

BIDDING DOCUMENTS

PROJECT: SISEMORE BRIDGE REHABILITATION

PROJECT #: W66035

**SUPPLEMENTAL
PREQUALIFICATION:** MARCH 13, 2020

MANDATORY PRE-BID: MARCH 20, 2020

BID OPENING: APRIL 1, 2020

COMPLETION DATE: SEPTEMBER 30, 2020

CONTRACTING AGENCY:



**ROAD
DEPARTMENT**

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



ROAD DEPARTMENT

BIDDING DOCUMENTS SISEMORE BRIDGE REHABILITATION

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DESCRIPTION OF PARTS OF BIDDING DOCUMENTS WHICH ARE NOT BOUND HEREIN:

PROJECT PLANS, TITLED "SISEMORE BRIDGE REHABILITATION PROJECT / OUTFLOW OF TUMALO RES., FEBRUARY 2020"

SPECIAL PROVISIONS

OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2018

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 bearing like numbers and to Sections and subsections contained in these Special Provisions in their entirety.

**DESCHUTES COUNTY, OREGON
ROAD DEPARTMENT
INVITATION TO BID
SISEMORE BRIDGE REHABILITATION**

**Supplemental Prequalification
Mandatory Pre-Bid Meeting
Bid Closing**

**Date: March 13, 2020
Date: March 20, 2020
Date: April 1, 2020**

**Time: 2:00 P.M.
Time: 10:00 A.M.
Time: 2:00 P.M.**

Sealed bids will be received at the Deschutes County Road Department, 61150 SE 27th Street, Bend, Oregon 97702, until but not after, **2:00 p.m. on April 1, 2020**, at which time and place all bids for the above-entitled public works project will be publicly opened and read aloud.

The Class of Work of this Project is Bridges and Structures. The value for this Contract is estimated to be between \$550,000 and \$700,000. The Work will consists of, but not be limited to, the following:

1. Install and maintain temporary traffic control.
2. Construct temporary work access and containment.
3. Perform structure and general excavation.
4. Install steel reinforcement for concrete.
5. Perform concrete repair.
6. Place low density cellular concrete.
7. Place aggregate base and shoulders.
8. Construct asphalt concrete pavement.
9. Replace steel bridge rail.
10. Perform additional and incidental work as called for by the specifications and plans.

Specifications and other bid documents may be inspected and obtained from the Deschutes County Bids and RFPs website at <http://www.deschutes.org/rfps>. Inquiries pertaining to these specifications shall be directed to Cody Smith, County Engineer, in writing at Cody.Smith@deschutes.org or the address above.

Bids shall be made on the forms furnished by the County, including a Bid Bond or Cashiers Check for the minimum amount of 10% of the Bid Price, addressed and mailed or delivered to Chris Doty, Department Director, 61150 SE 27th Street, Bend, Oregon 97702 in a sealed envelope plainly marked "BID FOR SISEMORE BRIDGE REHABILITATION" and the name and address of the bidder.

Bidders must submit a Subcontractor Disclosure Statement. The subcontractor disclosure statement may be submitted in the sealed bid prior to 2:00 p.m. on April 1, 2020 or in a separate sealed envelope marked "SUBCONTRACTOR DISCLOSURE STATEMENT - SISEMORE BRIDGE REHABILITATION" prior to 4:00 p.m. on April 1, 2020 at the above location.

Because the work called for under this contract is for a public works project subject to state prevailing rates of wage under ORS 279C.800 to 279C.870, the County will not receive or consider a bid unless the bid contains a statement by the bidder that the bidder will comply with ORS 279C.840. Each bid must contain a statement as to whether the bidder is a resident bidder, as defined in ORS 279A.120. Vendors shall use recyclable products to the maximum extent economically feasible in the performance of the contract work set forth in this document.

Bidders shall be prequalified with the State of Oregon for the Class of Work stated above in accordance with ORS 279C.430 through 279C.450 and Deschutes County Code 12.52.020. The successful bidders and subcontractors providing labor shall maintain a qualified drug testing program for the duration of the contract. Bidders shall be licensed with the Construction Contractor's Board. Contractors and subcontractors need not be licensed under ORS 468A.720.

In addition to the prequalification requirements above, bidders will be subject to a Supplemental Contractor Prequalification. Key Individual Reference Form(s) must be submitted in a sealed envelope marked "KEY INDIVIDUAL REFERENCE FORM – SISEMORE BRIDGE REHABILITATION" and the name and address of the Bidder, or as PDF in an email with subject "KEY INDIVIDUAL REFERENCE FORM – SISEMORE BRIDGE REHABILITATION" and the name of the Bidder prior to 2:00 p.m. on March 13, 2020. Deschutes County will review the Key Individual Reference

Form(s) and notify Bidders of their supplemental prequalification status within five (5) calendar days of the submission deadline.

Prequalified Bidders must attend a mandatory pre-bid meeting at 10:00 a.m. on March 20, 2020. The pre-bid meeting will be held at the Sisemore Rd bridge located at 44°08'21.6"N 121°24'54.6"W (44.139338, -121.415180) in Deschutes County, Oregon.

Deschutes County may reject any bid not in compliance with all prescribed bidding procedures and requirements, and may reject for good cause any or all bids upon a finding of Deschutes County it is in the public interest to do so. The protest period for this procurement is seven (7) calendar days.

CHRIS DOTY
Road Department Director

PUBLISHED:
DAILY JOURNAL OF COMMERCE: March 4, 2020
THE BEND BULLETIN: March 4, 2020

INFORMATION FOR BIDDERS

1. **General Description of Project.** A general description of the work to be performed is contained in the Invitation to Bid. The scope is indicated in the applicable parts of these Contract documents.
2. **Contract Documents.** The Contract documents under which it is proposed to execute the work consist of the material bound herewith. These Contract documents are intended to be mutually complementary and to provide all details reasonably required for the execution of the proposed work.

Any person contemplating the submission of a proposal and being in doubt as to the meaning or intent of said contract document shall at once notify, in writing, the Road Department Director of Deschutes County, Oregon. Any interpretation of change will be mailed or delivered to each person receiving a set of documents.

3. **Form of Proposals.** All proposals must be submitted on the forms furnished. Subcontractor disclosure form may be submitted with the bid or in a separate envelope.
4. **Substitutions.** Materials and/or products called for in the specifications are named in order to establish a standard of quality design. Manufacturers or suppliers of products similar to those specified may submit bids on the work providing requests for approval of substitution materials are made at least seven (7) calendar days prior to the bid opening. Adequate information on which to base approval or disapproval must be furnished to the Road Department Director or his representative and the Road Department Director shall be the sole judge of any request. When the Road Department Director approves a substitution, it is with the understanding that the Contractor guarantees the substituted article or materials to be equal or better than the specified.
5. **Preparation of Proposals.** All blank spaces in the proposal form must be filled in, in ink, or typed, in both words and figures where required. No changes shall be made in phraseology of the forms. Written amount shall govern in cases of discrepancy between the amount stated in writing and amount stated in figures.

Any proposal shall be deemed informal which contains omissions, erasures, alterations, or additions of any kind, or prices uncalled for, or which, in any manner shall fail to conform to the conditions of the published invitation to bidders.

The bidder shall sign his/her proposal in the blank space provided therefore. Proposals made by corporations or partnerships shall contain names and addresses of the principal officers or partners therein. If a corporation makes a proposal, it must be signed by one of the principal officers thereof, and the corporate seal affixed.

If made by a partnership, it must be signed by one of the partners, clearly indicating that he is signing as a partner of the firm. In the case of a proposal

made by a joint venture, each of the joint venturers must sign the proposal in his personal capacity.

The wording of the proposal shall not be changed. Any additions, conditions, limitations or provisions inserted by the bidder will render the proposal irregular and may cause its rejection.

6. **Submission of Proposals.** All proposals must be submitted in the time and place and in the manner prescribed in the invitation to bid. Proposals must be made on the prescribed proposal forms furnished. Each proposal must be submitted in a sealed envelope, so marked as to indicate its contents without being opened. If the proposal is submitted by mail, the sealed envelope containing the bid must be enclosed in a separate envelope plainly addressed for mailing to conformance with instructions in the Invitation to Bid

A responsive bid proposal must include the following completed items:

- Bid Proposal Form
- Schedule of Bid Items
- Bid Guaranty Form

7. **Modification or Withdrawal of Proposal.** Any bidder may modify his bid by written or telegraphic communication at any time prior to the scheduled closing time for receipt of bids, provided such communication is received by the County prior to the closing time, and provided further that a written confirmation of a telegraphic modification over the signature of the bidder was mailed prior to the closing time. If written confirmation of a telegraphic communication is not received within at least two calendar days of the closing time, no consideration will be given to the modification. The written or telegraphic communication should not reveal the bid price, but should state the addition or subtraction or other modification so that the County will not know the final prices or terms until the sealed bid is opened.

Proposals may be withdrawn prior to the scheduled time for the opening of the proposals either by telegraphic or written request, or in person. No proposal may be withdrawn after the time scheduled for opening of proposals, unless the County has failed to comply with the time limits applicable to award of the Contract.

8. **Disclosure of First Tier Subcontractors.** Bidders must submit a subcontractor disclosure statement where the value, estimated by the contracting Agency exceeds \$100,000. The subcontractor disclosure statement may be submitted in the sealed bid prior to the bid closing OR it may be submitted in a separate sealed envelope marked **"SUBCONTRACTOR DISCLOSURE STATEMENT"** and the name of the project, within two (2) working hours after the bid closing. Bidder must submit a statement on the form provided in these contract documents identifying all first-tier subcontractors that will furnish labor or labor and materials and whose contract value is equal to or greater than:

- 5% of the total project bid, but at least \$15,000, or
- \$350,000 regardless of the percentage of the total project bid.

For each subcontractor listed, include:

- The name, address and telephone number of the subcontractor:
- The category of work that the subcontractor would be performing.

If no subcontracts subject to the above disclosure requirements are anticipated, a bidder is required to indicate **“NONE”** on the accompanying form.

To determine disclosure requirements, it is required that bidders disclose subcontract information for any subcontractor as follows:

- 1) Use the forms bound herewith for the required disclosure.

Notice – Bidder’s Requirements: Bidders are required to disclose information about certain first-tier subcontractors when the contract value estimated by the contracting Agency for a Public Improvement is greater than \$100,000 (see ORS 279C.370). Specifically, when the contract amount of a first-tier subcontractor furnishing labor or labor and materials would be greater than or equal to: (i) 5% of the project bid, but at least \$15,000, or
(ii) \$350,000 regardless of the percentage, the bidder must disclose the following information about that subcontract either in its Bid submission or within two working hours after bid closing:

(a) The subcontractor’s name, and

(b) The category of work that the subcontractor would be performing.

- 2) If the bidder will not be using any subcontractors that are subject to the above disclosure requirements, the bidder is required to indicate “NONE” on the accompanying form.
- 3) Bidder shall submit the disclosure form required by OAR 137-049-0360 either in its bid submission or separately within two working hours after Bid Closing in the manner specified by the invitation to bid.
- 4) Compliance with the disclosure and submittal requirements of ORS 279C.370 and OAR 137-049-0360 is a matter of Responsiveness. Bids which are submitted by Bid Closing, but for which the disclosure submittal has not been made by the specified deadline, are not responsive and shall not be considered for Contract award.
- 5) County shall obtain, and make available for public inspection, the disclosure forms required by ORS 279C.370 and OAR 137-049-0360. County shall also provide copies of disclosure forms to the Bureau of Labor and Industries as required by ORS 279C.835. County is not required to determine the accuracy or completeness of the information provided on disclosure forms.
- 6) Substitution of affected first-tier subcontractors shall be made only in accordance with ORS 279C.585. County shall accept written submissions filed under the statute as public records. Aside from issues involving inadvertent clerical error under ORS 279.585(5), County does not have a statutory role or duty to review, approve, or resolve disputes

concerning such substitutions. See ORS 279C.590 regarding complaints to the Construction Contractors Board on improper substitution.

THE COUNTY MUST REJECT A BID IF THE BIDDER FAILS TO SUBMIT THE DISCLOSURE FORM WITH THIS INFORMATION BY THE STATED DEADLINE (see OAR 137-049-0360).

9. **Bid Security.** The Bid Bond or Cashier's Check will be for a minimum of ten per cent (10%) of the amount of the bid price. If a bidder bids more than one bid proposal, each proposal must be accompanied by separate bid security. The County reserves the right to retain the bid security of the three (3) lowest bidders until the successful bidder has signed and delivered the contract and furnished one hundred percent (100%) Performance and Payment Bonds.
10. **Conditions of Work.** Each bidder must inform himself of the conditions relating to the execution of the work, and make himself thoroughly familiar with all the Contract documents. Failure to do so will not relieve the successful bidder of his obligations to enter into a Contract and complete the contemplated work in strict accordance with the Contract documents. Each bidder must inform himself on all laws and statutes, both Federal and State, relative to the regular execution of the work, the employment of labor, protection of public health, access to the work and similar requirements.
11. **Award of Contract.** The award of the contract will be made by the County on the basis of the proposal which in its sole and absolute judgment will best serve the interest of the County.

County will issue a notice of intent to award contract. Any bidder may protest the notice of intent to award contract within seven (7) calendar days of the notice of intent to award contract.

The County reserves the right to accept or reject any or all proposals, and to waive any informalities and irregularities in said proposals.

12. **Payment and Retainage.** Payment for work performed will be made by the County as specified in the Special Provisions based upon the contract unit prices on the Bid Schedule.

Upon substantial completion of the contract, Contractor may request a partial release of retainage held by the County. The maximum amount of a request for a partial release retainage shall be the Contract amount less 150 percent of the estimated cost of the Contract yet to be performed through final completion. Upon final completion, Contractor may request release of the remaining retainage. Each request for the release of retainage shall be accompanied by the Consent of the contractor's surety.

13. **Performance Bond and Payment Bond.** The successful bidder shall file with the County, at the time of execution of the contract, a Performance Bond and a Payment Bond each of not less than the contract price on the forms furnished by the County. The Surety Company furnishing the required bonds shall have a sound financial standing and a record of service satisfactory to the County, and shall be authorized to do business in the

State of Oregon. In lieu of a Performance Bond, the contractor may file cash, a Certified or Cashier's Check made payable to Deschutes County, Oregon. This money, check or certificate will be held by the County conditioned on and subject to the same provisions as set forth in the attached Performance Bond. ORS 279C.380 allows no flexibility for a cash deposit in lieu of a Payment Bond.

County may request a copy of Contractor's surety bond(s). Contractor must supply County with copy of surety bond(s) within ten (10) calendar days from the date of the request.

14. **Required Public Works Bond.** Before starting work on this project the Contractor and every subcontractor to which Contractor is a party for the performance of work under this contract must have a public works bond filed with the Construction Contractors Board, 700 Summer St. NE, Suite 300, Salem, Oregon 97309-5052, before starting work on the project, unless exempt under section 2 (7) or (8) of 2005 Oregon Laws Chapter 360 ORS 279C.836(7) or (8). Every subcontract to which Contractor is a party for the performance of work under this contract shall contain a provision requiring the subcontractor to have a public works bond filed with the Construction Contractors Board before starting work on this project, unless exempt under ORS 279C.836 (7) or (8) section 2 (7) or (8) of 2005 Oregon Laws Chapter 360.
15. **Failure to Execute Contract.** Upon failure by the successful bidder to enter into the Contract and furnish the necessary bond within ten (10) calendar days from the date Notice of Award is made, the bid bond accompanying the bid shall be forfeited, the proceeds paid to the County, and the award withdrawn. The award may then be made to the next lowest responsible bidder, or all bids rejected and the work is re-advertised.
16. **Disclaimer of Responsibility.** Neither the County nor the Road Department Director will be responsible for oral interpretations. Should a bidder find discrepancies in, or omissions from the drawings, specifications, or other pre-bid documents, or be in doubt as to their meaning, he shall notify the County at least seven (7) calendar working days prior to the bid opening date. Any and all such interpretations, any supplemental instructions or approval of manufacturer's materials to be substituted will be made only in the form of written addenda to the specifications, which, if issued, will be hand delivered or sent by regular mail, email and fax to all prospective bidders receiving a set of such documents, not later than two (2) calendar days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued are to be covered in the bid for such addenda to become part of the Agreement.
17. **Permits and Licenses.** The successful bidder shall be required to have or obtain, at his expense, any and all permits and licenses required by Deschutes County, any City within the County, and the State of Oregon, pertaining to the service he proposes to furnish. Licensing shall include without limitation registration with Construction Contractors Board and in the case of professional engineers and architects proof of current licensing with the appropriate State licensing board.

18. **Minimum Requirements of Bid.** The following minimum requirements as to the form and manner of submitting bids must be strictly observed; variance from these requirements will result in rejection of the bid as unresponsive.
- a. Each Bid must be submitted on forms furnished by the County, and include a complete set of contract documents.
 - b. Each Bid must be signed by the bidder.
 - c. Bid security, in the required form and amount, must accompany each bid.
 - d. Each blank in the proposal must be filled in unless an alternative is provided. Each separate bid item must be bid on, unless the proposal form clearly indicates otherwise.
 - e. Each Bid must be submitted in a separate sealed envelope, marked to identify without opening, and in the hands of the Road Department Director at the time and place specified for bid opening.
 - f. A proposal containing modifications, deletions, exceptions or reservations which in any way conflict with or purport to alter any substantive provision contained in the bid documents, will not be considered.
 - g. A conditional bid will not be considered.
 - h. Any bid submitted without all of the pages of the bid documents, but with a sufficient number of the pages of the bid documents to allow the evaluation of the bid, shall be deemed to have been submitted with the missing pages for purposes of bid evaluation. The missing pages of the bid documents shall be deemed to be incorporated into bid by reference.
19. **Plans.** Plans are not to be taken or construed as being reproduced at precisely the indicated scale. Where the plans are photographic reductions of the original tracings, the approximate amount of reduction is indicated by a note on the plans.
20. **Specifications.** The specifications are the minimum acceptable specifications for the project for which proposals are sought. Any deviation from the specifications contained herein, shall render the bid non-responsive.
21. **Examination of Site and Conditions.** Bidders are required, prior to submission of bids, to carefully examine the site and the Plans and Specifications of the contemplated work. Errors and omissions in the Plans or Specifications shall be called to the attention of the Road Department Director prior to submission of bid so that addenda may be issued. Failure to do so on the part of the Contractor does not relieve him of responsibility for a correct and completely finished job. Only a written interpretation or correction by addendum shall be binding.

22. **Pre-Bid Inquiries.** Bidders with pre-bid inquiries shall contact Cody Smith, County Engineer, in writing at cody.smith@deschutes.org or 61150 SE 27th Street, Bend, Oregon 97702.
23. **Mandatory Pre-Bid Meeting.** The Agency will hold a mandatory pre-bid meeting for all prequalified prospective Bidders. All prospective Bidders must attend this meeting. Those not attending will have their Bids declared non-responsive. Prospective Bidders will be given the opportunity to ask questions relating to any details involved in the performance of the work under the Contract.
24. **Prequalification of Bidders.** Bidders shall be pre-qualified with the State of Oregon in accordance with ORS 279C.430 and Deschutes County Code 12.52.020. The prequalification class is as shown in the Invitation to Bid. This contract is subject to ORS 279C.800 to 279C.870. The successful bidders and subcontractors providing labor shall maintain a qualified drug-testing program for the duration of the contract. Bidders shall be licensed with the Construction Contractor's Board. Contractors and subcontractors need not be licensed under ORS 468.710.
25. **Supplemental Contractor Prequalification.** In addition to the prequalification requirements above, bidders will be subject to a Supplemental Contractor Prequalification. Bidders shall submit the Key Individual Reference Form(s) prior to Bid Opening at the time and place listed in the Invitation to Bid.
- Deschutes County will review the Key Individual Reference Form(s), contact references as needed and determine if Bidders meet the requirements outlined in the Supplemental Contractor Prequalification.
- Deschutes County will notify Bidders of their prequalification status within five (5) calendar days of the submission deadline.
26. **Contract Award.** Deschutes County reserves the right to postpone award of the contract for fourteen (14) calendar days from the date of the bid opening, or until a final decision is made on a protest, whichever is later.
27. **Bidder Statement.** Submission of a bid for the project shall constitute a statement by the bidder that the provisions of ORS 279C.840 are to be complied with.

BID PROPOSAL FORM
SISEMORE BRIDGE REHABILITATION

BIDDER NAME

CCB#

ADDRESS

CITY

STATE

ZIP CODE

CONTACT NAME

CONTACT PHONE NUMBER

CONTACT EMAIL ADDRESS

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; and it is made without collusion with any official of Deschutes County, Oregon, hereinafter called County; 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 Bidder has carefully examined the contract documents; that Bidder is satisfied as to the quantities involved, including materials and equipment, and conditions of work involved; 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 agrees that all of the applicable provisions of Oregon law relating to public contracts (ORS Chapter 279) are, by this reference, incorporated in and made a part of this Proposal. Bidder hereby states that Bidder will comply with ORS 279C.840.

Bidder declares that (check appropriate box):

☐ Bidder is a resident bidder of the State of Oregon.

☐ Bidder is a nonresident bidder from the State of _____.

Bidder declares that Bidder is not in violation of any tax laws of the State of Oregon and Deschutes County, including but not limited to those programs listed in ORS 305.380(4),

The Bidder further agrees that if this Proposal is accepted, Bidder will, within ten (10) calendar days after notification of acceptance, execute the contract with the County in the form of contract annexed hereto; and will, at the time of execution of the contract, deliver to the County the Performance and Payment Bonds (See Section 13 Information for Bidders) required herein; and will, to the extent of this Proposal, furnish all materials necessary to complete the work in the manner, in the time, and according to the methods as specified in the contract documents and required by the Road Department Director.

Bidder certifies that it has a drug testing program in place for its employees, or warrants that a drug testing program will be in place prior to execution of this contract, that the drug testing program is in writing, that new employees must pass a drug screening, that existing employees may be tested for reasonable cause or when an employee is injured or involved in an accident resulting in property

damage. Bidder agrees that each subcontractor providing labor under this Contract shall maintain a qualifying drug testing program for the duration of the Contract.

The Bidder agrees to commence work upon the issuance of a "Notice to Proceed" by the County and fully complete the project according to the time schedule specially set forth in the contract documents.

Bidder further agrees to pay liquidated damages for failure to complete within the specified time.

It is agreed that if the Bidder is awarded the contract for the work herein proposed and shall fail or refuse to execute the contract and furnish the contract and furnish the specified Performance and Payment Bond within ten (10) calendar days after receipt of notification of acceptance of Bidder's proposal, then, in that event, the bid security deposited herewith according to the conditions of the Invitation to Bid and Information for Bidders shall be retained by the County as liquidated damages; and it is agreed that the said sum is a fair measure of the amount of damage the County will sustain in case the Bidder shall fail or refuse to enter into the contract for the said work and to furnish the Performance and Payment Bonds (See Section 13 Information for Bidders) as specified in the contract documents. Bid security in the form of a certified check shall be subject to the same requirements as a bond.

(IF SOLE PROPRIETOR OR PARTNERSHIP)

IN WITNESS HERETO, the undersigned has set hand this _____ day of _____, 2020.

SIGNATURE OF BIDDER

TITLE

(IF CORPORATION)

IN WITNESS WHEREOF, the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers this _____ day of _____, 2020.

NAME OF CORPORATION

By: _____

Title: _____

Attest: _____

(SCHEDULE OF BID ITEMS TO FOLLOW)

**DESCHUTES COUNTY, OREGON
ROAD DEPARTMENT**

**SUPPLEMENTAL CONTRACTOR PREQUALIFICATION
SISEMORE BRIDGE REHABILITATION**

KEY INDIVIDUAL REFERENCE FORM INSTRUCTIONS

1. INSTRUCTIONS TO BIDDER:

- a. The Bidder is responsible for filling out Sections A and B of the Key Individual Reference Form for at least one qualifying project.
- b. A qualifying project is defined as:
 - A project in which the bidder's Project Manager or Project Superintendent represented the prime contractor (or a sub-contractor with a total sub-contract value greater than \$25,000) as a Project Manager, Project Superintendent, Project Engineer, Construction Foreman or other role with equivalent levels of duties and responsibilities; and
 - A project involving a structure listed in the Oregon Historic Bridge Field Guide (<https://www.oregon.gov/ODOT/Bridge/Documents/ohbg.pdf>), or similar historic structure database of the State or Oregon, another state or a federal agency; and
 - A project involving rehabilitation, reconstruction, preservation, strengthening, or similar work.
- c. Deschutes County will conduct project reference checks by contacting the Project Owner references provided in Section B. If satisfactory references are not received by the County from the Project Owner representatives, the Bidder will not be prequalified and bids will be declared non-responsive for the Project.
- d. Key Individual Reference Form(s) must be submitted prior to **2:00 p.m. on March 13, 2020**. Key Individual Reference Form(s) must be submitted by way of one of the following:
 - Mail or Hand Delivery: Forms must be in a sealed envelope marked "KEY INDIVIDUAL REFERENCE FORM – SISEMORE BRIDGE REHABILITATION" and the name and address of the Bidder.
 - Email: Forms must be attached as PDF to email with the subject line "KEY INDIVIDUAL REFERENCE FORM – SISEMORE BRIDGE REHABILITATION" and the name of the Bidder. The Bidder's name and address must be clearly shown in the body of the email. Do not let individual emails exceed 2MB in size. It is strongly recommended that if this option is used, the bidder follow up by way of phone to confirm receipt of the forms by Deschutes County.
- e. Deschutes County will review the Key Individual Reference Form(s) and notify Bidders of their prequalification status within 5 calendar days of the submission deadline.

Mail, hand deliver or email the Key Individual Reference Form(s) to:

Colby Gederos, Transportation Engineer
61150 SE 27th St
Bend, Oregon 97702
colby.gederos@deschutes.org
541-322-7130

KEY INDIVIDUAL REFERENCE FORM

Project Name: SISEMORE BRIDGE REHABILITATION

Bid Closing Date: April 1, 2020

Time: 2:00 P.M.

Name of Bidding Contractor: _____

Name of Bidder's Qualified Staff: _____

This form must be submitted at the location specified in the Invitation to Bid prior to:
2:00 p.m. on March 13, 2020.

A. Contractor and Referenced Project Information		
Project Title:		
Contractor:		
Project Location:	Project Type:	
Project Superintendent:	Project Manager:	
Email:	Email:	
Phone:	Phone:	
Brief Project Description and Contractor's Role (including structure name, structure number, and County of structure location for recognition in the Oregon Historic Bridge Field Guide, or similar database):		
Contract #:	Contract Start (Mo/Yr):	Contract Complete (Mo/Yr):
Construction Bid Amount for the Project:		
Change Order and Claim Amount (if applicable):		
B. Referenced Project Owner Information		
Project Owner Name:		
Owner's Construction PM:	Alternate Owner Contact:	
Current Title:	Title:	
Email:	Email:	
Ph #:	Ph #:	

ITEM NO.	SPEC SECTION	ITEM	UNIT	QTY	UNIT PRICE	AMOUNT
<u>Part 00200 - Temporary Features and Appurtenances</u>						
001	00210	Mobilization	LS	1	\$	\$
002	00225	Temporary Protection And Direction Of Traffic	LS	1	\$	\$
003	00225	Temporary Signs	SQFT	250	\$	\$
004	00225	Temporary Barricades, Type III	EACH	10	\$	\$
005	00225	Flaggers	HOUR	100	\$	\$
006	00253	Temporary Work Access and Containment	LS	1	\$	\$
007	00280	Erosion Control	LS	1	\$	\$
008	00280	Check Dam, Type 3	EACH	4	\$	\$
009	00280	Sediment Barrier, Type 3	FOOT	150	\$	\$
010	00290	Pollution Control Plan	LS	1	\$	\$
011	00290	Work Containment Plan	LS	1	\$	\$
<u>Part 00300 - Roadwork</u>						
012	00305	Construction Survey Work	LS	1	\$	\$
013	00330	General Excavation	CUYD	60	\$	\$
014	00333	Aggregate Ditch Lining	SQYD	30	\$	\$
<u>Part 00400 - Drainage and Sewers</u>						
015	00444	Low Density Cellular Concrete	LS	1	\$	\$
<u>Part 00500 - Bridges</u>						
016	00501	Remove Portion of Curb Concrete	LS	1	\$	\$
017	00510	Structure Excavation	LS	1	\$	\$
018	00530	Reinforcement, Grade 60	LS	1	\$	\$
019	00536	Internal Shear Anchors, Top	EACH	400	\$	\$
020	00538	Inject And Seal Cracks	FOOT	205	\$	\$
021	00540	General Structural Concrete, Class 4000, Curbs	LS	1	\$	\$
022	00540	General Structural Concrete, Class 4000, Slabs	LS	1	\$	\$
023	00542	Locate Damaged Concrete	LS	1	\$	\$
024	00542	Repair Damaged Concrete	SQYD	90	\$	\$
025	00542	Seal Large Cracks, Bent 1 Wingwall	LF	32	\$	\$
026	00575	Stone Masonry Repair	SF	6	\$	\$
027	00575	Stone Masonry Rechinking	SF	100	\$	\$
028	00581	Bridge Drainage System, Supplemental	LS	1	\$	\$
029	00585	Poured Joint Seals	LS	1	\$	\$
030	00587	Replace Steel Rail	LS	1	\$	\$
031	00591	Warranted Spray Waterproofing Membrane	SQFT	2000	\$	\$
<u>Part 00600 - Bases</u>						
032	00640	Aggregate Base	TON	200	\$	\$

Part 00700 - Wearing Surfaces

033	00744	Level 2, 1/2 Inch ACP Mixture	TON	100	\$	\$
034	00744	Level 2, 1/2 Inch ACP Mixture In Leveling	TON	2	\$	\$
035	00746	Crack Sealing	FOOT	307	\$	\$

Part 00900 - Permanent traffic Control and Illumination Systems

036	00905	Remove And Reinstall Object Markers	LS	4	\$	\$
-----	-------	-------------------------------------	----	---	----	----

TOTAL BID: _____

FOR DESCHUTES COUNTY USE ONLY

ADD % FOR NON-RESIDENT BIDDER _____

TOTAL BID _____

The Bidder acknowledges receipt of the following Addenda: (insert addenda numbers)

No.____ No.____ No.____ No.____ No.____ No.____ No.____ No.____

FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

Project Name: SISEMORE BRIDGE REHABILITATION

Bid #: W66035

Bid Closing Date: April 1, 2020

Time: 2:00 P.M.

Name of Bidding Contractor: _____

This form must be submitted at the location specified in the Invitation to Bid on the advertised bid closing date and within two working hours (4:00 p.m.) after the advertised bid closing time.

List below the name of each subcontractor that will be furnishing labor or materials and that is required to be disclosed, the category of work that the subcontractor will be performing and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed. (ATTACH ADDITIONAL SHEETS IF NEEDED).

	NAME	DOLLAR VALUE	CATEGORY OF WORK
1)	_____	\$ _____	_____
2)	_____	\$ _____	_____
3)	_____	\$ _____	_____
4)	_____	\$ _____	_____
5)	_____	\$ _____	_____
6)	_____	\$ _____	_____
7)	_____	\$ _____	_____
8)	_____	\$ _____	_____

Failure to submit this form by the disclosure deadline will result in a non-responsive bid. A non-responsive bid will not be considered for award.

Form submitted by

Bidder name: _____

Contact name: _____ Phone number: _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, That _____

_____ ,

hereinafter called the Principal, and _____

_____ ,

a corporation duly organized under the laws of the State of _____ ,

having its principal place of business at _____

_____ , in the State of _____ ,

and authorized to do business in the State of Oregon, as Surety, are held and firmly bound unto the

County of Deschutes, hereinafter called the Obligee, in the penal sum of _____

_____ DOLLARS (\$ _____),

for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this Bond is that, whereas, the Principal is submitting a bid proposal for the SISEMORE BRIDGE REHABILITATION project hereby made a part hereof;

NOW THEREFORE, if the said bid proposal submitted by the said principal be accepted, and the contract be awarded to said Principal, and if the said Principal shall execute the proposed contract and shall furnish the Performance and Payment Bond as required by the bidding and contract documents with the time fixed by said documents, then this obligation shall be void, otherwise to remain in full force and effect. Signed and sealed this _____ day of _____, 2020.

SURETY:

CONTRACTOR:

Name

Name

By: _____

By: _____

Title: _____

Title: _____

CONTRACT
FOR
SISEMORE BRIDGE REHABILITATION

THIS CONTRACT is made and entered into, in duplicate, by and between DESCHUTES COUNTY, a political subdivision of the State of Oregon, hereinafter called "County" and _____, hereinafter called "Contractor."

WITNESSTH:

THAT the said Contractor, in consideration of the sums to be paid by the County in the manner and at the times herein provided, and in consideration of the other covenants and agreements herein contained, hereby agrees to perform and complete the work herein described and provided for, and to furnish all necessary things in accordance with the applicable contract documents, bound herewith, and in accordance with such alterations or modifications of the same as may be made by the County, and according to and within the meaning and purpose of this contract. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the Contractor.

THAT the Contract Documents, consisting of Invitation to Bid, Information for Bidders, Special Provisions, Schedule of Items, Award, Subcontractor Disclosure, Contract, Performance Bond, Payment Bond, Certificate of Insurance, Prevailing Wage Rates, Oregon Standard Specifications, Project Plans and Standard Drawings bound or referenced herewith are hereby specifically referred to and by this reference made a part hereof, and shall, by such reference have the same force and effect as though all of the same were fully written or inserted herein.

THAT the Contractor shall faithfully complete and perform all of the obligations of this Contract, and in particular, shall promptly, as due, make payment of all just debts, dues, demands and obligations incurred in the performance of said Contract; and shall not permit any lien or claim to be filed or prosecuted against the County, its agents or employees. It is expressly understood that this Contract in all things shall be governed by the laws of the State of Oregon, and the Ordinances of the County.

THAT in consideration of the faithful performance of all of the obligations, general and special, herein set out, and in consideration of the faithful performance of the work as set forth in the Contract Documents in accordance with the directions of the Road Department Director and the Director's satisfaction, the County agrees to pay to the said Contractor the amount earned, as determined from the quantities of work performed, and taking into consideration any amounts that may be deductible and under the terms of the Contract, and to make such payments in the manner and at the times provided in the applicable provisions, and schedule of contract prices.

(SIGNATURE PAGE TO FOLLOW)

IN WITNESS WHEREOF, DESCHUTES COUNTY has caused this agreement to be signed in its name, by its Board of County Commissioners, duly attested by its Recording Secretary; and the said Contractor has caused this Agreement to be signed and sealed the same as of the _____ day of _____, 2020.

CONTRACTOR

**BOARD OF COUNTY COMMISSIONERS
OF DESCHUTES COUNTY, OREGON**

BY: _____

PATTI ADAIR, CHAIR

TITLE: _____

ANTHONY DEBONE, VICE CHAIR

DATE: _____

PHILIP G. HENDERSON,
COMMISSIONER

DATE: _____

ATTEST:

RECORDING SECRETARY

APPROVED AS TO CONTENT:

ROAD DEPARTMENT DIRECTOR

APPROVED AS TO FORM:

COUNTY LEGAL COUNSEL

Bond # _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called
(Corporation, Partnership, or Individual)

“Principal”, and _____
(Name of Surety)

hereinafter called “Surety”, are held and firmly bound unto Deschutes County, Oregon

hereinafter called “Owner”, in the penal sum of _____

_____ Dollars, \$(_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 2020, a copy of which is hereto attached and made a part hereof for the construction of:

SISEMORE BRIDGE REHABILITATION

NOW THEREFORE, if Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by Owner, with or without notice to Surety and during the **two year guaranty period**, and if Principal shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless Owner from all costs and damages which is may suffer by reason of failure to do so, and shall reimburse and repay Owner all outlay and expense which Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED FURTHER, that Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or the specifications.

PROVIDED, FURTHER, that no final settlement between Owner and Principal shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in two counterparts, each one of which shall be deemed an original, this the _____ day of _____ 2020.

(SEAL)

PRINCIPAL: _____

By _____
Signature

Official Capacity

Attest: _____
Corporation Secretary

(SEAL)

SURETY: _____
[Add signatures for each surety if using multiple bonds]

BY ATTORNEY-IN-FACT:
[Power-of-Attorney must accompany each surety bond]

Name

Signature

Address

City State Zip

Phone Fax

NOTE: Date of bond must not be prior to date of Contract.
If Contractor is Partnership, all partners should execute bond.

Bond # _____

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called
(Corporation, Partnership, or Individual)

“Principal”, and _____
(Name of Surety)

hereinafter called “Surety”, are held and firmly bound unto Deschutes County, Oregon

hereinafter called “Owner”, in the penal sum of _____

_____ Dollars, \$(_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 2020, a copy of which is hereto attached and made a part hereof for the construction of:

SISEMORE BRIDGE REHABILITATION

NOW, THEREFORE, if Principal shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between Owner and Principal shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in two counterparts, each one of which shall be deemed an original, this the _____ day of _____, 2020.

(SEAL)

PRINCIPAL: _____

By _____
Signature

Official Capacity

Attest: _____
Corporation Secretary

(SEAL)

SURETY: _____
[Add signatures for each surety if using multiple bonds]

BY ATTORNEY-IN-FACT:
[Power-of-Attorney must accompany each surety bond]

Name

Signature

Address

City State Zip

Phone Fax

NOTE: Date of bond must not be prior to date of Contract.
If Contractor is Partnership, all partners should execute bond.

SPECIAL PROVISIONS

PROJECT: SISEMORE BRIDGE REHABILITATION

PROJECT #: W66035

CONTRACTING AGENCY:



**ROAD
DEPARTMENT**

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

DESCHUTES COUNTY ROAD DEPARTMENT

SPECIAL PROVISIONS

FOR

Grading, Drainage, Structures, Paving & Striping
Sisemore Bridge Rehabilitation Project
Outflow of Tumalo Res.
Sisemore Road
Deschutes County

PROFESSIONAL OF RECORD CERTIFICATION:

Seal w/signature  RENEWS: 06-30-2021	I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for TP&DT, Erosion Control, Roadway, Modified Special Provisions were prepared by me or under my supervision. Sections 00210, 00220, 00225, 00280, 00305, 00330, 00333, 00350, 00640, 00744, 00905
Date Signed: <u>12/17/2019</u>	

DESCHUTES COUNTY ROAD DEPARTMENT

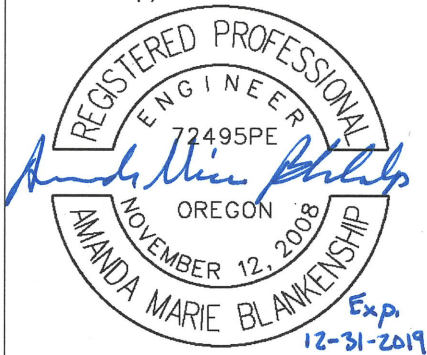
SPECIAL PROVISIONS

FOR

Grading, Drainage, Structures, Paving & Striping
Sisemore Bridge Rehabilitation Project
Outflow of Tumalo Res.
Sisemore Road
Deschutes County

PROFESSIONAL OF RECORD CERTIFICATION:

Seal w/signature (Amanda Blankenship)



I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for Structural Items Modified Special Provisions were prepared by me or under my supervision.

Sections 00444, 00501, 00510, 00530, 00536, 00538, 00540, 00542, 00575, 00581, 00585, 00587, 00591, 00594, 00747, 02001, 02050, 02440, 02510, 02530, 02560

Date Signed: 12-23-2019

SPECIAL PROVISIONS

WORK TO BE DONE

The work to be done under this contract consists of the following on the SIEMORE BRIDGE REHABILITATION project:

1. Install and maintain temporary traffic control.
2. Construct temporary work access and containment.
3. Perform structure and general excavation.
4. Install steel reinforcement for concrete.
5. Perform concrete repair.
6. Place low density cellular concrete.
7. Place aggregate base and shoulders.
8. Construct asphalt concrete pavement.
9. Replace steel bridge rail.
10. 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 September 30, 2020.

CLASS OF WORK

The Class of Work for this Project is Bridges and Structures.

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:

In addition to the prequalification requirements above, Bidders will be subject to a supplemental contractor prequalification prior to submitting Bids for the project. Bidders must submit the required supplemental contractor prequalification documentation found in the Bidding Documents, to the location specified prior to the submission deadline. Failure to submit the required documentation prior to the submission deadline, or to meet the minimum requirements of the supplemental prequalification, will result in a rejection of the Bid. The Agency will notify Bidders of their supplemental prequalification status within five (5) calendar days of the submission deadline.

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.

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

SIEMORE BRIDGE REHABILITATION PROJECT
OUTFLOW OF TUMALO RES.
FEBRUARY 2020

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.

00120.15 Examination of Work Site and Solicitation Documents; Consideration of Conditions to be Encountered - Add the following to the end of this subsection:

The Agency will hold a mandatory pre-bid meeting for all prospective Bidders who are prequalified according to 00120.00 at the Sisemore Rd bridge located at 44°08'21.6"N 121°24'54.6"W (44.139338, -121.415180) in Deschutes County, Oregon at 10:00 a.m. on March 20, 2020.

All prospective Bidders must attend this meeting. Those not attending will have their Bids declared non-responsive.

Information distributed, statements made or responses given to questions, by the Agency's representatives at the pre-bid meeting will not in any way alter or affect any of the provisions contained in the Solicitation Documents or Contract requirements and will not be binding upon the Agency unless confirmed by Addenda.

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.

00150.50(f) Utility Information:

There are no anticipated conflicts with Utilities. The Contractor shall contact those Utilities having buried facilities and request that they locate and mark them for their protection prior to construction.

SECTION 00160 – SOURCE OF MATERIALS

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

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.

00170.65(a) General: Replace the paragraph that begins " As required by ORS 279C.520, compliance by the ..." with the following paragraphs:

As required by ORS 279C.520, the Contractor shall comply with ORS 652.220 and shall not unlawfully discriminate against any of Contractor's employees in the payment of wages or other compensation for work of comparable character on the basis of an employee's membership in a protected class. "Protected class" means a group of persons distinguished by race, color, religion, sex, sexual orientation, national origin, marital status, veteran status, disability, or age. Contractor's compliance with this provision constitutes a material element of the Contract and failure to comply constitutes a material breach that entitles the Agency to exercise any remedies available under the Contract, including, but not limited to, termination for default.

As required by ORS 279C.520, the Contractor shall not prohibit any of the Contractor's employees from discussing the employee's rate of wage, salary, benefits or other compensation with another employee or another person .and shall not retaliate against an employee who discusses the employee's rate of wage, salary, benefits or other compensation with another employee or another person.

00170.70 Insurance - Replace this subsection with the following:

00170.70(a) Insurance Coverages -

Contractor - The Contractor shall obtain the insurance specified below prior to the execution of the Contract. The Contractor shall maintain the insurance in full force at the Contractor's expense throughout the duration of the Contract and all warranty periods that apply.

Subcontracting - If the Contractor specifies prior to the execution of the Contract that a Subcontractor will satisfy an insurance requirement, that is permitted to be satisfied by a Subcontractor, the Contractor shall obtain Agency approval of Subcontractor and Subcontractor's insurance coverage(s), as required by 00180.21, prior to commencement of Subcontracted work. After the Contractor receives Agency approval of the Subcontractor, the Contractor may contractually obligate the Subcontractor to obtain and maintain, at the Subcontractor's expense or at the Contractor's expense, the insurance permitted.

The Contractor shall require that all Subcontractors carry insurance coverage that the Contractor deems appropriate based on the risks of the subcontracted work. The

Contractor shall obtain proof of the required insurance coverages, as applicable, from any Subcontractor providing Services related to the Contract.

Neither the insurance provided by Subcontractor(s) nor any agreements Contractor or Subcontractor(s) may enter into shall place any limitation on the liability or indemnification obligations of the Contractor under applicable law or the Contract.

Insurance Provisions - The Contractor and Subcontractor(s), if any, shall obtain insurance from insurance companies or entities that are authorized to transact the business of insurance and issue coverage in the State and that are acceptable to the Agency. Insurance coverage shall be primary and noncontributory with any other insurance and self-insurance, with the exception of Workers' Compensation. The Contractor, or appropriate Subcontractor, but not the Agency, shall pay for all deductibles, self-insurance retentions and self-insurance, if any.

- **Commercial General Liability** - The Contractor shall provide Commercial General Liability Insurance written on an occurrence basis and covering the Contractor's liability for bodily injury and property damage. This insurance shall include personal and advertising injury liability, products and completed operations coverage, and contractual liability coverage. Coverage may be written in combination with Commercial Automobile Liability Insurance with separate limits for Commercial General Liability and Commercial Automobile Liability. Combined single limit per occurrence shall not be less than the dollar amount specified in the Contract. The annual aggregate limit shall not be less than the dollar amount specified in the Contract. The policy shall be endorsed to state that the annual aggregate limit of liability shall apply separately to the Contract.

When Work to be performed includes operations or activity within 50 feet of any railroad property, bridge, trestle, track, roadbed, tunnel, underpass or crossing, the Contractor shall provide the Contractual Liability – Railroads CG 24 17 endorsement, or equivalent, on the Commercial General Liability policy.

- **Commercial Automobile Liability** - The Contractor shall provide, Commercial Automobile Liability Insurance covering all owned, non-owned, and hired vehicles for bodily injury and property damage. This coverage may be written in combination with the Commercial General Liability Insurance with separate limits for Commercial Automobile Liability and Commercial General Liability. Combined single limit per occurrence shall not be less than the dollar amount specified in the Contract. If this coverage is written in combination with the Commercial General Liability, the policy shall be endorsed to state that the Commercial General Liability annual aggregate limit shall apply separately to the Contract.

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)

(b) Extended Reporting - If any of the required insurance is permitted to be and is on a "claims made" basis, the Contractor or Subcontractor who provided the insurance coverage, shall obtain an extended reporting period on the claims made policy or maintain the claims made policy, for a duration of at least 24 months from the date the applicable work has been completed and accepted by the Agency or the date of Final Acceptance. This extended reporting requirement shall be satisfied with documentation of one of the following:

- Extended Reporting Endorsement;
- Tail Coverage; or
- Maintaining the applicable continuous claims made policy with liability coverage.

The Contractor or Subcontractor shall furnish certification of this extended reporting requirement as a condition to receive Third Notice under 00150.90(b) and 00180.50(g).

(c) Excess/Umbrella Liability - A combination of primary and Excess/Umbrella Insurance may be used to meet the required limits of insurance. Excess/Umbrella coverage must be at least as broad as that provided by the underlying primary insurance policies. In addition, the limits of the underlying primary insurance must be sufficient to prevent any gap between such minimum limits and the attachment point of the coverage provided by the Excess/Umbrella Liability policy.

(d) Additional Insured - The liability insurance coverages of 00170.70(a) shall include an Additional Insured Endorsement specifying the "State of Oregon, the Oregon Transportation Commission and the Department of Transportation, and their respective officers, members, agents, and employees" as Additional Insureds, but only with respect to the Contractor's activities to be performed under the Contract. Coverage shall be primary and non-contributory with any other insurance and self-insurance. The liability coverages of 00170.70(a) that are permitted by the Agency to be obtained by an appropriate Subcontractor shall include all of the foregoing as Additional Insureds and shall also include the Contractor and its officers and employees as Additional Insureds.

Additional Insured Endorsements on the Commercial General Liability shall be written on ISO Form CG 20 10 07 04, or equivalent, with respect to liability arising out of ongoing operations and ISO Form CG 20 37 07 04, or equivalent, with respect to liability arising out of completed operations. Additional Insured Endorsements shall be submitted with the Certificate(s) of Insurance and must be acceptable to the Agency.

Add the following as Additional Insureds under the Contract:

- Deschutes County and its officers, agents, employees, and volunteers
- Deschutes County Board of Commissioners
- State of Oregon
- Oregon Transportation Commission and its members
- Oregon Department of Transportation and its officers, employees and agents
- Tumalo Irrigation District and its Board, officers, agents, employees, and volunteers

(e) Workers' Compensation - All employers, including the Contractor and Subcontractor(s), if any, that employ subject workers, as defined in ORS 656.027, shall

comply with ORS 656.017 and shall provide Workers' Compensation Insurance coverage, unless such employers meet the requirement for an exemption under ORS 656.126(2). The coverage shall include Employer's Liability Insurance with limits not less than \$500,000 each accident.

The Contractor shall certify in the Contract that the Contractor is registered by the Oregon Workers' Compensation Division either as a carrier-insured employer, a self-insured employer, an exempt employer, or is an independent contractor who will perform the Work without the assistance of others.

The Contractor shall require and verify that its insurance carrier files a guaranty contract with the Oregon Workers' Compensation Division before performing any Work.

All employers, including the Contractor and Subcontractor(s), if any, exempt under ORS 656.126(2) and subject to any other state's Workers' Compensation law, shall provide Workers' Compensation Insurance coverage as required by applicable Workers' Compensation laws. The coverage shall also include Employer's Liability Insurance with limits not less than \$500,000 each accident.

If the Contractor's and Subcontractor's, if any, operations include use of watercraft on navigable waters and employ persons in applicable positions, a Maritime Coverage Endorsement must be added to the Workers' Compensation policy, unless coverage for captain and crew is provided in a Protection and Indemnity policy.

If the Contractor and Subcontractor, if any, conducts its operations in proximity to navigable waters and employ persons in applicable positions, United States Longshore and Harbor Workers' Compensation Act coverage must be endorsed onto the Workers' Compensation policy.

The Contractor shall require compliance with these requirements in all Subcontractor contracts.

(f) Notice of Cancellation or Change - The Contractor shall provide at least 30 Days' written notice to the Agency before cancellation of, material change to, potential exhaustion of aggregate limits, or non-renewal of the required insurance coverages. If a Subcontractor is providing insurance to meet the contract requirements, the Contractor shall provide at least 30 Days' written notice to the Agency before cancellation of, material change to, potential exhaustion of aggregate limits, or non-renewal of the required insurance coverage(s). Any failure to comply with the reporting provisions of this insurance shall not affect the coverage(s) provided to the State, Agency, County, City, or other applicable political jurisdiction or to the Agency's governing body, board, or Commission and its members, and the Agency's officers, agents, and employees.

(g) Certificate(s) of Insurance - As evidence of the insurance coverages required by the Contract, the Contractor shall furnish Certificate(s) of Insurance to the Agency at the time(s) provided in 00130.50(a). As evidence of insurance coverages required by the Contract but permitted by the Agency under 00170.70(a) to be obtained by an appropriate Subcontractor, the Contractor shall furnish Certificate(s) of Insurance to the Agency for such coverages together with the Contractor's request under 00180.21 for approval of the subcontract with that Subcontractor. The Certificate(s) shall:

- List “Deschutes County and its officers, agents, employees, and volunteers, the Deschutes County Board of Commissioners, State of Oregon, Oregon Transpiration Commission and its members, Oregon Department of Transportation and its officers, employees and agents, and Tumalo Irrigation District and its Board, officers, agents, employees, and volunteers” as a Certificate holder and as an endorsed Additional Insured;
- Include all required endorsements or copies of the applicable policy language effecting coverage required by the Contract;
- Specify that all liability insurance coverages shall be primary and non-contributory with any other insurance and self-insurance, with exception of Workers’ Compensation;
- Include a list of all policies that fall under the Excess/Umbrella Insurance if Excess or Umbrella Insurance is used to meet the minimum insurance requirement.

(h) Agency Acceptance - All insurance and insurance providers are subject to Agency acceptance. If requested by Agency, the Contractor shall provide complete copies of insurance policies, endorsements, self-insurance documents and related insurance documents to Agency’s representatives responsible for verification of the insurance coverages required by the Contract.

(i) Insurance Requirement Review - The Contractor agrees to periodic review of insurance requirements by Agency under the Contract and to provide updated requirements as mutually agreed upon by the Contractor and Agency.

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
- State of Oregon
- Oregon Transpiration Commission and its members
- Oregon Department of Transportation and its officers, employees and agents
- Tumalo Irrigation District and its Board, officers, agents, employees, and volunteers

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 Time	00180.50(h)
Closed Lanes	00220.40(e)(1)

Bridge Site Road Closure00220.42

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 September 30, 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.

The Contractor shall comply with all applicable legal requirements for withholding and releasing retainage and for prompt payments, including but not limited to those in ORS Chapters 279C and 701, and 49 CFR 26.29.

00195.50(e) Withholding Payments - Replace the bullet that begins "Complied with all orders issued..." with the following two bullets:

- Complied with all orders and directives issued by the Engineer under or pursuant to the Contract;
- Corrected or cured its failure to comply with the Contract; and

00195.50(f) Prompt Payment Policy - Replace the paragraph that begins "Payments shall be made promptly ..." with the following paragraph:

Payments shall be made promptly according to ORS 279C.570, ORS 279C.580 and other applicable legal requirements.

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).

00199.40(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.

00199.40(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.

SECTION 00220 - ACCOMMODATIONS FOR PUBLIC TRAFFIC

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

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 when allowed, shown, or directed during the following periods of time except as allowed in 00220.42:

- Daily, Monday through Friday, between 7:00 a.m. and 5:00 p.m.

00220.40(e)(2) Opened Lanes – Delete this subsection.

Add the following subsection:

00220.42 Bridge Site Road Closure - Sisemore Rd may be closed to traffic at the bridge site when allowed, shown, or directed during the followings periods:

- January 1 to September 30

Do not close the road until all materials and equipment are on hand or guaranteed to be delivered so that the work can be done in an efficient manner with a minimum period of road closure.

The road closure will not be allowed until the area and the detour route are signed according to the TCP and the requirements of Section 00225.

Add the following subsection:

00220.45 Load Restrictions on Bridges - Prior to the completion of the bridge strengthening in the form of the new 6" reinforced concrete slab reaching design strength, limit the combined weight of construction vehicles, equipment, and daily material usage in excess of the existing fill to 25,000 pounds per span.

The Contractor may request alternate loadings by submitting, 30 Calendar Days before proposed loadings, stamped loading calculations and data according to 00150.35.

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 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.

00225.94 Work Zone Lighting - Delete Pay Item (a) from the pay item list.

Replace the paragraph that begins "Item (a) includes..." with the following paragraph:

No separate or additional payment will be made for flagger station lighting.

SECTION 00253 - TEMPORARY WORK ACCESS AND CONTAINMENT

Comply with Section 00253 of the Standard Specifications modified as follows:

00253.00 Scope - Add the following paragraph to the end of this subsection:

For Structure No. 17C02, provide temporary work access and containment, for bridge and roadway rehabilitation work including work on the piers, soffit, headwalls, wingwalls, curbs, railings, and interior of the arches. Temporary work access and containment shall comply with this section 00253 and Section 00290.

Add the following subsection:

00253.02 Definitions:

Basic Wind Speed - Three-second gust speed at 33 feet above ground in open terrain with scattered obstructions not over 30 feet high.

Dead Load - Self-weight of a structure, such as a work platform, scaffolding, and containment.

Factor of Safety - Component ultimate failure load divided by the maximum working load combination applied to the component.

Fundamental Frequency - Lowest natural frequency of vibration for a structure, measured in Hz.

Live Load - The weight of personnel, equipment, materials, debris, and vehicles.

Point Load - A force applied to a structure at a single point.

Projected Area - The area of a structure exposed to the wind. For winds parallel to the roadway, the projected area of containment is the width of the containment multiplied by its height. For winds transverse to the roadway, projected area is the length of the containment multiplied by its height.

Span - A section of bridge superstructure between piers.

Wind Load - Forces imparted on a structure, such as a bridge or containment, by wind pressure and structural dynamic response to wind.

00253.03 Submittals - Add the following paragraph and bullets to the end of this subsection:

Submit the following:

- Stamped work scaffolding Working Drawings, specifications and design calculations. Identify the maximum allowable accumulations of collected debris or water (inches depth) allowed in conjunction with the number of workers allowed and the concentrated loads (in pounds) of equipment and materials to be used within the structure.

Add the following subsection:

00253.09 Work Platform, Scaffolding and Containment Structural Design Requirements -

Design work platforms, scaffolding, and containment structures for dead load, live load, and wind load with a basic wind speed of 72 mph, applied in the most critical direction. For structures with fundamental frequency less than 1 Hz, design for wind loads accounting for structural dynamic effects.

Provide designs with a factor of safety of at least six for wire ropes and connecting hardware and at least four for all other components for containment structure and work platform components.

For movable containment structures, provide positive restraint to prevent movement except when containment structures are being relocated.

Add the following subsection:

00253.42 Safety Requirements - Replace the paragraph that begins "Follow approved procedures for evacuating..." with the following paragraph:

Follow approved procedures for evacuating and securing work platforms and containment systems if wind speeds or predicted wind speeds exceed design limits. For concrete removal and repair work, comply with all applicable requirements of OSHA Standard Number 1926.1153, Respirable Crystalline Silica, including Table 1.

Add the following subsection:

00253.46 Staging Area - When lane or shoulder closures are allowed, equipment, vehicles, and supplies may be placed in the closed traffic lane or shoulder on the bridge and on the bridge approaches within the roadway closure and within existing Right-of-Way. Limit the combined weight of equipment, vehicles and supplies staged on the bridge according to 00225.45.

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.

00280.16(i) Concrete Washout - Delete the bullet that begins “**Geotextile** - Type 2 drainage...”.

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 00290 - ENVIRONMENTAL PROTECTION

Comply with Section 00290 of the Standard Specifications modified as follows:

00290.20(c)(1) General - Replace the paragraph that begins “Segregate all demolition debris according to...” with the following paragraph:

Segregate all demolition and construction debris according to its intended end use (reuse, recycle, or dispose). If required, store in designated areas in a manner that prevents contamination to Soil and water and prevents fugitive dust emissions. Remove all waste materials recovered from the site unless otherwise approved, in writing. Retain disposal and recycling facility receipts for wastes generated on site for at least 1 year after completion of the Project. Provide copies of the receipts to the Engineer within 7 Calendar Days of the disposal or recycling.

00290.20(c)(3) Reuse, Recycle and Dispose of Materials - Replace the title of this subsection with “**Reuse, Recycle, Compost and Dispose of Materials**”.

(3) Reuse, Recycle, Compost and Dispose of Materials – Replace the three bullets with the following bullets:

- Reuse demolition and construction debris.

- Recycle demolition and construction debris.
- Compost or mulch yard waste material from lawn and landscape maintenance.
- If it is not feasible to reuse, recycle, or compost, ("feasible" is defined as a facility that is capable of handling the material, will take the material and the cost of transportation plus the cost to reuse or recycle the material is equal to or less than the costs of disposal) dispose of waste material according to the following:

00290.30(a) Pollution Control Measures - Add the following subsections and bullets:

(7) Water Quality:

- Do not discharge contaminated or sediment-laden water, including drilling fluids and waste, or water contained within a work area isolation, directly into any waters of the State or U.S. until it has been satisfactorily treated (using a best management practice such as a filter, settlement pond, bio-bag, dirt-bag, or pumping to a vegetated upland location).
- Do not use permanent stormwater quality treatment facilities to treat construction runoff unless prescribed by an ESCP approved under Section 00280
- If construction discharge water is released using an outfall or diffuser port, do not exceed velocities more than 4 feet per second, and do not exceed an aperture size of 1 inch.
- Do not use explosives under water.
- Implement containment measures adequate to prevent pollutants or construction and demolition materials, such as waste spoils, fuel or petroleum products, concrete cure water, silt, welding slag and grindings, concrete saw cutting by-products and sandblasting abrasives, from entering waters of the State or U.S.
- Implement containment measures adequate to prevent flowing stream water from coming into contact with concrete or grout within the first 24 hours after placement.
- Cease project operations under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage.
- The Engineer retains the authority to temporarily halt or modify the Work in case of excessive turbidity or damage to natural resources.
- If Work activities violate permit conditions or any requirement of this subsection, stop all in-water work activities and notify the Engineer.
- Do not cause a visible sediment plume in waters of the State or U.S.

00290.34(a) Regulated Work Areas - Add the following to the end of this subsection:

The regulated work area is the area at or below the ordinary high water (OHW) elevation shown on the plans.

For this Project, the regulated work area is the area at or below 3,507 feet elevation west of the dam (Tumalo Reservoir), and within the wetland boundary east of the bridge.

An in-water work period does not apply to these regulated work areas.

The following activities are allowed within the regulated work area:

- Placement of untreated wood blocks and vertical scaffolding supports within the regulated work area. Locate supports to prevent restrictions to channel flow.
- Minor hand excavation immediately adjacent to bridge piers. Excavated areas will be backfilled with native soils.

Operation of equipment within the regulated work area is not allowed

00290.34(b) Prohibited Operations - Replace this subsection, except for the subsection number and title, with the following:

Except where allowed by the Contract or by permit, do not:

- Use water jetting.
- Release petroleum products or chemicals in the water.
- Obstruct stream channels.
- Cause silting or sedimentation of waters of the State or waters of the U.S.
- Use treated timbers within the regulated work area.

Add the following subsection:

00290.34(c) Aquatic Species Protection Measures Required by Environmental Permits:

(1) General Requirements:

- Do not apply surface fertilizer within 50 feet of any stream channel.

Use heavy equipment as follows:

- Choice of equipment must have the least adverse effects on the environment (for example: minimally sized, low ground pressure).
- Secure absorbent material around all stationary power equipment (for example: generators, cranes, drilling equipment) operated within 150 feet of wetlands, waters of the State, waters of the U. S., drainage ditches, or water quality facilities to prevent leaks, unless suitable containment is provided to prevent spills from entering waters of the state or waters of the U.S.
- Do not cross directly through a stream for construction access, unless shown or approved.
- Store fuel and maintain all equipment in staging areas that are at least 150 feet away from any waters of the State, waters of the U.S., or storm inlet or on an impervious surface that is isolated from any waters of the State, waters of the U.S., or storm inlet.

- If temporary access roads are needed within 150 feet of any body of water, use existing routes unless new routes are shown or approved.
- Before beginning work on temporary access routes that are not shown, submit a proposal to the Engineer for approval.

(2) Water Intake Screening - Install, operate, and maintain fish screens on each water intake used for project construction, including pumps used to isolate an in-water work area. When drawing or pumping water from any stream, protect fish by equipping intakes with screens having a minimum 27% open area and meeting the following requirements:

- Perforated plate openings shall be 3/32 inch or smaller.
- Mesh or woven wire screen openings shall be 3/32 inch or smaller in the narrowest direction.
- Profile bar screen or wedge wire openings shall be 1/16 inch or smaller in the narrow direction.

Choose size and position of screens to meet the following criteria:

Type	Approach Velocity ¹ (Ft./Sec.)	Sweeping Velocity ² (Ft./Sec.)	Wetted Area of Screen (Sq. Ft.)	Comments
Ditch Screen	≤ 0.4	Shall exceed approach velocity	Divide max. water flow rate (cfs) by 0.4 fps	If screen is longer than 4 feet, angle 45° or less to stream flow
Screen with proven self-cleaning system	≤ 0.4	–	Divide max. water flow rate (cfs) by 0.4 fps	–
Screen with no cleaning system other than manual	≤ 0.2	–	Divide max. water flow rate (cfs) by 0.2 fps	Pump rate 1 cfs or less
¹ Velocity perpendicular to screen face at a distance of approximately 3 inches ² Velocity parallel to screen				

Provide ditch screens with a bypass system to transport fish safely and rapidly back to the stream.

(3) Special Aquatic Habitats - The following exploration or construction activities are not allowed in special aquatic habitats:

- Use of pesticides and herbicides, unless allowed according to Section 01030.
- Use of short pieces of plastic ribbon to determine flow patterns.
- Temporary roads or drilling pads built on steep slopes, where grade, soil type, or other features suggest a likelihood of excessive erosion or slope failure.

- Installation of a fish screen on any permanent water diversion or intake that is not already screened.
- Drilling or sampling in an EPA-designated Superfund Site, a state-designated clean-up area, or the likely impact zone of a significant contaminant source, as identified by historical information, U. S. Army Corps of Engineers representative, or the Agency.

(4) Treated Wood - Treated wood includes any wood treated with any pesticide or wood preservatives. Do not use lumber, pilings, or other wood products that are treated or preserved with pesticidal compounds below the ordinary high water (OHW) or as part of an in-water or over-water structure, except as described below:

- Store treated wood shipped to the Project out of contact with standing water and wet soil, and protected from precipitation.
- Visually inspect each load and piece of treated wood. Reject for use in or above aquatic environments if visible residues, bleeding of preservative, preservative-saturated sawdust, contaminated soil, or other matter is present.
- Use pre-fabrication to the extent feasible. When field fabrication is necessary, all cutting and drilling of treated wood, and field preservative treatment of wood exposed by cutting and drilling, shall occur above the OHW. Use tarps, plastic tubs, or similar devices to contain the bulk of any fabrication debris, and wipe off any excess field preservative.
- All treated wood structures, including pilings, shall have design features to avoid or minimize impacts and abrasion by livestock, pedestrians, vehicles, vessels, and floats.
- Treated wood may be used to construct a bridge, or over-water structure, with the exception of the work containment system, provided that all surfaces exposed to leaching by precipitation, overtopping waves, or submersion are coated with a water-proof seal or barrier are maintained. Apply and contain coatings and paint-on field treatment to prevent contamination. Surfaces that are not exposed to precipitation or wave attack, such as parts of a timber bridge completely covered by the bridge deck, are exempt from this requirement.
- During demolition of treated wood, ensure that no treated wood debris falls into the water. If treated wood debris does fall into the water, remove it immediately.
- Store removed treated wood debris in appropriate dry storage areas, at least 150 feet away from the regulated work area.

Add the following subsection:

00290.41 Protection of Wetlands – Replace the title of this subsection with “**Protection of Waters of the U.S. or State**”

Delete the paragraph that begins with “For the purposes of this Section...”.

Allow untreated wood blocks and vertical scaffolding supports within the regulated work area, including wetlands. Locate supports to prevent restrictions to channel flow. Minor

excavation of soils immediately adjacent to bridge piers is allowed. Excavated areas must be backfilled with native soils.

00290.41(a) Identifying Wetlands – Replace the title of this subsection with “**Identifying Waters of the U.S. or State, Including Wetlands**”

Add the following subsection:

00290.42 Work Containment Plan - A Work Containment Plan (WCP) is required on this Project for bridge repair activities.

Develop and submit a WCP for approval at least 28 Calendar Days prior to mobilization for bridge repair activities. Maintain a copy of the WCP on the Project Site at all times during construction, readily available to employees and inspectors. Ensure that all employees comply with the provisions of the WCP. Design the WCP to avoid or minimize disturbance to protected features (sensitive cultural or natural resources, Regulated Work Areas, aquatic life or habitat in Regulated Work Areas) related to Contractor operations.

Before developing the WCP, meet with Agency to review the Contractor's activities that require the WCP to ensure that all parties understand the locations of protected features to be avoided and the measures needed to avoid and protect them.

Notify the Project Manager at least 10 Calendar Days before beginning work access or containment construction activities.

The Agency reserves the right to stop work and require the Contractor to change the WCP methods and equipment before any additional Contract work, at no additional cost to the Agency, if and when, in the opinion of the Agency, such methods jeopardize sensitive cultural or natural resources, Regulated Work Areas, or aquatic life or habitat in Regulated Work Areas.

The WCP shall identify how the Contractor's construction operations will protect regulated features during mobilization, construction, maintenance, and demolition. Include a narrative describing compliance with Section 00290 as related to construction, operation, and demolition activities specified in Section 00253.

Design, construct, maintain, and remove temporary work access and containment systems according to Section 00253.

00290.90 Payment - Add the following paragraph(s) to the end of this subsection:

The Work Containment Plan will be paid for at the Contract lump sum amount for the item "Work Containment Plan".

Payment will be payment in full for furnishing all materials, equipment, labor, and incidentals necessary to complete the work as specified. Payment includes providing and updating the Work Containment Plan.

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 25 foot intervals for the length of the project along the shoulder of the roadway. Maintain the stationing so it is visible throughout construction of the project.

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 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 00333 - AGGREGATE DITCH LINING

Section 00333, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00333.00 Scope - This work consists of furnishing and placing aggregate ditch lining at locations shown or directed.

Materials

00333.10 Aggregate Ditch Lining - Provide hard durable rock or gravel with a moisture binder of clay material that provides a tight, erosion-resistant surface meeting the following grading requirements:

Sieve Size Passing	Percentages (by Weight)
6"	100
4"	30 - 50
2"	20 - 30
No. 200	15 - 25

Construction

00333.40 General - Place the aggregate material to the lines and grades established and as shown.

Measurement

00333.80 Measurement - The quantities of aggregate ditch lining will be measured on the area basis of the actual surface area of the wetted perimeter of the lined ditch.

Ditch excavation is incidental to ditch lining. No additional measurement will be made for ditch excavation.

Payment

00333.90 Payment - The accepted quantities of aggregate ditch lining will be paid for at the Contract unit price, per square yard, for the item "Aggregate Ditch Lining".

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

No separate or additional payment will be made for ditch excavation.

SECTION 00444 – CELLULAR CONCRETE

Section 00444 which is not a Standard Specification, is included in this Project by Special Provision.

Description

00444.00 Scope - This Section includes the requirements for low density cellular concrete (cellular concrete).

00444.01 General - This work shall consist of batching, mixing and placing cellular concrete as indicated on the plans according to these Specifications.

00444.02 Definitions:

ASTV – Actual Strength Test Value - average of test cylinder compressive strengths

Cellular Concrete – Low density, controlled strength, flowable concrete composed of portland cement, water, foaming agent, and admixtures as necessary.

Cementitious Materials - Included but not limited to portland cement, fly ash, silica fume, ground granulated blast furnace slag, and metakaolin.

Foaming Agent – Commercially available admixture added during mixing to form a high volume of entrapped gas bubbles resulting in a low cast density.

Modifiers - Pozzolans, latex.

Pozzolans - Fly ash.

Materials

00444.10 Materials - Furnish materials meeting the requirements of the following:

Admixtures	02040
Cement	02010
Modifiers	02030
Water	02020

00444.11 Admixtures – Admixtures for accelerating, water reducing, and other specific properties may be used when specifically approved by the foaming agent Manufacturer and as required by 02040.

00444.12 Cementitious Materials - Cementations materials may be used when specifically approved by the foaming agent Manufacturer and as required by 02030.

00444.13 Foaming Agent - Foaming agent shall be used and tested in accordance with ASTM C 796.

00444.14 Portland Cement - Portland cement shall comply with AASHT) M 85 Type I, II, or III.

00444.20 Cellular Concrete Properties - Provide cellular concrete that is a workable mixture, uniform in composition and consistency, permeable and having the following properties:

Table 00444-1

Class of Cellular Concrete	II
Maximum Cast Density, pcf	30
Minimum 28 day Compressive Strength, psi	200

00444.30 Cellular Concrete Mix Design - Submit a mix design to the Engineer for review, prepared by a CCT, that will produce the physical properties described for each required class of cellular concrete. Allow 14 calendar days for the review. Do not proceed with placement until the Engineer has determined that the mix design complies with the Specifications. Review of mix designs does not relieve the Contractor of the responsibility to provide cellular concrete meeting the Specification requirements.

00444.31 Required Submittals for Mix Designs - Submit the following information for each cellular concrete mix design:

(a) Supplier's Unique Mix Design Identification Number

(b) Written certification from foaming agent Manufacturer indicating approval of mix design constituents

(c) Mix Design Constituent Proportions:

- Weight per cubic yard (pounds per cubic yard) of cementitious material, modifiers, and mix water.
- Absolute volumes of cementitious material, modifiers, and mix water.
- Dosage rates for chemical admixtures.

(d) Cementitious Material - For each cementitious material used, identify the following:

- Manufacturer
- Brand name
- Type
- Relevant Specification
- Source or location plant

(e) Modifiers - For each modifier used, identify the following:

- Manufacturer
- Brand name
- Source
- Relevant specification
- Class

(f) Admixtures - For each admixture used, identify the following:

- Manufacturer
- Brand name
- Design dosage rate

(g) Water - Identify the source of water to be used.

(h) Compressive Strength Test Results - Report the individual test results and the ASTV of cylinders from the trial batch or the average for the cylinder sets presented for evaluation of a current mix design.

(i) Quality Control Personnel - Provide the name and certification number of the CCT who prepared the mix design, the QCT who cast the test cylinders, the laboratory where the cylinders were tested, and the CSTT who tested the cylinders.

Construction

00444.40 Batching, Mixing, and Placing Equipment - Batching, mixing and placing equipment shall be capable of producing material that meets the requirements of this Section. Cement and water may be premixed and delivered to the site. Foam shall be added and mixed at the site using aforementioned equipment.

00444.41 Personnel Requirements – The cellular concrete installer shall be certified and approved in writing by the foam agent manufacturer. The installer's foreman shall have a minimum of 2 years experience in this work and shall have worked on at least three successful cellular concrete projects.

The installer shall use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are familiar with the specified requirements and the methods needed for proper performance of the work.

The Contractor's Representative shall be experienced in the placement of cellular concrete and shall be on site full-time during placement.

00444.42 Cellular Concrete Acceptance – Acceptance shall be based on test results meeting the following requirements. Testing frequency shall consist of 4 test cylinders for each 400 CY of cellular concrete placed or a minimum of 2 sets of 4 cylinders each per day, whichever is greater.

(a) Cast Density - At the point of placement, the density must comply with the specified cast density. During placement of the initial batch, the installer shall check the density and adjust the mix as required to obtain the specified cast density at point of placement.

(b) Compressive Strength - At 28 days, the compressive strength must comply with the specified compressive strength.

Specimens shall be cured in the molds for up to 7 days and then removed from the mold and moist cured. Stop moist curing specimens from 24 to 72 hours before the 28 day compressive strength test and allow to air dry. Specimens shall not be oven dried.

The contractor shall rectify any cellular concrete material rejected by the Engineer that does not meet the minimum required material properties or is not installed in accordance with this specification. Corrective measures are subject to the approval of the Engineer. Accepted corrected measures will be performed by the contractor at no additional cost to the Agency or extension of the contract time. This includes removal and replacement of rejected cellular concrete material not meeting the minimum material requirements or installed in accordance with this specification.

00444.45 Placement – Place homogeneous mixture of cellular concrete in accordance with the following:

(a) Weather:

1. Ambient Temperature - Do not place at temperatures lower than 32 degrees Fahrenheit or when freezing conditions are expected in less than 24 hours.

2. Frozen Ground - Cellular concrete shall not be placed on frozen materials.

3. Mixing - Cellular concrete must be job site mixed with foaming agent and placed with equipment specialized for cellular concrete lightweight material. Cement and water may be premixed and delivered to the job site and foaming agent added on site. Once mixed, the cellular concrete shall be conveyed promptly to the location of placement without excessive handling.

4. Lift Thickness - Cellular concrete lift thicknesses must not exceed 4 feet. After curing for 24 hours, any crumbling area on the surface must be removed and scarified before the next layer is placed. Surface stepping to achieve grade and super elevation under the pavement must not be less than 2 inches nor more than 3 inches in thickness.

5. Curing:

a. Lift Timing - A minimum 24 hour curing period between lifts is required.

b. Construction Traffic - Paving machines, heavy construction equipment, or vehicles shall not be permitted on cellular concrete until it has attained the specified 28 days compressive strength.

Measurement

00444.80 Measurement – No measurement of quantities will be made for cellular concrete. The estimated quantity of cellular concrete is:

Location	Cellular Concrete (Cubic Yard)
Within Concrete Arches	55

Payment

00444.90 Payment – The accepted quantities of work performed on this Section will be paid for at the Contract unit price per unit of measurement for the following item:

Pay Item	Unit of Measurement
(a) Low Density Cellular Concrete	Lump Sum

Payment will be payment in full for full for preparation of written submittals, material testing, coordination of and scheduling of cellular concrete placement, specialized equipment to mix, transport and placement cellular concrete, stormwater control, temporary shoring, and include all associated costs such as materials, labor, equipment and incidentals necessary to furnish and place cellular concrete as specified.

SECTION 00501 - BRIDGE REMOVAL

Comply with Section 00501 of the Standard Specifications modified as follows:

00501.00 Scope - Add the following paragraph(s) to the end of this subsection:

Remove portions of the existing Sisemore bridge curb and railing as shown.

Add the following subsection:

00501.02 Plans - Plans of the existing structure are available for viewing at the office of the Engineer. Prints of these plans are available upon request.

Add the following subsection:

00501.03 Submittals - Provide unstamped bridge removal plans according to 00150.35 a minimum of 21 calendar days before beginning removal work.

Include the following information in the submittal:

- Removal sequence, including contractor staging and traffic staging.
- Detailed schedule of bridge removal work.
- Type of equipment that will be used, including size and capacity.
- Equipment location during removal operations.

Do not begin bridge removal work until the bridge removal plans have been approved.

00501.80 Measurement - Replace this subsection, except for the subsection number and title, with the following:

No measurement of quantities will be made for bridge curb and railing removal shown in the plans.

00501.90 Payment - Replace this subsection, except for the subsection number and title, with the following:

The accepted quantities of bridge curb and railing removal will be paid for at the Contract lump sum amount for the item "Remove Portion of Curb Concrete".

No payment will be made for saw cutting limits of concrete curb removal.

SECTION 00510 - STRUCTURE EXCAVATION AND BACKFILL

Comply with Section 00510 of the Standard Specifications modified as follows:

Add the following subsection:

Equipment

00510.20 Equipment - Provide excavation equipment containing rubber tires or rubber or smooth tracks and smooth buckets to ensure no unintended damage to the bridge during structure excavation. Comply with load restriction requirements according to 00220.45.

00510.41 Structure Excavation - Add the following to the end of this subsection:

Structure excavation within bridge arches shall not damage existing bridge concrete. Care shall be taken excavating on bridge where variable location of arches results in variable depth of structure excavation. Location of concrete shown in as-built drawings of existing bridge has not been verified. Structure excavation within bridge arches will require some handwork.

Perform structure excavation at base of pier walls with hand tools only.

00510.80(b)(1) Lump Sum - Add the following to the end of this subsection:

The estimated quantity of structure excavation is:

Location	Structure Excavation (Cubic Yard)
Within bridge arches	70
Around bridge piers	10

SECTION 00530 - STEEL REINFORCEMENT FOR CONCRETE

Comply with Section 00530 of the Standard Specifications modified as follows:

00530.80(a) Lump Sum - Add the following to the end of this subsection:

The estimated quantity of reinforcement is:

Structure Number	Uncoated Reinforcement Grade 60 Quantity (Pound)
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17C02	7,500
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The weight of miscellaneous metal, based on weights listed in 00530.80(b) and Project quantities, is included in the estimated quantity of uncoated reinforcement.

00530.90 Payment - Replace this subsection, except for the subsection number and title, with the following:

The accepted quantities of reinforcement will be paid for at the Contract unit price, per unit of measurement, for the following items:

(a) Reinforcement, Grade 60..... Lump Sum

Item (a) includes fabricating and placing uncoated reinforcement as specified.

Payment for reinforcement will be made when the reinforcement is incorporated into the concrete.

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,

No separate or additional payment will be made for clips, wire, separators, wire chairs, and other Material used in fastening the reinforcement in place.

SECTION 00536 - INTERNAL SHEAR ANCHORS

Comply with Section 00536 of the Standard Specifications.

SECTION 00538 - CRACK INJECTING EXISTING BRIDGES

Comply with Section 00538 of the Standard Specifications.

SECTION 00540 - STRUCTURAL CONCRETE

Comply with Section 00540 of the Standard Specifications modified as follows:

00540.17(a) Aggregate - Replace this entire subsection, including 00540.17(a)(1) and 00540.17(a)(2), with the following subsection:

00540.17(a) Aggregate - Acceptance of aggregate will be according to 02690.12.

00540.17(c)(2) Actual Strength Test Value - Replace this subsection, except for the subsection number and title, with the following:

The ASTV at 28 Days is the average compressive strength of the three cylinders tested. Discard all specimens that show definite evidence, other than low strength, of improper sampling, molding, handling, curing, or testing. The average strength of the remaining cylinders shall then be considered the test result.

00540.49(a)(1) Hot Weather - Replace the paragraph that begins "Maintain the concrete temperature..." with the following paragraph:

Maintain the concrete temperature during hot weather as specified. When concrete temperatures approach the maximum allowable temperature according to 02001.20(d), take appropriate action to lower the concrete temperature.

00540.51(a) General Requirements - Replace the paragraph that begins "Cure cast-in-place concrete..." with the following paragraphs:

Provide high pressure washers, according to 00549.28, fitted with fog nozzles during all arch slab concrete placements to prevent and control permanent drying. Apply fog spray upwind of the concrete placement during finishing. The purpose of fogging is to maintain a layer of high humidity above the concrete surface in order to minimize water loss in the mix after placement and before application of cure. Do not allow larger water droplets to drip from nozzles to fall onto the freshly plastic concrete.

Cure cast-in-place concrete surfaces with water, wet burlap, and a layer of 4 mil polyethylene film, except polypropylene fabric may be used in place of wet burlap on horizontal surfaces. Begin curing as soon after placement as possible without damaging the freshly placed concrete. Continue curing for 7 Calendar Days (14 Calendar Days for bridge decks) after placement.

Add the following paragraph to the end of this subsection:

If the ambient temperature falls below 50 °F, or is forecasted to be below 50 °F, provide a 24-hour continuous recording thermometer and place it directly on the surface of the concrete. Once placed, the thermometer shall remain in place for the duration of the cure period. Use methods approved by the Engineer to maintain a concrete temperature of at least 50 °F during the cure period.

Add the following subsection:

00540.53(e) Sand Blast Surface Finish - Complete the general surface finish. Let the concrete cure for at least 14 days. Protect adjacent surfaces that are not to be

sandblasted. Sandblast a small test area for approval before proceeding. Use sand to produce an even fine-grained surface in which no trowel or form lines are visible.

00540.80(a)(1) Lump Sum - Add the following to the end of this subsection:

The estimated quantity of concrete is:

Bridge No. 17C02

Type and Class	Quantity (Cu. Yd.)
General Structural Concrete, Class 4000, Curbs	16
General Structural Concrete, Class 4000, Slab	23

SECTION 00542 - CONCRETE REPAIR

Section 00542, which is not in the Standard Specifications, is included in this Project by Special Provision.

Description

00542.00 Scope - This Work includes, but is not limited to:

- Locating, marking and removing all damaged concrete and installing repair mortar.
- Removing the minimum quantity of sound concrete required to shape excavations for adequate patch retention. The depth of concrete damage, due to corrosion, is not substantially greater than the reinforcing bar depth + 1/2".
- Cleaning all exposed metal and concrete surfaces to receive patching Materials.
- Installing anchors in the substrate for patches more than 1 inch thick
- Installing hand-troweled patching Material in concrete cavities up to 0.50 square foot surface area.
- Installing pumped repair mortar in concrete cavities greater than 0.50 square feet surface area.
- Repairing Bent 1 wingwall cracks.
- Curing the repair material.

00542.01 Definitions:

Damaged Concrete - Concrete that is spalled or delaminated due to corroded reinforcement or metal appurtenances such as bearing devices, drains, and conduits; concrete that is debonded from corroded reinforcing bars; concrete with near-surface rock

pockets; unsound or delaminated existing patches; and concrete that has been drilled, excavated, or removed during prior maintenance work or during the Work of this Contract.

Saturated Surface Dry Condition - Surface condition where hardened concrete is thoroughly saturated with water but any free water has been removed from the surface.

Shallow Rebar - Steel reinforcement with 1/2 inch or less of concrete cover.

00542.02 Submittals: - Submit the following according to 00150.37. 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".

(a) Concrete Repair Mortar – Submit before concrete repair work the following:

- A description of all relevant constituents and properties of the material. Data published by manufacturer is acceptable unless certifications of the material characteristics are required by these Specifications.
- For prepackaged products, the manufacturer's certification that the contents include cement and Aggregate and do not include silica fume, fly ash, or any other porosity-reducing admixture. Provide the proportion (by weight) of Portland cement to Sand.
- The Specifications subsection with which each repair mortar complies.
- If proposing alternative repair mortar to those specified in 00542.10, test data demonstrating compliance with 00542.10.

For prepackaged product, take a sample of sufficient quantity for testing from the first delivery to the Project Site. Submit the sample to the Engineer. Do not use a prepackaged product until tests have confirmed that the contents meet the requirements of these Specifications, and the Engineer has approved the product.

For Approved Alternate repair mortar submit three 4 by 8-inch cylinders of patch Material cast in the presence of the Engineer using the proposed mix proportions, admixtures, and mixing and application Equipment, at least 10 Calendar Days before starting concrete repair Work. Cast and cure the cylinders according to AASHTO T 23 or T 39.

Submit records of mix proportions and which mix design was used in each repair location. Maintain and provide records that are complete enough to be able to match repaired areas with the mix records.

(b) Cured Mortar Sample – Submit before concrete repair work cured test panel of mortar with the dimensions 1.5" x 12" x 12" with the surface finish specified in Section 00540.53(e). Acceptance of sample will be based on matching the color and texture of the existing concrete. Cured Mortar Sample shall be approved by the Engineer prior to the start of any concrete repair work.

(c) Concrete Repair Procedure – Submit before concrete repair work a concrete repair procedure that includes the following:

For prepackaged products, submit the manufacturer's certification that the contents contain cement and Aggregate and do not include silica fume, fly ash, or any other porosity-reducing admixture. Provide the proportion (by weight) of portland cement to Sand according to the provisions of 00165.35(a), (b), and (c).

Include the following in the procedures for concrete repair Work:

- Manufacturer's specifications and operating instructions for all Equipment.
- Details of each step to accomplish the Work.
- Steps to regularly maintain quality control of all newly applied mortar.
- Plan to maintain records of verification of proportion (by weight) of Sand to portland cement and quantity of any additives for all mortar mixed on-site.
- Plan to maintain records identifying the mix design for each repaired area.

Materials

00542.10 Patch Material:

(a) Pumped Repair Mortar - Provide one of the following mortars with the required admixture as specified in 00542.15.

- Pumped BASF MasterEmaco S 440MC (formerly BASF LA Repair Mortar) with internal color tinting so cured mortar matches existing concrete color
- Alternative PCC Material conforming to the following:
 - Non-polymer flowable micro-concrete
 - Suitable for pumping
 - At least 4,000 psi 28-Day compressive strength
 - "Low" potential for cracking and no cracking in 28 Calendar Days when tested according to ASTM C 1581, including Appendix
 - Electrical resistivity in the range of 2,000 to 20,000 ohm-cm
 - Internal color tinting so cured mortar matches existing concrete color

Submit proposed alternative Materials for approval according to 00542.17.

(b) Hand Patch Material - Provide hand patching Materials from section 02015.20, in the category "PCC Repair", of the QPL. Observe QPL remarks and follow the manufacturer's r for application. Provide internal color tinting so cured material matches existing concrete color.

00542.11 Non-conductive Resin - Non-conductive resin is acceptable for filling cavities of 0.05 square feet or less. Provide a non-conductive resin from the category "Concrete Anchor, Resin HS High Strength" of the QPL, mixed at a 1:1 ratio with clean abrasive blasting Material:

00542.12 Abrasive - Provide clean, dry, non-metallic grit abrasive material with no mineral constituents that break down and remain on the surface in visible quantity. Provide hard angular shaped abrasives from 16 - 30 mesh.

00542.13 Water - Provide potable water according to 02020.10(b).

00542.14 Reinforcement and Added Steel - Provide uncoated reinforcing bars conforming to 02510.10 (ASTM A706 Grade 60). Provide uncoated, ungalvanized welded wire fabric conforming to 02510.40. Other metal embedded in the mortar to facilitate concrete replacement shall be uncoated and ungalvanized.

00542.15 Admixtures - Use only admixtures approved by the Engineer.

If using admixtures to reduce the water-cement ratio, or to retard or accelerate the development of strength, use only admixtures compatible with the mortar and at the rate specified by the patch Material manufacturer.

00542.16 Hollow Wall Anchors - Provide the following plastic hollow wall anchors, or an approved equal:

- Powers 2345 Nylon Zip-It
- Simpson Strong Tie SWN06 Nylon Sure Wall Drywall Anchor
- ITW Red Head EZP100 Nylon E-Z Drywall Anchor

Construction

00542.40 Access; Containment; Disposal - Provide Work access and debris containment according to Section 00253.

Dispose of waste according to 00290.20.

00542.41 Locating and Marking - Locate and mark the following:

- All concrete having visible spalling or delamination due to corrosion of reinforcement or metal appurtenances such as bearing devices, drains, and conduits. Include within the repair boundaries all damaged concrete at the edges of spalls.
- All visible unsound patches of material.
- All concrete that is visibly loose, or that becomes dislodged or loosened when struck with a 16-ounce masonry hammer or by other approved technique.

Verify the presence of steel with a metal detector.

The Contractor is advised that concrete containing aggregate larger than 2 inches can cause false readings. If no steel is present, readings in such areas should be disregarded.

Investigate all spots of rust visually and with a metal detector to determine if a metallic object is present. If a metal object is present mark the location.

In areas where spalling or delamination is not visually detectable, but is indicated by sounding, use a rebar locator and mark reinforcing bars and their minimum concrete cover. Remove a 4-inch wide (perpendicular to the bar) exploration area centered over

the bar. The exploration boundary area shall have an initial length of 8 inches if splitting cracks are present directly over and parallel to reinforcing bar and suggest a potential for corrosion; remove as much splitting crack length as needed until clean bar is exposed. If rust scale or pitting is found on the exposed reinforcing bar, or if the remaining concrete is separated from the bar, mark the damaged concrete area for removal.

Do not use internal angles less than 45 degrees in defining the repair boundaries. Make all repairs at least 2 inches wide in each direction. Within these restrictions, mark boundaries such that repair areas can be efficiently sawed and excavated.

Determine and mark the location and extent of each repair excavation. Do not begin concrete removal until location and extent have been verified by the Engineer.

The Engineer will perform verification surveys of selected sections of the Work and determine the final quantity of repairs. Do not begin concrete removal until the Engineer has completed the verification surveys.

00542.42 Concrete Removal - Saw-cut the boundaries of concrete to be removed, to a depth just missing the reinforcing bars with less than 1/2 inch concrete cover or to a minimum of 1/2 inch, whichever is less. Saw cuts shall not overrun at the corners of the marked boundaries. Saw cutting is not required if the Contractor can consistently provide, by another technique, a minimum 1/2 inch deep excavation surface that is uniformly perpendicular to the original concrete surface along the marked boundary.

Remove concrete within the marked boundaries with high-pressure waterjet blasting Equipment, pneumatic hammers, chipping guns, manual picks and chisels, or other Equipment approved by the Engineer. Do not use pneumatic hammers heavier than a nominal 15-pound class. Remove concrete in such a way that removal of sound concrete beyond established boundaries is kept to a minimum. When working around reinforcing bars, avoid loosening the reinforcement or fracturing the concrete around it beyond the repair area.

Remove all damaged concrete within the marked boundaries to the depth of sound concrete. In areas where the reinforcing bar lacks bond with the existing concrete, continue to excavate to 1/2 inch beyond the depth of the reinforcing bar. In areas where it is difficult to determine if the reinforcing bar lacks bond with the existing concrete do not excavate beyond the depth of the reinforcing bar if a 4-inch wide exploration area shows the reinforcing bar to be free of rust scale or pitting, and the reinforcing bar is not separated from the remaining concrete.

The depth of concrete damage, due to corrosion, in any member is not expected to be substantially greater than 1/2" inch beyond the depth of the reinforcing bar. Do not remove sound concrete over shallow rebar.

00542.43 Repair Damaged Reinforcement Bars - Repair reinforcing bar showing 50 percent or greater section loss or any reinforcing bar damaged by contractor's operations during concrete removal according to the following:

- Remove all damaged concrete

- Remove sound concrete as necessary so that there is a minimum of 3/4-inch clearance between the concrete and splice bars over entire length of repair
- Blast-clean all exposed reinforcing steel and concrete
- If feasible, place splice bars so as to allow 1/2 inch of concrete cover without raising the concrete surface
- Perform all weld splicing according to ANSI/AWS D1.4, "Structural Welding Code - Reinforcing Steel". Since the carbon content of existing reinforcement is unknown, assume that preheating is required under ANSI/AWS D1.4. Limit the temperature of reinforcing bar at concrete interface to 500 °F or less, verified using an infrared thermometer.
- Remove any additional concrete that cracks or spalls during welding
- Keep the existing (spliced) bars in place and avoid gouging and loosening reinforcing bar or damaging sound concrete outside of splice areas
- Keep the splice bar in the proper position during placement of concrete cover

Repair round bars with new splice bars the same size as the original bars. Repair square bars with new round splice bars with a diameter equal to the thickness of the square bars.

00542.44 Shallow Rebar in Sound Concrete - If shallow rebar exists in sound concrete and passes the sounding test, no concrete repair is necessary.

00542.45 Shallow Rebar in Damaged Concrete:

Where directed, treat prefabricated mesh and other closely spaced shallow metals in the same manner as shallow rebar in damaged concrete. Place additional cover Material over shallow rebar in damaged concrete according to the following.

(a) Mortar Buildup on Shallow Rebar - Place additional mortar as needed to achieve at least 1/2 inch of cover over shallow rebar repairs.

(b) Resin Buildup on Shallow Rebar - In areas where additional buildup is not feasible, or where buildup would detract from the aesthetic appearance of the Structure, provide additional cover using non-conductive resin conforming to 00542.12. Apply the resin in 2-inch wide strips over the shallow rebar.

00542.46 Surface Preparation - Abrasive-blast or water-blast all concrete surfaces that are to receive additional mortar cover or patches, to remove all debris, loose concrete, concrete pulverized during removal, scale, and loose rust. Blast exposed reinforcing bars according to (SSPC) Standard SP6 "Commercial Blast Cleaning" or equivalent procedure. Do not allow prepared surfaces to remain exposed more than 36 hours before placing repair mortar.

Prepare surfaces that are to receive additional mortar or resin cover with a surface profile according to International Concrete Repair Institute (ICRI) Guideline 310.2R-2013 surface profile CSP 6 (1/8-inch surface profile).

Provide hollow wall anchors for concrete surfaces that are to receive more than 1 inch of repair mortar and have reinforcing bar spacing greater than 9 inches. Install anchors by drilling 1/4-inch diameter holes 1/2 to 3/4 inch deep on a 9-inch (maximum) grid in the

concrete substrate. Apply non-conductive resin and insert anchors. Remove excess resin from the concrete substrate.

00542.48 Patch Installation:

(a) Forms - Provide smooth-surfaced form Materials. Provide adequate support and bracing of forms to prevent deflection under the weight and pressure of new mortar, and to prevent vibration damage to mortar during setting and curing. Leave forms in place for a minimum of three days after mortar placement.

Provide watertight form Materials and a watertight form system to prevent loss of water during presoaking and repair mortar placement. Incorporate enough pumping ports to ensure consistent placement and enough vent holes or vent tubes to allow air to escape extreme surface irregularities and remote cavities. Limit port spacing to prevent mortar segregation.

Provide forms that can readily be removed and reinstalled for presoaking, flushing, blowdown, and for verification of surface saturated dry condition.

Forms may be omitted for repairs less than 0.5 square feet in area.

(b) Pre-soak - Saturate the substrate concrete for at least 24 hours before application of repair mortar, using either a watertight form kept full of water or saturated burlap or foam Material packed inside forms, in contact with the entire existing concrete surface, and soaked frequently, or any other method demonstrated to produce saturated surface dry condition.

After the substrate has been saturated, temporarily remove the form and, immediately before placing mortar, remove all dust, dirt, and other debris by flushing the surface with water pressurized to at least 60 psi, followed by blasting with clean compressed air to remove excess water. Provide a damp surface free of standing water (saturated surface dry condition) and free of contaminants when applying repair mortar. Light surface rust that appears during the pre-soak stage does not need to be removed. When the concrete surface is in saturated surface dry condition and free of contaminants, and reinforcement is clean or has only light surface rust, immediately reinstall the forms and place mortar or place troweled mortar for repairs less than 0.50 square feet in area.

(c) Mixing - When a package of prepackaged repair mortar is opened, mix the entire contents of the package.

Mix repair mortar according to the manufacturer's instructions including, but not limited to, mixing speed, mixing time, and mixing Equipment.

(d) Placing Repair Mortar – Pump repair mortar and achieve thorough and uniform hydration without the use of excess water.

Do not place mortar before acceptance of saturated surface dry condition by the Engineer.

Do not place mortar during freezing weather or if temperatures are likely to drop below freezing during the cure period for the mortar. Do not apply mortar to frosted surfaces. Follow the manufacturer's recommendations regarding temperature and weather conditions during mortar placement.

Provide adequate pumping pressure into each port to ensure mortar completely fills the cavity and mortar is observed at all vents. Vibrate only if approved by the Engineer in advance.

For repair areas less than 0.50 square feet, apply mortar according to manufacturer's recommendations and applied in such a way to prevent voids in the completed patch.

(e) Adjacent Surface Protection - Protect surfaces outside the repair area from mortar overshoot and drip and remove the excess Material from these areas after the application has been completed.

(f) Mix Records - Record proportion (by weight) of Sand to portland cement and the quantity of any additives for all mortar mixed on-site at the start of each mortar placement operation and every time proportions or additives are changed. Keep a record of which mix is used for each repair area.

00542.49 Curing - Take care to avoid cracks in the new mortar due to excessive surface evaporation. Continuously cure all newly applied mortar according to the manufacturer's recommended curing schedule.

00542.50 Finish – Finish all exposed surfaces and surface defects to straight and true lines as shown. Provide a general surface finish according to 00540.53 on all surfaces, with no coating on any surface unless otherwise directed, followed by a sand blast finish.

00542.51 Delamination Survey - After mortar repair Work has cured, conduct a delamination survey of all repaired areas with the Engineer according to the following:

- Sound all repaired areas with a 1-pound masonry hammer or by other approved technique.
- Mark boundaries of all delaminations in the repaired areas.
- Identify the marked delamination that needs patching.

Make repairs when delamination repair areas do not meet the acceptance criteria of 00542.52.

Upon completion of the survey, prepare and sign a survey report that identifies all areas to be patched. Submit the survey report for review and acceptance by the Engineer.. Repair the identified areas in a manner satisfactory to the Engineer.

After patching the identified areas, repeat the delamination survey. Repeat the delamination survey and repair procedure until all areas of unsound concrete have been repaired and accepted.

Following the bond strength test of cores according to 00542.52(b), the Engineer will visually inspect the cores for sand pockets and voids. If sand pockets or voids are found,

the area from which the core was taken will be marked by the Engineer to aid in the Contractor's delamination survey.

00542.52 Production Quality Control Testing - The Work performed under this Section will not be accepted if it does not pass the tests described in this subsection.

(a) Compressive Test - For each 100 square feet of mortar placed on the Bridge, but not less than once per production Work shift, cast at the same time and under the same conditions three 4 by 8-inch cylinders for testing. Cast the cylinders in single-use plastic molds. Cast and cure strength specimens according to AASHTO T 23 or AASHTO R 39. Test the cylinders for compressive strength according to AASHTO T 22 following a 28-Day cure.

The minimum acceptable 28-Day compressive strength (f'_c) of cylinders is 4000 psi.

(b) Bond Strength Test - Following a 7-Day cure of the mortar patch, core one test specimen from each 100 square feet of newly applied mortar placed on the Bridge surface, at locations designated by the Engineer. Locate cores to avoid damaging reinforcing bar. Core approximately 1/2 inch into the original concrete. Do not break cores free before testing. Perform Pull-off tests of the cores 14 to 24 Calendar Days after placement and in the presence of the Engineer.

Measure the core bond strength according to ASTM C 1583. Use pull-test dollies with the same diameter as the cores. Conduct the test until failure.

The minimum acceptable bond strength between the new and original concrete is 175 psi.

The minimum acceptable strength for failure in original concrete substrate is 100 psi.

Individually seal the cores taken from the Bridge in plastic bags and tag them for identification.

00542.53 Deficient Repair Mortar - Repair at no additional cost to the Agency all mortar patches that, after completion of blast cleaning according to 00542.46, show an alligator cracking in the surface or uncontrolled cracks visible without magnification. Perform additional testing as directed to determine the extent of deficient mortar in the production test area represented. If additional patches are found to be deficient, repair the production test area represented according to these Specifications at no additional cost to the Agency. Repairs include, but are not limited to, removal and replacement of patches found to be substandard.

Repair small crevices (a maximum of 0.4 inch deep and 0.1 inch wide at the edge of a patch) with non-conductive resin mixed with abrasive blasting Material or other approved patch Material, at no additional cost to the Agency. Cut out pockets or other defects and replace with new repair mortar according to this Section.

Measurement

00542.80 Measurement - The quantities of Work performed under this Section will be measured according to the following:

(a) Locate Damaged Concrete - No measurement of quantities will be made for locating damaged concrete. The estimated quantity of locate damaged concrete is 774 square feet.

(b) Repair Damaged Concrete - Repair of damaged concrete will be measured on the area basis. Measurement will be the outside measurement of the area of Work marked for concrete repair, after locating damaged concrete and before concrete removal Work. The area of Work marked for concrete repair does not include initially sound concrete that is damaged or micro-fractured by the Contractor's operations.

Payment

00542.90 Payment - The accepted quantities of Work performed under this Section will be paid for at the Contract unit price per unit of measurement for the following items:

Pay Item	Unit of Measurement
(a) Locate Damaged Concrete	Lump Sum
(b) Repair Damaged Concrete	Square Yards
(c) Seal Large Cracks, Bent 1 Wingwall	Linear Feet

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 00575 — STONE MASONRY

Section 00575, which is not a Standard Specification, is included in this project by Special Provision.

Description

00575.00 Scope – This work consists of :

Repairing Stone Masonry – This work consists of providing stones which are shaped, dressed to within 1/2" of true line, and laid in mortar to repair the existing mortared stone masonry wall.

Rechinking Stone Masonry – This work consists of cleaning existing stone masonry and providing stones varying in size and shape, are roughly dressed, and are placed between existing dry stacked stone masonry to stabilize the existing dry stacked stone masonry wall.

The work shall be provided by a bonded masonry construction company, who specializes in masonry construction, and shall furnish all equipment and labor required for completing masonry work for this project.

The masonry company shall have completed at least 3 projects of similar complexity and shall have been in business for a minimum of 10 years. Submit examples of recent comparable work.

Materials

00575.10 General - Furnish materials meeting the following requirements:

Provide mortar that complies with ASTM C270. Mortar color after curing shall match existing mortar. Provide samples of cured mortar material for Engineer approval prior to beginning work.

Comply with manufacturer's instructions related to mix proportions, mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures needed to produce mortars of uniform quality and with optimum performance characteristics.

00575.11 Stones - Stones are needed to complete the work. Furnish stones meeting the following requirements:

Furnish sound, durable rock that is similar in texture and color to existing masonry rock and that is proven satisfactory for the intended use. Provide a sample of the intended rock to the Engineer for inspection and approval prior to beginning work.

(a) Sizes and shapes. Do not use rock with depressions or projections that might weaken it or prevent it from being properly bedded.

Furnish rocks in the sizes and face areas necessary to produce the general characteristics and appearance consistent with the existing wall.

(b) Dressing. Remove all thin or weak portions. For repairing stone masonry, dress face rock bed and joint lines to a 0.5" maximum variations from true line.

(c) Finish for exposed faces. Remove drill or quarry marks from exposed faces.

Construction

00575.41 Cleaning - Hand remove debris and vegetation from existing walls. For Reinking Stone Masonry, salvage small stones removed during cleaning for reuse during reinking the wall.

00575.42 Photo Inventory - After cleaning, digitally photograph face of the wall being repaired or reinked. Take photos prior to starting wall work and after the wall face has been cleaned.

Photos must show the entire length of the structure being repaired or reinked and must clearly show size and shape of the materials in the structure and its overall appearance.

Submit one electronic copy of the photo inventory to the Engineer before repairing or reinking the walls.

00575.43 Placing Stone for Repairing Stone Masonry - Rock placement shall match existing random layout documented in the photo inventory. Joint spacing shall match existing spacing.

Do not place mortar when the ambient temperature is below 32 degrees F. Maintain completed mortared masonry at a temperature above 40 degrees F for 24 hours after construction.

Remove stones loosened after the mortar has taken initial set, clean off the mortar, and relay the stone with fresh mortar.

For repairing stone masonry, clean stones and moisten before placing. Use hand tools to clean the exposed faces of the stones of mortar when removing and resetting stone masonry. Clean and moisten the bed.

00575.44 Placing Stone for Reinking Stone Masonry- Fill voids in the wall that are greater than 3 square inches using rock. Set rock firmly in place and flush with the existing wall surface. Reink to stabilize the existing dry stacked stone masonry wall.

00575.45 Acceptance - Material for mortar and rock will be reviewed and approved by the Engineer for final acceptance. Completed work acceptance is based on visual inspection of the work for compliance with the contract and prevailing industry standards.

Measurement

00575.80 Measurement - The quantities of Work performed under this Section will be measured according to the following:

(a) **Stone Masonry Repair** – Stone Masonry Repair will be measured on the area basis. Measurement will be the outside measurement of the existing discrete voids repaired, as shown in the plans.

(b) **Stone Masonry Reinking** – Stone Masonry Reinking will be measured on the area basis. Measurement will be the outside measurement of the existing wall to be reinked, measured on the face of the existing wall.

Payment

00575.90 Payment - The accepted quantities of Work performed under this Section will be paid for at the Contract unit price per unit of measurement for the following items:

Pay Item	Unit of Measurement
(a) Stone Masonry Repair	Square Feet
(b) Stone Masonry Reinking	Square Feet

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 00581 - BRIDGE DRAINAGE SYSTEMS

Comply with Section 00581 of the Standard Specifications modified as follows:

Description

00581.00 Scope - Replace this entire subsection, with the following subsection:

00581.00 Scope - This Work consists of furnishing and installing perforated pipe and appurtenances, granular drain backfill, and drainage geotextile for Bridges as shown, specified or directed.

Materials

00581.10 Materials - Add the following to the end of this subsection:

Furnish materials meeting the requirements of 00430.10 and 00430.11.

If 2" perforated pipe is not available, provide solid pipe with perforations meeting the requirements of 00430.10.

Construction

00581.40 General - Add the following to the end of this subsection:

Construct pipe and granular drainage backfill according to the requirements of 00430. Place pipe with perforations down.

Drainage pipe shall fit into and through the existing drainage holes through the side wall of the bridge.

Measurement

00581.80 Measurement – Replace this subsection, with the following subsection:

00581.80 Measurement – No measurement of quantities will be made for installing the bridge drainage system.

The estimated quantity of 2" perforated pipe is: 96 feet

The estimated quantity of granular drain backfill is: 8 cubic yards

The estimated quantity of drainage geotextile is: 550 square feet

Payment

00581.90 Payment – Replace this subsection, with the following subsection:

00581.90 Payment – Bridge Drainage System, Supplemental will be paid for at the Contract lump sum amount for the item "Bridge Drainage System, Supplemental".

SECTION 00585 - EXPANSION JOINTS

Comply with Section 00585 of the Standard Specifications modified as follows:

Description

00585.00 Scope – Add the following to this subsection:

This work also consists of preparing and constructing the transverse joints in the asphalt pavement at the bridge bents.

00585.01 Definitions - Replace this subsection, except for the subsection number and title, with the following:

Armored Corner - Steel armoring to protect the vertical edges of a joint.

Asphaltic Plug Joint Seal - A sealed joint composed of Aggregate and flexible binder material placed over a steel bridging plate.

Closed Joint - A sealed or filled joint designed to prevent water and debris from passing through the joint.

Edgebeam - Steel armoring to protect the vertical edges of a joint opening including recesses to accept elastomeric seals.

Filled Joint - A joint using a preformed material placed prior to concrete pour.

Open Joint - A joint designed to allow water and debris to pass through the joint.

Poured Joint Seal - A seal made of materials that remain flexible which is poured into the gap of a joint and adheres to the sides of the gap.

Precompressed Foam Silicone Joint Seal - A joint system consisting of a preformed, pre-compressed, silicone-coated, self-expanding foam joint system bonded to joint faces using epoxy adhesive.

Preformed Compression Joint Seal - A preformed elastomeric device that is precompressed in the gap of a joint.

Sealed Joint - A joint using a compressible or expandable seal including asphaltic plug joint seals, preformed compression joint seals, poured joint seals, strip seals, and precompressed foam silicone joint seals.

Strip Seal - A sealed joint with an extruded elastomeric seal retained by edgebeams that are anchored to the structural elements.

00585.10 Materials – Replace this subsection, except for the subsection number and title, with the following:

Furnish expansion joints using Materials from the QPL and meeting the following requirements:

Backer Rod	02440.14
Elastomer.....	02570.10
Hot Applied Joint Sealant	02440.30
Lubricant/Adhesive.....	02440.15
Polytetrafluoroethylene (PTFE)	02570.10
Poured Joint Sealant.....	02440.11
Precompressed Foam Silicone Joint Seal	02440.23
Preformed Compression Joint Seal.....	02440.22
Preformed Joint Filler for Concrete.....	02440.10
Stainless Steel Sliding Surfaces.....	02570.10
Steel Bridging Plate.....	02440.19
Strip Seals.....	02440.20
Structural Steel	02530

00585.41 Filled Joints - Replace the sentence that begins “If shown or specified, place traffic...” with the following:

Unless shown or specified, place hot applied joint sealant at the top of the joint.

00585.42(c) Joint Preparation - Replace this subsection, except for the subsection number and title, with the following:

Prepare the joint surfaces as directed in this Section and according to the joint material manufacturer's recommendations. Ensure that all joint surfaces to receive a seal are sound, dry, clean, and frost-free at the time of joint installation.

For joint replacement, remove joint material from existing joints and clean the existing joints full depth and full width as directed by the Engineer. If existing joint surfaces have spalled, cracked, or deteriorated concrete, repair as shown or as directed to provide a uniform and smooth surface along the joint.

00585.44 Asphaltic Plug Seal - Replace this subsection with the following subsection:

00585.44 Asphaltic Plug Joint Seal - Install asphaltic plug joint seals according to the following:

Provide a clean, intact, and plane surface on which to place the steel bridging plate.

Ensure the gap below a 12 foot unlevelled straightedge does not vary from the testing edge by more than 1/8 inch when placed across the joint in any direction. Use either an elastomeric concrete or a structural patching product from the QPL as needed to repair the deck surface of new or existing concrete.

Ensure steel bridging plates are clean, free from surface rust, oil, or other residues and contaminants when installed. Place centering pins through the holes in the steel bridging plates and down into the expansion gap to assure proper centering. Avoid placing the steel bridging plate ends under wheel rut area.

Install asphaltic plug joint seals according to the manufacturer's recommendations.

Place preformed compression joint seal or poured joint seal in curbs and sidewalks.

00585.45 Poured Seal - Replace the title of this subsection with “**Poured Joint Seal**”

00585.46 Compression Seal - Replace the title of this subsection with “**Preformed Compression Joint Seal**”

00585.48 Hot-Dip Galvanizing - Replace this subsection with the following subsection:

00585.48 Precompressed Foam Silicone Joint Seal - Install precompressed foam silicone joint seal according to the manufacturer’s recommendations and the following:

Ensure that top of joint system is 3/4 inch minimum below deck surface.

Do not install the joint system in a joint width greater than 3 inches.

Add the following

00585.49 Hot-Dip Galvanizing - Hot dip galvanize steel expansion joint surfaces, except stainless steel, according to AASHTO M 111 (ASTM A123).

The contact surfaces at all galvanized slip critical structural bolted connections shall meet Class C (slip coefficient 0.33) surface preparation requirements.

00585.80 Measurement - Replace this subsection, except for the subsection number and title, with the following:

No measurement of quantities will be made for expansion joints.

The estimated quantities of asphaltic plug joint seals is based on a nominal depth of 2 1/4 inches.

The quantities of asphaltic plug joint seal Material for joints deeper than 2 1/4 inches will be measured on the volume basis.

The estimated quantities of expansion joints are:

Structure	Joint Type	Quantity (Foot)
Bridge No. 17C02	Poured Seals	78

00585.90 Payment - Replace pay items (c) with the following pay items:

(c) Poured Joint Seals..... Lump Sum

Replace the paragraph that begins “Item (a) includes saw cutting, steel bridge...” with the following paragraph:

Item (a) includes saw cutting, steel bridging plate, and asphaltic plug joint seal Material to a nominal depth of 2 1/4 inches.

Replace the paragraph that begins “Item (b) includes additional Material required...” with the following paragraph:

Item (b) includes additional Material required when the nominal depth of an asphaltic plug joint seal is greater than 2 1/4 inches.

Replace the paragraph that begins “In item (d), the type of compression ...” with the following paragraph:

In item (d), the type of compression joint seal will be inserted in the blank.

Replace the bullet that begins with “preformed expansion joint filler...” with the following:

Preformed expansion joint filler, hot applied joint sealant, or sawcutting

SECTION 00587 - BRIDGE RAILS

Comply with Section 00587 of the Standard Specifications modified as follows:

00587.80 Measurement - Add the following to the end of this subsection:

The estimated quantity of bridge rail is:

Structure	Rail Type	Quantity (Foot)
Bridge No. 17C02	Replace Steel Rail	307

SECTION 00591 - SPRAY WATERPROOFING MEMBRANE

Comply with Section 00591 of the Standard Specifications modified as follows:

Description

00591.00 Scope - Replace this subsection, with the following:

00591.00 Scope - This Work consists of furnishing and placing spray waterproofing membrane protective system to the top face of strengthening arch concrete and inside face of arch side walls to 1/2” below finished grade, as shown.

Construction

00591.45 Installation - Replace the last two bullets of this subsection with the following:

- Do not apply shear coat or tack coat.

SECTION 00594 - PREPARING AND COATING METAL STRUCTURES

Comply with Section 00594 of the Standard Specifications modified as follows:

00594.00 Scope - Replace this subsection, except for the subsection number and title, with the following:

This Work consists of preparing and coating the new bridge steel rail.

00594.10 Materials - Add the following to the end of this subsection:

For the new bridge steel rail on Bridge No. 17C02:

Furnish a galvanize and powder coating, from the QPL. Provide black top-coat color with matte finish approved by the Engineer.

00594.75 Coating System Warranty and Supplemental Warranty Performance Bond - Add the following to this subsection:

Provide a coating system warranty for Structure No. 17C02 and a supplemental warranty performance bond in the sum of \$ 50,000 to the Project Manager.

00594.90(a) New Metal Structures - Replace this subsection, except for the subsection number and title, with the following:

No separate payment will be made for preparing and coating new metal Work. Payment for this Work, including correction of damages, will be included in payment made for appropriate items under which this Work is required.

SECTION 00640 - AGGREGATE BASE AND SHOULDERS

Comply with Section 00640 of the Standard Specifications.

SECTION 00730 - EMULSIFIED ASPHALT TACK COAT

Comply with Section 00730 of the Standard Specifications modified as follows:

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 2 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 – Replace the last paragraph in this subsection with the following:

Test Aggregates for soundness, durability, and harmful substances at no additional cost to the Agency.

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

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

SECTION 00746 - CRACK SEALING FLEXIBLE PAVEMENTS

Comply with Section 00746 of the Standard Specifications modified as follows:

Description

00746.00 Scope – Add the following to this subsection:

This work also consists of constructing the poured sealant against the bridge curbs as shown in the plans.

00746.42 Installation Procedure - Replace the sentence that begins “Seal the cracks from the bottom up...” with the following:

Seal the cracks from the bottom up in a neat manner so that upon completion of the Work the surface of the sealant material is flush to the adjacent Pavement surface.

00746.42 Installation Procedure - Add the following to the end of this subsection:

Mask face of concrete curb with material approved by the Engineer to protect from overspray of poured sealant and staining.

00746.90 Payment - Replace the sentence that begins “No separate or additional payment...” with the following:

No separate or additional payment will be made for required cleaning, routing, or masking.

SECTION 00905 - REMOVAL AND REINSTALLATION OF EXISTING SIGNS

Comply with Section 00905 of the Standard Specifications.

SECTION 02001 - CONCRETE

Comply with Section 02001 of the Standard Specifications modified as follows:

02001.02 Abbreviations and Definitions - Replace this subsection, except for the subsection number and title, with the following:

- ASTV** - Actual Strength Test Value - average of test cylinder compressive strengths
- f'_c - Minimum Specified Compressive Strength at 28 days
- f'_{cr} - Average Compressive Strength Over-design. The average strength required to assure that, with normal variations, the concrete will meet f'_c
- GGBFS** - Ground Granulated Blast Furnace Slag
- HPC** - High Performance Concrete
- HRWRA** - High-Range Water-Reducing Admixture (super-plasticizer)
- PPCM** - Precast prestressed concrete member
- SCM** - Supplementary Cementitious Materials
- SSD** - Saturated Surface-Dry
- w/cm Ratio** - Water-Cementitious Material Ratio
- WRA** - Water Reducing Admixture

Cementitious Materials - Portland cement and supplementary cementitious materials.

High Performance Concrete - Concrete designed for enhanced durability and performance characteristics. High performance concrete is identified on the Plans by the letters "HPC" in front of the concrete class designation (for example, HPC4500 - 1 1/2).

Moderate Exposure - Elevations below 1,000 feet.

Pozzolans - Fly ash, silica fume, and metakaolin.

Severe Exposure - Elevations 1,000 feet and above.

Supplementary Cementitious Materials - Fly ash, silica fume, metakaolin, and ground granulated blast furnace slag.

02001.10 Materials - Replace this subsection, except for the subsection number and title, with the following:

Furnish Materials meeting the requirements of the following:

Aggregates.....	02690
Cement	02010
Chemical Admixtures	02040
Concrete Modifiers	02035
Supplementary Cementitious Materials	02030
Synthetic Fiber Reinforcing	02045

Water 02020

02001.20(a) Strength - Replace this subsection, except for the subsection number and title, with the following:

Provide concrete meeting the required Classes shown in the Contract Documents. The class of concrete designates the minimum required compressive strength, f'_c at 28 days.

Table 02001-1

Concrete Strength and Water/Cementitious Material (w/cm) Ratio		
Type of Concrete	Strength (PSI)	Maximum w/cm Ratio
Structural	3300	0.50
	3300 (Seal)	0.45
	4000	0.48
	HPC4500	0.40
	5000 and Above	0.40 ¹
	HPC5000 and above	0.40
Drilled Shaft	4000	0.48
Paving	4000	0.44
¹ PPCM's with cast-in-place decks and no entrained air may have w/cm as follows: 5000 psi - 0.48; 5500 psi - 0.44; 6000 psi and up - 0.42		

(1) Required Over Design Strength (f'_{cr}) - Using the ASTV from either field results or trial batch cylinder's, provide calculations demonstrating compliance with one of the following:

$$f'_{cr} = f'_c \times 1.20 \text{ for up to but not including Class 6000; } f'_{cr} = f'_c \times 1.15 \text{ for Class 6000 and higher}$$

$$f'_{cr} = f'_c + 1.34 \times S^1 \text{ for up to but not including Class 6000; } f'_{cr} = f'_c + 1.28 \times S^1 \text{ for Class 6000 and higher}$$

¹ For current designs, S is the standard deviation of 28-Day cylinder strengths from the available data set. For new mix designs, the second option above may be used if there are at least 15 sets of 28-Day cylinders from a similar class ($\pm 1,000$ psi) mix design produced at the same plant.

(2) Flexural Beams - Flexural beams for paving concrete mix designs shall achieve 600 psi at 28 Days.

02001.20(c) Slump - Replace this subsection, except for the subsection number and title, with the following:

Provide concrete at the appropriate slump shown in Table 02001-3. Take corrective action to maintain a consistent slump at the point of discharge from the delivery vehicle.

Table 02001-3

Concrete Slump	
Condition	Slump
Concrete without WRA	4" max.
Concrete with WRA	5" max.
Concrete with HRWRA	5 1/2" ± 2 1/2"
Precast Prestressed Concrete with HRWRA	10" max.
Seal Concrete	8" ± 2"
Drilled Shaft Concrete	8 1/2" ± 1 1/2" ¹
¹ Maintain a minimum slump of 4 inches throughout drilled shaft placement, including temporary casing extraction.	

Add the following subsection:

02001.20(e) Durability - For HPC and SFC designs, except designs for precast bridge rail elements, the following additional requirements apply:

Test	Test Method	Acceptance Value
Length Change	ASTM C157	-0.045%
Permeability	AASHTO T 277 1,000 Coulombs (max.) at 90 days ¹	

¹ Only required for alternate HPC designs. See 02001.30(b)(2).

02001.30 Concrete Mix Design - Replace this subsection with the following subsection:

02001.30 Concrete Constituents:

(a) Portland Cement - Use AASHTO M 85 or ASTM C150, Type I or II cement for structural or paving concrete. Use AASHTO M 85 or ASTM C150, Type III cement for precast prestressed concrete. Provide all cement from the QPL.

(b) Supplementary Cementitious Materials - SCM may be used separately or in combinations up to the specified maximum percentage by mass according to the following:

(1) General Limits - SCM may be used separately or in combination as shown:

Separate SCM	Maximum
Fly Ash + Other Pozzolans	25%
GGBFS	50%
Silica Fume	5%
 Combined SCM	 Maximum
Fly Ash + Other Pozzolans + GGBFS + Silica Fume	50%*
Fly Ash + Other Pozzolans + Silica Fume	30%*

* Fly ash + other pozzolans shall constitute no more than 25% and silica fume shall constitute no more than 5% of the total weight of cementitious materials.

When silica fume is added to truck mixed concrete, mix the batch a minimum of 100 revolutions at the mixing speed specified by the manufacturer before leaving the batch plant.

(2) HPC Cementitious Composition - Provide HPC with one of the following:

Cementitious material with 66 percent portland cement, 30 percent fly ash, and 4 percent silica fume.

Cement with SCM proportioned according to 02001.30(b)(1) and with trial batches performed to demonstrate that the proposed alternate mix design provides a maximum of 1,000 coulombs at 90 days when tested according to AASTHO T 277.

Cementitious material with modifiers and with trial batches performed to demonstrate that the proposed alternate mix design provides a maximum of 1,000 coulombs at 90 days when tested according to AASTHO T 277.

(c) Blended Hydraulic Cement - Blended hydraulic cement may be used subject to the limits of 02001.31(b)(1) and 02010.20.

(d) Chemical Admixtures - Use chemical admixtures according to the manufacturer's recommendations. Use WRA in all seal concrete and in Class 5000 concrete or greater. Use HRWRA in all HPC.

Use a superset extender from the QPL in all concrete for bridge decks. Use an appropriate amount to extend the initial set time of the concrete by 90 minutes.

(e) Aggregate - If the nominal maximum size of the coarse Aggregate is not included as a part of the class of concrete, or shown on the Plans, any size from 1 1/2-inch to 3/8-inch nominal maximum size Aggregate may be used according to ACI guidelines except:

Use 1 1/2 inch nominal maximum size Aggregates in bridge deck concrete.

Use 1 1/2 inch nominal maximum size Aggregates in paving concrete unless otherwise indicated.

Use 3/8 inch nominal maximum size Aggregates in drilled shafts unless otherwise indicated.

(f) Synthetic Fiber Reinforcing for Concrete - Use synthetic fiber reinforcing from the QPL and according to Section 02045 in all bridge deck and silica fume overlay concrete. Use synthetic fiber reinforcing according to the manufacturer's recommendations at the rate designated on the QPL. Fiber packaging is not allowed in the mixed concrete.

Proportion all HPC for a minimum coarse Aggregate absolute solid volume according to Table 02001-4:

Table 02001-4	
Absolute Solid Volume	
Maximum Nominal Aggregate Size	Cu. Yd. (Aggregate) / Cu. Yd. (Concrete)
3/8"	0.36
1/2"	0.38
3/4"	0.40
1"	0.42
1 1/2"	0.44

Two or more Aggregate products or sources meeting Specifications may be blended to improve concrete properties. Blending non-specification Aggregate Materials, except for gradation, with specification Materials is not allowed.

02001.31 Concrete Constituents - Replace this subsection with the following subsection:

02001.31 Concrete Mix Design - Submit new or current mix designs, prepared by a CCT, for each required class of structural or paving concrete to the Engineer for review. Allow 21 Calendar Days for the review. Design mixes by the volumetric method in ACI 211.1 to achieve the properties of 02001.20. Do not proceed with concrete placement until the Engineer has determined that the mix design complies with the Specifications. Review of concrete mix designs does not relieve the Contractor of the responsibility to provide concrete meeting the Specification requirements.

02001.32(a) Trial Batch - Add the following to the end of this subsection:

Furnish all materials, Equipment and Work required for designing the mixes, testing Materials, and making trial batches to verify the final design for final use at no additional cost to the Agency.

02001.32(c) Strength Tests - Replace this subsection with the following subsection:

02001.32(c) Hardened Concrete - When applicable, test properties according to the following test methods:

Test	Test Method
Compressive Strength	AASHTO T 22
Flexural Strength	AASHTO T 97
Length Change	ASTM C157
Permeability	AASHTO T 277

(1) Compressive Strength Tests - For each trial batch, cast and cure at least three test cylinders according to AASHTO T 23 or AASHTO R 39, in 6 inch by 12 inch or 4 inch by 8 inch single use plastic molds. Test at 28 days according to AASHTO T 22.

(2) Flexural Strength Tests - For each paving concrete trial batch, cast and cure at least three flexural beams according to AASHTO T 23 or AASHTO R 39. Test flexural beams at 28 days according to AASHTO T 97.

(3) Length Change Tests - For all HPC and SFC mix designs, except for precast bridge rail elements, make at least three specimens from the trial batch for length change testing. Sample prisms shall have a square, 4 inch by 4 inch cross section. Wet cure the samples until they have reached an age of 28 days, including the period in the molds. Store and measure samples according to ASTM C157, Section 11.1.2. Report length change results at 28 days.

(4) Permeability Tests - For alternate HPC mix designs, make at least three specimens from the trial batch for permeability testing. Prepare, cure, dry and test according to AASHTO T 277. Report permeability in coulombs at 90 days.

02001.32(d) Length Change Tests - Delete this subsection.

02001.32(e) Permeability Tests - Delete this subsection.

02001.33 Required Over Design Strength (f'_{cr}) for New Mix Designs - Delete this subsection.

02001.34(a) Length Change Tests - Delete this subsection.

02001.34(b) Permeability Tests – Delete this subsection.

02001.35 Required Submittals for Mix Designs - Replace this entire subsection with the following subsection:

02001.35 Required Submittals for Mix Designs - Submit the following information for each concrete mix design:

(a) Supplier's Information - Provide the supplier's unique mix design identification number and batch plant location.

(b) Mix Design Constituent Proportions:

Weight per cubic yard (pounds per cubic yard) of cement, SCM, fine Aggregates and coarse Aggregates (SSD), mix water, concrete modifiers, and chemical admixtures

Absolute volumes of cement, SCM, fine Aggregates and coarse Aggregates (SSD), mix water, air content, concrete modifiers, and chemical admixtures

Dosage rates for chemical admixtures (ounces per cubic yard)
w/cm ratio including all chemical admixtures

(c) Aggregates - Identify the Aggregate source by the ODOT source number. Report current values of the following:

Bulk specific gravities (SSD)

Fine Aggregate absorptions

Coarse Aggregate absorptions

Dry-rodded density of coarse Aggregates

Average stockpile gradations

Fineness modulus of sand used in the mix design calculations

(d) Cement - For each cement used, provide the following:

Manufacturer

Brand name

Type

Source or location plant

QPL product number

(e) SCM - For each SCM used, provide the following:

Manufacturer

Brand name

Source

Class

QPL product number

(f) Concrete Modifiers - For each concrete modifier used, provide the following:

Manufacturer

Brand name

QPL product number

(g) Admixtures - For each admixture used, identify the following:

Manufacturer

Brand name

Design dosage rate
QPL product number

(h) Synthetic Fiber Reinforcing - For each synthetic fiber reinforcing used, provide:

Manufacturer
Brand name
Design dosage rate
QPL product number

(i) Water - Identify the source of water to be used and provide a certificate of compliance certifying that the water meets the requirements of 02020.10.

(j) Plastic Concrete Tests - Report the temperature, slump, density, air content, yield, and w/cm ratio of the trial batch or the average of these values for the cylinder sets presented for evaluation of a current mix design.

For drilled shaft concrete, report the following additional information:

The total time estimate from initial batching through drilled shaft placement, including haul time, placing concrete, and temporary casing extraction.

Initial slump test results and subsequent results at 15-minute intervals, verifying a minimum slump of 4 inches is maintained for the total time estimated for drilled shaft placement, including temporary casing extraction. Report data in a table or graph format.

(k) Compressive Strength Test Results - Report the individual test results and the ASTV of cylinders from the trial batch for new mix designs. For current designs, provide the individual tests and the average of the cylinder sets presented for evaluation.

(l) Strength Analysis - Provide an analysis, showing all calculations, demonstrating that the mix design meets the requirements of 02001.20(a).

(m) Quality Control Personnel - Provide the name and certification number of the CCT who prepared the mix design, the QCT who performed the plastic concrete tests and cast the test cylinders, the CSTT who tested the cylinders, and the ODOT certification number of the laboratory where the cylinders were tested.

02001.37 Trial Batch Costs – Delete this subsection.

SECTION 02050 – CURING MATERIALS

Comply with Section 02050 of the Standard Specifications modified as follows:

02050.10 Liquid Compounds - Delete the paragraph that begins “Furnish liquid membrane-forming curing...” with the following paragraph:

Furnish liquid membrane-forming curing compounds from the QPL and meeting the requirements of ASTM C309.

Delete the paragraph that begins "Before using liquid compounds, submit..."

02050.20 Polyethylene Films - Delete the paragraph that begins "Furnish clear or white..." with the following paragraph:

Furnish clear or white polyethylene films for curing concrete meeting the requirements of ASTM C171.

SECTION 02440 - JOINT MATERIALS

Comply with Section 02440 of the Standard Specifications modified as follows:

02440.19 Steel Bridging Plate - Replace this subsection, except for the subsection number and title, with the following:

Furnish ASTM A36 steel bridging plate with a minimum thickness of 1/4 inch and a width of 8 inches, cut in lengths of 4 to 8 feet. Drill spike holes at 12 inch centers along the centerline of the plate.

02440.20 Preformed Joint Seal - Replace this subsection, except for the subsection number, with the following:

02440.20 Strip Seal - Furnish strip seals from the QPL and conforming to ASTM D5973.

Add the following subsection:

02440.22 Preformed Compression Joint Seal - Furnish preformed compression joint seals from the QPL and conforming to the requirements of AASHTO M 297.

Add the following subsection:

02440.23 Precompressed Foam Silicone Joint Seal - Furnish precompressed foam silicone joint seals from the QPL.

02440.30 Hot Poured Joint Filler - Replace this subsection with the following subsection:

02440.30 Hot Applied Joint Sealant - Furnish hot applied joint sealant from the QPL.

02440.40 Gaskets for Concrete Pipe and Precast Manhole Section Joints - Replace this subsection, except for the subsection number and title, with the following:

(a) Preformed Flexible Joint Sealant - Furnish Materials for tongue and groove or key lock manhole joints conforming to the requirements of ASTM C990.

(b) Rubber Gaskets - Furnish Materials for O-ring manhole and concrete pipe joints conforming to ASTM C443.

02440.70(b) Rubber - Replace this subsection, except for the subsection number and title, with the following:

Provide rubber water stops to the dimension shown and conforming to the requirements of ASTM C923, ASTM C1478, or ASTM F2510 as appropriate for the specific structure and pipe types.

SECTION 02510 - REINFORCEMENT

Comply with Section 02510 of the Standard Specifications modified as follows:

02510.10 Deformed Bar Reinforcement - Replace this subsection, except for the subsection number and title, with the following:

Furnish deformed bar reinforcement from the QPL and conforming to the requirements of ASTM A 706, AASHTO M31 (ASTM A615), or AASHTO M334 (ASTM A1035 CS). Unless otherwise specified or shown, all reinforcing bars shall be Grade 60.

02510.20 Mechanical Splices - Replace this subsection, except for the subsection number and title, with the following:

Furnish mechanical splices from the QPL. Where bars of different sizes or strengths are connected, the governing strength shall be the strength of the smaller or weaker bar.

- Type 1 Mechanical Splices - Furnish Type 1 Mechanical Splices that develop at least 125 percent of the specified minimum yield strength of the reinforcing bars. Type 1 Mechanical Splices are not allowed for column bars.
- Type 2 Mechanical Splices - Furnish Type 2 Mechanical Splices that develop at least 125 percent of the specified minimum yield strength of the reinforcing bars and 100 percent of the specified tensile strength of the reinforcing bars.
- Total slip displacement - Measure displacement after loading in tension to 30.0 ksi and relaxing to 3.0 ksi. The displacement for bars up to No. 14 shall not exceed 0.01 inches. The displacement for No. 18 bar shall not exceed 0.03 inches.

02510.25 Headed Bar Reinforcement - Replace this subsection, except for the subsection number and title, with the following:

Furnish Class HA headed steel bar from the QPL for concrete reinforcement. The headed steel bar shall develop the specified minimum tensile strength of the reinforcing bars, according to ASTM A970. Ferrous-filler coupling sleeves and welded headed steel bars are not allowed for concrete reinforcement.

SECTION 02530 - STRUCTURAL STEEL

Comply with Section 02530 of the Standard Specifications modified as follows:

02530.70 Galvanizing - Replace the paragraph that begins "Steel that will be finished by hot-dip galvanizing..." with the following paragraph:

Steel that will be finished by hot-dip galvanizing for use as sign bridges, illumination poles, traffic signal poles, sign supports, bridge rail and items designated on the Plans as "Galvanize - Control Silicon" shall have controlled silicon content. The silicon content shall be in either of the ranges 0 - 0.06 percent or 0.13 - 0.25 percent. Before galvanizing, submit mill test certificates verifying silicon content to the Engineer and the galvanizer.

SECTION 02560 - FASTENERS

Comply with Section 02560 of the Standard Specifications modified as follows:

02560.10(b) Nuts— Replace this subsection, except for the subsection number and title, with following:

Nuts for carbon steel bolts shall conform to the requirements of the following, or equivalent:

Plain (Noncoated) Bolts:

1/4" - 1 1/2" - ASTM A563, Grade A, hex

Over 1 1/2" - 4" - ASTM A563, Grade A, heavy hex

Galvanized Bolts:

All - ASTM A563, Grade A, C, D, or DH, heavy hex

02560.20(a) Bolts – Replace this subsection, except for the subsection number and title, with following:

High-strength bolts used in noncoated weathering steel connections shall be Type 3. High-strength bolts shall conform to the requirements of the following:

Heavy Hex Head:

ASTM F3125, Grade A325

Twist-Off:

ASTM F3125, Grade F1852

02560.20(b) Nuts – Replace this subsection, except for the subsection number and title, with following:

Nuts for high-strength bolts shall conform to the requirements of the following, or equivalent:

Type 1 Plain (Noncoated) Bolts:

All - Heavy hex ASTM A563, Grade C, D, or DH

Type 1 Galvanized Bolts:

All - Heavy hex ASTM A563, Grade DH

Type 3 Bolts:

All - Heavy hex ASTM A563, Grade C3 or DH3

02560.20(f) Lock-Pin and Collar Fasteners - Delete this subsection.

02560.30(c) Nuts – Replace this subsection, except for the subsection number and title, with following:

Nuts for tie rods, anchor bolts, and anchor rods shall conform to the requirements of the following, or equivalent:

Plain Steel Tie Rods, Anchor Bolts, and Anchor Rods:

All - Heavy hex ASTM A563, Grade A

Galvanized Steel Tie Rods, Anchor Bolts, and Anchor Rods:

All - Heavy hex ASTM A563, Grade A, C, D, or DH

Plain Or Galvanized High-Strength Tie Rods, Anchor Bolts, or Anchor Rods:

All - Heavy hex ASTM A563, Grade DH

02560.40 Galvanizing and Coating - Replace this subsection with the following subsection:

02560.40 Galvanizing and Coating:

(a) High Strength Fasteners - When specified, hot-dip galvanize Grade A325 fasteners or mechanically deposit zinc to Grade F1852 fasteners according to ASTM F3125.

(b) Tie Rods, Anchor Bolts, Anchor Rods and Carbon Fasteners - Hot-dip galvanize, tie rods, anchor bolts, anchor rods, nuts, washers and carbon fasteners according to ASTM F2329 as appropriate to the product.

Overlap nuts for galvanized fasteners, galvanized tie rods, galvanized anchor bolts, and galvanized anchor rods according to ASTM A563.

Measure the zinc thickness on the wrench flats or top of bolt head of galvanized bolts and on the wrench flats of galvanized nuts.

(c) Direct Tension Indicators – When specified, apply mechanically deposited zinc according to ASTM F959.

(d) Repair of Hot-Dip Galvanizing - Repair damaged hot-dip galvanizing according to ASTM A780. Minimum zinc content for Method A2 is 94 percent on the dry film.

02560.60(b) Other Test Requirements - In the paragraph that begins "Wedge test all bolts according..." replace the words "AASHTO M 164 (ASTM A325)" with the words "ASTM F3125, Grade A325 or Grade F1852".

02560.70 Lubricating Fasteners - Replace this subsection, except for the subsection number and title, with following:

Furnish all galvanized and coated fasteners with a factory applied commercial water-soluble wax that contains a visible dye of a color that contrasts with the color of galvanizing or coating. Black fasteners shall be "oily" to the touch when installed.

Field lubricate galvanized bolts in tapped holes, galvanized anchor rods, and galvanized tie rods with a lubricant from the QPL. Apply lubricant to threads and to bearing surfaces that will turn during installation.

Protect fasteners from dirt and moisture at the Project site.

Retest heavy hex head fasteners that do not pass the field rotational capacity test. Clean and relubricate heavy hex head fasteners with a lubricant from the QPL prior to retesting.

Relubrication of Twist-Off fasteners is not permitted.
