HIGHWAY WORK PROPOSAL

Proposal Number: 4 1

Wisconsin Department of Transportation
DT1502 10/2010 s.66.29(7) Wis. Stats.

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Sheboygan	4996-19-71		C Sheboygan, 8th Street Sheboygan River Bridge	Loc Str

This proposal, submitted by the undersigned bidder to the Wisconsin Department of Transportation, is in accordance with the advertised request for proposals. The bidder is to furnish and deliver all materials, and to perform all work for the improvement of the designated project in the time specified, in accordance with the appended Proposal Requirements and Conditions.

Proposal Guaranty Required, $ 75,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: June 13, 2017 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time April 30, 2019	
Assigned Disadvantaged Business Enterprise Goal 0 %	This contract is exempt from federal oversight.

This certifies that the undersigned bidder, duly sworn, is an authorized representative of the firm named above; that the bidder has examined and carefully prepared the bid from the plans, Highway Work Proposal, and all addenda, and has checked the same in detail before submitting this proposal or bid; and that the bidder or agents, officer, or employees have not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal bid.

Do not sign, notarize, or submit this Highway Work Proposal when submitting an electronic bid on the Internet.

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

(Print or Type Name, Notary Public, State Wisconsin)

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work Bridge rehabilitation, concrete surface repairs, steel painting, hydraulic cylinder repair, concrete panel replacement, spot curb replacement, curb ramp replacement, and paver replacement.	
Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

The bidder, signing and submitting this proposal, agrees and declares as a condition thereof, to be bound by the following conditions and requirements.

If the bidder has a corporate relationship with the proposal design engineering company, the bidder declares that it did not obtain any facts, data, or other information related to this proposal from the design engineering company that was not available to all bidders.

The bidder declares that they have carefully examined the site of, and the proposal, plans, specifications and contract forms for the work contemplated, and it is assumed that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of the specifications, special provisions and contract. It is mutually agreed that submission of a proposal shall be considered conclusive evidence that the bidder has made such examination.

The bidder submits herewith a proposal guaranty in proper form and amount payable to the party as designated in the advertisement inviting proposals, to be retained by and become the property of the owner of the work in the event the undersigned shall fail to execute the contract and contract bond and return the same to the office of the engineer within fourteen (14) days after having been notified in writing to do so; otherwise to be returned.

The bidder declares that they understand that the estimate of quantities in the attached schedule is approximate only and that the attached quantities may be greater or less in accordance with the specifications.

The bidder agrees to perform the said work, for and in consideration of the payment of the amount becoming due on account of work performed, according to the unit prices bid in the following schedule, and to accept such amounts in full payment of said work.

The bidder declares that all of the said work will be performed at their own proper cost and expense, that they will furnish all necessary materials, labor, tools, machinery, apparatus, and other means of construction in the manner provided in the applicable specifications and the approved plans for the work together with all standard and special designs that may be designed on such plans, and the special provisions in the contract of which this proposal will become a part, if and when accepted. The bidder further agrees that the applicable specifications and all plans and working drawings are made a part hereof, as fully and completely as if attached hereto.

The bidder, if awarded the contract, agrees to begin the work not later than ten (10) days after the date of written notification from the engineer to do so, unless otherwise stipulated in the special provisions.

The bidder declares that if they are awarded the contract, they will execute the contract agreement and begin and complete the work within the time named herein, and they will file a good and sufficient surety bond for the amount of the contract for performance and also for the full amount of the contract for payment.

The bidder, if awarded the contract, shall pay all claims as required by Section 779.14, Statutes of Wisconsin, and shall be subject to and discharge all liabilities for injuries pursuant to Chapter 102 of the Statutes of Wisconsin, and all acts amendatory thereto. They shall further be responsible for any damages to property or injury to persons occurring through their own negligence or that of their employees or agents, incident to the performance of work under this contract, pursuant to the Standard Specifications for Road and Bridge Construction applicable to this contract.

In connection with the performance of work under this contract, the contractor agrees to comply with all applicable state and federal statutes relating to non-discrimination in employment. No otherwise qualified person shall be excluded from employment or otherwise be subject to discrimination in employment in any manner on the basis of age, race, religion, color, gender, national origin or ancestry, disability, arrest or conviction record (in keeping with s.111.32), sexual orientation, marital status, membership in the military reserve, honesty testing, genetic testing, and outside use of lawful products. This provision shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation, and selection for training, including apprenticeship. The contractor further agrees to ensure equal opportunity in employment to all applicants and employees and to take affirmative action to attain a representative workforce.

The contractor agrees to post notices and posters setting forth the provisions of the nondiscrimination clause, in a conspicuous and easily accessible place, available for employees and applicants for employment.

If a state public official (section 19.42, Stats.) or an organization in which a state public official holds at least a 10% interest is a party to this agreement, this contract is voidable by the state unless appropriate disclosure is made to the State of Wisconsin Ethics Board.

Effective with August 2015 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

(1) Obtain bidding proposals as specified in section 102 of the standard specifications prior to 11:45 AM of the last business day preceding the letting. Submit bidding proposals using one of the following methods:

1. Electronic bid on the internet.
2. Electronic bid on a printout with accompanying diskette or CD ROM.
3. Paper bid under a waiver of the electronic submittal requirements.

(2) Bids submitted on a printout with accompanying diskette or CD ROM or paper bids submitted under a waiver of the electronic submittal requirements govern over bids submitted on the internet.

(3) The department will provide bidding information through the department's web site at:
http://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

The contractor is responsible for reviewing this web site for general notices as well as information regarding proposals in each letting. The department will also post special notices of all addenda to each proposal through this web site no later than 4:00 P.M. local time on the Thursday before the letting. Check the department's web site after 5:00 P.M. local time on the Thursday before the letting to ensure all addenda have been accounted for before preparing the bid. When bidding using methods 1 and 2 above, check the Bid Express™ on-line bidding exchange at http://www.bidx.com/ after 5:00 P.M. local time on the Thursday before the letting to ensure that the latest schedule of items Expedite file (*.ebs or *.00x) is used to submit the final bid.

(4) Interested parties can subscribe to the Bid Express™ on-line bidding exchange by following the instructions provided at the www.bidx.com web site or by contacting:

Info Tech Inc.
5700 SW 34th Street, Suite 1235
Gainesville, FL 32608-5371
email: mailto:customer.support@bidx.com

(5) The department will address equipment and process failures, if the bidder can demonstrate that those failures were beyond their control.

(6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at:
http://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

or by calling the department at (608) 266-1631. Addenda can ONLY be obtained from the departments web site listed above or by picking up the addenda at the Bureau of Highway Construction, Room 601, 4802 Sheboygan Avenue, Madison, WI, during regular business hours.

(7) Addenda posted after 5:00 PM on the Thursday before the letting will be emailed to the eligible bidders for that proposal. All eligible bidders shall acknowledge receipt of the addenda whether they are bidding on the proposal or not. Not acknowledging receipt may jeopardize the awarding of the project.

B Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

1. Have a properly executed annual bid bond on file with the department.
2. Have a digital ID on file with and enabled by Info Tech Inc. Using this digital ID will constitute the bidder's signature for proper execution of the bidding proposal.

(2) In lieu of preparing, delivering, and submitting the proposal as specified in 102.6 and 102.9 of the standard specifications, submit the proposal on the internet as follows:

1. Download the latest schedule of items reflecting all addenda from the Bid Express web site.
2. Use Expedite™ software to enter a unit price for every item in the schedule of items.
3. Submit the bid according to the requirements of Expedite™ software and the Bid Express™ web site. Do not submit a bid on a printout with accompanying diskette or CD ROM or a paper bid. If the bidder does submit a bid on a printout with accompanying diskette or a paper bid in addition to the internet submittal, the department will disregard the internet bid.
4. Submit the bid before the hour and date the Notice to Contractors designates.
5. Do not sign, notarize, and return the bidding proposal described in 102.2 of the standard specifications.

(3) The department will not consider the bid accepted until the hour and date the Notice to Contractors designates.

B.2 On a Printout with Accompanying Diskette or CD ROM

(1) Download the latest schedule of items from the Wisconsin pages of the Bid Express™ web site reflecting the latest addenda posted on the department's web site at:

http://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

Use Expedite ™ software to prepare and print the schedule of items. Provide a valid amount for all price fields. Follow instructions and review the help screens provided on the Bid Express™ web site to assure that the schedule of items is prepared properly.

(2) Staple an 8 1/2 by 11 inch printout of the Expedite™ generated schedule of items to the other proposal documents submitted to the department as a part of the bidder's sealed bid. As a separate submittal not in the sealed bid envelop but due at the same time and place as the sealed bid, also provide the Expedite™ generated schedule of items on a 3 1/2 inch computer diskette or CD ROM. Label each diskette or CD ROM with the bidder's name, the 4 character department-assigned bidder identification code from the top of the bidding proposal, and a list of the proposal numbers included on that diskette or CD ROM as indicated in the following example:

Bidder

Name

BN00

Proposals: 1, 12, 14, & 22

(3) If bidding on more than one proposal in the letting, the bidder may include all proposals for that letting on one diskette or CD ROM. Include only submitted proposals with no incomplete or other files on the diskette or CD ROM.

(4) The bidder-submitted printout of the Expedite™ generated schedule of items is the governing contract document and must conform to the requirements of section 102 of the standard specifications. If a printout needs to be altered, cross out the printed information with ink or typewriter and enter the new information and initial it in ink. If there is a discrepancy between the printout and the diskette or CD ROM, the department will analyze the bid using the printout information.

(5) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:

1. The check code printed on the bottom of the printout of the Expedite™ generated schedule of items is not the same on each page.
2. The check code printed on the printout of the Expedite™ generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.
3. The diskette or CD ROM is not submitted at the time and place the department designates.

C Waiver of Electronic Submittal

(1) The bidder may request a waiver of the electronic submittal requirements. Submit a written request for a waiver in lieu of bids submitted on the internet or on a printout with accompanying diskette or CD ROM. Use the waiver that was included with the paper bid document sent to the bidder or type up a waiver on the bidder's letterhead. The department will waive the electronic submittal requirements for a bidding entity (individual, partnership, joint venture, corporation, or limited liability company) for up to 4 individual proposals in a calendar year. The department may allow additional waivers for equipment malfunctions.

(2) Submit a schedule of items on paper conforming to section 102 of the standard specifications. The department charges the bidder a $75 administrative fee per proposal, payable at the time and place the department designates for receiving bids, to cover the costs of data entry. The department will accept a check or money order payable to: "Wisconsin, Dept. of Transportation."

(3) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:

1. The bidder fails to provide the written request for waiver of the electronic submittal requirements.
2. The bidder fails to pay the $75 administrative fee before the time the department designates for the opening of bids unless the bidder requests on the waiver that they be billed for the $75.
3. The bidder exceeds 4 waivers of electronic submittal requirements within a calendar year.

(4) In addition to the reasons specified in section 102 of the standard specifications, the department may refuse to issue bidding proposals for future contracts to a bidding entity that owes the department administrative fees for a waiver of electronic submittal requirements.

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

Proposal Number	Project Number	Letting Date
Name of Principal		
Name of Surety	State in Which Surety is Organized	

We, the above-named Principal and the above-named Surety, are held and firmly bound unto the State of Wisconsin in the sum equal to the Proposal Guaranty for the total bid submitted for the payment to be made; we jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns. The condition of this obligation is that the Principal has submitted a bid proposal to the State of Wisconsin acting through the Department of Transportation for the improvement designated by the Proposal Number and Letting Date indicated above.

If the Principal is awarded the contract and, within the time and manner required by law after the prescribed forms are presented for signature, enters into a written contract in accordance with the bid, and files the bond with the Department of Transportation to guarantee faithful performance and payment for labor and materials, as required by law, or if the Department of Transportation shall reject all bids for the work described, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect. In the event of failure of the Principal to enter into the contract or give the specified bond, the Principal shall pay to the Department of Transportation **within 10 business days of demand** a total equal to the Proposal Guaranty as liquidated damages; the liability of the Surety continues for the full amount of the obligation as stated until the obligation is paid in full.

The Surety, for value received, agrees that the obligations of it and its bond shall not be impaired or affected by any extension of time within which the Department of Transportation may accept the bid; and the Surety does waive notice of any such extension.

IN WITNESS, the Principal and Surety have agreed and have signed by their proper officers and have caused their corporate seals to be affixed this date: **(DATE MUST BE ENTERED)**

PRINCIPAL

(Company Name) **(Affix Corporate Seal)**

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Name of Surety) **(Affix Seal)**

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

On the above date, this instrument was acknowledged before me by the named person(s).

(Signature, Notary Public, State of Wisconsin)

(Print or Type Name, Notary Public, State of Wisconsin)

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

On the above date, this instrument was acknowledged before me by the named person(s).

(Signature, Notary Public, State of Wisconsin)

(Print or Type Name, Notary Public, State of Wisconsin)

(Date Commission Expires)

Notary Seal

IMPORTANT: A certified copy of Power of Attorney of the signatory agent must be attached to the bid bond.

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

Time Period Valid (From/To)
Name of Surety
Name of Contractor
Certificate Holder Wisconsin Department of Transportation

This is to certify that an annual bid bond issued by the above-named Surety is currently on file with the Wisconsin Department of Transportation.

This certificate is issued as a matter of information and conveys no rights upon the certificate holder and does not amend, extend or alter the coverage of the annual bid bond.

Cancellation: Should the above policy be cancelled before the expiration date, the issuing surety will give thirty (30) days written notice to the certificate holder indicated above.

(Signature of Authorized Contractor Representative) (Date)

March 2010

LIST OF SUBCONTRACTORS

Section 66.0901(7), Wisconsin Statutes, provides that as a part of the proposal, the bidder also shall submit a list of the subcontractors the bidder proposes to contract with and the class of work to be performed by each. In order to qualify for inclusion in the bidder's list a subcontractor shall first submit a bid in writing, to the general contractor at least 48 hours prior to the time of the bid closing. The list may not be added to or altered without the written consent of the municipality. A proposal of a bidder is not invalid if any subcontractor and the class of work to be performed by the subcontractor has been omitted from a proposal; the omission shall be considered inadvertent or the bidder will perform the work personally.

No subcontract, whether listed herein or later proposed, may be entered into without the written consent of the Engineer as provided in Subsection 108.1 of the Standard Specifications.

Name of Subcontractor	Class of Work	Estimated Value

DECEMBER 2000

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS - PRIMARY COVERED TRANSACTIONS

Instructions for Certification

1. By signing and submitting this proposal, the prospective contractor is providing the certification set out below.

2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective contractor shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective contractor to furnish a certification or an explanation shall disqualify such person from participation in this transaction.

3. The certification in this clause is a material representation of fact upon which reliance was placed when the department determined to enter into this transaction. If it is later determined that the contractor knowingly rendered an erroneous certification in addition to other remedies available to the Federal Government the department may terminate this transaction for cause or default.

4. The prospective contractor shall provide immediate written notice to the department to whom this proposal is submitted if at any time the prospective contractor learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department to which this proposal is being submitted for assistance in obtaining a copy of those regulations.

6. The prospective contractor agrees by submitting this proposal that, should this contract be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department entering into this transaction.

7. The prospective contractor further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," which is included as an addendum to PR-1273 - "Required Contract Provisions Federal Aid Construction Contracts," without

modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

8. The contractor may rely upon a certification of a prospective subcontractor/materials supplier that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A contractor may decide the method and frequency by which it determines the eligibility of its principals. Each contractor may, but is not required to, check the Disapproval List (telephone # 608/266/1631).

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

10. Except for transactions authorized under paragraph 6 of these instructions, if a contractor in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions

(1) The prospective contractor certifies to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offense enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) Where the prospective contractor is unable to certify to any of the statements in this certification, such prospective contractor shall attach an explanation to this proposal.

Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 4996-19-71, C Sheboygan, 8th Street, Sheboygan River Bridge, Loc Street, Sheboygan County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2017 Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.
100-005 (20161130)

2. Scope of Work.

The work under this contract shall consist of the work mentioned below and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

B-59-0154
Structural steel painting, concrete surface repair, machinery room wall removal and replacement, and hydraulic cylinder rehabilitation will be completed on the structure.

Roadway
Concrete panel replacement, curb and gutter spot replacements, brick masonry removal and replacement, pavement markings, and curb ramp replacement will be included on the project.
104-005 (20090901)

3. Prosecution and Progress.

Begin work within ten calendar days after the engineer issues a written notice to do so.

Provide the start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the approved start date.

To revise the start date, submit a written request to the engineer at least two weeks before the intended start date. The engineer will approve or deny that request based on the conditions cited in the request and its effect on the department's scheduled resources.

Schedule of Operations
The schedule of operations shall conform to the requirements described below, unless modifications are approved in writing by the engineer.

Roadway
Roadway construction includes curb replacements, paver removal and replacement within the sidewalks, concrete panel replacement, and curb ramps.

At the beginning of roadway concrete panel replacement operations, close 8th Street to through traffic for a maximum of 10 consecutive days. Detour traffic as described in the "Traffic" article of these special provisions and as shown in the plans. Do not reopen until completing the following work: full width concrete panel replacement on the north abutment of Sheboygan River Bridge, including removal, concrete placement, finishing, and curing, and all sidewalk, curb and gutter and curb ramps in the median island at the southern project limits.

Do not close 8th Street to through traffic prior to October 1, 2017. Lane closures along 8th Street will be permitted beginning July 15, 2017 as specified in the "Traffic" article.

B-59-0154
Structure work includes concrete surface repair, hydraulic cylinder rehabilitation, back wall modifications, electrical work, and structural steel painting above and below the structure. The machine room wall will be altered to remove the hydraulic cylinders and then repaired after re-installation. After removal of the cylinders, the machine room hole must be covered with rigid material and secured to the existing concrete wall to protect the mechanical room from the elements.

Riverwalk closure will be allowed for a maximum of 14 consecutive days for the north abutment and a maximum of 14 consecutive days for the south abutment to complete work above or adjacent to the walkway; including painting and concrete repairs.

The City of Sheboygan will be responsible for raising, lowering, and opening the existing bridge to river traffic and for all testing purposes. If lane closures or full closures of the roadway occur during the navigation season, the bridge must remain operable for river traffic.

A two consecutive day testing period is allowed prior to reopening the bridge. Testing will require a full closure of the bridge and will utilize the vehicle and pedestrian detour as shown in the plans.

Interim Completion of Work April 29, 2018
Complete construction operations on B-59-0154 to the stage necessary to reopen to marine traffic prior to 12:01 AM, April 30, 2018. Do not reopen until completing the work noted above under section B-59-0154.

Contractor is required to coordinate with the United States Coast Guard Cleveland, Ohio Office 30 days prior to starting work. Confirm the specific dates of the non-navigational season with the US Coast Guard during construction. Construction work shall be conducted with the bridge fully operational during the navigation season. During the navigation season, the bridge is in operation from 6:00 AM to 10:00 PM, Monday through Sunday. Channel restrictions are not allowed during navigation season. The bridge will be inoperable with the movable span in the down position during the non-navigational season for cylinder repairs, with the exception of the final testing period.

The contractor is responsible for maintaining utility service during construction, including but not limited to electricity and heat at the bridge and operator house.

If the contractor fails to complete the work necessary to reopen 8th Street to through traffic after the 10 consecutive calendar day full closure, the department will assess the contractor interim liquidated damages of $2065 for each calendar day that the roadway remains closed beyond 10 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

If the contractor fails to complete the work necessary to reopen 8th Street to through traffic after the two consecutive calendar days testing full closure, the department will assess the contractor interim liquidated damages of $2,065 for each calendar day that the roadway remains closed beyond two calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

If the contractor fails to complete the work necessary to reopen the bridge to marine traffic (operational condition) prior to 12:01 AM April 30, 2018, the department will assess the contractor interim liquidated damages of $2,065 for each calendar day that the bridge in not in operational condition beyond the interim completion date. An entire calendar day will be charged for any period of time within a calendar day that the bridge is not in operational condition beyond 12:01 AM.

The department will not grant time extensions to the interim completion dates specified above for the following:

1. Severe weather as specified in standard spec 108.10.2.2.
2. Labor disputes that are not industry wide.
3. Delays in material deliveries.

If contract time expires prior to completing all work specified in the contract, additional liquidated damages will be assessed according to standard spec 108.11.

4. Municipality Acceptance of Lift Bridge Construction

Both the department and City of Sheboygan personnel will inspect and accept the lift bridge construction under this contract.

5. Traffic.

Accomplish the construction sequence, including the associated traffic control as detailed in the Traffic Control plan sheets and as described herein.

Unless detailed in the plans, do not begin or continue any work that closes traffic lanes outside the allowed time periods specified in this article.

Weekday and weekend closures will be allowed except during holidays and festivals. Refer to the "Holiday Work Restrictions" article.

Materials and equipment cannot be stored on the movable span during construction.

During navigation season traffic control devices cannot be placed on the movable span. Signs, barricades, and drums must be adjusted in the field to maintain this requirement; a non-standard gap in device spacing is allowed. All devices must be cleared from the movable span prior to final testing as well. All traffic control device locations must be approved by the engineer in the field.

Submit any traffic control change request to the engineer at least 48 hours prior to an actual traffic control change. A request does not constitute approval.

Portable Changeable Message Signs – Message Prior Approval
Notify the engineer, two business days prior to deploying or changing a message on a PCMS to obtain approval of the proposed message.

Notify all emergency services at least 10 days in advance of each traffic control staging change.

Detour
A full roadway closure will be required for concrete panel replacements and final testing of the bridge. A pedestrian detour along 8th Street is required for full closure during the final testing period only. Pedestrian detours for the Riverwalk areas under the bridge are required during painting and concrete work near the abutments. Use the detours provided in the plans.

6. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying 8th Street traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

Holidays
- From noon Friday, June 30, 2017 to 6:00 AM Wednesday, July 5, 2017 for Independence Day;

- From noon Friday, September 1, 2017 to 6:00 AM Tuesday, September 5, 2017 for Labor Day;
- From noon Wednesday, November 22, 2017 to 6:00 AM Monday, November 27, 2017 for Thanksgiving;
- From noon Friday, December 22, 2017 to 6:00 AM Wednesday, December 27, 2017 for Christmas;
- From noon Friday, December 29, 2017 to 6:00 AM Tuesday, January 2, 2018 for New Year's.
- From noon Wednesday, November 21, 2018 to 6:00 AM Monday, November 26, 2018 for Thanksgiving;
- From noon Friday, December 21, 2018 to 6:00 AM Wednesday, December 26, 2018 for Christmas;
- From noon Friday, December 28, 2018 to 6:00 AM Wednesday, January 2, 2018 for New Year's.

Festivals

- Greek Fest - June 23,24,25 2017 - From noon Friday, June 23, 2017 to 8:00 PM Sunday, June 25, 2017
- Salvation Army Ride – July 8, 2017 - From 5:00 PM Friday, July 7 to 12:01 AM Monday, July 10, 2017;
- Hmong Sheboygan Summer Festival - July 15-16, 2017 - From 5:00 PM Friday, July 14 to 12:01 AM Monday, July 17, 2017;
- Shore to Shore Bicycle Tour – July 22, 2017 – From 5:00 PM Friday, July 21 to 12:01 AM Monday, July 24, 2017;
- Miesfeld's Lakeshore Weekend - July 28-30, 2017 – From noon Friday July 28, 2017 to 12:01 AM Monday, July 31, 2017;
- Jaycees Brat Days - August 3-5 2017 – From noon Thursday August 3, 2017 to 12:01 AM Monday, August 7, 2017.

stp-107-005 (20050502)

7. Utilities.

This contract does not come under the provision of Administrative Rule Trans 220.
stp-107-065 (20080501)

The locations of existing utility installations are approximate. There may be other utility installations within the project limits that are not shown. This project involves public utility adjustments. Utility work will require coordination with the contractor's construction activities as outlined below. The contractor shall verify the location of all live underground facilities through Diggers Hotline and/or by a direct call to the utility and shall use caution to ensure the integrity of all existing overhead and underground utility facilities.

Prospective bidders are cautioned that the arrangements set for in this Article represent the utility companies' best estimate of their plans to relocate and/or adjust conflicting facilities. Bidders are advised to contact each utility company listed in the plans, prior to

preparing their bids, to obtain current information on the status of any utility relocation work stated herein.

It is the contractor's responsibility to coordinate all work with each utility. This includes giving proper notification when utility work is to be performed in conjunction with roadway construction.

Alliant Energy
Alliant Energy has facilities in the area but none are foreseen to be a conflict. These facilities are located in the southwest corner of Riverfront Drive intersection under the roadway to the northwest corner. Then heading diagonally through the intersection to the southeast quadrant, the facilities terminate on the Harbor Winds property. South of the bridge, there are facilities through the splitter island of the roundabout that turn west and terminate in the restaurant parking lot.

Utility contact:
Jason Hogan
4902 N Biltmore Lane
PO Box 770077
Madison, WI 53707-1007
(608) 458-4871
jasonhogan@alliantenergy.com

AT&T Wisconsin
AT&T has facilities in the area but none are foreseen to be a conflict. AT&T buried conduit is located at the north abutment manhole and extends in the northbound lanes to the intersection of Riverfront Drive. A lateral of buried copper cable runs from the north abutment manhole to the Harbor Winds property. Buried fiber cable is located in the southeast quadrant of the bridge, extends south to the office building and then runs west across 8th Street. The facility then turns south and runs along the west side of 8th Street in front of the restaurant.

Utility contact:
Lisa Suprenand
70 East Division Street
Fond du Lac, WI 54935
(920) 929-8459
ad5647@att.com

City of Sheboygan – Sanitary Sewer and Street Lighting
The City of Sheboygan has facilities in the area but none are foreseen to be a conflict. To the north, there are sanitary sewer facilities in the southwest quadrant of Riverfront Drive intersection that run northeast into the intersection and then down the centerline of 8th Street north of the intersection. Riverfront Drive has a sanitary line that runs from the intersection to the east. Street lighting is attached to the northeast and southwest signals at

Riverfront Drive, with two additional poles between the intersection and north abutment; one on either side. Four street lights are located on the structure.

At the south abutment, there is a sanitary sewer line, and abandoned sanitary sewer all running south, under the roadway, from the abutment to the roundabout. Sanitary is located down the centerline and through the splitter island. At the south end of the splitter island, the sanitary runs east along S. Pier Drive and west across the parking lot and along Commerce Street. Two decorative street lights are located at the south abutment on either side of the road at the southern curb ramps on either side.

Utility contact:
Ryan Sazama
2026 New Jersey Avenue
Sheboygan, WI 53081
(920)-459-3485
Ryan.Sazama@sheboyganwi.gov

City of Sheboygan - Water Utility
The City of Sheboygan Water Utility has facilities in the area but none are foreseen to be a conflict. Water facilities with valves are located on the north side of the bridge in the southbound outside roadway lane, extending north. Laterals are located on the west side of 8th Street north of Riverfront Drive. A 6-inch water main runs along Riverfront Drive on the north side of the road. A fire hydrant is located just south of Riverfront Drive on the outside southbound lane of 8th Street. A water main is also located on the south bridge approach in the southbound lane. This extends south through the splitter island and roundabout and then down the centerline of 8th Street south of the roundabout. A fire hydrant is located in the sidewalk just north of the splitter island to the roundabout at Indiana Avenue.

Utility contact:
Damian Nevers
72 Park Avenue
Sheboygan, WI 53081
(920) 459-3806
DamianNevers@sheboyganwater.org

Wisconsin Public Service
Wisconsin Public Service has facilities in the area but none are foreseen to be a conflict. No facilities extend up to or across the bridge. A main runs along the southbound outside lane of 8th Street north of the Riverfront Drive intersection. It stops in the westbound intersection lanes of Riverfront Drive and then continues east. A main runs along S. Pier Drive to the roundabout and then heads south to connect with Indiana Avenue in the southeast corner of the roundabout. This continues east and west along Indiana Avenue and again south on 8th Street in the southbound outside lane.

Utility contact:
Lori Butry
700 N Adams Street
PO Box 19001
Green Bay, WI 54307-9001
(920) 433-1703
labutry@integrysgroup.com

8. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Check for and comply with local ordinances governing the hours of operation of construction equipment. Do not operate motorized construction equipment from 10:00 PM until the following 6:00 AM, unless prior written approval is obtained from the engineer.
stp-107-001 (20060512)

9. Erosion Control Structures.

Prior to initial construction operations, place temporary erosion control measures as shown on the plans, and remove them after the work in that area requiring the devices has been completed unless directed otherwise by the engineer.
107-070

The department, as per the WisDOT/WDNR Cooperative Agreement, will contact the WDNR liaison person and coordinate with the WDNR prior to performing any construction activities.

The contractor's erosion control implementation plan (ECIP) shall be provided at least 14 days prior to the preconstruction conference for this project.

10. Environmental.

Rivers, Streams, and Floodplains
The project area is located within a designated US EPA Superfund Site. If there will be any removal of river bottom material or sediment around the north pier, sediment sampling, special handling and disposal requirements may apply. Questions regarding this issue may be directed to department Superfund project manager Tom Wentland at (920) 893-8528 or thomas.wendland@wi.gov.

Environmental Protection
Supplement standard spec 107.18 follows:

The nesting season for swallows and other birds is usually between May 1 and August 30. If there is evidence of migratory bird nesting on the existing structure, please note that under the U.S. Migratory Bird Treaty Act, destruction of swallows and other migratory

birds or their nests is unlawful unless a permit has been obtained from the U.S. Fish & Wildlife Service.

Northern Long-eared Bat (*Myotis septentrionalis*)
Northern Long-eared Bats (NLEB) have the potential to inhabit the project limits because they roost in trees. Roosts may not have been observed on this project, but conditions to support the species exist. The species and all active roosts are protected by the Federal Endangered Species Act. If an individual bat or active roost is encountered during construction operations, stop work and notify the engineer and the WisDOT Regional Environmental Coordinator (REC).

If additional construction activities beyond what was originally specified are required to complete the work, approval from the engineer, following coordination with WisDOT REC, is required prior to initiating these activities.

Environmental Protection, Aquatic Exotic Species Control.
Exotic invasive organisms such as VHS, zebra mussels, purple loosestrife, and Eurasian water milfoil are becoming more prolific in Wisconsin and pose adverse effects to waters of the state. Wisconsin State Statutes 30.07, "Transportation of Aquatic Plants and Animals; Placement of Objects in Navigable Waters", details the state law that requires the removal of aquatic plants and zebra mussels each time equipment is put into state waters.

At construction sites that involve navigable water or wetlands, use the follow cleaning procedures to minimize the chance of exotic invasive species infestation. Use these procedures for all equipment that comes in contact with waters of the state and/or infested water or potentially infested water in other states.

Ensure that all equipment that has been in contact with waters of the state, or with infested or potentially infested waters, has been decontaminated for aquatic plant materials and zebra mussels prior to being used in other waters of the state. Before using equipment on this project, thoroughly disinfect all equipment that has come into contact with potentially infested waters. Use the following inspection and removal procedures (guidelines from the Wisconsin Department of Natural Resources) http://dnr.wi.gov/topic/fishing/documents/vhs/disinfection_protocols.pdf for disinfection:

1. Prior to leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;
3. Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots), and dispose of removed mussels and plant materials in a garbage can prior to leaving the area or invested waters; and
4. Disinfect your boat, equipment and gear by either:
    a. Washing with ~212º F water (steam clean), or

b. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
c. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore this disinfect should be used in conjunction with a hot water (>104º F) application.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.
stp-107-055 (20130615)

Construction Over or Adjacent to Navigable Waters.
Add the following to standard spec 107.19:

The Sheboygan River is classified as a navigable waterway.
stp-107-060 (20150630)

Work shall be conducted with the movable span fully operational during the navigation season. Waterway navigation will be closed with the movable span in the down position during the non-navigational season. The non-navigational season is approximately between November 1 through April 30. Additional coordination by the contractor with the US Coast Guard during construction is required to confirm the specific dates of the non-navigational season, and any agreed upon deviations from the normal operating procedures.

The Coast Guard has determined that the project will not require a Coast Guard permit as there would be no changes to alter the permitted navigational clearances or character of the bridge; however it does require a letter of authorization to proceed. Once the contract is awarded the contractor is required to coordinate efforts with the U.S. Coast Guard – Commander (OBR), Ninth Coast Guard District, 1240 East 9th Street, Room 2019, Cleveland, Ohio 44199-2060, telephone (216) 902-6084, FAX (216) 902-6088 at least 30 days in advance of any construction over the waterway. Allow an additional 5 days for mail processing once the package has been received by at the U.S. Coast Guard facility. Primary contact at the U.S Coast Guard is:

Name:	Phone:	Email:
Lee Soule	(216) 902-6085	Lee.D.Soule@uscg.mil

Provide the Coast Guard with a schedule and timeframe for rehabilitation of the 8th Street bridge and describe any temporary construction aids and work within the limits of the Sheboygan River to receive the U.S. Coast Guard authorization. The Coast Guard notification requirement is based on anticipated beginning of rehabilitation of the bridge and any work that affects the operation of the bridge or navigation within the Sheboygan River throughout the duration of the project. During the project (due to unforeseen project

requirements) if the contractor needs to alter the original plan as it affects the navigation of the waterway the contractor shall provide a minimum of two weeks' advance notice to the Coast Guard prior to altering the original plan. Copy the engineer on all correspondence with the Coast Guard.

During non-working hours any barges must be moored outside the bascule span navigable waterway and lighted according to navigation rules. Scaffolding/containment hung from the underside of the bridge within the navigable waterway shall not suspend more than 2 feet below low steel under one leaf of the bridge and shall be lighted with steady burning amber lights on the bottom and four corners during non-working hours. Containment that extends from the bottom of the bridge down to the water will only be allowed during working hours, 24/7 containment from the bridge to the waterline will not be allowed.

Costs for furnishing, maintaining, moving, and installing lights and signs required in these special provisions are incidental to the contract.

Submit a contingency plan to the engineer prior to the start of construction. Include the names and telephone numbers of personnel and a list of equipment that will be available to correct any navigation problems that may arise during non-working hours.

Provide industry accepted measures and precautions to prevent accidental dropping of debris, sparks, flames, lighted or other damaging objects onto boats and water users passing beneath the bridge.

Ensure the rights and safety of the navigating public. Place appropriate warning signs and buoys upstream and downstream of the project site. In accordance to the U.S. Coast Guard Standards, place marker lights on all watercraft and equipment that will remain moored, anchored, or otherwise floating on the waterway between dusk and dawn. Sign, mark, or light all other potential navigation hazards associated with the project including, but not limited to, construction machinery, rigging, and temporary structures. Provide water space with horizontal and vertical clearances to allow for safe public navigation through the construction site at all times. Payment for this accommodation is considered incidental to the contract work.

Contractor Access

The contractor will have access to the 8th Street Boat Launch during construction for docking and construction staging with no additional fee. Two docks can be utilized until removal on October 1.

Parking lot east of the structure on S. Pier Drive can be utilized by the contractor for staging and parking. The contractor must maintain access to the grassy areas east of the lot at all times.

The contractor is responsible for finding and obtaining a construction staging area outside of the above listed locations.

11. Notice to Contractor, Notification of Demolition and/or Renovation No Asbestos Found.

John Roelke, License Number All-119523, inspected Structure B-59-0154 for asbestos on August 19, 2015. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from: Dave Schmidt (920) 360-0983.

In accordance with NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 4/11), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days prior to beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Dave Schmidt (920) 360-0983 and DOT BTS-ESS attn: Hazardous Materials Specialist, PO Box 7965, Madison, WI 53707-7965. In addition, comply with all local or municipal asbestos requirements.

Use the following information to complete WisDNR form 4500-113 :

- Site Name: Structure B-59-0154, 8th Street over Sheboygan River
- Site Address: City of Sheboygan, Sheboygan County Lat/Long Coordinates: 434440.12/874246.57
- Ownership Information: City of Sheboygan, 2026 New Jersey Avenue, Sheboygan, WI 53081
- Contact: Craig Treadway, JT Engineering, Inc.: craigtreadway@jt-engineering.com
- Phone: (920) 468-4771
- Age: 22 years old. This structure was constructed in 1995.
- Area: 19,250 SF of deck

Insert the following paragraph in Section 6.g.:

- If asbestos not previously identified is found or previously non-friable asbestos becomes crumbled, pulverized, or reduced to a powder, stop work immediately, notify the engineer, and the engineer will notify the department's Bureau of Technical Services at (608) 266-1476 for an emergency response according to standard spec 107.24. Keep material wet until it is abated or until it is determined to be non-asbestos containing material.

stp-107-125 (20120615)

12. Notice to Contractor – Emergency Contact.

The prime contractor shall provide a 24-hour emergency contact person responsible for the project. The individual shall be available either on site or by telephone and be equipped with the ability to make decisions regarding the project.

The prime contractor shall provide a 24-hour emergency traffic control contact person responsible for the project. The individual shall be available either on site or by telephone and be equipped with the ability to make decisions regarding the project.

13. Business Coordination Meeting.

Following the preconstruction conference and before the commencement of construction operations, a representative of the contractor, along with the engineer and City of Sheboygan officials, will be required to meet with interested adjoining property owners, transit authority, emergency services, and businesses to discuss the proposed schedule and access during construction. Subsequent meetings with property and business owners will be held to discuss the progress of the project and any problems associated with construction, as needed. The City of Sheboygan will provide a location for these meetings and provide the required contact list to the contractor. The contractor is responsible for arranging, assembling and mailing notifications, and conducting the meeting.

During construction, weekly progress meetings will be held between the contractor and the department according to the department's Timely Decision Making Project administration Tools, current edition.

14. Backfill Controlled Low Strength, Item 209.0200.S.

A Description

This special provision describes furnishing and placing a controlled low strength material designed for use as backfill in trenches for culverts, sewers, utilities, or similar structures, as backfill behind bridges abutments, or as fill for the abandonment of culverts, pipes, or tanks.

B Materials

Provide controlled low strength backfill that consists of a designed cementitious mixture of natural or processed materials. Allowable materials include natural sand, natural gravel, produced sand, foundry sand, produced gravel, fly ash, Portland cement, and other broken or fragmented mineral materials. The designed mixture shall be self-leveling and shall be free of shrinkage after hardening. Design the mixture to reach a state of hardening such that it can support foot traffic in no more than 24 hours. Provide a mixture that also meets the following requirements.

Test	Method	Value
Flow (inch)	ASTM D-6103	9 min
Compressive Strength (psi)	ASTM D-6024	20-40 @ 14 days 40-80 @ 28 days 80-120 @ 90 days

Chemical admixtures to control air content and setting time are allowable. Ten days prior to placement, furnish the engineer with a design mix detailing all components and their proportions in the mix. Also, provide documentation from the supplier of the industrial byproducts that the foundry sand and fly ash used in the mixture meet the requirements for Industrial Byproducts Categories 1, 2, 3, or 4 in NR 538 of the Wisconsin Administrative Code for use as a confined geotechnical fill.

C Construction

Place controlled low strength backfill at the locations and to the lines and grades as shown on the plan. Proportion and mix materials to produce a product of consistent texture and flow characteristics. The engineer may reject any materials exhibiting a substantial change in properties, appearance, or composition.

If the official Weather Bureau forecast for the construction site predicts temperatures at or below freezing within the next 24 hours after placement of controlled low strength backfill, protect the placed materials from freezing during that time period. If the temperature is not forecast to rise above 40º F for 72 hours after placement, the engineer may require protection from freezing for up to 72 hours.

No controlled low strength backfill shall be allowed to enter any stream, lake, or sewer system. The contractor shall be responsible for any clean up or remediation costs resulting from such occurrences.

D Measurement

The department will measure Backfill Controlled Low Strength in volume by the cubic yard of material, placed and accepted. Such volume shall be computed from actual measurements of the dimensions of the area to be backfilled. In irregular or inaccessible areas, the engineer may allow volume to be determined by other appropriate methods.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
209.0200.S	Backfill Controlled Low Strength	CY

Payment is full compensation for designing the mix; supplying all materials; preparing the proportioned mix; hauling it to the construction site; placing the material; and protecting it from freezing.

stp-209-010 (20090901)

15. QMP Base Aggregate.

A Description

A.1 General

(1) This special provision describes contractor quality control (QC) sampling and testing for base aggregates, documenting those test results, and documenting related production and placement process changes. This special provision also describes department quality verification (QV), independent assurance (IA), and dispute resolution.

(2) Conform to standard spec 301, standard spec 305, and standard spec 310 as modified here in this special provision. Apply this special provision to material placed under all of the Base Aggregate Dense and Base Aggregate Open Graded bid items, except do

not apply this special provision to material classified as reclaimed asphaltic pavement placed under the Base Aggregate Dense bid items.

(3) Do not apply this special provision to material placed and paid for under the Aggregate Detours, Breaker Run, Select Crushed, Pit Run, Subbase, or Riprap bid items.

(4) Provide and maintain a quality control program, defined as all activities related to and documentation of the following:
1. Production and placement control and inspection.
2. Material sampling and testing.

(5) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required sampling and testing procedures. The contractor may obtain the CMM from the department's web site at:
http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/rdwy/default.aspx

A.2 Small Quantities

(1) The department defines a small quantity, for each individual Base Aggregate bid item, as a contract quantity of 9000 tons or less of material as shown in the schedule of items under that bid item.

(2) The requirements under this special provision apply equally to a small quantity for an individual bid item except as follows:

A.2.1 Quality Control Plan

(1) Submit an abbreviated quality control plan consisting of the following:
1. Organizational chart including names, telephone numbers, current certification(s) with HTCP number(s) and expiration date(s), and roles and responsibilities of all persons involved in the quality control program for material under affected bid items.

A.2.2 Contractor Testing

1.

Contract Quantity	Minimum Required Testing per source
≤ 6000 tons	One stockpile test prior to placement, and two production or one loadout test.[1] [2]
> 6000 tons and ≤ 9000 tons	One stockpile and Three placement tests[3] [4] [5]

[1] Submit production test results to the engineer for review prior to incorporating the material into the work. Production test results are valid for a period of 3 years.

[2] If the actual quantity overruns 6,000 tons, on the next day of placement perform one randomly selected placement test for each 3000 tons, or fraction of 3000 tons, of overrun.

[3] If the actual quantity overruns 9000 tons, on the next day of placement perform one randomly selected placement test for each 3000 tons, or fraction of 3000 tons, of overrun.
[4] For 3-inch material or lift thickness of 3-inch or less, obtain samples at load-out.
[5] Divide the aggregate into uniformly sized sublots for testing

2. Stockpile testing for concrete pavement recycled in place will be sampled on the first day of production.

3. Until a four point running average is established, individual placement tests will be used for acceptance. Submit aggregate load-out and placement test results to the engineer within one business day of obtaining the sample. Assure that all properties are within the limits specified for each test.
4. Material represented by a sublot with any property outside the specification limits is nonconforming. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

A.2.3 Department Testing

(1) The department will perform testing as specified in B.8 except as follows:
- Department stockpile verification testing prior to placement is optional for contract quantities of 500 tons or less.

B Materials

B.1 Quality Control Plan

(1) Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not place base before the engineer reviews and comments on the plan. Construct the project as that plan provides.

(2) Do not change the quality control plan without the engineer's review. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in each of the contractor's laboratories as changes are adopted. Ensure that the plan provides the following elements:
1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
3. A list of source and processing locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Test results for wear, sodium sulfate soundness, freeze/thaw soundness, and plasticity index of all aggregates requiring QC testing. Obtain this information from the region materials unit or from the engineer.
5. Descriptions of stockpiling and hauling methods.
6. Locations of the QC laboratory, retained sample storage, and where control charts and other documentation is posted.

7. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.

B.2 Personnel

(1) Have personnel certified under the department's highway technician certification program (HTCP) perform sampling, testing, and documentation as follows:

Required Certification Level:	Sampling or Testing Roles:
Transportation Materials Sampling Technician (TMS) Aggregate Technician I (AGGTEC-I) Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Sampling[1]
Aggregate Technician I (AGGTEC-I) Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Gradation Testing, Aggregate Fractured Particle Testing, Aggregate Liquid Limit and Plasticity Index Testing

[1] Plant personnel under the direct observation of an aggregate technician certified at level one or higher may operate equipment to obtain samples.

(2) A certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

B.3 Laboratory

(1) Perform QC testing at a department-qualified laboratory. Obtain information on the Wisconsin laboratory qualification program from:

Materials Management Section
3502 Kinsman Blvd.
Madison, WI 53704
Telephone: (608) 246-5388

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/appr-prod/qual-labs.aspx

B.4 Quality Control Documentation

B.4.1 General

(1) Submit base aggregate placement documentation to the engineer within 10 business days after completing base placement. Ensure that the submittal is complete, neatly organized, and includes applicable project records and control charts.

B.4.2 Records

(1) Document all placement observations, inspection records, and control adjustments daily in a permanent field record. Also include all test results in the project records. Provide test results to the engineer within one business day after obtaining a sample. Post or distribute tabulated results using a method mutually agreeable to the engineer and contractor.

B.4.3 Control Charts

(1) Plot gradation and fracture on the appropriate control chart as soon as test results are available. Format control charts according to CMM 8.30. Include the project number on base placement control charts. Maintain separate control charts for each base aggregate size, source or classification, and type.

(2) Provide control charts to the engineer within one business day after obtaining a sample. Post or distribute charts using a method mutually agreeable to the engineer and contractor. Update control charts daily to include the following:
   1. Contractor individual QC tests.
   2. Department QV tests.
   3. Department IA tests.
   4. Four-point running average of the QC tests.

(3) Except as specified under B.8.2.1 for nonconforming QV placement tests, include only QC placement tests in the running average. The contractor may plot process control or informational tests on control charts, but do not include these tests, conforming QV tests, or IA tests in the running average.

B.5 Contractor Testing

(1) Test gradation, fracture, liquid limit and plasticity index during placement for each base aggregate size, source or classification, and type.

(2) Perform one stockpile test from each source prior to placement.

(3) Test gradation once per 3000 tons of material placed or fraction thereof. Determine random sample locations and provide those sample locations to the engineer. Obtain samples after the material has been bladed, mixed, and shaped but before compacting; except collect 3-inch samples or lift thickness of 3-inch or less from the stockpile at load-out. Do not sample from material used to maintain local traffic or from areas of temporary base that will not have an overlying pavement. On days when placing only material used to maintain local traffic or only temporary base that will not have an overlying pavement, no placement testing is required.

(4) Split each contractor QC sample and identify it according to CMM 8.30. Retain the split for seven calendar days in a dry, protected location. If requested for department comparison testing, deliver the split to the engineer within one business day.

(5) The engineer may require additional sampling and testing to evaluate suspect material or the technician's sampling and testing procedures.

(6) Test fracture for each gradation test until the fracture running average is above the lower warning limit. Subsequently, the contractor may reduce the frequency to one test per 10 gradation tests if the fracture running average remains above the warning limit.

(7) Test the liquid limit and plasticity index for the first gradation test. Subsequently, test the liquid limit and plasticity index a minimum of once per 10 gradation tests.

B.6 Test Methods

B.6.1 Gradation

(1) Test gradation using a washed analysis conforming to the following as modified in CMM 8.60:

Gradation..... AASHTO T 27
Material finer than the No. 200 sieve..... AASHTO T 11

(2) For 3-inch base, if 3 consecutive running average points for the percent passing the No. 200 sieve are 8.5 percent or less, the contractor may use an unwashed analysis. Wash at least one sample out of 10. If a single running average for the percent passing the No. 200 sieve exceeds 8.5 percent, resume washed analyses until 3 consecutive running average points are again 8.5 percent passing or less.

(3) Maintain a separate control chart for each sieve size specified in standard spec 305 or standard spec 310 for each base aggregate size, source or classification, and type. Set control and warning limits based on the standard specification gradation limits as follows:

1. Control limits are at the upper and lower specification limits.
2. There are no upper warning limits for sieves allowing 100 percent passing and no lower control limits for sieves allowing 0 percent passing.
3. Dense graded warning limits, except for the No. 200 sieve, are 2 percent within the upper and lower control limits. Warning limits for the No. 200 sieve are set 0.5 percent within the upper and lower control limits.
4. Open graded warning limits for the 1-inch, 3/8-inch, and No. 4 sieves are 2 percent within the upper and lower control limits. Upper warning limits for the No. 10, No. 40, and No. 200 sieves are 1 percent inside the upper control limit.

B.6.2 Fracture

(1) Test fracture conforming to CMM 8.60. The engineer will waive fractured particle testing on quarried stone.

(2) Maintain a separate fracture control chart for each base aggregate size, source or classification, and type. Set the lower control limit at the contract specification limit, either specified in another special provision or in table 301-2 of standard spec 301.2.4.5. Set the lower warning limit 2 percent above the lower control limit. There are no upper limits.

B.6.3 Liquid Limit and Plasticity

(1) Test the liquid limit and plasticity according to AASHTO T 89 and T 90.

(2) Ensure the material conforms to the limits specified in standard spec table 301-2.

B.7 Corrective Action

B.7.1 General

(1) Consider corrective action when the running average trends toward a warning limit. Take corrective action if an individual test exceeds the contract specification limit. Document all corrective actions both in the project records and on the appropriate control chart.

B.7.2 Placement Corrective Action

(1) Do not blend additional material on the roadbed to correct gradation problems.

(2) Notify the engineer whenever the running average exceeds a warning limit. When two consecutive running averages exceed a warning limit, the engineer and contractor will discuss appropriate corrective action. Perform the engineer's recommended corrective action and increase the testing frequency as follows:

1. For gradation, increase the QC testing frequency to at least one randomly sampled test per 1000 tons placed.
2. For fracture, increase the QC testing frequency to at least one test per gradation test.

(3) If corrective action improves the property in question such that the running average after four additional tests is within the warning limits, the contractor may return to the testing frequency specified in B.5.3. If corrective action does not improve the property in question such that the running average after four additional individual tests is still in the warning band, repeat the steps outlined above starting with engineer notification.

(4) If the running average exceeds a control limit, material starting from the first running average exceeding the control limit and ending at the first subsequent running average inside the control limit is nonconforming and subject to pay reduction.

(5) For individual test results significantly outside the control limits, notify the engineer, stop placing base, and suspend other activities that may affect the area in question. The engineer and contractor will jointly review data, data reduction, and data analysis; evaluate sampling and testing procedures; and perform additional testing as required to determine the extent of potentially unacceptable material. The engineer may direct the contractor to remove and replace that material. Individual test results are significantly outside the control limits if meeting one or more of the following criteria:

1. A gradation control limit for the No. 200 sieve is exceeded by more than 3.0 percent.
2. A gradation control limit for any sieve, except the No. 200, is exceeded by more than 5.0 percent.
3. The fracture control limit is exceeded by more than 10.0 percent.

B.8 Department Testing

B.8.1 General

(1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The

department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor within two business days after the department obtains the sample.

B.8.2 Verification Testing

B.8.2.1 General

(1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in B.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

(2) The department will conduct QV tests of each base aggregate size, source or classification, and type during placement conforming to the following:
1. Perform one stockpile test from each source prior to placement.
2. At least one random test per 30,000 tons, or fraction of 30,000 tons, placed.

(3) The department will sample randomly, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will collect QV samples after the material has been bladed, mixed, and shaped but before compacting; except, for 3-inch aggregates or for a lift thickness of 3-inch or less, the department will collect samples at load-out. The department will split each sample, test half for QV, and retain half.

(4) The department will conduct QV tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.

(5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to the specification, the department will take no further action. If QV test results are nonconforming, add the QV to the QC test results as if it were an additional QC test.

B.8.3 Independent Assurance

(1) Independence assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:
1. Split sample testing.
2. Proficiency sample testing.
3. Witnessing sampling and testing.
4. Test equipment calibration checks.
5. Reviewing required worksheets and control charts.
6. Requesting that testing personnel perform additional sampling and testing.

(2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in B.9.

B.9 Dispute Resolution

(1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor may review the data, examine data reduction and analysis methods, evaluate sampling and testing procedures, and perform additional testing. Use ASTM E 178 to evaluate potential statistically outlying data.

(2) Production test results, and results from other process control testing, may be considered when resolving a dispute.

(3) If the project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C (Vacant)

D (Vacant)

E Payment

(1) Costs for all sampling, testing, and documentation required under this special provision are incidental to this work. If the contractor fails to perform the work required under this special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the non-performance of QMP administrative item.

(2) For material represented by a running average exceeding a control limit, the department will reduce pay according to CMM 8-10.5.2 for the affected Base Aggregate bid items listed in subsection A. The department will administer pay reduction under the Nonconforming QMP Base Aggregate Gradation or Nonconforming QMP Base Aggregate Fracture Administrative items. The department will determine the quantity of nonconforming material as specified in B.7.2.

stp-301-010 (20161130)

16. Stamping Colored Concrete, Item 405.1000.01 Herringbone Pattern; Item 405.1000.02 Soldier Course Pattern.

This special provision describes stamping and coloring concrete City of Sheboygan – Butterfield U15 Coral Buff Unimix (Herringbone Pattern) and Butterfield U28 Charcoal Unimix (Soldier Course Pattern) for work constructed under other contract bid items. Conform to standard spec 405 as modified in this special provision.

Replace standard spec 405.2.1.1(1) with the following:

(1) Integrally color concrete using non-fading pigments conforming to ASTM C979.

- For Butterfield U15 Coral Buff Unimix and Butterfield U28 Charcoal Unimix: use synthetic pigment as required by the manufacturer at a loading of at least the recommended minimum percent or more by weight of total cementitious material in the mix.

Replace standard spec 405.2.1.1(3) with the following:

(3) The City of Sheboygan will accept the color based on comparison to color samples available for viewing at the City of Sheboygan's office.

Replace the entire contents of standard spec 405.2.2 with the following:

(1) Furnish Butterfield U15 Coral Buff Unimix and Butterfield U28 Charcoal Unimix full-depth colored concrete conforming to standard spec 405.2.1

(1) Use a herringbone pattern for the Butterfield U15 Coral Buff Unimix color and a soldier course pattern for the Butterfield U28 Charcoal Unimix color. All stamps will be supplied by the City of Sheboygan. Damage or loss of the stamps shall be paid by the contractor.

Replace the entire contents of standard spec 405.3.2 with the following:

(1) Color concrete full-depth conforming to standard spec 405.3.1

(2) The colored and stamped colored concrete shall be poured in one layer. All colored concrete within a single "area" and shall be poured in no more than two consecutive work days in a single "area".

All textured concrete surfaces under this item shall receive Butterfield RCL Clear Liquid Release. Two applications are required for uniform coverage.

The sealer shall be Butterfield Clear Guard. Two applications are required.

17. Epoxy Crack Sealing, Item 509.9020.S.

A Description
Seal all cracks as directed by the engineer and as hereinafter provided.

B Materials
Furnish a penetrating epoxy sealant manufactured by Sika, Adhesive Engineering, Technical Sealants, Dayton Superior, or equal. Before using, obtain the engineer's approval for the epoxy system which is proposed to seal the cracks.

C Construction
Before sealing, clean the cracks by chipping and by using high-pressure air.

After all of the cleaning is completed, inject epoxy sealant into the cracks to be sealed. Seal the cracks using the penetrating epoxy sealant as recommended by the sealant manufacturer.

D Measurement
The department will measure Epoxy Crack Sealing in length by the linear foot of crack, acceptably sealed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
509.9020.S	Epoxy Crack Sealing	LF

Payment is full compensation for cleaning the cracks; and for furnishing and placing the epoxy sealant.

18. Structure Repainting General.

A General
A.1 Inspection
On all structures in this contract, notify the engineer of any missing or broken bolts or nuts, any missing or broken rivets, or of any cracks or flaws in the steel members while cleaning or painting.

A.2 Date Painted
At the completion of all painting work, stencil in black paint or contrasting color paint the date of painting the bridge. The numbers shall be three inches (75 mm) in height and shall show the month and year in which the painting was completed: e.g., 11-95 (November 1995). On each bridge painted, stencil the date at two locations. On truss bridges, stencil the date on the cover plates of end posts near and above the top of the railings at the oncoming traffic end. On steel girder bridges, stencil the date on the **inside** of the outside stringers at the abutments. The date on grade separation bridges shall be readable when going under the

structure or at some equally visible surface near the ends of the bridge, as designated by the engineer.

A.3 Graffiti Removal
Remove any graffiti on concrete abutments, piers, pier caps, parapet railings, slope paving or any other location at the direction of the engineer. Use a brush sandblast to remove graffiti.

The above work will not be measured and paid for separately, but will be considered incidental to other items in the contract.

B (Vacant)

C Construction
C.1 Repainting Methods
Do not perform blasting, cleaning and painting on days of high winds. Prevailing winds in excess of 15 mph (25 km/hr) shall be considered high winds.

Place the final field coat of paint on the exterior of the exterior beams as a continuous painting operation. Stop at splices, vertical stiffeners or other appropriate locations so that lap marks are not evident or noticeable.

Completely clean and remove spent abrasive and other waste materials resulting from the contractor's operation from bridge deck surfaces, gutter lines, drains, curbs, bridge seats, pier caps, slope paving, roadway below, and all structural members and assemblies.

C.2 Inspection
Add the following to standard spec 105.9:

Furnish, erect and move scaffolding and other appropriate equipment to permit the inspector the opportunity to closely observe all affected surfaces. The scaffolding, with appropriate safety devices, shall meet the approval of the engineer.
stp-517-005 (20150630)

19. Structure Repainting Recycled Abrasive B-59-154, Item 517.1800.S.01.

A Description
This special provision describes surface preparation and painting of the metal surfaces according to the manufacturer’s recommendations and as hereinafter provided.

A.1 Areas to be Cleaned and Painted
All structural metal surfaces of:

1. Structure B-59-154 34,000 SF.

Areas are approximate and given for informational purposes only.

B Materials

B.1 Coating System

Furnish a complete coating system from the department's approved list for "Structure Repainting Recycle Abrasive Structure". The color for the finish coating material for all structural steel, traffic tubular steel railings, and machine room cylinder support pedestals shall be a custom color "Sheboygan Blue," matching the color of the existing Riverfront Walkway. Supply the engineer with a color sample of each paint color and the product data sheets for review and approval before any coating is applied. The product data sheets shall indicate the mixing and thinning directions, the recommended spray nozzles and pressures, and the minimum drying time between coats.

The color of the primer must be such that a definite contrast between it and the color of the blasted steel is readily apparent. There shall be a color contrast between all subsequent coats for the paint system selected. Submit color samples of the primer and all coats to the engineer for approval prior to any application of paint.

Prior to blast cleaning, solvent clean all surfaces to be coated according to SSPC-SP1.

All metal surfaces must be blast cleaned according to SSPC-SP10 and verified prior to painting.

Upon completion of surface preparation, test representative surfaces, which were previously rusted (i.e. pitted steel) for the presence of residual chloride. Perform Surface Contamination Tests (SCAT) according to the manufacturer's recommendations. The tests must be witnessed by the engineer. If chlorides are detected at levels greater than $7ug/cm^2$, continue to clean the affected areas until results are below the specified limit. Submit anticipated testing frequencies and chloride remediation methods to the engineer for review and approval.

Apply the prime coat the same day that the metal surfaces receive the No. 10 blast or re-blast before application. Cleaned surfaces shall be of the specified condition immediately prior to paint application. If rust bloom occurs prior to applying the primer, stop the painting operation in the area of the rust bloom and re-blast and clean the area to SSPC SP-10 prior to applying the primer.

The steel grit and any associated equipment brought to the site and used for blast cleaning shall be clean. Remove immediately dirty grit or equipment brought to the site at no expense to the department. Furnish an abrasive that has a gradation such that it will produce a uniform surface profile between 1 to 3 mils on the steel surface, as measured according to ISO 8503-5.

The abrasive blasting and recovery system shall be a completely integrated self-contained system for abrasive blasting and recovery. It shall be an open blast and recovery system that will allow no emissions from the recovery operation. The recovery equipment shall be such that the amount of contaminants in the clean recycled steel grit shall be less than 1 percent by weight as per SSPC AB-2.

Remove by grinding all fins, tears, slivers, and burred or sharp edges that are present on any steel member, or that appear during the blasting operation, and re-blast the area to give a 1 to 3 mils surface profile.

Remove all spent material and paint residue from steel surfaces with a good commercial grade vacuum cleaner equipped with a brush-type cleaning tool, and test cleanliness according to ASTM D4285. The airline used for surface preparation shall have an in-line water trap and the air shall be free of oil and water as it leaves the airline.

Take care to protect freshly coated surfaces from subsequent blast cleaning operations. Thoroughly wire brush damaged primed surfaces with a non-rusting tool, or if visible rust occurs, re-blast to a near white condition. Clean and re-prime the brushed or blast cleaned surfaces according to this specification.

C.2 Coating Application

Apply paint according to the manufacturer's recommendations in a neat workmanlike manner. Paint application shall normally be by airless spray or inaccessible areas by brush, roller or other methods approved by the engineer.

The engineer may allow the use of conventional spray equipment after satisfactory demonstration by the contractor of the proper application technique and handling of that equipment.

Mix the paint or coatings according to the manufacturer's directions to a smooth lump-free consistency. Keep paint thoroughly mixed during the painting application.

After the inspector approves the entire cleaned surface to be coated, apply a prime coat uniformly to the entire surface. Either before or after applying the prime coat, brush or spray a stripe coat of primer on all plate edges, bolt heads, nuts, and washers. Apply succeeding coats as the product data sheet shows.

Remove all dry spray by vacuuming, wiping, or sanding if necessary.

If the application of the coating at the required thickness in one coat produces runs, bubbles, or sags; apply a "mist-coating" in multiple passes of the spray gun; separate the passes by several minutes. Where excessive coating thickness produces "mud-cracking", remove such coating back to soundly bonded coating and re-coat the area to the required thickness.

The resultant paint film shall be smooth and uniform, without skips or areas of excessive paint according to SSPC PA1.

The coating is supplied for normal use without thinning. If in cool weather it is necessary to thin the coating for proper application, thin according to the manufacturer's recommendations.

During surface preparation and coating application the ambient and steel temperature shall be between 39 degrees F and 100 degrees F. The steel temperature shall be at least 5 degrees F above the dew point temperature. (This requires the steel to be dry and free of any condensation or ice regardless of the actual temperature of the steel.) The relative humidity shall not exceed 85%. The manufacturer's ambient condition requirements must be followed if they are more stringent.

Paint thickness shall be within the requirements for a three coat paint system listed in the department's approved list for Structure Repainting Recycle Abrasive Structure and the paint system being used.

Time to recoat shall be according to the manufacturer's recommendations.

The dry film thickness will be determined by use of a magnetic film thickness gage. The gage shall be calibrated for dry film thickness measurement according to SSPC-PA 2. Dry film thickness in each area measured will be based on an average of three gage readings, after calibration of the gage to account for surface profile of the bare steel as a result of surface preparation.

D Measurement

The department will measure Structure Repainting Recycled Abrasive B-59-154 as a single complete lump sum unit of work, completed according to the contract and accepted.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
517.1800.S.01	Structure Repainting Recycled Abrasive B-59-154	LS

Payment is full compensation for preparing and cleaning the designated surfaces; furnishing and applying the paint; and for providing the listed equipment.

20. Structure Overcoating Cleaning and Priming B-59-154, Item 517.3000.S.01.

A Description

This special provision describes cleaning and painting with two or three coats of paint the metal surfaces as hereinafter provided. The color for the finish coating material for machinery room items, including machinery, shall match the existing color, except for those items painted "Sheboygan Blue."

A.1 Areas to be Cleaned and Painted

Structure B-59-154

1. Two Coat Area: 0 SF with SP 1 cleaning.
2. Three Coat Area:
   0 SF with SP 2 cleaning.
   0 SF with SP 3 cleaning.
   2,500 SF with SP 11 cleaning.
   2,500 SF total three-coat area.

These areas are approximate and for estimating purposes only. Clean and paint areas of corroded steel in the pier 1 machinery room as directed by the Engineer.

B (Vacant)

C Construction

C.1 Surface Preparation

Prior to overcoating or power tool cleaning, solvent clean all surfaces to be coated in accordance to SSPC-SP1. A SSPC-SP 11 power Tool Cleaning according to Steel Structures Painting Council Specification 11 will be required on all metal surfaces to be painted with a three-coat system. Prime the same day, or re-clean before application, all metal surfaces receiving a No. 11 cleaning.

Remove all abrasive or paint residue from steel surfaces with a High Efficiency Particulate Abatement (HEPA-VAC) vacuum cleaner equipped with a brush-type cleaning tool, or by double blowing. If the double blowing method is used, vacuum the exposed top surfaces of all structural steel, including flanges, longitudinal stiffeners, splices, plates, and hangers, after the double blowing operations are completed. The air line used for blowing the steel clean shall have an inline water trap and the air shall be free of oil and water as it leaves the air line.

Take care to protect freshly coated surfaces from subsequent cleaning operations. Thoroughly wire brush damaged primed surfaces with a non-rusting tool. Clean and re-prime the brushed surfaces within the time recommended by the manufacturer.

C.2 Painting

Paint by applying two or three coats of an approved coating system as specified herein to the surfaces as described in A.1 from the department's approved products list.

C.3 Coating Application

Apply paint in a neat, workmanlike manner. The resultant paint film shall be smooth and uniform without skips or areas of excessive paint. Apply coating in accordance to the manufacturer's recommendations.

Prior to applying the prime coat, coat with primer all edges, rivet and bolt heads, nuts and washers by using either a brush, roller, or spray application.

Dry Film Thickness per coat shall be a minimum of 3-mil. The dry film thickness shall be determined by use of a magnetic film thickness gage. The gage shall be calibrated for dry film thickness measurement in accordance to SSPC-PA 2.

During surface preparation and coating application, the ambient and steel temperature shall be between 39 and 100 degrees F. The steel temperature shall be at least 5 degrees F above the dew point temperature, and the relative humidity shall not exceed 85%.

D Measurement
The department will measure Structure Overcoating Cleaning and Priming B-59-154, completed in accordance with the contract and accepted, as a single complete unit of work.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
517.3000.S.01	Structure Overcoating Cleaning and Priming B-59-154	LS

Payment is full compensation for preparing and cleaning the designated surfaces; and for furnishing and applying the paint.
stp-517-036 (20080501)

21. Containment and Collection of Waste Materials B-59-154, Item 517.4000.S.01.

A Description
This special provision describes furnishing and erecting tarpaulins to contain, collect and store the spent material from surface preparation of steel surfaces, collecting such spent material, and labeling and storing the spent material in waste containers according to the contract and as hereinafter provided.

B Materials
Provide 5-gallon lidded plastic containers for containing the spent material.

C Construction
Erect tarpaulins or other materials to collect all of the spent material from power tool cleaning. Consider and treat all spent material as hazardous waste because it contains lead.

Collect and store all waste material collected by this operation at the bridge site for disposal. Collect and store all waste materials at the end of each workday or more often if needed. Store materials in 5-gallon lidded plastic containers.

Label each container with the date the first waste was placed in the container and the words "Hazardous Waste – EPA Waste Code D008." Lock and secure all containers at the end of each workday. Keep the containers covered at all times except to add or remove waste

material. Store the containers in an accessible and secured area, not located in a storm water runoff course, flood plain or exposed to standing water.

Collect the spent debris by vacuuming, shoveling, sweeping, or by channeling it directly to disposal containers. The enclosure shall be thoroughly cleaned at the end of each work day.

D Measurement

The department will measure Containment and Collection of Waste Materials B-59-154, completed according to the contract and accepted, as a single complete unit of work for each structure designated in the contract.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
517.4000.S.01	Containment and Collection of Waste Materials B-59-154	LS

Payment is full compensation for designing, erecting, operating, maintaining and disassembling the containment devices; collecting, labeling and storing spent materials in appropriate containers.

stp-517-037 (20080902)

22. Negative Pressure Containment and Collection of Waste Materials, B-59-154, Item 517.4500.S.01.

A Description

This special provision describes providing a dust collector to maintain a negative air pressure in the enclosure; furnishing and erecting enclosures as required to contain, collect and store waste material resulting from the preparation of steel surfaces for painting, and repainting, including collection of such waste material, and the labeling and storage of waste material in approved hazardous waste containers, all as hereinafter provided.

B (Vacant)

C Construction

Erect an enclosure to completely enclose (surround) the blasting operations. The ground, slope paving, or roadway cannot be used as the bottom of the enclosure unless covered by approved containment materials. So that there are no visible emissions to the air or ground or water, design, erect, operate, maintain and disassemble the enclosures in such a manner to effectively contain and collect dust and waste materials resulting from surface preparation and paint over spray. Suspend all enclosures over water from the structure or as approved by the engineer.

Construct the enclosure of flexible materials such as tarpaulins or of rigid materials such as plywood, or of a combination of flexible and rigid materials and meet SSPC Guide 6

requirements with Level 1 emissions. Systems manufactured and provided by Eagle Industries, Detroit Tarps, or equal, are preferred. The tarpaulins shall be a non-permeable material, either as part of the tarp system or have a separate non-permeable lining. Maintain all materials free of tears, cuts or holes. The vertical sides of the enclosure shall extend from the bottom of the deck down to the level of the covered work platform or covered barge where used for structures over water, and shall be fastened securely to those levels to prevent the wind from lifting them. Bulkheads are required between beams to enclose the blasting area as approved by the engineer. Where bulkheads are required, construct them of plywood and properly seal them. To prevent spent materials and paint over spray from escaping the enclosed area, overlap and fasten together all seams. Place groundcovers under all equipment prior to operations or as approved by the engineer.

To allow proper cleaning, inspection of structures or equipment, and painting, provide safe adequate artificial lighting in areas where natural light is inadequate.

Provide a dust collector so that there are no visible emissions outside of the enclosure and so that a negative air pressure inside the enclosure is maintained. The dust collector shall be sized to maintain the minimum air flow based on the cross-sectional area of the enclosure.

A combination of positive air input and negative air pressure may be needed to maintain the minimum airflow within the enclosure.

Filter all air exhausted from the enclosure to create a negative pressure within the enclosure so as to remove all hazardous and other particulate matter.

After all debris has been removed and all painting has been approved in the containment area is complete, remove containment according to SSPC Guide 6.

As a safety factor for structures over water, provide for scum control. Provide a plan for corrective measures to mitigate scum forming and list the procedures, labor and equipment needed to assure compliance. Effectively contain the scum that forms on the water and does not sink in place from moving upstream or downstream by the use of floating boom devices.

If in the use of floating boom devices the scum tends to collect at the devices, contain, collect, store the scum, and do not allow it to travel upstream or downstream beyond the devices. Remove the scum at least once a day or more often if needed.

Collect and store at the bridge site for disposal all waste material or scum collected by this operation, or any that may have fallen onto the ground tarps. Collect and store all waste material and scum at the end of each workday or more often if needed. Storage shall be in provided hazardous waste containers. Label each container as it is filled, using the labels provided by the Hazardous Waste Disposal contractor. Check the label and ensure that the project ID, bridge number and EPA ID match the structure. Fill in the generation date when the first material is placed in the container. Secure all containers at the end of each workday. Keep the containers covered at all times except to add or remove waste material. Store the

containers in an accessible and secured area, not located in a storm water runoff course, flood plain, or exposed to standing water.

In a separate operation, recover the recyclable abrasive for future application, and collect the paint and/or corrosion particles for disposal.

D Measurement
The department will measure Negative Pressure Containment and Collection of Waste Materials B-59-154 as a single complete lump sum unit of work for each structure designated in the contract, completed according to the contract and accepted,.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
517.4500.S.01	Negative Pressure Containment and Collection of Waste Materials B-59-154	LS

Payment is full compensation for designing, erecting, operating, maintaining, and disassembling the containment devices; providing negative pressure exhaust ventilation; collecting, labeling, and for storing spent materials in provided hazardous waste containers.
stp-517-065 (20140630)

23. Portable Decontamination Facility, Item 517.6001.S.

A Description
This special provision describes furnishing and maintaining weekly, or more often if needed, a single unit portable decontamination facility as hereinafter provided.

B Materials
Supply and operate all equipment according to OSHA.

Supply adequate heating equipment with the necessary fuel to maintain a minimum temperature of 68° F in the facility.

The portable decontamination facility shall consist of a separate "Dirty Room", "Shower Room" and "Clean Room". The facility shall be constructed so as to permit use by either sex. The facility shall have adequate ventilation.

The "Dirty Room" shall have appropriately marked containers for disposable garments, clothing that requires laundering, worker shoes, and any other related equipment. Each container shall be lined with poly bags for transporting clothing, or for disposal. Benches shall be provided for personnel.

The "Shower Room" shall include self-contained individual showering stalls that are stable and well secured to the facility. Provide showers with a continuous supply of potable hot and

cold water. The wastewater must be retained for filtration, treatment, and/or for proper disposal.

The "Clean Room" shall be equipped with secure storage facilities for street clothes and separate storage facilities for protective clothing. The lockers shall be sized to store clothing, valuables and other personal belongings for each worker. Benches shall be provided for personnel.

Supply a separate hand wash facility, either attached to the decontamination facility or outside the containment.

C Construction
Properly contain, store, and dispose of the wastewater.

D Measurement
The department will measure Portable Decontamination Facility by each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
517.6001.S	Portable Decontamination Facility	EACH

Payment is full compensation for furnishing and maintaining a portable decontamination facility.
stp-517-060 (20140630)

24. Labeling and Disposal of Waste Material.

The EPA ID number for Structure B-59-154 is #WIR000161992.

Presently, the state has an exclusive mandatory use contract with a private waste management contractor to transport and dispose of hazardous waste.

The state's waste management contractor shall furnish and deliver appropriate hazardous waste containers and site-specific labels to each bridge site. The provided containers shall be placed at pre-selected drop-off and pick-up points at each bridge site, and these locations shall be determined at the preconstruction conference. The custody of the containers and labels shall be the responsibility of the painting contractor while they are at the job site.

Report all reportable spills and discharges according to the contingency plan.

Labels are site-specific. Check the labels to ensure that the project ID, structure number, and EPA ID match the structure generating the waste. Apply a label to each drum when it

is opened for the first time. Fill in the date on the label the first day material is accumulated in the drum. The following page is an example of a properly filled-in label.

During paint removal operations, continuously monitor and notify the project inspector of the status of waste generation and quantity stored so that timely disposal can be arranged.
stp-517-055 (20100709)

HAZARDOUS WASTE

WW-5257580999-001-01-0

STORAGE LABEL

DOT SHIPPING DESCRIPTION

RQ, HAZARDOUS WASTE, SOLID, n.o.s.,
(LEAD), 9, NA3077, III, (D008)

Enter the date that waste materials were first placed into the container

EPA CODE: E/D008 STATE: S
WIP#: 391498
WIP DESC: BRIDGE SAND WITH LEAD

DATE ACCUMULATED: 07/01/2005

HAZARDOUS WASTE – FEDERAL LAW PROHIBITS IMPROPER DISPOSAL IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY.

WISC DOT BRIDGE # B-29-53/54
I-94 OVER CTH H
PROJECT # 5882-03-70
CAMP DOUGLAS, WI 54618 (608) 963-0871

GENERATOR EPA ID
WIR000121103

Project ID Number on label must match the Project Number assigned by the WIDOT

Bridge Number and Address on label must match specific bridge from which waste was generated.

EPA ID Number on label is specific to the bridge from which the waste is generated.

25. Furnishing and Planting Plant Materials.

Conform to standard spec 632.

Remove standard spec 632.3.18 and 632.3.19 in their entirety.

Replace standard spec 632.3.20(1) with the following:

Once planted, mulched, and fertilized, the engineer will make final inspection of the planting and approve only those plants in a healthy growing condition and conforming to the following minimum requirements:

- Plant sizes and standards shall adhere to the American Standards for Nursery Stock.
- All plants are the species specified unless the engineer approves changes. Conform to standard spec 632.3.19, for proper care of plants.
- Deciduous trees shall exceed the minimum size of the specified size range and shall have fully matured, average-sized, healthy leaves distributed throughout the branch system as is typical of the species.
- Deciduous shrubs shall exceed the requirements of the specified size range and have mature, average-sized leaves typically distributed throughout the branch system.
- Deciduous vines shall have the required number of runners, each exceeding the minimum required length.
- Evergreens shall exceed the minimum size of the specified size range and all coniferous types shall have fully developed, mature needles, and average-sized buds on current season's growth.

Remove standard spec 632.4(2) and 632.5.1(3) in their entirety.

Replace standard spec 632.5.2 with the following:

The department will pay the contract value of the work each time an item or portion of an item is acceptably completed.

The department will make final payments upon final acceptance and completion of all work required under the contract.

26. Re-chrome Cylinder Rod, Item SPV.0060.01.

A Description

This special provision describes re-chroming of the cylinder rod as directed by the Engineer.

B Materials

Ensure materials conform to the all applicable requirements specified in Hydraulic Span Drive Machinery Rehabilitation, Item SPV.0105.02.

C Construction
Once each cylinder has been disassembled, cleaned, photographed, run-out tested, and the rod diameter checked for rod stretch, the determination shall be made if the rod needs to be re-chromed. If the cylinder meets all necessary criteria to continue to be fully and reliably functional but the rod has scoring, gouging, pitting, or any other damage to its surface in excess of the original manufacturer's limitation criteria that would otherwise cause leakage or pre-mature failure of the rod seal, the cylinder rod shall be re-chromed or other surface treatment selected and approved by the engineer.

Perform all work according to all applicable requirements specified in Hydraulic Span Drive Machinery Rehabilitation, Item SPV.0105.02.

D Measurement
The department will measure Re-chrome Cylinder Rod by each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	Re-chrome Cylinder Rod	EACH

Payment is full compensation for furnishing all labor, equipment, materials, and testing to re-chrome and test each cylinder rod and all incidentals necessary to complete the work.

27. Hone Cylinder Barrel, Item SPV.0060.02.

A Description
This special provision describes re-honing of the cylinder barrel as directed by the Engineer.

B Materials
Ensure materials conform to the all applicable requirements specified in Hydraulic Span Drive Machinery Rehabilitation, Item SPV.0105.02.

C Construction
Once each cylinder has been disassembled, cleaned, photographed, foreign material removed, and ID measurements taken, if damage to the inside surface of the cylinder is found the determination shall be made if the barrel can be honed. If honing the cylinder will provide a surface that meets oversized seal tolerances, the cylinder shall be honed and oversized piston seals installed during re-build. Over-sized seals and honing will only be approved if the over-sized seals do not lower the rated capacity of the cylinder.

If the cylinder bore requires honing, in order to facilitate the passage of the honing tool past the area where the piston will travel, the cylinder bore end may have to be removed from the cylinder bore. Notify the engineer prior to commencing work. Re-attachment of

cylinder bore end shall be performed following approved welding process and position by a certified welder, and shall be radiographically inspected.

If excessive scoring or pitting is found on the inside of the barrel, cylinders can be repaired typically by honing either 0.03 inch or 0.06 inch oversize and fitting the corresponding oversize piston seals. Confirm availability of oversized piston seals for the bore size prior to honing the barrel.

Complete honing of the cylinder bore by moving the honing stones in and out of the cylinder any time they are rotating. Care should be taken not to maintain the honing stone process excessively in one location.

Identify the area of deepest scoring and pitting and document the RPM's and length of time required to remove the area of pitting and scoring. The rest of the cylinder should receive the same amount of honing in order for a consistent inside diameter throughout the length of the cylinder.

Final bore diameter oversize

If honing is performed, provide documentation of the final diameter. For over-sized piston seals, typically this is the nominal bore diameter plus 0.030 inch or 0.060 inch oversize. Confirm that this is the manufacturer's oversize limit and this size should be checked at several points along the barrel using an internal micrometer and documented in the inspection report.

Perform all work according to all applicable requirements specified in Hydraulic Span Drive Machinery Rehabilitation, Item SPV.0105.02.

D Measurement

The department will measure Hone Cylinder Barrel by each individual unit, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.02	Hone Cylinder Barrel	EACH

Payment is full compensation for furnishing all labor, equipment, materials, and testing to hone each cylinder barrel and test as described in this special provision and as shown on the plans. This payment includes all costs for parts, shipping, or other incidental costs associated with the procurement and installation of oversized seals to accommodate the increased inside dimension.

28. Replace Load Holding Valve, Item SPV.0060.03

A Description

This special provision describes replacing each load holding valve as directed by the Engineer.

B Materials

Ensure materials conform to the all applicable requirements specified in Hydraulic Span Drive Machinery Rehabilitation, Item SPV.0105.02.

C Construction

Once each load holding valve manifold has been disassembled, the manufacturer's recommended bench testing shall be performed to determine whether or not the manifold components meet the original manufacturer's tolerances for leakage, response rate, overall functionality, and quality. If the load holding valve or any other component inside the load holding valve manifold exceeds any of the original manufacturer's tolerances and cannot be repaired, it shall be replaced. If the load holding valve manifold is replaced it shall meet or exceed the previous manifold in quality, performance, leakage, functionality, and safety ratings and shall fit dimensionally within the manufacturer's tolerances in order to serve as a direct replacement.

Perform all work according to all applicable requirements specified in Hydraulic Span Drive Machinery Rehabilitation, Item SPV.0105.02.

D Measurement

The department will measure Replace Load Holding Valve by each by each individual unit, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Replace Load Holding Valve	EACH

Payment is full compensation for furnishing all labor, equipment, materials, and testing to replace each load holding valves rod as described in this special provision and as shown on the plans.

29. Support Hanger Replacement, Item SPV.0060.04.

A Description

This special provision describes replacing corroded or broken support hangers for suspended items including, but not limited to, cylinder drip pan supports, conduit tray supports, water line supports, and hydraulic line supports, furnishing support hangers and hardware, removing existing support hangers, and replacing with new stainless steel support hangers.

B Materials
Furnish materials conforming to standard spec 502 and as hereinafter provided.

Furnish stainless steel struts, threaded anchor rods, studs, bolts, nuts, washers, and mounting hardware conforming to the following:

Hex nuts ..... ASTM F594
Hex bolts and anchor rods..... ASTM F593, any type in alloy groups 1, 2, or 3
Washers.....ASTM A240
Struts and mounting hardware .....ASTM A276, any type in the 300 series

Furnish adhesive for adhesive anchors from the department's approved products list.

C Construction
Remove existing support hanger assembly and replace with new stainless steel support hanger system.

D Measurement
The department will measure the Support Hanger Replacement bid item as a unit. Each unit shall consist of the complete restoration of one support hanger assembly, including threaded anchor rod(s), strut or pipe clamp, mounting hardware, and epoxy adhesive acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.04	Support Hanger Replacement	EACH

Payment is full compensation for removing and disposing of the existing support hangers and struts or clamps, furnishing, fabricating, and placing new stainless steel threaded anchor rods, strut or pipe clamp, beam clamps, bolts, studs, nuts, washers, and epoxy adhesive.

30. Non-Bituminous Joint Filler, Item SPV.0090.01.

A Description
This special provision describes placing non-bituminous joint filler at the locations shown in the plans.

B Materials
Furnish materials conforming to standard spec 502.2.

C Construction
Conform to requirements under standard spec 502.3.

D Measurement
The department will measure the Non-Bituminous Joint Filler bid item as each linear foot, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Non-Bituminous Joint Filler	LF

Payment is full compensation for preparing the joints; and for furnishing and placing the joint filler.

31. Concrete Curb and Gutter Integral Type D 26-Inch, Item SPV.0090.02; Concrete Curb and Gutter 26-Inch Type A, Item SPV.0090.03.

This special provision describes constructing concrete curb according to gutter, with reinforcement.

A Description
Construct the concrete curb and gutter according to standard spec 601 and according to the construction plan detail "Curb and Gutter 26-Inch Detail" and "Curb and Gutter Integral Type D 26-Inch Detail".

B Materials
Furnish materials conforming to standard spec 416.2.3, 501, and 601.2.

C Construction
Conform to requirements under standard spec 601.3.

D Measurement
The department will measure Concrete Curb and Gutter Integral Type D 26-Inch and Concrete Curb and Gutter 26-Inch Type A as each linear foot, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.02	Concrete Curb and Gutter Integral Type D 26-Inch	LF
SPV.0090.03	Concrete Curb and Gutter 26-Inch Type A	LF

Payment for furnishing all curb and gutter under this section is full compensation for furnishing all foundation excavation and preparation; all special construction required at driveway and alley entrances, or curb ramps; for providing all materials, including concrete, expansion joints; for placing, finishing, protecting, and curing; for sawing joints; and for disposing of surplus excavation material, and restoring the work site. Payment also

includes providing required tie bars in unhardened concrete. For tie bars provided in concrete not placed under the contract, the department will pay separately under the Drilled Tie Bars bid item as specified in standard spec 416.5.

32. Electrical Work, Item SPV.0105.01.

A Description

This special provision describes furnishing labor, tools, equipment and materials necessary for the manufacture, installation, finishing, testing and making fully operational miscellaneous electrical rehabilitation items for the bascule bridge.

Comply with all local codes, all laws applying to electrical installations in effect and with the regulations of the latest National Electrical Code, where such regulations do not conflict with the laws in effect and with the requirements of the utility company.

It is the intention of the contract plans to call for completely finished work, fully tested and ready for reliable and consistent operation. Furnish, deliver, and install any apparatus, appliance, materials, or work not shown on the plans but mentioned in the special provisions or vice versa, or any incidental accessories necessary to make the work complete in all respects and ready for operation, to be furnished, delivered, and installed without additional expense to the department.

A.1 Scope

The rehabilitation work under this bid item includes the following:

- Remove and replace bridge full open limit switch
- Remove and replace miscellaneous corroded and damaged conduit as identified in plans or identified by the engineer.
- Remove and replace bridge seated limit switch.
- Remove and replace electrical connections as needed or as directed by engineer for the mechanical and hydraulic repairs. .
- Remove and replace channel navigation horns.
- Repair or replace audible and visual warning signals at each approach.

A.2 Submittals

Submit electrical equipment, hardware, drawings, testing plans, and documentation for all electrical items described in the contract documents. Submit working plans and shop drawings as prescribed in the contract documents and in this special provision. Clearly mark manufacturer's standard drawings that indicate dimensions and/or options for more than one piece of equipment to clearly indicate what data applies.

Include shop drawings drawn to scale and certified by the manufacturer for all submittals for major electrical equipment. Where wiring diagrams, schematic diagrams, engraving schedules, conduit drawings, interconnection diagrams, one-line, three-line diagrams, etc. are called for or provided, they are to be site specific.

Submittal approval shall be on an “all or none” basis. Provide complete resubmittals even if some items on the original submittals may not have been marked deficient. Provide

sufficient time in project schedule to allow for the possibility of repetitious submittals without creating delays to the project. The department will not bear any responsibilities for delays caused by repetitious submittals.

A.3 Coordination of Electrical Work

Coordinate all work that requires waterway or road closure as the same time with other structural, civil and mechanical work that requires a closure. Schedule and arrange electrical work in a neat, well organized manner.

The contract documents are diagrammatic in showing certain physical relationships which must be arranged within the electrical work, and which must interface with other work including utilities and mechanical work. Coordinate electrical work with the work of other trades to eliminate conflicts. Advise other trades of openings required in their work for the subsequent move-in of large units of electrical equipment.

Locate operating and control equipment to provide easy access, and arrange entire electrical work with adequate access for operation and maintenance, as per the latest NEC requirements.

B Materials

Provide all new materials that conform to the standards of the Underwriters Laboratories, Inc., in every case where such a standard has been established for the particular type of materials in question. Submit to the engineer for approval, prior to purchase of any materials or equipment required to be furnished and installed, a complete list of all such materials and equipment including manufacturer's catalog (part and/or model) numbers, catalog data sheets, illustrations, and shop drawings.

B.1 General

In addition to the standard specifications, provide and install all equipment according to the applicable requirements of the following:

- AASHTO Standard Specifications for Movable Highway Bridges
- NFPA 70, National Electrical Code
- NFPA 79, Electrical Standard for Industrial Machinery

Ensure that equipment and its installation present a neat and attractive appearance. Use new heavy-duty industrial design, equivalent to the best grade of the particular type of equipment made by the leading manufacturers of such equipment.

Furnish new equipment that is compatible with all other associated equipment in the system. Ensure that all items furnished perform the function indicated on the approved drawings and as required by the design.

Equipment sizes and space shown on design drawings are approximate. Ensure that all required electrical equipment components can be adequately located in the operator’s house and elsewhere on the project as required.

B.2 Limit Switches

B.2.1 Lever Arm Switches

Furnish and install electro-mechanical, lever-operated limit switches. Switch contacts shall be double pole double throw (DPDT) with a NEMA A600 contact rating. Both contacts shall be operated by the same armature. Supply switches that are heavy duty NEMA Type 4 Construction. All mounting brackets and mounting hardware shall be stainless steel.

B.3 Conduit

Furnish and install conduit and raceways required to complete the work as shown on the plans and as required by NEC. Section Includes: metal conduit, non-metallic conduit, liquidtight flexible metal conduit, and fittings and conduit bodies. Use rigid galvanized steel conduit for conduit in the operator, control and generator rooms. Use of thinwall EMT is allowed for lighting and receptacle circuits that are installed behind finished drywall. Use PVC coated rigid galvanized steel conduit for all exterior conduit that is located outside and in the machinery/hydraulic rooms. Use PVC schedule 40 for concrete embedded and installed in a trench, unless the conduit is under a roadway, then use Schedule 80.

B.3.1 Definitions:

Conduit: Pipe that has been treated, threaded, and U.L. listed as suitable for use as an electrical raceway.

Conduit Body: Fitting with removable cover to allow pulling conductors and which may also provide means for making a tight turn or "tee" connection in conduit.

Fitting: Accessory component for joining conduit (coupling), connecting conduit to box or enclosure (connector or hub), or providing other functions (such as expansion fitting).

B.3.2 Conduit Requirements:

Minimum Size: ¾ inch minimum trade size for rigid and PVC, unless otherwise specified. ½ inch for EMT.

PVC Coated Metal Conduit Description: NEMA RN 1; rigid steel conduit (ANSI C80.1) with external PVC coating, 40 mil thick. Fittings and Conduit Bodies: NEMA FB 1; steel fittings with external PVC coating to match conduit.

Liquidtight Flexible Metal Conduit Description: UL 360; Interlocked steel construction with PVC jacket. Fittings: NEMA FB 1.

Non-metallic conduit description: NEMA TC 2, schedule 80 (UL 651). PVC fittings NEMA TC 3 to match conduit. Embedded in concrete use only.

B.3.3 Conduit drawings

Before the initial start of construction, submit a full size drawing showing all conduit runs between all pieces of equipment for review and approval. Provide “as-built” drawing for riser diagrams and schedules.

B.4 Conductors

B.4.1 General

No aluminum or solid copper conductors allowed. For single conductor insulated wire use no wire smaller than No. 12 AWG for power and lighting circuits and no smaller than No. 14 AWG for control wiring, except that control wiring within a cabinet may be No. 16 AWG. Minimum field wire size is No. 12 AWG for control and No. 10 AWG for motor loads. Use minimum No. 10 AWG for 20 A, 120 VAC, branch circuit home runs longer than 75 feet, and for 20 A, 208/240/277 VAC, branch circuit home runs longer than 200 feet.

Furnish insulated conductors of seven or nineteen strand copper, minimum 98 percent conductivity and connector accessories for copper in sufficient quantities for a complete installation. Use twisted shielded pairs in cases of low level audio or digital signal when required. Provide XHNW, THHW/THWN-MTW insulation rated 600 VAC unless otherwise noted. Provide type SE, USE-2, RHW-2 or RHW insulation for incoming power.

Conform to the following:

- ANSI/NFPA 70 - National Electrical Code.
- ASTM B3/ANSI C7.1 - Standard Specifications for Soft or Annealed Copper Wire.
- UL 83 - Thermoplastic-Insulated Wires and Cable.
- UL 44 - Thermoset-Insulated Wires and Cable.
- UL 854 - Service Entrance Cables.
- UL 1063 - Machine-Tool Wire and Cables.
- UL 1685 - Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical Cables.
- Conform to requirements of ANSI/NFPA 70. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

B.4.2 Project Conditions

Verify that field measurements are as shown on plans. Wire and cable routing shown on plans is approximate unless dimensioned. Route wire and cable as required to meet project conditions. Where wire and cable routing is not shown, and destination only is indicated, determine exact routing and lengths required. Determine required separation between cable and other work. Determine cable routing to avoid interference with other work.

B.5 Navigation Horn

Replace existing navigation horns with new USCG approved electrically operated horn that produces sound by means of a diaphragm, which resonates a column of air. The horn shall produce a minimum of 105 db at 10’. Replace horn that is the same voltage level as the existing horn. The horn shall have a corrosion resistant cast aluminum housing with a brass projector.

C Construction

C.1 General

Comply with all local codes, all laws applying to electrical installations in effect and with the regulations of the latest edition of the National Electrical Code, where such regulations do not conflict with the laws in effect and with the requirements of the utility company.

C.1.1 Disconnection of Existing Equipment

Remove and isolate electrical connections as necessary for repairs to the hydraulic and mechanical systems. De-energize and isolate circuits as required. Tie back and tape up all conductors to prevent damage and breaker faults. Reconnect conductors and test connections with a megger. For motors circuits, verify the direction of the motor.

C.1.2 Protection of Electrical Equipment

Protect electrical equipment from water damage, especially from rain, snow, condensation, and water dripping or splashing on equipment and wiring, at all times during shipment, storage and construction (prior to final acceptance). Provide temporary electrical connections to equipment heaters, or provide temporary heaters, as required to prevent damage from moisture.

Thoroughly dry out and put through a special dielectric tests as directed by the engineer at no cost to the department, or replace if not tested to the satisfaction of the engineer, any apparatus that has been subjected to possible injury by water or dampness (including the interiors of motor control equipment, submarine cable ends, or any other electrical devices).

C.1.4 Field Measurements and Surveys

Prior to development of submittals, conduct field surveys to verify construction dimensions. Identify field dimensions on submittals that have been field verified. Conduct field measurements and surveys as required to supplement information provided to provide a complete and satisfactory fitting and fully operational installation.

C.1.6 Manuals

At the completion of the project, provide complete as-built drawings. As-built drawings will be essentially the same as the working plans and shop drawings submitted for approval but showing all of the changes made during construction.

C.2 Limit Switches

C.2.1 Bridge Seated Limit Switches

Remove existing bridge seated limit switch and mounting bracket. Replace limit switch and bracket(s) in similar location. Adjust the limit as required for proper seated indication. Fabricate mounting bracket to allow for multiple axis adjustability.

C.2.2 Bridge Full Open Limit Switches

Remove existing bridge full open limit switch and mounting bracket. Replace limit switch and bracket(s) in similar location. Adjust the limit as required for proper indication. Route

new conduit to avoid tripping hazards and to protect from excessive corrosion. Fabricate mounting bracket to allow for multiple axis adjustability.

C.3 Conduit

Unless otherwise specified in the plans, install conduit according to NECA Standard Practice. Install nonmetallic conduit according to manufacturer's instructions. Arrange supports to prevent misalignment during wiring installation. Support conduit using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers. Do not use plastic straps or plastic hangers. Group related conduits; support using conduit rack. Construct rack using steel channel; provide space on each for 25 percent additional conduits. Fasten conduit supports to building structure and surfaces under provisions of supporting devices. Attachment to steel or concrete shall be by galvanized or stainless steel straps, hangers held at not less than two points by galvanized, stainless steel bolts, or lag screws. Do not support conduit with wire or perforated pipe straps. Remove wire used for temporary support.

Provide pull boxes or junction boxes wherever necessary to facilitate the installation of the conductors. Pull boxes are used for pulling conductors through. No splicing or terminations are permitted. Junction boxes are used for field connections of conductors. Conductors are to be connected using approved terminal blocks. Do not use condulets for pulling more than 10 conductors or for making such turns in conduit runs or for branching conductors, except for indoor wiring to lighting fixtures and receptacles. At any point where a conduit crosses an expansion joint, or where movement between adjacent sections of conduit can be expected, install a bronze or alloy expansion fitting.

Use of flexible conduit is allowed only for the connection of motors, limit switches, and other devices that must be periodically adjusted in position. Make connections between the rigid conduit system and all motors, and limit switches with flexible conduit with couplings and threaded terminal fittings. Do not exceed two feet in length for flexible conduit extensions. Install flexible conduit with bonding jumpers and arrange to drain away from the device it serves.

Provide at both ends of each conduit run a brass tag having a number stamped thereon according to the conduit diagrams. Secure and permanently fasten these tags to the conduit ends with bare copper wire.

Arrange conduit to maintain headroom and present neat appearance. Route exposed conduit parallel and perpendicular to walls. Route conduit in and under slab from point-to-point. Maintain adequate clearance between conduit and piping. Maintain 12-inch clearance between conduit and surfaces with temperatures exceeding 104 ºF.

Connect conduit sections to each other with threaded couplings. Install conduits to be continuous and watertight between boxes or equipment. Protect conduits at all times from the entrance of water and other foreign matter by capping or well plugging overnight when the work is temporarily suspended.

Conduits mounted exteriorly on parts of the steel work must be set not less than 1½ inch clear from the supporting structure to prevent accumulation of dirt. Space parallel horizontal conduit one inch apart and securely clamp to the steel work to prevent rattling and wear. The clamps, in general, shall consist of U-bolts attached to angle or channel iron supports bolted to the members. The spacing of the clamps shall not exceed 6 feet of spacing per NEC 346 and 347 whichever is less.

Cut conduit square using saw or pipe cutter; de-burr cut ends. Bring conduit to shoulder of fittings; fasten securely. Long running threads will not be permitted. Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area inserted in fitting. Allow joint to cure for 20 minutes, minimum. Embedded conduit stub-outs shall be provided with threaded 316 stainless steel.

Use conduit hubs to fasten conduit to sheet metal boxes. Install no more than equivalent of three 90 degree bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams. Use factory elbows for bends in metal conduit larger than 2 inches. All field bends shall be long sweep, free from kinks, and of such easy curvature as to facilitate the drawing in of conductors without injury to the conductors. Make conduit runs with as few couplings as standard lengths will permit.

Avoid moisture traps; provide junction box with drain fitting at low points in conduit system. Install all conduits so that they will drain properly and provide drainage tees at low points where required. Provide suitable pull string in each empty conduit except sleeves and nipples. Use suitable caps to protect installed conduit against entrance of dirt and moisture. Carefully clean all conduits before and after installation. Upon completion of the conduit installation, clear each conduit with a tube cleaner equipped with a mandrel of a diameter not less than eighty percent of the nominal inside diameter of the conduit, and draw in the conductors. Identify conduit under provisions of the Electrical Identification section of this special provision.

C.4 Conductors

Do not splice conductors (except for “pigtail” leads and lighting circuits). Use solderless pressure connectors with insulating covers for wire splices and taps, No. 8 AWG and smaller, for lighting circuits. Make lug connections with high-pressure indent connector tools as recommended by the lug manufacturer. Use split bolt connectors for wire splices and taps, No. 6 AWG and larger, and all motor connections or other approved method.

Tape uninsulated conductors and connectors with electrical tape to 150 percent of the insulation value of conductor. Make splices and taps to carry full ampacity of conductors without perceptible temperature rise. All splices shall be waterproof. Terminate spare conductors with electrical tape.

Neatly train and lace wiring inside boxes, equipment, and panelboards. Place an equal number of conductors for each phase (three-phase system) of a circuit in same raceway or cable. Make conductor lengths for parallel circuits equal. Pull all conductors into a

raceway at the same time. Use soap base wire pulling lubricant for pulling No. 4 AWG and larger wire. Tighten all connections to manufacturer's recommendations. Take precautions to avoid “sawing” through PVC conduit. Pull ropes shall be braided. Bare conductors shall not be pulled through PVC conduits. Conduit shall be swabbed with lubricant prior to pulling the conductors.

Identify wire and cable under provisions of Electrical Identification. Identify each conductor with its circuit number or other designation indicated on plans.

Test each circuit for continuity and short-circuits for its complete length before being connected to its load. Verify identification numbers for the entire length of the circuit. Inspect wire and cable for physical damage and proper connection. Perform insulation testing on all power conductors.

D Measurement

The department will measure Electrical Work as a single lump sum unit of work, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Electrical Work	LS

Payment is full compensation for furnishing, replacing and new limits, horns, conduits and miscellaneous electrical components for the bascule span; and for furnishing all labor, shop drawings, as-built drawings, tools, testing equipment, materials, and incidentals necessary to complete the contract work.

33. Hydraulic Span Drive Machinery Rehabilitation, Item SPV.0105.02.

A Description

A.1 Hydraulic Span Drive Rehabilitation

This section describes work to be performed for rehabilitating the hydraulic drive machinery components and systems for the bascule leaf. Provide bridge machinery that meets the requirements of AASHTO LRFD Movable Highway Bridge Design Specifications, 2015 7th Edition with Interim Revisions through 2016, hereafter referred to as AASHTO Movable, and these contract documents.

Specific brands and part numbers of parts listed are for reference and are currently installed in the system according to the original contract documents. Contractor shall confirm existing parts installed in the system. Replacement of these parts with an alternate brand shall only be done if the alternate part is of equal quality, capacity, rating, size, shall be interchangeable, and shall be ‘equal to’ according to any operating parameter or functionality measurement. In addition, alternate parts shall meet criteria of Section A.9 Standard Products. If an alternate is selected requiring alteration of any housing,

connection, or any other means to facilitate installation, this shall be at no additional cost to the department.

The scope of the modifications to the Bridge Machinery consists of the following:
Furnish and install the following replacement items:
(QTY. 1) Hydraulic Re-circulation Pump, Fixed Disp. - Oilgear PFWH-45
Replace with Oilgear, Bosch Rexroth, Eaton, or equal
(QTY. 1) Electric Motor, 10 HP, TEFC 460/3/60, 1800 RPM
(QTY. 16) Flexible Hydraulic Hosing - 100 LF, 2" ID
(QTY. 16) Flexible Hydraulic Hosing - 80 LF, 0.5" - 1.25" ID
(QTY. 2) *Hydraulic Filter, 600 PSI, 12 Micron, Pall 249230-073
Replace with Pall, Hycon, Parker, or equal
(QTY. 2) *Hydraulic Filter, 2000 PSI, 3 Micron, Pall 317462.033
Replace with Pall, Hycon, Parker, or equal
(QTY. 2) *Hydraulic Filter, 360 PSI, 20 Micron, Hycon 248990-031
Replace with Hycon, Pall, Parker, or equal
(QTY. 2) *Hydraulic Filter Element Kit - 20, 12, & 3 Micron, Oilgear L723421
Replace with Oilgear, Pall, Hycon, or equal
(QTY. 4) Reservoir Air Breather - Humidal Desiccants 250946-001
Replace with Humidal, Hy-Dry, Parker, or equal
(QTY. 12) Hydraulic Fluid, 275 Gal Totes
(QTY. 8) Case Drain Flowmeter - 0.1 – 30 GPM
(QTY. 8) Immersion Heaters 4.5 kW, 480/3/60, Chromalox L2H-H202S-WS
Replace with Chromalox, Vulcan, Warren Electric, or equal

Items to repair or rebuild:
(QTY. 4) Hydraulic Cylinder Actuator – 26" Bore, 9" Rod, 10.5' Stroke
(QTY. 8) Cylinder Trunnion Bearings – 11.995" Bore Bronze Bushing
(QTY. 4) Cylinder Rod End Bearing – 16.5354" Bore Spherical Roller Bearing
(QTY. 4) Pilot Operated Check Valve Manifolds mounted on cylinder
(QTY. 4) Pilot Operated Check Valve Accumulator – 1 Gallon, 3000 PSI Nitrogen
(QTY. 16) Hard Line Hydraulic Piping Sections - ~200 LF, 0.75" - 4" ID
(QTY. 2) Flush and filter hydraulic systems to meet ISO 17/15/13 fluid cleanliness
(QTY. 4) Modify rod brake housing for oil leak capture. See Section C.10.6.3

Spare parts - Purchase, Package, & Deliver:
(QTY. 4) Oilgear Legacy PVK-370 Variable Displacement Hydraulic Pump – Oilgear recommends their PVV-250 **Replace with Oilgear, Bosch Rexroth, Parker, or equal**
(QTY. 8) Sets of any adapters or mounts required to replace a primary pump with a spare. This may require a test fit-up to verify the spares are now a drop in replacement.
(QTY. 2) Flexible Drive Coupling, Steel Flex Grid, Falk 1090T10
Replace with Falk, LoveJoy, Rexnord, or equal
(QTY. 1) Hydraulic Re-circulation Pump, Fixed Disp. - Oilgear PFWH-45
Replace with Oilgear, Bosch Rexroth, Eaton, or equal
(QTY. 6) *Hydraulic Filter, 600 PSI, 12 Micron, Pall 249230-073
Replace with Pall, Hycon, Parker, or equal

(QTY. 6) *Hydraulic Filter, 2000 PSI, 3 Micron, Pall 317462.033
Replace with Pall, Hycon, Parker, or equal
(QTY. 6) *Hydraulic Filter, 360 PSI, 20 Micron, Hycon 248990-031
Replace with Hycon, Pall, Parker, or equal
(QTY. 6) *Hydraulic Filter Element Kit - 20, 12, & 3 Micron, Oilgear L723421
Replace with Oilgear, Pall, Hycon, or equal

A.2 Manufacturer's Product Data
Submit manufacturer's data and/or shop drawings for all manufactured and purchased products.

Include in the submittal, as applicable: the manufacturer's name and trade name; descriptive literature, catalog cuts, drawings, diagrams and certified prints and lay out dimensions; catalog model number, nameplate data, size and pressure capacity, plus commercial, federal and military specification references; and any other relevant data required to establish contract compliance.

A.3 Shop Drawings
Provide fully detailed views per standard drafting convention and accurately dimension all parts on the shop drawings. Show limits of accuracy and tolerance required for machining, surface finishes and allowances for fits. Provide fits and finishes as specified according to ANSI B46.1 and ANSI B4.1.

Show proprietary parts in outline on the drawings. Furnish complete dimensions and data to enable a determination of the adequacy of the unit. Furnish certified dimensional prints stating the name, part and job number. Give pertinent pressure and valve settings; provisions for lubricating, the method of lubrication, location and type of all lubrication, and vent fittings. If a product is modified in any way from the description submitted by its original manufacturer, provide a drawing that details the modifications and assigns a special part number to that part to avoid supply of replacement parts not similarly modified.

Provide a diagram or assembly drawing sufficient to enable disassembly and reassembly of the component. Identify and describe on the assembly drawing, or diagram, each internal part and show dimensions of principal parts; certified external dimensions; gross weight and normal operating ratings.

Provide shop bills of material, listing all parts by number and quantity. Provide the materials and specifications for each part. Where standard specifications are used, give the designating numbers.

The following abbreviations may be used:

AASHTO	American Association of State Highway Transportation Officials
ABMA	American Bearing Manufacturers Association
AGMA	American Gear Manufacturers Association

AISI	American Iron and Steel Institute
ANSI	American National Standard Institute
ASME	American Society of Mechanical engineers
ASTM	ASTM International
AWS	American Welding Society
NEMA	National Electrical Manufacturers Association
NLGI	National Lubricating Grease Institute
OSHA	Occupational Safety and Health Act
SAE	Society of Automotive Engineers
SSPC	Steel Structures Painting Council

Furnish assembly and erection drawings with identifying marks and essential dimensions for locating parts and assemblies. The use of opposite hand or mirror image assembly drawings is not acceptable. It is the contractor's responsibility to achieve satisfactory construction and operation of the machinery; approval of shop drawings by the engineer does not constitute relief from this provision.

Show subtitles describing the parts and the inspection agency on each shop drawing.

Submit shop drawings to the engineer for review according to B.3 – Submitting and Review Process. Shop drawings will be distributed by the engineer for review. Resubmit drawings rejected or requiring correction until they are approved. Any damages or costs that result from ordering materials or performance of any work before receiving shop drawing review shall be the responsibility of the contractor.

A.4 Operation and Maintenance Manuals

Furnish manuals or revised versions of the existing manuals containing complete descriptive literature, catalog cuts, reduced size shop drawings and other information required for successful operation and maintenance for the machinery systems of the bridge. Provide revisions, if required, by means of addenda to the existing manuals. The following content scope is intended to describe the existing manuals and provide addenda for updates and changes, not complete re-creation of manuals.

Clearly print all materials so that the submittals, drawings, catalog cuts, and all other information is legible, accurate and distinct. Reduced size drawings and illustrations must be legible so that dimensions and lettering are readable. Fold all large format pages to the page size necessary for inclusion in the manuals.

Print the material on durable mediums. Use water resistant inks. Use printing methods that offer permanence and durability.

A.5 Contents

Neatly inscribe the following information on the manual's cover: Title: "Operating and Maintenance Manual"; the name and location of the bridge; the contract number, date, and the names of the consulting engineer and the contractor.

Include the following in the manual:

- Index of contents and tabbed dividers for each section.
- A system layout showing all machinery components, including all existing components reused.
- A detailed description of the control system and procedure for operating the bridge using the main drive motors, auxiliary drive motors and any manual means.
- Reduced size copies (11" x 17") of shop drawings and lubrication charts.
- Certified parts drawings and descriptions of proprietary units.
- A detailed description of the function of each principal component.
- Manufacturer's standard literature and instructions for installation, operation, lubrication, adjustment, and maintenance for each component and assembly.
- A list of the names, addresses and telephone numbers of all subcontractors and manufacturers furnishing and installing the equipment and systems together with a record of the local representatives for the equipment and systems installed.
- Recommended procedures and frequency for cursory and detailed inspections of the equipment.
- Information on trouble-shooting problems that may be encountered during operation for each of the major pieces of equipment. Include things to look for, signs of irregular operation and suggested solutions.

A.6 Materials for Manuals

Bind the maintenance and operating materials in heavy duty, three-hole binders, of either ring or post type, as directed by the engineer. Use binders that have nickel-plated, metal hinges and a locking mechanism that permits the sheets to lie flat, such as a channel lock. Use heavy duty, stiff covers that are moisture, oil and grease resistant such as plastic or other suitable materials.

Bind all the printed material between the rigid covers of the book. Provide a book measuring approximately 9 x 12 inches. Provide included drawings in black outline on white background. Use archival quality, acid free, punched, 60 pound, loose leaf paper. Use paper pages, foldout drawings, diagrams and illustrations having three standard spaced holes, 5/16 inch minimum diameter, with plastic or cloth reinforcement.

A.7 Manual Submittals

Submit to the engineer the arrangement of the books, proposed methods of binding, printing and reproduction and materials to be included.

Submit 2 copies of the complete manual to the engineer in final form 30 days prior to final inspection, acceptance tests or return of the span operation to the City of Sheboygan, Department of Public Works.

Submit to the engineer 5 copies and 2 CDs or electronic copies of the approved manual 10 days after final inspection and acceptance tests. One of the five copies shall become the property of the engineer of record; the remaining copies shall become the

property of the City of Sheboygan, Department of Public Works. Submit 2 copies of the manual in Adobe Acrobat format.

A.8 Operating Instructions

Provide operating instructions or revisions to the current set of operating instructions, to the engineer for review and approval, for each system and principal piece of equipment for the use of operation and maintenance personnel. Post on or adjacent to the piece of equipment the printed operating instruction, including proper adjustment, operation, lubrication, safety precautions, procedures to be followed in event of equipment failure and other items of instruction recommended by the manufacturer. Use either weather-resistant materials or protect the instructions with suitable enclosures. Prepare diagrams showing the complete layout of the operating machinery. Frame the diagrams, under glass or in an approved laminated plastic, and post where directed by the engineer. Securely fasten all posted instructions and diagrams to prevent easy removal. Do not locate in the direct sunlight.

A.9 Standard Products

In so far as practical, use materials and equipment that are the standard, catalogued products of manufacturers regularly engaged in the production of such products; and that are the latest standard design; and that comply with the requirements of the contract documents. Provide materials and equipment that essentially duplicate units which have served satisfactorily for at least two years prior to bid opening. Where two or more units of the same category equipment are required in the system use products of the same manufacturer; although, components of the system need not be the products of one manufacturer.

Provide each major component with a name plate, securely affixed in a conspicuous place, with the manufacturer's name and address, the model and serial number. The nameplate of the distributing agent is not sufficient.

A.10 Manufacturer's Recommendations

Install and align all units and components as recommended by the manufacturer of that product. Furnish printed copies of those instructions and procedures to the engineer before beginning installation. Failure to furnish these instructions may be cause for rejection. Preparation of the mounting surfaces and associated components required for the installation is included in the work.

A.11 Codes and Standards

Furnish all machinery bid items in compliance with the applicable requirements of the latest standards and codes of, but not limited to, those organizations designated above. Where other codes and standards are designated in these special provisions they shall also apply to the work requirements of the parts and equipment with which they are associated.

A.12 Qualification, Personnel and Facilities

Complete all fabrication, cleaning, lubrication, testing and all other work required for bridge machinery pay items using experienced mechanics and service personnel who

are thoroughly trained and familiar with the required methods specified for correct completion of the work.

For the installation, alignments, and fastening of the bridge machinery, use trained and skilled millwrights having past experience in the installation of hydraulic machinery.

Equip the mechanics, millwrights and service personnel with the necessary instruments, tools and other equipment necessary to assure the related components have been furnished within acceptable tolerances; and to make any adjustments required to attain correct installation and satisfactory operation at no additional cost to the city.

A.13 Rules, Regulations and Ordinances
Assure that all work complies with all applicable federal, state and local rules, regulations and ordinances.

In the event of a conflict between these special provisions and the federal, state and local codes, standards, rules, regulations and ordinances the most stringent requirement applies.

A.14 Measurements and Verification
Dimensions given on the plans are nominal, not to scale, and intended for guidance only. Note any variations from nominal dimensions on the shop drawings after confirmation of all dimensions in the field.

A.15 Substitutions
The specification of a manufacturer's name and part number is for the purpose of defining quality, configuration, rating and arrangement of parts. Equivalent products of another manufacturer may be substituted for the specified item upon the written approval of the engineer. Make any changes necessary, as a result of the substitution, in related machinery, structural, and electrical parts at no additional cost to the city.

Obtain the engineer’s written approval for a substitute product prior to ordering it. Acceptance of the substitute product is at the sole discretion of the engineer. The basis for acceptability of a substitute product will be a review of the descriptive material and detail submitted and evaluation of its ability to fulfill the contract requirements.

The engineer will approve submittals for substituted materials. Resubmit rejected shop drawings showing the specified product. Rejection shall in no way result in extra cost to the city. Approval of a substitute product by the engineer does not relieve the contractor of the responsibility for proper operation, performance or functioning of that product.

Inform the engineer if departures from the contract documents are deemed necessary. Submit full details of the departures and reasons for the need, as soon as possible, to the engineer for approval. Do not proceed with any departure without written approval.

B Materials

B.1 General Material Requirements

Provide materials as specified on the plans and in the specifications. Wherever materials are not shown or specified, provide materials conforming to the current specifications as outlined in TABLE 1, Materials. An alternative material may be requested in writing; the request must provide complete data justifying suitability of the alternate materials and must be approved by the city prior to initiating manufacture or construction.

Materials and equipment must be essentially the standard catalogued products of manufacturers regularly engaged in production of such materials or equipment and must be the manufacturer's latest standard design that complies with the specification requirements. Materials and equipment must essentially duplicate items that have been in satisfactory commercial or industrial use at least 2 years prior to bid opening. Where two units of the same class of equipment are required, these units must be products of the same manufacturer. However, the component parts of the system need not be the products of the same manufacturer.

TABLE 1 - MATERIALS

MATERIAL	DESCRIPTION	DESIGNATION (ASTM unless otherwise noted)
Iron castings	Gray iron	A48
Bronze castings	Bronze castings for bridges (max. Sulphur content 0.08%, chemical analysis required for each heat)	B22
Forgings	Carbon steel for industrial use Alloy steel for industrial use	A668
Hot rolled steel	Special quality carbon steel bars	A675
Dowel pins	American National Standard Unhardened Ground Dowel Pins (130 KSI minimum single shear strength)	ANSI B18.8.2
Cold rolled steel	Carbon steel bars	A311
Stainless Steel Shims	Stainless Steel	Type 316
Shapes, plates, and bars	Structural steel High strength, weathering steal	A36 or A709 A588
Stainless Steel (corrosion resistant) bolts or anchors	High Strength Stainless steel Fasteners	A193, Grade B8, A193, Grade B8M
Corrosion resistant shapes, bars, and plates	Stainless steel	A276, Type 316

B.2 Shop Drawings

Provide the hydraulic cylinder handling system plan and drawings, and the calculations and drawings for the marine vessel that will be used to remove the hydraulic cylinders from the pier, to the engineer for approval before the fabrication of the system.

- Submit shop drawings showing interface with other equipment, and including the following:
- Hydraulic cylinder with bill of materials,
- Rod eye pivot bearing with bill of materials,
- Trunnion bearings with bill of materials,
- Any modification to cylinder bore, piston, or rod with construction details, if required,
- Replacement seal dimensions with installation instructions,
- Installation, operation and maintenance manual sheets,
- Operational experience record for model supplied,
- Product data for all components,
- Certified test data for all factory tests and As-Built Plans,
- Marine vessel buoyancy calculations including loaded and unloaded draft,
- Plan and provisions for maintaining support and control of hydraulic cylinder as it passes through the exit of the pier and begins to load the marine vessel.

Submit a certified print of each hydraulic cylinder, showing:

- All external mounting dimensions including pin sizes, bores, and retention means,
- Ratings that will appear on the nameplate,
- Location of all lubricated connections,
- Lubrication recommendations,
- Section views, with part numbers for each component.

Show all steel designations, AWS welding symbols, and net weld lengths. Submit product data for all bearings.

Submit manufacturer's installation instructions, operation and maintenance data.

Submit results of weld testing, and shop bench testing of hydraulic cylinders and valves.

B.3 Submitting and Review Process

B.3.1 General

Submit all data on paper measuring either 8-1/2 inch x 11 inch, 11 inch x 17 inch as appropriate. Where appropriate, bind individual sheets into sets with a cover, title sheet, and table of contents.

Submit to the engineer samples of colors for all components which affect the appearance of the bridge. Product samples become the property of the City of Sheboygan unless determined otherwise by the engineer.

The review process will consist of two or more steps. The first step is to submit four copies of sets of materials to the engineer, or his designated agent, for preliminary review. The engineer, or his designated agent, will return one copy of the set of submitted materials with instruction for correction or re-submittal. When instructed by the engineer, the final step is to submit materials to the engineer, or his designated agent for distribution. The engineer will return one to three copies or sets of materials to the contractor with a stamp denoting general conformance to the plans and specifications. The exact review process, number of copies or sets of submittal materials, delivery requirements, and other procedural matters for the project will be determined at the pre-construction conference. Electronic submittal of the shop drawings and submittals is preferred over paper copies.

Drawings that are not initialed as having been checked or obviously have not been completed or are not clear and legible will not be accepted for review. The contractor will be notified that the subject drawings must be properly completed and resubmitted for review.

The title box of each shop drawing must carry the job number and structure and control section numbers, and the name and address of the fabricator, foundry, or manufacturer. The title sheet of each bound set of product information sheets must carry the job, control, and structure identification numbers, and the name and address of the supplier. Each sheet in a bound set must clearly identify the product or products being used and carry the name of the manufacturer.

A unique drawing and/or sheet number must be placed on each sheet so that similar items with subtle differences will not be confused with one another. When data is returned by the engineer to the contractor for correction and re-submission, each revised sheet needs to be marked with a revision number, indicating the number of times the sheet has been revised since the first submission and with the date of each revision. Each change on the sheet must also be marked with the appropriate revision number, shown on a small triangle, placed next to the change.

Drawings on data sheets that contain information for items or options other than those intended for use on this project must be clearly marked so as to indicate which items or options are intended for use on this project. Line or cross out those items or options that do not apply, or by circling or highlighting those items or options that do apply. Whatever method is used it must be done in a manner that clearly indicated which items apply to the project.

Ensure everyone, including suppliers, furnishes complete product and shop detail data for review by the engineer. The data must include, but is not limited to, the following:

Drawings including information on the exact number of units, exact unit to be furnished, and all of the equipment options to be furnished with the unit. Dimensions, material grades, fits, finishes, applicable standards (ASTM, AASHTO, ANSI, and other applicable standards) and all other data sufficient to meet the requirements of the contract documents.

Complete catalog data and specifications including the part supplier contact information name, address, and telephone number. Submit catalog cuts and detailed manufacturer's literature for all components not detailed in the shop drawings. Clearly mark such items with the item number corresponding to the mark shown on the assembly drawing and the full and complete part number, extended to completely define the part including all optional or custom features. If the same cut sheet is used to define more than one item, submit multiple copies.

Complete installation and maintenance instructions.

Drawings and catalog data must indicate the pertinent bid item.

If a submission is incomplete, it may be returned without review or comment. If so, it must be completed before re-submittal. The contractor is advised to keep an accurate record of all shop drawing transmittals and to maintain constant contact with all suppliers to obtain prompt re-submittal of drawings and data returned for correction and completion. Significant time lapses between the return and re-submittals of data could delay the project and shall be avoided.

At a minimum, the following submittals shall be submitted for approval:

- Personnel work experience submittal
- Disassembly, assembly, contamination prevention, and replacement criteria – cylinders
- Dis-assembly, shipping, bench testing, and replacement criteria – valve manifolds
- Temporary material handling system – cylinder removal
- Cribbing
- Overhead hoisting
- Marine vessel buoyancy calculations
- Rollers, dollies, and turtles
- Horizontal winching and anchor attachment
- Plumbing removal
- Contamination prevention
- Hydraulic system work plan– Phase 1: Pre-cylinder removal
- Operating pressure data collection
- Accumulator pressure verification
- Hydraulic pump condition testing
- Hydraulic system work plan– Phase 2: Post-cylinder removal
- Re-circulation pump replacement
- Fluid replacement and flushing
- Adjustable valve settings
- Installation of case drain flowmeters
- Flexible hose replacement
- Hydraulic fluid filter replacement
- Hydraulic oil sampling
- Hydraulic system work plan– Phase 3: Post-cylinder installation

- Operating pressure data collection
- Testing and commissioning

B.3.2 Submittal Review Time

It is the contractor's responsibility to ensure that all shop details and data are submitted for review in a timely manner. The preparation of construction drawings, shop details compilation of the technical data, transmittals, review, revision, and re-submittals constitutes a time consuming process.

Although no specific time periods are established herein for submittals or for the engineer's review, the contractor should anticipate that each review may take up to approximately 21 days. The engineer, or his designated agent, will endeavor to complete each review in the shortest practical time. Delays in submitting, reviewing, or approving submittals will not be cause for additional compensation.

B.4 Shop Testing and Inspection

B.4.1 General

If modification to the cylinder body to facilitate honing is required, or if fabrication of a replacement cylinder head is required, ensure the following information is provided:

- NDT documentation for ultrasonic or radiographic testing all welds.
- Test reports for materials used in the manufacture.
- Heat treatment documentation for through hardening of the cylinder rod.
- Hardness quality control documentation.
- Rod and or modified piston diameter or new seal dimensions and run-out measurements of the cylinder rod.

Provide two weeks' notice to the engineer on the hydraulic cylinder testing schedule.

Secure the hydraulic cylinder to rigidly fix its position during all testing.

Provide bench testing equipment for the testing of the hydraulic cylinders that is free of contamination and filled with hydraulic oil that matches the type of new oil to be used in the hydraulic power packs located in the machinery equipment room in the pier.

During testing of each hydraulic cylinder and valve manifold, each unit shall be checked for leaks, excessive piston rod and seal clearance, and any other unusual operating characteristics. The units shall operate smoothly, and without excessive vibration or temperature rise. All malfunctions shall be recorded and corrected, and the units retested if necessary before release from the manufacturer's shop. After the unit has passed the test, a Certificate of Compliance shall be submitted by the contractor to the engineer.

Prior to shipping, clean the hydraulic cylinders and valve manifolds of dirt, chips, grit, and all other injurious materials and apply the applicable paint coating. Coat exterior finished metal surface and unpainted metal surfaces as soon as practicable after finishing with rust-

inhibiting preservative. Remove these coatings from all surfaces prior to erection, final painting, and operation. Tag, bag, and crate mounting hardware and accessories for shipment and storage with the cylinders and valves. Mount assembled units on skids and crate for protection during handling, shipment, and storage.

Protect hydraulic cylinders and valve manifolds from weather, dirt, and all other injurious condition during manufacture, shipment, and storage, including storage at the site if applicable. Store cylinders and valve manifold inside a protective enclosure that protects the machinery from the weather and from freezing temperatures. During storage, provide maintenance to seals and other components as required by the manufacturer.

B.5 Steel Castings

If new cylinder heads are required, provide steel castings that are true to pattern in form and dimensions, free from pouring faults, sponginess, cracks, blow holes, and other defects. Sandblast or otherwise effectively clean castings of scale and sand, to present a smooth, clean, and uniform surface. Finish all edges of castings with rounded corners, and provide ample fillets on all inside angles. Provide adequate material allowance for all surfaces requiring finish for machining to finish dimensions. Finish all surfaces of castings in contact with other metal to 125 micro-inches as measured under ANSI B46.1, unless a finer finish is specified by the plans. Where castings are machined, the thickness of the metal after finishing shall not be less than the thickness shown on the plans. Provide machined bosses to give proper seats for bolt heads and nuts.

Blow holes appearing upon finished castings shall not have a depth injuriously affecting the strength of the casting. Weld minor defects, which do not impair the strength, by an approved process, with the approval of the engineer, and inspect by magnetic particle examination.

Perform visual surface examinations per ASTM A802 criteria for Level II and requirements of MSS SP-55 for every steel casting. Perform liquid-penetrant exams according to ASTM E165, or magnetic particle examination according to ASTM E709 on every casting to detect surface and near-surface flaws. Perform ultrasonic inspection on every casting according to ASTM A609 that meets the requirements of Level 2 (Procedure A) or Level 3 (Procedure B) for castings with cross sections in both directions thicker than 4 1/2 inches. Meet the requirements of Level 1 (Procedure A) or Level 1 (Procedure B) for thinner castings.

Reject steel castings that do not meet all of the above examination criteria. Reject castings that have been welded without the engineer's approval. Reject steel castings that do not have adequate thickness to “clean up” during machining.

B.6 Shafting and Pins

Furnish shafts that are accurately finished, round, smooth, and straight; and when turned to different diameters, provide rounded fillets at shoulders and chamfers at shaft ends. At the journal-bearing areas on shafts and pins provide surfaces that are accurately turned, ground, and polished with no trace of tool marks or scratches on the journal surface or

adjoining shoulder fillets. Finish journal surfaces to the limits specified in AASHTO Movable.

Provide shafts of forged steel meeting the requirements of ASTM A668. Hot rolled steel of equivalent strength and ductility may be substituted for shafting with a finished diameter of 4 inches or less. Cold finished shafts and pins will not be permitted. Provide ANSI Standard B4.1 FN2 fit at hub locations. Machine finish each shaft over its entire length to obtain a smooth finish concentric with the bearing centerline. For shafts with holes, install plugs prior to final assembly at each end of shaft.

B.7 Fasteners

B.7.1 General

Sub-drill all holes for connecting machinery parts to the supporting steel at least 1/32 inch smaller in diameter than the finish diameter, unless otherwise specified. Line ream at assembly with the mating part for proper fit after the parts are correctly aligned.

Furnish positive locks for all nuts. Provide double nuts for all connections requiring occasional opening or adjustment. For connections with single nuts, provide lock washers made of tempered steel and conforming to the SAE regular dimensions. Provide lock washers of material that meets the SAE tests for temper and toughness.

Use beveled washers where bearing faces have a slope of more than 1:20 with respect to a plane normal to the bolt axis.

Provide fasteners manufactured in the United States correctly marked on top of the head with identification of the property, class and source.

Clean all contacting surfaces of machinery elements and structural steel to be bolted together according to the standard specifications before bolting.

Provide bolts, nuts, and cap screws that conform to the coarse thread series and have a Class 2 tolerance for bolts and nuts or Class 2A tolerance for bolts and Class 2B tolerance for nuts according to the ANSI B1.1, "Unified Screw Threads."

All bolt heads and nuts shall bear on seats square with the axis of the bolt. On castings, except where recessed, furnish finished bosses or spot-faced seats. Provide square bolt heads for recesses in castings. Spot face all bolt holes through unfinished surfaces for the head and nut, square with the axis of the bolts.

B.7.2 Turned Bolts (Machinery to Machinery Supports)

Use turned bolts for all connections of machinery to supports. Provide turned bolts that conform to the requirements of ASTM A449. Provide nuts, and hardened washers that conform to the requirements of ASTM A563, and F436, respectively. Turn the diameter of the shank such that it is 1/16-inch larger than the diameter of the threads. Supply a surface finish of 63 micro-inches as measured under ANSI B46.1. Use hexagonal heads and nuts according to the heavy series specified in ANSI B18.2.1. Use

two nuts or one nut and a lock-washer on turned bolts. Lock washers will only be permitted if approved by the engineer. Carefully ream holes for turned bolts in mating structure to provide for an ANSI B4.1 LC6 fit with the body of the bolt.

B.7.3 High Strength Bolts (Machinery Supports to Steel Structure)
Use high strength bolts for connections of supports to steel bridge structure. Provide bolts, nuts, and hardened washers that conform to the requirements of ASTM F3125 Gr. A490, A563, and F436, respectively. Drill holes for bolts 1/32 inch larger than the diameter of the bolt. All high strength bolts, nuts, and washers shall be zinc coated with a Class 50 mechanically deposited zinc coating according to the requirements of ASTM B695.

B.7.4 Socket Head Screws
Where socket-head cap screws are used, provide screws that conform to ANSI B18.3, made of cadmium-plated heat-treated alloy steel, and furnished with a self-locking nylon pellet embedded in the threaded section. Provide set screws of the headless, safety type; threads of the coarse thread series; and cut points. Do not use set screws to transmit torque nor as the fastening or stop for any equipment that contributes to the stability or operation of the bridge.

B.8 Keys and Keyways
Provide square and rectangular keys and keyways that meet ANSI B.17.1, except where specified herein. Provide closed-end, milled keyways in the shaft to hold all keys in place. Provide clearance between keyways and bearings. Where one key is used, provide a key with an ANSI B4.1 LC4 fit with the keyway. Where two keys are used locate them 120 degrees apart and provide an ANSI B17.1 Class 2 fit between keys and keyways. Finish keys and keyways to a roughness value of 63 micro-inches as measured under ANSI B46.1.

Furnish keys that are machined from carbon steel forgings, ASTM A668, Class D, unless otherwise specified in the contract documents.

B.9 Bearings and Bushings
Select anti-friction bearings to provide for an ABMA rated L-10 life of 40,000 hours. Use pillow block bearings, adapter mounted, self-aligning, fixed or expansion versions as required. Use cast steel housings capable of withstanding the design loads in any direction, including radial up-lift. Cast the mounting bases without bolt holes. Mounting holes may be sub-drilled in the shop and then final drilled and reamed with the supporting structures, after alignment in the field. Provide units that are grease lubricated and have provision for re-lubrication through fittings in the housings. Provide triple lip shaft seals, mounted in the housings, capable of retaining the lubricant and preventing the entry of water and foreign materials.

For sleeve bearings, provide cast bronze that meet the requirements of castings above. Finish machine the outside diameters of the bushings to provide an ANSI Class LC-1 fit with their associated housing bores, unless specified otherwise in the Plans or herein.

Provide sufficient stock in the bushing inside diameter to permit final machining of the bore after assembly in their housings with the full liners in place. Polish bushing bores to a surface texture of 16 micro-inches according to ANSI B46.1. Provide an ANSI B4.1 RC6 fit between bushing and shaft. Provide grease grooves that have smooth edges that blend smoothly in the bearing surface. Provide entry holes for the grease fittings that intersect and lie completely within the grooves. Provide machine cut grease grooves.

B.10 Welding

Perform all welding required or designated in the plans in conformance with the appropriate American Welding Society Specification D1.5. Ultrasonically inspect all welds used to fabricate machinery per AWS D1.5 for compression welds. Stress relief all weldments. Keep distortion of the pieces to a minimum by use of welding fixtures or other approved devices, fixtures and procedures. Perform required machining after welding and stress relieving. Field welding of completed structures and machinery assemblies or components will not be permitted without the approval of the engineer.

Show complete details of welding joint sizes on the shop drawings. Submit welding procedures with the working drawings to the engineer for approval.

B.11 Lubrication

B.11.1 General

Standardization of the lubrication for the mechanical and electrical systems is required. Coordinate with all the system suppliers to ensure that the type of lubricant supplied shall be kept to as few as possible.

B.11.2 Lubrication Fittings

Provide all bearings and other grease lubricated machinery components with ¼ PTF lubrication fittings with ball check.

Locate the fittings to conveniently facilitate lubrication. Connect the lubrication ports to central stations using ¼ inch stainless steel, seamless pipe with stainless steel fittings. Use pipe extensions that are as short as possible and securely supported.

Upon completion of fabrication plug all grease fitting locations until the components are installed and regular lubrication is started. Lubricate all rotating and sliding parts immediately after assembly and prior to operation.

Provide removable hinged or bolted covers in order to access lubrication fittings and other routine maintenance devices that might be covered by machinery guards.

B.11.3 Lubrication Charts

Furnish three copies on laminated sheet or Mylar full size (22 inches by 34 inches) as well as reduced 1/2 sized for inclusion in the operating and maintenance manuals. The lubrication chart shall show the location of all lubrication fittings and other points of lubrication for the new and existing mechanical and electrical equipment, which will require lubrication of any kind. The chart shall show the kind of lubricant to be used at

each point and the frequency of lubrication. A full size print of the chart shall be framed under Lexan in a neat wooden frame with backing and shall be placed as directed by the City of Sheboygan within the control house.

Submit the lubrication chart to the City of Sheboygan for review and approval as a working drawing according to this Special Provision. Final lubrication chart shall not be made until the chart has been approved by the engineer.

B.11.4 Hydraulic Fluid

Supply new hydraulic fluid to replace the existing fluid. Due to having a seal failure in the system, going forward a lower ISO fluid cleanliness level requirement will be required ISO 17/15/13. Depending on supplier, new hydraulic fluid may not meet this fluid cleanliness level and may require pre-filtering. Existing hydraulic filter media is called out in the scope listing, but a different filter media may be required to be installed in order to maintain this new level of cleanliness. Determine the existing filtration media and supply manufacturer's cut sheets for replacement filter media that meets the new ISO requirement during the shop drawing and submittal process.

B.11.4.1 Flushing of System While Cylinders Disconnected

While flushing the existing piping and valving throughout both hydraulic power units while the cylinders are disconnected, filter the flushing process until an ISO level of 17/15/13 is reached. This ISO level will be reached prior to the cylinders being plumbed back with the existing system. The filtering time that it will take to reach this level will be dependent upon age and cleanliness of the existing fluid, buildup of foreign material in various parts of the system, the cleanliness of the fluid being added, the quality and selection of flush filtering media, and the rate at which the fluid is pumped during the flushing process. Previous oil samples rate the existing fluid at 20/17/12 and 21/17/12. Actuate all valves such that 100% of the system circuitry is flushed during the flushing process. A random oil sample from anywhere in the system may be taken prior to the cylinders being re-connected in order to verify ISO 17/15/13. The resulting fluid cleanliness of the system after flushing and prior to cylinder connection shall meet this new level at no additional cost to the department.

B.12 Spare Parts

Provide the spare parts listed in section A.1 Spare Parts - Purchase, Package, and Deliver

B.12.1 Package and Deliver Spare Parts

Prepare spare parts for long term storage as recommended by the manufacturer. Wrap and box in a durable wooden container. Tag all individual spares with clear identification using the part number and description as shown on the approved shop drawings. Clearly and permanently mark the outside of the spare parts boxes, identifying the contents of the box.

B.12.2 Deliver Spare Parts
Prior to final acceptance and after spare parts have been prepared according to section B.12.1, deliver spare parts to the bridge machinery room for inspection and approval of the engineer.

C Construction

C.1 General
Assembly, disassembly, testing, and adjustment of machinery shall be by millwrights or experienced machinists with demonstrated skill in this type of work. Hydraulic work shall be installed under the direct supervision of an onsite Certified Fluid Power Specialist pre-approved by the engineer.

C.2 Shop Fabrication
Give the engineer no less than ten working days' notice before beginning work at foundries, forge and machine shops so that inspections and tests may be arranged. Provide the engineer with the names and locations of casting, forging and machining suppliers; and other suppliers; and furnish copies of orders that have been placed, prior to the start of any work.

Allow the inspector, designated by the engineer, unlimited access and facilities for inspection of materials and workmanship in foundries, forge and machine shops. Such inspections are to facilitate work and avoid errors, but it is understood the contractor is not relieved of the obligation of assuring compliance with the plans and specifications or the necessity of replacing defective materials and workmanship. Any work performed while free access has been refused will be automatically rejected.

The inspector shall have full authority to reject materials or workmanship which does not fulfill the requirements of these special provisions.

Perform all testing and furnish test specimens, certified copies of chemical and physical tests and certificates of compliance to the engineer without additional charge. Initial acceptance of material and finished parts and assemblies will not preclude subsequent rejection if found deficient. Correction of the deficiencies and/or replacement of materials shall be the responsibility of the contractor. Any materials, components or assemblies rejected after receipt at the bridge site shall be removed and replaced without additional cost to the city.

C.3 Shop Inspection and Testing
Completely assemble all machinery components to assure they fit as required. Perform critical measurements to confirm conformance with the shop detail and assembly drawings.

C.4 Defective Materials and Workmanship
Remove and replace, without additional cost to the city, components determined defective and not made acceptable during inspection and testing. No claims for additional

compensation due to delays resulting from defective materials and/or components will be recognized.

Correct, without additional cost to the city, defects resulting from faulty materials, workmanship, components or installation errors that are revealed during the warranty period.

C.5 Guarantees and Warranties

The contractor shall assign to the city all manufacturer's warranties and guarantees covering products, components and assemblies purchased by the contractor and used in fulfillment of this contract. The terms of those warranties and guarantees are to be consistent with the customary practices of the manufacturer in commercial trade upon acceptance of the contract.

C.6 Protection of Equipment

During construction, all equipment must be protected from damage as a result of construction operations and contamination from dust and debris. Should any equipment become contaminated, immediately clean the equipment, re-lubricate, and protect from further contamination. The center lock must not be operated and no enclosed equipment opened during any period in which construction operations can contaminate the equipment.

C.7 Pressure Testing of Accumulators

C.7.1 De-energization

Prior to removing any hoses, components, or opening the hydraulic system in any way, bleed off the hydraulic pressure retained inside the accumulators by the accumulator valves by energizing the manual override valve. Failure to remove pressure from accumulators could result in personnel injury and equipment damage.

C.7.2 Verification of Accumulator Pressure

Follow manufacturer's directions for obtaining the current inert gas pressure measurement in each accumulator in the system. Confirm that each accumulator is not cracked and still holds the factory pressure. This may require removal of the accumulator from the system and shipment to original manufacturer for pressure readings.

C.7.3 Accumulator Pressure Report

Draft a report with the inclusion of the hydraulic schematic noting each accumulator with a clear label. After pressure measurements are confirmed, send report to engineer.

C.8 Adjustable Valve Setting Verification

C.8.1 General

This section includes the scope to verify that each adjustable valve in the system is properly set. For this system, this refers to each pressure relief valve and any other valve with an adjustable pressure setting

C.8.2 Hydraulic System As-Built Testing

Prior to commencement of work on this project that would affect the weight of the span or potentially affect the performance of the hydraulic system, perform a pre-construction hydraulic system performance test. During the operation of three consecutive openings and closings of the span, include the following test data:

- System operating pressure during warm up
- System operating pressure during load cycle – bridge opening
- System operating pressure during unload cycle - bridge closing
- Rod side cylinder pressures of each cylinder throughout the entire cycle
- Bore side cylinder pressures of each cylinder throughout the entire cycle
- Pilot pressures to each pilot operated valve
- Flow rates to each cylinder during both extend and retract functions

Measure directly and determine the current pressure setting of all adjustable pressure setting valves, including but not limited to pressure relief valves. This may require minor modification to the circuit to measure. Perform this only after the above measurements have been recorded.

Pressure transducer instrumentation should be selected such that real-time continuous measurements can be taken at a high enough sampling rate that a pressure spike can be measured, such as when the valve closes to stop downward motion of the span. If the accumulators protecting the cylinder pilot operated check valves are functioning properly, this pressure spike will not be instantaneous. Instrumentation should be capable of reading such a spike if the accumulators are not functioning properly.

C.8.3 Cracking Pressure

Confirm that the pressure setting is listed as cracking pressure and set valve according to standard industry procedures for setting relief valve cracking pressure. If external fluid power is used for portions of this testing, utilize a hydraulic power pack supply with pressure instrumentation that has been calibrated within the last 6 months that is filled with hydraulic fluid of the same type, viscosity, and meets the ISO cleanliness level required herein.

C.9 Hydraulic Schematic and System Flushing

C.9.1 Hydraulic Schematic

The current hydraulic schematic, drawing No. 517069, was created and provided by Oilgear on 5-25-94. In conformance with Sections A.1.3-A.1.5, provide a revised copy of the hydraulic schematic Bill of Materials including any marked up changes to adjustable valve pressure settings clearly noted. Include documentation directing any change to any adjustable pressure setting valve, a written statement that the bridge is still in conformance with AASHTO after the change, and any applicable calculations in an Appendix to the operator’s manual. Clearly mark or stamp “NOT THE LATEST REVISION” on any existing schematics, drawings, or operating procedures that are affected by the pressure setting change.

C.9.2 Hydraulic System Flushing

C.9.3 General

Once the hydraulic cylinders have been removed, install the necessary plumbing such that the remaining portions of the hydraulic system that will not be removed for refurbishment can be flushed to eliminate sludge, varnish, debris and contaminated or degraded fluid from conductor walls and other internal surfaces and system dead spots. Reasons for performing a system flush include:

- Fluid degradation - resulting in sludge, varnish or microbial deposits.
- Major failure - combined with filter overload disperses debris throughout the system.
- New or overhauled equipment - to purge 'built-in' debris.

Power flushing involves connecting the system to a hydraulic power unit to circulate fluid at high velocities to create turbulent flow conditions which assist in removing sediment and debris. A flushing rig is typically equipped with a pump that has a flow rate several times that of a system's normal flow but this may not be very practical for this system. The use of directional valves arranged such that a larger portion of flow than normal can be delivered to each individual conductor route are typically used. Accumulators, fluid heater and chiller and of course, a bank of filters are typical. The directional valves enable the flushing direction to be changed, the accumulators enable pulsating flow conditions and the heater and chiller enable the temperature of the flushing fluid to be increased or decreased, all of which can assist in the dislodgment of contaminants from conductor walls and circuit dead spots.

C.9.4 Execution of Power Flushing

For this system, if preferred, the existing power units can be used instead of a standalone power flushing unit. Slight plumbing changes to the lower manifold block below each pair of hydraulic cylinders should provide the same functionality. This manifold is a simple distribution block, or tee. Install a flexible hydraulic hose in place of the cylinder rod and bore ports. Cap the other two outlet ports such that instead of diverting half of the flow to the other cylinder, up to twice as much flow is delivered through each conductor route. At minimum, flush each conductor circuit until an amount of fluid equal to five times the volume of the hydraulic reservoir has been pumped through the circuit. Then, reverse the flow direction. Perform this at minimum four times in each direction for each circuit. After the previous conductor circuit is flushed, switch locations of the loop hosing and the caps such that the other conductor routes can be flushed in the same manner. Fluid heaters should be on and oil temperature should be kept hot during the entire flushing process. Oil sampling should be performed to determine the ISO particle count of the flushed system and the flushing process continued until the fluid meets the requirements of Section B.11.4

C.9.5 New Fluid

In order to speed the process, only perform flushing after the existing fluid has been removed and the hydraulic reservoirs cleaned. Only add a portion of new fluid to the reservoir capacity for the flushing process such that less power is used to heat the oil. If desired, again to speed the process, during flushing portions of this fluid can be drained

and discarded, filters changed, and new fluid added. This eliminates a large amount of debris without having to only rely on the filters to remove debris and sediments.

C.10 Hydraulic Cylinder Rebuild

C.10.1 General

The quality procedures developed for the rebuild shall be documented in writing and every effort possible made to prevent oil contamination. Oil contamination prevention steps and additional oil filtration and flushing processes should be identified and documented in writing prior to and after every step of the rebuild process. Provide a signature of the supervisor that each quality and oil contamination prevention step was performed. Submit this documentation with final cylinder rebuild report.

C.10.2 Shipping

Each assembled cylinder empty of oil, weighs at minimum 27,000 pounds. Prepare cylinders for shipping by fully retracting the rods, draining all existing fluid, adding one gallon of virgin Shell VSI 33 Oil inside bore end, and capping all ports after full. If the oil was not provided by the manufacturer to an ISO cleanliness level of ISO 17/15/13 or lower, then pre-filter the hydraulic fluid to this level prior to filling. When loading onto truck, cinch nylon straps down on the cylinder assembly only on the main cylinder body or through pivot pin eyes. Do not use chains or wire rope on the surface of the cylinder at any time during hoisting, shipping, dis-assembly, or assembly.

C.10.3 Disassembly

Deliver and support the cylinder assembly in the horizontal position prior to dismantling on a stable, clean, and level working surface.

Perform the following:

- Remove hard line hydraulic line plumbing.
- Remove Pilot Operated check valve manifold from cylinder body.
- Install steel caps or covers over open Pilot Operated check valve manifold ports and over machined surfaces.
- Install any necessary temporary fittings in the cylinder ports along with steel caps to protect from contamination.
- Remove and inspect cylinder trunnion bearings.
- Take pictures and measurements of trunnion bearing condition for rebuild report.
- Loosen rod pivot locknut and remove rod pivot from rod end. (4,200 pounds).
- Mark the orientation of the rod pivot bearing with a paint pen or similar permanent marking method on both the inner and outer race as well as the rod pivot. The bearing will be replaced 180° from original position in order to load the rollers with the least wear.
- Remove rod pivot bearing (Torrington P/N 23184KW33W45ABR or 23184KYMBW507C08) from rod pivot by removing the bolts in the retainer plate. Remove the retainer plate and spacers. Remove the bearing making sure the inner and outer race remain relative to one another.
- Remove rod pivot wipers from rod pivot.

- Remove rod head bolts from rod head. (Quantity 36)
- Remove steel caps from cylinder ports.
- Remove rod assembly consisting of piston, rod, and rod head from the cylinder. Provide a third support from overhead crane via a nylon strap or other means to assure the additional weight of the piston does not tip the extracted rod causing damage to piston or rod assembly. Do not scratch, nick, or dent chromed and machined surfaces. (8,500 pounds).
- Clean, document condition, and photograph assembly including visible seals for root cause inspection report.
- Remove rod head assembly and rod brake from rod being sure not to damage threads for rod pivot. (1,600 pounds).
- Remove rod brake assembly bolts.
- Remove rod brake assembly from cylinder head per rod brake manual.
- Clean, document condition, and photograph rod head seal for root cause inspection report.
- Remove packing gland by removing bolts and washers from rod head. Remove packing gland. (225 pounds).
- Remove packing gland seal and backup ring.
- Remove rod packing leaving backup ring in place.
- Remove rod wiper from packing gland.
- Remove rod head seal.
- Thoroughly inspect disassembled seals, capture and collect any foreign materials that could be attributed to rod seal failure, photograph any findings for root cause inspection report.
- Remove piston seal and backup ring.
- Remove piston packing.
- Clean, inspect, and perform all measurements for rebuild inspection report.

C.10.4 Root Cause Inspection Report

The rod seals cannot be visually inspected while installed due to the rod brake assembly. Therefore, the reason for seal failure needs to be confirmed. The current root cause regarding the failure of the rod seal has been attributed to improper replacement of rod brake pads with an alternate material and the subsequent damage to the seal from the adverse effects of this material contact with the rod. Verify this type of damage to the rod seal or the rod upon disassembly. Provide a report to the engineer confirming these findings or alternate findings that includes the following:

C.10.4.1 Documentation

Clean, inspect, and photograph the seals, the area between the rod brake assembly and cylinder head, the area between the seals, and any other area that becomes visible during each step of the dis-assembly process for inclusion in root cause inspection report. Include written description of the findings or condition of the seals during dis-assembly including any findings or recommendation as to the root cause of the seal failure. Provide a report or the determined root cause for seal failure for each of the cylinders as they are disassembled and transmit findings within three days to the engineer.

C.10.4.2 Foreign Material

Any foreign material found trapped between or embedded within the rod seals shall be removed, collected, photographed, and packaged for shipping. Clearly label the packaging for each sample of foreign material with details about source and photograph associated with each group. Send photographs with the root cause inspection report to the engineer. Ship any foreign materials to the engineer for inspection and possible future material analysis in order to confirm the cause of seal failure. This may be necessary if it is determined that rod brake material and rod scoring are not the root cause of the seal failure. If this is not the case the engineer can discard the material.

C.10.4.3 Alternate reason for seal failure and third party testing

If no foreign material is found or if seal appears to have failed due to any other reason other than foreign material or rod scoring, the damaged rod seal shall be packaged and shipped to an alternate location determined by the engineer for further analysis. This shall only be a requirement if the cause of the rod seal failure is suspected to be from reasons other than rod brake material degradation and subsequent rod scoring.

C.10.5 Rebuild Inspection Report

Include the root cause inspection report within the overall rebuild inspection report along with the documentation of the rebuild of each cylinder. Include photographs and any important findings at each step. Document quality control measures and note oil contamination prevention measures implemented at each step. Include details of each of the following:

C.10.5.1 Cylinder rod pivot bearing inspection and rotation

Mark the inner and outer race of the bearing with a permanent marking pen. Turn the bearing to assure smooth and quiet operation noting any issues. It is desired to maintain the inner and outer race relative to one another during the rebuild process. The bearing does not fully rotate during operation; therefore half of the rollers should have more wear than the other half. It is desired to re-assemble the bearing 180° from original location such that the rollers with the least amount of wear are loaded. When the bearing is spun, count the number of revolutions and spin the bearing back the same.

Photograph any suspected abnormalities, scratches, or signs of race spinning inside rod pivot and include with inspection report.

C.10.5.2 Cylinder trunnion bearings inspection

Photograph each surface side of each split bearing in order to document any cracks, galling, or any other potential issue that may warrant incorporating a change into the replacement split bearings. Include photographs with inspection report.

C.10.5.3 Hydraulic Cylinder Rod

Handling and removal

After brake assembly removal, head bolt disassembly, and head removal the rod can be removed from the barrel of the cylinder. Assure this removal is pre-planned and performed

in such a way that no scratches, nicks, or dents are inflicted on machined or chromed surfaces.

Cracks
Check the rod for cracks using dye penetrant test at all points where cross section area changes. Photograph results and include with rebuild inspection report. If any cracks or suspected cracks are found, contact the engineer.

Rod straightness
The cylinder rod shall be measured to determine if the rod is bent, not just a visual inspection of the dull or shiny nature of the chrome from one side to the other. The rod should be placed on rollers and rotated such that the run-out variance can be measured with a dial gauge at the rod's midpoint section. Document run-out and submit with cylinder rebuild report. No attempt to straighten the rod will be made if it exceeds tolerances. The primary load on the rod is a tensile load; therefore, a bent rod due to operation is not a primary concern but should be checked and documented in case cylinder removal, shipping, or handling has damaged the rod.

Rod Stretch
If the rod has been exposed to excessive loads the rod may have stretched and could be permanently deformed. A resulting reduction in outside diameter of the rod would indicate this condition. Measure the OD of the rod in three rotating locations noting minimum and maximum outside diameter if any variance. A set of these measurements should be taken progressively along the length of the rod a distance equivalent to the range of half the rod diameter to every rod diameter or approximately every 6 inches of rod length. Document these measurements in the inspection report for each cylinder rod. If any variance in outside diameter is found contact the engineer.

Rod Re-chroming
If excessive pitting or scoring of chromed rod surface is present, and all measurements from above meet tolerances, attempt to remove pitting or scoring with emery cloth in an alternating cross hatch pattern. If this is not possible, the rod may need to be re-chromed. Provide details about re-chroming vendor's process and a copy of their quality control documentation with rebuilt cylinder if cylinder rod is re-chromed.

C.10.5.4 Hydraulic Cylinder Head and Rod Seal

Handling and removal
See removal of rod above in Section C.10.3 Hydraulic Cylinder – Disassembly

Head inside diameter and seal grooves
Once the head is removed, take measurements of inside diameter of head with internal micrometer in alternating positions to check for warping or out of round. Document the photographs and measurements on rebuild inspection report.

Cylinder Head Trueness
While unlikely, the possibility exists that excessive loads could have warped the head out into a dome shape. This would result in a square or true machined surface from the outer edge into the area of the head bolt circle and then progressing into a domed shape towards the center of the cylinder head. If possible measure the trueness of the machined surface to document whether or not this condition exists.

Cylinder Head Bolts
While unlikely, it is possible that excessive cylinder tensile load or over-torqueing of cylinder head bolts could have stretched and permanently deformed the cylinder head bolts. Measure the length of the bolts and document in inspection report. The bolts will be replaced in kind, but the measurements are to determine whether or not the cylinder has been over-pressurized.

Cracks
Cover and protect machined surfaces and seal grooves while removing the outer cylinder head surface paint covering with sand or bead blasting. Check the cylinder head for cracks using dye penetrant test at all points where cross section area changes. Photograph results and include with rebuild inspection report. If any cracks or suspected cracks are found contact the engineer.

Nonmetallic wear bands
Wear bands are fitted between the head and rod. These shall be inspected, photographed, and replaced when the rod seals are replaced.

C.10.5.5 Cylinder Piston
Cracks
Check the cylinder piston for cracks using dye penetrant test at all points where cross section area changes. Photograph results and include with rebuild inspection report. If any cracks or suspected cracks are found contact the engineer.

Nonmetallic wear bands
Wear bands are fitted between the piston and barrel. These should be photographed and replaced with the piston seals.

C.10.5.6 Cylinder Barrel
Foreign Material
Remove any foreign material that is present inside the cylinder bore, photograph, and package for shipment to the engineer with root cause inspection report.

Bore diameter oversize
The maximum bore diameter for standard sized piston seals is the nominal bore diameter plus 0.010 inch oversize. Confirm that this is the manufacturer's upper limit and check this dimension at several points along the barrel using an internal micrometer and document in the inspection report.

Cylinder Barrel Surface

Inspection of the internal ID of the barrel for pitting and scoring will be necessary to determine if the barrel needs to be honed. Extensive inspection and photo documentation should be performed on the lower 90° of the inner barrel surface opposite of the bore and rod end ports. This area should be well inspected via a camera extension rod. This is a likely place for scoring as metallic shavings or scored rod material would tend to settle towards the bottom and be pushed up and down the cylinder bore. Document this inspection and photographs in the inspection report with any findings and recommendations on whether honing will be required.

Oil Contamination Preventative Measures

This outline of quality control steps and preventative measures applies not only to the cylinder rebuild process, but any work throughout the entire project that involves hydraulic components or components that can come in contact with the hydraulic fluid in any manner. Outline in writing any necessary steps required to prevent oil contamination during each step. This quality plan should be written, performed, and signed after each conformance. This may include, but not be limited to:

- Replacing the steel caps on any ports before and after each step.
- Fabrication and installation of clean steel cover plates for non-threaded ports and openings.
- Pressure washing work surface prior to placement of parts to be disassembled, assembled, or stored.
- Locating the work area away from open doors and any other sources of airflow allowing subsequent airborne dust and particulate contamination.
- Locating the work area away from any other processes in the shop that could potentially contaminate such as grinding and paint operations.
- Provision and use of latex gloves while handling internal components.
- Supply and disposal after each individual use of clean shop rags.
- Cleaning of tools prior to and after each use.
- Checking the fluid filtration level of any test power packs to meet ISO 17/15/13.
- Cleaning male and female quick connections before and after each use.
- Prevention and mediation of any sources of water contamination.

C10.6 Re-assembly of Cylinder

Confirm that all seals, glands, packing, wear bands, documentation, measurements, photographs, and dye penetrant tests have been replaced or performed. Re-assemble the cylinder in reverse order of Section. 3.6.3 “Dis-assembly” with the following notes, additions, and exceptions.

C.10.6.1 Bolt Torques

Torque bolts in alternating across-across pattern to listed bolt torques and lubrication instructions on original manufacturer’s drawing.

C.10.6.1 Rod Pivot Bearing

During dis-assembly the rod pivot bearing was marked prior to removal. During re-assembly, locate the bearing 180° from original position such that the rollers with the least amount of wear will be loaded after installation.

C.10.6.2 Outer surface cleaning/pressure washing

Thoroughly clean cylinder such that no sand, grit, leftover hydraulic oil, or any other foreign material is on the outer surface. A pressure washer may be used, provided that all ports are capped and thoroughly wrapped in plastic. The rod should be fully retracted, and rod seal should be protected by multiple layers of plastic and tape. Care should be taken not to directly hit the rod seal with high pressure water stream. A mild de-greasing formula may be used for oil removal provided it is thoroughly removed with cold clean water.

C.10.6.3 Modification of rod brake assembly to an oil leak capturing device

The rod brakes will not be used after the cylinders are re-installed on the bridge. In order to facilitate the capture of oil leakage in the event that a rod seal ever fails again in the future, the rod brake housing shall be modified and installed back on the cylinder as an oil leak capture device. Remove the inner workings of the rod brake assembly, including the brake pads, springs, tapered pad actuation weldment, and brake pad actuation cylinders. Remove the exterior hardline plumbing from all brake pad actuation cylinders, except for one, and plug or cap holes. During cylinder re-assembly, install a custom manufactured seal or liquid seal forming material capable of holding hydraulic oil up to 100 psi between the rod brake housing and the cylinder head. This seal will prevent the oil leaking out of the rod brake housing attachment bolt holes as is the current configuration. Replace the original rod wiper/seal (Parker D-9000) prior to re-installation of the rod brake housing on the cylinder.

When the cylinders are installed back on the bridge, plumb the oil leak capture device back to tank such that all fittings and hoses exist, but then disconnect the hose. The purpose for this is so that if a rod seal does fail in the future, maintenance staff will be alerted, instead of the leaking oil just running back to the tank. If this does occur in the future, then the oil leak capture device plumbing will be connected to tank and monitored at that time.

C.10.6.4 Repaint Cylinder

Clean and paint all unfinished, non-stainless surfaces of equipment according to an epoxy paint system the manufacturer recommends, except as noted herein and as shown in the plans. Provide two coats of Carboline Carbomastic 15 - Aluminum at 7-10 mils each and top coat of Carboline Carbothane 133 VOC at 5-7 mils with identical matching color code to Sherwin Williams. Provide color samples for the city for final approval. All painting shall be factory painted. Apply field touch-up paint to factory applied coatings that are damaged during construction and installation.

Prime coat finished machined mounting surfaces only, do not apply finish coat.

After completing the operating tests and acceptance tests, wash with an appropriate solvent all accumulated oil, grease, dirt, and other foreign matter from exposed surfaces, except rubbing surfaces.

C.10.6.5 Pressure testing and bench operation
After re-assembly of the cylinder, outer surface cleaning, and painting, safely pressure test cylinder on both the bore and rod side to a pressure of 1.5 times the rated working pressure of 3,000 psi. After this pressure is applied, reduce the pressure to the rated pressure of 3,000 psi and continually hold this pressure for 5 minutes on each side.

After relief of pressure, check for any leaks. After testing the bore side, inspect rod to make sure no damage was inflicted during all assembly and testing processes.

Return rod to fully retracted position, cap all ports, and prepare the cylinder for shipment.

C.11 Shipment and Storage
C.11.1 Protection for Shipment
Clean all machinery components and assemblies of dirt, grit, chips, corrosion and other injurious substances before shipment. Unpainted surfaces shall be coated with an approved corrosion-inhibiting preservative.

Grease exposed shaft journals, wrap in oil-resistant paper, and cover with oil-soaked burlap and securely timber lag for shipment. Take all precautions to assure the bearing surfaces are not damaged during shipping and handling.

Completely protect machinery parts from weather, dirt and foreign materials during shipment. Store machinery parts indoors while awaiting installation and erection at the site. Mount assembled units on skids or otherwise crate or protect during handling and shipping.

Bag and/or crate for shipment all mounting hardware and other small parts. Do not co-mingle the parts. Identify each part with its number and keep separate from other parts.

Provide tags recording the part number wired to the containers for each part prior to shipment. Coat bolts, nuts and other steel parts with approved rust-inhibitor.

C.12 Alignment and Bolting
Erect and assemble the machinery according to part number and match marks, and according to manufacturer's recommendations.

Torque all high strength bolts, and turned bolts as recommended by the equipment manufacturer.

C.13 Coatings
Coat threads for all turned bolts with anti-seize compound before assembly to avoid corrosion or galling and ease future removal.

C.14 Faying Surfaces

All finished contact surfaces which are not finally assembled in the shop shall be coated with waterproof National Lubricating Grease Institute No. 3 Multipurpose grease as soon as possible after being accepted and before removal from the shop, and shall be adequately protected during shipment by wrapping with burlap or canvas held by wooden bats securely wired together. During erection these surfaces shall be thoroughly cleaned and a field coat of grease applied prior to assembly.

C.15 Cleaning

C.15.1 High Pressure Water Wash-down

As directed in scope section of mechanical drawings, perform a high pressure water wash down of the machinery equipment room to remove all concrete demolition dust, debris, leaked hydraulic oil, grease, and any other foreign material from all surfaces to prevent contamination of new hydraulic oil during re-assembly. Perform an initial wash down prior to hydraulic system re-assembly and after any concrete demolition activities are completed. Perform de-greasing during the second wash down after all hydraulic components have been replaced to functional assembly state but before final acceptance testing of the bridge. High pressure stream shall consist of hot water pressure delivered at a minimum of 3,000 psi for degreasing operations with variable tip angles ranging from 10° to 30° fan tips which will provide a range of coverage rates.

Wrap with waterproof covering, protect from high pressure stream, cover, and avoid contact of water stream with electrical components, conduits, cords, controls, and any other component in the machinery room that would be adversely affected by water either directly from the pressure wand or splashing or dripping from components above.

For demolition dust cleaning, use a mild detergent soap mixture applied to surfaces followed by water only rinse. For the degreasing of any components with leaked hydraulic oil or grease, use a manufacturer’s recommended concentration of alkaline de-greaser followed by a mild detergent soap. The final pass over affected areas shall be water only and of adequate duration to remove any residual soap and degreaser films.

Determine final drainage location of floor drains to determine the need if any to capture, collect, and treat wash down water for water treatment per local area or applicable federal water treatment requirements. An optional non-toxic, environmentally friendly degreasing agent may be submitted for approval by the engineer.

C.16 Painting

C.16.1 General

Use a pre-approved top coat that is resistant to the effects of the sun, and is suitable for use in a marine environment.

This work shall be according to ASTM D6386.

Submit an outline of painting materials and methods with the shop drawings to the engineer for approval.

C.16.2 Shop Painting
Before painting unfinished surfaces in the shop, remove all burrs, chips, rust, scale, sand, grease and other foreign material by blasting, wire brushing or other approved means. Prepare surface for painting by blasting to achieve a SSPC-SP-10 "Near White Metal Blast Cleaning".

Use masking to avoid painting machinery surfaces which are in normal rubbing contact, such as shaft journals and bushings, and sliding guides.

After properly cleaning the surfaces apply one prime coat of shop paint to all unfinished machinery surfaces. Use a primer compatible with the paints selected for subsequent coats.

C.16.3 Epoxy System
See standard spec 517.

C.17 Primary Hydraulic Pumps
C.17.1 Case Drain Flowmeters
As part of the initial hydraulic system pressure and flow testing and data collection, furnish and install case drain flowmeters on each of the case drain lines of each primary hydraulic pump. Record current case drain flow rates and compare to manufacturer's specified tolerances as one means of determining the amount of wear inside the pump and the overall pump condition. At 3,500 psi and 200 SSU oil viscosity the typical case drain flow rates are 8.25 GPM maximum. Per manufacturer's recommendations the break points are at twice the typical flow (16.5 GPM) and three times the typical flow (25 GPM). Confirm deviations of this flow from this level due to operating at a lower pressure or alternate oil viscosity with the manufacturer and submit to the engineer for review. The case drain flowmeters shall remain installed for future preventative maintenance program monitoring. If aprimary hydraulic pump case drain flow rate exceeds the manufacturer's tolerances listed above or at the discretion of the engineer, that specific primary hydraulic pump shall be replaced with one of the spares provided.

C17.2 Primary Hydraulic Pump Spares
The existing hydraulic pumps and their rebuild components have been obsoleted by the original equipment manufacturer such that rebuild of the original hydraulic pumps is not possible. Supply the listed quantity of primary hydraulic pump spares listed in section A.1 as well as any items necessary to facilitate installation. Provide spare pumps of equal or greater volumetric efficiency, type, controls, flow rate, size and quality as the original pumps. Perform a single test fitup to assure that the spare pumps and any necessary adapting hardware will function in the future as a direct drop in replacement by city maintenance staff. This includes any modification plates for mounting, adapters for hosing, or different motor couplings.

C.18 Contractor's Inspection
Upon completion of the machinery installation, make a thorough inspection to confirm that all machinery components are free of obstructions and properly aligned; all bolts tightened in accord with standard spec 506; all field painting is complete; bearings and other rotating and sliding parts are supplied with lubricants; and the lift span is balanced as required.

C.19 Field Testing
When the bridge is ready for field testing, notify the engineer no less than 15 days before scheduling the tests such that a 2 day bridge closure can be communicated to the public. Inform all city personnel designated by the engineer about the tests such that they can be available to operate the lift span. Provide a complete crew of machinists to be available during the tests and make all adjustments and corrections required to complete the tests. Only the city shall operate the bridge during testing and all other operations. Advanced notice a minimum of 72 hours prior to testing is required.

Submit a testing procedure to the engineer for approval prior to the tests. Coordinate all mechanical equipment testing with tests required for electrical equipment.

The testing procedure shall include, but not be limited to, the verification of proper installation, alignment, fastening, adjustment and operation of the following:

- Normal Operation of Span Drive Machinery
- Manual Operation of Span Drive Machinery
- Operation of Span Drive Machinery without power

The tests shall include operation of the span under normal and auxiliary drive speed conditions. Open and close the bridge ten times consecutively as normal operation without problems prior to final acceptance. In addition to the 10 final acceptance openings and closures, demonstrate that the symmetric pairs of main hydraulic pumps can be isolated to facilitate future pump replacement without affecting bridge operation. Open and close the bridge without problems four times total (one time each) utilizing each pair of main hydraulic pumps operating independently.

Lowering of the lift span without electrical power is also required to be demonstrated. Perform one bridge closure without electrical power to demonstrate hydraulic plumbing, accumulators, and valve operation is functioning properly.

During the test runs, observe and inspect all machinery assemblies to determine if everything is in proper running order and fully meets the requirements of the contract documents, special provisions and the manufacturer's performance standards. The engineer and representatives of the machinery and electrical control manufacturers shall be present and witness all field testing. Temperature rises in mechanical and electrical equipment shall not exceed design and/or manufacturer's limits.

If testing shows that components are defective, inadequate, functioning improperly or incorrectly adjusted, make all corrections, adjustments, repairs or replacements necessary before final acceptance at no additional cost to the city.

C.20 Training
After the final testing of the bridge is complete and acceptable, provide instruction for the city's Operation and Maintenance personnel. The instruction shall include classroom presentations and discussions, utilizing materials in the Operation and Maintenance Manuals, as well as observations of the equipment in place on the lift span, while stationary as well as in operation. Facilities for training will be provided by the city.

The topics covered during the training shall include, but not be limited to:
- Function and purpose of the major components and systems
- Normal, auxiliary, and manual operation
- Primary hydraulic pump isolation and installation
- Operation of the bridge with primary hydraulic pumps isolated
- Routine maintenance, adjustments, and lubrication including storage of spares
- Trouble shooting

D Measurement
The department will measure Hydraulic Span Drive Machinery Rehabilitation as a single lump sum unit of work, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.02	Hydraulic Span Drive Machinery Rehabilitation	LS

Payment is full compensation for furnishing all labor, equipment, material, and all items needed to remove, repair, re-install, and test the hydraulic span drive machinery as described in this special provision and as shown on the plans including spare parts.

The following potentially required items of work will not be paid as part of this pay item but paid for separately under other bid items:
- Re-chroming Cylinder Rod
- Honing Cylinder Barrel
- Replacing Load Holding Valve

34. Tubular Steel Railing Repair, Item SPV.0105.03.

A Description
This special provision describes repairing cracks and broken welds in tubular steel railing and drilling drainage holes in tubular steel railing ends according to standard spec 513 and as hereinafter provided.

B (Vacant)

C Construction
Clean, repair, and weld cracks, longitudinal split sections, and broken welded connections in the tubular steel railing according to standard spec 513.3 as directed by the engineer.

Drill a ½“ hole into the tubular steel rail at the location where the rail terminates at the base plate, bottom of the angled section on the side facing the roadway (curb side) to allow for water drainage at the locations shown on the plans or as directed by the engineer.

D Measurement
The department will measure the Tubular Steel Railing Repair bid item as a single lump sum unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.03	Tubular Steel Railing Repair	LS

Payment is full compensation for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

35. Heating and Housing, Item SPV.0105.04.

A Description
This work consists of furnishing the necessary equipment and labor to completely enclose and heat portions of the structure for cleaning and coating of structural steel as described in this special provision and as directed by the engineer.

Heating and housing of portions of the structure applies to, but is not limited to, the following work: full cleaning and coating of all bascule span structural steel. This work will be accomplished beyond the seasonal limitations as defined in the Standard Specifications for Construction, these special provisions, and as authorized by the engineer.

B (Vacant)

C Construction
Arrange the heating system to provide uniform heating by forced air or radiation within the housing enclosure. Vent the heating system to prevent direct contact of carbon dioxide exhaust gases within the housing enclosure. Heaters must maintain air and steel temperatures from 50 degrees Fahrenheit (F) to 100 degrees F for the duration of the above work without discharging oils or other pollutants onto the surfaces to be coated.

D Measurement

The department will measure the Heating and Housing bid item as a single lump sum unit acceptably completed for the structure specified regardless of the number of enclosures necessary or regardless of the number of erection and removal operations necessary to allow the performance of other work within the enclosures.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.04	Heating and Housing	LS

Payment will only be made when work is required to be completed at a time that does not comply with temperature restrictions specified in standard spec 517 and these special provisions.

Heating and housing necessary to perform other items of work within the seasonal and weather limitations specified in the standard specifications is considered to be included in the payment of other pay items.

36. Water for Seeded Areas, Item SPV.0120.01.

A Description

This special provision describes furnishing, hauling and applying water to seeded areas as directed by the engineer, and as hereinafter provided.

B Materials

When watering seeded areas, use clean water, free of impurities or substances that might injure the seed.

C Construction

If rainfall is not sufficient, keep all seeded areas thoroughly moist by watering or sprinkling. Water for 30 days after seed placement or as the engineer directs. Apply water in a manner to preclude washing or erosion. The topsoil shall not be left un-watered for more than 3 days during this 30-day period unless the engineer determines that it is excessively wet and does not require watering. The equivalent of one inch of rainfall per week shall be considered the minimum.

D Measurement

The department will measure Water for Seeded Areas by volume by the thousand gallon units (MGAL), acceptably completed. The department will determine volume by engineer-approved meters or from tanks of known capacity.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0120.01	Water for Seeded Areas	MGAL

Payment is full compensation for furnishing, hauling, and applying the water. (NER12-1010)

37. Wall Modular Block Gravity Landscape LRFD, Item SPV.0165.01

A Description

This special provision describes designing, furnishing materials and erecting a permanent earth retention system according to the lines, dimension, elevations and details as shown on the plans and provided in the contract. The design life of the wall and all wall components shall be 75 years minimum.

B Materials

B.1 Proprietary Wall Systems

The supplied wall system must be from the department's approved list of Modular Block Gravity Landscape Wall systems (Modular Block Gravity Landscape Walls). Proprietary wall systems must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract. The location of the plant manufacturing the facing units shall be furnished to the engineer at least 14 days prior to the project delivery.

The department maintains a list of pre-approved Modular Block Gravity Landscape Wall systems. To be eligible for use on this project, a system must have been pre-approved by the Bureau of Structures and added to that list prior to the bid opening date. To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision and be prepared according to the requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Bureau of Structures, Structures Maintenance Section in Room 601 of the Hill Farms State Transportation Building in Madison or by calling (608) 266-8494.

B.2 Design Requirements

It is the responsibility of the contractor to submit a design and supporting documentation as required by this special provision, for review and acceptance by the department, to show the proposed wall design is in compliance with the design specifications. The submittal shall include the following items for review: detailed plans and shop drawings, complete design calculations, explanatory notes, supporting materials, and specifications. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls. Submit electronically to the engineer and Structures Maintenance Section for review and acceptance. Submit no later than 60 days from the date of notification to proceed with the project and a minimum of 30 days prior to the date proposed to begin wall construction.

The plans and shop drawings shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the project identification number and structure number. Design calculations and notes shall be on 8 ½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans, shop drawings, and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design of the Modular Block Gravity Landscape Wall shall be in compliance with the *AASHTO LRFD Bridge Design Specifications 6th Edition 2012*, (AASHTO LRFD) with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current *Standard Specifications for Highway and Structure Construction* (standard spec), Chapter 14 of the WisDOT LRFD Bridge Manual and standard engineering design procedures as determined by the department. Loads, load combinations, load and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined according to Table 11.5.7-1 LRFD.

Design and construct the walls according to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer.

Walls shall be designed for a minimum live load surcharge of 100 psf according to Chapter 14 of the WisDOT LRFD Bridge Manual or as shown on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratio (CDR) for sliding, eccentricity, and bearing checks is provided by the department and are provided on the wall plans.

The design of the Modular Block Gravity Landscape Wall by the contractor shall consider the internal and compound stability of the wall mass according to AASHTO LRFD 11.10.6. Internal stability shall also be considered at each block level. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. The width of the modular block from front face to back face of the wall shall be included in the design computations and shown on the wall shop drawings. Compound stability shall be computed for the applicable strength limits. Sample analyses and hand calculations shall be submitted to verify the output of any software program used. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal and external stabilities as defined in AASHTO LRFD.

Facing units shall be designed according to AASHTO LRFD 11.10.2.3.

The minimum embedment of the wall shall be 1 foot 6 inches, or as given on the contract plan. Step the leveling pad to follow the general slope of the ground line. Frost depth shall not be considered in designing the wall for depth of leveling pad. Additional embedment may be detailed by the contractor, but will not be measured for payment.
The leveling pad shall be as wide as the proposed blocks plus 6-inches, with 6-inches of the leveling pad extending beyond the front face of the blocks.

Wall facing units shall be installed on a concrete leveling pad or base aggregate leveling pad. The bottom row of blocks shall be horizontal and 100% of the block surface shall bear on the leveling pad.

The concrete leveling pad shall be as wide as the proposed blocks plus six inches, with six inches of the leveling pad extending beyond the front face of the blocks. The minimum thickness of the leveling pad shall be 6-inches. A concrete leveling pad is required for the following scenarios:

a. When the wall height measured from the top of the leveling pad to the top of the wall exceeds 5 feet at any point along the entire wall length
b. A structure number has been assigned (such as R-XX-XXX), regardless of wall height

A base aggregate leveling pad shall be used when a concrete leveling pad is not required. The base aggregate leveling pad shall be as wide as the blocks plus 12 inches, and the modular blocks shall be centered on the leveling pad. The minimum thickness of the leveling pad shall be 12-inches after compaction. The leveling pad shall be made from base aggregate dense 1¼-inch in conformance with standard spec 305.

B.3 Wall System Components
Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All certifications related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

B.3.1 Wall Facing
Wall facing units shall consist of precast modular concrete blocks. All units shall incorporate a mechanism or devices that develop a mechanical connection between vertical block layers. Units that are cracked, chipped, or have other imperfections according to ASTM C1372, or have excessive efflorescence shall not be used within the wall. A single block type and style shall be used throughout each wall. The color and surface texture of the block shall be as given on the plan or chosen by the engineer.

The top course of facing units shall be a solid precast concrete unit designed to be compatible with the remainder of the wall unless a cast-in-place concrete cap is shown on the plans. The finishing course shall be bonded to the underlying facing units with a durable, high strength, flexible adhesive compound compatible with the block material. A formed cast-in-place concrete cap may also be used to finish the wall. A cap of this type shall be designed to have texture, color, and appearance that complement the remainder of

the wall. The vertical dimension of the cap shall not be less than 3½ inches. Expansion joints shall be placed in the cap to correspond with each 24 inch change in vertical wall height and at maximum spacing of 10 feet.

Block dimensions may vary no more than ±1/8 inch from the standard values published by the manufacturer according to ASTM C1372. Blocks must have a minimum depth (front face to back face) of 8 inches. The minimum front face thickness of blocks shall be 4 inches measured perpendicular from the front face to inside voids greater than 4 square inches. The minimum allowed thickness of any other portions of the block is 1¾ inches. The front face of the blocks shall conform to plan requirements for color, texture, or patterns.

Cementitious materials and aggregates for modular blocks shall conform to the requirements of ASTM C1372 Section 4.1 and 4.2. Modular blocks shall meet the following requirements.

Test	Method	Requirement
Compressive Strength (psi)	ASTM C140	5000 min.
Water Absorption (%)	ASTM C140	6 max.
Freeze-Thaw Loss (%) 40 cycles, 5 of 5 samples 50 cycles, 4 of 5 samples	ASTM C1262[1]	 1.0 max.[2] 1.5 max.[2]

[1] Test shall be run using a 3% saline solution.
[2] Test results that meet either of the listed requirements for Freeze-Thaw Loss are acceptable.

All blocks shall be certified as to strength, absorption, and freeze-thaw requirements unless, due to contract changes after letting, certified blocks are not available when required. At the time of delivery of certified blocks, furnish the engineer a certified test report from a department-approved independent testing laboratory for each lot of modular blocks. The certified test report shall clearly identify the firm conducting the sampling and testing, the type of block, the date sampled, the name of the person who conducted the sampling, the represented lot, the number of blocks in the lot, and the specific test results for each of the stated requirements of this specification. The tests should have been conducted not more than 18 months prior to delivery. A lot shall not exceed 5000 blocks or fraction thereof produced in day. The certified test results will represent all blocks within the lot. Each pallet of blocks delivered shall bear lot identification information. Block lots that do not meet the requirements of this specification or blocks without supporting certified test reports will be rejected and shall be removed from the project at no expense to the department.

A department-approved independent testing laboratory shall control and conduct all modular block sampling and testing for certification. Prior to sampling, the manufacturer's representative shall identify all pallets of modular blocks contained in each lot. All pallets of blocks within the lot shall be numbered and marked to facilitate random sample selection. The representative of the independent testing laboratory shall identify five pallets of blocks by random numbers and shall then select one block from each of these pallets. Solid blocks used as a finishing or top course shall not be selected. The selected

blocks shall remain under the control of the person who conducted the sampling until shipped or delivered to the testing laboratory. All pallets of blocks within a lot shall be strapped or wrapped to secure the contents and tagged or marked for identification. The engineer will reject any pallet of blocks delivered to the project without intact security measures. At no expense to the department, the contractor shall remove all rejected blocks from the project.

The department may conduct testing of certified or non-certified modular blocks lots delivered to the project. The department will not conduct freeze-thaw testing on blocks less than 45 days old. If a random sample of five blocks of any lot tested by the department fails to meet any of the requirements of this specification (nonconforming), the contractor shall remove from the project site all blocks from the failed lot not installed in the finished work at no cost to the department, unless the engineer allows otherwise. Nonconforming blocks installed in the finished work will be considered approved by the department as stated in standard spec 106.5(2) and any adjustment to the contract price will not exceed the price of the blocks charged by the supplier.

Wall facing units may consist of precast modular concrete blocks produced by a wet cast process. The concrete blocks shall have a minimum strength of 4000 psi at 28 days. The concrete for the blocks shall be air entrained, with an air content of 6% +/- 1.5%. All materials for the concrete mixture for the blocks shall meet the requirements of standard spec 501. Wall facing units produced by a wet cast process need not be certified as to absorption and freeze-thaw requirements.

B.3.2 Backfill

Furnish and place backfill for Modular Block Gravity Landscape Walls as shown on the plans and as hereinafter provided.

Wall Backfill, Type A, shall comply with the requirements for Coarse Aggregate No. 1 as given in standard spec 501.2.5.4.4. All backfill placed within a zone from the top of the leveling pad to the top of the final layer of wall facing units and within 1 foot behind the back face of the wall shall be Wall Backfill, Type A. This includes all material used to fill openings in the wall facing units.

Backfill placed between retained soil and Type A backfill shall comply with the requirements for Grade 1 Granular Backfill as contained in standard spec 209.2.2. Wall Backfill, Type A, may be used as retained backfill.

B.3.3 Miscellaneous

If plans show sections of cast in place concrete cap or coping, use poured concrete Grade A, A-FA, A-S, A-T, A-IS, A-IP or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for cast in place cap and coping concrete as specified in standard spec 716, Class II Concrete.

Use a wall leveling pad that consists of poured concrete, Grade A, A-FA, A-S, A-T, A-IS, A-IP, or A-IT concrete conforming to standard spec 501 as modified in standard spec 716.

Provide QMP for leveling pad concrete as specified in standard spec 716, Class III Concrete.

If pins are used to align modular block facing units, they shall consist of a non-degrading polymer, or hot dipping galvanized steel and be made for the express use with the modular block units supplied, to develop mechanical interlock between facing unit block layers. Connecting pins shall be capable of holding the wall in the proper position during backfilling. Furnish documentation that establishes and substantiates the design life of such devices.

C Construction

C.1 Excavation and Backfill

Excavation and preparation of the foundation for the Modular Block Gravity Landscape wall and the leveling pad shall be according to standard spec 206. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

Place backfill materials in the areas as indicated on the plans and as detailed in this specification. Backfill lifts shall be no more than 8-inches in depth. Backfilling shall closely follow erection of each course of wall facing units.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall facing units or other wall components. At no expense to the department, correct any such damage or misalignment as directed by the engineer. A field representative of the wall supplier shall be available during wall construction to provide technical assistance to the contractor and the engineer.

Do not operate tracked or wheeled equipment on the backfill within 3 feet from the back face of modular blocks. The engineer may order the removal of any large or heavy equipment that may cause damage or misalignment of the wall facing units.

C.2 Compaction

Compact wall backfill Type A with at least three passes of lightweight manually operated compaction equipment acceptable to the engineer.

Insure adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the modular blocks.

C.3 Wall Components

Erect wall facing units and other associated elements according to the wall manufacturer's construction guide and to the lines, elevations, batter, and tolerances as shown on the

plans. Center the initial layer of facing units on the leveling pad; then level them and properly align them. Fill formed voids or openings in the facing units with wall backfill, Type A. Remove all debris on the top of each layer of facing units, before placing the next layer of facing units.

Install all pins, rods, clips, or other devices used to develop mechanical interlock between facing unit layers according to the manufacturer's directions.

C.4 Geotechnical Information
Geotechnical data to be used in the design of the wall is given on the wall plan.

D Measurement
The department will measure Wall Modular Block Gravity Landscape LRFD by the square foot acceptably completed, measured as the vertical area within the pay limits the contract plans show. Unless the engineer directs in writing, a change to the limits indicated on the contract plan, wall area constructed above or below these limits will not be measured for payment.

E Payment
The department will pay for accepted measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DECRIPTION	UNIT
SPV.0165.01	Wall Modular Block Gravity Landscape LRFD	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional wall system including cap, copings and leveling pad; constructing the retaining system including drainage system; providing backfill, backfilling, compacting, developing/completing/documenting the quality management program, performing compaction testing.

Parapets, railings, and other items above the wall cap or coping will be paid for separately. Vehicle barrier and its support will be paid separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.

38. Removing Brick Pavers, Item SPV.0165.02.

A Description
This special provision describes removing, hauling and disposing of brick masonry.

B (Vacant)

C Construction
Remove, haul and dispose of masonry items. The contractor becomes the owner of the removed masonry items and is responsible for their disposal as specified for disposing of materials under standard spec 204.3.1.3.

D Measurement
The department will measure Removing Brick Pavers by the square foot of surface area, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.02	Removing Brick Pavers	SF

Payment is full compensation for removing, hauling and disposing of masonry items and any material covering existing masonry items.

39. Sealing Concrete Pavement Joints, Item SPV.0180.01.

A Description
This special provision describes furnishing and installing joint sealer for concrete pavement as shown on the plans, and as hereinafter provided.

B Materials
Use a sealant material meeting the requirements of ASTM D6690 Type II: Joint and Crack Sealants, Hot Applied, for Asphalt and Concrete Pavements. Deliver the sealant in the manufacturer's original sealed container legibly marked with the following information:

- Manufacturer's name
- Trade name of sealant
- Manufacturer's batch or lot number
- ASTM D6690, Type II
- Minimum application temperature
- Maximum (or safe) heating temperature

Prior to commencing work, provide the engineer with a certificate of compliance along with a copy of the manufacturer's recommendations pertaining to heating and application of the sealant.

C Construction
Place joint sealer as shown on the plans and according to the manufacturer's instructions. All longitudinal, transverse, and construction joints shall be sealed prior to allowing any traffic on the pavement.

Joints shall not be sealed until they have been inspected and approved by the engineer.

Should any spalling of the sawed edges occur that would in the judgment of the engineer detrimentally affect the joint-sealing ability, such spalled areas shall be patched with an approved epoxy which shall be allowed to harden prior to installation of the joint seal. Each patch shall be true to the intended neat lines of the finished cut joint.

Application of the joint sealer shall be made when the joint surfaces are clean and dry.

Joints shall be cleaned and dried to accept the sealing material according to the manufacturer's recommendations.

All longitudinal and transverse concrete pavement joints, including the joint between the pavement and the curb and gutter and any joints in the curb and gutter shall be sealed. The sealant shall be tooled flush with or recessed up to a maximum of 1/16" ± 1/64" below the concrete surface. Overbonding will not be allowed. Material remaining on the surface of the pavement shall be removed without damaging the sealant in the joint.

D Measurement

The department will measure Sealing Concrete Pavement Joints by the square yard of pavement, sealed and acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.01	Sealing Concrete Pavement Joints	SY

Payment is full compensation for furnishing all materials, sawing joints, sealing all joints within concrete pavement and curb and gutter.
(NER14-1126)

ADDITIONAL SPECIAL PROVISION 4

Payment to First-Tier Subcontractors

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting "just cause" for withholding payment.

The prime contractor may also withhold routine retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

Ensure that subcontracting agreements at all tiers provide prompt payment rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

Release of Routine Retainage

After granting substantial completion the department may reduce the routine retainage withheld from the prime contractor to 75 percent of the original total amount retained.

When the Department sends the semi-final estimate the department may reduce the routine retainage withheld from the prime contractor to 10 percent of the original total amount retained.

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work and that no routine retainage is being withheld. The department will pay the prime contractor in full and reduce the routine retainage withheld from the prime contractor to zero when the department approves the final estimate.

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

ADDITIONAL SPECIAL PROVISION 6
ASP 6 - Modifications to the standard specifications

Make the following revisions to the standard specifications:

109.1.1.2 Bid Items Designated as Pay Plan Quantity

Replace the entire text with the following effective with the June 2017 letting:

109.1.1.2.1 General

(1) If the schedule of items designates a bid item with a **P** in the item description, the department will use the plan quantity, the approximate quantity the schedule of items shows, for payment unless one or both of the following occurs:

- Scope changes regardless of the magnitude of the revised work.
- Errors and omissions that affect the plan quantity.

109.1.1.2.2 Scope Changes

(1) For engineer-directed quantity increases, the engineer will issue a contract change order for extra work, establish the cost of the added work as specified in 109.4, and measure the revised work. For engineer-directed quantity decreases, the engineer will issue a contract change order to adjust the plan quantity under the designated bid item.

109.1.1.2.3 Errors and Omissions

(1) The engineer may issue a change order under 105.4(5) to adjust the plan quantity for an error or omission and may revise the contract unit price as specified in 109.4.

305.2.1 General

Replace paragraph two with the following effective with the June 2017 letting:

(2) Where the contract specifies or allows 1 1/4-inch base, do not place reclaimed asphalt, reprocessed material, or blended materials below virgin aggregate materials unless the contract specifies or the engineer allows in writing.

310.2 Materials

Replace paragraph three with the following effective with the June 2017 letting:

(3) Do not place reclaimed asphalt, reprocessed material, or blended materials below open-graded base unless the contract specifies or the engineer allows in writing.

320.3.1.1 Consolidating, Finishing, and Curing

Replace paragraph two with the following effective with the June 2017 letting:

(2) Cure concrete base as specified for concrete pavement in 415.3.12. Use wax-based curing compound conforming to 501.2.9.

390.3.2 Concrete Patching

Replace paragraph two with the following effective with the June 2017 letting:

(2) Cure exposed patches as specified for concrete pavement in 415.3.12. Use wax-based curing compound conforming to 501.2.9. Protect as specified for concrete pavement in 415.3.14. Open to traffic as specified for concrete base in 320.3.

390.3.4 Special High Early Strength Concrete Patching

Replace the entire text with the following effective with the June 2017 letting:

(1) Construct as specified for special high early strength repairs under 416.3.8 except as follows:

- The contractor may delay removal for up to 14 calendar days after cutting the existing pavement.
- Open to traffic as specified for concrete base in 320.3.

(2) Cure exposed patches as specified for concrete pavement in 415.3.12. Use wax-based curing compound conforming to 501.2.9. Do not apply excess curing compound that could cause slippery pavement under traffic.

440.3.5.2 Corrective Actions for Localized Roughness

Replace paragraph two with the following effective with the September 2016 letting:

(2) The engineer will not direct corrective action or assess a pay reduction for an area of localized roughness without physically riding that work. The engineer will not direct corrective action on bridges without authorization from the department's bureau of structures.

450.3.1.1.4 Recording Truck Loads

Replace the entire text with the following effective with the December 2016 letting:

(1) If not using automatic batch recording, install a digital recorder as part of the platform truck or storage silo scales. Ensure that the recorder can produce a printed digital record of at least the gross or net weights of delivery trucks. Provide gross, tare, net weights, load count, and the cumulative tonnage; the date, time, ticket number, WisDOT project ID, and mix 250 number; and the mix type including the traffic, binder, and mix designation codes specified in 460.3.1. Ensure that scales cannot be manually manipulated during the printing process. Provide an interlock to prevent printing until the scales come to rest. Size the scales and recorder to accurately weigh the heaviest loaded trucks or tractor-trailers hauling asphaltic mixture. Ensure that recorded weights are accurate to within 0.1 percent of the nominal capacity of the scale.

(2) Ensure that tickets identify additives not included in the mix design submittal. Indicate on the ticket if the mixture will be placed under a cold weather paving plan and identify the warm mix additive and dosage rate required under 450.3.2.1.2.2.

455.3.2.1 General

Replace paragraph one with the following effective with the December 2016 letting:

(1) Apply tack coat only when the air temperature is 32 F or more unless the engineer approves otherwise in writing. Before applying tack coat ensure that the surface is reasonably free of loose dirt, dust, or other foreign matter. Do not apply to surfaces with standing water. Do not apply if weather or surface conditions are unfavorable or before impending rains.

460.2.1 General

Replace the entire text with the following effective with the December 2016 letting:

(1) Furnish a homogeneous mixture of coarse aggregate, fine aggregate, mineral filler if required, SMA stabilizer if required, recycled material if used, warm mix asphalt additive or process if used, and asphaltic material. Design mixtures conforming to table 460-1 and table 460-2 to 4.0% air voids to establish the aggregate structure.

(2) Determine the target JMF asphalt binder content for production from the mix design data corresponding to 3.0% air voids (97% Gmm) target at the design the number of gyrations (Ndes). Add liquid asphalt to achieve the required air voids at Ndes.

(3) For SMA, determine the target JMF asphalt binder content for production from the mix design data corresponding to 4.0% air voids (96% Gmm) target at Ndes.

460.2.8.2.1.5 Control Limits

Replace paragraph one with the following effective with the December 2016 letting:

(1) Conform to the following control limits for the JMF and warning limits based on a running average of the last 4 data points:

ITEM	JMF LIMITS	WARNING LIMITS
Percent passing given sieve:		
37.5-mm	+/- 6.0	+/- 4.5
25.0-mm	+/- 6.0	+/- 4.5
19.0-mm	+/- 5.5	+/- 4.0
12.5-mm	+/- 5.5	+/- 4.0
9.5-mm	+/- 5.5	+/- 4.0
2.36-mm	+/- 5.0	+/- 4.0
75-µm	+/- 2.0	+/- 1.5
Asphaltic content in percent	- 0.3	- 0.2
Air voids in percent[1]	+1.3/-1.0	+1.0/-0.7
VMA in percent[2]	- 0.5	- 0.2

[1] For SMA, JMF limits are +/-1.3 and warning limits are +/-1.0.

[2] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in table 460-1.

460.2.8.2.1.6 Job Mix Formula Adjustment

Replace paragraph one with the following effective with the December 2016 letting:

(1) The contractor may request adjustment of the JMF according to CMM 8-36.6.13.1. Have an HMA technician certified at a level appropriate for process control and troubleshooting or mix design submit a written JMF adjustment request. Ensure that the resulting JMF is within specified master gradation bands. The department will have a certified Hot Mix Asphalt, Mix Design, Report Submittals technician review the proposed adjustment and, if acceptable, issue a revised JMF.

460.2.8.3.1.6 Acceptable Verification Parameters

Replace paragraph one with the following effective with the December 2016 letting:

(1) The engineer will provide test results to the contractor within 2 mixture-production days after obtaining the sample. The quality of the product is acceptably verified if it meets the following limits:

- Va is within a range of 2.0 to 4.3 percent. For SMA, Va is within a range of 2.7 to 5.3 percent.
- VMA is within minus 0.5 of the minimum requirement for the mix design nominal maximum aggregate size.

460.3.3.1 Minimum Required Density

Replace paragraph one with the following effective with the December 2016 letting:

(1) Compact all layers of HMA mixture to the density table 460-3 shows for the applicable mixture, location, and layer.

TABLE 460-3 MINIMUM REQUIRED DENSITY[1]

LOCATION	LAYER	PERCENT OF TARGET MAXIMUM DENSITY		
		MIXTURE TYPE		
		LT and MT	HT	SMA[5]
TRAFFIC LANES[2]	LOWER	93.0[3]	93.0[4]	___
	UPPER	93.0	93.0	___
SIDE ROADS, CROSSOVERS, TURN LANES, & RAMPS	LOWER	93.0[3]	93.0[4]	___
	UPPER	93.0	93.0	___
SHOULDERS & APPURTENANCES	LOWER	91.0	91.0	___
	UPPER	92.0	92.0	___

[1] The table values are for average lot density. If any individual density test result falls more than 3.0 percent below the minimum required target maximum density, the engineer may investigate the acceptability of that material.

[2] Includes parking lanes as determined by the engineer.

[3] Minimum reduced by 2.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

[4] Minimum reduced by 1.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

[5] The minimum required densities for SMA mixtures are determined according to CMM 8-15.

460.5.2.1 General

Replace paragraph six with the following effective with the December 2016 letting:

(6) If during a QV dispute resolution investigation the department discovers mixture with 1.5 > Va > 5.0 or VMA more than 1.0 below the minimum allowed in table 460-1, and the engineer allows that mixture to remain in place, the department will pay for the quantity of affected material at 50 percent of the contract price.

460.5.2.3 Incentive for HMA Pavement Density

Replace paragraph one with the following effective with the December 2016 letting:

(1) If the lot density is greater than the minimum specified in table 460-3 and all individual air voids test results for that mixture placed during the same day are within 2.5 - 4.0 percent, the department will adjust pay for that lot as follows:

INCENTIVE PAY ADJUSTMENT FOR HMA PAVEMENT DENSITY[1]

PERCENT LOT DENSITY ABOVE SPECIFIED MINIMUM	PAY ADJUSTMENT PER TON[2]
From -0.4 to 1.0 inclusive	$0
From 1.1 to 1.8 inclusive	$0.40
More than 1.8	$0.80

[1] SMA pavements are not eligible for density incentive.

[2] The department will prorate the pay adjustment for a partial lot.

501.2.6 Fly Ash

Replace the entire subsection with the following effective with the December 2016 letting:

501.2.6.1 General

(1) Fly ash is defined as a finely divided residue resulting from the combustion of coal in a base loaded electric generating plant, transported from the boiler by flue gases, and later collected, generally by precipitators. Use fly ash in concrete manufactured by facilities and processes known to provide satisfactory material.

(2) Test fly ash using a recognized laboratory, as defined in 501.2.2(1), starting at least 30 days before its proposed use, and continuing at ASTM-required frequencies as the work progresses. The manufacturer shall test the chemical and physical properties listed in tables 1 and 2 of ASTM C618 at the frequencies and by the test methods prescribed in ASTM C311.

(3) Use only one source of fly ash for a bid item of work under the contract, unless the engineer directs or allows otherwise in writing.

(4) Prequalify any proposed fly ash source as follows: The contractor shall obtain a copy of the certified report of tests or analysis made by a qualified independent laboratory, recognized by the department under 501.2.2, showing full and complete compliance with the above specification from the fly ash manufacturer and furnish it to the engineer. Provide this report to the engineer at least 14 calendar days before using the fly ash.

(5) The manufacturer shall retain test records for at least 5 years after completing the work, and provide these records upon request.

501.2.6.2 Class C Ash

(1) Conform to ASTM C618 class C except limit the loss on ignition to a maximum of 2 percent.

501.2.6.3 Class F Ash

(2) Furnish a class F fly ash from a source listed on the department's approved product list, and conform to ASTM C618 class F except limit the loss on ignition to a maximum of 2 percent.

502.3.7.8 Floors

Replace paragraph sixteen with the following effective with the September 2016 letting:

(16) The finished bridge floor shall conform to the surface test specified in 415.3.10. The engineer will not direct corrective grinding without authorization from the department’s bureau of structures.

503.3.2.1.1 Tolerances

Increase the "length of beam" max tolerance for prestressed concrete I-type girders from 3/4" to 1 1/2" effective with the December 2016 letting:

PRESTRESSED CONCRETE I-TYPE GIRDERS

Length of beam..... +/- 1/8" per 10', up to a max of +/- 1 1/2"

Errata

Make the following corrections to the standard specifications:

104.2.2.5 Change Orders for Eliminated Work

Correct errata by changing "eliminated bid items" to "eliminated work."

104.2.2.5 Change Orders for Eliminated Work

(1) The department has the right to partially eliminate or completely eliminate work the project engineer finds to be unnecessary for the project. If the project engineer partially eliminates or completely eliminates work, the project engineer will issue a contract change order for a fair and equitable amount as specified in 109.5.

105.4 Coordination of the Contract Documents

Correct errata to change "apparent error or omission" to just "error or omission."

(5) Neither the contractor nor the department may take advantage of an error or omission in the contract. Notify the engineer immediately as specified in 104.3 upon discovering an error or omission. The engineer will offer an interpretation and make the necessary corrections.

105.13.4 Content of Claim

Correct errata to change references to the "Blue Book" rates to reference "EquipmentWatch" rates.

(1) Include the following 5 items in the claim.

1. A concise description of the claim.
2. A clear contractual basis for the claim. This should include reference to 104.2 on revisions to the contract and as appropriate, specific reference to contract language regarding the bid items in question.
3. Other facts the contractor relies on to support the claim.
4. A concise statement of the circumstances surrounding the claim and reasons why the department should pay the claim. Explain how the claimed work is a change to the contract work.
5. A complete breakdown of the costs used to compile the claim. Include copies of all EquipmentWatch equipment rental rate sheets used, with the applicable number highlighted.

108.13 Terminating the Contract for Convenience of the Department

Correct errata by changing "eliminated bid items" to "eliminated work."

(4) If the department orders termination of the contract for convenience, the department will pay for all completed work as of that date at the contract price. The department will pay for partially completed work at agreed prices or by force account methods specified in 109.4.5 provided, however, that payment does not exceed the contract price for the bid item under which the work was performed. The department will pay for work eliminated by the termination only to the extent provided under 109.5. The department will pay for new work, if any, at agreed prices or paid for by force account methods specified in 109.4.5.

109.2 Scope of Payment

Correct errata to clarify that work under the contract is included in payment unless specifically excluded.

(2) The department will pay for the quantity of work acceptably completed and measured for payment as the measurement subsection for each bid item specifies. Within the contract provide means to furnish and install the work complete and in-place. Payment is full compensation for everything required to perform the work under the contract including, but not limited to, the work elements listed in the payment subsection. Payment also includes all of the following not specifically excluded in that payment subsection:

1. Furnishing and installing all materials as well as furnishing the labor, tools, supplies, equipment, and incidentals necessary to perform the work.
2. All losses or damages, except as specified in 107.14, arising from one or more of the following:
   - The nature of the work.
   - The action of the elements.
   - Unforeseen difficulties encountered during prosecution of the work.
3. All insurance costs, expenses, and risks connected with the prosecution of the work.
4. All expenses incurred because of an engineer-ordered suspension, except as specified in 104.2.2.3.
5. All infringements of patents, trademarks, or copyrights.
6. All other expenses incurred to complete and protect the work under the contract.

109.4.5.5.1 General

Correct errata to change references to the "Blue Book" rates to reference "EquipmentWatch" rates.

(2) The department will pay for use of contractor-owned equipment the engineer approves for force account work at published rates. The department will pay the contractor expense rates, as modified in 109.4.5.5, given in EquipmentWatch Cost Recovery (formerly Rental Rate Blue Book) . Base all rates on revisions effective on January 1 for all equipment used in that calendar year.

http://equipmentwatch.com/estimator/

109.4.5.5.2 Hourly Equipment Expense Rates (Without Operators)

Correct errata to change references to the "Blue Book" rates to reference "EquipmentWatch" rates.

(1) The contractor shall determine, and the department will confirm, hourly equipment expense rates as follows:

HEER = [RAF x ARA x (R/176)] + HOC

Where:

HEER = Hourly equipment expense rate.
RAF = EquipmentWatch regional adjustment factor.
ARA = EquipmentWatch age rate adjustment factor.
R = Current EquipmentWatch monthly rate.
HOC = EquipmentWatch estimated hourly operating cost.

(2) The EquipmentWatch hourly operating cost represents all costs of equipment operation, including fuel and oil, lubrication, field repairs, tires, expendable parts, and supplies.

109.4.5.5.3 Hourly Equipment Stand-By Rate

Correct errata to change references to the "Blue Book" rates to reference "EquipmentWatch" rates.

(1) For equipment that is in operational condition and is standing-by with the engineer's approval, the contractor shall determine, and the department will confirm, the hourly stand-by rate as follows:

HSBR = RAF x ARA x (R/176) x (1/2)

Where:

HSBR = Hourly stand-by rate.

RAF = EquipmentWatch regional adjustment factor.

ARA = EquipmentWatch age rate adjustment factor.

R = Current EquipmentWatch monthly rate.

(2) The department will limit payment for stand-by to 10 hours or less per day up to 40 hours per week. The department will not pay the contractor for equipment that is inoperable due to breakdown. The department will not pay for idle equipment if the contractor suspends work or if the contractor is maintaining or repairing the equipment.

109.4.5.5.4 Hourly Outside-Rented Equipment Rate

Correct errata to change references to the "Blue Book" rates to reference "EquipmentWatch" rates.

(1) If the contractor rents or leases equipment from a third party for force account work, the contractor shall determine, and the department will confirm, the hourly outside-rented equipment rate as follows:

HORER = HRI + HOC

Where:

HORER = Hourly outside-rented equipment rate

HRI = Hourly rental invoice costs prorated for the actual number of hours that rented equipment is operated solely on force account work

HOC = EquipmentWatch hourly operating cost.

109.5 Eliminated Work

Correct errata by changing "eliminated bid items" to "eliminated work."

109.5 Eliminated Work

(1) If the department partially eliminates or completely eliminates work as specified in 104.2.2.5, the department will pay contractor costs incurred due to that elimination. The department will pay a fair and equitable amount covering all costs incurred as of the date the work was deleted. Immediately submit a certified statement covering all money expended for the eliminated work.

(2) The department will execute a contract change order for the following costs related to eliminated work:

1. Preparation expenses defined as follows:
   - If preparation for the eliminated work has no value to other contract work, the department will reimburse the contractor in full for that preparation.
   - If preparation for the eliminated work is distributed over other contract work, the department will prorate reimbursement based on the value of the eliminated work compared to the total value of associated contract work.
2. All restocking and cancellation charges.
3. A markup for applicable overhead and other indirect costs paid as 7 percent of the contract price of the work actually eliminated.

(3) If the department partially eliminates or completely eliminates work, the department may pay for, and take ownership of, materials or supplies the contractor has already purchased.

201.3 Construction

Correct errata by changing the link from 201.3(14) to 201.3(15).

(16) Dispose of clearing and grubbing debris before proceeding with grading operations. If the contractor intends to burn debris but cannot secure burning permits on schedule, do not delay removing clearing debris from areas affected by other operations. While waiting to secure burning permits, pile clearing and grubbing debris beyond the limits affected by other work. Do not leave elm debris beyond the limits specified in 201.3(15).

204.3.2.2.1 General

Correct errata by removing the reference to 490 which was deleted effective with the 2017 spec.

(1) Under the Removing Pavement bid item, remove concrete pavements, concrete alleys, concrete driveways, or rigid base including all surfaces or other pavements superimposed on them.

440.1 Description

Correct errata to replace "150 feet of the points of curvature" with " entry and exit curves".

(2) Profile the final mainline riding surfaces greater than 1500 feet in continuous length. Include bridges, bridge approaches, and railroad crossings in the calculation of IRI. Exclude roundabouts and pavements within their entry and exit curves from the calculation of IRI.

460.2.8.2.1.3.1 Contracts with 5000 Tons of Mixture or Greater

Correct 460.2.8.2.1.3.1 (6) to change the reference from ASTM D4867 to AASHTO T283.

(6) Also conduct field tensile strength ratio tests according to AASHTO T283 on mixtures requiring an antistripping additive. Test each full 50,000 ton production increment, or fraction of an increment, after the first 5000 tons of production. Perform required increment testing in the first week of production of that increment. If field tensile strength ratio values are either below the spec limit or less than the mixture design JMF percentage value by 20 or more, notify the engineer. The engineer and contractor will jointly determine a corrective action.

506.2.8.3 Expansion Bearing Assemblies

Correct errata to update ASTMs and change the specified melting point from 622 +/- 3 to 621 +/- 18 F.

(6) Use PTFE materials that are virgin polytetrafluoroethylene fluorocarbon resin, unfilled conforming to ASTM D4894. The finished materials shall exhibit the following physical properties:

REQUIREMENT	TEST METHOD	UNFILLED VALUE
Hardness at 78 F	ASTM D2240 Shore "D"	50-65
Tensile strength, psi	ASTM D1708	2800 Min.
Elongation, percent	ASTM D1708	200 Min.
Specific gravity	ASTM D792	2.16 +/- 0.03
Melting point	ASTM D4591	621 +/- 18 F

514.3.2 Adjusting Floor Drains

Correct errata by clarifying priming and painting requirements for adjusted floor drains.

(1) If the plans show or contract specifies, provide new drain frames and inserts. Fabricate, blast clean, and apply a shop coat of primer. Touch up areas of damaged primer after installation with a department-approved organic zinc-rich primer.

657.2.2.1.1 General

Correct errata by eliminating the reference to department provided arms in the last sentence.

(1) Furnish shop drawings as specified in 506.3.2, except submit 5 copies with the materials list. Ensure the drawings contain sufficient detail to allow satisfactory review and show the outside diameters of the pole at the butt, top, and splice locations the plans show. Show the width, depth, length, and thickness of all material, and list pertinent ASTM specification designations and metal alloy designations together with the tensile strength of metallic members. Provide tightening procedures for arm-to-pole connections on the shop drawings.

657.2.2.1.4 Poles Designed Under Legacy Standards

Correct errata by deleting the entire subsection to eliminate redundant language.

657.2.2.2 Trombone Arms

Correct errata by changing the reference from 657.2.2.1.3 to 657.2.2.1.2.

(1) Design aluminum trombone arms as specified in 657.2.2.1.2 based on the completed maximum loading configuration the plans show. Furnish shop drawings conforming to 657.2.2.1.1 that show the width, depth, length, and thickness of all members. Also list the ASTM alloy designation and strength of each aluminum member on the shop drawings.

715.3.1.2.2 Lots by Lane-Feet

Correct errata ride spec reference from "the special provisions" to "440.3.4.2."

(1) The contractor may designate slip-formed pavement lots and sublots conforming to the following:

- Lots and sublots are one paving pass wide and may include one or more travel lanes, integrally placed shoulders, integrally placed ancillary concrete, and pavement gaps regardless of mix design and placement method.
- Sublots are 1000 feet long for single-lane and 500 feet long for two-lane paving. Align sublot limits with ride segment limits defined in 440.3.4.2. Adjust terminal sublot lengths to match the project length or, for staged construction, the stage length. Ensure that sublot limits match for adjacent paving passes. Pavement gaps do not affect the location of sublot limits.
- Create lots by grouping 4 to 8 adjacent sublots matching lots created for adjacent paving passes.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
5. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
6. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4) and (5), and shall be binding on all first tier subcontractor relationships and all contractors and subcontractors utilizing DBE firms on the project.

B. Costs for conforming to this special provision are incidental to the contract.

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at:

http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/default.aspx

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Paul Ndon at (414) 438-4584 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll data from their computer system into CRCS should have their payroll coordinator contact Paul Ndon. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at:

http://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payroll-manual.pdf

Non-discrimination Provisions

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. Compliance with Regulations: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. Non-discrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. Information and Reports: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

a. Withholding payments to the contractor under the contract until the contractor complies; and/or
b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

Effective with February 2017 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION AND SYSTEM DEVELOPMENT

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

I. PREVAILING WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The U.S. Department of Labor (Davis-Bacon Minimum Wage Rates) attached hereto and made a part hereof furnishes the prevailing wage rates pursuant to Section 84.062 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 84.062, Stats. Apprentices shall be paid at rates not less than those prescribed in their apprenticeship contract.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this is not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 16.856 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly base rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half:

January 1
Last Monday in May
July 4
First Monday in September
Fourth Thursday in November
December 25
The day before if January 1, July 4 or December 25 falls on a Saturday, and

The day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, euclid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

II. PAYROLL REQUIREMENTS

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 84.062 of the Wisconsin Statutes.

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous and accessible place at the site of work:

a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 84.062 of the Wisconsin Statutes.

b. A copy of the U.S. Department of Labor (Davis-Bacon, Minimum Wage Rates).

c. A copy of the contractor's Equal Employment Opportunity Policy.

All required documents shall be posted by the first day of work and be accurate and complete. Postings must be readable, in an area where they will be noticed, and maintained until the last day of work.

IV. WAGE RATE REDISTRIBUTION

A contractor or subcontractor performing work subject to a Davis-Bacon wage determination may discharge its minimum wage obligations for the payment of both straight time wages and fringe benefits by (1) paying both in cash, (2) making payments or incurring costs for bona fide fringe benefits, or (3) by a combination thereof. Thus, under the Davis-Bacon a contractor may offset an amount of monetary wages paid in excess of the minimum wage required under the determination to satisfy its fringe benefit obligations. *See* 40 USC 3142(d) and 29 CFR 5.31.

V. ADDITIONAL CLASSIFICATIONS

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5(a)(1)(ii)). The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination.

The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

a. The work to be performed by the classification requested is not performed by a classification in the wage determination; and

b. The classification is utilized in the area by the construction industry; and

c. The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

General Decision Number: WI170010 04/28/2017 WI10

Superseded General Decision Number: WI20160010

State: Wisconsin

Construction Type: Highway

Counties: Wisconsin Statewide.

HIGHWAY, AIRPORT RUNWAY & TAXIWAY CONSTRUCTION PROJECTS (does not include bridges over navigable waters; tunnels; buildings in highway rest areas; and railroad construction)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.20 for calendar year 2017 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.20 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2017
1	02/03/2017
2	02/10/2017
3	02/24/2017
4	03/17/2017
5	03/31/2017
6	04/21/2017
7	04/28/2017

BRWI0001-002 06/01/2016

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 31.84	20.95

BRWI0002-002 06/01/2016

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.04	19.70

BRWI0002-005 06/01/2016

ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA,

CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 35.07	20.51

BRWI0003-002 06/01/2016

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.22	20.57

BRWI0004-002 06/01/2016

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
BRICKLAYER	$ 36.59	21.49

BRWI0006-002 06/01/2016

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE, ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

	Rates	Fringes
BRICKLAYER	$ 33.04	19.75

BRWI0007-002 06/01/2016

GREEN, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 33.53	20.95

BRWI0008-002 06/01/2016

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
BRICKLAYER	$ 36.98	20.62

BRWI0011-002 06/01/2016

CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes

BRICKLAYER.....$ 32.22 20.57

BRWI0019-002 06/01/2016

BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 31.98	20.81

BRWI0034-002 06/01/2015

COLUMBIA AND SAUK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.86	17.22

CARP0087-001 05/01/2016

BURNETT (W. of Hwy 48), PIERCE (W. of Hwy 29), POLK (W. of Hwys 35, 48 & 65), AND ST. CROIX (W. of Hwy 65) COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen	$ 36.85	18.39

CARP0252-002 06/01/2016

ADAMS, BARRON, BAYFIELD (Eastern 2/3), BROWN, BUFFALO, BURNETT (E. of Hwy 48), CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE (except area bordering Michigan State Line), FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE (except N.E. corner), MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. of Hwys 29 & 65), POLK (E. of Hwys 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST CROIX (E. of Hwy 65), TAYLOR, TREMPEALEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CARPENTER		
CARPENTER	$ 33.56	18.00
MILLWRIGHT	$ 35.08	18.35
PILEDRIVER	$ 34.12	18.00

CARP0252-010 06/01/2016

ASHLAND COUNTY

	Rates	Fringes

Carpenters
Carpenter.....$ 33.56 18.00
Millwright.....$ 35.08 18.35
Pile Driver.....$ 34.12 18.00

CARP0264-003 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WAUKESHA, AND WASHINGTON COUNTIES

	Rates	Fringes
CARPENTER	$ 35.78	22.11

CARP0361-004 05/01/2016

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER	$ 34.57	18.16

CARP2337-001 06/01/2016

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON

ZONE B: KENOSHA & RACINE

	Rates	Fringes
PILEDRIVERMAN		
Zone A	$ 31.03	22.69
Zone B	$ 31.03	22.69

ELEC0014-002 05/30/2016

ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Maryville, Colby, Unity, Sherman, Fremont, Lynn & Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON, AND WASHBURN COUNTIES

	Rates	Fringes
Electricians:	$ 32.00	19.28

ELEC0014-007 05/30/2016

REMAINING COUNTIES

	Rates	Fringes
Teledata System Installer		
Installer/Technician	$ 24.35	13.15

Low voltage construction, installation, maintenance and

removal of teledata facilities (voice, data, and video) including outside plant, telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area networks), LAN (local area networks), and ISDN (integrated systems digital network).

ELEC0127-002 06/01/2016

KENOSHA COUNTY

	Rates	Fringes
Electricians:	$ 37.71	30%+10.02

ELEC0158-002 05/30/2016

BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE(Wausuakee and area South thereof), OCONTO, MENOMINEE (East of a ine 6 miles West of the West boundary of Oconto County), SHAWANO (Except Area North of Townships of Aniwa and Hutchins) COUNTIES

	Rates	Fringes
Electricians:	$ 30.50	29.50% + 9.57

ELEC0159-003 05/30/2016

COLUMBIA, DANE, DODGE (Area West of Hwy 26, except Chester and Emmet Townships), GREEN, LAKE (except Townships of Berlin, Seneca, and St. Marie), IOWA, MARQUETTE (except Townships of Neshkoka, Crystal Lake, Newton, and Springfield), and SAUK COUNTIES

	Rates	Fringes
Electricians:	$ 36.50	20.39

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* ELEC0219-004 06/01/2016

FLORENCE COUNTY (Townships of Aurora, Commonwealth, Fern, Florence and Homestead) AND MARINETTE COUNTY (Township of Niagara)

	Rates	Fringes
Electricians:		
Electrical contracts over $180,000	$ 32.38	18.63
Electrical contracts under $180,000	$ 30.18	18.42

ELEC0242-005 05/29/2016

DOUGLAS COUNTY

	Rates	Fringes
Electricians:	$ 34.92	25.05

ELEC0388-002 05/30/2016

ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Beecher, Dunbar, Goodman & Pembine), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Aniwa and Hutchins), VILAS AND WOOD COUNTIES

	Rates	Fringes
Electricians:	$ 30.69	26.00% +10.05

ELEC0430-002 06/01/2016

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:	$ 36.07	21.84

ELEC0494-005 06/01/2016

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:	$ 36.01	24.00

ELEC0494-006 06/01/2014

CALUMET (Township of New Holstein), DODGE (East of Hwy 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

	Rates	Fringes
Electricians:	$ 29.64	20.54

ELEC0494-013 06/01/2015

DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupuin), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Sound & Communications		
Installer:	$ 16.47	14.84
Technician:	$ 26.00	17.70

Installation, testing, maintenance, operation and servicing

of all sound, intercom, telephone interconnect, closed circuit TV systems, radio systems, background music systems, language laboratories, electronic carillion, antenna distribution systems, clock and program systems and low-voltage systems such as visual nurse call, audio/visual nurse call systems, doctors entrance register systems. Includes all wire and cable carrying audio, visual, data, light and radio frequency signals. Includes the installation of conduit, wiremold, or raceways in existing structures that have been occupied for six months or more where required for the protection of the wire or cable, but does not mean a complete conduit or raceway system. work covered does not include the installation of conduit, wiremold or any raceways in any new construction, or the installation of power supply outlets by means of which external electric power is supplied to any of the foregoing equipment or products

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ELEC0577-003 05/30/2016

CALUMET (except Township of New Holstein), GREEN LAKE (N. part including Townships of Berlin, St Marie, and Seneca), MARQUETTE (N. part including Townships of Crystal Lake, Neshkoro, Newton, and Springfield), OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
Electricians:	$ 30.68	17.28

ELEC0890-003 06/01/2016

DODGE (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington Township), ROCK AND WALWORTH COUNTIES

	Rates	Fringes
Electricians:	$ 32.45	26.10% + $10.56

ELEC0953-001 07/01/2015

	Rates	Fringes
Line Construction:		
(1) Lineman	$ 42.14	32% + 5.00
(2) Heavy Equipment Operator	$ 40.03	32% + 5.00
(3) Equipment Operator	$ 33.71	32% + 5.00
(4) Heavy Groundman Driver	$ 26.78	14.11
(5) Light Groundman Driver	$ 24.86	13.45
(6) Groundsman	$ 23.18	32% + 5.00

ENGI0139-005 06/01/2016

	Rates	Fringes
Power Equipment Operator		

Group 1	$ 39.27	21.80
Group 2	$ 38.77	21.80
Group 3	$ 38.27	21.80
Group 4	$ 38.01	21.80
Group 5	$ 37.72	21.80
Group 6	$ 31.82	21.80

HAZARDOUS WASTE PREMIUMS:
EPA Level "A" protection - $3.00 per hour
EPA Level "B" protection - $2.00 per hour
EPA Level "C" protection - $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, tower cranes, and derricks with or without attachments with a lifting capacity of over 100 tons; or cranes, tower cranes, and derricks with boom, leads and/or jib lengths measuring 176 feet or longer.

GROUP 2: Cranes, tower cranes and derricks with or without attachments with a lifting capacity of 100 tons or less; or cranes, tower cranes, and derricks with boom, leads, and/or jibs lengths measuring 175 feet or under and Backhoes (excavators) weighing 130,000 lbs and over; caisson rigs; pile driver; dredge operator; dredge engineer; Boat Pilot.

GROUP 3: Mechanic or welder - Heavy duty equipment; cranes with a lifting capacity of 25 tons or under; concrete breaker (manual or remote); vibratory/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pvt. spreader - heavy duty (rubber tired); concrete spreader & distributor; automatic subgrader (concrete); concrete grinder & planing machine; concrete slipform curb & gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi & over); bridge paver; concrete conveyor system; concrete pump; Rotec type Conveyor; stabilizing mixer (self-propelled); shoulder widener; asphalt plant engineer; bituminious paver; bump cutter & grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer & scarifier; Backhoes (excavators) weighing under 130,000 lbs; grader or motor patrol; tractor (scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader; hydraulic backhoe (tractor type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller over 5 tons; percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches & A-frames; post driver; material hoist.

GROUP 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self propelled; tractor (mounted or towed compactors & light equipment); shouldering machine; self- propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint sawer (multiple blade) belting machine; burlap machine; texturing machine; tractor endloader (rubber tired) - light; jeep digger; forklift; mulcher; launch operator; fireman, environmental burner

GROUP 5: Air compressor; power pack; vibrator hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; Concrete proportioning plants; generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; Oiler, pump (over 3 inches); Drilling Machine Tender.

GROUP 6: Off-road material hauler with or without ejector.

IRON0008-002 06/01/2016

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:

	Rates	Fringes
IRONWORKER	$ 30.86	25.42

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0008-003 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
IRONWORKER	$ 33.15	25.42

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0383-001 06/01/2015

ADAMS, COLUMBIA, CRAWFORD, DANE, DODGE, FLORENCE, FOREST, GRANT, GREENE, (Excluding S.E. tip), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LA CROSSE, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, ROCK (Northern area, vicinity of Edgerton and Milton), SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES

	Rates	Fringes
IRONWORKER	$ 32.85	21.84

IRON0498-005 06/01/2016

GREEN (S.E. 1/3), ROCK (South of Edgerton and Milton), and WALWORTH (S.W. 1/3) COUNTIES:

	Rates	Fringes
IRONWORKER	$ 36.29	30.77

IRON0512-008 05/01/2015

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPEALEAU COUNTIES

	Rates	Fringes
IRONWORKER	$ 35.50	23.45

IRON0512-021 05/01/2015

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA, PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER	$ 31.04	23.45

LABO0113-002 06/01/2016

MILWAUKEE AND WAUKESHA COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 27.51	20.35
Group 2	$ 27.66	20.35
Group 3	$ 27.86	20.35
Group 4	$ 28.01	20.35
Group 5	$ 28.16	20.35
Group 6	$ 24.00	20.35

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagperson; traffic control person

LABO0113-003 06/01/2016

OZAUKEE AND WASHINGTON COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 26.76	20.35
Group 2	$ 26.86	20.35
Group 3	$ 26.91	20.35
Group 4	$ 27.11	20.35
Group 5	$ 26.96	20.35
Group 6	$ 23.85	20.35

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated);

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson and Traffic Control Person

LABO0113-011 06/01/2016

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 26.57	20.35
Group 2	$ 26.72	20.35
Group 3	$ 26.92	20.35
Group 4	$ 26.89	20.35
Group 5	$ 27.22	20.35
Group 6	$ 23.71	20.35

LABORERS CLASSIFICATIONS:

GROUP 1: General laborer; Tree Trimmer; Conduit Layer;

Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagman; traffic control person

LABO0140-002 06/01/2016

ADAMS, ASHLAND, BARRON, BAYFIELD, BROWN, BUFFALO, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DOUGLAS, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IRON, JACKSON, JUNEAU, IOWA, JEFFERSON, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST. CROIX, TAYLOR, TREMPEALEAU, VERNON, VILLAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 30.67	16.55
Group 2	$ 30.77	16.55
Group 3	$ 30.82	16.55
Group 4	$ 31.02	16.55
Group 5	$ 30.87	16.55
Group 6	$ 27.30	16.55

LABORER CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bitminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator, Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk and Pavement); Strike Off Man

GROUP 4: Line and Grade Secialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson; Traffic Control

LABO0464-003 06/01/2016

DANE COUNTY

	Rates	Fringes
LABORER		
Group 1	$ 30.95	16.41
Group 2	$ 31.05	16.41
Group 3	$ 31.10	16.41
Group 4	$ 31.30	16.41
Group 5	$ 31.15	16.41
Group 6	$ 27.30	16.41

LABORERS CLASSIFICATIONS:

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminious Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; Powderman

GROUP 6: Flagperson and Traffic Control Person

PAIN0106-008 05/02/2016

ASHLAND, BAYFIELD, BURNETT, AND DOUGLAS COUNTIES

	Rates	Fringes
Painters:		
New:		
Brush, Roller	$ 29.86	16.35
Spray, Sandblast, Steel	$ 30.46	16.35

Repaint:		
Brush, Roller	$ 28.36	16.35
Spray, Sandblast, Steel	$ 28.96	16.35

PAIN0108-002 06/01/2016

RACINE COUNTY

	Rates	Fringes
Painters:		
Brush, Roller	$ 32.74	18.70
Spray & Sandblast	$ 33.74	18.70

PAIN0259-002 05/01/2008

BARRON, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, SAWYER, ST. CROIX, AND WASHBURN COUNTIES

	Rates	Fringes
PAINTER	$ 24.11	12.15

PAIN0259-004 05/01/2015

BUFFALO, CRAWFORD, JACKSON, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
PAINTER	$ 22.03	12.45

PAIN0781-002 06/01/2016

JEFFERSON, MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Painters:		
Bridge	$ 30.42	22.19
Brush	$ 30.07	22.19
Spray & Sandblast	$ 30.82	22.19

PAIN0802-002 06/01/2016

COLUMBIA, DANE, DODGE, GRANT, GREEN, IOWA, LAFAYETTE, RICHLAND, ROCK, AND SAUK COUNTIES

	Rates	Fringes
PAINTER		
Brush	$ 27.50	17.72

PREMIUM PAY:
Structural Steel, Spray, Bridges = $1.00 additional per hour.

PAIN0802-003 06/01/2016

ADAMS, BROWN, CALUMET, CLARK, DOOR, FOND DU LAC, FOREST, GREEN LAKE, IRON, JUNEAU, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, PORTAGE, PRICE, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WAUSHARA, WAUPACA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
PAINTER	$ 24.39	11.72

PAIN0934-001 06/01/2016

KENOSHA AND WALWORTH COUNTIES

	Rates	Fringes
Painters:		
Brush	$ 32.74	18.70
Spray	$ 33.74	18.70
Structural Steel	$ 32.89	18.70

PAIN1011-002 06/01/2016

FLORENCE COUNTY

	Rates	Fringes
Painters:	$ 24.56	11.93

PLAS0599-010 06/01/2016

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
Area 1	$ 39.46	17.17
Area 2 (BAC)	$ 35.07	19.75
Area 3	$ 35.61	19.40
Area 4	$ 34.70	20.51
Area 5	$ 36.27	18.73
Area 6	$ 32.02	22.99

AREA DESCRIPTIONS

AREA 1: BAYFIELD, DOUGLAS, PRICE, SAWYER, AND WASHBURN COUNTIES

AREA 2: ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

AREA 3: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA

CROSSE MONROE, PEPIN, PIERCE, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES

AREA 4: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

AREA 5: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES

AREA 6: KENOSHA AND RACINE COUNTIES

TEAM0039-001 06/01/2016

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axles	$ 26.63	19.85
3 or more Axles; Euclids Dumptor & Articulated, Truck Mechanic	$ 26.78	19.85
WELL DRILLER	$ 16.52	3.70

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage

determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current

negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

General Decision Number: WI170015 04/28/2017 WI15

Superseded General Decision Number: WI20160015

State: Wisconsin

Construction Type: Heavy

Counties: Wisconsin Statewide.

HEAVY CONSTRUCTION PROJECTS (Excluding Tunnel, Sewer, and Water Lines).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.20 for calendar year 2017 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.20 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2017
1	02/03/2017
2	02/10/2017
3	02/24/2017
4	03/17/2017
5	03/31/2017
6	04/14/2017
7	04/28/2017

BOIL0107-001 01/01/2017

	Rates	Fringes
BOILERMAKER		
Boilermaker	$ 35.65	29.89
Small Boiler Repair (under 25,000 lbs/hr)	$ 26.91	16.00

BRWI0001-002 06/01/2016

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 31.84	20.95

BRWI0002-002 06/01/2016

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.04	19.70

BRWI0002-005 06/01/2016

ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 35.07	20.51

BRWI0003-002 06/01/2016

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.22	20.57

BRWI0004-002 06/01/2016

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
BRICKLAYER	$ 36.59	21.49

BRWI0006-002 06/01/2016

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE, ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

	Rates	Fringes
BRICKLAYER	$ 33.04	19.75

BRWI0007-002 06/01/2016

GREEN, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 33.53	20.95

BRWI0008-002 06/01/2016

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes

BRICKLAYER.....$ 36.98 20.62

BRWI0009-001 06/01/2016

GREEN LAKE, MARQUETTE, OUTAGAMIE, SHAWANO, WAUPACA, WASHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.22	20.57

BRWI0011-002 06/01/2016

CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.22	20.57

BRWI0013-002 06/01/2016

DANE, GRANT, IOWA, AND RICHLAND COUNTIES

	Rates	Fringes
BRICKLAYER	$ 33.49	20.99

BRWI0019-002 06/01/2016

BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 31.98	20.81

BRWI0021-002 06/01/2015

DODGE AND JEFFERSON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 33.58	16.65

BRWI0034-002 06/01/2015

COLUMBIA AND SAUK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.86	17.22

CARP0087-001 05/01/2016

BURNETT (W. of Hwy 48), PIERCE (W. of Hwy 29), POLK (W. of Hwys 35, 48 & 65), AND ST. CROIX (W. of Hwy 65) COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen.....	$ 36.85	18.39

CARP0252-002 06/01/2016

ADAMS, BARRON, BAYFIELD (Eastern 2/3), BROWN, BUFFALO, BURNETT (E. of Hwy 48), CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE (except area bordering Michigan State Line), FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE (except N.E. corner), MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. of Hwys 29 & 65), POLK (E. of Hwys 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST CROIX (E. of Hwy 65), TAYLOR, TREMPEALEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CARPENTER		
CARPENTER.....	$ 33.56	18.00
MILLWRIGHT.....	$ 35.08	18.35
PILEDRIVER.....	$ 34.12	18.00

CARP0252-010 06/01/2016

ASHLAND COUNTY

	Rates	Fringes
Carpenters		
Carpenter.....	$ 33.56	18.00
Millwright.....	$ 35.08	18.35
Pile Driver.....	$ 34.12	18.00

CARP0264-003 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WAUKESHA, AND WASHINGTON COUNTIES

	Rates	Fringes
CARPENTER.....	$ 35.78	22.11

CARP0361-004 05/01/2016

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER.....	$ 34.57	18.16

CARP2337-001 06/01/2016

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON

ZONE B: KENOSHA & RACINE

	Rates	Fringes
PILEDRIVERMAN		
Zone A	$ 31.03	22.69
Zone B	$ 31.03	22.69

CARP2337-003 06/01/2016

	Rates	Fringes
MILLWRIGHT		
Zone A	$ 29.98	21.53
Zone B	$ 29.98	21.53

ZONE DEFINITIONS

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON COUNTIES

ZONE B: KENOSHA & RACINE COUNTIES

ELEC0014-002 05/30/2016

ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Maryville, Colby, Unity, Sherman, Fremont, Lynn & Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON, AND WASHBURN COUNTIES

	Rates	Fringes
Electricians:	$ 32.00	19.28

ELEC0014-007 05/30/2016

REMAINING COUNTIES

	Rates	Fringes
Teledata System Installer		
Installer/Technician	$ 24.35	13.15

Low voltage construction, installation, maintenance and removal of teledata facilities (voice, data, and video) including outside plant, telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area networks), LAN (local area networks), and ISDN (integrated systems digital network).

ELEC0127-002 06/01/2016

KENOSHA COUNTY

	Rates	Fringes
Electricians:	$ 37.71	30%+10.02

ELEC0158-002 05/30/2016

BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE(Wausuakee and area South thereof), OCONTO, MENOMINEE (East of a ine 6 miles West of the West boundary of Oconto County), SHAWANO (Except Area North of Townships of Aniwa and Hutchins) COUNTIES

	Rates	Fringes
Electricians:	$ 30.50	29.50% + 9.57

ELEC0159-003 05/30/2016

COLUMBIA, DANE, DODGE (Area West of Hwy 26, except Chester and Emmet Townships), GREEN, LAKE (except Townships of Berlin, Seneca, and St. Marie), IOWA, MARQUETTE (except Townships of Neshkoka, Crystal Lake, Newton, and Springfield), and SAUK COUNTIES

	Rates	Fringes
Electricians:	$ 36.50	20.39

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* ELEC0219-004 06/01/2016

FLORENCE COUNTY (Townships of Aurora, Commonwealth, Fern, Florence and Homestead) AND MARINETTE COUNTY (Township of Niagara)

	Rates	Fringes
Electricians:		
Electrical contracts over $180,000	$ 32.38	18.63
Electrical contracts under $180,000	$ 30.18	18.42

ELEC0242-005 05/29/2016

DOUGLAS COUNTY

	Rates	Fringes
Electricians:	$ 34.92	25.05

ELEC0388-002 05/30/2016

ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Beecher, Dunbar, Goodman & Pembine), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto

County), ONEIDA, PORTAGE, SHAWANO (Aniwa and Hutchins), VILAS AND WOOD COUNTIES

	Rates	Fringes
Electricians:	$ 30.69	26.00% +10.05

ELEC0430-002 06/01/2016

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:	$ 36.07	21.84

ELEC0494-005 06/01/2016

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:	$ 36.01	24.00

ELEC0494-006 06/01/2014

CALUMET (Township of New Holstein), DODGE (East of Hwy 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

	Rates	Fringes
Electricians:	$ 29.64	20.54

ELEC0494-013 06/01/2015

DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupuin), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Sound & Communications		
Installer	$ 16.47	14.84
Technician	$ 26.00	17.70

Installation, testing, maintenance, operation and servicing of all sound, intercom, telephone interconnect, closed circuit TV systems, radio systems, background music systems, language laboratories, electronic carillion, antenna distribution systems, clock and program systems and low-voltage systems such as visual nurse call, audio/visual nurse call systems, doctors entrance register systems. Includes all wire and cable carrying audio, visual, data, light and radio frequency signals. Includes the installation of conduit, wiremold, or raceways in existing structures that have been occupied for six months or more where required for the protection of the wire or cable, but

does not mean a complete conduit or raceway system. work covered does not include the installation of conduit, wiremold or any raceways in any new construction, or the installation of power supply outlets by means of which external electric power is supplied to any of the foregoing equipment or products

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ELEC0577-003 05/30/2016

CALUMET (except Township of New Holstein), GREEN LAKE (N. part including Townships of Berlin, St Marie, and Seneca), MARQUETTE (N. part including Townships of Crystal Lake, Neshkoro, Newton, and Springfield), OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
Electricians:	$ 30.68	17.28

ELEC0890-003 06/01/2016

DODGE (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington Township), ROCK AND WALWORTH COUNTIES

	Rates	Fringes
Electricians:	$ 32.45	26.10% + $10.56

ELEC0953-001 07/01/2015

	Rates	Fringes
Line Construction:		
(1) Lineman	$ 42.14	32% + 5.00
(2) Heavy Equipment Operator	$ 40.03	32% + 5.00
(3) Equipment Operator	$ 33.71	32% + 5.00
(4) Heavy Groundman Driver	$ 26.78	14.11
(5) Light Groundman Driver	$ 24.86	13.45
(6) Groundsman	$ 23.18	32% + 5.00

ENGI0139-001 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 43.21	20.40
Group 2	$ 42.71	20.40
Group 3	$ 42.21	20.40
Group 4	$ 41.52	20.40
Group 5	$ 39.34	20.40
Group 6	$ 34.19	20.40

HAZARDOUS WASTE PREMIUMS:
EPA Level "A" Protection: $3.00 per hour
EPA Level "B" Protection: $2.00 per hour
EPA Level "C" Protection: $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, Tower Cranes, Pedestal Tower Cranes and Derricks with or w/o attachments with a lifting capacity of over 100 tons; or Cranes, Tower Cranes, Pedestal Tower Cranes and Derricks with boom, leads, and/or jib lengths measuring 176 feet or longer; Self-Erecting Tower Cranes over 4000 lbs lifting capacity; All Cranes with Boom Dollies; Boring Machines (directional); Master Mechanic. $0.50 additional per hour per 100 tons or 100 ft of boom over 200 ft or lifting capacity of crane over 200 tons to a maximum of 300 tons or 300 ft. Thereafter an increase of $0.01 per ft or ton, whichever is greater.

GROUP 2: Cranes, Tower Cranes, Pedestal Tower Cranes and Derricks with or without attachments with a lifting capacity of 100 tons or less; or Cranes, Tower Cranes Portable Tower Cranes, Pedestal Tower Cranes and Derricks with boom, leadsand/or jib lengths measuring 175 feet or less; Backhoes (excavators) 130,000 lbs and over; Caisson Rigs; Pile Drivers; Boring Machines (vertical or horizontal), Versi-Lift, Tri-Lift, Gantry 20,000 lbs & over.

GROUP 3: Backhoe (excavator) under 130,000 lbs;Self-erecting Tower Crane 4000 lbs & under lifting capacity;Traveling Crane (bridge type); Skid Rigs; Dredge Operator; Mechanic; Concrete Paver (over 27E); Concrete Spreader and Distributor; Forklift/ Telehandler (machinery- moving / steel erection); Hydro Blaster, 10,000 psi and over

GROUP 4: Material Hoists; Stack Hoists; Hydraulic Backhoe (tractor or truck mounted); Hydraulic Crane, 5 tons or under (tractor or truck mounted); Hoist (tuggers 5 tons & over); Hydro-Excavators/Daylighters; Concrete Pumps Rotec type Conveyors; Tractor/Bulldozer/End Loader (over 40 hp); Motor Patrol; Scraper Operator; Sideboom; Straddle Carrier; Welder; Bituminous Plant and Paver Operator; Roller over 5 tons; Rail Leveling Machine (Railroad); Tie Placer; Tie Extractor; Tie Tamper; Stone Leveler; Rotary Drill Operator and Blaster; Percussion Drill Operator; Air Track Drill and/or Hammers; Gantrys (under 20,000 lbs); Tencher (wheel type or chain type having 8 inch or larger bucket); Milling Machine; Off-Road Material Haulers.

GROUP 5: Backfiller; Concrete Auto Breaker (large); Concrete Finishing Machines (road type); Rubber Tired Roller; Concrete Batch Hopper; Concrete Conveyor Systems; Grout Pumps; Concrete Mixers (14S or over); Screw Type Pumps and Gypsum Pumps; Tractor, Bulldozer, End Loader (under 40 hp); Trencher (chain type, bucket under 8 inch); Industrial Locomotives; Rollers under 5 tons; Stump Grinder/Chipper (Large); Timber Equipment; Firemen (pile drivers and derricks); Personnel Hoist, Telehandler over 8000 lbs; Robotic Tool Carrier with or without attachments

GROUP 6: Tampers - Compactors (riding type); Assistant Engineer; A-Frames and Winch Trucks; Concrete Auto Breaker; Hydrohammers (small); Brooms and Sweepers; Hoist (tuggers under 5 tons); Boats (Tug, Safety, Work Barges, Launch); Shouldering Machine Operator; Prestress Machines; Screed Operator; Stone Crushers and Screening Plants; Screed Operators (milling machine), Farm or Industrial Tractor Mounted Equipment; Post Hole Digger; Fireman (asphalt plants); Air Compressors over 400 CFM; Generators, over 150 KW; Augers (vertical and horizontal); Air, Electric, Hydraulic Jacks (slipform); Skid Steer Loaders (with or without attachments); Boiler Operators (temporary heat); Refrigeration Plant/Freeze Machines; Power Pack Vibratory/Ultra Sound Drivers and Extractors; Welding Machines; Heaters (mechanical); Pumps; Winches (small electric); Oiler and Greaser; Rotary Drill Tender; Conveyor; Forklifts/Telehandler 8000 lbs & under; Elevators: Automatic Hoists; Pumps (well points); Combination Small Equipment Operators

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ENGI0139-003 06/01/2016

REMAINING COUNTIES

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 38.72	20.60
Group 2	$ 37.47	20.60
Group 3	$ 36.27	20.60
Group 4	$ 35.74	20.60
Group 5	$ 33.67	20.60
Group 6	$ 33.04	20.60

HAZARDOUS WASTE PREMIUMS:
EPA Level "A" Protection: $3.00 per hour
EPA Level "B" Protection: $2.00 per hour
EPA Level "C" Protection: $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, Tower Cranes and Derricks with or without attachments with a lifting capacity of over 100 tons; Cranes, Tower Cranes, and Derricks with boom, leads and/or jib lengths 176 ft or longer.

GROUP 2: Backhoes (Excavators) weighing 130,00 lbs and over; Cranes, Tower Cranes and Derricks with or without attachments with a lifting capacity of 100 tons or less; Cranes, Tower Cranes, and Derricks with boom, leads, and/or jib lengths 175 ft or less; Caisson Rigs; Pile Driver

GROUP 3: Backhoes (Excavators) weighing under 130,000 lbs; Travelling Crane (bridge type); Milling Machine; Concrete Paver over 27 E; Concrete Spreader and Distributor; Concrete Laser Screed; Concrete Grinder and Planing Machine; Slipform Curb and Gutter Machine; Boring Machine (Directional); Dredge Operator; Skid Rigs; over 46 meter Concrete Pump.

GROUP 4: Hydraulic Backhoe (tractor or truck mounted); Hydraulic Crane, 10 tons or less; Tractor, Bulldozer, or End Loader (over 40 hp); Motor Patrol; Scraper Operator; Bituminous Plant and Paver Operator; Screed-Milling Machine; Roller over 5 tons; Concrete pumps 46 meter and under; Grout Pumps; Rotec type machine; Hydro Blaster, 10,000 psi and over; Rotary Drill Operator; Percussion Drilling Machine; Air Track Drill with or without integral hammer; Blaster; Boring Machine (vertical or horizontal); Side Boom; Trencher, wheel type or chain type having 8 inch or larger bucket; Rail Leveling Machine (Railroad); Tie Placer; Tie Extractor; Tie Tamper; Stone Leveler; Straddle Carrier; Material Hoists; Stack Hoist; Man Hoists; Mechanic and Welder; Off Road Material Haulers.

GROUP 5: Tractor, Bulldozer, or Endloader (under 40 hp); Tampers -Compactors, riding type; Stump Chipper, large; Roller, Rubber Tire; Backfiller; Trencher, chain type (bucket under 8 inch); Concrete Auto Breaker, large; Concrete Finishing Machine (road type); Concrete Batch Hopper; Concrete Conveyor Systems; Concrete Mixers, 14S or over; Pumps, Screw Type and Gypsum); Hydrohammers, small; Brooms and Sweeeprs; Lift Slab Machine; Roller under 5 tons; Industrial Locomotives; Fireman (Pile Drivers and Derricks); Pumps (well points); Hoists, automatic; A-Frames and Winch Trucks; Hoists (tuggers); Boats (Tug, Safety, Work Barges and Launches); Assistant Engineer

GROUP 6: Shouldering Machine Operator; Farm or Industrial Tractor mounted equipment; Post Hole Digger; Auger (vertical and horizontal); Skid Steer Loader with or without attachments; Robotic Tool Carrier with or without attachments; Power Pack Vibratory/Ultra Sound Driver and Extractor; Fireman (Asphalt Plants); Screed Operator; Stone Crushers and Screening Plants; Air, Electric, Hydraulic Jacks (Slip Form); Prestress Machines; Air Compressor, 400 CFM or over; Refrigeration Plant/Freese Machine; Boiler Operators (temporary heat); Forklifts; Welding Machines; Generators; Pumps over 3"; Heaters, Mechanical; Combination small equipment operator; Winches, small electric; Oiler; Greaser; Rotary Drill Tender; Conveyor; Elevator Operator

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IRON0008-002 06/01/2016

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:

	Rates	Fringes
IRONWORKER	$ 30.86	25.42

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0008-003 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
IRONWORKER	$ 33.15	25.42

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0383-001 06/01/2015

ADAMS, COLUMBIA, CRAWFORD, DANE, DODGE, FLORENCE, FOREST, GRANT, GREENE, (Excluding S.E. tip), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LA CROSSE, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, ROCK (Northern area, vicinity of Edgerton and Milton), SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES

	Rates	Fringes
IRONWORKER	$ 32.85	21.84

IRON0512-008 05/01/2015

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPEALEAU COUNTIES

	Rates	Fringes
IRONWORKER	$ 35.50	23.45

IRON0512-021 05/01/2015

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA, PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER	$ 31.04	23.45

LABO0113-002 06/01/2016

MILWAUKEE AND WAUKESHA COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 27.51	20.35
Group 2	$ 27.66	20.35
Group 3	$ 27.86	20.35
Group 4	$ 28.01	20.35
Group 5	$ 28.16	20.35

Group 6.....$ 24.00 20.35

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagperson; traffic control person

LABO0113-003 06/01/2016

OZAUKEE AND WASHINGTON COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 26.76	20.35
Group 2	$ 26.86	20.35
Group 3	$ 26.91	20.35
Group 4	$ 27.11	20.35
Group 5	$ 26.96	20.35
Group 6	$ 23.85	20.35

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated);

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson and Traffic Control Person

LABO0113-011 06/01/2016

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 26.57	20.35
Group 2	$ 26.72	20.35
Group 3	$ 26.92	20.35
Group 4	$ 26.89	20.35
Group 5	$ 27.22	20.35
Group 6	$ 23.71	20.35

LABORERS CLASSIFICATIONS:

GROUP 1: General laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagman; traffic control person

LABO0140-002 06/01/2016

ADAMS, ASHLAND, BARRON, BAYFIELD, BROWN, BUFFALO, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DOUGLAS, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IRON, JACKSON, JUNEAU, IOWA, JEFFERSON, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST. CROIX, TAYLOR, TREMPEALEAU, VERNON, VILLAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes

LABORER

Group 1	$ 30.67	16.55
Group 2	$ 30.77	16.55
Group 3	$ 30.82	16.55
Group 4	$ 31.02	16.55
Group 5	$ 30.87	16.55
Group 6	$ 27.30	16.55

LABORER CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bitminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator, Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk and Pavement); Strike Off Man

GROUP 4: Line and Grade Secialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson; Traffic Control

LABO0464-003 06/01/2016

DANE COUNTY

	Rates	Fringes
LABORER		
Group 1	$ 30.95	16.41
Group 2	$ 31.05	16.41
Group 3	$ 31.10	16.41
Group 4	$ 31.30	16.41
Group 5	$ 31.15	16.41
Group 6	$ 27.30	16.41

LABORERS CLASSIFICATIONS:

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminious Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch

Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; Powderman

GROUP 6: Flagperson and Traffic Control Person

PAIN0106-008 05/02/2016

ASHLAND, BAYFIELD, BURNETT, AND DOUGLAS COUNTIES

	Rates	Fringes
Painters:		
New:		
Brush, Roller	$ 29.86	16.35
Spray, Sandblast, Steel	$ 30.46	16.35
Repaint:		
Brush, Roller	$ 28.36	16.35
Spray, Sandblast, Steel	$ 28.96	16.35

PAIN0108-002 06/01/2016

RACINE COUNTY

	Rates	Fringes
Painters:		
Brush, Roller	$ 32.74	18.70
Spray & Sandblast	$ 33.74	18.70

PAIN0259-002 05/01/2008

BARRON, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, SAWYER, ST. CROIX, AND WASHBURN COUNTIES

	Rates	Fringes
PAINTER	$ 24.11	12.15

PAIN0259-004 05/01/2015

BUFFALO, CRAWFORD, JACKSON, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
PAINTER	$ 22.03	12.45

PAIN0781-002 06/01/2016

JEFFERSON, MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Painters:		
Bridge	$ 30.42	22.19
Brush	$ 30.07	22.19
Spray & Sandblast	$ 30.82	22.19

PAIN0802-002 06/01/2016

COLUMBIA, DANE, DODGE, GRANT, GREEN, IOWA, LAFAYETTE, RICHLAND, ROCK, AND SAUK COUNTIES

	Rates	Fringes
PAINTER		
Brush	$ 27.50	17.72

PREMIUM PAY:
Structural Steel, Spray, Bridges = $1.00 additional per hour.

PAIN0802-003 06/01/2016

ADAMS, BROWN, CALUMET, CLARK, DOOR, FOND DU LAC, FOREST, GREEN LAKE, IRON, JUNEAU, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, PORTAGE, PRICE, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WAUSHARA, WAUPACA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
PAINTER	$ 24.39	11.72

PAIN0934-001 06/01/2016

KENOSHA AND WALWORTH COUNTIES

	Rates	Fringes
Painters:		
Brush	$ 32.74	18.70
Spray	$ 33.74	18.70
Structural Steel	$ 32.89	18.70

PAIN1011-002 06/01/2016

FLORENCE COUNTY

	Rates	Fringes
Painters:	$ 24.56	11.93

PLAS0599-010 06/01/2016

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		

Area 1	$ 39.46	17.17
Area 2 (BAC)	$ 35.07	19.75
Area 3	$ 35.61	19.40
Area 4	$ 34.70	20.51
Area 5	$ 36.27	18.73
Area 6	$ 32.02	22.99

AREA DESCRIPTIONS

AREA 1: BAYFIELD, DOUGLAS, PRICE, SAWYER, AND WASHBURN COUNTIES

AREA 2: ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

AREA 3: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA CROSSE MONROE, PEPIN, PIERCE, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES

AREA 4: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

AREA 5: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES

AREA 6: KENOSHA AND RACINE COUNTIES

PLUM0011-003 05/02/2016

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, SAWYER, AND WASHBURN COUNTIES

	Rates	Fringes
PLUMBER	$ 39.07	18.73

PLUM0075-002 06/01/2016

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
PLUMBER	$ 40.27	21.47

PLUM0075-004 06/01/2016

DODGE (Watertown), GREEN, JEFFERSON, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes

PLUMBER.....$ 40.52 21.47

PLUM0075-009 06/01/2016

COLUMBIA, DANE, IOWA, MARQUETTE, RICHLAND AND SAUK COUNTIES

	Rates	Fringes
PLUMBER	$ 38.82	20.12

PLUM0111-007 06/01/2016

MARINETTE COUNTY (Niagara only)

	Rates	Fringes
PLUMBER/PIPEFITTER	$ 32.19	21.28

PLUM0118-002 06/01/2016

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
Plumber and Steamfitter	$ 40.95	19.95

PLUM0400-003 05/30/2016

ADAMS,BROWN, CALUMET, DODGE (except Watertown), DOOR, FOND DU LAC, GREEN LAKE,KEWAUNEE, MANITOWOC, MARINETTE (except Niagara), MENOMINEE, OCONTO, OUTAGAMIE, SHAWANO, SHEBOYGAN, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
PLUMBER/PIPEFITTER	$ 34.39	17.65

PLUM0434-002 05/29/2016

BARON, BUFFALO, CHIPPEWA, CLARK, CRAWFORD, DUNN, EAU CLAIRE, FLORENCE, FOREST, GRANT, JACKSON, JUNEAU, LA CROSSE, LANGLADE, LINCOLN, MARATHON, MONROE, ONEIDA, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RUSK, ST. CROIX, TAYLOR, TREMPEALEAU, VERNON, VILAS, AND WOOD COUNTIES

	Rates	Fringes
PIPEFITTER	$ 38.20	16.72

PLUM0601-003 06/01/2016

DODGE (Watertown), GREEN, JEFFERSON, LAFAYETTE, MILWAUKEE, OZAUKEE, ROCK, WASHINGTON AND WAUKESHA COUNTIES

	Rates	Fringes
PIPEFITTER	$ 43.26	22.96

PLUM0601-009 06/01/2016

COLUMBIA, DANE, IOWA, MARQUETTE, RICHLAND AND SAUK COUNTIES

	Rates	Fringes
PIPEFITTER	$ 46.43	19.54

TEAM0039-002 06/01/2016

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axle Trucks	$ 26.63	19.85
3 or more axles; Euclids or Dumptor, Articulated Truck, Mechanic	$ 26.78	19.85

SUWI2011-001 11/16/2011

	Rates	Fringes
WELL DRILLER	$ 16.52	

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the

cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of

each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

March 2017

NOTICE TO BIDDERS
WAGE RATE DECISION

The wage rate decision of the Department of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Department of Labor's decision.

Since the bidder is responsible, independently, for ascertaining area practice with respect to the necessity, or lack of necessity, for the use of these classifications in the prosecution of the work contemplated by this project, no inference may be drawn from the omission of these classifications concerning prevailing area practices relative to their use. Further, this omission will not, per se, be construed as establishing any governmental liability for increased labor cost if it is subsequently determined that such classifications are required.

There may be omissions and/or errors in the federal wage rates. The bidder is responsible for evaluating and determining the correct applicable rate.

If a project includes multiple types of construction (highway, bridge over navigable water, sanitary sewer and water main, building) and there is not a separate wage determination for this type of work included in the proposal, use the wage determination that is in the proposal.

Proposal ID: 20170613041 Project(s): 4996-19-71

Federal ID(s): N/A

SECTION: 0001 CONTRACT ITEMS

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0010	204.0100 Removing Pavement	220.000 SY	_____.____	_____.____
0020	204.0150 Removing Curb & Gutter	102.000 LF	_____.____	_____.____
0030	204.0155 Removing Concrete Sidewalk	135.000 SY	_____.____	_____.____
0040	204.0185 Removing Masonry	2.000 CY	_____.____	_____.____
0050	205.0100 Excavation Common	8.000 CY	_____.____	_____.____
0060	209.0200.S Backfill Controlled Low Strength	1.000 CY	_____.____	_____.____
0070	213.0100 Finishing Roadway (project) 01. 4996-19-71	1.000 EACH	_____.____	_____.____
0080	305.0110 Base Aggregate Dense 3/4-Inch	15.000 TON	_____.____	_____.____
0090	405.1000 Stamping Colored Concrete 01. Herringbone Pattern	18.000 CY	_____.____	_____.____
0100	405.1000 Stamping Colored Concrete 02. Soldier Course Pattern	10.000 CY	_____.____	_____.____
0110	415.0090 Concrete Pavement 9-Inch	200.000 SY	_____.____	_____.____
0120	416.0610 Drilled Tie Bars	261.000 EACH	_____.____	_____.____
0130	416.0620 Drilled Dowel Bars	144.000 EACH	_____.____	_____.____
0140	502.0100 Concrete Masonry Bridges	2.000 CY	_____.____	_____.____
0150	502.3200 Protective Surface Treatment	151.000 SY	_____.____	_____.____
0160	502.4205 Adhesive Anchors No. 5 Bar	12.000 EACH	_____.____	_____.____

Proposal ID: 20170613041 Project(s): 4996-19-71

Federal ID(s): N/A

SECTION: 0001 CONTRACT ITEMS

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0170	502.4206 Adhesive Anchors No. 6 Bar	12.000 EACH	_____.____	_____.____
0180	505.0600 Bar Steel Reinforcement HS Coated Structures	280.000 LB	_____.____	_____.____
0190	507.0200 Treated Lumber and Timber	0.150 MBM	_____.____	_____.____
0200	509.1200 Curb Repair	44.000 LF	_____.____	_____.____
0210	509.1500 Concrete Surface Repair	284.000 SF	_____.____	_____.____
0220	509.9020.S Epoxy Crack Sealing	1,887.000 LF	_____.____	_____.____
0230	517.1800.S Structure Repainting Recycled Abrasive (structure) 01. B-59-154	LS	LUMP SUM	_____.____
0240	517.3000.S Structure Overcoating Cleaning and Priming (structure) 01. B-59-154	LS	LUMP SUM	_____.____
0250	517.4000.S Containment and Collection of Waste Materials (structure) 01. B-59-154	LS	LUMP SUM	_____.____
0260	517.4500.S Negative Pressure Containment and Collection of Waste Materials (structure) 01. B-59-154	LS	LUMP SUM	_____.____
0270	517.6001.S Portable Decontamination Facility	1.000 EACH	_____.____	_____.____
0280	601.0600 Concrete Curb Pedestrian	26.000 LF	_____.____	_____.____
0290	602.0415 Concrete Sidewalk 6-Inch	2,415.000 SF	_____.____	_____.____
0300	602.0515 Curb Ramp Detectable Warning Field Natural Patina	58.000 SF	_____.____	_____.____
0310	611.8115 Adjusting Inlet Covers	5.000 EACH	_____.____	_____.____

Proposal ID: 20170613041 Project(s): 4996-19-71

Federal ID(s): N/A

SECTION: 0001 CONTRACT ITEMS

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0320	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0330	625.0100 Topsoil	60.000 SY	_____.____	_____.____
0340	628.1504 Silt Fence	45.000 LF	_____.____	_____.____
0350	628.1520 Silt Fence Maintenance	45.000 LF	_____.____	_____.____
0360	628.1905 Mobilizations Erosion Control	5.000 EACH	_____.____	_____.____
0370	628.1910 Mobilizations Emergency Erosion Control	1.000 EACH	_____.____	_____.____
0380	628.2008 Erosion Mat Urban Class I Type B	60.000 SY	_____.____	_____.____
0390	628.7015 Inlet Protection Type C	12.000 EACH	_____.____	_____.____
0400	629.0210 Fertilizer Type B	4.100 CWT	_____.____	_____.____
0410	630.0140 Seeding Mixture No. 40	3.000 LB	_____.____	_____.____
0420	632.0201 Shrubs (species) (size) (root) 01. Juniperus Horizontalis 'Blue Rug Juniper', CG, 6-FT Spread	10.000 EACH	_____.____	_____.____
0430	642.5001 Field Office Type B	1.000 EACH	_____.____	_____.____
0440	643.0100 Traffic Control (project) 01. 4996-19-71	1.000 EACH	_____.____	_____.____
0450	643.0300 Traffic Control Drums	3,000.000 DAY	_____.____	_____.____
0460	643.0410 Traffic Control Barricades Type II	566.000 DAY	_____.____	_____.____
0470	643.0420 Traffic Control Barricades Type III	718.000 DAY	_____.____	_____.____

Proposal ID: 20170613041 Project(s): 4996-19-71

Federal ID(s): N/A

SECTION: 0001 CONTRACT ITEMS

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0480	643.0705 Traffic Control Warning Lights Type A	432.000 DAY	_____.____	_____.____
0490	643.0715 Traffic Control Warning Lights Type C	825.000 DAY	_____.____	_____.____
0500	643.0900 Traffic Control Signs	918.000 DAY	_____.____	_____.____
0510	643.0920 Traffic Control Covering Signs Type II	6.000 EACH	_____.____	_____.____
0520	643.1000 Traffic Control Signs Fixed Message	29.000 SF	_____.____	_____.____
0530	643.1050 Traffic Control Signs PCMS	47.000 DAY	_____.____	_____.____
0540	643.2000 Traffic Control Detour (project) 01.4996-19-71	1.000 EACH	_____.____	_____.____
0550	643.3000 Traffic Control Detour Signs	1,567.000 DAY	_____.____	_____.____
0560	646.0103 Pavement Marking Paint 4-Inch	1,380.000 LF	_____.____	_____.____
0570	647.0333 Pavement Marking Symbols Bike Shared Lane Paint	4.000 EACH	_____.____	_____.____
0580	647.0563 Pavement Marking Stop Line Paint 18-Inch	48.000 LF	_____.____	_____.____
0590	649.0400 Temporary Pavement Marking Removable Tape 4-Inch	942.000 LF	_____.____	_____.____
0600	653.0900 Adjusting Pull Boxes	2.000 EACH	_____.____	_____.____
0610	690.0250 Sawing Concrete	436.000 LF	_____.____	_____.____
0620	715.0415 Incentive Strength Concrete Pavement	500.000 DOL	1.00000	500.00
0630	SPV.0060 Special 01. Re-chrome Cylinder Rod	1.000 EACH	_____.____	_____.____

Proposal ID: 20170613041 Project(s): 4996-19-71

Federal ID(s): N/A

SECTION: 0001 CONTRACT ITEMS

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0640	SPV.0060 Special 02. Hone Cylinder Barrel	1.000 EACH	_____.____	_____.____
0650	SPV.0060 Special 03. Replace Load Holding Valve	1.000 EACH	_____.____	_____.____
0660	SPV.0060 Special 04. Support Hanger Replacement	22.000 EACH	_____.____	_____.____
0670	SPV.0090 Special 01. Non-Bituminous Joint Filler	339.000 LF	_____.____	_____.____
0680	SPV.0090 Special 02. Concrete Curb & Gutter Integral Type D, 26-inch	80.000 LF	_____.____	_____.____
0690	SPV.0090 Special 03. Concrete Curb & Gutter 26-Inch, Type A	102.000 LF	_____.____	_____.____
0700	SPV.0105 Special 01. Electrical Work	 LS	LUMP SUM	_____.____
0710	SPV.0105 Special 02. Hydraulic Span Drive Machinery Rehabilitation	 LS	LUMP SUM	_____.____
0720	SPV.0105 Special 03. Tubular Steel Railing Repair	 LS	LUMP SUM	_____.____
0730	SPV.0105 Special 04. Heating and Housing	 LS	LUMP SUM	_____.____
0740	SPV.0120 Special 01. Water For Seeded Areas	2.000 MGAL	_____.____	_____.____
0750	SPV.0165 Special 01. Wall Modular Block Gravity Landscape LRFD	25.000 SF	_____.____	_____.____
0760	SPV.0165 Special 02. Removing Brick Pavers	1,237.000 SF	_____.____	_____.____
0770	SPV.0180 Special 01. Sealing Concrete Pavement Joints	245.000 SY	_____.____	_____.____

Section: 0001 Total: _____.____

Total Bid: _____._____

PLEASE ATTACH SCHEDULE OF ITEMS HERE