Set No. _____
Specifications, Proposal,
and Contract Documents for:

TOTEM LAKE CONNECTOR BRIDGE

(NE 124TH St/124th Ave NE Pedestrian Bridge (Totem Lake Non-Motorized Bridge))

NMC086
Job No. 01-20-PW
Fed Contract No. TA 6970

Volume 1 - Specifications

City of Kirkland
Department of Public Works
123 Fifth Avenue
Kirkland, Washington 98033

CITY OF KIRKLAND
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GENERAL INFORMATION, PROPOSAL, & CONTRACT DOCUMENTS

CITY OF KIRKLAND

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CITY OF KIRKLAND

INFORMATION FOR BIDDERS

Bidders must bid on all items contained in the proposal.
The omission or deletion of any bid item will be considered non-responsive and shall be cause for rejection of the bid.

Submit your proposal on the Bid Proposal and other forms which are enclosed, or make a copy of the required forms and submit these documents.

The following forms must be executed in full *with* submittal of the bid:

1. BIDDER RESPONSIBILITY CRITERIA CHECKLIST
2. SUBCONTRACTOR RESPONSIBILITY CRITERIA CHECKLIST
3. PROPOSAL
   The lump sum or unit prices must be shown in the spaces provided on the bid schedule. Show total bid price in both words and figures on the Proposal.
   The Proposal form must be completed in full, signed and dated.
4. BID BOND

   A surety issued bid bond must be executed by the bidder and its surety company. The amount of the bid bond shall be not less than five percent (5%) of the total amount bid and may be shown in dollars or on a percentage basis. (A cashier's check payable to the City of Kirkland and issued for an amount not less than 5% of the total bid may be submitted in lieu of a bid bond.)

5. NONCOLLUSION AFFIDAVIT - Notarized
6. STATEMENT OF BIDDER'S QUALIFICATIONS
   This form must be filled in and signed. The owner reserves the right to check all statements and to judge the adequacy of the bidder's qualifications.
7. SUBCONTRACTOR IDENTIFICATION LIST
   This form must be completed for HVAC, plumbing, and electrical subcontractors if the estimate exceeds $1,000,000.

The following forms are to be executed *after* the contract is awarded:

1. CONTRACT
   This agreement is to be executed by the successful bidder.
2. PERFORMANCE AND PAYMENT BOND
   To be executed by the successful bidder and its surety company.
3. CONTRACTOR'S DECLARATION OF OPTION FOR MANAGEMENT OF STATUTORY RETAINED PERCENTAGE; RETAINED PERCENTAGE ESCROW AGREEMENT
   To be executed by the successful bidder based on bidder's selection of option.
4. CERTIFICATES OF INSURANCE
   To be executed by the successful bidder and by an acceptable insurance company. The City of Kirkland must be named as an additional insured.
5. STATEMENT(S) OF INTENT TO PAY PREVAILING WAGES
   Affidavit certifying all employees of Contractor and Subcontractor shall be paid no less than the Prevailing Wage Rate(s) as determined by the Industrial Statistician of the Washington State Department of Labor and Industries.

SPECIAL NOTE: Prior to commencing work, the contractor and all subcontractors must have applied and paid for a City of Kirkland business license

CITY OF KIRKLAND
Bidder Responsibility Criteria

It is the intent of City to award a contract to the low responsible bidder. Before award, the bidder must meet the following bidder responsibility criteria to be considered a responsible bidder. The bidder may be required by the City to submit documentation demonstrating compliance with the criteria. The bidder must:

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

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

☐ 3. Have:

Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;

A Washington Employment Security Department number, as required in Title 50 RCW;

A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;

☐ 4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3). **Meet responsibility criteria in RCW 39.04.350**

☐ 5. Until December 31, 2017, not have violated more than one time the off-site, prefabricated, non-standard, project specific items reporting requirements of RCW 39.04.370.

☐ 6. For public works projects subject to the apprenticeship utilization requirements of RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the first date of advertising for the project.

CITY OF KIRKLAND
Subcontractor Responsibility Criteria

☐ A. The Contractor shall include the language of this section in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the Owner, the Contractor shall promptly provide documentation to the Owner demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this section apply to all subcontractors regardless of tier.

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

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

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

☐ 3. Have:
Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RC
A Washington Employment Security Department number, as required in Title 50 RCW;
A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
An electrical contractor license, if required by Chapter 19.28 RCW;
An elevator contractor license, if required by Chapter 70.87 RCW.

☐ 4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3). **Meet responsibility criteria in RCW 39.04.350**

☐ 5. Until December 31, 2017, not have violated more than one time the off-site, prefabricated, non-standard, project specific items reporting requirements of RCW 39.04.370.

☐ 6. For public works projects subject to the apprenticeship utilization requirements of RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the first date of advertising for the project.

CITY OF KIRKLAND
BID PROPOSAL

TOTEM LAKE CONNECTOR BRIDGE
CIP NO. CNM0861000
JOB NO. 01-20-PW

To: Director of Finance
City of Kirkland
123 Fifth Avenue
Kirkland, Washington 98033

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this proposal are those named herein; that this proposal is in all respects fair and without fraud; that it is made without collusion with any official or employee of the City of Kirkland, hereinafter called the Owner; and that the proposal is made without any connection or collusion with any person making another proposal on this contract.

The bidder further declares that it has carefully examined the contract documents for the construction of the project; that it has personally inspected the site; that it has satisfied itself as to the quantities involved, including materials and equipment and conditions of work involved, including the fact that the description of the quantities of work materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the contract documents; and that this proposal is made according to the provisions and under the terms of the contract documents, which documents are hereby made a part of this proposal.

The bidder further agrees that it has exercised its own judgment regarding the interpretation of subsurface information and has utilized all data which it believes pertinent from the engineer-architect, owner, and other sources in arriving at its conclusions.

The bidder agrees to hold its bid proposal open for 45 days after the actual date of bid opening and to accept the provisions of the Instructions to Bidders regarding disposition of bid bond.

The bidder agrees that if this proposal is accepted, it will, within ten (10) calendar days after notification of acceptance, execute the contract with the Owner in the form of contract included in the contract documents, and will, at the time of execution of the contract, deliver to the Owner the Performance and Payment Bond and all Certificates of Insurance required therein, and will, to the extent of its proposals, furnish all machinery, tools, apparatus, and other means of construction and do the work in the manner, in the time, and according to the methods as specified in the contract documents and required by the engineer or other project manager designated thereunder.

The bidder further agrees, if awarded the contract, to begin work within ten (10) calendar days after the date of the execution of the contract and to complete the construction within the time specified in Section 1-08.5 of the Special Provisions.

In the event the bidder is awarded the contract and shall fail to complete the work within the time limit or extended time limit agreed upon as more particularly set forth in the contract documents, liquidated damages shall be paid to the Owner per the specifications contained in

the contract documents.

The bidder further proposes to accept as full payment for the work proposed herein, the amounts computed under the provisions of the contract documents and based upon the lump sum and unit price amounts entered by the bidder for the various bid items included in the Bid Schedule. The bidder further agrees the lump sum and unit prices entered for the various bid items included in the Bid Schedule include all use taxes, overhead, profit, bond premiums, insurance premiums and all other miscellaneous and incidental expenses as well as all costs of materials, labor, tools and equipment required to perform and complete the work.

Within the three-year period immediately preceding the date of the bid solicitation for this Project, bidder has not been determined by a final and binding citation and notice of assessment issued by the department of labor and industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW.

The undersigned bids and agrees to complete all construction of the **TOTEM LAKE CONNECTOR BRIDGE; JOB NO. 01-20-PW** for the following:

Total Computed Price *(in figures)*: $ _____

Washington State Sales Tax 10.1% *(in figures)*: $*not applicable*

Total Bid *(in figures)*: $ _____

Total Bid *(in words)*: _____

_____

Receipt of Addenda No(s). _____ is hereby acknowledged.

I certify (or declare) under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct:

_____ _____

CONTRACTOR (Firm Name) Location or Place Executed: (City, State)

_____ _____

By Name and title of person signing

_____ _____

(Indicate whether Contractor is Partnership, Corporation, or Sole Proprietorship) Date

Washington State Contractor's Registration Number	Contractor's Industrial Insurance Account Number
Employment Security Identification Number	Uniform Business Identification (UBI) Number

Contractor's Address:

Telephone Number

Fax Number

EMAIL

** Bid proposal to be submitted in a **sealed envelope** marked "**Bid Enclosed**" for **TOTEM LAKE CONNECTOR BRIDGE, JOB NO. 01-20-PW.**

CITY OF KIRKLAND
BID SCHEDULE

TOTEM LAKE CONNECTOR BRIDGE
JOB NO. 20-01-PW

Note: Unit prices for all items, all extensions, and the total amount of the bid must be shown. All entries must be typed or entered in ink.

Item No.	Item Description	Spec Ref.	Est. Qty.	Unit	Unit Price	Amount
			GENERAL			
1.	MOBILIZATION	1-09	1	LS		
			SUBSTRUCTURE			
2.	STRUCTURE EXCAVATION CLASS A INCL. HAUL	2-09	281	CY		
3.	SHORING OR EXTRA EXCAVATION CL. A	2-09, 8-19	1	LS		
4.	CONC. CLASS 4000 (FOR ABUTMENTS AND PIERS)	6-02	297	CY		
5.	STEEL REINFORCING BAR FOR ABUTMENTS AND PIERS	6-02	87,540	LB.		
6.	CONSTRUCTING 4 FT. DIAM SHAFT	6-19	70	LF		
7.	CONSTRUCTING 4'-11" DIAM SHAFT	6-19	490.5	LF		
8.	CONSTRUCTING 6.56 FT. DIAM SHAFT	6-19	310	LF		
9.	QA SHAFT TEST	6-19	15	EA.		
10.	REMOVING SHAFT OBSTRUCTIONS	6-19	1	EST.	**147,000.00**	**147,000.00**
11.	PRESTRESSING BAR - SUBSTR.	6-02	5	EA.		
12.	STRUCTURAL LOW ALLOY STEEL - SUBSTR.	6-03	1	LS		
13.	STRUCTURE SURVEYING	1-05	1	LS		

Item No.	Item Description	Spec Ref.	EST. Qty.	Unit	Unit Price	Amount
SUPERSTRUCTURE						
14.	BRIDGE DECK (TOTEM LAKE CONNECTOR)	6-02	1	LS		
15.	STRUCTURAL LOW ALLOY STEEL - SUPERSTR.	6-03	1	LS		
16.	DISC BEARING - SUPERSTR.	6-02	14	EA.		
17.	VIBRATION DAMPERS	6-20	2	EA.		
18.	BRIDGE RAILING - SUPERSTRUCTURE	6-06	1,651	LF		
APPROACH STRUCTURES						
19.	VEGETATED FACED MSE WALLS	6-14	4,484	SF		
20.	GRAVEL BORROW FOR STRUCTURAL EARTH WALL INCL. HAUL	6-14	2,461	CY		
21.	BRIDGE RAILING - MSE WALLS	6-06	542	LF		
22.	POST FOUNDATIONS	6-06	103	EA.		
23.	BRIDGE APPROACH SLAB	6-02	36	SY		
24.	CONC. CLASS 4000 (FOR LUMINAIRE FOUNDATIONS)	6-02	5	CY		
25.	STEEL REINFORCING BAR FOR LUMINAIRE FOUNDATIONS	6-02	1,230	LB.		
26.	SOIL TIE-BACK GRID AT ABUTMENT 1	6-02	1	LS		
LIGHTING						
27.	ILLUMINATION SYSTEM	8-20, 8-30	1	LS		
TEMPORARY TRAFFIC CONTROL						
28.	PROJECT TEMPORARY TRAFFIC CONTROL	1-10	1	LS		

Item No.	Item Description	Spec Ref.	EST. Qty.	Unit	Unit Price	Amount
TEMPORARY EROSION AND SEDIMENT CONTROL						
29.	EROSION CONTROL AND WATER POLLUTION PREVENTION, SOUTH WORK AREA	8-01	1	LS		
30.	EROSION CONTROL AND WATER POLLUTION PREVENTION, TRAFFIC ISLAND WORK AREA	8-01	1	LS		
31.	EROSION CONTROL AND WATER POLLUTION PREVENTION, NORTH WORK AREA	8-01	1	LS		
32.	ESC LEAD	8-01	120	DAY		
33.	SPCC PLAN	1-07	1	LS		
34.	CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (CSWPPP)	8-01	1	LS		
35.	TEMPORARY STORM DRAIN BYPASS	8-01	1	LS		
SITE PREPARATION						
36.	PUBLIC INFORMATIONAL SIGNS	8-21	4	EA.		
37.	CLEARING AND GRUBBING	2-01	2.6	AC.		
38.	QUARRY SPALLS, 2-"4"	8-15	2	TN		
39.	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	2-02	1	LS		
40.	REMOVE TREE	2-01	67	EA.		
41.	SALVAGE SIGNS	2-02	1	LS		
42.	HIGH VISIBILITY FENCE	8-01	1,600	LF		
43.	STABILIZED CONSTRUCTION ENTRANCE	8-01	560	SY		
44.	ROADWAY SURVEYING	1-05	1	LS		
45.	ROADSIDE CLEANUP	2-01	1	FA	**7,000.00**	**7,000.00**
46.	REHAB AND COAT EXISTING SANITARY SEWER MANHOLE	7-05	1	LS		

Item No.	Item Description	Spec Ref.	EST. Qty.	Unit	Unit Price	Amount
EARTHWORK						
47.	ROADWAY EXCAVATION INCL. HAUL	2-03	2,550	CY		
48.	SELECT BORROW INCL. HAUL	2-03	200	TN		
49.	COMMON BORROW INCL. HAUL	2-03	450	TN		
SOIL PREPARATION						
50.	TOPSOIL TYPE A	8-02	1,061	CY		
STORM DRAINAGE						
51.	SOLID WALL PVC STORM SEWER PIPE 8 IN DIAM	7-04	270	LF		
52.	PRECAST REINF. CONC. BOX CULVERT	7-02	1	LS		
53.	CATCH BASIN TYPE 1	7-05	3	EA.		
54.	ROCK FOR EROSION AND SCOUR PROTECTION, CLASS A	8-15	70	TN		
55.	BIORETENTION SOIL MIX	8-02	98	CY		
56.	STREAMBED BOULDER ONE MAN	8-02	153	EA.		
57.	FLEXIBLE GUIDE POST	8-10	4	EA.		
58.	PAINT LINE	8-22	68	LF		
59.	ROCKERY	8-24	120	SF		
PAVING						
60.	PHMA CL 1/2" IN. PG 70-22ER	5-04	365	TN		
61.	HMA CL 1/2 IN. PG 64-22	5-04	33	TN		
62.	PERMEABLE BALLAST	4-04	715	TN		
63.	CRUSHED SURFACING TOP COURSE	4-04	126	TN		
64.	CRUSHED SURFACING BASE COURSE	4-04	145	TN		
65.	CRUSHED SURFACING FOR TRAIL	4-04	25	TN		

Item No.	Item Description	Spec Ref.	EST. Qty.	Unit	Unit Price	Amount
66.	CEMENT CONC. TRAFFIC CURB & GUTTER	8-04	140	LF		
67.	CEMENT CONC. SIDEWALK	8-14	48	SY		
LANDSCAPE, HARDSCAPE, SEATING						
68.	LARGE WOODY DEBRIS	8-02	1	LS		
69.	JUTE MATTING	2-01	78,460	SF		
70.	SNAGS	8-26	5	EA.		
71.	ARBORIST WOOD CHIP MULCH	8-02	1.7	AC.		
72.	MEDIUM COMPOST	8-02	0.13	AC.		
73.	STEPPING STONES	8-02	1	LS		
74.	SPLIT RAIL FENCE	8-02	140	LF		
75.	REINFORCED LAWN SURFACING	8-02	1	LS		
76.	SEATING	8-27	1	LS		
77.	THERMOPLASTIC PAVEMENT MARKINGS	8-31	1	LS		
78.	GLASS PANELS	8-32	3	EA.		
79.	PEDESTRIAN HANDRAIL	8-28	32	LF		
80.	PERMANENT SIGNING	8-21	1	LS		
81.	GARBAGE RECEPTACLE	8-33	2	EA.		

Item No.	Item Description	Spec Ref.	EST. Qty.	Unit	Unit Price	Amount
IRRIGATION						
82.	IRRIGATION SYSTEM, SOUTH AREA	8-03	1	LS		
83.	IRRIGATION SYSTEM, NORTH AREA	8-03	1	LS		
84.	SERVICE CONNECTION 3/4 IN. DIAM.	7-15	1	EA.		
PLANTINGS						
85.	PSIPE 4" POTS	8-02	11,787	EA.		
86.	PSIPE 10 CU IN PLUGS	8-02	1710	EA.		
87.	PSIPE 40 CU IN PLUGS	8-02	510	EA.		
88.	PSIPE 2 GALLON POTS	8-02	716	EA.		
89.	PSIPE 5 GALLON CONTAINERS	8-02	36	EA.		
90.	PSIPE LIVE STAKES	8-02	290	EA.		
91.	PSIPE BAREROOT 12" - 18"	8-02	240	EA.		
92.	PSIPE 6'HT TREE	8-02	15	EA.		
93.	SOD INSTALLATION	8-02	665	SY		
94.	SEEDED LAWN INSTALLATION	8-02	777	SY		
95.	DRAINAGE DITCH SEEDING MIX	8-02	398	SY		
96.	LAWN MOWING	8-02	1	LS		
MISCELLANEOUS						
97.	RECORD DRAWINGS (**MIN. BID $5,000**)		1	LS		
98.	TRAINING		2400	HR		

TOTAL COMPUTED PRICE: $_____

_____

BID DEPOSIT

TOTAL COMPUTED PRICE: $_____

Herewith find deposit in the form of a cashier's check or certified check in the amount of

$_____which amount is not less than five percent (5%) of the total bid.

SIGN HERE_____

BID BOND

KNOW ALL MEN BY THESE PRESENTS:
That we, _____, as Principal,
and _____, as Surety,
are held and firmly bound unto the City of Kirkland, as Obligee, in the penal sum of
_____ _____ dollars, for the
payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for

_____

Project Name:_____

Job Number:_____

according to the terms of the proposal or bid made by the Principal therefor, and the Principal shall duly make and enter into a contract with the Obligee in accordance with the terms of said proposal or bid and award and shall give bond for faithful performance thereof, with Surety or Sureties approved by the Obligee; or if the Principal shall, in case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this bond.

SIGNED, SEALED AND DATED THIS _____ DAY OF _____,
20_____.

PRINCIPAL:	SURETY:
_____	_____
_____	_____

Note: If a Bid Bond is provided, it must be accompanied by a power of attorney which appoints the Surety's true and lawful attorney-in-fact to make, execute, seal and deliver this Bid Bond.

CITY OF KIRKLAND
NONCOLLUSION AFFIDAVIT

TOTEM LAKE CONNECTOR BRIDGE
CIP NO. CNM0861000
JOB NO. 01-20-PW

STATE OF WASHINGTON)
) SS
COUNTY OF KING)

The undersigned, being duly sworn, on oath deposes and says that the person(s), firm, association, partnership or corporation herein named has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this proposal is submitted.

_____ _____
Firm Name Authorized Signature

_____ _____
Type Name

_____
Title

Sworn to before me, this _____ day of _____, 20__.

_____
Notary Public in and for the State of Washington
Residing at _____
My Commission Expires _____

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071

The U.S. Department of Transportation (USDOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., ET. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of USDOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the USDOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

CITY OF KIRKLAND
STATEMENT OF BIDDER'S QUALIFICATIONS

Contractor Name: _____ Contact: _____
Business Address: _____
Business phone: _____ Fax: _____
Number of years the Contractor has been engaged in the construction business under the present firm name: _
Describe the general character of work performed by your company: _____
_____
_____
_____

List five projects of a similar nature which Contractor has completed within the last 10 years. Include contract amount and contact information for references:

Project Name	Amount	Owner/Agency	Contact	Phone	Year Completed

List major equipment anticipated to be used on this project; indicate whether Contractor-owned or to be leased from others: _____
_____
_____
_____
Bank reference(s): _
Washington State Contractor Registration No.: ___
Uniform Business Identification No.: _____
I certify that other contracts now in progress or hereafter obtained will not interfere with timely performance of the City of Kirkland project should I become the successful bidder.

Authorized Signature: _____

Print Name: _____Title: _____

CITY OF KIRKLAND
SUBCONTRACTOR IDENTIFICATION FOR CONTRACTS ESTIMATED TO BE IN EXCESS OF ONE MILLION DOLLARS ($1,000,000.00)

RCW 39.30.060 requires the following:

“(1) Every invitation to bid on a prime contract that is expected to cost one million dollars or more for the construction, alteration, or repair of any public building or public work of the state or a state agency or municipality as defined under RCW 39.04.010 … shall require each prime contract bidder to submit:

(a) Within one hour after the published bid submittal time, the names of the subcontractors with whom the bidder, if awarded the contract, will subcontract for performance of the work of: HVAC (heating, ventilation, and air conditioning); plumbing as described in chapter 18.106 RCW; and electrical as described in chapter 19.28 RCW, or to name itself for the work; or

(NEW LEGISLATIVE REQUIREMENT)
(b) Within forty-eight hours after the published bid submittal time, the names of the subcontractors with whom the bidder, if awarded the contract, will subcontract for performance of the work of structural steel installation and rebar installation.

The prime contract bidder shall not list more than one subcontractor for each category of work identified, unless subcontractors vary with bid alternates, in which case the prime contract bidder must indicate which subcontractor will be used for which alternate. Failure of the prime contract bidder to submit as part of the bid the names of such subcontractors or to name itself to perform such work or the naming of two or more subcontractors to perform the same work shall render the prime contract bidder's bid non-responsive and, therefore, void."

Each bidder shall submit a list of:

1. HVAC, plumbing, electrical, structural steel installation, and rebar installation subcontractors; and

2. The specific items of work those subcontractors will perform on the contract; and

3. The specific items of work that will be performed by the bidder on the contract relating to work described in RCW 39.30.060.

Local Agency Name
Local Agency Address

Local Agency Subcontractor List

Prepared in compliance with RCW 39.30.060 as amended

To Be Submitted with the Bid Proposal

Project Name

Failure to list subcontractors with whom the bidder, if awarded the contract, will directly subcontract for performance of the work of structural steel installation, rebar installation, heating, ventilation and air conditioning, plumbing, as described in Chapter 18.106 RCW, and electrical, as described in Chapter 19.28 RCW or naming more than one subcontractor to perform the same work will result in your bid being non-responsive and therefore void.

Subcontractor(s) with whom the bidder will directly subcontract that are proposed to perform the work of structural steel installation, rebar installation, heating, ventilation and air conditioning, plumbing, as described in Chapter 18.106 RCW, and electrical as described in Chapter 19.28 RCW must be listed below. The work to be performed is to be listed below the subcontractor(s) name.

To the extent the Project includes one or more categories of work referenced in RCW 39.30.060, and no subcontractor is listed below to perform such work, the bidder certifies that the work will either (i) be performed by the bidder itself, or (ii) be performed by a lower tier subcontractor who will not contract directly with the bidder.

Subcontractor Name	
Work to be performed	
Subcontractor Name	
Work to be performed	
Subcontractor Name	
Work to be performed	
Subcontractor Name	
Work to be performed	
Subcontractor Name	
Work to be performed	

* Bidder's are notified that it is the opinion of the enforcement agency that PVC or metal conduit, junction boxes, etc, are considered electrical equipment and therefore considered part of electrical work, even if the installation is for future use and no wiring or electrical current is connected during the project.

DOT Form 271-015A
Revised 06/2020

Washington State Department of Transportation

Underutilized Disadvantaged Business Enterprise Utilization Certification

To be eligible for Award of this Contract the Bidder shall fill out and submit, as a supplement to its sealed Bid Proposal, an Underutilized Disadvantaged Business Enterprise (UDBE) Utilization Certification. The Contracting Agency shall consider as non-responsive and shall reject any Bid Proposal that does not contain a UDBE Utilization Certification which properly demonstrates that the Bidder will meet the UDBE participation requirements in one of the manners provided for in the proposed Contract. **Refer to the instructions on Page 2 when filling out this form or the Bid may be rejected. An example form has been provided on Page 3.** The successful Bidder's UDBE Utilization Certification shall be deemed a part of the resulting Contract.

Box 1: _____ certifies that the UDBE firms listed below have been contacted regarding participation on this project. If this Bidder is successful on this project and is awarded the Contract, it shall assure that subcontracts or supply agreements are executed with named UDBEs. (If necessary, use additional sheets.)

Box 2: _____

Column 1 **Name of UDBE** (See instructions)	Column 2 **Project Role** (See instructions)	Column 3 **Description of Work** (See instructions)	Column 4 **Dollar Amount Subcontracted to UDBE** (See instructions)	Column 5 **Dollar Amount to be Applied Towards Goal** (See instructions)

Underutilized Disadvantaged Business Enterprise Condition of Award Contract Goal _____ Box 3

Total UDBE Commitment Dollar Amount _____ Box 4

5 ☐ By checking Box 5 the Bidder is stating that their attempts to solicit sufficient UDBE participation to meet the COA Contract goal has been unsuccessful and good faith effort will be submitted in accordance with Section 1-02.9 of the Contract

DOT Form 272-056U
Revised 03/2018

Instructions for Underutilized Disadvantaged Business Enterprise Utilization Certification Form

Box 1: Name of Bidder (Proposal holder) submitting Bid.

Box 2: Name of the Project.

Column 1: Name of the Underutilized Disadvantaged Business Enterprise (UDBE). UDBE Firms can be found using the search tools under the Firm Certification section of the Diversity Management and Compliance System web page https://wsdot.diversitycompliance.com Repeat the name of the UDBE for each Project Role that will be performed.

Column 2: The Project Role that the UDBE will be performing as follows;

- Prime Contractor
- Subcontractor
- Subcontractor (Force Account)
  - Work sublet as Force Account must be listed separately.
- Manufacturer
- Regular Dealer
  - Work sublet to a Regular Dealer must be listed separately.
  - Regular Dealer status must be approved prior to Bid submittal by the Office of Equal Opportunity, Washington State Department of Transportation, on each Contract.
- Broker
  - Work sublet to a Broker must be listed separately.

List each project role to be performed by a single UDBE individually on a separate row(s). The role is used to determine what portion of the amount to be subcontracted (Column 4) may be applied toward meeting the goal (column 5).

Column 3: Provide a description of the work to be performed by the UDBE. The work to be performed must be consistent with the Certified Business Description of the UDBE provided at the Diversity Management and Compliance System web page https://wsdot.diversitycompliance.com

- A Bidder subletting a portion of a bid item shall state **"Partial"** and describe the Work that is included.
  - For example; "Electrical (Partial) – Trenching".
- "Mobilization" will not be accepted as a description of Work.

Column 4: List the total amount to be subcontracted to each UDBE for each Project Role they are performing.

Column 5: This is the dollar amount for each line listed in the certification that the prime intends to apply towards meeting the COA Contract goal. It may be that only a portion of the amount subcontracted to a UDBE in Column 4 is eligible to be credited toward meeting the goal **See Note 1, Note 2, Note 3.** The Contracting Agency will utilize the sum of this column (Box 4) to determine whether or not the bidder has met the goal. In the event of an arithmetic error in summing column 5 or an error in making appropriate reductions in the amounts in column four, **See Note 1, Note 2, Note 3**, then the mathematics will be corrected and the total (Box 4) will be revised accordingly.

Note 1: For Work sublet as Force Account the bidder **may only claim 50%** of the amount subcontracted (Column 4) towards meeting the goal (Column 5). This information will be used to demonstrate that the UDBE contract goal is met at the time that the bidder submits their bid. For example; amount sublet as force account = $100,000 (Column 4) equates to ($100,000 X 50%) = $50,000 (Column 5) to be applied towards the goal.

Note 2: For Work sublet to a Regular Dealer the bidder **may only claim 60%** of the cost of the materials or supplies (Column 4) towards meeting the goal (Column 5). For example; Material cost = $100,000 (Column 4) equates to ($100,000 X 60%) = $60,000 (Column 5) to be applied towards the goal

Note 3: For Work sublet to a Broker the bidder **may only claim the fees** paid to a Broker towards meeting the goal (Column 4). For example; amount sublet to a broker = $100,000 (Column 4) equates to ($100,000 X reasonable fee %) = $ (Column 5) to be applied towards the goal.

Box 3: Box 3 is the COA Contract goal which is the minimum required UDBE participation. The goal stated in the Contract will be in terms of a dollar amount or a percentage in the Contract. When expressed as a percentage you must multiply the percentage times the sum total of all bid items as submitted in the Bidder's Proposal to determine the dollar goal and write it in Box 3. In the event of an error in this box, the Contracting Agency will revise the amount accordingly.

Box 4: Box 4 is the sum of the values in column 5. **This value must equal or exceed the COA Contract goal amount written in Box 3 or;**

Box 5: Check Box 5 if insufficient UDBE Participation has been achieved and a good faith effort is required. Refer to the subsection titled, *Selection of Successful Bidder/Good Faith Efforts (GFE)* in the Contract.

See the *Disadvantaged Business Enterprise Participation* specification in the Contract for more information.

DOT Form 272-056U
Revised 02/2018

Washington State Department of Transportation

Underutilized Disadvantaged Business Enterprise Utilization Certification

To be eligible for Award of this Contract the Bidder shall fill out and submit, as a supplement to its sealed Bid Proposal, an Underutilized Disadvantaged Business Enterprise (UDBE) Utilization Certification. The Contracting Agency shall consider as non-responsive and shall reject any Bid Proposal that does not contain a UDBE Utilization Certification which properly demonstrates that the Bidder will meet the UDBE participation requirements in one of the manners provided for in the proposed Contract. **Refer to the instructions on Page 2 when filling out this form or the Bid may be rejected. An example form has been provided on Page 3.** The successful Bidder's UDBE Utilization Certification shall be deemed a part of the resulting Contract.

Box 1: A Plus Construction Company certifies that the UDBE firms listed below have been contacted regarding participation on this project. If this Bidder is successful on this project and is awarded the Contract, it shall assure that subcontracts or supply agreements are executed with named UDBEs. (If necessary, use additional sheets.)

Box 2: US 395, Spokane City Limits to Stevens County Line - Paving and Safety

Column 1 **Name of UDBE** (See instructions)	Column 2 **Project Role** (See instructions)	Column 3 **Description of Work** (See instructions)	Column 4 **Dollar Amount Subcontracted to UDBE** (See instructions)	Column 5 **Dollar Amount to be Applied Towards Goal** (See instructions)
A Plus Construction Company	Prime	Asphalt and concrete paving, asphalt milling, preleveling and pavement repair	N/A	900,000
In the Line Services, Inc.	Subcontractor (Force Account)	Crack sealing	20,000	10,000
In the Line Services, Inc	Subcontractor	Guideposts, joint seal, pavement markers, temporary signage, construction sign installation	200,000	200,000
The Everything Guys, LLC	Regular Dealer	Rental and sales of highway construction and related equipment and materials	100,000	60,000
Optimus Prime Trucking, Inc.	Subcontractor	Dump Trucking	50,000	50,000
Metalheads, Inc.	Manufacturer	Dowel Bars	75,000	75,000
Erosion Under Control Co	Broker	Erosion control blankets, straw bales and wattles, sand bags	15,000	250

EXAMPLE

Underutilized Disadvantaged Business Enterprise Condition of Award Contract Goal 356,968.16 (Box 3) Total UDBE Commitment Dollar Amount 1,295,250 (Box 4)

5 ☐ By checking Box 5 the Bidder is stating that their attempts to solicit sufficient UDBE participation to meet the COA Contract goal has been unsuccessful and good faith effort will be submitted in accordance with Section 1-02.9 of the Contract

DOT Form 272-056U
Revised 03/2018

Washington State Department of Transportation

Underutilized Disadvantaged Business Enterprise (UDBE) Written Confirmation Document

See Contract Provisions: UDBE Document Submittal Requirements
Disadvantaged Business Enterprise Participation

THIS FORM SHALL ONLY BE SUBMITTED TO A UDBE THAT IS LISTED ON THE CONTRACTOR'S UNDERUTILIZED DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION CERTIFICATION.

THE CONTRACTOR SHALL COMPLETE PART A PRIOR TO SENDING TO THE UDBE.

PART A: To be completed by the bidder

The entries below shall be consistent with what is shown on the Bidder's Underutilized Disadvantaged Business Enterprise Utilization Certification. Failure to do so will result in Bid rejection.

Contract Title: _____

Bidder's Business Name: _____

UDBE's Business Name: _____

Description of UDBE's Work: _____

Dollar Amount to be Applied Towards UDBE Goal: _____

Dollar Amount to be Subcontracted to UDBE*: _____
*Optional Field

PART B: To be completed by the Underutilized Disadvantaged Business Enterprise

As an authorized representative of the Underutilized Disadvantaged Business Enterprise, I confirm that we have been contacted by the Bidder with regard to the referenced project for the purpose of performing the Work described above. If the Bidder is awarded the Contract, we will enter into an agreement with the Bidder to participate in the project consistent with the information provided in Part A of this form.

Name (printed): _____

Signature: _____

Title: _____

Address: _____ Date: _____

DOT Form 422-031U
Revised 03/2018

Washington State Department of Transportation

Underutilized Disadvantaged Business Enterprise (UDBE)Trucking Credit Form

PART A: TO BE COMPLETED BY THE BIDDER

This form is in support of the trucking commitment identified on the UDBE Utilization Certification Form submitted with the proposal. Please note that UDBE's must be certified prior to time of submittal.

Federal Aid #	Contract #	Project Name

If listing items by hours, or by lump sum amounts, please provide calculations to substantiate the quantities listed.

Bid Item	Item Description

Use additional sheets as necessary.

Bidder		Name/Title (please print)
Phone	Fax	Signature I certify that the above information is complete and accurate.
Address		
Email		Date

PART B: TO BE COMPLETED BY THE UDBE TRUCKING FIRM

Note: DBE/UDBE trucking firm participation may only be credited as DBE/UDBE participation for the value of the hauling services, not for the materials being hauled unless the trucking firm is also recognized as a supplier of the materials used on the project and approved for this project as a regular dealer.

1. Type of Material expected to be hauled? _____
2. Number of fully operational trucks expected to be used on this project? _____ Tractor/trailers: _____ Dump trucks: _____
3. Number of trucks and trailers owned by the UDBE that will be used on this project? _____ Tractor/trailers: _____ Dump trucks: _____
4. Number of trucks and trailers leased by the UDBE that will be used on this project? _____ Tractor/trailers: _____ Dump trucks: _____

UDBE Firm Name		Name/Title (please print)
Certification Number		
Phone	Fax	Signature I certify that the above information is complete and accurate.
Address		
Email		Date

DOT Form 272-058
Revised 05/2019

Submit this form to DBEDOC@wsdot.wa.gov.

Instruction to Bidder: The Bidder shall complete and submit the Underutilized Disadvantaged Business Enterprise (UDBE) Trucking Credit Form in accordance with Section 1-02.9 of the Contract.

INSTRUCTIONS

Please note – All Fields are required

PART A: TO BE COMPLETED BY THE BIDDER

Federal Aid: Include the project federal-aid number.

County: Specify the County where the project will take place.

Contract #: Specify the Project Contract Number which can be found in the Engineer's estimate bid check report.

Bid Item: Provide the Bid Item Number (as it appears in the engineer's estimate bid check report) for which trucking services will be utilized.

Item Description: Provide description of the bid item (as it appears in the engineer's estimate bid check report) for which trucking will be utilized.

Bidder: In this section, provide the bidder's legal name, title, Business address, Phone and email.

The bidder's representative signature is required in addition to the date the form was signed.

PART B: TO BE COMPLETED BY THE UDBE TRUCKING FIRM

Question 1: Specify type of material that will be hauled (i.e. Sand, HMA, gravel)

Question 2: Specify the total number of operational trucks that will be used on the project.

Question 3: Specify the total number of operational trucks and trailers owned by the UDBE that will be used on the project.

Question 4: Specify the total number of operational trucks and trailers leased by the UDBE that will be used on the project.

UDBE Firm: In this section, provide the UDBE Firm's legal name, UDBE Firm's representative legal name and title, certification Number (Found in the firm's OMWBE Profile page in the OMWBE directory), Business address, Phone, fax and email.

The UDBE Firm's representative signature is required in addition to the date the form was signed.

DOT Form 272-058
Revised 05/2019

Washington State Department of Transportation

Underutilized Disadvantaged Business Enterprise (UDBE) Bid Item Breakdown Form

1. Contract Number	2. Contract Name
3. Prime Contractor	4. Prime Contractor Representative Name
5. Prime Contractor Representative Phone Number	6. Prime Contractor Representative Email

Column 1 **Name of UDBE** (See Instructions)	Column 2 **Bid Item #** (See Instructions)	Column 3 **Full/Partial** (See Instructions)	Column 4 **Quantity** (See Instructions)	Column 5 **Description** (See Instructions)	Column 6 **Unit Price** (See Instructions)	Column 7 **Total Unit Cost** (See Instructions)	Column 8 **Dollar Amount to be Applied Towards Goal** (See Instructions)
					Subtotal:	$ 0.00	$ 0.00
Name of UDBE	**Bid Item #**	**Full/Partial**	**Quantity**	**Description**	**Unit Price**	**Total Unit Cost**	**Dollar Amount to be Applied Towards Goal**
					Subtotal:	$ 0.00	$ 0.00
Name of UDBE	**Bid Item #**	**Full/Partial**	**Quantity**	**Description**	**Unit Price**	**Total Unit Cost**	**Dollar Amount to be Applied Towards Goal**
					Subtotal:	$ 0.00	$ 0.00
Name of UDBE	**Bid Item #**	**Full/Partial**	**Quantity**	**Description**	**Unit Price**	**Total Unit Cost**	**Dollar Amount to be Applied Towards Goal**
					Subtotal:	$ 0.00	$ 0.00
					TOTAL UDBE Dollar Amount:	$ 0.00	$ 0.00

DOT Form 272-054
Revised 01/2020

Instructions for Underutilized Disadvantaged Business Enterprise (UDBE) Bid Item Breakdown Form

Box 1: Provide the Contract Number as stated in the project information webpage.

Box 2: Provide the Name of the project as stated in the project information webpage.

Box 3: Provide the Name of the bidder (Proposal holder) submitting Bid.

Box 4: Provide the name of the prime contractor's representative available to contact regarding this form.

Box 5: Provide the phone number of the prime contractor's representative available to contact regarding this form.

Box 6: Provide the email of the prime contractor's representative available to contact regarding this form.

Column 1: Provide the Name of the Underutilized Disadvantaged Business Enterprise (UDBE) Firm. UDBE Firms can be found using the search tools under the Firm Certification section of the Diversity Management and Compliance System (DMCS) webpage https://wsdot.diversitycompliance.com.

Column 2: Provide the Bid Item Number (as it appears in the engineer's estimate bid check report) available on the project information webpage.

Column 3: If the UDBE is performing only part of the bid item, mark "Partial". If the UDBE is performing the entire bid item, mark "Complete".

Column 4: Provide the estimated quantity for the specific bid item. For trucking firms, use hour or another unit of measure.

Column 5: Provide a description of the work to be performed by the UDBE.

Column 6: Provide the price per unit and specify the type of unit used. For trucking firms, use hour or another unit of measure.

Column 7: Provide the estimated total unit cost amount per bid item.

Column 8: Provide the amount of the bid item being used to fulfil the UDBE goal. The work to be performed must be consistent with the Certified Business Description of the UDBE provided in the DMCS webpage https://wsdot.diversitycompliance.com. Mobilization up to 10% is acceptable. If mobilization is more than 10% additional information and/or justification may be requested. The total amount shown for each DBE shall match the amount shown on the DBE Utilization Certification Form.

Use Additional Sheets if necessary.

DOT Form 272-054
Revised 01/2020

CITY OF KIRKLAND
BIDDER'S CHECKLIST

1. Have you reviewed the Bidder Responsibility and Subcontractor Responsibility Criteria?
2. Have you enclosed a bid bond or certified check with your bid? (Must be at least 5% of the total amount bid)
3. Have you entered a bid amount for all items and all schedules?
4. Do the written amounts of the proposal agree with the amounts shown in the figures?
5. Have you acknowledged receipt of addenda?
6. Has the proposal been properly completed and signed?
7. Have you completed the Statement of Bidder's Qualifications?
8. Have you completed the City of Kirkland Non-collusion Affidavit?
9. Have you completed the Subcontractor Identification List? (This is to be completed for HVAC, plumbing, and electrical subcontractors if the estimate amount exceeds $1,000,000.)
10. Have you completed (where applicable) the UDBE forms package (UDBE Utilization Cert., UDBE Written Confirmation Document, UDBE Trucking Credit Form, and UDBE Bid Item Breakdown form and submitted as required?
11. Bid proposal to be submitted in a sealed envelope marked "Bid Enclosed" for:

TOTEM LAKE CONNECTOR BRIDGE
CIP NO. CNM 086 1000
JOB NO. 01-20-PW

CITY OF KIRKLAND

TABLE OF CONTENTS – CONTRACT DOCUMENTS

CITY OF KIRKLAND
PUBLIC WORKS AGREEMENT
PROJECT NAME
JOB NO. XX-XX-XX

This agreement is made and entered into this _____day of_____, 20____, by and between **CONTRACTOR NAME**, hereinafter called the "Contractor" and the City of Kirkland, hereinafter called the "Owner."

W I T N E S S E T H:

Whereas, pursuant to the invitation of the Owner extended through an officially published "Invitation to Bid," the Contractor did, in accordance therewith, file with the Owner a proposal containing an offer which was invited by said notice, and

Whereas, the Owner has heretofore determined that said offer was the lowest responsible bid submitted; now, therefore, it is agreed:

Section 1. That Contractor shall comply in every way with the requirements of those certain specifications entitled: "PROJECT NAME, Job No. XX-XX-XX"

The further terms, conditions and covenants of the contract are set forth in the following contract documents which are hereby made a part of this agreement by actual attachment or by this reference thereto as follows:

A. Any Invitation to Bid, as published by the Owner.

B. Any Specifications prepared for this project by the Owner and named above by title.

C. Any detailed Plans listed and described in said Specifications, together with those which may be issued as supplements thereof.

D. The bid proposals submitted by the Contractor as to those items and/or alternatives accepted by the Owner.

E. Any change orders, additions or deletions, if any, issued by the Owner.

Section 2. In consideration of faithful compliance with the terms and conditions of this agreement, whether set forth herein or incorporated by reference, the Owner shall pay to the Contractor, at the times and in the manner provided in said specifications, the total sum of _____ dollars **($_____)** which sum is subject, however, to increase or decrease in such proportion as the quantities named in said proposal are so changed, all as in said specifications and proposal provided.

In witness whereof, said Contractor and said Owner have caused this agreement to be executed on the day and year first written above.

_____
CONTRACTOR (Firm Name)

_____ _____Signature of authorized officer Name and title of officer

(print or type)

_____ _____
WA Contractor's Registration Number Industrial Insurance Account Number

_____ _____
Uniform Business Identification (UBI) Number Phone Number

(For corporations, LLC's and other legal entities)

STATE OF WASHINGTON)
) SS
COUNTY OF KING)

On this day before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared _____, to me known to be the _____ of _____, the legal entity that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said legal entity, for the uses and purposes therein set forth, and on oath stated that he/she was authorized to sign said instrument.

Given under my hand and official seal this _____ day of _____, 2____.

_____
Print Name: _____
NOTARY PUBLIC in and for the State of Washington, residing _____
Commission expires: _____

(For individuals and d/b/a's)

STATE OF WASHINGTON)
) SS
COUNTY OF KING)

On this day before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared
_____ and
_____ to me known to be the individual(s) described herein and who executed the foregoing instrument, and acknowledged that he/she/they signed the same as his/her/their free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this _____ day of _____, 2____.

_____
Print Name: _____
NOTARY PUBLIC in and for the State of Washington, residing _____
Commission expires: _____

CITY OF KIRKLAND
BY: Tracey Dunlap, Deputy City Manager

Performance and Payment Bond

SURETY TO HAVE AN A.M. BEST RATING OF A-:VII OR BETTER.

Bond No. _____

KNOW ALL PERSONS BY THESE PRESENTS, that **CONTRACTOR NAME**, as Principal, and _____, (insert name of surety), as Surety, a corporation duly organized under the laws of the State of _____, (insert Surety's state of incorporation), and authorized to do business as a surety in the State of Washington, are held and firmly bound unto the City of Kirkland (City) in the sum of **_____** dollars **($_____)**, lawful money of the United States of America, plus the total amount of extra orders issued by the City to the Principal pursuant to the terms of the Contract referred to in the next succeeding paragraph hereof, for the payment whereof Principal and Surety bind ourselves, and our heirs, executors, administrators, representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has been awarded, and is about to enter into, a written Contract with the City for **PROJECT NAME**, **Job #XX-XX-XX**, which is hereby made a part of this bond as if fully set forth herein;

NOW, THEREFORE, the condition of this bond is such that:

If the Principal shall completely and faithfully perform all of its obligations under the Contract, including any warranties required thereunder, and all modifications, amendments, additions, and alterations thereto, including modifications which increase the contract price or time for completion, with or without notice to the surety; and

If the Principal shall indemnify and hold the City harmless from any and all losses, liability, damages, claims, judgments, liens, costs, and fees of any type that the City may be subject to because of the failure or default of the Principal in the performance of any of the terms, conditions, or obligations of the Contract, including all modifications, amendments, additions, and alterations thereto, and any warranties required thereunder;

THEN THIS obligation shall be null and void; otherwise to remain in full force and effect. If the City shall declare Principal to be in default of the Contract, and shall so notify Surety, Surety shall, within a reasonable time which shall not exceed 14 days, except for good cause shown, notify the City in writing of the manner in which surety will satisfy its obligations under this Bond.

Nonpayment of the Bond premium will not invalidate this Bond nor shall the City be obligated for the payment thereof. The Surety hereby waives notice of any modification of the Contract or extension of time made by the City.

Signed this _____ day of _____, 2____.

Principal:	_____	Surety:	_____
By:	_____	By:	_____
Title:	_____	Title:	_____
Address:	_____	Address:	_____
City/Zip:	_____	City/Zip:	_____
Telephone:	( ) _____	Telephone:	( ) _____

Note: A power of attorney must be provided which appoints the Surety's true and lawful attorney-in-fact to make, execute, seal and deliver this performance bond.

LABOR, MATERIAL and taxes PAYMENT BOND
Surety to have an A.M. Best rating of A-:VII or better.

Bond No. _____

KNOW ALL PERSONS BY THESE PRESENTS, that, **CONTRACTOR NAME**, as Principal, and _____, (insert name of surety), as Surety, a corporation duly organized under the laws of the State of _____ (insert Surety's state of incorporation), and authorized to do business as a surety in the State of Washington, are held and firmly bound unto the City of Kirkland (City) for the use and benefit of claimants as hereinafter defined, in the sum of **_____ Dollars ($_____),** lawful money of the United States of America, plus the total amount of any extra orders issued by the City, for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has been awarded, and is about to enter into, a Contract with City of Kirkland for **PROJECT NAME, Job #XX-XX-XX**, which contract is by this reference made a part hereof;

WHEREAS, the contract is a public works contract, subject to the provisions of RCW Titles 39 and 60;

NOW, THEREFORE, the conditions of this obligation are such that, if the Principal shall promptly make payment to all claimants as hereinafter defined, for (a) all labor and material used or reasonably required for use in the performance of the contract and (b) all taxes, increases, and penalties incurred on the above-referenced contract under Titles 50, 51, and 82 RCW which may be due, then this obligation shall be void; otherwise, it shall remain in full force and effect, subject, however, to the following conditions: A claimant is defined as and includes (a) a person claiming to have supplied labor or materials for the prosecution of the work provided for in the contract, including any person having direct contractual relationship with the contractor furnishing the bond or direct contractual relationship with any subcontractor, or an assignee of such person, (b) the state with respect to taxes incurred on the above-referenced contract under Titles 50, 51, and 82 RCW which may be due and (c) any other person or entity as allowed or required by law.

The Principal and Surety hereby jointly and severally agree with the City that every claimant as herein defined, who has not been paid in full prior to Final Acceptance of the project, or materials were furnished by such claimant, has an action on this bond for such sum or sums as may be justly due claimant, and may have execution thereon. The City shall not be liable for the payment of any costs or expenses of any such suit or action.

(Form continues on next page)

No suit or action shall be commenced hereunder by any claimant (except the state with respect to taxes, increases, and penalties incurred on the above-referenced contract under Titles 50, 51, and 82 RCW which may be due) unless the claimant has sent the written notice required under RCW Title 39 to the Principal and to the City's Purchasing Agent by registered or certified mail, or by hand delivery, no later than 30 days after Final Acceptance of the Project. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against the improvement, whether or not claim for the amount of such lien be presented under and against this bond.
The Surety hereby waives notice of any modification of the contract or extension of time made by the City.

Signed this _____ day _____ ,

Principal: _____	Surety: _____
By _____	By: _____
Title _____	Title _____
Address _____	Address: _____
City/Zip: _____	City/Zip _____
Telephone ( ) _____	Telephone ( ) _____

Note: A power of attorney must be provided which appoints the Surety's true and lawful attorney-in-fact to make, execute, seal and deliver this performance bond.

END OF LABOR, MATERIAL AND TAXES PAYMENT BOND FORM

CITY OF KIRKLAND
CONTRACTOR'S DECLARATION OF OPTION FOR MANAGEMENT
OF STATUTORY RETAINED PERCENTAGE
JOB TITLE
JOB NO. XX-XX-XX

Monies reserved under provisions of Chapter 60.28 RCW, at the option of the Contractor, shall be:

Select One

[ ] (1) Retained in a fund by the City. No interest will be earned on the retained percentage amount under this election.

[ ] (2) Retainage Bond

[ ] (3) Placed in escrow with a bank or trust company by the City. When the monies reserved are to be placed in escrow, the City will issue a check representing the sum of the monies reserved payable to the bank or trust company and the Contractor jointly. Such check shall be converted into bonds and securities chosen by the Contractor and approved by the City and the bonds and securities held in escrow. (For the convenience of those Contractors choosing option (3) a City approved Form of Escrow Agreement is included on the next page and should be completed and submitted with the executed contract.)

The Contractor in choosing option (3) agrees to assume full responsibility to pay all costs which may accrue from escrow services, brokerage charges or both, and further agrees to assume all risks in connection with the investment of the retained percentages in securities.

[ ] (4) Deposited by the City in an interest-bearing account at the FDIC insured bank currently providing contracted banking services to the City of Kirkland. Interest on such account shall be paid to the contractor. Any fees incurred shall be the responsibility of the contractor.

CONTRACTOR:

Signature: _____

Print or Type Name: _____

Title: _____

Date: _____

RETAINAGE BOND
RETURN THIS FORM IF RETAINAGE BOND OPTION IS SELECTED

Contract Title	_____
Contract Number	_____
Contractor Name	

The Undersigned, _____, existing under and by virtue of the laws of the State of Washington and authorized to do business in the State of Washington as Principal, and _____ organized and existing under the laws of the State of _____ and authorized to transact business in the State of Washington as Surety, are jointly and severally held and bound unto_____, hereinafter called Obligee, and are similarly held and bound unto the beneficiaries of the trust fund created by RCW 60.28, in the penal sum of _____
($_____), Which is 5% of the principal's price on Contract ID_____.

WHEREAS, on the _____ day of _____, 2____, the said principal herein executed a contract with the Obligee, for the Contract specified above, Contract ID Number_____.

WHEREAS, said contract and RCW 60.28 require the Obligee to withhold from the Principal the sum of ___% from monies earned on estimates during the progress of the construction, herein after referred to as earned retained funds.

NOW WHEREAS, Principal has requested that the Obligee not retain any earned retained funds as allowed under RCW 60.28.

NOW THEREFORE, the condition of the obligation is such that the Principal and Surety are held and bound unto the beneficiaries of the trust fund created by RCW 60.28 in the penal sum of _____ percent (___%) of the final contract cost which shall include any increases due to change orders, increases in quantities of work or the addition of any new item of work. If the Principal shall use the earned retained funds, which will not be retained, for the trust fund purposes of RCW 60.28, then this obligation shall be null and void; otherwise, it shall remain in full force and effect until release is authorized in writing by the Obligee. This bond and any proceeds therefrom shall be made subject to all claims and liens and in the same manner and priority as set forth for retained percentages in RCW 60.28.

PROVIDED HOWEVER, that:
The liability of the surety under this bond shall not exceed 5% or 50% of the total amount earned by the Principal if no monies are retained by the Obligee on estimates during the progress of construction. Any suit under this bond must be instituted within the time provided by applicable law.

Witness our hands this _____ day of _____, 2____.

SURETY

By:_____
Name/Title

OF:_____

PRINICPAL

By:_____
Name/Title

OF:_____

Surety Name and Local Office of Agent:_____

Surety Address and Phone of Local Office and Agent:_____

CITY OF KIRKLAND
RETAINED PERCENTAGE ESCROW AGREEMENT
JOB TITLE
JOB NO. XX-XX-XX

Escrow No. _____

City of Kirkland
123 Fifth Avenue
Kirkland, Washington 98033

Contractor: _____
Address: _____

Project Description: _____
_____
_____

TO: Escrow Bank or Trust Company:
Name: _____
_____
Address: _____
_____
Attention: _____

The undersigned, _____, herein referred to as the Contractor, has directed the City of Kirkland to deliver to you its warrants, which shall be payable to you and the Contractor jointly. Such warrants are to be held and disposed of by you in accordance with the following instructions and upon the terms and conditions hereinafter set forth.

INSTRUCTIONS

1. Warrants or checks made payable to you and the Contractor jointly upon delivery to you shall be endorsed by you and forwarded for collection. The moneys will then be used by you to purchase, as directed by the Contractor, bonds or other securities chosen by the Contractor and approved by the City of Kirkland. Attached is a list of such bonds, or other securities approved by the City of Kirkland. Other bonds or securities, except stocks, may be selected by the Contractor, subject to the express written approval of the City of Kirkland. Purchase of such bonds or other securities shall be in a form which shall allow you alone to reconvert such bonds or other securities into money if you are required to do so at the direction of the City of Kirkland and Contractor.

2. When and as interest on the securities held by you pursuant to this agreement accrues and is paid, you shall collect such interest and forward it to the Contractor at its address designated below unless otherwise directed by the Contractor.

3. You are not authorized to deliver to the Contractor all or any part of the securities held

by you pursuant to this agreement (or any moneys derived from the sale of such securities, or the negotiation of the City of Kirkland's warrants) except in accordance with written instructions from the City of Kirkland. Compliance with such instructions shall relieve you of any further liability related thereto. The estimated completion date on the contract underlying this Escrow Agreement is _____.

4. The Contractor agrees to pay you as compensation for your services hereunder as follows:

Payment of all fees shall be the sole responsibility of the Contractor and shall not be deducted from any property placed with you pursuant to this agreement until and unless the City of Kirkland directs the release to the Contractor of the securities and moneys held hereunder whereupon you shall be granted a first lien upon such property released and shall be entitled to reimburse yourself from such property for the entire amount of your fees as provided for hereinabove. In the event that you are made a party to any litigation with respect to the property held by you hereunder, or in the event that the conditions of this escrow are not promptly fulfilled or that you are required to render any service not provided for in these instructions, or that there is any assignment of the interests of this escrow or any modification hereof, you shall be entitled to reasonable compensation for such extraordinary services from the Contractor and reimbursement from the Contractor for all costs and expenses, including attorneys fees occasioned by such default, delay, controversy, or litigation.

5. This agreement shall not be binding until executed by the Contractor and the City of Kirkland and accepted by you.

6. This instrument contains the entire agreement between you, the Contractor and the City of Kirkland, with respect to this escrow and you are not a part nor bound by any instrument or agreement other than this; you shall not be required to take notice of any default or any other matter nor be bound by nor required to give notice or demand, nor required to take any action whatever, except as herein expressly provided; you shall not be liable for any loss or damage not caused by your own negligence or willful misconduct.

7. The foregoing provisions shall be binding upon the assigns, successors, personal representatives, and heirs of the parties hereto.

8. The Contractor's Federal Income Tax Identification number is _____.

**** Please note: Written release will be issued by the Director of Finance & Administration. For further information, contact the Purchasing Agent at (425) 587-3123.

The undersigned have read and hereby approve the instructions as given above governing the administration of this escrow and do hereby execute this agreement on this _____ day of _____, 2____.

CONTRACTOR:

By: _____
Signature

_____
Print or Type Name

_____
Title

CITY OF KIRKLAND:

By: _____
Signature

_____
Print or Type Name

_____
Title

Address: _____
_____

123 Fifth Avenue
Kirkland, Washington 98033

The above escrow instructions received and accepted this _____ day of _____, 2____.

ESCROW BANK OR TRUST CO:

_____

By: _____
Authorized Signature

_____
Print or Type Name

_____
Title

Securities Authorized by City of Kirkland (select one):

1. Bills, certificates, notes or bonds of the United States;
2. Other obligations of the United States or its agencies;
3. Obligations of any corporation wholly-owned by the government of the United States;
4. Indebtedness of the Federal National Mortgage Association; and
5. Time deposits in commercial banks.

RETURN THIS SIGNED AGREEMENT TO:

City of Kirkland
Attn: Purchasing Agent
123 Fifth Avenue
Kirkland, Washington 98033

CITY OF KIRKLAND
RETAINAGE RELEASE REQUIREMENTS

DOCUMENTS REQUIRED TO BE ON FILE PRIOR TO RELEASE OF RETAINAGE

1. Intent to Pay Prevailing Wage (Contractor must generation including for subcontractors)

   Department of Labor/Industries
   Employment Standards Division
   General Administration Building
   Olympia, Washington 98504
   (360) 956-5335

2. Notice of Completion of Public Works Contract (City generates)

   Department of Revenue
   Excise Tax Division
   Olympia, Washington 98504

3. Affidavit of Wages Paid (Contractor must generate including for subcontractors)

   Department of Labor/Industries

4. Certificate of Release - State Excise Tax by Public Works Contractor (Letter from State to City)

   Department of Revenue
   Department of Labor and Industries
   Employment Security Department

Receipt for Payment in full or Release of Lien signed by Lien Claimant and filed with City (Responsibility of Contractor to obtain)

Claims against retainage or Payment Bond filed with City by any such subcontractor, workman, or material supplier.

Current insurance certificate through retainage release (Contractor generates)
Produce final invoice for retainage if bond is not selected (Contractor generates)

SPECIAL PROVISIONS

Table of Contents

City of Kirkland Special Provisions

INTRODUCTION TO THE SPECIAL PROVISIONS

(August 14, 2013 APWA GSP)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2020 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). The Standard Specifications, as modified or supplemented by the Amendments to the Standard Specifications and these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

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

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

(March 8, 2013 APWA GSP)
(April 1, 2013 WSDOT GSP)
(May 1, 2013 COK GSP)
(******) (Project-Specific Special Provisions)

Also incorporated into the Contract Documents by reference are:

- *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently adopted edition, with Washington State modifications, if any
- *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT/APWA, current edition
- City of Kirkland Public Works Department Pre-Approved Plans and Policies

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

Division 1 General Requirements

DESCRIPTION OF WORK

(March 13, 1995)

This Contract provides for the improvement of **TOTEM LAKE CONNECTOR BRIDGE PROJECT** and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

The work includes, but is not limited to:

the construction of a bridge that will provide a grade separated crossing of the Cross Kirkland Corridor multi-use trail over the intersection of NE 124th St and Totem Lake Blvd NE, in the Totem Lake Neighborhood of Kirkland, WA. Major construction will include working in close proximity of existing utilities, handling and disposing of contaminated materials, working around arterial streets and traffic control, construction of drilled shafts, construction of cast-in-place concrete structures, fabrication and placement of steel trusses and precast concrete deck panels, construction of geosynthetic retaining walls, fabrication and installation of an illumination system, and fabrication and installation of bridge railing. Additionally, the work includes construction of a culvert, grading, utility work, paving, planting, and wetland remediation.

1-01 Definitions and Terms

(January 4, 2016 APWA GSP)

1-01.3 Definitions

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

Dates

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

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

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

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

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

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

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

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

complete. Supplement this Section with the following:

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

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

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

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

Other Definitions

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

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

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

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

Contract Documents
See definition for “Contract” in the Standard Specifications.

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

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

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

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

1-02 Bid Procedures and Conditions

1-02.1 Prequalification of Bidders

Delete this Section and replace it with the following:

(January 24, 2011 APWA GSP)

1-02.1 Qualifications of Bidder

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

(June 27, 2011 APWA GSP)

1-02.2 Plans and Specifications

Delete this section and replace it with the following:
Information as to where Bid Documents can be obtained or reviewed can be found in the Call for Bids (~~Advertisement~~ **Invitation** for Bids) for the work.
After award of the contract, plans and specifications will be issued to the Contractor at no cost as detailed below:

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17")	**10**	Furnished automatically upon award.
Contract Provisions	**10**	Furnished automatically upon award.
Large plans (e.g., 22" x 34")	**2**	Furnished automatically upon award.

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

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

(August 15, 2016 APWA GSP Option B)

1-02.4(1) General

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

Any prospective Bidder desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business **five (5)** business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

(March 8, 2013 APWA GSP)

1-02.4(2) Subsurface Information

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

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

(July 31, 2017 APWA GSP)

1-02.5 Proposal Forms

Delete this section and replace it with the following:

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

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

(July 11, 2018 APWA GSP)

1-02.6 Preparation of Proposal

Supplement the second paragraph with the following:

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

Item number 1 in the fifth paragraph of Section 1-02.6 is revised to read:

(June 4, 2020)

1. Subcontractors who will perform the work of structural steel installation, rebar installation, heating, ventilation, air conditioning and plumbing as described in RCW
   18.106 and electrical as described in RCW 19.28, and

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

If no Subcontractor is listed, the Bidder acknowledges that it does not intend to use

any Subcontractor to perform those items of work.

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

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

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

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

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture. A copy of the joint venture agreement shall be submitted with the Bid Form if any UDBE requirements are to be satisfied through such an agreement.

Supplement this section with the following:

(May 28, 2020 APWA GSP)

The Bidder shall submit with the Bid a completed Underutilized Disadvantaged Business Enterprise (UDBE) Utilization Certification, when required by the Special Provisions. For each and every UDBE firm listed on the Bidder's completed Underutilized Disadvantaged Business Enterprise Utilization Certification, the Bidder shall submit written confirmation from that UDBE firm that the UDBE is in agreement with the UDBE participation commitment that the Bidder has made in the Bidder's completed Underutilized Disadvantaged Business Enterprise Utilization Certification.

WSDOT Form 422 031U (Underutilized Disadvantaged Business Enterprise Written Confirmation Document) is to be used for this purpose. Bidder must submit good faith effort documentation only in the event the bidder's efforts to solicit sufficient UDBE participation have been unsuccessful.

The Bidder shall submit a UDBE Bid Item Breakdown form defining the scope of work to be performed by each UDBE listed on the UDBE Utilization Certification.

If the Bidder lists a UDBE Trucking firm on the UDBE Utilization Certification, then the Bidder must also submit a UDBE Trucking Credit Form (WSDOT Form 272-058) documenting how the UDBE Trucking firm will be able to perform the scope of work subcontracted to them.

Directions for delivery of the Underutilized Disadvantaged Business Enterprise Written Confirmation Documents, Underutilized Disadvantaged Business Enterprise Good Faith Effort documentation, UDBE Bid Item Breakdown Form and the UDBE Trucking Credit Form are included in Section 1-02.9.

(March 8, 2013 APWA GSP)

1-02.7 Bid Deposit

Supplement this section with the following:

Bid bonds shall contain the following:

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

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

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

(1/1/2016 COK GSP)

1-02.8 Non-collusion Declaration and Lobbying Certification

The following new paragraph is inserted at the end of Section 1-02.8:

Conflict of Interest
The bidder affirms that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of its services hereunder. The Contractor further covenants that in the performance of this contract, no person having any conflicting interest shall be employed. Any interest on the part of the Contractor or its employees must be disclosed forthwith to the City of Kirkland. If this contract is within the scope of a Federal Housing and Community Development Block Grant program, the Contractor further covenants that no person who presently exercises any functions or responsibilities in connection with the block grant program has any personal financial interest, direct or indirect, in this contract.

(December 19, 2019 APWA GSP Option B)

1-02.9 Delivery of Proposal

Delete this section and replace it with the following:

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

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

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

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

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

- In a sealed envelope labeled the same as for the Proposal, with "Supplemental Information" added, or
- By facsimile to the following FAX number: 425-587-3844 or
- By e-mail to the following e-mail address: **gpiland@kirklandwa.gov**

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

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

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

(July 23, 2015 APWA GSP)

1-02.10 Withdrawing, Revising, or Supplementing Proposal

Delete this section, and replace it with the following:

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

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

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

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

(December 19, 2019 APWA GSP)

1-02.13 Irregular Proposals

Delete this section and replace it with the following:

A Proposal will be considered irregular and will be rejected if:

a. The Bidder is not prequalified when so required;
b. The authorized Proposal form furnished by the Contracting Agency is not used or is altered;
c. The completed Proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
e. A price per unit cannot be determined from the Bid Proposal;
f. The Proposal form is not properly executed;
g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable, as required in Section 1-02.6;
h. The Bidder fails to submit or properly complete an Underutilized Disadvantaged Business Enterprise Certification, if applicable, as required in Section 1-02.6;
i. The Bidder fails to submit written confirmation from each UDBE firm listed on the

Bidder's completed UDBE Utilization Certification that they are in agreement with the bidder's UDBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;

j The Bidder fails to submit UDBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award was made;

k. The Bidder fails to submit a UDBE Bid Item Breakdown form, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;

l. The Bidder fails to submit UDBE Trucking Credit Forms, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;

m. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or

n. More than one Proposal is submitted for the same project from a Bidder under the same or different names.

A Proposal may be considered irregular and may be rejected if:

a. The Proposal does not include a unit price for every Bid item;

b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Contracting Agency;

c. Receipt of Addenda is not acknowledged;

d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or

e. If Proposal form entries are not made in ink.

(May 17, 2018 APWA GSP, Option C)

1-02.14 Disqualification of Bidders

Delete this section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended; or does not meet Supplemental Criteria 1-8 in this Section:

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1), and Supplemental Criteria 1-2. Evidence that the Bidder meets Supplemental Criteria 3-8 shall be provided by the Bidder as stated later in this Section.

1. **Delinquent State Taxes**

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

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

2. **Federal Debarment**

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

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

3. **Subcontractor Responsibility**

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

B. Documentation: The Bidder, if and when required as detailed below, shall submit a copy of its standard subcontract form for review by the Contracting Agency, and a written description of its procedure for validating the responsibility of subcontractors with which it contracts.

4. **Claims Against Retainage and Bonds**

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

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

- Name of project
- The owner and contact information for the owner;
- A list of claims filed against the retainage and/or payment bond for any of the projects listed;

- A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

5. **Public Bidding Crime**

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

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

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

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

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

7. **Lawsuits**

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

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

As evidence that the Bidder meets the Supplemental Responsibility Criteria stated above, the apparent low Bidder must submit to the Contracting Agency by 12:00 P.M. (noon) of the second business day following the bid submittal deadline, a written statement verifying that the Bidder meets the Supplemental Criteria together with supporting documentation (sufficient in the sole judgment of the Contracting Agency) demonstrating compliance with the Supplemental Responsibility Criteria.

The Contracting Agency reserves the right to request further documentation as needed from the low bidder and documentation from other Bidders as well to assess Bidder responsibility and

compliance with all bidder responsibility criteria. The Contracting Agency also reserves the right to obtain information from third-parties and independent sources of information concerning a Bidder's compliance with the mandatory and supplemental criteria, and to use that information in their evaluation. The Contracting Agency may consider mitigating factors in determining whether the Bidder complies with the requirements of the Supplemental Criteria.

The basis for evaluation of Bidder compliance with these mandatory and Supplemental Criteria shall include any documents or facts obtained by Contracting Agency (whether from the Bidder or third parties) including but not limited to: (i) financial, historical, or operational data from the Bidder; (ii) information obtained directly by the Contracting Agency from others for whom the Bidder has worked, or other public agencies or private enterprises; and (iii) any additional information obtained by the Contracting Agency which is believed to be relevant to the matter.

(August 14, 2013 APWA GSP)

1-02.15 Pre Award Information

Revise this section to read:

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

- A complete statement of the origin, composition, and manufacture of any or all materials to be used,
- Samples of these materials for quality and fitness tests,
- A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
- A breakdown of costs assigned to any bid item,
- Attendance at a conference with the Engineer or representatives of the Engineer,

Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.

Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-03 Award and Execution of Contract

(January 23, 2006 APWA GSP)

1-03.1 Consideration of Bids

Revise the first paragraph to read:

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

(October 1, 2005 APWA GSP)

1-03.3 Execution of Contract

Revise this section to read:

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

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

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

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

(July 23, 2015 APWA GSP)

1-03.4 Contract Bond

Delete the first paragraph and replace it with the following:

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

performance bonds, each shall be for the full contract amount. The bond(s) shall:

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

(November 30, 2018 APWA GSP)

1-03.7 Judicial Review

Revise this section to read:

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

1-04 Scope of The Work

(March 13, 2012 APWA GSP)

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

Revise the second paragraph to read:

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

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

(1/1/2016 COK GSP)

1-04.11 Final Cleanup

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

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

The Contractor shall:

Remove all rubbish, surplus materials, discarded materials, falsework, piling, camp buildings, temporary structures, equipment, and debris;

Remove from the Project, all unneeded, oversized rock left from grading, surfacing, or paving unless the Contract specifies otherwise, or the Engineer approves otherwise;

On all concrete and asphalt pavement work, flush the pavement clean and remove the

wash water and debris;

Sweep and flush structure decks and remove wash water and debris;

Clean out from all open culverts and drains, inlets, catch basins, manholes and water main valve chambers, within the limits of the Project Site, all dirt and debris of any kind that is the result of the Contractor's operations;

Level and fine grade all excavated material not used for backfill where the Contract requires;

Fine grade all slopes;

Upon completion of grading and cleanup operations at any privately-owned site for which a written agreement between the Contractor and property owner is required, the Contractor shall obtain and furnish to the Engineer a written release from all damages, duly executed by the property owner, stating that the restoration of the property has been satisfactorily accomplished.;

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

1-05 Control of Work

1-05.4 Conformity with and Deviations from Plans and Stakes

Section 1-05.4 is supplemented with the following:

(*****)

Structure Surveying

Copies of the Contracting Agency provided primary survey control data are available for the bidder's inspection at the office of the Engineer.

The Contractor shall be responsible for setting, maintaining, and resetting all alignment stakes, slope stakes, and grades necessary for the construction of bridges and retaining walls. Except for the survey control data to be furnished by the Contracting Agency, calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor's responsibility.

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

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

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

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

1. Verify the primary horizontal and vertical control furnished by the Contracting Agency, and expand into secondary control by adding stakes and hubs as well as additional survey control needed for the project. Provide descriptions of secondary control to the Contracting Agency. The description shall include coordinates and elevations of all secondary control points.
2. Establish, by placing hubs and/or marked stakes, the location with offsets of foundation shafts.
3. Establish offsets to footing centerline of bearing for structure excavation.
4. Establish offsets to footing centerline of bearing for footing forms.
5. Establish retaining wall alignment.
6. Establish retaining wall top of wall profile grade.
7. Establish elevation benchmarks for all substructure formwork.
8. Check elevations at top of footing concrete line inside footing formwork immediately prior to concrete placement.
9. Check column location and pier centerline of bearing at top of footing immediately prior to concrete placement.
10. Establish location and plumbness of column forms, and monitor column plumbness during concrete placement.
11. Establish pier cap and crossbeam top and bottom elevations and centerline of bearing.
12. Check pier cap and crossbeam top and bottom elevations and centerline of bearing prior to and during concrete placement.
13. Establish grout pad locations and elevations.
14. Establish structure bearing locations and elevations, including locations of anchor bolt assemblies.
15. Establish splice locations and elevations.
18. Establish bridge deck alignment, grades and provide dimensions from top of steel to top of deck slab. Set elevations for deck paving.
19. Establish curb profile.
20. Profile all tie-chords prior to the placement of any deadload or construction live load that may affect the tie-chord's profile.

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

To facilitate the establishment of these lines and elevations, the Contracting Agency will provide the Contractor with the following primary survey and control information:

1. Descriptions of control points used for the horizontal and vertical control. Primary control points will be described by reference to the project alignment and the coordinate system and elevation datum utilized by the project. In addition, the Contracting Agency will supply horizontal coordinates for the beginning and ending points and for each Point of Intersection (PI) on each alignment included in the project.

2. Horizontal coordinates for the centerline of each bridge pier and abutment.
3. Computed elevations at top of bridge deck at each pier and abutment. All form grades and other working grades shall be calculated by the Contractor.

The Contractor shall give the Contracting Agency three weeks notification to allow adequate time to provide the data outlined in Items 2 and 3 above. The Contractor shall ensure a surveying accuracy within the following tolerances:

		Vertical	Horizontal
1.	Stationing on structures		±0.02 feet
2.	Alignment on structures		±0.02 feet
3.	Superstructure elevations	±0.01 feet variation from plan elevation	
4.	Substructure	±0.02 feet variation from Plan grades.	

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

When staking the following items, the Contractor shall perform independent checks from different secondary control to ensure that the points staked for these items are within the specified survey accuracy tolerances:

- Shafts
- Footings
- Columns

The Contractor shall calculate coordinates for the points associated with shafts, footings and columns. The Contracting Agency will verify these coordinates prior to issuing approval to the Contractor for commencing with the survey work. The Contracting Agency will require up to seven calendar days from the date the data is received to issuing approval.

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

Payment

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

proposal: "Structure Surveying", lump sum.

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

section 1-05.4 is supplemented with the following:

(******)

Roadway Surveying

Copies of the Contracting Agency provided primary survey control data are available for the bidder's inspection at the office of the Engineer.

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

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

Detailed survey records shall be maintained, including a description of the work performed on each shift, the methods utilized, and the control points used. The record shall be adequate to

allow the survey to be reproduced. A copy of each day's record shall be provided to the Engineer within three working days after the end of the shift.

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

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

1. Verify the primary horizontal and vertical control furnished by the Contracting Agency, and expand into secondary control by adding stakes and hubs as well as additional survey control needed for the project. Provide descriptions of secondary control to the Contracting Agency. The description shall include coordinates and elevations of all secondary control points.
2. Establish, the centerlines of all alignments, by placing hubs, stakes, or marks on centerline or on offsets to centerline at all curve points (PCs, PTs, and PIs) and at points on the alignments spaced no further than 50 feet.
3. Establish clearing, wetland and wetland buffer limits, placing stakes at all angle points and at intermediate points not more than 50 feet apart as shown in the Plans.
4. Establish grading limits, placing slope stakes at centerline increments not more than 50 feet apart. Establish offset reference to all slope stakes. If Global Positioning Satellite (GPS) Machine Controls are used to provide grade control, then slope stakes may be omitted at the discretion of the Contractor
5. Establish the horizontal and vertical location of box culvert and infiltration ponds.
6. Establish trail subgrade and surfacing elevations by placing stakes at the top of subgrade and at the top of each course of surfacing. Subgrade and surfacing stakes shall be set at horizontal intervals not greater than 50 feet in tangent sections, 25 feet in curve sections with a radius less than 300 feet, and at 10 foot intervals in intersection radii with a radius less than 10 feet. Transversely, stakes shall be placed

at all locations where the trail slope changes and at additional points such that the transverse spacing of stakes is not more than 12 feet. If GPS Machine Controls are used to provide grade control, then roadbed and surfacing stakes may be omitted at the discretion of the Contractor.

7. Establish intermediate elevation benchmarks as needed to check work throughout the project.
8. Provide references for paving pins at 25 foot intervals or provide simultaneous surveying to establish location and elevation of paving pins as they are being placed.
9. For all other types of construction included in this provision provide staking and layout as necessary to adequately locate, construct, and check the specific construction activity.
10. Contractor shall determine if changes are needed to the profiles or trail sections shown in the Contract Plans in order to achieve proper smoothness and drainage where matching into existing features, such as a smooth transition from new pavement to existing surfacing. The Contractor shall submit these changes to the Engineer for review and approval 10 days prior to the beginning of work.

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

To facilitate the establishment of these lines and elevations, the Contracting Agency will provide the Contractor with primary survey control information consisting of descriptions of two primary control points used for the horizontal and vertical control. Primary control points will be described by reference to the project alignment and the coordinate system and elevation datum utilized by the project.

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

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

(parallel to alignment)
±0.1 feet
(normal to alignment)

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

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

The Contractor shall calculate coordinates for the alignment. The Contracting Agency will verify these coordinates prior to issuing approval to the Contractor for commencing with the work.

The Contracting Agency will require up to seven calendar days from the date the data is received.

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

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

(1/1/2016 COK GSP)
Measurement

No unit of measurement shall apply to the lump sum price for “Structure Surveying” and "Roadway Surveying"

Payment

Payment will be made in accordance with Section 1-04.1 of these Specifications for the following bid items:

“Structure Surveying” per lump

sum. "Roadway Surveying" per

lump sum.

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

(October 1, 2005 APWA GSP)

1-05.7 Removal of Defective and Unauthorized Work

Supplement this section with the following:

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

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

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

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

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

(1/1/2016 COK GSP)

1-05.9 Equipment

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

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

1-05.11 Final Inspections and Operational Testing

(October 1, 2005 APWA GSP)
1-05.11 Final Inspection

Delete this section and replace it with the following:

1-05.11(1) Substantial Completion Date

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

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

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work
.
The above process shall be repeated until the Engineer establishes the Substantial Completion Date and the Contractor considers the work physically complete and ready for final inspection.

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

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

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor,

take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7.

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

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

1-05.11(3) Operational Testing

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

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

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

(August 14, 2013 APWA GSP)

1-05.13 Superintendents, Labor and Equipment of Contractor

Delete the sixth and seventh paragraph of this section.

(March 13, 1995)

1-05.14 Cooperation With Other Contractors

Other Contracts or Other Work

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

- Puget Sound Energy 115kV transmission line construction. Approximate location shown on plans.

(March 25, 2009 APWA GSP)

1-05.15 Method of Serving Notices

Revise the second paragraph to read:

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

(October 1, 2005 APWA GSP)

1-05.16 Water and Power

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

Add the following new section:

(March 8, 2013 APWA GSP)

1-05.18 Record Drawings

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

This Record Drawing set shall be used for this purpose alone, shall be kept separate from other Plan sheets, and shall be clearly marked as Record Drawings. These Record

Drawings shall be kept on site at the Contractor's field office and shall be available for review by the Contracting Agency at all times. The Contractor shall bring the Record Drawings to each progress meeting for review.

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

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

Actual dimensions, arrangement, and materials used when different than shown in the Plans. Changes made by Change Order or Field Order.

Changes made by the Contractor.

Accurate locations of storm sewer, sanitary sewer, water mains and other water appurtenances, structures, conduits, light standards, vaults, width of roadways, sidewalks, landscaping areas, building footprints, channelization and pavement markings, etc. Include pipe invert elevations, top of castings (manholes, inlets, etc.).

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

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

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

Making Entries on the Record Drawings:

Use erasable colored pencil (not ink) for all markings on the Record Drawings, conforming to the following color code:

- Additions - Red

- Deletions - Green
- Comments - Blue
- Dimensions - Graphite

Provide the applicable reference for all entries, such as the change order number, the request for information (RFI) number, or the approved shop drawing number.

Date all entries
Clearly identify all items in the entry with notes similar to those in the Contract Drawings (such as pipe symbols, centerline elevations, materials, pipe joint abbreviations, etc.).

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

Payment will be made for the following bid item:

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

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

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

1-06 Control of Material

Section 1-06 is supplemented with the following:

Buy America

(August 6, 2012)

In accordance with Buy America requirements contained in 23 CFR 635.410, the major quantities of steel and iron construction material that is permanently incorporated into the project shall consist of American-made materials only. Buy America does not apply to temporary steel items, e.g., temporary sheet piling, temporary bridges, steel scaffolding and falsework.

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

American-made material is defined as material having all manufacturing processes occurring domestically. To further define the coverage, a domestic product is a manufactured steel material that was produced in one of the 50 States, the District of Columbia, Puerto Rico, or in the territories and possessions of the United States.

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

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

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

The following are considered to be steel manufacturing processes:

1. Production of steel by any of the following processes:

a. Open hearth furnace.

b. Basic oxygen.

c. Electric furnace.

d. Direct reduction.

2. Rolling, heat treating, and any other similar processing.

3. Fabrication of the products.

a. Spinning wire into cable or strand.

b. Corrugating and rolling into culverts.

c. Shop fabrication.

A certification of materials origin will be required for any items comprised of, or containing, steel or iron construction materials prior to such items being incorporated into the permanent work. The certification shall be on **DOT Form 350-109EF** provided by the Engineer, or such other form the Contractor chooses, provided it contains the same information as DOT Form 350-109EF.

(August 6, 2012)

The following items of work containing steel or iron construction materials are considered to be temporary and are excluded from the Buy America requirements contained in 23 CFR 635.410 as described in the above paragraphs:

Temporary steel forms for piers P2, P3, P4, P5, P6 (if proposed).

(January 4, 2016 APWA GSP)

1-06.6 Recycled Materials

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

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

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Table 9-03.21(1)E in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier). The Contractor's report shall be provided on DOT form 350-075 Recycled Materials Reporting.

1-07 Legal Relations and Responsibilities to The Public

1-07.1 Laws to Be Observed

Section 1-07.1 is supplemented with the following:

(1/1/2016 COK GSP)

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

The Contractor shall make an effort to reduce carbon emissions by turning off engines on construction equipment not in active use, and on trucks that are idling while waiting to load or unload material for five minutes or more.

Compliance with Laws

The Contractor shall comply with the requirements of all other City ordinances, state statutes, laws, and regulations, whether or not stated herein, which are specifically applicable to the public improvements and work to be performed.

(October 1, 2005 APWA GSP)

Supplement this section with the following:

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

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

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

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

(1/1/2016 COK GSP)
Contractor's Safety Responsibilities

These construction documents and the joint and several phases of construction hereby contemplated are to be governed at all times by applicable provisions of the federal law(s), including but not limited to the latest amendments of the following:

Williams-Steiger Occupational Safety and Health Act of 1980, Public Law 91-596. Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations.

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

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

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

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

Section 1-07.1 is supplemented with the following:

(April 3, 2006)
Confined Space

Confined spaces are known to exist at the following locations:

Northshore Utility District Manhole DMH-10

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

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

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

(June 27, 2011 APWA GSP)

1-07.2 State Taxes

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

1-07.2 State Sales Tax

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area.

The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

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

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

1-07.2(1) State Sales Tax — Rule 171

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

1-07.2(2) State Sales Tax — Rule 170

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

tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

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

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

1-07.2(3) Services

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

(June 4, 2020))

1-07.4.GR1 Sanitation

1-07.4(2).GR1 **Health Hazards**

Section 1-07.4(2) is supplemented with the following:

1-07.4(2)OPT2.GR1 COVID-19 Health and Safety Plan (CHSP)

(May 13, 2020)

COVID-19 Health and Safety Plan (CHSP)

The Contractor shall prepare a project specific COVID-19 health and safety plan (CHSP). The CHSP shall be prepared and submitted as a Type 2 Working Drawing prior to beginning physical Work. The CHSP shall be based on the most current State and Federal requirements. If the State or Federal requirements are revised, the CHSP shall be updated as necessary to conform to the current requirements.

The Contractor shall update and resubmit the CHSP as the work progresses and new activities appear on the look ahead schedule required under Section 1- 11 08.3(2)D. If the conditions change on the project, or a particular activity, the Contractor shall update and resubmit the CHSP. Work on any activity shall cease if conditions prevent full compliance with the CHSP.

The CHSP shall address the health and safety of all people associated with the project including State workers in the field, Contractor personnel, consultants, project staff, subcontractors, suppliers and anyone on the project site, staging areas, or yards.

COVID-19 Health and Safety Plan (CHSP) Inspection

The Contractor shall grant full and unrestricted access to the Engineer for CHSP Inspections. The Engineer (or designee) will conduct periodic compliance inspections on the project site, staging areas, or yards to verify that any ongoing work activity is following the CHSP plan.

If the Engineer becomes aware of a noncompliance incident either through a site inspection or other means, the Contractor will be notified immediately (within 1 hour). The Contractor shall immediately remedy the noncompliance incident or suspend all or part of the associated work activity. The Contractor shall satisfy the Engineer that the noncompliance incident has been corrected before the suspension will end.

1-07.5.GR1 Environmental Regulations

Section 1-07.5 is supplemented with the following:

(September 20, 2010)
Environmental Commitments

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

1-07.6.GR1 Permits and Licenses

Section 1-07.6 is supplemented with the following:

(January 2, 2018)
The Contracting Agency has obtained the below-listed permit(s) for this project. A copy of the permit(s) is attached as an appendix for informational purposes. Copies of these permits, including a copy of the Transfer of Coverage form, when applicable, are required to be onsite at all times.

Contact with the permitting agencies, concerning the below-listed permit(s), shall be made through the Engineer with the exception of when the Construction Stormwater General Permit coverage is transferred to the Contractor, direct communication with the Department of Ecology is allowed. The Contractor shall be responsible for obtaining Ecology's approval for any Work requiring additional approvals (e.g. Request for Chemical Treatment Form). The Contractor shall obtain additional permits as necessary. All costs to obtain and comply with additional permits shall be included in the applicable Bid items for the Work involved.

1. HYDRAULIC PROJECT APPROVAL PERMIT

2. ACOE NATIONWIDE #14 PERMIT

3. ECOLOGY CONSTRUCTION STORMWATER GENERAL PERMIT

(January 3, 2020 APWA GSP)

1-07.9(5) Required Documents

Delete this section and replace it with the following:

General

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

Intents and Affidavits

On forms provided by the Industrial Statistician of State L&I, the Contractor shall submit to the Engineer the following for themselves and for each firm covered under RCW 39.12 that will or has provided Work and materials for the Contract:

The approved "Statement of Intent to Pay Prevailing Wages" State L&I's form number F700- 029-000. The Contracting Agency will make no payment under this Contract until this statement has been approved by State L&I and reviewed by the Engineer.

The approved "Affidavit of Prevailing Wages Paid", State L&I's form number F700-007-000. The Contracting Agency will not grant Completion until all approved Affidavit of Wages paid for the Contractor and all Subcontractors have been received by the Engineer. The Contracting Agency will not release to the Contractor any funds retained under RCW 60.28.011 until "Affidavit of Prevailing Wages Paid" forms have been approved by State L&I and all of the approved forms have been submitted to the Engineer for every firm that worked on the Contract.

The Contractor is responsible for requesting these forms from State L&I and for paying any fees required by State L&I.

Certified Payrolls

Certified payrolls are required to be submitted by the Contractor for themselves, all Subcontractors and all lower tier subcontractors. The payrolls shall be submitted weekly on all Federal-aid projects and no less than monthly on State funded projects.

Penalties for Noncompliance

The Contractor is advised, if these payrolls are not supplied within the prescribed deadlines, any or all payments may be withheld until compliance is achieved. In addition, failure to provide these payrolls may result in other sanctions as provided by State laws (RCW 39.12.050) and/or Federal regulations (29 CFR 5.12).

1-07.11.GR1 Requirements for Nondiscrimination

Section 1-07.11 is supplemented with the following:

(September 3, 2019)
Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)

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

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

Women - Statewide

Timetable	Goal
Until further notice	6.9%

Minorities - by Standard Metropolitan Statistical Area (SMSA)

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

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

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

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

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

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

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

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

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

(415) 625-7799 Fax

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

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)

1. As used in these specifications:

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

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

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

    d. Minority includes:

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

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

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

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

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

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually

required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith effort to achieve the Plan goals and timetables.

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

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

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

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

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

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

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

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

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

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

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

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

i. Direct its recruitment efforts, both oral and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one

month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

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

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

l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1-07.11 Requirements for Nondiscrimination
(December 19, 2019 APWA GSP, Option B)

Supplement this section with the following:

(December 19, 2019 APWA GSP, Option B)

Disadvantaged Business Enterprise Participation

The Disadvantaged Business Enterprise (DBE) requirements of 49 CFR Part 26 and USDOT's official interpretations (i.e., Questions & Answers) apply to this Contract. Demonstrating

compliance with these Specifications is a Condition of Award (COA) of this Contract. Failure to comply with the requirements of this Specification may result in your Bid being found to be nonresponsive resulting in rejection or other sanctions as provided by Contract.

DBE Abbreviations and Definitions

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

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

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

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

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

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

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

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

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

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

Brokers, packagers, manufacturers' representatives, or other persons who arrange or expedite transactions shall not be regarded as Regular Dealers within the meaning of this definition.

Underutilized Disadvantaged Business Enterprise (UDBE) – A DBE Firm that is underutilized based on WSDOT's Disparity Study.

UDBE Commitment – The dollar amount the Bidder indicates they will be subcontracting to be applied towards the UDBE Condition of Award Goal as shown on the UDBE Utilization Certification Form for each UDBE Subcontractor. This UDBE Commitment amount will be incorporated into the Contract and shall be considered a Contract requirement. Any changes to the UDBE Commitment require the Engineer's approval.

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

UDBE COA Goal

The Contracting Agency has established a UDBE COA Goal for this Contract in the amount of: **11%**

Crediting DBE Participation

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

DBE participation is only credited upon payment to the DBE.

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

DBE Prime Contractor

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

DBE Subcontractor

Only take credit for that portion of the total dollar value of the subcontract that is equal to the distinct, clearly defined portion of the Work that the DBE performs with its own forces and is certified to perform. The value of work performed by the DBE includes the cost of supplies and materials purchased by the DBE and equipment leased by the DBE, for its work on the

contract. Supplies, materials or equipment obtained by a DBE that are not utilized or incorporated in the contract work by the DBE will not be eligible for DBE credit.

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

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

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

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

Work subcontracted to a Lower-Tier Subcontractor that is a DBE, but not a UDBE, may be counted as DBE participation but not counted toward the UDBE COA Goal.

Work subcontracted to a non-DBE does not count towards the UDBE COA Goal nor DBE participation.

DBE Subcontract and Lower Tier Subcontract Documents

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

DBE Service Provider

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

Force Account Work

When the Bidder elects to utilize force account Work to meet the UDBE COA Goal, as demonstrated by listing this force account Work on the UDBE Utilization Certification Form, for the purposes of meeting UDBE COA Goal, only 50% of the Proposal amount shall be credited toward the Bidder's Commitment to meet the UDBE COA Goal.

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

Temporary Traffic Control

If the DBE firm is being utilized in the capacity of only "Flagging", the DBE firm must provide a Traffic Control Supervisor (TCS) and flagger, which are under the direct control of the DBE. The DBE firm shall also provide all flagging equipment (e.g. paddles, hard hats, and vests).

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

Trucking

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

value of the materials in order to determine DBE credit for hauling

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

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

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

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

DBE Manufacturer and DBE Regular Dealer

One hundred percent (100%) of the cost of the manufactured product obtained from a DBE manufacturer can count as DBE participation. If the DBE manufacturer is a UDBE, participation may count towards the UDBE COA Goal.

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

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

Purchase of materials or supplies from a DBE which is neither a manufacturer nor a regular dealer, (i.e. Broker) only the fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or

supplies required on a job site, can count as DBE participation provided the fees are not excessive as compared with fees customarily allowed for similar services. Documentation will be required to support the fee/commission charged by the DBE. The cost of the materials and supplies themselves cannot be counted toward as DBE participation.

Note: Requests to be listed as a Regular Dealer will only be processed if the requesting firm is a material supplier certified by the Office of Minority and Women's

Business Enterprises in a NAICS code that falls within the 42XXXX NAICS Wholesale code section.

Underutilized Disadvantaged Business Enterprise Utilization

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

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

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

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

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

Underutilized Disadvantaged Business Enterprise Written Confirmation Document(s)

The requirements of this section apply to projects with a UDBE COA Goal. The Bidder shall submit an Underutilized Disadvantaged Business Enterprise (UDBE) Written Confirmation Document (completed and signed by the UDBE) for each UDBE firm listed in the Bidder's completed UDBE Utilization Certification submitted with the Bid. Failure to do so will result in the associated participation being disallowed, which may cause the Bid to be determined to be nonresponsive resulting in Bid rejection.

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

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

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

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

Selection of Successful Bidder/Good Faith Efforts (GFE)

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

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

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

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

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

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

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

Good Faith Effort (GFE) Documentation

GFE is evaluated when:

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

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

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

49 CFR Part 26, Appendix A is intended as general guidance and does not, in itself, demonstrate adequate good faith efforts. The following is a list of types of actions, which would be considered as part of the Bidder's GFE to achieve UDBE participation.

It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

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

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

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

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

    b. A Bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as the UDBE COA Goal into consideration. However, the fact that there may be some additional costs involved in finding and using UDBEs is not in itself sufficient reason for a Bidder's failure to meet the UDBE COA Goal, as long as such costs are reasonable. Also, the ability or desire of a Bidder to perform the Work of a Contract with its own organization does not relieve the Bidder of the responsibility to make Good Faith Efforts. Bidders are not, however, required to accept higher quotes from UDBEs if the price difference is excessive or unreasonable.

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

5. Making efforts to assist interested UDBEs in obtaining bonding, lines of

credit, or insurance as required by the recipient or Bidder.

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

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

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

Administrative Reconsideration of GFE Documentation

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

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

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

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

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

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

UDBE Bid Item Breakdown

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

UDBE Trucking Credit Form

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

Note: The UDBE Trucking Credit Form is only required for a UDBE Firm listed on the UDBE Utilization Certification as a subcontractor for "Trucking" or "Hauling" and are

performing a part of a bid item. For example, if the item of Work is Structure Excavation including Haul, and another firm is doing the excavation and the UDBE Trucking firm is doing the haul, the form is required. For a UDBE subcontractor that is responsible for an entire item of work that may require some use of trucks, the form is not required.

Procedures between Award and Execution

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

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

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

Procedures after Execution

Commercially Useful Function (CUF)

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

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

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

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

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

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

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

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

UDBE/DBE/FSBE Truck Unit Listing Log

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

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

Joint Checking

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

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

The approval to use joint checks and the use will be closely monitored by the

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

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

Prompt Payment

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

Subcontracts

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

NWRegionOEO@wsdot.wa.gov

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

Reporting

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

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

Changes in COA Work Committed to UDBE

The Contractor shall utilize the COA UDBEs to perform the work and supply the materials for which each is committed unless approved by the Engineer. The Contractor shall not be entitled to any payment for work or material completed by the Contractor or subcontractors that was committed to be completed by the COA UDBEs.

Owner Initiated Changes

Where the Engineer makes changes that result in changes to Work that was committed to a COA UDBE. The Contractor may be directed to substitute for the Work in such instances.

Contractor Initiated Changes

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

Original Quantity Underruns

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

Contractor Proposed DBE Substitutions

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

UDBE Termination

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

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

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

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

Good cause does not exist if:

- The Contractor seeks to terminate a COA UDBE so that the Contractor can self-perform the Work.

- The Contractor seeks to terminate a COA UDBE so the Contractor can substitute another DBE contractor or non-DBE contractor after Contract Award.

- The failure or refusal of the COA UDBE to perform its Work on the subcontract results from the bad faith or discriminatory action of the Contractor (e.g., the failure of the Contractor to make timely payments or the unnecessary placing of obstacles in the path of the UDBE's Work).

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

When a COA UDBE is terminated, or fails to complete its work on the Contract for any reason, the Contractor shall substitute with another UDBE or provide documentation of GFE. A plan to achieve the COA UDBE Commitment shall be submitted to the Engineer within 2 days of the approval of termination or the Contract shall be suspended until such time the substitution plan is submitted.

Decertification

When a DBE is "decertified" from the DBE program during the course of the Contract, the participation of that DBE shall continue to count as DBE participation as long as the subcontract with the DBE was executed prior to the decertification notice. The Contractor is obligated to substitute when a DBE does not have an executed subcontract agreement at the time of decertification.

Consequences of Non-Compliance

Breach of Contract

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

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

(1) Withholding monthly progress payments;

(2) Assessing sanctions;

(3) Liquidated damages; and/or

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

Notice

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

Sanctions

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

Payment

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

(April 3, 2017)

1-07.11OPT4 Special Training Provisions

General Requirements

The Contractor's equal employment opportunity, affirmative action program shall include the requirements set forth below. The Contractor shall provide on-the-job training aimed at developing trainees to journeyman status in the trades involved. The number of training hours shall be **2,400 hours**. Trainees shall not be assigned less than 400 hours. The Contractor may elect to accomplish training as part of the work of a subcontractor, however, the Prime Contractor shall retain the responsibility for complying with these Special Provisions. The Contractor shall also ensure that this training provision is made applicable to any subcontract that includes training.

Trainee Approval

The Federal government requires Contracting Agencies to include these training provisions as a condition attached to the receipt of Federal highway funding. The Federal government has determined that the training and promotion of members of certain minority groups and women is a primary objective of this training provision. The Contractor shall make every effort to enroll minority groups and women trainees to the extent such persons are available within a reasonable recruitment area. This training provision is not intended and shall not be used to discriminate against any applicant for training, whether that person is a minority, woman or otherwise. A non-minority male trainee or apprentice may be approved provided the following requirements are met:

1. The Contractor is otherwise in compliance with the contract's Equal Employment Opportunity and On-the-Job Training requirements and provides documentation of the efforts taken to fill the specific training position with either minorities or females

2. or, if not otherwise in compliance, furnishes evidence of his/her systematic and direct recruitment efforts in regard to the position in question and in promoting the enrollment and/or employment of minorities and females in the craft which the proposed trainee is to be trained

3. and the Contractor has made a good faith effort towards recruiting of minorities and women. As a minimum this good faith effort shall consist of the following:

Distribution of written notices of available employment opportunities with the Contractor and enrollment opportunities with its unions. Distribution should include but not be limited to; minority and female recruitment sources and minority and female community organizations;

Records documenting the Contractor's efforts and the outcome of those efforts, to employ minority and female applicants and/or refer them to unions;

Records reflecting the Contractor's efforts in participating in developing minority and female on-

the-job training opportunities, including upgrading programs and apprenticeship opportunities;

Distribution of written notices to unions and training programs disseminating the Contractor's EEO policy and requesting cooperation in achieving EEO and OJT obligations.

No employee shall be employed as a trainee in any classification in which the employee has successfully completed a training course leading to journeyman status or in which the employee has been employed as a journeyman. The Contractor's records shall document the methods for determining the trainee's status and findings in each case. When feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

For the purpose of this specification, acceptable training programs are those employing trainees/apprentices registered with the following:

1. Washington State Department of Labor & Industries — State Apprenticeship Training Council (SATC) approved apprenticeship agreement:

    a. Pursuant to RCW 49.04.060, an apprenticeship agreement shall be;

        i. an individual written agreement between an employer and apprentice
        ii. a written agreement between (an employer or an association of employers) and an organization of employees describing conditions of employment for apprentices

iii. a written statement describing conditions of employment for apprentices in a plant where there is no bona fide employee organization.

All such agreements shall conform to the basic standards and other provisions of RCW Chapter 49.

2. Apprentices must be registered with U.S. Department of Labor — Apprenticeship Training, Employer, and Labor Services (ATELS) approved program.

   Or

3. Trainees participating in a non-ATELS/SATC program, which has been approved by the contracting agency for the specific project.

4. For assistance in locating trainee candidates, the Contractor may call WSDOT's OJT Support Services Technical Advisor at (360) 704-6314.

Obligation to Provide Information

Upon starting a new trainee, the Contractor shall furnish the trainee a copy of the approved program the Contractor will follow in providing the training. Upon completion of the training, the Contractor shall provide the Contracting Agency with a certification showing the type and length of training satisfactorily completed by each trainee.

Training Program Approval

The Training Program shall meet the following requirements:

1. The Training Program (DOT Form 272-049) must be submitted to the Engineer for approval prior to commencing contract work and shall be resubmitted when modifications to the program occur.

2. The minimum length and type of training for each classification will be as established in the training program as approved by the Contracting Agency.

3. The Training Program shall contain the trades proposed for training, the number of trainees, the hours assigned to the trade and the estimated beginning work date for each trainee.

4. Unless otherwise specified, Training Programs will be approved if the proposed number of training hours equals the training hours required by contract and the trainees are not assigned less than 400 hours each.

5. After approval of the training program, information concerning each individual trainee and good faith effort documentation shall be submitted on (DOT Form 272-050.)

6. In King County, laborer trainees or apprentices will not be approved on contracts containing less than 2000 training hours as specified in this Section. In King County, no more than twenty percent (20%) of hours proposed for trainees or apprentices shall be in the laborer classification when the contract contains 2000

or more hours of training as specified in this Section. Trainees shall not be assigned less than 400 hours.

7. Flagging programs will not be approved. Other programs that include flagging training will only be approved if the flagging portion is limited to an orientation of not more than 20 hours.

8. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Some off-site training is permissible as long as the training is an integral part of an approved training program.

9. It is normally expected that a trainee will begin training on the project as soon as feasible after start of work, utilizing the skill involved and remain on the project as long as training opportunities exist in the work classification or upon completion of the training program. It is not required that all trainees be on board for the entire length of the contract. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

10. Wage Progressions: Trainees will be paid at least the applicable ratios or wage progressions shown in the apprenticeship standards published by the Washington State Department of Labor and Industries. In the event that no training program has been established by the Department of Labor and Industries, the trainee shall be paid in accordance with the provisions of RCW 39.12.021 which reads as follows:

Apprentice workmen employed upon public works projects for whom an apprenticeship agreement has been registered and approved with the State Apprenticeship Council pursuant to RCW 49.04, must be paid at least the prevailing hourly rate for an apprentice of that trade.

Any workman for whom an apprenticeship agreement has not been registered and approved by the State Apprenticeship Council shall be considered to be a fully qualified journeyman, and, therefore, shall be paid at the prevailing hourly rate for journeymen.

Compliance

In the event that the Contractor is unable to accomplish the required training hours but can demonstrate a good faith effort to meet the requirements as specified, then the Contracting Agency will adjust the training goals accordingly.

Requirements for Non ATELS/SATC Approved Training Programs

Contractors who are not affiliated with a program approved by ATELS or SATC may have their training program approved provided that the program is submitted for approval on DOT Form 272-049, and the following standards are addressed and incorporated in the Contractor’s program:

The program establishes minimum qualifications for persons entering the training program.

The program shall outline the work processes in which the trainee will receive supervised work experience and training on-the-job and the allocation of the approximate time to be spent in each major process. The program shall include the method for recording and reporting the training completed shall be stated.

The program shall include a numeric ratio of trainees to journeymen consistent with proper supervision, training, safety, and continuity of employment. The ratio language shall be specific and clear as to application in terms of job site and workforce during normal operations (normally considered to fall between 1:10 and 1:4).

The terms of training shall be stated in hours. The number of hours required for completion to journeyman status shall be comparable to the apprenticeship hours established for that craft by the SATC. The following are examples of programs that are currently approved:

CRAFT	**HOURS**
Laborer	4,000
Ironworker	6,000
Carpenter	5,200-8,000
Construction Electrician	8,000
Operating Engineer	6,000-8,000
Cement Mason	5,400
Teamster	2,100

The method to be used for recording and reporting the training completed shall be stated.

Measurement

The Contractor may request that the total number of “training” hours for the contract be increased subject to approval by the Contracting Agency. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other sources do not prohibit other reimbursement. Reimbursement to the Contractor for off-site training as indicated previously may only be made when the Contractor does one or more of the following and the trainees are concurrently employed on a Federal-aid project:

contributes to the cost of the training, provides the instruction to the trainee, pays the trainee’s wages during the off- site training period.

Reimbursement will be made upon receipt of a certified invoice that shows the related payroll number, the name of trainee, total hours trained under the program, previously paid hours under the contract, hours due this estimate, and dollar amount due this estimate. The certified invoice shall show a statement indicating the Contractor’s effort to enroll minorities and women when a new enrollment occurs. If a trainee is

participating in a SATC/ATELS approved apprenticeship program, a copy of the certificate showing apprenticeship registration must accompany the first invoice on which the individual appears. Reimbursement for training occurring prior to approval of the training program will be allowed if the Contractor verbally notifies the Engineer of this occurrence at the time the apprentice/trainee commences work. A trainee/apprentice, regardless of craft, must have worked on the contract for at least 20 hours to be eligible for reimbursement.

Payment

The Contractor will be reimbursed under the item “Training” per hour for each hour of training for each employee.

1-07.12 Federal Agency Inspection

Section 1-07.12 is supplemented with the following:

(January 25, 2016)
Required Federal Aid Provisions

The Required Contract Provisions Federal Aid Construction Contracts (FHWA 1273) Revised May 1, 2012 and the amendments thereto supersede any conflicting provisions of the Standard Specifications and are made a part of this Contract; provided, however, that if any of the provisions of FHWA 1273, as amended, are less restrictive than Washington State Law, then the Washington State Law shall prevail. The provisions of FHWA 1273, as amended, included in this Contract require that the Contractor insert the FHWA 1273 and amendments thereto in each Subcontract, together with the wage rates which are part of the FHWA 1273, as amended. Also, a clause shall be included in each Subcontract requiring the Subcontractors to insert the FHWA 1273 and amendments thereto in any lower tier Subcontracts, together with the wage rates. The Contractor shall also ensure that this section, REQUIRED FEDERAL AID PROVISIONS, is inserted in each Subcontract for Subcontractors and lower tier Subcontractors. For this purpose, upon request to the Engineer, the Contractor will be provided with extra copies of the FHWA 1273, the amendments thereto, the applicable 18 wage rates, and this Special Provision.

1-07.14 Responsibility for Damage

Section 1-07.14 is supplemented with the following:

1-07.15 Temporary Water Pollution/Erosion Control

(1/10/2019 COK GSP)

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

Add the following as the second paragraph of this section:

In the event the Contractor uses an SPCC Plan template that either follows the WSDOT SPCC Plan Template or contains the same or similar content and/or format, the following changes shall be required:

Replace all references to “WSDOT” as either the Contracting Agency or project owner with “City of Kirkland”, except where indicated in this Section.

Add into all Spill Reporting and related section(s): “The City of Kirkland Spill Response Hotline at (425) 587-3900 shall be the first point of contact in the event of a spill. Notification to the City of Kirkland Spill Response Hotline shall precede the spill notifications to federal and state agencies.”

Delete all references to the “WSDOT Environmental Compliance Assurance Procedure” (ECAP) in the SPCC.

Supplement the following referenced SPCC Plan Element Requirements in this Section as follows:

2. Add: “The City of Kirkland Spill Response Hotline at (425) 587-3900 shall be the first point of contact in the event of a spill.”
8. Add: “As part of Contractor spill response procedure, the Contractor shall contact the City of Kirkland Spill Response Hotline at (425) 587-3900 to report the spill regardless of whether or not the Contractor has fully contained, controlled, and/or cleaned up the spill.”

SPCC Plan Element Requirements is supplemented with the following:

2. City of Kirkland spill response hotline (425) 587-3900 shall be listed as the first point of contact.

1-07.17 Utilities and Similar Facilities

Section 1-07.17 is supplemented with the following:

(1/1/2016 COK GSP)

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

The Contractor is alerted to the existence of Chapter 19.122 RCW, a law relating to underground utilities. Any cost to the Contractor incurred as a result of this law shall be at the Contractor's expense.

No excavation shall begin until all known facilities in the vicinity of the excavation area have been located and marked.

The Contractor shall give advance notice to all utility companies involved where work is to take place and in all other respects comply with the provisions of Chapter 19.122 RCW. Notice shall include, but not be limited to, the following utility companies:

Water, sewer, storm, streets – minimum two working days in advance Power (Electric and Natural Gas) – minimum 48 hours in advance
Natural Gas – minimum 48 hours in advance

Cable Television – minimum 48 hours in advance Transit – minimum 21 days in advance

The following is a list of some utilities serving the Kirkland area. This is not intended or represented to be a complete list and is provided for the Contractor's convenience.

Utility Contacts List

Utility	Agency/Company	Address	Contact	Phone
Water/Sewer	City of Kirkland	123 Fifth Avenue Kirkland, WA 98033	Josh Pantzke	(425) 587-3900
Storm Drainage	City of Kirkland	123 Fifth Avenue Kirkland, WA 98033	Josh Pantzke	(425) 587-3900
Water / Sewer (North area of Kirkland)	Northshore Utility District	6380 NE 185th St Kenmore, WA 98028	George Matote	(425) 398-4400
Street	City of Kirkland	123 Fifth Avenue Kirkland, WA 98033	Greg Neumann	(425) 587-3900

Natural Gas / Electric	Puget Sound Energy	P.O. Box 97034 EST-11W Bellevue, Washington 98009-9734	Jeanne Coleman Sharon Seitz	(425) 449-7410 (206) 643-1908
Sanitary Sewer	King County Wastewater Treatment Division		Mark Lampard	(206) 477-5414
Electric	Seattle City Light		Jimmy Lin	(206) 733-9289
	Seattle Public Utilities		Richard Cox	(206) 684-8117
Telephone/ FIOS	Frontier Communications		Jay Schwab	(425) 263-4019
Cable Television	Comcast	1525 - 75th St SW, Suite 200 Everett, WA 98203	Joe Fordon Raymond Pilkenton	(425) 263-5348 (425) 263-5332
Network	Verizon/MCI	11311 NE 120th St Kirkland, WA 98034	Brad Landis Scott Christenson	(425) 201-0901 (425) 471-1079
Network	Zayo		Jason Acquari	(209) 456-2856
School District Transportation	Lake Washington School District	15212 NE 95th St Redmond, WA 98052	Jeff Miles	(425) 936-1120
Transit	King County METRO	MS SVQ-TR-0100 1270 6th Ave S Seattle, WA 98134	METRO Construction Information Center	(206) 477-1140 (206) 477-0438
Water (Northeast area of	Woodinville Water District	17238 NE Woodinville Duvall Road,	Ken McDowell	(425) 487-4104

Kirkland)		Woodinville, WA 98072		
Olympic Pipeline	BP		Kenneth Metcalf Joseph Stone	(425) 981-2575 (425) 981-2506

Note that utility companies may be contacted for locations through the “One Call” system, 1-800-424-5555. In the event of a gas emergency, call 911 and then the PSE hotline at 1-888- 225-5773 (1-888-CALL-PSE).

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

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

SCL's overhead transmission lines are 230 kV regional lines and will NOT be de-energized for construction. The Contractor shall follow all safety requirements per Washington Administrative Code (WAC) and the Department of Labor and Industries (L&I).

The Plans show a future Puget Sound Energy (PSE) power line along the east edge of the CKC Right-of-Way. This power line is unlikely to be in place at the time of bidding but may be installed (by others) while the Contractor is on site. The Contractor shall work cooperatively with PSE to allow for coordination of work areas within the project.

Other Notifications

Service Area Turn Off: All service area turn off notices must be distributed to affected parties two working days in advance of any scheduled shut off. City to provide door hangers and affected service area map. The contractor shall fill in all required information prior to hanging door hanger.

Entry onto Private Property: Each property owner shall be given two working days advance Written Notice prior to entry by the Contractor.

Loop Detection Systems: Where an excavation is to take place through a signal loop detector system, the Contractor shall provide at least five (5) Working Days advance notice to the City Signal Shop at (425) 587-3920 to coordinate temporary signal wire disconnect and installation of temporary signal detection equipment.

Survey Monuments: When proposed pavement removal is close to existing survey monumentation, or proposed pavement removal includes existing survey monumentation, the Contractor shall provide a minimum 4 Working Days advance

notice to the Engineer to allow survey crews to tie the monument out and reset the monument after pavement installation.

(January 4, 2016 APWA GSP)

1-07.18 Public Liability and Property Damage Insurance

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

1-07.18 Insurance

1-07.18(1) General Requirements

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

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

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

The Contractor's Automobile Liability, Commercial General Liability and Excess or Umbrella

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

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

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

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

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

1-07.18(2) Additional Insured

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

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

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

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

1-07.18(3) Subcontractors

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

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

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

1-07.18(4) Verification of Coverage

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

Verification of coverage shall include:

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

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

1-07.18(5) Coverages and Limits

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

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

1-07.18(5)A Commercial General Liability

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract. There shall

be no exclusion for liability arising from explosion, collapse or underground property damage.

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

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

Such policy must provide the following minimum limits:

- $1,000,000 Each Occurrence
- $2,000,000 General Aggregate
- $2,000,000 Products & Completed Operations Aggregate
- $1,000,000 Personal & Advertising Injury each offence
- $1,000,000 Stop Gap / Employers' Liability each accident

1-07.18(5)B Automobile Liability

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

Such policy must provide the following minimum limit:
$1,000,000 Combined single limit each accident

1-07.18(5)C Workers' Compensation

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

(January 4, 2016 APWA GSP)

1-07.18(5)D Excess or Umbrella Liability

The Contractor shall provide Excess or Umbrella Liability insurance with limits of not less than **3 million** each occurrence and annual aggregate. This excess or umbrella liability coverage shall be excess over and as least as broad in coverage as the Contractor's Commercial General and Auto Liability insurance

All entities listed under 1-07.18(2) of these Special Provisions shall be named as

additional insureds on the Contractor's Excess or Umbrella Liability insurance policy.

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

(January 4, 2016 APWA GSP)

1-07.18(5)I Builder's Risk

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

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

Coverage:

Total Cost of Project to be Insured: $5,000,000.00
Soft Costs: $500,000.00
Flood: $0
Earthquake: $2,500,000.00

Deductibles not to exceed:

Flood: 2% of the Value at Time of Loss, subject to a $250,000 Minimum
Earthquake: 5% of the Value at Time of Loss, subject to a $250,000 Minimum
Earth Movement: 5% of the Value at Time of Loss, subject to a $250,000 Minimum
All Other Perils: $50,000
Soft Costs: $50,000, with no more than 7-day waiting period

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

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

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

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

(January 4, 2016 APWA GSP)

1-07.18(5)K Professional Liability

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

Such policy shall provide the following minimum limits:

- $1,000,000 per claim and annual aggregate

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

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

(1/1/2016 COK GSP)

Pedestrian Control and Protection

When the work area encroaches upon a sidewalk, walkway, path, trail or crosswalk area,special consideration must be given to pedestrian safety. Maximum effort must be made to separate pedestrians from the work area. Protective barricades, fencing, and bridges, together with warning and guidance devices and signs, shall be utilized so that the passageway for pedestrians is safe and well defined. Whenever pedestrian walkways are provided across excavations, they shall be provided with suitable handrails. Footbridges shall be safe, strong, free of bounce and sway, have a slip resistant coating, and be free of cracks, holes, and irregularities that could cause tripping. Ramps shall be provided at the entrance

and exit of all raised footbridges, again to prevent tripping. Adequate illumination and reflectorization shall be provided during hours of darkness. All walkways shall be maintained with at least 4 feet clear width. All temporary pedestrian walkways, ramps, detours or any other temporary pedestrian facility must meet current ADA requirements for access.

Where it is necessary to divert pedestrians into the roadway, barricading or channeling devices shall be provided to separate the pedestrian walkway from the adjacent vehicular traffic lane.
At no time shall pedestrians be diverted into a portion of a street used concurrently by moving vehicular traffic.

At locations where adjacent alternate walkways cannot be provided, appropriate signs shall be posted at the limits of construction and in advance of the closure at the nearest crosswalk or intersection to divert pedestrians across the street.

Physical barricades shall be installed to prevent visually impaired people from inadvertently entering a closed area. Pedestrian walkways shall be wheelchair accessible at all times.
Pedestrian access shall be maintained to all properties adjacent to the construction site.

(May 2, 2017 APWA GSP)

1-07.23(1) Construction under Traffic

Work Zone Clear Zone

(February 3, 2020)

The Work Zone Clear Zone (WZCZ) applies during working and nonworking hours. The WZCZ applies only to temporary roadside objects introduced by the Contractor's operations and does not apply to preexisting conditions or permanent Work. Those work operations that are actively in progress shall be in accordance with adopted and approved Traffic Control Plans, and other contract requirements.

During nonworking hours equipment or materials shall not be within the WZCZ unless they are protected by permanent guardrail or temporary concrete barrier. The use of temporary concrete barrier shall be permitted only if the Engineer approves the installation and location.

During actual hours of work, unless protected as described above, only materials absolutely necessary to construction shall be within the WZCZ and only construction vehicles absolutely necessary to construction shall be allowed within the WZCZ or allowed to stop or park on the shoulder of the roadway.

The Contractor's nonessential vehicles and employees' private vehicles shall not be permitted to park within the WZCZ at any time unless protected as described above.

Deviation from the above requirements shall not occur unless the Contractor has requested the deviation in writing and the Engineer has provided written approval.

Minimum WZCZ distances are measured from the edge of traveled way and will be determined as follows:

Regulatory Posted Speed	Distance From Traveled Way (Feet)
35 mph or less	10
40 mph	15
45 to 50 mph	20
55 to 60 mph	30
65 mph or greater	35

Minimum Work Zone Clear Zone Distance

Revise the third sentence of the second paragraph to read:

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

(July 23, 2015 APWA GSP)

1-07.24 Rights of Way

Delete this section and replace it with the following:

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

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

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

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

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

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

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

1-08 Prosecution and Progress

Add the following new section:

(May 25, 2006 APWA GSP)

1-08.0 Preliminary Matters

Add the following new section:

(October 10, 2008 APWA GSP)

1-08.0(1) Preconstruction Conference

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

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

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

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

Add the following new section:

(December 8, 2014 APWA GSP)

1-08.0(2) Hours of Work

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

The working hours for the Contract shall be established at or prior to the preconstruction conference. The Contractor will be responsible for obtaining a night work variance from the City of Kirkland Public Works Department and a Work Hour variance from the City of Kirkland Planning Department.

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

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

If the Contracting Agency approves such a deviation, such approval may be subject to certain other conditions, which will be detailed in writing. For example:
On non-Federal aid projects, requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency representatives who worked during such times. (The Engineer may require designated representatives to be present during the work. Representatives who may be deemed necessary by the Engineer include, but are not limited to: survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees or third party consultants when, in the opinion of the Engineer, such work necessitates their presence.)
Considering the work performed on Saturdays, Sundays, and holidays as working days with regard to the contract time.

Considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period.
If a 4-10 work schedule is requested and approved the non working day for the week will be charged as a working day.

If Davis Bacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll.

Arterial Streets – Time Restricted

No work will be performed on arterial streets during the peak traffic hours of 7:00 a.m. – 9:00 a.m. and 3:30 p.m. – 6:00 p.m., except emergency work to restore services, unless a City- approved traffic control plan allows work during the peak hours. The following streets are classified as arterials:

STREET	***FROM***	***TO***
Central Way/NE 85th St	Market St	132nd Ave NE
Juanita Dr NE /NE Juanita Dr	NE 143rd St (City Limits)	98th Ave NE
Juanita Woodinville Way	100th Ave NE	NE 145th St (City Limits)
Lake St/Lake Washington Blvd/Northup Wy	Central Way	Northup Way (City Limits)
Kirkland Ave/Kirkland Way	Lake St	NE 85th St
Lakeview Dr /NE 68th St/NE 70th St	Lake Washington Blvd	132nd Ave NE

Market St/98th Ave NE/100th Ave NE	Central Way	NE 145th St (City Limits)
NE 116th St	98th Ave NE	Slater Ave NE
NE 120th St/132nd Ave NE	Slater Ave NE	NE 60th St (City Limits)
NE 124th St	**100th Ave NE**	**East City Limits**
NE 128th St	116th Ave NE/116th Way NE	120th Ave NE
Simonds Rd NE	92nd Ave NE (City Limits)	100th Ave NE
Slater Ave NE	NE 116th St	NE 124th St
Totem Lake Blvd	**NE 132nd St**	**124th Ave NE**
3rd Street/State Street	Central Way	NE 68th Street/Lakeview Dr.
6th St/6th St S/108th Ave NE	Central Way/NE 85th St	South City Limits
90th Ave NE/NE 131st Way/NE 132nd St	NE 134th St	132nd Ave NE
120th Ave NE/116th Ave NE/116th Way NE	NE 112th St	NE 132nd St
124th Ave NE	NE 85th St	NE 124th St
124th Ave NE	NE 132nd St	NE 145th Pl (City Limits)

(December 19, 2019 APWA GSP, Option A)

1-08.1 Subcontracting

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

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

1. Request to Sublet Work (WSDOT Form 421-012), and
2. Contractor and Subcontractor or Lower Tier Subcontractor Certification for Federal-aid Projects (WSDOT Form 420-004).

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

has been released.

The ninth paragraph, beginning with “On all projects, …” is revised to read:

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

Section 1-08.1 is supplemented with the following:

(1/1/2016 COK GSP)

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

(1/1/2016 COK GSP)

1-08.3 Progress Schedule

The order of work will be at the Contractor's option, in keeping with good construction practice and the terms of the contract. All work shall be carried out in accordance with the requirements of the City of Kirkland in compliance with the plans and specifications. However, the Contractor shall so schedule the work within the time constraints noted in the various contract documents, including any permits. The Contractor is cautioned to review said documents and permits and schedule the work appropriately.

(March 13, 2012 APWA GSP)

1-08.3(2)B Type B Progress Schedule

Revise the first paragraph to read:

The Contractor shall submit a preliminary Type B Progress Schedule at or prior to the

preconstruction conference. The preliminary Type B Progress Schedule shall comply with all of these requirements and the requirements of Section 1-08.3(1), except that it may be limited to only those activities occurring within the first 60-working days of the project. Failure to provide a preliminary schedule at or prior to the pre-construction conference shall be grounds for cancelling the pre-construction conference until Contractor provides the required schedule.

Revise the first sentence of the second paragraph to read:

The Contractor shall submit **5** copies of a **Type B Progress Schedule** depicting the entire project no later than 21-calendar days after the preconstruction conference.

1-08.4 Prosecution of Work

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

(July 23, 2015 APWA GSP)

1-08.4 Notice to Proceed and Prosecution of Work

Notice to Proceed will be given after the contract has been executed and the contract bond and evidence of insurance have been approved and filed by the Contracting Agency. The Contractor shall not commence with the work until the Notice to Proceed has been given by the Engineer. The Contractor shall commence construction activities on the project site within ten days of the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

When shown in the Plans, the first order of work shall be the installation of high visibility fencing to delineate all areas for protection or restoration, as described in the Contract. Installation of high visibility fencing adjacent to the roadway shall occur after the placement of all necessary signs and traffic control devices in accordance with 1-10.1(2). Upon construction of the fencing, the Contractor shall request the Engineer to inspect the fence. No other work shall be performed on the site until the Contracting Agency has accepted the installation of high visibility fencing, as described in the Contract.

1-08.5 Time for Completion

Revise the third and fourth paragraphs to read:

(November 30, 2018 APWA GSP, Option B)

Contract time shall begin on the first working day following the 7th calendar day after the Notice to Proceed date. If the Contractor starts work on the project at an earlier date, then contract time shall begin on the first working day when onsite work begins.

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been

used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any partial or whole day the Engineer declares as unworkable. Within 10 calendar days after the date of each statement, the Contractor shall file a written protest of any alleged discrepancies in it. To be considered by the Engineer, the protest shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of time disputed. By not filing such detailed protest in that period, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor is approved to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day, then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

Revise the sixth paragraph to read:

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

1. The physical work on the project must be complete; and
2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract.

The following documents must be received by the Project Engineer prior to establishing a completion date:

a. Certified Payrolls (per Section 1-07.9(5)).
b. Material Acceptance Certification Documents
c. Monthly Reports of Amounts Credited as DBE Participation, as required by the
Contract Provisions.
d. Final Contract Voucher Certification
e. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor and all Subcontractors
f. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred

back to the Contracting Agency in accordance with Section 8-01.3(16).

g. Property owner releases per Section 1-07.24

Section 1-08.5 is supplemented with the following:

(1/1/2016 COK GSP)

This project shall be physically completed in its entirety within **465** working days.

1-08.6 Suspension of Work

(Section 1-08.6 is supplemented with the following)

(*****)

Contract time may be suspended for procurement of critical materials (Procurement Suspension). In order to receive a Procurement Suspension, the Contractor shall within
30 calendar days after execution by the Contracting Agency, begin placing purchase orders for

all materials deemed critical by the Contracting Agency for physical completion of the contract. The Contractor shall provide copies of purchase orders for the critical materials. Such purchase orders shall disclose the purchase order date and estimated delivery dates for such critical material.

The Contractor shall show procurement of the materials listed below as activities in the Progress Schedule. If the approved Progress Schedule indicates that the materials procurement are critical activities, and if the Contractor has provided documentation that purchase orders are in-process for the critical materials within the prescribed 30 calendar days, then charging of contract time will be suspended for 60 calander days (40 working days) for procurement of the critical materials listed below:

- Shaft rebar and shaft casing

Charging of contract time will resume upon delivery of the critical materials to the Contractor on-site or 80 calendar days after execution by the Contracting Agency, whichever occurs first.

1-08.9 Liquidated Damages

Revise the fourth paragraph to read:

(August 14, 2013 APWA GSP)

When the Contract Work has progressed to Substantial Completion as defined in the Contract. The Engineer may determine that the work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For

overruns in Contract time occurring after the date so established, the formula for liquidated damages shown above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs

assignable to the project until the actual Physical Completion Date of all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

1-09 Measurement and Payment

1-09.2 Weighing Equipment

(July 23, 2015 APWA GSP, Option 2)

1-09.2(1) General Requirements for Weighing Equipment.

Revise item 4 of the fifth paragraph to read:

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

The second to last paragraph of Section 1-09.2(1) is supplemented with the following:

(1/1/2016 COK GSP)

Trucks and Tickets

All tickets shall, at a minimum, contain the following information:

- Ticket serial number
- Date and hour of weighing
- Weigher's identification

Duplicate tally tickets shall be prepared to accompany each truckload of materials delivered to the project.

It is the responsibility of the Contractor to see that tickets are given to the Inspector on the project for each truckload of material delivered. Pay quantities will be prepared on the basis of said tally tickets, delivered to the Inspector at time of delivery of materials. Tickets not collected at the time of delivery will not be honored for payment.

(May 2, 2017 APWA GSP)

1-09.2(5) Measurement

Revise the first paragraph to read:

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

(October 10, 2008 APWA GSP)

1-09.6 Force Account

Supplement this section with the following:

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

1-09.8 Payment for Material on Hand

The last paragraph of Section 1-09.8 is revised to read:

(August 3, 2009)
1-09.8.OPT1.GR1

The Contracting Agency will not pay for material on hand when the invoice cost is less than $2,000. As materials are used in the work, credits equaling the partial payments for them will be taken on future estimates.

Each month, no later than the estimate due date, the Contractor shall submit a letter to the Engineer that clearly states: 1) the amount originally paid on the invoice (or other record of production cost) for the items on hand, 2) the dollar amount of the material incorporated into each of the various work items for the month, and 3) the amount that should be retained in material on hand items. If work is performed on the items and the Contractor does not submit a letter, all of the previous material on hand payment will be deducted on the estimate.

Partial payment for materials on hand shall not constitute acceptance. Any material will be rejected if found to be faulty even if partial payment for it has been made.

(March 13, 2012 APWA GSP)

1-09.9 Payments

Supplement this section with the following:

Lump sum item breakdowns are not required when the bid price for the lump sum item is less than $20,000.

Delete the first four paragraphs and replace them with the following:

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

The Contractor shall submit a breakdown of the cost of lump sum bid items at the Preconstruction Conference, to enable the Project Engineer to determine the Work performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown,

the Project Engineer will make a determination based on information available. The Project Engineer's determination of the cost of work shall be final.

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

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

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

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

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

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

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

(June 27, 2011)
1-09.(1) Retainage

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

Vacant

(November 30, 2018 APWA GSP)
1-09.11(3) Time Limitation and Jurisdiction

Revise this section to read:

For the convenience of the parties to the Contract it is mutually agreed by the parties that any claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the Contract by the Contracting Agency; and it is further agreed that any such claims or causes of action shall be brought only in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction.

The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to any such claims or causes of action. It is further mutually agreed by the parties that when any claims or causes of action which the Contractor asserts against the Contracting Agency arising from the Contract are filed with the Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency to have timely access to any records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-09.13 Claims Resolution

(October 1, 2005 APWA GSP)
1-09.13(3) Claims $250,000 or Less

Delete this Section and replace it with the following:
The Contractor and the Contracting Agency mutually agree that those claims that total $250,000 or less, submitted in accordance with Section 1-09.11 and not resolved by nonbinding ADR processes, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

(November 30, 2018 APWA GSP)

1-09.13(3)A Administration of Arbitration

Revise the third paragraph to read:

The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the Contract as a basis for decisions.

1-10 Temporary Traffic Control

1-10.1(2) Description

The third paragraph is supplemented with the following:

(******)

The Contractor shall schedule road and sidewalk closures with the City of Kirkland 14 calendar days in advance to allow for advance notice of construction activities.

1-10.2 Traffic Control Management

(January 3, 2017)

1-10.2(1)GR1 General

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

Only training with WSDOT TCS card and WSDOT training curriculum is recognized in the State of Washington. The Traffic Control Supervisor shall be certified by one of the following:

The Northwest Laborers-Employers
Training Trust 27055 Ohio Ave.
Kingston, WA 98346
(360) 297-3035

Evergreen Safety
Council 12545
135th Ave. NE
Kirkland, WA 98034-8709
1-800-521-0778

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

1-10.2(3) Conformance to Established Standards

Section 1-10.2(3) is revised to read:

(February 3, 2020)

Flagging, signs, and all other traffic control devices and procedures furnished or provided shall conform to the standards established in the latest WSDOT adopted edition (in accordance with WAC 468-95) of the MUTCD, published by the U.S. Department of Transportation, and the 2005 draft version of the *Public Rights-of-Way*

Accessibility Guidelines (PROWAG): https://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of- way/background/revised-draft-guidelines. Judgment of the quality of devices furnished will be based upon *Quality Guidelines for Temporary Traffic Control Devices*, published by the American Traffic Safety Services Association. Copies of the MUTCD and *Quality Guidelines for Temporary Control Devices* may be purchased from the American Traffic Safety Services Association, 15 Riverside Parkway, Suite 100, Fredericksburg, VA 22406-1022.

In addition to the standards of the MUTCD described above, the Contracting Agency enforces crashworthiness requirements for most work zone devices. The AASHTO Manual for Assessing Safety Hardware (MASH) has superseded the National Cooperative Highway Research Project (NCHRP) Report 350 as the established requirements for crash testing.
Temporary traffic control devices manufactured after December 31, 2019 shall be compliant with the 2016 edition of the Manual for Assessing Safety Hardware (MASH 16) crash test requirements, as determined by the Contracting Agency, except as follows:

1. In situations where a MASH 16 compliant traffic control device does not exist and there are no available traffic control devices that were manufactured on or before December 31, 2019, then a traffic control device manufactured after December 31, 2019 that is compliant with either NCHRP 350 or the 2009 edition of the Manual for Assessing Safety Hardware (MASH 09) is allowed for use with approval of the Engineer.

2. Temporary traffic control devices that were manufactured on or before December 31, 2019, and were successfully tested to National Cooperative Highway Research Program (NCHRP) Report 350 or MASH 09 may continue to be used on WSDOT projects throughout their normal service life.

3. Small and lightweight channelizing and delineating devices, including cones, tubular markers, flexible delineator posts, and plastic drums, shall meet the requirements of either NCHRP 350, MASH 09, or MASH 16, as determined by the manufacturer of the device.

4. A determination of crashworthiness for acceptance of trailer-mounted devices such as arrow displays, temporary traffic signals, area lighting supports, and portable changeable message signs is currently not required.

The condition of signs and traffic control devices shall be acceptable or marginal as defined in the book *Quality Guidelines for Temporary Traffic Control Devices*, and will be accepted based on a visual inspection by the Engineer. The Engineer's decision on the condition of a sign or traffic control device shall be final. A sign or traffic control device determined to be unacceptable shall be removed from the project and replaced within 12 hours of notification.

(4/18/2018 COK GSP)

1-10.3 Traffic Control Labor, Procedures, and Devices

Section 1-10.3 is supplemented with the following:

(May 20, 2020)
Contractor Provided Uniformed Police Officers

The Contractor shall provide, direct, and monitor Uniformed Police Officers having jurisdiction to control traffic in accordance with the Plans. A uniformed police officer (UPO) is a sworn police officer from a local law enforcement agency or a Washington State Patrol officer. The UPO shall provide traffic control as shown in an accepted traffic control plan.

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

1. Off-Duty City of Kirkland UPO's: (206) 755-6632
2. County Sherriff
3. Washington State Patrol - local office

(******)
When construction activities occur within 100 feet of a signalized intersection, an intersection is placed into flash-mode, or any other traffic control activity where the flow of traffic through an intersection must be controlled and traffic conflicts avoided, the Contractor shall provide the necessary off-duty uniformed police officer(s) to control the flow of traffic through the intersection.

1-10.3(3)C Portable Changeable Message Sign

Supplement this section with the following:

(******)
Five Portable Changeable Message Signs (PCMS) shall be provided for the duration of the project. Proposed locations shall be shown on Traffic Control Plan(s) submitted by the contractor. Contractor shall submit proposed message(s) to be displayed and receive approval by the Engineer prior to placement. Contractor is responsible for programming of the approved message into the PCMS('s), set-up, placement, and removal upon project completion.

1-10.4 Measurement

1-10.4(2) Item Bids With Lump Sum for Incidentals

Section 1-10.4(2) is supplemented with the following:

(May 20, 2020)
"Contractor Provided Uniformed Police Officer" will be measured by the hour.

1-10.4(3).GR1 Reinstating Unit Items With Lump Sum Traffic Control

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

(August 2, 2004)
1-10.4(3)OPT1 (Project Lump Sum)
The bid proposal contains the item “Project Temporary Traffic Control,” lump sum and the additional temporary traffic control items listed below. The provisions of Section 1-10.4(1), Section 1-10.4(3), and Section 1-10.5(3) shall apply.

“Portable Changeable Message Sign”, per hour.

"Contractor Provided Uniformed Police Officer”, per hour.

The unit contract price per hour for "Contractor Provided Uniformed Police Officer” shall be full pay for the work described herein. No additional compensation will be made for hours of work on holidays, weekends, or overtime.

1-10.5 Payment

1-10.5(2).GR1 Item Bids with Lump Sum for Incidentals

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

(May 20, 2020)
1-10.5(2).OPT5.GR1 “Contractor Provided Uniformed Police Officer”, per hour.

The unit Contract price per hour for "Contractor Provided Uniformed Police Officer" shall be full pay for performing the Work as specified and as shown in the Plans, including all costs for arrangement for and supervision of a uniformed law enforcement personnel and vehicles to participate in the Contractor's traffic control activities.

END OF DIVISION 1

Division 2 Earthwork

2-01 Clearing, Grubbing, and Roadside Cleanup

2-01.1 Description

Section 2-01.1 is supplemented with the following:

(******)
This Work also includes protection of delineated wetland areas, clearing and grubbing within wetland and wetland buffer areas as described in this Section, and removal of invasive plants, as defined by the King County Noxious Weed List, including all regulated and non-regulated noxious weeds, including Himalayan blackberry, reed canarygrass, and Scotch broom, which have been identified on-site

The removal of invasives will occur with initial mobilization and again prior to restoration planting; additionally, as a part of 8-02 Roadside Restoration, the Contractor shall be responsible for meeting all requirements associated with Special Provisions in Section 8-02.3(13). Work to remove invasives shall be completed following the Washington Department of Fish and Wildlife's decontamination protocols, which are outlined in the "Invasive Species Management Protocols" and available online at https://wdfw.wa.gov/species-habitats/invasive/prevention.

"Remove tree" means removing trees five inches or greater in diameter, as measured 48 inches above ground level. Removed tree will be stockpiled for use as large woody debris or removed from the site as described in the Special Provisions.

2-01.3 Construction Requirements

Section 2-01.3 is supplemented with the following:

(******)
The Contractor shall preserve and protect the delineated wetland area throughout the duration of construction, acting immediately to repair or restore any fencing, flagging or other delineation that is damaged or removed.

Prior to clearing the Contractor shall coordinate and submit to the City photographs that document existing conditions along potential temporary construction access routes along the Cross Kirkland Corridor that are outside the limits of work (as shown in the Plans) and that may be used for construction access based on Contractor means and methods. At a minimum, photographs shall be taken every 25 feet to document exiting trail and edge conditions and connections to public streets. Photographs will be used by the City to compare post-constructon conditions to ensure disturbed areas outside the limits of work are restored to original, pre-construction conditions.

2-01.3(1) Clearing

Section 2-01.3(1) is replaced with the following:

(******)

The Contractor shall clear invasive plants, as defined by the King County Noxious Weed List, including all regulated and non-regulated noxious weeds, including Himalayan blackberry, reed canarygrass, and Scotch broom, which have been identified on-site, from all clearing and grubbing areas as indicated in the Plans.

Additional clearing requirements for areas outside of the wetland and wetland buffer. The Contractor shall:

- Leave standing any trees or native growth not designated for removal as indicated in the Plans or as directed by the Engineer.
- Remove any existing piles of vegetation, dead trees, or new piles of vegetation resulting from clearing.
- Protect, by fencing, all trees or native growth to remain from any damage caused by construction operations.
- Install temporary slope stabilization for slopes greater than 3:1. See Plans for reference to the type of slope stabilization to be utilized.

Additional clearing requirements for areas within the wetland and wetland buffer that are inside the limits of the high visibility silt fence. The Contractor shall:

- Remove from the site all brush cleared that is less than 5” in diameter.
- Remove any existing or new piles of vegetation resulting from clearing except retain trees/branches in stockpiles on-site that are larger than 5” diameter for reuse as Large Woody Debris per 8-26.
- Remove trees within the area to be cleared as indicated in the Plans. Stockpile any trees/branches larger than 5” diameter on site for reuse as Large Woody Debris per
- 8-26. Close-cut parallel to the slope of the ground all stumps of trees to be removed in the wetland and wetland buffer area
- Fell trees and stockpile for reuse as Snags as shown in the Plans.

For areas within the wetland and wetland buffer that are outside the limits of the high visibility silt fence but within the limits of work:

The Contractor shall hand remove invasive plants to avoid damage to roots of vegetation to remain. Hand removal of invasive plants will occur at initial mobilization and again prior to the second growing season when any remnant invasive plans (e.g. blackberry canes) are visible. Additional requirements within the wetland per the HPA permit obtained from WDFW and the Clean Water Act permit obtained from the USACE may include:

All work must be completed “in the dry”, i.e. when the work area portion of the wetland is not “flooded” (i.e. work area is not connected via surface waters to the wetland).

Avoid work during times of precipitation and implement TESC Plans and a SWPPP to ensure compliance with these standards.

Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance. No fill or drill spoils shall be placed in wetland.

Follow Level 1 Decontamination protocol for all equipment working within the wetland.

5. Clean equipment prior to entering the wetland area and use of biodegradable lubricants/fluids in accordance with permit requirements.

Restore (replant) all cleared areas in accordance with the approved restoration plans and permit requirements.

2-01.3(2) Grubbing

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

(******)
The Contractor shall take care to remove the root crowns of all invasive plants within areas to be cleared and grubbed, especially Himalayan blackberry. Grubbing will occur at initial mobilization and again during the second growing season when any remnant blackberry canes are visible.

Areas within the wetland and wetland buffer that are inside the limits of high visibility fence shall be covered with jute matting as described in 8-02.3(3)B after the areas have been grubbed.

Areas within the wetland and wetland buffer areas that are outside the limits of the high visibility silt fence but within the limits of work the Contractor shall hand grub invasive plants, including Himalayan blackberry, to avoid damage to roots of vegetation to remain.
Restore all grubbed areas in accordance with the approved restoration plans and permit requirements.

2-01.4 Measurement

Section 2-01.4 is supplemented with the following:

(******)
Tree removal will be measured per each for each tree removed that is greater than 5” in diameter.

Jute matting will be measured by the square foot along the ground slope line of surface area covered and accepted.

2-01.5 Payment

Section 2-01.5 is supplemented with the following:

(******)
“Remove Tree” per each
The unit Contract price per each for “Remove Tree” shall be full pay for all Work described in this section to remove, Grub and dispose of or stockpile the tree as applicable.

“Jute Matting” per square foot
The unit Contract price per square foot for “Jute Matting” shall be full pay for all costs to complete the specified Work.

No separate payment will be made for the time or Work required to photograph, document, coordinate, and submit photographs of existing conditions to verify existing conditions and document disturbed areas have been restored to the original, pre-construction condition.

2-02 Removal of Structures and Obstructions

2-02.1 Description

Section 2-02.1 is supplemented with the following:

(******)
Items to be removed and disposed of under this section include the following as shown in the Plans:

- Asphalt pavement, including the existing asphalt trail (365 square yards)
- Planing bitimunous pavement (30 square yards)
- Cement concrete sidewalk (30 square yards)
- Cement concrete traffic curb and gutter (145 linear feet)
- Gravel surfacing 4” depth trail (111 cubic yards)

Item(s) to be removed and salvaged are indicated in the Plans.

2-02.3 Construction Requirements

Section 2-02.3(3) is supplemented with the following:

(******)
Grind bitimunous pavement in accordance with 5-04.3(14) and City standard plans and/or as noted on the Plans.

(******)
2-02.3(5) Salvage of Existing Signs

Salvage existing signs to the Contracting Agency or for reinstallation as noted in the Plans. Signs identified for salvage on the Plans shall be carefully salvaged in their existing conditions.If necessary, the Contractor shall hand excavate to ensure materials are not damaged.

Contractor shall store items to be salvaged until item is reinstalled as shown in the Plans or delivery of salvaged items is coordinated with the Engineer.

2-02.5 Payment

Section 2-02.5 is supplemented with the following:

(******)
“Salvage Signs” per lump sum.
The lump sum contract price for “Salvage Signs” shall be full payment for all costs incurred for Work required to remove, store, deliver, protect and reinstall site elements designated in the Plans including the preparation and submittal of an approved work plan for items to be salvaged.

2-03 Roadway Excavation and Embankment

2-03.1 Description

Section 2-03.1 is supplemented with the following:

(******)
This work shall include the excavation, removal and disposal of cuts for infiltration ponds as shown in the Plans.

2-03.2 Vacant

Section 2-03.2 is replaced with the following:

(******)
2-03.2 Hazardous Materials Existing Conditions

Soils containing low to moderate levels of hazardous material exist within the project area and are expected to be encountered during the Project. The site history of both agricultural use and close proximity to the railroad indicated the potential for encountering petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), semivolatile organic compounds (SVOCs), pesticides and/or metals.

Agency sampling and testing confirms the presence of impacted soils found sporadically throughout the project area and planned excavation volumes. These impacted soils were characterized by sampling and testing as containing levels of petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), semivolatile organic compounds (SVOCs), pesticides, and/or metals. Concentrations of soil contamination were less than applicable Model Toxics Control Act (MTCA – 70.105D RCW and Chapter 173-340 WAC) cleanup levels.

Groundwater samples were also tested for contamination, but testing results were below method detection limits. Even so, groundwater withdrawn from the ground during Contractor Work may come into contact with impacted soils and become contaminated.

The Contracting Agency has provided sample locations and testing data in Appendix E of these Special Provisions for Contractor reference and use.

The Contractor is responsible for all Work required to handle, character the characterization and testing (including that for waste disposal profiling), handling, transportation, and disposal of impacted soil and groundwater encountered at the project site. The Contractor shall follow all applicable federal, state and local rules, regulations and guidance for the handling and disposal of impacted soil and groundwater removed as a part of the Work.

The Contractor shall also be responsible for identifying and using one or more disposal site(s) that meet applicable federal, state and local rules, regulations and guidance. Contractor shall be responsible for all special handling methods (both on-site and for hauling), testing, waste profiling documentation, and other disposal requirements needed for the selected disposal site(s).

2-03.3(14)K Select, Common Borrow, Gravel Borrow for Structural Earth Walls or Permeable Ballast Including Haul

Section 2-03.3(14)K is supplemented with the following:

(******)
Select borrow shall be used to construct embankments for proposed trails segments from Sta 12+00 to Sta 15+00, Sta 60+00 to Sta 60+78 and Sta 22+90 to Sta 24+00 except where the MSE wall is located. Fill placed on slopes shall be constructed per the requirements for Hillside Terraces, Section 2-03.3(14). Select borrow shall be compacted to 95 percent of the maximum dry density as determined by the compaction control tests described in Section 2-03.3(14)D.

Gravel Borrow for Structural Earth Walls shall be used to construct the Vegetated-face MSE walls and shall meet Specification 9-03.14(4) with the added restriction that no more than 5 percent shall pass the U.S. No. 200 sieve. Gravel borrow for structural earth walls shall be compacted to 95 percent of the maximum dry density as determined by the compaction control tests described in Section 2-03.3(14)D.

The lower 18 inches of the embankment retained by the Vegetated-face MSE wall should consist of permeable ballast as specified in Section 6-14.2. Permeable ballast shall also be placed as part of the Permeable Pavement, Section 2-06.3(3). Permeable ballast material shall meet the requirements of Section 4-04.2.

2-03.4 Measurement

Section 2-03.4 is supplemented with the following:

(******)
No separate measurement will be made to construct or desconstruct interim conditions to provide temporary access for construction laydown (including the placement, removal and disposal of quarry spalls), stabilized construction entrances or the temporary trail. Measurement for excavation and haul, select, common, and gravel borrow will be as specified in the Standard Specifications based on comparing the original ground surface with the planned finished section and grades shown in the Plans.

No separate measurement will be made for excavation, handling, testing, and disposal of impacted soil and/or groundwater with pollutant levels below applicable Model Toxics Control Act (MTCA – 70.105D RCW and Chapter 173-340 WAC) cleanup levels.

2-03.5 Payment

Section 2-03.5 is supplemented with the following:

(******)
The costs for all Work of grading interim conditions to provide temporary access for construction laydown, stabilized construction entrances and the temporary trail and for placing, removing and disposing of quarry spalls from the construction laydown area shall be incidental to construction.

No separate payment will be made for excavation, handling, testing, and disposal of impacted

soil and/or groundwater with pollutant levels below applicable Model Toxics Control Act (MTCA – 70.105D RCW and Chapter 173-340 WAC) cleanup levels. The unit Contract prices provided for each excavation and/or haul Contract Item shall be full compensation for all costs incurred by the Contractor for excavating, handling, stockpiling, protection, loading, hauling, testing and documenting for waste profile and disposal requirements, and disposing of the impacted soil and/or groundwater.

2-06 Subgrade Preparation

2-06.1 Subgrade Preparation

Section 2-06.1 is supplemented with the following:

(******)
This Work also includes preparing subgrades for infiltration ponds and porous asphalt trail (permeable pavement) areas.

Add the following new sections:

(******)

2-06.3(3) Subgrade for Permeable Pavements

Before placing permeable ballast for Porous HMA/WMA, the Contractor shall bring the Subgrade to the required line, grade, and cross-section. The Contractor shall compact the Subgrade to a depth of 6 inches to at least 90 percent, but not more than 92 percent, of the maximum density as determined by the compaction control tests described in Section 2-03.3(14)D. Two (2) density tests will be conducted for every 5,000 square feet of prepared subgrade; or four (4) tests per 200 lineal feet of trail or sidewalk. All subgrade shall be firm and unyielding as determined by the Engineer.

The Contractor shall take measures to protect the prepared and approved subgrade from traffic, water run-on, standing water, or other damage. Subgrade that has been compacted to more than 92 percent of the maximum dry density per ASTM D-1557, shall be scarified to a minimum depth of eight (8) inches and recompacted.

Material used to protect the Subgrade from traffic or provide access to adjacent facilities shall be removed and the subgrade compacted prior to infiltration performance testing is conducted per Special Provision Specificiation 2-06.3(5) and placing geotextile, if used and/or permeable ballast.

2-06.3(4) Subgrade for Infiltration Ponds

Protect infiltration areas from receiving construction silt laden water and overcompaction as in accordance with the notes on the Plans, see Sheet C-170.

2-06.3(5) Infiltration Performance Testing

Infiltration performance testing is required following subgrade preparation to verify design infiltration rates for the infiltration ponds (two locations), base of embankment STA. 12+00 to 15+00 (three tests) and porous asphalt trail between Sta 12+00 to Sta 14+85. Performance testing will be completed by the Engineer and shall be conducted prior to placing bioretention soil in the infiltration ponds, embankment of south approach, and prior to placing geotextile and permeable ballast for porous asphalt trail areas between Sta 12+00 and Sta 14+85.

The Contractor shall coordinate with and notify the Engineer a minimum of 15 working days prior to testing to allow time to schedule and subcontract the equipment, verify access needs, and confirm the duration of testing. For bidding purposes it is anticipated that 5 separate test

locations will be required, one in each infiltration pond and three within the porous asphalt trail area. Single ring percolation testing is required in accordance with the King County Surface Water Design Manual, anticipated to require two days at the porous asphalt trail area, and two to three days for the infiltration ponds (for a total of about 5 days).

If any testing fails to meet performance requirements for infiltration, additional testing will be required. The Contractor shall allow time in the schedule for additional testing. If it is determined infiltration areas were not adequately protected by the Contractor during construction as outlined in the "Infiltration and LID Facilities Protection Notes" in the Plans (see Sheet C-170) the additional testing completed by the Engineer will be at no additional cost to the Contracting Agency. Contracting Agency will debit from the total contract cost, by change order, the Engineer's cost for additional testing.

2-06.5 Measurement and Payment

This section is supplemented with the following:

(March 9, 2016 APWA GSP)
Measurement for Subgrade for Porous Asphalt Pavement will be in accordance with 2-06.5(1).

2-09 Structure Excavation

2-09.2 Materials

Section 2-09.2 is supplemented with the following:

(******)
Refer to Section 2-03.2 of the Special Provisions for discussion and requirements for handling and disposal of soil and/or groundwater impacted by hazardous materials that may be encountered during excavation.

2-09.4 Measurement

Section 2-09.4 is supplemented with the following:

(******)
No separate measurement will be made for excavation, handling, testing, and disposal of impacted soil and/or groundwater with pollutant levels below applicable Model Toxics Control Act (MTCA – 70.105D RCW and Chapter 173-340 WAC) cleanup levels.

2-09.5 Payment

Section 2-09.5 is supplemented with the following:

(******)
No separate payment will be made for excavation, handling, testing, and disposal of impacted soil and/or groundwater with pollutant levels below applicable Model Toxics Control Act (MTCA – 70.105D RCW and Chapter 173-340 WAC) cleanup levels. The unit Contract prices

provided for each excavation and/or haul Contract Item shall be full compensation for all costs incurred by the Contractor for excavating, handling, stockpiling, protection, loading, hauling, testing and documenting for waste profile and disposal requirements, and disposing of the impacted soil and/or groundwater.

Division 4 Bases

4-04 Ballast and Crushed Surfacing

4-04.2 Materials

Revise section 9-03.9(2) to read:

(******)

Crushed Surfacing for Trail

Crushed Surfacing for Trail shall be manufactured from 100% ledger rock in accordance with the Provisions of Section 3-01. The materials shall be uniform in quality and substantially free from wood, roots, bark and other extraneous materials and shall meet the following requirements:

Sieve Size	Percent Passing
3/8” (9.5mm)	100
#4 (4.75mm)	85-100
#10 (2mm)	40-65
#16 (1.18mm)	30-75
#30 (0.6mm)	15-40
#200 (75um)	5-15
% Fracture	100%

The material from which ballast is to be manufactured shall meet the following test requirements:

- Los Angeles Wear, 500 Rev 25 percent max.
- Degradation Factor 15 min.

The portion of crushed surfacing retained on a No. 4 sieve shall not contain more than 0.15 percent wood waste.

For approval of Source the Contractor shall supply one sample of material and test reports shown the product meets the above requirements.

Acceptance by the owner will be based on non-statistical evaluation as described in Section 3-04.3(5).

Permeable Ballast

Permeable ballast shall meet the requirements of Section 9-03.9(1) for ballast except for the following special requirements.

Permeable Ballast shall be manufactured from ledge rock, talus, or gravel in accordance with the provisions of Section 3-01. The materials shall be uniform in quality and substantially free from wood, roots, bark, and other extraneous material and shall meet the following quality test requirements:

- Los Angeles Wear, 500 Rev. 40% maximum, WSDOT Test Method T 96
- Degradation Factor 15 minimum, WSDOT Test Method T 113
- Minimum Void Ration Content 30% as determined by AASHTO T19 or ASTM C29, rodding procedure.

The grading and quality requirements are:

Sieve Size	Percent Passing
2-1/2 inche	100
2 inch	95-100
¾ inch	-
	-
-	-
No. 4	0-5
No. 100	0-2
% Fracture	75 min
All percentages are by weight.	

The sand equivalent value and dust ratio requirements do not apply.

The fracture requirement shall be at least two (2) fractured faces and will apply to the combined aggregate retained on the No. 4 sieve in accordance with WSDOT FOP for AASHTO T 335.

Aggregates shall meet the requirements for grading and quality when placed in hauling vehicles for delivery to the site, after placement in temporary, stockpiles on site, during installation, and after installation and compacted to project specifications.

Permeable ballast material may be conditionally approved based on Contractor submitted sampled materials prior to delivery to the site. Final Acceptance will be based on conformance testing completed on material that has been delivered, installed, and compacted on site. The exact point of acceptance will be determined by the Engineer. Material out of conformance with the project specifications will be removed and replaced at the Contractor's expense.

The Contractor's submittal for the aggregate material shall provide description of sampling methodology, identify where and how the sample was collected, total weight of sampled collected, description of sample preparation procedures, total weight of sample sieved to determine grain size distribution, and test results. Sampling and preparation shall be in conformance with ASTM D75 and ASTM C702.

Permeable ballast shall not include recycled material as defined in Section 9-03.21.

4-04.3 Construction Requirements

Section 4-04.5 is supplemented with the following:

(******)
Place liner for porous asphalt check dams as shown in details in the Plans.

(March 9, 2016 APWA GSP)

4-04.3(5) Shaping and Compaction

Supplement this section with the following:

Immediately following spreading and final shaping each layer of surfacing shall be lightly compacted in one lift until no visible movement of aggregate is observed resulting in a firm and unyielding condition, as determined by the Engineer.

(******)

Crushed surfacing for trail shall be compacted to at least 95 percent of the standard density as required by this section in the Standard Specifications.

Install irrigaton sleeving as described in the notes on plan sheet L-210A/B and at locations shown in design/build irrigation plans approved by the Engineer.

4-04.4 Measurement

Section 4-04.4 is supplemented with the following:

(******)

The basis of measurement for “Crushed Surfacing Top Course”, “Crushed Surfacing Base Course” and “Crushed Surfacing for Trail” will be by the ton based on certified truck tickets collected by the inspector at the end of each working day. Tickets will be accepted for payment after the end of each working day only when prior arrangements have been made with the inspector.

Should the Contractor not prepare subgrade to the correct lines and grades as shown on the plans, and crushed surfacing materials are placed in excess of the depths required by the Plans, the excess depth will not be measured for payment. The crushed surfacing in these areas will instead be measured by neat line, to be converted to tons for deduction in quantities accepted based on the certified truck tickets.

The contractor is responsible for delivering certified truck tickets to the on-site inspector.

No separate measurement for payment will be made for water used in placing and compacting surfacing materials.

4-04.5 Payment

Section 4-04.5 is supplemented with the following:

(******)

“Crushed Surfacing for Trail”, per ton.

The Contract Bid prices for “Crushed Surfacing ___” including all incidental work, shall be full compensation for all Work to satisfactorily complete the work as defined in the Standard Specifications and these Special Provisions. Work elements include, but are not limited to, procuring, hauling, placing, grading, and compacting crushed surfacing material.

No separate payment will be made for installation of liner for porous asphalt check dams.

Payment for irrigation sleeving will be made as a part of the lump sum cost for “Irrigation System”.

Division 5 Surface Treatments and Pavements

(July 18, 2018 APWA GSP)

5-04 Hot Mix Asphalt

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 9-03.8(3)B
- Mineral Filler 9-03.8(5)
- Recycled Material 9-03.21
- Portland Cement 9-01
- Sand 9-03.1(2)
  (As noted in 5-04.3(5)C for crack sealing)
- Joint Sealant 9-04.2
- Foam Backer Rod 9-04.2(3)A

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. The RAP shall be sampled and tested at a frequency of one sample for every 1,000 tons produced and not less than ten samples per project. The asphalt content and gradation test data shall be reported to the Contracting Agency when submitting the mix design for approval on the QPL. The Contractor shall include the RAP as part of the mix design as defined in these Specifications.

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

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

Production of aggregates shall comply with the requirements of Section 3-01.
Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall comply with the requirements of Section 3-02.

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

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

5-04.2(1)A Vacant

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

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

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

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, 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;

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

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 Equivalent Single Axle Loads (ESAL's) 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:

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.

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.

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.

Sampling and Testing of Mineral Materials – The HMA plant shall be equipped with a mechanical sampler for the sampling of the mineral materials. The mechanical sampler shall meet the requirements of Section 1-05.6 for the crushing and screening operation. The Contractor shall provide for the setup and operation of the field testing facilities of the Contracting Agency as provided for in Section 3-01.2(2).

Sampling HMA – The HMA plant shall provide for sampling HMA by one of the following methods:
A mechanical sampling device attached to the HMA plant.
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 other-wise 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:

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

To be approved for use, an MTD:

- Shall be positively connected to the paver.
- May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
- Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
- 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 all cracks ¼ inch in width and greater.

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

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

The sand slurry shall consist of approximately 20 percent CSS-1 emulsified asphalt, approximately 2 percent portland cement, water (if required), and the remainder clean Class 1 or 2 fine aggregate per section 9-03.1(2). The components shall be thoroughly mixed and then poured into the cracks and joints until full. The following day, any cracks or joints that are not completely filled shall be topped off with additional sand slurry. After the sand slurry is placed, the filler shall be struck off flush with the existing pavement surface and allowed to cure. The HMA overlay shall not be placed until the slurry has fully cured. The requirements of Section 1-06 will not apply to the portland cement and sand used in the sand slurry.

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

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

- Cracks ¼ inch to 1 inch in width - fill with hot poured sealant.
- Cracks greater than 1 inch in width – fill with sand slurry.

Hot Poured Sealant: For cracks that are to be filled with hot poured sealant, apply the material in accordance with these requirements and the manufacturer's recommendations. Furnish a Type 1 Working Drawing of the manufacturer's product information and recommendations to the Engineer prior to the start of work, including the manufacturer's recommended heating time and temperatures, allowable storage time and temperatures after initial heating, allowable reheating criteria, and application temperature range. Confine hot poured sealant material

within the crack. Clean any overflow of sealant from the pavement surface. If, in the opinion of the Engineer, the Contractor's method of sealing the cracks with hot poured sealant results in an excessive amount of material on the pavement surface, stop and correct the operation to eliminate the excess material.

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

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

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

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

Cracks ¼ inch to 1 inch in width - fill with hot poured sealant.
Cracks greater than 1 inch in width – fill with sand slurry.

5-04.3(4)B Vacant

5-04.3(4)C Pavement Repair

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

Unless otherwise shown in the Plans or determined by the Engineer, excavate to a depth of 1.0 feet. The Engineer will make the final determination of the excavation depth required. The minimum width of any pavement repair area shall be 40 inches unless shown otherwise in the Plans. Before any excavation, the existing pavement shall be sawcut or shall be removed by a pavement grinder. Excavated materials will become the property of the Contractor and shall be disposed of in a Contractor-provided site off the Right of Way or used in accordance with Sections 2-02.3(3) or 9-03.21.

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

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

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

Aggregates and RAP shall be stockpiled according to the requirements of Section 3-02. Sufficient storage space shall be provided for each size of aggregate and RAP. Materials shall be removed from stockpile(s) in a manner to ensure minimal segregation when being moved to the HMA plant for processing into the final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

5-04.3(5)A Vacant

5-04.3(6) Mixing

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

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

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

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

5-04.3(7) Spreading and Finishing

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

HMA Class 1” 0.35 feet

HMA Class ¾” and HMA Class ½”
wearing course 0.30 feet
other courses 0.35 feet

HMA Class ⅜” 0.15 feet

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

When more than one JMF is being utilized to produce HMA, the material produced for each

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

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

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

5-04.3(9) HMA Mixture Acceptance

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

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

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

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

HMA Tolerances and Adjustments

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:

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%

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.

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.

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).

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

5-04.3(9)A Vacant

5-04.3(9)B Vacant

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

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

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

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

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

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

5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling

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

- When the Composite Pay Factor (CPF) of a lot in progress drops below 1.00 and the Contractor is taking no corrective action, or
- 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
- When either the PFi 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

5-04.3(12)B1 HMA Sawcut and Seal

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

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

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

5-04.3(12)B2 Paved Panel Joint Seal

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

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

5-04.3(13) Surface Smoothness

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

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

Removal of material from high places by grinding with an approved grinding machine, or
Removal and replacement of the wearing course of HMA, or
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 planning (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 (Milling) 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 planning submittals.

Locations of existing surfacing to be planed are as shown in the Plans.

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 in the Plans 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 shownin the Plans. Cut butt joints in a straight line with vertical faces 2 inches or more in height, producing a smooth transition to the existing adjoining pavement.

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

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

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

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

Should such metal be identified, promptly notify the Engineer.

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

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

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

5-04.3(14)B1 General

In addition the requirements of Section 1-07.23 and the traffic controls required in Section 1-10, and unless the Contract specifies otherwise or the Engineer approves, the Contractor must comply with the following:

Intersections:

Keep intersections open to traffic at all times, except when paving or planing operations through an intersection requires closure. Such closure must be kept to the minimum time required to place and compact the HMA mixture, or plane as appropriate. For paving, schedule such closure to individual lanes or portions thereof that allows the traffic volumes and schedule of traffic volumes required in the approved traffic control plan. Schedule work so that adjacent intersections are not impacted at the same time and comply with the traffic control restrictions required by the Traffic Engineer. Each individual intersection closure or partial closure, must be addressed in the traffic control plan, which must be submitted to and accepted by the Engineer, see Section 1-10.2(2).

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.

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.
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.
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.

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

- A copy of the accepted traffic control plan, see Section 1-10.2(2), detailing each day's traffic control as it relates to the specific requirements of that day's planing and paving. Briefly describe the sequencing of traffic control consistent with the proposed planing and paving sequence, and scheduling of placement of temporary pavement markings and channelizing devices after each day's planing, and paving.

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

- 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.

- Names and locations of HMA Supplier facilities to be used.

- List of all equipment to be used for paving.

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

- 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.

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

- A copy of the approved Mix Designs.

- Tonnage of HMA to be placed each day.

- 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, Metro 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:

General for both Paving Plan and for Planing Plan:

- The actual times of starting and ending daily operations.

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

- The sequencing and scheduling of paving operations and of planing operations, as applicable, as it relates to traffic control, to public convenience and safety, and to other con-tractors who may operate in the Project Site.

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

- Description of the sequencing of installation and types of temporary pavement markings

as it relates to planning and to paving.

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

- Description of procedures and equipment to identify hidden metal in the pavement, such as survey monumentation, monitoring wells, street car rail, and castings, before planning, see Section 5-04.3(14)B2

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

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

- Other items the Engineer deems necessary to address.

Paving – additional topics:

- When to start applying tack and coordinating with paving.
- Types of equipment and numbers of each type 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 equipment as it relates to meeting Specification requirements.
- Number of JMFs to be placed, and if more than one JMF how the Contractor will ensure different JMFs are distinguished, how pavers and MTVs are distinguished if more than one JMF is being placed at the time, and how pavers and MTVs are cleaned so that one JMF does not adversely influence the other JMF.
- Description of contingency plans for that day's operations such as equipment breakdown, rain out, and Supplier shutdown of operations.
- 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.

5-04.4 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.

Preparation of untreated roadway will be measured by the mile once along the centerline of the main line Roadway. No additional measurement will be made for ramps, Auxiliary Lanes, service roads, Frontage Roads, or Shoulders. Measurement will be to the nearest 0.01 mile.

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

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

Asphalt for prime coat will be measured by the ton in accordance with Section 1-09.2.

Prime coat aggregate will be measured by the cubic yard, truck measure, or by the ton, whichever is designated in the Proposal.

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

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

Planing bituminous pavement will be measured by the square yard.

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

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

5-04.5 Payment

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

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

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

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

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

"Commercial HMA", per ton.

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

"Preparation of Untreated Roadway", per mile.

The unit Contract price per mile for “Preparation of Untreated Roadway” shall be full pay for all Work described under 5-04.3(4) , with the exception, however, that all costs involved in patching the Roadway prior to placement of HMA shall be included in the unit Contract price per ton for “HMA Cl. ___ PG ___” which was used for patching. If the Proposal does not include a Bid item for “Preparation of Untreated Roadway”, the Roadway shall be prepared as specified, but the Work shall be included in the Contract prices of the other items of Work.

“Preparation of Existing Paved Surfaces”, per mile.

The unit Contract Price for “Preparation of Existing Paved Surfaces” shall be full pay for all Work described under Section 5-04.3(4) with the exception, however, that all costs involved in patching the Roadway prior to placement of HMA shall be included in the unit Contract price per ton for “HMA Cl. ___ PG ___” which was used for patching. If the Proposal does not include a Bid item for “Preparation of Untreated Roadway”, the Roadway shall be prepared as specified, but the Work shall be included in the Contract prices of the other items of Work.

“Crack Sealing”, by force account.

“Crack Sealing” will be paid for by force account as specified in Section 1-09.6. For the purpose of providing a common Proposal for all Bidders, the Contracting Agency has entered an amount in the Proposal to become a part of the total Bid by the Contractor.

“Pavement Repair Excavation Incl. Haul”, per square yard.

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

“Asphalt for Prime Coat”, per ton.

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

“Prime Coat Agg.”, per cubic yard, or per ton.

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

“Asphalt for Fog Seal”, per ton.

Payment for “Asphalt for Fog Seal” is described in Section 5-02.5.

“Longitudinal Joint Seal”, per linear foot.

The unit Contract price per linear foot for “Longitudinal Joint Seal” shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(12).

“Planing Bituminous Pavement”, per square yard.

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

“Temporary Pavement Marking”, per linear foot.

Payment for “Temporary Pavement Marking” is described in Section 8-23.5.

“Water”, per M gallon.

Payment for “Water” is described in Section 2-07.5.

“Job Mix Compliance Price Adjustment”, by calculation.

“Job Mix Compliance Price Adjustment” will be calculated and paid for as described in Section 5-04.3(9)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 and no additional payments will be made.

“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.

5-04.5(1)B Price Adjustments for Quality of HMA Compaction

Delete this section and replace it with the following:

(January 16, 2014 APWA GSP)
The maximum CPF of a compaction lot is 1.00.

For each compaction lot of HMA when the CPF is less than 1.00, a Nonconforming 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 the NCCF, the quantity of HMA in the lot in tons and the unit contract price per ton of the mix.

(******)
The following is added as Section 5-06

5-06 Porous Hot Mix Asphalt

Section 5-04, Hot Mix Asphalt as printed in the Standard Specifications for Road, Bridge and Municipal Construction, 2016 edition is added and renumbered as Section 5-06 and supplemented with the APWA GSPs and Special Provisions listed below for porous hot mix asphalt

5-06.1 Description

Supplement this section with the following:

(March 9, 2016 APWA GSP)
This Work shall also consist of providing and placing one or more layers of plant-mixed porous hot mix asphalt (PHMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections for Porous Asphalt Trail as shown in the Plans or established by the Engineer. The manufacture of PHMA may include porous warm mix asphalt (PWMA) processes in accordance with these Specifications. PWMA processes include organic additives, chemical additives, and foaming.

5-06.2 Materials

Supplement this section with the following:

(March 9, 2016 APWA GSP)
Aggregates for Porous Hot Mix Asphalt/Porous Warm Mix Asphalt (PHMA/PWMA)

General Requirements
Aggregates for Porous Hot Mix Asphalt (PHMA) or Porous Warm Mix Asphalt (PWMA) shall be manufactured from ledge rock, talus, or gravel, in accordance with the provisions of Section 3-01 that meet the following test requirements:

Los Angeles Wear, 500 Rev. 30% max.
Degradation Factor 15 min.

Grading
Aggregates for PHMA/PWMA shall meet the following requirements for grading:

Sieve Size	Percent Passing
¾" square	100
½" square	90 - 100
⅜" square	55 - 90
U.S. No. 4	10 - 40
U.S. No. 8	0 - 20
U.S No. 40	0 - 13
U.S. No. 200	0 - 5

* All percentages are by weight.

The aggregate for PHMA/PWMA shall consist of crushed stone with a percent fracture greater than 90% on two faces on the No. 4 sieve and above, and shall be tested in accordance with the field operating procedures for AASHTO T 335.

5-06.3 Construction Requirements

Supplement this section with the following:

(March 9, 2016 APWA GSP)

Porous Asphalt (PHMA/PWMA) Acceptance Infiltration Test

Contractor shall conduct infiltration tests on the finished PHMA/PWMA per ASTM C1701 at locations chosen by the Engineer. Newly-placed PHMA/PHWA shall have a minimum infiltration rate of 100 inches/hour. Infiltration tests shall be completed every 150 linear feet of trail or sidewalk and conducted in accordance with ASTM C1701.

If the measured infiltration rate is less than 100 inches/hour, the Contractor shall conduct an additional four infiltration tests in line with the paver direction of travel. Two tests upstream and two tests downstream of the initial test locations shall be taken at distances of 20 feet and 40 feet. Results of the additional tests will be averaged. The Contractor shall conduct additional testing upstream and downstream to identify area to be removed. If the average infiltration rate is less than required remove and replace the failing section at the direction of the Engineer and at no cost to the Contracting Agency.

(******)

Install porous asphalt check dams in accordance with the details in the Plans.

5-06.3(1) Hot Asphalt Mixing Plant

Supplement this section with the following:

(March 9, 2016 APWA GSP)

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

Fiber Supply System

When fiber stabilizing additives are determined necessary to achieve drain down criteria per APWA GSP 5-06.3(7)A of these Specifications, a separate feed system that meets the following shall be required:

1. Accurately proportions by weight the required quantity into the mixture in such a manner that uniform distribution will be obtained.
2. The fibers shall be uniformly distributed prior to the injection of the asphalt binder into the mixture. When a continuous or drier-drum type plant is used, the fiber shall be added to the aggregate and uniformly dispersed prior to the injection of asphalt binder.

Surge and Storage Systems

The storage time for PHMA/PWMA mixtures shall be no more than four (4) hours for non-insulated silos or eight (8) hours for insulated silos. Placement temperature specifications shall be met regardless of silo storage time.

5-06.3(7)A Mix Design

Supplement this section with the following:

(March 9, 2016 APWA GSP)
Mix Designs for PHMA shall be submitted to the Engineer on Washington State DOT Form 350-042 with the additional PHMA test data required by this specification provided as a one page supplemental attachment. The supplemental test data form is available at http://www.wsdot.wa.gov/partners/apwa/PorousAsphaltPavement.pdf.

The asphalt binder for PHMA/PWMA shall be PG 70-22ER polymer modified or higher grade. Binder content shall be between 6.0% and 7.0% by total weight of the mix, and will be the highest percentage that passes both the drain down and void requirements tests at N_{design} = 75 gyrations. The binder content tolerance shall be ±0.3% during production/ placement of the PHMA/PWMA. The Contractor shall adjust the aggregate to meet the maximum drain down test requirements within the ranges provided below.

1. Drain down shall be 0.3 %, maximum, according to ASTM D6390
2. Void ratio shall be 16% to 25% per ASTM D3203 at N_{design} = 75 gyrations.

The Contractor shall include with the submittal temperature-viscosity curves from the polymer-modified asphalt binder supplier showing the recommended mixing and compaction temperatures developed for dense graded HMA applications.

The Contractor shall determine anti-strip requirements for PHMA/PWMA and provide data for anti-stripping. The asphaltic mix shall be tested for its resistance to stripping by water in accordance with ASTM D-3625. If the estimated coating area is not above 95 percent, anti-stripping agents shall be added to the asphalt. Contractor shall be responsible for conducting the anti-stripping evaluation and providing a report to the Engineer.

Alternately, anti-strip evaluation of an existing dense graded hot mix asphalt of the same maximum nominal aggregate class and from the same aggregate materials source may be used to set the anti-stripping requirements for PHMA/PWMA. The anti-strip requirement for the PHMA/PWMA shall be equivalent to the anti-stripping requirement for the HMA.

5-06.3(8)A1 General

Supplement this section with the following:

(March 9, 2016 APWA GSP)
Commercial evaluation will be the basis for acceptance of PHMA/ PWMA.

5-06.3(8)A6 Test Methods

Supplement this section with the following:

(March 9, 2016 APWA GSP)
The temperature of the mix at the time of discharge from the haul vehicle shall be within the temperature range identified in the approved PHMA submittal.

5-06.3(9) Spreading and Finishing

Supplement this section with the following:

(March 9, 2016 APWA GSP)
Placement temperature of the mixture shall be within the temperature range identified in the approved PHMA/PWMA submittal.

5-06.3(10)A General

Supplement this section with the following:

(March 9, 2016 APWA GSP)
Pneumatic tire rollers shall not be used for compaction of PHMA/PWMA.

The Contractor shall develop a roller pattern that will initially consolidate the pavement structure as well as target 15% to 18% final air voids (82% to 85% of maximum theoretical (Rice) density). The Contractor shall monitor compaction during placement of PHMA/PWMA with a pavement density gauge.

5-06.4 Measurement

Supplement this section with the following:

(March 9, 2016 APWA GSP)
PHMA/PWMA will be measured by the ton in accordance with Section 1-09.2, with no deduction being made for the weight of asphalt binder, blending sand, mineral filler, or any other component of the HMA. If the Contractor elects to remove and replace mix as allowed in Section 5-06.3(11), the material removed will not be measured.

(******)
No separate measurement will be made for porous asphalt check dams.

Associated land survey for final grades and subbase preparation shall be included in this pay item.

5-06.5 Payment

Supplement this section with the following:

(March 9, 2016 APWA GSP)
"PHMA CL. 1/2 In. PG 70-22ER", per ton.
The unit Contract price per ton for "PHMA CL. 1/2 In. PG 70-22ER" shall be full compensation for all costs, including anti-stripping additive and tack coat, incurred to carry out requirements of Section 5-04 except for those costs included in other items which are included in this Subsection.

Division 6 Structures

6-02 Concrete Structures

6-02.2 Materials

Section 6-02.2 is supplemented with the following:

(******)

Precast Concrete Stay-In-Place Panels

Concrete shall have a 28 day minimum compressive strength, as specified in the Plans.

Weldable rebar shall be used for connecting to the sole plates. The sole plate with attached bent rebar shall be hot dip galvanized.

Panels shall be placed on a layer of Evazote EV30 or approved equivalent material as specified in the Plans.

Soil Tie-Back Grid at Abutment 1

Soil tie back grid shall be as specified in the Plans. Embedded MSE hooks shall be submitted to Engineer for approval.

6-02.3 Construction Requirements

Section 6-02.3 is supplemented with the following:

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

The first line item of Section 6-02.3(2)A1 is revised with the following:

(******)

1. Aggregate shall use combined gradation in accordance with Section 9-03.1(5) with a nominal maximum aggregate size of 3/4 inches.

6-02.3(10)D5 Bridge Deck Concrete Finishing and Texturing

The fourth paragraph of Section 6-02.3(10)D5 is revised with the following:

(******)

The Contractor shall texture the concrete bridge deck surface in a transverse direction, perpendicular with centerline. The Contractor shall texture the bridge deck surface to within 3-inches minimum and 9-inches maximum of the edge of concrete at expansion joints, within 12-inches minimum and 15-inches maximum of the curb line, and within 3-inches minimum and 6-inches maximum of the perimeter of local dishing at bridge drain assemblies as shown in the Plans.

6-02.3(12) Construction Joints

Section 6-02.3(12) is supplemented with the following:

6-02.3(12)C Control Joints

Control Joint Preparation and Installation Procedure

Control joints are shallow saw cuts made transversely across the bridge deck over each floor-beam and end-beam centerline as described in the Plans. The control joints shall be filled with sealant as described in the Plans. The Contractor shall submit a Type 1 Working Drawing consisting of the sealant manufacturer's recommended deck control joint preparation and installation procedure.

Placing Deck Control Joint Sealant

The Contractor shall have the services of a qualified sealant manufacturer's technical representative physically present at the job site to train the Contractor's personnel installing the joint sealant, assist in assuring the proper installation of the rapid cure sealant, provide technical assistance for the use of the joint sealant, and to observe and inspect the installation of at least 10% of the completed control joints.

Contractor shall use Sika Sikaflex Concrete Fix one-component polyurethane sealant or approved equivalent.

6-02.3(14) Finishing Concrete Surfaces

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

Section 6-02.3(14)D is supplemented with the following:

(******)

Abutment A1 concrete surfaces specified in the Plans shall receive a WSDOT Standard Variable Depth Random Board Finish.

6-02.3(14)C Pigmented Sealer for Concrete Surfaces

Section 6-02.3(14)C is supplemented with the following:

(******)

The color of the pigmented sealer shall be **Mt. St. Helens Gray**.

Unless noted otherwise, all exposed concrete faces, except the top of deck, shall receive pigmented sealer as shown in the Plans.

6-02.3(19) Bridge Bearings

6-02.3(19)B Bridge Bearing Assemblies

This section is supplemented with the following:

(******)

Disc Bearing Types

The disc bearings shall be one of the following types, with bridge specific modifications, if any,

as shown in the Plans:

- Fixed Disc Bearings
- Guided Disc Bearings
- Multi-Directional Bearings

Each guided and multi-directional disc bearing shall consist of an upper and a lower unit. The lower unit consists of a masonry bearing plate and an upper bearing plate, with a polyether urethane disc between the plates. A polytetrafluoroethylene (PTFE) sheet is bonded to the upper bearing plate.

The upper unit consists of a sole plate with a stainless steel sheet welded to the bottom side. Guide bars shall be attached to the sole plate.

The interspace between the guide bars of the upper unit and the upper bearing plate of the lower unit shall be provided with stainless steel sheet against PTFE. The stainless steel sheet shall be welded to the guide bars and the PTFE sheet shall be mechanically fastened to the upper bearing plate of the lower unit.

Design Requirements
The Contractor shall design the bearing assemblies based on the current AASHTO LRFD Bridge Design Specifications and AASHTO Guide Specifications for LRFD Seismic Bridge Design, including latest interims, and also based on the following:

1. The bearing assembly design requirements for loads, movements, and rotations shall be as shown in the Plans.
2. The bearing assembly shall be removable and replaceable by raising the bridge superstructure 1/4 inch maximum.
3. The minimum coefficient of friction on PTFE surfaces used for design of the bearings shall be those corresponding to 0°F in Table 14.7.2.5-1 of the AASHTO LRFD Bridge Design Specifications. The PTFE surface shall be dimpled and lubricated.
4. The anchorage of the sole plates and masonry plates to the supporting structural element shall be designed for the maximum horizontal design force per bearing shown in the Plans, the friction force, or 10 percent of the maximum unfactored vertical design force per bearing, whichever is greater.
5. The sole and masonry plates shall have leveling capabilities.
6. The guide bars shall maintain all guided components within the guides at all points of translation and rotation of the bearing.

Submittals

Design Calculations
The Contractor shall submit design calculations for all the bearing components, including the polyether urethane disc, shear pin, bearing plates, sole plates, masonry plates, guide bars, welded attachment to end beams, and anchor rod attachment to substructure to the Engineer for approval). The design calculations shall accompany the shop plans and shall be signed/sealed by a licensed SE in the State of Washington.

The calculations shall provide, but not be limited to the following information:

1. Bending stresses in the plates due to bearing pressure at maximum design load and eccentricity.
2. Concrete bearing pressure under the plates at maximum bearing pressure and eccentricity.
3. Bearing clearances at maximum load and rotation, including allowance for uncertainties per Section 14.4.2.2.2 of the AASHTO LRFD Bridge Design Specifications. The calculated clearances shall include the effects of anticipated initial set and modified center of rotation.
4. Shear stress in the shear pin at maximum horizontal load.
5. Design of all connections and mating surfaces, including friction forces.
6. Compressive stress on all sliding surfaces at maximum and minimum design loads, including rotation.

The Contractor shall not begin bearing fabrication until receiving the Engineer's written approval of the calculations.

Bearing Manufacturer Requirements

The disc bearing manufacturer shall have a minimum of three years' experience in fabrication of disc bearings, and shall meet additional testing requirements as specified in this Special Provision.

The Contractor shall submit the name of the disc bearing manufacturer with a certification of disc bearing manufacturing experience to the Engineer for approval. The certification of experience shall include a list of at least three disc bearing installations performed by the bearing manufacturer on previous projects. The list shall include the following information for each installation:

1. Project Name and Location (Bridge name and highway number).
2. Date of installation.
3. Governmental Agency/Owner.
4. Name, address, and phone number of the Governmental Agency's/Owner's r epresentative.
5. Type and size of bearing.

The Contractor shall not begin preparation of the design calculations and shop plans until receiving the Engineer's written approval of the bearing manufacturer's certification of experience.

Shop Drawings

The Contractor shall submit shop drawings to the Engineer for approval in accordance with Section 6-03.3(7). These drawings shall include but not be limited to the following information:

1. Bearing schedule identifying location and bearing type as described in subsection **Bearing Types** of this Special Provision.
2. Minimum and maximum horizontal and vertical service loads.

3. Magnitude and direction of movements at all bearing support points.
4. Minimum and maximum rotation capacity.
5. Construction rotation requirements, per the Contractor's approved construction sequence.
6. Plan and elevation of the assembled bearing and each of the components showing dimensions and tolerances, including the required plinth sizes.
7. Complete details of all components and sections showing all materials incorporated into the bearing.
8. All AASHTO, ASTM, and other material designations.
9. All surface finishes, including the corrosion protection method.
10. Bearing manufacturer’s recommendations and procedures for bearing assembly shipment, storage, and installation. This shall include the initial setting and adjustments for setting guided and multi-directional bearings at various temperatures.
11. Bearing manufacturer shall provide a maintenance inspection schedule and procedure.

The Contractor shall not begin fabricating the disc bearings until receiving the Engineer’s approval of the shop drawings.

Shop Inspection

The manufacturer shall provide for inspection, as specified in the **Bearing Inspection and Acceptance** subsection of this Special Provision. Inspection during the fabrication process shall ensure that the materials and workmanship meet the requirements of the contract.

Quality Assurance Inspection and Final Shop Inspection shall be performed by an independent inspection entity approved by the Engineer. The Contractor shall submit the name, address, phone number and contact person of the inspection entity performing the required certified shop inspection of the bearings to the Engineer for approval. The Contractor shall not begin bearing fabrication until receiving the Engineer’s written approval of the inspection entity for certified shop inspection.

Bearing Testing Procedure

The Contractor shall submit the name, address, phone number, and contact person of the testing entity performing the required bearing testing specified in **Bearing Testing** subsection of this Special Provision to the Engineer for approval.

The testing entity shall be one of the following:

1. An independent testing agency.
2. The disc bearing manufacturer, with independent verification by the inspection entity performing the certified shop inspection of the bearings.

The Contractor shall not begin bearing fabrication until receiving the Engineer's written approval of the testing entity.

Bearing Assembly Inspection Reports and Certificates

The Contractor shall submit the daily inspection reports of the independent inspection entity performing the required certified shop inspection to the Engineer for approval. The daily inspection reports shall report on the shop fabrication and testing activities relating to the

bearing assemblies, and their conformance to the specification requirements.

The Contractor shall submit written documentation from the bearing manufacturer certifying that the bearing assemblies have been manufactured in full compliance with the specification requirements.

The Contractor shall not ship the bearing assemblies from the fabricator's facility until receiving the Engineer's approval of the certified shop inspection daily inspection reports and the bearing manufacturer's certificate of compliance.

Flatness and Manufacturing Tolerances

Flatness of bearing surfaces shall be determined by the following method:

1. A precision straightedge, longer than the nominal dimension to be measured shall be placed in contact with the surface to be measured as parallel to it as possible.
2. A feeler gauge having an accuracy of ± 0.001 inches equal to the tolerance allowed shall be selected and inserted under the straightedge.
3. If the feeler gauge does not pass under the straightedge, the surfaces shall be acceptable for flatness.
4. In determining the flatness, the straightedge may be located in any position on the surface being measured.

Flatness tolerances shall be defined as follows:

1. Class A tolerance = 0.001 x nominal dimension
2. Class B tolerance = 0.002 x nominal dimension
3. Class C tolerance = 0.005 x nominal dimension

(Nominal dimension shall be taken as the actual dimension of the plate or sheet under the straightedge, in inches.)

Manufacturing tolerances for the bearings are as follows:

Polyether Urethane Disc
Diameter: ± 1/8 inch
Thickness: -0, + 1/16 inch
Flatness: Class B tolerance
Discs shall be manufactured from a single piece.

Sole, Bearing, Masonry, and Sliding Plate
Plan dimensions
Greater than 30 inches: -0.00, +3/16 inch
30 inches or less: -0.00, +1/8 inch
Thickness: -1/32, +1/8 inch
Flatness: Class A tolerance, side in contact with steel, polyether urethane disc, or PTFE
Class C tolerance, side in contact with grout or concrete

Guide Bar

Length: ± 1/8 inch
Section dimensions: ± 1/16 inch
Flatness: Class A tolerance, side in contact with steel
Bar to bar tolerance: ± 1/32 inch
Bars shall be not more than 1/32” out of parallel over 1 foot

PTFE Sheet
Plan dimensions: Total nominal design area –0, +5 percent
Thickness: -0.00, +1/64 inch
Flatness: Class A tolerance
PTFE Recess: Length and width –0.00, +0.04 inch

Stainless Steel Sheet
Flatness: Class A tolerance

Overall Height
Total thickness: -1/16, +3/16 inch

The edges of all components shall be broken by grinding so that there are no sharp edges.

Special Fabrication Requirements

When the following components are shown in the Plans as part of the disc bearing assembly, the following special fabrication requirements shall apply:

Sole Plate and Masonry Plate

The sole plate and masonry plate shall be 3/4 inches minimum thickness, unless otherwise shown in the Plans.

PTFE Sheet

The thickness of solid PTFE sheet shall be a minimum of 1/8 inch and a maximum of 3/16 inch. Solid PTFE sheet shall be recessed for a depth equal to one-half of its thickness into the material it is bonded to.

The thickness of woven PTFE fabric, if used, shall be a minimum of 1/16 inch and a maximum of 1/8 inch.

Dimpled PTFE, if shown in the Plans, shall be unfilled and shall have a maximum thickness of 3/16 inch. Dimples shall be placed on a 1/2 inch grid and have a depth of 1/16 inch.

The PTFE sheet shall be recessed and chemically bonded to the supporting steel plate or bar. The woven PTFE sheet shall be mechanically bonded to the supporting steel plate or bar by using an interlocking grid. Bonding shall be performed under controlled conditions and in accordance with the written instructions of the PTFE manufacturer.

Following the bonding operation, the PTFE surface shall be smooth and free from bubbles. Filled PTFE shall be polished after the bonding operation is complete, in accordance with AASHTO LRFD Bridge Construction Specification Section 18.8.3.2.2, current edition and latest interims.

Stainless Steel Sheet

The stainless steel sliding surface shall completely cover the PTFE surface in all operating positions plus one additional inch in all directions.

The stainless steel shall be 14 gauge thick for the main sliding surfaces and 10 gauge thick for the guide bars.

The stainless steel sheet shall be seal welded all around to the supporting steel plate or bar by the gas tungsten arc welding (GTAW) process in accordance with current AWS specifications. The stainless steel sheet shall be clamped down to have full contact with the supporting steel plate or bar during welding. The welds shall not protrude beyond the sliding surface of the stainless steel sheet.

Guide Bar

Each guide bar shall be fabricated from a single steel plate. The guide bars shall be connected to the disc bearing assembly by recessing and bolting. The stainless steel sheet shall be welded to the guide bar before attaching the guide bar to the disc bearing assembly. The space between the guide bar and the guided component shall be 3/16 inch $\pm$ 1/16 inch.

Corrosion Protection

Steel surfaces, except as otherwise specified below, shall be painted in accordance with Section 6-07.3(9), and Section 6-03.3(30) as supplemented in these Special Provisions. The weld surfaces fastening stainless steel to structural steel shall be painted as specified for structural steel. Stainless steel shall not be painted. Galvanized fastening hardware (anchor bolts, bolts, nuts and washers) shall be painted in accordance with Section 6-07.3(11)A.

All coats of paint as specified in Section 6-07.3(9)A for steel surfaces shall be applied in the shop. After the disc bearing assembly has been erected in its final position with the anchor bolt nuts installed, all surfaces with damaged paint shall be repaired in accordance with Section 6-07.3(9)I.

All coats of paint as specified in Section 6-07.3(11)A for galvanized fastening hardware shall be applied after the disc bearing assembly has been erected in its final position with the anchor bolt nuts installed. The Contractor shall prepare the galvanized surfaces for painting in accordance with Section 6-07.3(11)A except only hand or power tool cleaning methods shall be used.

Bearing Testing

The Contractor shall provide for testing of the bearings. The testing shall be performed by the testing entity submitted by the Contractor and approved by the Engineer as specified in the *Bearing Testing Procedure* subsection of this Special Provision.

All testing specified by this Special Provision performed by the bearing manufacturer shall be witnessed by the inspection entity performing the certified shop inspection of the bearings.

When fabrication of the bearings is complete, a Proof Load test shall be performed either on bearing assemblies randomly selected from the production bearings, or on an equal number of prototype bearing(s) with a design capacity equal to the largest production bearing(s). One bearing per lot shall be tested where one lot is defined as the smaller of the following:

1. 25 disc bearing assemblies.
2. The total quantity of disc bearing assemblies specified in the contract.

The Proof Load test shall be performed on the selected test bearing assemblies as follows:

1. A proof load of 150 percent of the design service load capacity of the bearing shall be applied at the maximum design bearing rotation for a duration of six hours.
2. A bevel plate with a taper equal to the maximum design bearing rotation shall be used to simulate the specified bearing rotation.
3. After completing the specified load duration, the bearing shall be disassembled and inspected for wear and damage.
4. The test bearing shall show no signs of defects and failure while under load, and after disassembly and inspection.
5. The recovery of the disc shall be checked for permanent set after releasing the load.

Failure of the test bearing will result in rejection of all bearings in that particular lot.

The testing requirements specified above may be waived for bearing manufacturers with at least three years of disc bearing fabrication experience provided:

1. The bearing manufacturer, through the Contractor, shall submit certified test results from a previous installation of disc bearings of similar design and load capacity to the Engineer for approval. This submittal shall accompany the design calculation and shop plan submittal.
2. The tests performed on the previously installed bearings satisfy the requirements specified above.

The test bearing may be used as a production bearing provided:

1. The test results meet with the approval of the Engineer.
2. The test bearing was selected from the production bearings.
3. All PTFE in the test bearing assembly shall be replaced with new PTFE.

Bearing Inspection and Acceptance

Three levels of inspection shall be satisfied before the bearings are accepted. These are: Quality Control Inspection, Quality Assurance Inspection, and Final Shop Inspection. The manufacturer shall provide for both Quality Control and Quality Assurance Inspection. The manufacturer shall provide access for the Final Shop Inspection. The three levels of inspection are described below:

Quality Control Inspection

During the fabrication process of all major components, the manufacturer shall provide full time Quality Control Inspection to ensure that the materials and workmanship meet or exceed the minimum requirements of the contract. Quality Control Inspection shall be the responsibility of the manufacturer's quality control group that shall be independent of the fabrication group.

Quality Assurance Inspection

Quality Assurance Inspection shall be performed by the independent inspection entity performing the certified shop inspection, as submitted by the Contractor and approved by the Engineer. The independent inspection entity, the proposed Quality Assurance Inspection Program, and the forms to be used for the Quality Assurance Program shall be submitted to the Engineer for approval prior to the start of fabrication. Quality Assurance Inspection is not required to be full time inspection, but shall be done at all phases of the manufacturing process. The frequency of inspection shall be included in the Quality Assurance Inspection Program.

Final Shop Inspection

Prior to shipping the bearings to the job site, a representative number of bearings shall be inspected by the independent inspection entity at the manufacturer's facility. The manufacturer shall provide a clean, dry, and enclosed area for the bearing inspection. The manufacturer shall disassemble and reassemble the bearings for inspection by the Independent Inspection Agency. The independent inspection entity shall certify that the bearings have been inspected, and that the bearings have been manufactured in full compliance with the contract requirements.

The bearings shall satisfy each of the three levels of inspection described above before they will be accepted. Bearings that fail any one of the three levels of inspection shall be replaced or repaired as approved by the Engineer at no additional expense to the Contracting Agency. All proposed corrective procedures shall be submitted by the Contractor to the Engineer for approval before beginning corrective work.

Bearing Component Assembly, Shipping, and Storage

Each bearing shall be fully assembled at the manufacturing plant and delivered to the construction site as a complete unit, ready for installation. The units shall be held together with removable restraints so that the sliding surfaces are not damaged. Softeners shall be placed under the restraints to protect all painted surfaces. The Contractor shall not damage the painted surfaces while shipping, storing and installing the bearing assemblies.

All bearing assemblies shall be marked with the following information prior to shipping:

1. Location of the bearing, including the pier and the specific location along the pier.
2. Direction arrow pointing in the ahead on station direction.

The above information shall be marked on the top plate of the upper unit of the bearing assembly. The marks shall be permanent and shall be visible after bearing installation.

The bearing assemblies shall have centerlines marked on both upper and lower units for checking alignment in the field.

The bearing assemblies shall be shipped in light-proof, moisture-proof and dust-proof containers.

Bearing Assembly Field Inspection

Field inspection of a representative number of bearings assemblies will be performed by the Engineer. The Contractor shall provide a clean, dry and enclosed area at the site, spacious enough for the field inspection activities. The Contractor shall disassemble and reassemble the

bearings for inspection as requested by the Engineer. The disassembly and reassembly of the bearings shall be in accordance with the bearing manufacturer's written procedure and in the presence of the Engineer.

Bearings that fail the inspection shall be replaced or repaired by the Contractor, as approved by the Engineer, at no additional expense to the Contracting Agency. All proposed corrective procedures shall be submitted by the Contractor to the Engineer for approval before beginning corrective work.

Bearing Assembly Installation

The Contractor shall install the disc bearing assembly in accordance with the installation procedure included with the shop drawing submittal as approved by the Engineer.

PTFE sheet shall not be greased, except as otherwise noted. A thin uniform film of silicone grease shall be applied to the entire dimpled PTFE sheet before installation (all dimples shall be filled with grease).

For disc bearing assemblies with PTFE and stainless steel components, the Contractor shall take special care at all times to ensure protection of the PTFE and stainless steel surfaces from coming in contact with concrete and any other foreign matter.

When bearing assemblies are supporting steel superstructure, the interface between the sole plate and the steel girder flange (or the upper and lower sole plates when separate) shall be set with epoxy gel just before setting the superstructure in place. The (lower) sole plate surface in contact with the epoxy gel shall receive a thin uniform film of silicone grease, to prevent bonding to the epoxy gel. The threads of the sole plate clamping bolts shall be greased to prevent bonding and allow future removal. The Contractor shall apply the epoxy gel by troweling it onto the bottom surface of the steel girder flange or the upper sole plate welded to the steel girder flange and shall immediately bolt the (lower) sole plate in place to obtain a level surface.

Before the epoxy gel has cured, the superstructure shall be set in place, squeezing out the excess epoxy gel while filling the interface between the steel surfaces. Excess epoxy and grease shall be removed immediately. After the epoxy gel has cured, the sole plate clamping bolts shall be tightened to snug tight.

6-02.3(20) Grout for Anchor Bolts and Bridge Bearings

Section 6-02.3(20) is supplemented with the following:

(******)
Grout placed at the following locations shall conform to the requirements of this section.

- A1, P2, P3, P4, P5, P6 bearing pads and anchor bolt sleeves.
- P7, P8, P9, P10, P11 pier base plate grout pads.
- A12 tie-chord base plates grout pads.

6-02.3(24) Reinforcement

Section 6-02.3(24) is supplemented with the following:

(******)
Prior to fabricating any reinforcing steel, the Contractor shall submit Type 2 Working Drawings (placing drawings and bending lists) for review by the Engineer. Working Drawings shall be prepared in accordance with the CRSI Manual of Standard Practice and the ACI Detailing Manual. Placing drawings shall show the location of all concrete construction joints and rebar lap splices.

6-02.3(24)C Placing and Fastening

Section 6-02.3(24)C is supplemented with the following:

(******)
Reinforcing steel shall be kept separated from dissimilar metals. This includes, but is not limited to, the electrical junction boxes.

6-02.3(24)F Mechanical Splices

Section 6-02.3(24)F is supplemented with the following:

(******)
The term “Mechanical Coupler” is synonymous with “Mechanical Splice” in this section. The use of any of these terms in the Plans and Special Provisions is to be taken to mean “Mechanical Splice”.

6-02.3(26) Cast-In-Place Prestressed Concrete

Section 6-02.3(26) is supplemented with the following:

(******)
At Piers 2-6, high strength post-tensioning bars and associated hardware and installation shall be as determined from information provided in the Plans. Pipe strut and base plate are included in “Structural Low Alloy Steel – Substr.”

6-02.3(28) Precast Concrete Panels

6-02.3(28)A Shop Drawings

The list included in the third paragraph of Section 6-02.3(28)A is supplemented with the following:

(******)

- Construction sequence and method of forming the precast concrete stay-in-place panels, duration in forms, strength at form release, lifting details, and storage details.
- Details of additional reinforcement, if any, provided at lifting and support locations.
- Method, blocking material, and equipment used to support the panels during storage, transporting, and erection.
- Erection sequence, including the method of lifting the panels, placing and adjusting the panels to proper alignment and grade.

6-02.3(28)B Casting

Section 6-02.3(28)B is supplemented with the following:

(******)

The Contractor shall replace any panels damaged during handling, storage and erection at Contractor's cost.

6-02.3(28)E Finishing

Section 6-02.3(28)E is supplemented with the following:

(******)

The Contractor shall furnish a Class 2 surface finish, as specified in Section 6-02.3(14)B, on all surfaces of the precast concrete stay-in-place panels, except as otherwise noted. The top surface of all panels shall be roughened to a full amplitude of ¼" using a green cut surface to expose aggregate or using a tined surface in the transverse direction.

Pigmented sealer in accordance with section 6-02.3(14)C of the Special Provisions shall be applied to the side and bottom surfaces of the panels, and may be applied prior to erecting the panels.

6-02.3(28)F Tolerances

Section 6-02.3(28)F is supplemented with the following:

(******)

The precast concrete stay-in-place panels shall not exceed the following scalar tolerances:

Length and Width: ± 1/8 inch
Thickness: + 1/8, -0 inch
Camber (either upward or downward) ± 1/4 inch in ten feet
at time of placement on structure:

Precast concrete stay-in-place panels with tolerances exceeding those specified above, or with hairline cracks visibly apparent radiating from the strand at the end of the panel and extending more than three inches along the panel will be subject to evaluation by the Engineer for

possible rejection.

6-02.3(28)G Handling and Storage

Section 6-02.3(28)G is supplemented with the following:

(******)
Precast concrete stay-in-place panels shall be maintained in a flat and level position, without any twisting, at all times. After reaching 28 day strength, panels shall be supported at approximately 1'-6" from the panel ends and at the midpoint during storage. Supports shall be placed parallel to the long side and shall extend the full width of the panel.

Unloading and reloading at a site other than the bridge site will be permitted only under the direct supervision of the Engineer. The panels may be stacked, after reaching 28 day strength, to a height of 5 panels. The panel supports shall be in the same vertical plane and shall be of sufficient height to prevent damage to the lifting bar loops. The Contractor shall have received the Engineer's verification that the bottom panel of the stack is flat and level, without any twisting, prior to stacking additional panels. The panels shall not be in contact with the ground at any time. Any discoloration due to transport and storage shall be cleaned at Contractor's expense to the Engineer's satisfaction.

6-02.3(28)I Erection

Section 6-02.3(28)I is supplemented with the following:

(******)
The precast concrete stay-in-place panels shall be at least 60 days old at the time of placing bridge deck concrete. The Contractor shall place the panels atop the floor beams as shown in the Plans.

Prior to placing the bridge deck concrete, the surface of the panels shall be cleaned of all foreign materials and fully saturated with water.

(*****)
6-02.3(29) Soil Tie-Back Grid

Soil tie back grid shall be coordinated with MSE wall soil reinforcement as specified in the Plans. Placement of fill shall follow the same requirements as the MSE wall as specified in Section 6-14.

6-02.4 Measurement

Section 6-02.4 is supplemented with the following:

(June 26, 2000)
"Disc Bearing - Superstr." will be measured per each for each bearing assembly furnished and installed.

"Bridge Deck (Totem Lake Connector)" contains the following approximate quantities of materials and work, but does not represent all work included in this item:

- Precast Concrete Stay-in-Place Forms (Class 4000D) 135 CY
- CIP Concrete Overlay (Class 4000D) 182 CY
- Steel Reinforcing Bar Gr. 60 74,130 LB
- Metal Bar Grating 690 SF
- Pultruded Grating 110 SF
- Expansion Joints 33 LF
- Deck Drains 24 Each
- Pigmented Sealer 1,830 SY

The quantities are listed only for the convenience of the Contractor to assist in determining the volume of work involved and are not guaranteed to be accurate. The prospective bidders must verify these quantities before submitting a bid. No adjustments other than for approved changes will be made in the lump sum contract price for "Bridge Deck (Totem Lake Connector)" even though the actual quantities required may deviate from those listed.

"Bridge Approach Slab" contains the following approximate quantities of materials and work, but does not represent all work included in this item:

- CIP Concrete (Class 4000A) 9 CY
- Steel Reinforcing Bar Gr. 60 1,020 LB
- Pigmented Sealer 5 SY

The quantities are listed only for the convenience of the Contractor to assist in determining the volume of work involved and are not guaranteed to be accurate. The prospective bidders must verify these quantities before submitting a bid. No adjustments other than for approved changes will be made in the lump sum contract price for "Bridge Approach Slab" even though the actual quantities required may deviate from those listed.

(******)
"Prestressing Bar – Substr." will be measured per each for each PT bar assembly furnished and installed and shall include all work associated with constructing PT bar assembly as shown in the Plans.

"Soil Tie-Back Grid at Abutment 1" shall include all work associated with constructing the tie-back grid as shown in the Plans.

6-02.5 Payment

Section 6-02.5 is supplemented with the following:

(June 26, 2000)
"Disc Bearing - Superstr.", per each.

"Bridge Deck (Totem Lake Connector)", lump sum.
The lump sum contract price for "Bridge Deck (Totem Lake Connector)" shall be full pay for constructing the reinforced concrete portions of the steel bridge superstructure, including miscellaneous items as described in 6-02.4.

For the purpose of payment, such bridge and structures items as metal bar grating and

accessories, pultruded grating and accessories, etc, for which there is no pay item included in the proposal, are considered as bridge and structures minor items. All costs in connection with furnishing and installing these bridge and structures minor items as shown and noted in the Plans and as outlined in these specifications and in the Standard Specifications shall be included in “Bridge Deck (Totem Lake Connector)”.

“Prestressing Bar – Substr.”, per each.

“Soil Tie-Back Grid at Abutment 1”, Lump Sum.

6-03 Steel Structures

6-03.2 Materials

Section 6-03.2 is supplemented with the following:

(******)
Tie-Chord and Arch pipes shall be manufactured according to API Specification 5L with Delivery Condition PSL2 including Annexes B and E, with the following adaptations for pipes not intended for pressure purposes:

- Minimum Charpy V-Notch (CVN) toughness after manufacture (including bending) for both Pipe Body Tests and Pipe Weld and HAZ Tests (API 5L #9.8) shall be at least 25 ft-lbs at 40°F. (Note that the CVN of the material before manufacture must be higher than the above minimum if cold forming/bending, as it reduces the CVN.) The method and procedures for bending the pipes to the final geometry as shown in the Plans and achieving the required toughness shall be submitted to the Engineer for review and approval prior to fabrication. The Contractor shall make allowance for testing on material after bending if necessary.

- The following tests in API 5L are not required:
  - o Hydrostatic test #9.4
  - o Flattening test #9.6
  - o DWT test #9.9
  - o Weighing #10.2.9

6-03.3 Construction Requirements

6-03.3(7) Shop Plans

Section 6-03.3(7) is supplemented with the following:

(******)
The Contractor shall submit drawings and documents that identify interface items and maps out the fabrication process.

6-03.3(7)A Erection Methods

Section 6-03.3(7)A is supplemented with the following:

(******)
The Contractor shall conduct a Pre-Pick Safety Meeting with the Engineer after addressing comments on the Type 2E Working Drawings, and prior to erecting any steel members, to review the erection plan and procedures on site. Representatives of the Contractor, the Owner, and Engineer must attend and participate in the Pre-Pick Safety Meeting to confirm the methods the Contractor intends to use are acceptable. Final review and approval of the Type 2E Working Drawings will not be completed until after this meeting.

6-03.3(25) Welding and Repair Welding

Section 6-03.3(25) is supplemented with the following:

(******)

Welding and Repair Welding for Welded Tubular Members

All work for welded tubular members, connections, and appurtenances shall be in accordance with AWS D1.1/D1.1M:2015 Structural Welding Code (AWS D1.1). Additionally, the following requirements of AWS D1.5/D1.5M:2015 Bridge Welding Code (AWS D1.5) shall apply:

- Moisture and hydrogen control
- Minimum preheat and interpass temperatures
- Maximum electrode diameter Welding and repair welding for steel elements of the bridge not covered by AASHTO/AWS D1.5/D1.5M shall comply with AWS D1.1/D1.1M, latest edition, Structural Welding Code.
- Maximum fillet weld size
- Maximum weld layer thickness
- CVN testing requirements. Base metal CVNs shall meet a value of 15 ft-lbs at 40°F for non-Fracture Critical tension members and shall meet a value of 25 ft-lbs at 40°F for Facture Critical Members (FCM).

Tubular members designated as FCM in the Plans shall also follow the provisions of AWS D1.5 Clause 12 with the following additions and modifications:

- For the purposes of determining preheat and interpass temperatures, the values for AASHTO M 270 (ASTM A 709) may be used
- For the purposes of determining CVN test values of weld metal, the values for AASTHO M270 (ASTM A 709) may be used.

All tubular members shall be considered cyclically loaded and weld details for cyclically loaded tubular members as specified in AWS D1.1 shall be used

.

Backing for tubular member girth or butt welds shall be continuous.

All welds require Welding Procedure Specification (WPS) qualification. WPS Qualification shall be in accordance with AWS D1.1 Clause 4 or 9. For WPS parameter development, production welding heat input shall be maintained between 60 percent and 100 percent of the qualified maximum Procedure Qualification Record (PQR) heat input.

All welders shall be qualified in accordance with AWS D1.1 Clause 4.

6-03.3(28) Shop Assembly

6-03.3(28)A Method of Shop Assembly

Section 6-03.3(28)A is supplemented with the following:

(******)

Progressive Arch (Truss) assembly

The superstructure shall be assembled span by span and shall include all elements above the

bearings (End Beams, Floor Beams, Arches, Tie-Chords, Hangers, etc.). Each next span of the shop assembly shall be assembled to one of the previous assemblies, repositioned if necessary, and pinned to ensure accurate alignment. Each assembled span shall be surveyed and submitted to the Engineer for review and
acceptance prior to shipping. At a minimum, survey shall include bearing and field splice work points.

Contractor shall confirm that the pipe ovality of two adjoining members are not in opposite directions at all CJP field welded splice locations.

Anchor bolt templates shall be fabricated in the same shop in which the arch truss is assembled, and then shipped to site with anchor bolts attached to template plate.

6-03.3(28)B Check of Shop Assembly

Section 6-03.3(28)B is supplemented with the following:

(August 3, 2015)
If an assembly or stage of assembly is not accepted by the Engineer, deficiencies shall be corrected and the assembly or stage of assembly shall be resubmitted to the Engineer for acceptance.

6-03.3(30) Painting

Section 6-03.3(30) is supplemented with the following:

(******)
Paint for the new steel, excluding "strut" pipe at Piers 2-6, maintenance walkway in spans 2 and 4, and bridge railing shall be applied in accordance with Section 6-07.3(9). The color of the top coat, when dry, shall match **Federal Standard 595 Paint Specification Color: "Medium Blue" FS 35177 (RGB Hex Code:436F94).**

A color swatch shall be submitted for approval prior to ordering the paint top coat.

A mockup shall be submitted for approval, consisting of a painted 36" long section of the 20" diameter pipe section.

The interior surface of pipes and HSS members is not required to be painted. The Contractor shall ensure the inside of hollow members is kept dry

(******)

6-03.3(44) Slack Restrainer

Slack restrainers at Pier 4 shall be as specified in the Plans. The PT bars shall conform to ASTM A722, with associated nuts and washers per the manufacturer.

6-03.4 Measurement

Section 6-03.4 is supplemented with the following:

(******)
"Structural Low Alloy Steel – Substr." contains the following approximate quantities of materials and work as shown in the Plans for Piers 2-6 and Piers 7-11, but does not represent all work included in this item:

- Rectangular HSS 11,720 LBS
- Steel Plate 9,310 LBS
- Round HSS 1,770 LBS
- Anchor Rods 20 Each

"Structural Low Alloy Steel – Superstr." contains the following approximate quantities of materials and work as shown in the Plans for the superstructure, but does not represent all work included in this item:

- Pipe 324,050 LBS
- Steel Plate 75,500 LBS
- Rolled W Sections 74,100 LBS
- Round HSS 7,930 LBS
- Rectangular HSS 340 LBS
- Rolled L Sections 3,950 LBS
- Rolled WT Sections 210 LBS
- Shear Studs 2,606 Each
- Bolts 696 Each
- Threaded Rods 326 Each
- Anchor Rods 52 Each
- PT Bars 2 Each

The quantities are listed only for the convenience of the Contractor to assist in determining the volume of work involved and are not guaranteed to be accurate. The prospective bidders must verify these quantities before submitting a bid. No adjustments other than for approved changes will be made in the lump sum contract price for "Structural Low Alloy Steel – Substr." And "Structural Low Alloy Steel – Superstr." even though the actual quantities required may deviate from those listed.

6-03.5 Payment

Section 6-03.5 is supplemented with the following:

(******)
"Structural Low Alloy Steel – Substr.", lump sum.

"Structural Low Alloy Steel – Superstr.", lump sum.

6-06 Bridge Railings

6-06.1 Description

This Work consists of constructing railings along the Mechanically Stabilized Earth walls at the north and south approaches and along the full length of the bridge superstructure, as shown in the Plans. This Work includes top and bottom stainless steel pipes, steel stem pipes, saddles, base plates, anchor rods, stainless steel mesh infill and related accessories, stainless steel base and cap for glass panels, and aluminum brackets and channels for the Linear LED Rail Lighting (see Section 8-30).

6-06.2 Materials

Section 6-06.2 is supplemented with the following:

(******)
Pedestrian railing material shall be as specified below and in the Plans. Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

Tamper resistant bolts shall be Type 316 stainless-steel fasteners for exterior use.

Stem pipes shall be in accordance with ASTM A53/A53M-12.

Pipe saddles shall be in accordance with ASTM A36 or ASTM A709.

Stainless-Steel Pipe:
1.25” schedule 40 (1.66” O.D) stainless steel pipe as indicated in the Plans shall be Type 316 stainless steel conforming to ASTM 268. Finish must be a No. 4 finish.
Stainless-Steel Mesh: Carl Stahl X-TEND® Stainless Steel Flexible Mesh Handrail Infill, or approved equivalent.

Cable Diameter x Mesh Aperture Dimensions :

a. 1.5mm or 2.0mm x 60mm

Perimeter Finishes: Closed loops with loose ferrules for ‘sewn-on’ installation method

Direction (Grain) of mesh: horizontal mesh direction for rectangular frame shapes

Ferrule Style: seamless ASTM A492 316L stainless steel ferrule

Attachment cable material: ASTM A492 Type 316 stainless steel 7x7 (or 7x19) wire rope joined with Type 316 stainless steel ferrules.

Accessories:
Provide tensioning turnbuckles, grommet, bushings, washers, swaging ferrules, studs, receivers, fittings and other components as required for system installation, all in Type 316 stainless steel.

Aluminum U-Channel housing for LED lighting:
Type 6061-T6 structural aluminum U-channel in accordance with ASTM B221-14 and ASTM B308

Roll-form in shop in 25 foot lengths to radius of curvature shown in the Plans

Aluminum Bracket:
Type 6061-T6 aluminum plate in accordance with ASTM B209

6-06.3 Construction Requirements

6-06.3(2) Metal Railings

Section 6-06.3(2) is supplemented with the following:

(******)
Railing post orientation shall be as shown in the Plans. Pipe geometry shall be smoothly curved between posts as represented in the Plans.

The Contractor shall shop fabricate and paint the guardrail stanchions and associate components and wrap the stanchions with protective material prior to delivery to the site to prevent damage to the finish during delivery, storage and construction. Prior to delivery of railing materials, the Contractor shall review and be thoroughly knowledgeable with the fabricator's care and handling recommendations.

Store on site in a location and manner to avoid damage. Stacking shall be done in a manner that will prevent bending. Store material in a clean, dry location away from uncured concrete or masonry. The Contractor shall protect the steel and stainless-steel surfaces from organic solvents such as acetone, benzene, and paint thinner; petroleum-based solvents such as gasoline and diesel fuel; and open flames. Any protection on the railings during transportation shall remain until railing is installed.

Keep handling on site to a minimum. Exercise caution to avoid damage to railing finish. Components with damage shall be replaced or repaired to satisfaction of the Engineer.

Railings shall be painted as required in the Special Provisions Section 6-07.2

Working Drawings shall provide setting diagrams and templates for anchorages to be installed by others. Include mesh aperture and rope dimensions, cable and mesh attachment hardware, tensioning devices, and mounting technology for the stainless steel mesh infill.

6-06.3(3) Sampling and Testing

(******)
Verification Samples: Two samples representing actual products and finishes as follows:

- Typical stanchions complete with all attachments.
- SS wire mesh with fittings
- Size: Minimum of one 10 ft long module consisting of two guardrails, vertical tension

cable at Overlook ends (wire rope), and stainless steel wire mesh infill. Do not proceed with remaining work until workmanship is approved by Engineer.

Rework mock-up as required to produce acceptable workmanship, approved by the engineer.

Retain mock-up during construction as quality standard.

Mock-up may be incorporated into final construction with approval of Engineer.

6-06.3(4) Quality Assurance

(******)

Manufacturer Qualifications: Company specializing in fabrication of stainless steel mesh infill with five years minimum successful experience.

Installer Qualifications: Experienced in performing work of this section that is similar to that required for this project.

Pre-Installation Meeting: After acceptance of mock-up, conduct meeting with Contractor, Engineer, Owner, Installer and Supplier whose work involves railing system to verify project requirements, framing and support conditions, mounting surfaces, manufacturer's installation instructions, and warranty requirements.

Manufacturer’s Warranty: Submit, for Owner’s acceptance, manufacturer’s standard warranty document executed by authorized company official. Include manufacturer’s standard maintenance instructions.

(******)

6-06.3(5) Fabrication and Installation

General: Comply with manufacturer’s product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

Infill Mesh Fabrication: Infill mesh sections shall be dimensioned and manufactured to specified size in accordance with the Plans and these Special Provisions and labeled according to installer’s specifications.

Examination: Site Verification of Conditions: Verify condition of rail posts as installed, to ensure it is acceptable for product installation in accordance with manufacturer’s instructions. Do not begin installation until mounting surfaces are in satisfactory condition.

Preparation: Take field measurements after permanent end terminations are in place and prior to finalizing shop drawings and fabrication, to ensure fitting of work.

Installation: Install mesh infill system in accordance with manufacturer's instructions and the approved shop drawings. Mesh panel infill system shall be square to grade and railing and taut. Terminate and tension mesh panels in accordance with manufacturer’s instructions. Ensure mesh is clean, and without waves, kinks, or sags.

Anchor railing system to mounting surfaces as indicated in the Plans. Use manufacturers supplied mounting hardware. Separate dissimilar materials with bushings, grommets or washers to prevent electrolytic corrosion.

Cleaning: Clean installed products in accordance with manufacturer's instructions before owner's acceptance. Do not use chlorine-based or abrasive cleaners.

(******)

6-06.3(6) Post Foundations

Bridge Railing Post Foundations off the bridge are specified in the Plans. Post foundation system through MSE wall geogrid shall be constructed using Sleeve-It system by Strata, sonotubes connected together via a tie-bar, or an approved equivalent. Post Foundations shall not impart lateral loading on the wall facing.

The suggested construction sequence is to place the Post Foundations in accordance with the manufacturer’s specifications, then after wall, fill, and pavement are complete, fill post foundation form with concrete shy of the top and press post anchorage into concrete. Ensure post is in proper orientation and dispose of any concrete displaced during installation. Exposed surfaces of rail post base plate and post foundation form shall be protected to ensure that excess concrete can be removed fully to give a clean appearance.

6-06.4 Measurement

(******)

No separate measurement and payment shall be allowed for the work specified in this section. All work shall be incidental to the work to which it applies.

“Bridge Railing – MSE Walls” per linear foot includes all railing off the bridge (beyond the deck joint at A1 and beyond CL A12).

“Bridge Railing – Superstr.” per linear foot Includes all railing on the bridge (between the deck joint at A1 and CL A12).

“Post Foundations” each includes all work for constructing post foundations, includingpost foundation system concrete infill and associated work.

6-06.5 Payment

(******)

“Bridge Railing – MSE Walls” and “Bridge Railing – Superstr.”, per linear foot

“Post Foundations”, each

6-07 Painting

6-07.2 Materials

Section 6-07.2 is supplemented with the following:

(******)
Paint for the railing, excluding the stainless steel pipes, cable mesh infill, and the aluminum U-channels and brackets for LED lighting shall be applied in accordance with Section 6-07.3(9). The color of the top coat, when dry, shall match **Federal Standard 595 Paint Specification Color: "Light Gray" FS 36495 (RGB Hex Code: C6C5CA).**

A color swatch shall be submitted for approval prior to ordering the paint top coat.
A mockup shall be submitted for approval, consisting of a painted 12" section of the HSS post section.

Paint for Seating shall be applied in accordance with Section 6-07.3(9). The color of the top coat, when dry, shall match **AMS standard 595 color 17925 -White.**

Paint finish for the aluminum U-channel and bracket shall be shop-applied spray-coated PVDF (70% fluoropolymer) coating per the American Architectural Manufacturing Association -AAMA 2605-13 coating specification. The color of the top coat, when dry, shall match **Federal Standard 595 Paint Specification Color: "Light Gray" FS 36495 (RGB Hex Code: C6C5CA).**

6-14 Geosynthetic Retaining Walls

6-14.1 Description

Section 6-14.1 is replaced with the following:

(******)
This Work consists of constructing Mechanically Stabilized Earth (MSE) retaining walls having vegetated facing along the north and south bridge approaches, as specified herein and as shown in the Plans. The work includes excavating, furnishing all materials, constructing the wall and backfilling. The Contractor shall furnish all labor, materials and equipment for completing the work.

The terms “Vegetated Faced MSE Wall”, “Mechanically Stabilized Earth Wall”, “MSE Wall”, and “Structural Earth Wall” are synonymous with “Geosynthetic Retaining Wall” in this section. The use of any of these terms in the Plans and Special Provisions is to be taken to mean “Geosynthetic Retaining Wall”.

The Contractor is responsible for the construction means and methods and control of the process of the work. This includes the construction sequence, the safety of the workers, temporary hand rails, excavation access, barriers, lifting of materials and construction equipment into and out of the excavation, temporary bracing of formwork, the stability of all temporary cut slopes and other methods, techniques, sequences or procedures required to perform the work.

Reference Document:

Geotechnical Engineering Report, Geoengineers, Inc., “Phase 2 Geotechnical Engineering Services, Totem Lake Connector, NE 124th Street/124th Avenue NE, Kirkland, Washington” for The City of Kirkland and COWI North America, Inc., October 10, 2018.

Existing Site Conditions and Utilities

The design of the MSE walls for this project shall be based on soil conditions as described in the October 10, 2018 Geotechnical Report titled, “Phase 2 Geotechnical Engineering Services, Totem Lake Connector, NE 124th Street/124th Avenue NE, Kirkland, Washington” and prepared by GeoEngineers, Inc. for this project. If site conditions or design parameters are different than what has been specified, GeoEngineers shall be contacted immediately to assess the need for any design revisions.

Wall layout and reinforcement geometry shall be based on topographic and other project information presented in the project plans and specifications. The Contractor shall verify all dimensions, conditions and elevations before proceeding with final design and construction of the MSE wall. Any discrepancies shall be brought to the attention of the Engineer.

The Contractor shall verify the location of any and all existing and proposed utilities. Any conflicts between utility locations and the MSE walls will be resolved as directed by the Engineer. The Contractor shall seek approval of the Engineer to modify the soil reinforcement location or wall alignments to avoid conflicts. The Contractor shall be responsible for any

repair/replacement to damaged utilities during construction.

The Contractor is responsible for any removal of abandoned utilities or other underground obstructions that interfere with the MSE walls or that underlie the MSE wall footprints, including the area under the geogrid reinforced zone, and within 5 feet of the face of the MSE walls.

6-14.2 Materials

Section 6-14.2 is supplemented with the following:

(******)
The following products are approved for use of the Vegetated-Faced Mechanically StabilizedEarth Wall:

- Flex MSE
- Envirogrid Geocell
- Filtrexx
- Sierra Slope

Topsoil, planting, fence, curb, railing foundation, utility installation, and trail surfacing shall be as specified in other sections of the project plans and specifications
.
Geogrid reinforcement, plantable facing reinforcing, and wall facing wrap shall conform to manufacturers recommendations and shall have a 75 year design life. If soil reinforcing steel is to be used, it shall be cold drawn wire, as per section 9-07.9. A positive shear connection shall be provided between the wall facing and internal reinforcement.

Geosynthetic facing elements left permanently exposed to sunlight shall be stabilized to be resistant to ultraviolet radiation. Product specific test data shall be provided which can be extrapolated to the intended design life and which demonstrates that the product can perform as intended in an exposed environment.

Drainage zone shall be placed beneath and adjacent to the wall to promote active drainage from the irrigated wall facing and reinforcement zone.

Backfill material for the first layer placed within and under the structural reinforcement zone shall be 18 inches thick and shall consist of Permeable Ballast per Section 4-04.2. .

A perforated wall drain should also be included in design.

The drainage zone shall be designed to provide global stability, prevent erosion of the West Swale and to provide positive drainage away from the walls and supporting embankments. The wall drain shall be located above the infiltration layer as noted in the Plans.

The remainder of the fill material within and under the structural geogrid zone shall be Gravel Borrow for Structural Earth Wall conforming to WSDOT Standard Specification 9-03.14(4) with the added restriction it contain less than 5 percent passing the U.S. No. 200 sieve.

A nonwoven drainage geotextile should be placed to separate native soils from the permeable ballast and also native soils from the reinforced backfill. The drainage fabric shall meet the

requirements of Table 1 in Section 9-33.2(1) of the standard specifications for moderate survivability, and Class A of Table 2.

Topsoil and vegetation shall be approved by the Landscape Architect.

6-14.3(1) Quality Assurance

Section 6-14.3(1) is supplemented with the following:

(******)
The Contracting Agency will appoint a geotechnical engineering firm to perform inspection and testing which will include:

- Evaluation of foundation subgrades for fill placement and wall construction. This will include approval of all subgrade areas prior to fill placement or wall construction. Unsuitable soils, if present, will be identified by the geotechnical engineer for removal and replacement.
- Placement and compaction of backfill.
- Installation of wall facing, geosynthetic, and geogrid reinforcement.
- Material testing for content conformity.
- Wall drainage installation.
- Vegetation and topsoil installation.

The above field inspection and testing will not relieve the Contractor of the Contractor's responsibility to meet the requirements of thePlans, manufacturer's requirements and the project specifications.

6-14.3(2) Submittals

Section 6-14.3(2) is supplemented with the following:

(******)
The Contractor responsible for constructing the MSE retaining wall shall demonstrate at least 20,000 square feet of MSE retaining wall experience, at least 5 years with such systems, and at least 3 living or green walls. Other combinations of experience and past projects may be considered at the engineers discretion.

The vegetated-faced MSE wall product shall be constructed by a Contractor who is a certified installer of that product. The Contractor shall submit a letter from the product manufacturer indicating that they are a certified installer of the vegetated-faced MSE wall product.

The Contractor shall have a product manufacturer's representative on site at the Preconstruction Meeting for the vegetated-face MSE wall and shall have such representative on site periodically to monitor at least 24 hours of MSE wall construction, including the first two days of MSE wall construction, and at intermediate completion. The product manufacturer representative cost shall be included in the Contractor's bid. The Contractor shall schedule the Preconstruction Meeting with the Engineer prior to starting wall construction.

The Contractor shall be responsible for preparing and submitting a final design of the

vegetated face MSE wall in accordance with the manufacturer's requirements and the design criteria listed below. The plans and calculations shall be stamped by a registered Professional Engineer in the State of Washington. The Contractor shall submit the design for review and approval by the Engineer at least 2 weeks prior to starting wall construction.

Design of the MSE walls is to be based on the following soil parameters:

Parameter	Reinforced Backfill	Retained Backfill	Foundation Soil
Unit Weight (pcf)	130	125	120
Friction Angle (deg)	34	32	34
Cohesion (psf)	0	0	0

MSE wall seismic design is to be based on a peak ground acceleration of 0.38g and a coefficient of horizontal acceleration equal to 0.5 times the peak ground acceleration. Connections between the geogrid reinforcing layers and the wall facing units shall be sufficient to withstand seismic loading conditions.

Groundwater shall be assumed to be below the base of the MSE wall.
Wall shall be designed for 250 psf live load surcharge.
MSE wall design for this project shall be in accordance with NCMA methodologies and the product manufacturer's methodologies.

The following factors of safety shall be used in design:

	Static	Seismic
Geogrid Strength	1.5	1.1
Geogrid Pullout	1.5	1.1
Sliding	1.5	1.1
Overturning	2.0	1.5
Peak Connection	1.5	1.1
External Global Stability	1.5	1.1

The Contractor shall submit one 50-pound sample for each backfill material to the Contracting Agency's geotechnical representative for evaluation and testing at least 5 days prior to placement.

The Contractor shall submit one 12-inch by 12-inch sample of all geosynthetic materials including geotextiles and geogrid products to the Engineer for approval, including data sheets for the specified product. Samples shall have permanently applied identification information.

Bridge Railing foundations and light pole foundations shall be included in the Type 2E Working Drawings. Design and details of geosynthetic reinforcing at these foundations shall be included.

6-14.3(5) Guardrail Placement

Section 6-14.3(5) is replaced with the following:

(******)
Geogrid layout shall be coordinated with post foundations. Post foundations shall not impart lateral loading on the wall facing.

6-14.3(6) Permanent Facing

Section 6-14.3(6) is supplemented with the following:

(******)
Geosynthetic facing elements left permanently exposed to sunlight shall be stabilized to be resistant to ultraviolet radiation. Product specific test data shall be provided which can be extrapolated to the intended design life and which proves that the product will be capable of performing as intended in an exposed environment. Wall facing shall be vegetated per the wall planting elevations shown in thePlans.

6-14.4 Measurement

Section 6-14.4 is supplemented with the following:

(*****)
“Vegetated Faced MSE Wall” will be measured by the square foot of exposed face of completed wall. Corner wrap area and extensions of the MSE wall beyond the area of wall face shown in the Plans or staked by the Engineer are considered incidental to the wall construction and will not be include in the measurement. Measurement is based on the vertical projection of the exposed wall face.

Gravel borrow for structural earth wall will be measured as specified in Section 2-03.4

6-14.5 Payment

Section 6-14.5 is supplemented with the following:

(*****)
“Vegetated Faced MSE Wall”, per square foot

No separate payment will be made for the Work to provide the drainage zone, permeable ballast, and wall drain. This Work shall be incidental to construction.

6-19 Shafts

6-19.3 Construction Requirements

6-19.3 is supplemented with the following:

(******)
The Contractor shall include costs associated with temporary access and temporary protections to the future stormwater outfall in this pay item.

A deep NUD sanitary sewer manhole is in close proximity to Abutment A12 and connects to a deep pipe that crosses the spiral ramp area and is in proximity to the Pier 11 foundation, and a shallower pipe that crosses Totem Lake Boulevard that will be abandoned. Contractor shall verify the location of all utilities to confirm no conflicts are present between utility locations and proposed site work. The contractor shall be responsible for any repair/replacement to damaged utility lines during construction. The contractor shall perform a video inspection of the sewer pipes prior to the start of and after the end of construction to verify that the pipes have not been damaged. See Section 1-07.16(1) of these Special Provisions.

6-19.3(1) Quality Assurance

6-19.3(1)A Shaft Construction Tolerances

The third row of the table in Section 6-19.3(1)A is revised to read:

(******)

5 or larger	5

6-19.3(3) Shaft Excavation

6-19.3(3)B Temporary and Permanent Shaft Casing

Section 6-19.3(3)B is supplemented with the following:

(******)
(January 2, 2012)
The Contractor shall furnish and install casings as prescribed in the Plans.

When installing required permanent casings between the upper and lower elevation limits specified above, the casing shall be advanced prior to or concurrently with the excavation. In no case shall shaft excavation and/or casing placement extend below the bottom of shaft elevation prescribed in the Plans.

(January 2, 2012)
Shaft casing shall be equipped with cutting teeth or a cutting shoe, and installed by either rotating or oscillating the casing. Installing the casing by vibratory means will not be allowed.

6-19.4 Measurement

Section 6-19.4 is supplemented with the following:

“Constructing __Diam Shaft” per linear foot contains the following approximate quantities of materials and work, but does not represent all work included in this item:

Furnish & Place Permanent Casing	365,010 LB
Cast-In-Place Concrete for Drilled Shafts (Class 5000P)	738 CY
Steel Reinforcing Bar Gr. 60	141,690 LB

The quantities are listed only for the convenience of the Contractor to assist in determining the volume of work involved and are not guaranteed to be accurate. The prospective bidders must verify these quantities before submitting a bid. No adjustments other than for approved changes will be made in the lump sum contract price for “Constructing __Diam Shaft” even though the actual quantities required may deviate from those listed.

6-20 Bridge Vibration Dampers

The following new section is added:

(******) *New*

6-20.1 Description

In order to avoid unwanted vibrations due to pedestrian loading, the bridge will require additional damping in the form of tuned mass dampers (TMDs). This section describes the anticipated damping system requirements as well as the procedure of testing and installation that must be followed.

As the TMDs influence the visual appearance of the bridge, the design and arrangement of the dampers shall be fully contained within the Pier 9 Overlook cantilever box beam as shown in the Plans. The final arrangement shall be approved by the Engineer.

All damping values, weights, and quantities are subject to change upon testing of the bridge in its final constructed state. The quantities and recommendations herein are for information as to what is expected, but should not be assumed to constitute the final damping system design.

6-20.1(1) Description of Work

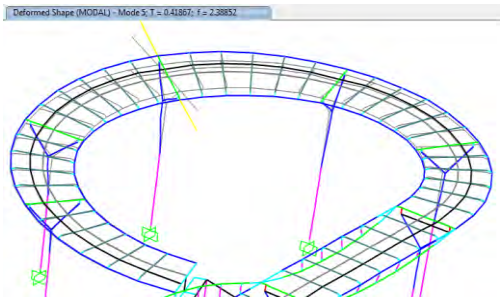
The work of this section includes:

- Design of TMDs and connections to the structure
- Fabrication of TMDs and connections
- Workshop testing of TMDs
- Shipping of TMDs and connections
- Installation of TMDs
- Performance Testing of the TMD system
  (An Expert shall supervise the testing)
- Re-tuning or revising the damping system as necessary based on the performance test results
  (This could include modifying the spring system or adding/removing weights).

6-20.1(2) Design Criteria

The design assessment of the theoretical model identified Mode 5 as the dominant mode for the vertical vibration of the Pier 9 / Overlook. The theoretical frequency of Mode 5 is 2.39 Hz. The theoretical mode shapes and frequencies of the other modes can be supplied by the design team upon requEST.

The mode shape targeted for supplemental damping is Mode 5 (Pier 9 Overlook), which is the vertical mode shown in the image below.



Mode 05 (deflected shape in color, static shape in grey)

Pier 9 Overlook – Damping

- Frequency to be damped: 2.39Hz ± 10% (to be confirmed by field measurement from performance testing)
- Dampers: 2 vertical dampers total, with 1 located within the tip of each cantilever as indicated in the Plans.
- Mass of individual dampers: 1125-lbs
- Mass Ratio between TMD and modal mass: approximately 10%
- The TMD mass shall be variable up to ±20%. Mass plates for variation shall be included
- Connections to the structure shall be designed and detailed by the Contractor in accordance with TMD supplier requirements. Connections shall be bolted and the attachment shall be reviewed and approved by the Engineer.

6-20.2 Materials

6-20.2(1) Tuned Mass Dampers

Approved Vertical Damper Suppliers:

- GERB – 1950 Ohio St. Lisle, IL 60532
- DEICON – 7525 Paragon Rd. Dayton, OH 45475
- Taylor Devices – 90 Taylor Dr. North Tonawanda, NY 14120

The TMD supplier shall have at least ten years experience in the design and fabrication of tuned mass dampers.

Proposed supplier shall be approved by the Engineer. Submit references and qualifications of TMD manufacturer for review.

Dampers must be “deactivated” for the initial testing as part of the field performance testing of the bridge. Supplier shall provide means to do this.

For each TMD a workshop test shall be done which verifies the following quantities:

a. Frequency within a tolerance of ±1%
b. Damping within a tolerance of ±15%

c. Internal friction within the guide system shall be a maximum of 1% of the considered TMD mass.
d. These test results shall be reviewed by the TMD expert.

The dampers shall have a Quality Control Inspection and Quality Assurance Inspection, prior to being released for shipment to the site.

6-20.2(2) Corrosion Protection

Corrosion protection of the damper assembly shall be as follows:

Hot-dipped galvanized or
Paint system as specified in Specification Section 6-07.

6-20.2(3) Warranties

The TMDs shall be designed for a service life of at least 30 years. Provide a 5 year warranty on the design and manufacture of the dampers guaranteeing their performance.

6-20.3 Construction Requirements

6-20.3(1) Examination

Examine the areas to receive the TMDs and verify that the proper attachments and any reinforcing that must be done is properly installed to receive the dampers.

6-20.3(2) Contractor Qualifications

The TMD installation shall be supervised by an Expert in the field of vibration and damping with at least ten years of experience. This Expert may be provided by the supplier.

The bridge will require testing after construction has obtained substantial completion. The Contractor shall provide a time at the end of construction of the bridge to allow the Expert in the field of vibration and damping to perform the testing specified herein. The Contractor shall provide two weeks advance notice of the field performance testing to the Engineer.

6-20.3(3) Installation

Install the TMDs in the locations agreed upon by the Engineer, TMD expert, and TMD supplier.

The Contractor shall be responsible for the final installation procedure.
Installation shall be reviewed by the TMD expert.

Carry out all testing before and after TMD activation as per Section 6-20.3(5) and the TMD expert's recommendations.

6-20.3(4) Maintenance

TMDs shall be virtually maintenance free. Replacement of the components of the TMDs shall not be required during their design service life of 30 years.

TMD supplier shall provide an inspection schedule and procedure.

TMDs shall be mounted in such a way as to allow for ease of visual inspection.

6-20.3(5) Performance Testing

Expert testing of the completed bridge structure with dampers installed, but deactivated, shall be performed to determine:

- Frequency and shape of the targeted mode.
- Modal damping from free-vibration test

The targeted frequency of TMDs shall be adjusted based on the measured frequency if the measured frequency is different from the theoretical frequency.

Retesting of the bridge with the dampers activated shall be performed to determine:

- Modified frequencies
- Supplemental damping values
- Effectiveness of damping system

6-20.3(6) Submittals

Submit TMD manufacturer's qualifications and reference projects showing at least 10 years of experience in the field of bridge damping.

Submit TMD expert's qualifications and references showing at least 10 years of experience in the field of vibration, dynamics, and damping testing.

Submit manufacturer's product data and installation and handling requirements for each material and product used.

Drawings: Submit Type 2 Working Drawings of the fully assembled TMD with all important dimensions and interface loads for fabrication and erection of all components of the damping system. Submit Calculations and Type 2 Working Drawings of TMD connections to structure, stamped by a licensed Washington SE.

Layout Drawings for Dampers: Provide location drawings for TMD attachment to structure.

Submit the plan for shop and field testing and in situ adjustments. The plan shall establish the performance criteria and outline the methodology, equipment to be used, and schedule for testing, including how the performance will be verified.

Submit the certified results from shop testing of the fabricated TMDs

Submit the certified results from field performance testing of the installed TMDs and a letter signed by the TMD expert certifying that the installed dampers have met the performance requirements based on the field test results.

6-20.4 Measurement

"Vibration Dampers" will be measured once per damper installed, including design, testing, performance verification, and connections to structure.

6-20.5 Payment

"Vibration Dampers", per each

6-21 Metal Bar Grating

The following new section is added:

(******) *New*

6-21.1 Description

This work includes furnishing of all labor, materials, and equipment necessary for construction of metal bar grating used in Spans 2 and 4, as described in the Plans. This includes:
Prefabricated steel bar gratings
Prefabricated support frames for metal bar grating
Miscellaneous installation hardware and accessories for metal bar grating

6-21.2 Materials

Metal bar gratings and miscellaneous installation hardware and accessories shall meet the requirements of Buy America per Section 1-06 of these Specifications.

6-21.2(A) Metal Bar Grating

Metal bar grating materials shall be carbon steel conforming to the following standards:

- ASTM A-1011 Structural Grade 50 Steel Strip Hot-Rolled Carbon
- ASTM A-1011 CS Type B Steel Strip Hot Rolled Carbon
- ASTM A-36 Carbon Steel

6-21.2(B) Installation Hardware and Accessories

Installation hardware and accessories shall conform to the following standards:

18-8 stainless steel

6-21.3 Construction Requirements

6-21.3(A) Performance Requirements

Metal Bar Grating shall meet the following, minimum performance requirements:
Orientation of the metal bar grating surface bars shall be as specified in the Plans.
Overall depth of the metal bar grating shall be as specified in the Plans.
Metal bar grating shall be manufactured without welded connections at its top surface.
Provide appropriate stainless steel fasteners for the approved metal bar grating anchorage system.

Segments of grating are intended to be cut from a larger standard section of grating. Exposed ends of bearing bars shall be protected with zinc coating.

6-21.3(A) Manufacturer Requirements

The manufacturer of the metal bar grating shall have a minimum of 10 years of documented experience. The Contractor shall submit the name of the manufacturer with a certification of applicable manufacturing experience to the Engineer for approval. The certification of experience shall include a list of at least 5 different metal bar grating installations on previous projects. This certification shall contain, at a minimum, the following pieces of information for

each installation:

- Project name and location
- Date of installation
- Owner
- Name, address and phone number of the Owner or Owner's Representative

The Contractor shall not begin preparation of the shop plans until receiving the Engineer's written approval of the metal bar grating manufacturer's certification of experience. Acceptable metal bar grating manufacturers include:

- McNichols Co. 2502 N Rocky Point Dr Ste 750 Tampa, FL 33607-1453, www.mcnichols.com
- Grating Pacific, Inc. 3651 Sausalito Street, Los Alamitos, CA 90720, 562-598-4314 www.gratingpacific.com
- Interstate Gratings, LLC. 1820 West 200 South, Lindon, UT 84042, 801-922-4700 www.interstategratings.com
- Ohio Gratings Inc. 5299 Southway St. SW, Canton, Ohio 44706, 800-321-9800 www.ohiogratings.com
- Alabama Metal Industries Corp. P.O. Box 3928, Birmingham, AL 35208, 205-787-2611 www.amico-online.com

6-21.3(B) Shop Plans

Before beginning fabrication, the Contractor shall submit shop drawings for the grating with interface to supporting elements, and shall contain the following items:

- The manufacturer's catalog pages or cut sheets of the proposed grating product, including load tables, installation hardware (anchors, fasteners, etc.), and standard installation details.
- A letter from the metal bar grating manufacturer certifying that the product offered meets the performance requirements given in this specification.

Show type and location of all fasteners and how they attach to other work.

Welding certificates

Signed mill certificates for all carbon steel and stainless steel used in the fabrication of the metal bar grating and installation hardware certifying that the products furnished meet the material specifications and Buy America requirements of these Specifications.

Prior to installation of the metal bar grating, the Contractor shall inspect the supports for correct alignment and conditions for proper attachment of the metal bar grating and any inconsistencies from the Plans shall be communicated in writing to the Engineer prior to placement.

6-21.4 Measurement and Payment

This work shall be incidental to and included in the Lump Sum item for "Bridge Deck (Totem Lake Connector)".

6-22 Pultruded Grating

The following new section is added:

(******) *New*

6-22.1 Description

This work includes furnishing of all labor, materials, and equipment necessary for construction of pultruded grating used on the Overlook as described in the Plans. This includes:

- Prefabricated pultruded grating.
- Cutting grating to trapezoidal sections.
- Miscellaneous installation hardware and accessories for grating.

6-22.2 Materials

Pultruded grating shall be Fiberglass Reinforced Polymer (FRP).

Pultruded grating and miscellaneous installation hardware and accessories shall meet the requirements of Buy America per Section 1-06 of these Specifications.

Materials used in the manufacture of the FRP products shall be raw materials in conformance with the specification described here-in and certified as meeting the manufacturer's approved list of raw materials.

Materials covered by these specifications shall be furnished by an ISO-9001 certified manufacturer.

ANSI/ACMA/FGMC FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

Visual quality of the pultruded shapes shall conform to ASTM D4385.

Color: dark grey.

The bearing bars shall be joined into panels by passing continuous length fiberglass pultruded cross-rods through the web of each bearing bar. A continuous fiberglass pultruded bar shaped section shall be wedged between the two cross rod spacers mechanically locking the notches in the cross rod spacers to the web of the bearing bars. Continuous adhesive bonding shall be achieved between the cross rod spacers and the bearing web and between the bar shaped wedge and the two cross rod spacers locking the entire panel together to give a panel that resists twist and prevents internal movement of the bearing bars.

The top surface of all panels shall have an integrated non-skid grit affixed to the surface by an epoxy resin followed by a baked-on top coat of epoxy resin.

The pultruded grating shall be manufactured using a process utilizing polyester resin with flame retardant and ultraviolet (UV) inhibitor additives. A synthetic surface veil fabric shall encase the glass reinforcement. FRP shapes shall achieve a flame spread rating of 25 or less in accordance with ASTM test method E-84, the flammability characteristics of UL 94 V0 and the self-extinguishing requirements of ASTM D635. Surface shall have a Wear Index of less than

1.0 when tested to ASTM D4060 (before and after 750 hours of UV exposure per ASTM D4329 cycle A).

Hold down clamps shall be type 316L stainless steel clips. Use 2 at each support with a minimum of 4 per panel.

6-22.3 Construction Requirements

Grating shall be shipped from the manufacturer, palletized and banded with exposed edges protected to prevent damage in shipment. Any material which, in the opinion of the Design Engineer, has become damaged as to be unfit for use, shall be promptly removed from the site of work, and the Contractor shall receive no compensation for the damaged material or its removal.

Furnish all labor, materials, equipment and incidentals governed by this section necessary to install the fiberglass reinforced polymer (FRP) products as specified herein.

Panels shall be fabricated to the sizes shown in the Plans with edges sanded smooth to be free of barbs. All cut ends shall be sealed with a compatible resin coating.

6-22.3(A) Manufacturer Requirements

The manufacturer of the pultruded grating shall have a minimum of five years of documented experience. The Contractor shall submit the name of the manufacturer with a certification of applicable manufacturing experience to the Engineer for approval. The certification of experience shall include a list of at least 5 different pultruded grating installations on previous projects. This certification shall contain, at a minimum, the following pieces of information for each installation:

- Project name and location
- Date of installation
- Owner
- Name, address and phone number of the Owner or Owner's Representative

The Contractor shall not begin preparation of the shop plans until receiving the Engineer's written approval of the pultruded grating manufacturer's certification of experience.

Acceptable pultruded grating manufacturers include:

- McNichols Co. 2502 N Rocky Point Dr Ste 750 Tampa, FL 33607-1453, www.mcnichols.com
- Grating Pacific, Inc. 3651 Sausalito Street, Los Alamitos, CA 90720, 562-598-4314 www.gratingpacific.com
- Interstate Gratings, LLC. 1820 West 200 South, Lindon, UT 84042, 801-922-4700 www.interstategratings.com
- Alabama Metal Industries Corp. P.O. Box 3928, Birmingham, AL 35208, 205-787-2611 www.amico-online.com

6-22.3(B) Shop Plans

Before cutting of the pultruded grating into the panel segments shown in the Plans, the

Contractor shall submit shop drawings for the grating with interface to supporting elements that shall contain the following items:

- The manufacturer's catalog pages or cut sheets of the proposed grating product, including load tables, installation hardware (anchors, fasteners, etc.), and standard installation details.
- A letter from the pultruded grating manufacturer certifying that the product offered meets the performance requirements given in this specification.

- Show type and location of all fasteners and how they attach to other work.

Prior to installation of the metal bar grating, the Contractor shall inspect the supports for correct alignment and conditions for proper attachment of the pultruded grating and any inconsistencies from the Plans shall be communicated in writing to the Engineer prior to placement.

6-22.4 Measurement and Payment

This work shall be incidental to and included in the Lump Sum item for "Bridge Deck (Totem Lake Connector)".

Division 7 Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits

7-02 Culverts

7-02.2 Materials

This section is supplemented with the following:

(******)
Reinforced concrete box culvert shall be Oldcastle Precast 6070 Trench or approved equal, except that the box culvert shall be ordered to the dimensions shown in the plans and the trench top shall be ordered to have a light broom finish on the trench top.

Grout to fill void around lift anchors on the trench top shall be nonshrink grout as specified on the "General Notes" sheet of the Plans.

Wood curb and the fasteners and attachments to attach the wood curb to the reinforced concrete box culvert shall be as noted in the Plans.

7-02.3 Construction Requirements

This section is supplemented with the following:

(******)
After the box culvert has been installed on-site the trench top shall be finished with a light to medium sandblast finish. The sandblast texture and degree of ‘bite’ will be determined from a 3’x3’ sample finish performed on the inside bottom of the box culvert. The sample finish will be reviewed and approved by the Engineer prior to beginning the sand blast finish on the top of the trench top.

Install wood curb as shown in the details in the Plans.

7-02.4 Measurement

This section is supplemented with the following:

(******)
No separate measurement will be made for the bedding for box culvert, gravel borrow for culvert backfill, sandblast finish, or wood curbing, including attaching the wood curbing to the culvert.

7-02.5 Payment

This section is supplemented with the following:

(******)
“Precast Reinf. Conc. Box Culvert”
The lump sum unit Contract price for “Precast Reinf. Conc. Box Culvert” shall be full pay for all

Work to construct and complete the installation including the concrete headwalls, culvert bedding, backfill, light sandblast finish on the top surface of the culvert trench top including the sample finish, wood curbing including fasteners and hardware, and coordination with the Engineer.

7-04 Storm Sewers

7-04.2 Materials

This section is supplemented with the following:

(******)
Pipe zone bedding material and trench backfill shall be per COK Standard Plan No. CK-D.02.

7-04.3 Construction Requirements

This section is supplemented with the following:

(******)
Bedding and backfill shall be per COK Standard Plan No. CK-D.02

(******)
When connecting catch basins or manholes to a new pipe, use a flexible connector (Kor-N-Seal or approved equal). When connecting catch basins or manholes to an existting pipe, use a fabricated sand collar of the same material as the connecting pipe.

7-04.5 Payment

This section is supplemented with the following:

(******)
The unit Contract price per linear foot for storm sewer pipe of the kind and size specified shall be full pay for all Work to complete the installation, including excavation, haul and disposal of excavated material, bedding, backfill, detectable marking tape, pipe installation including connections to drainage structures, testing, and adjustment of inverts to manholes.

7-05 Manholes, Inlets, Catch Basins, and Drywells

7-05.1 Description

This section is supplemented with the following:

(******)
This work consists of rehabilitating and coating the existing Northshore Utility District (NUD) sanitary sewer manhole adjacent to Abutment A12, as shown in the Plans. Interior surfaces of the manhole shall be coated, including base and channel, barrel, cone and adjusting ring(s).

The top slab and lid do not require coating.

7-05.2 Materials

This section is supplemented with the following:

(******)

Work covered in this section includes the requirements for surface preparation and coating of DMH-10. The coating product shall be Raven 405, as manufactured by Raven Lining Systems. No alternate products allowed.

7-05.3 Construction Requirements

This section is supplemented with the following:

(******)

7-05.3(3) Rehabilitation and Coating of Existing Manholes

A. SUBMITTALS

1. Repair and resurfacing product data
2. Product technical data sheets
3. Safety Data Sheets (SDS)
4. Technical data sheet and project specific data for repair materials to be topcoated with the coating product(s) including application, cure time and surface preparation procedures.
5. Contractor Data: Current documentation from coating product manufacturer certifying Contractor's training and equipment complies with the Quality Assurance requirements specified herein.

Five (5) recent references of Contractor indicating successful application of coating product(s) of the same material type as specified herein, applied by spray application within the municipal wastewater environment.

Contractor shall obtain acceptance from NUD on all submittals prior to beginning work for rehabilitating and coating the existing manhole.

B. QUALITY ASSURANCE

Coating product(s) shall be capable of being installed and curing properly within a sanitary sewer manhole environment. Coating product(s) shall be resistant to all forms of chemical or bacteriological attack found in municipal sanitary sewer systems; and, capable of adhering to the manhole structure substrates.

Repair product(s) shall be fully compatible with coating product(s) including ability to bond effectively forming a composite system.

Contractor shall utilize equipment for the spray application of the coating product(s) which has been approved by the coating product manufacturer; and, Contractor shall have received training on the operation and maintenance of said equipment from the coating product manufacturer.

Contractor shall be trained by, or have their training approved and certified by, the coating product manufacturer for the handling, mixing, application and inspection of the coating product(s) to be used as specified herein.

Contractor shall initiate and enforce quality control procedures consistent with the coating product(s) manufacturer recommendations and applicable NACE or SSPC standards as

referenced herein.

C. DELIVERY, STORAGE, AND HANDLING

Materials are to be kept dry, protected from weather and stored under cover.

Coating and repair materials are to be stored between 50 degrees F and 90 degrees F. Do not store near flame, heat or strong oxidants.

All materials are to be handled according to their Safety Data Sheets.

D. SITE CONDITIONS

Contractor shall conform to all local, state and federal regulations including those set forth by OSHA, RCRA and the EPA and any other applicable authorities.

Confined space entry, flow diversion and/or bypass plans shall be presented by Contractor as necessary to perform the specified work.

E. SPECIAL WARRANTY

Contractor shall warrant all work against defects in materials and workmanship for a period of two (2) years from the date of final acceptance of the project. Contractor shall, within a reasonable time after receipt of written notice thereof, repair defects in materials or workmanship which may develop during said two (2) year period, and any damage to other work caused by such defects or the repairing of same, at his own expense and without cost to the District.

F. REPAIR AND RESURFACING PRODUCTS

Repair products shall be used to fill voids, bugholes, and/or smooth transitions between components prior to the installation of the coating product(s). Repair materials must be compatible with the specified coating product(s) and shall be used and applied in accordance with the manufacturer’s recommendations.

Resurfacing products shall be used to fill large voids, lost mortar in masonry structures, smooth deteriorated surfaces and rebuild severely deteriorated structures.

The following products may be accepted and approved as compatible repair and resurfacing products for use within the specifications:

100% solids, solvent-free epoxy grout specifically formulated for epoxy topcoating compatibility.

Factory blended, rapid setting, high early strength, fiber reinforced, non-shrink repair mortar that can be trowelled or pneumatically spray-applied may be approved if specifically formulated to be suitable for topcoating with the specified coating product(s).

G. EXECUTION

1. Examination

Appropriate actions shall be taken by Contractor to comply with local, state and federal regulatory and other applicable agencies with regard to environment, health and safety

during work.

Any active flows shall be diverted as required to ensure all liquids are maintained below or away from the surfaces to be coated. Contractor shall coordinate with NUD on requirements for diverting flow, if required.

Temperature of the surface to be coated should be maintained between 40 and 120 deg F, per the manufacturer's recommendations.

Prior to commencing surface preparation, Contractor shall inspect all surfaces specified to receive the coating and notify District, in writing, of any noticeable disparity in the site, structure or surfaces which may interfere with the work, use of materials or procedures as specified herein.

2. Surface Preparation

Excessive debris, sediment, root intrusion or other foreign materials which may impact the effectiveness of the surface preparation process shall be removed prior to the commencement thereof.

Offset structural components, lids, covers, frames, etc. shall be repaired, replaced, or reset prior to the commencement of surface preparation.

Oils, grease, incompatible existing coatings, waxes, form release, curing compounds, efflorescence, sealers, salts, or other contaminants which may affect the performance and adhesion of the coating to the substrate shall be removed in accordance with SSPC-SP 1 – Solvent Cleaning.

Concrete and/or mortar damaged by corrosion, chemical attack or other means of degradation shall be removed so that only sound substrate remains.

Choice of surface preparation method(s) should be based upon the condition of the structure and concrete or masonry surface, potential contaminants present, access to perform work, and required cleanliness and profile of the prepared surface to receive the coating product(s).

Surface preparation method, or combination of methods, that may be used include high pressure water cleaning, high pressure water jetting, abrasive blasting, shotblasting, grinding, scarifying, detergent water cleaning, hot water blasting and others as described in NACE No. 6/SSPC SP-13. Whichever method(s) are used, they shall be performed in a manner that provides a uniform, sound clean neutralized surface suitable for the specified coating product(s).

Infiltration shall be stopped by using a material which is compatible with the repair products and is suitable for topcoating with the coating product(s).

3. Application of Repair and Resurfacing Products

Repair products shall be used to fill voids, bugholes, and other surface defects which may affect the performance or adhesion of the coating product(s).

Resurfacing products shall be used to repair, smooth or rebuild surfaces with rough profiles to provide a concrete or masonry substrate suitable for the coating product(s) to be applied. These products shall be installed to minimum thickness as recommended within manufacturers published guidelines.

Repair and resurfacing products shall be handled, mixed, installed and cured in accordance with manufacturer guidelines.

All repaired or resurfaced surfaces shall be inspected for cleanliness and suitability to receive the coating product(s). Additional surface preparation may be required prior to coating application.

4. Application of Coating Product(s)

Application procedures shall conform to the recommendations of the coating product(s) manufacturer, including environmental controls, product handling, mixing, application equipment and methods.

Spray equipment shall be specifically designed to accurately ratio and apply the coating product(s) and shall be in proper working order.

Contractors qualified in accordance with these specifications shall perform all aspects of coating product(s) installation.

Prepared surfaces shall be coated by spray application of the coating product(s) described herein to a minimum wet film thickness of 125 mils.

Subsequent topcoating or additional coats of the coating product(s) shall occur within the product's recoat window. Additional surface preparation procedures will be required if this recoat window is exceeded.

Coating product(s) shall interface with adjoining construction materials throughout the manhole structure to effectively seal and protect concrete or masonry substrates from infiltration and attack by corrosive elements. Procedures and materials necessary to effect this interface shall be as recommended by the coating product(s) manufacturer.

Termination points of the coating product(s) shall be made at the manhole chimney joint, and shall include the whole interior of the existing manhole, including the invert, and a minimum of 1" interfacing with each pipe penetration.

Sewage flow shall be stopped, bypassed or diverted for application of the coating product(s) to the invert and interface with pipe materials.

5. Testing and Inspection

During application a wet film thickness gauge, meeting ASTM D4414 - Standard Practice for Measurement of Wet Film Thickness of Organic Coatings by Notched Gages, shall be used. Measurements shall be taken, documented and attested to by Contractor for submission to NUD.

After the coating product(s) have set in accordance with manufacturer instructions, all surfaces

shall be inspected for holidays with high-voltage holiday detection equipment. Reference NACE RPO 188-99 for performing holiday detection. All detected holidays shall be marked and repaired by abrading the coating surface with grit disk paper or other hand tooling method. After abrading and cleaning, additional coating can be hand applied to the repair area. All touch-up/repair procedures shall follow the coating manufacturer's recommendations. Documentation on areas tested, results and repairs made shall be provided to NUD by the Contractor.

Visual inspection shall be made by NUD and/or Inspector. Any deficiencies in the finished coating shall be marked and repaired according to the procedures set forth herein by Contractor.

The sewer system may be returned to full operational service as soon as the final inspection has taken place and as authorized by the NUD.

7-05.3(4) Drop Structure Abandonment at Existing Manholes

The overflow pipe of the drop structure comes into the existing manhole at a section joint. The manhole section above this joint, along with the cone, may be removed during construction as outlined in Section 1-07.16 of these Special Provisions. The rest of the manhole below this joint shall remain in place. The tee at the top of the drop structure shall be removed, the abandoned sewer shall be capped water tight and the drop pipe shall be capped drop tight.

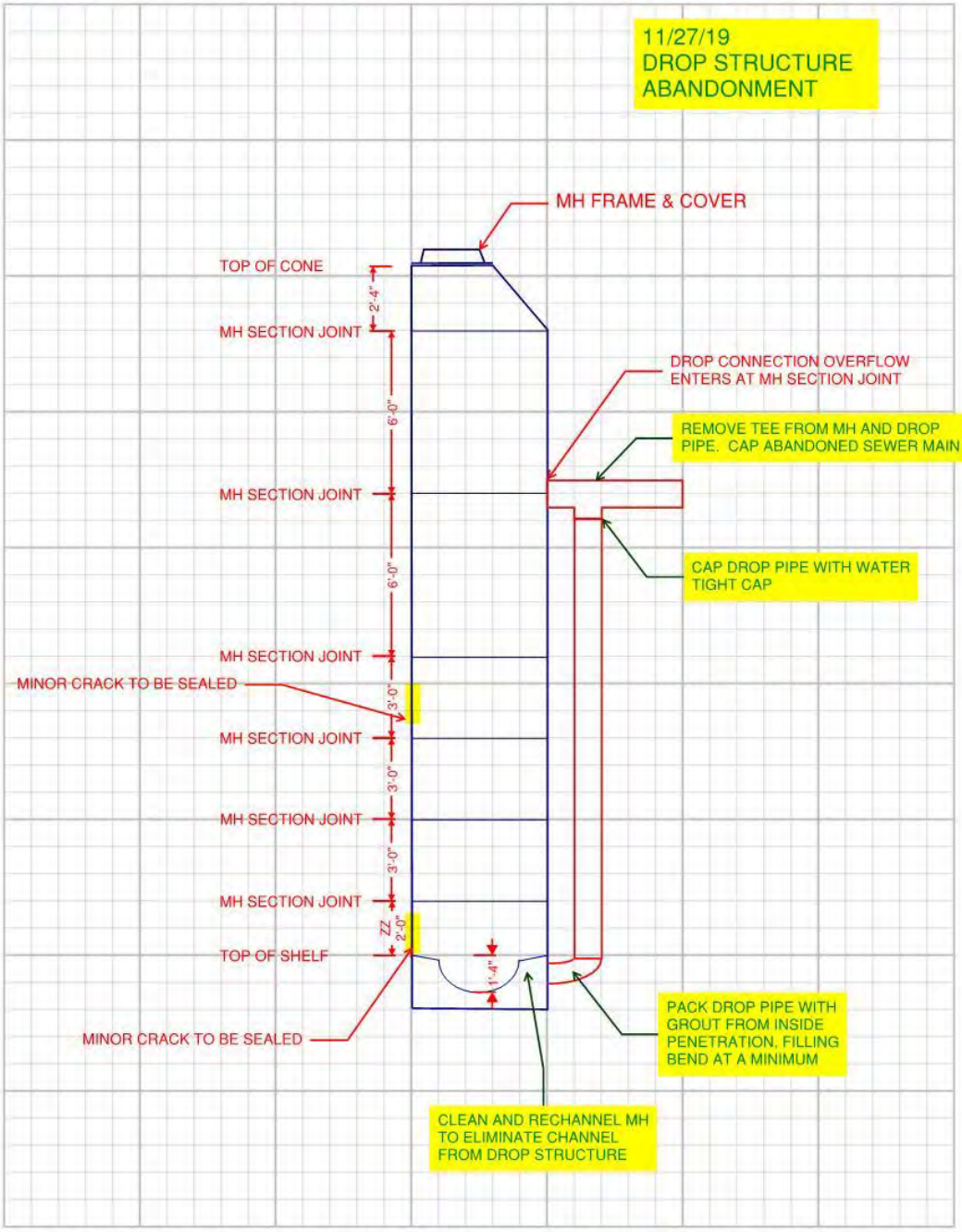
After bridge construction is complete, a two-ft high concrete collar shall be poured around the joint between the existing manhole and the new section, per NUD standard detail. This collar will also seal the penetration into the manhole from the drop tee removed. The base of the drop structure shall be packed with grout and the manhole channel cleaned and repaired to remove the channel from the abandoned drop structure. The repair of cracks and coating of the manhole shall be the last work completed on the manhole.

The figures on the following pages provide reference information for this scope of work.

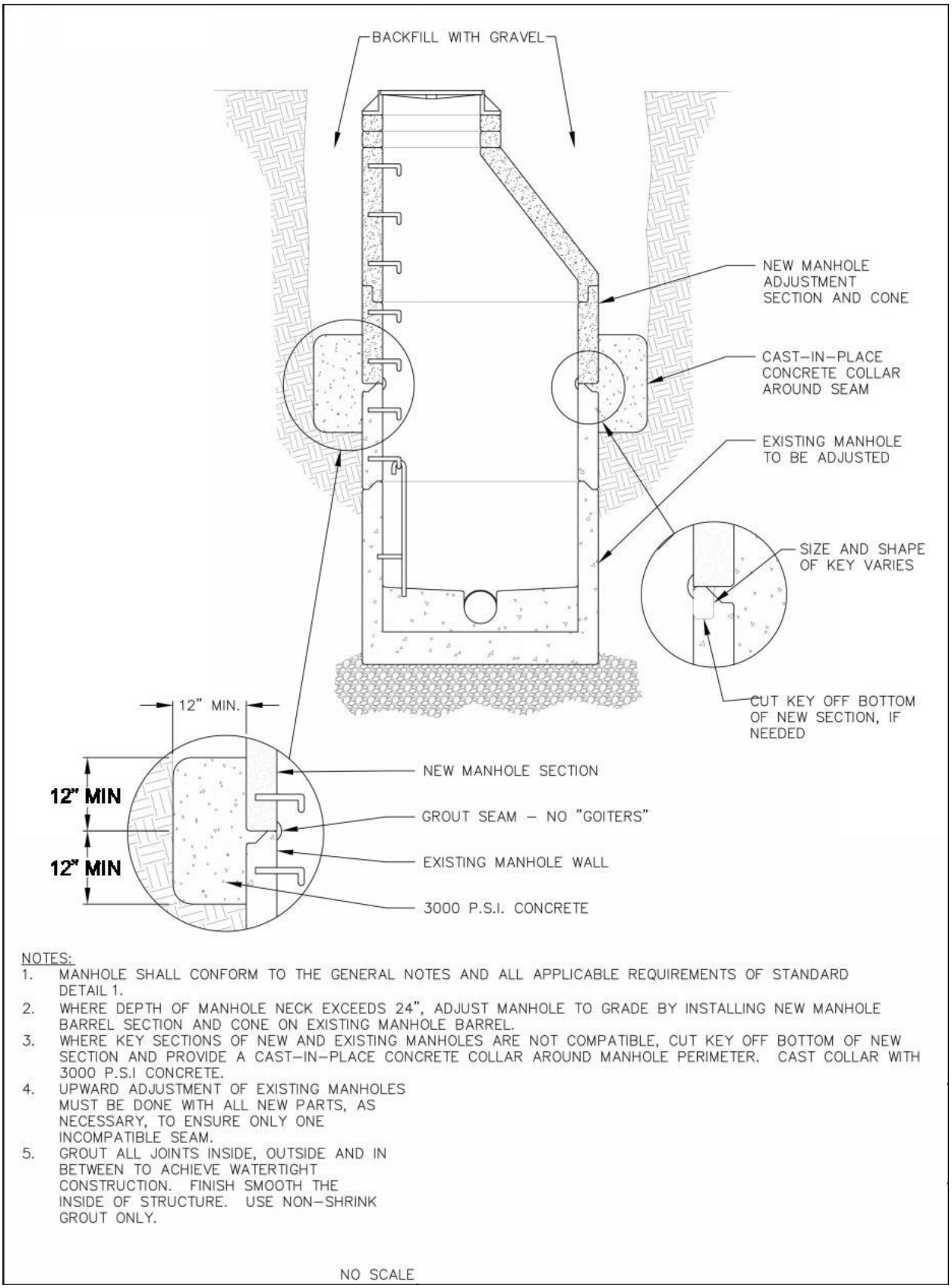
Project TOTEM LAKE CONNECTOR W.O.# C1629

Subject EXISTING MH AS-BUILT - DMH-10

By STEPH D. Date 9/17/19



Northshore Utility District - 6830 NE 185th St. - Kenmore, WA 98028 - (425) 398-4400 - www.nud.net



NOTES:

1. MANHOLE SHALL CONFORM TO THE GENERAL NOTES AND ALL APPLICABLE REQUIREMENTS OF STANDARD DETAIL 1.
2. WHERE DEPTH OF MANHOLE NECK EXCEEDS 24", ADJUST MANHOLE TO GRADE BY INSTALLING NEW MANHOLE BARREL SECTION AND CONE ON EXISTING MANHOLE BARREL.
3. WHERE KEY SECTIONS OF NEW AND EXISTING MANHOLES ARE NOT COMPATIBLE, CUT KEY OFF BOTTOM OF NEW SECTION AND PROVIDE A CAST–IN–PLACE CONCRETE COLLAR AROUND MANHOLE PERIMETER. CAST COLLAR WITH 3000 P.S.I CONCRETE.
4. UPWARD ADJUSTMENT OF EXISTING MANHOLES MUST BE DONE WITH ALL NEW PARTS, AS NECESSARY, TO ENSURE ONLY ONE INCOMPATIBLE SEAM.
5. GROUT ALL JOINTS INSIDE, OUTSIDE AND IN BETWEEN TO ACHIEVE WATERTIGHT CONSTRUCTION. FINISH SMOOTH THE INSIDE OF STRUCTURE. USE NON–SHRINK GROUT ONLY.

NO SCALE

7-05.4 Measurement

This section is supplemented with the following:

(******)
Rehabilitating and coating the existing sanitary sewer manhole will be measured per Lump Sum.

7-05.5 Payment

This section is supplemented with the following:

(******)
“Rehab and Coat Existing Sanitary Sewer Manhole”
The lump sum unit Contract price for “Rehab and Coat Existing Sanitary Sewer Manhole” shall be full pay for all Work to rehabilitate and coat the existing sanitary sewer manhole, including protecting the existing structure throughout construction, abandonment of drop structure and related repairs, excavation and backfill and coordination with NUD.

7-15 Service Connections

7-15.1 Description

This section is supplemented with the following:

(******)
This Work shall include installing the service connection from the existing water pipe to and including the meter box and all other work as shown in City of Kirkland Standard Plan No. CK-W.18.

This work shall also include the installation of a Washington State approved double-check valve backflow prevention device and associated hardware, plumbing, meter box, and any other items to provide a complete and functioning system for landscape irrigation.

Division 8 Miscellaneous Construction

8-01 Erosion Control and Water Pollution Control

8-01.1 Description

This section is supplemented with the following:

(******)
This Work consists of providing and designing as necessary a portable storage and filtration system and treating sediment laden water for acceptable discharge and preventing the conveyance of pollutants and sediment into surface waters, drainage systems, and environmentally critical areas.

8-01.2 Materials

This section is supplemented with the following:

(******)
Pipe for temporary storm drain bypass shall meet the requirements of Section 7-04.2 based on the Contactor's means and methods to maintain the 100-year peak flow rate shown in Plans.

Jointing new pipe to existing pipe for storm drain pipe shall be in accordance with WSDOT 7-04.3. Connections between pipes of differing material shall be made with a flexible gasketed coupling, adaptor or coupling-adaptor to make a watertight joint. Couplings shall be those manufactured by Romac, Caulder, or Fernco or approved equivalent product. Jointing of dissimilar pipe shall be in accordance with WSDOT Section 7-08.3(2)G.

Portable Storage and Filtration Systems
Portable storage tanks with filtration treatment conforming to Baker Tank® media filter systems or Rain-for-Rent® equipment or approved equivalent. Design and sizing for pumps, portable storage tanks, filtration and treatment system shall be included in the Contractor prepared TESC Plan per Standard Specification Section 8-01.3(1)A1.

8-01.3 Construction Requirements

This section is supplemented with the following:

(******)
The Contractor shall be responsible for providing adequate erosion control for the protection of the Municipal Separate Storm Sewer System and Waters of the State at all times.

The Contractor shall bear sole responsibility for damage to completed portions of the Work and to property located off the project site caused by erosion, siltation, runoff, or other related items during performance of the Work. The Contractor shall also bear sole responsibility for any pollution of rivers, streams, wetlands, groundwater, or other water which may occur as a result of the Work.

The Contractor shall exercise all necessary precaution and use all appropriate Best

Management Practices (BMPs) throughout performance of the Work and the life of the Project to prevent pollution, erosion, siltation, damage to property, and damage to Municipal Separate Storm Sewer System and Waters of the State.

Project requires a Department of Ecology National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit (CSWGP), which will be obtained by the City of Kirkland prior to construction. The Contractor will be required to transfer the NPDES permit from the Contracting Agency to the Contractor as the responsible party.

The Contractor shall be responsible for obtaining Ecology's approval for any Work requiring additional approvals (e.g. Request for Chemical Treatment Form). The Contractor shall obtain additional permits as necessary. All costs to obtain and comply with additional permits shall be included in the applicable Bid items for the Work involved.

(******)
The Contractor shall be responsible for all Work required for compliance with the CSWGP including annual permit fees.

8-01.3(1)A Submittals

Section 8-01.3(1)A is supplemented with the following:

(******)
Prior to the Preconstruction Conference, and prior to beginning work at the site and/or incorporation of materials and equipment into the project, the Contractor shall prepare, submit, and obtain approval from the Contracting Agency for the following:

Spill Prevention, Control & Countermeasures (SPCC) Plan – Per Section 1-07.15(1);
Temporary Erosion and Sediment Control (TESC) Plans – Per Section 8-01.3(1)A.

The Contractor shall develop the TESC Plan in accordance with City of Kirkland and Ecology's guidelines.

(******)
If the TESC Plan, at any time, is found to be inadequate to meet the intent of this section, or Ecology's requirements, the Contracting Agency may require the Contractor to revise and resubmit the plan. The Contractor shall implement the plan and any other BMP's necessary to adequately assure compliance with water quality standards.

8-01.3(1)C2 Process Wastewater

Section 8-01.3(1)C2 is supplemented with the following:

(******)
A portable storage and filtration treatment system shall be used in conjunction with other TESC BMPs as needed to meet CSWGP water quality discharge requirements; alternative methods for treatment approach must be submitted in the Contractor prepared TESC Plan for approval. Sizing for pumps, tanks, and filtration treatment system shall be documented in the approved TESC Plan.

8-01.3(1)C4 Management of Off-Site Water

This section is supplemented with the following:

(******)
The Type 2 Working Drawing shall show that the temporary storm bypass can convey the required flow rates as shown in the Plans.

8-01.3(2)B Seeding and Fertilizing

Section is supplemented with the following:

(******)
In the event seeding is used as a temporary measure, refer to the Section 8-02 for seed mix. Submit a proposal to the Engineer prior to placing seed mix. Temporary seeding for erosion control is not to be applied outside of seeded lawn areas.

8-01.3(9)A2 Silt Fence

Section is supplemented with the following:

(******)
Silt fence shall be in accordance with City of Kirkland Standard Plan No. CK-E.03 as shown in the Plans.

8-01.3(9)D Inlet Protection

Section is supplemented with the following:

(******)
Inlet protection shall be in accordance with City of Kirkland Standard Plan No. CK-E.11 as shown in the Plans.

8-01.3(10) Wattles

Section is supplemented with the following:

(******)
Wattles shall be in accordance with City of Kirkland Standard Plan No. CK-E.10 as shown in the Plans.

8-01.3(17) Temporary Culverts

This section is supplemented with the following:

(******)
Temporary culverts shall be constructed in accordance with Section 7-02 of the Standard Specifications and sized for the bypass flow indicated in the Plans.

8-01.4 Measurement

This section is supplemented with the following:

(******)
The areas for Erosion and Water Pollution Control shall be as follows:

- South Work Area – all areas south of the NE 124th Street road centerline
- North Work Area – all areas north of the Totem Lake Blvd NE road centerline
- Traffic Island Work Area – all areas between the South Work Area and the North Work Area.

8-01.5 Payment

8-01.5(1) Lump Sum Bid for Project (No Unit Items)

Add the following new items:

(******)
"Construction Stormwater Pollution Prevention Plan (CSWPPP)", Lump Sum.
The unit Contract price shall be full compensation for all costs incurred by the Contractor in performing the Work defined in Section 8-01.3(1)A1.

(******)
Replace the description "Erosion Control and Water Pollution Prevention" with the description "Erosion Control and Water Pollution Prevention, _____ Work Area" within the section.

This section is supplemented with the following:

(******)
The lump sum Contract price for "Erosion Control and Water Pollution Prevention, _____ Work Area" shall be full pay to perform the Work including the design and sizing of the system.

8-01.5(2) Item Bids

Supplement the first list item in the section with the following:

(******)
The unit Contract price shall be full compensation for all costs incurred by the Contractor in performing the Work defined in Section 8-01.3(1)B.

This section is supplemented with the following:

(******)
"Temporary Storm Drain Bypass", per lump sum.

The unit Contract price per lump sum for "Temporary Storm Drain Bypass" shall be full pay for all Work to design, develop the Type 2 Working Drawing, install, maintain, connect to existing pipe, disconnect from existing pipe, remove and dispose of the temporary bypass.

8-02 Roadside Restoration

8-02.1 Description

This section is supplemented with the following:

(******)
This Work shall include furnishing and placing Bioretention Soil Mix, Arborist Wood Chip Mulch, split rail fence, reinforced lawn surfacing,site boulders and stepping stones, and large woody debris stockpiled during clearing, see special provision 2-01.3 in accordance with these Specifications and as shown in the Plans.

(******)
8-02.1(1) Submittals

Contractor shall submit the following within 14 days after to notice to proceed of Work under this section. Submittal shall be grouped into one package. This submittal does not preclude other acceptance and warranty requirements. Submit:

Materials Lists: A complete list of plant, seed mixes and miscellaneous staking materials proposed to be furnished and installed, demonstrating conformance with the requirements specified. List to include names and addresses of all nurseries and suppliers as well as type and quantity of plants being supplied by each nursery. Contractor shall submit documentation from each of the plant suppliers within 20 days of notice-to-proceed that the plant materials have been secured. Securing plant materials shall include documented orders or other approved documentation.

One gallon sample of Topsoil Type A, Compost (fine and medium) and Arborist Wood Chip Mulch to the Engineer for approval. Include names and addresses of suppliers.
Test reports for supplied Topsoil Type A and Compost including composition and nutrient levels from an approved agricultural testing laboratory at Contractor's expense.
Description of equipment, methods and procedures for ripping/ tilling areas specified for soil preparation.

Landscape Contractor/Installer qualifications per this Section.
Plant Establishment Plan per Section 8-02.3(2)C.

At least 14 Working Days in advance of construction, the Contractor must submit to the Engineer for approval the source name, samples and data demonstrating conformance of Bioretention Soil Mix with the Specifications including:

- A 2-pound minimum sample of Mineral Aggregate for Bioretention Soil Mix;
- A 2 pound minimum sample of Compost for Bioretention Soil Mix;
- A 5 pound sample of mixed Bioretention Soil Mix;
- Grain-size analysis per ASTM Designation D 422 (Standard Test Method for Particle-Size Analysis of Soils) from a representative sample of the Mineral Aggregate for Bioretention Soil Mix material, demonstrating that it meets the specifications of this section.
- Quality analysis results for Compost performed in accordance with Seal of Testing

Assurance (STA) standards, as specified in this section; Compost for Bioretention Soil Mix shall be tested every thirty (30) calendar days and test results submitted within five (5) days of testing.

- Organic matter content test results of Bioretention Soil Mix. Organic content test shall be performed in accordance with Testing Methods for the Examination of Compost and Composting (TMECC) 05.07A, “Loss-On-Ignition Organic Matter Method” or per ASTM D 2974 Method C or D (Standard Test Methods for Moisture, Ash and Organic Matter of Peat and Other Organic Soils) test results demonstrating the Bioretention Soil Mix meets the requirements specified in this section.
- Modified Proctor compaction testing of mixed Bioretention Soil Mix, performed in accordance with ASTM D 1557, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort;
- A description of the equipment and methods proposed to mix the Mineral Aggregate and Compost to produce Bioretention Soil Mix;
- Provide the following information about the testing laboratory(ies):
- Name of laboratory(ies) including contact person(s),
- Address(es),
- Phone contact(s),
- Email address(es);
- Prior to construction, provide Manufacturer certification that the Compost for Bioretention Soil Mix material meets the specifications of this section, including certified laboratory test results dated within sixty (60) days of placement of material.
- During construction, perform quality conformance tests every sixty (60) days or every one thousand (1,000) cubic yards of Bioretention Soil Mix brought to or mixed on site, whichever is more frequent. Submit:
- Manufacturer certification that the Compost for Bioretention Soil Mix material meets the specifications of this section, including certified laboratory test results.

Stepping stones: At least 14 Working Days in advance of construction, the Contractor shall submit to the Engineer for approval:

Product data and source for each type of stone:
Samples of stone (consisting of stones not less than 12 inches square) for verification purposes of form, color, grade, finish, type, and variety of stone required. Stones shall be a flat stone, suitable and confortable for stepping on. Stone thickness shall be 1.5” minimum. Include 2 or more stones in each set of samples showing the full range of variations in appearance characteristics to be expected in the completed work. Deliver samples to the site for review by the Engineer.

Reinforced lawn surfacing: Product data for each element to provide a complete installation as shown in the Plans.

8-02.2 Materials

Section 8-02.2 is supplemented with the following:

(******)
Streambed Boulders shall meet the requirements of 9-03.11(3).

Stepping stones shall be quartzite flagstone or approved equal and have a smooth finish free of cracking and flaking. Minimum flagstone thickness shall be 1.5". Stone type and color to be approved by Engineer.

Arborist Wood Chip Mulch (AWCM) shall be coarse ground wood chips (approximately 1/2" to 4" along the longest dimension) derived from the mechanical grinding or shredding of the above-ground portions of trees. It may contain wood, wood fiber, bark, branches, and leaves; but may not contain visible amounts of soil. It shall be free of weeds and weed seeds, including but not limited to plants on the King County Noxious Weed list (available at: https://www.kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/laws/list.aspx), and shall be free of invasive plant portions capable of resprouting, including but not limited to horsetail, ivy, clematis, knotweed, etc. It may not contain treated wood, lumber and/or more than 0.5% by weight of manufactured inert material (plastic, concrete, ceramics, metal, etc.).

Arborist Wood Chip Mulch, when tested, shall meet the following loose volume gradation:

	Percent Passing	
Sieve Size	Minmum	Maximum
2"	95	100
1"	70	100
5/8"	0	50
¼"	0	40

No particles may be longer than six inches.

Bioretention Soil Mix

Bioretention Soil Mix (BSM) shall consist of an imported, well-blended homogeneous mixture of Compost for Bioretention Soil Mix and Mineral Aggregate for Bioretention Soil Mix that provides by volume: 35 to 40 percent max compost and 60-65 percent mineral aggregate (with less than 5% fines). Total BSM organic matter content of 4-8% (by dry weight). The Compost for Bioretention Soil Mix and Mineral Aggregate for Bioretention Soil Mix shall be as specified below.

The mixture shall have an organic material content that is four to eight percent by weight, as confirmed by organic matter content test results of Bioretention Soil Mix. Organic content test shall be performed in accordance with Testing Methods for the Examination of Compost and Composting (TMECC) 05.07A, "Loss-On-Ignition Organic Matter Method" or per ASTM D 2974 Method C or D (Standard Test Methods for Moisture, Ash and Organic Matter of Peat and Other Organic Soils) test results demonstrating the Bioretention Soil Mix meets the requirements specified in this section.

Mineral Aggregate for Bioretention Soil Mix:

Shall be analyzed by an accredited lab and shall meet the following gradation:

Sieve Size	Percent Passing
3/8" square	100
No. 4	60-100
No. 10	40-100
No. 40	15-50
No. 200	2-5

Grain-size analysis per ASTM Designation D 422 (Standard Test Method for Particle-Size Analysis of Soils) from a representative sample of the Mineral Aggregate for Bioretention Soil Mix material.

Mineral Aggregate for Bioretention Soil Mix shall be free of wood, waste, coating, or any other deleterious material. All aggregate passing the No. 200 sieve size shall be non-plastic.

Efforts shall be made to have the Mineral Aggregate for Bioretention Soil Mix meet the following gradation coefficients according to ASTM D 2487-98: Coefficient of Uniformity ($C_u = D_{60}/D_{10}$) equal to or greater than 4; and Coefficient of Curve ($C_c = (D_{30})^2/D_{60}xD_{10}$) greater than or equal to 1 and less than or equal to 3.

Compost for Bioretention Soil Mix:
Shall meet the following:

- Manufactured by facilities which have an active solid waste handling permit from the local jurisdictional Health Department as per WAC 173-350-220 or WAC 173-308. Submit a copy of this permit. Compost production and quality must comply with Chapter 173-350 WAC and with the criteria below:
- Compost products must be the result of the biological degradation and transformation of feedstocks as specified below, under the controlled conditions designed to promote aerobic decompositions, per WAC 173-350-220, which is available at http://apps.leg.wa.gov/wac/default.aspx?cite=173-350-220.
- The compost Supplier must test all compost products within 90 calendar days prior to application at the Suppliers expense. Submit a copy of producer's current Seal of Testing Assurance (STA) certification as issued by the U.S. Composting council.
- The compost product must contain a minimum of 65 percent by volume from recycled plant waste as defined in WAC 173-350-100 as yard debris, wood waste, crop residues, and bulking agents. A maximum of 35 percent by volume of pre-or post-consumer food waste as defined in WAC 173-350-100 may be substituted for recycled plant waste. Biosolids or manure feedstock shall not be used for the compost going into bioretention soils or infiltration ponds.
- Salmonella must be less than 3 MPM (Most Probable Number) per 4 grams of total solids, by dry weight.
- Metals must be at levels below those specified in WAC 173-350-220, Table 220B.
- Moisture content range: no visible free water or dust produced when handling the material.
- Screened to the following size gradations for Fine Compost when tested in accordance with TMECC test method 02.02-B, Sample Sieving for Aggregate Size Classification." Fine Compost shall meet the following gradation by dry weight:

    - Minimum percent passing 2” 100%
    - Minimum percent passing 1” 99% - 100%
    - Minimum percent passing 5/8” 90% - 100%
    - Minimum percent passing ¼” 75% - 100%
- pH between 6.0 and 8.5 (TMECC 04.11-A); 1:5 Slurry pH
- Physical contaminants, defined in WAC 173-350 (plastic, concrete, ceramics, metal, etc.) shall be less than 1.0 percent by weight as determined by TMECC 03.08-A “percent dry weight basis”.
- Minimum organic matter content of 40% by dry weight basis as determined by (TMECC 05.07A) Loss-On-Ignition-Organic Matter Method.
- Soluble salt content less than 5.0 mmhos/cm (TMECC 04.10-A) Slurry Method, Mass Basis.
- Maturity greater than 80% (TMECC 05.05-A “Germination and Vigor”). The Engineer may also evaluate compost for maturity using the Solvita® Maturity Test at time of delivery. Fine compost shall score a number 6 or above on the Solvita® Compost Maturity TEST.
- Stability of 7 or below (TMECC 05.08-B “Carbon Dioxide Evolution Rate”)
- Fine compost must have a carbon-to-nitrogen ratio of less than 25:1 as determined using (TMECC 04.01 “Total Carbon” and TMECC 04.02D “Total Kjeldahl Nitrogen”).

Fertilizer for Lawn Installation

Fertilizer shall meet the following specifications:

- Total Nitrogen (N) 12% - 16%

- A minimum of 40 percent of the total nitrogen shall be derived from isobutylidene dirurea (IBDU)®, or Polyon®). The remainder may be derived from any source.

- Available Phosphoric Acid (P2O5) 9% - 14%

- Soluble Potash (K) 9% - 14%

- The selected fertilizer shall contain these micro-nutrients:

    - Sulfur (S)
    - Boron (B)
    - Iron (Fe)
    - Manganese (Mn)
    - Zinc (Zn)

In addition to the requirements above, the Contractor shall show proof the product contains 70% or greater slow release nitrogen with a release time period greater than six weeks.

Additional Lawn Fertilizer
Fertilizer to be applied after the lawn establishment period, shall meet the following specifications:

- Total Nitrogen (N) 18% - 26.0%

- A minimum of 40 percent of the total nitrogen shall be derived from isobutylidene diurea (IBDU)®, or Polyon®. The remainder may be derived from any source.

- Available Phosphoric Acid (P205) 2.0% - 6%

- Soluble Potash (K20) 10.0% - 20%

- The selected fertilizer shall contain these micro-nutrients:

    - Sulfur (S)
    - Boron (B)
    - Iron (Fe)
    - Manganese (Mn)
    - Zinc (Zn)

In addition to the requirements above, the Contractor shall show proof the product contains 70% or greater slow release nitrogen with a release time period greater than six weeks.

Split rail fence shall be as specified in the details in the Plans.

Reinforced lawn surfacing system, which includes the surfacing, edge restraint and anchor shall be Grasspave2 Porous Grass Paver or approved equivalent.

8-02.3(3)A Chemical Pesticides

Supplement section 8-02.3(3)A with the following:

(******)
Chemical pesticides may not be used on this project unless prior written approval is obtained from the Engineer.

8-02.3(3)B Planting and Lawn Area Weed Control

Delete paragraph 6, Section 8-02.3(3)B and replace with the following:

(******)
Herbicides may not be used on this project for weed control within the planting areas. Weed control shall be performed by hand, as needed to control weed growth.

Supplement 8-02.3(3)B with the following:

(******)
Weed barrier mat shall be jute matting of a uniform open plain weave of unbleached, single jute yarn treated with a fire retardant chemical. The yarn must be of a loosely twisted construction and must not vary in thickness by more than half of its nominal diameter. Jute matting must be furnished in rolled strips approximately 50 yards in length. Matting width must be 48 inches with an average weight of 0.92 pound per square yard. A tolerance of ± 1 inch in roll width and ± 5 percent in weight per square yard will be allowed. Stakes for securing the matting may be wire staples, steel pins, steel spikes, or wooden stakes. Stakes for securing weed barrier matting to earth surfaces must be a minimum 12 inches in length, and must have

sufficient strength to withstand pounding the stakes into soil flush with the surface.

8-02.3(4) Topsoil

This section is replaced with the following:

(******)
Topsoil shall be evenly spread over the specified areas to the depth shown in the Plans and specifications or as otherwise ordered by the Engineer.

Topsoil shall not be placed when the ground or topsoil is frozen or excessively wet.

8-02.3(4)A Topsoil Type A

Section 9-14.1(1) is replaced with the following:

(******)
Topsoil Type A shall consist of the following:

Two-way topsoil consisting of 2/3 sandy loam, 1/3 fine compost by volume. Soil shall meet the following requirements:

Soil shall be sandy loam or loamy sand consisting largely of sand, but with enough silt and clay present to give it a small amount of stability. Individual sand grains can be seen and felt readily. On squeezing in the hand when dry, it shall fall apart when the pressure is released; on squeezing when moist, it shall form a cast that will not only hold its shape when the pressure is released, but shall withstand careful handling without breaking.
The mixed topsoil shall meet the following:

Screen Size	**Percent Retained**	**Percent Passing**
1/4 inch	5%	95%
#10	15	85
#30	50	50
#60	60	40
#100	80	20
#200	90	10

Topsoil shall have a pH range of 5.0 - 6.5 with dolomitic limestone added as necessary to attain this range (pH determined by soil test).

Submit soil analysis from a soils testing laboratory to the Engineer. Indicate source and obtain the Engineer's approval before hauling to site (analysis test with a 2-pound bag sample is required).

Compost for Topsoil mix shall be fine compost meeting the requirements of Section 9-14.5(8).

8-02.3(5) Roadside Seeding, Lawn and Planting Area Preparation

This section is supplemented with the following:

(******)
The Work involved in preparing areas shall be conducted so the flow lines in drainage channels are maintained. Material displaced by the Contractor's operations that interferes with drainage, shall be removed from the channel and disposed of as approved by the Engineer. Before planting and final grading takes place, the area shall be cultivated when specified in the Plans or the Special Provisions. The areas shall be brought to a uniform finished grade, 1 inch, or the specified depth of mulch plus 1 inch, below walks, curbs, junction and valve boxes, catch basins, and driveways, unless otherwise specified. All excess material and debris, stumps, and rocks larger than 3 inches, shall be removed and disposed of off the project site or as approved by the Engineer.

Work within the wetland and wetland buffer shall be conducted either through hand-turning of the soil or by using an excavator and backing out of the work area so that the cultivated soils are not re-compacted prior to placing large woody debris and/or planting.

Contractor shall coordinate with other Work related to this Project to achieve subgrade depths, allowing for specified amendments, topsoil and mulch. Establish subgrade depths by excavating native soils or filling deficit areas with Topsoil Type B. Subgrades shall be as follows:

Infiltration pond, Planting and Lawn Areas: Establish subgrades per details shown in the Plans. Do not cultivate subgrade within the dripline of existing trees. Hand dig planting holes when planting within a tree's critical root zone (CRZ).

8-02.3(5)B Lawn Area Preparation

This section is supplemented with the following:

(******)
Soil preparation for Seeded Lawn Areas:

- Prepare subgrades by thoroughly tilling the existing soils to eight-inch (8") depth and removing concrete debris, rocks, and organic matter over two inches in diameter. Secure approval by the Engineer after first tilling operations for confirmation of tilling depth and debris removal. If large (over 4" width) clods of soil or root masses remain, further tilling and/or removal of the material may be required by Engineer.
- Place one four-inch (4") lift of Topsoil Type A over prepared subgrade. Provide smooth grades and secure approval by the Engineer.
- Soil preparation for Sod Installation Areas:
- Prepare subgrades by thoroughly tilling the existing soils to eight-inch (8") depth and removing concrete debris, rocks, and organic matter over two inches in diameter. Secure approval by the Engineer after first tilling operations for confirmation of tilling depth and debris removal. If large (over 4" width) clods of soil or root masses remain, further tilling and/or removal of the material may be required by Engineer.

- Provide smooth grades and secure approval by the Engineer.

8-02.3(5) Planting Area Preparation

This section is supplemented with the following:

(******)
Prepare subgrades by thoroughly decompacting the existing soils in accordance with the Standard specifications.

Place one 4-inch (4”) lift of Topsoil Type A over prepared subgrade and till into subgrade below. Provide smooth grades and secure approval by the Engineer.

Soil preparation for Infiltration Ponds:

- Prepare subgrades by uniformly tilling, excavating or otherwise turning the existing soils to twelve-inch (12”) depth along the bottom of the infiltration pond area and removing concrete, asphalt or other debris and foreign matter over two inches (2”) in diameter. If the Contractor encounters possible poor draining or heavily compacted soil conditions, notify the Engineer prior to proceeding with construction secure approval by the Engineer after first tilling operations for confirmation of tilling depth and debris removal. Hand tamp to compact.
- All debris, including stumps, sticks, roots, and rocks, concrete or asphalt specified for removal per above shall be removed and disposed of off the project site before topsoil or bioretention soil mix is placed.
- Prepare Bioretention Soil Mix and place 8” in infiltration pond areas in 4-inch lifts. Till first 4-inch lift into subgrade, then place the second 4” lift. Do not walk on, use equipment, drive on or otherwise compact the placed soils, except to plant and/or mulch. Allow soils to settle for a minimum of 30 days. Assume the Infiltration Pond will settle by approximately two inches (2”) during this time. Apply additional Bioretention Soil Mix to achieve finished grade minus mulch as detailed.

For planting areas that become over-compacted due to construction use, such as staging areas and access roads, the Contractor shall remove any construction materials, rocks, or debris, then loosen and cultivate subgrade to a minimum depth of 12” prior to planting and seeding operations.

Soil preparation for MSE walls:

Prepare per MSE wall manufacturer’s instructions.

8-02.3(6) Mulch and Amendments

This section is replaced with the following:

(******)
Soil amendments of the type, quality, and quantities specified shall be applied where shown in

the Plans or as specified in the Special Provisions. Areas receiving soil amendments shall be bare soil or vegetation free prior to application.

8-02.3(6)A Compost

This section is replaced with the following:

(******)
Compost used for soil amendment shall be Compost for Bioretention Soil Mix as described in 8-02.2. All soil amendments shall be installed as shown in the Plans within 30 calendar days after delivery to the project site.

8-02.3(7) Layout of Planting, Lawn and Seeding Areas

This section is supplemented with the following:

(******)
The Contractor shall coordinate with the Engineer for the location and placement of all previously stockpiled large woody debris in the wetland and wetland buffer areas. See Special Provision Section 8-26.

8-02.3(8) Planting

This section is supplemented with the following:

(******)
Protect new plantings against harm from wind, unusual weather, foot traffic or other vandalism through project acceptance. Special planting techniques may be required by the Engineer for unseasonal planting or prolonged periods of drought.

Other than seeding, all planting outside of the wetland shall occur between September 15 and December 1.

Watering: Provide water to plantings immediately following installation. From initial installtion through substantial completion, apply a minimum of 1/2” of water every three days.

Weeding and Pest Control:
Weeding of the planted landscape areas: Weeding of the planted areas to occur a minimum of once a week from installation through acceptance by Engineer. Weed more frequently as needed to prevent weeds from going to seed.

2. The Contracting Agency encourages environmentally sensitive maintenance practices. The principals of Integrated Pest Management are preferred over routine chemical applications.

Remove the majority of weeds manually by use of pincer-type weeding tools, flame or hot water weeders. Spot treat isolated weeds with the least toxic method, such as fatty-acid (soap) based non-selective herbicides. Plantings may, at some time, require corrective insect and/or pest control. Maintain close inspection on each trip to the site to insure immediate identification of disease or insect infestation. An integrated pest management program is recommended. However, it is acknowledged that other methods may be required. When necessary, and as

approved by Engineer, apply the appropriate and least toxic pesticide in accordance with state and local regulations. Applications are to be corrective rather than preventative.

4. Use of chemicals must be approved in writing in advance. Under no circumstances should a preventative “blanket” application of herbicide, fungicide, or insecticide be used without prior written approval of the Engineer. Provide the Engineer a minimum of 15 days notice prior to large scale applications. Applications must be coordinated with the Engineer. Applications must be made before 7 a.m. or after 6 p.m. and coordinated with the Engineer to avoid special event conflicts. Chemicals must be EPA-approved and applied by a licensed Washington State Pesticide Applicator and per the manufacturer’s.

Materials and methods must be in accordance with state and local regulations and applied only by licensed applicators.

8-02.3(9)B Seeding and Fertilizing

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

(******)
Seed mix for drainage ditch seeding mix shall be the Native Northwest Mix by Sunmark Wildflower Seed Mixes or approved equal. Seed mix shall contain:

Scientific Name	**Common Name**
Cheiranthus allionii	Wallflower
Clarkia amoena	Dwarf Godetia
Clarkia unguiculate	Clarkia
Eschschozia californica	California Poppy
Gilia capitate	Globe Gilia
Gilia tricolor	Bird’s Eyes
Layia playtglossa	Tidy Tips
Linathus grandifloras	Mountain Phlox
Linum grandiflorum rubrum	Scarlet Flax
Linum perene lewisii	Blue Flax
Lobularia maritime	Sweet Alyssum
Lupinus densiflorus aureus	Yellow Lupine
Lupinus polyphyllis	Many Leaved Lupine
Nemophila maculate	Five-spot
Nemophila menziesii	Baby Blue-Eyes
Papaver rhoeas	Corn Poppy
Sysyrinchium bellum	Blue-Eyed Grass

Seed shall be applied at a rate of 25-30 pounds per acre.

8-02.3(10)B Lawn Seeding and Sodding

Section 8-02.3(10)B is supplemented with the following:

(******)

Seed mix for seeded lawn shall be as follows:

Kind and Variety of Seed in Mixture	Percent by Weight
Turf type Perennial Rye Blend (2 or more approved varieties)	50%
Chewings Fescue	30%
Hard Fescue	20%

Turf varieties must include only those ranked “Best” by the 2011 or most current succeeding year’s WSU Turfgrass Cultivars Evaluated in Western Washington/Oregon In Recent years list (see Puyallup.wsu.edu/turf).

The seed mixture must be no less than 98 percent pure, and must have a minimum germination rate of 90 percent, and contain less than 1.5% inert material. No noxious weeds will be permitted. Seed must be certified grown in Washington, Oregon or Idaho and tagged with the information specified in Section 9-14.2.

Seeding rate is 6 pounds per 1000 square feet. Apply starter fertilizer.

Fine Grade
After installation of the underdrain pipe and irrigation system, the Contractor shall fine grade the areas to a maximum deviation of 0.10 foot within any 10-foot segment without localized low areas to trap water.

Rake
The area shall be raked by approved hand or mechanical methods to remove and dispose of all clods, rocks, debris, and litter larger than 1 inch in any dimension.

Finished Grade
The finished grade shall be ½ (half) inch below all mowing strips, curbs, sidewalks, and other appurtenances.

Sow Seed
Lawn area seeding shall be applied via hydro seeding, in accordance with Section 8-01.3(2), unless otherwise approved by Engineer.

PAM shall not be used as tackifier. Do not place straw or wood strand mulch on seeded lawn areas.

Fertilizer
Fertilizer for lawn installation shall be furnished and applied at the rate of 1 lb. of actual nitrogen per 1000 sq. ft.

Water Application
Water shall be applied as required throughout germination, initial growth period, and the lawn establishment period.

Sod
Sod shall be net-free, and be a variety specified by supplier for use in sports or play field environments.

8-02.3(10)D Lawn Mowing

Section 8-02.3(16)C is supplemented with the following:

(******)
Lawn areas shall be mowed a minimum of twice per month (every 2 weeks) from March through November.

8-02.3(11)B Bark and Wood Chip Mulch

Replace this section with the following:

(******)
Arborist Wood Chip Mulch shall be the Material used to meet erosion control and tree /vegetation protection requirements. Any contamination of the mulch due to the Contractor's operations shall be corrected to its former condition at the Contractor's expense.

Arborist Wood Chip Mulch erosion control application shall be with a forced air mulch spreader, or by a delivery method that does not disturb the surface to be protected, followed by hand-raking to obtain uniform coverage and clearance around tree trunks. Where a forced air equipment mulch application is indicated as providing unacceptable results, the Contractor shall employ manual or other application methods such as hand spreading and raking.

Planting and restoration areas shall receive two inches (2") depth of Arborist Wood Chip Mulch. Mulch shall be feathered to the base of the plant and 1 inch below the top of junction and valve boxes, curbs, and pavement edges. All plant crowns shall be free of mulch.

Infiltration Ponds shall receive two inches (2") depth of Medium Compost per Section 9-14.5(8) on bottom and ponding areas (up to rim elevation of overflow drain), and 2" depth of Arborist Wood Chip Mulch on side slopes above ponding area and all other areas. Mulch shall be feathered to the base of the plant and 1 inch below the top of junction and valve boxes, curbs, and pavement edges. All plant crowns shall be free of mulch.

Mulch shall be raked or manually cleared 6 to 8 inches from the trunk(s) of each new tree and 12-18" from existing trees to prevent damage from rot or rodents.

Should the wood chip mulch coverage expose at any time bare ground of more than 50% in any 100 square foot area, the Contractor shall promptly remulch the exposed area to full coverage of the thickness required.

8-02.3(13) Plant Establishment

The third paragraph of this section is supplemented with the following:

(******)
Maintaining a weed-free condition shall include the removal of any remnant blackberry canes and roots.

(******)

8-02.3(18) Streambed Boulders

Streambed boulders shall be placed as shown in the Plans.

(******)

8-02.3(19) Stepping Stones

Install stepping stones in accordance with the details in the plans. Clean stone surfaces that have become dirty and stained prior to setting. Prior to placement remove soil, stains, and foreign materials and clean stones by thoroughly scrubbing stones with fiber brushes followed by a thorough drenching with clear water. Use only mild cleaning compounds that contain no caustic or harsh filler or abrasives.

(******)

8-02.3(20) Split Rail Fence

Contractor shall furnish and construct split rail fence, including sensitive area signs, in accordance with the Plans including modifications required for rails. All timber and lumber shall be in accordance with Setion 9-16.2(1)B.

(******)

8-02.3(21) Reinforced Lawn Surfacing

Install reinforced lawn surfacing, including paver, edge restraint and anchor, and base and fill matrerials in accordance with manufacturer's recommendations. Surfacing shall be installed over a six inch depth of compacted gravel base meeting manufacturer specficiations for base material and placed upon a prepared subgrade in accordance with Section 2-06.

8-02.4 Measurement

Section 8-02.4 is supplemented with the following:

(*****)

Topsoil shall be measured in place by the cubic yard.

"Bioretention Soil Mix" shall be measured in place by the cubic yard.

"Drainage Ditch Seeding Mix" shall be measured in place by the square yard.

Lawn Mowing shall be per lump sum, to be full pay for the specified work for the duration of the lawn mowing period.

"Live Stake", per each.

"Streambed Boulder One Man" shall be measured in-place per each.

Split rail fence shall be measured by the linear foot of completed fence, along the ground line, exclusive of openings. No separate measurement will be made for sensitive area signs.

"Arborist Woodchip Mulch" shall be measured in-place by the cubic yard along the grade and

slope of the area covered by the depth shown in the plans immediately after placement.

8-02.5 Payment

Section 8-02.5 is supplemented with the following:

(*****)
"Topsoil Type A", per cubic yard.
The unit Contract price per cubic yard for "Topsoil Type A" shall be full pay for all Work to prepare the subgrade, soil preparation, and furnish and spread the material.

"Bioretention Soil Mix", per cubic yard.
The unit Contract price per cubic yard for "Bioretention Soil Mix" shall include subgrade preparation and testing, furnishing and testing of soil mix, compost amendement, soil preparation, mixing, placement, soil tests, amendments, materials, compaction or other work required for completion of the Work.

"Drainage Ditch Seeding Mix" shall be measured in place by the square yard.

The Payment item for "Lawn Mowing" in Section 8-02.5 is replaced with the following:
"Lawn Mowing", per lump sum.

All costs for lawn mowing per Section 8-02.3(16)C shall be included in the lump sum price for "Lawn Mowing" including work, materials and equipment required to provide mowing, weeding, fertilizing, as specified.

"Live Stake", per each.

"Streambed Boulder One Man", per each.
The unit Contract price per each for "Streambed Boulder One Man" shall be full pay for all Work required to obtain and install the boulders.

"Stepping Stones", per lump sum.
The lump sum unit Contract price for "Stepping Stones" shall be full pay for all Work required to coordinate the selection of stones, prepare subgrade, and install the stepping stones.

"Split Rail Fence", per linear foot.
The unit Contract price per linear foot for "Split Rail Fence" shall be full pay for all Work to furnish and install the fence including sensitive area signs and any required modifications to rails noted in the Plans.

"Reinforced Lawn Surfacing", per lump sum.
The unit Contract price per lump sum for "Reinforced Lawn Surfacing" shall be full pay for all Work to furnish and install the surfacing including the edge restraints and anchors, Topsoil Type A, subgrade preparation, and providing, placing and compacting the gravel base material.

"Arborist Woodchip Mulch", per cubic yard.
the unit Contract price per cubic yard for "Arborist Woodchip Mulch" shall be full pay for all Work for furnishing and spreading the mulch.

8-03 Irrigation Systems

8-03.1 Description

Section 8-03.1 is replaced with the following:

(******)
Description:

This work consists of the designing, laying out, furnishing materials and installing temporary automatic irrigation systems in accordance with the Plans, Specifications and Notes, or as approved by the Engineer.

Project Conditions:

- Follow all procedures in Contract Plans regarding locating existing underground utilities.
- Follow requirements of the Tree and Vegetation Protection.
- Utility locate and review of newly installed utilities.

Before proceeding with any work, the Contractor shall inspect the site, carefully checking all grades and verifying all dimensions and conditions affecting the work to satisfy him/her that he/she may safely proceed. Changes or alterations to the system to meet actual conditions shall be made at the Contractor's expense.

When renovating or working around an existing irrigation system, the Contractor shall test and document the condition of the existing system prior to the Contractor beginning the work. Take care to neither disturb nor damage any above ground or underground utilities or elements. Keep streets, sidewalks and site clean, free from debris and affected drains open and free flowing at all times.

Follow requirements for porous asphalt and infiltration pond protection.

8-03.5 Payment

Section 8-03.5 is supplemented with the following:

(******)
"Irrigation System - ____ Area", per lump sum. South Area includes all planted areas to be irrigated, as indicated on the plans, south of NE 124th Street. North Area includes all planted areas to be irrigated, as indicated on the plans, north of Totem Lake Boulevard NE. All costs for designing, laying out, furnishing materials and installing, maintaining, winterizing, and re-energizing irrigation after winter for a period of one year from the date of substantial completeion shall be included.

All costs for furnishing and installing irrigation system shall include irrigation sleeving as shown in the Plans.

8-04 Curbs, Gutters, and Spillways

8-04.3 Construction Requirements

8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways

Section 8-03.5 is supplemented with the following:

(******)
All concrete shall be air-entrained Class 4000 conforming to the requirements of Section 6-02.

(******) ***NEW***
8-05 Pigmented Concrete Deck

8-05.1 Description

Integrally colored finishes for cast-in-place concrete in Span 3 “Resting Area” and Pier 9 "Overlook", as shown in the Plans.

8-05.2 Material

At Resting Area, provide colors from color additive manufacturer's Buddy Rhodes SB-40 Cobalt Blue, or approved equivalent.

At Overlook, provide colors from color additive manufacturer's Buddy Rhodes SB-99C Cool Gray, or approved equivalent.

8-05.3 Construction Requirements

Entire deck shall receive the same transverse broom finish.

8-05.3(1) Submittals

For each location, submit three mock-up samples 24" x 24" x 4" thick demonstrating colored concrete color with broom finished texture. Use three different pigment percentages to provide a range of colors for the Owner to select from.

It is acknowledged that sample submittals provide only general indication of color; color of completed work may differ.

8-05.3(2) Quality Assurance

Perform work in accordance with: ACI 305.1, ACI 306.1, ACI 318.

Obtain pigment material from the same source and maintain high degree of consistency in workmanship throughout the Project.

Installer Qualifications: Concrete work shall be performed by a firm with at least five years of experience with work of similar scope and quality.

Contractor to submit written description of methods to be used for construction of the pigmented concrete "Resting Area" and "Overlook" indicated in the Plans, including finishing conditions, materials, workmanship, joint treatments, and curing methods.

Accepted mock-up samples will provide visual standard for work of Section.

8-05.4 Measurement and Payment

This work shall be incidental to and included in the Lump Sum item for “Bridge Deck (Totem Lake Connector)”.

8-12 Chain Link Fence and Wire Fence

8-12.1 Description

This section is supplemented with the following:

(******)
This Work shall include the furnishing, installing, maintaining and removing of temporary chain link construction fencing to secure the work area and along the temporary trail running along the east edge of the Cross Kirkland Corridor ROW as shown in the Plans.

8-12.2 Materials

This section is supplemented with the following:

(******)
Construction Fencing: Prefabricated portable galvanized chain link fence panels including fabric, posts, top and bottom rails, and driven posts with rolled fabric & wire ties for areas of uneven terrain.

Prefabricated portable fence panels shall be a minimum of 6 feet high by maximum 10 feet wide. Post bases shall be minimum 16 inches by 8 inches by 8 inches high concrete pier with sleeve for post, or as approved. Prefabricated portable temporary fence panels shall be constructed to industry standards for fixed chain link fencing.

Chain-Link Fencing:

- Posts - minimum 1-1/2” OD Schedule 40 galvanized steel pipe.
- Fabric - minimum 11 gauge galvanized two-inch diamond mesh steel wire interwoven. Knuckled or twisted selvage is acceptable.
- Bracing: Provide additional panels or outriggers as necessary to provide a rigid, stable run of fence.

Driven Post Fencing:

- Posts - Schedule 40 galvanized steel pipe.
- Fabric - minimum 11 gauge galvanized two-inch diamond mesh steel wire interwoven. Knuckled or twisted selvage is acceptable.
- Wire Ties – minimum 9-gauge aluminum wire.

Gates shall be 20 feet wide (two prefabricated panels) with double padlocks to allow Contractor and Owner forces entry. Hinged sides of each operating panel shall include double bracketing. Owner will provide one lock keyed for City personnel for each entry. Contractor shall provide one lock keyed for Contractor and Subcontractor for each entry.

8-12.5 Payment

This section is supplemented with the following:

(******)

The Work to install temporary construction fencing shall be incidental and costs incurred to perform the Work described in this Section shall be included in payment for other items of Work in the Contract.

8-14 Cement Concrete Sidewalks

8-14.3 Construction Requirements

This section is supplemented with the following:

(******)
Cement concrete sidewalks shall be constructed and finished in accordance with the details shown in the Plans. All cement concrete will be air-entrained Class 4000.

8-15 Riprap

8-15.1 Description

This section is supplemented with the following:

(******)
This Work shall include furnishing and providing quarry spalls for infiltration pond overflows and to construct the temporary construction laydown work area south of NE 124th Street using a screened quarry spall material and the removal of quarry spalls and restoration of the existing drainage ditch upon removal of the construction laydown area.

Work also includes the furnishing and placing rock for erosion and scour protection as shown in the Plans surrounding the concrete box culvert.

8-15.2 Materials

This section is supplemented with the following:

(******)
Quarry spalls used to provide a level temporary work area south of NE 124th Street and for infiltration pond overflows shall be screened through a 4” sieve and washed prior to delivery to the site to facilitate removal of quarry spalls and restoration of the existing drainage ditches.

Rock for erosion and scour protection shall meet the requirements of Class A in accordance with Section 9-13.4(2).

8-15.3 Construction requirements

This section is supplemented with the following:

(******)
Excavation for rock for erosion and scour protection shall be in accordance with Section 8-15.3(1) and placement of rock shall be in accordance with Section 8-15.3(2) except only a 3-inch tolerance will be allowed from slope plane and grade line in the finished surface.

8-15.3(6) Quarry Spalls

This section is supplemented with the following:

(******)
Screened and washed quarry spalls for construction laydown shall be placed as needed to create a temporary work area.

Screened and washed quarry spalls shall also be placed for overflows at infiltration ponds as shown in details in the Plans.

8-15.4 Measurement

This section is supplemented with the following:

(******)
"Rock for Erosion and Scour Protection, Class A", will be measured by the ton of rock actually placed.

Quarry spalls for infiltration pond overflows will be measured by ton of spalls actually placed.

No measurement will be made for quarry spalls for the temporary construction laydown.

8-15.5 Payment

This section is supplemented with the following:

(******)
"Quarry Spalls, 2 In.-4 In.", per ton
The unit Contract price for "Quarry Spalls, 2 In.-4 In." per ton shall be full pay for furnishing all work required to construct the infiltration pond overflows.

No separate payment will be made for the Work to provide the quarry spalls for construction laydown or removal and disposal of construction laydown . This Work shall be incidental to construction.

"Rock for Erosion and Scour Protection, Class A", per ton.
The unit Contract price for "Rock for Erosion and Scour Protection, Class A" per ton shall be full pay for furnishing all Work required to construct the rock protection, except for excavation.

8-19 Field Office

Delete Section 8-19 and replace with the following:

(******)
The Contractor shall provide a field office on or adjacent to the Project Site for the use of the Engineer's staff within five (5) Working Days from the Notice to Proceed Date. The field office, its location, and an alternate date if necessary, shall be subject to the approval of the Engineer and shall be established at the pre-construction meeting. The field office shall meet the following requirements:

- The field office shall be a weather-tight building; either portable or permanent structure a minimum of eight (8) feet wide with not less than 360 square feet of clear floor space, having at least one door, and a window area of not less than 40 square feet. Windows shall open to allow ventilation. Doors and windows shall be provided with bug screens. The interior walls shall be covered with material suitable for displaying Contract Plans and progress charts, etc.
- To deter break-in and theft, window and door glass shall be protected with heavy security screens on metal frames bolted to the walls and doors. All doors shall have 2 locks each: one doorknob keyhole lock and 1 deadbolt cylinder lock, each with its own distinct key. The Contractor shall provide 6 sets of keys for each lock.
- The field office shall be level and, if portable, the structure shall be supported on blocks.

If more than three (3) steps are required to enter the office, a floor-level landing of at least 12 square feet with railing shall be provided. Steps and landing

- shall be stable and slip resistant. A 3 sided boot brush shall be provided at each field office entrance.

The Contractor shall be responsible for maintaining and cleaning the field office; repairing any damage to the structure, equipment and appurtenances; providing weekly janitorial services including supplying appropriate toilet room paper products; refilling applicable dispensers with drinking water cups, waterless hand cleaner with pumice, and paper towels; cleaning windows and sweeping floors; and emptying trash receptacles and recyclables, disposing trash, and relining trash receptacles and recyclables.

The office shall be furnished with the following furniture, equipment and appurtenances reasonably presentable, in good working order, and acceptable to the Engineer:

- Drafting table, 6 foot x 4 foot minimum, a “D size” plan drawer, soft pad covering entire top, locking tilt feature, and stool with back support (one set);

- Office desk, 30” x 60” minimum size, with at least 4 drawers which can be locked with key & one of which is set up for file folders, 2 sets of keys each desk (two);

- Office table 36” x 72” (two), 1 Conference table 4’ x 10’;

- Office chairs with seat & back cushion (eight);

- Four (4) drawer legal file steel cabinet (one) w/100 legal size folders and hanging folders, locking feature with 2 sets keys, and frame in each drawer to hold folders;

- Trash receptacles and recycle bins for paper, plastics and glass.

- Color Photocopy/Color Printer/Color Scanner/Fax multifunction machine with multiple tray frontload including 3 paper trays (8-1/2 x 11-inch, 8-1/2 x 14-inch, and 11 x 17 inch) with the following:
  - Understorage cabinet, floor wheels to accommodate service technician.
  - Preset reduction to 50% and enlarge to 200% plus zoom in 1% increments.
  - Bypass tray
  - Replacement toner cartridge (1 cartridge for each color)
  - Capability to scan directly to PDF color at 300 dpi
  - Plain paper fax capable

- Direct phone line connection and programmable capable to directly send scanned documents and faxes by e-mail.

- 400 sheets of each size 20 lb. bright paper with no more than 30% recycle post-consumer content.

- Repair and maintenance service contract with 4 hour service response on-site parts and labor;

- The Contractor shall provide a commercial grade broadband internet access with a

static IP address (Cable or DSL at a minimum speed of 2.0 Mbps upload & 6.0 Mbps download) between the field office and an Internet Service Provider (ISP). The Contractor shall provide for 24 hour technical support and a local or 1-800 phone number to troubleshoot and maintain the broadband connectivity.

- The Contractor shall provide inside wiring to support a Local Area Network inside the field office and shall include a 4-plex jack to at least 5 workstations (desk or table locations to be addressed at the pre- construction meeting per Section 1-08.1(2)).

- The Contractor shall provide necessary equipment to allow internet connectivity and shall be configured to allow VPN access from individual machines to the City of Kirkland. Color Printer/Color Copier/Scanner/Fax multifunction machine shall be connected to the office network and programmed to send scanned documents by e-mail.

- **The Contractor shall contact City of Kirkland IT Department at least 5 Working Days in advance for access to the City of Kirkland internal network;**

- White board (3'H x4'W) with eight (8) dry erase markers and 1 white board eraser.

- Electric power of sufficient capacity to operate an electric heater, air conditioner, FAX machine, internet access, 5 computers with monitors, calculator, and lights. Field office shall be provided with a minimum of eight (8) duplex convenience electrical outlets. The office shall be illuminated at the tables and desks. An outdoor light fixture with a 150 watt bulb or approved equal shall be installed to effectively light the area around the office facility.

After obtaining inspection and approval of the field office electrical system and the proposed temporary power connection hook-up from City, the Contractor shall provide a minimum 15 Working Days advance notice to the local power utility requesting a temporary power drop and connection. Generators (gas and diesel) for producing electrical power will not be allowed unless the Engineer permits such in writing.

Contractor shall provide drinking water with disposable cup dispenser filled with cups;
The Contractor shall provide heating and air-conditioning of sufficient capacity to heat the office to 70°F within 1 hour, and to cool the office 15°F within 1 hour.

If the Contractor fails to provide a field office at the location on the date agreed to at the pre-construction meeting, the Engineer will provide Written Notice of such and shall have the right to withhold progress payments in accordance with Section 1-09.9(3). If within 5 Working Days of the Engineer sending this Written Notice the Contractor has not provided the field office, then the Engineer will have the option to provide the field office. If the Engineer elects to provide the field office, the Engineer will give the Contractor a second Written Notice of such; will within three (3) Working Days of giving the second Written Notice provide the field office meeting the requirements specified in Section 1-07.29; and will charge the Contractor by deducting from monies due or to become due the Contractor on progress payments, all costs associated with the field office as specified in Section 1-07.29. Upon deliverance of the second Written Notice, the Contractor's right to provide the field office shall be forfeited.

The field office, equipment, and appurtenances supplied by the Contractor shall revert to and be removed by the Contractor when the Engineer, via the Written Notice of Physical Completion to the Contractor, establishes the Physical Completion Date. If the Contractor removes, closes, or discontinues the services specified in Section 1-07.29 prior to receiving the Written Notice of Physical Completion without first obtaining approval from the Engineer, the Contractor will be charged Liquidated Damages in accordance with Section 1-08.9.

All costs for the work required to provide and maintain the field office including regular expenses for telephone, internet, electricity, etc.; incidental constructions to accommodate; and to procure all permits and licenses required for the field office to meet the requirements of Section 1-07.29, shall be included in the lump sum Contract Price Bid for “Mobilization.”

All costs for the work required to relocate the field office, if required, shall be considered incidental to the Bid item “Mobilization

8-21 Permanent Signing

8-21.1 Description

This section is supplemented with the following:

(*****)

This Work also includes the installation, re-location, and removal and disposal of City-provided public informational signs; to be installed in the locations shown in the Drawings or as directed by the Engineer.

8-21.2 Materials

This section is supplemented with the following:

(*****)

Public Informational Signs shall be placed using two, four-inch by four-inch pressure treated wood posts with an exterior plywood backing matching the dimensions of the sign to be mounted. The City will supply the signs to the Contractor at time of installation.

8-21.3(1) Location of Signs

Replace the first sentence with the following:

(*****)

Public Informational Signs are located in the Drawings by station number, note, or as directed by the Engineer.

8-21.3(5) Sign Relocation

Replace the first sentence with the following:

(*****)

Where shown in the Drawings or directed by the Engineer, the existing Public Informational Signs, posts and plywood backer shall be relocated as directed by the Engineer.

8-21.3(10) Sign Attachment

This section is supplemented with the following:

(*****)

Public Informational Signs shall be attached to the supporting structure using methods that will ensure signs stay attached in all weather conditions, and are removable during relocation(s) without damaging the sign.

8-21.4 Measurement

This section is supplemented with the following:

(*****)

Public Informational Signs will be measured per each.

8-21.5 Payment

This section is supplemented with the following:

(*****)

"Public Informational Signs", per each.

All costs in connection with supplying and installing sign posts, post foundations, plywood backing, and mounting hardware during construction; as well as removal and disposal of all signs at project completion, shall be included in the bid item price. Sign media will be provided to the Contractor by the City and is not included in the bid item price. The Contract bid item price per each shall include relocation and re-installation of each sign one time during Contract duration.

8-24 Rock and Gravity Block Wall and Cribbing

8-24.2 Materials

Insert the following text at the end of this section:

(******)
Materials for rockery shall be as defined in the City of Kirkland Standard Plan CK-R.52 and as noted in the plans. Rocks type and color to be approved by Engineer.

8-24.3 Construction Requirements

This section is supplemented with the following:

(******)
Construct rockery in accordance with City of Kirkland Standard Plan CK-R.5. Submit description and image rocks to Engineer for approval prior to start of Work.

8-24.4 Measurement

This section is supplemented with the following:

(******)
"Rockery" will be measured per square foot of completed in place front face of wall. The vertical (bottom and top of wall) limits and horizontal limits for measurement are as shown in the Plans.

No separate measurement will be made for excavation and haul or any of the materials listed in City of Kirkland Standard Plan CK-R.52.

8-24.5 Payment

This section is supplemented with the following:

(******)
"Rockery" will be paid per square foot. The unit contract price per square foot for Rockery shall be full pay for Work required to complete the installation as shown in the Plans and detailed in the City of Kirkland Standard Plans.

8-26 Snags and Large Woody Debris

8-26.1 Description

This section is supplemented with the following:

(******)
This Work shall include installing the salvaged snags as described in the Plans and in coordination with the Engineer and dispersal of large woody debris that was stockpiled during clearing and grubbing.

8-26.2 Materials

This section is supplemented with the following:

(******)
Snags and large woody debris shall be salvaged from the site and be stockpiled as described in Section 2-01.

8-26.3 Construction Requirements

This section is supplemented with the following:

(******)
Snags - Bury one third of the total snag vertically as described in the Plans and in coordination with the Engineer.

Large woody debris – Evenly disperse large woody debris throughout wetland and wetland buffer area at the time of restoration planting. Final placement shall be reviewed and approved by the Engineer prior to planting.

8-26.4 Measurement

This section is supplemented with the following:

(******)
Measurement of snags will be by each.
Large woody debris will be lump sum.

8-26.5 Payment

This section is supplemented with the following:

(******)
“Snags”, per each
The unit Contract price per each for “Snags” shall be full pay for all Work to install the snags.

“Large Woody Debris”, per lump sum.
The unit Contract price for “Large Woody Debris” shall be full pay for all Work to disperse the

large woody debris and coordinate and review approval from the Engineer.

(******) **New Section**

8-27 Seating

8-27.1 Description

This work consists of fabricating and installing steel seating and associated fasteners and anchors as specified herein and as shown in the Plans.

8-27.2 Material

Steel Plate, Bars, and Pipe Shapes: Provide sizes and shapes as required to meet project design conditions specified and indicated In the Plans.

Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

Fasteners: Type 316 stainless-steel fasteners for exterior use.

Cast-in-Place Anchors in Concrete: Type 316 stainless steel. Provide bolts, washers, and shims as needed, all stainless steel.

Perforated metal sheet:

- Metal: Hot-rolled carbon steel type B sheets, pickled and oiled for removal of oxides

- Seating sides:
- 1/4 inch gauge (.2500 inch thick), with 3/8 inch round holes on 9/16 inch centers, 40% open area

- Seating tops:
- 3/8 inch gauge (.3750 inch thick), with ½ inch round holes on 11/16 inch staggered centers, 48% open area

Materials above conforming to the following standards:

- ASTM A53/A53M-12 - Pipe, Steel, Black and Hot-Dipped Zinc Coated, Welded and Seamless.

- ASTM A 1011 hot rolled pickled and oiled commercial steel type B.

- ASTM A29/A29 M-16 – steel bars, carbon and alloy, hot wrought.

- ASTM A 276 –stainless steel plate, bars and shapes

- 8-27.3 Construction Requirements

- 8-27.3(1) Sampling and Testing

Mock-Up: Provide a full scale mock-up of a Type L Seating, for evaluation of preparation techniques and installation workmanship.

Do not proceed with remaining work until workmanship is approved by Engineer.

Rework mock-up as required to produce acceptable work as approved by the engineer.

Retain mock-up during construction as quality standard.

The mock-up may be incorporated into the final product.

8-27.3(2) Submittals

Shop Drawings: Show fabrication and installation details. Include the following:

Plans, elevations, sections, and details of metal fabrications and their connections.

Show anchorage and accessory items.

Provide setting diagrams and templates for anchorages, sleeves, and bolts to be installed by others.

Where materials or fabrications are indicated to comply with design loadings, include material and safety factor properties, and other information needed for structural analysis.

Product Data: Provide manufacturer's standard catalog data for specified products demonstrating compliance with referenced standards. Provide list of fittings being provided with descriptions, load capabilities, and either photographs or drawings for each type.

8-27.3(3) Quality Assurance

Manufacturer Qualifications: Company specializing in fabrication of steel components with five years minimum successful experience.

Installer Qualifications: Experienced in performing work of this section that has specialized in installation of work similar to that required for this project.

8-27.3(4) Protection

The Contractor shall shop fabricate and paint the seating and wrap them with protective material prior to delivery to the site to prevent damage to the finish during delivery, storage and construction. Prior to delivery of seating materials, the Contractor shall review and be thoroughly knowledgeable with the fabricator’s care and handling recommendations.

The Contractor shall protect the surfaces from organic solvents such as acetone, benzene, and paint thinner; petroleum based solvents such as gasoline and diesel fuel; and open flames.

Seating with damage to structure or surface finish shall be replaced or touched up with approval of the Engineer.

8-27.3(5) Fabrication and Placement

Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

Fit exposed connections accurately together to form clean joints free of sharp edges.

Painting: Prepare and coat steel in accordance with Section 6-07.

Anchor Installation: Provide stainless steel embeds, anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction.

Installing bearing and levelling plates (to compensate for bridge deck grade and crossfall):

Clean concrete and bearing surfaces of bond-reducing materials and roughen to improve bond to surfaces. Clean bottom surface of plates.

Set bearing and leveling plates on wedges, shims, or leveling nuts. After bearing members have been positioned and plumbed, tighten anchor bolts.

Touchup painted steel in accordance with Section 6-07.

8-27.4 Measurement

The seating will be lump sum.

8-27.5 Payment

“Seating”, per lump sum, shall include all costs in connection with constructing the finished seating. This includes all costs for providing and installing the seating in accordance with the Plans, the Standard Specifications, these Special Provisions and the manufacturer’s installation instructions, including but not limited to, the seating and all fittings and embedded weld plates and connection fittings.

(******) **New Section**

8-28 Pedestrian Handrail

A. The Title of section 8-28 Pedestrian Handrail refers to plan sheet TLC-S-223 and the title on said plan sheet, “Sidewalk Guardrail Details” shall be interpreted to refer to the specification section 8-28 Pedestrian Handrail.

Bid item No. 79, Pedestrian Handrail shall likewise be interpreted as the bid item referring to items shown on plan sheet TLC-S-223 titled “Sidewalk Guardrail Details”.

8-28.1 Description

This Work consists of furnishing and constructing metal pedestrian railing, including foundations, of the type specified in accordance with the Plans, and these Specifications, at the locations shown in the Plans.

8-28.2 Material

Railing infill panels shall be Opus10 10-V-ST-D by Coda Architectural, or approved equal. Top rails, posts, and post sleeves shall be per pedestrian handrail supplier requirements. Foundations shall be as specified in the Plans. Finish shall be the galvanized undercoat and powder coat finish offered by the manufacturer. Color shall be Midnight, RAL 9005 (black).

8-28.3 Construction Requirements

8-28.3(1) Fabrication

Before fabricating the railing, the Contractor shall submit Type 2 Working Drawings for the Engineer’s acceptance showing dimensions and details of fabrication and including an erection diagram. Material being used shall be specified in the Working Drawings.

Cutting shall be done by sawing or milling and all cuts shall be true and smooth. Flame cutting will not be permitted.

Welding shall conform to the requirements of the "Structural Welding Code" AWS D1. for structural steel. All exposed welds shall be ground flush with adjacent surfaces.

All exposed components (including top rails, panels, posts, post sleeves, tab plates and hardware) shall be the galvanized undercoat and powder coat finish offered by the manufacturer. Color shall be Midnight, RAL 9005 (black).

8-28.3(2) Installation

The handrailing shall be adequately wrapped to insure surface protection during handling and transportation to the job site.

The handrailing shall be erected in accordance with details in the Plans. The railing shall be carefully erected, true to line and grade. Posts shall be vertical with the direction from the

vertical for the full height of the panel not exceeding 1/8 inch.

8-28.4 Measurement

Pedestrian railing will be measured by the linear foot along the line and slope at the base of the completed railing.

8-28.5 Payment

“Pedestrian Handrail”, per linear foot.

(******) New Section

8-30 LED Illumination System

8-30.1 Description

8-30.1(1) Linear LED Rail Lighting Description

The work consists of the supply and installation of exterior LED strips to light the bridge deck as shown in the Plans and as specified herein. This lighting shall apply to railings and glass panel lighting as shown in the Plans.

8-30.1(2) LED Accent Flood and Grazer Lights Description

The work consists of supply and installation of LED accent floodlights and grazer lights, controls and IT components, fibre cables, splicing and connections, managed switches including testing, set-up, commissioning, testing and training.

8-30.1(3) LED Lighting Description

The work consists of the supply and installation for exterior LED walkway lighting off the bridge and, under bridge flood and street lighting

8-30.1(4) Electrical

This work consists of the supply and installation of electrical work including but not limited to:

- Conduit, junction boxes and hand holes
- Conductors and wiring
- Mounting brackets
- Lighting control cabinet
- Grounding and bonding

8-30.2 Materials

8-30.2(1) Linear LED Rail Lighting Materials

Linear LED lighting strip, aluminum mounting channel with wireway and lens, connectors and drivers.. Drivers shall be sized to take the required load with 20% additional load capacity. Each driver shall have a field adjustable dimmer included with a minimum of 5 dim settings.

Reference Standard: Organic Lighting Systems LiniLED Top Power (OLS Part #011600), Connector Set, and Cast Joint, Channel with Lens and Drivers. Mocked up samples shall be provided for the 011600 and 011741 Side Mount unit also to compare.

Luminaires shall be:

- UV resistant PVC
- Designed for continuous connection and illumination with no loss of illumination at connectors
- Outdoor - IP67 rated
- 24V DC
- Minimum 104 lumens per
- Maximum - 1.4 W/ft
- 0.5” x 0.25 for top and 0.5” x 0.5” for side units, Max length – 33ft
- Bend radius – 1.2”
- Minimum 11 LED’s per ft
- Rated life – 50,000 hours
- Operating temperature -40˚ C to +40º C
- Correlated Color Temperature (CCT): 3000K
- CRI ≥80
- UL listed
- Warranty – Minimum 5 years

LED drivers shall meet the following requirements:

- Rated life – 100,000 hours
- UL Listed - outdoor wet location rated
- Drivers shall have a minimum efficiency of 85%.
- Drivers shall be dimmable
- Starting Temperature: -40 degrees C
- Input Voltage: 100 to 270 (±10%) VAC.
- Power Factor (PF): ≥ 0.90.
- Surge Protection: ≥10KA
- Total Harmonic Distortion (THD): ≤ 20%.
- Comply with FCC Title 47 CFR Part 18 Non-consumer RFI/EMI Standards
- Driver Current ≤500mA
- Dimmings switch with 5 settings
- Warranty – Minimum 5 years

8-30.2(2) LED Accent Flood and Grazer Lights Materials

LED RGB Floodlights and grazer lights, power / DMX boxes, whip cables, connectors and controls. Alternative Lumen pulse product and lighting controls will also be considered provided it meets all requirements listed.

Reference Standard:

- RGB LED Floodlights – Philips Color Burst PowerCore Gen 2 #123-000156-21(grey) with half glare shield and 80 degree spread lens and safety cable
- RGB Grazer Lights – Philips MX Power Core #123-000079-10 (3ft long) and custom mounting brackets
- DMX/Power Box – Philips Data Enable Pro (DMX/Ethernet) #106-000004-00
- Controls – Philips Active Site – Lighting Systems Controller and Active Site Gateway
- Managed Ethernet Switch – Cisco Industrial Ethernet 4000 Series - switch - 12 ports managed #: IE-4000-8GS4G-E, Cisco AC-DC Power Module for POE solution - power supply - 170 Watt #: PWR-IE170W-PCAC-RF, Cisco Rugged SFP - SFP (mini-GBIC) transceiver modules (2) – GigE #: GLC-LX-SM-RGD
- Fibre – Corning Altos Loose Tube, Gel-Free, All-Dielectric Cable, 12 fibre, Single Mode (OS2), Corning Single-Panel Fibre Housing #LAN6787, Corning Closet Connector Housing #CCH-CP12-A9, and buffer tube fan out kit, type LC connectors and Tyco SMOUV 1120 fusion splice protector sleeves.

Floodlight luminaires shall be:

- Input Voltage - 100 to 277 V
- Power Consumption - 33W
- Power Factor > 0.9
- Lumen Output – 963 (LM-79)
- Lumen Maintenance - L70 @ 25 °C - 48,300
- Weight - ≤8 lbs
- Effective Projected Area (EPA) - 26053 mm²
- Housing Material - Die-cast aluminum, powder-coated finish in grey
- Lens - Clear tempered glass with 80 degree diffuser
- Beam angle – 80 degrees
- Temperature Ranges – minus 40 to 50 °C (-40 to 122 °F)
- 3G Vibration Resistance - ANSI C136.31, 3G
- Mechanical Impact - IK08
- Corrosion Resistance - ASTM B117 standard for > 1,500 hours
- Humidity - 0 to 95%, non-condensing
- UL listed for wet locations
- Outdoor - IP66 rated
- Warranty – Minimum 10 years

Grazer luminaires shall be:

- Input Voltage - 100 to 277 V
- Power Consumption - 60W
- Power Factor > 0.9
- Lumen Output – 1509 (LM-79)
- Lumen Maintenance - L70 @ 25 °C – 80,000
- Weight - ≤8 lbs

- Housing Material - Extruded anodized aluminum
- Dimensions - 2.7” high x 36” long x 2.8” deep
- Lens - Clear polycarbonate
- Beam angle – 9 x 9 degrees
- Temperature Ranges – minus 40 to 50 °C (-40 to 122 °F)
- 3G Vibration Resistance - ANSI C136.31, 3G
- Mechanical Impact – IK10
- Corrosion Resistance - ASTM B117 standard for > 1,500 hours
- Humidity - 0 to 95%, non-condensing
- UL listed for wet locations
- Outdoor - IP66 rated
- Warranty – Minimum 10 years

DMX / Power boxes shall be:

- Integrated data and power to intelligent color and tunable RGB LED lighting
- Power DMX box shall merge line voltage and control data and delivers them to floodlights over a single cable
- Input Voltage -100 - 277VAC
- Maximum Input Current - 16.5 A maximum
- Power Consumption - 20 W maximum
- Power Input - 3-wire PC terminal block connector
- Power / Data Output - 4-wire PC terminal block connector
- and 4-wire IDC terminal block connector
- DMX Input / Output - Double-pair, double-entry IDC connectors
- Ethernet Input / Output - Double-pair, double-entry IDC connectors
- Size - 3.4” x 10.5” x 5.4”
- Weight - 6 lbs
- Cast aluminum enclosure with slots for surface mounting and hubs of ¾” conduit entry
- Finish - Powder-coated grey
- Temperature Range: -40° to 50° C
- Humidity 0-95%, non-condensing
- Certification - UL, FCC Class A, CE
- Environment - Wet Location, IP66 rated
- Warranty – Minimum 10 years

Active Site Gateway controls shall be:

- Input Voltage -100 - 240VAC
- Power Consumption - 40 W maximum
- Data Network - KiNET Ethernet protocol
- Size – 6.5” x 6.2” x 1”)
- Weight - 6 lbs
- Temperature Range: 0° to 40° C
- Humidity 0-90%, non-condensing

- Expansion slots – Full size mini x 1, half size mini x 1, sim slot x 1
- Front Panel I/O – Power button x 1, USB port x 2, com port x 1, eSATA port x 1, SD slot x 1
- Rear Panel I/O – DC 19V jack x 1, HDMI x 2, RJ45 jack x 2, HD audio ports x 2
- UL listed
- CPU – Intel Bay Trail series quad core
- Memory – 8 GB
- Graphics – Intel HD graphics
- Storage – Support mSATA
- LAN – Realtek RTL8111G x 2
- Warranty – Minimum 10 years including software updates at no cost

Lighting System Controller shall be:

- Input Voltage -100 - 240VAC
- Power Consumption 180 W maximum
- Control - Up to 15,000 nodes
- Network Data KiNET Ethernet* protocol via standard Ethernet switch
- Dimensions - 9.5” x 12” x 3”)
- Weight - 9.3 lbs
- Housing - Aluminum enclosure
- Connector/Cable (2) RJ45 ports, shielded Cat. 5e or better data cable
- Operating Temperature 0° – 35° C
- Humidity 0 – 90%, relative humidity, non-condensing
- Certification and Safety - CE, FCC, CCC, C-Tick
- Environment Dry indoor location
- Warranty – Minimum 10 years including software updates at no cost

8-30.2(3) LED Lighting Materials

Reference Standard:

- 31W Walkway luminaires -Lumec Candela Series CAND2 on 12 ft high pole as per City Standard drawings CK-R.47N and CK-R.47M
- 50W Underbridge street lights - American Electric ATBS-G-MVOLT-R2-3K-Grey-20-NL-DM-P7-SH
- LED Underbridge floodlights – RAB Lighting FFLED18N

Walkway and Under Bridge luminaires shall be:

- Rated life – 100,000 hours at 25 degree C.
- Input voltage 100-277VAC
- Operating temperature -40˚ C to +40º C
- Correlated Color Temperature (CCT): 3000K
- CRI ≥70

- UL listed
- Warranty – Minimum 10 years
- Surge – 10kA/20kV
- Optical system – IP66
- EPA – 0.3 sq ft
- Total Harmonic Distortion (THD): ≤ 20%.

8-30.2(4) Electrical Materials

Materials are defined in the Plans and noted below.

Conductors:

- All feeder circuit conductors shall be stranded copper 600-volt with THWN-2 insulation rated at 90 degrees C.
- Equipment Grounding Conductors: Insulated with green color insulation
- Grounding-Electrode Conductors: Stranded copper.

Underground Grounding Conductors:

- Bare, tinned, stranded, except as otherwise indicated.
- DMX Cables and Connectors – Refer to Plans and supplier's recommendations

Grounding and bonding:

- Governing Requirements: Where types, sizes, ratings, and quantities indicated are in excess of National Electrical Code (NEC) requirements, the more stringent requirements and the greater size, rating, and quantity indications govern.
- Grounding Rods: Copper-clad steel.
- Size: 3/4 inch by 120 inches.
- Ground Clamps: Bolted heavy-duty type.
- Bonding Jumpers: Braided steel type with bolted compression connections.
- Bond all FMC and rigid steel conduit

Connectors and Splices:

- UL-listed factory-fabricated wiring connectors of size, ampacity rating, material, and type and class for application and for service indicated. Splices will only be allowed where noted in the Plans.

Conductor Tags and Labeling:

- Sleeve type labels shall be used at all conductor terminations and splices in pole hand holes. Labels shall indicate conductor panel circuit
- Conductor tags shall be used in all pull boxes, cabinet and hand holes. Conductor tags shall be T&B TY553M or equal. Tags shall be marked with a marker with black indelible ink.
- All tags and labels shall be waterproof

Conduit:

- Conduit materials shall be as detailed in the Plans.
- Metallic Conduit: Use above ground only. Transition from PVC to Metallic conduit shall be made at grade with a suitable threaded connector and RPVC to steel conduit adaptor.
- Rigid Metal Conduit (RMC): ANSI C80.1, galvanized.
- Non Metallic (RPVC) Conduit: Schedule 80 (NSF Certified to UL651, rated for use with 90°C conductors, NEMA TC2 rated). Solvent and Primer: Use product specifically designed for RPVC conduit
- All underground conduits shall be a minimum of two-inch standard trade size unless otherwise noted.
- Expansion joints: Shall be IPEX Expansion Deflection Fitting (SE-J-35).

Lighting Cabinet:

- As shown in the Plans.
- The lighting cabinet shall have climate control system to maintain the operating temperature ratings of the equipment being installed. Cabinet shall have internal insulation
- Cabinet shall meet all UL and NEC requirements and bear a UL label
- Cabinet shall have internal LED lighting
- Cabinet shall be aluminum with NEMA 3R rating and powder coat finish
- Surge suppression device shall be separate from panel board. Type 2, 20kA I-n for use in Type 2 locations. Surge Capacity (per phase and per mode): 50kA with a Short-Circuit Current Rating of 200kA, Shall be approved to: ANSI/UL 1449 4th Edition, Type 2 SPD ANSI/IEEE C62.41.1, 62.41.2 and 62.45 and UL96A Lightning protection. The surge protection shall be installed within 150mm of the breakers which in the panel and wiring shall run in straight path with minimal bends.

Mounting Brackets

As shown in the Plans. Shall be corrosion resistant

Hand Holes:

- The Contractor shall provide all in-ground electrical hand holes where required to connect conduits and where specifically noted.
- Shall be concrete pre-cast products or approved alternate.
- A hand hole shall consist of the box (body) and lid. All hand holes shall be UL Listed. All lids shall be slip resistant lid with embossed “electric” cast in and locking bolt.
- All hand holes (box and lid) shall meet the requirement of the National Electrical Code.
- Hand holes are required to conform to all test provisions of the most current ANSI/SCTE 77 “Specification for Underground Enclosure Integrity” for minimum Tier 15 applications.
- All covers are required to have the Tier level rating embossed on the surface. In no assembly can the cover design load exceed the design load of the box.
- All components in an assembly (box & cover) are manufactured using matched surface

tooling.
- Size of boxes is noted in the Plans.

Junction Boxes:
- Shall be as shown in the Plans
- Product – Valid Manufacturing Ltd or approved equal

8-30.3 Construction Requirements

8-30.3(1) Sampling and Testing

Complete one section of Linear LED Rail lighting 132’ long mounted and wired and review with Engineer prior to proceeding to other sections.

Complete one group (5-6 luminaires) of flood and grazer lighting and review with Engineer prior to proceeding.

Define wiring and connections of LED Lighting and review with Engineer prior to construction.

8-30.3(2) Submittals

Product Data Provide manufacturer's standard catalog data for specified products demonstrating compliance with referenced standards. Provide list of fittings being provided with descriptions, load capabilities, and either photographs or drawings for each type.

Products samples for Linear LED Rail Lighting as follows:
Sections of LED light strip and channel for Top and Side Units
Typical fittings and connectors.

Mock-up: Provide working mock-up of railing lighting to review lighting effects. Mock-up shall include a working 6’ sample of lighting and channel and wiring mounted in railing channel to reflect the final installation during hours of darkness.

Products samples for LED Flood and Grazer Lights as follows:
Grazer and flood light luminaires
DMX Power BoxCabling and wiring
Mounting brackets

Mock-up: Provide working mock-up of grazer and flood lights (2) showing surfaces being illuminated during hours of darkness. Mock-up shall reflect final installation.

Verification Samples for electrical: Samples representing actual products and finishes as follows:

Sample junction boxes with components mounted.

8-30.3(3) Linear LED Rail Lighting Installation

Install lighting in accordance with the NEC, as shown in the Plans, and in accordance with manufacturer’s recommendations. Coordinate with bridge railing fabricator to ensure proper fit

of luminaire channel to railing channel. Railing channel shown diagrammaticallyin the Plans. Railing C channel shall be designed to allow the railing to be aimed 20 degrees downward from horizontal.

Where railing channel is not straight (curved) cut luminaire channel and mount every 6” or less to accommodate curve in the railing.

Luminaire channel shall be sized to accommodate wiring and inset into railing channel to prevent vandalism.

Secure luminaire channel to railing with the mounting tape that is attached to the extrusion and add an epoxy sealant rated for the materials (3M 4000 Marine Adhesive Sealant) for addition adhesion. Use caulking compound on extrusion joints with direct exposure to the weather.

Coordinate installation of light strip with the fabrication railing system.

Acceptance checks and tests - Verify operation after installing luminaires and energizing circuits.

8-30.3(4) LED Accent Flood & Grazer Lights Installation

Install lighting in accordance with the NEC, as shown in the Plans, and in accordance with manufacturer’s instructions. Use connectors defined by suppliers.

Contractor shall aim luminaires as directed by the engineer and allow for adjustment and re-aiming and adjustment of glare shields during hours of darkness.

System set-up shall be undertaken by the supplier’s technical specialist. In addition the supplier’s technical specialist shall provide a half day training on lighting controls with the City Operations Staff.

Fibre installation, splices and testing shall be undertaken by the Cities IT Contractor - Jessie Berry of Integrity Networks (JessieB@Integrity-net.net). The Contractor shall retain Integrity Networks to undertake all fibre installation, splicing, connections and OTDR and Power meter testing. The City will undertake the set-up and programming of the managed Ethernet switch which shall be supplied by the Contractor. The Ethernet switch to be supplied by the Contractor shall be as detailed in section 8-30.2(2) – bullet number five.

The supplier shall work with City staff to develop up to 5 lighting shows. The supplier shall set-up these shows and gain approval of the City prior to project completion.

Acceptance checks and tests - Verify operation after installing luminaires and energizing circuits.

8-30.3(5) LED Lighting Installation

Install lighting in accordance with the NEC, as shown in the Plans, and in accordance with manufacturer’s recommendations.

Luminaires shall be securely attached. Install walkway and under bridge luminaire with bottom of luminaire optical system level. Use level and check in two directions.

Install shorting caps on walkway and under bridge luminaires.

All mounting hardware shall be corrosion resistant.

Acceptance checks and tests - Verify operation after installing luminaires and energizing circuits.

8-30.3(6) Electrical Sampling and Testing

Verification Samples: Contractor shall provide sample junction box (cast in curb type) with driver, terminal block and wiring reflecting the final installation. This shall be reviewed by engineer prior to construction.

The Contractor shall measure and document the voltage and amperage at each branch circuit breakers located in the Lighting Control Cabinet. Contractor shall also measure and document the voltage and amperage at main circuit breakers when the maximum load is turned on. This information shall be submitted to the Engineer for review.

The Contractor shall:

- Measure and record resistance to ground at the main breaker
- Inspect wire and cable for physical damage and proper connection.
- Torque test conductor connections and terminations to manufacturers recommended values.
- Perform continuity test on all power and equipment branch circuit conductors. Verify proper phasing connections.
- Comply with manufacturer’s product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

8-30.3(7) Electrical Submittals

Product Data Provide manufacturer's standard catalog data for specified products demonstrating compliance with referenced standards. Provide list of fittings being provided with descriptions, load capabilities, and either photographs or drawings for each type.

Shop Drawings:

- Mounting brackets
- Poles and anchor bolts
- Luminaires
- Conduit
- Hand holes
- Junction boxes
- Lighting cabinet

Shop drawings for poles, anchor and mounting brackets shall be designed, signed and sealed

by a Structural Engineer registered in the state of Washington. Poles shall be designed in accordance with AASHTO standards.

Mock-ups – Provide mock-up of junction box with terminal blocks, drivers and wiring for engineer review.

8-30.3(8) Electrical Quality Assurance

Installer Qualifications: Experienced in performing work of this section that has specialized in installation of work similar to that required for this project. Specific requirements:

- NFPA 70 "National Electrical Code" for components and installation and NFPA 780.
- UL 467
- UL: Provide products which are UL-classified and labeled for the location and environment in which they are installed.

8-30.3(9) Electrical Installation

Installation shall meet electrical requirements listed in the WSDoT Standard Specifcations for Road, Bridge, and Municipal Construction 2020 MS-41-10. Where conflicts arise between the WSDoT specification and what is listed in this specification, contact the Engineer.

Conduit Installation: Conduit in earth shall be installed minimum 2 ft below grade. Conduit shall run as straight as possible. Install conduit and duct as indicated according to manufacturer's written instructions. Use manufactured elbows for stub-ups in poles, concrete bases and hand holes / boxes. Use non-manufactured long sweep bends with a minimum radius of 25 feet both horizontally and vertically at other locations. Do not exceed 20 degrees for field bends. Make joints in ducts and fittings watertight according to manufacturer's instructions. Stagger couplings so those of adjacent ducts do not lie in the same plane. After installation and prior to installing pull string: Pull a brush through the full length of ducts. Use round bristle brush with a diameter 1/2 inch greater than internal diameter of duct. Install 100-pound-test nylon cord in ducts, including spares. Install conduit expansion joints where noted in the Plans.

Trench: Excavate to bottom elevation of conduit (s), and correct points of over excavation by returning trench to grade with mechanically compacted backfill to form a smooth trench bottom (compact to at least 98% standard proctor density in paved areas and 95% in sod areas). Provide a minimum 24 inches of cover over the top of the conduits. Excavate to minimum width consistent with stability of sides. Where soft and wet or unstable material determined by frost condition is encountered, over excavate as required and backfill to attain proper grade with coarse sand, gravel, or other slurry. Where rock pad is used for conduit trench, over excavate six inches below the conduit, and refill and compact with selected backfill material of same composition. Materials suitable for backfilling to be piled in an orderly manner. The entire bottom of the excavation is to be firm, stable, and at a uniform density. Remove rocks larger than 2 inches in diameter. No trenches shall be left open after the Contractor has left the site.

Routing: Trenches shall be routed as shown in the Plans. As noted in the Plans special addition and equipment is required when excavating within tree drip lines as defined in the Plans.

Asphalt and Concrete: Areas of trenching in concrete or asphalt shall be done to the minimum width possible to reduce impacts. Asphalt or concrete shall be neatly saw cut in straight line, removed and disposed of off-site. Temporary backfill will be required if the restoration does not take place during the same day.

Backfilling: Backfill only after all necessary inspections and tests are performed and are in conformance with the requirements specified. Backfill with native material unless deemed unacceptable by the Engineer. Remove all debris, rocks, broken concrete, formwork, etc., from the trench prior to the start of backfilling operations. Deposit backfill in 6 inch lifts and compact to 98% standard proctor density. If trenches have not been properly filled, or if settlement occurs, refill, compact, smooth off, and make to conform to the surface of the ground.

Conductor Installation: Install wires and cables as indicated, according to manufacturer's written instructions and the NECA "Standard of Installation". Examine raceway to receive wires and cables for compliance with installation tolerances and other conditions. Do not proceed with installation until unsatisfactory conditions have been corrected. Pull conductors into raceway simultaneously where more than one is being installed in same raceway. Use pulling compound or lubricant where necessary; compound used must not deteriorate conduit and conductors or insulation. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips that will not damage cables or raceway. Neatly train and lace wiring inside boxes, equipment, and panel boards. Examine site to receive ducts for compliance with installation tolerances and other conditions affecting performance. Do not proceed with installation until unsatisfactory conditions have been corrected.

Wiring Connections and Terminations: Conductor Splices: Conductor splices shall only be made in boxes or handholes. Splices not allowed in DMX cables. Where required they shall be as follows:

Use twist on type connectors with insulating covers for copper wire splices. Wrap each conductor with self-holding tape, then wrap the entire splice with self-holding tape and finally cover the entire splice and connector with PVC tape and dip in 3M Scotchkote.

Where the size and number of conductors exceed the capacity of a solder -less pressure or spring wire connector then use split-bolt connectors. Wrap entire split-bolt with tape and then Duct Seal to form a ball over connector. Duct Seal shall be thick enough to prevent sharp edges of conductor or connector from protruding through the duct seal. After applying Duct Seal, then tape with self-holding and PVC tape.

Thoroughly clean wires before installing lugs and connectors.
Make splices, taps and terminations to carry full ampacity of conductors without perceptible temperature rise.

Terminate spare conductors with solder less pressure connectors and electrical tape. Tighten screws and bolts according to manufacturer's published torque-tightening values. Where these requirements are not available, use those specified in UL 486A and UL 486B.

Group, bundle and tag set of conductor circuits in pull boxes, pole hand holes and the lighting control cabinet output terminal block. Tags shall indicate the type of circuits (Sports lighting, Security Lighting, etc), the panel circuit numbers and the pole number. Tags shall be waterproof and shall be sized to allow for neat easy to read labeling as indicated above. Tags shall attach around conductors with ty-raps

Grounding: Ground electrical systems and equipment according to NEC requirements and local regulations, except where Plans or Specifications exceed NEC requirements. Equipment Grounding Conductors shall comply with NEC Article 250 for types, sizes, and quantities of equipment grounding conductors, except where specific types, larger sizes, or more conductors than required by NEC are indicated. The Contractor shall bond all metal parts and rebar and tie into electrical system ground. Bonding and grounding shall meet NEC requirements and require the approval of Seattle City Light and the Engineer. Use bonding jumpers where required.

Resistance to ground shall be no greater than 10 ohms to ground at the main breaker. The Contractor shall drive at least three ground rods in a delta configuration and measure the resistance to ground. If it is greater than 10 ohms additional rods shall be driven and resistance to ground retested until the requirement of 10 ohms or less is achieved.

Grounding Rods: Locate a minimum of 2-rod length from each other and at least the same distance from any other grounding electrode. Drive rods until tops are 2 inches above final grade, except as otherwise indicated.

Grounding Conductors: Route along the shortest and straightest paths possible, except as otherwise indicated. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage. Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.

Use electroplated or hot-tin-coated materials to assure high conductivity and to make contact points closer in order of galvanic series.
Make connections with clean, bare metal at points of contact.

Tighten screws and bolts for grounding and bonding connectors and terminals according to manufacturer's published torque-tightening values. Where these requirements are not available, use those specified in UL 486A and UL 486B.

Colour Coding: Insulation of wire sizes #8 AWG and smaller shall be colored. #6 AWG and larger may be colored with plastic tape or sleeves of the appropriate color at all junction boxes and terminations that comprise the circuit. Color coding shall be:

- A Phase - Black
- B Phase - Red
- Neutral - White
- Ground - Green

Restoration: Restore surface features at areas disturbed by excavation, and re-establish original grades except as otherwise indicated. Neatly cut, remove and replace removed sod as soon as possible after backfilling is completed (same day). The Contractor shall be responsible for fertilizing and irrigating excavated sod areas until back to original condition. If existing sod does not take then new sod shall be supplied. Restore all areas disturbed by trenching, storing of dirt, cable laying, and other work. Restore vegetation and include necessary topsoil, fertilizing, liming, sodding, or mulching. Soil restoration details shall be discussed with and agreed upon by the owner in advance of restoration activities.

Asphalt and concrete surfaces shall be restored with new concrete or asphalt to match existing. Concrete and asphalt shall match existing and meet all City requirements. Concrete and asphalt shall match existing surface with areas with no low or high points or seams where one could trip. Restore disturbed paving or concrete to original condition or better.

8-30.4 Measurement And Payment

No separate measurement and payment will be made for the work in this section. All work, including materials and installation, shall be incidental to the work in Section 8-20, Illumination System.

(******) **New Section**

8-31 Thermoplastic Pavement Marking

8-31.1 Description

This work consists of installing thermoplastic pavement markings for pedestrian and bicycle traffic visual and tactile wayfinding and warnings as shown in the Plans and as specified herein.

8-31.2 Material

A durable, high skid and slip resistant, pavement marking material suitable for use as markings to delineate pedestrian and bike lane, intersection, changes of direction, and speed control. For use on Portland cement concrete pavement surfaces.

Resilient preformed thermoplastic product which contains a minimum of thirty percent (30%) intermixed anti-skid/anti-slip elements uniformly distributed throughout the material.

Shall be composed of an ester-modified resin impervious to degradation by motor fuels, lubricants, etc., in conjunction with aggregates, pigments, binders, and anti-skid/anti-slip elements uniformly distributed throughout the material. The thermoplastic material shall conform to AASHTO designation M249, with the exception of the relevant differences due to the material being supplied in a preformed state,and being non-reflective. Pavement marking material shall be white in color.

Skid/Slip Resistance: The surface of the preformed thermoplastic material shall contain factory applied anti-skid elements with a minimum hardness of 9 (Mohs scale). Upon application, the material shall provide a minimum static coefficient of friction of 0.6 when tested according to ASTM C 1028 (wet and dry), and a minimum static coefficient of friction of 0.6 when tested according to ASTM D 2047.

Thickness: The material must be supplied at a minimum thickness of 90 mils (2.29 mm) or 125 mils (3.15 mm).

Environmental Resistance: The material shall be resistant to deterioration due to exposure to sunlight, water, salt or adverse weather conditions and impervious to oil and gasoline and concrete cleaning solvents.

The material shall be capable of being applied on bituminous and/or Portland cement concrete pavements by the use of a handheld heat torch, and/or infrared heater.

The material shall be capable of being applied to asphalt and Portland cement concrete surfaces without preheating the application surface to a specific temperature.

The material shall be capable of being applied in temperatures down to 45ºF (7.2ºC) without any special storage, preheating or treatment of the material before application.

The material shall contain heating indicators evenly distributed on the surface that shall act as visual cues during both the application process and post-application.

8-31.3 Construction Requirements

8-31.3(1) Sampling and Testing

Verification Samples: Two samples representing actual products and finishes as follows:

A 2-foot x 4-foot sample board with a section of the architectural pattern of the specified material and finish.

8-31.3(2) Submittals

Product Data Provide manufacturer's standard catalog data for specified products demonstrating compliance with referenced standards. Provide list of fittings being provided with descriptions, load capabilities, and either photographs or drawings for each type.

Shop Drawings: Provide layout geometry drawings. Include the following:

Provide setting out geometry diagrams showing the location and layout geometry and width dimensions of all pavement markings.

8-31.3(3) Quality Assurance

Manufacturer Qualifications: Company specializing in manufacture of thermoplastic paving products with five years minimum successful experience.

Installer Qualifications: Experienced in performing work of this section that has specialized in installation of work similar to that required for this project.

Mock-Up: Provide a mock-up for evaluation of preparation techniques and installation workmanship:

- Locate in areas designated by the Engineer.
- Size: Minimum area of 4 ft by 8 ft
- Utilize the same installation methods proposed for the application of the full extents of the pattern on the bridge deck.
- Do not proceed with remaining work until workmanship is approved by the Engineer.
- Rework mock-up as required to produce acceptable work.
- Retain mock-up during construction as quality standard.
- Incorporation: Incorporate mock-up into final construction upon approval by the Engineer.

8-31.3(4) Protection

The preformed thermoplastic marking product shall be packaged in cardboard cartons. The cartons in which packed shall be non-returnable, shall contain a minimum of 35% post-consumer recycled materials, and shall not exceed 40 in. (1.02 m) in length and 25 in. (.64 m) in width. The cartons shall be labeled for ease of identification. The weight of the individual carton must not exceed 70 lb. (32 kg). A protective film around the carton must be applied in order to protect the material from rain or premature aging.

8-31.3(5) Fabrication and Placement

Preparation:

General: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

Examination: Site Verification of Conditions: Verify condition of the concrete paving which has been previously installed under other sections, to ensure it is acceptable for product installation in accordance with manufacturer's instructions. Do not begin installation until concrete paving surfaces are in satisfactory condition.

Layout preparation: Apply layout markings in accordance with approved shop drawings for the Engineer's review prior to application

Application:

The material shall be capable of being applied using the propane torch method, and/or infrared heater recommended by the manufacturer. The material shall be capable of being applied at ambient and road temperatures down to 45ºF (7.2ºC) without any preheating of the pavement to a specific temperature. A sealer specified by the manufacturer shall be applied to the pavement surface prior to material application to ensure proper adhesion. The sealer must be supplied by the material manufacturer in 300/600ml cartridges along with sealer application supplies. A thermometer shall not be required during the application process. The pavement shall be clean, dry and free of debris. Supplier must enclose application instructions in English and Spanish with each box/package only pertaining to an application method that does not require preheating of the pavement to a specific temperature before application.

8-31.4 Measurement

The Thermoplastic Paving Markings will be measured per Lump Sum.

8-31.5 Payment

"Thermoplastic Paving Markings", per lump sum, shall include all costs in connection with supplying and applying the pavement markings, including mock-ups.

(******) **New Section**

8-32 Glass Panel

8-32.1 Description

This work consists of structural glass guards as shown in the Plans. Provide glass, glazing and accessories for a complete system as indicated and specified herein and as shown in the Plans. Provide one spare structural glass guard to the city in a protective wood crate for future repair use.

Design stainless steel connection system to be attached to pre-drilled structural steel and to accept structural glass panels once attached to structure.
Metal bracket glass clamps connecting structural glass guardrail panels to metal posts.

8-32.2 Material

Steel Plate And Shapes

Provide sizes and shapes as required to meet project design conditions specified and indicated in the Plans.

Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

Stainless Steel components and fasteners: Fabricate assembly from Grade 316 Stainless Steel conforming to ASTM 276. Directional satin finish No. 4, grind and polish surfaces to produce uniform finish, free of cross scratches.

Glass panel bottom channel and cap channel:
Type 316 stainless steel. Provide plate and angle sizes and shapes as required to meet project design conditions and as indicated in the Plans.

Tempered Laminated Glass

- Tempered Safety glass: To ASTM C1048
- Laminated glass: To ASTM C1172 Two layers of heat strengthened glass with .090 inch thick polyvinyl butyral (PVB) interlayer laminated together.
- Glass and glazing standards:
- ASTM C1048-12 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass
- ASTM C1172 . Standard Specification for Laminated Architectural Flat Glass
- ASTM C1115-06 (2011) - Standard Specification for Dense Elastomeric Silicone Rubber Gaskets and Accessories.
- GANA (Glass Association of North America), Laminated Glazing Reference Manual, 2009 edition.
- 2015 International Building Code.

Glazing Clamps

C.R. Lawrence Company CRL brushed stainless Z-series square type flat surface glass clamps complete with gaskets or approved equal.

Glazing Gaskets

Dense Compression Gaskets: Molded or extruded gaskets of material indicated below, complying with standards referenced with name of elastomer indicated below, and of profile and hardness required to maintain watertight seal:

- Neoprene, to ASTM C864.
- EPDM, to ASTM C864.
- Soft Compression Gaskets: Extruded or molded, closed-cell, integral-skinned gaskets of material indicated below; complying with ASTM C509, Type II, black; and of profile and hardness required to maintain watertight seal:
- Neoprene.
- EPDM.

Fabrication of Structural Glass

- Squareness of each panel: Within 3 mm.
- Bow tolerance: 0.1%.
- Grind and polish exposed edges unless otherwise noted.
- Fabricate structural glass to thicknesses indicated on reviewed Shop Drawings.
- Grind and swipe butt glass edges.

8-32.3 Construction Requirements

8-32.3(1) Sampling and Testing

Verification Samples: Two samples representing actual products and finishes (including etching) as follows:

- Submit two 4” x 4” size samples of each type of glass.
- Submit sample of Stainless Steel glass clamps.
- Product Data: For each glass product and glazing material indicated.
- Meet requirements of Building Code and By-law as recognized by authority having jurisdiction, as applicable, and as specified. Where there are conflicting requirements, inform City of Kirkland’s Representative for direction and resolution.
- General: Provide glazing systems capable of withstanding normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.
- Glass Thicknesses: Select minimum glass thicknesses to comply with Building Code and By-laws. Confirm glass thicknesses by engineering analysis of Project loads and in-service conditions as follows:
- Specified Design Wind Loads: As required by Code.
- Specified Design Snow Loads: As required by Code.
- Load Duration: 60 seconds or less.
- Thermal Movements: Provide glazing that allows for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on

glass framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and night time-sky heat loss.

- Temperature Change (Range): -20 to 40°C ambient; 75°C material surfaces.

8-32.3(2) Submittals

Shop Drawings:

Shop drawings to be prepared under supervision of, and signed and sealed by, a structural engineer registered to practice in the State of Washington. Field measure prior to shop drawing production.

Include structural analysis data prepared by engineer sealing shop drawings.
Furnish complete shop and erection drawings for review prior to fabrication. Do not fabricate work until Shop Drawings and other related submittals and samples have been reviewed by City of Kirkland's Representative.

Indicate sizes, quantities, thicknesses, materials, glass types, glazing compounds, sealants, anchorage and fastening details, hardware, glazing methods, and integration with adjacent systems.

Product Data: For each glass product and glazing material indicated.
Submit maintenance instructions for glass for inclusion in maintenance manuals.

8-32.3(3) Quality Assurance

Installation in accordance with Glass Association of North America Laminated Glazing Reference Manual

Installation to meet or exceed minimum requirements of current edition of governing and local codes including latest revisions.

Provide one year written guarantee to cover defects in workmanship and installation of accessory materials to all glazing.

8-32.3(4) Protection

Deliver glass in crates; other components in original containers with manufacturer's labels intact and all materials undamaged.

Do not remove containers from Work Site prior to Substantial Performance.
Store materials according to manufacturer's instructions on dry floor in weatherproof enclosure.
Coordinate delivery and arrange storage to keep handling to minimum.

Maintain responsibility for breakage regardless of location. Remove broken or otherwise damaged materials from Work Site and replace with acceptable materials at no added cost to the City of Kirkland.

8-32.3(5) Fabrication and Placement

- Examine conditions at all areas of installation for compliance with manufacturer's requirements for glass installation and joint sealant application, with Glazing Contractor Installer present.
- Verify dimensions prior to manufacture or cutting of glass, and again before installation.
- Do not perform glazing operations when temperature is less than 5°C.
- Start of the Work indicates the Glazing Contractor’s acceptance of conditions.
- Remove protective coatings, clean contact surfaces with solvent, and wipe dry.
- Apply primer to contact surfaces in accordance with manufacturer's recommendations.
- Use cleaning agent before sealant application to glass and metal surfaces as recommended by glass manufacturer.
- Perform glazing in accordance with reviewed Shop Drawings, manufacturer's written specifications, and Code requirements. Ensure perimeter clearance is sufficient to avoid point loading and provide for sufficient clearance of glass to metal.
- Install glass in clamps without bending or twisting. Material for protection markings on glass, such as adhesives for manufacturer's labels, to be either neutral or slightly acidic. Alkaline materials are not acceptable. Staining of glass or other surfaces by alkaline materials will be cause for rejection.
- Remove manufacturer's labels or grade marks on glass except as required by code for safety glass identification.
- At completion of glazing of each unit, remove surplus compounds from adjacent surfaces and glazing sections.
- Immediately clean off smears and other marks caused by own forces during erection of glass and glazing.
- Upon completion of work, remove protective coverings and paper labels from exposed surfaces, and make surfaces free of smears, marks, and discolouration.

8-32.4 Measurement

The glass panels will be measured per Each.

8-32.5 Payment

“Glass panels”, per Each, shall include all costs in connection with constructing the finished guardrails of Totem Lake Connector. This includes all costs for providing one spare glass panel, packaged for long-term storage and protection, in addition to erecting the glass panels in accordance with the Plans, the Standard Specifications, these Special Provisions and the manufacturer’s installation instructions, including but not limited to, the guardrail stanchions and all fittings and embedded weld plates, and connection fittings.

(******) **New Section**

8-33 Site Furnishings

8-33.1 Description

This Work consists of furnishing and installing garbage receptables in accordance with the Plans and these Specifications.

8-33.2 Material

Garbage Receptacles shall be Dispatch 36 gallon, single stream by Forms + Surfaces, model SLDIS-136, or approved equal. Receptacles shall have standard openings for litter only, with recessed access (screwdriver-operated) latch. Lid and Body colors shall be Aluminum Texture. Liner shall have drain holes and bag slots. Receptacle shall be surface mounted to the concrete pad.

8-33.3 Construction Requirements

Install per manufacturer recommendations.

8-33.4 Measurement

Garbage receptacles will be measured per each unit installed.

8-33.5 Payment

“Garbage Receptacle”, per each.

The unit Contract price per each for “Garbage Receptacle” shall be full pay for all Work to furnish and install the receptacles.