HIGHWAY WORK PROPOSAL

Proposal Number: 2 Ø

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Milwaukee and Waukesha	1060-35-93		Zoo IC, 2015 TMP Projects, Various Locations	

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: May 12, 2015 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time October 2, 2015	
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 Traffic signals (temporary and permanent), pavement removals, base aggregate, concrete items, pavement marking, signing, sidewalk replacement, sawcutting, earth retaining wall, beamguard, removal of pavement marking, FTMS components.	
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 2007 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://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm. 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://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm 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.

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://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm**. 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 1060-35-93, Zoo IC, 2015 TMP Projects, Various Locations, Milwaukee and Waukesha 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, 2015 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 (20141107)

2. Scope of Work.

The work under this contract shall consist of adding temporary traffic signals, traffic signal upgrades, concrete (sidewalk, curb and gutter, and median) replacement, removing pavement marking, pavement marking, signing, adding lane to entrance and exit ramp, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.
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 10 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 schedule resources.

Indicate on the schedule of operations working with a sufficient force and adequate equipment to assure that the work will be completed within the established contract time.

The completion date is based on an expedited work schedule and may require extraordinary forces and equipment; work on Saturdays, Sundays, and nationally recognized legal holidays; and work at night.

Obtain any noise variance permits to complete work outside of standard hours. Any permits obtained must be provided to the engineer.

Maintain the integrity on the inlet protection throughout the project. Remove and dispose of any debris that may prevent the flow of water.

When engaged in roadway cleaning operations, use equipment having vacuum or water spray mechanisms to eliminate the dispersion of particulate matter into the atmosphere. If vacuum equipment is employed, it must have suitable self-contained particulate collectors to prevent discharge from the collection bin in the atmosphere.

Staging

IH-894 Northbound Entrance Ramp

Stage 1

Complete all sawcuts, removals, earthwork, base aggregate, HMA pavement, curb & gutter, beam guard, earth retaining barrier wall, FTMS components, ramp metering, inlet work, sidewalk, curb ramps, restoration items, pavement marking, and signing per plan.

Stage 2

Complete all sawcuts, removals, earthwork, base aggregate, HMA pavement, curb & gutter, beam guard, FTMS components, traffic signal work, ramp metering, overhead sign support, lighting, signing, inlet work, sidewalk, curb ramps, restoration items, pavement marking, and signing per plan.

IH-894 Northbound Exit Ramp

Stage 1

Complete all sawcuts, removals, base aggregate, HMA pavement, curb & gutter, restoration items, pavement marking, and signing per plan.

Stage 2

Complete all sawcuts, removals, minor earthwork, base aggregate, HMA pavement, curb & gutter, sidewalk, curb ramps, restoration items, pavement marking, and signing per plan.

W. Greenfield Avenue and S. Calhoun Road

Complete all sawcuts, removals, base aggregate, traffic signal upgrades, sidewalk replacements, curb ramps, pavement marking, signing, and restoration items per plan.

W. Greenfield Avenue and S. Moorland Road

Complete all sawcuts, removals, base aggregate, traffic signal upgrades, sidewalk replacements, curb ramps, pavement marking, signing, and restoration items per plan.

W. Greenfield Avenue and S. Sunnyslope Road

Complete all sawcuts, removals, base aggregate, traffic signal upgrades, sidewalk replacements, curb ramps, pavement marking, signing, and restoration items per plan.

W. Greenfield Avenue and S. Elm Grove Road
Complete all sawcuts, removals, base aggregate, traffic signal upgrades, sidewalk replacements, curb ramps, pavement marking, signing, and restoration items per plan.

Equipment, vehicles, or materials shall be parked or stored only at work sites approved by the engineer.

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

Lane closures on arterial roadways are permitted during off-peak hours (from 9am – 3pm) or overnight hours (from 9pm – 6am).

Local Street Work Restrictions

Definitions

The following definitions apply to this contract for local street work restrictions:

Peak Hours

- 6:00 AM – 9:00 AM Monday, Tuesday, Wednesday, Thursday, Friday
- 3:00 PM – 9:00 PM Monday, Tuesday, Wednesday, Thursday, Friday
- 11:00 AM – 8:00 PM Saturday
- 1:00 PM – 5:00 PM Sunday

Off-Peak Hours

- 9:00 AM – 3:00 PM Monday, Tuesday, Wednesday, Thursday, Friday
- 9:00 PM – 6:00 AM Monday, Tuesday, Wednesday, Thursday
- 9:00 PM – 11:00 AM Friday PM to Saturday AM
- 8:00 PM – 1:00 PM Saturday PM to Sunday PM
- 5:00 PM – 6:00 AM Sunday PM to Monday AM

Do not close local street traffic lanes or intersections and ensure that the local street traffic lanes are entirely clear for traffic during Peak Hours, except as shown in the traffic control plans. One local street traffic lane and/or the shoulder may be closed, but maintain at least one local street traffic lane open to traffic, during Off-Peak Hours. Close intersections only during Off-Peak Hours, unless otherwise specified in the plan, or unless otherwise approved by the engineer for safety or operational reasons associated with other adjacent local street closures.

Follow plan details for closures. Lane restrictions beyond that shown on the traffic control plans must be approved by the engineer. If plan details are not provided in the traffic control plan, furnish plans for review by the engineer so that approval, or disapproval, is obtained at least three business days prior to the closure of local roadway and/or intersection as identified in Contractor Coordination.

Do not, at any time, conduct construction operations in the median area and adjacent outside shoulder area of the local street at the same time without obtaining prior permission of the engineer, beyond that shown on the traffic control plans.

Do not begin or continue any work that closes local street traffic lanes or intersection outside the allowed time periods specified in this contract. If the contractor fails to open local roadway lanes of traffic and/or intersections to traffic by the specified times, assessments shown in the article Lane Rental Assessment will be placed upon the contractor based on the hourly rental rate that the non-compliant closure occurs. The total assessment to the contractor will be the summation of the separate assessments for each local street traffic lane and local street intersection closure violation.

Permitting the contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the department of any of its rights under the contract.

Comply with all local ordinances that apply to local street work operations, including those pertaining to working during night time hours. Furnish any ordinance variance issued by the municipality or required permits to the engineer in writing 3 days prior to performing such work.

Interim and Final Completion of Work

Supplement standard spec 108.11 with the following:

The department will not grant time extensions for the following:

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

Each day is defined as a 24 hour period beginning at 12:01 AM.

4. Traffic.

The construction sequence, including associated traffic control, shall be substantially accomplished as detailed in the Traffic Control Plans and as described herein.

Submit to the engineer for approval a detailed traffic control plan if different than the traffic control plan provided in the plan set. This plan is to be submitted ten days prior to the preconstruction conference.

IH-894 Northbound Entrance Ramp from W. Oklahoma Avenue

Stage 1

Contractor shall close the inside lane for the minimum duration to complete all work per plan. Ramp must remain open at all times during construction. Contractor shall notify the Statewide Operations Center (STOC), Jeremy Iwen, (414) 225-3722 office or (414) 840-9457 cell, five days prior to closing lane for construction. All pavement markings pertaining to the inside lane shall be completed prior to closing the outside lane.

Stage FTMS construction to provide single lane ramp meter operations during the project. Coordinate with the Statewide Traffic Operations Center to determine ramp metering hours. Weekend or nighttime work may be necessary to accomplish the stage switch during non-metering hours.

Stage 2

Contractor shall close the outside lane for the minimum duration to complete all work per plan. Ramp must remain open at all times during construction. Contractor shall notify the Statewide Operations Center (STOC), Jeremy Iwen, (414) 225-3722 office or (414) 840-9457 cell, five days prior to closing lane for construction. All pavement markings pertaining to the outside lane shall be completed prior to opening the outside lane.

Stage FTMS construction to provide single lane ramp meter operations during the project. Coordinate with the Statewide Traffic Operations Center to determine ramp metering hours. Weekend or nighttime work may be necessary to accomplish the full ramp opening during non-metering hours.

For westbound pedestrian traffic, pedestrians must be notified of the approaching sidewalk closure at the IH-894 northbound entrance ramp and W. Oklahoma Avenue intersection beginning at S. 95th Street and W. Oklahoma Avenue.

IH-894 Northbound Exit Ramp to W. National Avenue

Stage 1

Contractor shall close the inside median lane located on W. National Avenue (northeast side) for the minimum duration to complete all work per plan. Ramp must remain open at all times during construction. All pavement markings pertaining to the inside lane shall be completed prior to opening this area.

Weekend or nighttime work may be necessary to accomplish the stage switch.

Stage 2

Contractor shall close the inside lane on the IH-894 exit ramp and the inside median lane located on W. National Avenue (southwest side) for the minimum duration to complete all work per plan. Ramp must remain open at all times during construction. All pavement markings pertaining to the inside lane and the southwest median on W. National Avenue shall be completed prior to opening the inside lane.

W. Greenfield Avenue and S. Calhoun Road

Contractor shall not close both sides of pedestrian sidewalks and right turn islands at the same time to complete the traffic signal upgrade work. One side of the intersection must remain open while the other side is under construction. Intersections must remain open at all times during construction. All pavement markings shall be completed utilizing moving operations during off peak hours.

Contractor may close one lane for the construction of medians and right turn islands only during off-peak hours. If a lane has been closed during off-peak hours, the contractor shall open the lane for all peak hours.

W. Greenfield Avenue and S. Moorland Road

Contractor shall not close both sides of pedestrian sidewalks and right turn islands at the same time to complete the traffic signal upgrade work. One side of the intersection must remain open while the other side is under construction. Intersections must remain open at all times during construction. All pavement markings shall be completed utilizing moving operations during off peak hours.

Contractor may close one lane for the construction of medians and right turn islands only during off-peak hours. If a lane has been closed during off-peak hours, the contractor shall open the lane for all peak hours.

W. Greenfield Avenue and S. Sunnyslope Road

Contractor shall not close both sides of pedestrian sidewalks and right turn islands at the same time to complete the traffic signal upgrade work. One side of the intersection must remain open while the other side is under construction. Intersections must remain open at all times during construction. All pavement markings shall be completed utilizing moving operations during off peak hours.

Contractor may close one lane for the construction of medians and right turn islands only during off-peak hours. If a lane has been closed during off-peak hours, the contractor shall open the lane for all peak hours.

W. Greenfield Avenue and S. Elm Grove Road

Stage 1

Contractor shall close for the absolute minimum duration to construct the northwest south section sidewalk and the southwest corner sidewalk per plan. Intersections must remain open at all times during construction. All pavement markings shall be complete utilizing moving operations during off peak hours.

Stage 2

Contractor shall close for the absolute minimum duration to construct the northwest east section sidewalk and the northeast corner sidewalk per plan. Intersections must remain open at all times during construction. All pavement markings shall be completed utilizing moving operations during off peak hours.

IH-94 Eastbound Exit Ramp to S. Moorland Road

Complete all traffic signal work per plan. Complete all removals of existing pavement markings, placement of new pavement marking and signing items per plan with a one to two day construction timeline. Ramp must remain open at all times during construction.

All pavement marking shall be completed utilizing moving operations and during off peak hours.

5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying IH-894 Northbound Entrance Ramp from W. Oklahoma Avenue, IH-894 Northbound Exit Ramp to W. National Avenue, W. Greenfield Avenue and S. Calhoun Road, W. Greenfield Avenue and S. Moorland Road, W. Greenfield Avenue and S. Sunnyslope Road, W. Greenfield Avenue and S. Elm Grove Road 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:

- From noon Friday, May 22, 2015 to 6:00 AM Tuesday, May 26, 2015 for Memorial Day;
- From noon Friday, July 3, 2015 to 6:00 AM Monday, July 6, 2015 for Independence Day;
- From noon Friday, September 4, 2015 to 6:00 AM Tuesday, September 8, 2015 for Labor Day.

107-005 (20050502)

6. Utilities.

This contract comes under the provisions of Administrative Rule TRANS 220.

Additional information regarding recently relocated utility facilities may be available on permits issued to the utility companies. These permits can be viewed at the Region Office during normal working hours. Contact WisDOT SE Freeways Utility Coordinator Douglas Gendron at (414) 750-4362 for further information.

Underground and overhead utility facilities are located within the project limits. Utility adjustments are required for this construction project as noted below. Coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area as required per state statute. Use caution to ensure the integrity of underground facilities and maintain code clearances from overhead facilities at all times.

Some utility work, as described below, is dependent on prior work being performed by the contractor at a specific site. Provide the engineer and the affected utility a good faith notice of when the utility is to start work at the site. Notice shall be given 14 to 16 calendar days in advance of when the site will be available to the utility. Follow up with a confirmation

notice to the engineer and the utility not less than 3 working days before the site will be ready for the utility to begin its work.

Contact utility companies listed in the plans prior to preparing bids to obtain current information on existing utility locations and the status of any new utility relocation work.

Utility companies will be performing utility work and adjustments within the limits and during the life of the project. The contractor shall cooperate and coordinate construction activities with these companies.

There may be abandoned utility facilities within the project limits. If a conflict with an abandoned utility facility is encountered, contact the appropriate utility owner/representative to coordinate construction activities and proper removal and disposal of said facility as necessary.

Utility working days shown herein are as defined in Wisconsin Administrative Code Chapter Trans 220.

Known utilities in the projects are as follows:

W. Greenfield Avenue and S. Calhoun Road

AT&T Wisconsin has existing underground communications facilities within the project limits in the following locations:

- An underground communications line beginning at a pole at the southwest corner of the intersection and running northerly to the north side of Greenfield Avenue where it turns and runs easterly to a manhole at the northeast corner of the intersection. From there the line continues easterly to beyond the project limits. This line will remain in place without adjustment.
- An underground communications line beginning at a manhole at the northeast corner of the intersection and running northerly to beyond the project limits. This line will remain in place without adjustment.

Contact Jay Bulanek, (414) 535-7407 office, of AT&T Wisconsin 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Lighting has existing underground and overhead lighting facilities throughout the project limits, including lighting on signal poles at the intersection. WisDOT will become the owner of the reconstructed lighting on signal poles at the intersection. All other lighting facilities will remain in place without adjustment. Remove, adjust, reconstruct, abandon and leave in place the lighting facilities as shown in the plans.

Contact John Carlson, (262) 787-3539 office, of the City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Sewer has an existing underground 8-inch sanitary sewer line beginning beyond the easterly project limits and running westerly along the northernmost westbound lane of Greenfield Avenue to beyond the westerly project limits. This line will remain in place without adjustment.

Contact Tom Grisa, (262) 796-6644, of City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Signals has existing underground and overhead signal facilities throughout the project limits. WisDOT will become the owner of the reconstructed signal facilities at the intersection. Remove, adjust, reconstruct, abandon and leave in place the signal facilities as shown in the plans.

Contact John Carlson, (262) 787-3539 office, of the City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Water has existing underground water facilities within the project limits at the following locations:

- A 12-inch water main beginning beyond the easterly project limits and running westerly along the northernmost westbound lane of Greenfield Avenue to a tee at the northeast corner of the intersection. From there it runs westerly through the intersection and continues westerly to beyond the project limits. This main will remain in place without adjustment.
- A 12-inch water main beginning at a tee in the northeast corner of the intersection and running northerly along the easterly curb line of Calhoun Road to beyond the northerly project limits. This main will remain in place without adjustment.

Contact Tom Grisa, (262) 796-6644, of City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Midwest Fiber Networks an existing underground communications line in a WisDOT conduit beginning beyond the westerly project limits and running easterly along the median of Greenfield Avenue, crossing through the intersection and continuing to beyond the easterly project limits. This line will remain in place without adjustment.

Contact Richard Trgovec, (414) 459-3554 office, of Midwest Fiber Networks 7 days in advance to coordinate locations and any excavation near their facilities.

New Berlin, City of - Water has existing underground water facilities within the project limits at the following locations:

- A 12-inch water main beginning beyond the easterly project limits and running westerly along the southernmost eastbound lane of Greenfield Avenue to the east side of the intersection where it jogs to the south, crossing the intersection and runs

to a tee at the median island of Calhoun Road. From there the main jogs back north at the west side of the intersection and runs westerly along the southerly curb line of Greenfield Avenue to beyond the project limits. This main will remain in place without adjustment.

- A 16-inch water main beginning at a tee at the median island of Calhoun Road at the south side of the intersection and running southerly along the median island to beyond the southerly project limits. This main will remain in place without adjustment.

Contact J. P. Walker, (262) 613-2025, of City of New Berlin 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies - Electric has existing underground and overhead electric facilities within the project limits in the following locations:

- An overhead electric line beginning beyond the westerly project limits and running easterly along the south right-of-way of Greenfield Avenue to a pole approximately 160 feet west of the intersection. From there it turns and runs across Greenfield Avenue and ends at a pole at the north right-of-way. This line will remain in place without adjustment.
- An underground electric line beginning at a pole at the north right-of-way of Greenfield Avenue and running westerly to beyond the project limits. This line will remain in place without adjustment.
- An underground electric line beginning beyond the southerly project limits and running northerly along the east right-of-way of Calhoun Road to the south right-of-way of Greenfield Avenue where it turns and runs easterly to a point approximately 160 feet east of the center of the intersection. From there it turns and runs across Greenfield Avenue to the north right-of-way where it turns and runs westerly along the north right-of-way to the east right-of-way of Calhoun Road. From there the line runs northerly along the east right-of-way line to beyond the project limits. This line will remain in place without adjustment.

Contact Jason Chapin, (414) 944-5575 office / (414) 587-0655 cell, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies – Gas has existing underground gas facilities within the project limits in the following locations:

- An underground gas line beginning beyond the easterly project limits and running westerly behind the northerly curb line of Greenfield Avenue to Calhoun Road where it turns and runs northerly behind the easterly curb line of Calhoun Road to beyond the northerly project limits. This line will remain in place without adjustment.

- An underground gas line beginning beyond the northerly project limits and running southerly along the west right-of-way of Calhoun Road to Greenfield Avenue where it turns and runs westerly behind the northerly curb line of Greenfield Avenue to beyond the project limits. This line will remain in place without adjustment.
- An underground gas line beginning behind the northerly curb line of Greenfield Avenue at a point approximately 200 feet west of the center of the intersection and running southerly across Greenfield Avenue to the south side of Calhoun Road. From there the line runs easterly behind the southerly curb line of Greenfield Avenue to Calhoun Road where it turns and runs southerly easterly behind the westerly curb line of Calhoun Road to beyond the project limits. This line will remain in place without adjustment.
- An underground gas line beginning behind the westerly curb line of Calhoun Road at a point approximately 190 feet south of the center of the intersection and running easterly across Calhoun Road to a point behind the easterly curb line of Calhoun Road where it turns and runs southerly behind the easterly curb line of Calhoun Road to beyond the project limits. This line will remain in place without adjustment.

Contact Erich Wuestenhagen, (414) 651-3948, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

Windstream has an existing underground communications line beginning beyond the northerly project limits and running southerly along the west side of southbound Calhoun Road, through the intersection and continuing southerly to beyond the project limits. This line will remain in place without adjustment.

Contact Jim Kostuch, (262) 792-7938 office, of Windstream 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT - Lighting has no existing lighting facilities within the project area. WisDOT will become the owner of the reconstructed lighting on signal poles at the intersection. Remove, adjust, reconstruct, abandon and leave in place the lighting facilities as shown in the plans.

Contact Eric Perea, (262) 574-5422 office / (414) 750-0935 cell, of WisDOT - Lighting 7 days in advance and WisDOT Traffic Signal Operations, (414) 750-2605, 5 working days in advance to coordinate construction activities.

WisDOT - Signals has no existing signal facilities within the project area. WisDOT will become the owner of the signal facilities being reconstructed at the intersection. Remove, adjust, reconstruct, abandon and leave in place the signal facilities as shown in the plans.

Contact Eric Perea, (262) 574-5422 office / (414) 750-0935 cell, of WisDOT - Lighting 7 days in advance and WisDOT Traffic Signal Operations, (414) 750-2605, 5 working days in advance to coordinate construction activities.

WisDOT - STOC has an existing underground communications line beginning beyond the westerly project limits and running easterly along the median of Greenfield Avenue, crossing through the intersection and continuing to beyond the easterly project limits. This line will remain in place without adjustment. WisDOT also has communications connections to existing signal facilities at the intersection. Remove, adjust, reconstruct, abandon and leave in place the communications facilities as shown in the plans.

Contact Jeff Madson, (414) 225-3723, of WisDOT - STOC 7 days in advance to coordinate locations and any excavation near their facilities.

W. Greenfield Avenue and S. Moorland Road

AT&T Wisconsin has existing underground communications facilities within the project limits in the following locations:

- An underground communications line beginning beyond the westerly project limits and running easterly behind the northerly curb line of Greenfield Avenue, continuing through the intersection to the median of Moorland Road where it turns and runs northerly along the median and ends at a vault located approximately 155 feet north of the center of the intersection. This line will remain in place without adjustment.
- An underground communications line beginning at a vault located at the median of Moorland Road approximately 155 feet north of the center of the intersection and running southeasterly to a point at the north right-of-way of Greenfield Avenue approximately 145 feet east of the center of the intersection. From there the line runs easterly along the north right-of-way to beyond the project limits. This line will remain in place without adjustment.
- Two underground communications lines beginning beyond the southerly project limits and running northerly behind the westerly curb line of Moorland Road to a point approximately 125 feet south of the center of the intersection. From there the lines run northeasterly through the intersection to a point on the median of Moorland Road approximately 55 feet north of the center of the intersection. From there the lines run northerly along the median to a vault located approximately 155 feet north of the center of the intersection where they turn and run northerly and northwesterly to a point at the westerly curb line of Moorland Road approximately 420 feet north of the center of the intersection. From there the lines run northerly along the westerly curb line of Moorland Road to beyond the project limits. These lines will remain in place without adjustment.

Contact Jay Bulanek (414-535-7407 office) of AT&T Wisconsin 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Lighting has existing underground and overhead lighting facilities throughout the project limits. WisDOT will become the owner of the lighting facilities being reconstructed at the intersection. All other lighting facilities will remain in place without adjustment. Remove, adjust, reconstruct, abandon and leave in place the lighting facilities as shown in the plans.

Contact John Carlson, (262) 787-3539 office, of the City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Sewer has an existing underground sanitary sewer line beginning beyond the northerly project limits and running southerly along the median of Moorland Road to a manhole located approximately 260 feet north of the center of the intersection. From there the line runs southwesterly to a manhole near the west right-of-way of Moorland Road approximately 213 feet north of the center of the intersection where it turns and runs westerly to beyond the project limits. This line will remain in place without adjustment.

Contact Tom Grisa, (262) 796-6644, of City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Water has existing underground water facilities within the project limits at the following locations:

- An underground 12-inch water main beginning beyond the westerly project limits and running easterly along the north right-of-way of Greenfield Avenue to Moorland Road where it turns and runs northerly along the west right-of-way to a point approximately 198 feet north of the center of the intersection. From there the line runs easterly across Moorland Road and ends at a tee located behind the easterly curb line of Moorland Road approximately 198 feet north of the center of the intersection. This line will remain in place without adjustment.
- An underground 12-inch water main beginning beyond the easterly project limits and running westerly behind the northerly curb line of Greenfield Avenue to Moorland Road. From there the line runs northerly behind the easterly curb line of Moorland Road to beyond the project limits. This line will remain in place without adjustment.

Contact Tom Grisa (262-796-6644) of City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Midwest Fiber Networks an existing underground communications line in a WisDOT conduit beginning beyond the westerly project limits and running easterly along the median of Greenfield Avenue, crossing through the intersection and continuing to beyond the easterly project limits. This line will remain in place without adjustment.

Contact Richard Trgovec, (414) 459-3554 office, of Midwest Fiber Networks 7 days in advance to coordinate locations and any excavation near their facilities.

New Berlin, City of – Sewer has an existing sanitary sewer line beginning at a manhole located 5 feet south of the southerly curb line of Greenfield Avenue, approximately 300 feet west of the center of the intersection, and running westerly behind the curb line to beyond the westerly project limits. This line will remain in place without adjustment.

Contact J. P. Walker, (262) 613-2025, of City of New Berlin 7 days in advance to coordinate locations and any excavation near their facilities.

New Berlin, City of – Water has an existing underground water main beginning beyond the westerly project limits and running easterly, approximately 10 feet south of the southerly curb line of Greenfield Avenue, crossing through the intersection, and continuing easterly to beyond the project limits. This main will remain in place without adjustment.

Contact J. P. Walker, (262) 613-2025, of City of New Berlin 7 days in advance to coordinate locations and any excavation near their facilities.

TDS Metrocom has an existing underground communications line beginning beyond the southerly project limits and running northerly behind the easterly curb line of Moorland Road, crossing through the intersection, and continuing northerly behind the easterly curb line to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Michael Johnson, (262) 754-3052 office / (262) 939-6355 cell, of TDS Metrocom 7 days in advance to coordinate locations and any excavation near their facilities.

Time Warner Cable has existing overhead and underground communications facilities within the project limits at the following locations:

- An overhead communications line on We Energies' poles beginning beyond the southerly project limits and running northerly along the west right-of-way of Moorland Road to a pole located approximately 125 feet south of the center of the intersection. From there is runs northwesterly across Greenfield Avenue to a pole located at the northerly back of sidewalk approximately 149 feet west of the center of the intersection where it turns and runs westerly along the back of sidewalk to beyond the westerly project limits. This line will remain in place without adjustment.
- An overhead communications line on We Energies' poles beginning at a pole at the west right-of-way of Moorland Road located approximately 125 feet south of the center of the intersection and running easterly across Moorland Road to a pole located at the south right-of-way of Greenfield Avenue approximately 141 feet east of the center of the intersection. This line will remain in place without adjustment.
- An overhead communications line on We Energies' poles beginning at a pole at the west right-of-way of Moorland Road located approximately 216 feet south of the center of the intersection and running northeasterly across Moorland Road to a pole located at the south right-of-way of Greenfield Avenue approximately 141 feet east of the center of the intersection. From there the line runs easterly along the south

right-of-way to beyond the easterly project limits. This line will remain in place without adjustment.

- An underground communications line beginning at a pole located at the northerly back of sidewalk of Greenfield Avenue approximately 149 feet west of the center of the intersection and running easterly and northeasterly to the west right-of-way of Moorland Road where it turns and runs northerly along the westerly right-of-way to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Steve Cramer, (414) 277-4045 office, of Time Warner Cable 7 days in advance to coordinate locations and any excavation near their facilities.

Waukesha, County of – Signals has existing underground and overhead signal facilities throughout the project limits, including signals on light poles at the intersection. WisDOT will become the owner of the reconstructed signals on light poles at the intersection. Remove, adjust, reconstruct, abandon and leave in place the signal facilities as shown in the plans.

Contact Gary Evans, (262) 548-7740, of Waukesha County DPW 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies - Electric has existing overhead and underground electric facilities within the project limits at the following locations:

- An underground electric line beginning beyond the southerly project limits and running northerly behind the westerly curb line of Moorland Road, crossing Greenfield Avenue and continuing northerly in the westernmost southbound lane of Moorland Road to beyond the northerly project limits. This line will remain in place without adjustment.
- An underground electric line beginning at a light pole at the end of the Greenfield Avenue median located approximately 89 feet west of the center of the intersection and running easterly, crossing the intersection, and continuing easterly along the Greenfield Avenue median to beyond the easterly project limits. This line will remain in place without adjustment.
- An overhead electric line beginning beyond the southerly project limits and running northerly along the west right-of-way of Moorland Road to a pole located approximately 125 feet south of the center of the intersection. From there is runs northwesterly across Greenfield Avenue to a pole located at the northerly back of sidewalk approximately 149 feet west of the center of the intersection where it turns and runs westerly along the back of sidewalk to beyond the westerly project limits. This line will remain in place without adjustment.
- An overhead electric line beginning at a pole at the west right-of-way of Moorland Road located approximately 125 feet south of the center of the intersection and running easterly across Moorland Road to a pole located at the south right-of-way of Greenfield Avenue approximately 141 feet east of the center of the intersection. This line will remain in place without adjustment.

- An overhead electric line beginning at a pole at the west right-of-way of Moorland Road located approximately 216 feet south of the center of the intersection and running northeasterly across Moorland Road to a pole located at the south right-of-way of Greenfield Avenue approximately 141 feet east of the center of the intersection. From there the line runs easterly along the south right-of-way to beyond the easterly project limits. This line will remain in place without adjustment.

Proper clearances between temporary signal lines and overhead electric lines must be maintained at all times. Contact Jason Chapin, (414) 944-5575 office / (414) 587-0655 cell, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies - Gas has existing underground gas facilities within the project limits in the following locations:

- An underground gas line beginning beyond the westerly project limits and running easterly behind the northerly curb line of Greenfield Avenue to a point approximately 130 feet west of the center of the intersection where it turns and runs northeasterly to a point at the westerly curb line of Moorland Road located approximately 93 feet north of the center of the intersection. From there the line runs easterly across the intersection to a point approximately 70 feet east of the center of the intersection where it turns and runs southeasterly and easterly behind the northerly curb line of Greenfield Avenue to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground gas line beginning at a point at the westerly curb line of Moorland Road located approximately 93 feet north of the center of the intersection and running northerly along the westerly curb line of Moorland Road to beyond the northerly project limits. This line will remain in place without adjustment.
- An underground gas line beginning beyond the westerly project limits and running easterly along the southerly curb line of Greenfield Avenue, crossing Moorland Road approximately 109 feet south of the center of the intersection, and continuing easterly along the southerly back of sidewalk of Greenfield Avenue to beyond the easterly project limits. This line will remain in place without adjustment.

Contact Erich Wuestenhagen, (414) 651-3948, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT - Lighting has no existing lighting facilities within the project area. WisDOT will become the owner of the lighting facilities being reconstructed at the intersection. Remove, adjust, reconstruct, abandon and leave in place the lighting facilities as shown in the plans.

Contact Eric Perea, (262) 574-5422 office / (414) 750-0935 cell, of WisDOT - Lighting 7 days in advance and WisDOT Traffic Signal Operations, (414) 750-2605, 5 working days in advance to coordinate construction activities.

WisDOT - Signals has no existing signal facilities within the project area. WisDOT will become the owner of the reconstructed signals on light poles at the intersection. Remove, adjust, reconstruct, abandon and leave in place the signal facilities as shown in the plans.

Contact Eric Perea, (262) 574-5422 office / (414) 750-0935 cell, of WisDOT - Lighting 7 days in advance and WisDOT Traffic Signal Operations, (414) 750-2605, 5 working days in advance to coordinate construction activities.

WisDOT - STOC has existing underground communications facilities within the project limits in the following locations:

- An underground communications line beginning beyond the westerly project limits and running easterly along the median of Greenfield Avenue, crossing through the intersection and continuing to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground communications line beginning at a point in the median of Greenfield Avenue approximately 90 feet east of the center of the intersection and running northwesterly to a point in the median of Moorland Road approximately 183 feet north of the center of the intersection. From there the line runs northerly along the median of Moorland Road to beyond the northerly project limits. This line will remain in place without adjustment.
- A communications connection to the existing signal facilities at the intersection. Remove, adjust, reconstruct, abandon and leave in place the communications facilities as shown in the plans.

Contact Jeff Madson, (414) 225-3723, of WisDOT - STOC 7 days in advance to coordinate locations and any excavation near their facilities.

IH 94 Eastbound Off Ramp @ S. Moorland Road

AT&T Wisconsin has existing underground communications facilities within the project limits in the following locations:

- Two existing underground communications lines beginning beyond the southerly project limits and running northerly along the west right-of-way of Moorland Road to beyond the northerly project limits. These lines will remain in place without adjustment.
- An underground communications line beginning beyond the southerly project limits and running northerly along the east right-of-way of Moorland Road to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Jay Bulanek, (414) 535-7407 office, of AT&T Wisconsin 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Lighting has existing light poles and underground lines beginning beyond the southerly project limits and running northerly along the median of Moorland Road to beyond the northerly project limits. These facilities will remain in place without adjustment.

Contact John Carlson, (262) 787-3539 office, of the City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Sewer has an existing underground sanitary sewer line beginning beyond the southerly project limits and running northerly approximately 10 feet behind the easterly curb line of Moorland Road to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Tom Grisa, (262) 796-6644, of City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Water has an existing underground water main beginning beyond the southerly project limits and running northerly along the median of Moorland Road to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Tom Grisa, (262) 796-6644, of City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

TDS Metrocom has an existing underground communications line beginning beyond the southerly project limits and running northerly behind the easterly curb line of Moorland Road to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Michael Johnson, (262) 754-3052 office / (262) 939-6355 cell, of TDS Metrocom 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies - Electric has an existing underground electric line beginning beyond the southerly project limits and running northerly along the westernmost southbound lane of Moorland Road to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Jason Chapin, (414) 944-5575 office / (414) 587-0655 cell, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies - Gas has an existing underground gas line beginning beyond the southerly project limits and running northerly along the median of Moorland Road to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Erich Wuestenhagen, (414) 651-3948, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT – Signals has existing underground and overhead signal facilities throughout the project limits. Remove, adjust, reconstruct, abandon and leave in place the signal facilities as shown in the plans.

Contact WisDOT Traffic Signal Operations, (414) 750-2605, 5 working days in advance to coordinate construction activities.

WisDOT - STOC has an existing underground communications line beginning beyond the southerly project limits and running northerly along the median of Moorland Road to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Jeff Madson, (414) 225-3723, of WisDOT - STOC 7 days in advance to coordinate locations and any excavation near their facilities.

W. Greenfield Avenue and S. Sunnyslope Road

AT&T Wisconsin has existing underground communications facilities within the project limits at the following locations:

- An underground communications line beginning beyond the westerly project limits and running easterly along the northerly curb line of Greenfield Avenue to a point approximately 187 feet west of the center of the intersection where it turns southeasterly and runs to a vault in the center of the intersection and continues across the intersection to the median of Greenfield Avenue at a point approximately 56 feet east of the center of the intersection. From there the line runs easterly along the median of Greenfield Avenue to a point approximately 270 feet east of the intersection where it turns and runs southerly to beyond the project limits. This line will remain in place without adjustment.
- An underground communications line beginning beyond the southerly project limits and running northerly to a point approximately 36 feet west of and 89 feet south of the center of the intersection. From there the line runs northeasterly to a vault in the center of the intersection where it turns and runs northerly along the southbound lane of Sunnyslope Road to beyond the northerly project limits. This line will remain in place without adjustment.
- An underground communications line beginning at a manhole in the median of Greenfield Avenue approximately 97 feet east of the center of the intersection and running northerly to the north sidewalk of Greenfield Avenue. From there the line turns and runs easterly along the north right-of-way of Greenfield Avenue to beyond the easterly project limits. This line will remain in place without adjustment.

Contact Jay Bulanek, (414) 535-7407 office, of AT&T Wisconsin 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Sewer has existing underground sanitary sewer facilities within the project limits in the following locations:

- An underground sanitary sewer line beginning beyond the westerly project limits and running easterly in the westbound lanes of Greenfield Avenue to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground sanitary sewer line beginning at a manhole at the center of the intersection and running northerly along the median of Sunnyslope Road to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Tom Grisa (262-796-6644) of City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Water has existing underground water facilities within the project limits at the following locations:

- An underground water main beginning beyond the westerly project limits and running easterly behind the northerly curb line of Greenfield Avenue to a point approximately 260 feet west of the center of the intersection where it turns and runs southeasterly to the center of the northernmost westbound lanes of Greenfield Avenue. From there the line runs easterly along the center of the northernmost westbound lane to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground water main beginning at a tee located approximately 45 feet east and 37 feet north of the center of the intersection and running northerly along the east right-of-way of Sunnyslope Road to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Tom Grisa, (262) 796-6644, of City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Midwest Fiber Networks an existing underground communications lines within the project limits at the following locations:

- An existing underground communications line in a WisDOT conduit beginning beyond the westerly project limits and running easterly along the median of Greenfield Avenue, crossing through the intersection and continuing to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground communications line beginning beyond the southerly project limits and running northerly along the west right-of-way of Sunnyslope Road, crossing Greenfield Avenue approximately 90 feet west of the center of the intersection and continuing northerly along the east right-of-way to beyond the northerly project limits. This line will remain in place without adjustment.
- An underground communications line beginning at a manhole in the median of Greenfield Avenue approximately 97 feet east of the center of the intersection and running northerly to the north sidewalk of Greenfield Avenue. From there the line turns and runs westerly across Sunnyslope Road and ends at a point approximately 65 west of the center of the intersection. This line will remain in place without adjustment.

Contact Richard Trgovec, (414) 459-3554 office, of Midwest Fiber Networks 7 days in advance to coordinate locations and any excavation near their facilities.

New Berlin, City of – Lighting has existing underground and overhead lighting facilities throughout the project limits, including lighting on signal poles at the intersection. WisDOT will become the owner of the reconstructed lighting on signal poles at the intersection. All other lighting facilities will remain in place without adjustment. Remove, adjust, reconstruct, abandon and leave in place the lighting facilities as shown in the plans.

Contact J. P. Walker, (262) 613-2025, of City of New Berlin 5 working days in advance to coordinate locations and any excavation near their facilities.

New Berlin, City of – Sewer has existing underground sanitary sewer facilities within the project limits at the following locations:

- An underground sanitary sewer line beginning in the middle of the southerly sidewalk of Greenfield Avenue approximately 255’ east of the center of the intersection and running westerly, crossing the intersection and continuing westerly behind the southerly curb line of Greenfield Avenue to a manhole located approximately 385 west of the center of the intersection. From there the line runs south to beyond the southerly project limits. This line will remain in place without adjustment.
- An underground sanitary sewer line beginning at a manhole located approximately 80 feet west and 56 feet south of the center of the intersection and running westerly along the south sidewalk of Greenfield Avenue to beyond the westerly project limits. The sewer will remain in place without adjustment. Adjust the sanitary manhole located approximately 80 feet west and 56 feet south of the center of the intersection in the sidewalk as shown in the plans.

Contact J. P. Walker, (262) 613-2025, of City of New Berlin 7 days in advance to coordinate locations and any excavation near their facilities.

New Berlin, City of - Signals has existing underground and overhead signal facilities throughout the project limits. WisDOT will become the owner of the reconstructed signal facilities at the intersection. Remove, adjust, reconstruct, abandon and leave in place the signal facilities as shown in the plans.

Contact J. P. Walker, (262) 613-2025, of City of New Berlin 5 working days in advance to coordinate locations and any excavation near their facilities.

New Berlin, City of – Water has an existing underground water main beginning beyond the westerly project limits and running easterly along the southerly back of walk of Greenfield Avenue to a point approximately 166 feet west of the center of the intersection where it turns and runs northeasterly to a point approximately 117 feet west of and 47 south of the center of the intersection. From there the line turns and runs easterly to a point approximately 7 feet

east of and 50 south of the center of the intersection where it turns and runs northeasterly to a point approximately 44 feet east of and 37 south of the center of the intersection. From there the line turns and runs easterly along the southerly curb line of Greenfield Avenue to beyond the easterly project limits. This line will remain in place without adjustment.

Contact J. P. Walker, (262) 613-2025, of City of New Berlin 7 days in advance to coordinate locations and any excavation near their facilities.

Time Warner Cable has existing overhead and underground communications facilities within the project limits at the following locations:

- An overhead communications line on We Energies' poles beginning beyond the southerly project limits and running northerly along the east right-of-way of Sunnyslope Road, crossing Greenfield Avenue and continuing northerly along the east right-of-way to beyond the project limits. This line will remain in place without adjustment.
- An underground facility begins at a pole located approximately 32 feet east and 90 feet north of the center of the intersection and running easterly along the north right-of-way of Greenfield Avenue to beyond the easterly project limits. This line will remain in place without adjustment.

Contact Steve Cramer (414-277-4045 office) of Time Warner Cable 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies - Electric has existing overhead facilities within the project limits at the following locations:

- An overhead electric line beginning beyond the southerly project limits and running northerly along the east right-of-way of Sunnyslope Road, crossing Greenfield Avenue and continuing northerly along the east right-of-way to beyond the project limits. This line will remain in place without adjustment.
- An overhead electric line beginning at a pole at the west right-of-way of Sunnyslope Road approximately 89 feet north of the center of the intersection and running easterly across Sunnyslope Road to a pole at the east right-of-way of Sunnyslope Road approximately 90 feet north of the center of the intersection. This line will remain in place without adjustment.
- An overhead electric line beginning at a pole at the north right-of-way of Greenfield Avenue approximately 241 feet west of the center of the intersection and running southerly across Greenfield Avenue to a pole at the south right-of-way of Greenfield Avenue approximately 248 feet west of the center of the intersection. From there the line runs westerly along the south right-of-way of Greenfield Avenue to beyond the westerly project limits. This line will remain in place without adjustment.

Proper clearances between temporary signal lines and overhead electric lines must be maintained at all times. Contact Jason Chapin, (414) 944-5575 office / (414) 587-0655 cell, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies - Gas has existing underground gas facilities within the project limits in the following locations:

- An underground gas line beginning beyond the westerly project limits and running easterly along the north right-of-way of Greenfield Avenue to the west side of Sunnyslope Road where it turns northeasterly and easterly, crossing Sunnyslope Road approximately 98 feet north of the center of the intersection, and continuing to the east side of Sunnyslope Road. From there runs southeasterly and easterly along the north right-of-way of Greenfield Avenue to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground gas line beginning beyond the westerly project limits and running easterly along the south right-of-way of Greenfield Avenue, crossing Sunnyslope Road approximately 64 feet south of the center of the intersection and continuing easterly along the south right-of-way to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground gas line beginning at a tee at the south right-of-way of Greenfield Avenue and running southerly along the west right-of-way of Sunnyslope Road to beyond the southerly project limits. This line will remain in place without adjustment.

Contact Erich Wuestenhagen, (414) 651-3948, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

Windstream has an existing underground communications line beginning beyond the southerly project limits and running northerly along the west right-of-way of Sunnyslope Road, crossing Greenfield Avenue approximately 90 feet west of the center of the intersection and continuing northerly along the west right-of-way to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Jim Kostuch, (262) 792-7938 office, of Windstream 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT - Lighting has no existing lighting facilities within the project area. WisDOT will become the owner of the reconstructed lighting on signal poles at the intersection. Remove, adjust, reconstruct, abandon and leave in place the lighting facilities as shown in the plans.

Contact Eric Perea, (262) 574-5422 office / (414) 750-0935 cell, of WisDOT - Lighting 7 days in advance and WisDOT Traffic Signal Operations, (414) 750-2605, 5 working days in advance to coordinate construction activities.

WisDOT - Signals has no existing signal facilities within the project area. WisDOT will become the owner of the signal facilities being reconstructed at the intersection. Remove, adjust, reconstruct, abandon and leave in place the signal facilities as shown in the plans.

Contact Eric Perea, (262) 574-5422 office / (414) 750-0935 cell, of WisDOT - Lighting 7 days in advance and WisDOT Traffic Signal Operations, (414) 750-2605, 5 working days in advance to coordinate construction activities.

WisDOT - STOC has an existing underground communications line beginning beyond the westerly project limits and running easterly along the median of Greenfield Avenue, crossing through the intersection and continuing to beyond the easterly project limits. This line will remain in place without adjustment. WisDOT also has communications connections to existing signal facilities at the intersection. Remove, adjust, reconstruct, abandon and leave in place the communications facilities as shown in the plans.

Contact Jeff Madson, (414) 225-3723, of WisDOT - STOC 7 days in advance to coordinate locations and any excavation near their facilities.

W. Greenfield Avenue and S. Elm Grove Road

AT&T Wisconsin has existing underground communications facilities within the project limits in the following locations:

- An underground communications line beginning beyond the westerly project limits and running easterly along the south right-of-way of Greenfield Avenue to a point approximately 52 feet west of the center of the intersection where it turns and runs southerly along the west right-of-way of Elm Grove Road to beyond the southerly project limits. This line will remain in place without adjustment.
- An underground communicaitons line beginning at a point on the west right-of-way of Elm Grove Road approximately 44 feet west and 110 feet south of the center of the intersection and running easterly across Elm Grove Road and ending at a pedestal located approximately 37 feet east and 112 feet south of the center of the intersection. This line will remain in place without adjustment.

Contact Jay Bulanek, (414) 535-7407 office, of AT&T Wisconsin 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Sewer has underground sanitary sewer facilities within the project limits in the following locations:

- An underground sanitary sewer line beginning beyond the westerly project limits and running easterly in the center of the westbound lanes of Greenfield Avenue, crossing through the intersection and continuing easterly to beyond the easterly project limits. This line will remain in place without adjustment.

- An underground sanitary sewer line beginning at a manhole located approximately 30 feet east and 22 feet north of the center of the intersection and running northerly along the median of Elm Grove Road to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Tom Grisa, (262) 796-6644, of City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of - Water has underground water facilities within the project limits at the following locations:

- An underground water main beginning beyond the westerly project limits and running easterly along the north right-of-way of Greenfield Avenue, crossing through the intersection and continuing easterly along the north right-of-way to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground water main beginning at a tee at the east curb line of Elm Grove Road approximately 44 feet east of the center of the intersection and running northerly along the east curb line to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Tom Grisa, (262) 796-6644, of City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Midwest Fiber Networks an existing underground communications line in a WisDOT conduit beginning beyond the westerly project limits and running easterly along the median of Greenfield Avenue, crossing through the intersection and continuing to beyond the easterly project limits. This line will remain in place without adjustment.

Contact Richard Trgovec, (414) 459-3554 office, of Midwest Fiber Networks 7 days in advance to coordinate locations and any excavation near their facilities.

New Berlin, City of – Lighting has existing underground and overhead lighting facilities throughout the project limits, including lighting on signal poles at the intersection. WisDOT will become the owner of the reconstructed lighting on signal poles at the intersection. All other lighting facilities will remain in place without adjustment. Remove, adjust, reconstruct, abandon and leave in place the lighting facilities as shown in the plans.

Contact J. P. Walker, (262) 613-2025, of City of New Berlin 5 working days in advance to coordinate locations and any excavation near their facilities.

New Berlin, City of – Sewer has facilities within the project limits at the following location:

- An underground sanitary sewer line beginning beyond the westerly project limits and running easterly in the eastbound lanes of Greenfield Avenue to a manhole located approximately 6 feet west and 33 feet south of the center of the

intersection. From there the line runs southerly to beyond the southerly project limits. This line will remain in place without adjustment.

Contact J. P. Walker, (262) 613-2025, of City of New Berlin 7 days in advance to coordinate locations and any excavation near their facilities.

New Berlin, City of - Signals has existing underground and overhead signal facilities throughout the project limits. WisDOT will become the owner of the reconstructed signal facilities at the intersection. Remove, adjust, reconstruct, abandon and leave in place the signal facilities as shown in the plans.

Contact J. P. Walker, (262) 613-2025, of City of New Berlin 5 working days in advance to coordinate locations and any excavation near their facilities.

New Berlin, City of – Water has an underground water main beginning beyond the westerly project limits and running easterly in the eastbound lanes of Greenfield Avenue, crossing through the intersection and continuing easterly to beyond the easterly project limits. This line will remain in place without adjustment.

Contact J. P. Walker, (262) 613-2025, of City of New Berlin 7 days in advance to coordinate locations and any excavation near their facilities.

Time Warner Cable has underground and overhead communications facilities within the project limits at the following locations:

- An overhead communications line on We Energies poles beginning beyond the southerly project limits and running northerly along the west right-of-way of Elm Grove Road, crossing Greenfield Avenue approximately 33 feet west of the center of the intersection and continuing northerly along the west right-of-way to beyond the northerly project limits. This line will remain in place without adjustment.
- An underground communications line beginning at a pole located approximately 49 feet west and 76 feet south of the center of the intersection and running southeasterly to a point located approximately 40 feet west and 109 feet south of the center of the intersection. From there the line runs easterly across Elm Grove Road and ends at a pedestal located approximately 35feet east and 112 feet south of the center of the intersection. This line will remain in place without adjustment.

Contact Steve Cramer, (414) 277-4045 office, of Time Warner Cable 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies - Electric has underground and overhead electric facilities within the project limits at the following locations:

- An overhead electric line poles beginning beyond the southerly project limits and running northerly along the west right-of-way of Elm Grove Road, crossing Greenfield Avenue approximately 33 feet west of the center of the intersection and

continuing northerly along the west right-of-way to beyond the northerly project limits. This line will remain in place without adjustment.

- An overhead electric line beginning at a pole located approximately 14 feet west and 90 feet north of the center of the intersection and running easterly across Elm Grove Road and ending at a pole located approximately 57 feet east and 83 feet north of the center of the intersection. This line will remain in place without adjustment.
- An overhead electric line beginning beyond the westerly project limits and running easterly to a pole located approximately 10 feet west and 171 feet north of the center of the intersection, crossing Elm Grove Road and continuing easterly to beyond the easterly project limits. This line will remain in place without adjustment.
- An overhead electric line beginning at a pole located approximately 51 feet west and 233 feet south of the center of the intersection, crossing Elm Grove Road and continuing easterly to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground electric line beginning beyond the westerly project limits and running easterly along the south right-of-way of Greenfield Avenue to a point approximately 52 feet west and 59 feet south of the center of the intersection. From there the line runs southeasterly to a point approximately 35 feet west and 111 feet south of the center of the intersection where it turns and runs easterly across Elm Grove Road and continues easterly to beyond the easterly project limits. This line will remain in place without adjustment.

Proper clearances between temporary signal lines and overhead electric lines must be maintained at all times. Contact Jason Chapin, (414) 944-5575 office / (414) 587-0655 cell, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies - Gas has existing underground gas facilities within the project limits in the following locations:

- An underground gas line beginning beyond the westerly project limits and running easterly along the north right-of-way of Greenfield Avenue, crossing through the intersection and continuing easterly along the north right-of-way to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground gas main beginning at a tee located at the north right-of-way of Greenfield Avenue approximately 75 feet east of the center of the intersection and running northerly along the east right-of-way of Elm Grove Road to beyond the northerly project limits. This line will remain in place without adjustment.
- An underground gas line beginning beyond the westerly project limits and running easterly along the south front of walk of Greenfield Avenue, crossing the intersection to a point approximately 42 feet east and 49 feet south of the center of the intersection. From there the line runs southerly to a point approximately 42 feet east and 82 feet south of the center of the intersection where it turns and runs eaterly to beyond the easterly project limits. This line will remain in place without adjustment.

Contact Erich Wuestenhagen, (414) 651-3948, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT - Lighting has no existing lighting facilities within the project area. WisDOT will become the owner of the reconstructed lighting on signal poles at the intersection. Remove, adjust, reconstruct, abandon and leave in place the lighting facilities as shown in the plans.

Contact Eric Perea, (262) 574-5422 office / (414) 750-0935 cell, of WisDOT - Lighting 7 days in advance and WisDOT Traffic Signal Operations, (414) 750-2605, 5 working days in advance to coordinate construction activities.

WisDOT - Signals has no existing signal facilities within the project area. WisDOT will become the owner of the signal facilities being reconstructed at the intersection. Remove, adjust, reconstruct, abandon and leave in place the signal facilities as shown in the plans.

Contact Eric Perea, (262) 574-5422 office / (414) 750-0935 cell, of WisDOT - Lighting 7 days in advance and WisDOT Traffic Signal Operations, (414) 750-2605, 5 working days in advance to coordinate construction activities.

WisDOT - STOC has an existing underground communications line beginning beyond the westerly project limits and running easterly along the median of Greenfield Avenue, crossing through the intersection and continuing to beyond the easterly project limits. This line will remain in place without adjustment. WisDOT also has communications connections to existing signal facilities at the intersection. Remove, adjust, reconstruct, abandon and leave in place the communications facilities as shown in the plans.

Contact Jeff Madson, (414) 225-3723, of WisDOT - STOC 7 days in advance to coordinate locations and any excavation near their facilities.

IH 894 Northbound Off Ramp @ W. National Avenue

ATC has two existing overhead 138kV electric transmission lines beginning beyond the southerly project limits and running northerly, east of IH 894, crossing through the middle of the northbound loop ramp and crossing National Avenue approximately 240 feet east of IH 894 and continuing to beyond the northerly project limits. These lines will remain in place without adjustment.

Coordinate construction activities with ATC. Due to outage constraints for the multi-state electric grid, these transmission lines cannot be de-energized during construction. Use caution when operating overhead equipment in this area and maintain OSHA safe working clearance to the overhead conductors at all times. Notify ATC 48 hours before beginning any work within or around overhead electric transmission lines.

Contact Jim Briggs (414-651-1830) of American Transmission Company 7 days in advance to coordinate locations and any excavation near their facilities.

AT&T Corporation has an existing underground communications beginning beyond the southerly project limits and running northerly along east fence line of IH 94 to a point approximately 376 feet east of the center of IH 894 and 179 feet south of the center of National Avenue. From there the line runs southwesterly to a point approximately 211 feet east of the center of IH 894 and 152 feet south of the center of National Avenue where it turns and runs northwesterly, crossing National Avenue approximately 135 feet east of the center of IH 894, and continues to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Ken Nine (574-904-6336 cell) of JMC Engineers & Associates, Inc. 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies - Electric has existing underground and overhead electric facilities within the project limits at the following locations:

- An underground electric line beginning at a pole located approximately 136 feet east of the center of IH 894 and 71 feet north of the center of National Avenue and running southerly to the north curb line of National Avenue. From there it runs southwesterly along the curb line to beyond the westerly project limits. This line will remain in place without adjustment.
- An overhead electric line beginning beyond the southerly project limits and running northerly, east of IH 894, crossing through the west side of the northbound loop ramp and crossing National Avenue approximately 140 feet east of IH 894 and continuing to beyond the northerly project limits. This line will remain in place without adjustment.
- An overhead electric line beginning beyond the southerly project limits and running northerly, east of IH 894, crossing through the east side of the northbound loop ramp and crossing National Avenue approximately 260 feet east of IH 894 and continuing to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Jason Chapin, (414) 944-5575 office / (414) 587-0655 cell, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies - Gas has existing underground gas facilities within the project locations at the following locations:

- An underground gas line beginning beyond the easterly project limits and running southwesterly in the southernmost westbound lane of National Avenue to a point approximately 344 feet east of the center of IH 894 and 26 feet north of the center of National Avenue. From there the line turns and runs northwesterly in the southbound lane of W. 100th Street to beyond the northerly project limits. This line will remain in place without adjustment.

- An underground 24-inch high pressure gas line beginning beyond the westerly project limits and running northeasterly in the northernmost westbound lane of National Avenue, crossing IH 894 approximately 40 feet north of the center of National Avenue and continuing northeasterly to a point approximately 83 feet east of the center of IH 894 and 40 feet north of the center of National Avenue. From there the line turns and runs southeasterly to a point approximately 164 feet east of the center of IH 894 and 115 feet south of the center of National Avenue where it turns and runs southeasterly to a point approximately 350 feet east of the center of IH 894 and 341 feet south of the center of National Avenue. From there the line turns and runs southerly to beyond the project limits. This line will remain in place without adjustment.

Contact Erich Wuestenhagen, (414) 651-3948, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

West Allis, City of - Lighting has existing overhead and underground lighting facilities within the project limits in the following locations:

- Existing light poles and underground lines beginning beyond the westerly project limits and running northeasterly along the south curb line of National Avenue, crossing IH 894 approximately 48 feet north of the center of National Avenue and continuing northeasterly along the south curb line to beyond the easterly project limits. These facilities will remain in place without adjustment.
- Existing light poles and underground lines beginning beyond the westerly project limits and running northeasterly along the north curb line of National Avenue, crossing IH 894 approximately 50 feet north of the center of National Avenue and continuing northeasterly along the north curb line to beyond the easterly project limits. These facilities will remain in place without adjustment.

Contact Peter Daniels, (414) 302-8374 office, of City of West Allis 7 days in advance to coordinate locations and any excavation near their facilities.

West Allis, City of - Sewer has existing underground sanitary sewer facilities within the project limits at the following locations:

- An existing underground sanitary sewer line beginning beyond the easterly project limits and running westerly across the northbound IH 894 off-ramp to a manhole west of the ramp located approximately 299 feet east of the center of IH 894 and 145 feet south of the center of National Avenue. From there the line runs northerly across National Avenue to a manhole located approximately 324 feet east of the center of IH 894 and 22 feet north of the center of National Avenue. From there the line continues northerly across National Avenue and along the east right-of-way of W. 100th Street to beyond the northerly project limits. This line will remain in place without adjustment. Replace the manhole west of the ramp as shown in the plans.

- An existing underground sanitary sewer line beginning at a manhole located approximately 324 feet east of the center of IH 894 and 22 feet north of the center of National Avenue and running northeasterly along the southernmost westbound lane of National Avenue to beyond the easterly project limits. This line will remain in place without adjustment.

West Allis also has an abandoned underground sanitary sewer line beginning beyond the westerly project limits and running northeasterly in the southernmost eastbound lane of National Avenue to a manhole located approximately 169 feet east of the center of IH 894 and 39 feet south of the center of National Avenue. From there the line runs southeasterly to a manhole located approximately 298 feet east of the center of IH 894 and 163 feet south of the center of National Avenue where it turns and runs easterly across the northbound IH 894 off-ramp to beyond the easterly project limits.

Contact Joe Burtch, (414) 302-8379 office, of City of West Allis 7 days in advance to coordinate locations and any excavation near their facilities.

West Allis, City of - Water has existing underground water facilities at the following locations:

- An underground water main beginning beyond the westerly project limits and running northeasterly in the center of the eastbound lanes of National Avenue, crossing IH 894 approximately 27 feet south of the center of National Avenue and continuing northeasterly to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground water main beginning at a tee located approximately 347 feet east of the center of IH 894 and 28 feet south of the center of National Avenue and running northwesterly to a point approximately 313 feet east of the center of IH 894 and 39 feet north of the center of National Avenue. From there the line turns and runs northerly along the northbound lane of W. 100th Street to beyond the northerly project limits. This line will remain in place without adjustment.
- An underground water main beginning at a tee located approximately 316 feet east of the center of IH 894 and 325 feet north of the center of National Avenue and running northeasterly along the center of the westbound lanes of National Avenue to beyond the easterly project limits. This line will remain in place without adjustment.

Contact Joe Burtch, (414) 302-8379 office, of City of West Allis 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT - Lighting has existing lighting facilities throughout the project area. These facilities will remain in place without adjustment.

Contact Eric Perea, (262) 574-5422 office / (414) 750-0935 cell, of WisDOT - Lighting 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT - Signals has existing overhead and underground signal facilities within the project area. Remove, adjust, reconstruct, abandon and leave in place the signal facilities as shown in the plans.

Contact WisDOT Traffic Signal Operations, (414) 750-2605, 7 days in advance to coordinate construction activities.

WisDOT - STOC has existing underground communications facilities along the northbound loop ramp. These facilities will remain in place without adjustment.

Contact Jeff Madson, (414) 225-3723, of WisDOT - STOC 7 days in advance to coordinate locations and any excavation near their facilities.

IH 894 Northbound On Ramp @ W. Oklahoma Avenue

ATC has two existing overhead 138kV electric transmission lines beginning beyond the southerly project limits and running northerly east of IH 894, crossing Oklahoma Avenue approximately 310 feet east of the center of IH 894 and continuing to beyond the northerly project limits. These lines will remain in place without adjustment.

Coordinate construction activities with ATC. Due to outage constraints for the multi-state electric grid, these transmission lines cannot be de-energized during construction. Use caution when operating overhead equipment in this area and maintain OSHA safe working clearance to the overhead conductors at all times. Notify ATC 48 hours before beginning any work within or around overhead electric transmission lines.

Contact Jim Briggs, (414) 651-1830, of American Transmission Company 7 days in advance to coordinate locations and any excavation near their facilities.

AT&T Corporation has an existing underground communications duct package beginning beyond the southerly project limits and running northerly along the east fence line of IH 894, crossing Oklahoma Avenue approximately 95 feet east of the center of IH 894 and continuing to a point approximately 86 feet east of the center of IH 894 and 62 feet north of the center of Oklahoma Avenue. From there the line runs northeasterly, crossing the northbound on-ramp and continuing northeasterly to a point approximately 195 feet east of the center of IH 894 and 146 feet north of the center of Oklahoma Avenue. From there the line runs northerly along the east fence line of IH 894 to beyond the northerly project limits. This duct package will remain in place without adjustment. AT&T Corporation will protect this duct package during the construction of the beam guard along the northbound on-ramp.

Contact Ken Nine, (574) 904-6336 cell, of JMC Engineers & Associates, Inc. 7 days in advance of the beam guard construction, to coordinate locations and any excavation near their facilities.

AT&T Wisconsin has existing underground facilities within the project limits at the following locations:

- An underground communications line beginning beyond the westerly project limits and running easterly in the center of the eastbound lanes of Oklahoma Avenue, crossing IH 894 approximately 30 feet south of the center of Oklahoma Avenue and continuing easterly to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground communications line beginning at a manhole located in the median of Oklahoma Avenue approximately 265 feet east of the center of IH 894 and running southwesterly to a point approximately 182 feet east of the center of IH 894 and 37 feet south of the center of Oklahoma Avenue. From there the line turns and runs southwesterly and southerly along the west edge of pavement of S. 100th Street to beyond the southerly project limits. This line will remain in place without adjustment.

AT&T Wisconsin also has an abandoned underground communications line beginning beyond the westerly project limits and running easterly along the median of Oklahoma Avenue to beyond the easterly project limits.

Contact Jay Bulanek, (414) 535-7407 office, of AT&T Wisconsin 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies - Electric has existing underground and overhead electric facilities within the project limits at the following locations:

- An overhead electric line beginning beyond the southerly project limits and running northerly, east of IH 894, crossing Oklahoma Avenue approximately 290 feet east of IH 894 and continuing to beyond the northerly project limits. This line will remain in place without adjustment.
- An overhead electric line beginning beyond the southerly project limits and running northerly, east of IH 894, crossing Oklahoma Avenue approximately 317 feet east of IH 894 and continuing to beyond the northerly project limits. This line will remain in place without adjustment.
- An underground electric line beginning beyond the westerly project limits and running easterly in the center of the westbound lanes of Oklahoma Avenue , crossing IH 894 approximately 35 feet north of the center of Oklahoma Avenue and continuing easterly to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground electric line beginning at a point approximately 330 feet east of the center of IH 894 and 39 feet north of the center of Oklahoma Avenue and running southerly to beyond the southerly project limits. This line will remain in place without adjustment.

Contact Jason Chapin, (414) 944-5575 office / (414) 587-0655 cell, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies - Gas has existing underground gas facilities within the project locations at the following locations:

- An underground gas line beginning beyond the westerly project limits and running easterly in the westbound, crossing IH 894 approximately 24 feet north of the center of Oklahoma Avenue and continuing easterly to a point approximately 226 feet east of the center of IH 894 and 24 feet north of the center of Oklahoma Avenue. From there the line turns and runs southerly across Oklahoma Avenue and continues southerly along S. 100th Street to beyond the southerly project limits. This line will remain in place without adjustment.
- An underground gas line beginning at a point approximately 231 feet east of the center of IH 894 and 11 feet south of the center of Oklahoma Avenue and running easterly along the south curb line of the median of Oklahoma Avenue to beyond the easterly project limits. This line will remain without adjustment.

Contact Erich Wuestenhagen, (414) 651-3948, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

West Allis, City of - Lighting has existing underground and overhead lighting facilities within the project limits in the following locations:

- Existing light poles and underground lines beginning beyond the westerly project limits and running easterly along the north curb line of Oklahoma Avenue, crossing IH 894 approximately 50 feet north of the center of Oklahoma Avenue and continuing easterly along the north curb line to beyond the easterly project limits. These facilities will remain in place without adjustment.

Contact Peter Daniels, (414) 302-8374 office, of City of West Allis 7 days in advance to coordinate locations and any excavation near their facilities.

West Allis, City of - Sewer has an existing underground sanitary sewer line beginning beyond the southerly project limits and running northerly along S. 100th Street, crossing Oklahoma Avenue and continuing northerly to a manhole located approximately 249 feet east of the center of IH 894 and 9 feet north of the center of Oklahoma Avenue. From there the line turns and runs easterly along the north curb line of the median of Oklahoma Avenue to beyond the easterly project limits. This line will remain in place without adjustment.

Contact Joe Burtch, (414) 302-8379 office, of City of West Allis 7 days in advance to coordinate locations and any excavation near their facilities.

West Allis, City of - Water has an existing underground water main beginning beyond the westerly project limits and running easterly in the northernmost westbound lane of Oklahoma Avenue, crossing IH 894 approximately 39 feet north of the center of Oklahoma Avenue and continuing easterly to a point approximately 248 feet east of the

center of IH 894 and 39 feet north of the center of Oklahoma Avenue. From there the line runs northeasterly to a point approximately 265 feet east of the center of IH 894 and 53 feet north of the center of Oklahoma Avenue where it turns and runs easterly along the north front of walk of Oklahoma Avenue to beyond the easterly project limits. This line will remain in place without adjustment.

Contact Joe Burtch, (414) 302-8379 office, of City of West Allis 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT – Lighting has existing underground and overhead lighting facilities throughout the project limits, including lighting lines in signal conduit, throughout the project limits. Remove, adjust, reconstruct, abandon and leave in place the lighting facilities as shown in the plans.

Contact Eric Perea, (262) 574-5422 office / (414) 750-0935 cell, of WisDOT - Lighting 7 days in advance and WisDOT Traffic Signal Operations, (414) 750-2605, 5 working days in advance to coordinate construction activities.

WisDOT - Signals has existing signal facilities within the project area. Remove, adjust, reconstruct, abandon and leave in place the signal facilities as shown in the plans.

Contact WisDOT Traffic Signal Operations, (414) 750-2605, 7 days in advance to coordinate construction activities.

WisDOT - STOC has existing underground communications facilities within the project area. Remove, adjust, reconstruct, abandon and leave in place the communications facilities as shown in the plans.

Contact Jeff Madson, (414) 225-3723, of WisDOT - STOC 7 days in advance to coordinate locations and any excavation near their facilities.

7. Municipality Acceptance of Sanitary Manhole Construction.

Both the department and City of West Allis personnel will inspect construction of the sanitary manhole replacement under this contract. However, acceptance of the sanitary sewer manhole replacement will be by the City of West Allis.

Both the department and City of New Berlin personnel will inspect construction of the sanitary manhole adjustment under this contract. However, acceptance of the sanitary manhole adjustment will be by the City of New Berlin.
105-001 (20140630)

8. Referenced Construction Specifications.

Construct the work enumerated below conforming to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW). If there is a discrepancy or conflict between the referenced specification and the standard

specifications regarding contract administration, part 1 of the standard specifications governs.

Conform to the referenced construction specifications for the following:

Item SPV.0060.0003 Adjusting Sanitary Manhole
Item SPV.0060.0004 Replace Sanitary Manhole

105-002 (20130615)

9. Other Contracts.

Coordinate work in accordance to standard spec 105.5.

Modifications to the traffic control plan may be required by the engineer to be safe and consistent with adjacent work by others.

It is expected that routine maintenance by the city and county personnel may be required at certain times concurrently with the work being done under this contract.

10. Hauling Restrictions.

Hauling shall not be permitted on S. 99th Street, S. 101st Street, S. Elm Grove Road, S. Sunnyslope Road, and S. Calhoun Road.

At all times, conduct operations in a manner that causes minimum disruption to traffic on existing roadways. Coordinate with the local authority.

This provision does not reduce or eliminate the contractor responsibility from restoring local roads under the item maintenance and repair of haul roads.
SEF Rev. 12_1004

11. Erosion Control.

Supplement standard spec 107.20 with the following:

Erosion control best management practices (BMP's) shown on the plans are at suggested locations. The actual locations will be determined by the contractor's ECIP and by the engineer. Include each dewatering (mechanical pumping) operation in the ECIP submittal. The ECIP will supplement information shown on the plans and not reproduce it. The ECIP will identify how to implement the project's erosion control plan. ECIP will demonstrate timely and diligently staged operations, continuing all construction operations methodically from the initial removals and topsoil stripping operations through the subsequent grading, paving, and re-application of top soil to minimize the period of exposure to possible erosion.

Provide the ECIP 14 days prior to the pre-construction conference. Provide 1 copy of the ECIP to the department and 1 copy of the ECIP to the WDNR Liaison (Kristina Betzold, (414) 263-8517, Kristina.betzold@wisconsin.gov). Do not implement the ECIP until department approval, and perform all work in accordance to the approved ECIP.

Maintain Erosion Control BMP's until permanent vegetation is established or until the engineer determines that the BMP is no longer required.

Stockpile excess materials or spoils on upland areas away from wetlands, floodplains, and waterways. Immediately install perimeter silt fence protection around stockpiles. If stockpiled materials will be left for more than 14 days, install temporary seed or other temporary erosion control measures the engineer orders.

Re-apply topsoil on graded areas, as designated by the engineer, immediately after grading is completed within those areas. Seed, fertilize, and mulch/erosion mat top-soiled areas, as designated by the engineer, within 5 days after placement of topsoil. If graded areas are left not completed and exposed for more than 14 days, seed those areas with temporary seed.

Do not allow any excavation for; structures, utilities, grading, maintaining drainage that requires dewatering(mechanical pumping) of water containing sediments (sand, silt, and clay particles) to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. Prior to each dewatering operation, submit to the department a separate ECIP amendment describing in words and pictorial format an appropriate BMP for sediment removal, in accordance to WisDNR Storm Water Construction Technical Standard, Code 1061, Dewatering. Include reasoning, location, and schedule duration proposed for each operation. Per Code 1061, include all selection criteria: site assessment, dewatering practice selection, calculations, plans, specifications, operations, maintenance, and location of proposed treated water discharge. Provide a stabilized discharge area. If directing discharge towards or into an inlet structure, provide additional inlet protection for back-up protection. Dewatering is considered incidental to the project.
SEF Rev. 15_0120

12. 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 8:00 PM until the following 7:00 AM, unless prior written approval is obtained from the engineer.
107-001 (20060512)

13. OCIP Information.

The Owner Controlled Insurance Program (OCIP)

The Zoo Interchange project will be constructed under the umbrella of an Owner Controlled Insurance Program (OCIP). Contractor/Consultant participation in this Corridor Project is mandatory and requires enrollment into the OCIP. Additional information regarding OCIP can be found at http://roadwaystandards.dot.wi.gov/hcci/index.shtm.

If you have any questions regarding the OCIP, including whether your company needs to be enrolled into the OCIP, please contact Chris Luttrell at (608) 381-2340, or chris.luttrell@dot.wi.gov.
SEF Rev. 15_0126

14. Notice to Contractor – OCIP Exclusions.

The Owner Controlled Insurance Program (OCIP) insurance coverage excludes environmental/abatement work, including but not limited to hazardous materials/chemicals, lead and other materials considered hazardous – see Article – Owner Controlled Insurance Program for additional information. Environmental/abatement work must be performed by a qualified contractor and the work will not be covered under OCIP. The contractor performing Environmental/abatement work may potentially be enrolled in the OCIP if also performing other work not excluded from the OCIP umbrella. The qualified subcontractor must carry Construction Pollution Liability insurance with limits of at least $1,000,000 per Occurrence and $2,000,000 Aggregate.

Report only payroll from non-environmental work under the OCIP. Do not report payroll generated from environmental/abatement work.

Direct questions regarding this or any other aspects of OCIP to Chris Luttrell at (608) 381-2340, or chris.luttrell@dot.wi.gov.
SEF Rev. 15_0126

15. Notice to Contractor – Contamination Beyond Construction Limits.

Petroleum-contaminated soil is present at the following sites:

- Southeast corner of STH 59 (W. Greenfield Ave.) and S. Calhoun Rd.
- Northwest corner of STH 59 (W. Greenfield Ave.) and S. Sunnyslope Rd.

The contaminated soils at the above sites are expected to be beyond the excavation limits necessary to complete the work under this project. Control construction operations at these locations to ensure that they do not extend beyond the excavation limits indicated in the plans. If contaminated soils are encountered at these sites or elsewhere on the project during excavation, terminate excavation in the area and notify the engineer.

The Hazardous Materials Report is available by contacting: Andrew Malsom; Wisconsin Department of Transportation, 141 NW Barstow, Waukesha, WI 53187; (262) 548-6705; Andrew.Malsom@dot.wi.gov.
107-100 (20050901)

16. Notice to Contractor – Traffic Signal Equipment Lead Time.

Lead time for traffic signal equipment specified for this project has been ranging from 12-weeks to 18-weeks. Order equipment as soon as possible to assure the equipment is procured in a timely fashion and, therefore, installed, inspected, and ready for turn-on at the required date.

17. Notice to Contractor – Airport Operating Restrictions.

Fill out the FAA Notice Criteria tool for any permanent structure (bridge, light pole, etc.) or equipment (crane, etc.) used during construction.

http://oeaaa.faa.gov/oeaaa/external/portal.jsp

If required by the Notice Criteria tool, and for any crane or construction equipment higher than 200 feet above the ground, submit completed form 7460-1 (Notice of Proposed Construction or Alteration) to The Federal Aviation Administration (FAA) at least 45 days before starting construction.
SEF Rev. 14_0609

18. Public Involvement Meetings.

Participate in department-sponsored public involvement meetings as the engineer requests. Ensure that representatives of subcontractors also participate in those meetings if the engineer requests.
SEF Rev. 14_0312

19. Traffic Meetings and Traffic Control Scheduling.

Every Wednesday by 10:00 AM, submit a detailed proposed 2-week look-ahead traffic closure schedule to the engineer. Type the detailed proposed 2-week look-ahead closure schedule into an excel spreadsheet provided by the engineer. Enter information such as closure dates, duration, work causing the closure and detours to be used. Also enter information such as ongoing long-term closures, emergency contacts and general 2-month look-ahead closure information into the excel spreadsheet.

Meet with the engineer between 11:00 - 11:30 AM on Wednesdays at the Zoo Interchange project office on 2424 S. 102nd Street; West Allis to discuss and answer questions on the proposed schedule. Edit, delete and add closures to the detailed proposed 2-week look-ahead schedule, as directed by the engineer, so that proposed closures meet specification requirements. Other edits, deletions or additions unrelated to meeting specification requirements may also be agreed upon with the engineer during the 11:00 AM meeting.

Every Wednesday at 2:00 PM, or as scheduled by the engineer, attend a weekly traffic meeting. The meeting will bring local agencies, project stakeholders, owner managers, owner engineers, contractors, document control and construction engineering personnel together to discuss traffic staging, closures and general impacts. Upon obtaining feedback from the meeting attendees, edit, delete and add information to the detailed 2-week look-ahead closure schedule, as needed. Submit the revised 2-week look-ahead to the engineer.

Obtain approval from the engineer for any mid-week changes to the closure schedule. Revise the 2-week look-ahead as required and obtain engineer approval.
SEF Rev. 15_0105

20. Materials and Equipment Staging.

Submit a map showing all proposed material stockpile or equipment storage locations to the engineer 14 days prior to either preconstruction or proposed use, whichever comes first. Identify the specific purposes for the location. Obtain written permits from the property owner, and submit two copies to the engineer before use. Do not stockpile or store materials or equipment on wetlands.
SEF Rev. 13_0204

21. Available Documents.

The department will make all its information available to bidding contractors. The list of documents that are available for contractor's information includes but is not limited to:

- Design Study Report
- Exceptions to Standards Report
- Interstate Access Justification Report
- Environmental Impact Statement
- As-Built Drawings
- Preconstruction Survey

These documents are available from Chris Hager, PE at 414 NW Barstow Street, Waukesha, WI 53187, (262) 521-4433.

Reproduction costs will be applied to any copies requested.
SEF Rev. 13_1218

22. Contractor Notification.

Replace standard spec 104.2.2.2(2) with the following:

If the contractor discovers the differing condition, provide a written notice, as specified in standard spec 104.3.3, of the specific differing condition before further disturbing the site and before further performing the affected work.

104.3.2 (Vacant)

104.3.3 Contractor Initial Written Notice
Replace standard specs 104.3.2 and 104.3.3 with the following:

If required by standard spec 104.2, or if the contractor believes that the department's action, the department's lack of action, or some other situation results in or necessitates a contract revision, promptly provide a written notice to the engineer. At a minimum, provide the following:

- A written description of the nature of the issue.
- The time and date of discovering the problem or issue.
- If appropriate, the location of the issue.

Provide the additional information specified in standard spec 104.3.5 as early as possible to assist the engineer in the timely resolution of an identified issue. The engineer will not require, in subsequent submissions, duplication of information already provided.
SEF Rev. 14_1211

23. Contractor Document Submittals.

This special provision describes minimum requirements for submitting project documents to the department. This special provision does not apply to shop drawing submittals.

Provide one electronic copy of all documents requiring department review, acceptance, or approval. Attach a completed engineer-provided transmittal sheet to each email submittal. The department will reject submittals with incomplete transmittal sheets and require re-submittal.

The department will return one reviewed, accepted, or approved original to the contractor. Additional return originals can be requested. Submit an additional original for each additional return original requested.

Submit electronic copies in Adobe Acrobat (.pdf) format via email to an account the engineer determines. If possible, translate original documents from their native format (e.g. Word, Excel, AutoCAD, etc.) using an Adobe Acrobat translation routine. Scan other documents to Adobe Acrobat format with a minimum resolution of 600 dpi.

All costs for contractor document submittals are incidental to the contract.
SEF Rev. 14_ 0602

24. Information to Bidders, Use of Recovered Material.

The department encourages the use of waste materials and recovered industrial byproducts as material substitutions (106.2.1), provided they meet standard specification gradation

requirements, conform to NR 538 requirements, and follow standard engineering practice for their intended use.
SEF Rev. 14_1211

25. Dust Control Implementation Plan.

A Description
Develop, update, and implement a detailed Dust Control Implementation Plan (DCIP) for all land-disturbing construction activities and associated impacts both within the project site boundaries and outside the project site boundaries. Incorporate contract bid items that this article specifies into the DCIP.

B (Vacant)

C Construction
C.1 General
Take responsibility for dust control on the project as specified in standard spec 107.18. Minimize dust emissions resulting from land disturbing activities. Do not generate excessive air borne particulate matter (PM) or nuisance dust conditions. Take direct responsibility for controlling dust at all times throughout the duration of the contract, 24 hours per day, 7 days per week, including non-working hours, weekends, and holidays.

Submit a DCIP to the engineer for review at least 14 calendar days before the preconstruction conference. Coordinate with the department, if requested, to resolve DCIP related issues before the preconstruction conference. The department will either approve the DCIP or request revisions. Do not initiate any land-disturbing activities without the department's approval of the DCIP.

C.2 Dust Control Implementation Plan Contents
Develop a DCIP tailored to the specific needs of the project. Consider potential impacts to businesses and residences adjacent to the job site. Describe in detail all land disturbing, dust generating activities. Identify strategies to prevent, mitigate, and collect excess dust. Establish clear lines of communication with the engineer to ensure that all dust control issues can be dealt with promptly.

The DCIP shall include, but not be limited to, all of the following:

- A single contact person with overall responsibility for the DCIP development as well as surveillance and remediation of job related dust. Include the following:
- Name, firm, address, and working-hours phone number.
- Non-working-hours phone number.
- Email address.
- Individual contact persons and their respective areas of responsibility. Include the following:
- Name, firm, address, and working-hours phone number.
- Non-working-hours phone number.
- Email address.

- A site map locating project features, the job site boundaries, all ingress and egress points, air intakes and other dust-sensitive areas, and all public and private paved surfaces within and immediately adjacent to the job site. Show where specific land disturbing, dust generating activities will occur and, to the extent possible, where employing various dust control or prevention strategies.
- A matrix showing, for each anticipated land disturbing, dust generating activity, the following:
- Preventive measures that shall be employed.
- The applicable contact person.
- The contractor's timetable and surveillance measures used to determine when remediation is required.
- The specific dust control and remediation measures that shall be employed. List the specific contract bid items that shall be used for payment. Also indicate costs that are incidental to the contract.
- Both maintenance and cleanup schedules and procedures.
- How excess and waste materials shall be disposed of.
- A description of how off-site impacts shall be monitored and dealt with.

C.3 Updating the Dust Control Implementation Plan

Update the DCIP throughout the term of the contract as the engineer directs. Obtain the engineer's approval for all DCIP alterations. Also obtain the engineer's approval for DCIP routine adjustments for weather, job conditions, or emergencies that will have an impact on payment under the bid items listed in the approved DCIP.

C.4 Dust Control Deficiencies

Correct engineer identified dust control deficiencies within the time the engineer specifies. The engineer will allow from 30 minutes to 24 hours from the time the engineer notifies the contractor in writing of the deficiency. Deficiencies include, but are not limited to, actions or lack of actions resulting in excessive dust, failing to comply with the contractor's dust control implementation plan or associated special provisions, and failing to properly maintain equipment.

D Measurement

The department will measure the various bid items associated with dust control as specified in the applicable measurement subsections of either the standard specifications or other contract special provisions. The department will not measure work performed under a DCIP alteration unless the engineer specifically approves that alteration.

Measurement under the DCIP shall include, but is not limited to, the contract bid items listed below:

623.0200	Dust Control Surface Treatment
624.0100	Water
628.7560	Tracking Pads
SPV.0105.0001	Pavement Cleanup Project 1060-35-93

The department will measure work completed under other existing contract bid items if approved as a part of the DCIP. The department will consider new bid items to the contract if proposed under the DCIP. The department will not measure work required under the DCIP that is not included in contract bid items.

E Payment

All costs associated with the development and updating of the DCIP are incidental to the contract. The department will pay separately for the work required to implement the actions approved in the DCIP under the contract bid items approved as a part of the DCIP. All other costs associated with work approved under the DCIP are incidental to the contract.

SEF Rev. 14_1211

26. Project Site Air Quality.

Because fine particulate matter levels for Milwaukee, Racine and Kenosha Counties are typically close to $PM_{2.5}$ limits and the project is in a non-attainment area for the federal 8-hour ozone standard, contributions from construction activities can have a major impact well beyond the project limits. Take practical measures to mitigate the impact of operating construction equipment on the air quality in and around the project site.

Voluntarily establishing the staging zones for trucks waiting to load and unload is encouraged by the department. Locate staging zones where idling of diesel powered equipment will have minimal impact on abutting properties and the general public. The department will make signs available to help identify these zones. Have truckers queue up in these zones whenever it is practical. The department further encourages drivers to shut down diesel trucks as soon as it appears likely that they will be queued up for more than ten minutes. Notify employees and sub-contractors about fueling and engine idling.

Portable Concrete Crusher Plants
Portable concrete crusher plants may need a NR 440 Concrete Crusher Plant Air Permit for air emissions. Please contact Mike Griffin, Wisconsin Department of Natural Resources, Air Compliance Engineer (414) 263-8554 to request additional information and permit application materials. Complete permit applications may take 3 months to process.
SEF Rev. 14_1212

27. Maintaining Drainage.

Maintain drainage at and through worksite during construction in accordance to standard specs 107.22, 204, 205 and 520.

Use existing storm sewers, existing culvert pipes, existing drainage channels, temporary culvert pipes, or temporary drainage channels to maintain existing surface and pipe drainage. Pumps may be required to drain the surface, pipe, and structure discharges during construction. Costs for furnishing, operating, and maintaining the pumps is considered incidental to the project.

Dewatering (Mechanical Pumping) for Bypass Water (sediment-free) Operations
If dewatering bypass operations are required from one pipe structure to another downstream pipe structure or from the upstream to downstream end of a culvert and the bypass flow is not transporting sediments (sand, silt, and clay particles) from a tributary work site area, bypass pumping operations will be allowed provided that the department has been made aware of and approves operation. When pumping bypass flows, the discharge location will need to be stable and not produce any erosion from the discharge velocity that would cause release of sediment downstream.

Dewatering (Mechanical Pumping) for treatment Water (sediment-laden) Operations
If dewatering operations require pumping of water containing sediments (sand, silt, and clay particles), the discharge will not be allowed to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. Refer to Special Provision Erosion Control for these requirements.
SEF Rev. 14_1208

28. Subletting the Contract.

Replace standard spec 108.1.1 (3) with the following:

If proposing to have a party other than a subcontractor perform work, notify the engineer and submit details of this arrangement in writing. The engineer will determine if that arrangement constitutes subcontracting. Submit copies of all other agreements between any parties regarding the performance of work under the contract with the Request to Sublet.
SEF Rev. 14_1212

29. CPM Progress Schedule.

Modify the standard specs as follows:

Submit a CPM Progress Schedule and updates in accordance to standard spec 108.4.4, and as hereinafter provided.

To ensure compatibility with the Master Program Schedule, use the latest version of Primavera Project Planner (P6), by Primavera Systems, Inc., Bala Cynwyd, PA to prepare the Initial CPM Progress Schedule, Monthly CPM Progress Updates and other CPM Progress Revisions requested by the engineer.

Within five business days after award, the department will provide its current standard Work Breakdown Structure and activity codes to use to develop the Initial CPM Progress Schedule.

Designate a Project Scheduler who will be responsible for scheduling the Work and submit a professional resume describing a minimum of three years of scheduling experience on interstate-highway reconstruction work of similar size and complexity, including recent experience with P6. Obtain approval of the submitted resume prior to scheduling the work.

With each Monthly CPM Progress Schedule Update also include:

- Activities underway and as-built dates for the past month.
- On a monthly basis, agree on the as-built dates with the department depicted in the Monthly CPM Progress Schedule Update or document any disagreements. Use the as-built dates from the Monthly CPM Progress Schedule Update for the month when updating the CPM schedule.
- Provide actual as-built dates for completed activities through final acceptance of the project.

SEF Rev. 14_1211

30. Force Account.

Supplement standard spec 109.4.5.1 (3)1 with the following:

Include accumulation of wages to date for each employee performing force account work and identify allowable Federal Unemployment Tax (FUTA) and State Unemployment Tax (SUTA) multipliers.
SEF Rev. 14_1211

31. Pavement Breaking Equipment.

Use only hydraulic pavement breaking equipment for breaking pavement within 300 ft. of any structure. Do not use guillotine, drop hammer, falling weight, gravity impact breakers or

equivalent equipment. A multi-head hydraulic drop hammer is allowed unless a structure is within 50 feet of the roadway.
SEF Rev. 14_0415

32. Excavation, Hauling, and Disposal of Petroleum Contaminated Soil, Item 205.0501.S.

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of petroleum contaminated soil at a DNR approved bioremediation facility. The closest DNR approved bioremediation facilities are:

Advanced Disposal Emerald Park Landfill
W124S10629 South 124th Street
Muskego, WI 53150
(414) 529-1360

Waste Management Orchard Ridge Landfill
N96W13503 County Line Road
Menomonee Falls, WI 53051
(262) 532-6200

Perform this work in accordance to standard spec 205 and with pertinent parts of Chapters NR 700-754 of the Wisconsin Administrative Code, as supplemented herein. Per NR 718.07, a solid waste collection and transportation service operating license is required under NR 502.06 for each vehicle used to transport contaminated soil.

A.2 Notice to the Contractor – Contaminated Soil Location

The department and others completed testing for soil contamination for locations within this project where excavation is required. Testing indicated that petroleum-contaminated soil is present at the following locations as shown on the plans:

- Northwest corner of STH 59 (W. Greenfield Ave.) and S. Calhoun Rd., Station 141+70 to 142+10, from 45 to 85 feet left of reference line, at the proposed location of monotube mast arm traffic signal SB12 from approximately 1 to 7 feet bgs. Soil at this location is contaminated with petroleum. Approximately 22 cubic yards (approximately 40 tons at an estimated 1.7 tons per cubic yard) of contaminated soil will be excavated here for traffic light monotube installation.

- Southwest corner of STH 59 (W. Greenfield Ave.) and S. Calhoun Rd., Station 141+85 to 142+25, from 50 to 90 feet right of reference line, at the proposed location of monotube mast arm traffic signal SB8 from approximately 3 to 9 feet bgs. Soil at this location is contaminated with petroleum. Approximately 22 cubic yards (approximately 40 tons at an estimated 1.7 tons per cubic yard) of contaminated soil will be excavated here for traffic light monotube installation.

- Northwest corner of STH 59 (W. Greenfield Ave.) and CTH O (S. Moorland Rd.), Station 195+00 to 195+40, from 75 to 115 feet left of reference line, at the proposed location of monotube mast arm traffic signal SB10 from approximately 2 to 8 feet bgs. Soil at this location is contaminated with petroleum. Approximately 22 cubic yards (approximately 40 tons at an estimated 1.7 tons per cubic yard) of contaminated soil will be excavated here for traffic light monotube installation.

- Southwest corner of STH 59 (W. Greenfield Ave.) and S. Sunnyslope Rd., Station 248+60 to 249+00, from 15 to 55 feet right of reference line, at the proposed location of monotube mast arm traffic signal SB7 from approximately 3 to 16+ feet bgs. Soil at this location is contaminated with petroleum. Approximately 50 cubic yards (approximately 85 tons at an estimated 1.7 tons per cubic yard) of contaminated soil will be excavated here for traffic light monotube installation.

Directly load contaminated soil into trucks that will transport the soil to a WDNR-licensed landfill for disposal

If contaminated soils are encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer.

No active groundwater monitoring wells were observed within the construction limits. If active groundwater monitoring wells are encountered during construction, notify the engineer and protect them to maintain their integrity. The environmental consultant will determine if monitoring wells need to be maintained. For monitoring wells that do need to be maintained, adjust the wells that do not conflict with structures or curb and gutter to be flush with the final grade. For wells that conflict with the previously mentioned items or if monitoring wells are not required to be maintained, they will be abandoned by others.

If groundwater is encountered during construction at this location it could contain elevated concentrations of petroleum compounds and metals. See Section C below for management of water from dewatering activities.

A.3 Excavation Management Plan

The excavation management plan for this project has been designed to minimize the offsite bioremediation of contaminated material. The excavation management plan, including these special provisions, has been developed in cooperation with the WDNR. The WDNR concurrence letter is on file at the Wisconsin Department of Transportation. For further information regarding previous investigation and remediation activities in these areas contact:

Name:	Andrew Malsom, HAZMAT and Environmental Engineer
Address:	WisDOT SE region, 141 NW Barstow St., Waukesha WI 53187
Phone:	(262) 548-6705
Fax:	(262) 548-6891
E-mail:	Andrew.Malsom@dot.wi.gov

A.4 Coordination
Coordinate work under this contract with the environment consultant:

Consultant:	TRC Environmental Corporation
Address:	150 N. Patrick Blvd. Ste. 180, Brookfield, WI 53045
Contact:	Bryan Bergmann, P.G.
Phone:	(262) 879-1212
Fax:	(262) 879-1220
E-mail:	bbergmann@trcsolutions.com

The role of the environmental consultant will be limited to:

- Determining the locations and limits of contaminated soil to be excavated based on soil analytical results from previous investigations, visual observations, and field screening of soil that is excavated;
- Identifying contaminated soils to be hauled to the bioremediation facility;
- Documenting that activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein; and
- Obtaining the necessary approvals for disposal of contaminated soil from the landfill facility.

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the areas of contamination to the environmental consultant. Also notify the environmental consultant at least three calendar days prior to commencement of excavation activities in the contaminated areas.

Coordinate with the environmental consultant to ensure that the environmental consultant is present during excavation activities in the contaminated area. Perform excavation work in the contaminated area on a continuous basis until excavation work is completed.

Identify the DNR licensed landfill facility that will be used for disposal of contaminated soils, and provide this information to the environmental consultant no later than 30 calendar days prior to commencement of excavation activities in the contaminated areas or at the preconstruction conference, whichever comes first. The environmental consultant will be responsible for obtaining the necessary approvals from the landfill facility for disposal of contaminated soils. Do not transport contaminated soil offsite without prior approval from the environmental consultant.

A.5 Health and Safety Requirements
Supplement standard spec 107.1 with the following:

During excavation activities, expect to encounter soil contaminated with gasoline, diesel fuel, fuel oil, or other petroleum related products. Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated

with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

Prepare a site-specific Health and Safety Plan, and develop, delineate and enforce the health and safety exclusion zones for the contaminated site location as required by 29 CFR 1910.120. Submit the site-specific health and safety plan and written documentation of up-to-date OSHA training to the engineer prior to the start of work.

B (Vacant)

C Construction
Supplement standard spec 205.3 with the following:

Control operations in the contaminated area to minimize the quantity of contaminated soil excavated.

The environmental consultant will periodically monitor soil excavated from the contaminated area to determine if the soil will require offsite landfill disposal or bioremediation. The environmental consultant will evaluate excavated soil based on field screening results, visual observations, and soil analytical results from previous environmental investigations. Assist the environmental consultant in collecting soil samples for evaluation using excavation equipment. The sampling frequency shall be a maximum of one sample for every 20 cubic yards excavated.

Directly load and haul soils designated by the environmental consultant for offsite landfill disposal or bioremediation to the DNR-approved landfill. Use loading and hauling practices that are appropriate to prevent any spills or releases of petroleum-contaminated soils or residues. Prior to transport, sufficiently dewater soils designated for off-site landfill disposal or bioremediation so as not to contain free liquids.

Verify that the vehicles used to transport material are licensed for such activity in accordance to applicable state and federal regulations. Obtain the necessary disposal facility approvals and WDNR approvals for disposal. Do not transport regulated solid waste off-site without obtaining the approval of the environmental consultant and engineer and notifying the disposal facility.

During excavation in the areas of known contamination, larger chunks of clean concrete (~2 cubic feet), asphalt and bricks will be segregated from the fill, to the extent practical and managed as common excavation. Under NR 500.08 this material is exempt from licensing and requirements of Wisconsin Administrative Code NR 500-538 of the solid waste regulations, and will be reused as designated by the engineer as fill on the project, or it will be disposed of off-site at the contractor’s disposal site(s).

If dewatering is required in an area of known contamination, water generated from dewatering activities may contain petroleum VOCs and metals. Such water may, with approval of the Milwaukee Metropolitan Sewerage District (MMSD), be discharged to the sanitary sewer as follows:

- Meet all applicable requirements of the MMSD including the control of suspended solids. Perform all necessary monitoring to document compliance with MMSD's requirements. Furnish, install, operate, maintain, disassemble, and remove treatment equipment necessary to comply with MMSD's requirements.

- Ensure continuous dewatering and excavation safety at all times. Provide, operate, and maintain adequate pumping equipment and drainage and disposal facilities.

Notify the engineer of any dewatering activities, and obtain any permits necessary to discharge water. Provide copies of such permits to the engineer. Meet any requirements and pay any costs for obtaining and complying with such permit use. Follow all applicable legislative statutes, judiciary decisions, and regulations of the State of Wisconsin.

Costs associated with excavation dewatering in the contaminated area are considered incidental to this pay item. The Wisconsin Department of Transportation will be the generator of regulated solid waste from this construction project.

D Measurement

The department will measure Excavation, Hauling, and Disposal of Petroleum Contaminated Soil in tons of contaminated soil accepted by the landfill facility as documented by weight tickets generated by the landfill facility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
205.0501.S	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	Ton

Payment is full compensation for excavating, segregating, loading, hauling, and disposal of contaminated soil; obtaining solid waste collection and transportation service operating licenses; assisting in the collection of soil samples for field evaluation; and dewatering of soils prior to transport, if necessary. No additional payment will be made for tipping fees associated with the disposal of contaminated soil.

205-003 (20080902)

33. 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 under the Aggregate Detours, Salvaged Asphaltic Pavement Base, 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://roadwaystandards.dot.wi.gov/standards/cmm/index.htm

A.2 Contractor Testing for Small Quantities

(1) The department defines a small quantity, for each individual Base Aggregate bid item, as a plan 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:
1. The contractor need not submit a full quality control plan but shall provide an organizational chart to the engineer including names, telephone numbers, and current certifications of all persons involved in the quality control program for material under affected bid items.
2. Divide the aggregate into uniformly sized sublots for testing as follows:

Plan Quantity	Minimum Required Testing
≤ 1500 tons	One test from production, load-out, or placement at the contractor's option[1]
> 1500 tons and ≤ 6000 tons	Two tests of the same type, either from production, load-out, or placement at the contractor's option[1]
> 6000 tons and ≤ 9000 tons	Three placement tests[2] [3]

[1] If using production tests for acceptance, submit 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] For 3-inch material, obtain samples at load-out.

[3] If the actual quantity overruns 9000 tons, create overrun sublots to test at a rate of one additional placement test for each 3000 tons, or fraction of 3000 tons, of overrun.

3. No control charts are required. 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. Department verification testing is optional for quantities of 6000 tons or less.

(3) 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.

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:
Aggregate Technician IPP Aggregate Sampling Technician Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Sampling[1]
Aggregate Technician IPP 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://www.dot.state.wi.us/business/engrserv/lab-qualification.htm

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 6 hours after obtaining a sample. For 3-inch base, extend this 6-hour limit to 24 hours. 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 6 hours after obtaining a sample. For 3-inch base, extend this 6-hour limit to 24 hours. 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 tests, include only QC 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) Test gradation once per 3000 tons of material placed. 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 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.

(3) Split each contractor QC sample and identify it according to CMM 8.30. Retain the split for 7 calendar days in a dry, protected location. If requested for department comparison testing, deliver the split to the engineer within one business day.

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

(5) 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.

(6) 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 2 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 4 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 4 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 2 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. One non-random test on the first day of 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, the department will collect samples from the stockpile 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 by 10 percent of the contract price 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.

301-010 (20100709)

34. Signs Type I and II.

Furnish and install new mounting brackets per approved product list for type II signs on overhead sign supports incidental to sign. For type II signs on sign bridges use aluminum vertical support beams noted above incidental to sign. New mounting brackets are incidental to the sign being installed.

Modify standard spec 637.2.4 with the following:

Use stainless steel bolts, washers and nuts for type I and type II signs mounted on sign bridges or type I signs mounted on overhead sign supports. Use clips on every joint for Sign Plate A 4-6 when mounted on a sign bridge or overhead sign support. Inspect installation of clips and assure bolts and nuts are tightened to manufacturers recommended torque values.

Use aluminum vertical sign support beams that have a 5-inch wide flange and weigh 3.7 pounds per foot, if the L-brackets are 4 inches wide then use 4 inch wide flange beams weighing 3.06 pounds per foot. Contractor shall measure the width of the L-brackets on existing structures of determine the width needed for sign support beams

Use beams a minimum of six feet in length or equal to the height of the sign to be supported, whichever is greater. Use U-bolts that are made of stainless steel, one-half inch diameter and of the proper size to fit the truss cords of each sign bridge. Install vertical sign support beams on each sign and use new U-bolts to attach each beam to the top and bottom cord of the sign bridge truss.

For type II signs on overhead sign supports follow the approved product list for mounting brackets.

Replace standard spec 637.2.4.1(2)2 with the following:

Clips may be either stainless steel or ASTM B 108, aluminum alloy, 356.0-T6.

Append standard spec 637.3.2.1(3) with the following:

Provide the engineer with 3 copies of drawings of the signs proposed to be furnished under this contract for approval.

Append standard spec 637.3.3.2(2) with the following:

Install Type I Signs at the offset stated in the plan, which shall be the clear distance between the edge of mainline pavement right edgeline and the near edge of the sign.

Append standard spec 637.3.3.3(3) with the following:

Furnish and install new aluminum vertical sign support beams on each sign and new U-bolts to attach each beam to the top and bottom cord of the sign bridge truss for Type I or Type II Signs and Type I signs on overhead sign supports incidental to sign. New I-beams are incidental to the sign being installed.
637-SER1 (20120401)

35. Field Facilities.

Replace standard spec 642 with the following:

The department has procured its own Field Facilities located at 2424 S. 102nd Street; West Allis, WI 53227.
SEF-ZOO IC 14_1212

36. Traffic Control.

The work under this item shall be in accordance to the requirements of standard spec 643, and as shown on the plans, or as approved by the engineer, except as hereinafter set forth.

Place traffic control devices for work in the proper location before operations proceed. Traffic Control is subject to change at the direction of the engineer in the event of an emergency.

Provide the Milwaukee County Sheriff's Department, City of Milwaukee Police Department, City of West Allis Police Department, City of Brookfield Police Department, Wisconsin State Patrol, the Statewide Traffic Operations Center, and the engineer a current telephone number with which the contractor or his representative can be contacted during non-working hours in the event a traffic control safety hazard develops.

Do not park or store equipment, vehicles, or construction materials within 30 feet of the edge of freeway traffic lanes without barrier separation for any roadway carrying freeway traffic; or within 20 feet off the edge of a freeway service interchange ramp during any time except as approved by the engineer. At such locations, the materials and equipment involved shall not constitute a hazard to the traveling public.

Do not park personal vehicles within the access control limits of the freeway. Do not cross live freeway traffic lanes with equipment or vehicles.

Do not use flag persons to direct, control, or stop freeway traffic. Obtain approval from the engineer to use a flag person to direct, control, or stop local street traffic. Adhere to Manual of Uniform Traffic Control Devices chapter 6E standard requirements for flagger control.

Do not disturb, remove or obliterate any traffic control signs, advisory signs, shoulder delineators, sand barrel array or beam guard in place along the traveled roadways not shown on the plans without the approval of the engineer.

Place one flashing arrow board in advance of each lane closure taper and one flashing arrow board within each lane closure taper at locations directed by the engineer.
SEF Rev 13_0610

37. Traffic Control Signs Removal.

Supplement standard spec 643.3.8.3 with the following:

Remove all signs on temporary mounts and other potential associated hazards to the traveling public from the right-of-way when not in use.
SEF Rev. 14_1212

38. Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch, Item 646.0843.S.

A Description
This special provision describes furnishing, grooving and installing preformed wet reflective pavement marking contrast tape for grooved applications as shown on the plans, according to standard spec 646, and as hereinafter provided.

B Materials
Furnish wet reflective pavement marking contrast tape and adhesive material, per manufacturer's recommendation if required, from the department's approved products list.

Furnish a copy of the manufacturer's recommendations to the engineer before preparing the pavement marking grooves.

C Construction
C.1 General
For quality assurance, provide the project engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of pavement marking contrast tape.

Plane the grooved lines according to details in the plan and per manufacturer's recommendations. Use grooving equipment with a free-floating, independent cutting head. Plane a minimum number of passes to create a grooved surface per manufacturer's recommendations.

C.2 Groove Depth
Cut the groove to a depth of 120 mils ± 10 mils from the pavement surface or, if tined, from the high point of the tined surface. To measure the depth, the contractor may use a depth plate placed in the groove and a straightedge placed across the plate and groove, or

the contractor may use a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Longitudinal Markings
Cut the groove one-inch wider than the width of the tape.

C.4 Groove Position
Position the groove edge according to plan details. Groove a minimum of 4 inches, but not greater than, 12 inches from both ends of the tape segment. Achieve straight alignment with the grooving equipment.

C.5 Groove Cleaning
C.5.1 Concrete
Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with high-pressure water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, and prior to pavement marking application. The groove surface shall be clean and dry before applying the adhesive, and the pavement marking tape. Use a high-pressure air blower with at least 185 ft^3/min air flow and 120 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 New Asphalt
Groove pavement five or more days after paving.

Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove.

C.5.3 Existing Asphalt
Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove.

C.6 Tape Application
Apply the tape when both the air and surface temperature are 40 degrees F and rising.

Apply tape in the groove as per manufacturer's recommendations. If manufacturer's recommendations require surface preparation adhesive

1) For the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee:

   · Apply SPA-60 during May 1 to September 30, both dates inclusive due to Volatile Organic Compound Limitations..

   · Apply P-50 during October 1 to April 30, both dates inclusive. –

2) For the remainder counties:

   · Apply either adhesive.

Refer to the manufacturer's instructions for determining when the surface preparation adhesive is set.

Tamp the wet reflective pavement marking contrast tape with a tamper cart roller, with a minimum of a 200-lb load, cut to fit the groove. Tamp a minimum of three complete cycles (6 passes) with grooved modified tamper roller cart.

D Measurement
The department will measure Pavement Marking Grooved Wet Reflective Contrast Tape (Width) for grooved applications in length by the linear foot of tape placed according to the contract and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
646.0843.S	Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the material; and for removing temporary pavement marking, if necessary.
646-022 (20120615)

39. Roadway Lighting Systems.

The following modifications are made to standard specifications and standard detail drawings:

Append standard spec 651.3.1 with the following:

Each electrical worker is responsible for his own protection from automatic switching and from switching by others. Conform to lock-out and tag-out rules that apply in the industry. Sign and date the tags and include the name of the contractor. If possible, clear lock-outs and tag-outs by the end of the work day. If not possible, notify the engineer.

The plans show required disconnections of existing lighting circuits, most in the form of abandoning existing underground conductors in place. The contractor may need to mobilize several times per each existing lighting distribution center. The contractor is expected to build these costs into the various paid items for removals and installations.

Append standard spec 651.5 with the following:

Work to disconnect and connect conductors will be incidental to the paid measurement of footage.

There will be no measurement for payment for abandoning conductors or removing conductors for scrap.

Work to disconnect and connect electrical system, splice through, or to connect conductors are incidental to the installation or removal of the lighting pay items included in this contract. The department will not measure conductors or conduits that have been abandoned in place or removing them for scrap. The department will allow, at the contractor's discretion, for the salvaging of conductors to be abandoned, if possible.

Append standard spec 652.3.1 with the following:

Installed minimum 3-inch diameter PVC conduit elbows in a ground mounted concrete bases to accommodate Cable in Duct (CID) type cable.

Append standard spec 652.3.1.2 with the following:

Furnish and install an UL-listed liquidtight flexible metallic conduit transition wherever a conduit exits from below grade.

Furnish a UL-listed fitting appropriate for the purpose at each transition from one type of conduit to another type. Couplings will not be individually measured for payment.

Append standard spec 652.3.1.4 with the following:

Support conductors at the top of the vertical raceway or as close as practical if the vertical rise exceeds 50-feet. Provide additional supports as shown; in no case shall the distance between supports exceed that shown in Table 300.19(A) of the National Electrical Code.

Append standard spec 655.3.1(1) and 655.3.7(3) with the following:

Wet location splices may be allowed under the following circumstances:

- Where shown in the plans.
- Where the best available location to connect new work to existing work below grade.

Make wet location splices with an approved epoxy kit.

Append standard spec 655.3.7(4) with the following:

Provide an approved secondary in line 600-volt AC fuse assembly with a FNQ 5 ampere fuses in the luminaire and provide No. 12 AWG, XLP wire in the pole shaft from fuses in the luminaire to underground feeder with splice at pole base. No. 12 AWG, XLP wire will be paid separately. Fuses are included in electrical wire bid items.

Where two or more cable networks occupy the same pull box, manhole, etc., bundle and tag each circuit network (i.e. A/B/N and C/D/N) with approved all-weather tags.

At each pull point or access point, indicate the line side bundle with a lap of blue tape. *Exception:* Where the direction the bundle comes from is obvious, the lap of blue tape is not required. *Example of exception:* a bridge parapet junction box.

Append standard spec 657.2.1(2) with the following:

For non-breakaway poles (mounted on structure, concrete base or behind noise wall barriers without transformer base), as well as at stems of sign bridges containing electrical wires, to be double nutted and contractor to install galvanized rat screen enclosing the bottom of pole area, extra nuts and screen incidental.

Modify standard spec 657.3.1(3) with the following:

Use corrosion protection measures for breakaway transformer bases and aluminum light poles for installation on lighting systems.

40. General Requirements for Electrical Work.

Append standard spec 651.3.3 (3) with the following:

Notify the department's Electrical Field Unit at (414) 266-1170 to coordinate the inspection for state owned traffic signals. The department's Region Electrical personnel will perform the inspection for the state owned and maintained traffic signals.

41. Install Conduit Into Existing Item, Item 652.0700.S.

A Description

This special provision describes installing proposed conduit into an existing manhole, pull box, junction box, communication vault, or other structure.

B Materials

Use nonmetallic conduit, as provided and paid for under other items in this contract. Furnish backfill material, topsoil, fertilizer, seed, and mulch conforming to the requirements of pertinent provisions of the standard specifications.

C Construction

Expose the outside of the existing structure without disturbing existing conduits or cabling. Drill the appropriate sized hole for the entering conduit(s) at a location within the structure without disturbing the existing cabling and without hindering the installation of new cabling within the installed conduit. Fill void area between the drilled hole and conduit with an engineer-approved filling material to protect against conduit movement and entry of fill material into the structure. Tamp backfill into place.

D Measurement

The department will measure Install Conduit Into Existing System by the unit, acceptably installed. Up to five conduits entering a structure per entry point into the existing structure will be considered a single unit. Conduits in excess of five, or conduits entering at significantly different entry points into the existing pull box, manhole, or junction box will constitute multiple units of payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
652.0700.S	Install Conduit Into Existing Item	Each

Payment is full compensation for excavating, drilling holes; furnishing and installing all materials, including bricks, coarse aggregate, sand, bedding, and backfill; for excavating and backfilling; and for furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for properly disposing of surplus materials; and for making inspections.
652-070 (20100709)

42. Electrical Wiring.

Append standard spec 655.3.1 with the following:

(3) For all cables entering each pull box, except loop detector lead in cables, provide an extra loop, approximately 16 feet in length, to remain in each pull box. This loop of cable is in addition to the amount needed to reach from the entrance conduit raceway end to the opening in the exiting conduit raceway.

43. Electrical Service Meter Breaker Pedestal STH 59 and CTH O, Item 656.0200.3002; STH 59 and S. Sunnyslope Road, Item 656.0200.3003; STH 59 and S. Elm Grove Road, Item 656.0200.3004.

Append standard spec 656.2.3 with the following:

Waukesha County/State Owned Traffic Signal, City of New Berlin/State Owned Traffic Signals (STH 59 and CTH O, Item 656.0200.3002; STH 59 and S. Sunnyslope Road, Item 656.0200.3003; STH 59 and S. Elm Grove Road, Item 656.0200.3004).

The department will be responsible for the electric service installation request for any department maintained facility. Notify the maintaining authority if the signal is not state maintained that it is their responsibility to arrange for the electrical service installation.

Electric utility company service installation and energy cost will be billed to and paid for by the maintaining authority.

Append standard spec 656.3.4 with the following:

Install the cabinet base and meter breaker pedestal first, so the electric utility company can install the service lateral. Finish grade the service trench, replace topsoil that is lost or contaminated with other materials, fertilize, seed, and mulch all areas that are disturbed by the electric utility company.

Append standard spec 656.5(3) with the following:

Payment for grading the service trench, replacing topsoil, fertilizer, seed, and mulch will be incidental to this work unless the bid items are in the contract and then they will be paid for at the contract price.

44. Traffic Signals, General.

All work shall be in accordance to the plans, the standard specifications and these special provisions.

State Owned Traffic Signals
Work under this item shall consist of furnishing and installing all materials, except for the traffic signal cabinet for the department owned traffic signals at the intersections of IH 94 eastbound Off Ramp and CTH O in the City of Brookfield and IH 894/USH 45 Ramps and W. Oklahoma Avenue in the Cities of West Allis and Greenfield, WI. Install the traffic signal cabinet furnished by the department.

All traffic signal cabinet switches for WisDOT operated traffic signals shall be performed during weekend nighttime hours (10:00 PM – 6:00 AM). Coordinate all traffic signal cabinet switches for WisDOT operated traffic signals with the WisDOT electrical field unit at (414) 266-1170 a minimum of five business days prior to construction for approval.

No traffic signal work is included under this contract at the intersection of IH 894/USH 45 Westbound Ramps and W. National Avenue in the City of West Allis. The signal plans included depict the location of the existing traffic signal equipment in relation to the proposed roadway work.

City of Brookfield/State Owned Traffic Signals
The existing traffic signal at the intersection of STH 59 and S. Calhoun Road is owned and operated by the City of Brookfield. The proposed traffic signal will be owned and operated by the department. Obtain any necessary electrical permits from the City of Brookfield prior to beginning the work. Pay any fines, penalties, damage done to property, etc., billed by the

City of Brookfield. Maintain operation of the traffic signal until the work at the intersection is complete. The state will assume ownership of the permanent traffic signal upon acceptance of the work.

The City of Brookfield will maintain ownership of the existing traffic signals at the intersection of STH 59 and S. Calhoun Road until the state assumes ownership of the permanent traffic signals upon acceptance of the work. The intersection of STH 59 and S. Calhoun Road does not require a temporary traffic signal.

Contact the WisDOT electrical field unit at (414) 266-1170 and City of Brookfield Department of Public Works at (262) 787-3919 five business days prior to performing work on the in-service traffic signal.

Do not perform any work that requires a traffic signal to go into a flashing red state during weekday morning or weekday afternoon peak hours. Contact the engineer for approval five business days prior to performing any work requiring the traffic signal to go into a flashing red state.

Work under this item shall consist of furnishing and installing all materials, except for the traffic signal cabinet, monotube equipment, video detection system, and emergency vehicle preemption system for the City of Brookfield/department owned traffic signals. Install the traffic signal cabinet, monotube equipment, video detection system, and emergency vehicle preemption system furnished by the department.

Waukesha County/State Owned Traffic Signals

The existing traffic signal at the intersection of STH 59 and CTH O (S. Moorland Road) is owned and operated by Waukesha County. The proposed traffic signal will be owned and operated by the department. Obtain any necessary electrical permits from the appropriate municipality prior to beginning the work. Pay any fines, penalties, damage done to property, etc., billed by the municipality. The state will assume ownership of the permanent traffic signal upon acceptance of the work.

Waukesha County will maintain the existing traffic signal at the intersection of STH 59 and CTH O (S. Moorland Road) until the contractor furnished and installed temporary traffic signal is activated. Assume all traffic signal responsibilities after the temporary traffic signal is operational. The state will assume ownership of the permanent traffic signal upon acceptance of the work.

Work under this item shall consist of furnishing and installing all materials, except for the traffic signal cabinet, monotube equipment, video detection system, and emergency vehicle preemption system for the Waukesha County/department owned traffic signal. Install the traffic signal cabinet, monotube equipment, video detection system, and emergency vehicle preemption system furnished by the department.

City of New Berlin/State Owned Traffic Signals

The existing traffic signals at the intersections of STH 59 and S. Sunnyslope Road and STH 59 and S. Elm Grove Road are owned and operated by the City of New Berlin. The proposed traffic signals will be owned and operated by the department. Obtain any necessary electrical permits from the City of New Berlin prior to beginning the work. Pay any fines, penalties, damage done to property, etc., billed by the City of New Berlin. The state will assume ownership of the permanent traffic signal upon acceptance of the work.

The City of New Berlin will maintain the existing traffic signals at the intersections of STH 59 and S. Sunnyslope Road and STH 59 and S. Elm Grove Road until the contractor furnished and installed temporary traffic signals are activated. Assume all traffic signal responsibilities after the temporary traffic signals are operational. The state will assume ownership of the permanent traffic signal upon acceptance of the work.

Work under this item shall consist of furnishing and installing all materials, except for the traffic signal cabinet, monotube equipment, video detection system, and emergency vehicle preemption system for the City of New Berlin/department owned traffic signals. Install the traffic signal cabinet, monotube equipment, video detection system, and emergency vehicle preemption system furnished by the department.

45. Traffic Signal Faces.

Append standard spec 658.3.2 with the following:

Connect all ungrounded conductors with wire nuts in the appropriate sections of the signal heads. Connect the neutral conductors to the terminal strip. Be certain to twist wires prior to installing the wire nuts. All wire nuts must be installed facing up to prevent the entrance of water.

46. Pedestrian Signal Face 16-Inch.

Append standard spec 658.2.3.2(1) with the following:

Furnish 16 inch LED ready pedestrian signal housing, drilled for top/bottom pipe mount with the ability to rotate 270 degrees on poly mounting bracket.

Append standard spec 658.3.4 with the following:

Connect all ungrounded conductors with wire nuts in the appropriate sections of the signal heads. Connect the neutral conductors to the terminal strip. Be certain to twist wires prior to installing the wire nuts. All wire nuts must be installed facing up to prevent the entrance of water.

47. Pedestrian Push Buttons.

Append standard spec 658.2.5 with the following:

Furnish vandal resistant, pressure activated, pedestrian push buttons, with die cast body type, in unfinished aluminum or yellow. Button constructed shall be constructed of stainless steel, with a Piezo driven solid state switch and beeper that sounds simultaneously with button push.

Furnish low profile, unfinished cast aluminum, vandal resistant, and flush mounting pole mount.

Place a Size 1, Type H reflective (R10-3EL, R, D) sign sticker (per state sign plate), message series – B, directly above each push button. Include a directional arrow or arrows on the sign as the plans show.

48. Temporary Traffic Signals for Intersections STH 59 and CTH O, Item 661.0200.3001; STH 59 and S. Sunnyslope Road, Item 661.0200.3002; and STH 59 and S. Elm Grove Road, Item 661.0200.3003.

Replace standard spec 661.2.1 paragraph (3) with the following:

(3) Use the existing underground electric service and/or meter breaker pedestal for the operation of the Temporary Traffic Signal. The department (if department owned/maintained traffic signal) or municipality (if municipal owned/maintained traffic signal) will pay for all energy costs for the operation of the Temporary Traffic Signal.

Coordinate with the Traffic Control contractor for the installation of temporary stop signs during switch over of the signal service whenever a generator is used. Placement of signs shall be in accordance to the MUTCD, Signing Guidelines Manual and Work Zone Safety Guide.

Add the following to standard spec 661.2.1:

(5) Furnish all temporary traffic signal equipment as shown on the plan. The signal controller shall be capable of operating with the video camera detection system and Emergency Vehicle Preemption (EVP) system. All wood poles shall be plumb and level. Provide primary and secondary temporary traffic signal contact names and phone numbers who will be responsible for implementing temporary traffic signal timing changes. The department may request traffic signal timing changes to an approved incident timing plan during the project. Implement any approved incident timing plan immediately upon notification of the change and immediately upon notification of switching the timing plan back to normal operation. Immediately notify the department of implementation of temporary traffic signal timing changes. Record the times of operation of the incident timing and subsequent return to normal operation and provide this information to the department.

(6) Furnish a video image detector system consisting of video image detector cameras, mounting brackets and hardware, power cable, video image processor card, and auxiliary equipment to make the video detector system fully operational.

(7) Furnish pedestrian signal faces in accordance to standard spec 658.2.3.

(8) Furnish pedestrian push buttons in accordance to standard spec 658.2.5.

Add the following to standard spec 661.3.1:

(4) Install temporary video detection cameras at the locations shown on the plans and according to the manufacturer's recommendations at a minimum 30-foot mounting height. Install power cable and signal cabinet equipment. Aim the video cameras to provide detection at the location shown on the plans and make the video detector system fully operational.

(5) In the event, at installation or turn on date, a noticeable obstruction is present in line with the video detection zone(s), advise the engineer before setting the zone.

(6) The video camera shall be mounted on a wooden pole. Relocate the video camera to a suitable location if there is impedance on the sensor operation, construction related or otherwise.

(7) The video detection system, as shown in the traffic signal construction plans, shall be complete, in place, tested, and in full operation during each stage and sub-stage of construction.

(8) Install pedestrian signal faces on the wood pole or wood post as the plans show. Maintain the height to the bottom of the pedestrian signal face as indicated in SDD Traffic Signal Standard Poly Bracket Mountings (Typical) 13 FT. or 15 FT.

(9) Install pedestrian push buttons in accordance to standard spec 658.3.5. Mount push buttons so that they are wheelchair accessible from the temporary crossing areas and in accordance to MUTCD Chapter 4.

Replace standard spec 661.3.1.1(2) with the following:

(2) Place the pole in the ground to no less than 1/5 of the pole's length as the plans show. Sawcut existing pavement and concrete curb and gutter as needed to install the wood poles and guy wire anchors. Sawcut existing pavement in accordance to the pertinent provisions in standard spec 690.3, Construction. Remove pavement and concrete curb and gutter as shown on the plans and if needed to install the wood poles and guy wire anchors. Remove only as much pavement as needed to install the wood poles. Remove pavement and curb and gutter in accordance to the pertinent provisions in standard spec 204.3, Construction.

Hold any wood poles in place and/or move wood poles during construction due to conflicts with proposed work.

Replace standard spec 661.3.1.4(1) with the following:

(1) Arrange for every other week inspections with the engineer to check the height of the span wire above the roadways to ensure that the bottom of the traffic signal heads remain within the minimum and maximum heights allowed above the roadway. Make all height adjustments within 1-hour of an inspection indicating that adjustments are required. Notify the engineer in writing upon completion of all necessary adjustments. Maintain a written log to properly document the date of each every other week inspection, the heights above the roadway, the roadway clearance after adjustments have been made and acceptance by the engineer. Provide all documentation related to the every other week span wire height checks as well as all records related to maintenance performed on the temporary traffic signal installations to the engineer.

Add the following to standard spec 661.3.1.4:

(4) Maintain all temporary vehicle detection zones as the plans show or as the engineer directs. The temporary vehicle detection zones shall be set near the vicinity and within the approximate distance from the stop bar as shown on the plans. Check temporary vehicle detection zones at a minimum every other week and at the opening of each stage of temporary traffic signal operation to ensure that they are working and are aimed properly. Check and/or adjust temporary vehicle detection zones immediately upon notification by the department and/or construction team that the video detection system is not operating correctly. Periodic adjustment of the detection zones and/or moving of the temporary vehicle detection sensors may be required due to changes in traffic control, staging, or other construction operations.

(5) Ensure that the temporary vehicular detection system stays in clean working order. Periodic cleaning of the equipment may be required due to dirt and dust build-up.

Add the following to standard spec 661.3.2.6:

(6) Remove the video detection system from the temporary traffic signal poles and cabinet.

Replace standard spec 661.5(2) with the following:

(2) Payment for the Temporary Traffic Signals for Intersections bid item is full compensation for providing, operating, maintaining, and repairing the complete temporary installation; and for removal. Payment also includes the following:

- Furnishing and installing the replacement equipment.
- The cost of delivery and pick-up of the cabinet assemblies.
- Removal of service and site restoration.

Payment is full compensation for drilling holes; furnishing and installing all materials, including bricks, and coarse aggregate; for excavation, bedding, and backfilling, including any sand or other required materials; furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for properly disposing of surplus materials; for making inspections; for performing any and all maintenance related to the temporary traffic signal installation; for checking and/or adjusting the temporary detection zones on an every other week basis; for maintaining and changing the temporary detection zones to match the plans, traffic control, and construction staging; for relocating the temporary detection sensors due to construction activities, if required; for periodically cleaning all temporary vehicle detector equipment; for removing the temporary vehicle detector system; for cleaning up and properly disposing of waste; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

49. Ramp Closure Gates Hardwired 32-FT, Item 662.1032.S.

A Description

This special provision describes providing hardwired freeway on-ramp closure gates on type 5 steel luminaire poles. This special provision also describes furnishing and delivering spare gate arms and flashers.

B Materials

B.1 General

Provide five user manuals and a listing of vendors and contact information for each manufactured component including flasher electrical components.

The engineer may allow alternates equal to specified manufactured components. The engineer may require plan detail modifications to accommodate alternates. The engineer may accept alternate arms or mounting adaptors only if the contractor can demonstrate that the department can easily remove and replace the arms.

B.2 Components

Furnish type 5 steel poles designed to carry twin 15-foot luminaire arms and conforming to standard spec 657 and with dimensions for acceptable installation of the ramp gate hardware as shown on the detail. Ensure a contiguous pole by eliminating the hand hole near base of pole, thus allowing uninhibited mounting of the gate pivot assembly.

Furnish galvanized steel nuts and bolts conforming to ASTM A307 except where designated as high strength (HS), conform to ASTM A325. For the ramp closure gate locking mechanism, furnish a handle nut to fit on a 3/4-inch.

Furnish grade A36 steel for the gate supports, gate pivot assembly, and associated hardware galvanized after fabrication by either a mechanical or hot-dip process. Grind welded connections, rough edges, and burrs smooth before galvanizing to ensure a finished appearance. Ensure that the galvanized coating conforms to ASTM A 153.

Provide aluminum/fiberglass gate arms of the nominal length the bid item indicates and conforming to plan dimensions. Cover gate arms on two sides with alternating red and white shop-applied type H reflective from the department's approved products list. Also provide a shear pin base that is the manufacturer’s “permanent pivot” style. Obtain components from:

B&B Roadway
15191 Hwy 243
Russellville, AL 35654
Tel: (888) 560-2060

Gate arm: model MU605

Furnish a worm gear winch with a single line vertical lift capacity of 2000 lbs. Ensure that the winch has hardened steel gears, a handgrip, permanently lubricated bearings, a reinforced arc-welded reel assembly, and mounting plate. Ensure that the winch can be mounted to the winch mount plate shown on the construction details and the handgrip can be operated without conflict with the pole or ramp gate assembly. Furnish a 2-inch outdoor rated, rot resistant polyester strap for the connection between the worm gear winch and the gate arm pivot assembly.

Furnish hardwire power system and connections conforming to the following:

1. Cabinet

Furnish cabinet assemblies, power wire terminal strips, and power supplies for the on-ramp closure gate systems.

The cabinet shall be the following dimensions: 9-inches wide, 15-inches high, and 5-inches deep.

Minimum wall thickness of the aluminum castings shall be 3/16-inch.

Cabinet body shall have a cast rain hood over the top of the door opening.

Hinges shall consist of 3/6-inch diameter pins in cast hinge bosses that allow door to swing no less than 180º when open.

Cabinet shall be capable of being field prepared for top, bottom, or rear mounting and wire entrance holes.

Set screws shall be stainless steel.

Assembly shall be water resistant by the door flange in full contact with and compressing a neoprene gasket held by an adhesive to a groove cast into the cabinet body.

The cabinets shall consist of a cabinet body, door, and latch cast from aluminum alloy 319 or approved equivalent The door lock shall be a standard police lock reinforced with a steel plat which is keyed the same as the standard traffic control cabinets. The cast shall be free of voids, pits, dents, molding sand, and excessive foundry grinding marks. All radii shall be smooth and intact. Exterior and interior surfaces shall be smooth and cosmetically acceptable, free of molding fins, cracks, and other blemishes.

The aluminum shall meet the following minimum requirements:

- Yield Strength – 18 ksi
- Tensile Strength – 27 ksi
- Brinell Hardness – 70
- Elongation (% in 2 inches) – 2

The assembly shall have an alodine conversion coating to provide corrosion resistance and a proper base for paint adhesion.

Furnish a stainless steel or anodized steel mounting adapter plate to mount the cabinet to a pole with stainless steel banding straps.

2. Power Converter

Furnish the cabinet with a 120 VAC to 12 VDC power converter.

Furnish the cabinet with a 10 position terminal block for the 12 VDC power distribution. Power wire terminal strips 10 position feed-through terminal blocks UL recognized for No. 22 AWG wire through No. 16 AWG wire and UL rated for 15 amps. The terminals shall be tin-plated brass with brass clips and clamps.

Furnish gate flasher assemblies conforming to the following:

- A 2-conductor connector, rated 12 volts at 5 amps minimum.

- A 2-amp weather resistant in-line fuse and fuse holder.

- Wiring harness made from 6-conductor 14 AWG stranded insulated control cable.

- A 12 V flasher controller, capable of providing LED flashers with 5% to 100% duty cycle at a one-second pulse repetition rate.

- A 4-conductor male/female electrical connector pair, 10 amp capacity for each connection, weather resistant, and mounted to allow rapid gate arm replacement.

- A 5-amp mercury switch with less than 3 ohms “on” resistance and a 20 to 30 degree activation angle. Mount the switch on the gate arm to activate the flashers when the gate arm is lowered more than 45 degrees from vertical.

- Furnish red LED flashers meeting the requirements of the MUTCD and/or AREMA standards for hue and brightness.

Power consumption	0.45 amp @ 10.5 V
Life expectancy	100,000 hrs
Directionality	0-degree cone orthogonal to face of flasher
Compliance temperature	-40° C to +70° C

- Furnish electrical wires with jackets conforming to the following color scheme throughout the ramp closure gate system:
- Hot = Black or Red
- Neutral = White
- Ground = Green

- Furnish a weatherproof hardened steel padlock with a minimum 2 1/4-inch shackle height and user programmable 4-digit combination.

C Construction

C.1 Ramp Closure Gates

Under the Ramp Closure Gates bid items, provide ramp closure gate at the locations the plans show. Apply marine grade anti seize compound compound to all bolt threads and to the interface between the aluminum base and steel pole. The engineer may direct adjustment of the gate arm assembly to ensure the correct vertical and angular orientation of the completed closure gate.

Install cabinet with power supply, flasher controller, and other components. Connect the 120 VAC to 12 VDC power supply to the circuit breaker in the breaker disconnect box. Connect the 120 VAC to 12 VDC power supply to the 10-position terminal block and connect the 12 VDC components to the terminal block.

Connect the 12 VDC terminal strip to the wiring harness through the female side of a 2-terminal polarized electrical connector. Connect male side of this connector to the flasher controller and the female side of a weatherproof polarized 4-conductor electrical connector.

Attach the male side of the 4 conductor electrical connector, mercury switch, wiring harness, and the three LED flasher units to the portion of the flasher assembly mounted on the breakaway portion of the gate arm. Adjust mercury switch so that as the gate arm is lowered to a maximum of 45 degrees from the vertical, the gate flasher assembly is energized, and the LEDs begin to flash. Ensure that when the gate arm is raised to a minimum of 15 degrees from vertical, the mercury switches the gate flasher assembly off.

Install structure identification plaques in the location the plan details show.

Contact Joanna Bush, (608) 261-5845, with questions regarding ramp gate numbers.

D Measurement
The department will measure the Ramp Closure Gates Hardwired bid items as each individual installation, 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
662.1032.S	Ramp Closure Gates Hardwired 32-FT	Each

Payment for the Ramp Closure Gate Hardwired bid items is full compensation for providing ramp closure gates including support poles; for gate arm assemblies including guides, collars, and gate arms;for cabinets, wiring, and power converters; for structure identification plaques; for gate flashers; and for padlock.
662-005 (2014630)

50. Intelligent Transportation System (ITS) – Control of Materials.

Standard spec 106.2 – Supply Source and Quality
Supplement standard spec 106.2 with the following:

The department will furnish a portion of equipment to be installed by the contractor. This department-furnished equipment includes the following:

Department-furnished Items
Fiber Optic Termination Panels
Ethernet Switch
Wireless Modem
Contact Closure Radio System
Portable Video Surveillance System
Temporary Vehicle Detector Assembly

Pick-up small department-furnished equipment, such as communications devices, cameras, and controllers, from the department's Statewide Traffic Operations Center (STOC), 433 W. St. Paul Ave., Milwaukee, WI 53203 at a mutually agreed upon time during normal state office hours. Contact the department's STOC at (414) 227-2166 to coordinate pick-up of equipment.

Large department-furnished equipment, such as camera poles will be delivered by the supplier to a contractor-controlled site within Milwaukee County. Delivery will not necessarily be in a "just in time" manner. Store the equipment until field installation. Provide location details and a contact for delivery coordination upon receiving the contract's Notice to Proceed.

Transportation of the equipment between the electric shop and the field or interim location(s) shall be the responsibility of the contractor.

Standard spec 106.3 – Approval of Materials
Supplement standard spec 106.3 with the following:

Design/Shop Drawings
Prior to the purchase and/or fabrication of any of the components listed herein, and for any non-catalog item shown on the Material and Equipment List specified above, and no more than 30 days after notice to proceed, submit five copies of design drawings and shop drawings, as required, to the department for review. The items and the drawings that represent them shall meet the requirements of the standard specifications.

Design drawing submissions shall consist of signed and certified designs, design drawings, calculations, and material specifications for required items.

Shop drawings will be required for, but not limited to the following:

- Mounting assemblies for the vehicle speed and classification sensors, including their attachment to the structure.
- Mounting LED warning signs to the sign structure.
- Mounting detail for dynamic message signs.
- Any contractor-designed structure or foundation.

The department will complete its review of the material within 30 days from the date of receipt of the submission, unless otherwise specified. The department will advise the contractor, in writing, as to the acceptability of the material submitted. The department may determine that if no exceptions were taken for the item, it is approved, and no further action is required by the contractor; or the item may be partially or totally rejected, in which case modify and/or amend the submittal as required by the department and resubmit the item within 14 days. At this time, the review and approval cycle described above will begin again.
670-005 (20100709)

51. Intelligent Transportation Systems – General Requirements.

A Description
A.1 General
This contract includes furnishing and installing elements for an Intelligent Transportation System (ITS) in or along the existing roadway as shown on the plans.

Unusual aspects of this project include:

- The project includes working on cables and equipment that are carrying data between roadside equipment and the department's Statewide Traffic Operations Center (STOC). Interruption of this service is not expected to perform this work. If an interruption is determined necessary, it must be done on a weekend, and must be

done in a way that minimizes communication outages for the existing equipment. Notify the department's STOC at least 48 hours in advance of the planned interruption.

- The department will furnish some of the equipment to be installed. Make a reasonable effort to discover defects in that equipment prior to installing it.

A.2 Surge Protection

Equip every ungrounded conductor wire entering or leaving any equipment cabinet with a surge protector. For purposes of this section, multiple cabinets on a single pole or foundation are considered a single cabinet.

B Materials

B.1 General

Only furnish equipment and component parts for this work that are new and have high quality workmanship. All controls, indicators, and connectors shall be clearly and permanently labeled in a manner approved by the engineer. All equipment of each type shall be identical.

All electrical equipment shall conform to the standards and requirements of the Wisconsin Electrical Code, the National Electrical Manufacturers Association (NEMA), National Electric Safety Council (NESC), Underwriter's Laboratory Inc. (UL) or the Electronic Industries Association (EIA), when applicable. All materials and workmanship shall conform to the requirements of the National Electrical Code (NEC), Rural Electrification Administration (REA), Standards of the American Society for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), requirements of the plans these special provisions, the standard specifications, and to any other codes, standards, or ordinances that may apply. All system wiring, conduit, grounding hardware and circuit breakers shall be in conformance with the National Electrical Code. Whenever reference is made to any of the standards mentioned, the reference shall be considered to mean the code, ordinance, or standard that is in effect at the time of the bid advertisement.

B.2 Outdoor Equipment

All conductive connectors, pins (except pins connected by soldering), and socket contacts shall be gold plated. Acrylic conformal coating shall protect each circuit board side that has conductive traces. Except for integrated circuits containing custom firmware, all components shall be soldered to the printed circuit board.

To prevent galvanic corrosion, all connections between dissimilar metals shall incorporate a means of keeping moisture out of the connection. Where the connection need not conduct electricity, interpose a non-absorbing, inert material or washer between the dissimilar metals. Use nonconductive liners and washers to insulate fasteners from dissimilar metals. Where the connection must conduct electricity, use a conductive sealant between the dissimilar metals. Alternatively, use an insulating gasket and a bond wire connecting the two metal parts.

B.3 Custom Equipment

Equipment that is not part of the manufacturer's standard product line, or that is made or modified specifically for this project, shall conform to the following requirements:

Where practical, electronics shall be modular plug-in assemblies to facilitate maintenance. Such assemblies shall be keyed to prevent incorrect insertion of modules into sockets.

All components shall be available from multiple manufacturers as part of the manufacturers' standard product lines. All must be clearly labeled with the value, part number, tolerance, or other information sufficient to enable a technician to order an exact replacement part.

Lamps used for indicator purposes shall be light-emitting diodes.

The printed circuit boards shall be composed of "two-ounce" copper on 1/16-inch thick fiberglass epoxy or equivalent type construction. Holes that carry electrical connections from one side of the boards to the other shall be completely plated through. Multilayer printed circuit boards shall not be used. The name or reference number used for the board in the drawings and maintenance manuals supplied to the department shall be permanently affixed to each board.

All components shall be mounted so that the identifying markings are visible without moving or removing any part, if practical.

B.3 Environmental Conditions

Equipment shall continue to operate as specified under the following ranges of environmental conditions, except as noted in the specifications for individual pieces of equipment.

1. **Vibration and Shock:** Vehicle speed and classification sensors and any other equipment mounted atop poles or on structures shall not be impaired by the continuous vibration caused by winds (up to 90 mph with a 30 percent gust factor) and traffic.
2. **Duty Cycle:** Continuous
3. **Electromagnetic Radiation:** The equipment shall not be impaired by ambient electrical or magnetic fields, such as those caused by power lines, transformers, and motors. The equipment shall not radiate signals that adversely affect other equipment.
4. **Electrical Power:**
    a. **Operating power:** The equipment shall operate on 120-volts, 60-Hz, single-phase unless otherwise specified. It shall conform to its specified performance requirements when the input voltage varies from 89 to 135 volts and the frequency varies +3 Hz.
    b. **High frequency interference:** The equipment operation shall be unaffected by power supply voltage spikes of up to 150 volts in amplitude and 10 microseconds duration.

c. **Line voltage transients:** The equipment operation shall be unaffected by voltage transients of plus or minus 20 percent of nominal line voltage for a maximum duration of 50 milliseconds. Equipment in the field shall meet the power service transient requirements of NEMA Standard TS-2 when connected to the surge protectors in the cabinets.

5. **Temperature and Humidity:**
   a. **Field equipment:** Equipment in the field shall meet the temperature and humidity requirements of NEMA Standard TS-2. Liquid crystal displays shall be undamaged by temperatures as high as 165 degrees F, and shall produce a usable display at temperatures up to 120 degrees F.
   b. **Equipment in Controlled Environments** shall operate normally at any combination of temperatures between 50 degrees F and 100 degrees F, and humidity's between 5 percent and 90 percent, non-condensing, and with a temperature gradient of 9 degrees F per hour.

B.4 Patch Cables and Wiring

All cables and wiring between devices installed in a single cabinet, or in separate cabinets sharing a single concrete base, will be considered incidental to the installation of the devices and no separate payment will be made for them. It is anticipated that this will include fiber optic patch cables between termination panels and Ethernet switches, 10 / 100 MBPS Ethernet cables, RS-232 cables between individual devices and terminal servers, and power cables between individual devices and power sources within the cabinets.

B.5 Surge Protection

Low-voltage signal pairs, including twisted pair communication cable(s) entering each cabinet shall be protected by two-stage, plug-in surge protectors and shall be installed on both ends of camera control cables. The protectors shall meet or exceed the following minimum requirements:

- The protectors shall suppress a peak surge current of up to 10k amps.
- The protectors shall have a response time less than one nanosecond.
- The protector shall clamp the voltage between the two wires at a voltage that is no more than twice the peak signal voltage, and clamp the voltage between each wire and ground at 50 volts.
- The first stage of protection shall be a three-element gas discharge tube, and the second stage shall consist of silicon clamping devices.
- The protector shall also contain a resettable fuse (PTC) to protect against excessive current.
- There shall be no more than two pairs per protector.
- It shall be possible to replace the protector without using tools.

Cables carrying power to curve signs shall be protected at the cabinet by grounded metal oxide varistors of appropriate voltages. The varistors must be at least 0.8 inch in diameter.

C Construction

C.1 Thread Protection

Provide rust, corrosion, and anti-seize protection at all thread assemblies of metallic parts by coating (non-spray) the mating surfaces with an approved compound. Failure to use an approved compound will result in no payment for the items to which coating was to have been applied.

C.2 Cable Installation

When installing new cables into conduits containing existing cables, remove the existing cables and reinstall the existing cables simultaneously with the new cables. Take every precaution necessary to protect the existing cables. In the event of avoidable damage to the existing cables, replace all damaged cables, in-kind, at no additional expense to the department. When cables are pulled into conduit, use a cable pulling lubricant approved by the cable manufacturer. Submit documentation supporting manufacturer approval of the lubricant to the engineer.

C.3 Wiring

Every conductor, except a conductor contained entirely within a single piece of equipment, must terminate either in a connector or on a terminal block. Provide and install the connectors and terminal blocks where needed, without separate payment. Use approved splice kits instead of connectors and terminal blocks for underground power cable splices.

Permanently label and key connectors to preclude improper connection. Obtain prior engineer approval for the labeling method(s) prior to use.

Terminal blocks must be affixed to panels that permanently identify the block and what wire connects to each terminal. This may be accomplished by silk screening or by installing a laminated printed card under the terminal block, with the labels on portions of the card that extend beyond the block. Installation of terminal blocks by drilling holes in the exterior wall of the cabinet is not acceptable.

Use barriers to protect personnel from accidental contact with all dangerous voltages.

Do not install conductors carrying AC power in the same wiring harness as conductors carrying control or communication signals.

Arrange wiring, including fiber optic pigtails, so that any removable assembly can be removed without disturbing wiring that is not associated with the assembly being removed.

Communication and control cables may not be spliced underground, except where indicated on the plans.

Cables in the Statewide Traffic Operations Center or in communication hubs, which are not contained within a single cabinet, shall have at least 10 feet of slack.

C.4 System Operations
If the contractor's operations unexpectedly interrupt Intelligent Transportation Systems (ITS) service, notify the engineer immediately and restore service within 24 hours. Repair all damaged facilities to the condition existing before the interruption. If service is not restored within 24 hours, the department may restore service to any operating device and deduct restoration costs from payments due the contractor.

C.5 Surge Protection
Arrange the equipment and cabinet wiring to minimize the distance between each conductor's point of entry and its protector. Locate the protector as far as possible from electronic equipment. Ensure that all wiring between the surge protectors and the point of entry is free from sharp bends.

D Measurement
No separate measurement will be made for the work described in this article.

E Payment
No separate payment will be made for the work described in this article. All work described in this article shall be included under the ITS items in the contract.
670-010 (20100709)

52. Install Ethernet Switch, Item 675.0400.S.

A Description
This special provision describes installing an Ethernet switch, and providing all necessary associated wiring.

B Materials
The department will furnish the Ethernet switch. Provide all necessary cables between the Ethernet switch and terminal server or other device.

C Construction
Install the Ethernet switch in a new or existing field cabinet. Connect it to devices as shown on the plans, or as directed by the engineer.

D Measurement
The department will measure Install Switch by the unit, installed in accordance to the contract, tested and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
675.0400.S	Install Ethernet Switch	Each

Payment is full compensation for installation of the Ethernet switch; furnishing all necessary incidental hardware; and making all necessary connections.
675-040 (20100630)

53. Removing Advance Flasher Assemblies Type 1, Item 676.9001.S; Removing Advance Flasher Assemblies Type 2, Item 676.9002.S.

A Description
Remove advance flasher assemblies at the locations shown on the plan. Rewire and disconnect all wiring in the control cabinet as necessary and properly dispose of materials, according to the pertinent provisions of standard spec 204 and as hereinafter provided.

B Materials
Dispose of all materials resulting from removing the Advance Flasher Assemblies including but not limited to poles, break-a-way bases, signal assemblies, bulbs, and wire off the job site.

C Construction
Do not remove existing advance flasher assemblies until proper disconnects and wiring changes in the controller cabinet have been made.

Where an existing advance flasher assembly is mounted to a light pole, remove all signal hardware including wire, conduit, signal assemblies and mounts. Where existing conduit has been installed under concrete sidewalk or roadway, do not remove buried conduit unless directed otherwise by the engineer or unless it is not possible to install new wire through the existing conduit.

D Measurement
The department will measure Removing Advance Flasher Assemblies (Type) by the unit, acceptably removed.

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

ITEM NUMBER	DESCRIPTION	UNIT
676.9001.S	Removing Advance Flasher Assemblies, Type 1	Each
676.9002.S	Removing Advance Flasher Assemblies, Type 2	Each

Payment is full compensation for removing advanced flasher assemblies; for rewiring, as necessary; for disconnecting wiring as necessary in the controller cabinet; and for properly disposing of all materials.

Removal of concrete bases and signs associated with this item will be measured and paid for separately.
676-900 (20100630)

54. Traffic Control Local Road Lane Closures, Item SPV.0060.0001.

A Description
This special provision describes furnishing the labor and equipment required for closing and subsequently opening a local road lane or lanes in accordance to standard spec 643, the plans, and as directed by the engineer.

B (Vacant)

C Construction
Drums and barricades may remain along the roadway when the local road is open to traffic. Immediately remove or cover signs when no longer in use. When removing signs, remove all signs, posts, supports, and other potential associated hazards to the traveling public from within the right-of-way.

D Measurement
The department will measure Traffic Control Local Road Lane Closures by each individual local road lane or two-lane closure that is set up and subsequently removed in each traffic direction within a 24 hour time period, 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.0060.0001	Traffic Control Local Road Lane Closures	Each

Payment is full compensation for closing and subsequently opening a local road lane or lanes. Drums, barricades, lights, arrow boards and signs will be paid for separately under the various traffic control items.
SEF 15_0114

55. Adjusting Sanitary Manhole, Item SPV.0060.0003.

A Description
This work includes adjusting sanitary manholes to an elevation as determined by the engineer as well as installing frame and cover, internal frame/chimney seal, in accordance to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW).

Add or remove masonry adjusting rings as needed. This item applies to structures to be lowered less than 6 inches or raised less than 12 inches.

B Materials
B.1 Adjusting Rings
Adjustment rings shall be concrete with steel reinforcement in conformance with ASTM C-478. Precast concrete rings shall have an inside diameter to match the manhole opening, be not less than 2 inches nor more than 6 inches high, and have a wall thickness of

6 inches unless otherwise specified. The rings shall contain a minimum of one No. 2 reinforcing rod centered within the ring. Do not use any cracked or broken rings. The top of precast manhole cones shall be set a maximum of 18 inches lower than established grade in unimproved areas, with the top of the manhole cover being ringed up flush with the existing ground. The minimum number of adjusting rings shall be one 2-inch ring. The maximum height of adjusting rings shall be 8 inches in paved areas. All joints between the adjusting rings shall be filled with grout or mortar, including between the cone and the adjusting ring and the adjusting ring and the frame. Rings shall be grooved to receive a step.

B.2 Manhole
Precast manholes and cones shall conform to ASTM Specifications, C478, latest revision.

B.4 Manhole Seal
Furnish new Cretex, NPC Flexrib, or approved equal internal frame/chimney Seal, as shown in the plans. The seal shall meet the material requirements of section 8.42.3 and the performance requirements of section 8.42.4 of the SSSW.

C Construction
C.1 General
The location of existing sanitary manholes to be adjusted is indicated on the plans. Adjust these items as shown in the plans. Reconstruct manholes as necessary so that the frames and cover when placed will be at the established required grade; remove the existing frame and cover. Install seals in accordance to the manufacturer's recommended installation procedures. Furnish and use Backfill Slurry in the manhole excavation area to existing surface or to appropriate depth for pavement restoration. Salvage the existing frame and cover.

C.2 Surface Preparation
Remove manhole cover and power wire brush the lower 3 inches of the manhole frame to remove any loose rust or scale and repair any imperfections by either grinding smooth or filling with mortar. A smooth, clean sealing surface is required. Realign the casting if it is offset more than approximately 2 inches from the chimney. Remove all loose and protruding mortar and brick from the upper 7-Inch chimney and clean surface by power wire brushing. Provide a 4-Inch wide sealing surface starting 2 inches down from the bottom of the frame.

All sealing surfaces must be circular, reasonably smooth, clean and free of any loose material or excessive voids. If such a surface does not exist for the bottom of the sleeve to seal against, use one-component, quick-set, high strength, non-shrink, polymer modified patching mortar which has been formulated for vertical or overhead use. If the bottom of the sleeve is to seal against the top of an eccentric (straight side) cone and an inadequately high vertical surface does not exist, contact the manufacturer to obtain details to build the required vertical surface.

Use caulk to fill minor irregularities in the bottom sealing surface. The caulk shall be a butyl rubber caulk conforming to AASHTO M-198, Type B. Apply a single bead of the caulk to the center portion of the lower sealing surface of the sleeve.

Any flaws in the manhole frame, such as minor cracks, pits or protrusions, shall be repaired by either filling with mortar or grinding smooth.

D Measurement
The department will measure Adjusting Sanitary Manhole as a unit per each adjustment, 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.0060.0003	Adjusting Sanitary Manhole	Each

Payment is full compensation for furnishing and installing all materials including adjusting rings, masonry, and internal frame/chimney seals; for excavating, backfilling, and compacting; for disposing of surplus materials; and for cleaning out and restoring the structure

56. Replace Sanitary Manhole, Item SPV.0060.0004.

A Description
This work includes furnishing and installing a standard 48-Inch diameter sanitary manhole made of precast concrete with necessary reinforcement, internal frame/chimney seal, materials, proper backfilling, surface replacement and work necessary to the completion of precast manholes including installation of frame and cover, the connection with all incoming and outgoing sewers, all stubs, steps, removing existing manhole and base, and all necessary bypass pumping.

Perform the work in accordance to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW).

B Materials
B.1 General
All materials and work required to install the manhole will conform to the SSSW.

B.2 Manhole
Manhole barrels shall be constructed of pre-cast reinforced concrete sections. Precast manholes and cones shall conform to Chapters 8.39.0 of the SSSW.

B.3 Manhole Seal
Furnish and install new Cretex, NPC Flexrib, or approved equal internal frame/chimney seal, as shown in the construction details on the plans. Meet the material requirements of section 8.42.3 and the performance requirements of section 8.42.4 of the SSSW.

B.4 Joints
Joints for precast manholes shall meet the requirements of ASTM C-443, latest revision, except that sealant shall be butyl rubber gasket or butyl rubber rope. Flexible butyl rubber gaskets or rope shall comply with the physical requirements for Type "B" gaskets in AASHTO Designation M-198, or Federal Specification SSS-00210-A, sealing compound, preformed plastic for expansion joints and pipe joints.

B.5 Steps
All manholes shall be provided with steps equally spaced vertically at a maximum of 16 inches on center installed by the manufacturer. Steps shall be embedded into the riser or conical top section of the wall a minimum of 3 inches. Manhole steps shall be made of steel reinforced plastic conforming to the requirements of ASTM Designation 4101 Type II Grade 49108 reinforced with a deformed ½ inch diameter reinforcing bar which conforms to the requirements of ASTM Designation A-615 Grade 60, or gray cast iron conforming to the requirements of ASTM Designation A-48 Class No. 30B and shall have a minimum cross sectional dimension of one inch in any direction. Each section of the manhole shall be aligned so the steps create a continuous ladder.

C Construction
Contact Joseph Burtch at (414) 302-8379 with the City of West Allis to arrange for an onsite inspector, prior to construction. A City of West Allis inspector shall be present for all installation activity.

Construct manholes as shown in the plans.

Salvage and reinstall existing City of West Allis frame and cover. City of West Allis inspector will verify the condition of existing frame and cover and if deemed necessary, City of West Allis will supply a new frame and cover.

Fill the excavation with Backfill Slurry, to existing surface or to appropriate depth for pavement restoration.

C.1 General
Excavate to provide a smooth, compacted flat bottom. Place a minimum 6-inch depth of bedding material conforming to the requirements of the SSSW and compact prior to setting manhole base and riser section.

Construct concrete bench in the interior bottom of the sanitary manhole which are precast or poured-in-place. The bench shall extend to the top of the pipe. Construct the bench invert to provide a smooth flow line and conform to the curvature of the pipe.

Reconnect existing sewer main, connectors for reconnecting existing clay sewers to new PVC shall be stainless steel reinforced rubber connectors.

Provide aggregate slurry backfill in accordance to section 8.43.8 of the SSSW.

Final rim elevations shall be ¼" to ½" below final grade in asphalt pavement and at final grade in concrete pavement and in grass. Adjustment rings shall not exceed 7.5 inches.

Provide by-pass pumping of wastewater around construction zone during working hours. During non-work hours, provide temporary connection of replacement sanitary sewer to existing sanitary sewer to provide uninterrupted sanitary sewer service.

D Measurement
The department will measure Replace Sanitary Manhole as a unit for each individual manhole, 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.0060.0004	Replace Sanitary Manhole	Each

Payment is full compensation for furnishing and installing all materials including pre-cast manhole base, riser, bench, cone section, and chimney adjustment rings; for installing frames, grates or lids, gaskets, joint seals, steps, bedding material, aggregate slurry backfill material; for furnishing all excavation, dewatering, sheathing and shoring, forming foundation, and masonry work; for making sanitary sewer connections: for backfilling; for removing sheeting and shoring; for disposal of all surplus or waste material; and for clean-up. The removal of existing sanitary sewer pipe and manholes from within the trench of replacement of sanitary sewer manholes will not be paid for separately, but shall be considered incidental to the item.

57. Grooved Preformed Thermoplastic Arrows Type 2 White, Item SPV.0060.0005; Words White, Item SPV.0060.0006; Crosswalk 6-Inch, Item SPV.0090.0002; Stop Line 18-Inch, Item SPV.0090.0003; Diagonal 12-Inch White, Item SPV.0090.0004.

A Description
This special provision describes grooving the pavement surface, and furnishing and installing preformed thermoplastic pavement marking as shown on the plans, in accordance to standard spec 647, and as hereinafter provided.

B Materials
Furnish preformed thermoplastic pavement marking and sealant material, if required, from the department's approved products list.

C Construction

C.1 General

For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of preformed thermoplastic pavement marking.

Plane the grooved lines in accordance to the plan details. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove.

C.2 Groove Depth

Cut the groove to a depth of 120 mils ±10 mils deeper than the thermoplastic thickness, from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Linear Markings

Cut the groove 1-inch wider than the width of the thermoplastic.

C.4 Groove Position

Position the groove edge in accordance to the plan details.

C.4.1 Linear Marking

Groove at a minimum of 4-inches, but not greater than, 12-inches from both ends of the line segment. Achieve straight alignment with the grooving equipment.

C.4.2 Special Marking

Groove a box around the special marking up to 4 inches from the perimeter of the special marking.

C.5 Groove Cleaning

C.5.1 Concrete

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, after removal of excess water, and prior to pavement marking application. Clean and dry the groove for proper application of the sealant, and placement of the pavement marking. Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 New Asphalt
Groove pavement 5 or more days after paving. Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove.

C.5.3 Existing Asphalt
Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

C.5.2 Asphalt
Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove.

C.6 Preformed Thermoplastic Application
Preheat the surface if necessary based on manufacturer's recommendation.

Application of the preformed thermoplastic in the groove without sealant will be as follows:

- May 1 to September 30, both dates inclusive – the Southeast Region and the ozone non-attainment or maintenance Northeast Region counties of Sheboygan, Manitowoc, Kewaunee, and Door.
- June 1 to August 31 – the Southwest Region, and the Northeast, North Central, and Northwest Regions except for the ozone non-attainment or maintenance Northeast Region counties of Sheboygan, Manitowoc, Kewaunee, and Door.

Application of the preformed thermoplastic in the groove with sealant materials will be as follows:

- October 1 to April 30, both dates inclusive – the Southeast Region and the ozone non-attainment or maintenance Northeast Region counties of Sheboygan, Manitowoc, Kewaunee, and Door.
- September 1 to May 31, both dates inclusive – the Southwest Region and the Northeast, North Central, and Northwest Regions, except for the ozone non-attainment or maintenance Northeast Region counties of Sheboygan, Manitowoc, Kewaunee, and Door.

The sealant must be wet.

D Measurement
The department will measure Pavement Marking Grooved Preformed Thermoplastic (Type) by each individual unit, acceptably completed.

The department will measure Pavement Marking Grooved Preformed Thermoplastic (Type) in length by the linear foot of tape placed, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0005	Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2 White	Each
SPV.0060.0006	Pavement Marking Grooved Preformed Thermoplastic Words White	Each
SPV.0090.0002	Pavement Marking Grooved Preformed Thermoplastic Crosswalk 6-Inch	LF
SPV.0090.0003	Pavement Marking Grooved Preformed Thermoplastic Stop Line 18-Inch	LF
SPV.0090.0004	Pavement Marking Grooved Preformed Thermoplastic Diagonal 12-Inch White	LF

Payment is full compensation for cleaning and preparing the pavement surface, and for furnishing and installing the material.

58. Removing Lighting Units, Item SPV.0060.1002.

A Description

This special provision describes the removal of lighting units (pole, arm, luminaire, and breakaway device, if applicable). Lamp disposal shall be paid separately.

Removed lighting units shall be returned to the Brookfield Highway Department located at 19700 Riverview Drive, Brookfield, WI 53045.

Please contact the City of Brookfield Public Works Department at (262) 787-3919 at least five working days prior to delivery to make arrangements.

B Materials

Lamps turned in to the department will be considered the property of the department for proper future disposal, and the contractor will have no further obligation for their disposal.

C Construction

No removal work will be permitted without approval from the engineer. Removal shall start as soon as the temporary lighting or permanent lighting, as applicable, is placed in approved operation. An inspection and approval by the engineer will take place before any associated proposed permanent or temporary lighting is approved for operation.

D Measurement

The department will measure Removing Lighting Units by each individual removed 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.0060.1002	Removing Lighting Units	Each

Payment is full compensation for removing lighting units and returning to the Brookfield Highway Department facility; and for disposal of all scrap materials.

59. Lamp Disposal High Intensity Discharge, Item SPV.0060.1010.

A Description

This special provision describes the packaging and delivering of high intensity discharge (mercury vapor, metal halide, and high-pressure sodium) lamps removed under this contract to the department for disposal as hazardous materials.

B Materials

Lamps turned in to the department will be considered the property of the department for proper future disposal, and the contractor will have no further obligation for their disposal.

C Construction

Pack intact lamps in the packaging of the new lamps used to replace them, or packaging affording the equivalent protection. Place in full, stackable cartons with the name of the contractor written on each carton. Segregate the lamps by type and wattage. Label each carton by the type and wattage contained (do not mix) and the quantity.

Pack broken lamps into thick plastic bags and place inside sturdy cardboard boxes or the equivalent. Mark the outer packaging with the term "broken lamps". Deliver all broken lamps to the department.

The department will not accept lamps improperly packaged or packed in metal containers. The department will reject any lamps not removed as part of this contract as shown on the plans.

Pile cartons no more than two high if palletized and secure them to prevent shifting or falling of the loads.

Deliver the lamps to the department at the South 60th Street office in West Allis. Consolidate all deliveries into a truckload or more, except when all the lamps removed under a contract measure less than a truckload, deliver as one load at one time. Contact Mike Prebish at (414) 266-1170, Monday through Thursday from 8 am to 4 pm to set up an appointment for delivery.

D Measurement

The department will measure Lamp Disposal High Intensity Discharge as each individual unit delivered to the department properly packaged and delivered. The department will not measure broken lamps that exceed a total of ten percent of all lamps to be delivered.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1010	Lamp Disposal High Intensity Discharge.	Each

Payment is full compensation for handling, packaging, labeling and delivering the lamps.

Payment will be in addition to payment for the work under which the lamps are removed from service.

60. Relocating Light Poles Luminaires and Arms, Item SPV.0060.1020.

A Description

The work under this item shall consist of removing lighting pole, arm and luminaires from the locations shown in the plans, and reinstalling pole with arm and luminaire at a new location as shown in the plans, in accordance to the applicable provisions of standard specs 204, 654, 655 and 659. The lamp disposal is not part of this bid item and is separately quantified under Bid Item SPV.0060.1010.

B (Vacant)

C Construction

Inspect the pole prior to removing from the existing base. Inform the engineer of any items of concern or potential problems that may interfere with the reuse of the pole, arm or luminaire. Minimize the time between removal from the existing base and reinstallation on the new base. Provide new lamp when installing the relocated pole. Coordinate lamp type and wattage with removed lamp.

D Measurement

The department will measure Relocating Light Poles Luminaires and Arms by each individual light pole, 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.0060.1020	Relocating Light Poles Luminaires and Arms	Each

Payment is full compensation for furnishing all the work required under this bid item.

61. Pull Boxes Steel 24x36-Inch Grounded, Item SPV.0060.1050.

A Description

This special provision describes pull boxes similar to the standard pull box item of the same size, modified for Grounded Neutral wiring systems.

B Materials
Conform to materials requirements for standard pull box items in standard spec 653.

C Construction
Conform to construction requirements for standard pull box items in standard spec 653. In addition, drive a 5/8-inch x 8-foot copper grounding electrode at the bottom of the pull box. Bond the grounded neutral ("white") conductors, and the canister, frame and cover grounds to the grounding electrode with #6 AWG and connect with an exothermic weld.

D Measurement
The department will measure Pull Boxes Steel 24x36-Inch Grounded conforming to standard spec 653.4.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1050	Pull Boxes Steel 24x36-Inch Grounded	Each

Payment is full compensation conforming to standard spec 653.5.

62. Install Contact Closure Radio System, Item SPV.0060.2001.

A Description
This special provision describes installing a department-furnished contact closure radio and antenna system on existing or proposed cabinets as shown on the plans and as directed by the engineer.

B Materials
Materials furnished by the department will include an Encom COMMPAK I/O 8 contact closure radio, a dome style antenna, a cable between the radio and the antenna, and mounting hardware consisting of a flat nut for tightening the antenna to the cabinet wall.

Materials furnished by the contractor will include wiring between contact closure cards and the radios, and wiring between the radio and the controller.

C Construction
Drill a hole in the cabinet shown on the plans. Size the hole as directed by the antenna manufacturer mounting instructions or as appropriate to allow for proper mounting and creating a seal when the antenna is tightened onto the cabinet.

Place the antenna mounting bolt and cable through the drilled hole and tighten it onto the cabinet with the supplied flat nut. Tighten appropriately to create a seal and to fasten the antenna firmly to the cabinet.

Place the radio on a shelf in the cabinet within the length of the supplied antenna cable.

In the FTMS cabinet, connect the contact closure wires to the radio and to the appropriate existing connections.

In the Traffic Signal Cabinet, connect the contact closure radio to the traffic signal controller.

Connect the supplied antenna cable to the radio.

Connect the radio to existing power source in the cabinet.

Integrate the radios to each other as directed by the manufacturer's instructions and verify proper functioning.

D Measurement
The department will measure Install Contact Closure Radio System as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2001	Install Contact Closure Radio System	Each

Payment is full compensation for testing and installing the radio, antenna and connections; and for furnishing all metallic conduit, mounting hardware, equipment, transportation, and incidentals necessary to complete the work.

63. Wireless Traffic Sensor, Item SPV.0060.2002.

A Description
This special provision describes furnishing and installing flush-mount wireless sensors in pavement to detect and monitor vehicles.

B Materials
For the wireless sensor, use a device that mounts flush to pavement, has 16 frequency channels available with 128 Hz sampling rate, auto-calibration, and 2-way radio communications.

Integrate the wireless sensor node with the access point box and repeater device.

C Construction
Install contractor-furnished wireless sensors at locations the plans show.

Core or drill hole in pavement and vacuum or brush the hole clear of dust and debris.

Apply epoxy to the bottom of the hole to a depth approximately 1/3 of hole's total depth

Install sensor in pavement at least 4” (10 cm) in diameter and 2 ¼” (5.7 cm) deep using a hammer or core drill.

Fill the hole with epoxy, completely covering the sensor and its shell.

Take every precaution to ensure that the sensor node is not damaged during storage or installation.

The contractor or field system integrator shall furnish all equipment, appliances, and labor necessary to test the installed sensor node.

Make all communications connections between the wireless sensor mode, access point and repeater, as required to provide a fully operational detection system.

After the wireless sensor node has been installed, and all other sensor equipment has been installed, the ATMS field system integrator shall successfully perform a field test at the sensor location to verify the sensor is detecting vehicles and accurately relaying the information to the access point.

Furnish all test equipment.

Following successful completion of the test, activate the entire detection system and leave it on for 30 consecutive days. During this period, ensure that all materials and components of the sensor system furnished and installed operate as specified and without any failure.

In the event that any contractor-provided component of the sensor system malfunctions or operates below the level specified, the department will terminate the test period, and will require the ATMS field system integrator to determine and correct the problems, including repair or replacement of equipment, at no cost to the department. Upon correction of the problems, the engineer will start a new 30-day test period. If a malfunction is the result of equipment not installed by the contractor, the engineer will suspend the acceptance test period until the responsible party corrects these problems.

D Measurement

The department will measure Wireless Traffic Sensor as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2002	Wireless Traffic Sensor	Each

Payment for Wireless Traffic Sensor is full compensation for installing all materials, necessary to completely install the sensor node; and for furnishing all required testing.

64. Install Wireless Traffic Sensor Access Point, Item SPV.0060.2003.

A Description

This special provision describes furnishing and installing wireless traffic sensor access points, and outdoor rated Ethernet cable between the access point and the respective controller cabinet, on poles or other structures to maintain wireless communications to all sensors and repeaters assigned to it and relay the data to a roadside traffic controller or remote server.

B Materials

Furnish the access point, mounting hardware, and outdoor rated Ethernet cable.

Wireless Traffic Sensor Access Point shall conform to the following:

For the access point box, use device that mounts to a pole, sign or traffic signal, is wireless, has DC power input, and 2-way radio communications.

For the access point box, use weatherized Ethernet or CAT 5 cable for connection no more than 325 feet (100 meters) long.

The access point box shall have a rack-mounted interface for a 2070 controller

Integrate the access point box with the wireless traffic sensors and repeater devices.

C Construction

Install contractor-furnished access point at locations the plans show.

Install access point box as manufacturer instructions show.

Take every precaution to ensure that the access point box is not damaged during storage or installation.

The contractor or field system integrator shall furnish all equipment, appliances, and labor necessary to test the installed access point box. Successfully perform the following tests before.

Make all communications connections between the wireless sensor mode, access point and repeater, as required to provide a fully operational detection system.

After the access point box has been installed, and all other sensor equipment has been installed, the ATMS field system integrator shall successfully perform a field test at the sensor location to verify the sensor is detecting vehicles and accurately relaying the information to the access point.

Furnish all test equipment.

Following successful completion of the test, activate the entire detection system and leave it on for 30 consecutive days. During this period, ensure that all materials and components of the sensor system furnished and installed operate as specified and without any failure.

In the event that any contractor-provided component of the sensor system malfunctions or operates below the level specified, the department will terminate the test period, and will require the ATMS field system integrator to determine and correct the problems, including repair or replacement of equipment, at no cost to the department. Upon correction of the problems, the engineer will start a new 30-day test period. If a malfunction is the result of equipment not installed by the contractor, the engineer will suspend the acceptance test period until the responsible party corrects these problems.

D Measurement

The department will measure Install Wireless Traffic Sensor Access Point as each individual unit, acceptably completed.

E. Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2003	Install Wireless Traffic Sensor Access Point	Each

Payment for Wireless Traffic Sensor Access Point is full compensation for installing all materials, necessary to completely install the access point; and for installing identification plaques when required.

65. Install Wireless Traffic Sensor Repeater, Item SPV.0060.2004.

A Description

This special provision describes installing a repeater to extend the range of coverage between the sensor nodes and access point.

B Materials

Under the Wireless Traffic Sensor Repeater bid item, use device that mounts to a pole, sign or traffic signal, has a battery life of at least two years, 16 frequency channels available, ability to handle 10 sensors per application, and can communicate with the access point at a range up to 1,000 feet (305 meters). Integrate the repeater device with the wireless sensor node and the access point box.

C Construction

Install contractor-furnished repeater at locations the plans show.

Install access point box as manufacturer instructions show.

Take every precaution to ensure that the sensor node is not damaged during storage or installation.

The contractor or field system integrator shall furnish all equipment, appliances, and labor necessary to test the installed sensor node.

Make all communications connections between the wireless sensor mode, access point and repeater, as required to provide a fully operational detection system.

After the repeater has been installed, and all other sensor equipment has been installed, the ATMS field system integrator shall successfully perform a field test at the sensor location to verify the sensor is detecting vehicles and accurately relaying the information to the access point.

Furnish all test equipment.

Following successful completion of the test, activate the entire detection system and leave it on for 30 consecutive days. During this period, ensure that all materials and components of the sensor system furnished and installed operate as specified and without any failure.

In the event that any contractor-provided component of the sensor system malfunctions or operates below the level specified, the department will terminate the test period, and will require the ATMS field system integrator to determine and correct the problems, including repair or replacement of equipment, at no cost to the department. Upon correction of the problems, the engineer will start a new 30-day test period. If a malfunction is the result of equipment not installed by the contractor, the engineer will suspend the acceptance test period until the responsible party corrects these problems.

D Measurement

The department will measure Install Wireless Traffic Sensor Repeater as each individual unit acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2004	Install Wireless Traffic Sensor Repeater	Each

Payment for Install Repeater is full compensation for installing all materials, necessary to completely install the sensor node; and for installing identification plaques when required.

66. Wireless Traffic Sensor Contact Closure Module, Item SPV.0060.2005; Extension Card, Item SPV.0060.2006.

A Description

This special provision describes furnishing and installing wireless traffic sensor contact closure modules and expansion cards to facilitate the connection of the wireless traffic sensors to ramp meter controllers.

B Materials

Furnish contact closure modules and expansion cards that are fully interoperable with the Wireless Traffic Sensors and associated equipment as provided under other pay items in this contract.

Under the respective bid items, integrate the contact closure modules and extension cards with the repeater device, wireless sensor node and the access point box.

Wireless Traffic Sensor Contact Closure Modules shall accommodate four contact closures and must function in a 170 / 2070 style contact closure rack system.

Wireless Traffic Sensor Extension Cards shall accommodate one contact closure per card and must function in a 170 / 2070 style contact closure rack system.

C Construction

Install Wireless Traffic Sensor Contact Closure Modules and Wireless Traffic Sensor Extension Cards at locations as show on the plans or as directed by the engineer.

Install furnished materials per manufacturer instructions.

Take every precaution to ensure that the materials are not damaged during storage or installation.

The contractor or field system integrator shall furnish all equipment, appliances, and labor necessary to test the installed equipment.

Make all communications connections among the contact closure module, expansion card, wireless sensor mode, access point and repeater, as required to provide a fully operational detection system.

After all sensor equipment has been installed, the FTMS Field System Integrator shall perform a field test at the sensor location to verify the sensor is detecting vehicles and accurately relaying the information to the access point.

Furnish all test equipment.

Following successful completion of the test, activate the entire detection system and leave it on for 30 consecutive days. During this period, ensure that all materials and components of the sensor system furnished and installed operate as specified and without any failure.

In the event that any contractor-provided component of the sensor system malfunctions or operates below the level specified, the department will terminate the test period, and will require the ATMS field system integrator to determine and correct the problems, including repair or replacement of equipment, at no cost to the department. Upon correction of the problems, the engineer will start a new 30-day test period. If a malfunction is the result of equipment not installed by the contractor, the engineer will suspend the acceptance test period until the responsible party corrects these problems.

D Measurement

The department will measure Wireless Traffic Sensor Contact Closure Module and Wireless Traffic Sensor Contact Closure Extension Card as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2005	Wireless Traffic Sensor Contact Closure Module	Each
SPV.0060.2006	Wireless Traffic Sensor Contact Closure Extension Card	Each

Payment for Wireless Traffic Sensor Contact Closure Module and Wireless Traffic Sensor Contact Closure Extension Card is full compensation for installing all materials, necessary to completely install the module and extension module; and for installing identification plaques when required.

67. Install Portable Video Surveillance System, Item SPV.0060.2007.

A Description

This special provision describes deploying a portable trailer-mounted video surveillance system as shown in the plans to provide continuous video surveillance of the project area during permanent CCTV sites downtime.

B Materials

Materials will be department-furnished and will be an all inclusive unit consisting of a cable erected pole with a direct IP CCTV camera, a solar power system, a wireless Ethernet bridge, and stability outriggers, all mounted on a trailer.

C Construction

Pick up the department-furnished video surveillance system at a location in Milwaukee or Waukesha County as directed by the engineer.

Deploy the surveillance system in the initial location as shown on the plans and as directed by the engineer following all recommended procedures by the manufacturer.

Integrate the surveillance system with the new and existing communications system through the wireless Ethernet bridge. Installation of the backhaul end of the wireless Ethernet bridge will be compensated for with other pay items in this contract.

D Measurement
The department will measure Install Portable Video Surveillance System as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2007	Install Portable Video Surveillance System	Each

Payment is full compensation for picking up the surveillance system in Waukesha; for deploying it in the project area; for making the system functional; and for testing.

68. Relocating Portable Video Surveillance System, Item SPV.0060.2008.

A Description
This special provision describes moving a previously deployed portable video surveillance system to a new location as directed by the engineer or as made necessary by construction operations in the area.

B Materials
Portable video surveillance system and wireless Ethernet bridge previously deployed through other pay items in this contract.

C Construction
Coordinate all planned down-time of the portable video surveillance system with the STOC at (414) 227-2166. Notify the STOC an amount of time ahead of planned down-time equal to the planned down-time. Examples would be that a 4-hour temporary down-time of the system would require notification 4-hours ahead of time while an 8-hour planned down-time would require 8-hours of advance notification.

Per manufacturer's recommendations, prepare the surveillance system for towing, relocate to the new location, re-deploy, and make functional as directed by the engineer and as made necessary by construction operations.

No payment will be made for this work unless previously approved by the engineer. No payment will be made for this work for relocations made necessary by operations not previously planned with the engineer's approval.

D Measurement
The department will measure Relocating Portable Video Surveillance System by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2008	Relocating Portable Video Surveillance System	Each

Payment is full compensation for taking the surveillance system down, moving to a new location, and re-deploying in a new location; for re-integrating the wireless Ethernet bridge into the communications system.

69. Install Temporary Vehicle Detector Assembly, Item SPV.0060.2009.

A Description
This special provision describes assembling from a combination of department-furnished and contractor furnished materials a temporary vehicle detector assembly and installing, calibrating, and integrating the assembly into the existing system.

B Materials
Materials will include department-furnished materials and contractor furnished materials.

Department-furnished materials include the following:

- Two Electronic Integrated Systems, Inc. (EIS) Remote Traffic Microwave Sensor (RTMS).
- One wireless data modem.
- One serial data sharing component.
- One solar power system consisting of 2-85W panels, 2-120 Amp-Hour batteries, a solar power controller, and one solar power cabinet to house the batteries and controller.

Contractor furnished materials include the following:

- One 40-foot type 4 or larger wood pole. The wood pole shall be western red cedar in accordance to ANSI standards 05.1. Pressure treatment shall be 5% pentachlorophenol with a minimum of 8 pounds per cubic foot net retention of the oil-borne preservative. Pole shall be shaved the entire length.
- Outdoor rated Power cable between solar power system output and state-furnished RTMS.
- Mounting hardware for solar power system and RTMS detector.

C Construction
<u>RTMS Detector Installation:</u>
Install the wood pole according to industry standards for supplied pole length.

Install the RTMS detector as required in standard spec 675. Additionally, integrate the integral serial communications radio with the radio installed at the field cabinet end. Installation of field cabinet radio is covered with other pay items in this contract.

Solar Power System Installation:
Install the solar panels facing south on the pole with the devices to be powered. If a compass is used, a correction must be made for the difference between magnetic north and true north. Install the solar panels at a tilt angle of approximately 60 degrees. The tilt angle shall be considered the angle from horizontal to the front, or face of the solar panel.

Mount the cabinet to the pole by the two cast aluminum mounting brackets which are already attached to the back of the cabinet. The brackets shall be attached to the pole using stainless steel bands or U-bolts.

Install the cabling, ensuring that cables enter the cabinet only through the bottom, and that strain relief fittings are used to seal cable entrance points. Connect the panel to the charge controller, connecting the white wire to the positive (+) terminal and the black wire to the negative terminal (-).

D Measurement
The department will measure Install Temporary Vehicle Detector Assembly as a unit, with each assembly, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2009	Install Temporary Vehicle Detector Assembly	Each

Payment is full compensation for providing the contractor furnished materials, assembling the state-furnished and contractor furnished materials, installing the assembly, calibrating the detector, and making the assembly functional; and for focusing on initial traffic lane configuration.

70. Refocusing Vehicle Detector Assembly, Item SPV.0060.2010.

A Description
This special provision describes refocusing an existing microwave detector for operation with a new lane configuration when relocation of the Vehicle Detector Assembly pole is not required.

B Materials
Materials associated with this item may be associated with permanent microwave detector installations on Type 5 or other poles, or may be associated with temporary installations on temporary wood poles.

Materials associated with this work include the following items purchased and installed through other pay items, or through other contracts:

- Two Electronic Integrated Systems, Inc. (EIS) Remote Traffic Microwave Sensor (RTMS)

C Construction

Coordinate all planned down-time of the vehicle detector assembly with the STOC at (414) 227-2166. Notify the STOC an amount of time ahead of planned down-time equal to the planned down-time. Examples would be that a 4-hour temporary down-time of the system would require notification 4-hours ahead of time while an 8-hour planned down-time would require 8-hours of advance notification.

Verify to the satisfaction of the engineer that the existing detector assembly is working properly. Inspect the vehicle detector assembly for damage.

Reinstall the RTMS detector as required in standard spec 675 and reintegrate the detector into the communications system.

D Measurement

The department will measure Refocusing Vehicle Detector Assembly by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2010	Refocusing Vehicle Detector Assembly	Each

Payment is full compensation for making the detector fully operational with a new lane configuration.

71. Removing Ramp Control Signal Assembly Sidemount, Item SPV.0060.2012.

A Description

This special provision describes removing or salvaging an existing sidemount ramp control signal assembly.

B Materials

Materials included in sidemount ramp control signal assemblies are:

1. Traffic signal standards.
2. Pedestal bases for traffic signal use.
3. Vehicular traffic signal heads.
4. Signal mounting brackets.
5. Sign mounting brackets.
6. Enforcement signal displays.

C Construction
Remove or salvage sidemount ramp control signal assemblies at the locations shown in the plans, or as directed by the engineer. Salvage the signal assemblies for the department to pick up, or dispose of them properly as directed by the engineer.

All work shall be in accordance to the applicable requirements of standard specs 655, 656, 657, and 658, the Wisconsin Electrical Code, these special provisions, and the details shown in the plans.

Salvage and store all removed materials for pickup by the department or reuse as shown on the plans. Coordinate with the engineer on a schedule to have the removed items picked up. Maintain all materials in a condition suitable for reutilization. Replace all items damaged during construction operations.

Electrical work under this item shall be completed by a journeyman electrician or be completed under the supervision of a journeyman electrician. Legal status or standing as a journeyman electrician shall be certified or otherwise documented to the engineer before any electrical work may begin.

D Measurement
The department will measure Removing Ramp Control Signal Assembly Sidemount 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.0060.2012	Removing Ramp Control Signal Assembly Sidemount	Each

Payment is full compensation for removal and storage of the ramp control signal assembly; disconnecting all wiring connections; removing all conduit connections; for any necessary restoration, including backfill, topsoil, and seeding.

72. Install Wireless Modem, Item SPV.0060.2013.

A Description
This special provision describes installing a wireless cellular modem and antenna and providing all necessary associated wiring.

B Materials
The department will furnish the wireless cellular modem and antenna. Provide all necessary cables between the wireless modem and device to be connected to it.

C Construction
Drill a hole in the new or existing cabinet to install the wireless modem antenna cable through. Mount the antenna on top of the cabinet and seal the hole with purpose-made waterproof sealing device such as a grommet or gasket.

Install the wireless modem in a new or existing field cabinet. Connect it to the antenna and to devices as shown on the plans, or as directed by the engineer.

D Measurement
The department will measure Install Wireless Modem 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.0060.2013	Install Wireless Modem	Each

Payment is full compensation for installing a wireless modem; furnishing all necessary incidental hardware; and making all necessary connections; and for testing.

73. Bury Existing Manhole, Item SPV.0060.2014.

A Description
This special provision describes modifying and burying an existing pre-cast concrete Type 1 Manhole without disturbing the conduit and cable running through the manhole.

B Materials
Existing pre-cast concrete Type 1 Manhole.

Furnish a manhole frame and lid made for a 48-inch diameter opening and meeting the requirements of AASHTO M306.

C Construction
Prior to beginning work at the manhole to be buried, open the adjacent existing manhole as shown on the plans and pull all the slack cable out of the manhole to be buried and coil it in the adjacent manhole.

Carefully excavate the area around the existing manhole to a depth of 12-inches above the existing conduit installed in the manhole. Excavate an area adequate to allow for completion of the construction operations described in this pay item.

Remove and dispose of the existing frame and lid.

Cut around the entire existing manhole approximately 12-inches above the existing conduits.

Lift off the part of the existing manhole above the cut.

Place a bead of tar, or sealant made for concrete to steel adhesion, around the exposed top of the existing manhole.

Place the new manhole lid frame on the tar or sealant and allow the tar or sealant to set per manufacturer's recommendations.

Place another bead of tar or sealant on the inside of the new manhole frame and place the new manhole lid in the frame.

Allow the tar or sealant to set per the manufacturer's recommendations and backfill the area above and around the manhole. Compact the backfilled soil per the requirements of the standard specifications.

D Measurement
The department will measure Bury Existing Manhole by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2014	Bury Existing Manhole	Each

Payment is full compensation for excavation of the area around the manhole, cutting the manhole for removal of top piece, for furnishing and installing the new manhole frame and lid.

74. Removing Pavement Markings Water Blasting, Item SPV.0090.0001.

A Description
This special provision describes removing pavement markings using high pressurized water spray from locations shown on the plans or as the engineer directs. Conform to standard spec 646 as modified in this special provision.

B (Vacant)

C Construction
Remove pavement marking using a high pressurized water spray with a vacuum recovery system to provide a clean, dry surface, without the use of a secondary cleanup process when pavement or ambient air temperature is 36 degrees F and rising. Remove all markings in their entirety. Provide equipment with a storage system that contains wastewater and debris. Control blast head at all times.

Obtain approval from engineer to perform alternative removal process, including grinding, when either restricted from using water blasting or water blasting alone was unsuccessful.

D Measurement
The department will measure Removing Pavement Markings Water Blasting by the linear foot of 4-inch wide line, 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.0090.0001	Removing Pavement Markings Water Blasting	LF

Payment is full compensation for removal; and for disposal of debris.
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75. Cable Type UF 2-14 AWG, Item SPV.0090.3001.

A Description
This work shall consist of furnishing and installing cable for confirmation lights and making all connections as shown on the plans and as hereinafter provided.

B Materials
Conform to standard spec 655 and as follows.

Supplement standard spec 655.3.4 with the following:

When lighting is installed in conjunction with traffic signals, conductors from the traffic signal control cabinet to the confirmation light(s) shall be Cable Type UF, 2 conductor without ground, solid copper conductor, size No. 14.

C Construction
Furnish and install Cable Type UF 2-14 AWG for traffic signals.

D Measurement
The department will measure Cable Type UF 2-14 AWG by the linear foot of cable, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.3001	Cable Type UF 2-14 AWG	LF

Payment shall be full compensation for furnishing and installing cable; for making all connections; for furnishing and installing all connectors, including wire nuts, splice kits, tape, insulating varnish or sealant and ground lug fasteners, and for testing.

76. Install Camera Power Cable, Item SPV.0090.3002; Install Cat-5e Cable, Item SPV.0090.3003.

A Description

This special provision describes the transporting and installing of department furnished Camera Power Cable, Cat-5e Cable, and Ethernet repeaters.

B Materials

Pick up the department furnished Camera Power Cable, Cat-5e cable, and Ethernet repeaters at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical field unit at (414) 266-1170 to make arrangements for picking up the department furnished materials at least five working days prior to material pick-up.

Furnish all other necessary materials (connectors including wire nuts, splice kits, tape, insulating varnish or sealant and ground lug fasteners) ensuring all materials are in compliance with the WisDOT Qualified Electrical Products List.

C Construction

Install the Cat-5e Cable from the video detection cameras to the cabinet. Provide an extra 6-foot loop of cable in each pull box. Cat-5e Cable runs longer than 300-feet require an Ethernet repeater. Provide an extra 12-foot loop of cable at locations provided by the engineer and install the department furnished Ethernet repeaters per the manufacturer's specifications. Terminate the Ethernet cable ends in the cabinet, at the video detection camera, and at the locations of any required Ethernet repeaters per the manufacturer's specifications. Each run of Ethernet cable must be terminated at both ends. All open field ends shall be taped and covered with a sealant in accordance to standard spec 655.3.1.

Mark the cabinet end of the Camera Power Cable and Cat-5e Cable appropriately to indicate the equipment label (i.e. V1, V2, etc.) in the traffic signal control cabinet. Neatly coil a minimum of 15-feet of extra cable in the traffic signal cabinet for connection to the traffic signal cabinet equipment by others.

Submit an Ethernet Cable Test Procedure to the department 30 days prior to camera installation. The department will approve the test procedure within 30 days of the date received and provide a written approval.

Resubmit rejected test procedures within 15 days of notification. The department will provide written approval of resubmitted test procedures within 30 days of the date received.

Perform an Ethernet Cable Test conforming to the approved Ethernet Cable Test Procedure on each run of Ethernet cable (cabinet to camera, cabinet to Ethernet repeater, Ethernet repeater to camera). Test the Ethernet cable at a minimum for the following: 1000BASE-T, 100BASE-TX, 10BASE-T, Voice Over IP, Wiremap, Telco, and Length. Submit five copies of the test results to the department for approval. Notify the department

of any cable that fails testing. If the Ethernet cable fails testing due to cable terminations, replace the terminations and re-test the cable. If the Ethernet cable fails testing due to the cable itself, re-install any failed Ethernet cable. Re-terminate the ends and re-test any Ethernet cable until it passes all testing procedures.

Connect the Ethernet cables to the video detection cameras and Ethernet repeaters per the manufacturer's specifications once all cable has passed testing. Connect the camera power cable to the video detection cameras. Neatly coil and secure the Ethernet cable and camera power cable in the traffic signal cabinet for connection to the adaptable traffic signal cabinet equipment by others.

Notify department's Electrical field unit at (414) 266-1170 upon installation completion at each intersection.

D Measurement

The department will measure Install Camera Power Cable and Install Cat-5e Cable by the linear foot of cable, 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.0090.3002	Install Camera Power Cable	LS
SPV.0090.3003	Install Cat-5e Cable	LS

Payment is full compensation for transporting and installing the Video Camera Power Cable, Cat-5e Cable, and Ethernet Repeaters; for making all connections; for furnishing and installing all connectors, including wire nuts, splice kits, tape, insulating varnish or sealant and ground lug fasteners; for terminating, testing, and connecting the Ethernet cables; for terminating and connecting the camera power cable.

77. Pavement Cleanup Project 1060-35-93, Item SPV.0105.0001.

A Description

This special provision describes cleanup of dust and debris from pavements within and adjacent to the job site.

B Materials

B.1 Pavement Cleanup

Furnish a vacuum-type street sweeper equipped with a power broom, water spray system, and a vacuum collection system.

Utilize vacuum equipment with a self-contained particulate collector capable of preventing discharge from the collection bin into the atmosphere.

Use a vacuum-type sweeper as the primary sweeper, except as specified herein or approved by the engineer.

C Construction

C.1 Pavement Cleanup

Keep all pavements, curb lanes and gutters both closed and open to public traffic within the job-site boundaries free of dust and debris generated from any activity under the contract. Keep all pavements, curb lanes and gutters adjacent to the project free of dust and debris that are affected by land disturbing, dust generating activities, as defined in the contractor's dust control implementation plan.

Provide surveillance to identify if material is being tracked from the jobsite. Clean up spillage and material tracked from the project within an hour of occurrence or as directed by the engineer. Perform cleanup operations in a safe manner.

Provide routine sweeping of all pavements, curb lanes and gutters on local street active haul routes a minimum of once a day as defined in the Dust Control Implementation Plan (DCIP) or as directed by the engineer. W. Oklahoma Avenue (between S. 99th Street and IH-894 Southbound Exit Ramp); IH-894 Northbound Entrance Ramp from W. Oklahoma Avenue; W. National Avenue (between S. 100th Street and IH-894 Southbound Entrance Ramp from W. National Avenue); S. Elm Grove Road (1 block north and south), W. Greenfield Avenue (1 block east and west); S. Sunnyslope Road (1 block north and south), W. Greenfield Avenue (1 block east and west); S. Moorland Road (1 block north and south), W. Greenfield Avenue (1 block east and west); S. Calhoun Road (1 block north and south), W. Greenfield Avenue (1 block east and west); and IH-94 Eastbound Exit Ramp, S. Moorland Road (1 block north and south).

In addition to routine sweeping, conduct sweepings as the engineer directs or approves, to deal with dust problems that might arise during off-work hours or emergencies. Provide the engineer with a contact person available at all times to respond to requests for emergency sweeping. Respond to emergency sweeping requests within 4 hours.

If the vacuum-type sweeper breaks down, a mechanical broom sweeper may be substituted for no more than 24 hours total elapsed time. Repair the vacuum-type sweeper within that 24 hours or substitute a vacuum-type sweeper.

Skid steers with mechanical power brooms may only be utilized on sidewalks and driveways whose pavements will not support the weight of a street sweeper, unless otherwise approved by the engineer

D Measurement

The department will measure Pavement Cleanup Project 1060-35-93 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.0105.0001	Pavement Cleanup Project 1060-35-93	LS

Payment schedule for this item will be in accordance to the percentage of contract value earned.

Payment is full compensation for surveillance, mobilization, sweeping, and disposing of materials.
SEF Rev. 14_1203

78. Survey Project 1060-35-93, Item SPV.0105.0002.

A Description
Perform work conforming to standard spec 105.6 and 650.

This special provision describes modifying standard specs 105.6 and 650 and as follows to define the requirements for construction staking for this contract.

Replace standard spec 105.6.2 with the following:

The department will not perform any construction staking for this contract. Obtain engineer's approval prior to performing all survey required to lay out and construct the work under this contract.

The survey includes establishing horizontal and vertical position for all aspects of construction including but not limited to storm sewer, subgrade, base, curb, gutter, curb and gutter, pipe culverts, drainage structures, structure layout, bridges, noise barriers, all retaining wall layout, pavement, pavement markings (temporary and permanent), barriers (temporary and permanent), overhead signs, freeway and local street lighting, electrical installations, supplemental control, slope stakes, ponds, traffic signals, ITS, FTMS, parking lots, paths, utilities, conduit, water main, sanitary sewer, booster stations, landscaping elements, irrigation system layout, installation of community sensitive design elements, traffic control items, fencing, etc.

The department may choose to perform quality assurance surveys during the project. These quality assurance surveys do not relieve the responsibility for performing all survey work required to lay out and construct the work under this contract.

Delete standard spec 650.1.

B (Vacant)

C Construction

Replace standard spec 650.3.1 (5) and standard spec 650.3.1 (6) with the following:

Perform survey work using global positioning or conventional methods. Establish additional benchmarks and control points as necessary to support the method of operation, or as the engineer directs. Do not use global positioning methods to establish the following:

- Structure layout horizontal or vertical locations.
- Concrete pavement vertical locations.
- Curb, gutter, and curb and gutter vertical locations.
- Concrete barrier vertical locations.
- Storm Sewer layout horizontal or vertical locations, including but not limited to structure centers, offsets, access openings, rim and invert elevations.
- Sanitary sewer construction or other gravity –based drainage system, including but not limited to structure centers, offsets, access openings, rim and invert elevations.

Maintain neat, orderly, and complete survey notes, drawings, and computations used in establishing the lines and grades. This includes, but is not limited to:

- Raw data files
- Digital stakeout reports
- Control check reports
- Supplemental control files (along with method used to establish coordinates and elevation)
- Calibration report

Make the survey notes and computations available to the engineer within 24 hours as the work progresses unless a longer period is approved by the engineer.

Replace standard spec 650.3.3.1 with the following:

Under the Survey Project bid item, global positioning system (GPS) machine guidance for conventional subgrade staking on all or part of the work may be substituted. The engineer may require reverting to conventional subgrade staking methods for all or part of the work at any point during construction if, in the engineer's opinion, the GPS machine guidance is producing unacceptable results.

Replace standard spec 650.3.3.3.4.1 with the following:

The department will provide the contractor staking packet as described in the Construction and Materials Manual (CMM) 7.10. At any time after the contract is awarded, the available survey and design information may be requested. The department will provide that information within 5 business days of receiving the contractor’s request. The department incurs no additional liability beyond that specified in standard spec105.6 or standard spec 650 by having provided this additional information.

Supplement standard spec 650.3.3.3.6.2 with the following:

Record all subgrade elevation checks and submit a hard copy to the engineer within 24 hours or as requested by the engineer.

Supplement standard spec 650.3 with the following:

650.3.14 Water Main
Record all elevation data for the casing, grade breaks, water main pipe, bends, fittings, and all information necessary to accurately record the construction document. Submit a hard copy to the engineer within 24 hours or as requested by the engineer.

Set and maintain construction stakes or marks as necessary to achieve the required accuracy and to support the method of operations. Locate all pipe, valves and bends to within 0.10 feet horizontal and establish the elevations to within 0.10 feet vertically.

Set construction stakes at all water main valves, fittings and bends and at maximum interval of 50 feet for water main piping.

Provide the as-built xyz coordinates and elevations, in the project horizontal and vertical datum, of all bends, fittings, valves and tie in locations for the as-built plan. Also provide the locations of the casing ends, the elevation of the top of casing and the size and material of all pipes.

650.3.15 Sanitary Sewer
Record all elevation data for pipe inverts, outside drops, bends, fittings, casings and other information necessary to accurately record the construction document. Submit a hard copy to the engineer within 24 hours or as requested by the engineer.

Set and maintain construction stakes or marks as necessary to achieve the required accuracy and to support the method of operations. Locate all pipe inverts, drops to within 0.02 feet horizontally and to within 0.01 feet vertically.

Provide the as-built xyz coordinates and elevations, in the project horizontal and vertical datum, of all tie in locations for the as-built plan. Also provide the locations of the casing ends, the elevation of the top of casing and the size and material of all pipes.

D Measurement
Replace standard spec 650.4 with the following:

The department will measure Survey Project 1060-35-93 as a separate single lump sum unit, acceptably completed.

E Payment
Replace standard spec 650.5 with the following:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.0002	Survey Project 1060-35-93	LS

Payment is full compensation for performing all survey work required to lay out and construct all work under this contract. The department will not make final payment for any staking item until the contractor submits all survey notes and computations used to establish the required lines and grades to the engineer within 24 hours of completing this work. The department will deduct from payments due the contractor for the additional costs specified in 105.6. No additional payments will be made for restaking due to construction disturbance and knock-outs.
SEF Rev. 14_0909

79. Maintenance of Lighting Systems, Item SPV.0105.1006.

A Description
Maintain existing and proposed lighting system beginning on the date that the contractor's activities (electrical or otherwise) at the job site begin. Take responsibility for the proper operation and maintenance of all existing and proposed lighting systems which are part of, or which may be affected by, the work until final acceptance or as otherwise determined by the engineer.

Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, initiate a request for a maintenance transfer and preconstruction inspection, as specified elsewhere herein, to be held in the presence of the engineer and a representative of the party or parties responsible for maintenance of any lighting systems which may be affected by the work. Make the request for the maintenance preconstruction inspection no less than seven calendar days prior to the desired inspection date.

Existing lighting systems, when depicted on the plans, are intended only to indicate the general equipment installation of the systems involved and shall not be construed as an exact representation of the field conditions. Visit the site to confirm and ascertain the exact condition of the electrical equipment and systems to be maintained.

B (Vacant)

C Construction
C.1 Existing Lighting Systems
Existing lighting systems are defined as any lighting system or part of a lighting system in service prior to this contract. The contract drawings indicate the general extent of any existing lighting. Ascertain the extent of effort required for compliance with these specifications; failure to do so will not be justification for extra payment or reduced

responsibilities. Clear and replace any knockdowns or damage caused to the existing lighting system, regardless of who causes the damage. Maintain existing lighting system as follows:

Partial Maintenance: Only maintain the affected circuits if the number of circuits affected by the contract is equal to or less than 40% of the total number of circuits in a given controller and the controller is not part of the contract work unless otherwise indicated. Ensure engineer approval to isolate the affected circuits by means of in-line waterproof fuse holders as specified elsewhere.

Full Maintenance: Maintain the entire controller and all associated circuits if the number of circuits affected by the contract is greater than 40% of the total number of circuits in a given controller, or if the controller is modified in any way under the contract work.

C.2 Proposed Lighting Systems

Proposed lighting systems are any temporary or final lighting systems or part of a lighting system to be constructed under this contract.

Maintain all items installed under this contract, including, but not be limited to, any equipment failures or malfunctions as well as equipment damage either by the motoring public, contractor operations, or other means.

Excluding damage due to contractor operations, the contractor will be reimbursed for replaced equipment, materials only, if the invoice paid for the individual piece of equipment is greater than $500. The cost of maintaining equipment installed under this contract, labor, mobilization, tools and incidentals along with repairs due to contractor operations are incidental to this bid item.

C.3 Maintenance Operations

Maintain lighting units (including sign lighting), cable runs, and lighting controls. In the case of a pole knockdown or sign light damage caused by normal vehicular traffic, promptly clear the lighting unit and circuit discontinuity and restore the system to service. Reinstall the lighting unit (if salvageable), or install a new one.

Provide weekly night-time patrol of the lighting system, with patrol reports filed immediately with the engineer and copied to the region lighting coordinator with deficiencies corrected within 24 hours of the patrol. Present patrol reports on standard forms as designated by the engineer. Uncorrected deficiencies may be designated by the engineer as necessitating emergency repairs as described elsewhere herein.

Perform corrective action on specific lighting system equipment according to the following chart. The chart lists the maximum response, service restoration, and permanent repair time.

Incident or Problem	Service Response Time	Service Restoration Time	Permanent Repair Time
Control cabinet out	1 hour	4 hours	7 Calendar days
Hanging mast arm	1 hour to clear	na	7 Calendar days
Motorist caused damage or leaning light pole 10 degrees or more	1 hour to clear	4 hours	7 Calendar days
Circuit out – Needs to reset breaker	1 hour	4 hours	na
Circuit out – Cable trouble	1 hour	24 hours	21 Calendar days
Outage of 3 or more successive lights	1 hour	4 hours	na
Outage of 75% of lights on one tower	1 hour	4 hours	na
Outage of light nearest RR crossing approach, Islands and gores	1 hour	4 hours	na
Outage (single or multiple) found on night outage survey	na	na	7 Calendar days

C.4 Lighting

1. **Serve Response Time:** The amount of time from the initial notification to the contractor until a patrolman physically arrives at the location.
2. **Service Restoration Time**: The amount of time from the initial notification to the contractor until the time the system is fully operational again. (In cases of motorist-caused damage, the undamaged portions of the system are operational.)
3. **Permanent Repair Time**: The amount of time from initial notification to the contractor until the time permanent repairs are made if the contractor was required to make temporary repairs to meet the service restoration requirement.

Failure to provide this service will result in liquidated damages of $500 per day per occurrence. In addition, the department reserves the right to assign any work not completed within this timeframe to the state Electrical Engineering and Electronics Unit. Reimburse all costs associated to repair this uncompleted work. Failure to pay these costs to the state Electrical Engineering and Electronics Unit within one month after the incident will result in additional liquidated damages of $500 per month per occurrence. Unpaid bills will be deducted from the cost of the contract. Repeated failures or a gross failure of maintenance shall result in the state's Electrical Engineering and Electronics Unit being directed to correct all deficiencies and the resulting costs deducted from any monies owed the contractor.

C.5 Operation of Lighting

Maintain operational lighting every night, dusk to dawn. Do not operate duplicate lighting systems (such as temporary lighting and proposed new lighting) simultaneously. Do not keep lighting systems in operation during long daytime periods. Ensure that the lighting

system is fully operational and approved by the engineer prior to submitting a pay request. Failure to do so will be grounds for denying the pay request.

D Measurement
The department will measure Maintenance of Lighting Systems as a single lump sum unit of work, per contract, 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.0105.1006	Maintenance of Lighting Systems	LS

Payment is full compensation for Maintenance of Lighting Systems, both existing and proposed, weekly night-time patrol of the lighting system, mobilization, and filed patrol reports. No payment will be considered for damage or repairs due to contractor operations.
SEF Rev. 14_1211

80. Relocate Existing CCTV Camera, Item SPV.0105.2002.

A Description
This special provision describes removing an existing CCTV camera and associated cabling and reinstalling the CCTV camera and cabling.

B Materials
Existing CCTV camera, cabling, and mounting hardware.

If not damaged during the removal process, it is allowable to salvage and re-use the existing cabling and mounting hardware.

If necessary, furnish new outdoor rated Category 5/E or better network cable and power conductors, and new mounting hardware.

C Construction
Remove the existing CCTV camera and mounting hardware from the existing pole. Dispose of damaged mounting hardware appropriately away from the project area.

Remove the existing CCTV camera cable as shown on the plans. Dispose of damaged cable appropriately away from the project area.

Install the CCTV camera on a new or existing pole as shown on the plans and as directed by the engineer. Use salvaged or new mounting hardware as appropriate.

Install the CCTV camera cable in new or existing conduit as shown on the plans and as directed by the engineer. Use salvaged or new cable as appropriate.

D Measurement
The department will measure Relocate Existing CCTV Camera as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.2002	Relocate Existing CCTV Camera	LS

Payment is full compensation for removing and salvaging the camera, mounting hardware, and cable; for reinstalling the camera, mounting hardware, and cabling; for re-integrating the camera into the communications network; and for furnishing all transportation, and other incidentals necessary to complete the work.

81. Relocate Existing Bluetooth Detector, Item SPV.0105.2003.

A Description
This special provision describes removing an existing Bluetooth detector and associated cabling and reinstalling the Bluetooth detector and cabling.

B Materials
Existing Bluetooth detector, cabling, and mounting hardware.

If not damaged during the removal process, it is allowable to salvage and re-use the existing cabling and mounting hardware.

If necessary, furnish new outdoor rated Category 5/E, or better, network cable and new mounting hardware.

C Construction
Remove the existing Bluetooth detector and mounting hardware from the existing pole. Dispose of damaged mounting hardware appropriately away from the project area.

Remove the existing Bluetooth detector cable as shown on the plans. Dispose of damaged cable appropriately away from the project area.

Install the Bluetooth detector on a new or existing pole as shown on the plans and as directed by the engineer. Use salvaged or new mounting hardware as appropriate.

Install the Bluetooth detector cable in new or existing conduit as shown on the plans and as directed by the engineer. Use salvaged or new cable as appropriate.

Remove the existing Bluetooth detector and reinstall it in the new location on the same day. Keep the Bluetooth detector operational except during relocation.

D Measurement
The department will measure Relocate Existing Bluetooth Detector as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.2003	Relocate Existing Bluetooth Detector	LS

Payment is full compensation for removing and salvaging the detector, mounting hardware, and cable; for reinstalling the detector, mounting hardware, and cabling; for re-integrating the detector into the communications network; and for furnishing all transportation, and other incidentals necessary to complete the work.

82. Remove Traffic Signals STH 59 and S. Calhoun Road, Item SPV.0105.3001; STH 59 and CTH O, Item SPV.0105.3002; STH 59 and S. Sunnyslope Road, Item SPV.0105.3003; STH 59 and S. Elm Grove Road, Item SPV.0105.3004; IH 94 EB Off Ramp and CTH O, Item SPV.0105.3005; IH 894/USH 45 Ramps and W. Oklahoma Avenue, Item SPV.0105.3006.

A Description
This special provision describes removing existing traffic signals in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

B (Vacant)

C Construction
Arrange for the de-energizing of the traffic signals with the local electrical utility after receiving approval from the engineer that the existing traffic signals can be removed.

The department, City of Brookfield, Waukesha County, and City of New Berlin assume that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Any equipment not identified as damaged or not working, prior to removal, will be replaced by the contractor at no cost to the department, City of Brookfield, Waukesha County, or City of New Berlin.

State Owned Traffic Signals
Notify the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to the removal of the traffic signals. Complete the removal work as soon as possible following shut down of this equipment.

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the transformer bases from each pole. Remove the signal heads, mast arms, luminaires, wiring/cabling, and traffic signal mounting devices from each signal standard, arm or pole. Ensure that all access hand hole doors and all associated hardware remain intact. Dispose of the underground signal cable, internal wires and street lighting cable off the state right-of-way. Deliver the remaining materials to the West Allis Electrical Service Facility at 935 South 60th Street, West Allis, WI. Contact the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to delivery to make arrangements.

Remove the signal cabinet from the footing. The signal cabinet and associated signal cabinet equipment will remain the property of the department. Deliver the traffic signal cabinet and associated equipment to the West Allis Electrical Service Facility at 935 South 60th Street, West Allis, WI. Contact the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to delivery to make arrangements.

City of Brookfield Owned Traffic Signals
Notify the City of Brookfield Public Works Department at (262) 787-3919 at least five working days prior to the removal of the traffic signal. Complete the removal work as soon as possible following shut down of this equipment.

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the transformer bases from each pole. Remove the signal heads, mast arms, luminaires, wiring / cabling and traffic signal mounting devices from each signal standard, arm or pole. Ensure that access handhole doors and all associated hardware remain intact. Remove the traffic signal cabinet from the concrete footing. Dispose of the underground signal cable, internal wires, and street lighting cable. Deliver the remaining materials to the Brookfield Highway Department at 19700 Riverview Drive, Brookfield, WI 53045. Contact the City of Brookfield Public Works Department (262) 787-3919 at least five working days prior to delivery to make arrangements.

Waukesha County Owned Traffic Signals
Notify Fred Patzer from Waukesha County at (262) 424-9129 at least five working days prior to the removal of the traffic signal. Complete the removal work as soon as possible following shut down of this equipment.

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the transformer bases from each pole. Remove the signal heads, mast arms, luminaires, wiring / cabling and traffic signal mounting devices from each signal standard, arm or pole. Ensure that access handhole doors and all associated hardware remain intact. Remove the traffic signal cabinet from the concrete footing. Dispose of the underground signal cable, internal wires, and street lighting cable. Deliver all above ground traffic signal materials, except for the adaptive traffic signal equipment, to the Waukesha County Highway Operations shop at 1641 Woodburn Road, Waukesha WI. Contact Fred Patzer at (262) 424-9129 at least five working days prior to delivery to make arrangements. Provide an itemized list of all salvaged items to Waukesha County. Provide

a verification of delivery form to Waukesha County for signature and provide this form to the engineer. Deliver the adaptive traffic signal cabinet and associated adaptive traffic signal equipment to the West Allis Electrical Service Facility at 935 South 60th Street, West Allis, WI. Contact the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to delivery to make arrangements.

City of New Berlin Owned Traffic Signals
Notify the City of New Berlin Engineering at (262) 786-8610 at least five working days prior to the removal of the traffic signal. Complete the removal work as soon as possible following shut down of this equipment.

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the transformer bases from each pole. Remove the signal heads, mast arms, luminaires, wiring / cabling and traffic signal mounting devices from each signal standard, arm or pole. Ensure that access handhole doors and all associated hardware remain intact. Remove the traffic signal cabinet from the concrete footing. Dispose of the underground signal cable, internal wires, and street lighting cable. Deliver the remaining traffic signal materials to the New Berlin Street Department at 16550 W. National Avenue, New Berlin, WI 53151. Contact the City of New Berlin Engineering at (262) 786-8610 at least five working days prior to delivery to make arrangements. Deliver the adaptive traffic signal cabinet and associated adaptive traffic signal equipment to the West Allis Electrical Service Facility at 935 South 60th Street, West Allis, WI. Contact the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to delivery to make arrangements.

D Measurement
The department will measure Remove Traffic Signals (Location) as a single lump sum unit of work for each intersection, 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.0105.3001	Remove Traffic Signals STH 59 and S. Calhoun Road	LS
SPV.0105.3002	Remove Traffic Signals STH 59 and CTH O	LS
SPV.0105.3003	Remove Traffic Signals STH 59 and S. Sunnyslope Road	LS
SPV.0105.3004	Remove Traffic Signals STH 59 and S. Elm Grove Road	LS
SPV.0105.3005	Remove Traffic Signals IH 94 EB Off Ramp and CTH O	LS
SPV.0105.3006	Remove Traffic Signals IH 894/USH 45 Ramps and W. Oklahoma Avenue	LS

Payment is full compensation for removing and disassembling traffic signals; for scrapping of some materials; for disposing of scrap material; for delivering the requested materials to the West Allis Electrical Service Facility, City of Wauwatosa, or City of West Allis.

83. Remove Loop Detector Wire and Lead-in Cable STH 59 and CTH O, Item SPV.0105.3011; STH 59 and S. Sunnyslope Road, Item SPV.0105.3012; STH 59 and S. Elm Grove Road, Item SPV.0105.3013.

A Description

This special provision describes removing loop detector wire and lead-in cable. Removal shall be in accordance to standard spec 204, as shown in the plans, and as hereinafter provided.

B (Vacant)

C Construction

Notify the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to the removal of the loop detector wire and lead-in cable. WisDOT forces shall disconnect the lead-in cable from the cabinet equipment.

Remove and dispose of detector lead-in cable and loop wire. Detector lead-in cable and loop wire shall become property of the contractor and shall be disposed off of the right-of-way.

D Measurement

The department will measure Remove Loop Detector Wire and Lead-in Cable as a single lump sum unit of work for each intersection, 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.0105.3011	Remove Loop Detector Wire and Lead-in Cable STH 59 and CTH O	LS
SPV.0105.3012	Remove Loop Detector Wire and Lead-in Cable STH 59 and S. Sunnyslope Road	LS
SPV.0105.3013	Remove Loop Detector Wire and Lead-in Cable STH 59 and S. Elm Grove Road	LS

Payment is full compensation for removing loop detector wire and lead-in cable; for scrapping of some materials; and for disposing of scrap material.

84. Install State Furnished Traffic Signal Cabinet STH 59 and S. Calhoun Road, Item SPV.0105.3021; STH 59 and CTH O, Item SPV.0105.3022; STH 59 and S. Sunnyslope Road, Item SPV.0105.3023; STH 59 and S. Elm Grove Road, Item SPV.0105.3024; IH 94 EB Off Ramp and CTH O, Item SPV.0105.3025; IH 894/USH 45 Ramps and W. Oklahoma Avenue, Item SPV.0105.3026.

A Description
This special provision describes the installing of the department furnished Traffic Signal Cabinet for traffic signals.

B Materials
Use materials furnished by the department including: the traffic signal controller and the traffic signal cabinet. The department will provide notification at the preconstruction meeting of the Traffic Signal Cabinet vendor and provide the vendor's contact information.

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five (5) working days prior to picking up the materials.

Provide all other needed materials in conformance with standard specs 651.2, 652.2, 653.2, 654.2, 655.2, 656.2, 657.2, 658.2 and 659.2.

Append standard spec 651.3.3 (6) with the following:

Operate the completed traffic signal installation for 30 days consecutively, using the specified signal sequence(s) and all special functions, such as preemption as the plans show or as specified by the engineer.

C Construction
Perform work in accordance to standard specs 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 except as specified below.

Request a signal inspection of the completed signal installation to the engineer at least five working days prior to the time of the requested inspection. The departments' Region Electrical personnel will perform the inspection.

Coordinate directly with the department's Traffic Signal Cabinet vendor to schedule the cabinet acceptance testing. Notify the department's Electrical Field Unit at (414) 266-1170 and participate in the acceptance testing. The department has the final determination of the cabinet acceptance testing date and time. The acceptance testing procedures will be provided by the department. The department shall not be responsible for project delays and costs due to the delays of delivery by the vendor or by the failure of the Traffic Signal Cabinet to pass acceptance testing.

D Measurement
The department will measure Install State Furnished Traffic Signal Cabinet (Location) 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.0105.3021	Install State Furnished Traffic Signal Cabinet STH 59 and S. Calhoun Road	LS
SPV.0105.3022	Install State Furnished Traffic Signal Cabinet STH 59 and CTH O	LS
SPV.0105.3023	Install State Furnished Traffic Signal Cabinet STH 59 and S. Sunnyslope Road	
SPV.0105.3024	Install State Furnished Traffic Signal Cabinet STH 59 and S. Elm Grove Road	LS
SPV.0105.3025	Install State Furnished Traffic Signal Cabinet IH 94 EB Off Ramp and CTH O	LS
SPV.0105.3026	Install State Furnished Traffic Signal Cabinet IH 894/USH 45 Ramps and W. Oklahoma Avenue	LS

Payment is full compensation for installing and testing the Traffic Signal Cabinet; for furnishing and installing all other items necessary (such as, wire nuts, splice kits and/or connectors, tape, insulating varnish, ground lug fasteners, etc.) to make the proposed system complete from the source of supply to the most remote unit; and for clean-up and waste disposal.

85. Transporting Signal and Lighting Materials STH 59 and S. Calhoun Road, Item SPV.0105.3031; STH 59 and CTH O, Item SPV.0105.3032; STH 59 and S. Sunnyslope Road, Item SPV.0105.3033; STH 59 and S. Elm Grove Road, Item SPV.0105.3034.

A Description

This special provision describes the transporting of department furnished materials for traffic signals and intersection lighting.

B Materials

Transport materials furnished by the department including: monotube poles, monotube arms, and luminaire arms (to be installed on monotube assemblies).

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials at least five working days prior to picking the materials up.

C (Vacant)

D Measurement

The department will measure Transporting Signal and Lighting Materials (Location) 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.0105.3031	Transporting Signal and Lighting Materials STH 59 and S. Calhoun Road	LS
SPV.0105.3032	Transporting Signal and Lighting Materials STH 59 and CTH O	LS
SPV.0105.3033	Transporting Signal and Lighting Materials STH 59 and S. Sunnyslope Road	LS
SPV.0105.3034	Transporting Signal and Lighting Materials STH 59 and S. Elm Grove Road	LS

Payment is full compensation for transporting the monotube poles, monotube arms, and luminaire arms (to be installed on monotubes). Installation of these materials is included under a separate pay item.

86. Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 59 and S. Calhoun Road, Item SPV.0105.3041; STH 59 and CTH O, Item SPV.0105.3042; STH 59 and S. Sunnyslope Road, Item SPV.0105.3043; STH 59 and S. Elm Grove Road, Item SPV.0105.3044.

A Description

This special provision describes the transporting and installing of department furnished Adaptable Traffic Signal Cameras and mounting hardware.

B Materials

Pick up the department furnished Adaptable Traffic Signal Cameras and mounting hardware at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical field unit at (414) 266-1170 to make arrangements for picking up the department furnished materials at least five working days prior to material pick-up.

C Construction

Notify the department's Electrical field unit at (414) 266-1170 at least five working days prior to the installation of the cameras.

Contact Justin Effinger at (262) 548-5676 to coordinate the locations of the cameras at least five working days prior to installation. Install the pole/arm mounting bracket, extension arm (if required) and cameras as shown on the plans (the final determination of location will be made by the department's electrical personnel to ensure best line of sight) per manufacturer recommendations.

Assist the department and vendor with aiming and programming the cameras during the adaptable traffic signal turn-on. The department will schedule the adaptable traffic signal turn-on and provide notification a minimum of five working days prior to turn-on.

D Measurement

The department will measure Transporting and Installing State Furnished Adaptable Traffic Signal Cameras (location) as a single lump sum unit of work for each intersection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3041	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 59 and S. Calhoun Road	LS
SPV.0105.3042	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 59 and CTH O	LS
SPV.0105.3043	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 59 and S. Sunnyslope Road	LS
SPV.0105.3044	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 59 and S. Elm Grove Road	LS

Payment is full compensation for transporting and installing the State Furnished Adaptable Traffic Signal System cameras and mounting hardware; and for assisting the vendor and department with aiming and programming the cameras.

87. Install State Furnished EVP Detector Heads STH 59 and S. Calhoun Road, Item SPV.0105.3051; STH 59 and CTH O, Item SPV.0105.3052; STH 59 and S. Sunnyslope Road, Item SPV.0105.3053; STH 59 and S. Elm Grove Road, Item SPV.0105.3054.

A Description

This special provision describes the transporting and installing of department furnished Emergency Vehicle Preemption (EVP) Detector Heads and EVP Detector Head Mounting Brackets, and Confirmation Light Assemblies.

B Materials

Use materials furnished by the department including: Emergency Vehicle Preemption (EVP) Detector Heads and EVP Detector Head Mounting Brackets, and Confirmation Light Assemblies.

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the state furnished materials at least five working days prior to picking the materials up.

C Construction

Install the EVP detector heads, EVP detector head mounting brackets, and confirmation light assemblies as shown on the plans. The department will determine the exact location to ensure that the installation does not create a sight obstruction. The department will terminate the EVP cable ends and install the discriminators and card rack in the cabinet.

Notify the department's Electrical shop at (414) 266-1170 upon completion of the installation of the Emergency Vehicle Preemption (EVP) Detector Heads and EVP Detector Head Mounting Brackets.

D Measurement

The department will measure Install State Furnished EVP Detector Heads (Location) 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.0105.3051	Install State Furnished EVP Detector Heads STH 59 and S. Calhoun Road	LS
SPV.0105.3052	Install State Furnished EVP Detector Heads STH 59 and CTH O	LS
SPV.0105.3053	Install State Furnished EVP Detector Heads STH 59 and S. Sunnyslope Road	LS
SPV.0105.3054	Install State Furnished EVP Detector Heads STH 59 and S. Elm Grove Road	LS

Payment is full compensation for transporting and installing of department furnished Emergency Vehicle Preemption (EVP) Detector Heads, EVP Detector head Mounting Brackets, and Confirmation Light Assemblies.

88. Temporary EVP System STH 59 and CTH O, Item SPV.0105.3061; STH 59 and S. Sunnyslope Road, Item SPV.0105.3062; STH 59 and S. Elm Grove Road, Item SPV.0105.3063.

A Description

This special provision describes furnishing, installing, and maintaining temporary EVP systems at the temporary signalized intersection as shown in the plans.

B Materials

Furnish an emergency vehicle preemption system compatible with the City of Brookfield and City of New Berlin systems and users

Contact the City of Brookfield Public Works Department at (262) 787-3919 for information regarding the equipment needs and operational requirements of the emergency vehicle preemption system within the City of Brookfield jurisdiction.

Contact the City of New Berlin Engineering at (262) 786-8610 for information regarding the equipment needs and operational requirements of the emergency vehicle preemption system within the City of New Berlin jurisdiction.

C Construction

The Temporary EVP System, as shown in the temporary traffic signal plans or as directed by the engineer, shall be complete in place, tested, and in full operation during each stage and sub-stage of construction.

Install the temporary vehicle detection system as shown in the plans and according to the manufacturer's recommendations. Determine a suitable location for the temporary EVP detectors for each stage and sub-stage of construction. Detectors may be mounted on the temporary traffic signal span wire or wood poles. Relocate the temporary EVP detectors to a suitable location if construction activities and/or construction staging changes impede the detector operation. Arrange for testing of equipment prior to acceptance of the installation for each construction stage.

All cables associated with the temporary vehicle detection system shall be routed to the cabinet. Each lead shall be appropriately marked as to which EVP channel it is associated.

Periodic adjustment and/or moving of the temporary EVP detectors may be required due to changes in traffic control, staging, or other construction operations.

Ensure that the temporary EVP system stays in clean working order. Periodic cleaning of the equipment may be required due to dirt and dust build-up.

Remove the temporary EVP system upon project completion.

Provide the engineer records of all EVP settings used during construction.

D Measurement

The department will measure Temporary EVP System (Location), furnished, installed, and completely operational, as a single complete unit of work per intersection, 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.0105.3061	Temporary EVP System STH 59 and CTH O	LS
SPV.0105.3062	Temporary EVP System STH 59 and S. Sunnyslope Road	LS
SPV.0105.3063	Temporary EVP System STH 59 and S. Elm Grove Road	LS

Payment is full compensation for furnishing and installing all required equipment, materials, and supplies; for maintaining and changing the EVP detectors to match the plans, traffic control, and construction staging; for relocating the temporary EVP detectors due to construction activities, if required; for testing the EVP system for each stage and sub-stage of construction; for periodically cleaning all temporary EVP detectors; for removing the temporary EVP system; for cleaning up and properly disposing of waste.

89. Install Fiber Optic Communications in Cabinet STH 59 and S. Calhoun Road, Item SPV.0105.3071; STH 59 and CTH O, Item SPV.0105.3072; STH 59 and S. Sunnyslope Road, Item SPV.0105.3073; STH 59 and S. Elm Grove Road, Item SPV.0105.3074; IH 94 EB Off Ramp and CTH O, Item SPV.0105.3075; IH 894/USH 45 Ramps and W. Oklahoma Avenue, Item SPV.0105.3076.

A Description

This special provision describes installing fiber optic communications equipment in traffic signal cabinets.

B Materials

The department will furnish pre-terminated fiber optic patch panels and managed Ethernet switches. The materials will be provided with the traffic signal cabinet. The patch panels will have pre-terminated fiber optic cable pigtails. Provide two each 1-meter lengths of ST-ST single mode fiber jumper (2 fibers per jumper) from the patch panel to the Ethernet switch. Provide a 1-meter length of CAT-5e cable from the Ethernet switch to the controller. Provide a 1-meter length of CAT-5e cable from the Ethernet switch to the Interface Panel. CAT-5e patch cords shall have factory pre-terminated RJ45 / 8P8C connectors on both ends per TIA/EIA T568B. Provide all patch panel, Ethernet switch, and Interface Panel attachment hardware.

Provide a 14 AWG XLP insulated, stranded, copper, 600 volt AC locate wire through the conduit run from the communication vault to the traffic signal cabinet. Connect the locate wire by using a silicone filled wire nut at each pull box, vault or other access point. Alternatively, use a single wire through the access points, leaving a 6 foot coil in each pull box, vault or other access point for splicing. All material under this item shall meet the requirements of standard spec 655.

C Construction

Install the patch panel and Ethernet switch on the side of the traffic signal cabinet opposite the electrical service at a location as approved by the engineer. With approval by the engineer, the Ethernet switch may be placed on a shelf near the patch panel. Install the pre-terminated fiber optic cable in conduit from the patch panel to the communication vault as specified in standard spec 678.3.1. Fiber optic cable ends shall be covered securely to protect open ends during installation in raceways. Leave the remainder of the fiber optic cable coiled in the communication vault.

Install the fiber jumpers and CAT-5e cable and provide a communications link from the communication vault to the controller. Install the CAT5-e cable from the Interface Panel to the Ethernet switch.

Connect the locate wire by using a wire nut at each access point. Alternatively, use a single wire through the access points.

D Measurement
The department will measure Install Fiber Optic Communications in Cabinet (Location) 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.0105.3071	Install Fiber Optic Communications in Cabinet STH 59 and S. Calhoun Road	LS
SPV.0105.3072	Install Fiber Optic Communications in Cabinet STH 59 and CTH O	LS
SPV.0105.3073	Install Fiber Optic Communications in Cabinet STH 59 and S. Sunnyslope Road	LS
SPV.0105.3074	Install Fiber Optic Communications in Cabinet STH 59 and S. Elm Grove Road	LS
SPV.0105.3075	I Install Fiber Optic Communications in Cabinet H-94 EB Off Ramp and CTH O	LS
SPV.0105.3076	Install Fiber Optic Communications in Cabinet IH-894/USH 45 Ramps and W. Oklahoma Avenue	LS

Payment is full compensation for installing pre-terminated patch panels, Ethernet switches, and fiber optic cable in conduit; furnishing and installing attachment hardware, fiber jumpers, CAT-5e cable, and locate wire.

90. Transporting and Installing State Furnished Radar Detection System IH 94 EB Off Ramp and CTH O, Item SPV.0105.3081.

A Description
This special provision describes the transporting and installing of department furnished Radar Detection System on for installation on monotube poles or arms.

B Materials
Pick up the department furnished Radar System at the department's electrical shop located at 935 South 60th Street, West Allis. Notify the department's electrical field unit (EFU) at (414) 266-1170 to make arrangements for picking up the department furnished materials at least five working days prior to material pick-up.

C Construction

Contact the EFU at (414) 266-1170 to coordinate the locations of the cameras at least five working days prior to installation. Install the department furnished pole/arm mounting brackets, extension arms (if required), and radar units per manufacturer recommendations. Install the power and communication cables to run continuously (without splices) from the traffic signal cabinet to the radar units plus an additional 16-feet in each pull box and an extra 10-feet in the monotube pole handhole. Terminate the ends of the cables, if required, and make all connections to the radar units. The EFU will install all required cabinet equipment in the traffic signal control cabinet. Make all final cable connections in the traffic signal cabinet.

Mark each end of the lead in the traffic signal cabinet and each cable in the monotube handhole to indicate the equipment label (i.e. RA1, RA2, etc.).

Notify department's Electrical Shop at (414) 266-1170 upon completion of the installation.

The department will provide notification of the radar detection system vendor and provide the vendor's contact information. Coordinate directly with the department's radar detection system vendor to arrange for the vendor to program the radar detection system on-site. Notify the department and vendor at least five working days prior to the date of programming. Assist the department and vendor with adjusting the radar units during the radar system programming.

D Measurement

The department will measure Transporting and Installing State Furnished Radar Detection System (Location) as a single lump sum unit of work for each intersection, acceptably completed.

E Payment

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3081	Transporting and Installing State Furnished Radar Detection System IH 94 EB Off Ramp and CTH O	LS

Payment is full compensation for transporting and installing the radar detection system, cable, mounting hardware, and radar units; arranging for and providing programming by the vendor; assisting the department and vendor during the radar system programming.

91. Concrete Sidewalk 5-Inch (High Early Strength), Item SPV.0165.0001.

A Description

This special provision describes constructing Concrete Sidewalk 5-Inch (High Early Strength) in accordance to standard spec 602 except as hereinafter modified.

B Materials

Furnish concrete materials that are according to the pertinent requirements of standard specs 501 and 416.2.5.

C Construction
Construct in accordance to standard spec 602 and with the dimensions shown in the plans.

D Measurement
The department will measure Concrete Sidewalk 5-Inch (High Early Strength) in area by the square 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.0165.0001	Concrete Sidewalk 5-Inch (High Early Strength)	SF

Payment is full compensation for performing all work; and for furnishing and installing all materials.

92. Topsoil Special, Item SPV.0180.0001.

A Description
This special provision section describes furnishing, placing, spreading, and finishing humus-bearing soil, adapted to sustain plant life, commonly known as topsoil, from locations the contractor furnishes beyond the limits of the right-of-way.

This special provision also describes removing topsoil from the sites of proposed roadway excavations and embankments in amounts and depths available and necessary to cover the work slopes. This work also includes reclamation, placing, spreading, and finishing of this topsoil.

B Materials
Furnish material that is relatively free from large roots, sticks, weeds, brush, stones, litter, and waste products.

Furnish material, either obtained offsite, or material obtained within project limits, consisting of loam, sandy loam, silt loam, silty clay loam, or clay loam humus-bearing soils adapted to sustain plant life. Do not use surface soils from ditch bottoms, drained ponds, and eroded areas, or soils which are supporting growth of NR 40 listed plants and noxious weeds or other undesirable vegetation. Ensure that the material conforms to the following:

Topsoil Requirements	Minimum Range	Maximum Range
Material Passing 2.00 mm (#10) Sieve*	90%	100%
PH Range	6.0	7.0
Organic Matter**	5%	20%
Clay	5%	30%
Silt	10%	70%
Sand and Gravel	10%	70%

*See standard spec 625.3.3 for sieve requirements when using either sod or seed mixture 40.
**Organic matter determined by loss on ignition test of samples oven dried to constant weight at 212 F (100 C).

C Construction

C.1 Preparing the Roadway for Topsoil

Undercut or underfill all areas designated to receive topsoil to a degree that if covered to the required depth with topsoil the finished work conforms to the required lines, grades, slopes and cross sections the plans and drawings show.

C.2 Processing Topsoil

Mow topsoil procurement areas to a height of approximately 6 inches. Remove litter such as brush, rock, and other materials that will interfere with subsequent vegetation establishment.

Strip off the humus-bearing soil. Take care to minimize removing the underlying sterile soil. Then stockpile the topsoil on the right-of-way or place it directly on the designated areas.

Obtain topsoil from embankment areas outside the roadway foundation only if that additional material is required to cover the slopes, and conforms to the requirements of section B above. Utilize excess topsoil on the project or dispose of as specified in standard spec 205.3.12.

C.3 Placing Topsoil

After preparing and finishing the areas designated for topsoil to the required lines, grades, slopes and cross section, place and spread the topsoil to a uniform depth as the plans show or the contract requires. If no depth is shown, place and spread the topsoil to a minimum depth of 4 inches in rural areas and a minimum depth of 6 inches in urban areas, or as the engineer designates.

Break down all clods and lumps using appropriate equipment to provide a uniformly textured soil.

Where using either sod or seed mixture 40 ensure that, for the upper 2 inches, 100 percent of the material passes a one-inch sieve and at least 90 percent passes the No. 10 sieve.

Remove rocks, twigs, foreign material, and clods that cannot be broken down. Dress the entire surface to present a uniform appearance. The engineer will not require rolling.

If light sandy soils are covered with heavier clay bearing loam topsoil, then mix or blend the 2 types of soils to a more or less homogeneous mixture by using the appropriate equipment.

D Measurement

The department will measure Topsoil Special, acceptably completed, by the square yard. The measured quantity shall equal the actual number of square yards of topsoiled area to the depth specified within the limits of construction designated on the plans, or in the contract, or as the engineer directs.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.0001	Topsoil Special	SY

Payment is full compensation for removing, stockpiling, reclaiming, providing, processing, excavating, loading, hauling, and placing this material; and for undercutting excavations, or underfilling embankments necessary to receive this material. The department will make no allowance, adjustment, or measurement for payment under the Excavation bid items for undercutting cut sections, underfilling embankments, or deductions for materials obtained from areas of cut sections.

If an area is damaged by erosion after partial acceptance, the department will pay for restoring topsoil in these areas at a unit price determined by multiplying the contract unit price bid for Topsoil multiplied by 3, the department will pay for restoration under the Restoration Post Acceptance Topsoil administrative item.

The department will not pay for removing topsoil from outside the roadway foundation in embankment areas unless that material is necessary to cover the slopes.

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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:

450.3.2.1 General

Replace the entire text with the following effective with the January 2015 letting:

(1) Do not place asphaltic mixture when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 36 F for upper layers or 32 F for lower layers unless the engineer allows in writing. The contractor should place HMA pavement for projects on or north of STH 29 between May 1 and October 15 inclusive and for projects south of STH 29 between April 15 and November 1 inclusive. Notify the engineer at least one business day before paving.

(2) Unless the contract specifies otherwise, conform to the following:

- Keep the road open to all traffic during construction.
- Prepare the existing foundation for treatment as specified in 211.
- Incorporate loose roadbed aggregate as a part of preparing the foundation, in shoulder construction, or dispose of as the engineer approves.

(3) Place asphaltic mixture only on a prepared, firm, and compacted base, foundation layer, or existing pavement substantially surface-dry and free of loose and foreign material. Do not place over frozen subgrade or base, or where the roadbed is unstable.

450.5 Payment

Replace the entire text with the following effective with the May 2015 letting:

(1) All costs of furnishing, maintaining, and operating the truck scale or other weighing equipment and furnishing the weigh tickets are incidental to the contract.

(2) Nonconforming material allowed to remain in place is subject to price adjustment under 105.3.2.

(3) Full-depth sawing to remove integrally placed safety edge where not required is incidental to the contract.

(4) The contractor is responsible for the quality of HMA pavement placed in cold weather. If because of an excusable compensable delay under 108.10.3, the engineer directs the contractor to pave when the temperature is less than 36 F for the upper layer or less than 32 F for lower layers, the department:

- Will relieve the contractor of responsibility for damage and defects the engineer attributes to cold weather paving.
- Will not assess disincentives for density or ride.

455.3.2.1 General

Replace the paragraphs one and two with the following effective with the January 2015 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 dry and reasonably free of loose dirt, dust, or other foreign matter. Do not apply if weather or surface conditions are unfavorable or before impending rains.

(2) Use tack material of the type and grade the contract specifies. The contractor may, with the engineer's approval, dilute tack material as allowed under 455.2.4. Provide calculations using the asphalt content as-received from the supplier and subsequent contractor dilutions to show that as-placed material has 50 percent or more residual asphalt content. Apply at 0.050 to 0.070 gallons per square yard, after dilution, unless the contract designates otherwise. The engineer may adjust the application rate based on surface conditions. Limit application each day to the area the contractor expects to pave during that day.

460.2.2.3 Aggregate Gradation Master Range

Replace paragraph one with the following effective with the December 2014 letting:

(1) Ensure that the aggregate blend, including recycled material and mineral filler, conforms to the gradation requirements in table 460-1. The values listed are design limits; production values may exceed those limits.

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENTS PASSING DESIGNATED SIEVES						
	NOMINAL SIZE						
	37.5 mm	25.0 mm	19.0 mm	12.5 mm	9.5 mm	SMA 12.5 mm	SMA 9.5 mm
50.0-mm	100						
37.5-mm	90 –100	100					
25.0-mm	90 max	90 -100	100				
19.0-mm	___	90 max	90 -100	100		100	
12.5-mm	___	___	90 max	90 -100	100	90 - 97	100
9.5-mm	___	___	___	90 max	90 -100	58 - 72	90 - 100
4.75-mm	___	___	___	___	90 max	25 - 35	35 - 45
2.36-mm	15 – 41	19 - 45	23 - 49	28 - 58	20 - 65	15 - 25	18 - 28
75-µm	0 – 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	8.0 - 12.0	10.0 - 14.0
% MINIMUM VMA	11.0	12.0	13.0	14.0[1]	15.0[2]	16.0	17.0

[1] 14.5 for E-0.3 and E-3 mixes.

[2] 15.5 for E-0.3 and E-3 mixes.

460.3.4 Cold Weather Paving

Add a new subsection as follows effective with the May 2015 letting:

460.3.4 Cold Weather Paving

460.3.4.1 Cold Weather Paving Plan

(1) Submit a written cold weather paving plan to the engineer at the preconstruction meeting. In that plan outline material, operational, and equipment changes for paving when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 40 F. Include the following:

- Use a department-accepted HMA mix design that incorporates a warm mix additive from the department's approved products list. Do not use a foaming process that introduces water into the mix.
- Use additional rollers.

(2) Engineer written acceptance is required for the cold weather paving plan. Engineer acceptance of the plan does not relieve the contractor of responsibility for pavement performance except as specified in 450.5(4).

460.3.4.2 Cold Weather Paving Operations

(1) Do not place asphaltic mixture when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 40 F unless a valid engineer-accepted cold weather paving plan is in effect.

(2) If the national weather service forecast for the construction area predicts ambient air temperature less than 40 F at the projected time of paving within the next 24 hours, confirm or submit revisions to a previously engineer-accepted cold weather paving plan for engineer validation. Upon validation of the plan, the engineer will allow paving for the next day. Once in effect, pave conforming to the engineer-accepted cold weather paving plan for the balance of that work day or shift regardless of the temperature at the time of paving.

460.4 Measurement

Add paragraph two as follows effective with the January 2015 letting:

(2) The department will measure HMA Cold Weather Paving by the ton of HMA mixture for pavement placed conforming to an engineer-accepted cold weather paving plan.

460.5.1 General

Revise paragraph one as follows effective with the January 2015 letting:

(1) The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
460.1100	HMA Pavement Type E-0.3	TON
460.1101	HMA Pavement Type E-1	TON
460.1103	HMA Pavement Type E-3	TON
460.1110	HMA Pavement Type E-10	TON
460.1130	HMA Pavement Type E-30	TON
460.1132	HMA Pavement Type E-30X	TON
460.1700	HMA Pavement Type SMA	TON
460.2000	Incentive Density HMA Pavement	DOL
460.4000	HMA Cold Weather Paving	TON

460.5.2.2 Disincentive for HMA Pavement Density

Revise paragraph two as follows effective with the January 2015 letting:

(2) The department will not assess density disincentives for pavement placed in cold weather because of a department-caused delay as specified in 450.5(4).

460.5.2.4 Cold Weather Paving

Add a new subsection as follows effective with the May 2015 letting:

460.5.2.4 Cold Weather Paving

(1) Payment for HMA Cold Weather Paving is full compensation for additional materials and equipment specified for cold weather paving under 460.3.4 including costs for preparing, administering, and following the contractor's cold weather paving plan. The department will not pay for HMA Cold Weather Paving for HMA placed on days when the department is assessing liquidated damages.

(2) If HMA pavement is placed under 460.3.4 and the HMA Cold Weather Paving bid item is not in the contract, the department will pay for the additional costs specified in 460.5.2.4(1) as extra work. The department will pay separately for HMA pavement under the appropriate HMA Pavement bid items.

465.2 Materials

Replace paragraph two with the following effective with the December 2014 letting:

(2) Under the other 465 bid items, the contractor need not submit a mix design. Furnish aggregates mixed with a type AC asphaltic material, except under the Asphaltic Curb bid item furnish PG58-28 asphaltic material. Use coarse and fine mineral aggregates uniformly coated and mixed with the asphaltic material in an engineer-approved mixing plant. The contractor may include reclaimed asphaltic pavement materials in the mixture.

506.3.2 Shop Drawings

Replace the entire text with the following effective with the May 2015 letting:

(1) Ensure that shop drawings conform to the contract plans and provide additional details, dimensions, computations, and other information necessary for completely fabricating and erecting the work. Include project and structure numbers on each shop drawing sheet.

(2) Check shop drawings and submit electronically to the department for review before beginning fabrication. For primary fabrication items, also certify that shop drawings conform to quality control standards by submitting department form DT2333. Department review does not relieve the contractor from responsibility for errors or omissions on shop drawings.

(3) Shop drawings are part of the contract. The department must approve differences between shop drawings and contract plans. The contractor bears the costs of department-approved substitutions. Do not deviate from or revise drawings without notifying the department and resubmitting revised drawings.

(4) Ensure that the fabricator delivers 3 sets of shop drawings for railroad structures to the railroad company upon contract completion.

Bid Items Added

Add the following new bid item effective with the January 2015 letting:

ITEM NUMBER	DESCRIPTION	UNIT
460.4000	HMA Cold Weather Paving	TON

Errata

Make the following corrections to the standard specifications:

501.3.2.4.4 Water Reducer

Correct errata by deleting the reference to footnote 6 for grade D concrete.

(1) Add a water reducing admixture conforming to 501.2.3. Determine the specific type and rate of use based on the atmospheric conditions, the desired properties of the finished concrete and the manufacturer's recommended rate of use. The actual rate of use shall at least equal the manufacturer's recommended rate, and both the type and rate used require the engineer's approval before use.

506.5 Payment

Correct errata by changing the reference to 506.3.22.

(9) The department will limit costs for inspections conducted under 506.3.22 to $0.05 per pound of material and deduct costs in excess of that amount from payment due the contractor. The department will determine costs for in-house inspections based on hourly rates for department staff plus overhead and use invoiced costs for contracted-out inspections. The department will administer deductions for the contractor's share of the total inspection cost under the Excess Costs For Fabrication Shop Inspection administrative item.

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://www.dot.wi.gov/business/civilrights/laborwages/index.htm

(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 Tess Mulrooney at 608-267-4489 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 send several sample electronic files to Tess two months before a payroll needs to be submitted. 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://www.dot.wi.gov/business/civilrights/laborwages/docs/crc-payroll-manual.pdf

DECEMBER 2013

BUY AMERICA PROVISION

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials from smelting forward in the manufacturing process must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America. The exemption of this requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or $2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project. The contractor shall take actions and provide documentation conforming to CMM 2-28.5 to ensure compliance with this “Buy America” provision.

http://roadwaystandards.dot.wi.gov/standards/cmm/cm-02-28.pdf#cm2-28.5

Upon completion of the project certify to the engineer, in writing using department form WS4567, that all steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these "Buy America" provisions. Attach a list of exemptions and their associated costs to the certification form. Department form WS4567 is available at:

http://roadwaystandards.dot.wi.gov/standards/forms/ws4567.doc

Effective with September 2004 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various 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 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture contacts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this in 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 103.50 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 rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half: (1) January 1, (2) the last Monday in May, (3) July 4, (4) the first Monday in September, (5) the fourth Thursday in November, (6) December 25, (7) the day before if January 1, July 4 or December 25 falls on a Saturday and (8) 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, eculid 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.

For those projects subject to the requirements of the Davis-Bacon Act, the Secretary of Labor will also have determined "Minimum Wage Rates" for work to be performed under the contract. These rates are, for all or most of the labor, worker, mechanic or truck driver classifications, identical to those established under Section 103.50 of the Wisconsin Statutes. In the event the rates are not identical, the higher of the two rates will govern.

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 103.50 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 place at the site of work:

a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 103.50 of the Wisconsin Statutes.

b. A copy of the State of Wisconsin Minimum Wages Rates. (Four pages.)

c. A copy of the contractor's Equal Employment Opportunity Policy.

d. On any project involving federal aid, in addition to the furnished postings, the contractor shall post a copy of the "Davis-Bacon Act, Minimum Wage Rates". (Three pages.)

IV. WAGE RATE REDISTRIBUTION

The amount specified as the hourly basic rate of pay and the amount(s) specified as the fringe benefit contribution(s), for all classes of laborers, workers, mechanics or truck drivers may be redistributed, when necessary, to conform to those specified in any applicable collective bargaining agreement, provided that both parties to such agreement

request and receive the approval for any such redistribution from both the Department of Transportation and the Department of Workforce Development prior to the implementation of such redistribution.

V. ADDITIONAL CLASSIFICATIONS

Any unlisted laborer or mechanic classification that is needed to perform work on this project, and is not included within the scope of any of the classifications listed in the application prevailing wage rate determination, may be added after award only if all of the following criteria have been met:

1. The affected employer(s) must make a written request to WisDOT Central Office to utilize the unlisted classification on this project.

2. The request must indicate the scope of the work to be performed by the unlisted classification and must indicate the proposed wage/fringe benefit package that the unlisted classification is to receive.

3. The work to be performed by the unlisted classification must not be performed by a classification that is included in the applicable prevailing wage rate determination.

4. The unlisted classification must be commonly employed in the area where the project is located.

5. The proposed wage/fringe benefit package must bear a reasonable relationship to those set forth in the applicable prevailing wage rate determination.

6. The request should be made prior to the actual performance of the work by the unlisted classification.

7. DWD must approve the use of the unlisted classification and the proposed wage/fringe benefit package. USDOL also must approve the use of the unlisted classification and the proposed wage/fringe benefit package on federal aid projects.

8. WisDOT and DWD may amend the proposed wage/fringe benefit package, as deemed necessary, and may set forth specific employment ratios and scope of work requirements in the approval document.

The approved wage/fringe benefit package shall be paid to all laborers, workers, mechanics or truck drivers performing work within the scope of that performed by the unlisted classification, from the first day on which such work is performed. In the event that work is performed by the unlisted classification prior to approval, the wage/fringe benefit package to be paid for such work must be in conformance with the wage/fringe

benefit package approved for such work. Under this arrangement a retroactive adjustment in wages and/or fringe benefits may be required to be made to the affected laborers, workers, mechanics or truck drivers by the affected employer(s).

ANNUAL PREVAILING WAGE RATE DETERMINATION
FOR ALL STATE HIGHWAY PROJECTS
WAUKESHA COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on May 1, 2015

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions reqarding the proper trade or classification to be used for any worker on a public works project.

OVERTIME: Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

FUTURE INCREASE: If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

PREMIUM PAY: If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

SUBJOURNEY: Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Bricklayer, Blocklayer or Stonemason	35.37	17.99	53.36
Carpenter	34.13	20.61	54.74
Future Increase(s): Add $1.50/hr on 6/1/2015; Add $1.65/hr on 6/1/2016.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Cement Finisher	32.75	19.21	51.96
Future Increase(s): Add $1.87 on 6/1/15; Add $1.75 on 6/1/16.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	33.93	22.77	56.70
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Fence Erector	23.73	19.09	42.82
Ironworker	30.77	23.97	54.74
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Line Constructor (Electrical)	39.50	21.04	60.54
Painter	29.22	16.69	45.91
Pavement Marking Operator	30.27	18.79	49.06
Piledriver	30.11	26.51	56.62
Future Increase(s): Add $1.50/hr on 6/1/2015; Add $1.60/hr on 6/1/2016.			
Premium Pay: Add $.65/hr for Piledriver Loftsman; Add $.75/hr for Sheet Piling Loftsman. DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Roofer or Waterproofer	29.40	17.05	46.45
Teledata Technician or Installer	24.89	17.15	42.04
Tuckpointer, Caulker or Cleaner	33.76	17.82	51.58
Underwater Diver (Except on Great Lakes)	35.40	15.90	51.30
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	35.55	15.57	51.12
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	31.60	15.19	46.79
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	27.65	13.44	41.09
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.68	12.83	38.51
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	11.63	33.38
TRUCK DRIVERS			
Single Axle or Two Axle	25.18	18.31	43.49
Future Increase(s): Add $1.15/hr on 6/1/2015. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Three or More Axle	28.75	13.54	42.29
Articulated, Euclid, Dumptor, Off Road Material Hauler	30.27	21.15	51.42
Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Pavement Marking Vehicle	23.16	17.13	40.29
Shadow or Pilot Vehicle	24.37	17.77	42.14
Truck Mechanic	28.75	13.54	42.29
LABORERS			
General Laborer	27.06	20.03	47.09
Future Increase(s): Add $1.05/hr eff. 06/01/2015; Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Pay: Add $.15/hr for air tool operator, joint sawer and filler (pavement), vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.35/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.50/hr for line and grade specialist; Add $.65/hr for blaster and powderman; Add $2.01/hr for topman; Add $2.46/hr for bottomman; Add $3.23/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	22.05	18.41	40.46
Landscaper	27.06	20.03	47.09
Future Increase(s): Add $1.05/hr eff. 06/01/2015; Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Flagperson or Traffic Control Person	23.55	20.03	43.58
Future Increase(s): Add $1.05/hr eff. 06/01/2015; Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.71	16.01	33.72
Railroad Track Laborer	14.50	4.07	18.57
HEAVY EQUIPMENT OPERATORS			
Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type).	37.72	21.15	58.87
Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver.	37.22	21.15	58.37
Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, VIbratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane WIth a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor);	36.72	21.15	57.87

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A- Frames.			
Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or WIthout Attachments); Telehandler; Tining or Curing Machine.	36.46	21.15	57.61
Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack.	36.17	21.15	57.32
Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Fiber Optic Cable Equipment.	28.89	17.95	46.84

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 Intersection Improvements					
0010	108.4400 CPM Progress Schedule	1.000 EACH		.		.
0020	201.0110 Clearing	2,498.000 SY		.		.
0030	201.0210 Grubbing	2,498.000 SY		.		.
0040	204.0100 Removing Pavement	320.000 SY		.		.
0050	204.0150 Removing Curb & Gutter	1,606.000 LF		.		.
0060	204.0155 Removing Concrete Sidewalk	1,130.000 SY		.		.
0070	204.0170 Removing Fence	182.000 LF		.		.
0080	204.0195 Removing Concrete Bases	58.000 EACH		.		.
0090	205.0100 Excavation Common	886.000 CY		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0100	205.0501.S Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	204.000 TON		.		.
0110	213.0100 Finishing Roadway (project) 0001. 1060-35-93	1.000 EACH		.		.
0120	305.0120 Base Aggregate Dense 1 1/4-Inch	1,123.000 TON		.		.
0130	320.0145 Concrete Base 8-Inch	1,475.000 SY		.		.
0140	416.0610 Drilled Tie Bars	867.000 EACH		.		.
0150	455.0140 Asphaltic Material PG64-28P	16.000 TON		.		.
0160	455.0605 Tack Coat	32.000 GAL		.		.
0170	460.1110 HMA Pavement Type E-10	261.000 TON		.		.
0180	465.0125 Asphaltic Surface Temporary	13.000 TON		.		.
0190	601.0331 Concrete Curb & Gutter 31-Inch	1,180.000 LF		.		.
0200	601.0409 Concrete Curb & Gutter 30-Inch Type A	337.000 LF		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0210	601.0411 Concrete Curb & Gutter 30-Inch Type D	324.000 LF		.		.
0220	601.0555 Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type A	24.000 LF		.		.
0230	601.0600 Concrete Curb Pedestrian	8.000 LF		.		.
0240	602.0405 Concrete Sidewalk 4-Inch	2,140.000 SF		.		.
0250	602.0410 Concrete Sidewalk 5-Inch	7,196.000 SF		.		.
0260	602.0415 Concrete Sidewalk 6-Inch	96.000 SF		.		.
0270	602.0505 Curb Ramp Detectable Warning Field Yellow	456.000 SF		.		.
0280	603.1436 Concrete Barrier Type S36C	320.000 LF		.		.
0290	608.0312 Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	19.000 LF		.		.
0300	611.0430 Reconstructing Inlets	4.000 EACH		.		.
0310	611.0540 Manhole Covers Type K	4.000 EACH		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0320	611.0600 Inlet Covers Type A	2.000 EACH		.		.
0330	611.0610 Inlet Covers Type BW	1.000 EACH		.		.
0340	611.3220 Inlets 2x2-FT	3.000 EACH		.		.
0350	611.8110 Adjusting Manhole Covers	1.000 EACH		.		.
0360	611.8115 Adjusting Inlet Covers	2.000 EACH		.		.
0370	614.0200 Steel Thrie Beam Structure Approach	49.000 LF		.		.
0380	614.2300 MGS Guardrail 3	571.000 LF		.		.
0390	614.2610 MGS Guardrail Terminal EAT	2.000 EACH		.		.
0400	614.2620 MGS Guardrail Terminal Type 2	1.000 EACH		.		.
0410	616.0206 Fence Chain Link 6-FT	182.000 LF		.		.
0420	618.0100 Maintenance And Repair of Haul Roads (project) 0001. 1060-35-93	1.000 EACH		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0430	619.1000 Mobilization	1.000 EACH		.		.
0440	620.0300 Concrete Median Sloped Nose	269.000 SF		.		.
0450	624.0100 Water	141.000 MGAL		.		.
0460	628.1504 Silt Fence	813.000 LF		.		.
0470	628.1520 Silt Fence Maintenance	813.000 LF		.		.
0480	628.1905 Mobilizations Erosion Control	4.000 EACH		.		.
0490	628.1910 Mobilizations Emergency Erosion Control	4.000 EACH		.		.
0500	628.2002 Erosion Mat Class I Type A	107.000 SY		.		.
0510	628.2006 Erosion Mat Urban Class I Type A	297.000 SY		.		.
0520	628.2008 Erosion Mat Urban Class I Type B	558.000 SY		.		.
0530	628.7005 Inlet Protection Type A	5.000 EACH		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0540	628.7015 Inlet Protection Type C	28.000 EACH		.		.
0550	629.0210 Fertilizer Type B	1.000 CWT		.		.
0560	630.0130 Seeding Mixture No. 30	22.000 LB		.		.
0570	630.0200 Seeding Temporary	22.000 LB		.		.
0580	631.0300 Sod Water	56.000 MGAL		.		.
0590	631.1000 Sod Lawn	931.000 SY		.		.
0600	634.0618 Posts Wood 4x6-Inch X 18-FT	67.000 EACH		.		.
0610	634.0816 Posts Tubular Steel 2x2-Inch X 16-FT	16.000 EACH		.		.
0620	637.2210 Signs Type II Reflective H	1,098.510 SF		.		.
0630	637.2215 Signs Type II Reflective H Folding	343.160 SF		.		.
0640	637.2230 Signs Type II Reflective F	134.000 SF		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0650	638.2102 Moving Signs Type II	5.000 EACH		.		.
0660	638.2602 Removing Signs Type II	135.000 EACH		.		.
0670	638.3000 Removing Small Sign Supports	57.000 EACH		.		.
0680	641.8100 Overhead Sign Support (structure) 0001. S-40-937	LUMP	LUMP			.
0690	643.0100 Traffic Control (project) 0001. 1060-35-93	1.000 EACH		.		.
0700	643.0300 Traffic Control Drums	9,048.000 DAY		.		.
0710	643.0410 Traffic Control Barricades Type II	2,761.000 DAY		.		.
0720	643.0420 Traffic Control Barricades Type III	150.000 DAY		.		.
0730	643.0705 Traffic Control Warning Lights Type A	5,822.000 DAY		.		.
0740	643.0715 Traffic Control Warning Lights Type C	5,981.000 DAY		.		.
0750	643.0800 Traffic Control Arrow Boards	111.000 DAY		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0760	643.0900 Traffic Control Signs	5,922.000 DAY		.		.
0770	646.0106 Pavement Marking Epoxy 4-Inch	1,705.000 LF		.		.
0780	646.0126 Pavement Marking Epoxy 8-Inch	1,522.000 LF		.		.
0790	646.0843.S Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	791.000 LF		.		.
0800	647.0166 Pavement Marking Arrows Epoxy Type 2	1.000 EACH		.		.
0810	647.0168 Pavement Marking Arrows Preformed Thermoplastic Type 2	3.000 EACH		.		.
0820	647.0356 Pavement Marking Words Epoxy	1.000 EACH		.		.
0830	647.0456 Pavement Marking Curb Epoxy	505.000 LF		.		.
0840	647.0566 Pavement Marking Stop Line Epoxy 18-Inch	774.000 LF		.		.
0850	647.0606 Pavement Marking Island Nose Epoxy	37.000 EACH		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0860	647.0726 Pavement Marking Diagonal Epoxy 12-Inch	200.000 LF		.		.
0870	647.0766 Pavement Marking Crosswalk Epoxy 6-Inch	2,735.000 LF		.		.
0880	647.0955 Removing Pavement Markings Arrows	5.000 EACH		.		.
0890	647.0965 Removing Pavement Markings Words	3.000 EACH		.		.
0900	649.0400 Temporary Pavement Marking Removable Tape 4-Inch	2,476.000 LF		.		.
0910	649.0900 Temporary Pavement Marking Stop Line 12-Inch	20.000 LF		.		.
0920	649.1200 Temporary Pavement Marking Stop Line Removable Tape 18-Inch	15.000 LF		.		.
0930	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	1,613.000 LF		.		.
0940	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	3,715.000 LF		.		.
0950	652.0605 Conduit Special 2-Inch	51.000 LF		.		.
0960	652.0615 Conduit Special 3-Inch	4,292.000 LF		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0970	652.0700.S Install Conduit into Existing Item	26.000 EACH		.		.
0980	653.0140 Pull Boxes Steel 24x42-Inch	53.000 EACH		.		.
0990	653.0900 Adjusting Pull Boxes	1.000 EACH		.		.
1000	653.0905 Removing Pull Boxes	26.000 EACH		.		.
1010	654.0101 Concrete Bases Type 1	17.000 EACH		.		.
1020	654.0102 Concrete Bases Type 2	5.000 EACH		.		.
1030	654.0105 Concrete Bases Type 5	5.000 EACH		.		.
1040	654.0110 Concrete Bases Type 10	10.000 EACH		.		.
1050	654.0113 Concrete Bases Type 13	10.000 EACH		.		.
1060	654.0217 Concrete Control Cabinet Bases Type 9 Special	3.000 EACH		.		.
1070	655.0124 Cable In Duct 3-4 AWG	25.000 LF		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1080	655.0230 Cable Traffic Signal 5-14 AWG	3,189.000	LF	.		.	
1090	655.0240 Cable Traffic Signal 7-14 AWG	1,511.000	LF	.		.	
1100	655.0250 Cable Traffic Signal 9-14 AWG	890.000	LF	.		.	
1110	655.0260 Cable Traffic Signal 12-14 AWG	7,337.000	LF	.		.	
1120	655.0270 Cable Traffic Signal 15-14 AWG	1,533.000	LF	.		.	
1130	655.0310 Cable Type UF 2-12 AWG	305.000	LF	.		.	
1140	655.0320 Cable Type UF 2-10 AWG Grounded	3,719.000	LF	.		.	
1150	655.0510 Electrical Wire Traffic Signals 12 AWG	1,055.000	LF	.		.	
1160	655.0515 Electrical Wire Traffic Signals 10 AWG	8,691.000	LF	.		.	
1170	655.0615 Electrical Wire Lighting 10 AWG	3,465.000	LF	.		.	
1180	655.0620 Electrical Wire Lighting 8 AWG	2,095.000	LF	.		.	

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1190	655.0630 Electrical Wire Lighting 4 AWG	480.000 LF		.		.
1200	655.0700 Loop Detector Lead In Cable	19,465.000 LF		.		.
1210	655.0800 Loop Detector Wire	19,342.000 LF		.		.
1220	655.0900 Traffic Signal EVP Detector Cable	5,615.000 LF		.		.
1230	656.0200 Electrical Service Meter Breaker Pedestal (location) 3002. STH 59 & CTH O	LUMP	LUMP			.
1240	656.0200 Electrical Service Meter Breaker Pedestal (location) 3003. STH 59 & S. Sunnyslope Road	LUMP	LUMP			.
1250	656.0200 Electrical Service Meter Breaker Pedestal (location) 3004. STH 59 & S. Elm Grove Road	LUMP	LUMP			.
1260	657.0100 Pedestal Bases	18.000 EACH		.		.
1270	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	3.000 EACH		.		.
1280	657.0305 Poles Type 2	2.000 EACH		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1290	657.0322 Poles Type 5-Aluminum	1.000 EACH		.		.
1300	657.0420 Traffic Signal Standards Aluminum 13-FT	4.000 EACH		.		.
1310	657.0425 Traffic Signal Standards Aluminum 15-FT	10.000 EACH		.		.
1320	657.0430 Traffic Signal Standards Aluminum 10-FT	6.000 EACH		.		.
1330	657.0610 Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	1.000 EACH		.		.
1340	657.1350 Install Poles Type 10	10.000 EACH		.		.
1350	657.1355 Install Poles Type 12	4.000 EACH		.		.
1360	657.1360 Install Poles Type 13	6.000 EACH		.		.
1370	657.1520 Install Monotube Arms 20-FT	4.000 EACH		.		.
1380	657.1525 Install Monotube Arms 25-FT	1.000 EACH		.		.
1390	657.1530 Install Monotube Arms 30-FT	5.000 EACH		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1400	657.1540 Install Monotube Arms 40-FT	9.000 EACH		.		.
1410	657.1545 Install Monotube Arms 45-FT	1.000 EACH		.		.
1420	657.1815 Install Luminaire Arms Steel 15-FT	24.000 EACH		.		.
1430	658.0110 Traffic Signal Face 3-12 Inch Vertical	70.000 EACH		.		.
1440	658.0115 Traffic Signal Face 4-12 Inch Vertical	22.000 EACH		.		.
1450	658.0215 Backplates Signal Face 3 Section 12-Inch	70.000 EACH		.		.
1460	658.0220 Backplates Signal Face 4 Section 12-Inch	22.000 EACH		.		.
1470	658.0416 Pedestrian Signal Face 16-Inch	28.000 EACH		.		.
1480	658.0500 Pedestrian Push Buttons	26.000 EACH		.		.
1490	658.0600 Led Modules 12-Inch Red Ball	54.000 EACH		.		.
1500	658.0605 Led Modules 12-Inch Yellow Ball	52.000 EACH		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1510	658.0610 Led Modules 12-Inch Green Ball	52.000 EACH		.		.
1520	658.0615 Led Modules 12-Inch Red Arrow	38.000 EACH		.		.
1530	658.0620 Led Modules 12-Inch Yellow Arrow	62.000 EACH		.		.
1540	658.0625 Led Modules 12-Inch Green Arrow	40.000 EACH		.		.
1550	658.0635 Led Modules Pedestrian Countdown Timer 16-Inch	28.000 EACH		.		.
1560	658.5069 Signal Mounting Hardware (location) 3001. CTH 59 & S. Calhoun Road	LUMP	LUMP			.
1570	658.5069 Signal Mounting Hardware (location) 3002. STH 59 & CTH O	LUMP	LUMP			.
1580	658.5069 Signal Mounting Hardware (location) 3003. STH 59 & S. Sunnyslope Road	LUMP	LUMP			.
1590	658.5069 Signal Mounting Hardware (location) 3004. STH 59 & S. Elm Grove Road	LUMP	LUMP			.
1600	659.1125 Luminaires Utility LED C	25.000 EACH		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1610	661.0200 Temporary Traffic Signals for Intersections (location) 3001. STH 59 & Cth O	LUMP	LUMP			.
1620	661.0200 Temporary Traffic Signals for Intersections (location) 3002. STH 59 & S. Sunnyslope Road	LUMP	LUMP			.
1630	661.0200 Temporary Traffic Signals for Intersections (location) 3003. STH 59 & S. Elm Grove Road	LUMP	LUMP			.
1640	661.0300 Generators	6.000 DAY		.		.
1650	661.0700 Temporary Ramp Meter (location) 2001. 15+62	LUMP	LUMP			.
1660	662.1032.S Ramp Closure Gates Hardwired 32-FT	2.000 EACH		.		.
1670	670.0100 Field System Integrator 2001. FTMS	LUMP	LUMP			.
1680	670.0100 Field System Integrator 3001. STH 59	LUMP	LUMP			.
1690	670.0100 Field System Integrator 3002. IH 894/USH 45	LUMP	LUMP			.
1700	670.0200 ITS Documentation 2001. FTMS	LUMP	LUMP			.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1710	670.0200 ITS Documentation 3001. STH 59	LUMP	LUMP			.
1720	670.0200 ITS Documentation 3002. IH 894/USH 45	LUMP	LUMP			.
1730	674.0300 Remove Cable	1,195.000 LF		.		.
1740	674.0400 Reinstall Cable	210.000 LF		.		.
1750	675.0400.S Install Ethernet Switch	1.000 EACH		.		.
1760	676.0100 Signal Assembly Ramp Control Sidemount	1.000 EACH		.		.
1770	676.0105 Signal Assembly Ramp Control Overhead	2.000 EACH		.		.
1780	676.0300 Signal Assembly Advance Flasher Type 1	2.000 EACH		.		.
1790	676.9001.S Removing Advance Flasher Assemblies Type 1	1.000 EACH		.		.
1800	676.9002.S Removing Advance Flasher Assemblies Type 2	1.000 EACH		.		.
1810	678.0006 Install Fiber Optic Cable Outdoor Plant 6-CT	480.000 LF		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1820	678.0300 Fiber Optic Splice	112.000 EACH		.		.
1830	678.0400 Fiber Optic Termination	6.000 EACH		.		.
1840	678.0500 Communication System Testing 2001. FTMS	LUMP	LUMP			.
1850	678.0500 Communication System Testing 3001. STH 59	LUMP	LUMP			.
1860	678.0500 Communication System Testing 3002. IH 894/USH 45	LUMP	LUMP			.
1870	690.0150 Sawing Asphalt	362.000 LF		.		.
1880	690.0250 Sawing Concrete	2,261.000 LF		.		.
1890	SPV.0060 Special 0001. Traffic Control Local Road Lane Closures	296.000 EACH		.		.
1900	SPV.0060 Special 0003. Adjusting Sanitary Manhole	1.000 EACH		.		.
1910	SPV.0060 Special 0004. Replace Sanitary Manhole	1.000 EACH		.		.
1920	SPV.0060 Special 0005. Grooved Prefomed Thermoplastic Arrows Type 2 White	4.000 EACH		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1930	SPV.0060 Special 0006. Grooved Preformed Thermoplastic Words White	2.000 EACH		.		.
1940	SPV.0060 Special 1002. Removing Lighting Units	5.000 EACH		.		.
1950	SPV.0060 Special 1010. Lamp Disposal High Intensity Discharge	16.000 EACH		.		.
1960	SPV.0060 Special 1020. Relocating Light Poles Luminaires And Arms	7.000 EACH		.		.
1970	SPV.0060 Special 1050. Pull Boxes Steel 24x36-Inch Grounded	2.000 EACH		.		.
1980	SPV.0060 Special 2001. Install Contact Closure Radio System	2.000 EACH		.		.
1990	SPV.0060 Special 2002. Wireless Traffic Sensor	15.000 EACH		.		.
2000	SPV.0060 Special 2003. Install Wireless Traffic Sensor Access Point	2.000 EACH		.		.
2010	SPV.0060 Special 2004. Install Wireless Traffic Sensor Repeater	1.000 EACH		.		.
2020	SPV.0060 Special 2005. Wireless Traffic Sensor Contact Closure Module	1.000 EACH		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2030	SPV.0060 Special 2006. Wireless Traffic Sensor Contact Closure Extension Card	5.000 EACH		.		.
2040	SPV.0060 Special 2007. Install Portable Video Surveillance System	1.000 EACH		.		.
2050	SPV.0060 Special 2008. Relocating Portable Video Surveillance System	2.000 EACH		.		.
2060	SPV.0060 Special 2009. Install Temporary Vehicle Detector Assembly	1.000 EACH		.		.
2070	SPV.0060 Special 2010. Refocusing Vehicle Detector Assembly	2.000 EACH		.		.
2080	SPV.0060 Special 2012. Removing Ramp Control Signal Assembly Sidemount	2.000 EACH		.		.
2090	SPV.0060 Special 2013. Install Wireless Modem	1.000 EACH		.		.
2100	SPV.0060 Special 2014. Bury Existing Manhole	2.000 EACH		.		.
2110	SPV.0090 Special 0001. Removing Pavement Markings Water Blasting	2,572.000 LF		.		.
2120	SPV.0090 Special 0002. Grooved Preformed Thermoplastic Crosswalk 6-Inch	209.000 LF		.		.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2130	SPV.0090 Special 0003. Grooved Preformed Thermoplastic Stop Line 18-Inch	92.000 LF		.		.
2140	SPV.0090 Special 0004. Grooved Preformed Thermoplastic Diagonal 12-Inch White	140.000 LF		.		.
2150	SPV.0090 Special 3001. Cable Type UF 2-14 Awg	5,615.000 LF		.		.
2160	SPV.0090 Special 3002. Install Camera Power Cable	4,869.000 LF		.		.
2170	SPV.0090 Special 3003. Install Cat-5e Cable	5,361.000 LF		.		.
2180	SPV.0105 Special 0001. Pavement Cleanup Project 1060-35-93	LUMP	LUMP			.
2190	SPV.0105 Special 0002. Survey Project 1060-35-93	LUMP	LUMP			.
2200	SPV.0105 Special 1006. Maintenance Of Lighting Systems	LUMP	LUMP			.
2210	SPV.0105 Special 2002. Relocate Existing CCTV Camera	LUMP	LUMP			.
2220	SPV.0105 Special 2003. Relocate Existing Bluetooth Detector	LUMP	LUMP			.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2230	SPV.0105 Special 3001. Remove Traffic Signals STH 59 & S. Calhoun Road	LUMP	LUMP			.
2240	SPV.0105 Special 3002. Remove Traffic Signals STH 59 & CTH O	LUMP	LUMP			.
2250	SPV.0105 Special 3003. Remove Traffic Signals STH 59 & S. Sunnyslope Road	LUMP	LUMP			.
2260	SPV.0105 Special 3004. Remove Traffic Signals STH 59 & S. Elm Grove Road	LUMP	LUMP			.
2270	SPV.0105 Special 3005. Remove Traffic Signals IH 94 EB Off Ramp & Cth O	LUMP	LUMP			.
2280	SPV.0105 Special 3006. Remove Traffic Signals IH 894/USH 45 Ramps & W. Oklahoma Avenue	LUMP	LUMP			.
2290	SPV.0105 Special 3011. Remove Loop Detector Wire And Lead -In Cable STH 59 & CTH O	LUMP	LUMP			.
2300	SPV.0105 Special 3012. Remove Loop Detector Wire And Lead -In Cable STH 59 & S. Sunnyslope Road	LUMP	LUMP			.
2310	SPV.0105 Special 3013. Remove Loop Detecotr Wire And Lead -In Cable STH 59 & S. Elm Grove Road	LUMP	LUMP			.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2320	SPV.0105 Special 3021. Install State Furnished Traffic Signal Cabinet STH 59 & S. Calhoun Road	LUMP	LUMP			.
2330	SPV.0105 Special 3022. Install State Furnished Traffic Signal Cabinet STH 59 & CTH O	LUMP	LUMP			.
2340	SPV.0105 Special 3023. Install State Furnished Traffic Signal Cabinet STH 59 & S. Sunnyslope Rd	LUMP	LUMP			.
2350	SPV.0105 Special 3024. Install State Furnished Traffic Signal Cabinet STH 59 & S. Elm Grove Rd	LUMP	LUMP			.
2360	SPV.0105 Special 3025. Install State Furnished Traffic Signal Cabinet Ih 94 EB Off Ramp & CTH O	LUMP	LUMP			.
2370	SPV.0105 Special 3026. Inst St Furn Traffic Sig Cabinet IH 894/USH 45 Ramp & W Oklohoma Ave	LUMP	LUMP			.
2380	SPV.0105 Special 3031. Transporting Signal And Lighting Materials STH 59 & S. Calhoun Road	LUMP	LUMP			.
2390	SPV.0105 Special 3032. Transporting Signal And Lighting Materials STH 59 & CTH O	LUMP	LUMP			.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2400	SPV.0105 Special 3033. Transporting Signal And Lighting Materials STH 59 & S. Sunnyslope Road	LUMP	LUMP			.
2410	SPV.0105 Special 3034. Transporting Signal And Lighting Materials STH 59 & S. Elm Grove Road	LUMP	LUMP			.
2420	SPV.0105 Special 3041. Transporting And Installing State Furnished Adaptable Traffic Signal Cameras STH 59 & S. Calhoun Road	LUMP	LUMP			.
2430	SPV.0105 Special 3042. Transporting And Installing State Furnished Adaptable Traffic Signal Cameras STH 59 & CTH O	LUMP	LUMP			.
2440	SPV.0105 Special 3043. Transporting And Installing State Furnished Adaptable Traffic Signal Cameras STH 59 & S. Sunnyslope Road	LUMP	LUMP			.
2450	SPV.0105 Special 3044. Transporting And Installing State Furnished Adaptable Traffic Signal Cameras CTH 59 & E. Elm Grove Road	LUMP	LUMP			.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2460	SPV.0105 Special 3051. Install State Furnished EVP Detector Heads STH 59 & S. Calhoun Road	LUMP	LUMP			.
2470	SPV.0105 Special 3052. Install State Furnished EVP Detector Heads STH 59 & CTH O	LUMP	LUMP			.
2480	SPV.0105 Special 3053. Install State Furnished EVP Detector Heads STH 59 & S. Sunnyslope Rd	LUMP	LUMP			.
2490	SPV.0105 Special 3054. Install State Furnished EVP Detector Heads STH 59 & S. Elm Grove Rd	LUMP	LUMP			.
2500	SPV.0105 Special 3061. Temporary EVP System STH 59 & CTH O	LUMP	LUMP			.
2510	SPV.0105 Special 3062. Temporary EVP System STH 59 & S. Sunnyslope Road	LUMP	LUMP			.
2520	SPV.0105 Special 3063. Temporary EVP System STH 59 & S. Elm Grove Road	LUMP	LUMP			.
2530	SPV.0105 Special 3071. Install Fiber Optic Communications In Cabinet STH 59 & S. Calhoun Road	LUMP	LUMP			.
2540	SPV.0105 Special 3072. Install Fiber Optic Communications In Cabinet STH 59 & CTH O	LUMP	LUMP			.

CONTRACT: 20150512020 PROJECT(S): 1060-35-93 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2550	SPV.0105 Special 3073. Install Fiber Optic Communications In Cabinet STH 59 & S. Sunnyslope Road	LUMP	LUMP			.
2560	SPV.0105 Special 3074. Install Fiber Optic Communications In Cabinet STH 59 & S. Elm Grove Road	LUMP	LUMP			.
2570	SPV.0105 Special 3075. Install Fiber Optic Communications In Cabinet IH 94 EB Off Ramp & CTH O	LUMP	LUMP			.
2580	SPV.0105 Special 3076. Install Fiber Optic Comm in Cab IH 894/USH 45 Ramps & W. Oklahoma Ave Oklahoma Avenue	LUMP	LUMP			.
2590	SPV.0105 Special 3081. Transport and Install State Furn Radar Det Sys IH 94 EB Off Ramp & CTH O	LUMP	LUMP			.
2600	SPV.0165 Special 0001. Concrete Sidewalk 5-Inch (High Early Strength)	267.000 SF	.			.
2610	SPV.0180 Special 0001. Topsoil Special	931.000 SY	.			.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE