HIGHWAY WORK PROPOSAL

Proposal Number: Ø 8

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Dane	5994-00-71	WISC 2012 068	Monona Drive, City of Monona Winnequah Road - Cottage Grove Road	CTH BB
Dane	5994-00-75		Monona Drive, City of Monona Winnequah Road - Cottage Grove Road	CTH BB
Dane	5994-00-76		Monona Drive, City of Monona Winnequah Road - Cottage Grove Road	CTH BB

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: February 14, 2012 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time October 30, 2012	
Assigned Disadvantaged Business Enterprise Goal 6 %	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 Grading, pavement removal, base aggregate dense, concrete curb and gutter, concrete sidewalk, concrete driveway, HMA pavement, Structure C-13-3003, storm sewer, water main, sanitary sewer main, street lighting, traffic signals, pavement marking, permanent signing, erosion control, and landscaping.

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)

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

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

(Signature of Attorney-in-Fact)

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)

FEBRUARY 1999

LIST OF SUBCONTRACTORS

Section 66.29(7), Wisconsin Statutes, provides that a bidder, as a part of his proposal, shall submit a list of the subcontractors he proposes to contract with and the class of work to be performed by each, provided that to qualify for such listing each subcontractor must first submit his bid in writing to the general contractor at least 48 hours prior to the time of bid closing. It further provides that a proposal of a bidder shall not be invalid if any subcontractor, and the class of work to be performed by such subcontractor, has been omitted from a proposal.

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

Table of Contents

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Projects 5994-00-71, 5994-00-75 and 5994-00-76, Monona Drive, City of Monona, Winnequah Road – Cottage Grove Road, CTH BB, Dane 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, 2012 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 (20110615)

2. Scope of Work.

The work under this contract shall consist of grading, pavement removal, base aggregate dense, concrete curb and gutter, concrete sidewalk, concrete driveway, HMA pavement, Structure C-13-3003, storm sewer, water main, sanitary sewer main, street lighting, traffic signals, pavement marking, permanent signing, erosion control, and landscaping 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 ten calendar days before the approved start date.

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

Provide a schedule of operations to conform to the construction staging as shown in the construction staging plans, unless modifications to the schedule are approved in writing by the engineer.

The contract time for completion is based on an expedited work schedule and may require extraordinary forces and equipment.

During Stage 1, close the easterly northbound lane of Monona Drive and maintain access to all side roads. Complete the following work items before proceeding to Stage 2: installation of the storm sewer box culvert, completion of temporary pavement, installation of concrete sidewalk on the east side of Monona Drive, and finishing items behind the new concrete sidewalk.

Install the storm sewer box culvert across Monona Drive near Station 123+10 and across the Buckeye Road intersection between 8:00 PM and 6:00 AM (Night-Time Work Hours). This may take multiple nights to complete the work. Utilize road closure and detour to complete the work. Monona Drive to be open to 3 lanes of traffic (2 lanes southbound and 1 lane northbound) by 6:00 AM. Pave construction trench patch prior to 6:00 AM on the last day of installing the storm sewer box culvert in the respective location.

Notify Dan Pruess at the Wisconsin Department of Transportation SW Region Madison Office at (608) 246-3849, email: daniel.pruess@dot.wi.gov, a minimum of 5 working days prior to implementing the detour. Provide days and times detour will be in effect.

During Stage 2, close the southbound lanes of Monona Drive. Winnequah Road may be closed during Stage 2 to complete construction of Winnequah Road. Maintain access to properties on Winnequah Road from the west end of the construction zone. Maintain access to Ferchland Place at all times. Maintain access to private driveways at all times except when necessary to install concrete curb and gutter, concrete sidewalk, and concrete driveway aprons. Open driveways as soon as possible after completing concrete work. Complete the following work items before proceeding to Stage 3: installation of concrete sidewalk, concrete curb and gutter, and concrete driveway aprons on the west side of Monona Drive, lower course paving operations, and finishing items.

During Stage 3, close the northbound lanes of Monona Drive and Lake Edge Boulevard. Maintain access to Buckeye Road, Davidson Street, and Cottage Grove Road. Maintain access to private driveways at all times except when necessary to install concrete curb and gutter and concrete driveway aprons. Open driveways as soon as possible after completing concrete work. Complete the following work items before proceeding to Stage 4: installation of concrete curb and gutter and concrete driveway aprons on the east side of Monona Drive, lower course paving operations, and finishing items.

During Stage 4, close the inside northbound and southbound lanes of Monona Drive as necessary to complete construction of the median areas. All side roads and driveways to be open during Stage 4. During Stage 4 complete concrete curb and gutter, concrete sidewalks, concrete driveways, final paving operations, permanent signing and striping, lighting, traffic signals and final landscaping.

Perform paving operations of the surface layer during Night Time Work Hours to minimize damage to joints caused by excessive traffic.

Hold progress meetings once a week. The contractor's superintendent or designated representative and subcontractor's representatives for ongoing subcontract work or subcontractor work to begin within the next two weeks are to attend and provide a written schedule of the next week(s) operations. Include begin and end dates of specific prime and subcontractor work operations. Invite the City of Monona, City of Madison, Dane County and Madison Metro Bus representatives to attend progress meetings. Agenda items to include review of contractor's schedule and subcontractor's schedule, evaluation of progress and pay items, and revisions if necessary. Plans and specifications for upcoming work will be reviewed to prevent potential problems of conflicts between contractors.

Based on the progress meeting, if a new revised schedule is requested by the engineer, submit within seven calendar days. Failure to submit a new schedule within seven days will result in the engineer holding pay requests until received.

Remove existing traffic signals only after the temporary traffic signals have been installed, inspected, and are controlling the intersection.

Notify residents and businesses 48 hours in advance if their direct access will be closed. Notify the City of Monona and City of Madison emergency services 48 hours in advance of closing any street.

Contact and coordinate with City of Madison for signal timing and phasing setup for temporary signals prior to the start of a traffic change or stage.

Coordinate with the City of Madison to provide access for garbage collection. Contact Refuse Supervisor at (608) 246-4532.

Notify Madison Metro two weeks prior to construction. Notify one week prior to traffic switches, street closures, and reopening the road to through traffic for bus routing. Contact Drew Beck at (608) 266-6599.

Notify City of Monona and City of Madison Police and Fire Departments at least 3 days (72 hours) in advance of any traffic stage changes or restriction. Ensure that emergency vehicles are provided access to all properties along the project at all times.

Submit any traffic control change requests to the engineer at least 3 days (72 hours) prior to an actual traffic control change.

Provide 7 days of notice to the United States Postal Service postmaster, the Monona Grove School District and the Madison School District prior to closing any side road or beginning a stage.

4. Notice to Contractor – Archaelogical Site.

An archaeologically significant site exists in the project area. This site is located on lots 4 and 5 of Mound Park between Stations 137+00 and 137+50 left.

Provide two weeks' notice to the Environmental Services Section (ESS) before doing any work in the areas of these sites. ESS will provide a qualified archaeologist to be on site at all times when work occurs near these areas.

The contact at ESS is Jim Becker at (608) 261-0137 or Lynn Cloud at (608) 266-0099.

If a potentially significant archaeological feature or material is discovered during construction operations, the qualified archeologist will promptly coordinate with the engineer and with ESS to determine an appropriate course of action.

5. Traffic.

Construct this project using staged construction. Keep Monona Drive open to through traffic by providing a minimum of one lane in each direction and building sideroads one half at a time. The project provides a signed detour route using Pflaum Road, Stoughton Road (USH 51) and Cottage Grove Road for the purpose of installing the storm sewer box culvert during night time work hours.

Construct Monona Drive in four stages: major storm sewer, southbound improvements, northbound improvements, and medians. For Stage 3, close Lake Edge Boulevard between Monona Drive/Buckeye Road and Hegg Avenue. Local traffic can use Hegg Avenue to get to Davidson Street, one block to the north, or Winnequah Road, one block to the south. Both of these streets provide access to Monona Drive.

Stage 1
Stage 1 traffic control involves closing the outside northbound lane of Monona Drive and the easterly sidewalk from just north of Winnequah Road to Buckeye Road. This closure is necessary to accommodate the installation of a the storm sewer box culvert from Lake Edge Boulevard to the newly constructed storm sewer outfall structure south of Buckeye Road, to install a 4 foot temporary pavement widening needed for traffic during Stage 2 construction, and to allow construction of the new concrete sidewalk on the easterly side of the road. The proposed storm sewer crosses Monona Drive at approximately Station 123+25. It then continues to the north under the easterly sidewalk, which will be removed during the installation. It crosses the Buckeye Road intersection under the crosswalk and then turns easterly to run under the southeasterly curb line of Lake Edge Boulevard. Most of the installation is outside the roadway limits with the exception of the crossings at Station 123+25 and Buckeye Road. Perform installation of these crossings at night to minimize traffic impacts. During that time, detour traffic via Pflaum Road, Stoughton Road (USH 51), and Cottage Grove Road. Direct pedestrians to the westerly sidewalk by crossing at Winnequah Road or Lake Edge Boulevard.

Stage 2
Close southbound lanes and reduce traffic to two lanes, one lane in each direction. Shift traffic to the northbound lanes that include the 4 foot temporary widening installed during Stage 1. Restrict access from Buckeye Road onto southbound Monona Drive. Construct the west half of the project during this stage along with necessary storm sewer crossings. Construct Ferchland Place in halves so that two lanes of traffic can be maintained during this stage of construction. Winnequah Road may be closed during Stage 2.

Close the westerly sidewalk during this time. Direct pedestrians to the easterly sidewalk. There are no existing on-street bicycle accommodations and none will be provided during construction.

Stage 3
Close northbound lanes and shift traffic to the newly constructed southbound lanes, again with one lane of traffic in each direction. Construction during Stage 3 will consist of reconstructing the northbound lanes, associated utilities, and the remainder of the sidewalk that was not constructed during Stage 1. Construct the Buckeye Road and the Cottage Grove Road intersections in halves so that two lanes of traffic can be maintained on these side streets during this stage of construction. Construct Lake Edge Boulevard during this stage.

Close the easterly sidewalk during this time. Direct pedestrians to the westerly sidewalk. There are no existing on-street bicycle accommodations and none will be provided during construction.

Stage 4
Construct medians and designated turn lanes. Reduce traffic to one lane in each direction, with the center two lanes being closed for the entire length of the project. Make sidewalks and on-street bicycle lanes available during Stage 4.

Maintain pedestrian movements crossing the construction zone at all intersections at all times except as noted below. Construct pedestrian crossings of intersections to meet requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) consisting of temporary asphaltic surface. Gravel or base course material is not acceptable. Maintain ADAAG accessible pedestrian walkways that are free from mud, sand, and construction debris. Closures of sidewalk must be approved by the engineer and conform to signing shown on the traffic control plan. At locations where crosswalks crossing Monona Drive exist on both sides of the intersection, contractor may close one of the two crosswalks as long as all other crossings are completely open. At intersections where only one crosswalk exists, stage work to maintain crosswalk at all times.

Maintain sidewalk at all times on at least one side of Monona Drive except under direction of the engineer. In areas of sidewalk construction, provide a temporary surface for pedestrian access at all times. Construct the temporary surface to meet ADAAG requirements consisting of temporary asphaltic surface, any grade of concrete, skid resistant steel plating, or alternative material as approved by the engineer. Gravel or base

course material is not acceptable. Maintaining sidewalk is included in the item Traffic Control Surveillance and Maintenance. Maintain sidewalk access to all businesses at all times.

Driveways will be right-in, right-out during Stages 2 and 3.

6. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying Monona Drive (CTH BB) 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 25, 2012 to 6:00 AM Tuesday, May 29, 2012 for Memorial Day;
- From noon Tuesday, July 3, 2012 to 6:00 AM Thursday, July 5, 2012 for Independence Day;
- From noon Friday, August 31, 2012 to 6:00 AM Tuesday, September 4, 2012 for Labor Day.

107-005 (20050502)

7. Utilities.

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

Within the limits of this project there are underground and aerial utility facilities. Coordinate construction activities with a call to Diggers Hotline, or a direct call to the utilities for the underground facilities in the area as required per statutes. Some utility work will need to be done during construction. Contractor Utility Line Opening (ULO) will be required to determine utility facility depths. Use caution to ensure the integrity of underground facilities and maintain OSHA code clearances from overhead facilities at all times. Additional detailed information regarding the location of relocated utility facilities is available in the work plan provided by each utility company or on the permits issued to them.

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

MG&E (Electric) has overhead and underground facilities throughout the project. MG&E will be removing their overhead electric lines and placing them underground for the length of the project. The new underground lines will be placed under the proposed westerly sidewalk. Crossings of Monona Drive will be placed for service laterals and at

Winnequah Road, Buckeye Road and Cottage Grove Road. Work around these crossings. This work will begin prior to construction and continue during construction.

MG&E (Gas) has a 12-inch high pressure gas line that runs the length of the project. This line is known to conflict with the proposed storm sewer box culvert crossing at 123+25. MG&E has indicated they will move this line to resolve this conflict during construction. It is anticipated this work will take approximately 3 weeks to complete and will require the closing of the south entrance to Lake Edge Shopping Center. Five additional areas of this high pressure line will be inspected during construction. Each inspection will require one day and, if repairs are required, an additional three days at each site. Coordinate this work with MG&E.

MG&E has a 2-inch steel distribution system with several laterals throughout the project. MG&E will replace these steel pipes with plastic pipes. The new mains will be placed under the proposed sidewalk on both sides of Monona Drive. This work will be done during construction Coordinate this work with MG&E.

AT&T has overhead line and underground cable and fiber optic throughout the project. The overhead line from 123+00 to 146+10 will be removed and buried jointly with MG&E. Their conduit system may conflict with the proposed storm sewer at the following locations:

112+25, 12’ RT.
115+60, 11’ RT.
118+25, 12’ RT.
120+50, 12’ RT.
123+00, 12’ RT.
123+11, 12’ RT.
123+27, 46’ RT.
127+00, 13’ RT.
128+00, 65’ RT.
128+48, 50’ RT.
128+85, 18’ RT.
130+87, 14’ RT.
134+40, 12’ RT.
141+50, 15’ RT.
142+00, 38’ RT.
142+30, 28’ LT.
12’B’+50, 22’ LT.

Their conduit system may conflict with the proposed water main at the following locations:

111+80, 12’ RT.

AT&T will conduct test holes in the fall of 2011 to determine the exact depth of duct packages. Some required relocations will take place prior to construction while others will take place during construction after the pavement has been removed. Coordinate work with AT&T.

AT&T will also be adjusting their manholes during the project at the following locations:

114+33, 30’ RT.
114+39, 9’ RT.
121+40, 12’ RT.
123+37, 48’ RT.
128+37, 20’ RT.
135+29, 14’ RT.
142+07, 17’ RT.
146+93, 13’ RT.

Coordinate with AT&T to provide time and access to their facilities for adjustment during construction.

Charter Communications has aerial fiber optic and coaxial lines that are present throughout the project corridor and utilize MG&E power poles as attachments.

Charter will relocate their aerial facilities to new underground conduit installed concurrently with MG&E along the west proposed sidewalk.

Charter Communications will coordinate their work with MG&E. Relocation of their facilities will commence when MG&E begins their adjustments. Work is expected to take place prior to construction.

Madison Metropolitan Sewerage District (MMSD) has a 36-inch force main that runs the length of the project. No conflict is anticipated with this line. Take extreme care when installing the proposed storm sewer box culvert across this line. Coordinate with MMSD when working near their facilities so that a MMSD representative can be on-site.

A piece of existing City of Monona sanitary sewer is being replaced between Stations 141+25 and 145+00. This line lies adjacent to the 36 inch MMSD force main that runs along Monona Drive. Because this is a replacement at approximately the same grade as the existing pipe, no conflicts are anticipated. The contractor will have to take care to protect the force main.

City of Madison Water has hydrants, valves and curb stops throughout the project that will require relocation or adjustment. Any relocations will be completed in the Spring of 2012, while adjustments will be done by the contractor as part of the project.

City of Madison Sanitary Sewer has facilities at the intersections of Buckeye Road, Lake Edge Drive, Davidson Street and Cottage Grove Road. No conflicts are anticipated, but adjustment of manhole covers may be required as part of the project. Several manholes will be replaced and let as part of the project. See plans for more details.

City of Monona Water New water main will be installing near the Winnequah Road intersection by the contractor. See plans for more details.

City of Monona Sanitary Sewer will be replacing some existing sanitary sewer between Stations 141+25 and 145+00. The purpose of this work is to replace a sagging sanitary sewer line that has caused maintenance issues. This work will be let with this contract. See plans for more details.

8. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Check for and comply with local ordinances governing the hours of operation of construction equipment. Do not operate motorized construction equipment from 9:00 PM until the following 7:00 AM, unless prior written approval is obtained from the engineer.
107-001 (20060512)

9. Municipality Acceptance of Sanitary Sewer and Water Main Construction.

The department, the City of Monona and City of Madison personnel will inspect construction of sanitary sewer and water main under this contract. However, construction staking, testing, and final acceptance of the sanitary sewer and water main construction will be by the City of Monona and City of Madison.
105-001 (20061009)

10. Coordination with Businesses.

The contractor will arrange and conduct a meeting between the contractor, the department, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting two weeks prior to the start of work under this contract and hold two meetings per month thereafter.

11. General Requirements for Electrical Work.

Replace standard spec 651.2(6) with the following:

The approved products list is located at:
http://www.dot.wisconsin.gov/business/engrserv/docs/ap0/electrical.pdf

12. General Provisions for City Traffic Signals.

Perform all work on the lighting and conduit/pull box system in accordance to the Wisconsin Electrical Code, the applicable provisions of the standard specifications, and these special provisions and plans.

The City of Madison will remove existing traffic signals and "signal only" poles when the temporary signals are in place at each intersection. Contact Michael Christoph, City of Madison Traffic Engineering Shop at (608) 266-9031 to coordinate removal of existing signals and installation of new signals.

Remove existing streetlight poles including those that also have traffic signal equipment on them.

Each pedestrian push button installation shall include "Push Button for Walk Signal" signs. Single direction arrow signing shall also be used with all buttons except two direction arrow signing is needed for single buttons on median poles.

13. General Provisions for City Conduit Installation.

Supplement standard spec 652 as follows:

Use Schedule 80 conduit under all traffic areas.

Install all conduit at a minimum depth of 30 inches, unless otherwise approved by the engineer. Solvent weld all joints. Mark the location of each conduit, where conduit crosses traffic areas, by a permanent chiseled arrow or other appropriate permanent stamp in top of the curb head.

Install and connect all conduit to the concrete bases, manholes, handholes, existing conduit, or conduit elbows so as to provide a continuous network, unless otherwise indicated on the plan. All connections shall be watertight. Do not install drainage holes in conduit. Uncover the ends or mid-sections of all existing conduit that is being extended by or incorporated into this project work.

When connections are to be made to an existing conduit, first verify that the existing conduit is fully clear and useable for its entire cross-section and length. When the existing conduit is found to be defective, notify the engineer and do not proceed until the engineer so directs. If the contractor connects to an existing defective conduit without the express direction from the engineer, make any and all necessary repairs and replacements to all conduits, including conduit that was "existing" prior to the contractor starting work and to the satisfaction of the engineer. All costs of this work shall be at the expense of the contractor.

Turn up conduits terminating in a non-paved location and not in a structure, and end at terrace finish grade with a PVC cap securely attached, per duct termination detail. Where conduit runs parallel to curb and gutter, place the conduit within 12 inches of the back of the curb, except as directed by the engineer. The engineer will determine termination points not within pull boxes or concrete bases.

Unless the contract provides for installation of cable, cap the ends of each run of conduit with standard conduit caps or otherwise appropriately plug the ends to preclude infiltration of water and soil. Install a pull wire in each conduit, except those with only streetlight wire. A pull wire shall be approximately 4 feet longer than the conduit run, and shall be doubled back for at least 2 feet at each terminal. The pull wire shall be #10 AWG copper, stranded, with THHN insulation and green color coding. Install the pull wire within seven days of completing a conduit installation from structure-to-structure. Use a 6-inch minimum sand padding below the conduit and a 6-inch minimum sand lift above the conduit. Do not backfill trench with any rocks larger than 4 inches in diameter or any foreign debris.

14. General Provisions for City Electrical Systems.

A General Requirements

Perform this work in accordance to the Wisconsin Electrical Code, National Electrical Contractor's Association (NECA) electrical construction practices, OSHA and the standard specifications.

Upon completion of the work, or a portion of the work, notify the engineer that the work is ready for inspection by the engineer. Perform all work on the lighting and conduit/pull box system in accordance to the Wisconsin Electrical Code, and applicable provisions of standard spec 659, and these special provisions and plans.

Carefully remove and salvage the steel frames and covers from all pull boxes and manholes to be removed or abandoned, and all street light poles, arms, transformer bases, fixtures, concrete handholes, and associated equipment called for removal. Prior to removal, the electrical hanholes, light poles, mast arms, and luminaires shall be inspected by representatives from the city, contractor, and the engineer to assess their original condition. Deliver all salvageable materials to 1120 Sayle Street, Madison, WI. Notify Dennis Rowe at (608) 266-4767 one working day prior to delivery to coordinate delivery schedule.

Complete electrical work by a journey-worker electrician or be completed by an electrical apprentice under the supervision of a journey-worker electrician. Legal status or standing as a journey-worker and apprentice electricians shall be certified or otherwise documented to the engineer before beginning any electrical work. Electrical work is hereby defined as electrical and related construction required to be performed under the contract by the contractor, in accordance to the standard specifications, contract provisions, standard detail drawings and plan details applicable to electrical construction. At the pre-construction conference, supply the engineer with a list of names and

qualifications of journey-workers and/or electrical apprentices who will or may be working on this contract.

Proof of qualification to do electrical journey-worker level work shall be the “Completion of Apprenticeship” certification card issued by an approved state agency, or a resume showing sufficient electrical education and a minimum of 14,000 hours of varied electrical work experience. All apprentices shall be indentured by an approved state agency.

The contractor is hereby advised that electrical apprentices must work under the terms of their indentures, which require an apprentice be under the direct supervision of a journeyworker with the exception of an apprentice in the final year as an apprentice. Any violation, or suspected violation, of these terms will be reported to the Bureau of Apprenticeship Standards. Any violation, or suspected violation, of these terms will be reported to the Bureau of Apprenticeship Standards.

On completion of the work, test the installation and ensure that it is entirely free of grounds and short circuits. This contract contemplates and intends a complete and operating installation of electrical work. Everything in the form of labor or material necessary for this result is in the intent of the contract.

It must be understood that electrical drawings and details are diagrammatic; they are not intended to be shop drawings. It is expected it may be necessary to move conduit, and/or equipment in some cases, to get a coordinated installation. Such changes are considered part of the contract obligation, without cost to the owner. Do not locate any equipment where its usefulness and/or operation may be affected by the work of other trades, door swing, counter, equipment, etc.

The contractor acknowledges his acquaintance with the plans and specifications and their respective requirements, and shall guarantee the electrical system has been installed strictly in accordance to the electrical plans and specifications, using only the best of materials available and installed in a substantial manner by experienced labor. The contractor agrees to replace and/or repair items failing from causes of faulty workmanship, material or design, without extra cost, at any time within one year from the date of final acceptance.

Furnish the City of Madison with service manuals for all items furnished under this contract. Service manuals shall be complete with drawings, diagrams, operation and installation instructions, and parts lists.

New streetlight wire in conduits shall consist of 3#6 and 1#8 green wire. The color coding for the #6 wire shall be one black, one red, and one white.

Ground wires shall have green insulation. Equipment and enclosures shall be grounded, ground connection surfaces shall be cleaned, and connections shall be made so it is impossible to move them.

All maintenance of existing street light facilities within the project limits shall be the contractor's responsibility. Maintain the new street lights until project work is accepted. This work shall be considered incidental to installation of street light units, temporary lighting, structures and ducts, and no separate compensation will be paid.

Extend existing lighting circuits to feed the new and relocated lights as part of this project. Verify the existing loads of each lighting circuit before adding additional load to a lighting circuit. Loading on any circuit shall not exceed NEC requirements.

Submit one copy of as-built plans, including cable and conduit routing diagrams, wiring of fixtures and other pertinent details, to the engineer and the City of Madison.

Furnish equipment and appliances necessary to test the complete installation of electrical conductors. Test and demonstrate to the satisfaction of the engineer that the circuits are properly connected, continuous and free from short circuits and unspecified grounds, that the circuits are connected in accordance to the manufacturer's wiring layout, and that each circuit is operational. The lighting system shall not be deemed complete until the electrical work has been completed and the electrical systems are found to be in proper working order, including operation for ten consecutive nights without failure.

B Materials

All materials furnished by the contractor for lighting installation under this contract are subject to approval by the engineer.

Manufacturers shall be responsible for providing materials listed by UL or other approved agencies and all governing codes and ordinances. Materials must bear a UL and/or other approved labels, where possible. Items specified by catalog number of brand name and shop drawing approval will not relieve the manufacturer of this responsibility. All electrical material for which a standard has been established by the Underwriters Laboratories, Inc. shall be furnished and installed under this contract. Material shall have the UL label firmly attached and be listed by UL Listing signifies that the material has passed the established standard testing. All electrical materials shall conform to the latest requirements of the Wisconsin Electrical Code.

All materials, not specified herein, used in the work shall conform to the requirements specified on the plan or the contract special provisions.

Furnish and install incidental items, such as wire nuts, grommets, tape, connectors, and electrical varnish that are obviously necessary to make the proposed system complete from the source of supply to the most remote unit.

Touch up mars and scratches on painted equipment with two coats of synthetic resin enamel or as directed by the engineer.

Furnish a complete list and cut sheets/shop drawings of materials to be furnished and used for lighting. Include the names and addresses of manufacturers, together with catalog numbers, certificates of compliance, specifications, and other product information requested by the engineer. Submit the list and cut sheets/shop drawings within 20 calendar days of the award of the contract. Do not incorporate any materials into the lighting system prior to obtaining the written approval of the engineer. Approval does not change the intent of the specifications. Do not substitute any materials. The contractor is allowed up to two submittals of material for approval. If more than two submittals are required, the contractor will be charged on a time-and-material basis for additional review time with payment made before submittals will be reviewed.

C Splices

Splices shall comply with standard spec 659.3.2. All splices within a junction box, handhole, etc. shall be of the same type. No splices are allowed in underground pull boxes, except for grounding conductors.

D Circuit Identification

Accomplish color coding by using cable jackets of the proper color. Code all tails of all splices. Color-code secondary distribution circuits as shown on the plans; the ground conductor shall be green. Each accessible location of underground cable in junction boxes, pull boxes and pole bases shall have a permanent white nylon tag with black lettering, attached in a “flag” manner using a nylon tie, identifying the cabinet and conductor circuit number.

E Branch Circuit Tagouts

The contractor may at his option work on live circuits or he may disconnect and tag out circuits. Any branch circuit not disconnected and tagged out shall be considered live; restrict work force to those qualified to work on live circuits. Disconnection may be made by disconnecting branches at the overcurrent device. Make tagouts with contractor furnished manufactured electrical warning tags and endorse with the name of the contractor, the date, and the project. Clear all tagouts by the end of the workday.

F Threaded Fasteners

Liberally coat all threaded fasteners, i.e., screws, and bolts with an approved anti-seize compound. Excepting fasteners inside control cabinets, fasteners up to ½-inch in diameter shall be stainless steel.

Provide rust, corrosion and anti-seize protection at threaded assemblies by coating the mating surfaces with Markal (Hightemp E-Z Break), Never-Seez (marine grade), LPS 100, Lubriplate or approved equal.

G Bonding Wire

Install bonding wire in conduits for equipment grounding. Ground all equipment as required.

H Initial Failures
The contractor and the engineer shall agree on a time for test burning of completed installations, which is generally toward the end of the contract period. Replace failed lamps, along with any other non-functioning component, for no additional compensation. Only one test burn for the purpose of identifying initial failures will be required. Coordinate supply of replacement lamps with the city.

I Project Construction Staging
The construction of the new lighting system shall maintain the integrity of the existing lighting systems within and beyond the project limits at all times. Exceptions to this shall only be granted for just cause by the inspector.

J Items of the Same Classification
All items of the same classification shall be of the same manufacturer and series.

K Underground Installation
Ensure that the engineer has inspected all underground conduit and concrete base forms before backfilling any trench or pouring concrete. Any work completed without such inspection is subject to rejection as unacceptable work and shall be immediately removed and acceptably replaced or otherwise satisfactorily corrected by and at the expense of the contractor. It is the contractor's responsibility to arrange for inspections. There will not be any additional compensation to the contractor for delays and inconvenience associated with arranging and waiting for inspections.

15. General Provisions for Storm Sewer.

All round and elliptical shape storm sewer shall be constructed in accordance to the pertinent provisions of standard spec 608, standard spec 610 and standard spec 611 as shown on the plans and as follows.

Prior to ordering drainage pipes and structures, the contractors shall verify related drainage information in the plan with the engineer. This shall include all information obtained from the bid item "Utility Line Opening" (ULO).

The joints for reinforced concrete pipe shall be sealed with either mastic or internal rubber gaskets as described in standard spec 607.2.3 and standard spec 607.2.4. The use of mortar as a pipe joint method is prohibited.

All round and elliptical shape storm sewer shall be laid on a 6-inch minimum thick bed of Base Aggregate Dense Graded 1 ¼-Inch in accordance to standard spec 305.2.1 or when water is encountered, No. 1 coarse concrete aggregate in accordance to standard spec 501.2.5.4. Bedding for round and elliptical pipe shall be incidental to the installation costs of the round or elliptical pipe. Bedding for all storm sewer box is specified under the respective storm sewer box items and shall be paid for under the respective storm sewer box item.

Dewatering shall be incidental to the unit price for all storm sewer pipe installation.

All inlets shall be constructed rectangular in shape. All structures shall be reinforced concrete. Concrete brick and block options are prohibited.

All structures (manholes and inlets) shall be constructed on a 12-inch minimum thick bed of Base Aggregate Dense Graded 1 ¼-Inch in accordance to standard spec 305.2.1 or when water is encountered, No. 1 coarse concrete aggregate in accordance to standard spec 501.3.6.4.5, and as shown on the plans. Bedding for structures shall be incidental to the installation costs of the structure.

All structures (manholes and inlets) shall be bid as field poured, and shall be constructed as field poured unless the contractor receives approval of the City of Madison design engineer to precast the structures. This approval will not be given until it can be confirmed that the proposed design will fit existing conditions including possible utility conflicts. No precast approval shall be authorized for any structure until such time as all ULO's that could affect the structure/structures in question have been completed and the City of Madison design engineer has had a minimum of three working days to review all the relevant information.

Further, all precast structures shall have shop drawings submitted to the City of Madison design engineer. The city design engineer shall have three days to approve or reject the shop drawings. Under no circumstance shall a precast structure be brought to or used on the construction site without a written approval of the shop drawing for that structure prior to its use on site.

Station and offset for inlet structures, as given on the storm plans, shall not be used exclusively for final layout of the structure. The curb line in the area of the inlet shall be determined prior to pouring the inlet structure to assure proper location of the inlet relative to the curb line.

The costs to connect storm sewer to existing structures or pipes and the costs to plug pipes for future use including tapping the hole, placing the pipe and sealing the joint, furnishing and installing a plugging device as specified above, will be included in the unit price bid for the pipe of the type, class and diameter used. The cost for a concrete collar for storm sewer, where shown on the plans or directed by the engineer, will be paid for separately.

All existing inlet, manhole, and catch basin covers that are not being adjusted and reused on the project shall be carefully removed and stockpiled at a location on the right-of-way outside the construction limits for pickup by City of Madison personnel. The contractor shall contact Rennie Richardson, City of Madison Department of Public Works at (608) 267-1973 to schedule pickup.

Any frames or grates and all other material that the city does not want shall be removed from the right-of-way and disposed of by the contractor.

16. Sanitary Sewer – Madison, General.

Utility Standard Specifications: Perform work in accordance to these provisions and City of Madison Standard Specifications for Public Works Construction-Latest Edition.

Work Sequence: Construct sanitary sewer main and laterals in stages to accordance with the traffic control plan.

Contractor shall provide bypass pumping of sanitary sewage to maintain sanitary sewer service when new Sewer Access Structures are being constructed over the existing mains.

Shop Drawings and Samples: Submit shop drawings and samples required in these Special Provisions and for the following:

- Sanitary Sewer Pipe Material
- Sanitary Sewer Access Structure Casting and Cover
- Sanitary Sewer Access Structure Internal Chimney Seal
- Precast Sanitary Sewer Access Structure

Contractor's responsibilities shall include:

- Review shop drawings and samples prior to submittal;
- Determine and verify field measurements, field construction criteria, catalog numbers and similar data, and conformance with specifications;
- Coordinate each submittal with requirements of work and of Special Provisions;
- Notify City Engineer or City Engineer's Representative, in writing, at time of submittal of deviations in submittals from requirements of Special Provisions.

NOTE: Do not begin any fabrication or work, which requires submittals, until return of submittals with City Engineer's or City Engineer Representative's approval.

Submittals shall contain:

A. Date of submittal and dates of previous submittals.

B. Project title and number.

C. Contract identification.

D. Names of contractor, supplier, and manufacturer.

E. Identification of product, with identification numbers, and drawing and specification section numbers.

F. Field dimensions clearly identified.

G. Identification of details required on drawings and in specifications.

H. Manufacturer and model number (give dimensions and provide clearances).

I. Relation to adjacent or critical features or work or materials.

J. Applicable standards, such as ASTM, and identification of deviations from contract documents.

K. Identification of revisions on resubmittals.

L. Eight-inch and three-inch blank space for contractor and City Engineer stamps.

M. Contractor's stamp, signed, certifying to review of submittal, verification of products, field measurement, field construction criteria, and coordination of information with submittal with requirements of work and Special Provisions.

Resubmittal requirements shall include:

A. Corrections or changes in submittals required by Civil Engineer. Resubmittals are required until approved.

B. Shop Drawings and Product Data: Review initial drawings or data and resubmit as specified for initial submittal. Indicate changes, which have been made other than those requested by City Engineer.

Provide complete copies of required submittals as follows:

Shop Drawings:	Six copies
Test Results:	Three copies

Deliver required copies of submittals to Mark Moder, City of Madison, Department of Public Works, City-County Building, Room 115, 210 Martin Luther King Jr. Boulevard, Madison, Wisconsin 53710.

Protection of Sewers: Take adequate measures to prevent impairment of operation of existing sanitary sewer and storm sewer systems. Prevent construction material, concrete, earth, or other debris from entering sewer or sewer structure.

Divert sewage flow interfering with construction to sanitary sewers leading away from construction area. Prior to commencing excavation and construction, submit to City Engineer for review, detailed plans, including routing and connections, required to handle and dispose of sanitary wastes. By reviewing the plan, the City Engineer neither accepts responsibility for adequacy thereof nor for damages to public or private property resulting there from, such responsibilities remain with contractor.

Sanitary sewer damaged or removed during construction, which is to remain in service, shall be restored or replaced to original material and workmanship used for original construction.

All Castings from removed and abandoned structures shall be delivered to City Engineering's Service Building, 1602 Emil Street, Madison, Wisconsin.

In accordance to the City of Madison Standard Specifications for Public Works Construction – Latest Addition, "Pipe to be removed that is in the same trench as a new pipe shall not be compensated as remove pipe and shall be considered to be part of the new pipe installation."

17. Removing Brick Pilasters, Item 204.9060.S.01.

A Description
This special provision describes removing brick pilasters in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C Construction
Remove brick pilasters in accordance to the applicable portions of standard spec 204 and as herein provided.

Deennergize and remove wiring necessary to remove light fixtures. Remove wiring to proposed finish grade and abandon the remaining portion in compliance with State Electric Code.

D Measurement
The department will measure Removing Brick Pilasters as each individual brick pilaster, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.01	Removing Brick Pilasters	Each

204-025 (20041005)

18. Removing Commercial Signs, Item 204.9060.S.02.

A Description
This special provision describes removing commercial signs in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C Construction
Remove commercial signs in accordance to the applicable portions of standard spec 204 and as herein provided.

De-ennergize and remove wiring necessary to remove commercial sign and lights. Remove wiring to proposed finish grade and abandon the remaining portion in compliance with State Electric Code.

D Measurement
The department will measure Removing Commercial Signs as each individual sign, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.02	Removing Commercial Signs	Each

204-025 (20041005)

19. Removing Light Poles, Item 204.9060.S.03.

A Description
This special provision describes removing light poles in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C Construction
Remove commercial signs in accordance to the applicable portions of standard spec 204 and as herein provided.

Deennergize and remove wiring necessary to remove light poles. Remove wiring to proposed finish grade and abandon the remaining portion in compliance with State Electric Code.

D Measurement
The department will measure Removing Light Poles as each individual pole, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.03	Removing Light Poles	Each

204-025 (20041005)

20. Removing Concrete Steps, Item 204.9165.S.01.

A Description
This special provision describes removing concrete steps in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Concrete Steps as square foot, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9165.S.01	Removing Concrete Steps	SF
204-025 (20041005)		

21. 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, 305, and 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 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)

22. QMP HMA Pavement Nuclear Density.

A Description

Replace standard spec 460.3.3.2 (1) and 460.3.3.2 (4) with the following:

(1) This special provision describes density testing of in-place HMA pavement with the use of nuclear density gauges. Conform to standard spec 460 as modified in this special provision.

(2) Provide and maintain a quality control program defined as all activities and documentation of the following:

1. Selection of test sites.
2. Testing.
3. Necessary adjustments in the process.
4. Process control inspection.

(3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required procedures. Obtain the CMM from the department's web site at:
http://roadwaystandards.dot.wi.gov/standards/cmm/index.htm

(4) The department's Materials Reporting System (MRS) software allows contractors to submit data to the department electronically, estimate pay adjustments, and print selected reports. Qualified personnel may obtain MRS software from the department's web site at:
http://www.atwoodsystems.com/mrs

B Materials

B.1 Personnel

(1) Perform HMA pavement density (QC, QV) testing using a HTCP certified nuclear technician I, or a nuclear assistant certified technician (ACT-NUC) working under a certified technician.

(2) If an ACT is performing sampling or testing, 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.2 Testing

(1) Conform to ASTM D2950 and CMM 8.15 for density testing and gauge monitoring methods. Perform nuclear gauge measurements using gamma radiation in the backscatter position. Perform each test for 4 minutes of nuclear gauge count time.

B.3 Equipment

B.3.1 General

(1) Furnish nuclear gauges from the department's approved product list at http://www.dot.wisconsin.gov/business/engrserv/approvedprod.htm.

(2) Have the gauge calibrated by the manufacturer or an approved calibration service within 12 months of its use on the project. Retain a copy of the manufacturer's calibration certificate with the gauge.

(3) Prior to each construction season, and following any calibration of the gauge, the contractor must perform calibration verification for each gauge using the reference blocks located in the department's central office materials laboratory. To obtain information or schedule a time to perform calibration verification, contact the department's Radiation Safety Officer at:

Materials Management Section
3502 Kinsman Blvd.
Madison, Wisconsin 53704
Telephone: (608) 243-5998

B.3.2 Correlation of Nuclear Gauges

B.3.2.1 Correlation of QC and QV Nuclear Gauges

(1) Select a representative section of the compacted pavement prior to or on the first day of paving for the correlation process. The section does not have to be the same mix design.

(2) Correlate the 2 or more gauges used for density measurement (QC, QV). The QC and QV gauge operators will perform the correlation on 5 test sites jointly located. Record each density measurement of each test site for the QC, QV and back up gauges.

(3) Calculate the average of the difference in density of the 5 test sites between the QC and QV gauges. Locate an additional 5 test sites if the average difference exceeds 1.0 lb/ft^3. Measure and record the density on the 5 additional test sites for each gauge.

(4) Calculate the average of the difference in density of the 10 test sites between the QC and QV gauges. Replace one or both gauges if the average difference of the 10 tests exceeds 1.0 lb/ft^3 and repeat correlation process from B.3.2.1 (2).

(5) Furnish one of the QC gauges passing the allowable correlation tolerances to perform density testing on the project.

B.3.2.2 Correlation Monitoring

(1) After performing the gauge correlation specified in B.3.2.1, establish a project reference site approved by the department. Clearly mark a flat surface of concrete or asphalt or other material that will not be disturbed during the duration of the project. Perform correlation monitoring of the QC, QV, and all back-up gauges at the project reference site.

(2) Conduct an initial 10 density tests with each gauge on the project reference site and calculate the average value for each gauge to establish the gauge's reference value. Use the gauge's reference value as a control to monitor the calibration of the gauge for the duration of the project.

(3) Check each gauge on the project reference site a minimum of one test per day if paving on the project. Calculate the difference between the gauge's daily test result and its reference value. Investigate if a daily test result is not within 1.5 lb/ft^3 of its reference value. Conduct 5 additional tests at the reference site once the cause of deviation is corrected. Calculate and record the average of the 5 additional tests. Remove the gauge from the project if the 5-test average is not within 1.5 lb/ft^3 of its reference value established in B.3.2.2(2).

(4) Maintain the reference site test data for each gauge at an agreed location.

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

(1) A lot consists of the tonnage placed each day for each layer and target density specified in standard spec 460.3.3.1. A lot may include partial sublots.

(2) Divide the roadway into sublots. A sublot is 1500 lane feet for each layer and target density.

(3) A sublot may include HMA placed on more than one day of paving. Test sublots at the pre-determined random locations regardless of when the HMA is placed. No additional testing is required for partial sublots at the beginning or end of a day's paving.

(4) If a resulting partial quantity at the end of the project is less than 750 lane feet, include that partial quantity with the last full sublot of the lane. If a resulting partial quantity at the end of the project is 750 lane feet or more, create a separate sublot for that partial quantity.

(5) Randomly select test locations for each sublot as specified in CMM 8.15 prior to paving and provide a copy to the engineer. Locate and mark QC density test sites when performing the tests. Perform density tests prior to opening the roadway to traffic.

(6) Use Table 1 to determine the number of tests required at each station, depending on the width of the lane being tested. When more than one test is required at a station, offset the tests 10 feet longitudinally from one another to form a diagonal testing row across the lane.

Lane Width	No. of Tests	Transverse Location
5 ft or less	1	Random
Greater than 5 ft to 9 ft	2	Random within 2 equal widths
Greater than 9 ft	3	Random within 3 equal widths

Table 1

B.4.1.2 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) A lot represents a combination of the total daily tonnage for each layer and target density.

(2) Each side road, crossover, turn lane, ramp, and roundabout must contain at least one sublot for each layer.

(3) If a side road, crossover, turn lane, or ramp is 1500 feet or longer, determine sublots and random test locations as specified in B.4.1.1.

(4) If a side road, crossover, turn lane, or ramp is less than 1500 feet long, determine sublots using a maximum of 750 tons per sublot and perform the number of random tests as specified in Table 2.

Side Roads, Turn Lanes, Crossovers, Ramps, Roundabouts: Sublot/Layer tonnage	Minimum Number of Tests Required
25 to 100 tons	1
101 to 250 tons	3
251 to 500 tons	5
501 to 750 tons	7

Table 2

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

(1) Calculate the average sublot densities using the individual test results in each sublot.

(2) If all sublot averages are no more than one percent below the target density, calculate the daily lot density by averaging the results of each random QC test taken on that day's material.

(3) If any sublot average is more than one percent below the target density, do not include the individual test results from that sublot when computing the lot average density and remove that sublot's tonnage from the daily quantity for incentive. The tonnage from any such sublot is subject to disincentive pay according to standard spec 460.5.2.2.

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.2.2 Width of 5 Feet or Less

(1) If all sublot test results are no more than 3.0 percent below the minimum target density, calculate the daily lot density by averaging all individual test results for the day.

(2) If a sublot test result is more than 3.0 percent below the target density, the engineer may require the unacceptable material to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine the limits of the unacceptable material according to B.4.3.

B.4.2.3 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.4 Documentation

(1) Document QC density test data as specified in CMM 8.15. Provide the engineer with the data for each lot within 24 hours of completing the QC testing for the lot.

B.4.3 Corrective Action

(1) Notify the engineer immediately when an individual test is more than 3.0 percent below the specified minimum in standard spec 460.3.3.1. Investigate and determine the cause of the unacceptable test result.

(2) The engineer may require unacceptable material specified in B.4.3(1) to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine limits of the unacceptable area by measuring density of the layer at 50-foot increments both ahead and behind the point of unacceptable density and at the same offset as the original test site. Continue testing at 50-foot increments until a point of acceptable density is found as specified in standard spec 460.5.2.2(1). Removal and replacement of material may be required if extended testing is in a previously accepted sublot. Testing in a previously accepted sublot will not be used to recalculate a new lot density.

(3) Compute unacceptable pavement area using the product of the longitudinal limits of the unacceptable density and the full sublot width within the traffic lanes or shoulders.

(4) Retesting and acceptance of replaced pavement will be according to standard spec 105.3.

(5) Tests indicating density more than 3.0 percent below the specified minimum, and further tests taken to determine the limits of unacceptable area, are excluded from the computations of the sublot and lot densities.

(6) If 2 consecutive sublot averages within the same paving pass and same target density are more than one percent below the specified target density, notify the engineer and take necessary corrective action. Document the locations of such sublots and the corrective action that was taken.

B.5 Department Testing

B.5.1 Verification Testing

(1) The department will have a HTCP certified technician, or ACT working under a certified technician, perform verification testing. The department will test randomly at locations independent of the contractor's QC work. The department will perform verification testing at a minimum frequency of 10 percent of the sublots and a minimum of one sublot per mix design. The sublots selected will be within the active work zone. The contractor will supply the necessary traffic control for the department's testing activities.

(2) The QV tester will test each selected sublot using the same testing requirements and frequencies as the QC tester.

(3) If the verification sublot average is not more than one percent below the specified minimum target density, use the QC tests for acceptance.

(4) If the verification sublot average is more than one percent below the specified target density, compare the QC and QV sublot averages. If the QV sublot average is within 1.0 lb/ft^3 of the QC sublot average, use the QC tests for acceptance.

(5) If the first QV/QC sublot average comparison shows a difference of more than 1.0 lb/ft^3 each tester will perform an additional set of tests within that sublot. Combine the additional tests with the original set of tests to compute a new sublot average for each tester. If the new QV and QC sublot averages compare to within 1.0 lb/ft^3, use the original QC tests for acceptance.

(6) If the QV and QC sublot averages differ by more than 1.0 lb/ft^3 after a second set of tests, resolve the difference with dispute resolution specified in B.6. The engineer will notify the contractor immediately when density deficiencies or testing precision exceeding the allowable differences are observed.

B.5.2 Independent Assurance Testing

(1) Independent assurance is unbiased testing the department performs to evaluate the department's verification and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform the independent assurance review according to the department's independent assurance program.

B.6 Dispute Resolution

(1) The testers may perform investigation in the work zone by analyzing the testing, calculation, and documentation procedures. The testers may perform gauge correlation according to B.3.2.1.

(2) The testers may use correlation monitoring according to B.3.2.2 to determine if one of the gauges is out of tolerance. If a gauge is found to be out of tolerance with its reference value, remove the gauge from the project and use the other gauge's test results for acceptance.

(3) If the testing discrepancy cannot be identified, the contractor may elect to accept the QV sublot density test results or retesting of the sublot in dispute within 48 hours of paving. Traffic control costs will be split between the department and the contractor.

(4) If investigation finds that both gauges are in error, the contractor and engineer will reach a decision on resolution through mutual agreement.

B.7 Acceptance

(1) The department will not accept QMP HMA Pavement Nuclear Density if a non-correlated gauge is used for contractor QC tests.

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

(1) Costs for all sampling, testing, and documentation required under this special provision are incidental to the 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.

E.2 Disincentive for HMA Pavement Density

(1) The department will administer density disincentives according to standard spec 460.5.2.2.

E.3 Incentive for HMA Pavement Density

(1) Delete standard spec 460.5.2.3.

(2) If the lot density is greater than the minimum specified in standard spec table 460-3 and all individual air voids test results for that mixture are within +1.0 percent or -0.5 percent of the design target in standard spec table 460-2, the department will adjust pay for that lot as follows:

Percent Lot Density Above Minimum	Pay Adjustment Per Ton
From -0.4 to 1.0 inclusive	$0
From 1.1 to 1.8 inclusive	$0.40
More than 1.8	$0.80

(3) The department will adjust pay under the Incentive Density HMA Pavement bid item. Adjustment under this item is not limited, either up or down, to the bid amount shown on the schedule of items.

(4) If a traffic lane meets the requirements for disincentive, the department will not pay incentive on the integrally paved shoulder.

(5) Submit density results to the department electronically using the MRS software. The department will validate all contractor data before determining pay adjustments.

460-020 (20100709)

23. Reheating HMA Pavement Longitudinal Joints, Item 460.4100.S.

A Description

This special provision describes reheating the abutting edge of the previously compacted surface layer in the adjacent lane while paving mainline asphalt pavements.

B (Vacant)

C Construction

C.1 Equipment

Provide a self-contained heating unit that heats by convection only. Do not use forced air to enhance the flame. Provide a fireproof barrier between the flame and the heater's fuel source. The heater must produce a uniform distribution of heat within the heat box. Provide automatic controls to regulate the heater output and shutoff the heater when the paver stops or the heater control system loses power.

Mount the heater on the paver inside the paver's automatic leveling device.

C.2 Reheating Joints

Evenly reheat at least an 8 inch (200 mm) wide strip of the previously compacted surface layer in the adjacent lane as follows:

1. Ambient air temperature at or above 60 degrees F (15 degrees C), reheat to 290 to 340 degrees F (143-171 degrees C).
2. Ambient air temperature below 60 degrees F (15 degrees C), reheat to 240 to 290 degrees F (115-143 degrees C).

The engineer may modify the required joint reheat temperatures to adjust for weather, wind, and other field conditions. Coordinate the heater output and paver speed to achieve the required joint reheat temperature without visible smoke emission.

D Measurement

The department will measure Reheating HMA Pavement Longitudinal Joints by the full 100-foot (40 m) survey station acceptably completed as measured along the joint. The department will measure partial stations as full stations.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
460.4100.S	Reheating HMA Pavement Longitudinal Joints	STA

Payment is full compensation for all the work required under this bid item.
460-015 (20090901)

24. Precast Concrete Box Culvert, 8 FT x 3 FT, Item 504.2000.S.01; 11 FT x 3 FT, Item 504.2000.S.02.

A Description

This special provision describes furnishing and installing precast concrete box culverts of the size and length shown on the plans, and in accordance to the requirements of the standard specifications and as hereinafter provided.

B Materials

Provide materials and fabricate Precast Concrete Box Culvert in accordance to Precast Reinforced Concrete Box Sections for Culverts, Storm Drains and Sewers AASHTO Designation M259 or ASTM C1433, except that the concrete mixture shall contain not less than 565 pounds of Portland cement, blended cement or Portland cement plus pozzolanic admixture per cubic yard. Slab thickness, areas of reinforcement, and other details shall be as shown on the plans.

C (Vacant)

D Measurement
The department will measure Precast Concrete Box Culvert, (Size), completed in accordance to the contract and accepted, in length by the linear foot in place, acceptably completed. The box culvert will be measured on the centerline of the box along the flow line.

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

ITEM NUMBER	DESCRIPTION	UNIT
504.2000.S.01	Precast Concrete Box Culvert, 8 FT x 3 FT	LF
504.2000.S.02	Precast Concrete Box Culvert, 11 FT x 3 FT	LF

Payment is full compensation for furnishing, hauling and placing the box, including joint ties, mastic, bedding, connections, and waterproofing at connections, concrete beams, and concrete floor.

25. Culvert Pipe Concrete Collar, Item 520.8000.S.

A Description
This special provision describes constructing a concrete collar as shown on the plans and as hereinafter provided.

B Materials
Provide concrete masonry in accordance to standard spec 501.

C (Vacant)

D Measurement
The department will measure Culvert Pipe Concrete Collar by the unit complete in place.

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

ITEM NUMBER	DESCRIPTION	UNIT
520.8000.S	Culvert Pipe Concrete Collar	Each

Payment is full compensation for furnishing, hauling and placing of all materials; and for excavation, backfilling and disposing of excess material.
(090208) 520-020

26. Wall Modular Block Gravity, Item 532.0200.S.

A Description
This special provision describes designing, furnishing materials, and erecting a permanent earth retention system in accordance to the lines, dimension, elevations and

details as shown on the plans and provided in the contract. The design life of the wall and all wall components shall be 75 years.

B Materials

B.1 Proprietary Modular Block Gravity Wall Systems

The department specifies approved modular block gravity wall products on the department's approved products list.

Proprietary wall systems may be used for this work, but must conform to the requirements of this specification and be pre-approved for use by the departments' Bureau of Structures, Structures Development Section. The name of the companies supplying pre-approved material shall be furnished within 25 days after the award of contract. The department maintains a list of pre-approved systems of retaining walls. To be eligible for use on this project, a system must have been pre-approved and added to that list prior to the bid opening date.

Applications for pre-approval may be submitted at any time. Applications must be prepared in accordance to the requirements of chapter 14 of the department's Bridge manual. Information and assistance with the pre-approval process can be obtained by contacting the Structures Development Section in Room 601 of the Hill Farms State Transportation Building in Madison or by calling (608) 266-8494.

B.2 Design Requirements

It is the responsibility of the contractor to supply a design and supporting documentation as required by this special provision for review by the department to show that the proposed wall design is in compliance with the design specifications. The following shall be submitted to the engineer for review and acceptance no later than 21 days before wall construction will begin.

The design/shop plans shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the project identification number and structure number. Design calculations and notes shall be on 8½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans and calculations shall be signed, sealed, and dated by a professional engineer licensed in the State of Wisconsin. Four copies of the shop drawings and two copies of the design calculations and supporting materials shall be submitted.

The design of the Modular Block Gravity Wall shall be in conformance to the latest edition of the AASHTO Standard Specifications for Highway Bridges including interim specifications, the standard specifications, and standard engineering design procedures as determined by the department. The design must include analyses that clearly show the factors of safety for overturning, sliding, and soil bearing stress. The width of the modular block from front face to back face of the wall shall be given in the design computations and shown on the wall shop drawings.

The minimum embedment to the bottom of the modular block shall be 1 foot 6 inches, or as specified in the plan.

B.3 Wall System Components
Materials furnished under this contract shall conform to the requirements hereinafter provided.

B.3.1 Backfill
Wall Backfill, Type A, shall comply with the requirements for coarse aggregate No. 1 as given in 501.2.5.4 of the standard specifications. All backfill placed within a zone from the base of the leveling pad to the top of the final layer of wall facing units and within 1 foot behind the back face of the wall shall be Wall Backfill, Type A. This includes all material used to fill openings in the wall facing units.

A layer of Geotextile Fabric Type "DF" (Schedule B) shall be placed vertically between the retained soil and the Type A backfill. The geotextile fabric shall extend from the top of the leveling pad to 6 inches below the surface of the retained soil. The geotextile shall then wrap across the top of the Type A backfill to the back of block wall facing.

B.3.2 Wall Facing
Provide wall facing units that consist of precast modular concrete blocks. All units shall incorporate a mechanism or devices that will develop a mechanical connection between vertical block layers. Units that are cracked, chipped or have other imperfections in accordance to ASTM C1372 or excessive efflorescence shall not be used within the wall. A single block type and style shall be used throughout each wall. The color and surface texture of the block shall be as given on the plan, or chosen by the engineer.

The top course of facing units shall be a solid precast concrete unit designed to be compatible with the remainder of the wall. The finishing course shall be bonded to the underlying facing units with a durable, high strength, flexible adhesive compound compatible with the block material. A formed cast-in-place concrete cap may also be used to finish the wall. A cap of this type shall be designed to have texture, color, and an appearance that complements the remainder of the wall. The vertical dimension of the cap shall not be less than 3½ inches. Expansion joints shall be placed in the cap to correspond with each 24-inch change in vertical wall height or at a maximum spacing of 10 feet. Concrete for all cast-in-place caps shall be Grade A and shall conform to the requirements of 501.3 of the standard specifications.

Block dimensions may vary no more than ±1/8 inch from the standard values published by the manufacturer, in accordance to ASTM C1372. Blocks must have a minimum depth (front face to back face) of 8 inches. The minimum front face thickness of blocks shall be 4 inches measured perpendicular from the front face to inside voids greater than 4 square inches. Also the minimum allowed thickness of any other portion of the block is 2 inches. The front face of the blocks shall conform to plan requirements for color, texture, or patterns.

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

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

(1) Test shall be run using a 3% saline solution.

(2) Test results that meet either of the listed requirements for Freeze-Thaw Loss are acceptable

All blocks shall be certified as to strength, absorption, and freeze-thaw requirements unless, due to contract changes after letting, certified blocks are not available when required. At the time of delivery of the certified blocks, furnish the engineer a certified test report from a department-approved independent testing laboratory for each lot of modular blocks. The certified test report shall clearly identify the firm conducted the sampling and testing, the type of block, the date sampled, name of the person conducting the sampling, the represented lot, the number of blocks in the lot, and the specific test results for each of the stated requirements of this specification. A lot shall not exceed 5000 blocks. The certified test results will represent all blocks within the lot. Each pallet of blocks delivered shall bear lot identification information. Block lots that do not meet the requirements of this specification or blocks without supporting certified test reports will be rejected and shall be removed from the project at the contractor's expense.

A department-approved independent testing laboratory shall control and conduct all modular block sampling and testing for certification. Prior to sampling, the manufacturer's representative shall identify all pallets of modular blocks contained in each lot. All pallets of blocks within the lot shall be numbered and marked to facilitate random sample selection. The representative of the independent testing laboratory shall identify five pallets of blocks by random numbers and shall then select one block from each of these pallets. Solid blocks used as a finishing or top course shall not be selected. The selected blocks shall remain under the control of the person who conducted the sampling until shipped or delivered to the testing laboratory. All pallets of blocks within a lot shall be strapped or wrapped to secure the contents and tagged or marked for identification. The engineer will reject any pallet of blocks delivered to the project without intact security measures. The contractor shall remove all rejected blocks from the project at no expense to the department.

The department may conduct testing of certified or non-certified modular blocks lots delivered to the project. The department will not do freeze-thaw testing on blocks less than 45 days old. If a random sample of five blocks of any lot tested by the department fails to meet any of the requirements of this specification (nonconforming), the contractor

shall remove from the project site all blocks from the failed lot that have not been installed in the finished work, at no cost to the department, unless the engineer allows otherwise. Nonconforming blocks installed in the finished work will be considered approved by the department as stated in subsection 106.5(2) of the standard specifications and any adjustment to the contract price will not exceed the price of the blocks charged by the supplier.

B.3.3 Leveling Pad

For all walls over 5 feet tall measured from the top of the leveling pad to the top of the wall, the wall leveling pad shall consist of a poured concrete masonry pad made from Grade A concrete as specified in section 501 of the standard specifications. The depth of the leveling pad shall be as shown on the plans or 6-inches minimum. The leveling pad shall be as wide as the blocks plus 6-inches. Six inches of leveling pad shall extend beyond the front face of the blocks. The bottom of the blocks shall be horizontal and 100% of the block surface shall bear on the leveling pad. A concrete leveling pad shall be used for the entire length of the wall. All walls with a Structure Number assigned (such as R-XX-XXX) shall be built using the concrete leveling pad given above. The leveling pad shall step to follow the general slope of the ground line. The leveling pads steps shall keep the bottom of the wall within one block's thickness of the minimum embedment, i.e. minimum embedment plus up to the thickness of one block. Additional embedment may be detailed but will not be measured for payment.

On walls less than or equal to 5 feet in height without a wall number assigned, a compacted leveling pad made from base aggregate dense 1¼ inch as given in section 305 of the standard specifications may be used. The depth of the aggregate leveling pad shall be as shown on the plans or 12-inches minimum. The aggregate leveling pad shall be as wide as the blocks plus 12 inches with 12 inches of pad extending beyond the front face of the wall.

C Construction

C.1 General

Construct the modular block gravity wall in accordance to the manufacturer's instructions, at the locations and to the dimensions shown on the plan and as directed by the engineer. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the front face of the wall.

Place materials in the areas as indicated on the plans and as detailed in this specification. Backfill lifts shall be no more than 8-inches in depth. Backfilling shall closely follow erection of each course of wall facing units.

Compact each layer of wall backfill Type A with at least three passes of lightweight manually operated compaction equipment acceptable to the engineer.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall facing units. At no expense to the department, correct any such damage or misalignment as directed by the engineer.

Do not operate tracked or wheeled equipment within 3 feet of the back face of the blocks. The engineer may order the removal of any large or heavy equipment that may cause damage or misalignment of the wall facing units.

After construction of the wall, restore the surrounding area located above and below all precast block retaining wall sites to its original condition and to the finished details on the plans.

C.2 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. The allowable soil bearing capacity is given on the plan. After completion of excavation, the department's Regional Soils Engineer will inspect the site and determine if the foundation is adequate for the intended loads. Allow the region's Soils Engineer two working days to perform the inspection.

D Measurement

The department will measure Wall Modular Block Gravity in area by the square foot of face on a vertical plane between the top of the leveling pad and a line indicating the top of wall including wall cap or copings as required and shown on the plans. Unless directed by the engineer, wall area constructed above or below these limits will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
532.0200.S	Wall Modular Block Gravity	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of surplus materials; supplying all necessary wall components to produce a functional system including cap and copings; constructing the retaining system; providing backfill, backfilling, and compacting the backfill; furnishing and installing geotextile fabric; and for furnishing all tools, labor, equipment, and incidentals necessary to complete the contract work. Parapets, railings, and other items above the wall cap or coping will be paid for separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.

532-030 (20110615)

27. Adjusting Manhole Covers.

This work shall be in accordance to the pertinent provisions of standard spec 611, as shown on the plans, and as hereinafter provided.

Revise standard spec 611.3.7 by deleting the last paragraph.

Set the manhole frames so that they comply with the surface requirements of standard spec 450.3.2.9. At the completion of the paving, a 6-foot straightedge shall be placed over the centerline of each manhole frame parallel to the direction of traffic. A measurement shall be made at each side of the frame. The two measurements shall be averaged. If this average is greater than 5/8 inches, reset the manhole frame to the correct plane and elevation. If this average is 5/8 inches or less but greater than 3/8 inches, the manhole frame shall be allowed to remain in place but shall be paid for at 50 percent of the contract unit price.

If the manhole frame is higher than the adjacent pavement, the two measurements shall be made at each end of the straightedge. These two measurements shall be averaged. The same criteria for acceptance and payment as above, shall apply.
611-005 (20030820)

28. Landscape Planting Surveillance and Care Cycles.

If the care specialist fails to perform any of the required care cycles as specified in standard spec 632.3.19.1, the department will assess daily damages in the amount of $500 to cover the cost of performing the work with other forces. The department will assess these damages for each day the requirements of the care cycle remain incomplete, except when the engineer extends the required time period.
632-005 (20070510)

29. Nighttime Work Lighting-Stationary.

A Description
Provide portable lighting as necessary to complete nighttime work. Nighttime operations consist of work specifically scheduled to occur after sunset and before sunrise.

B (Vacant)

C Construction
C.1 General
This provision shall apply when providing, maintaining, moving, and removing portable light towers and equipment-mounted lighting fixtures for nighttime stationary work operations, for the duration of nighttime work on the contract.

At least 14 days prior to the nighttime work, furnish a lighting plan to the engineer for review and acceptance. Address the following in the plan:

1. Layout, including location of portable lighting – lateral placement, height, and spacing. Clearly show on the layout the location of all lights necessary for every aspect of work to be done at night.

2. Specifications, brochures, and technical data of all lighting equipment to be used.

3. The details on how the luminaires will be attached.

4. Electrical power source information.

5. Details on the louvers, shields, or methods to be employed to reduce glare.

6. Lighting calculations. Provide illumination with average to minimum uniformity ratio of 5:1 or less throughout the work area.

7. Detail information on any other auxiliary equipment.

C.2 Portable Lighting

Provide portable lighting that is sturdy and free standing and does not require any guy wires, braces, or any other attachments. Furnish portable lighting capable of being moved as necessary to keep up with the construction project. Position the portable lighting and trailers to minimize the risk of being impacted by traffic on the roadway or by construction traffic or equipment. Provide lightning protection for the portable lighting. Portable lighting shall withstand up to 60 mph wind velocity.

If portable generators are used as a power source, furnish adequate power to operate all required lighting equipment without any interruption during the nighttime work. Provide wiring that is weatherproof and installed according to local, state, federal (NECA and OSHA) requirements. Equip all power sources with a ground-fault circuit interrupter to prevent electrical shock.

C.3 Light Level and Uniformity

Position (spacing and mounting height) the luminaires to provide illumination with an average to minimum uniformity ratio of 5:1 or less throughout the work area.

Illuminate the area as necessary to incorporate construction vehicles, equipment, and personnel activities.

C.4 Glare Control

Design, install, and operate all lighting supplied under these specifications to minimize or avoid glare that interferes with all traffic on the roadway or that causes annoyance or discomfort for properties adjoining the roadway. Locate, aim, and adjust the luminaires to provide the adequate level of illumination and the specified uniformity in the work area without the creation of objectionable glare.

Provide louvers, shields, or visors, as needed, to reduce any objectionable levels of glare. As a minimum, ensure the following requirements are met to avoid objectionable glare on the roadways open to traffic in either direction or for adjoining properties:

1. Aim tower-mounted luminaires, either parallel or perpendicular to the roadway, so as to minimize light aimed toward approaching traffic.

2. Aim all luminaires such that the center of beam axis is no greater than 60 degrees above vertical (straight down).

If lighting does not meet above-mentioned criteria, adjust the lighting within 24 hours.

C.5 Continuous Operation
Provide and have available sufficient fuel, spare lamps, generators, and qualified personnel to ensure that the lights will operate continuously during nighttime operation. In the event of any failure of the lighting system, discontinue the operation until the adequate level of illumination is restored. Move and remove lighting as necessary.

D (Vacant)

E Payment
Costs for furnishing a lighting plan, and for providing, maintaining, moving, and removing portable lighting, tower mounted lighting, and equipment-mounted lighting required under this special provision are incidental to the contract.
643-010 (20100709)

30. Traffic Control Covering Signs, Item 643.0905.S.

A Description
This special provision describes covering sign messages, maintaining the sign covering, and removing the sign covering, as shown on the plan and as hereinafter provided. The covered sign message shall be unreadable during daytime and nighttime hours.

B Materials
Provide covering material of sufficient durability to withstand the effects of weather. Provide porous cloth or sheet aluminum covering. If porous cloth covers are provided, only provide those that do not allow light to reflect from the sign face at night.

Tape, paper, plastic, or sheet metal covers will not be allowed.

C Construction
If porous cloth covering is provided, fold porous cloth covers over the sign edges and secure to the back of the sign. When only a portion of the sign is to be covered, cover only the area of the sign designated to be covered with the cloth cover held tightly in place using a rope system or other system as approved by the engineer. Secure the cloth so that it will not flap against the sign face.

If sheet aluminum covers are provided, rivet the covering to the sign face. Provide rivets that are a maximum of 3/16-inch in diameter. When only a portion of the sign is to be covered, provide aluminum cover sheeting that has on its face the same color as the surrounding sign.

D Measurement
The department will measure Traffic Control Covering Signs in units for each sign covered. Multiple covers on the same sign will be paid for separately. Multiple coverings and removals of sign coverings on the same sign will be paid for separately.

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

ITEM NUMBER	DESCRIPTION	UNIT
643.0905.S	Traffic Control Covering Signs	Each

Payment is full compensation for furnishing, installing, maintaining, and removing sign covers.
643-040 (20050502)

31. Manhole Type 60, Item SPV.0060.01; Manhole Type 1 Special, Item SPV.0060.02.

A Description
Perform work in accordance to the applicable provisions of standard spec 611 and as detailed in the plans.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Manhole (Type) by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060. 01	Manhole Type 60	Each
SPV.0060. 02	Manhole Type 1 Special	Each

Payment is full compensation for providing all materials, including all masonry, conduit and sewer connections, steps and other fittings; for furnishing all excavating, backfilling, disposing of surplus material, and for cleaning out and restoring to work site, and all

incidentals necessary to complete the contract work except that the department will pay for covers, including frames, grates and lids separately.

32. Sanitary Manhole 4-FT, Item SPV.0060.03.

A Description

This work includes the construction of sanitary manholes consisting of precast reinforced concrete, adjusting rings, watertight joints, precast concrete base, precast reinforced concrete eccentric cone tops, steps, and all required excavation and granular backfill in accordance to the applicable provisions of standard spec 611, construction details on the plans.

B Materials

Provide minimum 4-foot inside diameter precast concrete manhole sections. Provide an eccentric type cone section with a minimum clear opening of 24 inch. Provide concrete with a compressive strength of 4000 psi and conforming to ASTM C478. Wall thicknesses of manholes shall conform to ASTM C76 for Class B concrete tongue and groove joint pipe.

Install steps in all sewer manholes as shown on the construction details, Neenah Type R-1980-E, or equal. Space manhole steps at 16-inch O.C. with an allowable tolerance of 1 inch plus or minus. Embed steps into the riser or conical top section wall a minimum of 3 inches and provide a 6-inch projection from the wall.

Use rubber ring gasket material for manhole joints. Plastic gaskets shall be preformed, high adhesion material, packaged ready for use between protective paper strips conforming to Federal Specification SS-S-00210, Type I, Rope Form; Ram-Nek, Mas-Stik, or equal.

Make manhole connections for sanitary sewer mains using flexible, watertight connections, Kor-N-Seal, or equal, for sewers up through 18-inch diameter. Provide all other sanitary sewer manhole connections made with A-Lok, Kor-N-Seal, or equal.

Provide concrete with steel reinforcement adjustment rings in conformance with ASTM C-478 that are 4 inches in thickness. A maximum of 10 inch for adjustment is allowed. Multiple grade rings are not allowed where one will suffice.

C Construction

Construct concrete benches in the interior bottom of sanitary sewer manholes which are precast or poured-in-place in the field. Extend benches to the top of each pipe to a maximum height of 42 inch. Smooth flow lines and provide uniform curves to promote flow through the manhole.

Remove any horizontal surfaces on the inside side of the manhole floor. Shape the floor to drain into the floor channel.

Build up manholes so that the cover and lid when placed will be at the established required grade.

Use precast reinforced bases in lieu of cast-in-place bases. Place bases on a bed of material at least 6 inches in depth, which meets the requirements for granular backfill. Compact bedding material and provide uniform support for the entire area of the base.

Provide precast shop drawings to engineer prior to fabrication or installation.

D Measurement
The department will measure Sanitary Manhole 4-FT as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Sanitary Manhole 4-FT	Each

Payment is full compensation for furnishing all work herein specified; for furnishing all materials including masonry, sanitary sewer connections, steps and other fittings; for furnishing all excavation, backfilling, disposal of surplus materials, and cleaning out and restoring the work site. Sanitary manhole covers will be paid for at a separate unit price.

33. Sanitary Manhole Cover, Item SPV.0060.04.

A Description
The work consists of furnishing and installing the cover, adjusting rings, and external chimney seal as shown in the construction details on the plans.

B Materials
Provide ductile iron manhole covers meeting the Standard Specifications for Gray Iron Castings of the ASTM A48. Provide Neenah R1710 covers with machined frame, Type B solid lid, concealed pick holes, self-sealing gaskets, and nonrocking. Cast the word “SANITARY” into the lid for sanitary manholes.

Provide concrete adjustment rings with steel reinforcement in conformance with ASTM C-478 and a minimum of 4-inch in thickness. A maximum of 10-inch for adjustment will be allowed. Multiple grade rings will not be allowed where one will suffice.

Provide internal chimney seal made of a rubber-type product, with a minimum thickness of 3/16 inches, a minimum unstretched width of 8 inches and extruded or molded from a high grade rubber compound conforming to the applicable requirements of ASTM C923. Fabricate the bands used for compressing the sleeve against the manhole from stainless steel conforming to ASTM A240, Type 304, for sheet and ASTM A479, Type 304, for rods. Any screws, bolts, or nuts used on these bands are to be stainless steel conforming

to ASTM F593 and F594, Type 304. The internal seal or its appurtenances are not to extend far enough into the manhole opening to restrict entry into or exit from the manhole.

Design manhole frame-chimney seals to prevent the leakage of water into the manhole at the area of the joint between the manhole frame and chimney continuously throughout a 20-year design life. The seal is to remain flexible, allowing repeated vertical movements of the frame because of frost lift, ground movement, or other causes of up to 2 inches and/or repeated horizontal movements of the frame because of thermal movement of the pavement or other causes of up to 1/2 inch, both rates of movement occurring at rates not less than 0.10 inch per minute. If the seal is an internal seal, it and its appurtenances are not to extend far enough into the manhole opening to restrict entry or exit from the manhole.

Provide seals made of only materials that have been successfully used in sanitary sewer construction for at least ten years and have proven to be resistant to sanitary sewerage; corrosion or rotting under wet or dry conditions; the gaseous environment in sanitary sewers and at road surfaces including common levels of ozone, carbon monoxide and other trace gases at the sites of installations; the biological environment in soils and sanitary sewers; chemical attacks by road salts, road oil and common street spillages or solvents used in street construction or maintenance; the temperature ranges, variations and gradients in and between manhole frames and chimneys in the climate of the location of construction; variations in moisture conditions and humidity; fatigue failure caused by a minimum of 30 freeze-thaw cycles per year; or vibrations because of traffic loadings; fatigue failure because of repeated variations of tensile, compressive and shear stresses and repeated elongation and compression; and any combination of the foregoing. The materials used are to be compatible with each other and the manhole materials.

C (Vacant)

D Measurement

The department will measure Sanitary Manhole Cover as 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.0060.04	Sanitary Manhole Cover	Each

Payment is full compensation for furnishing new covers, including frames, grates or lids, adjusting rings, chimney seal, and all other required materials.

34. Adjust Valve Box, Item SPV.0060.05.

A Description
This special provision describes adjusting, protecting, and maintaining accessibility, for the duration of the project, to water valve boxes located within the project limits.

B (Vacant)

C Construction
Adjust all water valve boxes to proposed elevations at locations shown on the plans.

Throughout the duration of the project, the contractor must ensure that the water valve boxes are adequately located and identified by blue paint, and that at all times, all water appurtenances remain accessible for operation by city forces. Exercise caution working adjacent to water facilities to avoid damage and ensure accessibility.

D Measurement
The department will measure Adjust Valve Box 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.0060.05	Adjust Valve Box	Each

Payment is full compensation for furnishing all excavation, backfilling, disposal of surplus materials, and water box clean-out.

Upon completion of the contract, the town will inspect all water facilities to ensure the water boxes are clean, properly aligned, and accessible. The contractor shall be responsible to make identified repairs and adjustments, and if any repairs or adjustments are made by the town, the cost will be charged to the contractor.

35. Water Main Gate Valve and Valve Box, 6-Inch, Item SPV.0060.06; 8-Inch, Item SPV.0060.07; 12-Inch, Item SPV.0060.68.

A Description
This work consists of furnishing and installing gate valves and valve boxes in accordance to Standard City of Monona Specifications, and as hereinafter provided.

B Materials
Provide valves manufactured in accordance to AWWA specifications C509. Design valves 12 inch and smaller for 200 psi working pressure. Provide valves having mechanical joint ends and clear water wall equal to the full nominal diameter of the valve. Valves are to be resilient wedged seated gate valves with nonrising stems, opening

by turning left and provided with 2-inch square operating nut with arrow cast in metal to indicate direction of opening.

Water valves are to be Clow, Mueller, or Waterous, open left. All valves are to have valve boxes, Tyler 6860 Series, or equal, cover marked "Water." Valve box length as required for depth shown on drawings.

Each valve must have manufacturer's name, pressure rating, and year of manufacture cast on body. Prior to shipping from factory, hydrostatically pressure test to equal twice specified working pressure.

C Construction
All gate valves and valve boxes shall be constructed at locations shown on the drawings.

Support valve boxes with a gate valve adapter to eliminate any settling or shifting of the box. The adapter shall be installed in lieu of hardwood bricking and shall be incidental to the valve and box installation.

D Measurement
The department will measure Water Main Gate Valve and Valve Box (Size) as 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.0060.06	Water Main Gate Valve and Valve Box, 6-Inch	Each
SPV.0060.07	Water Main Gate Valve and Valve Box, 8-Inch	Each
SPV.0060.68	Water Main Gate Valve and Valve Box, 12-Inch	Each

Payment is full compensation for furnishing all materials, including gate valve, valve box, valve support, water main connections, and other fittings; for furnishing all excavation, backfilling, disposal of surplus material, cleanup, and restoring site of work.

36. Water Main Hydrants, Item SPV.0060.08.

A Description
This work consists of furnishing and installing hydrants in accordance to City of Monona Standard Water Main Specifications and as hereinafter provided.

B Materials
Provide Waterous "Pacer," Model WB-67, open left hydrants with Pentagon operating nut, red in color, AWWA C-502 breakaway type with two 2 1/2-inch outlets and one 4 1/2-inch outlet with 16-inch break off section standpipe, meeting requirements of Standard City of Monona Specifications.

C Construction
Construct all hydrants at locations shown on the drawings.

Setting Hydrants. Locate hydrants as shown or as directed by the engineer and in such a manner that the possibility of damage from vehicles or injury to pedestrians will be minimized. All hydrants shall stand plumb and shall have the pumper nozzle aligned as per the owner's direction. Set hydrants to the established grade, or as directed. Connect each hydrant to the main with a 6-inch lead controlled by an independent gate valve. Set the hydrant and 6-inch gate valve on hardwood blocking.

Where a hydrant is set in soil that is pervious, provide drainage at the base of the hydrant by placing coarse gravel or crushed stone mixed with coarse sand from the bottom of the trench to at least 6 inches above the waste opening in the hydrant and to a distance of 1 foot around the elbow.

Brace the bowl of each hydrant against unexcavated earth at the end of the trench with concrete backing. Block or approved mechanical joint lugged retainer glands may be used.

Set the elevation of breakaway flange at a minimum of 2 inches and a maximum of 4 inch above proposed grade.

Provide drain pocket at base of hydrant of 1 cubic yard of crushed stone or rock conforming to requirements of ASTM C33, Gradation Number 2.

Backfill and compact as specified for adjacent water main.

D Measurement
The department will measure Water Main Hydrants as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.08	Water Main Hydrants	Each

Payment is full compensation for excavating, backfilling, and for making connections.

37. Utility Line Opening, Item SPV.0060.09.

A Description
This work consists of excavating to uncover utilities for the purpose of determining elevation and potential conflicts as shown on the plans or as directed by the engineer.

B (Vacant)

C Construction
Perform the excavation in such a manner that the utility in question is not damaged and the safety of the workers is not compromised.

Perform the utility line openings as soon as possible and at least 10 days in advance of proposed utility construction to allow any conflicts to be resolved with minimal disruption. Where utilities are within 6 feet of each other at a potential conflict location, only one utility line opening shall be called for. In these cases, a single utility line opening will be considered full payment to locate multiple utilities. Utility line openings shall include a trench up to 10 feet long as measured at the trench bottom, and of any depth required to locate the intended utility.

All utility line openings shall be approved and coordinated with the engineer. Notify the utility field engineers or their agents of this work a minimum of 3 days prior to the work so they may be present when the work is completed.

D Measurement
The department will measure Utility Line Opening as 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.0060.09	Utility Line Opening	Each

Payment is full compensation for the excavation required to expose the utility line, backfilling with existing material removed from the excavation, compacting the backfill material, restoring the site, and cleanup.

Existing pavement, concrete curb, gutter, and sidewalk removals necessary to facilitate utility line openings will not be considered part of or paid for under Utility Line Openings, but shall be considered separate and measured and paid for separately as removal items. Replacement pavement, concrete curb, gutter, and sidewalk items shall also be considered separate from Utility Line Openings and will be measured and paid for separately.

38. Electrical Utility Access Structure, Item SPV.0060.10.

A Description
Perform the work in accordance to the applicable provisions of standard spec 611 and as detailed in the plans.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Electrical Utility Access Structure as 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. 10	Electrical Utility Access Structure	Each

Payment is full compensation for furnishing all work herein specified; for furnishing all materials including masonry, conduit connections, steps and other fittings; for furnishing all excavation, backfilling, disposal of surplus materials, and for cleaning out and restoring the work site

39. Concrete Base Type G, Item SPV.0060.11; Type LB-3, Item SPV.0060.12; Type LB-8, Item SPV.0060.13; Type M, Item SPV.0060.14; Type P, Item SPV.0060.15.

A Description
This special provision describes construction of concrete foundations, including necessary hardware, as shown on the plans, in accordance to the pertinent provisions of standard spec 654 and as hereinafter provided.

B Materials
Concrete masonry shall be Grade A, A-WR, A-FA, or A-IP conforming to the requirements of standard spec 501.

Conduit cast within the bases shall be Schedule 40 polyvinyl chloride (PVC) electrical conduit and shall conform to the requirements of standard spec 652.

Anchor bolts for Type G bases shall be made from high-strength steel 50 KSI minimum yield strength, ASTM A36, and each shall be fitted with a hard washer and heavy hex nut. Each bolt shall have approximately 3 inches or more of thread at the top end. The bolts, washers, and nuts shall be galvanized. Bolts shall be ¾” x 24”.

Anchor bolts for Type LB-3 and Type LB-8 bases shall be made from high strength steel (50 KSI minimum yield strength), ASTM A36, and each shall be fitted with two hard washers and two heavy hex nuts. Each bolt shall have approximately 6 inches or more of thread at the top end. The bolts, washers, and nuts shall be galvanized. Bolts for the LB-8 base shall be 1.25 inch by 48 inch, including 4 inch L-bend at the bottom. Bolts for the LB-3 base shall be 1.00 inch by 40 inch including 4 inch L-bend at the bottom.

The Type P and M bases shall include a concrete maintenance platform. The Type P and Type M bases shall generally be constructed in accordance to the Concrete Control Cabinet Base Standard Detail. The location of the conduits in the base shall be confirmed

with the City of Madison. Anchor bolts, nuts, and washers for Concrete Controller Base, Type P, will be provided and installed by the City of Madison when installing signal control cabinets. Bar steel reinforcement shall conform to the requirements of section 505 of the standard specifications.

C Construction
The bases shall be placed with one side parallel to the centerline of the street.

Forms shall be of sufficient depth to provide a minimum of 12 inches of formed base below the finished grade on the low side of the base. The top surface of the base shall be level with a ¾ inch bevel on the edges and shall be given a rubbed finish.

Anchor bolts shall be cast into the base as shown on the plans. Bolt circle diameters shall be verified before constructing the bases.

Manufactured elbows shall be furnished and installed in all bases by the contractor, except as noted on the details. Elbows shall be installed to permit conduit to be installed in as nearly straight-line runs as possible, without unnecessary bends. Bases not installed to this standard will not be accepted. Existing conduit shall be extended into the bases.

Elbows shall conform to the requirements of the type of conduit entering the base. Each base at the end of a run shall have an extra elbow installed as directed by the engineer.

Extra elbows shall also be installed in any base as directed by the engineer.

Poles shall not be erected on the concrete bases until the bases have cured for at least seven days.

All concrete bases shall require a rubbed finish down to finished grade.

D Measurement
The department will measure Concrete Base (Type) 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. 11	Concrete Base Type G	Each
SPV.0060. 12	Concrete Base Type LB-3	Each
SPV.0060. 13	Concrete Base Type LB-8	Each
SPV.0060. 14	Concrete Base Type M	Each
SPV.0060. 15	Concrete Base Type P	Each

Payment is full compensation for furnishing and installing all materials including conduit, bushings, caps and/or plugs, ground rod, anchor bolts, cadwelding, copper grounding wire; bar steel reinforcement, and concrete masonry; for providing openings through existing pavement where required; for excavation, including hand-digging as required, backfill, and for disposal of surplus materials.

40. Pull Box Type I, Item SPV.0060.16; Type III, Item SPV.0060.17; Type V, Item SPV.0060.18.

A Description

Perform work in accordance to the applicable provisions of standard spec 653 and as detailed in the plans.

B Materials

Provide Pull Box Type I that are gray colored polymer concrete construction. Provide box dimensions for Type I of 19 inches wide, 32 inches long, and 24 inches deep, and with a cover rated to withstand 15,000 pounds over a 10-inch square with a minimum test load of 22,568 pounds.

Provide Pull Box Type III that are high-density polyethylene box and concrete polymer lid or concrete polymer construction for box and lid. Provide box dimensions for Type III of 12 inches wide, 12 inches long and 12 inches deep. The Type III box and polymer cover must be rated to withstand 20,000 pounds.

Provide Pull Box Type V that are gray colored polymer concrete construction. Provide box dimensions of 24 inches wide, 36 inches long, and 24 inches deep. The box and cover must be rated at 15,000 pounds over a 10-inch square.

Provide each cover with the logo “TRAFFIC SIGNAL” imprinted on it from the manufacturer.

C (Vacant)

D Measurement

The department will measure Pull Box (Type) as each individual pull box, 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. 16	Pull Box Type I	Each
SPV.0060. 17	Pull Box Type III	Each
SPV.0060. 18	Pull Box Type V	Each

Payment is full compensation for providing and installing all materials including coarse aggregate; for excavating, backfilling, and for properly disposing of surplus materials.

41. Posts Round Tubular Steel 2 3/8-Inch 14-FT, Item SPV.0060.19.

A Description
Perform work in accordance to the applicable provisions of standard spec 634 and as provided below.

B Materials
Provide 2 3/8-Inch outside diameter, 13 gauge, round steel posts meeting ASTM B6 and ASTM B117, at the lengths shown on the plans. Provide posts with a minimum yield strength of 50,000 PSI and a minimum tensile strength of 55,000 PSI.

Provide two galvanized soil stabilizing fins welded to the sign post orientated perpendicular to the roadway alignment. The minimum dimensions of the soil fins will be as shown in the WisDOT sign plate A4-9. Soil stabilizing fins are not required if the sign post is installed in poured concrete.

C Construction
Band signs to the sign posts in accordance to the WisDOT sign plate A5-9. Embed the sign post a minimum of 3 Feet below finished grade.

D Measurement
The department will measure Posts Round Tubular Steel 2 3/8-Inch (Size) 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. 19	Posts Round Tubular Steel 2 3/8-Inch 14-FT	Each

Payment for the Posts Round Tubular Steel bid items is full compensation for providing, hauling, and placing the posts; treating cut post ends; and providing hardware and anchors. The department will not pay for replacing damaged posts or upper tube cut-offs.

42. Stone Veneer Wall, Item SPV.0060.20.

A Description
This special provision describes furnishing and installing reinforced concrete walls with stone veneer and appurtenances.

B Materials
Furnish concrete per standard spec 501. Furnish reinforcing steel per standard spec 505. Furnish mortar per standard spec 519.2.4, with a color of tan / buff. Furnish stone veneer and caps as supplied by Fond Du Lac Stone, N 4224 Hwy. 175, Fond Du Lac, WI 54937,

Valders Stone & Marble, 443 Quarry Road, Valders, WI 54245, Vetter Stone, 23894 Third Avenue, Mankato, MN 56001, or equal. Provide stone with a minimum compression strength of 4000 psi. Veneer stone shall be random ashlar pattern, rock face, color to be buff. Stone caps shall be color buff. Furnish corrugated wall ties. Furnish rubber templates for street designation text. Furnish epoxy for street name lettering, color shall be dark brown.

C Construction

Install reinforced concrete walls and veneer stone as shown on the drawings. Sand blast street designation letters over rubber templates.

D Measurement

The department will measure Stone Veneer Wall 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.0060.20	Stone Veneer Wall	Each

Payment is full compensation for providing and installing all materials necessary to provide a finished wall unit; furnishing and installing hardware, for performing all tasks associated with a finished wall unit necessary to complete the contract work.

43. Root Pruning Existing Trees, Item SPV.0060.21.

A Description

This work shall consist of pruning roots of existing terrace trees using a root pruner to allow for excavation; storm sewer, sanitary sewer or water main installation; and curb and gutter operations.

B (Vacant)

C Construction

Preserve existing trees not shown as being removed on the plans. Cut roots of existing trees using a root pruner to allow for adjacent construction operations. Prune roots along the roadway side of the tree from drip edge to drip edge of the tree. Prune roots in the terrace from the back of curb and gutter to the face of sidewalk in areas of proposed sanitary and water utility lateral installations a minimum of 6 feet from the centerline the proposed utility trench. Prune roots no closer than 15 inches to any existing tree.

Clean cut roots with a sharp clean carbide tipped rotary saw blade. Disinfect blade between cuts to avoid spreading disease. Make all root cuts smooth and clean to facilitate callusing or root regeneration. Tearing or ripping of roots will not be acceptable.

Backfill cut roots immediately after cutting. After back filling trenches, water the soil sufficiently to facilitate settling and to provide moisture to previously exposed roots.

If backfilling cannot be achieved immediately, take protective measures to keep roots from drying out. Maintain a moist environment around and at the ends of all exposed roots until proper backfilling can take place.

Avoid Root Pruning during environmentally stressful times such as extreme drought or heat conditions. Avoid Root pruning during bud break or shoot growth.

D Measurement
The department will measure Root Pruning Existing Trees as each individual tree root pruned, 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.0060.21	Root Pruning Existing Trees	Each

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

44. Transformer Base 16-Inch Black Steel, Item SPV.0060.22; 20-Inch Black Steel, Item SPV.0060.23.

A Description
This special provision describes furnishing and installing steel transformer bases as shown on the plans and as follows.

B Materials
The steel transformer bases shall be hot-dipped galvanized in accordance to ASTM designation A123. The bases shall have slotted bolt openings. Steel connecting bolts, size 1.25 inches by 4 inches, hold down lugs for 1.25 inch bolts and nuts and washers shall be furnished. All such material shall be hot-dipped galvanized and be of sufficient size and strength to exceed the capacity of the bases. The 16 inch base shall conform to the detail in the plan. The 20 inch base shall be Valmont M201, Union Metal 14-B2640Y2, Millerbernd 390A105, Ameron TB1316, or approved equal.

Furnish to the engineer, at the time of delivery of the bases, a manufacturer's certificate of compliance that the base and hardware as furnished meets the above requirements. Bases shall be painted black. The minimum paint system shall be the manufacturer’s best paint system, using prime and finish paint, subject to City of Madison review and approval. The paint system chosen shall result in a durable weather-resistant paint well adhered to the pole and suitable for streets with heavy salting and the resulting salt spray from passing vehicles traveling at speeds averaging 40 mph. The manufacturer’s warranty on

paint finish shall be identified. No warranty less than five years will be accepted. The black finish paint color shall be a Tiger Drylac RAL 9004 with 80% gloss.

C Construction
Install transformer bases in accordance to the manufacturer's instructions, contract plans and specifications. Some of the bases will be installed under existing streetlight poles. In such cases, the existing light pole shall be lifted and reinstalled as part of this bid item.

New streetlight pole wire may be needed to reconnect the luminaire to the circuit.

D Measurement
The department will measure Transformer Base (Size) Black Steel, as each individual transformer base 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.0060.22	Transformer Base, Black 16-Inch Black Steel	Each
SPV.0060.23	Transformer Base, Black 20-Inch Black Steel	Each

Payment is full compensation furnishing and installing transformer bases, streetlight pole wire, mechanical grounding connector and related hardware; and for leveling shims when required.

45. Traffic Signal Standard, Aluminum, Black, 3.5-Foot, Item SPV.0060.24; 9-Foot, Item SPV.0060.25; 13-Foot, Item SPV.0060.26; 15-Foot, Item SPV.0060.27.

A Description
This special provision describes furnishing and installing poles in accordance to standard spec 657, and these special provisions.

B Materials
All poles shall conform to standard specs for items 657.0404, 657.0410, 657.0420, and 657.0425 and shall be painted black. The minimum paint system shall be the manufacturer’s best paint system, using prime and finish paint, subject to City of Madison review and approval. The paint system chosen shall result in a durable weather-resistant paint well adhered to the pole and suitable for streets with heavy salting and the resulting salt spray from passing vehicles traveling at speeds averaging 40 mph. The manufacturer’s warranty on paint finish shall be identified. No warranty less than five years will be accepted. The black finish paint color shall be a Tiger Drylac RAL 9004 with 80% gloss.

C (Vacant)

D Measurement
The department will measure Traffic Signal Standard, Aluminum, Black (size) 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.0060.24	Traffic Signal Standard, Aluminum, Black 3.5-Foot	Each
SPV.0060.25	Traffic Signal Standard, Aluminum, Black 9-Foot	Each
SPV.0060.26	Traffic Signal Standard, Aluminum, Black 13-Foot	Each
SPV.0060.27	Traffic Signal Standard, Aluminum, Black 15-Foot	Each

Payment is full compensation for furnishing and installing all materials, including poles, all hardware and fittings necessary to completely install the pole; and for corrosion prevention when required.

46. Pole 20-Foot, Black 7 Gauge, Item SPV.0060.28; Pole 30-Foot, Black, 11 Gauge, Item SPV.0060.29; Pole 30-Foot, Black, 7 Gauge, Item SPV.0060.30.

A Description
This special provision describes furnishing and installing poles and arms in accordance to standard spec 657, the details shown on the plans, and these special provisions.

B Materials
All poles shall be round, with a base plate welded to the bottom end of the pole. All poles are to be a single section, with an 8-inch diameter shaft at the base and 0.14 inches per foot taper.

Base plates shall have a slotted opening for anchor bolts.

All 30-foot poles shall be designed to withstand a 90-mile per hour sustained wind velocity and 117 mile per hour gust velocity with the bracket arm and luminaire in place. The 20-foot 7 gauge poles will be used for supporting aluminum trombone arms holding signs and/or signal heads.

A 4” x 6-1/2” galvanized handhole shall be provided with contoured or flat cover plate joined to the reinforced handhole frame with two bolts. The handhole shall be located 90°clockwise from the bracket arm side of poles as viewed when looking down from the top of the pole. The center of the handhole shall be 14 inches from the bottom of the pole. A solid metal bracket, with a drilled and tapped hole, shall be provided for securing cover plate bolts. Clips for holding these bolts is not acceptable. The machine bolts shall be a slotted hex-head style.

The pole shaft shall be fabricated from the herein specified manufacturer's best grade, hot rolled basic open hearth, or basic oxygen process steel. The shaft shall have only one longitudinal, electrically welded joint, with the strength rated at not less than 100 percent of the yield strength of the steel and shall have no intermediate horizontal joints or welds. Only one length of steel sheet shall be used, and it shall be formed into a continuously tapered shaft, having a taper of approximately 0.14 inches per foot. The weld shall be smooth, allowing the specified taper to be constant. The pole shall be within 1/4" in 10 feet of being straight and centered on its longitudinal axis.

A grounding nut or nut holder for accommodating a 1/2 inch x 13 UNC threaded bolt or stud shall be provided on the inside of the shaft immediately opposite the center of the handhole. The nut shall be completely free of any metal residue that would prevent a bolt from easily screwing entirely into the nut.

All 30-foot poles shall have mounting and wire raceway holes placed before being hot-dipped galvanized. A pole-top cover and four nut covers shall be furnished and installed for each pole. Each steel pole shall have a permanent imprinted metal label attached with rivets midway between the base plate and the handhole. The label shall state the overall pole height, shaft gauge, and year of manufacture. The label shall conform to the curvature of the pole and not have any sharp edges or corners. All rivets shall be smooth inside and outside of the pole.

After all welding has been completed, the exterior surface of the pole, arm, and hardware shall be thoroughly cleaned and shall be free of all loose rust, mill scale, dirt, oil, grease, and other foreign substances. The poles and arms shall be hot-dipped galvanized in accordance to the requirements of ASTM Designation A123. The hardware shall be hot-dipped galvanized in accordance to ASTM Designation A153. The galvanized finish shall be bright, shiny, and uniform. Matted or dull pole sections will not be accepted. The minimum paint system shall be the manufacturer's best paint system, using prime and finish paint, subject to City of Madison review and approval. The paint system chosen shall result in a durable weather-resistant paint well adhered to the pole and suitable for streets with heavy salting and the resulting salt spray from passing vehicles traveling at speeds averaging 40 mph. The manufacturer's warranty on paint finish shall be identified. No warranty less than five years will be accepted. The black finish paint color shall be a Tiger Drylac RAL 9004 with 80% gloss.

Furnish non-shrink commercial grout from approved products list.

C Construction

Group lighting units to operate from branch circuits, which are energized by lighting contactors remotely controlled by photocell. Where a system is employed, no individual lighting units shall be controlled by photocells or time switches. Time switches control only the removal from service of the midnight circuits.

Wire each system in a manner that presents as near as is possible a balanced load at the source of supply during midnight and all-night operation.

Conductors to the luminaire shall be two No. 14 solid annealed copper, UF, 600 volt, as manufactured by General Cable, Anaconda, Rome, Kaiser, or approved equal. On all systems, the phase wire at the pole handhole shall have a secondary in-line fuse assembly, Series 64, as manufactured by Elastic Stop Nut Corporation of America, Buss Tron HEB-AA fuseholder, or approved equal, with a Bussmantype FNM or FNQ fuse, 2.0 amp for Type A and 3.0 amp for Type B luminaires.

Do not splice the phase wire between the fuse assembly and luminaire. For poles with two luminaires, two fuseholders and separate wire from each fuseholder to each luminaire shall be provided. A sufficient length of No. 14 conductor shall be installed in the pole to permit removal of this fuseholder through the handhole before disconnecting. A 24" length of #12 THHN Stranded Conductor tail shall be installed to supply wires permitting easy removal of fixture wires and fuse holder through the handhole.

A tail of #4 wire from the neutral conductor splice shall be grounded to each ground rod and metal street light pole.

The following color coding shall be used at all street light bases:

- Midnight Circuit (red)
- All night circuit (black)
- Neutral (white)

Electrical splices and connections shall be electrically secure and made with pressure or compression fittings as manufactured by Thomas & Betts, Burndy, 3-M (scotch lock brand) or approved equal and used as recommended by the engineer. Taps and splices shall be protected in the following manner: all wire connections shall be coated with No-Lox Compound; taps and splices made with irregularly shaped connectors shall first be built up with insulating material, "Air Seal" #18415 manufactured by Kearney or approved equal; all sharp corners and voids shall be filled; over this, install 3 half lapped layers of rubber electrical tape, dielectric strength, 300 volts per mil - self vulcanizing tape, installed as per manufacturer's instructions; over this, apply 3 half lapped layers Scotch Brand 33 Plus or approved equal, vinyl plastic electrical tape; then dip the entire splice 1" beyond the insulating material in Scotch-Kote or approved equal. The constructed splice shall be allowed to air dry completely before insertion into the street light pole. All wires leaving the splice shall be in one direction. Split bolts, when used, shall be hammered and retightened three times and a spacer shall be provided between any copper and aluminum conductors.

The fuse holder shall be connected to the All-Night circuit or Midnight circuit as indicated on the plans with an approved wire nut (3M or Ideal). The wire nut shall be dipped in Scotch-Kote or approved equal.

The lighting units shall be connected with the underground or overhead cable, as is applicable, and shall provide a complete, operational system when finished.

Metal poles shall be set and plumbed with the use of leveling nuts furnished with the anchor bolts. Luminaires shall be leveled after erecting and leveling the metal standards with bracket arms. The proper leveling method may be obtained from the manufacturer's instruction manual. Nuts on anchor and transformer bolts shall be torqued to 175-200 foot pounds or as directed by the engineer. Rust, corrosion, and anti-seize protection shall be provided at all threaded assemblies by coating and mating surfaces with Markal (Hightemp-E-Z Break), Never-Seez (Marine Grade), LPS 100, Lubriplate, or approved equal.

The stranded copper ground wire that is installed as a part of base construction shall be attached with an approved connector (Fargo GC 202 or approved equal) to a ground nut located inside the pole and opposite the handhole.

When transformer bases are not installed, grout shall be troweled between the pole and concrete base and finished at an angle from the edge of the pole base to the outer edge of the foundation. A 1/2 inch slot for drainage shall be left through the grouting on the street side at the top of the concrete base.

D Measurement
The department will measure Pole (description) 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.0060.28	Pole 20-Foot, Black 7 Gauge	Each
SPV.0060.29	Pole 30-Foot, Black 11 Gauge	Each
SPV.0060.30	Pole 30-Foot, Black 7 Gauge	Each

Payment is full compensation for furnishing and installing all materials, including poles, pole wire, all hardware and fittings necessary to completely install the pole; for corrosion prevention when required; and for installing identification plaques when required.

47. Monotube Pole, Type 9, Black Item SPV.0060.31; 25-Foot, Black Item SPV.0060.32; 30-Foot, Black Item SPV.0060.33.

A Description
This section describes furnishing and installing poles and monotube arms for traffic signals.

B Materials
Design support structures, consisting of poles and arms, conforming to the completed maximum loading configurations and to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years. Design to withstand a 3 second gust wind speed of 90 mph.

Along with the materials list, submit a certificate of compliance certifying that poles as furnished, conform to the above structural performance requirements. Ensure that the certificate of compliance is on the manufacturer's letterhead, signed by an authorized company officer, and notarized. Send a copy of the certificate and a copy of the pole shop drawings to the engineer. Furnish poles from an approved manufacturer.

Furnish shop drawings as specified in standard spec 506.3.2, except submit five copies with the materials list. Ensure the drawings contain sufficient detail to allow satisfactory review and show the outside diameters of the pole at the butt, top, and splice locations the plans show.

Show the width, depth, length, and thickness of all material, and list all pertinent ASTM specification designations and metal alloy designations together with the tensile strength of all metallic members.

After completing the manufacturing process, ensure that all shafts a nominal 40 feet or less in length for lighting poles only, are round, of one-piece construction, and of the specified length.

Construct poles of materials having sufficient rigidity that, with all material installed and in place as the plans show, the centerline of the shaft is vertical. Include dampers for poles as needed. If the engineer determines that vibration is a problem after a pole has been installed, install dampeners as the engineer directs.

After all welding has been completed, the exterior surface of the pole, arm, and hardware shall be thoroughly cleaned and shall be free of all loose rust, mill scale, dirt, oil, grease, and other foreign substances. The poles and arms shall be hot-dipped galvanized in accordance to the requirements of ASTM Designation A123. The hardware shall be hotdipped galvanized in accordance to ASTM Designation A153. The galvanized finish shall be bright, shiny, and uniform. Matted or dull pole sections will not be accepted. The minimum paint system shall be the manufacturer’s best paint system, using prime and finish paint, subject to City of Madison review and approval. The paint system chosen shall result in a durable weather-resistant paint well adhered to the pole and suitable for streets with heavy salting and the resulting salt spray from passing vehicles traveling at speeds averaging 40 mph. The manufacturer’s warranty on paint finish shall be identified. No warranty less than five years will be accepted. The black finish paint color shall be a Tiger Drylac RAL 9004 with 80% gloss.

Provide a reinforced hand hole measuring 5 inches by 8 inches. Locate the hand hole approximately 18 inches from the bottom of the pole base plate to the center of the door. For the hand hole, include an access cover mounted to the pole by two 1/4” -20 x 3/4” hex-head stainless steel bolts.

Provide a grounding lug complete with mounting hardware as required, inside the pole, 180-degrees from the handhole side of the pole

Provide access to the grounding L-clip from the hand hole. Before galvanizing the pole, weld the grounding L-clip directly opposite the hand hole on the inside wall of the pole. Equip the top of the pole shaft with a removable, ventilated cap held securely in place by at least one 1/4” -20 x 3/4” hex-head stainless steel set screw.

Ensure that all castings are clean, smooth, and with all details well defined and true to pattern.

Attach base plates firmly to the pole shaft by welding or other approved method. Each steel pole shall have a permanent imprinted metal label attached with rivets midway between the base plate and the handhole. The label shall state the shaft length, manufacturer’s name, and year of manufacture. The label shall conform to the curvature of the pole and not have any sharp edges or corners. All rivets shall be smooth inside and outside of the pole.

Monotube arms shall have:

- A mounting device welded to the pole end of the monotube arm that allows the attachment of the arm to a pole.
- Stiffeners or gussets if required between the arm tube and the arm mounting device to provide adequate strength to resist side loads.
- A wiring raceway.

C Construction

Under each bid item, furnish and install poles, ventilated pole caps, arms, and all necessary miscellaneous hardware needed to complete the installation of the poles and arms.

Install dampeners as the plans show and for poles and arms used in configurations susceptible to vibration. If the engineer determines that vibration is a problem after a pole and arm has been installed, install dampeners as the engineer directs.

After completing erection using normal pole shaft raking techniques, ensure that the centerline of the shaft is vertical.

D Measurement

The department will measure Monotube Pole, Black Type 9, and Monotube Arm, Black (Length) 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.0060.31	Monotube Pole, Black Type 9	Each
SPV.0060.32	Monotube Arm, Black 25-Foot	Each
SPV.0060.33	Monotube Arm, Black 30-Foot	Each

Payment is full compensation for furnishing and installing all materials.

48. Lighting Fixtures Type-A, Item SPV.0060.34; Type-B, Item SPV.0060.35.

A Description

This special provision describes furnishing and installing Kim fixture luminaires.

B Materials

B.1 General

It is the intent of this specification to describe the minimum requirements for an integral ballast type, high pressure sodium vapor lighting unit. All parts not specifically mentioned, which are necessary and are regularly furnished in order to provide a complete unit, shall be furnished by the successful bidder at the bid price and shall conform in quality of material and workmanship to that usually provided by the engineering practice indicated in this specification.

Furnish luminaires of the "cutoff" type and shall conform to all general aspects for luminaires as specified under standard spec 659 except as modified herein.

All equipment to be furnished shall be new, unused, and the latest model being produced. The Type-A luminaires shall be a Cooper Lighting black LED Talon luminaire (part number "TLM-A04-LED-E1-SL2-BK").

The Type-B luminaires shall be a Cooper Lighting black LED Talon luminaire (part number "TLM-A06-LED-E1-SL2-BK").

Information to identify the model, voltage, wattage, P.E.C. receptacle, and I.E.S. distribution of the luminaires shall be marked on the outside of the shipping boxes. Catalog numbers are acceptable if all of the above information is coded therein.

B.2 Manufacturer's Warranty

The manufacturer shall warrant that goods provided for this project will conform to applicable specifications, drawings, designs, samples, descriptions and will be free from defects in material and workmanship and will be fit for the particular purpose intended by the city.

This warranty shall remain in effect for one year. The warranty period shall commence on the date the luminaires are installed.

Under this warranty, the manufacturer agrees to replace within a reasonable time, any part, feature or product found to be defective during the warranty period at no cost to the City of Madison.

New lighting units will not be accepted before luminaires and lamps have operated without failure for a period of at least 10 consecutive nights.

C (Vacant)

D Measurement
The department will measure Lighting Fixtures (Type) as 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.0060.34	Lighting Fixtures, Type-A	Each
SPV.0060.35	Lighting Fixtures, Type-B	Each

Payment is full compensation for furnishing and installing all materials, including luminaires and mounting hardware.

49. Traffic Signal Control Cabinet, Black Item SPV.0060.36.

A Description
This special provision describes providing to the City of Madison a door-in-door style, base mounted cabinet, with exterior dimensions of 55" height, 38" width, and 26" depth. The cabinet shall be of weatherproof construction, fabricated from sheet aluminum at least 0.125-Inches thick and adequately reinforced. A heavy duty stainless steel handle (5/8 inch minimum diameter) and latch shall be provided. The door hinges shall be all stainless steel and continuous for the full height of the door. The cabinet interior shall have a zinc chromate prime coat and be finished with one coat of rust-resistant high gloss white enamel. The cabinet exterior shall be natural mill finish. The minimum paint system shall be the anufacturer's best paint system, using prime and finish paint, subject to City of Madison review and approval. The paint system chosen shall result in a durable weather-resistant paint well adhered to the cabinet and suitable for streets with heavy salting and the resulting salt spray from passing vehicles traveling at speeds averaging 40 mph. The manufacturer's warranty on paint finish shall be identified. No warranty less than five years will be accepted. The black finish paint color shall be a Tiger Drylac RAL 9004 with 80% gloss.

Two adjustable-height shelves of 12-13 inches depth are required.

B Materials
B.1 Locks
Provide a main cabinet door with a tumbler lock keyed for a Corbin No. 2 key. Equip the auxiliary (Police Panel) door with a lock for a standard police key. Furnish a key for each lock. When the door is closed and latched, with the key removed, the door shall lock. The locking bar shall be a solid non-rusting metal with a square cross-section, equipped with a double roller on each end.

B.2 Door Stop
Equip the cabinet with a door stop assembly to hold the door open at approximately 90º and 150º.

B.3 Weather Protection and Incandescent Light
Equip the cabinet with an electric fan assembly with a minimum capacity of 100 cubic feet per minute. Mount the fan in the top of the cabinet in a manner to prevent rain from entering the cabinet. The fan shall be thermostatically controlled and shall be manually adjustable to turn on between 80º F and 150º F. The cabinet fan circuit shall have fuse protection at 125% of the capacity of the fan motor.

Air intake near the bottom of the cabinet via louvered vents shall have a removable filter, including a gasketed aluminum filter replacement for use in the winter to prevent entrance of snow.

Mount an incandescent light socket in the upper front part of the cabinet.

B.4 Grounding
Provide a copper equipment grounding bus in each cabinet to accept up to #4 stranded wire. Ground the ground bus to the cabinet, and provide at least 14 terminals of the tubular clamp type. Connect all ground bus together with a minimum #8 green copper wire.

B.5 Solid State Flasher
Furnish the cabinet with two 6 pin, 20 amp, double circuit solid state flashers, fully connected and operating.

B.6 Flash Transfer Relays
Provide electromechanical relays for opening and closing traffic signal field circuits. Furnish the cabinet supplied under this specification with four 2-pole transfer relays wired to transfer the vehicle phases. Cover relays used for this purpose, insulate, or locate so that electrically alive parts are not readily exposed. All relays shall be next to each other and mounted on the back panel.

All contact points which make, break, and carry current to the signal lamps shall be of silver-cadmium, coin silver or equivalent material. Contact shall be capable of making, breaking, and carrying a current of 10 amperes, 120 volts, without undue pitting. Relay coils shall have a power consumption of 10 volt amperes or less and shall be designed for continuous duty. Contact points which make, break, and carry current to the solid state switchpacks shall be capable of carrying 40 amperes of 120 volts without undue pitting. The transfer relay shall withstand a potential of 1500 volts at 60 Hertz between insulated parts, and between current carrying parts and grounded and non-current carrying parts. Each transfer relay shall have a one cycle surge rating of 175 amperes RMS (247.5 amperes peak). Each transfer relay shall be unaffected by electrical noise, having a rise

time of up to 200 volts per microsecond. Each relay shall be unaffected by the 500 volt power noise transient test.

The flash transfer relay shall energize the flasher and transfer field signal light circuit from the controller to flasher, and shall permit flashing lights as programmed on the main street or highway and on the cross street or streets. Operation of the flash transfer relay ircuit shall not prohibit the operation of the controller, but shall prohibit operation of the field signal light circuits by the controller.

The flash transfer relay shall be provided with a connector (Cinch-Jones Type P-408-SB, or equivalent) and intermate with Cinch-Jones Type #S-408-SB, or equivalent.

The socket pin assignments shall be as follows:

Pin Function

1 Relay Coil
2 Relay coil
3 NC Ckt. #1
4 NC Ckt. #2
5 Relay Common Ckt. #1
6 Relay Common Ckt. #2
7 No. Ckt. #1
8 No. Ckt. #2

Wire the flash circuit in a fail-safe manner so that the intersection will revert to and remain in the flashing mode whenever and for as long as either the controller or the monitor is disconnected. Support the relays with a rack at least 8½ inches out from each socket.

B.7 Flash Sequence Programming

A programming means shall be provided to determine if flashing yellow or red appears on the output field terminals to the signal heads. Accomplish programming with simple tools such as a screwdriver. Conform the sequence timing for flash by automatic call-up with the MUTCD.

B.8 Load Switches

Furnish eight 3-circuit load switches, discrete type, with each cabinet. The load switch panel shall have a bracket support for its full length and extending out 8½ inches from the panel socket. The bracket support is intended to reduce switch loosening from vibrations and to prevent switches from falling down if disengaged from the socket.

B.9 Harness Wiring

The wiring and cabinet panel arrangement shall provide for full dual ring eight phase actuated operation. A 12-channel conflict monitor harness shall be supplied and wired in each cabinet. All cabinet wiring harnesses shall be neat, firm and routed to minimize crosstalk and electrical interference. Loop harnesses shall be routed to the right (hinge) side of the cabinet and attached up to shelf level to avoid harnesses dangling in front of the door.

Wiring containing AC shall be routed and bundled separately from all low voltage control circuits. Fuses and surge protection shall be furnished for all interconnect circuits. All conductors and live terminals or parts, which could be hazardous to maintenance personnel, shall be covered with suitable insulating material.

B.10 Terminal Blocks

Terminal block connections shall be a minimum of 8 inches from the bottom of the cabinet. The terminal blocks provided shall be two-position barrier type. Terminal blocks shall be so arranged that they shall not upset the entrance, training and connection of incoming field conductors. All terminals shall be clearly identified and shall be permanently associated with the terminal block.

Terminal blocks used for field wiring connections (field terminals) shall be capable of securing conductors with 10-32 or larger nickel or cadmium plated brass binder head screws.

Terminal blocks used for the applied AC power shall be capable of securing conductors with a 10-32 nickel or cadmium plated brass binder head screws.

There shall be field terminal blocks provided for the connection of all loop detectors. Where a card rack is required, terminal blocks to accommodate 16 detector channels shall be provided.

B.11 Detectors Card Rack

The detector card rack shall provide four slots for four-channel detectors (a total of 16 detector channels) and a power supply slot. The card rack shall have flanges turned out. The card rack shall be fully wired and connected to cabinet terminals 1 through 16. Terminals 1 through 8 shall be associated with vehicle phases 1 through 8, respectively. A four-channel power supply shall be supplied with per-channel fusing and output indicators for each channel. The card rack shall be mounted on the top shelf, left side as one looks into the cabinet.

B.12 Detectors

The cabinet shall contain four 4 channel digital loop detector amplifiers approved for use by City of Madison Traffic Engineering and shall have at the minimum the following characteristics: Rack mount design, 2” maximum width for front panel. User selection for the following must be available on the front panel without requiring auxiliary devices:

- Pulse or presence.
- Sensitivity, minimum of 6 levels.
- Sequentially scan channels or other suitable means to reduce crosstalk.
- Display detection and faults for each channe..l
- Self tuning.

B.13 Power Panel

The cabinet shall have a power distribution panel containing the following elements:

- Surge protection provided by use of a varistor or other suitable equipment.
- Two 30 amp Radio Interference Suppressors.
- 50 amp single pole Main Breaker followed by dual 30 amp Main Circuit Breakers with single common trip.
- 15 amp Auxiliary Equipment Circuit Breaker.
- Two 30 amp Power Relays (Mercury Contactors).
- Neutral Bus Bar Isolated from Cabinet Ground.
- Ground Bus Bar.
- EDCO SHP 300-10 Power Line Surge Protector.

The mercury contactor shall be normally open and capable of switching 30 amperes at 120 volts AC.

A neutral bus terminal shall be provided with at least 14 terminals of the tubular clamp type able to accept up to #4 stranded wire.

B.14 Police Panel

The main door of the cabinet shall have a police panel door. Behind this door shall be a panel with a minimum of a toggle switch labeled “SIGNALS ON-OFF” and a toggle switch labeled “SIGNALS FLASH-AUTO.” The signals on-off switch shall cause all intersection displays to be turned off and the controller AC power to be removed when placed in the off position.

In the flash position, the signals flash switch shall cause the intersection to be placed in flashing position and the controller shall stop time.

B.15 Maintenance Panel

Provide a maintenance panel on the inside of the main door containing the following:

- GFCI duplex convenience outlet.
- Stop time switch.
- Controller on/off switch.
- Vehicle and pedestrian detector actuation test push buttons.
- Incandescent light switch.

The stop time switch shall be a three-position toggle switch labeled ON, OFF, and AUTO. In the ON position, stop timing power shall be applied to the controller. In the OFF position, stop timing shall be removed from the controller if it has been applied by the conflict monitor or other auxiliary device. The AUTO position shall be the normal operating position and allow auxiliary devices to apply stop timing inputs to the controller. The conflict monitor shall be wired through the stop time switch such that when in the AUTO setting and a conflict is detected, stop timing shall be applied to the controller.

The controller switch shall be a two-position toggle switch labeled ON and OFF. In the OFF position, the intersection shall be placed in flashing operation and the controller turned off.

There shall be a detector test push button or toggle switch for each vehicle and pedestrian phase. These shall be located to preclude accidental activation when the door is closed.

B.16 Pedestrian Button Wiring
Pedestrian push button logic shall be opto-isolated such that there will be no logic common carried out to each individual push button. The AC- from the field pedestrian push button shall activate the opto-isolated pedestrian push button relays when the field button is activated.

B.17 Testing, Labeling and Wiring Diagram
The vendor shall thoroughly test the cabinet wiring and auxiliary devices with a controller and monitor (if the harness is to be furnished by the vendor) in place. All equipment furnished in the cabinet shall be clearly and permanently labeled. A good reproducible 24 inch by 26 inch mylar wiring diagram shall be supplied to the city.

B.18 Manufacturer's Warranty
The vendor shall warrant the performance and construction of the fully-wired cabinet to meet the requirements of this specification, and shall warrant all wiring parts, components, and appurtenances against defects in design, material and workmanship for a period of one year from the date of installation. In the event defects and failures become apparent during this time, the vendor shall repair and/or replace all defective parts or appurtenances at no additional expense to the city. This specification is to construe that any part, or parts, that fail to function properly shall be replaced at no charge to the city.

B.19 Cabinet Design for City Review Before Manufacturing.
The vendor shall supply the city with a complete set of plans for the cabinet for review before manufacturing the cabinet. After city approval of the design as received or as modified by joint agreement between the city and the vendor, the cabinets shall be wired according to the approved design and specifications. The city will complete its review within five work days from receipt of the cabinet design.

C (Vacant)

D Measurement
The department will measure Traffic Signal Control Cabinet by each individual unit, acceptably completed, and delivered to the City of Madison.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.36	Traffic Signal Control Cabinet	Each

Payment is full compensation for furnishing and delivering all materials to the City of Madison, 1120 Sayle Street, Madison, Wisconsin.

50. Traffic Signal Controller, Item SPV.0060.37.

A Description
This special provision describes furnishing a traffic signal controller with auxiliary equipment to the City of Madison.

B Materials
Furnish the following:

- Econolite ASC/3-2100 with HTR, data key, and Ethernet.
- FSK TLM 25 pin for this controller.
- Econolite TIO board with harness.
- D connector interface harness and board.

C (Vacant)

D Measurement
The department will measure Traffic Signal Controller by each individual unit, acceptably completed, and delivered to the City of Madison.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.37	Traffic Signal Controller	Each

Payment is full compensation for furnishing and delivering the signal controller, and all auxiliary equipment, to the City of Madison, 1120 Sayle Street, Madison, Wisconsin.

51. NEMA-Plus Conflict Monitor, Item SPV.0060.38.

A Description
This special provision describes furnishing a NEMA-Plus 12-Channel Conflict Monitor to the City of Madison.

B Materials
Furnish a NEMA-Plus 12-Channel Signal Conflict Monitor, with LCD display, and a Ejector Tab card release on side of card.

C (Vacant)

D Measurement
The department will measure NEMA-Plus Conflict Monitor by each individual unit, acceptably completed, and delivered to the City of Madison

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.38	NEMA-Plus Conflict Monitor	Each

Payment is full compensation for furnishing and delivering the conflict monitor to the City of Madison, 1120 Sayle Street, Madison, Wisconsin.

52. Traffic Signal Trombone Arms, Black, Aluminum 12-Foot, Item SPV.0060.39, 15-Foot, Item SPV.0060.40; 18-Foot, Item SPV.0060.41.

A Description
This special provision describes furnishing and installing trombone mast arms and all necessary miscellaneous hardware needed to complete the installation of the trombone mast arm as shown on the plans, in the standard specifications, and as hereinafter provided.

B Material
The traffic signal trombone arm shall be designed to withstand loadings resulting from a 12" 3-section aluminum signal with backplate and an 18” x 90” aluminum street name sign mounted on the arm as shown on the drawing. Design factors in accordance to the AASHTO Specifications for the Design and Construction of Structural Supports for Traffic Signals, Signs, and Highway Lighting, together with a wind pressure resulting from a wind velocity of 80 miles per hour plus gust factor, shall be applied to these arms, with the above signals attached.

Certification of compliance with these stated AASHTO performance requirements shall be furnished with submission of the material list.

Shop drawings shall be submitted and shall include dimensions of width, depth, length and thickness of all members and ASTM designation and alloy designation of aluminum members.

The trombone arm shall be aluminum and shall consist of round or oval upper and lower members joined by one or more tubular vertical struts welded to them. The pole end of the mast arm shall have a mounting clamp welded to it which will permit the attachment of the mast arm to a round pole of varying diameter. The lower clamp shall be 5-7/8" I.D. and the upper clamp shall be 5-l/2" I.D. The design of the clamps shall accommodate some variation in pole diameter while still attaining full contact between the clamp and the pole. The surface area of the clamp contacting the pole shall be sufficiently large and designed to prevent horizontal rotation in windy conditions. The bolts connecting the arm

bracket to the back bracket shall be galvanized steel; stainless steel bolts are not acceptable. The vertical strut, which has provision for mounting the signal head, shall also provide for horizontal adjustability along the main mast arm members so that signal heads of various lengths with backplates, up to and including 5-section 12" heads, can be accommodated within the confines of the mast arm. The cross tees for signal heads shall each have two slots on the threaded hubs that face each other.

The wiring raceway entrance shall be through the lower mounting bracket.

The mast arm shall have a uniform natural aluminum finish and shall be clean. The minimum paint system shall be the manufacturer's best paint system, using prime and finish paint, subject to City of Madison review and approval. The paint system chosen shall result in a durable weather-resistant paint well adhered to the arms and suitable for streets with heavy salting and the resulting salt spray from passing vehicles traveling at speeds averaging 40 mph. The manufacturer's warranty on paint finish shall be identified. No warranty less than five years will be accepted. The black finish paint color shall be a Tiger Drylac RAL 9004 with 80% gloss.

The portion of the main members of the arm to which the arm attachment bands are welded shall be one piece seamless tapered aluminum tubes.

The main arm member shall be attached to the pole using extruded aluminum clamps fastened with continuously threaded stainless steel bolts with nuts and washers meeting the requirements of ASTM Designation A-320. Strength and/or grade specification ratings shall be listed on the shop drawings. Stiffeners or gussets shall be provided at the joints between the main arm tubes and arm clamps to provide adequate strength to resist side loads.

Shims shall be made of an aluminum alloy.

A permanent imprint of the "Type" and "Year of Manufacture" shall be made on the underside of the lower member of each arm.

C (Vacant)

D Measurement

The department will measure Traffic Signal Trombone Arms Aluminum (Length) 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.0060.39	Traffic Signal Trombone Arm, Black, Aluminum 12-Foot	Each
SPV.0060.40	Traffic Signal Trombone Arm, Black, Aluminum 15-Foot	Each
SPV.0060.41	Traffic Signal Trombone Arm, Black, Aluminum 18-Foot	Each

Payment is full compensation furnishing and installing all materials including all hardware, fittings, mounting clamps, shims and attachments necessary to completely install the mast arm.

53. Traffic Signal Heads 8-Inch, 3-Section Vertical, Item SPV.0060.42; 12-Inch 3-Section Vertical, Item SPV.0060.43; 12-Inch 4-Section Vertical, Item SPV.0060.44; 12-Inch 5-Section Vertical, Item SPV.0060.45; 12-Inch 3-Section Horizontal, Item SPV.0060.46; 12-Inch Pedestrian, Item SPV.0060.47; 12-Inch Pedestrian Countdown, Item SPV.0060.48.

A Description

This special provision describes furnishing and installing vehicle and pedestrian signals with LED indications in accordance to the standard specifications and these special provisions.

B Materials

Furnish all LED lamps according to those listed in the table below:

8 inch Red Ball LED	Duralight JXC-200VIR
8 inch Yellow Ball LED	Duralight JXC-200VIY
8 inch Green Ball LED	Duralight JXC-200VIG
12 inch Red Ball LED	Duralight JXC-300CAR
12 inch Yellow Ball LED	Duralight JXC-300CAY
12 inch Green Ball LED	Duralight JXC-300CAG
12 inch Red Arrow LED	Duralight JXJ-300VIRA
12 inch Yellow Arrow LED	Duralight JXJ-300VIYA
12 inch Green Arrow LED	Duralight JXJ-300VIGA
12 inch Pedestrian Countdown LED	Duralight JXM-200VIEP
12 inch Pedestrian Signal	Duralight JXM200VIHM

All pedestrian signals shall have tunnel visors.

All vehicle signals shall have cutaway visors.

Pedestrian countdown timers have a control wire so that when 120V AC current is applied, the timer will immediately go dark. This control wire shall be wired back to the signal control cabinet.

All vehicle and pedestrian signal heads shall be black color polycarbonate.

All vehicle and pedestrian signal heads shall be CH-SIG, Siemens LFE/SG, McCain, or Peek/TCT, subject to review and approval by City of Madison Traffic Engineering. Drain channels shall be provided so that rainwater does not pond on top of the units.

C (Vacant)

D Measurement
The department will measure Traffic Signal Heads (Inch) (Description) as 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.0060.42	Traffic Signal Heads 8-Inch, 3-Section Vertical	Each
SPV.0060.43	Traffic Signal Heads 12-Inch, 3-Section Vertical	Each
SPV.0060.44	Traffic Signal Heads 12-Inch, 4-Section Vertical	Each
SPV.0060.45	Traffic Signal Heads 12-Inch, 5-Section Horizontal	Each
SPV.0060.46	Traffic Signal Heads 12-Inch, 3-Section Horizontal	Each
SPV.0060.47	Traffic Signal Heads 12-Inch, Pedestrian	Each
SPV.0060.48	Traffic Signal Heads 12-Inch, Pedestrian Countdown	Each

Payment is full compensation for furnishing and installing all materials.

54. Backplates Signal Face, 3-Section 12-Inch Item SPV.0060.49; 4-Section 12-Inch, Item SPV.0060.50; 5-Section 12-Inch, Item SPV.0060.51.

A Description
This special provision describes furnishing and installing backplates for signal faces.

B Materials
Furnish Backplates Signal Face (Size) that are in accordance to the pertinent requirements of section 658 of the standard specifications and these special provisions. Backplates for 12” signal heads shall provide a 5” wide black band around the signal head. The backplates shall be an approved black rigid material, such as vacuum formed ABS plastic. The backplates shall match the signal heads being furnished under this bid, equipped with all necessary holes, mounting devices. All mounting hardware shall be stainless steel.

C Construction
Install the backplates in accordance to standard spec 658.3, the manufacturer’s instructions, and as shown on the plans.

D Measurement
The department will measure Backplates Signal Face (Description) 12-Inch 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.0060.49	Backplates Signal Face, 3 Section 12-Inch	Each
SPV.0060.50	Backplates Signal Face, 4 Section 12-Inch	Each
SPV.0060.51	Backplates Signal Face, 5 Section 12-Inch	Each

Payment is full compensation for furnishing and installing all materials.

55. Lighting Control Cabinets, Black Item SPV.0060.52.

A Description
This special provision describes furnishing and installing a lighting control cabinet with all electrical components and wiring assembled.

B Materials
B.1 Contactors
Furnish 8-pole, 30-amp, 600-V electrically held contactors with 120-V control coil in NEMA 1 enclosure as required for the proposed circuits. Engrave “ALL NIGHT” or “MIDNIGHT” identification on cover of respective enclosures.

B.2 Photocell
Furnish a button type photocell and install as shown on the detail. Apply silicone caulk to maintain the watertight integrity of the enclosure. The photocell shall be rated for 120V, 1500W with 30-60 second delay between “on-off” operations.

B.3 Panel
Furnish a 120/240-volt, 100A main circuit breaker, single-phase, 20-circuit panel board in a NEMA 1 enclosure. Provide copper ground and split neutral bus bars in addition to copper bus bars. Provide bolt-on, thermal-magnetic circuit breakers that clearly indicate ON, OFF, or TRIPPED position in the panel. Provide double pole breakers as required for all multiwire branch circuits.

B.4 Time Clock
Furnish a time clock with an 8-year lithium battery time backup, -40° F to 120° F operating range, 40-year program schedule retention, LCD type, daylight saving time, and leap year correction. Program as required by the City of Madison.

B.5 Selector Switches
Furnish “Hand-Off-Auto” switches to control each all-night circuit and midnight circuit separately. Provide a “Hand-Off-Auto” legend plate for each switch. Engrave “ALL NIGHT” and “MIDNIGHT” above each appropriate operator. Mount the switches in a horizontal manner in a NEMA 1 enclosure.

B.6 Enclosure
Provide a NEMA 4X enclosure made from .125" Type 5052-H32 aluminum. The doorframe shall be double flanged. All exterior hardware shall be stainless steel. The door hinges shall be all stainless steel. Door handle shall be 3/4-inch diameter stainless steel with three point latching system and hasp.

Provide an aluminum-mounting panel at back (interior) of enclosure. Provide a weatherproof pad lock with 2 3/8-inch wide body, repinnable/ replaceable cylinder, and five keys. There shall be no louvers or Corbin main door lock. Exterior of Cabinet is to be painted black. The minimum paint system shall be the manufacturer’s best paint system, using prime and finish paint, subject to City of Madison review and approval. The paint system chosen shall result in a durable weather-resistant paint well adhered to the cabinet and suitable for streets with heavy salting and the resulting salt spray from passing vehicles traveling at speeds averaging 40 mph. The manufacturer’s warranty on paint finish shall be identified. No warranty less than five years will be accepted. The black finish paint color shall be a Tiger Drylac RAL 9004 with 80% gloss.

B.7 Surge Arrester
Furnish a surge suppressor to protect the panel board. The surge suppressor shall provide six modes of surge protection, meet UL1449 Second Edition with 32 kA per phase and 48 kA system peak surge current, contain LED line indicators, 5-year warranty, and dimensions of 4.54-inches high x 2.58-inches wide x 2.22-inches deep. Connect the surge suppressor to the branch circuit breaker as indicated on the plans.

B.8 Field Wiring Termination Blocks
All connections from the field wiring to equipment in the lighting control cabinet shall be made through termination blocks. Provide quantity of channel mount, NEMA type single terminal blocks as indicated on plans that are capable of holding #12 to #1/0 wire with solderless box lugs, for power, neutral and grounding connections.

Mount the terminal blocks on a mounting channel of appropriate length with end anchors and an end barrier. Each terminal block shall have a label indicating the appropriate circuit number, neutral (‘N’) or ground (‘G’) wire connected to block; handwritten numbers and letters are not acceptable means of identification.

Make connections from the underground field wiring to the equipment in the lighting control cabinet through distribution blocks.

B.9 Incidental Materials
Secure all wiring using screw attachment type straps; adhesive type shall not be allowed.

C Construction
Assemble the control cabinet as shown on the plans. Pretest the cabinet prior to shipment to the site.

Mount all equipment to panel in enclosure. Train the cables to be in straight horizontal and vertical directions and to be parallel next to, and adjacent to, other cables whenever possible.

Mount the cabinet to the concrete base per the manufacturer's requirements.

D Measurement
The department will measure Lighting Control Cabinets 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.0060.52	Lighting Control Cabinets	Each

Payment is full compensation for for furnishing and installing photo control, contactors, panel, distribution blocks, surge arrestor, enclosure, grounding, wiring and electrical components; and mounting to the concrete base.

56. Temporary Bus Stop Pad, Item SPV.0060.53.

A Description
This special provision describes furnishing, maintaining, moving, and removing temporary pavement for Temporary Bus Stop Pads in the median during construction and for Temporary Bus Stop Pads in the terrace, as shown on the plans.

B Materials
Furnish asphaltic surface temporary in accordance to standard spec 465.2 (2) or furnish concrete in accordance to standard spec 602.2.

C Construction
Construct temporary bus stop pads 10 feet long by 6 feet wide (or the width of the terrace) that meet the requirements of the current Americans with Disabilities Act Accessibility Guidelines (ADAAG).

Form the foundation by excavating at least 3 inches. Tamp or compact the foundation to ensure stability.

Place three inches of Asphaltic Surface Temporary in accordance to standard spec 465.3.1 or place three inches of concrete in accordance to standard spec 602.3.2.3, and as shown in the plan.

Separate temporary bus stop pads in the median from construction operations with traffic drums and locate them outside the immediate work area, as directed by the engineer. Connect temporary bus stop pads in the median to crosswalks and permanent sidewalks by Temporary Crosswalk Access, which will be paid for separately.

Reconstruct or move temporary bus stop pads if required for utility installation or paving operations.

Temporary bus stop signs and poles will be furnished and installed by Madison Metro.

D Measurement
The department will measure Temporary Bus Stop Pad 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.0060.53	Temporary Bus Stop Pad	Each

Payment is full compensation for furnishing and installing all materials; for constructing; for reconstructing or moving; for removing; and for furnishing and installing safety fence.

57. Inlet Type 3 Modified, Item SPV.0060.54.

A Description
Work under this item shall include the construction of a drop inlet on top of the proposed storm sewer box precast reinforced concrete 11-FTx3-FT. This work shall conform to details in the plan and standard spec 611 and herein as described.

B (Vacant)

C Construction
The storm sewer box precast reinforced concrete 11-FTx3-FT shall be precast with a 2’x3’ opening for the drop inlet. A reinforced concrete inlet shall be formed around this opening, in line with the curb and gutter, and constructed to the required depth as shown in the plans. #4 bars shall be doweled into the box to anchor the walls of the inlet and shall be embedded 4 inches. All reinforcement shall be a minimum of three inches clear of all exposed surfaces of the concrete. All dowels shall be grouted in place with epoxy mortar. The inlet walls shall be reinforced with #4 epoxy coated rebar placed longitudinally 8 inches on center in the vertical direction. The details for the inside dimensions of the opening and other incidentals are shown in the Standard Detail Drawings.

D Measurement
The department will measure Inlet Type 3 Modified by each individual inlet, 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.0060.54	Inlet Type 3 Modified	Each

Payment is full compensation for furnishing all work, materials, labor and incidentals required to complete the work set forth in the description.

58. Perennial, Feathered Reed Grass Karl CG 24", Item SPV.0060.55; Perennial, Blue Zinger Sedge CG 12", Item SPV.0060.56; Perennial, Happy Returns Daylily CG 12", Item SPV.0060.57; Perennial, Shenandoah Switchgrass CG 18", Item SPV.0058; Perennial, Russian Sage CG 24", Item SPV.0060.59; Perennial, Goldstrum Black Eyed CG 18", Item SPV.0060.60.

A Description
This section describes furnishing and planting perennials and ornamental grasses in planting beds as shown on the plans. This includes furnishing all necessary materials, excavating plant holes, backfilling, watering and disposing of waste materials and following the requirements of standard spec 632, Plant Materials, except do not fertilize bulb plantings.

B Materials
Furnish perennial plantings in the variety and size noted on the planting schedule; as well as topsoil, mulch, fertilizer and water as required to construct the planting bed.

C Construction
Install the perennials and construct the planting bed as defined in standard spec 632, Plant Materials, and the planting details.

D Measurement
The department will measure Perennials (Type) 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.0060.55	Perennial, Feathered Reed Grass, Karl CG 24”	Each
SPV.0060.56	Perennial, Blue Zinger Sedge CG 12”	Each
SPV.0060.57	Perennial, Happy Returns Daylily CG 12”	Each
SPV.0060.58	Perennial, Shenandoah Switchgrass CG 18”	Each
SPV.0060.59	Perennial, Russian Sage CG 24”	Each
SPV.0060.60	Perennial, Goldstrum Black Eyed CG 18”	Each

Payment is full compensation for providing and installing all materials necessary to completely install each perennial; constructing the planting beds, furnishing and installing planting, topsoil, mulch, watering; creating proper soils for the planting bed; for performing all grading, excavating, backfilling, and for proper disposing of surplus material and restoration.

59. Remove Existing Hydrant, Item SPV.0060.61.

A Description

Work under this item shall include all work, labor, materials and incidentals required to remove hydrants as shown on the plans or as directed by the engineer.

B Materials

Select Fill backfill shall meet the requirements of Section 202 of the *City Standard Specifications.*

C Construction

Remove and dispose of the existing hydrants. After removing the hydrants and plugging the end of the water main, the remaining void space shall be backfilled and compacted with approved fill material to grade. Each layer of backfill to be placed in the void shall not exceed 12 inches in thickness and shall be thoroughly compacted by means of approved tampers, rollers or vibrators.

Hydrants shall be salvaged and stockpiled on site for removal by the city if so directed by the engineer, otherwise they shall be disposed of off-site at a site determined by the contractor at his own expense.

D Measurement

The department will measure Remove Existing Hydrant as each individual removed hydrant, 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.0060.61	Remove Existing Hydrant	Each

Payment is full compensation for furnishing all labor, equipment, and materials to perform the work including excavation, disposal of surplus materials from the excavation; backfilling of the void with granular backfill and compaction of the backfill material, restoring the site; and all other work incidental to the removal of hydrants.

60. Remove Existing Water Valve Box, Item SPV.0060.62.

A Description
This work shall consist of removing all water main valve boxes within the project limits which serve valves no longer in service as shown or as directed by the engineer.

B Materials
All materials used for this work shall comply with the City Standard Specifications.

C Construction
All work shall take place after the existing water main has been abandoned. Remove the valve boxes and backfill and compact the opening with approved fill material.

D Measurement
The department will measure Remove Existing Water Valve Box as each individual removed water valve box, 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.0060.62	Remove Existing Water Valve Box	Each

Payment is full compensation for furnishing all labor, tools, equipment, excavation including dewatering if necessary, disposal of surplus material, backfilling and compaction of the backfill material, restoring the site, and all other incidentals necessary to complete the work.

61. Sanitary Sewer Internal Chimney Seal, Item SPV.0060.63.

A Description
Furnish and install an internal chimney seal on all sanitary sewer access structures located within 100 feet of a street low point, in greenways, and where indicated on the plan or in the field.

B Material
Internal Chimney seal shall consist of either rubber with metal bands or a low density polyethylene insert conforming to the City of Madison Standard Detail Drawing 5.7.17 – SAS Internal Chimney Seal or other equivalent chimney seal products as approve by the engineer.

C Construction
Internal Chimney Seal shall be installed in accordance to the manufacturer's instructions.

D Measurement
The department will measure Sanitary Sewer Internal Chimney Seal as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.63	Sanitary Sewer Internal Chimney Seal	Each

Payment is full compensation for furnishing all labor, tools, materials, and all other work incidental to the installation of the sanitary internal chimney seal.

62. Sanitary Tap, Item SPV.0060.64.

A Description
Work under this item shall include the connection of a new lateral or main to an existing structure and the connection of an existing lateral or main to a new structure.

B Materials
The flexible watertight connector to be installed in the tapped hole shall be a Kor-n-Seal flexible connector, or approved equal in accordance to Standard Detail Drawing 5.2.3 of the City of Madison Standard Specifications for Public Works Construction- Latest Edition.

C Construction

Existing Pipe to New Structure
The contractor shall provide a flexible connector to connect the existing pipe to any new pipe which is required to make the connection to the structure. Any new pipe that is installed by the contractor to reconnect the existing sewer main or lateral shall be PVC (SDR-35) and shall be considered incidental to this bid item. The newly installed pipe shall match the existing pipe's diameter or be of the next larger diameter. Field coring for the connection of existing laterals to the new structure shall be included in this item. If the existing lateral is to be replaced, the new pipe shall be compensated under bid item SPV.0090.04 Sanitary Sewer Lateral 6-Inch.

The pouring and construction of concrete benches and flowlines in new sewer access structures for the inlet or outlet pipes shall not be paid for under this bid item. The construction of concrete benches and flowlines shall be considered incidental to the installation of the sewer access structure (Bid Item SPV.0060.03 Sanitary Manhole 4-FT and Bid Item SPV.0060.65 Sanitary Manhole 5-FT.

The contractor shall be responsible for maintaining the normal flow of wastewater during tapping of the sewer access structure and shall do so in accordance with BID ITEM SPV.0105.11 Wastewater Control.

D Measurement
The department will measure Sanitary Tap as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.64	Sanitary Tap	Each

Payment is full compensation for furnishing all work, materials, labor and incidentals required to complete the work set forth in the description.

63. Sanitary Manhole 5-FT, Item SPV.0060.65.

A Description
This work includes the construction of sanitary manholes consisting of precast reinforced concrete, adjusting rings, watertight joints, precast concrete base, precast reinforced concrete eccentric cone tops, steps, and all required excavation and granular backfill in accordance to the applicable provisions of standard spec 611, construction details on the plans.

B Materials
Provide minimum 4-foot inside diameter precast concrete manhole sections. Provide an eccentric type cone section with a minimum clear opening of 24 inch. Provide concrete with a compressive strength of 4000 psi and conforming to ASTM C478. Wall thicknesses of manholes shall conform to ASTM C76 for Class B concrete tongue and groove joint pipe.

Install steps in all sewer manholes as shown on the construction details, Neenah Type R-1980-E, or equal. Space manhole steps at 16-inch O.C. with an allowable tolerance of 1 inch plus or minus. Embed steps into the riser or conical top section wall a minimum of 3 inches and provide a 6-inch projection from the wall.

Use rubber ring gasket material for manhole joints. Plastic gaskets shall be preformed, high adhesion material, packaged ready for use between protective paper strips conforming to Federal Specification SS-S-00210, Type I, Rope Form; Ram-Nek, Mas-Stik, or equal.

Make manhole connections for sanitary sewer mains using flexible, watertight connections, Kor-N-Seal, or equal, for sewers up through 18-inch diameter. Provide all other sanitary sewer manhole connections made with A-Lok, Kor-N-Seal, or equal.

Provide concrete with steel reinforcement adjustment rings in conformance with ASTM C-478 that are 4 inches in thickness. A maximum of 10 inch for adjustment is allowed. Multiple grade rings are not allowed where one will suffice.

C Construction
Construct concrete benches in the interior bottom of sanitary sewer manholes which are precast or poured-in-place in the field. Extend benches to the top of each pipe to a maximum height of 42 inch. Smooth flow lines and provide uniform curves to promote flow through the manhole.

Remove any horizontal surfaces on the inside side of the manhole floor. Shape the floor to drain into the floor channel.

Build up manholes so that the cover and lid when placed will be at the established required grade.

Use precast reinforced bases in lieu of cast-in-place bases. Place bases on a bed of material at least 6 inches in depth, which meets the requirements for granular backfill. Compact bedding material and provide uniform support for the entire area of the base.

Provide precast shop drawings to engineer prior to fabrication or installation.

D Measurement
The department will measure Sanitary Manhole 5-FT as 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.0060.65	Sanitary Manhole 5-FT	Each

Payment is full compensation for furnishing all work herein specified; for furnishing all materials including masonry, sanitary sewer connections, steps and other fittings; for furnishing all excavation, backfilling, disposal of surplus materials, and for cleaning out and restoring the work site. Sanitary manhole covers will be paid for at a separate unit price.

64. Inlet Casting Type Flat, Item SPV.0060.66.

A Description
Furnish and install inlet covers at the locations shown in the plans. This work shall conform to standard spec 611 and herein as described.

B Materials
Provide inlet castings of type Neenah Foundry R-3067-C, Deeter Foundry 2061, East Jordan Iron Works 7034, or equal

C (Vacant)

D Measurement
The department will measure Inlet Casting Type Flat as 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.0060.66	Inlet Casting Type Flat	Each

Payment is full compensation for furnishing all work, materials, labor and incidentals required to complete the work set forth in the description.

65. Manhole Type 15, Item SPV.0060.67.

A Description
Work under this item shall include the construction of a manhole to connect existing 34”x53” RCP and 57”x38” CSPA storm sewer pipe to the proposed storm sewer box precast reinforced concrete 8-FTx3-FT. This work shall conform to details in the plan and standard spec 611 and herein as described.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Manhole Type 15 by 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.0060.67	Manhole Type 15	Each

Payment is full compensation for furnishing all work, materials, labor and incidentals required to complete the work set forth in the description.

66. Concrete Curb and Gutter 30-Inch Special Double Pan, Item SPV.0090.01.

A Description
Perform work in accordance to the applicable provisions of standard spec 601 and as detailed in the plans.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Concrete Curb and Gutter 30-Inch Special Double Pan by the linear foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090. 01	Concrete Curb and Gutter 30-Inch Special Double Pan	LF

Payment is full compensation for furnishing all foundation excavation and preparation; all special construction required at driveway and alley entrances, or curb ramps; for providing all materials, including concrete, expansion joints, and reinforcement tie bars unless specified otherwise; for placing, finishing, protecting, and curing; for sawing joints; and for disposing of surplus excavation material, and restoring the work site. However, if the contract provides a bid item for excavation, then the department will pay for excavation required for this work as specified in the contract.

67. Sanitary Sewer Main 8-Inch, Item SPV.0090.02; Sanitary Sewer Main 10-Inch, Item SPV.0090.03.

A Description
This work consists of excavating required trenches or tunnels, placing bedding and cover materials, laying therein the sanitary sewer pipe of the size and type specified, connection of the pipe to existing pipes or manholes; connections of the pipe to new manholes, tees, wyes, risers and all required fittings; all sheeting and shorings, backfilling and compacting the trenches, testing, and restoring the work site all as provided by the plans, specifications and contract.

B Materials

Provide polyvinyl chloride (PVC) sewer pipe meeting the requirements of Standard Specifications for Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings of the American Society for Testing Materials, Serial Designation D3034 for pipe sizes 4-inch through 15-inch and F679 for 18-inch through 36-inch. All PVC sewer pipe shall have maximum standard dimension ratio (SDR) of 35.

Provide the wall thickness conforming to requirements for a T-1 wall. Provide PVC material with a cell classification 12454-B or 12454-C as defined in ASTM D1784 with minimum modules of elasticity of 400,000 psi in tension. Provide a minimum pipe stiffness of 46 psi when tested in accordance to ASTM D2412.

Provide pipe and fittings that are the product of one manufacturer with experience records substantiating acceptable performance of the pipe to be furnished.

Provide injection molded fittings.

Acceptance of piping will be subject to tests conducted by an approved testing agency in accordance to ASTM D3034 and/or ASTM F679.

Provide fittings such as saddles, elbows, tees, wyes and others of material and construction corresponding to and having a joint design compatible with the adjacent pipe. Provide approved adapters for transitions to other types of pipe.

Provide elastomeric type joints for pipes 4 inch or larger and elastomeric or solvent cement for pipes less than 4 inch.

Provide elastomeric joints with a bell and spigot joint conforming to ASTM D3212 sealed by a rubber gasket conforming to ASTM F477 so that the assembly will remain watertight under all conditions of service, including the movements resulting from the expansion, contraction, settlement and deformation of the pipe. Form bells integrally with the pipe so they contain a factory installed positively restrained gasket.

Assemble solvent cement joints using solvent cement obtained from the pipe manufacturer, which conforms to the requirements of ASTM D2564.

The assembled joint shall pass the performance tests as required in ASTM D3212.

Provide bedding material made by crushing sound limestone or dolomite ledge rock, or crushed gravel aggregate. Provide the material that is hard and durable meeting the following gradation specifications.

BEDDING STONE GRADATION

	Percentage by Weight Passing		
Sieve Size	**Gradation No. 1**	**Gradation No. 2**	**Gradation No. 3**
1 inch	100	--	--
3/4 inch	90 to 100	--	--
1/2 inch	--	100	100
3/8 inch	20 to 55	90 to 100	--
No. 4	0 to 10	--	75 to 100
No. 8	0 to 5	0 to 15	--
No. 30	--	0 to 3	--
No. 100	--	--	10 to 25

Material native to the trench cannot be used for bedding material.

Provide the engineer with a sieve analysis of the bedding material for review prior to starting construction.

Material which is to be placed from the bedding material to 12 inches above the top of the pipe will be termed cover material. Backfill all trenches by hand to 12 inches above the top of the pipe with cover material. Deposit cover material in the trench for its full width on each side of the pipe, fittings and appurtenances simultaneously in 1-inch layers and compact using hand tamping bars and/or mechanical tampers. Use special care in placing cover material so as to avoid injury to the pipe. Provide cover material consisting of durable granular particles ranging in size from fine to a maximum size of 3/4-inch. Unwashed bank run sand and crushed bank run gravel will be considered generally acceptable cover material. Provide cover material conforming to the following gradation specifications:

COVER MATERIAL GRADATION

Sieve Size	**Percentage by Weight Passing**
1 inch	100
3/4 inch	85 to 100
3/8 inch	50 to 80
No. 4	35 to 65
No. 40	15 to 30
No. 200	5 to 15

Native trench materials may be used for cover material if they substantially conform to the above gradation specifications and a suitable credit is extended to the owner.

Bedding material may be substituted for cover material when requested by the contractor except where polyethylene encasement is used.

Bed all sanitary sewer pipe and related appurtenances using Class "B" bedding as shown on the Construction Drawings conforming to Gradation No. 1.

C Construction

Alignment And Grade – General. Lay and install utility lines to the lines and grades specified with valves, fittings, manholes, and other appurtenances at the specified locations; spigots centered in bells; and all manholes and riser pipes plumb. Unless otherwise noted, service lines shown on the drawings are approximate. The engineer will assist the contractor in staking the actual location in the field.

Deviations Occasioned By Existing Improvements. Wherever significant obstructions not shown on the drawings are encountered during the progress of the work and interfere to such an extent that an alteration in the plan may be necessary, the engineer will have the authority to change and request a deviation from the line and grade or arrange with the owners of the structure for the removal, relocation or reconstruction of the obstructions. Existing items unnecessarily damaged during the performance of this contract shall be repaired and replaced at the expense of the contractor.

Caution In Excavation. Proceed with caution in the excavation and preparation of the trench so that the exact location of underground structures may be determined. The contractor will be held responsible for the repair of such structures when broken or otherwise damaged because of carelessness on the part of the contractor.

Excavation And Preparation Of Trench – General. Dig the trench so that the pipe can be laid to the alignment and depth specified. Unless otherwise allowed by the engineer, trenches shall not be excavated more than 100 feet in advance of pipe laying.

Excavation to Grade. Finish the trench to the depth necessary to provide a uniform and continuous bearing and support for the pipe on the bedding material provided at every point between bell holes. Any part of the bottom of trench excavated below the specified grade shall be corrected with bedding material, thoroughly compacted in place. Shape and finish the bedding with hand tools to fit the bottom quadrant to the pipe.

Pile all excavated material in a manner that will not endanger the work. Conduct the work in such a manner that pedestrian and motor traffic is not unnecessarily disrupted. Fire hydrants, valve boxes and manholes shall be left unobstructed. Gutters shall be kept clear or other satisfactory provisions made for street drainage, and natural water courses shall not be obstructed.

Remove excavated material designated by the engineer as being undesirable for backfilling immediately as excavation progresses. All undesirable and surplus material must be disposed of in accordance to standard spec 205.3.11.

Dewatering. The contractor shall, at his own expense, keep the excavation clear of water while the sewers and appurtenances are being installed and backfilled. Wherever necessary, excavate in advance of the completed work and lead the water into sumps or pump wells. The expense for making all extra excavations necessary to prevent water from interfering with the proper construction of the work and for forming of all dams, digging sumps or pump wells, bailing and pumping shall be borne by the contractor.

The contractor's dewatering system shall ensure that soils within the trench will not be destabilized by hydrostatic uplift pressures from adjacent ground water. If conditions warrant, furnish and install well point systems or deep wells. Provide spacing and depth of well points or wells adequate to lower the ground water table and hydrostatic uplift pressure below the trench bottom. Obtain and pay for any permits necessary for the dewatering operations.

No extra payment will be made for dewatering of the trench whether accomplished by the use of sumps and pumps, well point systems, or deep wells.

Take all necessary precautions during the dewatering operation to protect adjacent structures against subsidence, flooding or other damage. Prior to dewatering, take into account the effect of proposed dewatering operation on existing private water supply systems and make arrangements with property owners for protecting their supplies or providing alternative supply.

In areas where continuous operation of dewatering pumps is necessary, avoid noise disturbance to nearby residences to the greatest extent possible by using electric driven pumps, intake and exhaust silencers, or housing to minimize noise.

Width of Trench. The contractor shall be responsible for determining and providing the minimum width necessary to provide a safe trench in accordance to current OSHA standards and all other applicable standards. Pay items related to maximum trench widths shall not limit the contractor's responsibility to provide safe trench conditions.

The width of trench below the outside top of the pipe shall be as shown in the following table for the sizes listed. A minimum clearance of 8 inches between the outside of the pipe barrel and the trench wall at the pipe spring line shall be maintained. If sheeting is used, the trench width will be measured as the clear distance between inside faces of the sheeting.

MINIMUM WIDTH OF TRENCH BELOW TOP OF PIPE

Internal Pipe Diameter (Inch)	Trench Width (Inch)
4	30
6	30
8	36
10	36
12	36
15	36
18 and Larger	See engineer

Where the width of trench below the outside top of the pipe barrel cannot be otherwise maintained within the limits shown above, the contractor, at his own expense, shall furnish an adequate pipe installation for the actual trench width which will meet design conditions. This may be accomplished by furnishing higher class bedding, a stronger pipe, concrete cradle, cap or envelope or by driving sheeting prior to excavation to subgrade. Removal of sheeting below the top of the pipe, if allowed by the engineer, shall be gradual during backfilling.

If the maximum trench width is exceeded for any reason other than by request of the engineer, the concrete cradle, cap, sheeting, bedding or the stronger pipe shall be placed by the contractor at his own expense. Where the maximum trench width is exceeded at the written request of the engineer, the concrete cradle, cap, sheeting, bedding, or stronger pipe will be paid for on the basis of the unit price bid. Keep the top width of trench excavation as narrow as is reasonably possible, and acceptable, to minimize pavement damage.

Width of Trench - Thermoplastic Pipe: The trench width for flexible pipe shall be the greater of twice the pipe outside diameter or the maximum trench width specified for rigid pipe, whichever is greater.

Braced And Sheeted Trenches. Sheet and brace open-cut trenches as required by any governing state laws and municipal ordinances and as may be necessary to protect life, property, improvements or the work. Protect underground or aboveground improvements to be left in place and, if damaged, repair or replace at the expense of the contractor.

Sheeting and bracing which is to be left in place must be removed for a distance of 4 feet below the established street grade or existing surface of the street, whichever is lower. Trench bracing, except that which is left in place, may be removed after backfilling has been completed or has been brought up to such an elevation as to permit its safe removal.

Pipe Installation – General. Prior to commencing pipe laying, notify the engineer of the intended date for starting work. The engineer may request the removal and relaying of pipe installed prior to notification of the engineer at the contractor's expense.

Provide and use proper implements, tools, and facilities for the safe and convenient prosecution of the work. Carefully lower all pipe, fittings, and appurtenances into the trench, piece by piece, with a crane, rope or other suitable tools or equipment, in such manner as to prevent damage to materials. Under no circumstance shall pipe be dropped or rolled into the trench.

Provide materials as shown on the drawings or as specified herein.

Material Inspection. Inspect the pipe, fittings, and appurtenances for defects when delivered to the job site and prior to lowering into the trench. Remove defective material from the job site. Provide material that is clean and free of deleterious substances prior to use in the work.

Bedding And Cover. Immediately prior to placing the pipe, shape the trench bottom by hand to fit the entire bottom quadrant of the pipe. If pipe is of the bell and spigot type, provide bell holes to prevent the bell from supporting the backfill load. Bell holes shall be large enough to permit proper making of the joint but not larger than necessary to make the joint. All adjustments to line and grade must be done by scraping away or filling in bedding material under the body of the pipe. Any fill used must be bedding material. If necessary to obtain uniform contact of the pipe with the subgrade, a template shall be used to shape the bedding material. All pipe shall be bedded in bedding material at least 4 inches thick. Perform all necessary excavation and furnish all necessary material to provide this bedding.

Pipe Laying. Lay all pipe accurately to the line and grade as designated. Preparatory to making pipe joints, all surfaces of the portions of the pipe to be joined or of the factory made jointing material shall be clean and dry. Use lubricants, primers, adhesives, and other joint material and install as recommended by the pipe or joint manufacturer's specifications. The jointing materials or factory fabricated joints shall then be placed, fitted, joined, and adjusted in such a workmanlike manner as to obtain the degree of watertightness specified. Furnish pertinent specifications from the joint and pipe manufacturer that outline procedures to be followed in making the joint to the engineer.

At times when pipe laying is not in progress, close the open ends of pipe with plugs to prevent the entry of foreign material. Remove all foreign material from the pipe prior to acceptance.

After placing a length of pipe in the trench, center the spigot end in the bell and force the pipe home and bring to correct line and grade. Secure the pipe in place with specified backfill material tamped around it except at the bells. Keep trenches water-free during bedding, laying, and jointing and for as long a period as necessary to permit proper execution of the work.

Pipe shall be brought home by using a cross member and levers or jacks. It will not be permissible to push pipe home with motor-powered excavation equipment.

Install sanitary sewer to an elevation tolerance of plus or minus 0.03 feet of the plan elevation or elevation provided on the grade sheet at any point along the main.

Install wyes, tees, and special as called for on the drawings or as requested by the engineer. In general, joint wyes, tees, and specials with the same type of joint as used in the main.

In joining two dissimilar types of pipe, use manufactured adaptors and fittings.

Do not exceed joint deflection limits established by the pipe manufacturer for the pipe and joint being used.

Portable Trench Box. Whenever a portable trench box or shield is used, take special precautions so as not to pull already jointed pipe apart or leave voids around the pipe wall. Whenever possible keep the bottom edge of the box at a level approximately even with the top of pipe. Place cover material to at least the top of pipe before moving the box ahead.

Backfilling. Backfill material shall be that material placed between the top of cover material to the subgrade for placement of restoration materials.

When the type of backfill material is not otherwise specified, the contractor may backfill with the excavated material, provided that such material consists of loam clay, sand, gravel or other materials that, in the opinion of the engineer, are suitable for backfilling.

All backfill material must exceed 35°F and be free from frost cinders, ashes, refuse, vegetable or organic matter, boulders, rocks, or stone, frozen lumps or other material which in the opinion of the engineer is unsuitable. From 12 inches above the top of the pipe to the trench subgrade, well-graded material containing stones up to 8-inch in their greatest dimension may be used, unless otherwise specified.

Granular Backfill. When called for on the drawings or requested by the engineer, provide granular backfill material consisting of durable particles ranging in size from fine to coarse in a substantially uniform combination. Sufficient fine material must be present to fill all the voids in the coarse material. No stones over 3-inch or clay lumps will be allowed.

Placement. Backfill all trenches using specified material so that excessive lengths of trench are not left open. In general the backfilling operation shall proceed so that no more than 100 feet of trench is open behind the pipe laying operation.

Leave backfill below the original surface to allow for placement of restoration materials including pavement, base course, concrete, topsoil, or sod. When settlement occurs, restore the surface improvements at contractor’s expense, so as to maintain the finished surface.

Backfill Consolidation. Consolidate all trenches as specified in this Section for the entire depth and width of the trench.

Consolidate by use of smooth surface vibratory compactors or backhoe-operated hydraulic compactors for granular materials and rotating segment pad mechanisms for loam/clay soils. The lift height shall not exceed 8 inches for walk-behind hand-operated vibratory compactors and segmented pad. Lift height shall not exceed 24 inches for self-propelled vibratory drum or backhoe-operated hydraulic compactors. Provide smaller lift heights as necessary to achieve the degree of compaction specified.

Provide compaction density a minimum of 90% of the maximum dry density as determined by the Modified Proctor Test (ASTM D1557) for all areas within current or future roadway right-of-way or any area restored under this Contract or future projects as identified on the drawings, with base course, asphalt, or concrete surface. Unless otherwise specified, compact backfill material placed in other areas to the point where no additional consolidation can be observed from the compaction equipment being used.

Recompact backfill material not meeting the compaction specification at no cost to the owner. Cost for additional testing on recompacted material will be at the contractor's expense.

Testing
Televise completed sections of the sanitary sewer main. Provide a report and color video tape taken by a 360-degree radial-view camera for closeup view showing all completed work in accordance to NASCO PACP Standards. Low pressure air testing, and mandrel testing will not be required.

D Measurement
The department will measure Sanitary Sewer Main (Size) by the linear foot, acceptably completed.

The quantity to be paid shall be measured from centerline of manhole to centerline of manhole, or from manhole to the end of a portion not starting or terminating in a manhole.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.02	Sanitary Sewer Main 8-Inch	LF
SPV.0090.03	Sanitary Sewer Main 10-Inch	LF

Payment is full compensation for furnishing all work herein specified; televising; and for furnishing all labor, tools, equipment and miscellaneous appurtenances necessary to complete the work.

68. Sanitary Sewer Lateral 6-Inch, Item SPV.0090.04.

A Description

This work consists of excavating required trenches, connecting the lateral to the mainline pipe, placing bedding material, connecting the new lateral to the existing lateral, all required fittings, and bends, backfilling and compacting the trenches and restoring the work site all as provided by the plans, specifications and contract. The contractor shall be responsible for locating, identifying, and abandoning "inactive" laterals.

B Materials

Provide PVC pipe of the bell and spigot type conforming to the requirements of ASTM Specification D-1789-89, Schedule 40.

Provide bedding, cover materials, and backfill conforming to the sanitary sewer main specifications.

Provide a Valco CP test mini-box, or approved equal tracer wire access box.

Provide continuous 10-gauge solid tracer wire with a 5/8-inch-diameter steel grounding rod.

C Construction

Perform all pipe installation in accordance to the applicable provisions of sanitary sewer main and as modified hereinafter.

All sanitary sewer pipe and related appurtenances shall be bedded using Class "B" bedding as shown on the construction drawings confirming to Gradation No. 1.

The existing sanitary sewers have been televised and reports are available to indicate existing wyes and taps. Confer with each property owner to verify the location of the existing sanitary lateral. Provide new sanitary sewer laterals conforming to the requirements of the City of Monona Standard Sewer and Water Lateral Specifications.

Wherever shown on the drawings or requested by the engineer, build wye or tee branches into the main for use in making service and inlet connections. Provide openings in the wyes or tees for sanitary service pipes 6-inch in diameter unless otherwise shown or specified.

Turn wyes so that the branch is at an angle of 30° or 45° with the horizontal. Branches shall be of the same material as the main for smaller diameter sewers. For larger diameter mains, furnish and install special branch fittings as specified.

Furnish and install sanitary sewer laterals as shown on the drawings and as requested by the engineer. Under normal circumstances, service laterals will be installed within the right-of-way or easement to serve all existing buildings and all platted lots. In certain cases only wye or tee branches will be installed to vacant lots. Service laterals shall consist of a branch fitting at the main and extension of the specified lateral pipe to the

end of lateral as called for and requested. Furnish and install all necessary fittings to complete the installation as shown on the Construction Details for Sanitary Sewer Laterals.

Service laterals for Standard Laterals, Type 1, or for Modified Laterals, Types 1, 2, 4 and 5 as shown on the Construction Details for Sanitary Sewer Laterals, shall be solid wall PVC unless otherwise shown on the drawings or as standardized upon by the owner.

Standard risers and pipe from risers, Type 3 and 6, shall be ductile iron pipe and fittings with push on joints as shown on the Construction Details.

Fittings for all laterals are to be of the same material as the lateral pipe unless special fittings are needed for transition between material types or sizes or standard fittings are not manufactured. Where the wye and lateral are dissimilar materials, provide a transition coupling, Fernco, or equal, designed to join the two pipe materials. All fittings used, including type of jointing, are subject to review by the engineer.

Under normal conditions and unless otherwise shown on the drawings or requested by the engineer, all service laterals shall be Standard Laterals, Type 1, as shown on the Construction Details. Service laterals of Types 2 through 6 may be requested by the engineer to meet field conditions.

It is the general intent to install Modified Laterals, Type 2, 4, or 5 for service to properties that presently have shallow or no basements or where the depth to ground water at the end of lateral is shallow.

Maintain a complete and accurate tabulation of length, depth, and location of all branches, risers, and laterals on cards available from the engineer. Make measurements from the nearest downstream manhole. Lateral installation to meet these specifications and field conditions are the responsibility of the contractor. Problems occurring because of failure to provide proper installation or proper records shall be corrected by the contractor at his expense.

Do not backfill an installed lateral until the engineer has been notified that the lateral is complete and reasonable time is allowed for observation of the work.

D Measurement

The department will measure Sanitary Sewer Lateral 6-Inch, by the linear foot, acceptably completed.

The quantity to be paid shall be measured from the connection of the mainline sewer pipe to the connection of the existing sanitary lateral along the centerline of the pipe.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.04	Sanitary Sewer Lateral 6-Inch	LF

Payment is full compensation for furnishing all work herein specified. The price shall also be full payment for determining whether laterals are “active”, “inactive”, or abandoned, and the exact location and size of “active” lateral reconnections.

69. Water Main, 6-Inch, Item SPV.0090.05; 8-Inch, Item SPV.0090.06; 12-Inch, Item SPV.0090.09.

A Description

This work consists of furnishing and installing water main in accordance to City of Monona Standard Water Main Specifications and as hereinafter provided.

B Materials

Iron pipe and fittings for water main shall be ductile iron, American, Tyler, Griffin, U.S. Pipe, or equal, and shall conform to AWWA C151/A21.51, with mechanical joints or push-on joints where buried and flanged joints elsewhere as shown on the drawings.

Furnish pipe wall thickness as required by AWWA C115 for flanged piping, and AWWA C150 for buried piping with the depth of cover as shown on the drawings for Class C bedding as shown on the Construction Details.

Gaskets for flanged piping shall be full face, 1/8 inch, synthetic rubber gaskets with factory-made holes for flange bolts. No field make-up flanges will be allowed.

Unless otherwise shown or specified, provide flanged pipe with minimum special thickness Class 53 with a minimum rated working pressure of 350 psi and a water hammer allowance of 100 psi. Provide buried pipe with minimum special thickness Class 52 with a minimum rated working pressure of 330 psi or pressure Class 350 with a water hammer allowance of 100 psi.

In cases where corporation stops are to be tapped into mains, furnish pipe wall thickness as specified in AWWA C151 to provide four threads; furnish pipe saddles as approved by manufacturer.

Joints shall be mechanical joint AWWA C111 or slip joint. Furnish all water main, pipe, valves, and fittings with cable bond conductor or electrobond conductivity strips. Lead-tipped gaskets or bronze wedges will not be allowed.

Each pipe shall have the weight, class, or nominal thickness and casting period shown on it. Cast or stamp the manufacturer's mark, the year in which the pipe was produced, and the letters "DI" or "DUCTILE" on the pipe.

Provide ductile iron pipe centrifugally cast in metal or sand-lined molds having bell and spigot ends designed for a rubber gasket push-on joint or mechanical joints.

Provide pipe walls that are homogeneous from inside to outside and completely free of laminations, blisters, or other imperfections. Defects may be removed at the factory only.

Provide pipe with a cement mortar lining and internal and external bituminous coats. Lining and coating must be suitable for use with potable water systems and shall comply with AWWA C151.

Apply the bituminous coating over the cement lining on the inside of the pipe, and a bituminous seal coat on the exterior of all pipe and fittings. The coating shall be smooth and impervious to water without any tendency to scale off.

Improper or incomplete marking will be cause for rejection of the pipe.

Furnish certification data representing each class of pipe furnished. The certification report must clearly state that all pipe furnished meets the appropriate AWWA specification.

Unless otherwise specified, provide rubber gaskets conforming to AWWA C111 or ANSI 21.11 for Rubber Gasket Joints for Ductile Iron Pressure Pipe and Fittings.

Furnish gaskets in sufficient number for all joints. Furnish sufficient joint lubricant by the manufacturer with the gaskets.

Where required in the specifications or on the drawings. Provide polyethylene encasement conforming to AWWA C105 or ANSI A21.5. Film shall be Class C - Black, with a minimum nominal thickness of 0.008 inch (8 mils). Tape for securing the film shall be a thermoplastic material with a pressure sensitive adhesive face capable of bonding to metal, bituminous coating, and polyethylene. Tape shall have a minimum thickness of 0.008 inch (8 mils) and a minimum width of 1 inch.

The polyethylene film envelope shall be free as is commercially possible of gels, streaks, pinholes, particles of foreign matter and undispersed raw materials. There shall be no other visible defect such as holes, tears, blisters or thinning out at folds.

Fittings. Provide American-made ductile iron fittings.

Provide ductile iron fittings conforming to AWWA C110, C153 DI compact fittings or ANSI A21.10 for all ductile iron or PVC pressure pipe.

Ductile iron fittings shall be American made with mechanical joints in accordance to AWWA C110 and AWWA C111.

Provide ductile iron "compact fittings" rated at 350 psi and made in accordance to AWWA C153. Provide mechanical joint bolts and nuts made of high strength, low alloy steel having the characteristics specified in Section 11.6.5 of AWWA C111. Flange joints shall be made in accordance to AWWA C110 and ANSI B16.1.

Provide interior and exterior coatings conforming to AWWA C110. Cement mortar lining of standard fittings is not required unless specified.

Ductile iron "compact fittings" shall be cement lined on the interior conforming to AWWA C153.

Mechanical joint lugged retainer glands (Megalug, or equal) may be used with ductile iron or poly vinyl chloride pressure pipe.

Provide all plugs, caps, tees, hydrants, and bends for water mains and force mains with positive reaction backing. Reaction backing shall be poured-in-place concrete. Place backing between solid ground and the fitting to be anchored; the area of bearing on the pipe and on the ground in each instance shall be sized so that the soil bearing pressure does not exceed 1200 psi, using a working pressure in the main of 150 psi plus 100 psi water hammer allowance. Place the backing, unless otherwise shown or specified, so that the pipe and fitting joints will be accessible for repair. The contractor may use MEGALUG, or equal, restrained joints in lieu of reaction backing. The number of joints to be restrained to provide adequate restraint shall be as shown on the drawings.

C Construction

General: Perform construction in conformance with AWWA C600 for cast iron or ductile iron water main.

Installation: Provide sufficient and adequate equipment on the site of the work for unloading and lowering pipe and fittings into the trench. Exercise extreme in handling all pipe, fittings and special castings so as to prevent breakage. Under no circumstances shall they be dropped into the trench or so handled as to receive hard blows or jolts when being moved.

Field Inspection of Materials: Before lowering and while suspended, the pipe or fittings shall be inspected for defects. All materials used in the work must pass field inspection.

Direction of Laying: Unless otherwise ordered, lay pipe with the bell ends facing the direction of laying. When the grade exceeds 100 feet of rise per 300 feet of trench, face the bells upgrade.

Joining of Pipe: Take every precaution to prevent foreign material from entering the pipe while it is being placed in the line.

Cutting of Pipe: Cut the pipe at right angles to the centerline of the pipe. Perform cutting in a neat workmanlike manner without damage to the pipe and so as to leave smooth ends. Cut all pipes with an approved mechanical cutter. The cut end of the pipe to be used with a rubber gasket joint shall be tapered by grinding or filing back at an angle of approximately 30 degrees with the centerline of the pipe, and any sharp or rough edges shall be removed.

Obstructions in Line or Grade: Whenever it becomes necessary to lay a main over, under or around a known obstruction, the contractor will furnish and install the required fittings. The laying of such fittings will be paid for at the unit price bid for each size of main. No additional compensation will be paid to the contractor for any expenses incurred because of such obstruction. When an unknown underground structure interferes with the work to such an extent that an alteration of the plan is required, and such alteration results in a change in the cost to the contractor, the engineer will issue a written

change order for such altered work, specifying the basis of payment or credit for such altered work.

Setting Valves: Provide and install valves in water mains in locations where shown on the plans. Provide a valve box for every valve. The valve box shall not transmit shock or stress to the valve and shall be centered and plumb over the wrench nut of the valve, with the box cover flush with the surface of the finished grade or such level as may be directed.

Polyethylene Wrap: Provide corrosion protection for all ductile pipe, iron tees, crosses, bends, etc., and all valves by use of polyethylene wrap.

Extend the wrap approximately 18 inches beyond all joints. Tape all seams securely. Place the cover material with care to prevent damage to the polyethylene wrap. Repair any rips or punctures in the wrap immediately.

Separation: Expose utilities that cross proposed facility prior to construction to allow the engineer to check for conflicts. Protect utilities from disturbance throughout work.

Whenever water mains cross over sewers, lay the water main at such an elevation that the bottom of the water main is at least 6 inches above the top of the sewer. Whenever water mains cross under sewers, maintain a minimum vertical separation of 18 inches between the top of the water main and the bottom of the sewer. At crossings, center one full length of water pipe on the sewer so that both joints will be as far from the sewer as possible.

Disinfection: Furnish all material, equipment and labor necessary to disinfect all new water mains and all existing mains disturbed by construction including laboratory testing. Schedule sampling and testing to complete the work within the contract times. Furnish items of material for testing in the size and quantity necessary to properly complete the test. Interruption or delay of the contractor's work progress caused by testing and sampling will not be cause for extra payment under the contract nor will they be cause for extension of contract time. Costs for items furnished under this section will be included as an incidental item of work under the various items included in the bid. Material suppliers shall furnish certificates of compliance indicating that all tests required by the various standards have been conducted and that the test results comply with the standards.

Testing: Conduct hydrostatic pressure tests and leakage tests of all joints in accordance to the requirements of AWWA C600. During performance of the hydrostatic pressure test, subject the main to a minimum pressure of 125 psi. Remove all air from the water main during testing by flushing and by installing corporations at high points.

Prior to conducting the pressure and leakage test, backfill the trench for its full depth. All bends and special connections to the main shall be adequately blocked and tied prior to the test. Correct any damage caused to the water main or its appurtenances during performance of these tests.

Keep a record of all tests performed. These records shall show the individual lengths of main tested and test results.

Where connections are made to existing mains, it will be the responsibility of the contractor to provide the necessary hydrostatic tests on all new mains installed. This may necessitate, but is not limited to, the installation of temporary valves to isolate the new system from the existing system. All materials, work, and equipment necessary for this work will be furnished by the contractor at his expense.

Disinfect and sterilize all new work and old mains where it is necessary to cut into them. Perform disinfection in accordance to AWWA C651. Furnish all materials and equipment needed for disinfection of mains. Collect the necessary samples and deliver them to the testing laboratory. The cost of all work under this item is included in the price as bid under Water Main.

Furnish all equipment, labor and miscellaneous items necessary to perform electrical continuity tests on all new water main installed. Perform tests using an ohmmeter to assure that electrical continuity exists across all joints. Make all necessary repairs to establish continuity across joints.

All testing of pipelines shall proceed concurrently with installation. The contractor is advised that it may be advantageous to conduct daily preliminary testing of his work.

D Measurement

The department will measure Water Main, (Size) by the linear foot acceptably completed. Quantity to be paid for includes construction through valves and other fittings. Tees, reducers, sleeves, and bends will be measured and paid as water main.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.05	Water Main, 6-Inch	LF
SPV.0090.06	Water Main, 8-Inch	LF
SPV.0090.09	Water Main, 12-Inch	LF

Payment is full compensation for furnishing all work herein specified.

The price bid shall include the pipe, excavation, dewatering, bedding, laying, jointing, backfilling, and maintenance of surface and all other labor and material necessary for complete compliance with these specifications. The cost of all special connections to existing mains and appurtenances shall be included in the prices bid.

70. Water Service, Copper, 1-Inch, Item SPV.0090.07.

A Description

This work consists of furnishing and installing new water service laterals complete with stop boxes from new water main as shown on the drawings in accordance to City of Monona Standard Sewer and Water Lateral Specifications, and as hereinafter provided.

B Materials
Water laterals shall be 1-inch-diameter Type K copper and all fittings shall meet the requirements of City of Monona Standard Technical Specifications.

Corporation stops shall be Mueller H-15013, or equal.

Curb stops shall be Mueller B-25155, or equal. Curb stops and fittings shall have a positive metal to metal connection.

Service boxes shall be Mueller H-10300-99002. The service box shall consist of an Minneapolis pattern base section, 1-inch upper section, a stationary 5660 stainless steel rod, and 2 7/8-inch lower section. Provide service boxes with a minimum length of Provide 7 feet when extended without using extension sections.

C Construction
Install water service laterals with minimum amount of service interruption. Replacement corporation stops, curb stops, extension rods, and boxes for each water service reconnected will be included under this bid item. All curb boxes shall be installed at the right-of-way. Where it is not possible to install curb box at the right-of-way, curb boxes shall be installed at the location of the existing curb box or as determined by the engineer.

Backfill and compact as specified for adjacent water main.

A clay dam shall be installed at the end of the new lateral.

D Measurement
The department will measure Water Service, Copper, 1-Inch by the linear foot, acceptably completed, measured along centerline of tubing from the centerline of the main to the connection to the existing lateral.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.07	Water Service, Copper, 1-Inch	LF

Payment is full compensation for furnishing all work herein specified.

The price bid shall include the pipe, corporation stop, curb stop, extension rod, and box, excavation, dewatering, bedding, cover laying, jointing, backfilling, and maintenance of surface and all other labor and material necessary for complete compliance with these specifications. The cost of all special connections to existing mains and appurtenances shall be included in the prices bid.

71. Loop Detector Lead-In Cable, Item, SPV.0090.08.

A Description

This special provision describes furnishing and installing loop detector lead in cable according to standard spec 655 and these specifications.

B Material

Furnish 0.25 inch diameter, 4-conductor, #18 AWG, waterproof, shielded, polypropylene insulation cable, with HDPE outer jacket. Meeting IMSA specifications. Loop detector lead in cable shall be smooth on the outside without any ripples or ribbing from cable wires.

C Construction

Furnish and install one cable for every two loops from each loop handhole to the intersection control cabinet via the most direct route, without intermediate splicing. Most of the loops will be new and are shown on the plan. Install cable for some existing loops. Verify cable needs with the City of Madison Traffic Engineering staff before completing intersection wiring.

D Measurement

The department will measure Loop Detector Lead In Cable by the linear foot acceptably completed, measured from the splice with the loop lead in wire along the centerline of the conduit to its connection with terminals in the control cabinet.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.08	Loop Detector Lead In Cable	LF

Payment is full compensation for furnishing and installing all materials.

72. Abandon Water Main, Item SPV.0105.01.

A Description

This special provision describes abandoning existing water main by filling it with cellular concrete in accordance to the pertinent requirements of standard spec 204 and standard spec 501, removing hydrants that are being replaced, and removing existing valve boxes as shown in the plans, and as hereinafter provided.

B Materials

Provide cellular concrete meeting the following specifications: 1 part cement, 1 part fly ash, 8 parts sand or an approved equal, and water. Provide cement meeting the requirements of standard spec 501.2.1 for Type 1 Portland Cement. Provide sand meeting the requirements of standard spec 501.2.5.3. Provide water meeting the requirements of standard spec 501.2.4.

C Construction
Fill the abandoned water pipe with cellular concrete as directed by the engineer. If the pipe cannot be completely filled from existing ends, tap the pipe where necessary and fill from these locations.

Deliver removed hydrants to the City of Monona.

D Measurement
The department will measure Abandon Water Main as a single lump sum unit of work for abandoning water main, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Abandon Water Main	LS

Payment is full compensation for furnishing all materials; excavating and backfilling where necessary.

73. Opticom Signal Preempt, Item SPV.0105.02.

A Description
This special provision describes furnishing and installing Opticom brand optical signal preempt equipment for the two signalized intersections. If proposed, an alternate optical preempt system that is compatible with Opticom equipment will be considered by the City of Madison Traffic Engineering Division. The acceptability of alternate equipment rests solely with the City of Madison Traffic Engineering Division.

B Materials
Contractor to provide the following materials to the City of Madison:

- Model 454 discriminator for two signalized intersections, two total.
- Model 760 card rack for each intersection, two total.
- Cables and auxiliary equipment as necessary for a complete operating system.

Contractor to install the following materials:

- Model 138 detector cable as necessary.
- Model 711 detectors, six total.

C Construction
Install detectors on the top horizontal member of monotube arms, between the first and second traffic signal head. The detectors will be on the far side of the intersection, and shall be aimed at approaching traffic, as further directed by City Traffic Engineering staff. Detector cable shall be installed from the detector to the control cabinet at each intersection, using the shortest path.

All installation methods shall be consistent with the manufacturer's instructions.

Card rack and discriminator installation, as well as cabinet connections, will be made by City of Madison Traffic Engineering staff.

D Measurement
The department will measure Opticom Signal Preempt as a single complete lump sum unit of work for opticom signal preempt, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.02	Opticom Signal Preempt	LS

Payment is full compensation furnishing and installing detectors and cable; for furnishing and delivering discriminators, card racks, cables and miscellaneous materials to the city Traffic Engineering Field Office, 1120 Sayle Street, Madison, Wisconsin.

74. Temporary Traffic Signals (Monona Drive and Buckeye Road), Item SPV.0105.03; (Monona Drive and Cottage Grove Road), Item SPV.0105.04.

A Description
This special provision describes installing temporary traffic signals for intersections, using overhead electrical wiring to temporary traffic signal poles and temporary supports, in accordance to standard spec 661 and as amended herein.

The City of Madison traffic signal personnel will perform the traffic signal inspection.

B Materials
Furnish and use materials that are in accordance to standard spec 661.2 and as amended herein.

Maintain and extend signal interconnectivity as necessary. Furnish and install Opticom signal preempt for the temporary signals. The following approach directions each need to be detected and brought back individually to the signal control cabinet: southbound, northbound and westbound at Buckeye Road intersection, and southbound, northbound and westbound at Cottage Grove Road intersection.

B.1 Luminaires
Furnish and install luminaire arms and luminaries conforming to the pertinent requirements of standard spec 657 and standard spec 659. The luminaries shall be 400 watt, full cutoff, high-pressure sodium and shall be furnished with photo electric cells to turn the luminaire on and off.

B.2 Existing City Equipment
Use of any existing signal equipment, including signal faces, signal poles and trombone arms, which the contractor wishes to remain on site for use as part of the temporary traffic signal, shall be requested in writing to Dan Dettmann, email: ddettmann@cityofmadison.com, prior to the installation of temporary signals. Existing signal equipment will not be replaced or provided by the city once the temporary traffic signal is installed. Repair or replace in kind any equipment that is requested to remain on site and is subsequently damaged.

B.3 Signal Poles and Signal Faces
Furnish new or used poles and traffic signal standards for use in temporary signals conforming to the pertinent requirements of standard spec 657 and standard spec 661. Furnish signal faces in accordance to standard spec 661.2.2.2.

B.4 Pedestrian Push Buttons
Furnish pedestrian push buttons conforming to standard spec 658.

B.5 Signal Cabinet
The contractor may use the existing signal cabinet and enclosed signal equipment for temporary signals. If using the existing signal cabinet for temporary signals, relocate the existing cabinet to permit the construction of a new cabinet base and installation of the new cabinet. If not using the existing signal cabinet, furnish new or equivalent to new materials as specified in standard spec 661.2.

B.6 Controller
Furnish a new or equivalent to new Econolite ASC-2/2100 or ASC3-2100 controller with Telemetry Module for each Econolite Controller. The controller shall be compatible with the City of Madison closed loop system (CLS).

B.7 Conflict Monitor
Furnish a new or equivalent to new NEMA+ 12-Channel Signal Conflict Monitor, with LCD display, and an Ejector Tab card release on side of card.

Provide keys to the temporary signal control cabinet to the City of Madison in addition to other required keys in accordance to standard spec 661.2.1.

C Construction
C.1 General
The City of Madison will load the timing programs into the controller.

Do not use new permanent signal conduit for temporary signal wiring. Provide horizontal and vertical clearance between sidewalks and guy wires.

Arrange for all required electrical service modifications with the utility. Pay all utility company installation costs for modifications required to maintain the Temporary Traffic Signal. The City of Madison will pay for energy costs.

Locate and avoid all underground and aboveground utilities and structures. Install temporary supports as required to avoid conflicts with proposed curb and gutter, sidewalk, and traffic signal poles. The engineer will approve the final location of wood poles prior to installation.

C.2 Existing City Equipment
City forces will remove all existing signal equipment after temporary signals are in place. Contact Michael Christoph at (608) 266- 9031 to coordinate signal removals.

C.3 Signal Heads
Signal heads for the same vehicle travel direction shall be a minimum of 11 feet from each other. Pedestrian signals shall be provided for each crosswalk open to pedestrians and shall be located so that they are clearly visible to pedestrians prior to and during their crossing. Signal heads shall be moved as necessary or as directed by the engineer.

C.4 Pedestrian Push Buttons
Install pedestrian push buttons for pedestrians crossing Monona Drive, Buckeye Road and Cottage Grove Road. Mount push buttons so that they are wheelchair accessible from temporary crosswalks. Install pedestrian push buttons as required by the MUTCD chapter 4.

C.5 Luminaires
Orient luminaries as shown on the plans to illuminate both traffic lanes and sidewalks on both sides of the respective street.

C.6 Cabinet
The contractor shall have a representative of the supplier of their cabinet on site at the time of the turn on if the existing cabinet is not being used. Install equipment in the cabinet as follows:

C.6.1 Controller
Install the controller and ensure that it is operational as part of the City of Madison closed loop system.

C.7 Maintenance
When a signal installation is not in operation, hood, turn, or take down the signal head(s) to clearly indicate that the signal is not in operation. (See MUTCD 4D-1).

C.8 Pre-emption Hardware, Cable, and Equipment
Install detector cards, sensors, cables, and all required ancillary equipment, appurtenances and mounting hardware at the temporary signals to provide a fully function pre-emption system. Arrange testing of the pre-emption system with Mike Christoph at (608) 266-9031 before turn-on of the temporary signal.

C.9 Contractor Qualifications
Demonstrate the ability to operate all required traffic signal equipment listed in this special provision for the engineer and the City of Madison prior to starting work.

Provide proof of the ability to obtain all required traffic signal equipment listed in this special provision to the engineer and the City of Madison prior to starting work.

D Measurement
The department will measure Temporary Traffic Signals (Location), completed in accordance to the contract and accepted, as a single complete lump sum unit of work, in accordance to standard spec 661.4.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.03	Temporary Traffic Signals (Monona Drive and Buckeye Road)	LS
SPV.0105.04	Temporary Traffic Signals (Monona Drive and Cottage Grove Road)	LS

Payment is full compensation in accordance to standard spec 661.5.

75. Temporary Crosswalk Access (Monona Drive and Winnequah Road), Item SPV.0105.05; (Monona Drive and Buckeye Road), Item SPV.0105.06; (Monona Drive and Cottage Grove Road), Item SPV.0105.07.

A Description
This work shall consist of furnishing, installing and maintaining temporary access for pedestrian crossings and access of the project area.

B (Vacant)

C Construction
Construct Temporary Crosswalk Access at intersections noted below to meet requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) consisting of temporary asphaltic surface, any grade of concrete, skid resistant steel plating, or alternative material as approved by the engineer. Gravel or base course material is not acceptable. Maintain ADAAG accessible crosswalk accesses that are free from mud, sand, and construction debris.

D Measurement
The department will measure Temporary Crosswalk Access (Location), completed in accordance to the contract and accepted, as a single complete lump sum unit of work in accordance to standard spec 661.4.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.05	Temporary Crosswalk Access (Monona Drive and Winnequah Road)	LS
SPV.0105.06	Temporary Crosswalk Access (Monona Drive and Buckeye Road)	LS
SPV.0105.07	Temporary Crosswalk Access (Monona Drive and Cottage Grove Road)	LS

Payment is full compensation for furnishing, installing, and maintaining temporary crosswalk access and for furnishing all work, equipment, materials, labor, and incidentals required to complete the work.

76. Temporary Vehicle Detection (Monona Drive and Buckeye Road), Item SPV.0105.08; (Monona Drive and Cottage Grove Road), Item SPV.0105.09.

A General

Work under this item shall consist of furnishing, installing, and maintaining vehicle detection systems at the intersections of Buckeye Road and Monona Drive and Cottage Grove Road and Monona Drive, in conjunction with temporary traffic signals as shown in the Plans.

The desired vehicle detection zones and their operational parameters are shown in the plans.

The contractor, with prior approval of the engineer and City of Madison, shall select the vehicle detection technology best suited for the site conditions and the anticipated construction work zones and activities. The engineer reserves the right to request a demonstration of any or all temporary vehicle detection technologies prior to said approval. Vehicle detection technologies considered shall include but are not limited to temporary inductive loops, microwave detection, or video detection. Damage to new pavement for temporary detection loops will not be allowed.

The temporary vehicle detection system shall be considered part of the temporary traffic signals and is subject to the same maintenance and repair requirements as described in the Temporary Traffic Signal (location) bid item.

B Materials

Provide all necessary equipment for the approved method of temporary vehicle detection.

C (Vacant)

D Measurement
The department will measure Temporary Vehicle Detection (Location) as a single lump sum 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.0105.08	Temporary Vehicle Detection (Monona Drive and Buckeye Road)	LS
SPV.0105.09	Temporary Vehicle Detection (Monona Drive and Cottage Grove Road)	LS

Payment is full compensation for demonstrating and selecting the vehicle detector technology, furnishing and installing the equipment, including all required materials, tools, and supplies; for furnishing all labor; for clean-up and waste disposal; and for furnishing all incidentals necessary to complete this item of work.

77. Dewatering Item SPV.0105.10.

A Description
Groundwater is expected to be encountered during excavation for the sanitary sewer. Provide and maintain ample means and devices with which to promptly remove all water entering excavations, trenches, and other parts of the work and keep said excavations dry until the structures to be built therein are completed. No masonry is to be installed in water nor is water allowed to rise over masonry or concrete if there is danger of flotation or of setting up unequal pressures in the concrete until the concrete has set at least 24 hours and any danger of flotation has been removed.

The contractor is responsible for all work, materials, and equipment required to comply with permit conditions to dewater the site. At a minimum, pump water into a settling tank as described below to remove suspended solids prior to discharging the water into the storm sewer system.

B General
Obtain all applicable State of Wisconsin permits for all groundwater control wells including if necessary the Wisconsin Department of Natural Resources (WDNR). Drill and seal all wells in accordance to requirements of the WDNR for installing and abandoning wells. Permits are required in accordance to Paragraph 144.025(2)(e), Wisconsin Statutes, for all groundwater control wells that singly or in aggregate produce 70 or more gallons per minute. Drill and seal all wells in accordance to requirements of the WDNR for installing and abandoning well.

If necessary, the WDNR address for obtaining well permits is:

Wisconsin Department of Natural Resources
Private Water Supply Section
Box 7921
Madison, WI 53707

File a copy of the permit with the City of Madison 48 hours prior to commencement of dewatering.

List the contractor as the owner on the WDNR Dewater Permit application. Adhere to all of the requirements of the dewatering permit including reporting requirements.

C Construction

The contractor is solely responsible for choosing a method of groundwater control which is compatible with the constraints defined. The contractor is responsible for the adequacy of the groundwater control system. Take all necessary measures to ensure that the groundwater control operation will not endanger or damage any existing adjacent utility or structure.

Design the method or methods to be installed and operated in such a manner to provide satisfactory working conditions and to maintain the progress of work. Design the methods and systems to avoid settlement or damage to adjacent property in accordance to the applicable legislative statutes and judicial decisions of the State of Wisconsin. Design all required pumping, drainage and disposal of groundwater systems to avoid damage to adjacent property or structures, or to the operations of other contractors and without interference with the access rights of public or private parties.

Dewater in such a manner that assures safe working conditions and provides stable trench side slopes and trench bottom for adequate support of the pipe and appurtenances. Dewater sufficiently to minimize or eliminate groundwater pressures below the proposed trench bottom which otherwise may tend to cause boiling or “quick” condition at the trench bottom.

Pump water from dewatering operations directly to a minimum 1,500 gallon holding tank to allow for settlement of large solids. Periodically pump water from the top of the settling tank into the storm sewer system.

Notify the engineer at least 3 days in advance of any proposed changes to the dewatering plan.

The contractor is responsible for removal and/or abandonment of dewatering wells.

Obtain permission to use any storm sewers, or drains, for groundwater disposal purposes from the City of Madison. Identify and obtain any permits required for the discharge of groundwater to the surface or to a sewerage system. Do not cause flooding by over-

loading or blocking up the flow in the drainage facilities, and leave the facilities unrestricted and as clean as originally found. Repair or restore any damage to facilities as directed by the City of Madison Engineering Department, at no cost to the owner.

D Measurement
The department will measure Dewatering as a single lump sum unit of work for dewatering, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.10	Dewatering	LS

Payment is full compensation for furnishing all work necessary for pumping, settling and discharging water; for paying permit fees required; and for eliminating and correcting all flooding or erosion damage caused by dewatering operations. No disposal fees are required by the City of Madison for discharge to the storm sewer system. The contractor shall pay all other permit fees

78. Wastewater Control, Item SPV.0105.11.

A Description
Work under this item shall include all equipment, labor, materials, coordination, and incidentals required to control or divert, to the engineer's satisfaction, sanitary sewer flows during reconstruction of the sanitary sewer.

B (Vacant)

C Construction
This work shall include a pump with a capacity of 100 g.p.m. and all associated equipment required to maintain a functioning sanitary sewer system during construction. At no time shall the normal flow of wastewater in sanitary sewer service laterals be disrupted without prior approval from the engineer. This condition shall also hold at the time of connection of an existing lateral to the new sewer main.

If the contractor elects to use bypass pumping as a means of wastewater control, the methods, equipment, type of hose, etc. shall be subject to approval by the engineer. Hoses crossing streets, driveways, parking areas, etc., are to be ramped over to prevent damage to hoses. Spillage of wastewater is to be contained within the trenches and disposed of downstream to previously installed sewer piping. No spillage of wastewater to adjacent streets, lawns, etc. shall be tolerated. If any such spillage should occur, all construction operations shall cease. Cleanup shall commence immediately and be completed to the satisfaction of the engineer prior to the resumption of any construction operations.

D Measurement
The department will measure Wastewater Control as a single lump sum unit of work for wastewater control, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.11	Wastewater Control	LS

Wastewater control shall be paid for at the contract price, which shall be full compensation for furnishing all work as outlined in the description for all sanitary sewer control and diverting required to reconnect sewer laterals to main lines and to construct the sanitary sewer as designed..

79. Construction Staking Water Main Project 5994-00-76, Item SPV.0105.12.

A Description
Perform the work in accordance to the applicable provisions of standard spec 650.3.2 and standard spec 650.3.6.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Construction Staking Water Main Project 5994-00-76 as a single lump sum unit of work for construction staking, 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.0105.12	Construction Staking Water Main Project 5994-00-76	LS

Payment is full compensation for locating and setting all construction stakes; for relocating and resetting damaged or missing construction stakes.

80. Construction Staking Sanitary Sewer Project 5994-00-75, Item SPV.0105.13.

A Description
Perform the work in accordance to the applicable provisions of standard spec 650.3.2 and standard spec 650.3.6.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Construction Staking Sanitary Sewer Project 5994-00-75 as a single lump sum unit of work for construction staking, 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.0105.13	Construction Staking Sanitary Sewer Project 5994-00-75	LS

Payment is full compensation for locating and setting all construction stakes; for relocating and resetting damaged or missing construction stakes.

81. Salvage and Replace Stone Retaining Wall, Item SPV.0165.01.

A Description
This special provision describes salvaging and replacing stone retaining walls as shown on the plans and as hereinafter provided.

B (Vacant)

C Construction
Remove, handle, store and reinstall existing wall materials in a manner that prevents damage to the materials. If fabric or plastic sheeting abuts or underlies the existing walls, then replace in a similar manner meeting the approval of the engineer. If the contractor damages the materials through its own operations then the contractor will replace them at no expense to the department.

D Measurement
The department will measure Salvage and Replace Stone Retaining Wall by the square foot from the leveling pad to the top of the salvaged and replaced retaining wall, 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.0165.01	Salvage and Replace Stone Retaining Wall	SF

Payment is full compensation for providing all materials, including all fabric or plastic sheeting, base aggregate dense 1-1/4 inch leveling pad, for furnishing all excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site.

82. Stamped Colored Concrete Sidewalk 5-Inch, Item SPV.0165.02.

A Description
This special provision describes the construction of stamped colored concrete sidewalk, on a prepared foundation.

B Materials
Provide all materials in accordance to standard spec 602. Provide the stamping pattern as detailed on the plans and color to be approved by the engineer.

B.1 Concrete
Conform to standard spec 501 and as hereinafter provided:

Integrally color the concrete using non-fading synthetic iron oxides conforming to ASTM C979 at a minimum percent loading of 6% and a maximum percent loading of 8% by weight of the cementitious materials in the mix.

The department will accept the color based on contractor supplied comparison sample panels as hereinafter provided.

Add integral concrete colorant according to manufacturer's instructions.

Maintain mix characteristics for all colored concrete requiring a matching finish. Use the same source, brand, type, and color of portland cement, supplementary cementitious materials, aggregates and admixtures for colored concrete pavement throughout the project. Use constant cement content, supplementary cementitious material content. Except for minor adjustments, maintain a constant water/cementitious materials ratio.

B.2 Form Release Agent
Supply a powder antiquing form release agent. Apply form release agent according to manufacturer’s instructions using manufacturer’s recommended application techniques.

B.3 Concrete Curing
Supply a liquid membrane-forming clear curing compound conforming to AASHTO M 148, type 1. Apply curing compound for integrally colored concrete according to manufacturer's instructions using manufacturer’s recommended application techniques. Apply curing compound at a standard time after each pour.

Do not cure colored concrete using plastic sheeting, unless necessary due to weather conditions.

B.4 Admixtures
Use admixtures designed for use and compatible with colored concrete pigments. Do not use calcium chloride or admixtures containing chlorides. Use the same admixtures for colored concrete pavement throughout the project.

C Construction

Construct stamped colored concrete sidewalk in accordance to standard spec 602 and as hereinafter provided.

Prior to work commencing for stamped colored concrete, provide a finished stamped colored concrete sample having minimum dimensions of 2 feet by 2 feet by 2 inches (length, width, thickness). Up to five sample panels may be submitted to the engineer to demonstrate the typical pattern, texture, surface finish, color, and standard workmanship. Notify the engineer seven days in advance of delivering the finished stamped colored concrete samples.

Produce consistent colored concrete mixes. Except as required to maintain constant color, the engineer will not allow variations in the amounts, types, or source of materials. The contractor may make minor adjustments of water and air-entraining agent as field conditions dictate.

Colored concrete mixes for the entire project are to be consistent. If the contractor chooses to provide mixes with High Early Strength, then all colored concrete will be provided as High Early Strength. Switching from regular colored concrete to High Early Strength colored concrete or High Early Strength colored concrete to regular colored concrete will not be allowed.

If additional water is added to the colored concrete once a truck is on site, this concrete will be rejected.

If the engineer allows, minimal amounts of water may be applied to the surface of the colored concrete to complete the final surface finishing operations. If too much water is added to the surface of the colored concrete during final surface finishing operations, such that the colored concrete no longer conforms to the sample panel, the colored concrete may be rejected and removed at the direction of the engineer.

Cover and protect adjacent construction and concrete from discoloration and spillage during placement and curing of colored concrete. Remove and replace discolored concrete as the engineer directs.

Uniformly apply liquid release agent onto the colored still plastic state concrete to provide clean release of imprinting tools from the concrete surface without lifting imprint or tearing concrete.

While initially finished concrete is in plastic state, accurately align and place imprinting stamps. Contractor will need to monitor the setting up of the concrete. Once the concrete has set to the point it can be stamped begin stamping. Uniformly pound or press imprint tools into concrete to produce required pattern and depth of imprint on concrete surface. Remove platform tools immediately. Hand texture and stamp edges and surfaces unable to be imprinted by stamp mats. Touch up imperfections such as broken corners, double imprints and surface cracks.

Stamp concrete consistently so that stamped concrete does not have a vertical elevation difference of 1/2 inch or depressions in concrete capable of causing ponding water or ice.

For concrete hand stamp edges and surfaces that are unable to be imprinted by platform tools, use texture mats and single blade hand stamps to match platform tool stamping pattern. Finish imprinting to match sample panels.

After concrete has been stamped and the sheen has left the surface of the colored concrete, seal colored concrete. Apply per manufacturer's recommendations. Apply two coats of seal. Apply second coat after first coat has dried. Do not seal over blemishes or imperfections caused by rainfall or protection materials.

Protect colored concrete from premature drying and excessive cold or hot temperatures. Apply evaporation retarders to concrete surfaces during initial finishing only if hot, dry, or windy conditions cause a moisture loss approaching 0.20 lb/sf/hr before and during initial finishing. Apply according to manufacturer’s written instructions.

Protect the colored concrete from damage. Do not permit construction traffic or material storage on colored concrete sidewalk. Exclude other foot traffic from colored concrete sidewalk for at least 5 days after placement.

Remove and replace adjacent concrete that is discolored to the approval of the engineer.

D Measurement

The department will measure Stamped Colored Concrete Sidewalk 5-Inch 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.0165.02	Stamped Colored Concrete Sidewalk 5-Inch	SF

Payment will be in accordance to standard spec 602.

Payment also includes full compensation for excavation, forming, for providing placing and finishing stamped colored concrete; for furnishing materials including concrete masonry, colored pigments, stamping and patterning, curing and release agents, and necessary admixtures; for providing sample panels; and for protecting adjacent pavements and curb and gutter.

83. Cast Iron Truncated Domes, Item SPV.0165.03.

A Description

This special provision describes furnishing and installing cast iron truncated domes.

B Material
Provide Neenah detectable warning plates manufactured of ASTM A-48, Class 30 B Gray Iron. Provide a casting that is steel shot blasted and free of any adhering sand or debris and that has a color of Federal Yellow. Standard section will be 24 inches square with bolt lugs on the underside edges providing anchorage and the means for fastening two plates together with two 3/8-inch steel bolts and nuts. Provide a minimum plate thickness of 5/16 inch with a weight of 62 pounds.

Provide 4 vent holes to allow entrapped air to escape during installation. Countersink these vent holes to allow optional stainless steel countersunk flathead anchor screws to be inserted through the holes into the concrete below. The top surface is to have truncated domes that meet the size and spacing as specified in ADA and ABA guidelines. The plate surface and dome truncation surface is to have a tight pattern of raised conical points to increase the coefficient of friction.

C Construction
Install cast iron truncated domes conforming to manufacturer recommended procedures.

D Measurement
The department will measure Cast Iron Truncated Domes 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.0165.03	Cast Iron Truncated Domes	SF

Payment is full compensation for furnishing and installing unpainted cast iron truncated domes.

84. Salvage and Replace Timber Retaining Wall, Item SPV.0165.04.

A Description
This special provision describes salvaging and replacing timber retaining walls as shown on the plans and as hereinafter provided.

B (Vacant)

C Construction
Remove, handle, store and reinstall existing wall materials in a manner that prevents damage to the materials. If fabric or plastic sheeting abuts or underlies the existing walls, then replace in a similar manner meeting the approval of the engineer. If the contractor damages the materials through its own operations then the contractor will replace them at no expense to the department.

D Measurement

The department will measure Salvage and Replace Timber Retaining Wall by the square foot from the leveling pad to the top of the salvaged and replaced retaining wall, 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.0165.04	Salvage and Replace Timber Retaining Wall	SF

Payment is full compensation for providing all materials, including all fabric or plastic sheeting, base aggregate dense 1-1/4 inch leveling pad, for furnishing all excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site.

ADDITIONAL SPECIAL PROVISION 1 (ASP 1)
FOR TRANSPORTATION ALLIANCE FOR NEW SOLUTIONS (TrANS)
PROGRAM EMPLOYMENT PLACEMENTS AND APPRENTICESHIPS

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 5204(e) – Surface Transportation Workforce Development Training and Education, provides for 100 percent Federal funding if the core program funds are used for training, education, or workforce development purposes, including "pipeline" activities. The core programs includes: Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Highway Bridge Program (HBP), Interstate Maintenance (IM), National Highway System (NHS), and Surface Transportation Program (STP). These workforce development activities cover surface transportation workers, including OJT/SS programs for women and minorities as authorized in 23 U.S.C. §140(b).

TrANS is an employment program originally established in 1995 in Southeastern Wisconsin. Currently TrANS has expanded to include TrANS program locations to serve contractors in Southeast (Milwaukee and surrounding counties), Southcentral (Dane County and surrounding counties including Rock County), and most Northeastern Wisconsin counties from locations in Keshena, Rhinelander and surrounding far Northern areas. TrANS attempts to meet contractor's needs in other geographic locations as possible. It is an industry driven plan of services to address the outreach, preparation, placement and retention of women, minorities and non-minorities as laborers and apprentices in the highway skilled trades. These candidate preparation and contractor coordination services are provided by community based organizations. For a list of the TrANS Coordinators contact the Disadvantaged Business Enterprise Office at (414) 438-4583 in Milwaukee or (608) 266-6961 in Madison. These services are provided to you at no cost.

I. BASIC CONCEPTS

Training reimbursements to employing contractors for new placements, rehires or promotions to apprentice of TrANS Program graduates will be made as follows:

1) **On-the-Job Training, Item ASP.1T0G, ASP 1 Graduate.** At the rate of $5.00 per hour on federal aid projects when TrANS graduates are initially hired, or seasonally rehired, as unskilled laborers or the equivalent.

   Eligibility and Duration: To the employing contractor, for up to 2000 hours from the point of initial hire as a TrANS program placement.

   Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __1__ *(number)* TrANS Graduate(s) be utilized on this contract.

2) **On-the-Job Training, Item ASP.1T0A, ASP 1 Apprentice.** At the rate of $5.00 per hour on federal aid projects at the point when an employee who came out of the TrANS Program is subsequently entered into an apprenticeship contract in an underutilized skilled trade (this will include the Skilled Laborer Apprenticeship when that standard is implemented).

Eligibility and Duration: To the employing contractor, for the length of time the TrANS graduate is in apprentice status.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __2__ *(number)* TrANS Apprentice(s) be utilized on this contract.

3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.

4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.

5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

I. RATIONALE AND SPECIAL NOTE

The $5.00 per hour now being paid for TrANS placements is intended to cover the duration of two years to allow for reaching entry-level laborer status. An additional incentive, the $5.00 rate, would promote movement into the underutilized skilled trades' apprenticeships and applies until the individual completes their apprenticeship. These incentives benefit TrANS candidates by giving them a better opportunity to enter a skilled trade; benefits contractors who will be assisted in meeting their EEO profiles and goals; and benefits the public who will see the program reinforce larger public-private employment reform in Wisconsin. The pool of TrANS graduates was created for the purpose of addressing underutilization in the skilled trades, an objective that is further reinforced by a parallel retention pilot program, known as the Companywide Reporting. *Whether or not reimbursement is involved, the WisDOT reassures contractors who are in the Companywide Program that TrANS placements still contribute toward fulfilling the new hire goal of 50% women and minorities.* Based on data administered by United States Department of Labor (US DOL), the highway skilled trades remain underutilized for women statewide (less than 6.9%); and for minorities in all counties (% varies by county).

NOTE: *Unless using other advancement strategies, contractors are encouraged to use some or all of this monetary incentive to offset the cut in hourly wages an individual may incur when entering an apprenticeship if the full general laborer hourly rate has been previously paid. No special accounting measures are required.*

II. IMPLEMENTATION

The implementation of ASP 1 is intended to cover only the amount of time it takes for underutilization to be resolved across the trades. This will be measured annually at the county and/or state levels using data administered by WisDWD in relation to goals set by the USDOL-

OFCCP. With appropriate state and federal approvals, we may also do some measurement at the company level.

It is the contractor's responsibility to note on their Certified Payrolls if their employee is a TrANS graduate or a TrANS apprentice. The District EEO Coordinators utilize the information on the Certified Payrolls to track the hours accumulated by TrANS Graduates and TrANS apprentices on WisDOT contracts. Payment under this ASP 1 is made based on the hours recorded off of the Certified Payrolls. Tracking may eventually include improved linkages with the WisDWD apprentice database, information from company and committee level sources.

TrANS is nondiscriminatory by regulation, and is a tool for optional use by contractors to address the underutilization of women and minorities as laborers and apprentices in our industry's skilled trades.

IV. *TRANS TRAINING*

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided to employees enrolled in apprenticeship and on-the-job training programs as follows:

The contractor shall provide on-the-job training aimed at developing full journey workers in the type of trade or job classifications involved. In the event the contractor subcontracts a portion of the contract work, the contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract.

Training and upgrading of minorities and women toward journey workers status is a primary objective of this training special provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority trainees and women trainees); to the extent such persons are available within a reasonable area of recruitment. The contractor will be given an opportunity and will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to determination as to whether the contractor is in compliance with this training special provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey workers status or in which they have been employed as a journey worker. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the contractor's records should document the findings in each case.

V. APPRENTICESHIP TRAINING

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the State transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

The OJT Supportive Services (OJT/SS) Program was established in Title 23 Code of Federal Regulations (CFR), Part 230) to supplement the OJT program and support STA training programs by providing services to highway construction contractors and assistance to highway construction apprentices and trainees. The primary objectives of OJT/SS are:

(1) To increase the overall effectiveness of the State highway agencies' approved training programs.
(2) To seek other ways to increase the training opportunities for women, minorities, and disadvantaged individuals.

The STAs are responsible for establishing procedures, subject to the availability of Surface Transportation and Bridge Funds under 23 U.S.C. §140(b*)* (Nondiscrimination), for the provision of supportive services with respect to training programs approved under 23 CFR, Part 230(a*)* (Equal Employment Opportunity on Federal and Federal-aid Construction Contracts – including Supportive Services).

The contractor and subcontractor shall maintain records to demonstrate compliance with these apprenticeship requirements. Reasonable exemptions and modifications to and from any or all of these requirements will be determined by the Wisconsin Department of Transportation-Civil Rights Office. A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT Civil Rights Office, 4802 Sheboygan Avenue, P.O. Box 7965, Rm. 451, Madison, WI 53707.

ADDITIONAL SPECIAL PROVISION 3

Disadvantaged Business Enterprise Development. This item shall consist of concerted efforts by the contractor as part of its affirmative action responsibilities to train and develop minority business enterprises to become fully qualified contractors in the transportation construction field. Hereafter, minority business enterprise refers to businesses owned or controlled by socially and economically disadvantaged person(s) as certified by the Wisconsin Department of Transportation. It is the intention of this provision that firms owned and controlled by women be included as a presumptive group within the definition of Disadvantaged Business Enterprise (DBE).

The contractor will aggressively solicit DBE subcontractor and/or supplier quotes and incorporate them in its bid for work on this project by making systematic written and verbal contact with DBEs likely to have an interest in transportation construction work.

In this contract, the contractor shall procure services, materials, or subcontract the minimum percentage as shown on the cover of the Highway Work Proposal of the total amount bid to one or more certified DBEs. The Department maintains and furnishes the list of DBEs considered certified. If the proposed DBE is uncertified, the contractor must appeal to the Department to establish the eligibility of the DBE to become certified. This goal may be accomplished through the use of any combination of ethnic or women owned businesses certified as DBEs by the Department.

It is the intent of this specification that the percentage goal specified be fulfilled as indicated. However, if the contractor considers such fulfillment to be impossible of attainment, and if the contractor can demonstrate to the satisfaction of the Department that such utilization is not feasible, the Department may accept a varying percentage in lieu of the designated percentage for the DBE classification.

The contractor is encouraged to develop DBEs in areas of construction where these firms have traditionally been non-competitive. Therefore, the DBE goal on this contract may be reduced by the Department up to 50 percent for DBE work in the non-traditional construction categories of: concrete paving, asphalt paving, excavating and heavy grading, aggregate production, structures and major culvert installation. Any goal reduction is discretionary by the Department and will only be granted where it is clear the intended work will benefit the development and experience of the DBE.

Credit toward the required DBE goal is allowed for supplies and materials furnished by DBEs. However, the DBEs must assume the actual contractual responsibilities for furnishing the supplies and materials and also manufacture them. For these purposes, a manufacturer is a supplier that either produces goods from raw materials or substantially alters them before resale. When the supplier is not the manufacturer, only 60 percent of the expenditure to the supplier may be credited toward the DBE goal, provided the supplier performs a commercially useful function in the transaction.

Nevertheless, in order for the Department to execute a contract with a bidder that has failed to meet the specified DBE contract goal, the Department must determine that the bidder's good faith efforts were those that, given all relevant circumstances, a bidder activity and aggressively seeking to meet the goal would make.

Good faith efforts are to include contacts with the Department's Office of Disadvantaged Business Programs. In determining whether a contractor has made good faith efforts, the Department will usually look not only at the different kinds of efforts that the bidder has made, but also the quantity and intensity of those efforts. Efforts that are merely pro forma are not good faith efforts to meet the goal. Even if the efforts are sincerely motivated, they are not considered to be good faith efforts if, given all relevant circumstances, they could not

reasonably be expected to produce a level of DBE participation sufficient to meet the goal.

Within ten working days after the notification of contract award, the contractor is to identify, by name, the DBE firms whose utilization is intended to satisfy this provision, the items of work of the subcontract or supply agreement and the dollar amount of such items of work. Failure by the contractor to furnish the necessary information within the specified time frame does not negate the Department's right to award and execute the contract; however, good faith efforts after the submittal requirement will be discounted. Delay in fulfilling this requirement shall not constitute a cause for extension of the contract time. All other aspects of this minority business enterprise requirement shall be in accordance with appropriate provisions of Part 26 of Volume 49 of the Code of Federal Regulations entitled "Participation by Minority Business Enterprises in Department of Transportation Programs."

The contractor shall also provide or arrange for direct assistance to the DBEs in such areas as providing information to prepare intelligent quotations, insuring that the DBE can read and understand highway plans, assisting in reaching a full understanding of the Standard Specifications and contract requirements applicable to the DBE portion of the work, appropriate cost accounting and other business practices, and other actions aimed at continued development of the DBE into a viable highway contracting business.

The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.

The work herein prescribed will not be paid for separately, but will be considered incidental to other items of work included in the contract.

Failure on the part of the bidder to meet the DBE goal and to meet an adequate level of good faith efforts will, at the discretion of the Department, be deemed failure to execute the contract, be just cause of the cancellation of the award, and such other actions as deemed appropriate.

The entire provisions of this item do not apply if the bidder, excluding joint ventures, is a certified DBE.

ADDITIONAL SPECIAL PROVISION 4

Payment to all Subcontractors. Within 10 calendar days of receipt by a contractor of a progress payment for work performed, materials furnished, or materials stockpiled by a subcontractor, the contractor shall pay that subcontractor for all work satisfactorily performed and for all materials furnished or stockpiled.

The contractor agrees further to release retainage amounts to each subcontractor within 10 calendar days after the subcontractor's work is satisfactorily completed. In addition, whenever the Department reduces the contract retainage amount, within 10 calendar days of receipt by a contractor of a retainage payment, the contractor must reduce the total amount retained from subcontractors to no more than remains retained by the Department.

The contractor shall pay the subcontractor within the time frames described above unless the contractor complies with both of the following within 10 calendar days of receiving the Department's progress payment:

1) The contractor notifies the subcontractor in writing that the work is not satisfactorily completed.
2) The contractor requests approval from the Department to delay payment because the subcontractor has not satisfactorily completed the work.

The contractor's request for approval should include the written notification to the subcontractor and shall provide sufficient documentation of good cause to assist the engineer in making a timely decision. If the engineer does not grant approval, the contractor shall pay the subcontractor within 10 calendar days of the Department's decision.

All subcontracting agreements made by a contractor shall include the above provisions and shall be binding on all contractors and subcontractors.

The contractor certifies compliance with the requirements of this Additional Special Provision by signing the contract. This clause applies to both DBE and non-DBE subcontractors.

ADDITIONAL SPECIAL PROVISION 6
MODIFICATIONS TO THE STANDARD SPECIFICATIONS

Make the following revisions to the 2012 edition of the standard specifications:

102.1 Prequalifying Bidders

Replace paragraph two with the following effective with the November 2011 letting:

(2) Furnish a dated prequalification statement on the department's form at least 10 business days before the time set for opening proposals.

107.17.3 Railroad Insurance Requirements

Replace the entire text with the following effective with the November 2011 letting:

(1) If required by the special provisions, provide or arrange for a subcontractor to provide railroad protective liability insurance in addition to the types and limits of insurance required in 107.26. Keep railroad protective liability insurance coverage in force until completing all work, under or incidental to the contract, on the railroad right-of-way or premises of the railroad and until the department has accepted the work as specified in 105.11.2.4.

(2) Provide railroad protective liability insurance coverage written as specified in 23 CFR part 646 subpart A with the Wisconsin Department of Transportation, its officers, agents, and employees named as an additional insured. Provide a separate policy for each railroad owning tracks on the project. Ensure that the railroad protective liability insurance policies provide the following minimum limits of coverage:

1. Coverage A, bodily injury liability and property damage liability; $2 million per occurrence.
2. Coverage B, physical damage to property liability; $2 million per occurrence.
3. An annual aggregate amount of $6 million that shall apply separately to each policy renewal or extension.

(3) Obtain coverage from insurance companies licensed to do business in Wisconsin that have an A.M. Best rating of A- or better. The cost of providing the required insurance coverage and limits is incidental to the contract. The department will make no additional or special payment for providing insurance.

(4) Submit the following to each railroad owning tracks on the project as evidence of that railroad's respective coverage:

1. A certificate of insurance for the types and limits of insurance specified in 107.26.
2. The railroad protective liability insurance policy or other acceptable documentation to the railroad company.

(5) Submit the following to the region as evidence of the required coverage:

1. A copy of the letter to the railroad company transmitting the submittal documents specified in 107.17.3(4).
2. A certificate of insurance for the required railroad protective liability coverages.

(6) Do not begin work on the right-of-way or premises of the railroad company until the region receives the submittals specified in 107.17.3(5) and notification from the railroad company that the contractor has provided sufficient insurance information to begin work.

(7) Notify the railroad and the region immediately upon cancellation or initiating cancellation, whichever is earlier, or any material change in coverage. Cease operations within 50 feet of the railroad right-of-way immediately if insurance is cancelled or reduced. Do not resume operations until the required coverage is in force.

107.26 Standard Insurance Requirements

Replace the entire text with the following effective with the November 2011 letting:

(1) Maintain the following types and limits of commercial insurance in force until completing and obtaining the department's acceptance of all work as specified in 105.11.2.4.

TYPE OF INSURANCE	MINIMUM LIMITS REQUIRED[1]
1. Commercial general liability insurance endorsed to include blanket contractual liability coverage.[2]	$2 million combined single limits per occurrence with an annual aggregate limit of not less than $4 million.
2. Workers' compensation providing coverage regardless of the number of employees.	Statutory limits
3. Employers' liability insurance.	Bodily injury by accident: $100,000 each accident Bodily injury by disease: $500,000 each accident $100,000 each employee
4. Commercial automobile liability insurance covering all contractor-owned, non-owned, and hired vehicles used in carrying out the contract.[2]	$1 million-combined single limits per occurrence.

[1] The contractor may satisfy these requirements through primary insurance coverage or through excess/umbrella policies.

[2] The Wisconsin Department of Transportation, its officers, agents, and employees must be named as an additional insured under the general liability and automobile liability insurance.

(2) For a joint venture, limited liability company, or partnership; ensure that the bidding entity is the named insured and that coverages apply jointly and severally to its member entities.

(3) Obtain coverage from insurance companies licensed to do business in the state that have an A.M. Best rating of A- or better. The cost of providing the required insurance coverage and limits is incidental to the contract.

(4) The department may request proof of insurance at any time. Submit copies of insurance policies as well as associated certificates of insurance upon department request.

(5) Notify the department immediately upon cancellation or initiating cancellation, whichever is earlier, or any material change in coverage. Cease operations immediately if any insurance is cancelled or reduced. Do not resume operations until the required coverage is in force.

(6) The above insurance requirements apply with equal force whether the contractor or a subcontractor, or anyone directly or indirectly employed by either, performs work under the project.

450.2.1 Acronyms and Definitions

Replace the entire text with the following effective with the November 2011 letting:

(1) Interpret materials related acronyms used in sections 450 through 499 as follows:

FRAP Fractioned reclaimed asphaltic pavement
HMA Hot mix asphalt
JMF Job mix formula
PG Performance graded
RAP Reclaimed asphaltic pavement
RAS Recycled asphalt shingles
SMA Stone matrix asphalt

VMA	Voids in mineral aggregate
WMA	Warm mix asphalt

(2) Interpret materials related definitions used in sections 450 through 499 as follows:

Asphaltic binder	The principal asphaltic binding agent in HMA. including asphalt cement and material added to modify the original asphalt cement properties.
Filler	A finely divided mineral aggregate added to asphaltic mixtures to improve mixture properties.
Fractioned reclaimed asphaltic pavement	Material resulting from cold milling or crushing existing asphaltic pavement processed to control gradation properties.
Leveling layer	Initial layer placed thinner than the minimum required under 460.3.2.
Lower layer	Any asphaltic pavement layer that will not be exposed to traffic when the pavement structure is complete. A pavement structure may have multiple lower layers.
Reclaimed asphaltic pavement	Material resulting from cold milling or crushing existing asphaltic pavement.
Recycled asphalt shingles	Waste material from a shingle manufacturing facility, either new or used material salvaged from residential roofing operations, or any combination of these materials ground to ensure that 100 percent will pass a 1/2 sieve and processed to remove deleterious material.
Upper layer	The asphaltic pavement layer exposed to traffic when the pavement structure is complete. A pavement structure has only one upper layer.
Warm mix asphalt	Any asphaltic mixture that contains a warm mix additive, or utilizes a warm mix process, as part of its mixture design that has the ability to reduce the mixing and compaction temperature requirements below the typical temperatures used for that application.

460.1 Description

Replace paragraph one with the following effective with the November 2011 letting:

(1) This section describes HMA mixture design, providing and maintaining a quality management program for HMA mixtures, and constructing HMA pavement. Unless specifically indicated otherwise, references within section 460 to HMA also apply to WMA.

460.2.1 General

Replace paragraph one with the following effective with the November 2011 letting:

(1) Furnish a homogeneous mixture of coarse aggregate, fine aggregate, mineral filler if required, SMA stabilizer if required, recycled material if used, warm mix asphalt additive or process if used, and asphaltic material.

460.2.4.4 Warm Mix Asphalt Additive or Process

Add a new subsection as follows effective with the November 2011 letting:

460.2.4.4 Warm Mix Asphalt Additive or Process

(1) Use additives or processes from the department's approved products list. Follow supplier or manufacturer recommendations for additives and processes when producing WMA mixtures.

460.5.2.1 General

Replace paragraphs two and three with the following effective with the November 2011 letting:

(2) Payment for HMA Pavement Type E-0.3, E-1, E-3, E-10, E-30, and E-30x is full compensation for providing HMA mixture designs; for preparing foundation; for furnishing, preparing, hauling, mixing, placing, and compacting mixture; for QMP testing and aggregate source testing; for warm mix asphalt additives or processes; and for all materials except asphaltic materials.

(3) Payment for HMA Pavement Type SMA, is full compensation for providing HMA mixture designs; for preparing foundation; for furnishing, preparing, hauling, mixing, placing, and compacting the mixture; for QMP testing and aggregate source testing; for all materials including asphaltic materials and warm mix asphalt additives and processes; and for stabilizer, hydrated lime, and liquid antistripping agent if required.

506.3.22 Shop Inspection

Replace paragraph one with the following effective with the July 2010 letting:

(1) The engineer or an independent inspection agency under department contract may inspect all structural steel and miscellaneous metals furnished. The department will provide the contractor with monthly consultant inspection invoices and identify any quality deficiencies at the fabrication facility.

506.5 Payment

Add paragraph nine as follows effective with the June 2010 letting:

(9) The department will limit costs for inspections conducted under 506.3.2 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.

Errata

Make the following corrections to the 2012 edition of the standard specifications:

506.2.6.4 Non-Laminated Elastomeric

(2) The pads shall conform to the following physical properties:

Correct the allowable hardness range for natural rubber:

	NATURAL RUBBER	CHLOROPRENE
Hardness (ASTM D2240)	60+/-5	60+/-5

634.2.5.1 General

Correct errata by changing ASTM A570 to ASTM A1011.

(2) Fabricate the tubular components using structural quality 12-gauge strip steel conforming to ASTM A1011, grade 50 with an average minimum yield strength, after cold-forming, of 55,000 psi. Punch holes on all 4 sides for the full length as the plans show. Provide corner radii of approximately 5/32 inches and conform to other dimensions and tolerances as follows:

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://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm

(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 section 3.2 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/docs/crc-basic-info.pdf

-1273 Electronic version -- March 10, 1994

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4, and 7;
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and

the contracting agency, the DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

> "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: 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, preapprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's

EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. **Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. **Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors

with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. **Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of $10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. **General:**

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. **Classification:**

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards

Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. **Payment of Fringe Benefits:**

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. **Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:**

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage

rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. **Apprentices and Trainees (Programs of the U.S. DOT):**

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. **Withholding:**

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. **Overtime Requirements:**

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. **Violation:**

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. **Withholding for Unpaid Wages and Liquidated Damages:**

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. **Compliance with Copeland Regulations (29 CFR 3):**

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. **Payrolls and Payroll Records:**

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages

earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than $1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the

prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts

related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more that $10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.
2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.
3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.
4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. **Instructions for Certification - Primary Covered Transactions:**
(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant 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 primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

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

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

e. 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 rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction 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 or agency entering into this transaction.

g. The prospective primary participant 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," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. 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 participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant 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 or agency may terminate this transaction for cause or default.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant 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 3-year period preceding this proposal been convicted of or had a civil judgement 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 offenses enumerated in paragraph 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

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

* * * * *

2. **Instructions for Certification - Lower Tier Covered Transactions:**
(Applicable to all subcontracts, purchase orders and other lower tier transactions of $25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

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

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction 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 or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. 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 participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant 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 or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall

complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT PREFERENCE FOR APPALACHIAN CONTRACTS

(Applicable to Appalachian contracts only.)

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph 1c shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph 4 below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which he estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, he shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within 1 week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph 1c above.

5. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

This page last updated May 20, 2002

SEPTEMBER 2002

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Employment Practices" and "Equal Opportunity Clause" set forth in the Required Contract Provisions, FHWA 1273.

2. The goals and timetables for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade, on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade:

County	%	County	%	County	%
Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	0.6
Barron	0.6	Jackson	0.6	Price	0.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	0.6	Richland	1.7
Buffalo	0.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	0.6
Calumet	0.9	La Crosse	0.9	St. Croix	2.9
Chippewa	0.5	Lafayette	0.5	Sauk	1.7
Clark	0.6	Langlade	0.6	Sawyer	0.6
Columbia	1.7	Lincoln	0.6	Shawano	1.0
Crawford	0.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	0.6	Taylor	0.6
Dodge	7.0	Marinette	1.0	Trempealeau	0.6
Door	1.0	Marquette	1.7	Vernon	0.6
Douglas	1.0	Menominee	1.0	Vilas	0.6
Dunn	0.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	0.5	Monroe	0.6	Washburn	0.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	0.6	Waukesha	8.0
Forest	1.0	Outagamie	0.9	Waupaca	1.0
Grant	0.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	0.6	Winnebago	0.9
Green Lake	1.0	Pierce	2.2	Wood	0.6

Goals for female participation for each trade: 6.9%

These goals are applicable to all the contractor's construction work, (whether or not it is federal or federally assisted), performed in the covered area. If the contractor performs construction work in the geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

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

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

   As referred to in this section, the Director means:

   Director
   Office of Federal Contract Compliance Programs
   Ruess Federal Plaza
   310 W. Wisconsin Ave., Suite 1115
   Milwaukee, WI 53202

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

4. As used in this notice, and in the contract resulting from solicitation, the "covered area" is the county(ies) in Wisconsin to which this proposal applies.

SEPTEMBER 2002

ADDITIONAL FEDERAL-AID PROVISIONS

BUY AMERICA

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials 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.

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

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

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

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
DANE COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on July 15, 2011

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	33.80	20.37	54.17
Carpenter	28.31	14.91	43.22
Cement Finisher	29.37	15.13	44.50
Future Increase(s): Add $1.86 on 6/1/11; Add $1.86 on 6/1/12; Add $1.87 on 6/1/13; Add $1.87 on 6/1/14; Add $1.87 on 6/1/15; Add $1.75 on 6/ 1/ 16. Premium Pay: Effective 6/1/2011 for "Airport Pavement or State Highway Construction" project type only, add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night to avoid peak traffic volumes under artificial illumination with traffic control. The work is completed after sunset and before sunrise.			
Electrician	37.25	14.68	51.93
Fence Erector	21.51	5.07	26.58
Ironworker	30.90	17.11	48.01
Line Constructor (Electrical)	35.26	21.35	56.61
Painter	26.00	12.15	38.15
Pavement Marking Operator	26.54	14.45	40.99
Piledriver	30.31	15.68	45.99
Roofer or Waterproofer	28.85	0.37	29.22
Teledata Technician or Installer	21.26	11.52	32.78
Tuckpointer, Caulker or Cleaner	31.46	17.43	48.89
Underwater Diver (Except on Great Lakes)	32.31	14.91	47.22
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	33.23	15.04	48.27
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	28.21	13.51	41.72
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.68	12.41	37.09
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	22.92	11.87	34.79

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	26.75	6.22	32.97
TRUCK DRIVERS			
Single Axle or Two Axle	21.00	14.51	35.51
Three or More Axle	23.99	14.62	38.61
Articulated, Euclid, Dumptor, Off Road Material Hauler	25.62	18.10	43.72
Future Increase(s): Add $1.95/hr on 6/1/11; Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: On Sunday & holidays, pay two times the hourly basic rate. For "Airport Pavement or State Highway Construction" project type only, add $1.50/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).			
Pavement Marking Vehicle	20.06	13.67	33.73
Shadow or Pilot Vehicle	21.00	14.51	35.51
Truck Mechanic	23.99	14.62	38.61
LABORERS			
General Laborer	26.15	12.90	39.05
Future Increase(s): Add $1.60/hr on 6/1/2011; Add $1.60/hr on 6/1/2012: Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/ 1/ 2014. Premium Pay: Add $.10/hr for topman, air tool operator, vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.15/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.20/hr for blaster and powderman; Add $.25/hr for bottomman; Add $.35/hr for line and grade specialist; Add $.45/hr for pipelayer. "Airport Pavement or State Highway Construction" project type only, 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	16.00	4.81	20.81
Landscaper	26.15	12.90	39.05
Future Increase(s): Add $1.60/hr on 6/1/11; Add $1.60/hr on 6/1/12; Add $1.70/hr on 6/1/13; Add $1.60/hr on 6/ 1/ 14. Premium Pay: "Airport Pavement or State Highway Construction" project type only, 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).			
Flagperson or Traffic Control Person	22.50	12.90	35.40
Future Increase(s): Add $1.60/hr on 6/1/2011; Add $1.60/hr on 6/1/2012: Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/ 1/ 2014. Premium Pay: "Airport Pavement or State Highway Construction" project type only, 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).			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	15.00	3.59	18.59
Railroad Track Laborer	22.81	13.42	36.23

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
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).	33.07	18.10	51.17
Future Increase(s): Add $1.95/hr on 6/1/11; Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: On Sunday & holidays, pay two times the hourly basic rate. For "Airport Pavement or State Highway Construction" project type only, add $1.50/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).			
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.	32.57	18.10	50.67
Future Increase(s): Add $1.95/hr on 6/1/11; Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: On Sunday & holidays, pay two times the hourly basic rate. For "Airport Pavement or State Highway Construction" project type only, add $1.50/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).			
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); 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.	32.07	18.10	50.17
Future Increase(s): Add $1.95/hr on 6/1/11; Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.			

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Premium Pay: On Sunday & holidays, pay two times the hourly basic rate. For "Airport Pavement or State Highway Construction" project type only, add $1.50/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).			
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.	31.81	18.10	49.91
Future Increase(s): Add $1.95/hr on 6/1/11; Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: On Sunday & holidays, pay two times the hourly basic rate. For "Airport Pavement or State Highway Construction" project type only, add $1.50/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).			
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.	31.52	18.10	49.62
Future Increase(s): Add $1.95/hr on 6/1/11; Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: On Sunday & holidays, pay two times the hourly basic rate. For "Airport Pavement or State Highway Construction" project type only, add $1.50/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).			
Fiber Optic Cable Equipment.	22.79	15.30	38.09

SUPERSEDES DECISION WI20070010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
DECISION NUMBER: W1080010
DATE: November 11, 2011
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence and Bridge Builder; Landscaper, Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, Utility Man); Batch Truck Dumper; or Cement Handler; Bituminous Worker; (Dumper, Ironer, Smoother, Tamper); Concrete Handler	$24.15	11.75
Group 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer	24.25	11.75
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man	24.30	11.75
Group 4: Line and Grade Specialist	24.50	11.75
Group 5: Blaster and Powderman	24.35	11.75
Group 6: Flagperson and Traffic Control Person	20.50	11.75

Truck Drivers:	Basic Hourly Rates	Fringe Benefits
1 & 2 Axles	25.09	15.20
Three or More Axles; Euclids, Dumptor & Articulated, Truck Mechanic	25.24	15.20

CLASSES OF LABORER AND MECHANICS

Bricklayer	28.41	12.81
Carpenter	30.56	13.36
Millwright	32.16	13.36
Piledriverman	31.06	13.36
Ironworker	30.90	19.13
Cement Mason/Concrete Finisher	30.68	15.68
Electrician		See Page 3
Line Construction		
Lineman	37.05	17.60
Heavy Equipment Operator	33.35	16.34
Equipment Operator	29.64	15.07
Heavy Groundman Driver	25.94	13.83
Light Groundman Driver	24.08	13.18
Groundsman	20.38	11.94
Painter, Brush	25.65	13.10
Painter, Spray, Structural Steel,Bridges	26.65	13.10
Well Drilling:		
Well Driller	16.52	3.70

Notes: Welders receive rate prescribed for craft performing operation to which welding is incidental. Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5(a)(1)(ii)). Includes Modification 0, dated March 12, 2010; Modification 1, dated March 19, 2010; Modification 2, dated June 4, 2010; Modification 3, dated July 2, 2010; Modification 4, dated August 6, 2010; Modification 5, dated September 3, 2010; Modification 6, dated October 1, 2010, Modification 7, dated November 5, 2010; Modificaton 8; dated November 15, 2010; Modification 9, dated January 7, 2011; Modification #10 dated February 11, 2011; Modification #11 dated May 6, 2011; Modification #12 dated May 13, 2011; Modification #13 dated June 3, 2011; Modification #14 dated July 29, 2011; Modification #15 dated August 12, 2011; Modification #16 dated August 26, 2011; Modification #17 dated September 16, 2011; Modification #18 dated October 14, 2011; Modification #19 dated November 11, 2011.

SUPERSEDES DECISION WI20070010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
DECISION NUMBER: W1080010
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

DATE: November 11, 2011

POWER EQUIPMENT OPERATORS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of over 100 tons or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 176 feet or longer	$34.22	$18.65
Group 2: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of 100 tons or less or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 175 feet or less, and backhoes (excavators) having a manufacturer's rated capacity of 3 cu. yds. and over, caisson rigs, pile driver, dredge operator, dredge engineer.....	$33.72	$18.65
Group 3: Mechanic or welder - heavy duty equipment, cranes with a lifting capacity of 25 tons or less, concrete breaker (manual or remote); vibrator/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pavement spreader - heavy duty (rubber tired); concrete spreader and distributor, automatic subgrader (concrete); concrete grinder and planing machine; concrete slipform curb and gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi and over); bridge paver; concrete conveyor system; concrete pump; stabilizing mixer (self propelled); shoulder widener; asphalt plant engineer; bituminous paver; bump cutter and grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer and scarifier; backhoes (excavators) having a manufacturers rated capacity of under 3 cu. yds.; grader or motor patrol; tractor (scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader hydraulic backhoe (tractor-type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller (over 5 tons); percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches and A-frames; post driver; material hoist operator.	$33.22	$18.65
Group 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self-propelled; tractor (mounted or towed compactors and light equipment); shouldering machine; self-propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint saw (multiple blade) belting machine; burlap machine; texturing machine; tractor, endloader (rubber tired) - light; jeep digger; fork lift; mulcher; launch operator; fireman; environmental burner.	$32.96	$18.65
Group 5: Air compressor; power pack; vibratory hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; concrete pro-portioning plants generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; oiler; pump (over 3 inches); drilling machine helper.....	$32.67	$18.65
Group 6: Off – road material hauler with or without ejector	$26.77	$18.65

Premium Pay:
EPA Level “A” protection - $ 3.00 per hour
EPA Level “B” protection - $ 2.00 per hour
EPA Level “C” protection - $ 1.00 per hours

SUPERSEDES DECISION WI20070010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
DECISION NUMBER: W1080010
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

DATE: November 11, 2011

LABORERS CLASSIFICATION:	Rates	Benefits
Electricians		
Area 1	$27.40	16.41
Area 2:		
Electricians	28.74	17.82
Area 3:		
Electrical contracts under $130,000	26.24	16.85
Electrical contracts over $130,000	29.41	16.97
Area 4:	28.29	16.41
Area 5	28.29	16.41
Area 6	33.75	18.87
Area 8		
Electricians	30.00	24%+10.56
Area 9:		
Electricians	32.55	18.80
Area 10	28.88	19.06
Area 11	30.39	22.90
Area 12	32.87	19.22
Area 13	31.54	20.88
Teledata System Installer		
Area 14		
Installer/Technician	21.26	11.70
Sound & Communications		
Area 15		
Installer	16.47	13.94
Technician	24.65	15.13

Area 1 - CALUMET (except township of New Holstein), GREEN LAKE (N. part, including Townships of Berlin, St. Marie and Seneca), MARQUETTE (N. part, including Townships of Crystal Lake, Neshkoro, Newton & Springfield), OUTAGAMIE, WAUPACA, WAUSHARA and WINNEBAGO COUNTIES.

Area 2 - ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Mayville, Colby, Unity, Sherman, Fremont, Lynn and Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST. CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON and WASHBURN COUNTIES

Area 3 - FLORENCE (townships of Aurora, Commonwealth, Fern, Florence and Homestead), MARINETTE (Niagara township)

Area 4 - BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE (Wausauke and area south thereof), OCONTO, MENOMINEE (East of a line 6 miles West of the West boundary of Oconto County), SHAWANO (except area North of Townships of Aniwa and Hutchins) COUNTIES.

Area 5 - ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Area North of the town of Wausaukee), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Area North of the townships of Aniwa and Hutchins), VILAS AND WOOD COUNTIES

Area 6 - KENOSHA COUNTY

Area 8 - DODGE, (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington township), ROCK and WALWORTH COUNTIES

Area 9 - COLUMBIA, DANE, DODGE, (area west of Hwy. 26, except Chester & Emmet Townships), GREEN LAKE (except townships of Berlin, Seneca and St. Marie), IOWA, MARQUETTE (except townships of Neshkoka, Crystal Lake, Newton and Springfield), and SAUK COUNTIES

Area 10 - CALUMET (Township of New Holstein), DODGE (East of Hwy. 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

Area 11 - DOUGLAS COUNTY

Area 12 - RACINE (except Burlington township) COUNTY

Area 13 - MILWAUKEE, OZAUKEE, WASHINGTON and WAUKESHA COUNTIES

Area 14 - Statewide.

Area 15 - DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupun), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES.

FEBRUARY 1999

NOTICE TO BIDDERS
WAGE RATE DECISION

The wage rate decision of the Secretary of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Secretary of Labor's decision.

Since the bidder is responsible, independently, for ascertaining area practice with respect to the necessity, or lack of necessity, for the use of these classifications in the prosecution of the work contemplated by this project, no inference may be drawn from the omision of these classifications concerning prevailing area practices relative to their use. Further, this omission will not, per se, be construed as establishing any governmental liability for increased labor cost if it is subsequently determined that such classifications are required.

There may be omissions and/or errors in the federal wage rates. The bidder is responsible for evaluating and determining the correct applicable rate. The higher of state or federal rate will apply.

SCHEDULE OF ITEMS REVISED:

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20120214008	5994-00-71	WISC 2012068
	5994-00-75	N/A
	5994-00-76	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 ROADWAY ITEMS					
0010	201.0120 CLEARING	1,089.000 ID		.		.
0020	201.0220 GRUBBING	1,089.000 ID		.		.
0030	204.0100 REMOVING PAVEMENT	22,698.000 SY		.		.
0040	204.0130 REMOVING CURB	533.000 LF		.		.
0050	204.0150 REMOVING CURB & GUTTER	5,471.000 LF		.		.
0060	204.0155 REMOVING CONCRETE SIDEWALK	4,104.000 SY		.		.
0070	204.0165 REMOVING GUARDRAIL	38.000 LF		.		.
0080	204.0195 REMOVING CONCRETE BASES	21.000 EACH		.		.
0090	204.0210 REMOVING MANHOLES	6.000 EACH		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0100	204.0220 REMOVING INLETS	24.000 EACH		.		.
0110	204.0245 REMOVING STORM SEWER (SIZE) 01. 12-INCH	379.000 LF		.		.
0120	204.0245 REMOVING STORM SEWER (SIZE) 02. 24-INCH	659.000 LF		.		.
0130	204.0245 REMOVING STORM SEWER (SIZE) 03. 30-INCH	639.000 LF		.		.
0140	204.0245 REMOVING STORM SEWER (SIZE) 04. 30 X 60 INCH	50.000 LF		.		.
0150	204.0245 REMOVING STORM SEWER (SIZE) 05. 34 X 53 INCH	485.000 LF		.		.
0160	204.9060.S REMOVING (ITEM DESCRIPTION) 01. REMOVING BRICK PILASTERS	4.000 EACH		.		.
0170	204.9060.S REMOVING (ITEM DESCRIPTION) 02. REMOVING COMMERCIAL SIGNS	8.000 EACH		.		.
0180	204.9060.S REMOVING (ITEM DESCRIPTION) 03. REMOVING LIGHT POLES	5.000 EACH		.		.
0190	204.9165.S REMOVING (ITEM DESCRIPTION) 01. REMOVING CONCRETE STEPS	30.000 SF		.		.

CONTRACT: 20120214008

PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76

FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0200	205.0100 EXCAVATION COMMON	26,398.000 CY		.		.
0210	209.0100 BACKFILL GRANULAR	1,508.000 CY		.		.
0220	213.0100 FINISHING ROADWAY (PROJECT) 01. 5994-00-71	1.000 EACH		.		.
0230	305.0110 BASE AGGREGATE DENSE 3/4-INCH	1,599.000 TON		.		.
0240	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	31,359.000 TON		.		.
0250	416.0160 CONCRETE DRIVEWAY 6-INCH	789.000 SY		.		.
0260	416.0170 CONCRETE DRIVEWAY 7-INCH	144.000 SY		.		.
0270	455.0115 ASPHALTIC MATERIAL PG64-22	310.000 TON		.		.
0280	455.0120 ASPHALTIC MATERIAL PG64-28	177.000 TON		.		.
0290	455.0605 TACK COAT	710.000 GAL		.		.

CONTRACT: 20120214008

PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76

FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0300	460.1103 HMA PAVEMENT TYPE E-3	8,129.000 TON		.		.
0310	460.2000 INCENTIVE DENSITY HMA PAVEMENT	5,200.000 DOL	1.00000		5200.00	
0320	460.4100.S REHEATING HMA LONGITUDINAL JOINTS	49.000 STA		.		.
0330	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	248.000 TON		.		.
0340	465.0125 ASPHALTIC SURFACE TEMPORARY	456.000 TON		.		.
0350	504.2000.S PRECAST CONCRETE BOX CULVERT (FT X FT) 01. 8-FT X 3-FT	603.000 LF		.		.
0360	504.2000.S PRECAST CONCRETE BOX CULVERT (FT X FT) 02. 11-FT X 3-FT	94.000 LF		.		.
0370	513.7030 RAILING STEEL TYPE C6 (STRUCTURE) 01. RETAINING WALL #4	LUMP	LUMP			.
0380	520.8000.S CULVERT PIPE CONCRETE COLLAR	1.000 EACH		.		.
0390	521.0757 PIPE ARCH CORRUGATED STEEL 57X38-INCH	69.000 LF		.		.

CONTRACT: 20120214008

PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76

FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0400	530.0112 CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH	15.000 LF		.		.
0410	532.0200.S WALL MODULAR BLOCK GRAVITY	80.000 SF		.		.
0420	601.0120 CONCRETE CURB TYPE J	555.000 LF		.		.
0430	601.0407 CONCRETE CURB & GUTTER 18-INCH TYPE D	8,662.000 LF		.		.
0440	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D	845.000 LF		.		.
0450	601.0600 CONCRETE CURB PEDESTRIAN	18.000 LF		.		.
0460	602.0410 CONCRETE SIDEWALK 5-INCH	34,262.000 SF		.		.
0470	602.0415 CONCRETE SIDEWALK 6-INCH	4,219.000 SF		.		.
0480	602.0420 CONCRETE SIDEWALK 7-INCH	2,157.000 SF		.		.
0490	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	892.000 LF		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0500	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	495.000 LF		.		.
0510	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	336.000 LF		.		.
0520	608.0327 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 27-INCH	9.000 LF		.		.
0530	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	659.000 LF		.		.
0540	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	464.000 LF		.		.
0550	609.0142 RELAID STORM SEWER 42-INCH	69.000 LF		.		.
0560	610.0114 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 14X23-INCH	69.000 LF		.		.
0570	611.0201 MANHOLES TYPE 1	5.000 EACH		.		.
0580	611.0210 MANHOLES TYPE 3	4.000 EACH		.		.
0590	611.0303 INLETS TYPE 3	35.000 EACH		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0600	611.0305 INLETS TYPE 8	1.000 EACH		.		.
0610	611.0530 MANHOLE COVERS TYPE J	13.000 EACH		.		.
0620	611.0624 INLET COVERS TYPE H	21.000 EACH		.		.
0630	611.0639 INLET COVERS TYPE H-S	24.000 EACH		.		.
0640	611.0645 INLET COVERS TYPE MS-A	1.000 EACH		.		.
0650	611.8110 ADJUSTING MANHOLE COVERS	38.000 EACH		.		.
0660	619.1000 MOBILIZATION	1.000 EACH		.		.
0670	620.0300 CONCRETE MEDIAN SLOPED NOSE	451.000 SF		.		.
0680	621.1100 LANDMARK REFERENCE MONUMENTS AND CAST IRON COVERS	1.000 EACH		.		.
0690	624.0100 WATER	439.000 MGAL		.		.
0700	625.0100 TOPSOIL	6,452.000 SY		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0710	628.1104 EROSION BALES	80.000 EACH		.		.
0720	628.1504 SILT FENCE	1,115.000 LF		.		.
0730	628.1520 SILT FENCE MAINTENANCE	1,115.000 LF		.		.
0740	628.1905 MOBILIZATIONS EROSION CONTROL	12.000 EACH		.		.
0750	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	12.000 EACH		.		.
0760	628.2006 EROSION MAT URBAN CLASS I TYPE A	6,225.000 SY		.		.
0770	628.7005 INLET PROTECTION TYPE A	2.000 EACH		.		.
0780	628.7015 INLET PROTECTION TYPE C	66.000 EACH		.		.
0790	629.0210 FERTILIZER TYPE B	4.060 CWT		.		.
0800	630.0140 SEEDING MIXTURE NO. 40	77.500 LB		.		.

CONTRACT: 20120214008

PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76

FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0810	630.0200 SEEDING TEMPORARY	16.000 LB		.		.
0820	631.0300 SOD WATER	92.000 MGAL		.		.
0830	631.1000 SOD LAWN	2,148.000 SY		.		.
0840	632.0101 TREES (SPECIES, ROOT, SIZE) 01. AUTUMN GOLD GINGKO, B&B 2-1/2" CAL.	17.000 EACH		.		.
0850	632.0101 TREES (SPECIES, ROOT, SIZE) 02. FT MCNAIR HORSE CHESTNUT, B&B, 2-1/2" CAL.	7.000 EACH		.		.
0860	632.0101 TREES (SPECIES, ROOT, SIZE) 03. CLEVELAND SELECT PEAR, B&B, 2-1/2" CAL.	9.000 EACH		.		.
0870	632.0101 TREES (SPECIES, ROOT, SIZE) 04. AUTUMN BLAZE PEAR, B&B, 2-1/2" CAL.	11.000 EACH		.		.
0880	632.0101 TREES (SPECIES, ROOT, SIZE) 05. JAPANESE TREE LILAC, B&B, 2-1/2" CAL	3.000 EACH		.		.
0890	632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	20.000 EACH		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0900	637.0202 SIGNS REFLECTIVE TYPE II	369.940 SF		.		.
0910	637.0402 SIGNS REFLECTIVE FOLDING TYPE II	43.750 SF		.		.
0920	638.2102 MOVING SIGNS TYPE II	1.000 EACH		.		.
0930	638.2602 REMOVING SIGNS TYPE II	47.000 EACH		.		.
0940	638.3000 REMOVING SMALL SIGN SUPPORTS	47.000 EACH		.		.
0950	638.4000 MOVING SMALL SIGN SUPPORTS	1.000 EACH		.		.
0960	642.5201 FIELD OFFICE TYPE C	1.000 EACH		.		.
0970	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 5994-00-71	184.000 DAY		.		.
0980	643.0300 TRAFFIC CONTROL DRUMS	32,310.000 DAY		.		.
0990	643.0410 TRAFFIC CONTROL BARRICADES TYPE II	1,840.000 DAY		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1000	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	3,712.000 DAY		.		.
1010	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	575.000 EACH		.		.
1020	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	575.000 EACH		.		.
1030	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	9,548.000 DAY		.		.
1040	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	230.000 DAY		.		.
1050	643.0800 TRAFFIC CONTROL ARROW BOARDS	412.000 DAY		.		.
1060	643.0900 TRAFFIC CONTROL SIGNS	12,981.000 DAY		.		.
1070	643.0905.S TRAFFIC CONTROL COVERING SIGNS	40.000 EACH		.		.
1080	643.1050 TRAFFIC CONTROL SIGNS PCMS	828.000 DAY		.		.
1090	646.0106 PAVEMENT MARKING EPOXY 4-INCH	8,807.000 LF		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1100	646.0116 PAVEMENT MARKING EPOXY 6-INCH	7,154.000 LF		.		.
1110	646.0126 PAVEMENT MARKING EPOXY 8-INCH	301.000 LF		.		.
1120	646.0600 REMOVING PAVEMENT MARKINGS	8,466.000 LF		.		.
1130	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2	9.000 EACH		.		.
1140	647.0206 PAVEMENT MARKING ARROWS BIKE LANE EPOXY	10.000 EACH		.		.
1150	647.0356 PAVEMENT MARKING WORDS EPOXY	5.000 EACH		.		.
1160	647.0406 PAVEMENT MARKING WORDS BIKE LANE EPOXY	28.000 EACH		.		.
1170	647.0456 PAVEMENT MARKING CURB EPOXY	350.000 LF		.		.
1180	647.0576 PAVEMENT MARKING STOP LINE EPOXY 24-INCH	641.000 LF		.		.
1190	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY	16.000 EACH		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1200	647.0716 PAVEMENT MARKING DIAGONAL EPOXY 8-INCH	172.000 LF		.		.
1210	647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	507.000 LF		.		.
1220	647.0776 PAVEMENT MARKING CROSSWALK EPOXY 12-INCH	761.000 LF		.		.
1230	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH	37,889.000 LF		.		.
1240	649.0900 TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH	193.000 LF		.		.
1250	650.4000 CONSTRUCTION STAKING STORM SEWER	64.000 EACH		.		.
1260	650.4500 CONSTRUCTION STAKING SUBGRADE	4,570.000 LF		.		.
1270	650.5000 CONSTRUCTION STAKING BASE	4,570.000 LF		.		.
1280	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	10,118.000 LF		.		.
1290	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 5994-00-71	LUMP	LUMP			.

CONTRACT: 20120214008

PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76

FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1300	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 5994-00-71	LUMP	LUMP			.
1310	650.9920 CONSTRUCTION STAKING SLOPE STAKES	4,570.000 LF		.		.
1320	652.0215 CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/4-INCH	630.000 LF		.		.
1330	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	4,525.000 LF		.		.
1340	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	5,748.000 LF		.		.
1350	652.0325 CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH	2,026.000 LF		.		.
1360	652.0335 CONDUIT RIGID NONMETALLIC SCHEDULE 80 3-INCH	3,817.000 LF		.		.
1370	652.0800 CONDUIT LOOP DETECTOR	1,179.000 LF		.		.
1380	654.0110 CONCRETE BASES TYPE 10	2.000 EACH		.		.
1390	655.0210 CABLE TRAFFIC SIGNAL 3-14 AWG	43.000 LF		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1400	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG	1,715.000 LF		.		.
1410	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG	192.000 LF		.		.
1420	655.0250 CABLE TRAFFIC SIGNAL 9-14 AWG	1,281.000 LF		.		.
1430	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG	208.000 LF		.		.
1440	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG	363.000 LF		.		.
1450	655.0280 CABLE TRAFFIC SIGNAL 19-14 AWG	481.000 LF		.		.
1460	655.0290 CABLE TRAFFIC SIGNAL 21-14 AWG	124.000 LF		.		.
1470	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG	11,460.000 LF		.		.
1480	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG	8,302.000 LF		.		.
1490	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG	24,906.000 LF		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1500	655.0800 LOOP DETECTOR WIRE	3,172.000 LF		.		.
1510	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. TSCB1	LUMP	LUMP			.
1520	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 02. TSCB2	LUMP	LUMP			.
1530	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 03. SLCB1	LUMP	LUMP			.
1540	657.0100 PEDESTAL BASES	10.000 EACH		.		.
1550	658.0500 PEDESTRIAN PUSH BUTTONS	14.000 EACH		.		.
1560	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 01. BUCKEYE ROAD INTERSECTION	LUMP	LUMP			.
1570	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 02. COTTAGE GROVE ROAD INTERSECTION	LUMP	LUMP			.
1580	690.0150 SAWING ASPHALT	2,634.000 LF		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1590	690.0250 SAWING CONCRETE	8,374.000 LF		.		.
1600	ASP.1T0A ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	550.000 HRS	5.00000		2750.00	
1610	ASP.1T0G ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	1,000.000 HRS	5.00000		5000.00	
1620	SPV.0060 SPECIAL 01. MANHOLE TYPE 60	7.000 EACH		.		.
1630	SPV.0060 SPECIAL 02. MANHOLE TYPE 1 SPECIAL	4.000 EACH		.		.
1640	SPV.0060 SPECIAL 03. SANITARY MANHOLE 4-FT	3.000 EACH		.		.
1650	SPV.0060 SPECIAL 04. SANITARY MANHOLE COVER	8.000 EACH		.		.
1660	SPV.0060 SPECIAL 05. ADJUST VALVE BOX	33.000 EACH		.		.
1670	SPV.0060 SPECIAL 06. WATER MAIN GATE VALVE AND VALVE BOX 6-INCH	1.000 EACH		.		.
1680	SPV.0060 SPECIAL 07. WATER MAIN GATE VALVE AND VALVE BOX 8-INCH	2.000 EACH		.		.

CONTRACT: 20120214008

PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76

FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SPV.0060 SPECIAL 08.					
1690	WATER MAIN HYDRANTS	1.000 EACH		.		.
	SPV.0060 SPECIAL 09.					
1700	UTILITY LINE OPENING	20.000 EACH		.		.
	SPV.0060 SPECIAL 10.					
1710	ELECTRICAL UTILITY ACCESS STRUCTURE	3.000 EACH		.		.
	SPV.0060 SPECIAL 11.					
1720	CONCRETE BASE TYPE G	10.000 EACH		.		.
	SPV.0060 SPECIAL 12.					
1730	CONCRETE BASE TYPE LB-3	30.000 EACH		.		.
	SPV.0060 SPECIAL 13.					
1740	CONCRETE BASE TYPE LB-8	5.000 EACH		.		.
	SPV.0060 SPECIAL 14.					
1750	CONCRETE BASE TYPE M	1.000 EACH		.		.
	SPV.0060 SPECIAL 15.					
1760	CONCRETE BASE TYPE P	2.000 EACH		.		.
	SPV.0060 SPECIAL 16.					
1770	PULL BOX TYPE I	24.000 EACH		.		.
	SPV.0060 SPECIAL 17.					
1780	PULL BOX TYPE III	12.000 EACH		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SPV.0060 SPECIAL 18.					
1790	PULL BOX TYPE V	5.000 EACH		.		.
	SPV.0060 SPECIAL 19.					
1800	POSTS ROUND TUBULAR STEEL 2-3/8-INCH X 14-FT	76.000 EACH		.		.
	SPV.0060 SPECIAL 20.					
1810	STONE VENEER WALL	8.000 EACH		.		.
	SPV.0060 SPECIAL 21.					
1820	ROOT PRUNING EXISTING TREES	12.000 EACH		.		.
	SPV.0060 SPECIAL 22.					
1830	TRANSFORMER BASE 16-INCH, BLACK STEEL	4.000 EACH		.		.
	SPV.0060 SPECIAL 23.					
1840	TRANSFORMER BASE 20-INCH, BLACK STEEL	2.000 EACH		.		.
	SPV.0060 SPECIAL 24.					
1850	TRAFFIC SIGNAL STANDARD ALUMINUM BLACK 3.5-FOOT	1.000 EACH		.		.
	SPV.0060 SPECIAL 25.					
1860	TRAFFIC SIGNAL STANDARD ALUMINUM BLACK 9-FOOT	1.000 EACH		.		.
	SPV.0060 SPECIAL 26.					
1870	TRAFFIC SIGNAL STANDARD ALUMINUM BLACK 13-FOOT	4.000 EACH		.		.
	SPV.0060 SPECIAL 27.					
1880	TRAFFIC SIGNAL STANDARD ALUMINUM BLACK 15-FOOT	2.000 EACH		.		.

CONTRACT: 20120214008

PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76

FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1890	SPV.0060 SPECIAL 28. POLE 20-FOOT, BLACK 7 GAUGE	3.000 EACH		.		.
1900	SPV.0060 SPECIAL 29. POLE 30-FOOT, BLACK 11 GAUGE	30.000 EACH		.		.
1910	SPV.0060 SPECIAL 30. POLE 30-FOOT, BLACK 7 GAUGE	2.000 EACH		.		.
1920	SPV.0060 SPECIAL 31. MONOTUBE POLE, TYPE 9 BLACK	2.000 EACH		.		.
1930	SPV.0060 SPECIAL 32. MONOTUBE ARM 25-FOOT BLACK	1.000 EACH		.		.
1940	SPV.0060 SPECIAL 33. MONOTUBE ARM 30-FOOT BLACK	1.000 EACH		.		.
1950	SPV.0060 SPECIAL 34. LIGHTING FIXTURES TYPE-A	20.000 EACH		.		.
1960	SPV.0060 SPECIAL 35. LIGHTING FIXTURES TYPE-B	15.000 EACH		.		.
1970	SPV.0060 SPECIAL 36. TRAFFIC SIGNAL CONTROL CABINET, BLACK	2.000 EACH		.		.
1980	SPV.0060 SPECIAL 37. TRAFFIC SIGNAL CONTROLLER	2.000 EACH		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1990	SPV.0060 SPECIAL 38. NEMA PLUS CONFLICT MONITOR	2.000 EACH		.		.
2000	SPV.0060 SPECIAL 39. TRAFFIC SIGNAL TROMBONE ARMS, BLACK ALUMINUM 12-FOOT	2.000 EACH		.		.
2010	SPV.0060 SPECIAL 40. TRAFFIC SIGNAL TROMBONE ARMS, BLACK ALUMINUM 15-FOOT	2.000 EACH		.		.
2020	SPV.0060 SPECIAL 41. TRAFFIC SIGNAL TROMBONE ARMS, BLACK ALUMINUM 18-FOOT	1.000 EACH		.		.
2030	SPV.0060 SPECIAL 42. TRAFFIC SIGNAL HEADS 8-INCH, 3-SECTION VERTICAL	4.000 EACH		.		.
2040	SPV.0060 SPECIAL 43. TRAFFIC SIGNAL HEADS 12-INCH, 3-SECTION VERTICAL	18.000 EACH		.		.
2050	SPV.0060 SPECIAL 44. TRAFFIC SIGNAL HEADS 12-INCH, 4-SECTION VERTICAL	4.000 EACH		.		.
2060	SPV.0060 SPECIAL 45. TRAFFIC SIGNAL HEADS 12-INCH, 5-SECTION VERTICAL	2.000 EACH		.		.

CONTRACT: 20120214008

PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76

FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2070	SPV.0060 SPECIAL 46. TRAFFIC SIGNAL HEADS 12-INCH, 3-SECTION HORIZONTAL	5.000 EACH		.		.
2080	SPV.0060 SPECIAL 47. TRAFFIC SIGNAL HEADS 12-INCH, PEDESTRIAN	14.000 EACH		.		.
2090	SPV.0060 SPECIAL 48. TRAFFIC SIGNAL HEADS 12-INCH, PEDESTRIAN COUNTDOWN	14.000 EACH		.		.
2100	SPV.0060 SPECIAL 49. BACKPLATES SIGNAL FACE, 3-SECTION 12-INCH	21.000 EACH		.		.
2110	SPV.0060 SPECIAL 50. BACKPLATES SIGNAL FACE, 4-SECTION 12-INCH	5.000 EACH		.		.
2120	SPV.0060 SPECIAL 51. BACKPLATES SIGNAL FACE, 5-SECTION 12-INCH	2.000 EACH		.		.
2130	SPV.0060 SPECIAL 52. LIGHTING CONTROL CABINETS, BLACK	1.000 EACH		.		.
2140	SPV.0060 SPECIAL 53. TEMPORARY BUS STOP PAD	3.000 EACH		.		.
2150	SPV.0060 SPECIAL 54. INLET TYPE 3 MODIFIED	2.000 EACH		.		.
2160	SPV.0060 SPECIAL 55. PERENNIAL, FEATHERED REED GRASS, KARL CG 24"	48.000 EACH		.		.

CONTRACT: 20120214008

PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76

FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2170	SPV.0060 SPECIAL 56. PERENNIAL, BLUE ZINGER SEDGE CG 12"	640.000 EACH		.		.
2180	SPV.0060 SPECIAL 57. PERENNIAL, HAPPY RETURNS DAYLILY CG 12"	208.000 EACH		.		.
2190	SPV.0060 SPECIAL 58. PERENNIAL, SHENANDOAH SWITCHGRASS CG 18"	48.000 EACH		.		.
2200	SPV.0060 SPECIAL 59. RUSSIAN SAGE CG 24"	16.000 EACH		.		.
2210	SPV.0060 SPECIAL 60. GOLDSTRUM BLACK EYED CG 18"	120.000 EACH		.		.
2220	SPV.0060 SPECIAL 61. REMOVE EXISTING HYDRANT	1.000 EACH		.		.
2230	SPV.0060 SPECIAL 62. REMOVE EXISTING WATER VALVE BOX	1.000 EACH		.		.
2240	SPV.0060 SPECIAL 63. SANITARY SEWER INTERNAL CHIMNEY SEAL	5.000 EACH		.		.
2250	SPV.0060 SPECIAL 64. SANITARY TAP	6.000 EACH		.		.
2260	SPV.0060 SPECIAL 65. SANITARY MANHOLE 5-FT	3.000 EACH		.		.

CONTRACT: 20120214008

PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76

FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2270	SPV.0060 SPECIAL 66. INLET CASTING TYPE FLAT	7.000 EACH		.		.
2280	SPV.0060 SPECIAL 67. INLET TYPE 15	1.000 EACH		.		.
2290	SPV.0060 SPECIAL 68. WATER MAIN GATE VALVE AND VALVE BOX 12-INCH	2.000 EACH		.		.
2300	SPV.0090 SPECIAL 01. CONCRETE CURB & GUTTER 30-INCH SPECIAL DOUBLE PAN	38.000 LF		.		.
2310	SPV.0090 SPECIAL 02. SANITARY SEWER MAIN 8-INCH	370.000 LF		.		.
2320	SPV.0090 SPECIAL 03. SANITARY SEWER MAIN 10-INCH	40.000 LF		.		.
2330	SPV.0090 SPECIAL 04. SANITARY SEWER LATERAL 6-INCH	20.000 LF		.		.
2340	SPV.0090 SPECIAL 05. WATER MAIN 6-INCH	23.000 LF		.		.
2350	SPV.0090 SPECIAL 06. WATER MAIN 8-INCH	157.000 LF		.		.
2360	SPV.0090 SPECIAL 07. WATER SERVICE COPPER 1-INCH	65.000 LF		.		.

CONTRACT: 20120214008
PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76
FEDERAL ID(S): WISC 2012068, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2370	SPV.0090 SPECIAL 08. LOOP DETECTOR LEAD-IN CABLE	6,000.000 LF		.		.
2380	SPV.0090 SPECIAL 09. WATER MAIN 12-INCH	28.000 LF		.		.
2390	SPV.0105 SPECIAL 01. ABANDON WATER MAIN	LUMP	LUMP			.
2400	SPV.0105 SPECIAL 02. OPTICOM SIGNAL PREEMPT	LUMP	LUMP			.
2410	SPV.0105 SPECIAL 03. TEMPORARY TRAFFIC SIGNALS (MONONA DRIVE & BUCKEYE ROAD)	LUMP	LUMP			.
2420	SPV.0105 SPECIAL 04. TEMPORARY TRAFFIC SIGNALS (MONONA DRIVE & COTTAGE GROVE ROAD)	LUMP	LUMP			.
2430	SPV.0105 SPECIAL 05. TEMPORARY CROSSWALK ACCESS (MONONA DRIVE & WINNEQUAH ROAD)	LUMP	LUMP			.
2440	SPV.0105 SPECIAL 06. TEMPORARY CROSSWALK ACCESS (MONONA DRIVE & BUCKEYE ROAD)	LUMP	LUMP			.
2450	SPV.0105 SPECIAL 07. TEMPORARY CROSSWALK ACCESS (MONONA DRIVE & COTTAGE GROVE ROAD)	LUMP	LUMP			.

CONTRACT: 20120214008

PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76

FEDERAL ID(S): WISC 2012068, N/A, 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 08 TEMPORARY VEHICLE DETECTION (MONONA DRIVE & BUCKEYE ROAD)	LUMP	LUMP			.
2470	SPV.0105 SPECIAL 09. TEMPORARY VEHICLE DETECTION (MONONA DRIVE & COTTAGE GROVE ROAD)	LUMP	LUMP			.
2480	SPV.0105 SPECIAL 10. DEWATERING	LUMP	LUMP			.
2490	SPV.0105 SPECIAL 11. WASTEWATER CONTROL	LUMP	LUMP			.
2500	SPV.0105 SPECIAL 12. CONSTRUCTION STAKING WATER MAIN (PROJECT 5994-00-76)	LUMP	LUMP			.
2510	SPV.0105 SPECIAL 13. CONSTRUCTION STAKING SANITARY SEWER PROJECT (5994-00-75)	LUMP	LUMP			.
2520	SPV.0165 SPECIAL 01. SALVAGE AND REPLACE STONE RETAINING WALL	376.000 SF		.		.
2530	SPV.0165 SPECIAL 02. STAMPED COLORED CONCRETE SIDEWALK 5-INCH	547.000 SF		.		.
2540	SPV.0165 SPECIAL 03. CAST IRON TRUNCATED DOMES, YELLOW	272.000 SF		.		.

CONTRACT: 20120214008

PROJECT(S): 5994-00-71, 5994-00-75, 5994-00-76

FEDERAL ID(S): WISC 2012068, N/A, 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.0165 SPECIAL 04. SALVAGE AND REPLACE TIMBER RETAINING WALL	80.000 SF		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE