DIVISION 2
TEMPORARY FEATURES

2-01 Mobilization

2-01.1 Description
(March 22, 2023 CFW GSP)

Supplement Section 2-01.1 with the following:

Obtaining a site for the Contractor's mobilization, field office(s), storage of materials, access and personnel parking spaces, and other general operations shall be the responsibility of the Contractor. The Contactor will be responsible for maintaining these spaces in a safe and orderly condition throughout the duration of the project. The Contractor shall provide the City with a copy of agreement(s) with property owner. All costs associated with securing sites shall be included in the other bid items on the project and no other compensation will be made.

2-03 Public Convenience and Safety

2-03.3 Construction Requirements

2-03.3(1) Construction Under Traffic
(*****)

Section 2-03.3(1) is supplemented with the following:

Lane, ramp, shoulder, and roadway closures are only permitted as follows:

- Lane closures shall not restrict vehicular access for buses through the project site. Bus stops shall remain ADA accessible at all times throughout the project.

- No paving or planing (milling) shall occur in residential areas on refuse, recycle, and yard waste collection days. Collection schedules are available at www.federalwaywa.gov/publicworks/recycling.

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

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

1. A holiday,

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

3. After 12:00 PM (noon) on the day prior to a holiday or holiday weekend, and

4. Before 7:00 AM on the day after the holiday or holiday weekend.

5. Within the City Center zone from the Friday after Thanksgiving Day ("Black Friday") until the first City recognized business day of the following year without written approval by the Engineer. The boundaries of the City Center zone are identified in the City of Federal Way Comprehensive Plan. In general, it is the area located within the following boundaries:

   Northern boundary: S 312th Street
   Southern boundary: S 324th Street
   Eastern boundary: Interstate 5
   Western boundary: 14th Ave S (future extension) / Federal Way 320th Library / 11th Pl S

6. During student drop-off and pick-up times on school days if a school is located in or within ¼ mile of the project limits or if the engineer determines the construction could impact school traffic during these peak times.
   a. Student Drop-Off (typically in morning): 20 minutes prior to school start time until 10 minutes after school start time.
   b. Student Pick-Up (typically in afternoon): 20 minutes prior to school end time until 20 minutes after school end time.
   c. Daily bell schedules, as well as calendars which reflect no-school days, early release days, and half-days are available on FWPS.org.

Traffic Delays

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

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

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

General Restrictions

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

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

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

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

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

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

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

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

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

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

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

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

(November 14, 2025, CFW GSP)
Section 2-03.3(1) is supplemented with the following:
In addition to the requirements of 1-07.29 and at least 48 hours prior to conducting work that temporarily impacts access to adjacent properties (i.e. paving operations), the Contractor shall notify all affected property owners and tenants. Notification shall be in the format of a door hanger. Information provided on the door hanger must be approved by the City prior to distribution.

(March 21, 2025, CFW GSP)
Section 2-03.3(1) is supplemented with the following:
Traffic signals shall only be switched into flash mode by City project inspector or King County Traffic personnel (see Section 1-07.17 for contact info). Placing a signalized intersection into flash mode requires pre-approval by the City minimum 5 business days via an approved traffic control plan. The type of work that requires signals to be placed into flash mode may include, but is not limited to: installation of signal poles; signal switchover; paving, striping, or excavation in the intersection.

2-04 Temporary Traffic Control

2-04.3(1) Traffic Control Management

(September 2, 2025 WSDOT GSP, OPTION 1)

Section 2-04.3(1) is supplemented with the following:

Work Zone Safety Contingency

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

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

The Contractor shall be solely responsible for submitting any traffic control plan revision to implement the enhancement in accordance with Section 2-04.3(2).

(October 3, 2022 WSDOT GSP, OPTION 2)

Section 2-04.3(1) is supplemented with the following:

The Traffic Control Supervisor shall be certified by one of the following:

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

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

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

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

Safety Alliance

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

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

2-04.3(2) Traffic Control Plans
(November 6, 2025 CFW GSP)
Section 2-04.3(2) is supplemented with the following:
If the Contractor opts to utilize traffic control plans other than those provided in these Contract Documents, the Contractor shall provide traffic control plans to the City of Federal Way for review and approval a minimum of five (5) working days prior to implementation. The plans shall include the following information:

- Location and spacing of traffic control devices
- Minimum lane widths provided for vehicular travel.
- Turn pocket length, gap, and tapers
- Location of proposed flagger stations
- Location of signs

2-04.3(4)B Other Traffic Control Labor
(*****)
Section 2-04.3(4)B is supplemented with the following:

Uniformed Police Officer

Definitions:
Uniformed Police Officer (UPO) as used in this specification is a "General Authority Washington Peace Officer" as defined by RCW 10.93.020 (4), or a "Specially Commissioned Washington Peace Officer" as defined by RCW 10.93.020(11).

Law Enforcement Agency as used in this specification is a "General Authority Washington Law Enforcement Agency" as defined by RCW 10.93.020(3).

The Contractor shall arrange for off-duty UPOs to be present for the following activities:

1. At the commissioning of a new traffic signal, or the recommissioning of an existing traffic signal which has been upgraded.
2. Countermanding a traffic signal indication at a signalized intersection.
3. Directing vehicle and pedestrian traffic when a traffic signal indication is turned off or is inoperative.
4. Where the Engineer deems it necessary for safety, including Work during hours of darkness.

It shall be the Contractor's responsibility to secure the off duty UPOs as required by the contract, including the costs to arrange, coordinate, and supervise.

The following contact information is supplied for the Contractor's convenience:

Agency Police Officer
Contact: City of Federal Way Police Phone:
(253) 835-6701

County Deputy Sheriff
Contact: King County Sheriff Phone: (206)
296-4155
Washington State Patrol
Contact: Washington State Patrol Phone: (425)
401-7788

The Contractor must obtain prior approval for use of off-duty UPOs through an approved traffic control plan and approved amendments to the contract traffic control plans. The off-duty UPOs shall be in addition to all other personnel required for flagging according to the approved traffic control plan.

A UPO shall be provided in the event of accidental power outages or disruption of a signalized intersection as a result of Contractor's Work and remain in place until the intersection becomes satisfactorily operational as determined by Agency Engineer or his/her representative.

The UPO shall be capable of providing their Agency Police Vehicle with active light bars for night visibility.

(November 13, 2025, CFW GSP)
Section 2-04.3(4)B is supplemented with the following:

The Federal Way Chief of Police must approve the use of UPO's from any law enforcement agency not listed in the special provision.

Agency Police Vehicles are required to be on-site at all times when a UPO is present.

2-04.3(6)A Construction Signs
(November 14, 2025 CFW GSP)
Section 2-04.3(6)A is supplemented with the following:

Business Open During Construction Signs
The Contractor shall provide a "Business Open During Construction" sign at every non-residential driveway approach within the project limits.

City of Federal Way Project Signs
The Contractor shall provide two (2) City project signs (4' x 8') to be posted on either end of the project to display the project name, partners, and funding sources. The Contractor shall request the sign template from the City prior to fabrication.

2-04.3(6)K Pedestrian Traffic Control

(November 14, 2025 CFW GSP)
Section 2-04.3(6)K is supplemented with the following:

The Contractor shall keep all pedestrian routes & access points (including, but not limited to, sidewalks, and crosswalks when located within the project limits) open and clear at all times unless permitted otherwise by the Engineer in an approved traffic control plan. An ADA accessible route must be provided through the project site at all times.

2-04.4 Measurement

2-04.4(2) Item Bids with Lump Sum for Incidentals
(*****)
Section 2-04.4(2) is supplemented with the following:

"Uniformed Police Officer" will be measured by the hour.

Hours will be measured for each fully equipped Uniformed Police Officer, including vehicle, if required, directing or monitoring traffic, as shown on an approved Traffic Control Plan in accordance with Section 2-04.3(4)B of these Special Provisions.

2-04.5 Payment

2-04.5(2) Item Bids with Lump Sum for Incidentals
(November 2, 2022 WSDOT GSP, OPTION 7)
Section 2-04.5(2) is supplemented with the following:

"Work Zone Safety Contingency", by force account.

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

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

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

(*****)
Section 2-04.5(2) is supplemented with the following:

"Uniformed Police Officer", per hour.

The unit contract price for "Uniformed Police Officer", when applied to the number of units measured for this item in accordance with Section 2-04.4(2), shall be full compensation for all costs incurred by the Contractor in performing the Contract Work defined in 2-04.3(4)B of these special provisions, including all costs for arrangement for and supervision of uniformed law enforcement personnel and vehicles to participate in the Contractor's traffic control activities.

END OF DIVISION 2

DIVISION 3
EARTHWORK

3-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP

3-01.1 Description

(March 13, 1995 WSDOT GSP, OPTION 1)

Section 3-01.1 is supplemented with the following:

Clearing and grubbing on this project shall be performed within the following limits:

Limits for clearing & grubbing shall be as shown on the plans. Clearing shall include removal of trees as noted on the plans or as directed by the Engineer to accommodate the improvements. Tree removal shall include removal of stumps and/or grinding of stumps to a depth at least two feet below finish grade.

3-01.3 Construction Requirements

3-01.3(4) Roadside Cleanup

(January 5, 1998 WSDOT GSP, OPTION 1)

Section 3-01.3(4) is supplemented with the following:

The Contractor shall restore, repair or correct all portions of the roadside or adjacent landscapes that were unavoidably damaged due to the performance or installation of the specified work. Unavoidable damage shall be determined only by the Engineer. All materials utilized shall be in accordance with Sections 9-14 and 9-15 and other applicable sections of the Standard Specifications or Special Provisions, whichever may apply. All work shall be performed in accordance with Sections 8-02 and 8-03 and other applicable sections of the Standard Specifications. The Contractor shall review the work with the Engineer and receive approval to proceed prior to commencing the work.

3-01.3(5) Clearing Limit Fence

(April 12, 2018 CFW GSP)

Section 3-01.3(5) is a new section:

Clearing limit fence shall be 4-feet high, orange, high density polyethylene fencing with mesh openings 1½-inch by 3-inches nominal and weigh at least 7 oz. per linear foot. Either wood or steel posts shall be used. Wood posts shall have minimum dimensions of 1½ inches by 1½ inches by the minimum length of 5 feet, and shall be free of knots, splits, or gouges. Steel posts shall consist of either size No. 6 rebar or larger, ASTM A 120 steel pipe with a minimum diameter of 1 inch, U, T, L or C shape steel posts with a minimum weight of 1.35 lbs./ft. or other steel posts having equivalent strength and bending resistance to the post sizes listed. The spacing of the support posts shall be a maximum of 6½ feet.

3-01.4 Measurement

(April 12, 2018 CFW GSP)

Section 3-01.4 is supplemented with the following:

"Clearing and Grubbing" will be measured on a lump sum basis. Installation, maintenance, and removal of the Clearing Limit Fence shall be included in the Clearing and Grubbing bid item.

"Tree Removal", will be measured per each and includes root removal.

3-01.5 Payment

(April 12, 2018 CFW GSP)

Section 3-01.5 is supplemented with the following:

"Clearing and Grubbing", lump sum.

"Tree Removal", per each.

3-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

(October 4, 2021 WSDOT GSP, OPTION 5)

Section 3-02.3 is supplemented with the following:

Removal and Disposal of Asbestos Material

In the event suspected Asbestos Containing Material (ACM) is encountered, the Contractor shall immediately notify the Engineer and the provisions of Section 1-04.7 shall apply. Prior to commencing asbestos related work, the Contractor shall obtain all permits from and provide notification to, the Washington State Department of Labor and Industries, the Washington State Department of Ecology, the local clean air agency, and other permitting and regulatory agencies with jurisdiction over the work involving asbestos as the laws, rules, and regulations require.

The ACM shall only be disturbed under the supervision of a Washington State Certified Asbestos Supervisor (CAS). The CAS shall be certified in accordance with WAC 295-65-012.

The CAS shall supervise the asbestos removal and ensure that the handling and removal of asbestos is accomplished by certified asbestos workers and in accordance with Washington State Department of Labor and Industries standards. The Contractor shall ensure that the removal and disposal of asbestos meets the requirements of EPA regulation 40 CFR Part 61, local health department regulations, and all other applicable regulations.

No asbestos is expected to be encountered. However, if the Contractor believes they have encountered asbestos, they shall immediately notify the Engineer in accordance with Section 1-04.7.

3-02.3(2)B Removal of Drainage Structures

(April 12, 2018 CFW GSP)

Section 3-02.3(2)B is a new section:

Where shown in the Plans or where designated by the Engineer, the Contractor shall remove existing catch basins, manholes, pipes, and other drainage features in accordance with the Standard Specifications. Removal shall be conducted in such a manner as to prevent damage to surrounding facilities including any existing storm sewers, sanitary sewers, electrical conduits or other facilities to remain. All remaining facilities including but not limited to storm sewers, sanitary sewers, monuments, valves, vaults, and electrical conduits damaged due to the Contractor's operations shall be replaced by the Contractor to the satisfaction of the Engineer at no additional cost to the Contracting Agency. Catch basins, manholes, and other drainage structures designated for removal, including all debris, shall be completely removed. All removed catch basins, manholes, and other drainage structures shall become the property of the Contractor and shall be disposed of in accordance with the Standard Specifications. All undamaged frames, grates, and solid covers in a re-useable condition shall be the property of the City of Federal Way and shall be delivered to a location specified by the Engineer.

Sawcutting (full depth) of existing asphalt concrete pavement and cement concrete curb and gutter surrounding the structure required for removal will be considered incidental to the removal of the catch basin, manhole, or other drainage structures. Sawcuts shall be in accordance with Section 3-02 of these Special Provisions.

Backfilling of catch basins, manholes, pipes and other drainage structures to be removed and replaced shall not be performed until the new structure is installed and shall be in accordance with Section 7-05. Backfilling of a structure to be replaced shall be considered incidental to the construction and installation of the new catch basin, manhole, or other drainage structure. Backfilling of catch basins, manholes, pipes and other drainage structures to be completely removed shall be performed using gravel borrow paid in accordance with the Bid Schedule.

Prior to backfilling any voids, the Contractor shall remove pipe as noted in the plans. Pipe shown to be abandoned or ordered by the Engineer to be abandoned shall be filled with CDF in accordance with Section 3-07.3(1)E of the Standard Specifications. Plugging pipe ends shall be considered incidental and included in the pipe removal and no additional payment will be made.

The Contractor shall maintain existing drainage, where designated by the Engineer, until the new drainage system is completely installed and functioning.

3-02.3(3) Removal of Pavement, Sidewalks, Curbs, and Gutters
(November 4, 2025 CFW GSP)
Section 3-02.3(3) is supplemented with the following:

No wastewater from the sawcutting operation shall be released directly to any stream or storm sewer system.

Removal of pavement, curbs, gutters, and sidewalks shall be measured and paid as "Roadway Excavation incl. Haul" in accordance with Section 3-03.

3-02.4 Vacant
(November 4, 2025 CFW GSP)
Section 3-02.4 Vacant shall be deleted and replaced with the following:
3-02.4 Measurement

"Removal of Traffic Type C Curb" will be measured by the linear foot.
"Removal of Cement Conc. Extruded Curb" will be measured by the linear foot.
"Sawcutting" will be measured by the linear foot.
"Remove Existing Catch Basin" will be measured per each.

3-02.5 Payment
(December 1, 2021 CFW GSP)
Section 3-02.5 is supplemented with the following:

Payment will be made in accordance with Section 1-04.1 for the following bid items when included in the proposal:

"Sawcutting", per linear foot. Sawcutting necessary for utility and stormwater installation and removal are incidental to the measurement and payment of those contract items.
"Removal of Traffic Type C Curb", per linear foot.

"Removal of Cement Conc. Extruded Curb", per linear foot.
"Remove Existing Catch Basin", per each.

3-03 ROADWAY EXCAVATION AND EMBANKMENT

3-03.3 Construction Requirements

Section 3-03.3(3) Excavation Below Subgrade
(November 4, 2025 CFW GSP)
Section 3-03.3(3) is supplemented with the following:

All excavations shall be founded on dense, non-yielding granular foundation soil as approved by the engineer. Remove all organic materials and debris, trash, or other deleterious material prior to beginning construction above subgrade. Proof roll the subgrade as directed by the Engineer.

Section 3-03.3(10) Selected Material
(November 4, 2025 CFW GSP)
Section 3-03.3(10) is supplemented with the following:

If the Contractor requests the use of Selected Material, the Contractor shall complete and provide material gradation test results to the City for the City's use in evaluating the material.

Section 3-03.3(14)G Backfilling
(February 21, 2024 CFW GSP)
Section 3-03.3(14)G is supplemented with the following:

Remove all water and non-compatible materials from excavations prior to backfilling or attempting to compact embankment soil. Provide import Gravel Borrow as required to complete the work. Backfill all embankments in accordance with 3-03.3(14)C, Compacting Earth Embankments, Method C.

Section 3-03.3(20) Wet Weather Earthwork
(November 4, 2025 CFW GSP)
Section 3-03.3(20) is a new section:

Excavation and embankment work completed in wet weather or under wet conditions shall be accomplished in small sections to minimize exposure to wet weather. Each section shall be sufficiently small so that the removal of materials and placement of backfill can be accomplished on the same day. No soil shall be left un-compacted and exposed to water. Soil that is too wet for compaction shall be removed and replaced with Gravel Borrow material. Grading and earthwork should not be accomplished during periods of heavy continuous rainfall.

3-03.4 Measurement
(March 13, 1995 WSDOT GSP, OPTION 2)
Section 3-03.4 is supplemented with the following:

Only one determination of the original ground elevation will be made on this project. Measurement for roadway excavation and embankment will be based on the original ground elevations recorded previous to the award of this contract.

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

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

Electronic Design Files will be available by request for the Bidder's Inspection before the opening of the Bids.

(November 4, 2025 CFW GSP)

Section 3-03.4 is supplemented with the following:

If the Contractor excavates outside the neat-line limits designated for "Roadway Excavation, Incl. Haul" or performs extra excavation, it shall be considered for the Contractor's benefit and this additional work shall not be eligible for payment from the City.

3-03.5 Payment

(March 13, 1995 WSDOT GSP, OPTION 2)

Section 3-03.5 is supplemented with the following:

All costs in connection with the preparation of waste sites and waste deposits shall be included in the Mobilization.

END OF DIVISION 3

DIVISION 4
AGGREGATES AND BASES

4-01 PRODUCTION FROM QUARRY AND PIT SITES

4-01.4 Contractor Furnished Material Sources

4-01.4(1) Acquisition and Development
(April 12, 2018 CFW GSP)

Section 4-01.4(1) is supplemented with the following:

No source has been provided for any materials necessary for the construction of these improvements.

If the source of material provided by the Contractor necessitates hauling over roads other than City streets, the Contractor shall, at his own cost and expense, make all arrangements for the use of haul routes.

4-05 BALLAST AND CRUSHED SURFACING

4-05.3 Construction Requirements

4-05.3(3) Mixing
(April 12, 2018 CFW GSP)

Item 2 of Section 4-05.3(3), is replaced with the following:

2. **Road Mix Method** - The road mix method of mixing surfacing material will not be allowed.

4-05.3(4) Placing and Spreading
(April 12, 2018 CFW GSP)

Item 2 of Section 4-05.3(4), is replaced with the following:

2. **Road Mix Method** - The road mix method of mixing surfacing material will not be allowed.

4-05.5 Payment
(January 19, 2024 CFW GSP)

Section 4-05.5 is supplemented with the following:

The unit contract price for Crushed Surfacing and Shoulder Finishing shall also include hauling, compacting, spreading, and removing to waste when required by the Engineer.

END OF DIVISION 4

DIVISION 5
SURFACE TREATMENTS AND PAVEMENTS

5-04 Hot Mix Asphalt

(January 31, 2023 APWA GSP)

Delete Section 5-04 and amendments, Hot Mix Asphalt and replace it with the following:

5-04.1 Description

This Work shall consist of providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections shown in the Plans. The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

HMA shall be composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

5-04.2 Materials

Materials shall meet the requirements of the following sections:

Asphalt Binder	9-02.1(4)
Cationic Emulsified Asphalt	9-02.1(6)
Anti-Stripping Additive	9-02.4
HMA Additive	9-02.5
Aggregates	9-03.8
Recycled Asphalt Pavement (RAP)	9-03.8(3)B, 9-03.21
Reclaimed Asphalt Shingles (RAS)	9-03.8(3)B, 9-03.21
Mineral Filler	9-03.8(5)
Recycled Material	9-03.21

The Contract documents may establish that the various mineral materials required for the manufacture of HMA will be furnished in whole or in part by the Contracting Agency. If the documents do not establish the furnishing of any of these mineral materials by the Contracting Agency, the Contractor shall be required to furnish such materials in the amounts required for the designated mix. Mineral materials include coarse and fine aggregates, and mineral filler.

The Contractor may choose to utilize recycled asphalt pavement (RAP) in the production of HMA. The RAP may be from pavements removed under the Contract, if any, or pavement material from an existing stockpile.

The Contractor may use up to 20 percent RAP by total weight of HMA with no additional sampling or testing of the RAP.

If the Contractor wishes to utilize High RAP/Any RAS, the design must be listed on the WSDOT Qualified Products List (QPL).

The grade of asphalt binder shall be as required by the Contract. Blending of asphalt binder from different sources is not permitted.

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 20 percent or less RAP by total weight of HMA. The Contractor shall submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

Production of aggregates shall comply with the requirements of Section 4-01. Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall comply with the requirements of Section 4-02.

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

If the contractor wishes to submit a mix design for inclusion in the Qualified Products List (QPL), please follow the WSDOT process outlined in Standard Specification 5-04.2(1).

5-04.2(1)A Vacant

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

No paving shall begin prior to the approval of the mix design by the Engineer.

Nonstatistical evaluation will be used for all HMA not designated as Commercial HMA in the contract documents.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Project Engineer. The Proposal quantity of HMA that is accepted by commercial evaluation will be excluded from the quantities used in the determination of nonstatistical evaluation.

Nonstatistical Mix Design. Fifteen days prior to the first day of paving the contractor shall provide one of the following mix design verification certifications for Contracting Agency review;

- The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.
- The proposed HMA mix design on WSDOT Form 350-042 with the seal and certification (stamp & sig-nature) of a valid licensed Washington State Professional Engineer.
- The Mix Design Report for the proposed HMA mix design developed by a qualified City or County laboratory that is within one year of the approval date.

The mix design shall be performed by a lab accredited by a national authority such as Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction Materials Engineering Council (CMEC's) ISO 17025 or AASHTO Accreditation Program (AAP) and shall supply evidence of participation in the AASHTO: resource proficiency sample program.

Mix designs for HMA accepted by Nonstatistical evaluation shall;

- Be designed for ***$$1$$*** million equivalent single axle loads (ESALS).
- Have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2), except that Hamburg testing for ruts and stripping are at the discretion of the Engineer, and 9-03.8(6).
- Have anti-strip requirements, if any, for the proposed mix design determined in accordance with AASHTO T 283 or T 324, or based on historic anti-strip and aggregate source compatibility from previous WSDOT lab testing.

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

Commercial Evaluation Mix Design. Approval of a mix design for "Commercial Evaluation" will be based on a review of the Contractor's submittal of WSDOT Form 350-042 (For commercial mixes, AASHTO T 324 evaluation is not required) or a Mix Design from the current WSDOT QPL or from one of the processes allowed by this section. Testing of the HMA by the Contracting Agency for mix design approval is not required.

For the Bid Item Commercial HMA, the Contractor shall select a class of HMA and design level of ESALs appropriate for the required use.

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

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

- Do not use additives that reduce the mixing temperature more than allowed in Section 5-04.3(6) in the production of mixtures.
- Before using additives, obtain the Engineer's approval using WSDOT Form 350-076 to describe the proposed additive and process.

5-04.3 Construction Requirements

5-04.3(1) Weather Limitations

Do not place HMA for wearing course on any Traveled Way beginning October 1st through March 31st of the following year without written concurrence from the Engineer.

Do not place HMA on any wet surface, or when the average surface temperatures are less than those specified below, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

Minimum Surface Temperature for Paving

Compacted Thickness (Feet)	Wearing Course	Other Courses
Less than 0.10	55◦F	45◦F
0.10 to .20	45◦F	35◦F

More than 0.20	35◦F	35◦F

5-04.3(2) Paving Under Traffic

When the Roadway being paved is open to traffic, the requirements of this Section shall apply.

The Contractor shall keep intersections open to traffic at all times except when paving the intersection or paving across the intersection. During such time, and provided that there has been an advance warning to the public, the intersection may be closed for the minimum time required to place and compact the mixture. In hot weather, the Engineer may require the application of water to the pavement to accelerate the finish rolling of the pavement and to shorten the time required before reopening to traffic.

Before closing an intersection, advance warning signs shall be placed and signs shall also be placed marking the detour or alternate route.

During paving operations, temporary pavement markings shall be maintained throughout the project. Temporary pavement markings shall be installed on the Roadway prior to opening to traffic. Temporary pavement markings shall be in accordance with Section 8-23.

All costs in connection with performing the Work in accordance with these requirements, except the cost of temporary pavement markings, shall be included in the unit Contract prices for the various Bid items involved in the Contract.

5-04.3(3) Equipment

5-04.3(3)A Mixing Plant

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

1. **Equipment for Preparation of Asphalt Binder –** Tanks for the storage of asphalt binder shall be equipped to heat and hold the material at the required temperatures. The heating shall be accomplished by steam coils, electricity, or other approved means so that no flame shall be in contact with the storage tank. The circulating system for the asphalt binder shall be designed to ensure proper and continuous circulation during the operating period. A valve for the purpose of sampling the asphalt binder shall be placed in either the storage tank or in the supply line to the mixer.

2. **Thermometric Equipment –** An armored thermometer, capable of detecting temperature ranges expected in the HMA mix, shall be fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit. The thermometer location shall be convenient and safe for access by Inspectors. The plant shall also be equipped with an approved dial-scale thermometer, a mercury actuated thermometer, an electric pyrometer, or another approved thermometric instrument placed at the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates. This device shall be in full view of the plant operator.

3. **Heating of Asphalt Binder –** The temperature of the asphalt binder shall not exceed the maximum recommended by the asphalt binder manufacturer nor shall it be below the minimum temperature required to maintain the asphalt binder in a homogeneous

state. The asphalt binder shall be heated in a manner that will avoid local variations in heating. The heating method shall provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25°F. Also, when a WMA additive is included in the asphalt binder, the temperature of the asphalt binder shall not exceed the maximum recommended by the manufacturer of the WMA additive.

4. **Sampling and Testing of Mineral Materials –** The HMA plant shall be equipped with a mechanical sampler for the sampling of the mineral materials. The mechanical sampler shall meet the requirements of Section 1-05.6 for the crushing and screening operation. The Contractor shall provide for the setup and operation of the field testing facilities of the Contracting Agency as provided for in Section 4-01.2(2).

5. **Sampling HMA –** The HMA plant shall provide for sampling HMA by one of the following methods:

    a. A mechanical sampling device attached to the HMA plant.

    b. Platforms or devices to enable sampling from the hauling vehicle without entering the hauling vehicle.

5-04.3(3)B Hauling Equipment

Trucks used for hauling HMA shall have tight, clean, smooth metal beds and shall have a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. Whenever the weather conditions during the work shift include, or are forecast to include, precipitation or an air temperature less than 45°F or when time from loading to unloading exceeds 30 minutes, the cover shall be securely attached to protect the HMA.

The contractor shall provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Excess release agent shall be drained prior to filling hauling equipment with HMA. Petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA shall not be used. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

5-04.3(3)C Pavers

HMA pavers shall be self-contained, power-propelled units, provided with an internally heated vibratory screed and shall be capable of spreading and finishing courses of HMA plant mix material in lane widths required by the paving section shown in the Plans.

The HMA paver shall be in good condition and shall have the most current equipment available from the manufacturer for the prevention of segregation of the HMA mixture installed, in good condition, and in working order. The equipment certification shall list the make, model, and year of the paver and any equipment that has been retrofitted.

The screed shall be operated in accordance with the manufacturer's recommendations and shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. A copy of the manufacturer's recommendations shall be provided upon request by the Contracting Agency. Extensions will be allowed provided they produce the same results, including

ride, density, and surface texture as obtained by the primary screed. Extensions without augers and an internally heated vibratory screed shall not be used in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Lines shall be placed on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. The grade and slope for intermediate lanes shall be controlled automatically from reference lines or by means of a mat referencing device and a slope control device. When the finish of the grade prepared for paving is superior to the established tolerances and when, in the opinion of the Engineer, further improvement to the line, grade, cross-section, and smoothness can best be achieved without the use of the reference line, a mat referencing device may be substituted for the reference line. Substitution of the device will be subject to the continued approval of the Engineer. A joint matcher may be used subject to the approval of the Engineer. The reference line may be removed after the completion of the first course of HMA when approved by the Engineer. Whenever the Engineer determines that any of these methods are failing to provide the necessary vertical control, the reference lines will be reinstalled by the Contractor.

The Contractor shall furnish and install all pins, brackets, tensioning devices, wire, and accessories necessary for satisfactory operation of the automatic control equipment.

If the paving machine in use is not providing the required finish, the Engineer may suspend Work as allowed by Section 1-08.6. Any cleaning or solvent type liquids spilled on the pavement shall be thoroughly removed before paving proceeds.

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

A Material Transfer Device/Vehicle (MTD/V) shall only be used with the Engineer's approval, unless otherwise required by the Contract.

Where an MTD/V is required by the Contract, the Engineer may approve paving without an MTD/V, at the request of the Contractor. The Engineer will determine if an equitable adjustment in cost or time is due.

When used, the MTD/V shall mix the HMA after delivery by the hauling equipment and prior to laydown by the paving machine. Mixing of the HMA shall be sufficient to obtain a uniform temperature throughout the mixture. If a windrow elevator is used, the length of the windrow may be limited in urban areas or through intersections, at the discretion of the Engineer.

To be approved for use, an MTV:

1. Shall be self-propelled vehicle, separate from the hauling vehicle or paver.
2. Shall not be connected to the hauling vehicle or paver.
3. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
4. Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
5. Shall mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

To be approved for use, an MTD:

1. Shall be positively connected to the paver.
2. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
3. Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
4. Shall mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

5-04.3(3)E Rollers

Rollers shall be of the steel wheel, vibratory, oscillatory, or pneumatic tire type, in good condition and capable of reversing without backlash. Operation of the roller shall be in accordance with the manufacturer's recommendations. When ordered by the Engineer for any roller planned for use on the project, the Contractor shall provide a copy of the manufacturer's recommendation for the use of that roller for compaction of HMA. The number and weight of rollers shall be sufficient to compact the mixture in compliance with the requirements of Section 5-04.3(10). The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, displacement of the mixture or other undesirable results shall not be used.

5-04.3(4) Preparation of Existing Paved Surfaces

When the surface of the existing pavement or old base is irregular, the Contractor shall bring it to a uniform grade and cross-section as shown on the Plans or approved by the Engineer.

Preleveling of uneven or broken surfaces over which HMA is to be placed may be accomplished by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

Compaction of preleveling HMA shall be to the satisfaction of the Engineer and may require the use of small steel wheel rollers, plate compactors, or pneumatic rollers to avoid bridging across preleveled areas by the compaction equipment. Equipment used for the compaction of preleveling HMA shall be approved by the Engineer.

Before construction of HMA on an existing paved surface, the entire surface of the pavement shall be clean. All fatty asphalt patches, grease drippings, and other objectionable matter shall be entirely removed from the existing pavement. All pavements or bituminous surfaces shall be thoroughly cleaned of dust, soil, pavement grindings, and other foreign matter. All holes and small depressions shall be filled with an appropriate class of HMA. The surface of the patched area shall be leveled and compacted thoroughly. Prior to the application of tack coat, or paving, the condition of the surface shall be approved by the Engineer.

A tack coat of asphalt shall be applied to all paved surfaces on which any course of HMA is to be placed or abutted; except that tack coat may be omitted from clean, newly paved surfaces at the discretion of the Engineer. Tack coat shall be uniformly applied to cover the existing pavement with a thin film of residual asphalt free of streaks and bare spots at a rate between 0.02 and 0.10 gallons per square yard of retained asphalt. The rate of application shall be approved by the Engineer. A heavy application of tack coat shall be applied to all joints. For Roadways open to traffic, the application of tack coat shall be limited to surfaces that will be paved during the same working shift. The spreading

equipment shall be equipped with a thermometer to indicate the temperature of the tack coat material.

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

The tack coat shall be CSS-1, or CSS-1h emulsified asphalt. The CSS-1 and CSS-1h emulsified asphalt may be diluted once with water at a rate not to exceed one-part water to one-part emulsified asphalt. The tack coat shall have sufficient temperature such that it may be applied uniformly at the specified rate of application and shall not exceed the maximum temperature recommended by the emulsified asphalt manufacturer.

5-04.3(4)A Crack Sealing

5-04.3(4)A1 General

When the Proposal includes a pay item for crack sealing, seal cracks in accordance with Section 5-03.

5-04.3(4)B Vacant

5-04.3(4)C Pavement Repair

The Contractor shall excavate pavement repair areas and shall backfill these with HMA in accordance with the details shown in the Plans and as marked in the field. The Contractor shall conduct the excavation operations in a manner that will protect the pavement that is to remain. Pavement not designated to be removed that is damaged as a result of the Contractor's operations shall be repaired by the Contractor to the satisfaction of the Engineer at no cost to the Contracting Agency. The Contractor shall excavate only within one lane at a time unless approved otherwise by the Engineer. The Contractor shall not excavate more area than can be completely finished during the same shift, unless approved by the Engineer.

Unless otherwise shown in the Plans or determined by the Engineer, excavate to a depth of 1.0 feet. The Engineer will make the final determination of the excavation depth required. The minimum width of any pavement repair area shall be 40 inches unless shown otherwise in the Plans. Before any excavation, the existing pavement shall be sawcut or shall be removed by a pavement grinder. Excavated materials will become the property of the Contractor and shall be disposed of in a Contractor-provided site off the Right of Way or used in accordance with Sections 3-02.3(3) or 9-03.21.

Asphalt for tack coat shall be required as specified in Section 5-04.3(4). A heavy application of tack coat shall be applied to all surfaces of existing pavement in the pavement repair area.

Placement of the HMA backfill shall be accomplished in lifts not to exceed 0.35-foot compacted depth. Lifts that exceed 0.35-foot of compacted depth may be accomplished with the approval of the Engineer. Each lift shall be thoroughly compacted by a mechanical tamper or a roller.

5-04.3(5) Producing/Stockpiling Aggregates and RAP

Aggregates and RAP shall be stockpiled according to the requirements of Section 4-02. Sufficient storage space shall be provided for each size of aggregate and RAP. Materials shall be removed from stockpile(s) in a manner to ensure minimal segregation when being moved to the HMA plant for processing into the final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

5-04.3(5)A Vacant

5-04.3(6) Mixing

After the required amount of mineral materials, asphalt binder, recycling agent and anti-stripping additives have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

When discharged, the temperature of the HMA shall not exceed the optimum mixing temperature by more than 25°F as shown on the reference mix design report or as approved by the Engineer. Also, when a WMA additive is included in the manufacture of HMA, the discharge temperature of the HMA shall not exceed the maximum recommended by the manufacturer of the WMA additive. A maximum water content of 2 percent in the mix, at discharge, will be allowed providing the water causes no problems with handling, stripping, or flushing. If the water in the HMA causes any of these problems, the moisture content shall be reduced as directed by the Engineer.

Storing or holding of the HMA in approved storage facilities will be permitted with approval of the Engineer, but in no event shall the HMA be held for more than 24 hours. HMA held for more than 24 hours after mixing shall be rejected. Rejected HMA shall be disposed of by the Contractor at no expense to the Contracting Agency. The storage facility shall have an accessible device located at the top of the cone or about the third point. The device shall indicate the amount of material in storage. No HMA shall be accepted from the storage facility when the HMA in storage is below the top of the cone of the storage facility, except as the storage facility is being emptied at the end of the working shift.

Recycled asphalt pavement (RAP) utilized in the production of HMA shall be sized prior to entering the mixer so that a uniform and thoroughly mixed HMA is produced. If there is evidence of the recycled asphalt pavement not breaking down during the heating and mixing of the HMA, the Contractor shall immediately suspend the use of the RAP until changes have been approved by the Engineer. After the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, and RAP is ensured.

5-04.3(7) Spreading and Finishing

The mixture shall be laid upon an approved surface, spread, and struck off to the grade and elevation established. HMA pavers complying with Section 5-04.3(3) shall be used to distribute the mixture. Unless otherwise directed by the Engineer, the nominal compacted depth of any layer of any course shall not exceed the following:

HMA Class 1”	0.35 feet
HMA Class ¾” and HMA Class ½” wearing course	0.30 feet

other courses	0.35 feet
HMA Class ⅜"	0.15 feet

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

When more than one JMF is being utilized to produce HMA, the material produced for each JMF shall be placed by separate spreading and compacting equipment. The intermingling of HMA produced from more than one JMF is prohibited. Each strip of HMA placed during a work shift shall conform to a single JMF established for the class of HMA specified unless there is a need to make an adjustment in the JMF.

5-04.3(8) Aggregate Acceptance Prior to Incorporation in HMA

For HMA accepted by nonstatistical evaluation, the aggregate properties of sand equivalent, uncompacted void content, and fracture will be evaluated in accordance with Section 3-04. Sampling and testing of aggregates for HMA accepted by commercial evaluation will be at the option of the Engineer.

5-04.3(9) HMA Mixture Acceptance

Acceptance of HMA shall be as provided under nonstatistical, or commercial evaluation.

Nonstatistical evaluation will be used for the acceptance of HMA unless Commercial Evaluation is specified.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Engineer.

The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the approval of the Engineer and may be made in accordance with this section.

HMA Tolerances and Adjustments

1. **Job Mix Formula Tolerances –** The constituents of the mixture at the time of acceptance shall be within tolerance. The tolerance limits will be established as follows:

   For Asphalt Binder and Air Voids (Va), the acceptance limits are determined by adding the tolerances below to the approved JMF values. These values will also be the Upper Specification Limit (USL) and Lower Specification Limit (LSL) required in Section 1-06.2(2)D2

Property	Non-Statistical Evaluation	Commercial Evaluation
Asphalt Binder	+/- 0.5%	+/- 0.7%
Air Voids, Va	2.5% min. and 5.5% max	N/A

   For Aggregates in the mixture:

a. First, determine preliminary upper and lower acceptance limits by applying the following tolerances to the approved JMF.

Aggregate Percent Passing	Non-Statistical Evaluation	Commercial Evaluation
1", ¾", ½", and 3/8" sieves	+/- 6%	+/- 8%
No. 4 sieve	+/-6%	+/- 8%
No. 8 Sieve	+/- 6%	+/-8%
No. 200 sieve	+/- 2.0%	+/- 3.0%

b. Second, adjust the preliminary upper and lower acceptance limits determined from step (a) the minimum amount necessary so that none of the aggregate properties are outside the control points in Section 9-03.8(6). The resulting values will be the upper and lower acceptance limits for aggregates, as well as the USL and LSL required in Section 1-06.2(2)D2.

2. Job Mix Formula Adjustments – An adjustment to the aggregate gradation or asphalt binder content of the JMF requires approval of the Engineer. Adjustments to the JMF will only be considered if the change produces material of equal or better quality and may require the development of a new mix design if the adjustment exceeds the amounts listed below.

   a. **Aggregates –** 2 percent for the aggregate passing the 1½", 1", ¾", ½", ⅜", and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. The adjusted JMF shall be within the range of the control points in Section 9-03.8(6).

   b. **Asphalt Binder Con**tent – The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content shall be 0.3 percent

5-04.3(9)A Vacant

5-04.3(9)B Vacant

5-04.3(9)C Mixture Acceptance – Nonstatistical Evaluation

HMA mixture which is accepted by Nonstatistical Evaluation will be evaluated by the Contracting Agency by dividing the HMA tonnage into lots.

5-04.3(9)C1 Mixture Nonstatistical Evaluation – Lots and Sublots

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot shall be equal to one day's production or 800 tons, whichever is less except that the final sublot will be a minimum of 400 tons and may be increased to 1200 tons.

All of the test results obtained from the acceptance samples from a given lot shall be evaluated collectively. If the Contractor requests a change to the JMF that is approved, the material produced after the change will be evaluated on the basis of the new JMF for the remaining sublots in the current lot and for acceptance of subsequent lots. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

Sampling and testing for evaluation shall be performed on the frequency of one sample per sublot.

5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling

Samples for acceptance testing shall be obtained by the Contractor when ordered by the Engineer. The Contractor shall sample the HMA mixture in the presence of the Engineer and in accordance with AASH-TO T 168. A minimum of three samples should be taken for each class of HMA placed on a project. If used in a structural application, at least one of the three samples shall be tested.

Sampling and testing HMA in a structural application where quantities are less than 400 tons is at the discretion of the Engineer.

For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, a minimum of one acceptance test shall be performed. In all cases, a minimum of 3 samples will be obtained at the point of acceptance, a minimum of one of the three samples will be tested for conformance to the JMF:

- If the test results are found to be within specification requirements, additional testing will be at the Engineer's discretion.
- If test results are found not to be within specification requirements, additional testing of the remaining samples to determine a CPF shall be performed.

5-04.3(9)C3 Mixture Nonstatistical Evaluation – Acceptance Testing

Testing of HMA for compliance of V_a will at the option of the Contracting Agency. If tested, compliance of V_a will use WSDOT SOP 731.

Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308.

Testing for compliance of gradation will be by FOP for WAQTC T 27/T 11.

5-04.3(9)C4 Mixture Nonstatistical Evaluation – Pay Factors

For each lot of material falling outside the tolerance limits in 5-04.3(9), the Contracting Agency will determine a CPF using the following price adjustment factors:

Table of Price Adjustment Factors	
Constituent	**Factor "f"**
All aggregate passing: 1½", 1", ¾", ½", ⅜" and No.4 sieves	2
All aggregate passing No. 8 sieve	15
All aggregate passing No. 200 sieve	20
Asphalt binder	40
Air Voids (Va) (where applicable)	20

Each lot of HMA produced under Nonstatistical Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the nonstatistical tolerance limits in the Job Mix Formula shown in Table of Price Adjustment Factors, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The nonstatistical tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the Roadway shall be tested to provide a minimum of three sets of results for evaluation.

5-04.3(9)C5 Vacant

5-04.3(9)C6 Mixture Nonstatistical Evaluation – Price Adjustments

For each lot of HMA mix produced under Nonstatistical Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The total job mix compliance price adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

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

5-04.3(9)C7 Mixture Nonstatistical Evaluation - Retests

The Contractor may request a sublot be retested. To request a retest, the Contractor shall submit a written request within 7 calendar days after the specific test results have been received. A split of the original acceptance sample will be retested. The split of the sample will not be tested with the same tester that ran the original acceptance test. The sample will be tested for a complete gradation analysis, asphalt binder content, and, at the option of the agency, V_a. The results of the retest will be used for the acceptance of the HMA in place of the original sublot sample test results. The cost of testing will be deducted from any monies due or that may come due the Contractor under the Contract at the rate of $500 per sample.

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

If sampled and tested, HMA produced under Commercial Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the commercial tolerance limits in the Job Mix Formula shown in 5-04.3(9), the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The commercial tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the street shall be tested to provide a minimum of three sets of results for evaluation.

For each lot of HMA mix produced and tested under Commercial Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The Job Mix Compliance Price Adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

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

5-04.3(10) HMA Compaction Acceptance

HMA mixture accepted by nonstatistical evaluation that is used in traffic lanes, including lanes for intersections, ramps, truck climbing, weaving, and speed change, and having a specified compacted course thickness greater than 0.10-foot, shall be compacted to a specified level of relative density. The specified level of relative density shall be a CPF of not less than 0.75 when evaluated in accordance with Section 1-06.2, using a LSL of 92.0 (minimum of 92 percent of the maximum density). The maximum density shall be determined by WSDOT FOP for AASHTO T 729. The specified level of density attained will be determined by the evaluation of the density of the pavement. The density of the pavement shall be determined in accordance with WSDOT FOP for WAQTC TM 8, except that gauge correlation will be at the discretion of the Engineer, when using the nuclear density gauge and WSDOT SOP 736 when using cores to determine density.

Tests for the determination of the pavement density will be taken in accordance with the required procedures for measurement by a nuclear density gauge or Roadway cores after completion of the finish rolling.

If the Contracting Agency uses a nuclear density gauge to determine density the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the mix is placed and prior to opening to traffic.

Roadway cores for density may be obtained by either the Contracting Agency or the Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches minimum, unless otherwise approved by the Engineer. Roadway cores will be tested by the Contracting Agency in accordance with WSDOT FOP for AASHTO T 166.

If the Contract includes the Bid item “Roadway Core”, the cores shall be obtained by the Contractor in the presence of the Engineer on the same day the mix is placed and at locations designated by the Engineer. If the Contract does not include the Bid item “Roadway Core”, the Contracting Agency will obtain the cores.

For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor’s request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used for preleveling wheel rutting shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

Test Results

For a sublot that has been tested with a nuclear density gauge that did not meet the minimum of 92 percent of the reference maximum density in a compaction lot with a CPF

below 1.00 and thus subject to a price reduction or rejection, the Contractor may request that a core be used for determination of the relative density of the sublot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the sublot and will be used for calculation of the CPF and acceptance of HMA compaction lot.

When cores are taken by the Contracting Agency at the request of the Contractor, they shall be requested by noon of the next workday after the test results for the sublot have been provided or made available to the Contractor. Core locations shall be outside of wheel paths and as determined by the Engineer. Traffic control shall be provided by the Contractor as requested by the Engineer. Failure by the Contractor to provide the requested traffic control will result in forfeiture of the request for cores. When the CPF for the lot based on the results of the HMA cores is less than 1.00, the cost for the coring will be deducted from any monies due or that may become due the Contractor under the Contract at the rate of $200 per core and the Contractor shall pay for the cost of the traffic control.

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

Compaction shall take place when the mixture is in the proper condition so that no undue displacement, cracking, or shoving occurs. Areas inaccessible to large compaction equipment shall be compacted by other mechanical means. Any HMA that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt, or is in any way defective, shall be removed and replaced with new hot mix that shall be immediately compacted to conform to the surrounding area.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option, provided the specified densities are attained. Unless the Engineer has approved otherwise, rollers shall only be operated in the static mode when the internal temperature of the mix is less than 175°F. Regardless of mix temperature, a roller shall not be operated in a mode that results in checking or cracking of the mat. Rollers shall only be operated in static mode on bridge decks.

5-04.3(10)B HMA Compaction – Cyclic Density

Low cyclic density areas are defined as spots or streaks in the pavement that are less than 90 percent of the theoretical maximum density. At the Engineer's discretion, the Engineer may evaluate the HMA pavement for low cyclic density, and when doing so will follow WSDOT SOP 733. A $500 Cyclic Density Price Adjustment will be assessed for any 500-foot section with two or more density readings below 90 percent of the theoretical maximum density.

5-04.3(10)C Vacant

5-04.3(10)D HMA Nonstatistical Compaction

5-04.3(10)D1 HMA Nonstatistical Compaction – Lots and Sublots

HMA compaction which is accepted by nonstatistical evaluation will be based on acceptance testing performed by the Contracting Agency dividing the project into compaction lots.

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced

for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot shall be equal to one day's production or 400 tons, whichever is less except that the final sublot will be a minimum of 200 tons and may be increased to 800 tons. Testing for compaction will be at the rate of 5 tests per sublot per WSDOT T 738.

The sublot locations within each density lot will be determined by the Engineer. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used to prelevel wheel ruts shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

5-04.3(10)D2 HMA Compaction Nonstatistical Evaluation – Acceptance Testing

The location of the HMA compaction acceptance tests will be randomly selected by the Engineer from within each sublot, with one test per sublot.

5-04.3(10)D3 HMA Nonstatistical Compaction – Price Adjustments

For each compaction lot with one or two sublots, having all sublots attain a relative density that is 92 percent of the reference maximum density the HMA shall be accepted at the unit Contract price with no further evaluation. When a sublot does not attain a relative density that is 92 percent of the reference maximum density, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The maximum CPF shall be 1.00, however, lots with a calculated CPF in excess of 1.00 will be used to offset lots with CPF values below 1.00 but greater than 0.90. Lots with CPF lower than 0.90 will be evaluated for compliance per 5-04.3(11). Additional testing by either a nuclear moisture-density gauge or cores will be completed as required to provide a minimum of three tests for evaluation.

For compaction below the required 92%, a Non-Conforming Compaction Factor (NCCF) will be determined. The NCCF equals the algebraic difference of CPF minus 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of CPF, the quantity of HMA in the compaction control lot in tons, and the unit Contract price per ton of mix.

5-04.3(11) Reject Work

5-04.3(11)A Reject Work General

Work that is defective or does not conform to Contract requirements shall be rejected. The Contractor may propose, in writing, alternatives to removal and replacement of rejected material. Acceptability of such alternative proposals will be determined at the sole discretion of the Engineer. HMA that has been rejected is subject to the requirements in Section 1-06.2(2) and this specification, and the Contractor shall submit a corrective action proposal to the Engineer for approval.

5-04.3(11)B Rejection by Contractor

The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material. Any such new material will be sampled, tested, and evaluated for acceptance.

5-04.3(11)C Rejection Without Testing (Mixture or Compaction)

The Engineer may, without sampling, reject any batch, load, or section of Roadway that appears defective. Material rejected before placement shall not be incorporated into the pavement. Any rejected section of Roadway shall be removed.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests that the rejected material be tested. If the Contractor elects to have the rejected material tested, a minimum of three representative samples will be obtained and tested. Acceptance of rejected material will be based on conformance with the nonstatistical acceptance Specification. If the CPF for the rejected material is less than 0.75, no payment will be made for the rejected material; in addition, the cost of sampling and testing shall be borne by the Contractor. If the CPF is greater than or equal to 0.75, the cost of sampling and testing will be borne by the Contracting Agency. If the material is rejected before placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at a CPF of 0.75. If rejection occurs after placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at the calculated CPF with an addition of 25 percent of the unit Contract price added for the cost of removal and disposal.

5-04.3(11)D Rejection - A Partial Sublot

In addition to the random acceptance sampling and testing, the Engineer may also isolate from a normal sublot any material that is suspected of being defective in relative density, gradation or asphalt binder content. Such isolated material will not include an original sample location. A minimum of three random samples of the suspect material will be obtained and tested. The material will then be statistically evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)E Rejection - An Entire Sublot

An entire sublot that is suspected of being defective may be rejected. When a sublot is rejected a minimum of two additional random samples from this sublot will be obtained. These additional samples and the original sublot will be evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)F Rejection - A Lot in Progress

The Contractor shall shut down operations and shall not resume HMA placement until such time as the Engineer is satisfied that material conforming to the Specifications can be produced:

1. When the CPF of a lot in progress drops below 1.00 and the Contractor is taking no corrective action, or
2. When the Pay Factor (PF) for any constituent of a lot in progress drops below 0.95 and the Contractor is taking no corrective action, or
3. When either the PF for any constituent or the CPF of a lot in progress is less than 0.75.

5-04.3(11)G Rejection - An Entire Lot (Mixture or Compaction)

An entire lot with a CPF of less than 0.75 will be rejected.

5-04.3(12) Joints

5-04.3(12)A HMA Joints

5-04.3(12)A1 Transverse Joints

The Contractor shall conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed, and the roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When the Work is resumed, the previously compacted mixture shall be cut back to produce a slightly beveled edge for the full thickness of the course.

A temporary wedge of HMA constructed on a 20H:1V shall be constructed where a transverse joint as a result of paving or planing is open to traffic. The HMA in the temporary wedge shall be separated from the permanent HMA by strips of heavy wrapping paper or other methods approved by the Engineer. The wrapping paper shall be removed and the joint trimmed to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

The material that is cut away shall be wasted and new mix shall be laid against the cut. Rollers or tamping irons shall be used to seal the joint.

5-04.3(12)A2 Longitudinal Joints

The longitudinal joint in any one course shall be offset from the course immediately below by not more than 6 inches nor less than 2 inches. All longitudinal joints constructed in the wearing course shall be located at a lane line or an edge line of the Traveled Way. A notched wedge joint shall be constructed along all longitudinal joints in the wearing surface of new HMA unless otherwise approved by the Engineer. The notched wedge joint shall have a vertical edge of not less than the maximum aggregate size or more than ½ of the compacted lift thickness and then taper down on a slope not steeper than 4H:1V. The sloped portion of the HMA notched wedge joint shall be uniformly compacted.

5-04.3(12)B Bridge Paving Joint Seals

Bridge Paving Joint Seals shall be in accordance with Section 5-03.

5-04.3(13) Surface Smoothness

The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course shall not vary more than ⅛ inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. The transverse slope of the completed surface of the wearing course shall vary not more than ¼ inch in 10 feet from the rate of transverse slope shown in the Plans.

When deviations in excess of the above tolerances are found that result from a high place in the HMA, the pavement surface shall be corrected by one of the following methods:

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

2. Removal and replacement of the wearing course of HMA, or

3. By other method approved by the Engineer.

Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances.

Deviations in excess of the above tolerances that result from a low place in the HMA and deviations resulting from a high place where corrective action, in the opinion of the Engineer, will not produce satisfactory results will be accepted with a price adjustment. The Engineer shall deduct from monies due or that may become due to the Contractor the sum of $500.00 for each and every section of single traffic lane 100 feet in length in which any excessive deviations described above are found.

When utility appurtenances such as manhole covers and valve boxes are located in the traveled way, the utility appurtenances shall be adjusted to the finished grade prior to paving. This requirement may be waived when requested by the Contractor, at the discretion of the Engineer or when the adjustment details provided in the project plan or specifications call for utility appurtenance adjustments after the completion of paving.

Utility appurtenance adjustment discussions will be included in the Pre-Paving and Pre-Planing Briefing (5-04.3(14)B3). Submit a written request to waive this requirement to the Engineer prior to the start of paving.

5-04.3(14) Planing Bituminous Pavement

The planing plan must be approved by the Engineer and a pre-planing meeting must be held prior to the start of any planing. See Section 5-04.3(14)B2 for information on planing submittals.

Where planing an existing pavement is specified in the Contract, the Contractor must remove existing surfacing material and to reshape the surface to remove irregularities. The finished product must be a prepared surface acceptable for receiving an HMA overlay.

Use the cold milling method for planing unless otherwise specified in the Contract. Do not use the planer on the final wearing course of new HMA.

Conduct planing operations in a manner that does not tear, break, burn, or otherwise damage the surface which is to remain. The finished planed surface must be slightly grooved or roughened and must be free from gouges, deep grooves, ridges, or other imperfections. The Contractor must repair any damage to the surface by the Contractor's planing equipment, using an Engineer approved method.

Repair or replace any metal castings and other surface improvements damaged by planing, as determined by the Engineer.

A tapered wedge cut must be planed longitudinally along curb lines sufficient to provide a minimum of 4 inches of curb reveal after placement and compaction of the final wearing course. The dimensions of the wedge must be as shown on the Drawings or as specified by the Engineer.

A tapered wedge cut must also be made at transitions to adjoining pavement surfaces (meet lines) where butt joints are shown on the Drawings. Cut butt joints in a straight line with vertical faces 2 inches or more in height, producing a smooth transition to the existing adjoining pavement.

After planing is complete, planed surfaces must be swept, cleaned, and if required by the Contract, patched and preleveled.

The Engineer may direct additional depth planing. Before performing this additional depth planing, the Contractor must conduct a hidden metal in pavement detection survey as specified in Section 5-04.3(14)A.

(June 13, 2023 CFW GSP)

Section 5-04.3(14) is supplemented with the following:

Existing paving fabric encountered during planing shall be removed incidental to planing bituminous pavement. Additional street sweeping and disposal associated with paving fabric removal shall be incidental to planing bituminous pavement.

5-04.3(14)A Pre-Planing Metal Detection Check

Before starting planing of pavements, and before any additional depth planing required by the Engineer, the Contractor must conduct a physical survey of existing pavement to be planed with equipment that can identify hidden metal objects.

Should such metal be identified, promptly notify the Engineer.

See Section 1-07.16(1) regarding the protection of survey monumentation that may be hidden in pavement.

The Contractor is solely responsible for any damage to equipment resulting from the Contractor's failure to conduct a pre-planing metal detection survey, or from the Contractor's failure to notify the Engineer of any hidden metal that is detected.

5-04.3(14)B Paving and Planing Under Traffic

5-04.3(14)B1 General

In addition, the requirements of Section 2-03 and the traffic controls required in Section 2-04, and unless the Contract specifies otherwise or the Engineer approves, the Contractor must comply with the following:

1. Intersections:

    a. Keep intersections open to traffic at all times, except when paving or planing operations through an intersection requires closure. Such closure must be kept to the minimum time required to place and compact the HMA mixture, or plane as appropriate. For paving, schedule such closure to individual lanes or portions thereof that allows the traffic volumes and schedule of traffic volumes required in the approved traffic control plan. Schedule work so that adjacent intersections are not impacted at the same time and comply with the traffic control restrictions required by the Traffic Engineer. Each individual intersection closure or partial closure must be addressed in the traffic control

plan, which must be submitted to and accepted by the Engineer, see Section 2-04.3(2).

b. When planing or paving and related construction must occur in an intersection, consider scheduling and sequencing such work into quarters of the intersection, or half or more of an intersection with side street detours. Be prepared to sequence the work to individual lanes or portions thereof.

c. Should closure of the intersection in its entirety be necessary, and no trolley service is impacted, keep such closure to the minimum time required to place and compact the HMA mixture, plane, remove asphalt, tack coat, and as needed.

d. Any work in an intersection requires advance warning in both signage and a number of Working Days advance notice as determined by the Engineer, to alert traffic and emergency services of the intersection closure or partial closure.

e. Allow new compacted HMA asphalt to cool to ambient temperature before any traffic is allowed on it. Traffic is not allowed on newly placed asphalt until approval has been obtained from the Engineer.

2. Temporary centerline marking, post-paving temporary marking, temporary stop bars, and maintaining temporary pavement marking must comply with Section 8-23.

3. Permanent pavement marking must comply with Section 8-22.

5-04.3(14)B2 Submittals – Planing Plan and HMA Paving Plan

The Contractor must submit a separate planing plan and a separate paving plan to the Engineer at least 5 Working Days in advance of each operation's activity start date. These plans must show how the moving operation and traffic control are coordinated, as they will be discussed at the pre-planing briefing and pre-paving briefing. When requested by the Engineer, the Contractor must provide each operation's traffic control plan on 24 x 36 inch or larger size Shop Drawings with a scale showing both the area of operation and sufficient detail of traffic beyond the area of operation where detour traffic may be required. The scale on the Shop Drawings is 1 inch = 20 feet, which may be changed if the Engineer agrees sufficient detail is shown.

The planing operation and the paving operation include, but are not limited to, metal detection, removal of asphalt and temporary asphalt of any kind, tack coat and drying, staging of supply trucks, paving trains, rolling, scheduling, and as may be discussed at the briefing.

When intersections will be partially or totally blocked, provide adequately sized and noticeable signage alerting traffic of closures to come, a minimum 2 Working Days in advance. The traffic control plan must show where police officers will be stationed when signalization is or may be, countermanded, and show areas where flaggers are proposed.

At a minimum, the planing and the paving plan must include:

1. A copy of the accepted traffic control plan, see Section 2-04.3(2), detailing each day's traffic control as it relates to the specific requirements of that day's planing and paving. Briefly describe the sequencing of traffic control consistent with the proposed planing and paving sequence, and scheduling of placement of temporary pavement markings and channelizing devices after each day's planing, and paving.

2. A copy of each intersection's traffic control plan.

3. Haul routes from supplier facilities, and locations of temporary parking and staging areas, including return routes. Describe the complete round trip as it relates to the sequencing of paving operations.

4. Names and locations of HMA supplier facilities to be used.

5. List of all equipment to be used for paving.

6. List of personnel and associated job classification assigned to each piece of paving equipment.

7. Description (geometric or narrative) of the scheduled sequence of planing and of paving and intended area of planing and of paving for each day's work, must include the directions of proposed planing and of proposed paving, sequence of adjacent lane paving, sequence of skipped lane paving, intersection planing and paving scheduling and sequencing, and proposed notifications and coordinations to be timely made. The plan must show HMA joints relative to the final pavement marking lane lines.

8. Names, job titles, and contact information for field, office, and plant supervisory personnel.

9. A copy of the approved Mix Designs.

10. Tonnage of HMA to be placed each day.

11. Approximate times and days for starting and ending daily operations.

5-04.3(14)B3 Pre-Paving and Pre-Planing Briefing

At least 2 Working Days before the first paving operation and the first planing operation, or as scheduled by the Engineer for future paving and planing operations to ensure the Contractor has adequately prepared for notifying and coordinating as required in the Contract, the Contractor must be prepared to discuss that day's operations as they relate to other entities and to public safety and convenience, including driveway and business access, garbage truck operations, transit operations and working around energized overhead wires, school and nursing home and hospital and other accesses, other Contractors who may be operating in the area, pedestrian and bicycle traffic, and emergency services. The Contractor, and Subcontractors that may be part of that day's operations, must meet with the Engineer and discuss the proposed operation as it relates to the submitted planing plan and paving plan, approved traffic control plan, and public convenience and safety. Such discussion includes, but is not limited to:

1. General for both the Paving and Planing:

a. The actual times of starting and ending daily operations.

b. In intersections, how to break up the intersection, and address traffic control and signalization for that operation, including use of peace officers.

c. The sequencing and scheduling of paving operations and of planing operations, as applicable, as it relates to traffic control, public convenience and safety, and other Contractors who may operate in the Project limits.

d. Notifications required of Contractor activities and coordinating with other entities and the public as necessary.

e. Description of the sequencing of installation and types of temporary pavement markings as it relates to planning and paving.

f. Description of the sequencing of installation of, and the removal of, temporary pavement patch material around exposed castings and as may be needed.

g. Description of procedures and equipment to identify hidden metal in the pavement, such as survey monumentation, monitoring wells, streetcar rail, and castings, before planing as per Section 5-04.3(14)B2.

h. Description of how flaggers will be coordinated with the planing, paving, and related operations.

i. Description of sequencing of traffic controls for the process of rigid pavement base repairs.

j. Other items the Engineer deems necessary to address.

2. Paving – additional topics:

a. When to start applying tack and coordinating with paving.

b. Types of equipment and numbers of each type of equipment to be used. If more pieces of equipment than personnel are proposed, describe the sequencing of the personnel operating the types of equipment. Discuss the continuance of operator personnel for each type of equipment as it relates to meeting Specification requirements.

c. Number of JMFs to be placed, and if more than one JMF is used, how the Contractor will ensure different JMFs are distinguished, how pavers and how MTVs are distinguished, and how pavers and MTVs are cleaned so that one JMF does not adversely influence the other JMF.

d. Description of contingency plans for that day's operations such as equipment breakdown, rain out, and supplier shutdown of operations.

e. Number of sublots to be placed, sequencing of density testing, and other sampling and testing.

5-04.3(15) Sealing Pavement Surfaces

Apply a fog seal where shown in the plans. Construct the fog seal in accordance with Section 5-02.3. Unless otherwise approved by the Engineer, apply the fog seal prior to opening to traffic.

5-04.3(16) HMA Road Approaches

HMA approaches shall be constructed at the locations shown in the Plans or where staked by the Engineer. The Work shall be performed in accordance with Section 5-04.

5-04.3(17) Temporary Asphalt Pavement

(December 1, 2021 CFW GSP)

Section 5-04.3(17) is a new section:

Temporary asphalt pavement shall be placed by the Contractor immediately upon the request of the Engineer for the maintenance of traffic during construction. These areas include: voids created by the removal of existing improvements (i.e. Traffic islands, curbs), providing paved access to private properties, and ramps for property access during cement concrete driveway approach construction. All temporary paving shall be approved by the Engineer before placement. Any areas of temporary pavement to be removed and replaced shall be approved by the Engineer beforehand. This work shall also include the removal of temporary asphalt concrete pavement in its entirety prior to final paving.

Hot Mix Asphalt Temporary Pavement: Hot mix asphalt will be used for any trench or pavement restoration within the traveled way. Whether temporary or permanent, saw cut and treat edges with CSS-1 asphalt emulsion and apply a minimum 3-inch pavement depth or match existing, whichever is greater. Also, fill voids created by the removal of existing traffic islands and curbing, paving over excavated roadway to temporary access to adjacent properties, and ramps for property access during concrete approach construction.

Cold Mix Asphalt Temporary Pavement: Cold mix asphalt is allowed for temporary paving outside the traveled way. The cold mix shall be approved by the Engineer and placed in a 2-inch minimum thickness. Placement of temporary pavement without prior approval of the Engineer shall be considered as a benefit of the Contractor and no cost to the owner. Any areas of temporary pavement to be removed and replaced require prior approval by the Engineer. This work shall include the removal of the temporary pavement prior to paving of final asphalt concrete pavement.

5-04.4 Measurement

HMA Cl. ___ PG ___, HMA for ___ Cl. ___ PG ___, and Commercial HMA will be measured by the ton in accordance with Section 1-09.2, with no deduction being made for the weight of asphalt binder, mineral filler, or any other component of the mixture. If the Contractor elects to remove and replace mix as allowed by Section 5-04.3(11), the material removed will not be measured.

Roadway cores will be measured per each for the number of cores taken.

Pavement repair excavation will be measured by the cubic yard.

Planing bituminous pavement will be measured by the square yard.

(April 12, 2018 CFW GSP)

Section 5-04.4 is supplemented with the following:

Hot Mix Asphalt Temporary Pavement shall be measured by the ton of material actually placed, with no deduction being made for the weight of liquid asphalt, blending sand, mineral filler, or any other component of the mixture. Hot Mix Asphalt Temporary Pavement shall be paid under the "Temporary Pavement" bid item and shall include placement and compaction of hot mix asphalt, removal and disposal of temporary pavement.

Cold Mix Asphalt Temporary Pavement will not be measured and shall be considered incidental to other bid items.

5-04.5 Payment

Payment will be made for each of the following Bid items that are included in the Proposal:

"HMA Cl. ___ PG ___", per ton.

"HMA for Approach Cl. ___ PG ___", per ton.

"HMA for Preleveling Cl. ___ PG ___", per ton.

"HMA for Pavement Repair Cl. ___ PG ___", per ton.

"Commercial HMA", per ton.

The unit Contract price per ton for "HMA Cl. ___ PG ___", "HMA for Approach Cl. ___ PG ___", "HMA for Preleveling Cl. ___ PG ___", "HMA for Pavement Repair Cl. ___ PG ___", and "Commercial HMA" shall be full compensation for all costs, including anti-stripping additive, incurred to carry out the requirements of Section 5-04 except for those costs included in other items which are included in this Subsection and which are included in the Proposal.

"Pavement Repair Excavation Incl. Haul", per cubic yard.

The unit Contract price per cubic yard for "Pavement Repair Excavation Incl. Haul" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(4) with the exception, however, that all costs involved in the placement of HMA shall be included in the unit Contract price per ton for "HMA for Pavement Repair Cl. ___ PG ___", per ton.

"Asphalt for Prime Coat", per ton.

The unit Contract price per ton for "Asphalt for Prime Coat" shall be full payment for all costs incurred to obtain, provide and install the material in accordance with Section 5-04.3(4).

"Prime Coat Agg.", per cubic yard, or per ton.

The unit Contract price per cubic yard or per ton for "Prime Coat Agg." shall be full pay for furnishing, loading, and hauling aggregate to the place of deposit and spreading the aggregate in the quantities required by the Engineer.

"Planing Bituminous Pavement", per square yard.

The unit Contract price per square yard for "Planing Bituminous Pavement" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(14).

"Job Mix Compliance Price Adjustment", by calculation.

"Job Mix Compliance Price Adjustment" will be calculated and paid for as described in Section 5-04.3(9)C6.

"Compaction Price Adjustment", by calculation.

"Compaction Price Adjustment" will be calculated and paid for as described in Section 5-04.3(10)D3.

"Roadway Core", per each.

The Contractor's costs for all other Work associated with the coring (e.g., traffic control) shall be incidental and included within the unit Bid price per each.

"Cyclic Density Price Adjustment", by calculation.

"Cyclic Density Price Adjustment" will be calculated and paid for as described in Section 5-04.3(10)B.

END OF DIVISION 5

DIVISION 6
STRUCTURES

6-02 CONCRETE STRUCTURES

6-02.3 Construction Requirements

6-02.3(2) Proportioning Matierials

6-02.3(2)A Contractor Mix Design
(December 16, 2022 CFW GSP)

The first sentence of the first paragraph of Section 6-02.3(2)A is deleted and replaced with the following:

> The Contractor shall provide a mix design in writing to the Engineer for all classes of concrete.

6-02.3(2)B Commercial Concrete
(December 16, 2022 CFW GSP)

The last sentence of the first paragraph of Section 6-02.3(2)B is deleted and replaced with the following:

> Commercial concrete requires mix design and source approvals for cement, aggregate, and other admixtures.

Section 6-02.3(2)B is supplemented with the following:

> The concrete class requirements in paragraph one and two are applicable for Type I/II Portland cement. See Section 9.01.2(1)B for requirements for Type 1L cement.

6-02.3(4) Construction Requirements

6-02.3(4)A Qualification of Concrete Suppliers
(November 25, 2025 WSDOT GSP, OPT 1)

Section 6-02.3(4)A is revised to read:

> Batch Plant Prequalification requires a certification by the National Ready Mix Concrete Association (NRMCA). Information concerning NRMCA certification may be obtained from the NRMCA at 900 Spring Street, Silver Springs, MD 20910 or online at www.nrmca.org. The NRMCA certification shall be valid for a 2-year period from the date of certificate. The following documentation shall be submitted to the Engineer; a copy of the current NRMCA Certificate of Conformance, the concrete mix design(s) (WSDOT Form 350-040), along with copies of the truck list, batch plant scale certification, admixture dispensing certification, and volumetric water batching devices (including water meters) verification.
>
> For central-mixed concrete, the mixer shall be equipped with a timer that prevents the batch from discharging until the batch has been mixed for the prescribed mixing time. A mixing time of 1 minute will be required after all materials and water have been introduced into the drum. Shorter mixing time may be allowed if the mixer performance is tested in accordance with (AASHTO M157 Annex A1 Concrete Uniformity Requirements). Tests shall be conducted by an independent testing lab or by a commercial concrete producer's lab. If the tests are performed by a producer's lab, the Engineer or a representative will witness all testing.

For shrink-mixed concrete, the mixing time in the stationary mixer shall not be less than 30 seconds or until the ingredients have been thoroughly blended.

For transit-mixed or shrink-mixed concrete, the mixing time in the transit mixer shall be a minimum of 70 revolutions at the mixing speed designated by the manufacturer of the mixer. Following mixing, the concrete in the transit mixer may be agitated at the manufacturer's designated agitation speed.

All transit-mixers shall be equipped with an operational revolution counter and a functional device for measurement of water added. All mixing drums shall be free of concrete buildup and the mixing blades shall meet the minimum Specifications of the drum manufacturer. A copy of the manufacturer's blade dimensions and configuration shall be on file at the concrete producer's office. A clearly visible metal data plate (or plates) attached to each mixer and agitator shall display: (1) the maximum concrete capacity of the drum or container for mixing and agitating, and (2) the rotation speed of the drum or blades for both the agitation and mixing speeds. Mixers and agitators shall always operate within the capacity and speed-of-rotation limits set by the manufacturer. Mixers, when fully loaded, shall keep the concrete uniformly mixed. All mixers and agitators shall be capable of discharging the concrete at a steady rate. Only those transit-mixers which meet the above requirements will be allowed to deliver concrete to a Contracting Agency project covered by these Specifications.

In transit-mixing, mixing shall begin within 30 seconds after the cement is added to the aggregates.

For each project, at least biannually, or as required, the Plant Manager will examine mixers and agitators to check for buildup of hardened concrete or worn blades. If this examination reveals a problem, or if the Engineer wishes to test the quality of the concrete, slump tests may be performed with samples taken at approximately the ¼ and ¾ points as the batch is discharged. The maximum allowable slump difference shall be as follows:
If the average of the two slump tests is < 4 inches, the difference shall be < 1 inch or if the average of the two slump tests is >4 inches, the difference shall be < 1½ inches.

If the slump difference exceeds these limits, the equipment shall not be used until the faulty condition is corrected. However, the equipment may continue in use if longer mixing times or smaller loads produce batches that pass the slump uniformity tests.

All concrete production facilities will be subject to verification inspections at the discretion of the Engineer. Verification inspections are a check for: current scale certifications; accuracy of water metering devices; accuracy of the batching process; and verification of coarse aggregate quality.

If the concrete producer fails to pass the verification inspection, the following actions will be taken:

1. For the first violation, a written warning will be provided.

2. For the second violation, the Engineer will give written notification and the Contracting Agency will assess a price reduction equal to 15 percent of the invoice cost of the concrete that is supplied from the time of the infraction until the deficient condition is corrected.

3. For the third violation, the concrete supplier is suspended from providing concrete until all such deficiencies causing the violation have been permanently corrected and the plant and equipment have been reinspected and meets all the prequalification requirements.

4. For the fourth violation, the concrete supplier shall be disqualified from supplying concrete for 1 year from the date of disqualification. At the end of the suspension period the concrete supplier may request that the facilities be inspected for prequalification.

6-02.3(4)D Temperature and Time for Placement
(November 3, 2025 WSDOT GSP, OPT 1)
Section 6-02.3(4)D is revised to read:

When conditions are such that the concrete may experience an accelerated initial set, the Engineer may require a shorter time to discharge. The time to discharge in the above table may be extended 15 minutes upon request from the Contractor and concurrence of the Engineer. Time extensions greater than 15 minutes require a Type 3 Working Drawing submittal. The submittal shall include:

1. An explanation of why an extended placement time is necessary for the Work.

2. The proposed concrete mix design, including the specified dosage of chemical admixtures for the anticipated range of concrete temperatures and details regarding when the admixtures are to be introduced into the mix. Type B (retarding) or Type D (water-reducing and retarding) chemical admixtures are required for structural or self-consolidating concrete.

3. Technical data sheets and supporting information from the admixture supplier indicating the appropriate chemical admixture dosage for the anticipated concrete temperatures, haul times, and working times.

4. The haul distance and estimated range of haul times.

5. The proposed maximum time to discharge for the mix(es) shall not exceed 3 hours.

6-10 CONCRETE BARRIER

6-10.3 Construction Requirements

6-10.3(1) Precast Concrete Barrier
(December 16, 2022 CFW GSP)
Section 6-10.3(1) is supplemented with the following:

The concrete class requirements are applicable for Type I/II Portland cement. See Section 9-01.2(1)B for requirements for Type 1L cement.

6-10.3(2) Cast-In-Place Concrete Barrier
(December 16, 2022 CFW GSP)
Section 6-10.3(2) is supplemented with the following:

The concrete class requirements are applicable for Type I/II Portland cement. See Section 9-01.2(1)B for requirements for Type 1L cement.

END OF DIVISION 6

DIVISION 7
DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS, AND CONDUITS

7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS

7-05.3 Construction Requirements
(March 22, 2023 CFW GSP)

Section 7-05.3 is supplemented with the following:

Storm drain cleanouts shall be provided for retaining wall drainage and connected to the storm drainage system at the locations specified in the plans or as directed by the Engineer.

All lids located within sidewalk areas, along an ADA pedestrian route, or in other accessible surfaces within the public right-of-way or on publicly owned properties, must meet ADA requirements and be slip-resistant. Acceptable slip-resistant products shall be non-slip methyl methacrylate (MMA) coating. Placement of the non-slip MMA coating shall be in accordance with the manufacturer's recommendations. Vertical edges of the utility shall be flush with the adjoining surface to the extent possible after installation.

The following requirements shall be applicable to both existing and proposed structures, as shown in the plans, or as designated by the Engineer:

Vaned Grate vs Solid Lid

A vaned grate and associated frame shall be installed on manholes and catch basins located where they will accept runoff. Bi-directional vaned grates shall be installed at all roadway sag locations and at low points along curb returns.

All structures not receiving surface runoff shall include solid lids, unless otherwise indicated in the plans or directed by the Engineer.

Locking vs Non-Locking Lid

All lids and frames shall be locking unless shown as non-locking on plans or directed otherwise by the Engineer. The Contractor shall place anti-seize compound on all locking lid bolts prior to the final project punch list inspection.

Round vs Square Lid

All structures, new or existing, shall utilize round lids, except for those that accept surface runoff (i.e. those located along a gutter flow line). Catch basins shall include conversion risers to accommodate round lids where indicated in the plans or directed by the Engineer.

Heavy-Duty Hinged Frames and Covers

Heavy-duty hinged frames and covers shall be installed whenever round, solid lids are required as outlined above.

7-05.3(1) Adjusting Manholes and Catch Basins to Grade
(November 14, 2025 CFW GSP)

Section 7-05.3 is supplemented with the following:

The pavement shall be removed to a neat circular shape for circular grates and covers and a neat rectangular shape for rectangular grates and covers.

Where existing structures are located within the wheel path of a travel lane, adjusting of manholes and catch basins shall include conversion risers and heavy duty locking frames and covers and high-impact risers.

7-05.3(3) Connections to Existing Manholes
(April 12, 2018 CFW GSP)
Section 7-05.3(3) is supplemented with the following:

The requirements of this section shall also apply to connections to existing catch basins.

7-05.3(5) Connections to Existing Pipe
(April 12, 2018 CFW GSP)
Section 7-05.3(5) is a new section:

The contractor shall connect (or reconnect) existing pipes to new manholes or catch basins without obstructing flow from upstream locations.

7-05.3(6) Cleaning
(April 12, 2019 CFW GSP)
Section 7-05.3(6) is a new section:

Prior to final project acceptance by the City, the Contractor shall be responsible to ensure the sumps of all manholes, inlets, catch basins, and drywells are clean of sediment and debris.

7-05.4 Measurement
(January 19, 2024 CFW GSP)
Section 7-05.4 is supplemented with the following:

"Non-slip MMA Coating for Lids" will be measured per square foot.

7-05.5 Payment
(January 19, 2024 CFW GSP)
Section 7-05.5 is supplemented with the following:

The unit contract price for catch basins and/or manholes shall be full pay for furnishing all labor, tools, equipment, and materials necessary to complete each unit according to the Plans and Specifications. This includes all sawcutting, pavement removal and disposal, excavation, dewatering (if required), temporary flow bypass, connections to existing and new pipe, foundation material, bedding, imported backfill, compaction, surface restoration, testing, cleaning, and furnishing and placing of all accessories and conversion risers, temporary patching hot mix to allow for the passage of traffic, and other items as applicable. Frames and grates or rings and covers, grade rings and adjustment risers including conversion risers, and non-slip MMA coating for new lids in accessible surfaces shall be considered incidental to this bid item and will not be measured for separate payment. 50% of payment will be made once the catch basin or manhole is installed and the pipe inlets and outlets are grouted. The remaining 50% will be paid once risers/rings are grouted to the satisfaction of the City, the frame/grate is installed, and non-slip MMA coating is applied.

The unit contract price for "Adjust Manhole" and/or "Adjust Catch Basin" and/or "Adjust Inlet" applies to existing storm drainage catch basins, inlets, and manholes that require adjustment to grade by addition or removal of adjustment risers. The unit contract price includes all labor, tools, equipment, and materials necessary to adjust to finished grade, sawcutting, temporary patching hot mix to allow for the passage of traffic, restoration of

the area around the adjusted structure, and providing new rings and covers or frames and grates. Conversion of catch basin/manhole/inlet lids (i.e. convert to heavy duty, solid, round locking lid) shall be included in this bid item. Grade rings and adjustment risers (concrete or high-impact) shall be considered incidental to this bid item and will not be measured for separate payment. Non-slip MMA coating for lids in accessible surfaces shall be considered incidental to this bid item and will not be measured for separate payment. Payment will be made once the adjustment is fully complete and grouted. Partial payment will not be made if risers have been added, but the grouting has not been completed to the satisfaction of the City.

"Non-slip MMA Coating for Lids", per square foot.

7-07 CLEANING EXISTING DRAINAGE STRUCTURES

7-07.5 Payment

(April 12, 2018 CFW GSP)

Section 7-07.5 is replaced with the following:

All costs associated with cleaning existing drainage structures shall be considered incidental to and included in the various bid items and no additional payment shall be made.

END OF DIVISION 7

DIVISION 8
MISCELLANEOUS CONSTRUCTION

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

8-01.3 Construction Requirements

8.01.3(1) General
(April 12, 2018 CFW GSP)

The first paragraph of 8-01.3(1) is deleted and replaced with the following:

The Contractor shall install a high visibility fence along the right-of-way lines shown in the Plans or as instructed by the Engineer.

8-01.3(1)A Submittals
(April 12, 2018 CFW GSP)

Section 8-01.3(1)A is revised to read:

A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared by the Contractor and submitted for approval to the Engineer. The plan shall consist of the Contractor's complete strategy to meet the requirements of the Department of Ecology's NPDES and State Waste Discharge General Permit for Stormwater Discharges Associated With Construction Activity (General Permit). The SWPPP shall include and modify as necessary the Site Preparation and Erosion Control Plan drawings provided as part of the Contract Plans. The Contractor shall prepare review and modify the SWPPP as necessary to be consistent with the actual work schedule, sequencing, and construction methods that will be used on the project. The Contractor's SWPPP shall meet the requirements of the general permit. The Contractor's modifications to the SWPPP shall also incorporate the content and requirements for the Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with Section 1-07.15(1).

The SWPPP shall document all the erosion and sediment control Best Management Practices (BMPs) proposed, whether permanent or temporary. The plan shall document installation procedures, materials, scheduling, and maintenance procedures for each erosion and sediment control BMP. The Contractor shall submit the SWPPP for the Engineer's approval before any work begins. The Contractor shall allow at least five working days for the Engineer's review of the initial SWPPP or any revisions to the modified SWPPP. Failure to approve all or part of any such plan shall not make the Contracting Agency liable to the Contractor for any work delays. The Contractor may not begin work without an approved Contractor's SWPPP.

The Contractor shall complete and modify the SWPPP to meet the Contractor's schedule and method of construction. All TESC Plans shall meet the requirements of the current edition of the WSDOT Temporary Erosion and Sediment Control Manual M 3109 and be adapted as needed throughout construction based on site inspections and discharge samples to maintain compliance with the CSWGP. The Contractor shall develop a schedule for implementation of the SWPPP work and incorporate it into the Contractor's progress schedule.

In addition, the SWPPP shall outline the procedures to be used to prevent high pH stormwater or dewatering water from entering surface waters. The plan shall include how the pH of the water will be maintained between pH 6.5 and pH 8.5 prior to being discharged

from the project or entering surface waters. Prior to beginning any concrete or grinding work, the Contractor shall submit the plan, for the Engineer's review and approval.

As a minimum, the SWPPP shall include all the SWPPP requirements identified in the General Permit, including:

Narrative discussing and justifying erosion control decisions (12 elements)

Drawings illustrating BMPs types and locations

Engineering calculations for ponds and vaults used for erosion control

A schedule for phased installation and removal of the proposed BMPs, including:

A. BMPs that will be installed at the beginning of project startup.

B. BMPs that will be installed at the beginning of each construction season.

C. BMPs that will be installed at the end of each construction season.

D. BMPs that will be removed at the end of each construction season.

E. BMPs that will be removed upon completion of the project.

An Ecology template is available to the Contractor for producing the SWPPP, using project-specific information added by the Contractor. The template and instructions are available at:
http://www.ecy.wa.gov/programs/wq/stormwater/construction/

Turbidity and pH Exceedances

Following any exceedances of the turbidity or pH benchmarks, the Contractor shall provide the following at no additional cost to the Contracting agency:

1. The necessary SWPPP revisions and on-site measures/revisions including additional source control, BMP maintenance, and/or additional stormwater treatment BMPs that are necessary to prevent continued exceedance of turbidly and/or pH benchmarks.

2. The regulatory notification to the Dept. of Ecology and to the Engineer of any monitoring results requiring regulatory notification.

3. The additional daily sampling and reporting measures described in the General Permit to verify when project site runoff is in compliance.

8-01.3(1)B Erosion and Sediment Control (ESC) Lead
(October 3, 2022 WSDOT GSP, OPTION 1)
Item number 3 and 4 in the second paragraph of Section 8-01.3(1)B are revised to read:

3. Submit to the Engineer no later than the end of the next working day following the inspection a TESC Inspection Report that includes:
    a. When, where, and how BMPs were installed, maintained, modified, and removed.

    b. Observations of BMP effectiveness and proper placement.

c. Recommendations for improving future BMP performance with upgraded or replacement BMPs when inspections reveal TESC BMP deficiencies.

d. Identify for each discharge point location whether there is compliance with state water quality standards in WAC 173-201A for turbidity and pH.

8-01.3(2) Seeding, Fertilizing, and Mulching

8-01.3(2)B Seeding and Fertilizing

(September 3, 2019 WSDOT GSP, OPTION 3)

Section 8-01.3(2)B is supplemented with the following:

Grass seed shall be a commercially prepared mix, made up of low growing species which will grow without irrigation at the project location, and approved by the Engineer. The application rate shall be two pounds per 1000 square feet. Fertilizer shall be a commercially prepared mix of 10-20-20 and shall be applied at the rate of 10 pounds per 1000 square feet.

8-02 ROADSIDE RESTORATION

8-02.3 Construction Requirements

8-02.3(1) Responsibility During Construction

(April 12, 2018 CFW GSP)

Section 8-02.3(1) is supplemented with the following:

Landscape construction is anticipated to begin after all curbs, sidewalks, walls, and associated roadside work is completed. Landscape materials shall not be installed until weather permits and installation has been authorized by the Engineer. If water restrictions are anticipated or in force, planting of landscape materials may be delayed.

Throughout planting operations, the Contractor shall keep the premises clean, free of excess soils, plants, and other materials, including refuse and debris, resulting from the Contractor's work. At the end of each work day, and as each planting area is completed, it shall be neatly dressed, and all surrounding walks and paved areas shall be cleaned to the satisfaction of the Engineer. No flushing will be allowed. At the conclusion of work, the Contractor shall remove surplus soils, materials, and debris from the construction site and shall leave the project in a condition acceptable to the Engineer.

8-02.3(5) Planting Area Preparation

(April 12, 2018 CFW GSP)

Section 8-02.3(5) is supplemented with the following:

Thoroughly scarify subgrade in tree, and seeded lawn areas to a minimum depth of six-inches (6") except within critical root zones of existing trees to remain, as noted on plans. Scarified subgrade shall be inspected and approved by the Engineer prior to the placement of topsoil. Remove all construction debris and rocks over two-inches (2") in diameter prior to placing topsoil.

Scarified subgrade shall be inspected and approved by the Engineer prior to placement of topsoil. Upon approval of the subgrade, Topsoil A shall be installed to a minimum depth of 4 inches lightly compacted depth in all seeded areas, unless otherwise noted on plans.

Lightly compact soil and establish a smooth and uniform finished grade to allow to surface drainage and prevents ponding.

The areas shall be brought to a uniform grade, 1 inch, or the specified depth of mulch, below walks, curbs, junction and valve boxes, and driveways, unless otherwise specified.

The costs of removing all excess material and debris shall be considered incidental to and included in the unit contract prices of other items in this contract.

8-02.3(6)B Fertilizers

(September 3, 2019 WSDOT GSP, OPTION 3)

Section 8-02.3(6)B is supplemented with the following:

Fertilizer shall be a commercially prepared mix of 10-20-20 and shall be applied at the rate of 10 pounds per 1000 square feet.

8-02.3(8) Planting

(September 20, 2024 CFW GSP)

Section 8-02.3(8) is supplemented with the following:

All Topsoil Type A required to plant trees and bark mulch for topdressing, as specified in the plans, shall be considered incidental to and included in the unit contract price of the trees.

Use loosened and replaced compacted mineral native soil without organics under tree rootball. Use topsoil on sides of tree rootball only. Use full depth topsoil for shrubs.

Trees shall be handled by the rootball, not by the trunk. Burlap and wire shall remain intact until trees are set in their final positions within each planting pit.

Plant trees and shrubs upright and rotate in order to give the best appearance or relationship to adjacent plants, topography, and structures. Hold plant rigidly in position until topsoil has been backfilled and water settled free of voids and air pockets and tamped firmly around the ball or roots.

When the pit is backfilled halfway, place the specified quantity of fertilizer plant tablets and stakes as shown in the Plans. Evenly space the fertilizer tablets around the perimeter of, and immediately adjacent to the root system. Carefully place water and compact planting topsoil, filling all voids. Tree root crowns to be 1” higher than finished grade to allow for settlement.

When the planting pit is three quarters backfilled, fill with water and allow water to soak away. Fill the pits with additional topsoil to finish grade and continue backfilling as detailed in the Plans. Water trees immediately after planting.

The contractor shall place pea gravel flush with bottom of tree grates in tree wells in accordance with City Standard Details.

8-02.3(9)B Seeding and Fertilizing

(September 3, 2019 WSDOT GSP, OPTION 2)

Section 8-02.3(9)B is supplemented with the following:

Grass seed shall be a commercially prepared mix, made up of low growing species which will grow without irrigation at the project location, and accepted by the Engineer. The application rate shall be two pounds per 1000 square feet.

8-02.3(10) Fertilizer
(April 12, 2018 CFW GSP)
Section 8-02.3(10) is supplemented with the following:

All fertilizers shall be furnished in standard unopened containers with weight, name of plant nutrients and manufacturer's guaranteed statement of analysis clearly marked, in accordance with State and Federal law.

Seeded areas, trees, and shrubs shall be fertilized at a rate according to fertilizer manufacturer's recommendations.

8-02.3(11) Bark or Wood Chip Mulch
(March 22, 2023 CFW GSP)
Section 8-02.3(11) is supplemented with the following:

Bark Mulch shall be placed over all tree planting pits to a depth no less than two (2) inches, or as detailed in the Plans. Thoroughly water and hose down plants with a fine spray to wash the leaves of the plants immediately after application.

8-02.3(17) Protection of Private Property and Property Restoration
(March 22, 2023 CFW GSP)
Section 8-02.3(17) is a new section:

Property Restoration shall consist of fine grading and restoration of adjacent landscaped areas; adjustment and/or replacement of private irrigation systems; slope restoration behind sidewalks; timber edgings; installing and replacing private wood and chain link fencing; and other work not currently identified in the plans, as directed by the Engineer.

The Contractor is specifically reminded that any unnecessary damage caused by construction activities will be repaired at the Contractor's expense.

Restore all disturbed areas to original condition or better. Grass areas shall be restored with hydroseed where directed.

Removal of tree roots outside the limits of construction, as directed by the Engineer and under the supervision of a certified arborist, shall be paid for under "Property Restoration".

Topsoil shall be Type A and mulch shall be Bark or Wood Chip Mulch, per these Special Provisions.

All materials shall conform to Sections 9-14 Erosion Control and Roadside Planting and 9-15 Irrigation System of the Standard Specifications.

The force account provided for property restoration also includes any adjustments and/or replacements of existing irrigation systems not covered under Section 8-03 Irrigation Systems of the Special Provisions. This work shall also consist of modifying existing landscape lighting systems as may become necessary by these improvements.

The Contractor is advised that protecting existing private irrigation and lighting systems from damage does not constitute a basis for claim or extra work.

8-02.4 Measurement

(April 12, 2018 CFW GSP)

Section 8-02.4 is supplemented with the following:

Topsoil Type A, will be measured by the cubic yard in the haul conveyance at the point of delivery.

"Sod Lawn" will be measured in square yards of actual lawn completed, established, and accepted.

"Property Restoration" will be paid by force account and must be approved by the engineer prior to completing the work.

Fertilizer shall be incidental to other bid items unless specifically listed as a bid item.

8-02.5 Payment

(April 12, 2018 CFW GSP)

Section 8-02.5 is supplemented with the following:

"Topsoil Type A" per cubic yard.

"Sod Lawn" per square yard of actual lawn completed, established and accepted.

"Property Restoration" per force account.

8-03 IRRIGATION SYSTEMS

8-03.1 Description

(April 12, 2018 CFW GSP)

Section 8-03.1 is supplemented with the following:

The work shall consist of installing a fully functioning and complete landscape irrigation system.

Some private irrigation systems exist within the project limits which may be impacted by the project improvements. The Contractor shall minimize the impacts to these facilities to the maximum extent possible. In the event that irrigation systems are found to encroach within the limits of the project improvements, they shall be modified as necessary per Engineer directed force accounts to ensure satisfactory operation upon completion of the improvements.

The Contractor is responsible to coordinate with affected property owners to ensure their existing sprinkler systems are fully functional before they are disturbed.

8-03.2 Materials

(April 12, 2018 CFW GSP)

Section 8-03.2 is supplemented with the following:

The materials for the irrigation system, where applicable, shall conform with the following manufacturers in order to be compatible with other systems located throughout the City.

Rainbird 1804 sprinkler bodies and MPR spray nozzles
Rainbird PEB Automatic Control Valve
Rainbird ESPLXBASIC Controller and Cabinet

Buckner Quick Coupling Valve
Febco 850 Double Check Valve
Legend Bronze Valve
Superior 3100 Master Control Valve

8-03.3 Construction Requirements
(April 12, 2018 CFW GSP)
Section 8-03.3 is supplemented with the following:

All work shall be in strict conformance with the Lakehaven Water and Sewer District Water System and Sewer Standards, together with the plans, details and manufacturer's written information regarding recommended installation procedures. References to the use of galvanized pipe in the Standard Specifications and Amendments shall be replaced with Schedule 80 PVC or other Engineer accepted pipe material.

Private sprinkler irrigation systems found to encroach within the limits of improvements shall be modified as necessary to remove the encroachment and to ensure satisfactory operation of the remaining system. The Contractor shall ensure that existing private systems remain in operation during the construction of this project. The Contractor shall furnish temporary water to disconnected existing irrigation systems. Private irrigation systems that have been damaged during construction activities shall be repaired within 5 working days. The Contractor shall be liable for any damage due to irrigation facilities damaged by his operations and shall repair such damaged facilities to an "equal or better than" original condition. This work will include, but not be limited to, cutting and capping existing pipe, relocating existing risers and sprinkler heads new pipe heads and connections, and testing of the system. Payment will be by Force Account for Property Restoration.

8-04 CURBS, GUTTERS, AND SPILLWAYS

8-04.3 Construction Requirements
(September 20, 2024 CFW GSP)
Section 8-04.3 is supplemented with the following:

The sub-base for curb and gutter sections shall be compacted to 95 percent density at or below optimum moisture content, as per Section 3-03.3(14)D revised, before placing the curb and gutter.

White-pigmented curing compounds will not be allowed.

The top of the finished concrete shall not deviate more than one-eighth (1/8") in ten feet (10') or the alignment one-fourth (1/4") in ten feet (10').

Where shown in the Plans, the concrete curb will be ramped for wheel chairs as shown in the City of Federal Way Standard Details and WSDOT Standard Plans.

Where shown in the Plans, the Contractor shall paint the curbs with 2-coats of yellow paint. Paint and application shall conform to the Standard Specifications for traffic paint striping.

8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways
(December 16, 2022 CFW GSP)
Section 8-04.3(1) is supplemented with the following:

The concrete class requirements in paragraph one are applicable for Type I/II Portland cement. See Section 9.01.2(1)B for requirements for Type 1L cement.

8-04.3(6) Catch Basin Grouting & Repair
(February 14, 2025 CFW GSP)
Section 8-04.3(6) is a new section:

When installation of new curb and/or curb and gutter disturbs existing catch basins, the Contractor shall adjust the catch basin as needed and shall grout the catch basin. No wooden shims may be used for adjustment.

8-04.4 Measurement
(February 14, 2025 CFW GSP)
Section 8-04.4 is supplemented with the following:

Painting of curbs, where required, will not be measured and is considered incidental to the unit price of the type of curb.

Minor adjustments and grouting of catch basins within areas of replaced curbs or curb and gutters is considered incidental to the unit price of the type of curb.

8-04.5 Payment
(February 14, 2025 CFW GSP)
Section 8-04.5 is supplemented with the following:

"Cement Conc. Rolled Curb & Gutter", per linear foot.

8-06 CEMENT CONCRETE DRIVEWAY ENTRANCES

8-06.3 Construction Requirements
(December 16, 2022 CFW GSP)
Section 8-06.3 is supplemented with the following:

The concrete class requirements in paragraph one are applicable for Type I/II Portland cement. See Section 9.01.2(1)B for requirements for Type 1L cement.

All driveways shall remain open except as necessary to permit curing of construction materials or for short periods of time as required for excavations. However, at least one (1) driveway per parcel shall remain open to vehicular traffic at all times unless otherwise approved by the Engineer and affected property owner in writing. If a parcel has only one driveway, then that driveway must be constructed one-half at a time to allow the passage of vehicles. The amount of time that a driveway can be closed will be limited. To meet these requirements, the Contractor may use a quick setting concrete. The Engineer shall approve the quick-setting mix prior to use.

Property owners shall be notified in writing at least 48 hours in advance of any planned driveway closures

Crushed rock may be used, with Engineer approval, to maintain a driving surface.

8-06.5 Payment
(April 12, 2018 CFW GSP)
Section 8-06.5 is supplemented with the following:

If the Contractor chooses to use a quick-setting concrete mix for driveway construction, any additional costs to use such mix shall be incidental to the bid item for "Cement Conc. Driveway" and no additional payment will be made.

If the Contractor chooses to use crushed rock to maintain a driveway surface, it shall be incidental to the bid item for "Cement Conc. Driveway" and no additional payment shall be made.

8-07 PRECAST TRAFFIC CURB

8-07.3 Construction Requirements

8-07.3(16) Installing Curbs

(September 20, 2024 CFW GSP)

Section 8-07.3(16) is supplemented with the following:

Nosing pieces will be required at the exposed ends of curbs.

8-09 RAISED PAVEMENT MARKERS

8-09.1 Description

(September 20, 2024 CFW GSP)

Section 8-09.1 is supplemented with the following:

RPMs shall be installed in accordance with City of Federal Way Standard Details. Type 2BB RPMs (blue, bi-directional) shall be installed at all hydrant locations, near the center line of the street, offset to the side of the street containing the hydrant.

8-10 GUIDE POSTS AND BARRIER DELINEATORS

8-10.2 Materials

(September 20, 2024 CFW GSP)

Section 8-10.2 is supplemented with the following:

Flexible Guide Posts with Curb Base 9-17

8-10.4 Measurement

(September 20, 2024 CFW GSP)

Section 8-10.4 is supplemented with the following:

Flexible Guide Posts with Curb Base will be measured by the unit for each post and curb base furnished and installed.

Flexible Guide Post will be measured by the unit for each post including furnished and installed.

8-10.5 Payment

(September 20, 2024 CFW GSP)

Section 8-10.5 is supplemented with the following:

"Flexible Guide Post with Curb Base", per each.

"Flexible Guide Post", per each.

8-13 MONUMENT CASES

8-13.2 Materials

(March 13, 1995 WSDOT GSP, OPTION 1)

Section 8-13.2 is supplemented with the following:

The pipe shall be Schedule 40 galvanized pipe.

8-13.3(1) Monument Case and Cover

(November 24, 2025 CFW GSP)

The last paragraph of Section 8-13.3(1) is revised to read:

The monument will be furnished and set by the Contractor. A City of Federal Way Monument Record form shall be completed and stamped by a Professional Land Surveyor and submitted to the Project Engineer for each monument installed by the Contractor. Vertical measurements shall be on the NGVD 29 vertical datum. Horizontal positions shall be state plane coordinates on NAD 83/91 datum.

8-13.3(2)A Removing and Lowering Monument Case and Cover

(November 24, 2025 CFW GSP)

Section 8-13.3(2)A is supplemented with the following:

When existing monument cases are lowered prior to planing and/or paving, it is the Contractor's responsibility to notify the City of monument cases that are not able to be opened, lowered, and/or raised. If the Contractor does not notify the City of existing damage/issues with monument cases prior to planing and/or paving, any such damages/issues shall be the responsibility of the Contractor to repair and/or replace.

8-13.3(2)B Reinstalling Monument Case and Cover

(November 24, 2025 CFW GSP)

Section 8-13.3(2)B is supplemented with the following:

The concrete class requirements listed are applicable for Type I/II Portland cement. See Section 9.01.2(1)B for requirements for Type 1L cement.

8-13.3(3)C Permit to Remove or Destroy Survey Monuments

(January 19, 2024 CFW GSP)

Section 8-13.3(3)C is a new Section.

In accordance with RCW 58.24.040(8), no cadastral or geodetic survey monument may be disturbed without a valid permit to remove or destroy a survey monument, issued by the Washington State Department of Natural Resources. Permit applications can be obtained on the DNR Public Land Survey Office website. The permit application must be stamped by a registered Washington State Land Surveyor. The Contractor shall obtain the permit to Remove or Destroy a survey monument as necessary. All costs to obtain and comply with the permit shall be considered incidental to other bid items and no additional payment will be made.

8-13.4 Measurement

(*November 24, 2025 CFW GSP*)

The first paragraph of Section 8-13.4 is supplemented as follows:

Incidental to "Monument Case and Cover" is the installation of survey monuments (i.e. brass discs) and the preparation of the City of Federal Way Monument Record form which shall be completed and stamped by a Professional Land Surveyor and submitted to the Project Engineer for each new monument installed by the Contractor.

8-13.5 Payment

(*November 24, 2025 CFW GSP*)

The first paragraph of Section 8-13.4 is revised to read:

Payment for "Monument Case and Cover", per each, will be paid as follows:

- 50% of bid item – Upon satisfactory installation of monument, case, and cover.
- 100% of bid item – Upon City's acceptance of satisfactory Monument Record Forms.

8-14 CEMENT CONCRETE SIDEWALKS

8-14.3(5)C Surface Applied Detectable Warning Surface

(December 16, 2022 CFW GSP)

Section 8-14.3(5)C is replaced with the following:

MMA-Style Truncated Dome Detectable Warning Surfaces applied to asphalt surfaces for permanent installations shall be liquid-applied Vanguard ADA Systems, or approved equal.

8-14.4 Measurement

(April 12, 2018 CFW GSP)

Section 8-14.4 is supplemented with the following:

Detectable Warning Surface – Black will be measured per square foot.

MMA-Style Truncated Dome Detectable Warning Surfaces will be measured per square foot.

8-14.5 Payment

(September 20, 2024 CFW GSP)

Section 8-14.5 is supplemented with the following:

Payment for "Cement Conc. Curb Ramp Type ____" will not be made until the City has verified that the ramp(s) meet ADA requirements.

"Detectable Warning Surface – Black", per square foot.

"MMA-Style Truncated Dome Detectable Warning Surfaces", per square foot.

8-20 ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, INTELLIGENT TRANSPORTATION SYSTEMS, AND ELECTRICAL

8-20.1 Description

This Work consists of furnishing, installing and field testing all materials and equipment necessary to complete in place, fully functional system(s) of any of the following types, including modifications to an existing system, partial removal of an existing system, or complete removal of an existing system, all in accordance with approved methods, the Plan, the Special Provisions, and these Specifications:

1. Traffic Signal System
2. Illumination System
3. Intelligent Transportation Systems (ITS)

Unless otherwise noted, the location of signals, controllers, standards, and appurtenances shown in the Plans are approximate; and the exact location will be established by the Engineer in the field.

8-20.1(1) Regulations and Code

(September 20, 2024 CFW GSP)

Section 8-20.1(1) is supplemented with the following:

Where applicable, materials shall conform to the latest requirements of Puget Sound Energy (PSE), Tacoma Power, and the Washington State Department of Labor and Industries.

8-20.1(2) Industry Codes and Standards

(March 13, 2012 CFW GSP)

The following is added at the end of the first paragraph of this section:

National Electrical Safety Code (NESC) Committee, IEEE Post Office Box 1331445 Hoes Lane, Piscataway, NJ 08855-1331.

8-20.1(3) Permitting and Inspections

(April 12, 2018 CFW GSP)

Section 8-20.1(3) is supplemented with the following:

The Contractor shall be responsible for obtaining all required electrical permits, including all required City of Federal Way electrical permits. All costs to obtain and comply with electrical permits shall be included in the applicable bid items for the work involved.

8-20.2 Materials

8-20.2(1) Equipment List And Drawings

8-20.3 Construction Requirements

8-20.3(1) General

Section 8-20.3(1) is supplemented as follows:

Removal of Existing or Temporary Signal Systems

All removals associated with an electrical system, which are not designated to remain the property of the City of Federal Way, shall become the property of the Contractor and shall be removed from the project and be disposed of off-site at a legal disposal site.

For this project, all signal standards, terminal cabinets, vehicle signal heads, back plates, video detection equipment, traffic signal cabinet and all components, service cabinet and all components, BBS cabinet and components, light standards and luminaire arms, and overhead-mounted signs shall remain the property of the City of Federal Way. The Contractor shall deliver the items to King County.

Removals associated with the electrical system shall not be stockpiled within the jobsite without the Engineer's approval.

The Contractor shall:

Remove all wires for discontinued circuits from the conduit system.

Remove elbow sections of abandoned conduit entering junction boxes.

Abandoned conduit encountered during excavation shall be removed to the nearest outlets.

Remove foun3-07dations entirely.

Backfill voids created by removal of foundations and junction boxes. Backfilling and compaction shall be performed in accordance with Section 3-07.3(1)E and gravel borrow shall meet the requirements of Section 9-03.14(1), unless the Engineer has approved the use of native material.

Delivery of Removed Items

The Engineer shall decide the ownership of all salvaged signal materials. All salvaged signal materials not designated by the Engineer to remain property of the City of Federal Way shall become the property of the Contractor. The existing controller cabinet with all contents and any other items listed above shall remain the property of the City of Federal Way.

Removed signal and electrical equipment which remains the property of the City of Federal Way, shall be delivered to:

King County Signal Shop
Attn: Mark Parrett
155 Monroe Avenue NE
Renton, Washington 98056
Phone: 206-396-3763

Forty-eight working hours advance notice shall be communicated to both the Engineer and the King County Signal Technician at the address listed above. Delivery shall occur between the hours of 8:00 am to 2:00 pm, Monday through Friday. Material will not be accepted without the required advance notice.

The Contractor shall be responsible for unloading the equipment where designated by the Engineer or King County Signal Technician at the delivery site.

Equipment damaged during removal or delivery shall be repaired or replaced at the Engineer's discretion, at no cost to the City of Federal Way.

All costs involved in furnishing all labor, materials, tools, and equipment necessary for the complete protection, removal, and delivery of the existing or Temporary Traffic Signal System items listed above shall be included in the Contractor's lump sum bid price for the "Traffic Signal Modifications" or "Temporary Traffic Signal System".

8-20.3(1)B Communication System Repairs

(September 20, 2024 CFW GSP)

Section 8-20.3(1)B is supplemented with the following:

Fiber Optic Cable Service Outage Duration and Notification

The maximum allowable interruption to the operation of the existing fiber optic cable service is three days, including testing. Outages of fiber optic cable may affect multiple parties, including but not limited to, the City, King County, and/or WSDOT. Proposed outage dates shall be reviewed and approved by the City. The City shall coordinate the outage with WSDOT. The Contractor shall coordinate the outage with King County Metro and King County Traffic at least two weeks in advance of the proposed outage. The notification shall include description of work, location, duration of outage including start and ending date/time and emergency contact information. Notification in writing shall be sent to the following:

King County Metro (Owen Kehoe)
Phone: (206) 477-5811
Email: owen.kehoe@kingcounty.gov

King County Metro (Jeffery Barnett)
Phone: (206) 263-7826
Email: Jeffery.Barnett@kingcounty.gov

King County Traffic Signal Shop (Mark Parrett)
Phone: (206) 396-3763
Email: Mark.Parrett@kingcounty.gov

8-20.3(2) Excavating and Backfilling
(September 20, 2024 CFW GSP)

Section 8-20.3(2) is supplemented with the following:

Controlled density fill (CDF) shall meet the requirements of Washington Aggregates and Concrete Association.

Bedding material shall consist of crushed surface top course free of any deleterious substances.

Underground utilities of record are shown in the construction Plans insofar as information is available. These, however, are shown for convenience only and the City assumes no responsibility for improper locations or failure to show utility locations in the construction Plans.

The location of existing underground utilities, when shown in the Plans, is approximate only, and the Contractor shall be responsible for determining their exact location. The Contractor shall check with the utility companies concerning any possible conflict prior to commencing excavation in any area, as not all utilities may be shown in the Plans.

The Contractor shall be responsible for potholing for conflicts with underground utility locations prior to determining exact locations of signal and light standard foundations, underground vaults, and directional boring operations. Prior to construction, if any conflicts are expected, it shall be brought to the attention of the Engineer for resolution.

The Contractor shall be entirely responsible for coordination with the utility companies and arranging for the movement or adjustment, either temporary or permanent, of their facilities within the project limits.

If a conflict is identified, the Contractor shall contact the Engineer. The Contractor and City shall locate alternative locations for poles, cabinets, or junction boxes. The Contractor shall get approval from the Engineer prior to installation. The Contractor may consider changing depth or alignment of conduit to avoid utility conflicts.

Before beginning any excavation work for foundations, vaults, junction boxes, or conduit runs, the contractor shall confirm that the location proposed in the Contract Plans does not conflict with utility location markings placed on the surface by the various utility companies. If a conflict is identified, the following process shall be used to resolve the conflict:

1. Contact the Engineer and determine if there is an alternative location for the foundation, junction box, vault or conduit trench.

2. If an adequate alternate location is not obvious for the underground work, select a location that may be acceptable and pothole to determine the exact location of other utilities. Potholing must be approved by the Engineer.

3. If an adequate alternate alignment still cannot be identified following potholing operations, the pothole area should be restored and work in the area should stop until a new design can be developed.

The Contractor shall not attempt to adjust the location of an existing utility unless specifically agreed to by the utility owner.

All foundations and anchor bolts shall be removed to 6 feet below new subgrade, and the resulting hole shall be backfilled with compacted gravel borrow meeting the requirements of Section 9-03.14(1), unless the Engineer has approved the use of native material.

Where junction boxes are removed, the conduit and wire shall also be removed to the bottom of the trench and the resulting hole backfilled with gravel borrow meeting the requirements of Section 9-03.14(1), unless the Engineer has approved the use of native material.

8-20.3(4) Foundations

Section 8-20.3(4) is supplemented with the following:

During construction of the pole foundations, the Contractor shall ensure the safety of the excavation site. Steel trench plates shall cover the excavation site, when the Contractor is not actively working on the foundations. Trench plates shall be traffic-rated and shall not be able to be moved by a pedestrian to access the excavation area.

Paperboard forms are allowed for the top 12 inches of foundations only and only if the top of foundation will be exposed. Corrugated metal pipe is the preferred method of foundation installation. This applies to all types of foundations, with the exception of cabinet foundations.

The concrete class requirements in paragraph one are applicable for Type I/II Portland cement. See Section 9.01.22(1)B for requirements for Type 1L cement.

Excavation for foundations shall be completed by vactor excavation. This excavation shall be incidental to the illumination, traffic signal systems, intelligent transportation system, or electrical bid items.

Pole foundations within the sidewalk area shall be constructed in a single pour to the bottom of the cement concrete sidewalk. The sidewalk shall be constructed in a separate pour.

Pole foundations not within the sidewalk area shall incorporate a minimum 3-foot by 3-foot by 4-inch-thick cement concrete pad set flush with the adjacent ground. Where the pad abuts a sidewalk, the pad shall extend to the sidewalk and the top of the pad shall be flush with the sidewalk. A construction joint shall be provided between the two units. See City of Federal Way Standard Details for additional information.

Federal Way Pedestrian Push Button (FWPPB) Post Foundations

All FWPPB post foundations shall be constructed in accordance with the City of Federal Way Standard Detail FW.J20.10. No pre-cast foundations will be allowed. Anchor bolts shall be in accordance with Section 9-29.6(5).

8-20.3(5) Conduit

8-20.3(5)A General

(September 20, 2024 CFW GSP)

Section 8-20.3(5) is supplemented with the following:

Banding of risers to steel or aluminum poles will not be allowed.

A copper ground wire shall be installed with all conduit.

A pull tape shall be installed in all conduit and shall remain upon completion of the project.

When conduit risers are installed, they shall be attached to the pole every 4 feet and shall be equipped with weather heads.

Conduit for the service wires between the Puget Sound Energy or Tacoma Power pole and the service panel and all above ground conduit shall be hot-dip galvanized rigid steel.

All conduits affected by this project shall have duct sealant installed, materials in accordance with Section 9-29.1(11).

All conduits shall be clearly labeled at each junction box, handhole, vault or other utility appurtenance. Labeling shall be permanent and shall consist of the owner/type name and a unique conduit number or color. The owner name shall be approved by the Engineer prior to starting work. The recommended owner/type abbreviations are:

PSE – Puget Sound Energy
LUMEN - Lumen
COMCAST(AT&T)/C – Cable
COMCAST(AT&T)/F – Fiber
SIC – City Signal Interconnect
City Spare – City spares
Cobra – COBRA luminaire system

Traffic signal interconnect shall be placed, wherever feasible, in the joint utility trench being constructed under this contract (if applicable). This work shall be coordinated with the other utilities to ensure a 2-inch minimum conduit is provided solely for the traffic signal interconnect. Conduit size shall be verified with City Traffic Engineer prior to installation.

8-20.3(5)B Conduit Type

(December 11, 2025 CFW GSP)

Section 8-20.3(5)B is supplemented with the following:

All conduits for signal, illumination, or fiber optic cable raceways under streets and driveways shall be rigid galvanized steel or Schedule 80 polyvinyl chloride (PVC).

Unless otherwise indicated in the Plans, liquid-tight flexible metal conduit will not be allowed; HDPE conduit will be allowed for boring operations only.

8-20.3(5)E Method of Conduit Installation

Conduit shall be placed under existing pavement by approved directional boring, jacking, or drilling methods at locations approved by the Engineer. The pavement shall not be disturbed unless allowed in the Plans or with the approval of the Engineer in the event

obstructions or impenetrable soils are encountered. High density polyethylene (HDPE) conduit runs, which enter the traveled way or shoulders, shall be installed using the directional boring method.

Conduit used with a specific method of installation shall be certified for use with that method of installation.

8-20.3(5)E1 Open Trenching

(November 24, 2025 CFW GSP)

Section 8-20.3(5)E1 is supplemented with the following:

Open trenching shall not allow. When open trenching is allowed, trench construction shall conform to the following:

1. In paved areas, edges of the trench shall be sawcut the full depth of the pavement and sawcuts shall be parallel. All trenches for placement of conduit shall be straight and as narrow in width as practical to provide a minimum of pavement disturbance. The existing pavement shall be removed in an approved manner. The trench bottom shall be graded to provide a uniform grade.

2. Bedding and backfill materials for electrical trenches shall be as follows:

   Electrical conduit trench depth shall be a minimum of 24 inches cover over conduits or in accordance with Section 8-20.3(5)D, whichever is greater.

   Bedding material for trenches 18 inches or less in width shall be crushed surfacing top course. Bedding material for trenches greater than 18 inches or for joint utility trenches shall be pit run sand. Bedding material shall be placed two inches below the conduits and shall extend to two inches above the conduits.

   Backfill material for trenches located within the roadway limits (back of curb to back of curb), including perpendicular crossings of roadways and underneath driveways shall be controlled density fill (CDF), vibrated in place.

   Backfill material for trenches located outside of roadway and driveway limits shall be Bank Run Gravel for Trench Backfill conforming to Section 9-03.19, unless the Engineer determines that native material is suitable.

3. Backfill shall be carefully placed so that the backfilling operation will not disturb the conduit in any way. The backfill shall be thoroughly mechanically tamped in 8-inch layers with each layer compacted to 95% of maximum density in traveled ways, and 90% of maximum density elsewhere at optimum soil moisture content.

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

Section 8-20.3(6) is supplemented with the following:

Unless otherwise noted in the Plans or approved by the Engineer, junction boxes, cable vaults, and pull boxes shall not be placed within the traveled way or shoulders.

All junction boxes, cable vaults, and pull boxes placed within the traveled way or paved shoulders shall be heavy-duty. Standard Duty nonconcrete junction boxes shall not be installed within the City of Federal Way.

Junction boxes shall not be located within the traveled way, ramps/landings, or driveways, nor should junction boxes interfere with any other previous or relocated installation. The lid of the junction box shall be flush with the surrounding area and be adequately supported by a bed of crushed surfacing. Junction boxes shall be installed in accordance with Standard Plans. Junction boxes placed improperly shall be moved and reset or replaced and reset at the expense of the Contractor, including replacement of any concrete that may have been disturbed as a result.

Junction boxes installed in sidewalks shall have 3/8-inch pre-molded joint filler (full depth) between the concrete and the junction box. Where junction boxes are installed side-by-side in a sidewalk, install 3/8-inch pre-molded joint filler between the junction boxes, as well.

Anti-seize lubricant shall be applied to all junction box penta head bolts.

All junction boxes not placed in the sidewalk shall be placed immediately adjacent to a sidewalk or curb surrounded by concrete (or asphalt if adjacent to roadway) to prevent the box from lifting out of the dirt in accordance with City of Federal Way Standard Details.

All junction box lids located within sidewalk areas, along a pedestrian access route, or in other accessible surfaces within the public right-of-way or on publicly owned properties, must meet accessibility requirements and shall be slip-resistant. Acceptable slip-resistant products shall be non-slip Methyl methacrylate (MMA) coating or SlipNot Grade 3. Placement of the slip-resistant MMA coating shall be in accordance with the manufacturer's recommendations. Vertical edges of the utility shall be flush with the adjoining surface to the extent possible after installation.

Wiring shall not be pulled into any conduit until all associated junction boxes have been adjusted to, or installed in, their final grade and location, unless installation is necessary to maintain system operation. If wire is installed for this reason, sufficient slack shall be left to allow for future adjustment.

Wiring shall be replaced for full length if sufficient slack as specified in Section 8-20.3(8) is not maintained. No splicing will be permitted.

Junction boxes shall meet the requirements of WSDOT Standard Plans. Junction boxes shall be inscribed based upon system in accordance with Section 9-29.2(4), except as listed below for interconnect systems. Junction box lids and frames shall be grounded in accordance with Section 8-20.3(9).

Junction boxes shall be located at the station and offset indicated in the Plans except that field adjustments may be made at the time of construction by the Engineer to better fit existing field conditions.

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

Field Wiring Chart (IMSA Standards)

501	+Input	506	AC+Control	511	Remote-All Red
502	AC-	507	AC+Crosswalk	512-520	Special
503	AC+Lights	508	AC+Detectors	551-562	Interconnect
504	AC+Lights	509	AC+12 Volts	593-598	Rail Road Preemption
505	AC+Lights	510	Remote-Flash		

	Phases	1	2	3	4	5	6	7	8	A	B
Emergency Vehicle Preemption	Orange (B+)		581		584		587		590		
	Yellow (Call)		582		585		588		591		
	Blue (BB)		583		586		589		592		
Vehicle Heads	Red	611	621	631	641	651	661	671	681	691	601
	Orange	612	622	632	642	652	662	672	682	692	602
	Green	613	623	633	643	653	663	673	683	693	603
	Black	614	624	634	644	654	664	674	684	694	604
	White (Common)	616	626	636	646	656	666	676	686	696	606
Pedestrian Heads and PPB	Red (Hand)	711	721	731	741	751	761	771	781	791	701
	Green (Man)	712	722	732	742	752	762	772	782	792	702
	White (Confirmation Lights)	716	726	736	746	756	766	776	786	796	706
	Orange (Push button)	714	724	734	744	754	764	774	784	794	704
	Black (Common for Push button)	715	725	735	745	755	764	775	785	795	705
Vehicle Detectors	Loop 1	811	821	831	841	851	861	871	881	891	801
	Loop 1	812	822	832	842	852	862	872	882	892	802
	Loop 2	813	823	833	843	853	863	873	883	893	803
	Loop 2	814	824	834	844	854	864	874	884	894	804
	Loop 3	815	825	835	845	855	865	875	885	895	805
	Loop 3	816	826	836	846	856	866	876	886	896	806
	Loop 4	817	827	837	847	857	867	877	887	897	807
	Loop 4	818	828	838	848	858	868	878	888	898	808
Vehicle Detectors/ Count Loops	Loop 1	911	921	931	941	951	961	971	981	991	901
	Loop 1	912	922	932	942	952	962	972	982	992	902
	Loop 2	913	923	933	943	953	963	973	983	993	903
	Loop 2	914	924	934	944	954	964	974	984	994	904
	Loop 3	915	925	935	945	955	965	975	985	995	905
	Loop 3	916	926	936	946	956	966	976	986	996	906
	Loop 4	917	927	937	947	957	967	977	987	997	907
	Loop 4	918	928	938	948	958	968	978	988	998	908

Cable entering cabinets shall be neatly bundled and wrapped. Each wire shall bear the circuit number and be thoroughly tested before being connected to the appropriate terminal.

The Contractor shall be responsible for the protection of all field wiring until such time that the project has obtained final written acceptance notification from the Contracting Agency. The Contractor shall replace, at no cost to the Contracting Agency, any wiring that has been stolen during the duration of this Contract. Upon final written acceptance of the work by the Contracting Agency, all junction box lids marked "LT" shall be tack welded by the Contractor.

All traffic signal conductors shall be installed with one complete wrap of slack within each ground level junction box, arranged in a loop around the base of the junction box.

All field conductors entering the controller cabinet shall be of sufficient length to lie completely around the interior of the cabinet one and one-half times prior to termination. Within the cabinet, power conductors shall not be less than 6 feet in length. Multi-conductor cables within the controller cabinet shall be long enough to form one and one-half complete wrap around the cabinet base. For multi-conductor cables only, remove the outer jacket from the conductor end to the top of the conduit that enters the controller cabinet. All conductors shall be layered toward the back of the cabinet, dressed and fanned neatly to terminal strips. Tie wraps shall be used where deemed necessary by the King County Signal Technician. There shall be no unnecessary shortening of any wire. If there is any excess slack, the Contractor shall pull the slack back into the adjacent junction box, or as designated by the Engineer.

Pedestrian signal heads shall be mounted with a clamshell bracket. Contractor shall provide and install a galvanized steel threaded bushing where the wire enters the pole to protect the conductors.

Wire nuts and split bolt connections are not acceptable for use on City of Federal Way projects.

8-20.3(8)A Splices

Section 8-20.3(8)A is supplemented with the following:

No splicing of traffic signal, service, or photo-electric/illumination node conductors shall be allowed.

8-20.3(8)C Wire and Cable Pulling

(September 20, 2024 CFW GSP)

Section 8-20.3(8)C is supplemented as follows:

All wiring, cable, and cords associated with this equipment shall be neatly dressed and secured to the rack frames or cable trays by nylon ties.

8-20.3(9) Bonding, Grounding

(September 20, 2024 CFW GSP)

Section 8-20.3(9) is supplemented with the following:

Contractor shall provide and install bonding and grounding wires as described in Standard Specifications and the National Electric Code for any new junction boxes and any modified existing junction boxes. For the purposes of this section, a junction box shall be considered “modified” if new current-carrying conductors are installed, including low-voltage conductors.

At points where shields of shielded conductors are grounded, the shields shall be neatly wired and terminated on suitable grounding lugs.

Junction box lids and frames shall be grounded in accordance with Department of Labor and Industries standards, and shall be grounded so that the ground will not break when the lid is removed and laid on the ground next to the junction box.

All conduits shall have continuous grounding wires between junction boxes.

At points where wiring shields of shielded conductors are grounded, the shields shall be neatly wired and terminated on suitable grounding lugs.

8-20.3(9)A Supplemental Grounding

(September 20, 2024 CFW GSP)

Section 8-20.3(9)A is supplemented with the following:

In addition to the service grounds provided at the service cabinet, each light and signal standard shall have a supplemental ground installed.

Ground clamps that attach to ground rods or to the rebar cage in a foundation shall be acorn-style. Only those ground clamps on the WSDOT Qualified Products List will be allowed.

8-20.3(11)A Traffic Signal System Testing

Section 8-20.3(11)A is supplemented with the following:

Traffic signal systems shall not be turned on until the sidewalk and curb ramps are completed and pedestrian traffic is able to use the system or an approved pedestrian detour is in place. Any cost associated with a proposed pedestrian detour for signal turn on purposes shall be the responsibility of the Contractor.

Traffic signal systems shall not be turned on if there are any utility wires in front of the signal heads, as determined by the Engineer.

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

(September 20, 2024 CFW GSP)

Section 8-20.3(11)B is supplemented with the following:

It shall be the responsibility of the Contractor to ensure that existing traffic signal and control systems remain fully functional during all phases of the project, except as specified for signal changeovers. The Contractor shall provide a detailed work plan for the signal system changeover to be approved by the Engineer a minimum of five full business days in advance of any signal changeovers. They shall not deviate from the work plan without prior written approval from the Engineer. The work plan shall show the exact date of the signal system changeover.

Once the signal changeover workplan is approved by the City, the Contractor shall coordinate with King County Signal Technicians a minimum of three full business days in advance of any signal changeovers. The King County Signal Technicians will support the resetting of video detection zones and coordinating camera changes and aiming.

The changeover of the signal equipment shall commence after 8:30 am and be completed by 3:00 pm on the same day (unless as noted below). Changeovers must take place on Tuesday, Wednesday, or Thursday, unless otherwise approved by the Engineer. During changeover, traffic control shall be provided. The exact work plan and schedule for changeover shall be pre-approved by the Engineer.

Certain intersections may require a night-time changeover due to traffic volumes. If the City of Federal Way determines a night-time switchover is required, they will provide direction as to the allowable hours of work. No additional payment will be made to the Contractor for a night-time switchover.

No traffic signal changeover shall occur until a preliminary inspection and flash out has been conducted by King County. All signing and pavement markings shall be installed in accordance with the Contract Documents or as approved by the City of Federal Way before the new signal control equipment is turned on. Stop lines and crosswalk lines at intersections that were unsignalized prior to the project shall not be installed until the day of signal turn on, unless authorized by the City of Federal Way.

All work necessary in keeping the existing traffic signal system fully-functional, as indicated in the Plans, and any installation or relocation of existing equipment or hardware necessary for maintaining such operation and protection of the traffic signal system, shall be considered incidental to the respective pay item. This includes the vehicle detection system; however, with approval of the Engineer, the existing traffic signal control may be placed on a fixed time program to facilitate signal changeover work for a period not to exceed fourteen calendar days.

8-20.3(11)C4 Operational Testing

(September 20, 2024 CFW GSP)

Section 8-20.3(11)C4 is a new Section as follows:

Prior to final acceptance, the following fully-operating systems shall be tested for the minimum time frames established by this Section and are as follows:

Traffic Signal Modifications, 14 days;

The operational testing periods are not intended to be charged working days, unless other Contract work is being performed.

During the operational testing, any parts that fail and were provided by the Contractor or were provided by the City of Federal Way and damaged by the Contractor shall be immediately replaced. The Contractor shall replace the failed part with a new operable part of the same type and model as required by the Contract Documents. Passing the operational test does not reduce any manufacturer guarantees, if applicable, that are to be conveyed to the City of Federal Way after passing of the operational testing.

8-20.3(14)B Signal Heads

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

Unless otherwise noted in the Plans, each pedestrian signal head shall be provided and installed with Type E clamshell mounting hardware in accordance with Standard Plans, and as modified below, shall be utilized for all signal and light standard mounting, which shall consist of a two piece, cast aluminum alloy assembly joined together by stainless steel spring pins. The clamshell assembly shall be mounted on the pole using stainless steel 1/2 - 13 hex head cap screws and the pole drilled and tapped to accept the 1/2 - 13 mounting hardware. The clamshell is closed by rotating the pedestrian head assembly and securing with a flathead socket bolt. A signal power interface and three-position terminal block shall be provided in the pedestrian housing to allow for pedestrian pushbutton and pedestrian indication module wiring. Connections shall be made using conventional screw type terminals. The terminal block shall be sized to accept #12 AWG or #14 AWG wire.

8-20.3(14)C Induction Loop Vehicle Detectors

(September 20, 2024 CFW GSP)

Item 2 is deleted.

Item 5 of this section is deleted and replaced with the following:

5) Each loop shall have 3 turns of loop wire.

Item 11 of this section is deleted and replaced with the following:

11) The detector loop sealant shall be a flexible traffic loop wire encapsulation. Encapsulation shall be designated to enable vehicular traffic to pass over the properly filled sawcut within five minutes after installation without cracking of material. The encapsulation shall form a surface skin allowing exposure to vehicular traffic within 30 minutes at 75 degrees F. and completely cure to a tough rubber-like consistency within two to seven days after installation. Properly installed and cured encapsulation shall exhibit resistance to defects of weather, vehicle abrasion, motor oil, gasoline, antifreeze solutions, brake fluid, deicing chemicals and salt normally encountered in such a manner that the performance of the vehicle detector loop wire is not adversely affected.

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

One-quarter-inch saw cuts shall be cleared of debris with compressed air before installing three turns of loop wire. All detector loops shall be 6-foot-diameter circle with diagonal mini-cut corners (no 90 degree corners) of not more than 1-inch on the diagonal. From the loops to the junction box, the loop wires shall be twisted two turns per foot and labeled at the junction box in accordance with the loop schematics included in these Plans. A 3/8-inch saw cut will be required for the twisted pair. No saw cut will be within 3 feet of any manhole or utility risers located in the street. Loops and lead-ins will not be installed in broken or fractured pavement. Where such pavement exists it will be replaced in kind with minimum 12-foot sections. Loops will also not be sawed across transverse joints in the road. Loops to be placed in concrete will be located in full panels, a minimum 18 inches from any expansion joint.

Existing Traffic Loops

The Contractor shall notify the City Traffic Engineer a minimum of five working days in advance of pavement removal in the loop areas. The Contractor shall install and maintain interim video detection until the permanent systems are in place. The interim video detection shall be operational simultaneously with decommission of the existing pavement loops.

If the Engineer suspects that damage to any loop, not identified in the Plans as being replaced, may have resulted from Contractor's operations, the Engineer may order the Contractor to perform the field tests specified in Section 8 20.3(14)D. The test results shall be recorded and submitted to the Engineer. Loops that fail any of these tests shall be replaced by the Contractor.

Loops that fail the tests, as described above, and are replaced shall be installed in accordance with current City of Federal Way Design and Construction Standards and Standard Plans, as determined by the Engineer.

If traffic signal loops that fail the tests, as described above, are not replaced and operational within 48 hours, the Contractor shall install and maintain interim video detection until the replacement loops are operational. The type of interim video detection furnished shall be approved by the Engineer prior to installation.

8-20.3(14)D Test for Induction Loops and Lead-In Cable

(March 31, 2012 CFW GSP)

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

Test A – The resistance shall not exceed values calculated using the given formula.

Resistance per 1000 ft of 14 AWG, R = 3.26 ohms / 1000 ft

$$R = \frac{3.26 \times \text{distance of lead-in cable (ft)}}{1000 \text{ ft}}$$

Test B and Test C in this section are deleted and replaced with the following: Megger readings of the detection wire to ground shall read 200 megohms at the amplifier connection. The 200 megohms or more shall be maintained after the splices are tested by submerging them in detergent water for at least 24 hours. The tests will be conducted with King County personnel at the request of the Contractor. All costs incurred to meet this minimum standard will be the responsibility of the Contractor.

8-20.3(14)E Signal Standards

(September 20, 2024 CFW GSP)

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

Traffic signal standards shall be furnished and installed in accordance with the methods and materials noted in the applicable Standard Plans, pre-approved plans, or special design plans.

After delivering the poles or arms to the job site and before they are installed, they shall be stored outside of the clear zone in a place that will not inconvenience the public. All poles and arms shall be installed in compliance with Washington State Utility and Electrical Codes.

Terminal cabinets shall be installed on all Type II and Type III signal poles or where designated in the Plans and shall be in accordance with the material requirements of Section 9-29.25. Terminal cabinets shall be installed at a minimum height of 7 feet, to not impede pedestrians.

8-20.3(17) "As Built" Plans

(September 20, 2024 CFW GSP)

Section 8-20.3(17) is deleted and replaced with the following:

Upon completion of the project, the Contractor shall furnish an "as-built" drawing of the intersection showing all signal heads, pole locations, detectors, junction boxes, Illumination system showing luminaire locations, miscellaneous equipment, conductors, cable wires up to the signal controller cabinet, and with a special symbol identifying those items that have been changed from the original contract drawings. All items shall be located to within 1 foot horizontally and 6 inches vertically above or below the finished surface grade.

8-20.3(19) Pedestrian Pushbuttons

(December 15, 2025 CFW GSP)

8-20.3(19)A Materials

Section 8-20.3(19)A is supplemented with the following:

The Traffic Signal Modifications shall consist of the following components:

1. Foundation, including excavation, haul, and forms
2. Pole assembly and hardware

3. Pushbutton and sign assembly
4. Trenching, installation of new conduits, backfill, and surface restoration
5. Wiring and enclosures

8-20.3(19)B Construction Requirements
(December 15, 2025 CFW GSP)
Section 8-20.3(19) is supplemented with the following:

The Contractor shall remove and construct Accessible Pedestrian Pushbuttons for the following locations:

S 320th St and 1st Ave S – Ramp 1 and 2 (SW Corner)
1. Construct 1 new Federal Way Pedestrian Pushbutton (FWPPB) pole and foundation behind curb ramp 01. Install one new APS pushbutton on new FWPPB pole and relocate APS pushbutton on existing traffic signal pole per City of Federal Way Standard Details FW.J20.10 and WSDOT Standard Plan J-20.05-00.
2. Plug existing traffic signal poles.
3. Salvage existing PPB to KC.

S 320th St and 1st Ave S – Ramp 3 and 4 (NW Corner)
1. Construct 1 new Federal Way Pedestrian Pushbutton (FWPPB) pole and foundation behind curb ramp 04. Install one new APS pushbutton on new FWPPB pole and relocate APS pushbutton on existing traffic signal pole per City of Federal Way Standard Details FW.J20.10 and WSDOT Standard Plan J-20.05-00.
2. Plug existing traffic signal poles.
3. Salvage existing PPB to KC.

S 320th St and 1st Ave S – Ramp 5 and 6 (SE Corner)
1. Construct 1 new Federal Way Pedestrian Pushbutton (FWPPB) pole and foundation behind curb ramp 05. Install one new APS pushbutton on new FWPPB pole and relocate APS pushbutton on existing traffic signal pole per City of Federal Way Standard Details FW.J20.10 and WSDOT Standard Plan J-20.05-00.
2. Plug existing traffic signal poles.
3. Salvage existing PPB to KC.

S 320th St and 1st Ave S – Ramp 7 and 8 (NE Corner)
1. Construct 1 new Federal Way Pedestrian Pushbutton (FWPPB) pole and foundation behind curb ramp 08. Install one new APS pushbutton on new FWPPB pole and relocate APS pushbutton on existing traffic signal pole per City of Federal Way Standard Details FW.J20.10 and WSDOT Standard Plan J-20.05-00.
2. Install conduit from junction box to signal cabinet.
3. Plug existing traffic signal poles.
4. Salvage existing PPB to KC.

S 320th St and 8th Ave S – Ramp 17 and 18 (SW Corner)
1. Construct 1 new Federal Way Pedestrian Pushbutton (FWPPB) pole and foundation behind curb ramp 18. Install one new APS pushbutton on new

FWPPB pole and one new APS pushbutton on existing traffic signal pole per City of Federal Way Standard Details FW.J20.10 and WSDOT Standard Plan J-20.05-00.

2. Install a new 3" RMC conduit from type 8 J-box to the back (south) side of existing cabinet. Utilize a metal LB conduit body, ground bushing, conduit nipple, lock washer, and stainless steel channel and clamps to attach conduit to cabinet foundation (including all hardware). Use silicone sealant at conduit cabinet entrance. See sheet 22.
3. Plug existing traffic signal poles.
4. Dispose existing PPBs.

S 320th St and 8th Ave S – Ramp 19 and 20 (NW Corner)

1. Construct 1 new Federal Way Pedestrian Pushbutton (FWPPB) pole and foundation behind curb ramp 20. Install one new APS pushbutton on new FWPPB pole and one new APS pushbutton on existing traffic signal pole per City of Federal Way Standard Details FW.J20.10 and WSDOT Standard Plan J-20.05-00.
2. Plug existing traffic signal poles.
3. Salvage existing PPBs to KC.

S 320th St and 8th Ave S – Ramp 21 and 22 (SE Corner)

1. Construct 1 new Federal Way Pedestrian Pushbutton (FWPPB) pole and foundation behind curb ramp 21. Install one new APS pushbutton on new FWPPB pole and one new APS pushbutton on existing traffic signal pole per City of Federal Way Standard Details FW.J20.10 and WSDOT Standard Plan J-20.05-00.
2. Plug existing traffic signal poles.
3. Salvage existing PPBs to KC.

S 320th St and 8th Ave S – Ramp 23 and 24 (NE Corner)

1. Construct 1 new Federal Way Pedestrian Pushbutton (FWPPB) pole and foundation behind curb ramp 23. Install one new APS pushbutton on new FWPPB pole and one new APS pushbutton on existing traffic signal pole per City of Federal Way Standard Details FW.J20.10 and WSDOT Standard Plan J-20.05-00.
2. Plug existing traffic signal poles.
3. Salvage existing PPBs to KC.

8-20.4 Measurement

Section 8-20.4 is replaced as the following:

Adjust Junction Box will be measured per each.
Junction Box Type 8 will be measured per lump sum.
Traffic Signal Modifications – S 320th St and 1st Ave S, shall be measured per lump sum.
Traffic Signal Modifications – S 320th St and 8th Ave S, shall be measured per lump sum.

8-20.5 Payment

Paragraph 2, 3, 4, and 5 of Section 8-20.5 are deleted and replaced with the following:

"Adjust Junction Box", per each.
"Junction Box Type 8", per lump sum.
"Traffic Signal Modifications – S 320th St and 1st Ave S", per lump sum.
"Traffic Signal Modifications – S 320th St and 8th Ave S", per lump sum.

The per lump sum price for "Junction Box Type 8" shall be full pay for furnishing all labor, equipment, materials and supplies necessary to complete the work as specified. The per each price shall include all costs associated with connecting the illumination system to the service cabinet and for making modifications to the existing systems as noted. All items and labor necessary to supply, install, and test the conduit, junction boxes, service circuit breaker and connections, the illumination control node, electrical service and service cabinet electrical connections, connections with existing conduit and junction boxes, restoring facilities destroyed or damaged during construction, salvaging existing materials, installation of non-slip MMA coating on new or existing lids located within accessible surfaces, and all other components necessary to make a complete system shall be included within the lump sum measurement.

The lump sum price for "Traffic Signal Modifications – S 320th St and 1st Ave S" shall be full pay for furnishing all labor, equipment, materials and supplies necessary to complete the work as specified. All items and labor necessary to supply, install, and test the system including, but not limited to, conduit, junction boxes, vehicular and pedestrian signal heads, pedestrian push buttons, connections with existing conduit and junction boxes, restoring facilities destroyed or damaged during construction, removing and salvaging existing pedestrian push button equipment and all other components necessary to make a complete signal modification shall be included within the lump sum measurement. The lump sum bid price shall include all costs associated with the construction of the cement concrete pads around signal poles. After construction is complete, it is Contractor's responsibility to adjust, relocate, and reposition all APS buttons to their final position as shown on the Contract Documents, and shall be considered incidental to the lump sum measurement.

The lump sum price for "Traffic Signal Modifications – S 320th St and 8th Ave S" shall be full pay for furnishing all labor, equipment, materials and supplies necessary to complete the work as specified. All items and labor necessary to supply, install, and test the system including, but not limited to, conduit, junction boxes, vehicular and pedestrian signal heads, pedestrian push buttons, connections with existing conduit and junction boxes, restoring facilities destroyed or damaged during construction, removing and salvaging existing pedestrian push button equipment and all other components necessary to make a complete signal modification shall be included within the lump sum measurement. The lump sum bid price shall include all costs associated with the construction of the cement concrete pads around signal poles, replacing grout pads, install new 3" RMC conduit from J-box Type 8 to the back (south) side of existing cabinet. After construction is complete, it is Contractor's responsibility to adjust, relocate, and reposition all APS buttons to their final position as shown on the Contract Documents, and shall be considered incidental to the lump sum measurement.

(September 20, 2024 CFW GSP)

Section 8-20.5 is supplemented with the following:

"Induction Loop Vehicle Detection System" per each.

The per each price for "Induction Loop Vehicle Detection System" shall be full pay for furnishing all labor, equipment, materials, and supplies necessary to complete the work as specified. All items and labor necessary to supply, install, and test the system, including, but not limited to: conduit, junction boxes, connections to signal controls, loop wire, removal of old loop wire, lead-in conductor, heat shrink tubing, solder, sealant, and all

other components necessary to make a fully operational induction loop vehicle detection system shall be included within the lump sum measurement.

(September 20, 2024 CFW GSP)

Section 8-20.5 is supplemented with the following:

Sawcutting for trench, sawcutting for "T-cut" trench restoration, pavement removal, excavation, trenching, bedding and backfill materials, backfilling of trenches, pavement restoration of trenches and conduit/junction box installations shall be incidental to the bid items included in this section and no additional compensation will be made.

Coordination of service connections with Puget Sound Energy or Tacoma Power, as applicable and any necessary permits and fees associated with the service connections shall be considered incidental to the bid items included in this section and no additional compensation will be made.

Coordination with communication connections with Comcast, Lumen, or other communication provider affected by this project, and any necessary permits and fees associated with the communications connections shall be considered incidental to the bid items included in this section and no additional compensation will be made.

All costs for installing junction boxes and conduit containing traffic signal system, illumination system, decorative illumination system, festival outlet system and/or interconnect system wiring shall be incidental to the bid item(s) of this section and no additional compensation will be made.

All costs for painting shall be incidental and included in the bid items included in this section and no additional compensation will be made.

Adjustment of junction boxes shall be incidental and included in the bid items included in this section and no additional compensation will be made.

Restoration of facilities destroyed or damaged during construction shall be considered incidental to the bid items included in this section and no additional compensation will be made.

8-22 PAVEMENT MARKING

8-22.1 Description

(September 20, 2024 CFW GSP)

Section 8-22.1 is supplemented with the following:

Pavement markings shall conform to City of Federal Way Standard Details. Longitudinal striping patterns shall be as shown on Standard Plan M-20.20.

The Contractor shall perform all spotting and layout for all permanent pavement markings.

8-22.2 Materials

(September 20, 2024 CFW GSP)

Section 8-22.2 Paragraph #3 is deleted and replaced with the following:

Glass beads for Type A plastic shall be as recommended by the manufacturer.

Section 8-22.2 is supplemented with the following:

Glass beads and Reflective Elements for Type D plastic shall be in accordance with Section 9-34.4. Both glass beads and reflective elements are required to be installed with Type D pavement markings.

8-22.3 Construction Requirements
(March 22, 2023 CFW GSP)
Section 8-22.3 is supplemented with the following:

Permanent pavement markings shall be installed within 30 calendar days after paving. If a project contains paving on multiple streets (i.e., schedules of work), this requirement applies to the paving date for each street / schedule individually.

8-22.3(3) Marking Application

8-22.3(3)E Installation
(September 20, 2024 CFW GSP)
Section 8-22.3(3)E is supplemented with the following:

Profiled Type D lines shall be installed in accordance with Standard Plan M-20.20.

All parallel double lines (narrow pattern and wide pattern) shall be placed in one pass.

All longitudinal pavement markings shall be applied, in cycle, in the direction of traffic, unless specifically approved by the City of Federal Way. The City of Federal Way shall designate in which direction to apply center line striping, as applicable.

For paint, the use of a pushcart or motorized cart is prohibited. A striping truck is required, unless otherwise approved by the Engineer for specific locations.

If Type B plastic markings are allowed, the material shall not overlap and there shall not be gaps between individual segments of the material.

For Type D, liquid cold applied methyl methacrylate, longitudinal line markings, Type D-3 or Type D-4 shall be used. Type D-3 or Type D-4 application method shall be defined as machine extrusion. Application by walk-behind carts is not allowed. Application of double center line by means that requires a separate pass for each line is not allowed.

8-22.3(3)G Glass Beads
(March 13, 2012, CFW GSP)
Section 8-22.3(3)G is supplemented with the following:

Glass beads shall be applied to Type D markings at a rate of 8 to 10 pounds per one hundred square feet.

Reflective elements shall be applied to Type D markings at a rate of 10 grams per 4-inch wide by 1 linear foot of marking.

8-22.3(6) Removal of Pavement Markings
(September 20, 2024 CFW GSP)
Section 8-22.3(6) is supplemented with the following:

As indicated in the Plans, the Contractor shall remove existing pavement markings that may consist of paint, plastic, and raised pavement markings.

All existing, plastic pavement markings that are to be paved over, shall be removed prior to paving.

If, in the opinion of the Engineer, the pavement is materially damaged by pavement marking removal or raised pavement marker removal, such damage shall be repaired by the Contractor in accordance with Section 1-07.13(1).

If pavement markings are removed as a part of pavement grinding or removal, that removal will be considered incidental to that bid item and no additional payment will be made under the pavement marking removal bid item.

8-22.4 Measurement

(December 16, 2022 CFW GSP)

Paragraphs 12 and 13 of Section 8-22.4 are replaced with the following:

Measurement for the removal of all pavement markings will be per lump sum.

(March 22, 2023 CFW GSP)

Section 8-22.4 is supplemented with the following:

Raised Pavement Markers are incidental to Pavement Markings. No separate measurement or payment will be made.

8-22.5 Payment

(February 14, 2025 CFW GSP)

Section 8-22.5 is modified as follows:

The following bid items are deleted:

"Removing Paint Line", per linear foot.
"Removing Plastic Line", per linear foot.
"Removing Painted Crosswalk Line", per square foot.
"Removing Plastic Crosswalk Line", per square foot.
"Removing Painted Traffic Marking", per each.
"Removing Plastic Traffic Marking", per each.

The following are new bid items:

"Painted Shared Lane Marking", per each.
"Plastic Shared Lane Marking", per each.
"Removing Pavement Markings", lump sum.

8-23 TEMPORARY PAVEMENT MARKINGS

8-23.1 Description

(March 22, 2023 CFW GSP)

Section 8-23.1 is supplemented with the following:

Temporary pavement markings shall be installed and maintained by the Contractor prior to traffic being released onto public streets when the installation of permanent pavement markings is not yet completed. All pavement markings including lines, symbols, and raised pavement markers shown on the plans and details shall be provided as temporary pavement markings until such time that permanent pavement markings are installed. Temporary pavement markings shall generally follow the alignment for the permanent pavement markings.

8-23.2 Materials

(March 22, 2023 CFW GSP)

Section 8-23.2 is supplemented with the following:

The City of Federal Way does not allow Low VOC Waterborne Paint for temporary or permanent pavement markings.

8-23.3 Construction Requirements

8-23.3(1) General

(September 20, 2024 CFW GSP)

Section 8-23.3(1) is deleted and replaced with the following:

All work zone temporary pavement markings shall be paint, except for markings on the new asphalt or concrete wearing course. This includes lane shifts for construction stages.

All temporary pavement markings that are expected to remain in place for two months or more shall be paint, with raised pavement markers. This includes any work zone markings.

All temporary pavement markings that are installed prior to a winter suspension shall be paint with raised pavement markers. This includes any work zone markings.

Temporary pavement markings that are installed on the wearing course of new asphalt or concrete shall be tape.

Tape may be used for other short-term applications, as approved by the Engineer.

8-23.3(4) Pavement Marking Application

8-23.3(4)A Temporary Pavement Markings – Short Duration

(March 22, 2023 CFW GSP)

Paragraph 2 of Section 8-23.3(4)A is modified as follows:

Temporary Center Line (Double Yellow Center Line) – Two SOLID lines used to delineate adjacent lanes of traffic moving in opposite directions. Temporary raised pavement markings should be installed on both sides of the yellow lines at 40-foot intervals.

Temporary Center Line (Skip Center Line) – A BROKEN line used to delineate adjacent lanes of traffic moving in opposite directions. The broken pattern shall be based on a 10-foot unit, consisting of a 1-foot line with a 9-foot gap.

8-23.3(4)A2 Temporary Pavement Marking Tape

(September 20, 2024 CFW GSP)

Section 8-23.3(4)A2 is supplemented with the following:

Black mask pavement marking tape shall not be used, unless specifically requested by the Engineer.

8-23.3(4)E Removal of Pavement Markings

(September 20, 2024 CFW GSP)

Section 8-23.3(4)E is supplemented with the following:

Raised pavement markers shall be removed prior to paving. This work shall be performed by the Contractor.

8-23.4 Measurement

(November 7, 2025 CFW GSP)

Section 8-23.4 is supplemented with the following:

Temporary Raised Pavement Markers are incidental to Temporary Pavement Markings. No separate measurement or payment will be made.

Traffic control (Flaggers, Traffic Control Supervisor, Other Traffic Control, etc.) for the initial installation of Temporary Pavement Markings shall be measured and paid in accordance with the respective Traffic Control Bid Items. Traffic control associated with the subsequent maintenance and/or removal of Temporary Pavement Markings shall be incidental to the temporary pavement marking bid items and no additional payment will be made.

8-33 POTHOLING AND RESOLUTION OF UTILITY CONFLICTS

(September 20, 2024 CFW GSP)

Section 8-33 and it's subsections are new sections as follows:

8-33.1 Description

(September 20, 2024 CFW GSP)

Section 8-33.1 is a new section:

This work involves the identification and resolution of utility conflicts not identified in the plans between proposed improvements and existing utilities. The City will pay these costs by force account if the work proves to be acceptable and the Contractor had performed the work with the authority of and due notice to the Engineer.

8-33.3 Construction Requirements

(September 20, 2024 CFW GSP)

Section 8-33.3 is a new section:

The City may direct the Contractor to pothole existing utilities to verify the field location and depth. Potholing shall include excavation and backfilling of the existing utility, identification of the pipe or line size, material type and condition and the survey work to locate the facility horizontally and vertically. Survey information to be obtained shall include station and offset to center of utility and elevation at top of utility. Stations, offsets and elevations shall be to the nearest 0.1 foot unless greater accuracy is required. Potholes shall be backfilled with CSTC compacted to 95%, or with CDF, as directed by the Engineer. In areas subject to public traffic, the HMA patch shall match the depth of the surrounding pavement.

In the event that a conflict arises between the proposed improvements and an existing utility, the Resolution of Utility Conflicts item will compensate the Contractor for standby time and additional work in the following manner:

1. Standby time resulting from existing utility conflicts. Standby time is defined as time the Contractor is unable to proceed with progression of a specific work item (i.e. storm drainage, underground utility installation etc.) due to conflicts with existing facilities. However, payment for standby time shall be limited to:

    a. For each agreed upon conflict, a maximum of four (4) hours of standby time will be paid for actual delay of labor and equipment due to a utility conflict. The Contractor shall be responsible to adjust his work schedule and/or reassign his work forces and equipment to other areas of work to minimize standby time.

b. If the conflict is resolved within one (1) hour of notification to the Engineer, no standby time will be paid.

2. Additional work required to resolve utility conflicts will be paid for at the bid unit prices for the associated work. Work that can be measured and paid for at the unit contract prices shall not be identified as force account work. This work includes but is not limited to:

   a. Storm drainage manhole, pipe, vault, and conduit realignments of line and/or grade for the storm drain and undergrounding of overhead utilities, to avoid existing utility conflicts.

   b. Additional storm drainage manholes, pipe, vaults, and conduit required by a change in alignment, and/or grade, not exceeding the limits set in section 1-04.4 of the Standard Specifications.

8-33.4 Measurement

(September 20, 2024 CFW GSP)

Section 8-33.4 is a new section:

"Potholing", will be measured for force account per Section 1-09.6.

"Resolution of Utility Conflicts" will be measured for force account per Section 1-09.6.

8-33.5 Payment

(September 20, 2024 CFW GSP)

Section 8-33.5 is a new section:

"Potholing", will be paid by force account.

"Resolution of Utility Conflicts", will be paid by force account.

To provide a common proposal for all bidders, the City has estimated the amount for "Resolution of Utility Conflicts" and "Potholing" and entered the amounts in the proposal to become a part of the total bid by the Contractor.

Utility conflicts due to the Contractor's actions or operations shall be resolved by the Contractor at no expense to the Contracting Agency.

END OF DIVISION 8

DIVISION 9
MATERIALS

9-01 CONCRETE

9-01.2 Specifications

9-01.2(1)B Blended Hydraulic Cement

Section 9-01.2(1)B is modified with the following:

Type IL cement is only allowed for use within the City of Federal Way subject to the conditions listed below:

	Class 3000 Type 1L	Class 4000 Type 1L	Class 4000 Type 1L with crystalline waterproofing and corrosion protection admixture[1]	Class 5000 Type 1L
Cast-in-Place Foundations *(light standards, signals, RRFBs, etc.)*		X	X	X
Pre-cast or cast-in-place catch basins and manholes		X	X	X
Roads, curbs, curb & gutters, roundabouts & aprons, sidewalks, ADA ramps, driveway approaches			X	X
Other exposed surfaces *(retaining walls, junction box aprons, cabinet bases, barriers, etc.)*			X	X

[1] *Crystalline Waterproofing admixtures (Penetron or approved equal) shall meet the following specification: ASTM C494, Type S, hydrophilic, crystalline permeability-reducing admixture for hydrostatic conditions (PRAH) shall form insoluble crystals throughout the concrete matrix, self-healing and sealing all pores, capillaries and cracks up to 0.5mm (1/51 inch). The crystalline waterproofing admixture shall include a colored tracer material so that it is visible when included in the concrete mix.*

For all Type 1L concrete mixes, the City will not accept any maleated rosin (i.e. MasterAir AE90) as a supplied air entrainment and waterproofing admixture or any wax-based curing compounds.

9-03 AGGREGATES

9-03.12 Gravel Backfill

9-03.12(6) Pit Run Sand

(April 12, 2018 CFW GSP)

Section 9-03.12(6) is a new section:

Sieve Size	Percent Passing
3/8" square	100
U.S. No. 4	90
Sand Equivalent	30 minimum

9-03.14(3) Common Borrow

(April 12, 2018 CFW GSP)

Section 9-03.14(3) is modified with the following requirements:

Material from on-site excavations meeting the requirements for Common Borrow shall be used to the extent practicable. Material for common borrow shall consist of granular soil and/or aggregate which is free of trash, wood, debris, and other deleterious material.

Common Borrow material shall be at the proper moisture content for compaction. This material is generally moisture sensitive. The natural moisture content shall range from not more than 1 percent wet of optimum to not more than 3 percent dry of optimum as determined in accordance with Section 2-03.3(14)D. The material shall not pump or yield under the weight of compaction equipment and construction traffic. The Contractor is responsible for protecting the material from excess moisture wherever/whenever possible. To the extent practicable, this material should be handled only during non-rainy periods and should be removed, hauled, placed, and compacted into final embankments without intermediate handling or stockpiling. Surfaces should be graded and sloped to drain and should not be left uncompacted.

Common Borrow shall meet the following gradation limits:

Sieve Size	Percent Passing (by weight)
6” square [1]	100
4” square	90 - 100
2” square	75 - 100
U.S. No. 4	50 - 80
U.S. No. 40	50 max.
U.S. No 200	25 max.

[1] For geosynthetic reinforced walls or slopes, 100 percent passing 1¼-inch square sieve and 90 to 100 percent passing the 1-inch square sieve.

Common Borrow shall contain sufficient fines for compaction and to bind the compacted soil mass together to form a stable surface when heavy construction equipment is operated on its surface.

9-05 DRAINAGE STRUCTURES AND CULVERTS

9-05.13 Ductile Iron Sewer Pipe

(September 20, 2024 CFW GSP)

Section 9-05.13 is supplemented as follows:

All ductile iron pipe shall be epoxy lined.

9-05.23(1) Dual Wall HDPE Storm Sewer Pipe

(October 11, 2024 CFW GSP)

Section 9-05.23(1) is a new section as follows:

Dual wall HDPE storm sewer pipe shall meet the requirements of ASTM F2648.

9-05.15 Metal Castings

9-05.15(4) Heavy Duty Hinged Style Ductile Iron Frame and Cover

(December 2, 2019 CFW GSP)

Section 9-05.15(4) is a new section:

Heavy-Duty hinged style ductile iron frame and covers shall meet the requirements for metal castings found in Section 9-05.15. The covers shall be hinged and incorporate a 90-degree blocking system to prevent accidental closure. The cover shall be operable by one person using standard tools and shall allow for the cover to open to 120-degrees where it can either remain open in a secure position or be removed if needed. The cover pick slot shall provide a solid point of removal for most removal tools and be designed to eliminate surface water inflow. The covers shall be lockable with a cam lock assembly and have a cap or cover to prevent debris from entering and preventing access to the lock assembly. Keys for all lock assemblies will be provided to the City. The frame and cover assembly shall be capable of withstanding a test load of 100,000 lbs and include a "T" shaped durable gasket to cushion traffic shock and resist water infiltration. The frame and cover assembly shall be circular, compatible with City of Federal Way standard top slab openings, and available in a 24-inch clear opening. The frame and cover depth shall not exceed 4 inches and the flange shall incorporate bedding slots and bolt holes. The cover shall be installed with the hinge facing oncoming traffic so the lid will open towards traffic.

9-05.15(5) High Impact Multi-Purpose Rubber Composite Adjustment Risers
(December 2, 2019 CFW GSP)

Section 9-05.15(5) is a new section:

Risers shall be minimum 80% by weight recycled rubber and minimum 10% by volume recycled RFL fiber. Adjustment risers shall be of uniform quality and free from cracks, holes, and any other surface defects. Adjustment risers shall be designed for heavy duty street traffic and shall meet or exceed minimum load capacity requirements of AASHTO. Adjustment risers shall be installed as a single unit and shall not be cut into pieces or used as shims. Manufacturer certification shall be furnished upon request stating that the product meets the requirements of this specification. Risers shall be available in standard thicknesses from 1/2-inch to 3-inches; available flat or tapered; and in round, square, and rectangular shapes.

9-14 EROSION CONTROL AND ROADSIDE PLANTING

9-14.1 Materials Submittals and Acceptance
(January 10, 2022, WSDOT GSP, OPT1.2023)

In the table in Section 9-14.1, the row for Compost is revised to read:

9-14.5(8)	Compost	Cert & following information is required to be submitted fourteen days prior to application. a) A copy of the Solid Waste Handling Permit issued to the manufacturer by the Jurisdictional Health Department in accordance with https://apps.leg.wa.gov/WAC/default.aspx?cite=173-350 (Minimum Functions Standards for Solid Waste Handling). b) Compost Test Data submitted on WSDOT Form 220-038 that show the compost complies with the processes, testing, and standards specified in WAC 173-350 and this section. And independent Seal of Testing Assurance (STA) Program certified laboratory shall perform the testing within 90 calendar days of application.

		c) A copy of the manufacturer's annual Seal of Testing Assurance STA certification as issued by the U.S. Composting Council. d) A sample of the compost approved for use. e) A list of feed stocks by volume for each compost type. f) Compliance with the applicable section.

9-14.2 Topsoil

9-14.2(1) Topsoil Type A

(June 12, 2020 CFW GSP)

Section 9-14.2(1) is supplemented with the following:

Topsoil Type A mix shall be 50% pure organic compost and 50% sand or sandy loam. The soil shall be high in organic content and compromised of fully composted and mature organic materials.

No fresh sawdust or other fresh wood by-products shall be added to extend the volume after the composting process.

Chemical and physical characteristics of Topsoil Type A shall comply with the following:

Screen Size	7/16" Maximum
Total Nitrogen	0.25% Minimum
Organic Matter	10% Minimum
pH Range	5.5 to 7.5
Conductivity	5 mmhos/cm Maximum

9-14.3 Seed

(June 12, 2020 CFW GSP)

Section 9-14.3 is supplemented with the following:

The grass seed dealer shall mix the grass seed only. The Contractor shall furnish the Engineer with a dealer's guaranteed statement of the composition, mixture, and the percentage of purity and germination of each variety. Seed shall be applied at manufacturer's recommended rate. Hydroseed shall be composed of the following varieties mixed in the proportions indicated, or approved equal:

SEEDED LAWN MIXTURE			
NAME	**BY WEIGHT**	**% PURITY**	**% GERMINATION**
Tall Fescue / Festuca arundinacea	40%	98%	90%
Creeping Red Fescue / Festuca rubra	25%	98%	90%
Highland Colonial Bentgrass / Agrostis capillaris var. 'Highland'	5%	98%	90%
Perennial Rye / Lolimum perenne (blend of two: 'Fiesta II', 'Prelude II', 'Commander'	30%	95%	90%

9-14.4 Fertilizer

(June 12, 2020 CFW GSP)

Section 9-14.4 is supplemented with the following:

Fertilizer for trees shall be biodegradable fertilizer packets, 20-10-5. Apply per manufacturer's recommendations.

9-14.5 Mulch and Amendments

9-14.5(3) Bark or Wood Chips

(June 12, 2020 CFW GSP)

Section 9-14.5(3) is supplemented with the following:

Bark or Wood Chip Mulch shall be medium grade composted ground fir or hemlock bark. The bark shall be uniform in color, free from weed seeds, sawdust and splinters. The moisture content of bagged mulch shall not exceed 22%. The acceptable size range of bark mulch material is ½" to 1" with maximum of 20% passing the ½" screen.

9-14.7 Plant Materials

9-14.7(2) Quality

(June 12, 2020 CFW GSP)

Section 9-14.7(2) is supplemented with the following:

Plant material shall be free from disfiguring knots, swollen grafts, sunscald injuries, bark abrasions, evidence of improper pruning or other objectionable disfigurement.

Potted and container stock shall be well rooted and vigorous enough to ensure survival and healthy growth. Shrubs shall have full foliage (not leggy). Container stock shall be grown in its delivery container for not less than six (6) months, but not for more than two (2) years. Root bound or broken containers will not be accepted. Bare root, liner and root stock with dried or shriveled roots from exposure will not be accepted.

Measurements, caliper, branching, grading, quality, balling and burlapping shall follow the Code of Standards of the American Associate of Nurserymen in the American Standard for Nursery Stock, ANSI 260.1, latest edition. Measurements shall be taken with all branches in their normal growing position. Plants shall not be pruned prior to delivery to site.

9-14.7(3) Handling and Shipping

(June 12, 2020 CFW GSP)

Section 9-14.7(3) is supplemented with the following:

Tie back branches as necessary, and protect bark from chafing with burlap bags. Do not drag Plant materials along ground without proper protection of roots and branches. Protect rootballs from environmental or mechanical damage and water as necessary to keep roots moist. Do not store Plants for more than one week.

9-14.7(4) Sod

(June 12, 2020 CFW GSP)

Section 9-14.7(4) is supplemented with the following:

Sod Lawn shall be three-way Tall Fescue Blend Sod, 33.33% Firecracker LS Tall Fescue, 33.33% Spyder LS Tall Fescue, 33.33% Raptor II Tall Fescue with degradable netting, or approved equal.

9-14.7(5) Tagging

(June 12, 2020 CFW GSP)

Section 9-14.7(5) is a new section:

All Plant material shall be legibly tagged. Tagging may be by species or variety with minimum of one tag per ten trees, shrubs, or vines. Remove all tagging prior to final acceptance.

9-14.7(6) Inspection

(June 12, 2020 CFW GSP)

Section 9-14.7(6) is a new section:

The Contracting Agency shall reserve the option of selecting and inspecting Plant material at the nursery. The contractor shall provide the Contracting Agency with at least one week notice prior to preparing Plants for shipping and delivery. The Contractor shall neither deliver to site nor install Plant materials until authorized by the Contracting Agency.

9-14.7(7) Temporary Storage

(June 12, 2020 CFW GSP)

Section 9-14.7(7) is a new section:

Cold storage of Plants shall not be permitted.

If Planting is delayed more than 24 hours after delivery, set balled and burlapped Plants on the ground, well protected with soil or wet peat. Adequately cover all roots of bare root material with soil or wet peat. Protect rootballs from freezing, sun, drying winds or mechanical damage. Water Plant material as necessary until Planted.

Plants shall not be stored for more than one week. Longer storage period at project site will result in rejection of Plant materials by the Contracting Agency.

9-14.8 Stakes, Guys, and Wrapping

(June 12, 2020 CFW GSP)

Section 9-14.8 is supplemented with the following:

Stakes shall be BVC round tree stakes with Chainlock guying or Engineer accepted product. No wrapping required.

9-14.9 Root Barrier

(June 12, 2020 CFW GSP)

Add the following new section:

Root Barrier shall be 18-inch high, minimum thickness 0.090-inch, interlocking root barrier panels constructed of high-impact polypropylene with 1/2-inch reinforcing ribs.

9-17 FLEXIBLE GUIDE POSTS

9-17.1 General

(September 20, 2024 CFW GSP)

Section 9-17.1 is supplemented with the following:

Flexible guide post curb bases shall be NCHRP 350 and MASH 2009 compliant and shall be designed for use in traffic. Curb bases shall be yellow or white, to match the channelization color, and use a quick-release style base. Curb caps/nosing will be required for both sides of each delineator location, if the curb base is greater than 2 inches high.

The delineators used with the curb base shall be 3 inches in diameter, white with white sheeting, and tubular type.

9-19 DETECTABLE WARNING SURFACE

9-19.2 Cast-in-Place Detectable Warning Surface

9-19.2(1) General Requirements

(October 3, 2022 WSDOT GSP, OPTION 1)

The first paragraph of Section 9-19.2(1) is revised to read:

The color of detectable warning surfaces shall be yellow and shall match SAE AMS Standard 595, color number 33538 unless otherwise shown on the plans. When used in areas between ramps to differentiate between travel paths, detectable warning surfaces shall be black.

Units shall provide the required contrast (light-on-dark or dark-on-light) with the adjacent curb ramp or other applicable walkway.

9-28 SIGNING MATERIALS AND FABRICATION

9-28.1 General

(September 20, 2024 CFW GSP)

Paragraph three is deleted and replaced with the following:

All regulatory (R series), school (S series), and warning (W and X series) signs, except for parking regulation, parking prohibition signing and signs of fluorescent yellow-green color shall be constructed with Type III or Type IV Glass Bead Retroreflective Element Material sheeting in accordance with Section 9-28.12. All street name (D-3) sign sheeting shall meet this specification. The reflectivity standard of supplemental plaques shall match that of the primary sign.

All overhead signing shall meet the specifications of Type IX sheeting, 3M 3990 series or approved equal. This sheeting has a retroreflection rating of 300 candelas per foot candle per square foot of material for white sheeting (250 for yellow sheeting) with an entrance angle of minus 5 degrees. This standard applies to all signs mounted above the roadway, on span wires, or on traffic signal standard mast arms.

All pedestrian / non-motorized-related warning signs (W-series) and all school warning signs (S-series) shall be of fluorescent yellow-green color and shall meet the specifications of Type IX sheeting, 3M 3983, or approved equivalent. This sheeting has a retroreflection rating of 325 candelas per foot candle per square foot of material for fluorescent yellow-green sheeting with an observation angle of 0.2 degrees and an entrance angle of minus 4 degrees. The reflectivity standard of supplemental plaques shall match that of the primary sign.

Motorist information and parking signing shall be constructed with Type I Glass Bead Retroreflective Element Material sheeting in accordance with Section 9-28.12. The reflectivity standard of supplemental plaques shall match that of the primary sign.

9-28.2 Manufacturer's Identification and Date

(October 23, 2014 CFW GSP)

Section 9-28.2 is deleted and replaced with the following:

All signs shall show the manufacturer's name and date of manufacture on the back.

9-28.8 Sheet Aluminum Signs

(September 20, 2024 CFW GSP)

Section 9-28.8 table is deleted and replaced with the following:

Sign sheet thickness and material shall be in accordance with City of Federal Way Standard Details.

9-28.9 Fiberglass Reinforced Plastic Signs

(December 18, 2009 CFW GSP)

Section 9-28.9 is deleted in its entirety.

9-28.12 Reflective Sheeting

(September 20, 2024 CFW GSP)

Section 9-28.12 is replaced with the following:

Reflective sheeting material shall conform to ASTM D4956 – *Standard Specification for Retroreflective Sheeting for Traffic Control.* The following standard reflective sheeting types have been modified to reflect City of Federal Way requirements:

Device Type	Use	Sheeting Color	Allowable Sheeting Types
Permanent Signs			
Permanent Signing	All	All	IV[1]
Object Markers	All	All	IV
Temporary Construction Signing			
Warning Signs	All	Fluorescent Orange	VIII, IX, X[2], XI
Regulatory Signs	All	White	IV
Regulatory Signs	Rural	White	II[3], IV
Regulatory Signs	Urban/Rural	White	III[3], IV
Regulatory Signs	All	Red	III, IV
Regulatory Signs	All	Green	II, IV
Regulatory Letters, Border or Symbols		Green	III[3], IV[3]
Temporary Construction Signs	All	All Other Background Colors	III[3], IV
Other Devices			
Barricades	All	White or Orange	III[3], IV
Barrier Delineators	All	White or Yellow	III, IV, V, XI
Bollards	All	All	IV
Flexible Guidepost	All	All	III, IV, V
Pedestrian Channelization Devices	All	White or Orange	III[3], IV
Signal Backplates	Portable Signals		IV
Signal Backplates	Permanent Signals		See Section 9-29.16
Tall Channelization Devices 42-inch	All	Fluorescent Orange/White	III[4], IV[4], VIII, IX, XI[4]
Traffic Cones 28- and 36-inch	All	White or Higher White	III[3], IV
Traffic Safety Drums	All	Fluorescent Orange/White	III[4], IV[4], VIII, IX, XI[4]

Transportable Attenuators	All	Yellow and Black Chevron	III[3], IV
Transportable Attenuators	All	White and Red Chevron	IV
Utilities attached to Bridges	All		I, See Section 6-01.10

Notes:

1. Except S Series signs with fluorescent yellow-green sheeting shall use Type IX. Overhead signs shall use Type IX.

2. Former Type X, not shown in ASTM D4956, however meets requirements of Types VII, IX and XI.

3. Only devices in inventory may be used, new fabrication shall use Type IV.

4. Type III and Type IV orange and white sheeting may be still used through December 31, 2026.

9-28.14 Sign Support Structures

(September 20, 2024 CFW GSP)

Section 9-28.14 is supplemented with the following:

Unless otherwise noted in the Plans or approved by the Engineer, all sign posts shall be steel sign posts. Sign post sizes will be shown on Plans or shall be sized in accordance with the WSDOT Design Manual. Sign supports (foundations) shall be in accordance with City of Federal Way Standard Details.

9-29 ILLUMINATION, SIGNAL, ELECTRICAL

9-29.1(11) Foam Conduit Sealant

(January 7, 2019 WSDOT Option 1)

Section 9-29.1(11) is supplemented with the following:

The following products are accepted for use as Cully Duct Sealing Compound, #14300 or approved equal conduit sealant:

9-29.2 Junction Boxes, Cable Vaults, and Pull Boxes

(September 20, 2024 CFW GSP)

Section 9-29.2 is supplemented with the following:

Slip-Resistant Surfacing for Junction Boxes, Cable Vaults, Fiber Vaults, and Pull Boxes

All lids located within sidewalk areas, along a pedestrian access route, or in other accessible surfaces within the public right-of-way or on publicly owned properties, must meet accessibility requirements and be slip-resistant. Acceptable slip-resistant products shall be slip-resistant MMA coating and SlipNot Grade 3-Coarse. Placement of the slip-resistant MMA coating shall be in accordance with the manufacturer's recommendations. Vertical edges of the utility shall be flush with the adjoining surface to the extent possible after installation.

9-29.2(1) Junction Boxes

9-29.2(1)A Standard Duty Junction Boxes

(September 20, 2024 CFW GSP)

Section 9-29.2(1)A is supplemented with the following:

Bonding straps shall be provided and installed by the Contractor on all junction boxes between the junction box lid and frame. All Type 1 and Type 2 junction boxes shall be locking lid and shall be in accordance with Standard Plans. All Type 8 junction boxes shall be double hinged, double door, locking lids, with a concrete footing, and shall be in accordance with Standard Plans.

All junction box lids and frames shall have slip-resistant surfaces and the slip-resistant treatment shall be in accordance with Section 9-29.2.

9-29.2(1)A2 Non-Concrete Junction Boxes
(September 20, 2024 CFW GSP)
Section 9-29.2(1)A2 is replaced with the following:

Non-concrete junction boxes are not allowed for use within the City of Federal Way.

9-29.3(2)A3 Equipment Grounding and Bonding Conductors
(September 20, 2024 CFW GSP)
Section 9-29.3(2)A3 is supplemented with the following:

All Ufer grounds shall be bare stranded copper.

9-29.3(2)B Multi-Conductor Cable
(September 20, 2024 CFW GSP)
Section 9-29.3(2)B is supplemented with the following:

Two-conductor through 20-conductor unshielded signal control cable shall have stranded copper conductors.

Multi-conductor cables for vehicle signal heads, pedestrian signal heads, and pedestrian push buttons shall meet IMSA Spec No. 20-1 (P.E. jacket and P.E. insulation) and shall be #18 AWG stranded cable.

9-29.3(2)F Detector Loop Wire
(November 24, 2025 CFW GSP)
Section 9-29.3(2)F is modified as follows:

Detector loop wire shall use #14 AWG stranded copper conductors, and shall conform to IMSA Specification, with USE-rated cross-linked polyethylene (XLPE) insulation.

9-29.6(1) Steel Light and Signal Standards
Section 9-29.6(1) is supplement with the following:

Traffic signal standards and illumination standards shall be furnished and installed in accordance with the methods and materials noted in the applicable Standard Plans, pre-approved plans, or special design plans. All welds shall comply with the latest AASHTO LRFD Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals. Welding inspection shall comply with Section 6-03.3(25)A, Welding Inspection.

After delivering the poles to the job site and before they are installed, they shall be stored in a place outside of the clear zone and that will not inconvenience the public. All poles and arms shall be installed in compliance with Washington State Utility and Electrical Codes.

Galvanized steel light and signal standards shall not be painted.

Anchor bolts shall be in accordance with Section 9-29.6(5).

FW Type I Standards
The Contractor shall provide and install Type I vehicle head standards where shown in the Plans. The Type I vehicle head standards to be provided shall be in accordance with Standard Plans. See the Traffic Signal System Pole Sheet in the Plans and Sections 8-20.3(14)B and 9-29.19 for equipment mounting details. Where signal heads are not installed on the Type I standard, provide a steel pole cap with stainless steel set screws.

Anchor bolts shall be in accordance with Section 9-29.6(5).

PS Standards
PS standards are not used in the City of Federal Way. All pedestrian heads shall be side-mounted with clamshell hardware.

PPB Posts
The Contractor shall provide and install FWPPB posts where shown in the Plans. The FWPPB posts to be provided shall be in accordance with City of Federal Way Standard Details.

9-29.6(2) Slip Base Hardware
(September 20, 2024 CFW GSP)
Section 9-29.6(2) is supplemented with the following:
Slip base standards will not be allowed, unless specifically called for in the Plans.

9-29.6(5) Foundation Hardware
Section 9-29.6(5) is supplemented with the following:
For FWPPB posts: Anchor bolts for FWPPB posts shall be in accordance with City of Federal Way Standard Details.

For FW Type I vehicle head standards: Anchor bolts for FW Type 1 vehicle head standards shall be in accordance with Fixed Base as shown in Standard Plans.

9-29.19 Pedestrian Push Buttons
Section 9-29.19 is deleted and replaced with the following:
The Contractor shall provide and install accessible pedestrian push buttons and signs, as shown in the Plans. The position of the pedestrian push buttons shall be located in a manner such that the tactile arrow is aligned parallel to the direction of travel for the crosswalk which the push button is intended to serve; however final positioning for the optimum effectiveness shall be approved by the Engineer. Accessible pedestrian push button units shall be Polara iNS3 pedestrian station or Campbell Company Guardian accessible pedestrian station. The station shall have a black body and face plate color and shall meet the following requirements:

Push buttons shall be mounted to the poles by means of stainless steel bolts. All mountings shall be securely fastened as approved by the Engineer.

The sign legend to be used shall be sign designation R10-3e and shall be 9 inches by 15 inches. Sign sheeting shall be engineer grade. All mounting bolts shall be non-corrosive stainless steel.

The pedestrian pushbutton housing shall be aluminum and shall be painted black. Units shall operate at a temperature range of -35C to 85C. Power requirements shall be 120 VAC, 60 Hz (100 ma, typical +/- 20%).

Pedestrian indicators shall include an audible speaker, call confirmation LED, and vibrotactile arrow. The audible speaker shall be programmable to have a button locator tone, acknowledgement tone/message, walk cycle tone/message and clearance tone/message. The units shall have automatic volume controls for message strength over ambient noise levels. The walk tone/message shall be programmable to stop with the walk signal or other user settable time. The units shall be user settable for Accessible Pedestrian Signal (APS) message initiation with an extended press or on call.

The call confirmation LED shall be red with 160 degree view ability and once activated shall remain illuminated until the corresponding walk indication is given. An audible acknowledgement message of "WAIT" shall accompany each activation of the call confirmation LED.

The locator tone shall be active for a time of 0.15 seconds or less and shall repeat at 1 second intervals. The locator tone shall be intensity responsive to ambient sound and be audible from 6 feet to 12 feet from the pushbutton with a maximum of 5 dBA louder than ambient sound.

A walk cycle audible message shall be set for each pushbutton unit indicated in the Plans and shall be patterned after the model: "Broadway. Walk sign is on to cross Broadway." The walk cycle message shall be intensity responsive to ambient sound with a volume 5 dBA above ambient sound up to a maximum volume of 100 dBA. The walk cycle message shall be audible from the beginning of the associated crosswalk during the walk interval only.

The vibrotactile arrow shall be located on the pushbutton and shall have high visibility contrast of either light on dark or dark on light. The push button units shall be installed in a manner such that the vibrotactile arrow is aligned parallel to the direction of travel for the crosswalk which the push button is intended to serve. The vibrotactile arrow shall activate with the walk cycle.

For RRFB systems, provide Polara iNX push buttons (green body and face plate) or approved equal.

9-29.20 Pedestrian Signals

(September 20, 2024 CFW GSP)

Section 9-29.20 is supplemented with the following:

The symbol message modules shall plug directly into the transformer or be solid-state modules.

Side mountings shall be clamshell mountings Type E, as shown on WSDOT Standard Plans unless otherwise noted in the Plans. All terminal compartments shall be painted in the same manner as specified for signal housings. All pedestrian head mounting bolts shall be noncorrosive stainless steel. Where pedestrian signal heads are to be fastened to the vehicle signal pole, the Contractor shall securely attach the clamshell mounting to the pole using stainless steel Allen-head bolts.

Pedestrian display housings shall have a minimum depth capable of accommodating a Campbell Advisor Pedestrian Pushbutton Controller or Polara pedestrian signal head controller in the rear of the housing.

Pedestrian signals shall be LED Countdown units as manufactured by Dialight Corporation or approved equal.

All pedestrian signal displays shall be the LED type with displays for "RAISED HAND", "WALKING PERSON" and a countdown timer. Each LED pedestrian signal module shall not require special tools for installation. The installation of an LED pedestrian module shall not require any modification to the housing. Each LED pedestrian module shall be a single, self-contained device, not requiring any on-site assembly for installation into any pedestrian signal housing. The power supply for the LED pedestrian module may be packaged as a separate module.

All pedestrian "RAISED HAND" modules and countdown timer display modules shall be Portland Orange and shall conform to current ITE Standards for size, chromaticity, and intensity. LED pedestrian "RAISED HAND" modules shall be manufactured with a matrix of AlInGaP LED light sources. All pedestrian "WALKING PERSON" modules shall be Lunar White and shall conform to current ITE Standards for size, chromaticity, and intensity. LED pedestrian "WALKING PERSON" modules shall be manufactured with a matrix of InGaN LED light sources. The "RAISED HAND" and "WALKING PERSON" message-bearing surfaces shall be filled (not outline) symbols. The LED pedestrian modules shall be operationally compatible with controller and conflict monitors on this Project.

The LED pedestrian module shall be rated for use in the ambient operating temperature range of minus 40 degrees C to 74 degrees C. Each LED pedestrian module shall be protected against dust and moisture intrusion in accordance with the NEMA Moisture Resistance STD 250-1991 for Type 4 enclosures to protect all internal components. The assembly, manufacturing, and mounting of the LED pedestrian module shall be designed to assure all internal LED and electronic components are adequately supported to withstand mechanical shock and vibration from high winds and other sources. The manufacturer's name, trademark, serial number, and other necessary identification shall be permanently marked on the backside of the LED pedestrian module. LED signal pedestrian modules used on this Project shall be from the same manufacturer. A label shall be provided on the LED housing, and the Contractor shall mark the label with a permanent marker to note the installation date.

LED pedestrian modules shall operate at a maximum power consumption of 15W. Each LED pedestrian module shall be operated from a 60 plus 3-Hz AC line over a range of 80 VAC to 135 VAC. Nominal operating voltage for all measurements shall be 120 plus 3 volts rms. The LED circuitry shall prevent flicker at less than 100 Hz over the voltage range specified above. Fluctuations in the line voltage specified above shall not affect luminous intensity by more than plus 10 percent. The signal module on-board noise transients and low-repetition high-energy transients shall be as stated in Section 2.1.6, NEMA Standard TS-2, 1992. The individual LED light sources shall be wired so that catastrophic failure of any one LED light source will result in the loss of not more than 20 percent of the signal module light sources. LED pedestrian signal modules shall provide a power factor of 0.90, or greater, when operated at nominal operating voltage, and 25 degrees C. Total harmonic distortion induced into an AC power line by an LED

pedestrian module shall not exceed 20 percent. Each LED pedestrian module and associated onboard circuitry shall meet Federal Communications Commission (FCC) Title 47, Subpart B, Section 15 regulations concerning the emission of electrical noise. Two secured, color-coded, 600V, 20AWG minimum, jacketed wires, conforming to the National Electric Code, rated for service at 105 degrees C, are to be provided for electrical connection.

LED signals shall show no evidence of illumination for input voltages below 35 volts. LED signals shall supply illumination current (unregulated) for all input voltages higher than 45 volts (and conform to appropriate intensity requirements specified above 80 volts).

The manufacturer shall provide a written warranty against defects in materials and workmanship for the LED signal modules for a period of 60 months and against loss of intensity below 50 percent of original values for a period of 36 months after installation of the modules. All warranty documentation shall be given to the Engineer prior to installation.

9-34 PAVEMENT MARKING MATERIAL

9-34.2 Paint

9-34.2(5) Low VOC Waterborne Paint
(December 16, 2022 CFW GSP)

Section 9-34.2(5) is replaced with the following:

The City of Federal Way does not allow Low VOC Waterborne Paint.

9-34.3 Plastic

9-34.3(4) Type D – Liquid Cold Applied Methyl Methacrylate
(March 13, 2012 CFW GSP)

Section 9-34.3(4) is supplemented with the following:

The methyl methacrylate (MMA) material shall be formulated as a long-life durable pavement marking system capable of providing a minimum of two years of continuous performance. The material shall be a catalyzed methyl methacrylate (MMA), wet-continuous reflective product and placed shall have a dry time (cure) to the touch of no more than 30 minutes. The material shall be capable of retaining reflective glass beads and ceramic micro-crystalline elements of the drop-on or spray-on type as specified by the manufacturer. The binder shall be lead free and suitable for bituminous and concrete pavements.

9-34.4 Glass Beads for Pavement Marking Materials
(September 20, 2024 CFW GSP)

Section 9-34.4 is supplemented with the following:

Methyl Methacrylate Pavement Markings Optics

Both glass beads and reflective elements are required for MMA application, unless otherwise noted.

Glass Beads

Surface-drop glass beads shall be the Swarco SwarcoFlex bead that has a Methacrylate compatible coupling agent approved by the material manufacturer.

Glass beads shall be applied at a rate of 8 to 10 pounds per one hundred square feet.

Reflective Elements
Surface-drop ceramic elements shall be 3M Series 50M or 70M with a methacrylate-compatible coupling agent approved by the material manufacturer. Elements shall meet or exceed a minimum initial coefficients of retroreflected luminance value of 200 mcd/m^2/lx for white and 150 mcd/m^2/lx for yellow in accordance with ASTM E2832.

The reflective elements shall contain either clear or yellow tinted microcrystalline ceramic beads bonded to the opacified core. These elements shall not be manufactured using lead, chromate or arsenic. All "dry-performing" microcrystalline ceramic beads bonded to the core shall have a minimum index of refraction of 1.89 when tested using the liquid oil immersion method. All "wet performing" microcrystalline ceramic beads bonded to the core shall have a minimum index of refraction of 2.40 when tested using the liquid oil immersion method. The test method is described in ASTM E1967-98.

The gradation for the reflective elements shall be as follows:

US Mesh	Micron	Standard Elements
10	2000	95-100
14	1410	0-40
20	850	0-7

A sample of reflective elements supplied by the manufacturer shall show resistance to corrosion of their surface after exposure to a 1% solution (by weight) of sulfuric acid for 24 hours. After testing, no more than 15% of beads shall show a distinct opaque surface upon microscopic examination after the test.

The reflective elements are surface treated to optimize embedment and adhesion to the MMA binder. Elements treated for use with MMA shall have identification on packaging or label to indicate use with the MMA binder.

Reflectance
Typical initial retroreflectivity values are shown in the table below. Typical retroreflectivity is averaged over many readings. Minimum retroreflectivity results represent average performance for smooth pavement surfaces. Results may vary due to differences in pavement type and surface roughness. Increased element drop rate may be necessary to compensate for increased surface area characteristic of rough pavement surfaces.

Minimum Initial Retroreflectivity Values		
	White	Yellow
Dry (ASTM E1710)	700	525
Wet recovery (ASTM E2177)	275	225
Wet continuous (ASTM E2176)	200	150

9-35 TEMPORARY TRAFFIC CONTROL MATERIALS

9-35.5 Portable Changeable Message Signs
(January 10, 2022, WSDOT GSP, Option 1.2023)
Section 9-35.5 is revised to read:

PCMS, mPCMS, and truck mounted PCMS shall meet the requirements of the MUTCD and the following general requirements:

1. Use light emitting diode (LED) technology capable of emitting a yellow or amber image when displayed with a flat black image matching the background when not activated.

2. Be capable of displaying 3 lines of at least 8 alphanumeric characters with a minimum of one pixel separation between each line.

3. Be capable of displaying 2 phases of messages at 2.0 second display each in addition to 3 phases of messages at 1.5 second display each.

4. PCMS characters shall be at least 18 inches in height.

5. mPCMS characters shall be at least 12 inches in height.

6. Truck-mounted PCMS characters shall be at least 10 inches in height.

7. The sign display shall be covered by a stable, impact resistant polycarbonate face. The sign face shall be non-glare from all angles and shall not degrade due to exposure to ultraviolet light.

8. Be capable of simultaneously activating all pixels for the purpose of pixel diagnostics. This feature shall not occur when the sign is displaying an active message.

9. The light source shall be energized only when the sign is displaying an active message.

10. Primary source of power shall be solar power with a battery backup to provide continuous operation when failure of the primary power source occurs.

11. The sign controller software shall be NTCIP compliant.

The PCMS panels and related equipment shall be permanently mounted on a trailer or truck with all needed controls and power generating equipment.

Standard Plans

(May 5, 2025 WSDOT)

The Washington State Department of Transportation Standard Plans M21-01, published September 2024, is made a part of this Contact with the following revisions:

A-10.30

RISER RING detail (Including SECTION view and RISER RING DIMENSIONS table): The RISER RING detail is deleted from the plan.

INSTALLATION detail, SECTION A: The “1/4”” callout is revised to read “+/- 1/4" (SEE CONTRACT ~ Note: The + 1/4" installation is shown in the Section A view)”

A-40.20

Sheet 1, NOTES 1, 2, 3, and 4 are replaced with the following:

1. Use the ½ inch joint details for bridges with expansion length less than 100 feet and for bridges with L type abutments. Use the 1 inch joint details for other applications.

2. Use detail 5, 6, 7 on steel trusses and timber bridges with concrete bridge deck panels.

3. For details 1, 2, 3, and 4, the item "HMA Joint Seal at Bridge End" shall be used for payment. For details 5 and 6, the item "HMA Joint Seal at Bridge Deck Panel Joint" shall be used for payment. For detail 7, the item "Clean and Seal Bridge Deck Panel Joint" shall be used for payment.

Sheet 2, Detail 8 reference to "6-09.3(6)" is revised to read "6-21.3(7)".

A-50.40
Sheet 1, Plan View: The callout "BEAM GUARDRAIL TYPE 31 TRANSITION SECTION TYPE 21 OR TYPE 24 (SEE STANDARD PLAN C-25.20 OR C-25.30)" is revised to read "BEAM GUARDRAIL TYPE 31 TRANSITION SECTION TYPE 21, 24, OR 25 (SEE STANDARD PLAN C-25.20, C-25.30, OR C-25.32)"

A-60.40
Note 2 reference to "6-09.3(6)" is revised to read "6-21.3(7)".

B-55.20
General Note 3 reference to "2-09.4" is revised to read "3-07.4".

B-90.40
Valve Detail – DELETED

C-20.41
Note 4, First Sentence, "Box Culvert guardrail steel posts are not needed for fill depths greater than 40 inches." is revised to read; "Box culvert guardrail steel posts are not needed for fill depths greater than 46 inches. Provide 6-inches or greater of separation between the bottom of the guardrail post and top of the culvert"
BOX CULVERT POST ASSEMBLY, ELEVATION VIEW, post assembly length dimension "41" MIN. 72" MAX." is revised to read; "41" MIN. 78" MAX."
SECTION A, base material depth dimension - "9" MIN. 40" MAX. (SEE NOTE 4)" is revised to read: "9" MIN. 46" MAX. (SEE NOTE 4)"

C20-43
Note 4, First Sentence: "Box culvert guardrail steel posts are not needed for fill depths greater than 40 inches." is revised to read: "Box culvert guardrail steel posts are not needed for fill depths greater than 46 inches. Provide 6-inches or greater separation between the bottom of guardrail post and top of culvert."
BOX CULVERT POST & BASE PLATE ASSEMBLY, ELEVATION VIEW, post assembly length dimension – "41" MIN. 72" MAX." is revised to read: "41" MIN. 78" MAX."
SECTION A, base material depth dimension - "9" MIN. 40" MAX. (SEE NOTE 4)" is revised to read: "9" MIN. 46" MAX. (SEE NOTE 4)"

C-23.70

Sheet 2, ANCHOR BRACKET ASSEMBLY DETAIL, dimension, “R. 5/16” is revised to read; R. 15/16”
ANCHOR PLATE DETAIL, weld callout (fillet), 1/4" is revised to read; 3/16”

C-60.20
Sheet 1, Plan view, callout – “1/2” (IN) DIAMETER X 6 1/2" (IN) LONG ANCHOR BOLT ~ PER STD. SPEC. SECT. 9-06.5(4) (TYPICAL) (SEE NOTE 7)” is revised to read: “5/8” DIAMETER x 6 1/2" (IN) LONG ANCHOR BOLT ~ PER STD. SPEC. SECT. 9-06.5(4) (TYPICAL) (SEE NOTE 7)”

C-70.15
BARRIER CONNECTION DETAIL, callout – “CENTER GRID IN CONNECTION BLOCKOUT AND FILL VOID WITH TYPE 3 GROUT (STD. SPECIFICATION SECTION 9-20.3(3) PLACED IN ACCORDANCE WITH STD. SPECIFICATION SECTION 6-20.3(20)” is revised to read “CENTER GRID IN CONNECTION BLOCKOUT AND FILL VOID WITH GROUT TYPE 3 (STD. SPECIFICATION SECTION 9-20.3(3) PLACED IN ACCORDANCE WITH STD. SPECIFICATION SECTION 6-02.3(20)”

C81.10
Sheet 1, TYPICAL SECTION – TRAFFIC BARRIER the R4 #6 bar on the traffic face may be placed 4” down from the top of the barrier to allow additional room to install BP railing or other attachments. The R4 bar shall be kept tight to the front R2 bar.
Sheet 4, the existing table “IMPACT SHEAR AND IMPACT MOMENT TABLE” is renamed to “IMPACT SHEAR AND MOMENT TABLE DECK OVERHANG AND CONNECTIONS” keynote 25 is still applicable.
Sheet 4, NOTES, the following Note is added: “3. Deck overhangs for this use constitute plain reinforced concrete typically around 8" in thickness, non-prestressed moment slabs or approach slabs, or plain reinforced and longitudinally prestressed box girders which employ a topping slab. Other Supporting Structure Systems inclusive of post-tensioned decks, walls, and or Structure segments tied together without a topping slab, with the ties in the barrier resistance load path, shall use the impact shear and moments for other supporting structures.”
Sheet 4, the following table is added with a keynote 25.

IMPACT SHEAR AND MOMENT TABLE OTHER SUPPORTING STRUCTURES										
	Interior Segment					End Segment				
Roadway and Fill Height at Curb Line (in)	0	6	12	18	24	0	6	12	18	24
End Segment Length (ft)	-	-	-	-	-	10.00	10.50	11.25	11.75	12.50
Impact Moment (kip*ft/ft)	19.86	24.12	28.55	33.16	37.97	20.80	25.17	29.65	34.27	39.04
Impact Shear (kip/ft)	7.89	8.04	8.23	8.44	8.68	8.27	8.39	8.54	8.72	8.92

C-81.15
Sheet 1, General Notes, Add Note 7, to read;”7. The concrete class for the moment slab shall be class 4000 typically and class 4000A when the top of the slab is used as the roadway, or sidewalk, surface. The concrete class for the barrier is defined in Standard Specification Section 6-10.3.”

C-85.11
On Section B, the callout “3” EXPANDED POLYSTYRENE AROUND COLUMN (TYP.)” is revised to read “3” EXPANDED POLYSTYRENE OR POLYETHYLENE FOAM AROUND COLUMN (TYP.)”

D-3.09
Sheet 1, GEOSYNTHETIC WALL WITH 2 FT TRAFFIC SURCHARGE detail, callout – "BARRIER ON WALL ~ SEE Standard Plan D-3.15 or D-3.16" is revised to read: "BARRIER ON WALL ~ SEE CONTRACT PLANS"

D-3.10
Sheet 1, Typical Section, callout – "FOR WALLS WITH SINGLE SLOPE TRAFFIC BARRIER. USE THE DETAILS ABOVE THE MATCH LINE ON STANDARD PLAN D-3.15" is revised to read; "FOR WALLS WITH SINGLE SLOPE TRAFFIC BARRIER, SEE CONTRACT PLANS"
Sheet 1, Typical Section, callout – "FOR WALLS WITH F-SHAPE TRAFFIC BARRIER. USE THE DETAILS ABOVE THE MATCH LINE ON STANDARD PLAN D-3.16" is revised to read; "FOR WALLS WITH F-SHAPE TRAFFIC BARRIER, SEE CONTRACT PLANS"

D-3.11
Sheet 1, Typical Section, callout – ""B" BRIDGE APPROACH SLAB (SEE BRIDGE PLANS) OR PERMANENT GEOSYNTHETIC WALL BARRIER ~ SEE STANDARD PLANS D-3.15 OR D-3.16" is revised to read; "B" BRIDGE APPROACH SLAB OR MOMENT SLAB (SEE CONTRACT PLANS)
Sheet 1, Typical Section, callout – "TYPICAL BARRIER ON BRIDGE APPROACH SLAB (SEE BRIDGE PLANS) OR PERMANENT GEOSYNTHETIC WALL BARRIER ~ SEE STANDARD PLANS D-3.15 OR D-3.16" is revised to read; "TYPICAL BARRIER ON BRIDGE APPROACH SLAB OR MOMENT SLAB (SEE CONTRACT PLANS)

D-10.10
Note 7, "If Traffic Barriers are required, See Standard Plans D-15.10, D-15.20 and D-15.30" is revised to read "Traffic Barriers shall not be structurally connected to the Reinforced Concrete Retaining Wall Type 1 and 1SW".

D-10.15
Note 7, "If Traffic Barriers are required, See Standard Plans D-15.10, D-15.20 and D-15.30" is revised to read "Traffic Barriers shall not be structurally connected to the Reinforced Concrete Retaining Wall Type 2 and 2SW".

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
Note 5, "If Traffic Barriers are required, See Standard Plans D-15.10, D-15.20 and D-15.30" is revised to read "Traffic Barriers shall not be structurally connected to the Reinforced Concrete Retaining Wall Type 7".

D-10.45
Note 5, "If Traffic Barriers are required, See Standard Plans D-15.10, D-15.20 and D-15.30" is revised to read "Traffic Barriers shall not be structurally connected to the Reinforced Concrete Retaining Wall Type 8".

E-20.10
On Sheet 2, the reference to “2-09.4” is revised to read “3-07.4”.

F-10.18
Note 1; “Construct curb joints at cement concrete pavement transverse joint locations. If all adjacent pavement is HMA, see Standard Plan F-30.10 for Curb Expansion and Contraction Joint Spacing.” is revised to read – “See Standard Plan F-30.10 and Standard Specification Section 8-04.3 for Curb Expansion and Contraction Joint details and spacing.”
CURB 3 Detail, the diamond note 1 callout on the 6” dimension at the bottom left side of the detail, is revised to be a diamond note 2 callout.

F-30.10
All five instances of the “2.0% MAX.” are replaced with “2.1% MAX.”

F-40.12
The one instance of “2.0% MAX.” is replaced with “2.1% MAX.”
Note 7 is replaced with the following:
7. The running slope of curb ramps shall not exceed 8.3% maximum except as noted herein. If the 8.3% running slope creates a ramp that exceeds 15ft, see contract plans for details. Use a single constant slope from bottom of ramp to top of ramp to match into the landing. Do not include the abutting landing in the Curb Ramp length measurement. When a ramp is constructed on a radius, the Curb Ramp length is measured on the inside radius along the back of the walkway.
Section B is amended as follows:
Delete: “15’ – 0” MAX. (TYP.)”
Section C is amended as follows:
Delete: “15’ – 0” MAX. (TYP.)”

F-40.14
The one instance of “2.0% MAX.” is replaced with “2.1% MAX.”
Note 7 is replaced with the following:
7. The running slope of curb ramps shall not exceed 8.3% maximum except as noted herein. If the 8.3% running slope creates a ramp that exceeds 15ft, see contract plans for details. Use a single constant slope from bottom of ramp to top of ramp to match into the landing. Do not include the abutting landing in the Curb Ramp length measurement. When a ramp is constructed on a radius, the Curb Ramp length is measured on the inside radius along the back of the walkway.
Section A is amended as follows:
Delete: “15’ – 0” MAX. (TYP.)”
Section C is amended as follows:
Delete: “15’ – 0” MAX. (TYP.)”

F-40.15
The one instance of “2.0% MAX.” is replaced with “2.1% MAX.”
Note 7 is replaced with the following:
7. The running slope of curb ramps shall not exceed 8.3% maximum except as noted herein. If the 8.3% running slope creates a ramp that exceeds 15ft, see contract plans for details. Use a single constant slope from bottom of ramp to top of ramp to match into the landing. Do not include the abutting landing in the Curb Ramp length measurement.
Section A is amended as follows:

Delete: “15’ – 0” MAX. (TYP.)”

F-40.16
The one instance of “2.0% MAX.” is replaced with “2.1% MAX.”
Note 8 is replaced with the following:
7. The running slope of curb ramps shall not exceed 8.3% maximum except as noted herein. If the 8.3% running slope creates a ramp that exceeds 15ft, see contract plans for details. Use a single constant slope from bottom of ramp to top of ramp to match into the landing. Do not include the abutting landing in the Curb Ramp length measurement.
Section A is amended as follows:
Delete: “15’ – 0” MAX. (TYP.)”
Section B is amended as follows:
Delete: “15’ – 0” MAX. (TYP.)”

F-80.10
The one instance of “2.0% MAX.” is replaced with “2.1% MAX.”
Note 6 is replaced with the following:
The running slope of the Pedestrian Ramp shall not exceed 8.3% maximum except as noted herein. If the 8.3% running slope creates a ramp that exceeds 15ft, see contract plans for details. Use a single constant slope from bottom of ramp to top of ramp to match into the sidewalk.
Section A is amended as follows:
Delete: “15” Max.”

J-5.50
General Note 4 reference to “2-09.3(1)E” is revised to read “3-07.3(1)E”
General Note 5 reference to “2-09.3(1)E” is revised to read “3-07.3(1)E”

J-10.10
Sheet 4 of 6, “Foundation Size Reference Table”, PAD WIDTH column, Type 33xD=6’ – 3” is revised to read: 7’ – 3”. Type 342LX / NEMA P44=5’ – 10” is revised to read: 6’ – 10”
Sheet 5 of 6, Plan View, “FOR EXAMPLE PAD SHOWN HERE:, “first bullet” item, “-SPACE BETWEEN TYPE B MOD. CABINET AND 33x CABINET IS 6” (IN)” IS REVISED TO READ: “SPACE BETWEEN TYPE B MOD. CABINET (BACK OF ALL CHANNEL STEEL) AND 33x CABINET IS 6” (IN) (CHANNEL STEEL ADDS ABOUT 5” (IN)”

J-10.16
Key Note 1, Standard Plan J-10.30 revised to Standard Plan J-10.14

J-10.17
Key Note 1, Standard Plan J-10.30 revised to Standard Plan J-10.14

J-10.18
Key Note 1, Standard Plan J-10.30 revised to Standard Plan J-10.14

J-15.15
The reference to “2-09.3(1)E” is revised to read “3-07.3(1)E”

J-20.01
STANDARD DIMENSIONS AND REFERENCES table, TYPE FB, Standard Height column – “15’-0” ”is revised to read; “14’-0” ”

J-20.10
DELETED

J-20.11
DELETED

J-20.26
Add Note 1, “1. One accessible pedestrian pushbutton station per pedestrian pushbutton post.”
Add General Note 2, to read: “Signs shown are for locations with pedestrian signal displays (Accessible Pedestrian Signals/APS). Accessible information device (AID) pushbuttons signs not shown.”
Revise View Titles (Both Sheets) to read: “ACCESSIBLE PEDESTRIAN PUSHBUTTON ASSEMBLY”

J-20.16
View A, callout, was – LOCK NIPPLE, is revised to read; CHASE NIPPLE

J-21.10
Sheet 1, Anchor Bolt Template, callout; “9” (IN) BOLT CIRCLE” is revised to read: “9” (IN) DIA.BOLT CIRCLE”
Base Plate Detail, callout; “3/4” (IN) STEEL PLATE WITH HOLE = POLE BASE + 1/6” (IN)” IS REVISED TO READ; “3/4” (IN) STEEL PLATE WITH HOLE = POLE BASE + 1/16” (IN)”
Flat Foundation Detail – Elevation, 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”
Flat Foundation Detail – Elevation, dimension; 4’ – 0” is revised to read; “4’ – 0” ROUND OR 3’ – 0” SQUARE”

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
On both elevation views, the overall standard height dimension “15’-0” ” is revised to read; “14’-0” ”

J-26.10
The reference to “2-09.3(1)E” is revised to read “3-07.3(1)E”

J-27.10
The reference to “2-09.3(1)E” is revised to read “3-07.3(1)E”

J-28.30
General Note 13 – “See Standard Plans C-8b and C-85.14 for steel light standards on traffic barrier” is revised to read; “See Standard Plan C-85.15 for steel light standards on traffic barrier.”

J-29.10

The reference to “2-09.3(1)E” is revised to read “3-07.3(1)E”

J-40.10
Sheet 2 of 2, Detail F, callout, “12 – 13 x 1 ½” S.S. PENTA HEAD BOLT AND 12” S. S. FLAT WASHER” is revised to read; “12 – 13 x 1 ½” S.S. PENTA HEAD BOLT AND 1/2” (IN) S. S. FLAT WASHER”

J-40.36
Note 1, second sentence; ”Finish shall be # 2B for backbox and # 4 for the cover.” Is revised to read; ”Finish shall be # 2B for barrier box and HRAP (Hot Rolled Annealed and Pickled) for the cover.

J-40.37
Note 1, second sentence; ”Finish shall be # 2B for backbox and # 4 for the cover.” Is revised to read; ”Finish shall be # 2B for barrier box and HRAP (Hot Rolled Annealed and Pickled) for the cover.

J-50.15
Sheet 1, SECTION A, the call out “LOOP LEAD-IN WIRES, TWISTED PAIRS ~ MAX. 3 PAIRS” is revised to read “LOOP LEAD-IN WIRES, TWISTED PAIRS ~ MAX. 6 PAIRS”
General Note 1 reference to “2-09.3(1)E” is revised to read “3-07.3(1)E”

J-75.20
Key Notes, note 16, second bullet point, was: “1/2” (IN) x 0.45” (IN) Stainless Steel Bands”, add the following to the end of the note: “Alternate: Stainless steel cable with stainless steel ends, nuts, bolts, and washers may be used in place of stainless steel bands and associated hardware.”

J-75.55
Notes, Note A1, Revise reference, was – G-90.29, should be – G-90.20.

L-5.10
Add new general Note 9 on sheet 1 – “9. The top of wall in Section A on Sheet 1 shall be located as follows: 1) flush with the finished grade when placed within the deflection distance of the long span guardrail system (Std. Plan C-20.40), 2) Two inches maximum above finished grade when placed behind a box culvert guardrail steel post system (Std. Plan C-20.41 or C-20.43), 3) Six inches minimum for all other applications. The bottom rail shall be located at mid height between the top rail and the top of structure.”

M-20.30
Wide Dotted Lane Line Detail, reference below title, (SEE NOTE 6) is revised to read: (SEE NOTE 5)

M-40.10
Guide Post Type ~ Reflective Sheeting Applications Table, remove reference - “(SEE NOTE 5)”

The following are the Standard Plan numbers applicable at the time this project was advertised. The date shown with each plan number is the publication approval date shown in the lower right-hand corner of that plan. Standard Plans showing different dates shall not be used in this contract.

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-40.00-01 ..... 7/6/22
A-40.10-04 ..... 7/31/19
A-40.15-00 ..... 8/11/09
A-40.20-04 ..... 1/18/17
A-40.50-03 ..... 9/12/23
A-50.10-02 ..... 7/18/24
A-50.40-01 ..... 8/17/21
A-60.10-03 ..... 12/23/14
A-60.20-03 ..... 12/23/14
A-60.30-01 ..... 6/28/18
A-60.40-00 ..... 8/31/07

B-5.20-03 ..... 9/9/20
B-5.40-02 ..... 1/26/17
B-5.60-02 ..... 1/26/17
B-10.20-03 ..... 8/23/23
B-10.40-02 ..... 8/17/21
B-10.70-03 ..... 8/23/23
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-20.40-04 ..... 2/27/18
B-20.60-03 ..... 3/15/12
B-25.20-02 ..... 2/27/18
B-25.60-03 ..... 8/23/23
B-30.05-00 ..... 9/9/20
B-30.10-03 ..... 2/27/18
B-30.15-00 ..... 2/27/18
B-30.20-04 ..... 2/27/18
B-30.30-03 ..... 2/27/18
B-30.50-03 ..... 2/27/18
B-30.60-00 ..... 9/9/20
B-30.40-03 ..... 2/27/18
B-30.70-04 ..... 2/27/18
B-30.80-01 ..... 2/27/18
B-30.90-02 ..... 1/26/17
B-35.20-00 ..... 6/8/06
B-35.40-01 ..... 8/23/23
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-55.20-03 ..... 8/17/21
B-60.20-02 ..... 9/9/20
B-60.40-01 ..... 2/27/18
B-65.20-01 ..... 4/26/12
B-65.40-00 ..... 6/1/06
B-70.20-01 ..... 3/15/22
B-75.20-03 ..... 8/17/21
B-75.50-02 ..... 3/15/22
B-70.60-01 ..... 1/26/17
B-75.60-00 ..... 6/8/06
B-80.20-00 ..... 6/8/06
B-80.40-00 ..... 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-95.20-02 ..... 8/17/21
B-95.40-01 ..... 6/28/18

C-1 ..... 9/8/22
C-1b 10/12/23
C-1d 10/31/03
C-6a 9/8/22
C-7 ..... 9/8/22
C-7a 9/8/22
C-20.10-09 ..... 10/12/23
C-20.14-05 ..... 9/8/22
C-20.15-03 ..... 10/12/23
C-20.18-04 ..... 9/8/22
C-20.40-10 ..... 10/12/23
C-20.41-05 ..... 7/18/24
C-20.43-01 ..... 7/18/24
C-20.44-00 ..... 8/13/24
C-20.45-03 ..... 9/8/22
C-20.55-00 ..... 7/30/24
C-22.16-08 ..... 10/17/23
C-22.40-11 ..... 7/21/24
C-22.45-07 ..... 7/21/24
C-23.70-01 ..... 10/16/23
C.24.10-05 ..... 7/21/24
C-24.15-00 ..... 3/15/22
C-25.20-07 ..... 8/20/21
C-25.22-06 ..... 8/20/21
C-25.26-05 ..... 8/20/21
C-25.30-01 ..... 8/20/21
C-25.32-00 ..... 7/29/24
C-25.80-05 ..... 8/12/19
C-60.10-04 ..... 7/21/24
C-60.15-01 ..... 7/21/24
C-60.20-01 ..... 9/8/22
C-60.30-02 ..... 7/21/24
C-60.40-01 ..... 7/21/24
C-60.45-01 ..... 7/21/24
C-60.50-01 ..... 7/21/24
C-60.60-01 ..... 7/21/24
C-60.70-01 ..... 9/8/22
C-60.80-02 ..... 7/21/24
C-70.10-04 ..... 10/16/23
C-70.15-01 ..... 7/21/24
C-75.10-02 ..... 9/16/20
C-75.20-03 ..... 8/20/21
C-75.30-03 ..... 8/20/21
C-80.10-03 ..... 10/16/23
C-80.20-01 ..... 6/11/14
C-80.30-02 ..... 8/20/21
C-80.40-01 ..... 6/11/14
C-85.10-00 ..... 4/8/12
C-85.11-01 ..... 9/16/20
C-85.15-03 ..... 10/17/23
C-85-18-03 ..... 9/8/22
C-81.10-00 ..... 9/12/23
C-81.15-00 ..... 9/12/23

D-2.36-03 ..... 6/11/14
D-2.46-02 ..... 8/13/21
D-2.84-00 ..... 11/10/05
D-3.11-03 ..... 6/11/14
D-4 ..... 12/11/98
D-6 ..... 6/19/98
D-10.25-01 ..... 8/7/19
D-10.30-00 ..... 7/8/08
D-10.35-00 ..... 7/8/08

D-2.92-01 ..... 4/26/22
D-3.09-00 ..... 5/17/12
D-3.10-01 ..... 5/29/13

E-1 ..... 2/21/07
E-2 ..... 5/29/98

F-10.12-04..... 9/24/20
F-10.16-00..... 12/20/06
F-10.18-04..... 6/28/24
F-10.40-04..... 9/24/20
F-10.42-00..... 1/23/07

G-10.10-00 ..... 9/20/07
G-20.10-03 ..... 8/20/21
G-22.10-04 ..... 6/28/18
G-24.10-00 ..... 11/8/07
G-24.20-01 ..... 2/7/12
G-24.30-02 ..... 6/28/18
G-24.40-07 ..... 6/28/18

H-10.10-01 ..... 6/2/24
H-10.11-00..... 6/2/24
H-10.15-01 ..... 6/2/24
H-10.16-00 ..... 6/2/24

I-10.10-01 ..... 8/11/09
I-30.10-02 ..... 3/22/13
I-30.15-02 ..... 3/22/13
I-30.16-01 ..... 7/11/19
I-30.17-01 ..... 6/12/19

J-05.50-00 ..... 8/30/22
J-10 ..... 7/18/97
J-10.10-04 ..... 9/16/20
J-10.12-00 ..... 9/16/20
J-10.14-00 ..... 9/16/20
J-10.15-01 ..... 6/11/14
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