

SPECIAL PROVISIONS

PROJECT: SW CANAL BLVD/SW HELMHOLTZ WAY
INTERSECTION IMPROVEMENTS

PROJECT #: W66085


CONTRACTING AGENCY:




**ROAD
DEPARTMENT**

**61150 SE 27TH STREET
BEND, OREGON 97702
PHONE: (541) 388-6581
FAX: (541) 388-2719
WEB: www.deschutes.org/road**

PROFESSIONAL OF RECORD CERTIFICATION:

<p>Seal w/signature</p>  <p>EXPIRES: 12/31/2020</p> <p>Date Signed: <u>11/19/19</u></p>	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Sections 00210, 00230, 00280, 00305, 00310, 00320, 00330, 00340, 00370, 00620, 00641, 00730, 00744, 00749, 01012, 01030, 01050, 01070, 02630, 02640, 0310, 03020</p>
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<p>Seal w/signature</p>  <p>EXPIRES 12/31/19</p> <p>Date Signed: <u>11/19/19</u></p>	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Sections 00220, 00225, 00850, 00855, 00865, 00867, 00905, 00910, 00920, 00930, 00940, 00960, 00962, 00970, 02910, 02926</p>
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SPECIAL PROVISIONS

WORK TO BE DONE

The work to be done under this contract consists of the following on the SW Canal Blvd/SW Helmholtz Way Intersection Improvement project:

1. Install and maintain temporary traffic control
2. Perform earthwork
3. Place aggregate base and shoulders.
4. Construct asphalt concrete pavement.
5. Install illumination system.
6. Perform additional and incidental work as called for by the specifications and plans.

APPLICABLE SPECIFICATIONS

The Specification that is applicable to the Work on this Project is the 2018 edition of the "Oregon Standard Specifications for Construction."

All number references in these Special Provisions shall be understood to refer to the Sections and subsections of the Standard Specifications and Supplemental Specifications bearing like numbers and to Sections and subsections contained in these Special Provisions in their entirety.

Copies of the Oregon Standard Specifications may be purchased or viewed online at

http://www.oregon.gov/ODOT/Business/Pages/Standard_Specifications.aspx.

APPLICABLE RULES

The rules applicable to this contract are the Attorney General's Model Public Contract Rules, Chapter 137-046 and Chapter 137-049, as presently constituted and Deschutes County Code (DCC) Chapter 2.37. The provisions of DCC Chapter 2.37.150 are incorporated herein by reference. These provisions may be viewed at the following web address:

<http://www.co.deschutes.or.us/administration/page/deschutes-county-code>

CONTRACT TIME

The Contractor shall complete all Work to be done under the Contract not later than August 31, 2020.

CLASS OF WORK

The Class of Work for this Project is Earthwork and Drainage or Asphalt Concrete Paving and Oiling.

SECTION 00110 - ORGANIZATION, CONVENTIONS, ABBREVIATIONS AND DEFINITIONS

Comply with Section 00110 of the Standard Specifications modified as follows:

00110.20 Definitions - Replace the definitions of the words and phrases list below with the following definitions :

Agency – County of Deschutes

Bid Booklet - The version that can be accessed and printed from the Deschutes County Bids and RFPs website, which contains the information identified in 00120.10.

Engineer - The Road Department Director of Deschutes County acting either directly or through his authorized representatives.

SECTION 00120 - BIDDING REQUIREMENTS AND PROCEDURES

Comply with Section 00120 of the Standard Specifications modified as follows:

00120.00 Prequalification of Bidders – Replace the last paragraph with the following:

Deschutes County Road Department will regularly evaluate the performance of Contractors on its projects for purposes of responding to reference checks, future prequalification and determinations of responsibility.

00120.01 General Bidding Requirements - Replace this subsection with the following:

Bidders shall submit bids by paper.

The standard prequalification forms furnished by the ODOT Procurement Office shall be used by the bidder to file authorized signatures with Deschutes County Road Department. Signatures are of personnel authorized to submit Bids, modify Bids, or withdraw Bids.

00120.05 Request for Solicitation Documents – Replace this subsection with the following:

Bidders shall obtain solicitation documents from the Deschutes County Bids and RFPs website:
<https://www.deschutes.org/rfps>

Each request shall include both the name of the person ordering or obtaining the Solicitation Documents, and the name of the Entity intending to use them. The Agency will add the name of the Entity intending to use the Solicitation Documents to the list of Holders of Bidding Plans. Bidders are cautioned that only Solicitation Documents obtained properly from the Deschutes County website may be used to submit Bids.

Only paper Bids will be accepted.

Copies of the Oregon Standard Specifications may be purchased or viewed online at

[http://www.oregon.gov/ODOT/Business/Pages/Standard Specifications.aspx](http://www.oregon.gov/ODOT/Business/Pages/Standard_Specifications.aspx).

The Plans, which are applicable to the Work to be performed under the Contract, bear title and date as follows:

SW CANAL BLVD/SW HELMHOLTZ WAY
INTERSECTION IMPROVEMENT
DESCHUTES COUNTY
DECEMBER 2019

00120.10 Bid Booklet – Replace this subsection with the following:

The Bidding Documents Booklet may include, but is not limited to:

- Cover Page
- Index
- Invitation to Bid
- Information for Bidders
- Bid Proposal Form
- Schedule of Bid Items
- Subcontractor Disclosure Form
- Bid Guaranty Form
- Contract Form (for review only)
- Payment and Performance Bond Forms (for review only)

Depending on the Class of Project, other certificates or statements may be bound within the Bidding Documents Booklet. Plans, specifications, and other documents referred to in the Bidding Documents Booklet will be considered part of the Bid.

00120.30 Changes to Plans, Specifications, or Quantities before Opening of Bids – Replace the first paragraph with the following:

The Agency reserves the right to issue Addenda making changes or corrections to the Plans, Specifications, or quantities. The Agency will provide Addenda only by publishing them on the Agency's web site at:

<https://www.deschutes.org/rfps>

00120.40(a) (2) Electronic Bids – Delete this subsection.

00120.40(c) (2) Electronic Bid Schedule Entries – Delete this subsection.

00120.40 (d) Bidder's Address and Signature Pages – Replace this subsection with the following:

Bidders shall include in the Bid the address to which all communication concerning the Bid and Contract should be sent. The Bid shall be signed by a duly authorized representative of the Bidder.

00120.40(e) (2) Bid Guaranty with Electronic Bids – Delete this subsection.

00120.40(f) Disclosure of First-Tier Subcontractors – Under the paragraph “The Subcontractor Disclosure Form may be submitted for a paper Bid either,” replace the second bulleted item with the following:

- By removing it from the paper Bid Booklet, filling it out and submitting it separately to the Deschutes County Public Works Engineering and Construction Division at the address given in the Bid Booklet.

Delete the third bulleted item.

Delete the paragraph which begins “The Subcontractor Disclosure Form may be submitted for an electronic Bid either:”

Replace the paragraph that begins “Subcontractor Disclosure forms submitted by...” with the following:

Subcontractor Disclosure Forms submitted by any method will be considered late if not received by the Agency within two working hours of the time designated for receiving Bids.

00120.45 Submittal of Bids – Replace this subsection with the following:

Bids shall be submitted in the manner and prior to the time listed in the Bidding Documents Booklet. Bids may be submitted by mail, parcel delivery service, or hand delivery. Bids submitted after the time set for receiving Bids will not be opened or considered. The Agency assumes no responsibility for the receipt and return of late Bids.

00120.50 Submitting Bids for More than One Contract – Delete this subsection.

00120.60(a) Paper Bids – Replace all references to “ODOT Procurement Office” with “Agency.”

Delete the third bullet point.

00120.60(b) Electronic Bids – Delete this subsection.

00120.70 Rejection of Nonresponsive Bids – Add the following bullet to the end of the bullet list:

- The Agency determines that any Pay Item is significantly unbalanced to the potential detriment of the Agency.

00120.95 Opportunity for Cooperative Arrangement – Delete this subsection.

SECTION 00130 – AWARD AND EXECUTION

Comply with Section 00130 of the Standard Specifications modified as follows:

00130.10 Award of Contract – Replace the paragraph that begins “The Agency will provide Notice of Intent...” with the following:

The Agency will provide Notice of Intent to Award on the Agency’s website:

<https://www.deschutes.org/rfps>

Delete the paragraph that begins “The Award will not be final until...”

00130.15 Right to Protest Award – Replace this subsection with the following:

Adversely affected or aggrieved Bidders, limited to the three apparent lowest Bidders and any other Bidder directly in line for Contract Award, may submit to the Board of County Commissioners of Deschutes County a written protest of the Agency’s intent to Award within five working days following the Bid Opening. The protest shall specify the grounds upon which it is based.

The Agency is not obligated to consider late protests.

00130.50 Execution of Contract and Bonds:

(a) By the Bidder – In the sentence that begins “The successful Bidder...” replace “ODOT Procurement Office – Construction” with “Agency” and replace “15 Calendar Days” with “the requested amount of time”.

(b) By the Agency – In the sentence that begins “Within 7 Calendar Days...” replace “7” with “21 (twenty-one)”.

SECTION 00140 – SCOPE OF WORK

Comply with Section 00140 of the Standard Specifications.

SECTION 00150 - CONTROL OF WORK

Comply with Section 00150 of the Standard Specifications modified as follows:

00150.05 Cooperative Arrangements – Replace this subsection with the following:

Agency is not, by virtue of this Contract, a partner or joint venturer with Contractor in connection with activities carried out under this Contract, and shall have no obligation with respect to Contractor's debts or any other liabilities of each and every nature.

00150.15(b) Agency Responsibilities - Replace this subsection, except for the subsection number and title, with the following:

The Engineer will perform the Agency responsibilities described in the Construction Surveying Manual for Contractors, Chapter 1.5 (see Section 00305).

00150.15(c) Contractor Responsibilities - Replace this subsection, except for the subsection number and title, with the following:

The Contractor shall perform the Contractor responsibilities described in the Construction Surveying Manual for Contractors, Chapter 1.6 (see Section 00305).

00150.50(f) Utility Information (No Anticipated Relocations) - Within the Project limits, there are no anticipated relocations with the Utilities listed below. The Contractor shall contact those Utilities having buried facilities and request that they locate and mark them for their protection prior to construction.

Utility	Contact Person's Name, Address, Email, and Phone Number
Quantum (LS Networks)	Rick Rappe rrappe@lsnetworks.net 503-414-0497
Central Oregon Irrigation District	Dan Downing ddowning@coid.org 541-548-6047

00150.50(g) Utility Information (Anticipated Relocations):

The following organizations may be adjusting Utilities within the limits of the Project during the period of the Contract with relocation Work estimated to be completed by the following dates and times:

Subsection	Utility	Contact Person's Name, Address, Email, and Phone Number	Estimated Completion Date
00150.50(g)(1)	Central Electric Cooperative	Cody Smith, Distribution Engineer 2098 NW 6 th St Redmond, OR 97756 csmith@cec.coop 541-312-7752	TBD
00150.50(g)(2)	CenturyLink	Robert Watters, Engineer 541-985-0221 Robert.Watters@centurylink.com	January 15, 2020

The Contractor shall contact the Engineer to view the approved Utility Relocation Plans.

The Contractor shall notify, in writing, the Utilities listed above, with a copy to the Engineer, at least 14 Calendar Days before beginning Work on the Project.

(1) Central Electric Cooperative - "Power Supplier":

The Contractor shall notify the Power Supplier(s) in writing, with a copy to the Engineer, at least 14 Calendar Days before beginning Work within 10 feet of the power line(s).

The Contractor shall notify the Power Supplier in writing, with a copy to the Engineer, 21 Calendar Days before the Contractor's estimated completion of removal of existing fence on "Southwest Canal Blvd" between Sta.687+25 R and 694+75 R. After the Contractor has completed this Work, the Contractor shall then allow the Power Supplier 21 Calendar Days to schedule and complete the relocation and adjustment work.

(2) CenturyLink - "Telecommunication Utility":

The Contractor shall notify the Telecommunication Utility in writing, with a copy to the Engineer, at least 14 Calendar Days before beginning Work within 10 feet of the Telecommunication Utility facilities.

SECTION 00160 – SOURCE OF MATERIALS

Comply with Section 00160 of the Standard Specifications modified as follows:

00160.30 Agency-Furnished Materials – Add the following paragraph:

No Agency materials are being offered for use on this project. Contractor shall provide all required materials.

00160.40 Agency-Furnished Sources– Add the following paragraph:

No Agency sources are being offered for use on this project. Contractor shall provide all required materials.

SECTION 00165 - QUALITY OF MATERIALS

Comply with Section 00165 of the Standard Specifications modified as follows:

00165.03 Testing by Agency – Delete this subsection.

00165.04 Costs of Testing – Delete this subsection.

00165.50(b)(1) Specification Materials – Delete the second sentence.

00165.10(a) Field-Tested Materials – Add the following sentence to the end of this subsection:

This is a Type D project.

SECTION 00170 – LEGAL RELATIONS AND RESPONSIBILITIES

Comply with Section 00170 of the Standard Specifications modified as follows:

Add the following subsection:

00170.09 Debt Limitation - This Contract is expressly subject to the debt limitation of Oregon counties set forth in Article XI, Section 10, of the Oregon Constitution, and is contingent upon funds being appropriated therefore. Any provision herein which would conflict with law are deemed inoperative to that extent.

00170.70(a) Insurance Coverages - Add the following paragraph and table to the end of this subsection:

The following insurance coverages and dollar amounts are required pursuant to this subsection:

Insurance Coverages	Combined Single Limit per Occurrence	Annual Aggregate Limit
Commercial General Liability	\$1,000,000	\$2,000,000
Commercial Automobile Liability	\$1,000,000	(aggregate limit not required)

00170.70(c) Additional Insured - Add the following paragraph and bullets to the end of this subsection:

Add the following as Additional Insureds under the Contract:

- Deschutes County and its officers, agents, employees, and volunteers
- Deschutes County Board of Commissioners

00170.72 Indemnity/Hold Harmless - Add the following paragraph and bullets to the end of this subsection:

Extend indemnity and hold harmless to the Agency and the following:

- Deschutes County and its officers, agents, and employees
- Deschutes County Board of Commissioners

SECTION 00180 – PROSECUTION AND PROGRESS

Comply with Section 00180 of the Standard Specifications modified as follows:

00180.40(c) Specific Limitations - Limitations of operations specified in these Special Provisions include, but are not limited to, the following:

Limitations	Subsection
Cooperation with Utilities	00150.50
Contract Completion Time	00180.50(h)
Traffic Lane Restrictions	00220.40(e)

Be aware of and subject to schedule limitations in the Standard Specifications that are not listed in this subsection.

00180.41 Project Work Schedules - After the paragraph that begins "One of the following Type..." add the following paragraph:

In addition to the "look ahead" Project Work schedule, a Type A schedule as detailed in the Standard Specifications is required on this Contract.

00180.50(h) Contract Time - The Contractor shall complete all Work to be done under the Contract not later than August 31, 2020.

SECTION 00190 – MEASUREMENT OF PAY QUANTITIES

Comply with Section 00190 of the Standard Specifications.

SECTION 00195 - PAYMENT

Comply with Section 00195 of the Standard Specifications modified as follows:

00195.12(d) Steel Materials Pay Item Selection - Add the following to this subsection:

No Pay Items under this Contract qualify for the steel escalation/de-escalation program for this Project.

00195.50(b) Retainage – Replace the first paragraph of this subsection with the following:

The amount to be retained from progress payments will be 5% of the value of Work accomplished, and will be retained in one of the forms specified in Subsection (c) below. No retainage will be withheld from Work performed as Force Account Work, escalation/de-escalation, bonuses, or other items decided by the Agency.

00195.50(c-2) Cash, Alternate B (Retainage Surety Bond) - Delete this subsection.

00195.50(c-3) Bonds and Securities – Delete this subsection.

00195.50(d) Release of Retainage – Replace this subsection with the following:

As the Work progresses, release of the amounts retained under (b) above will only be considered for Pay Items that have been satisfactorily completed. For purposes of this Subsection, a Pay Item will be considered satisfactorily completed only if all of the Work for the Pay Item is complete and all contractual requirements pertaining to the Pay Item and Work have been satisfied. Work not included in a Pay Item, or which constitutes part of an uncompleted Pay Item, will not be regarded as satisfactorily completed Work for the purposes of this Subsection.

A determination of satisfactory completion of Pay Items or Work or release of retainage shall not be construed as acceptance or approval of the Work and shall not relieve the Contractor of responsibility for defective Materials or workmanship or for latent defects and warranty obligations.

SECTION 00196 – PAYMENT FOR EXTRA WORK

Comply with Section 00196 of the Standard Specifications.

SECTION 00197 – PAYMENT FOR FORCE ACCOUNT WORK

Comply with Section 00197 of the Standard Specifications.

SECTION 00199 - DISAGREEMENTS, PROTESTS, AND CLAIMS

Comply with Section 00199 of the Standard Specifications modified as follows:

00199.40 Claim Decision; Review; Exhaustion of Administrative Remedies – Replace the second and third paragraphs with the following:

If the Engineer denies the claim for additional compensation or a combination of additional compensation and Contract Time, in full or in part, according to 00199.40(a), the Contractor may request review of the denial. The disputed claim may then be resolved, in full or in part, at any of the three progressive steps of claim review procedure as set forth in (b) through (d) of this Subsection.

If the Engineer has denied a claim, in full or in part, for Contract Time only according to 00180.80, or has denied a claim, in full or in part, for correction of final compensation according to 00195.95, those disputed claims may then be resolved, in full or in part, at any of the three progressive steps of claim review procedure as specified in (b) through (d) of this Subsection.

Delete the fifth paragraph.

00199.40(b - e)- Replace these subsections in their entirety with the following:

00199.40(b) Step 1: Board of Commissioners Review – The Contractor shall request that the Engineer arrange for a hearing during a regularly scheduled Board of Commissioners Meeting in order to present the denied or partially denied claim for formal review and discussion. The meeting will take place within 21 Calendar Days of the Agency's receipt of the request, or as otherwise agreed by the parties.

If the Board of Commissioners determines that the Contractor must furnish additional information or documentation to allow proper analysis of the claim, the Engineer will prepare a Board meeting agenda item for a second hearing within 14 Calendar Days, or as otherwise agreed by the parties, at which the Contractor shall present the requested information or documentation.

If the Contractor does not accept the Step 1 decision, the Contractor may, within 10 Calendar Days of receipt of the written decision, request in writing through the Engineer that the claim be advanced to Step 3 or 4 (see (c) and (d) below).

00199(c) Step 2: Arbitration - At this step, the claim will be resolved by binding arbitration before a single arbitrator according to the Construction Industry Arbitration Rules of the American Arbitration Association or such other arbitration service and rules as agreed by the parties.

Arbitration filing costs and any arbitrator's fees will be divided equally between the Agency and the Contractor.

00199(d) Step 3: Litigation – This step applies to appeals of arbitration awards issued in Step 2 at 00199.40(c) above, according to ORS 36.600 through ORS 36.740.

The Contractor must follow each step in order and exhaust all available administrative remedies before resorting to litigation. Lawsuits must be properly filed in a court of competent jurisdiction within 6 months from the date of the final decision that exhausted the Contractor's available administrative remedies under this Section 00199.

The Contractor shall comply with 00170.00.

SECTION 00210 - MOBILIZATION

Comply with Section 00210 of the Standard Specifications modified as follows:

SECTION 00220 - ACCOMMODATIONS FOR PUBLIC TRAFFIC

Comply with Section 00220 of the Standard Specifications modified as follows:

00220.02(a) General Requirements - Add the following bullets to the end of the bullet list:

- When performing trench excavation or other excavation across or adjacent to a Traffic Lane on a roadway having a pre-construction posted speed greater than 35 mph, backfill the excavation, install surfacing, and open the roadway to traffic by the end of each work shift. Install a "BUMP" (W8-1-48) sign approximately 100 feet before the backfilled area and a "ROUGH ROAD" (W8-8-48) sign approximately 500 feet ahead of the "BUMP" sign. If this requirement is not met, maintain all necessary lane or shoulder closures and provide additional TCM, including flagging, at no additional cost to the Agency. Do not use temporary steel plating to reopen the roadway.
- Before activating a modified traffic signal, revising lane usage, implementing new roadway geometry, or removing a "STOP" sign, protect traffic by installing "NEW TRAFFIC PATTERN AHEAD" (W23-2) signing according to 00225.02. Keep the signs in place for 30 Calendar Days after completing the modifications.
- When an abrupt edge is created by excavation, protect traffic according to the "Excavation Abrupt Edge" and the "Typical Abrupt Edge Delineation" configurations shown on the Standard Drawings.
- When paving operations create an abrupt edge, protect traffic by installing a "DO NOT PASS" (R4-1) sign before the work area at sign spacing "A" from the TCD Spacing Table" shown on the standard drawings. Alternate "ABRUPT EDGE" (CW21-7) signs with appropriate (CW21-8) rider and "DO NOT PASS" (R4-1) signs at 1/2 mile spacings. Install a "BUMP" (W8-1) sign 100 feet prior to the transverse paving edge.
- Protect pedestrians in pole base excavation areas by placing approved covers over all pole base excavations. Place a minimum of two B(II)LR barricades adjacent to and on either side of the excavated area, facing pedestrian traffic, or place covers and barricades as directed.

00220.40(e)(1) Closed Lanes - Replace this subsection, except for the subsection number and title, with the following:

One or more Traffic Lanes may be closed on SW Canal Boulevard and SW Helmholtz Way when allowed, shown, or directed during the following periods of time except as indicated in 00220.40(e)(2):

- Daily, Monday through Friday, between 7:00 a.m. and 6:00 p.m.

Add the following subsection:

00220.40(f) Road Closure - The Contractor will be permitted to close all Traffic Lanes on SW Helmholtz Way at the intersection with SW Canal Boulevard for up to twenty-one (21) consecutive calendar days.

SECTION 00225 - WORK ZONE TRAFFIC CONTROL

Comply with Section 00225 of the Standard Specifications modified as follows:

00225.02(a) Temporary Signs - Add the following to the end of the bullet list:

- Install "ROAD WORK AHEAD" (W20-1-48) signs with a 36 by 24-inch "FINES DOUBLE" (R2-6aP) rider on Canal Boulevard and SW Helmholtz Way, according to the "TCD Spacing Table" shown on the Standard Drawings or as modified by the Plans except do not install the "FINES DOUBLE" rider on concrete barrier mounted signs.
- Install beyond each end of the Project, facing outgoing traffic, an "END ROAD WORK" (CG20-2A-24) sign a distance of $(A \div 2)$ according to the "TCD Spacing Table" shown on the Standard Drawings or as modified by the Plans.
- Install two sign flag boards, as shown on the Standard Drawings, above the following detour and road closed advance warning signs, where applicable:
 - "DETOUR AHEAD", "DETOUR XXXX FT", "DETOUR X/X MILE" (W20-2) signs.
 - "ROAD CLOSED AHEAD", "ROAD CLOSED XXXX FT", "ROAD CLOSED X/X MILE" (W20-3) signs.
- Install a "NEW TRAFFIC PATTERN AHEAD" (W23-2) sign approximately 500 feet in advance of the SW Canal Boulevard/SW Helmholtz Way intersection, facing eastbound incoming traffic.
- Install a "NEW TRAFFIC PATTERN AHEAD" (W23-2) sign approximately 500 feet in advance of the SW Canal Boulevard/SW Helmholtz Way intersection, facing westbound incoming traffic.
- Install a "NEW TRAFFIC PATTERN AHEAD" (W23-2) sign approximately 325 feet in advance of the SW Canal Boulevard/SW Helmholtz Way intersection, facing southbound incoming traffic.
- Keep the "NEW TRAFFIC PATTERN AHEAD" signs in place 30 Calendar Days after substantial completion of the project .
- When construction requires bicycles to use the Traffic Lanes, install a "Bicycle ON ROADWAY" (CW11-1) symbol sign on 1/2 mile spacing through the affected area. Keep the signs in place until completion of the Shoulder or bikeway final surface.
- During staged roadway construction operations on SW Canal Boulevard, install temporary signing and other required TCD as shown. Install temporary speed zone signing according to and as shown in the Temporary Speed Zone Order.

Add the following subsection:

00225.16(c) Radar Speed Trailer - Use a radar speed trailer with a Type 2 panel from the QPL, Conditional List, or as approved.

Add the following subsection:

00225.19 Pole Base Excavation Covers - Use pole base excavation covers meeting the following requirements:

- Utility grade plywood
- 3/4-inch minimum thickness
- New or in like new condition

00225.32(b) Traffic Control Inspection Without TCS - Add the following bullet(s) to the end of the bullet list:

- Shall report to the Project Site within 1 hour after being notified in the event of a Work Zone incident during non-work periods.

00225.46(b) Portable Changeable Message Signs (PCMS) - Add the following bullets to the end of the bullet list:

- Seven Calendar Days before the SW Helmholtz Way closure, place one or more PCMS displaying the following message as shown, or as directed:

Panel 1	Panel 2
NW	(Time Frame)
HELMHOLT	(Time Frame)
CLOSED	

Add the following subsection:

00225.46(d) Radar Speed Trailers - Provide and install radar speed trailers according to the Plans and the following:

- Place and delineate according to the Flagger Station Lighting Delineation detail as shown on the Standard Drawings, or as directed.
- Operate radar speed modes and set speed thresholds as directed and as follows:
 - Use an over speed threshold equal to the posted speed on the radar speed trailer.
 - Use a blackout speed threshold of 85 mph, which does not allow the radar speed trailer to display a speed or message when the measured speed exceeds 85 mph.
- Program to display the over speed message as follows, or as approved by the Engineer:

SLOW
DOWN

Ensure that the over speed message is displayed when the measured vehicle speeds exceed the posted speed mounted on the radar speed trailer but do not exceed the blackout speed threshold.

- Provide speed and event logging data to the Engineer at the completion of the Project, in a format compatible with Microsoft Excel.
- When not actively displaying speeds, remove from the Roadway and locate the radar speed trailer at least 30 feet from the nearest open Traffic Lane, behind a barrier system, or as directed.

- Install a 30 by 36-inch “SPEED XX” (OR2-1) sign below the trailer display panel. The “XX” value is determined by a Speed Zone Order signed by the Board of County Commissioners.

00225.66 Portable Electrical Signs - Replace this subsection, except for the subsection number and title, with the following:

Maintain and use the required PCMS, radar speed trailers, and sequential arrow signs according to the manufacturer's recommendations, TCP, and as required. Do not display or alter any sign message before it is approved.

While PCMS, radar speed trailers, and sequential arrow signs are in use, have repair Equipment and parts on the Project site, as recommended by the manufacturer.

When directed, repair or replace sequential arrow signs, radar speed signs, and PCMS that are damaged or destroyed before continuing Work that requires use of the signs.

Add the following subsection:

00225.86(c) Radar Speed Trailers - Radar speed trailers will be measured on the unit basis, when the devices are initially installed on the Project.

00225.90(a)(2) Temporary Protection and Direction of Traffic – Replace the bullet that begins “Providing, Surfacing, maintaining, removing...” with the following bullet:

- Providing, Surfacing, maintaining, removing, and restoring the TPAR.

Add the following bullet to the end of the bullet list:

- Furnishing, placing, maintaining, moving, and removing pole base excavation covers.

00225.96 Temporary Electrical Signs - Add the following pay item to the pay item list:

(c) Radar Speed Trailer Each

Add the following paragraph to the end of this subsection.

Item (c) includes furnishing, operating, moving, maintaining, and removing the radar speed trailer.

SECTION 00230 - TEMPORARY DETOURS

Section 00230, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00230.00 Scope - This work consists of constructing, maintaining, and removing temporary detours as shown or directed.

Materials

00230.10 Embankment - Provide embankment materials according to the applicable parts of Section 00330.

00230.13 Aggregate Base - Provide Aggregate Base meeting the requirements of 00640.10.

00230.14 Asphalt Concrete Pavement - Provide ACP meeting the requirements of 00744.

00230.15 Emulsified Asphalt Tack Coat - Use CSS-1, CSS-1h, CMS-2, CMS-2S, CMS-2h, CRS-1, CRS-2, HFRS-2, or HFMS-2 asphalt in tack as the Contractor elects.

Construction

00230.40 Earthwork - Construct detour embankments and excavation according to the applicable parts of Section 00330 except compaction to the specified densities will not be required. Compact the embankment material until there is no reaction or yielding under the compactor.

00230.43 Aggregate Base - Place and compact Aggregate Base according to the applicable parts of Section 00640.

00230.44 Asphalt Concrete Pavement - Compact the asphalt concrete mixture according to 00745.49(d).

Maintenance

00230.60 Surface Maintenance - Maintain detour surfaces according to 00220.60.

Finishing and Cleaning Up

00230.70 General - When temporary detours are no longer needed, do the following:

- Remove them
- Restore the area on which the detours occupied to the original ground contours
- Dispose of excess materials according to 00330.41(a)(5)

Measurement

00230.80 Measurement - No measurement of quantities will be made for work performed under this Section. It is estimated that the following approximate quantities of materials will be required:

Material	Amount
Embankment.....	70 cu. yd.
Excavation	250 cu. yd.
Aggregate Base	160 cu. yd.
Asphalt Concrete Mixture	120 ton

Payment

00230.90 Payment - The accepted quantities of work performed under this Section will be paid for at the Contract lump sum amount for the item "Construct and Remove Detours".

Payment will be payment in full for constructing, maintaining, and removing detours, and for furnishing and placing all Materials, and for furnishing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

SECTION 00280 - EROSION AND SEDIMENT CONTROL

Comply with Section 00280 of the Standard Specifications modified as follows:

00280.06 Erosion and Sediment Control Manager - Delete this subsection.

00280.62 Inspection and Monitoring - Replace this subsection, except for the subsection number and title, with the following:

Inspect the Project Site and all ESC devices for potential erosion or sediment movement on a weekly basis and when 1/2 inch or more of rainfall occurs within a 24-hour period, including weekends and holidays.

If a significant noncompliance or serious water quality issue occurs that could endanger health or the environment, verbally report it to the Engineer with 24 hours.

SECTION 00305 - CONSTRUCTION SURVEY WORK

Section 00305, which is not a Standard Specification, is included for this Project by Special Provision.

Description

00305.00 Scope - Provide construction survey work according to the current edition on the date of Advertisement, of the ODOT "Construction Surveying Manual for Contractors". This manual is available on the web at:

http://www.oregon.gov/ODOT/ETA/Documents_Geometronics/Construction-Survey-Manual-Contractors.pdf

In addition to the requirements of the ODOT "*Construction Surveying Manual for Contractors*", establish Engineering Stationing at 50 foot intervals for the station intervals shown below. Maintain the stationing so it is visible throughout construction of the project.

SW Canal alignment:

- STA: 683+00 - STA: 698+25

SW Helmholtz Way Alignment:

STA: 5+00- STA: 6+50

00305.05 3D Engineered Models - If the Contractor elects to use the 3D Engineered Models to control the work, provide unstamped 3D Construction Models according to 00150.35 which include the following:

- A detailed outline and list of the pay items and Work that will be controlled by the 3D Construction Models.
- A narrative outlining any differences between the Agency-prepared 3D Engineered Models and the 3D Construction Models.
- A copy of the 3D Construction Models that will be used by the Contractor's equipment for machine guidance or verification, that include and represent the Agency-prepared 3D Engineered Models with changes identified in the narrative. Provide files in LandXML format or as directed.

Measurement

00305.80 Measurement - No measurement of quantities will be made for construction survey work.

Payment

00305.90 Payment - The accepted quantities of construction survey work will be paid for at the Contract lump sum amount for the item "Construction Survey Work".

Payment will be payment in full for furnishing all material, equipment, labor, and incidentals necessary to complete the work as specified.

No separate or additional payment will be made for any temporary protection and direction of traffic measures including flaggers and signing necessary for the performance of the construction survey work.

No separate or additional payment will be made for preparing surveying documents including but not limited to office time, preparing and checking survey notes, and all other related preparation work.

Costs incurred caused by survey errors will be at no additional cost to the Agency. Repair any damage to the Work caused by Contractor's survey errors at no additional cost to the Agency. The Engineer may make an equitable adjustment, which may decrease the Contract Amount, if the required survey work is not performed.

SECTION 00310 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Comply with Section 00310 of the Standard Specifications.

SECTION 00320 - CLEARING AND GRUBBING

Comply with Section 00320 of the Standard Specifications.

SECTION 00330 - EARTHWORK

Comply with Section 00330 of the Standard Specifications modified as follows:

00330.03 Basis of Performance - Add the following paragraph to the end of this subsection:

Perform all earthwork under this Section on the excavation basis.

SECTION 00340 - WATERING

Comply with Section 00340 of the Standard Specifications.

SECTION 00370 - FINISHING ROADBEDS

Comply with Section 00370 of the Standard Specifications.

SECTION 00620 - COLD PLANE PAVEMENT REMOVAL

Comply with Section 00620 of the Standard Specifications.

SECTION 00641 - AGGREGATE SUBBASE, BASE, AND SHOULDERS

Comply with Section 00641 of the Standard Specifications.

SECTION 00730 - EMULSIFIED ASPHALT TACK COAT

00730.90 Payment - Replace this subsection, except for the subsection number and title, with the following:

No separate or additional payment will be made for Emulsified Asphalt tack coat. Approximately 10 tons of Emulsified Asphalt in tack coat will be required on this Project.

SECTION 00744 - ASPHALT CONCRETE PAVEMENT

Comply with Section 00744 of the Standard Specifications modified as follows:

00744.10(a) New Coarse and Fine Aggregates – Delete the sentence that begins with “Testing of Aggregates for soundness...”

00744.11(a) Asphalt Cement - Add the following to the end of this subsection:

Provide PG 58-34ER grade asphalt cement for this Project.

SECTION 00749 - MISCELLANEOUS ASPHALT CONCRETE STRUCTURES

Comply with Section 00749 of the Standard Specifications.

SECTION 00850 - COMMON PROVISIONS FOR PAVEMENT MARKINGS

Comply with Section 00850 of the Standard Specifications modified as follows:

00850.45 Installation - Add the following bullet before the bullet that begins “Place material according to...”:

- Place material between May 1 and October 15.

Replace the bullet that begins “Place material according to...” with the following bullet:

- Place material according to the manufacturer’s installation instructions.

SECTION 00855 - PAVEMENT MARKERS

Comply with Section 00855 of the Standard Specifications.

SECTION 00865 - LONGITUDINAL PAVEMENT MARKINGS - DURABLE

Comply with Section 0865 of the Standard Specifications.

SECTION 00867 - TRANSVERSE PAVEMENT MARKINGS - LEGENDS AND BARS

Comply with Section 00867 of the Standard Specifications modified as follows.

00867.90 Payment - Add the following paragraph after the paragraph that begins "Item (p) includes one...":

Item (q) includes the STOP legend and AHEAD legend.

SECTION 00905 - REMOVAL AND REINSTALLATION OF EXISTING SIGNS

Comply with Section 00905 of the Standard Specifications.

SECTION 00910 - WOOD SIGN POSTS

Comply with Section 00910 of the Standard Specifications.

SECTION 00920 - SIGN SUPPORT FOOTINGS

Comply with Section 00920 of the Standard Specifications modified as follows:

00920.80 Measurement - Add the following to the end of this subsection:

The estimated quantities of concrete for minor sign supports are:

Support Type	Quantity
Perforated Steel Square Tube Slip Base Sign Supports	6.0 cu. yd.

SECTION 00930 - METAL SIGN SUPPORTS

Comply with Section 00930 of the Standard Specifications modified as follows:

00930.10 Materials - Replace the paragraph that begins "Furnish structural steel materials..." with the following paragraph:

Furnish perforated steel square tube slip base sign supports and perforated steel square tube anchor sign supports from the QPL. Furnish other structural steel materials meeting the applicable portions of Section 02530, with weights and sizes as shown or specified.

00930.80 Measurement - Add the following to the end of this subsection:

The estimated quantities of structural steel are as follows:

Item	Estimated Quantity (Pound)
Minor Sign Supports	
Perforated Steel Square Tube Slip Base Sign Supports	1,350

SECTION 00940 - SIGNS

Comply with Section 00940 of the Standard Specifications.

SECTION 00960 - COMMON PROVISIONS FOR ELECTRICAL SYSTEMS

Comply with Section 00960 of the Standard Specifications modified as follows:

00960.01 Regulations, Standards, and Codes - Replace the paragraph that begins "Wherever reference is made..." with the following paragraph:

Use the code, order, or standard in effect on the date the Project is advertised unless otherwise shown.

Replace the paragraph that begins "Do not begin installations..." with the following paragraph:

Safe wiring labels normally required by the Department of Consumer and Business Services, Building Codes Division will not be required for traffic management systems listed on the Red Sheets (see 00160.00) as allowed by ORS 479.540 and OAR 918-261-0037. The Red Sheets may be viewed on ODOT's web site.

00960.02 Equipment List and Drawings - Replace this subsection with the following subsection:

00960.02 Equipment List and Drawing Submittals - Within 30 Calendar Days after execution of the Contract, submit two copies of the Blue Sheets (see 00160.00) and two copies of the Green Sheets (see 00160.00) according to 00150.37 for all materials the Contractor proposes to install. Blue Sheets and Green Sheets will be made available to the Contractor by the Engineer.

Fill out the Blue Sheets and Green Sheets based on the Project requirements. Check off all pre-approved items to be used on the Project. When proposing write-in items, check off the box under "Write-in items" and follow the instructions. Use the current version of the Blue Sheets and Green Sheets that is in effect on the date of Advertisement.

Within 14 Calendar Days after receipt of submittals, the Engineer will review the submittals and designate them in writing as "approved", "approved as noted", or "returned for correction". Do not proceed with the Work before receiving written approval of the submittals from the Engineer.

Add the following subsection:

00960.03 Permits – Provide the Engineer with copies of all required electrical permits prior to performing any work.

00960.10 Materials - Replace this subsection, except for the subsection number and title, with the following:

Furnish Materials meeting the following requirements:

Commercial Grade Concrete.....	00440
Controlled Low Strength Materials	00442
Delineators.....	00840.10 and 00840.11
Metal Illumination and Traffic Signal Supports	00962
Selected General Backfill	00330.13
Selected Granular Backfill	00330.14
Steel Reinforcement	00530

Furnish electrical Materials that have been approved through the Blue Sheet and Green Sheet submittal process in 00960.02.

Anchor rods shall conform to 02560.30 and to the types and sizes shown.

Use commercially available 30 pound nonperforated asphalt-saturated felt where shown.

Use commercially available No. 10 - 0 sand when sand blanket is required.

Use commercially available UL listed insulating vinyl plastic tape where shown.

Use commercially available UL listed silicon bronze (or copper alloy) split bolt where shown.

Use commercially available galvanized steel weatherproof compression fittings where shown.

00960.40 General – Replace this subsection with the following subsection:

00960.40 Excavation:

Remove and replace sidewalks, curbs, paved surfaces, and other materials as needed. Replace and finish all surfaces to correspond with the existing surfaces. Restore all disturbed landscaping and underground systems to original condition.

Excavate trenches, foundations, and junction boxes to locations, Neat Lines, grades and Cross Sections as shown or as established or approved. Furnish, place, and remove any shoring required to prevent caving of walls.

Dispose of all excavated Materials according to 00290.20.

00960.41 Excavation - Replace this subsection with the following subsection:

00960.41 Horizontal Directional Drilling - Drilling shall not "hump" or deform the Pavement and shall be guided. Keep drilling pits at least 2 feet from the edge of Pavement. Do not use water to the extent that the Pavement might be undermined or Subgrade softened. Sand bedding and marking tape are not required with this method.

If jointed conduit is used, verify the joints have not separated by pulling a mandrel through the conduit after installation.

00960.42 Conduit - Replace this subsection, except for the subsection number and title, with the following:

(a) Cleaning New Conduit – Before cable and wire installation, clean all new conduit with cylindrical mandrel of the proper size for that conduit and blow out with compressed air. Mechanical pulling methods may be used for conduit cleaning.

(b) Cleaning Existing Conduit - Before installation of new cable(s) or wire(s) in an existing conduit, temporarily remove all existing cable(s) and wire(s). Clean existing conduit with cylindrical mandrel of the proper size for that conduit and blow out with compressed air. Mechanical pulling methods may be used for conduit cleaning. Stop work and notify the

Engineer immediately if there are any difficulties cleaning the existing conduit. Reinstall existing cable(s) and wire(s) in existing conduit unless otherwise shown.

00960.43 Foundations – Replace this subsection, except for the subsection number and title, with the following:

Construct foundations for pedestals, posts, and cabinets according to Section 00440 and the applicable portions of 00540.48(a). Place concrete:

- Directly against the sides of the excavation in undisturbed or well-compacted material or place in forms.
- With a continuous pour.
- To the elevation shown or directed.
- With conduit ends and anchor rods held securely in proper vertical position, to proper height, using a manufacturer's recommended template until the concrete sets.

Maintain rebar clearances during concrete pour.

Make no adjustments of anchor rods after concrete has set.

Set forms square and true to line and grade. Construct forms of rigid materials that remain in position until removed.

Remove forms and place subsequent loading according to Table 00540-1.

Finish tops of foundations to Roadway, sidewalk or curb grade, or as directed.

Finish exposed concrete foundations to present a smooth, neat appearance. Fill all holes.

00960.44 Junction Boxes - Delete this subsection.

00960.45 Cable and Wire - Delete this subsection.

00960.46 Wiring Practices - Delete this subsection

00960.47 Wood Poles - Delete this subsection.

00960.48 Coating - Delete this subsection.

00960.49 Electrical Service - Delete this subsection.

00960.50 Grounding and Bonding - Replace this subsection, except for the subsection number and title, with the following:

(a) General - Make all ground rods, metal conduit, metal poles, grounding wire, metallic junction boxes, metallic junction box covers, and cabinets mechanically and electrically secure to form a continuous, effectively grounded and bonded system.

(b) Grounding/Bonding Wire - Use a THWN No. 6 AWG stranded copper grounding/bonding wire in conduit or as shown. Use an un-insulated No. 4 AWG stranded copper grounding/bonding wire outside of conduit or as shown.

(c) Ground Rods - Ground each above ground metallic Structure with a separate ground rod.

(1) Located in Junction Box - Install ground rod in a junction box if shown. Drive ground rods into the ground with the top of the ground rod 2 inches to 3 inches above the bottom of the junction box to allow for an accessible clamp.

(2) Located in Foundation - Install ground rod in a foundation if shown, with the ground rod 2 inches to 3 inches above the top of the foundation to allow for an accessible clamp.

(d) Services and Cabinets - Bond the neutral conductor, the control cabinets, and the metal base to the grounding electrode system.

(g) Nonmetallic Conduit - In all nonmetallic conduit, run a ground/bond wire continuously between all poles, pedestals, posts, and cabinets. Bond wires are not required in conduit that only contains circuits that operate at less than 25 volts.

Add the following subsection:

00960.60 Maintenance, Operation and Power Costs - The Agency will continue normal maintenance and operations of the existing systems including the furnishing of electrical energy. Do not use for construction purposes electrical energy billed to the Agency or other agencies.

00960.70 Electrical Energy - Replace this subsection with the following subsection:

00960.70 Service Cabinet and Electrical Energy - Install service cabinet and associated equipment early on to allow the Utility to schedule its Work before project completion. Have the service cabinet inspected by the Utility providing power. Arrange for the Utility to make the electrical hookup.

The following table contains Utility contact information to arrange for the Utility to make electrical hookups:

Location	Utility	Utility Contact Person's Name, Email and Phone Number
SW Canal Boulevard / SW Helmholtz Way	Central Electric Cooperative	Cody Smith, csmith@cec.coop , 541-312-7752

Furnish and install a meter base approved by the serving Utility (with cover by the Utility), where shown.

Add the following subsection:

00960.71 As-Built Plans - Upon completion of the installation, submit a red-lined copy of the original Plans noting all changes made. The information furnished shall include all modifications made and shall represent the material installed and in operation. It shall be sufficiently detailed to enable maintenance forces to replace or repair any part of the Project under routine or emergency maintenance by direct reference.

SECTION 00962 - METAL ILLUMINATION AND TRAFFIC SIGNAL SUPPORTS

Comply with Section 00962 of the Standard Specifications modified as follows:

00962.46(j)(2)(d) Final Tightening - In the table, replace the words "ASTM A325" with the words "ASTM F3125, Grade A325"

SECTION 00970 - HIGHWAY ILLUMINATION

Comply with Section 00970 of the Standard Specifications modified as follows:

00970.42 Cable and Wire - Replace the paragraph that begins "Support the conductors..." with the following paragraph:

Support the conductors at the top of the pole using a flexible metal cable support grip to prevent insulation damage at the upsweep arm opening. When splicing cable into a new or existing circuit at a pole base (minimum wire length: 18 inches outside handhole), install a watertight, in-line fuse holder in the pole base for each underground wire going up the pole. This fuse holder shall be constructed so the wire to the ballast can be disconnected without cutting or disconnecting wiring at the ballast. Insulate terminal ends of the in-line fuse holder using either heat shrink tubing or electrical insulating rubber tape over-wrapped with electrical vinyl plastic tape as specified.

Add the following paragraph to the end of this subsection:

Color coding of illumination circuits is required for three phase systems only. Ensure color coding of each phase conductor remains consistent throughout the entire electrical system.

SECTION 01012 - STORMWATER CONTROL, WATER QUALITY BIOFILTRATION SWALE

Section 01012, which is not a Standard Specification, is included for this Project by Special Provision.

Description

01012.00 Scope - This work consists of furnishing and installing a water quality biofiltration swale as shown.

Materials

01012.12 Water Quality Mixture - Furnish medium compost meeting the requirements of Section 03020. Furnish soil meeting the following gradation requirements, or approved equal:

Sieve Size	Percent Passing (by Weight)
No. 4	100
No 10	95 - 100
No. 40	40 - 60
No. 100	10 - 25

No. 200

5 - 10

Sample soil according to AASHTO T 2. Determine sieve analysis according to AASHTO T 27 and AASHTO T 11.

Blend the medium compost and soil so that the mixture:

- Is composed of between 20 percent and 25 percent medium compost material and between 75 percent and 80 percent soil material.
- Has a pH between 5.5 and 8.0.
- Does not have clumps greater than 3 inches in any direction.

Construction

01012.40 General - Construct water quality biofiltration swale facility as shown. Perform excavation, fine grading, and placement work only when the facility area is dry and only from the top of the swale area. Do not stockpile excavated material in the facility area. Scarify the subsoil area a minimum 12 inches deep. After scarification, place the water quality mixture in maximum 12 inch lifts. Compact each lift with a water filled landscape roller.

Maintenance

01012.70 Cleaning - If a stormwater control facility is used for erosion and sediment control, remove all accumulated sediment and debris before completing the facility.

Measurement

01012.80 Measurement – The quantities of Water Quality Mixture will be measured on the volume basis.

Payment

01012.90 Payment - The accepted quantities of Work performed under this Section will be paid for at the Contract lump sum amount for the item "Water Quality Swale".

Payment for water quality biofiltration swale exaction will be made according to 00330.93.

Payment will be payment in full for furnishing and placing all Materials, and for furnishing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

SECTION 01030 - SEEDING

Comply with Section 01030 of the Standard Specifications modified as follows:

01030.13(f) Types of Seed Mixes - Add the following to the end of this subsection:

Provide the following seed mix formulas:

• **Permanent Seeding Mix Seeding:**

Botanical Name (Common Name)	PLS (lb/acre)	÷ (% Purity (minimum)	x % Germination) (minimum)	= Amount (lb/acre)
Bromus Carinatus (California brome)	20	_____	_____	_____
Elymus elymoides (Bottlebrush squirrel tail)	12	_____	_____	_____
Festuca roemerii (Roemer's fescue)	5	_____	_____	_____
Festuca idahoensis (Idaho fescue)	2.5	_____	_____	_____
Poa secunda spp. Secunda (Sanberg's bluegrass)	0.5	_____	_____	_____

01030.15 Mulch - Add the following paragraph to the end of this subsection:

Projects that have variable slopes may include straw mulch and hydromulch when approved.

SECTION 01050 - FENCES

Comply with Section 01050 of the Standard Specifications.

SECTION 01070 - MAILBOX SUPPORTS

Comply with Section 01070 of the Standard Specifications modified as follows:

01070.90 Payment - Add the following pay item to the pay item list:

(d) Remove and Reinstall Mailbox Supports Each

SECTION 02630 – BASE AGGREGATE

Comply with Section 02630 of the Standard Specifications modified as follows:

SECTION 02640 – SHOULDER AGGREGATE

Comply with Section 02640 of the Standard Specifications.

SECTION 02910 - SIGN MATERIALS

02910.40 Hardware - Replace the paragraph that begins "The bolts, nuts, and washers..." with the following paragraph:

The bolts, nuts, and washers used to fabricate and erect signs shall be aluminum alloy, stainless steel, or hot-dip galvanized steel. Aluminum for bolts and nuts shall conform to ASTM B211, alloys 2024-T4 or 6061-T6 as the Contractor elects. Aluminum washers shall conform to ASTM B209, alloy Alclad 2024-T4. Stainless steel for bolts, nuts, and washers shall be Type 304 or Type 316. Galvanized steel bolts, nuts and washers shall be medium carbon steel. Galvanize steel hardware according to AASHTO M 232 (ASTM A153).

SECTION 02926 - HIGHWAY ILLUMINATION MATERIALS

Comply with Section 02926 of the Standard Specifications modified as follows:

02926.00 Scope - Replace this subsection, except for the subsection number and title, with the following:

In addition to all applicable portions of AASHTO "Roadway Lighting Design Guide" (2018) and "Recommended Practice for Lighting Roadway and Parking Facilities" (ANSI/IES, RP - 8, 2018), this Section includes the requirements for highway illumination installations.

02926.41(e) Photoelectric Relay - Replace the paragraph that begins "Power consumption shall be..." with the following paragraph:

Power consumption shall be less than 1 W. At the designated voltage, the photoelectric relay shall be capable of controlling a minimum HID or LED luminaire load of 1000 W. Minimum operating temperature range shall be from -40 °F to 150 °F.

02926.53(b)(1) Vertical Light Distributions - Replace this subsection, except for the subsection number and title, with the following:

Divide vertical light distributions into three groups: short (S), medium (M), and long (L). Classification of the three groups depends on the maximum candle power point within a grid area according to the ANSI/IES RP-8 (2018) publication.

02926.54(c) Submittals - Replace the paragraph that begins "Within 21 Calendar Days..." with the following paragraph:

Within 21 Calendar Days after receipt of submittals, the Engineer will review the submittals and designate them in writing as "approved", "approved as noted", or "returned for correction". Do not begin LED luminaire installation before receiving written approval of submittals from the Engineer.

SECTION 03010 – FENCING MATERIALS

Comply with Section 03010 of the Standard Specifications.

SECTION 03020 – EROSION MATERIALS

Comply with Section 03020 of the Standard Specifications.