HIGHWAY WORK PROPOSAL

Proposal Number: 4 1

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Waushara	1166-03-70		Coloma - Plainfield Coloma Safety & Weight Facility	IH 39

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

Proposal Guaranty Required, $ 75,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: May 14, 2013 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time Thirty (30) Working Days	
Assigned Disadvantaged Business Enterprise Goal 0%	This contract is exempt from federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work Removing, furnishing and installing weigh-in-motion and static weigh scale systems, concrete pavement.	
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

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1166-03-70, Coloma - Plainfield, Coloma Safety and Weight Facility, IH 39, Waushara 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, 2013 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 (20120615)

2. Scope of Work.

The work under this contract shall consist of removing existing weigh-in-motion and static scale systems, furnishing and installing new weigh-in-motion and static scale systems, concrete pavement 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.

The Coloma Safety and Weight Enforcement Facility will not be in operation during this work but the facility will remain open for official use. State Patrol officers and maintenance staff will need to access the building. Coordinate operations with the engineer, the State Patrol sergeant, Robert Hartson, (715) 845-1143, (robert.hartson@dot.wi.gov) and the on-site service provider, Waushara Industries, Inc., Pete Fischbach, (920) 787-4696.

4. Traffic.

IH 39 traffic will not be impacted by this project. The Coloma Safety and Weight Enforcement Facility will not be in operation during this work although State Patrol officers and maintenance staff will need access to the building. Ramps into the facility will be closed and barricaded off.

Any work area shall be clearly blocked off to prevent persons or vehicles from entering or going through. Use drums, barricades, signage and safety fence to direct pedestrian traffic from the work area.

5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying IH 39 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 Wednesday, July 3, 2013 to 6:00 AM Monday, July 8, 2013 for Independence Day;
- From noon Friday, August 30, 2013 to 6:00 AM Tuesday, September 3, 2013 for Labor Day.

107-005 (20050502)

6. Utilities.

This contract does not come under the provision of Administrative Rule Trans 220.

Utility facilities are located within the project limits. Adams Columbia Electric Cooperative provides electric service. Union Telephone Company provides telecommunications service. AmeriGas provides LP tank service. Utility adjustments are not required for this construction project.

7. Prequalification of Bidders.

Prequalification is not required. Section 102.1 of the standard specifications does not apply.

8. QMP Base Aggregate.

A Description

A.1 General

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

(2) Conform to standard spec 301, standard spec 305, and standard spec 310 as modified here in this special provision. Apply this special provision to material placed under all of the Base Aggregate Dense and Base Aggregate Open Graded bid items, except do not apply this special provision to material classified as reclaimed asphaltic pavement placed under the Base Aggregate Dense bid items.

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

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

(5) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required sampling and testing procedures. The contractor may obtain the CMM from the department's web site at:

http://roadwaystandards.dot.wi.gov/standards/cmm/index.htm

A.2 Contractor Testing for Small Quantities

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

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

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

[1] If using production tests for acceptance, submit test results to the engineer for review prior to incorporating the material into the work. Production test results are valid for a period of 3 years.

[2] For 3-inch material, obtain samples at load-out.

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

3. No control charts are required. Submit aggregate load-out and placement test results to the engineer within one business day of obtaining the sample. Assure that all properties are within the limits specified for each test.
4. Department verification testing is optional for quantities of 6000 tons or less.

(3) Material represented by a sublot with any property outside the specification limits is nonconforming. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

B Materials

B.1 Quality Control Plan

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

(2) Do not change the quality control plan without the engineer's review. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in each of the contractor's laboratories as changes are adopted. Ensure that the plan provides the following elements:

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
3. A list of source and processing locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Test results for wear, sodium sulfate soundness, freeze/thaw soundness, and plasticity index of all aggregates requiring QC testing. Obtain this information from the region materials unit or from the engineer.
5. Descriptions of stockpiling and hauling methods.
6. Locations of the QC laboratory, retained sample storage, and where control charts and other documentation is posted.
7. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.

B.2 Personnel

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

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

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

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

B.3 Laboratory

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

Materials Management Section
3502 Kinsman Blvd.
Madison, WI 53704
Telephone: 608-246-5388
http://www.dot.state.wi.us/business/engrserv/lab-qualification.htm

B.4 Quality Control Documentation

B.4.1 General

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

B.4.2 Records

(1) Document all placement observations, inspection records, and control adjustments daily in a permanent field record. Also include all test results in the project records. Provide test results to the engineer within 6 hours after obtaining a sample. For 3-inch base, extend this 6-hour limit to 24 hours. Post or distribute tabulated results using a method mutually agreeable to the engineer and contractor.

B.4.3 Control Charts

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

(2) Provide control charts to the engineer within 6 hours after obtaining a sample. For 3-inch base, extend this 6-hour limit to 24 hours. Post or distribute charts using a method mutually agreeable to the engineer and contractor. Update control charts daily to include the following:

1. Contractor individual QC tests.
2. Department QV tests.
3. Department IA tests.
4. Four-point running average of the QC tests.

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

B.5 Contractor Testing

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

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

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

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

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

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

B.6 Test Methods

B.6.1 Gradation

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

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

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

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

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

B.6.2 Fracture

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

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

B.6.3 Liquid Limit and Plasticity

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

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

B.7 Corrective Action

B.7.1 General

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

B.7.2 Placement Corrective Action

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

(2) Notify the engineer whenever the running average exceeds a warning limit. When 2 consecutive running averages exceed a warning limit, the engineer and contractor will discuss appropriate corrective action. Perform the engineer's recommended corrective action and increase the testing frequency as follows:
   1. For gradation, increase the QC testing frequency to at least one randomly sampled test per 1000 tons placed.
   2. For fracture, increase the QC testing frequency to at least one test per gradation test.

(3) If corrective action improves the property in question such that the running average after 4 additional tests is within the warning limits, the contractor may return to the testing frequency specified in B.5.3. If corrective action does not improve the property in question such that the running average after 4 additional individual tests is still in the warning band, repeat the steps outlined above starting with engineer notification.

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

(5) For individual test results significantly outside the control limits, notify the engineer, stop placing base, and suspend other activities that may affect the area in question. The engineer and contractor will jointly review data, data reduction, and data analysis; evaluate sampling and testing procedures; and perform additional testing as required to determine the extent of potentially unacceptable material. The engineer may direct the contractor to remove and replace that material. Individual test results are significantly outside the control limits if meeting one or more of the following criteria:
   1. A gradation control limit for the No. 200 sieve is exceeded by more than 3.0 percent.
   2. A gradation control limit for any sieve, except the No. 200, is exceeded by more than 5.0 percent.
   3. The fracture control limit is exceeded by more than 10.0 percent.

B.8 Department Testing

B.8.1 General

(1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor within 2 business days after the department obtains the sample.

B.8.2 Verification Testing

B.8.2.1 General

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

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

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

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

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

B.8.3 Independent Assurance

(1) Independence assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:

1. Split sample testing.
2. Proficiency sample testing.
3. Witnessing sampling and testing.
4. Test equipment calibration checks.
5. Reviewing required worksheets and control charts.
6. Requesting that testing personnel perform additional sampling and testing.

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

B.9 Dispute Resolution

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

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

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

C (Vacant)

D (Vacant)

E Payment

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

(2) For material represented by a running average exceeding a control limit, the department will reduce pay by 10 percent of the contract price for the affected Base Aggregate bid items listed in subsection A. The department will administer pay reduction under the Nonconforming QMP Base Aggregate Gradation or Nonconforming QMP Base Aggregate Fracture Administrative items. The department will determine the quantity of nonconforming material as specified in B.7.2.

301-010 (20100709)

9. Removing Weight Scale, Item SPV.0105.01.

A Description

The work under this item consists of removing and disposing of the existing truck weight scale in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C Construction

The existing scale pit will remain in place for reuse. Remove scale deck, support structure and scale pit coping. Remove the existing concrete deck and support structure without damage to the scale pit. All removed scale materials shall become the property of the contractor.

D Measurement
The department will measure Removing Weight Scale, completed in accordance to the contract and accepted, as a single complete lump sum unit of work.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Removing Weight Scale	LS

Payment is full compensation for removing and disposing of the existing truck weight scale and for furnishing all labor, tools, equipment and incidentals necessary to complete the work

10. Removing Weigh-In-Motion Scale System, Item SPV.0105.02.

A Description
The work under this item consists of removing and disposing of the existing weigh-in-motion scale system in accordance with the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C Construction
Remove scale frames, platforms, sensors, loops, conduit, wiring, cabling electronics and other components. All removed scale materials shall become the property of the contractor.

D Measurement
The department will measure Removing Weigh-In-Motion Scale System, completed in accordance with the contract and accepted, as a single complete lump sum unit of work.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.02	Removing Weigh-In-Motion Scale System	LS

Payment is full compensation for removing and disposing of the existing weigh-in-motion scale system and for all labor, tools, equipment and incidentals necessary to complete the work

11. Static Scale System, SPV.0105.03.

A General

Furnish and install one commercial motor vehicle scale with a weighing platform of 24’ x 12’ wide, placed in the existing scale pit. Equipment to consist of parts designed to act as a unit by a manufacture experienced in design, construction, and operation of equipment for the purpose required.

Scale and components must be NTEP approved. The following specifications represent the minimum static scale requirements.

B System Components

B.1 The Static Scale

Furnish and install one motor truck scale with a minimum gross capacity of 50 tons (100,000 lbs.) and a weighing platform of 24’ x 12’ wide, placed in the existing scale pit. Equipment to consist of parts designed to act as a unit by a manufacture experienced in design, construction, and operation of equipment for the purpose required.

1. The static scale to have two sections (a single weighbridge module).
    a. The truck scale shall have a reinforced concrete deck.
    b. The concrete deck shall have dual tandem axle capacity of 70,000 lbs on 4-foot centers.
    c. The platform shall consist of a prefabricated, factory-welded weighbridge assembly.

2. The weighbridge is of factory welded I-beam design and all exposed steel surfaces of the weighbridge will be hot-dip galvanized according to ASTM A123. Non-exposed steel surfaces may be protected with one coat primer and two coats of Enamel paint.
    a. The weigh bridge main girders shall be ASTM A572 steel, minimum of W24 x 68 lbs.
    b. The weigh bridge cross girders shall be ASTM A572 steel, minimum of W12 x 35 lbs.
    c. All in-house welding on the structure shall be either gas to metal, submerged or shielded arc process. All welding procedures to be in compliance with the American Welding Society D1.1-88 Structural Welding Code.
    d. All bolts used will be hot-dip galvanized according to ASTM A153.

3. The deck surface shall have 8-inch thickness minimum, colored concrete, having a minimum compressive strength of 4000 psi.
    a. Reinforcing steel to be epoxy coated, conforming to the requirements of standard spec 505. The deck shall be lined along the bottom with 3/16 STM-A36 steel plate or 18-gauge minimum galvanized deck sheeting, a reinforcing mat shall be set into place the length and width of the scale deck, and the deck channel is to have studs welded to the steel to form a composite structure when the concrete is added. The reinforcing mat and deck channel

studs are to relieve surface tension in the concrete caused by expansion and contraction.

b. Concrete to be A-FA or A-S, conforming to standard spec 501. The color admixture shall be reddish-brown (Federal Standard Color No. 31136) or similar color approved by the Engineer. Add colored admixture to the mix per manufacturer's written instructions in a pre-measured bag and not added by weight of cement content. Admixture shall be a colored, water-reducing, admixture containing no calcium chloride with coloring agents that are lime proof and UV resistant.

4. The scale checking shall be done with check rods. The scale shall not use the load cells as a checking device.

5. No manholes are allowed in the scale platform. An 8-inch diameter access hole with a secured cover shall be provided in the scale deck. A galvanized steel sleeve shall be cast in the concrete deck. Scale pit access will be from an underground pit tunnel entrance from the building basement.

6. Provision may be made for lifting the platform and weighbridge by casting 3-inch sleeves through the concrete deck. If used, sleeves shall be Type 304 stainless steel.

7. The scale platform and scale pit wall exposed surfaces shall be treated with a protective surface treatment conforming to standard spec 502.

B.2 Load Cells

1. The weighing elements shall be stainless steel, hermetically sealed load cells to guard against moisture ingression and barometric effects.

2. The cells shall have moisture protection to IP 68 standards.

3. Load shall be applied to the cells without the use of links, bolts, pins cables or flexure.

4. All load cells shall be self-centering.

5. Load cells shall provide a digital or analog signal output. Proprietary load cell signal is prohibited.

6. The load cells shall be a minimum of 25 tons capacity each, and each cell shall have stainless steel braided covering on the load cell cable.

7. All load cells shall be manufactured of stainless steel.

8. The scale shall have self-diagnostic capabilities able to identify load cell problems and failure.

9. The scale shall be able to identify each load cell individually.

10. The scale shall have the ability to view all of the load cells in the scale system simultaneously.

11. Diagnostics to have the capability to predict the failure of a cell before it actually happens to prevent down time. The following diagnostics shall be available at a minimum:
    a) Individual cell not responding.
    b) Individual cell negative out of range.
    c) Individual cell command failed.
    d) Individual cell enclosure breach.
    e) Power up Zero.
    f) Major and minor overvoltage or overcurrent.
    g) Major and minor undervoltage.
    h) Individual cell not found.
    i) All errors shall be logged in the static scale electronics with the capability to be emailed when an error occurs.

12. The design shall permit the individual load cells to be matched and the scale sections to be electronically calibrated.

B.3 Technical Specifications

Maximum Capacity (tons)	50 tons
(Concentrated Load Capacity (CLC) is not the same as dual tandem axle capacity)	
Overall Scale Dimension (L x W) (Pit opening, in feet)	24’-2” x 12-2" (confirm in field)
Deck Material	Concrete
Scale Accuracy	0.1%
Weighbridge:	
Weighbridge Design	I-Beam
Number of Sections	2
Number of Modules	1
Reinforcing Steel Size	Welded mats Minimum W16 x16 on 4"x4" centers
Number of Manholes	0
Number of access holes	1 – 8-inch diameter
Type of Checking	Check rods
Deck Concrete	Factory or site poured
Pit Coping included (Y/N)	Yes
Deck Channel included (Y/N)	Yes

Load cells:

Load Cell Type	Rocker Column
Rated Capacity	25T (50,000 lbs)
Safe Overload	200 %
Ultimate Overload	300 %
Safe Sideload	100%
Material	Stainless Steel
Load Cell Cable	4 conductor 22 AWG Shielded
Load Cell Cable Protection	Stainless Steel Outer Jacket
IP Rating	IP 68
Rated Excitation	5 to 15 Volts
Temperature Compensation Range	-10° to +40° C

Standard Instrument:

Resolution	10,000 d commercial 50,000 d non-commercial
Display Size	16 lines @ 26 characters/line
Display Rate	0.1 to 10 sec. by 0.1 steps
Display Full Color LCD	
Over Capacity Warning (Y/N)	Yes
Units Switching	Programmable
Zero Range	Programmable 2% or 100%
Motion Band	Programmable XXX
Dimensions (desktop model)	14.85" x 12.00" x 3.72"
Mounting	Desk
Load Power Supply Limits	8-350 ohm cells, 16 - 1000 ohm
Loadcell Input	Digital or analog
Communication Output Ethernet	

Instrument Environmental Specifications:

Operating Temperature	-10° to 40° C
Operating Humidity	Non-condensing
Storage Temperature	-20° to 60° C

Instrument Power Requirements:

Power	17 VAC +/- 10 % 230 VAC +/- 10%, 50-60 112 +/- 2 Hz
Grounding	RG 3.0 Ohms to Earth Ground (Resistance to ground)

Ticket Printer Specifications:

Type of Printer	Networked laser printer
Communication	Ethernet
Ticket Size	Standard 8 ½” x 11”

Electrical Requirements:

Volts	1 17 / 230 VAC selectable
Full Load Amperes	10 A
Isolation Transformer Voltage KVA Ratings	1 KV
Conduit Size	Up to 50

Static scale system shall have been tested and passed lightning simulated lightning strike up to 80,000 amperes

B.4 Scale Pit

This section describes pit construction and weighbridge installation techniques. These instructions are a brief overview and supplemental to the plans and technical manuals that will be provided should the order of a scale be placed. Listed below is a guideline for installation.

B.4.1 Scale Pit Notes

1. Existing scale pit is to be utilized.
2. Powerwash existing scale pit. Remove all loose debris from pit and sump. Ensure that sump pump is in working order.
3. Remove existing coping. Sawcut scale pit wall down and remove wall 18" min. to expose reinforcing.
4. Tie new reinforcing bars and install new coping. Reinforcing bars to conform to standard spec 505. Steel coping to be hot-dip galvanized according to ASTM A123.
5. Concrete to conform to standard spec 501 Grade E.

B.5 Static Scale Electronics

Furnish and install one electronic instrument to drive the above specified scale. Equipment to consist of parts desired to act as a unit by a manufacturer experienced in design, construction, and manufacture of electronic components, and operation of equipment for the purpose required.

The scale instrument and all peripheral devices should be designed to function as a unit. The equipment shall have the following specifications:

B.5.1 Hardware Specifications

LED Graphic Display (168 x 128 or 16 lines @ 26 5x7 matrix size) Characters/line)
LED Backlighting (Yellow)
Display Full Color

Character sizes:	* 5 x 7 normal * 5 x 14 normal enhanced * 10 x 14 large * 15 x 2 1 extra large
Memory:	* 320k Battery backed non-volatile battery life, 2 years typically)

Serial I/O:	* 20 mA Optically Isolated Remote display interface * COM 1 RS485 Bus to network up to 32 digitized interface * COM 2 Full 9-pin (Modem compatible) RS232C * COM 3 RS232C (4 Wire) * COM 4 Full 9-pin (Modem compatible) RS232C * COM 5 RS232C (4 Wire) or RS485
Flow Control:	* Hardware CTS/RTS, Software XON/XOFF.
Parallel I/O	* 4 Optically DC isolated inputs (10 mA) * 4 Optically isolated DC outputs TTL outputs
Keyboard:	* Oversized keypad, 9 Function keys 0 thru 9 and decimal point Both keyboards can be operated In unison to complement each other
Clock:	* Real time clock, day of the week, 12 hour am/pm, month/day/year date format. Two or four digit year date selectable.
Peripherals:	* PTR-3950 Ticket printer * PTR 3960 Ticket printer * 50-3550 Tape printer * 50-3520 Form printer (Tickets or Reports) * Remote display output with continuous or demand modes * Continuous, refresh after each display update cycle * Demand, refresh after each print cycle * Time can be programmed to be shown when weight data is at zero for 10 or more seconds * Custom Driver, commands to control printers or a computer program inteace * Commands include: TICKET INITIALIZATION CHARACTER SIZE DOUBLE WIDTH CHARACTERS LINE FEED FORM FEED REPORT initialization * These commands are not limited to the above function and can be used to perform other functions (i.e. FORM FEED could be used to operate a printer cutter blade) * Computer: IBM PC Software is available to support a number of data transfers * Modem: Hayes compatible modems from 300 baud to 19200 baud

Number of Scales: * 1, 2, 3, 4
* Each scale can be set up with the following parameters:
* Scale units (lb, kg, ton, tonne)
* Weight Conversion (lb/kg, lh/ton, kg/tonne, ton/tonne)
* Zero enable, enable printer only after the weight is returned to zero.
* Motion bandwidth (0.5d, 1.01 2.0d, 3.0d)
* Division size (0.001 thru 50)
* Digital filter (light, medium-light medium, heavy-medium, heavy)
* Dual Units
* Single range and Dual range Scale Capacities
* Calibration time and date stamp
* Configuration time and date stamp

Display rate: * From 0.1 to 10 seconds in 0.1 second intervals

Zero: * 2% or 100% Zero capability
* Can be completely disabled for tank weighing applications
* Additional load cell diagnostics are performed when the zero switch is operated.

Calibration: * Keyboard
* Enter cell capacity, impedance and sensitivity for each cell in the scale group. The resultant span, assuming a good installation and accurate data, produces a calibration within +/- 0.1%. The final calibration is achieved through front panel trimming using the up/down arrow keys.
* Sectional Calibration: Apply a known weight (scale test truck) to each section of the scale. Apply a calibrated weight to the scale and trim from the instrument keyboard.

Load cell Calibration: Apply a known weight to each cell in the scale group in the order prescribed by the instrument display, and trim to the final value from the instrument keyboard.

Tare: * Can be disabled for gross weight only applications
Keyboard Tare: * Tare data can be entered thorough either keyboard
Auto tare: * Tares can be stored by direct weighing
Auto clear: * Tares can be automatically cleared after printing
Tare expiration: * Tares are time and date stamped to give a warning when their expiration date is up

Stored Tares:
* 100 stored tares
* 1 to 15 alphanumeric character ID
* Time and date stamped
* Weight data automatically converted to the appropriate weighing units
* Tare data files can be listed to a printer or viewed directly from the instrument

Products:
* 50 Product files
* 1 to 15 alphanumeric character ID
* Weight accumulator
* Conversion factor
* Number of decimal places for conversion factor
* 1 to 15 alphanumeric conversion factor legend
* Product data can be programmed to be entered in an inbound, outbound or Gross Tare Net operation
* Product data files can be viewed directly from the instrument

Field Names:
* 7 Field names can be given a 15 alphanumeric name to denote driver name, product grade, site location, etc.
* Each field name can be programmed to be entered in an Inbound, Outbound or Gross Tare Net (GTN) operation
* The first field name is stored as part of the transaction file

Incomplete:
* Up to 1648 Incomplete record storage
* Transaction records are stored temporarily as incomplete records
* Incomplete data files can be listed to a printer or viewed directly from the instrument

Transactions:
* Up to 1648 transaction records, each record consists of:
* Inbound time (12 hour am/pm format)
* Outbound time (12 hour am/pm format)
* Outbound date (month/date/year/format)
* Gross weight
* Tare weight
* Net weight
* Product ID (15 Alphanumeric character ID)
* Conversion factor
* Conversion legend (15 Alphanumeric character ID)
* Loop # (15 Alphanumeric character ID)
* 1st Field name (15 Alphanumeric character ID)
* Ticket number

B.5.2 Environmental:

* Enclosure, 13 ga 304 stainless steel for office or general industrial use
* Temperature, 14 F to 104 F, (-10-C to 40 C)
* Humidity, 95% relative humidity non-condensing
* Ventilation, none required
* Dust, non-conducting, non-corrosive
* Power, 100 VAC to 130 VAC or 200 VAC to 260 VAC, 501Hz/60Hz
* Power Consumption, 1 amp maximum at 115 VAC nominal
* Number of Cells, 16 standard, up to 32 by inquiry
* Scale can be located up to 1500 feet from the instrument

B.6 Static Scale Operation Specifications

1. Each load cell shall have a cable length of no more than 30 feet in stainless steel braided cable.

2. The scale instrument shall only receive digital information from the load cell assemblies. There shall be no analog to digital conversion function in the scale instrument or in junction boxes between the load cell and the scale instrument.

3. The scale instrument shall be capable of assigning each load cell with its own unique identification number and shall be capable of displaying the weight reading of each individual load cell through the instrument without disconnecting any of the load cells from the system.

4. The scale instrument shall communicate with each individual load cell.

5. The scale instrument shall be capable of being programmed and calibrated in pounds or kilograms.

6. The display is to be a full graphic, alphanumeric LED back-lit display with the capability to prompt the operator through all operations with true alpha characters. Segmented LED alphanumeric displays are not acceptable.

7. The scale instrument shall communicate static scale weights to the Scale Manager on the central Weigh Station computer to display weights on the computer system screen, and to allow the accurate weighing of the truck on the static scale.
8. The scale instrument shall have program to accumulate up to 19 axle and axle groups and print 8.5 x 11 weight tickets that is independent of the WIM system. This program should work as a backup in case the Station system is not working.

9. The instrument is to have the capability to run multiple scales as a standard unit. Adding extra boards at a later date is to be considered not meeting specifications.

10. The instrument is to have self diagnostics built in that allow the technician to view all load cell outputs simultaneously.

11. Simultaneous viewing of load cell output allows for fast easy analysis of the scale operating system. Viewing cell outputs one at a time is not acceptable.

12. The system shall have the ability to be 100% calibrated from within the scale house. No corrections or calibration adjustments at the scale through summing boxes are acceptable.

13. Summing boxes with potentiometers are not acceptable anywhere within the system.

14. Surge Voltage Protection on the system shall be optically isolated at each load cell, and transformer coupled from the instrument.

15. Scale is to have the ability to be analyzed via modem.

16. The scale instrument is to have the ability to be programmed via modem.

17. Modem diagnostics will allow simultaneous viewing of all load cells in counts, and actual weight that each individual load cell is sensing. Viewing of cells one at a time is not acceptable.

18. Modem service will be capable of displaying load cell zero calibration counts, current zero counts and actual mV/V output of each cell simultaneously. A printed report of this information is possible from the modem software.

19. Modem service will be capable of performing a self test on all communications ports and report the current setup.

20. Original calibration values shall have the capability to be retrieved and stored via modem.

21. Original configuration values shall have the capability to be retrieved and stored via modem.

22. For non-commercial applications, scales shall have the capability to be set up and calibrated via modem.

B.7 Ticket Printer Requirements

The printer shall provide hi-directional operation and provide printing of three lines per second. The ticket printer shall have the ability to print single or multiply carbon leaf tickets. The ticket printer shall have dimensions of 12 inches long, 9 inches wide and 8-3/8 inches high. The ticket printer shall meet the following specifications:

Power requirements	1 15/230 VAC + 10%, 50/60 Hz, grounded 3 wire AC, 200 watts
Serial Interface	RS232C/20mA
Baud Rate	Selectable from 1 10 300, 600, 1200, 2400, 4800 and 9600
Operating Temperature	32F to l04F (0C to 40C)
Ribbon	Cartridge-type continuous loop with automatic advance
Character height	0.12 inches
Character width	0.052 inches standard; 0.104 inches expanded
Print Speed	3 lines per second (bi-directional)
Print Line Length	3.3 inches
Characters per line	40 characters per line with normal characters; 20 characters per line with expanded characters
Document thickness	0.01 to 0.018 inch range

Alternatively, an existing, on-site, networked printer may be utilized instead with the approval of the engineer. The ticket format shall include:

- Wisconsin Department of Transportation, Division of State Patrol
- Site location and ID
- Date and time
- Title (Static scale weights: Report)
- Accumulated weights up to 19 weights
- Total gross weight
- Officer Name

B.8 Scoreboard Sign Requirements

One display to be supplied. Mount on existing pole. Sign shall display the gross weight of the axle(s) of the vehicle being weighed. The display shall meet the following specifications:

Display	Six digits, >/= 4 inches high
Viewing Distance	Up to 160 feet
Maximum cable length	1000 feet (20 mA 50 feet (RS232C)
Power	117 VAC + 15%m 50/60 Hz 1.2 amps
Enclosure	NEMA 3 rated
Input	RS232 or 20mA (active or passive)
Digital Color	Fluorescent yellow or red
Lighting	Internal Fluorescent light(visible at night) or LED
Storage Temp.	0F to 150F (-18C to 65C)
Humidity	0% to 100% non-condensing

B.9 Lightning Protection Specifications

- A comprehensive lightning protection system shall be provided with the scale.
- The system shall not require complicated wiring or devices to provide this protection.
- Major scale components including load cells, scale instrument, and printer shall be included in the lightning protection system.
- Grounding of all scale components including load cells, scale instrument, printer, and accessories shall be to one common point. Multiple ground point systems are not acceptable.
- An AC line surge protector shall plug into a common electrical outlet and have receptacles for the scale instrument, ticket printer, and other scale accessories.
- Each AC line surge protector required shall have isolated grounding, hospital grade duplex receptacles, and an internal 15-amp circuit breaker.
- Verification of lightning protection system performance shall be available in writing from the manufacturer upon request.

C Training

Upon completion, the vendor shall set up and conduct training for State Patrol personnel on the operation, maintenance and installation of the system components of the new static scale system.

D Measurement

The department will measure Static Scale System, completed in accordance with the contract and accepted, as a single complete lump sum unit of work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.03	Static Scale System	LS

Payment is full compensation for furnishing and installing all materials; coordinating and making all utility hook-ups; making the system operational; calibrating; testing; providing required training; and for furnishing all labor, supervision, equipment, tools, and incidentals necessary to complete the contract work. Materials and equipment included in the Static Scale System are a single platform Static Scale including instrumentation, printer, scoreboard, load cells, cabling and scale deck.

12. Static Scale System Warranty Maintenance, Item SPV.0105.04.

A Description

Provide warranty and maintenance service for the Static Scale System for a period of five years. Provide routine maintenance on all major systems, system components and ancillary equipment at annual intervals. Provide emergency repair services on an as-required basis.

The static scale equipment shall be warranted by the manufacturer, in writing, against defective in or from material, workmanship, lightning, and to perform as required by these Technical Special Provisions, giving proper and continuous service under all conditions required and specified, or which may reasonably be inferred, for a period of five years from the date of acceptance. The manufacturer's routine maintenance schedule shall be stated. The written manufacturer's warranty shall be furnished to the department by the contractor at the time the equipment performance supporting data is submitted. The warranties shall also state they are subject to transfer to the department.

The static scale equipment weighing instruments, load cells, weigh bridge, deck and hardware shall be warranted by the manufacturer, in writing, against defects in or from material, workmanship, lightning, and perform as required by these Technical Special Provisions for the period of five years or as described above from the date of final acceptance of the project.

The manufacture shall also provide an extended five year warranty on static scale load cells. This warranty shall take effect at the conclusion of the initial five year warranty. This extended five year warranty shall exclude labor, freight, and travel.

A.1 Warranty Bond

The contractor shall provide a warranty bond for the Static Scale System Warranty Maintenance. The bond will be in effect for the entire five year warranty period beginning when the Static Scale System is completed, operational and accepted. The bonding company must have an AM Best rating of "A-" or better and the contractor will provide proof of a five year bond commitment before execution of the contract.

The warranty bond amount will be for $10,000. The bond will ensure the proper and prompt completion of required warranty work following completion of the contract work, including payments for furnishing all labor, equipment, and materials used according to this specification.

The contract bond, which remains in effect for one year beyond the completion of the project, will also include warranty work as described in this article. For the remaining four year warranty period, provide documentation that the warranty bond will be provided in a single term four year warranty bond.

Failure of the contractor or its surety to issue the warranty bond will be considered a default and will result in forfeiture of the face amount of the bond to the department.

All warranty work will be as prescribed in this article. At the end of the warranty period, the contractor will be relieved of the responsibility to perform further warranty work, provided all previous warranty work has been completed.

Maintain insurance, in the course of performing warranty work, as specified in standard spec 107.26 throughout the five year warranty period.

B (Vacant)

C Methods

C.1 Maintenance Services

Scheduled maintenance services shall be performed annually during autumn of the year. The scheduled maintenance service shall include the following:

1 Visual inspection of the static scale system.
2 Calibration of the scale.
3 Lubrication of load cells, bumpers and check rods.
4 Power washing of the scale deck and pit with 2000 psi minimum pressure washer.
5 Parts, labor and shipping.
6 Mobilization and traffic control necessary to perform the maintenance services.

A report shall accompany the scheduled maintenance service and shall be submitted to the department. The report shall include:

- Calibration process and results.
- Work completed.
- Evaluation of the static scale system.
- Other comments.

C.2 Emergency Repair Services

Emergency repair services shall be completed on an as-required basis. The maximum response time for emergency repair services shall not exceed 48 hours after written receipt of notice by email or fax. The vendor shall initiate on-site repairs within 5 calendar days of notification. Emergency repair services shall include all parts, labor, shipping, mobilization and traffic control necessary to perform the work.

D Measurement

The department will measure Static Scale System Warranty Maintenance, as a single lump sum unit of work completed and accepted in accordance to the terms of the contract.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.04	Static Scale System Warranty Maintenance	LS

Payment is full compensation for providing warranty and all maintenance services and emergency service for a period of five years, load cell extended five year warranty and shall include all labor, tools, parts, shipping, mobilization, traffic control and incidentals necessary to perform the maintenance services.

13. Weigh-In-Motion Scale System, Item SPV.0105.05.

A Description

Furnish and install a weigh-in-motion (WIM) scale weighing system to pre-weigh, classify and sort commercial vehicles; process information and provide direction to vehicles in motion as they travel along the ramp towards the Weigh Station. This system will include two weigh-in-motion scale sets, one set on each exit ramp from IH 39, entering the Coloma SWEF.

A vehicle that has entered the weigh station will be screened on the ramp. Based on the results of this screening, automatic directional signals will direct the vehicle to either bypass or report to the scale house for further inspection. The sort decisions will be based on compliance of speed, side-to-side balance, axle weights, axle group weights, and gross vehicle weights with the pre-set tolerances.

The weigh-in-motion scale system shall include various components that interact together.

The components shall include the following:

- Two sets of weigh-in-motion (WIM) scales
- Axle and loop detection
- Overview image videocapture
- Ramp lane control systems
- Detector loops
- Weigh Station computer system
- Station Console
- Scale Manager
- Vehicle Display
- Station PC
- Override Console
- Printer
- On-site communication system
- Static scale message sign (existing)
- OPEN/CLOSED and Arrow ↙/CLOSED CMS's

The scope of work includes furnishing and installing the following:

- Two sets WIM scales
- Axle sensing, loops, and utilizing existing cabinets.
- Overview image camera installation.
- Ramp lane control systems

- Weigh Station computer system
  a) Station Console
  b) Scale Manager
  c) Vehicle Display
  d) Station PC
  e) Override Console
- Printer (if existing not used)
- All new communications cabling and wiring
- All new electrical power wiring
- New conduit where needed
- On-site communication system
- Two each LED OPEN/CLOSED and Arrow ↙/CLOSED signs
- Portable static wheel load scales
- Portable manual test stand for portable scale calibration

The objective of the department is to have fully operational ramp sorting WIM Systems capable of accurately and automatically pre-screening vehicles in motion for enforcement purposes. Based on the weights obtained from the WIM screening, the system shall automatically direct the selected vehicles to the enforcement scales, as illustrated in the attached plans and these specifications.

The purpose of this project is not for the research and development of a system which might perform the objectives as described above. Therefore the contractor shall be required to furnish documentation which demonstrates to the satisfaction of the department that all equipment proposed for use in the ramp sorting WIM systems is of standard manufacture; that the manufacturer has had similar equipment available for purchase and has a proven acceptable performance history while in use under conditions similar to those for the intended use.

As a minimum, the equipment documentations provided by the contractor shall include the following for the WIM system:

1. Detailed description of how the system requirements will be met.
2. Drawings showing the Station Console and Override Console with descriptions.
3. Manufacturer's name and model number, supported by descriptive material for (but not limited to) the standard package components with all accessories identified under "Description." Submittals shall be supported by descriptive material, such as catalog cuts, diagrams, and other data published by the manufacturer, to show conformance to specifications and plan requirements

A.1 WIM System Overview

The ramp weigh-in-motion system shall be located on the northbound and southbound exit ramps from IH 39 into the Coloma weigh station. This location shall provide coverage of northbound and southbound commercial vehicle traffic on IH 39 and shall relay that information to the Coloma weigh station.

All vehicles approaching the ramp WIM System shall produce a vehicle record containing an overview image, various weights, and speed, as well as classification information. The WIM System shall determine whether each vehicle is weight compliant based on its allowable weights as set by the weigh station operator.

The WIM System shall trigger an overview image camera system to capture an image of each vehicle as it passes the WIM scales and will link each image with the appropriate WIM vehicle record.

Images of commercial vehicles will be collected and stored by the System Electronics and relayed to the weigh station for all commercial vehicles. The user can also identify the selection criteria for a violating commercial vehicle, i.e. overweight, over length, speeding, etc.

The combined data (image and vehicle record) will be transferred to the central weigh station computer located in the operations building. After the central computer has received the data, any computer with secure network access will be able to connect to the central computer and view the password protected captured images and vehicle records of the suspected violating vehicles.

A.2 Ramp WIM Systems

The accuracy of the WIM system to conform with ASTM E 1318-09 Type III "Standard Specifications for Highway Weigh-in-Motion (WIM) Systems with user Requirements and Test Methods" performance requirements for a Type III system. Calibration and accuracy tests shall be performed as specified below. The contractor shall ensure the roadway meets the requirements of section 6 of ASTM E 1318-09. The WIM system shall utilize existing roadside cabinets to house the new WIM electronics and/or the WIM computer and its peripherals. The WIM computer and its peripherals may optionally be installed inside the Scale Building.

As commercial vehicles enter the weigh station exit ramp at medium speeds (40 to 55 mph), the sorter system will continuously and automatically collect truck information including speed, gross vehicle weights, axle weights, axle spacing, axle groups, and axle imbalances. From this data, the WIM System will determine whether the vehicle is compliant. Violating vehicles will be directed to report to the static scale. All vehicle information, including violation information, will be determined in real time and shall be displayed on the Vehicle Display Windows on the WIM Computer.

The system will function under either manual or automatic control. Under automatic control, the compliance system will automatically direct a suspected violator to the static weigh scales and compliant violators to exit the station. The Station Console will be used to control the system and will allow the operator to direct all vehicles to either the scale or bypass lanes. The WIM system will not be able to direct vehicles according to vehicle information collected in this mode, but will continue to display vehicle information to the operator. Each direction of travel will be able to operate in automatic or manual mode (all static or bypass) independently. For example operators can set the northbound WIM to sort vehicles

automatically, while at the same time setting the southbound WIM to manually sort all vehicles to the bypass lane.

The station console will provide manual control to the weigh station for the operation of the lane control signals. OPEN/CLOSED signs will be controlled by a physical switch on the Override Console.

The system should be able to collect continuous data on the vehicles entering the station for statistical analysis. The data collection system should save vehicle information in a compressed format complete with a date and time stamp. As a result, the information can be downloaded and, with the aid of commercially available software, the user will be able to generate reports based on user inputs. The stored data must be remotely accessible by telephone modem communications or network connection.

A.3 Enforcement Camera System

The enforcement camera system will consist of an overview image camera mounted alongside the roadway on each ramp. This camera will capture an image of passing commercial vehicles to be linked with the vehicle record as an identifier. The camera will be capable of full color photos during daytime operation, and black-and white near-infrared images during nighttime operation. The camera system electronics, which will be located with the other System Electronics, will store the image and will link it with the correct vehicle record.

A.4 Ramp Lane Control System (LCS)

Each ramp lane control system shall consist of an overhead LED CMS system that is linked to the WIM system. For the bypass lane, the sign will display a green arrow ↓ to an oncoming truck if it is cleared to bypass the static scale; otherwise it will display a red X as a signal to report. Conversely, an oncoming truck will receive a red X to bypass and a green arrow ↓ to report for the scale lane. The signs to have a dual-sided display, also visible to the scale house. The signs to be mounted and supported on the existing overhead pole/mast arm structure.

A.5 Open/Closed Signs

Existing OPEN/CLOSED and ↙/CLOSED CMS signs to be removed from existing sign panels in a manner to preclude damage, salvaged and delivered to the engineer. Furnish, install and make operational new LED CMS signs in existing sign panels.

A.6 Station Computer System and Operator Interface

Using the central Station Computer, the operator may set the sorting threshold and allow for random sorting. The sorting threshold determines at what percentage of legal weight a vehicle must be measured to be required to report. In this way, the operator may set the WIM to bring in the maximum number of trucks that the station can process, without exceeding the station capacity. Random sorting allows the operator to require a set percentage of compliant trucks to report. This allows the enforcement officials to perform random safety checks on otherwise compliant trucks.

The central weigh station computer system will receive the WIM record from the roadside WIM electronics at the ramp location. The weigh station computer contains electronic records that will be used to ascertain weight compliance. After the weigh station computer creates the WIM record, it will immediately begin to analyze the data contained in the record in order to determine whether the vehicle weights and dimensions are within local compliance regulations. If the measured vehicle weight is within the allowable limits, the driver will be given a bypass message through the ramp lane control system. If the vehicle is not compliant or if it is randomly selected for inspection, the driver will receive a message to report to the weigh station.

The central Weigh Station computer system will provide safety features to detect and prevent backups and unsafe conditions. These will include:

- An audible alarm to alert operators of a backup at the ramp WIM scale in either direction
- Automatically close the station in a direction if a backup occurs on the exit ramp from IH 39. An audible alarm will sound to alert operators. Once the backup has cleared the station will automatically reopen in that direction.
- Automatically sort all vehicles including violators to the bypass lane on static scale lane back up

Operators will have the capability to override the automatic close and automatic sort to bypass on static lane back up feature on the Override console.

A.7 Data Collection System

Vehicle information is to be collected continuously by the roadside WIM electronics at the Ramp WIM locations. This information shall be made available to the user and a variety of reports summarizing the data can be generated. This data can be shared between departments if the agency responsible for weight enforcement is separate from the roadway maintenance, planning and/or design departments.

A.7.1 Capabilities

An operator at the site may download the vehicle data directly from the roadside WIM System Electronics, or the data may be transferred to a remote location via modem or network connection. Manufacturer host software can be used to automatically call one or several WIM systems to obtain traffic data from the site. The user configures the frequency of the calls and the information to be obtained. Once the data has been obtained, office analysis software capable of computing various classification schemes shall be used to provide various report capabilities based on the data collected. This system shall store a least 60 days of vehicle records (over 2 million vehicle records) in a compressed format.

A.7.2 Information Available

The following information shall be made available from the data collection feature of the ramp WIM systems:

- Reports over any selected time period in hourly increments, daily, weekly, or monthly.
- Summary of vehicle speeds.
- Summary of vehicle classification counts.
- Vehicle counter
- Equivalent Single Axle Load (ESAL) count.
- Reports on the number of violating and non-violating axles, axle groups and gross vehicle weights.
- User selected reports based on adjustable parameters such as periods and vehicle types.
- Customization for generating reports for specific needs that are not available using basic parameters.

A.8 WIM System Functional Requirements

A.8.1 WIM Scales

The accuracy of the WIM system will be in conformance with Type III ASTM E 1318-09 "Standard Specifications for Highway Weigh-in-Motion (WIM) Systems with User Requirements and Test Method" performance requirements for a Type III system.

Grind the concrete roadway beginning 200 feet prior to the scale location and ending 100 feet after the scale location, for a total of 300 feet, with a minimum 36-inch blanket grinder to ensure that the roadway meets the requirements of section 6 of ASTM E 1318-09.

The WIM scales shall be constructed of two independent weighing platforms placed across a roadway. The WIM scales will utilize load cells. Each scale module shall be a self-contained weighing unit. The WIM scales shall measure approximately 144-inches x 38-inches including frame. Each scale module shall measure approximately 72-inches x 38-inches including frame.

The WIM scales shall operate properly in a temperature range of -40°F to +160°F.

The WIM scale shall be installed flush with the road surface. The WIM scales shall be weather-sealed. Water, ice, snow, salt, debris, dirt, moisture, or sand will not degrade scale performance.

The WIM scales and frames shall be grounded with ground rods. The signal processing electronic components/modules shall be protected against lightning.

The WIM scales and their frames shall be hot-dip galvanized for protection. All installation hardware shall be either stainless steel or rust proofed. All surface mounting bolt and service holes shall be sealed.

The load cell cables for the WIM scales shall be stainless steel, braided cable to prevent damage by rodents.

A.8.2 Axle Sensors

The WIM system may use axle sensors in the ramp exit lane for WIM operation prior to the point where the roadway splits into two lanes. If used, the axle sensors shall be Class I piezoelectric and approximately 12 feet in length. The axle sensors shall be installed below the road surface. The axle sensors and their electrical wiring connector shall be completely watertight and sealed.

A.8.3 Detector Loops

Each detector loop shall have a minimum loop area of 6 foot x 6 foot. Detector loops shall conform to WisDOT standard specifications. Loop wire shall be 1 conductor, 14 AWG, IMSA 51-5. Loop leads must be 2-conductor, 14-gauge, IMSA 50-2 cable.

Detector loops shall be installed in or below new concrete pavement. Loops shall not be cut directly into the roadway and loop sawcuts will not be exposed to the roadway surface.

Detector loops shall placed in order to control signals and for the system to operate as described in the special provisions. Loop detectors shall be provided for interface to these detector loops. The Ramp system shall use signals from these loops to switch the lane directional signals and the CMS located downstream of the Static Scale.

A.8.4 Electronics

The Weigh-In-Motion (WIM) Interface Electronics shall be located next to the weigh-in-motion scales in an existing roadside cabinet. The electronics will be all new and existing electronics shall not be reused. The weigh-in-motion electronics will be responsible for retrieving truck data and communicating it to the sorter computer in the scale house.

The electronics should include interfaces to the following components:

- Weigh-in-motion scales
- Axle sensors
- Loops
- Off-scale detectors
- Lane directional signals
- Overview cameras
- Weigh station computer system

The electronic system must be of a modular design to aid in system maintenance, troubleshooting and in-field servicing.

All components of the electronic system, including inductive loop detectors, shall contain necessary electrical protection to prevent damage from electrical surges, spikes and the effects of lightning.

The system must be of a durable, industrial design and construction and enable continuous operation, with automated startup in the event of a power outage.

All sensor and ancillary equipment connections must be conveniently located on the system front panel. All connections, where possible, should be a plug-in, quick-connect style.

Where possible, all printed circuit boards and components should be of a commercially available design. This includes, but is not limited to; the system central processing unit (motherboard) and CPU related interfaces such as digital input/output interfaces.

All cutouts and openings in the electronics housing cabinet shall be vermin proofed.

All wires from scales, off-scale sensors, axle sensors, loops, sign control lines, shall be terminated on terminal strips or screw terminal connections. The terminal strips shall be identified by terminal strip number and screw connection number. These terminal strips shall be readily accessible. All cables shall be long enough to easily reach these terminal strips. Terminal strips, splices, or other type of connections prior to these standard terminal strips shall not be allowed except for splicing of a loop to a shielded twisted loop lead. All AC power connections shall be shielded to prevent electrical shock.

A.9 WIM System Operation

A.9.1 Operational Overview

The Weigh Station system shall be located in the scale house and will collect data from the WIM electronics and static scale, for central monitoring and control of the facility operation. The system will have operator displays and consoles to control signals and signs, monitor vehicle movements, adjust WIM sorting parameters, view and control the static scale, and run reports.

The Weigh Station System will be made up of the following components:

- A Central Weigh Station PC
- A Station Console
- An Override Console
- Vehicle Display Windows (displays will vary by manufacturer)
- Static Scale Manager.

A.9.2 Weigh Station System Functional Requirements

The Weigh Station System shall provide the following functions:

1. Perform single-lane WIM operation on both ramps.
2. Perform weight compliance analysis on vehicles in accordance to Wisconsin DOT regulations.
3. Monitor safety conditions of the facility these include:

- A WIM scale back up in either direction
- Ramp back up in either direction
- Static scale lane back up

4. Perform sorter operation in accordance to decisions based on weight compliance analysis, other violations (speeding, improper maneuvers, etc.), station console selection, override console selection, safety conditions and operator selected action.
5. Insert sequence numbers for vehicle records for tracking purposes.
6. Display of vehicle record in windows.

7. Track vehicle movement in the execution of sorter operation.
8. Control display of the LCS to synchronize with the movement of a vehicle being tracked.
9. Provide vehicle records for those that have been sorted to or come to the static scale.
10. Automatically position each vehicle on the static scale using the existing static scale sign.
11. Provide real time display and control of the static scale.
12. Allow operators to automatically sequence vehicles across the static scale or manually weigh by accumulating axles.
13. Automatically determine and provide operators feedback based on whether a vehicle is potentially overweight based on axle spacings, axle, axle group, gross, and front/rear bridge weights based on Wisconsin regulations.
14. Automatically or manually release vehicles that are not overweight based on Wisconsin regulations and do not have other violations.
15. Allow operators to print weight tickets.
16. Provide audible message alarms to alert operators of conditions that may require their attention.
17. Provide reports on system operation.
18. Perform data collection, data storage, file management and report generation functions for collected vehicle information.
19. Allow adjustment of WIM and system settings.

The WIM system shall have application programs to detect prolonged power failure conditions to initiate orderly shutdown operation.

A.9.3 Station Console

The Station Console shall provide a graphical console representing the overhead layout of the station on the central Weigh Station Computer to provide control and monitoring of the station. The Station Console shall provide the ability for an operator in the weigh station to select the control operation of each the Ramp LCS manually. The Station Console shall have visual indicators to identify the mode of control of each LCS. In addition vehicle movement information will be displayed using indicators on the graphical panel. It shall provide the following functions:

- Select automatic sort control of each Ramp LCS system or the manual control of the LCS by the operator.
- In manual control of the LCS by an operator, each LCS can be set for all vehicles to come to the static scale or to all bypass.
- Real-time monitoring of the station operation by showing indicators when the appropriate sensors are activated and deactivated including loops
- Graphics representing the color and status of the directional signals. The graphics will continuously display the status of the overhead signals, open/closed signs, and static scale message sign.
- The Station system must provide an audible voice warning for the following conditions:
- WIM scale backup including direction
- Violator in the bypass lane including direction

- Station automatically closing with direction because ramp is backed up
- Station is automatically reopening with direction because ramp has cleared
- Vehicle waiting on the static scale
- Violator waiting on the static scale

A.9.4 Override Console

A Manual Override Console shall be provided as an interface that allows the operator to override the Ramp WIM Systems in order to gain control of various system components. The console will include control of the Open/Closed sign in either direction. The console will also include the ability to control the static scale message sign.

The override signal control console will be located adjacent to the Station Console. It will provide the ability for the operator to manually override the directional signals. It will be a minimum of 24 inches long and 10 inches wide with large push buttons and switches to allow officers to quickly locate and change signal controls when override is require.

The Override Console must be operationally independent of the weigh-in-motion interface electronics, the Station Console, and the Station Computer to control all directional lights, i.e., the override console shall remain operational even if the Station computer is not functioning.

A.9.5 Vehicle Display Windows

On the Station Computer will be Windows to display vehicle records from the WIM system on either ramp. The vehicle record for each record will have:

- sequence number
- time and date,
- class
- speed,
- gross vehicle weight,
- lane
- direction of travel
- violations highlighted in red
- individual axle weights with violations highlighted in red
- individual, front bridge, rear bridge, and full vehicle spacing
- tandem weights as measured by the WIM electronics with violations highlighted in red
- front and rear bridge weights as measured by the WIM electronics with violations highlighted in red
- thumbnail image of the vehicle from the overview camera

A vehicle record shall be displayable in either graphic form or in text form. An alternate to the first format, graphical, is a tabular presentation OR, as designed by the manufacturer and approved by the state.

The length from axle to axle shall be shown on a linear scale with axle spacings plotted below the scale line. An asterisk or red text shown at the axle spacing shall indicate the location of an overweight axle or axle group.

When a vehicle passes over the WIM scale, its corresponding vehicle information consisting of vehicle configuration (i.e. number of axles and their groupings) and axle spacings are displayed.

The vehicle records Display must show the following violation information in addition to weight violations:

- Missed Scale - A vehicle has missed the scales, i.e., loops triggered but no axle counts.
- Off-scale - One or more of the off-scale detectors was triggered during the weighing operation
- Vehicle speeding

The Vehicle Display Window shall buffer vehicle records for display purposes. The buffer shall represent multiple pages of windowing display.

The Vehicle Display Window shall allow the following options at any time without going to alternate screens or menus:

- Freeze vehicle record
- Print vehicle record
- Double click on the overview thumbnail image to see a larger view

A.9.6 Scale Manager

The Scale Manager will be located on the central Weigh Station Computer, and facilitate processing vehicles that are sorted or volunteer to come to the static scale. As officers primarily focus on vehicles that are potential violators this will be the main screen that they work with. The screen will also give the operator the ability to control system settings and view and run reports. It shall provide the following functions:

- Interface with the static scale indicator and WIM systems
- Display and accumulate static scale weights and display WIM data for the vehicle that is positioned on the static scale
- Provide adjustable thresholds to each steer axle, axle, tandem, bridge, and gross weight based on Wisconsin regulations
- Automatically check weights to thresholds and release vehicle if in auto mode or alert operator of violation with audio and visual alerts
- Use WIM data to determine if the vehicle should be auto or manually sequenced in automatic mode
- Allow operators to weigh trucks manually with the following buttons
- Add axle
- Add tandem
- Provide the following features within the display
- Display shift counts

- Violations displayed in red
- Zero scale
- Reset scale
- Print requirements include
- Site identification
- Individual weights (axles and axle groups)
- Gross weight
- Time and date
- WIM axle spacing
- Thumbnail image of vehicle
- Will continuously show updated static scale counts for each shift for the day.
- Utilities
- View individual live raw counts for static scale load cells
- Allow remote diagnostics access

If a vehicle is not positioned properly or is a weight violator the operator shall be notified by visual and audio alarms

A.9.7 WIM Scale Auto-Calibration

To eliminate costly ramp calibrations, the ramp WIM scales shall electronically interface with the static scale. On a continuous basis the static scale shall ensure WIM system accuracy and calibration.

Calibration of each WIM scale shall be automatic and performed by electronic recording of WIM and static weights on 50 vehicles from the vehicle stream which are loaded to within 75% of the legal allowable limit.

Acceptance testing shall confirm the WIM accuracy performance which shall be verified in a report. This report shall be created by continuous (24/7) electronic recording of vehicles from the vehicle stream on each ramp. The actual stable static weights and WIM weights shall be saved in a common database to determine WIM scale accuracy compliance, as opposed to the method described in ASTM E 1318-09. This information is to be easily accessible in reports to state personnel and shall be printed on a weekly basis throughout the continuous operating test and in everyday use of the weigh station afterwards.

The current accuracy requirements described in ASTM E 1318-09 for a Type III WIM will remain in effect. Vehicles shall be first weighed by the WIM System, then by the Static Scale Manager.

All reports will be available from the Scale Manager for one central place to view reports. The following reports shall be available:

- Number of vehicles per lane across the WIM by class, hour, and shift for a selected period.
- Number of trucks per lane across the WIM by hour, and shift for a selected period.

- Number of trucks per lane across the WIM by hour, and shift for a selected period.
- Axle and GVW weights by class for a selected period.
- Number of vehicles per lane by weights, by class and by hour for a selected period.
- Number of vehicles across the static scale by class, hour, and shift for a selected period.
- WIM accuracy performance by class for a selected period.

A selected period for report generation shall include starting date and time and ending date and time. Reports shall be generated manually by operator action. Reports shall have an option to display a chart view, and to be exported into Microsoft Office compatible formats.

The Static Scale Manager shall have utility programs do the following:

- Set up and configure the operation of the Ramp WIM systems.
- Set up and configure the operation of the Ramp Sorter Systems.
- Initiate and reset traffic counting operation of the WIM Systems.
- Perform maintenance functions of the Weigh Station systems.

B Materials

Materials used in the construction of this equipment shall be of good commercial quality entirely suitable for the intended purpose. Materials shall be free from all defects and imperfections that might affect serviceability of the finished product.

The equipment shall be constructed of standard material, so that the prompt and continuing service and delivery of spare parts may be assured. The component parts need not be products of the same manufacturer.

All disturbed areas are to be seeded and mulched.

C Construction

C.1 WIM System Functional Requirements

C.1.1 WIM Scales

The accuracy of the WIM system shall be in conformance with ASTM E 1318-09 "Standard Specifications for Highway Weigh-in-Motion (WIM) Systems with User Requirements and Test Method" performance requirements for a Type III system.

Place Concrete Pavement 10-Inch. The concrete pavement shall cover the width of the roadway as shown with doweled, 20-foot joint spacings as shown in the plans. The concrete pavement shall begin 200 feet prior to each WIM scale location and shall end 100 feet after. Concrete pavement shall be paved through, then an area sawcut and removed to enable WIM scale installation.

Blanket grind the concrete roadway beginning 200 feet prior to the WIM scale location and ending 100 feet after the scale location, for a total of 300 feet, with a minimum 36-inch

blanket grinder to ensure that the roadway meets the requirements of Section 6 of ASTM E 1318-09.

All electrical work shall meet the requirements of standard spec 651.

Terminate all wires from scales, off-scale sensors, axle sensors, loops, and cameras, on terminal strips or screw terminal connectors. The terminal strips shall be identified by terminal strip number and screw connection number. These terminal strips shall be readily accessible. All cables shall be long enough to easily reach these terminal strips. Terminal strips, splices, or other type of connections prior to these standard terminal strips shall not be allowed except for splicing of a loop to a shielded twisted loop lead.

Shield all AC power connections to prevent electrical shock.

C.1.5 Camera System

The Camera System shall consist of the following system components:

1. Color and Black/White video camera
2. Illuminator system
3. Video capture system

The video system shall monitor traffic flow on the roadway at the weigh station site. It shall capture still images of trucks having violations for identification and enforcement purposes. The images shall be displayed on an operator interface located in the Coloma SWEF. Each vehicle record number shall be displayed with the vehicle image.

Provide and install one camera for each lane on poles located near the ramp WIM location. Each camera shall provide overview images of the passing commercial vehicles, detailing their cab and side. Color images shall be provided for daylight use, and black/white images shall be provided for night use.

Camera poles and bases shall conform to the requirements of standard spec 672.

C.1.6 Conduit and Pull Boxes

All cables shall be in conduit unless specifically approved by the engineer. All conduit installed shall meet the requirements of standard spec 652. All pull boxes shall meet the requirements of standard spec 653.

All materials shall comply with the National Electrical Code and the current standard specifications, Standard Detail Drawings, and special requirements by department weigh-in-motion specifications. Use duct seal to seal all conduits in the cabinets and in all pull boxes. All conduits shall have a polyethylene pull string with at least 210-pound break strength left in place at completion of construction.

Use separate conduits for AC/DC power and low voltage signal cables. Low voltage signal cables shall include video, digital communication, sensor signal cable, and sensor excitation cables where voltage is under +/- 20 volts DC. Conduits for video and RF cables shall be of a large enough size to accommodate the maximum bend radius using factory 90-degree "bends".

C.1.7 Portable Static Wheel Load Scales

Furnish two sets of six scale units meeting the following specifications. The units shall be portable hydraulic/analog (mechanical) designed to weigh commercial vehicles. The unit shall be applicable for use in law enforcement as a wheel-load weigher for weighing commercial vehicles which includes large trucks and buses.

Each unit shall have a large active platform measuring a minimum of 26-inches x 15-inches to accommodate the space needs of dual and large tires. The height shall not exceed ¾-inch in order to negate the need of ingress and egress ramp. The total physical weight of the unit shall not exceed 35 pounds. Each unit shall be completely waterproof and dustproof.

Each unit shall be able to accurately weigh up to 20,000 pounds, with:

1. A rate of "+ or –" 50 pounds up to 2,500 pounds.
2. A rate of "+ or –" 100 pounds between 2,500 and 10,000 pounds.
3. A rate of "+ or –" 300 pounds between 10,000 and 20,000 pounds

The weight gradations shall be easily readable and must be in 50 pound or less increments. The readout system shall be capable of indicating weights from 0 to 20,000 pounds. The unit must have incorporated a simple zero adjust method to facilitate zeroing before each weighing.

Each unit shall remain within the acceptance tolerance when subjected to temperatures of 0 degrees or less to 120 degrees or more. Each unit shall be able to weigh accurately under conditions not absolutely level. Each unit shall be capable of 24 hours of continual use without need for battery recharge of external power source.

Each unit shall meet applicable technical requirements of National Institute of Standards and Technology (NIST) Handbook 44 as they pertain to specifications, tolerances, and other technical requirements for wheel load scales or Class III devices. The NIST Handbook can be obtained at ts.nist.gov/weightsandmeasures/h44-07.cfm.

Each unit shall be capable of being calibrated with the portable manual test stand described below. All weighing and measuring devices are required by State law to have a NTEP Certificate. Any piece of equipment purchased for the purposes of calibrating/testing wheel load scales must have a NTEP certificate of conformance

C.1.8 Portable Manual Test Stand For Portable Scale Calibration

Furnish one (1) unit meeting the following specifications. The unit shall be portable, capable of testing and calibrating portable static wheel load scales. The unit shall have an accuracy of 0.10% calibrated to ASTM specification E-74 with capacity 20,000 lbs. x 1 lb. graduations. The range shall be zero to full capacity with travel of 8-inches.

The unit shall be aluminum, 6000 Series. The unit shall have a minimum 33-inch x 21-inch test surface area. The overall unit weight shall be less than 300 lbs with carrying/lifting handles.

The unit load cell shall be steel with a capacity of 25,000 lbs. The accuracy shall have non-linearity, hysteresis and non-repeatability @ ± 0.05% R.O.

The unit hydraulic system pump shall be 2-speed manual hand operation, 10,000 psi. The cylinder shall have a 30-ton single action capability and a 10,000 psi pressure gauge.

The indicator resolution shall have 10,000 displayed graduations and 1,000,000 internal graduations. The NIST Classification shall meet or exceed HB-44 class III/IIIL at 10,000 divisions. It shall be battery operated using rechargeable NiCad batteries, 12-120 VDC/VAC. The display shall be LCD, 6-digits.

The aluminum loading block shall have a minimum size of 10-inch (± 0.25-inch) x 17-inch (± 0.25-inch) x 1.75-inch. The rubber loading pad shall have a minimum size of 10-inch (± 0.25-inch) x 17-inch (± 0.25-inch) x 0.5-inch (± 0.125-inch) with 40 to 70 Shore A rating.

C.2 System Acceptance

The WIM system shall be accepted subject to fulfilling the following conditions:

1. System review
2. Acceptance tests (meeting WIM accuracy on a weekly basis).
3. Training

C.2.1 System Review

The selected WIM vendor shall submit six copies of a system layout for each individual site. These layouts shall be submitted to the engineer for review and approval.

A preliminary on-site meeting shall be held for each site to discuss contractor's plans for the routing of conduits, cables, and placement of equipment.

C.2.2 Acceptance Tests

The WIM system, all inclusive as contracted, shall be designed, built and tested by the vendor, and as proof of operation, the systems, overall and singularly, shall be tested at various times according to the test specifications. All field tests shall be performed by the WIM Vendor and observed by the engineer with all reports submitted to the engineer.

C.2.2.1 Factory Acceptance Tests

Prior to shipment of any equipment, factory acceptance tests shall be performed for each system to verify the equipment operating as described in the contract documents and in accordance to the test specifications approved by the engineer. The factory acceptance tests shall include at minimum the following:

1. A physical inspection to verify that the quality of material and workmanship satisfy specified requirements and standards and that the equipment and software under test are complete and ready for delivery.
2. A functional test to verify that the equipment and software operate as described in the contract documents.
3. A performance test to verify that the equipment satisfies performance and operation criteria.

For the purpose of these tests the equipment and software shall be configured as nearly as possible to the final configuration. Any field inputs not available at the factory test site shall be simulated to provide a close approximation to actual site conditions.

C.2.2.2 Site Acceptance Tests

After all the equipment and software have been installed at the site, run tests to ensure that all equipment operates as specified in contract documents. These tests shall be witnessed or conducted by the engineer within one week of the manufacturer notifying the engineer that the system is ready for testing.

The camera system shall be tested at the virtual weigh station system site to verify that the images taken at daytime and nighttime are clear and integrated properly with the vehicle record from the virtual weigh station system. The Vendor shall collect data observed by the department and provide the results of the images taken for the duration of the testing during day and night time operation. Success will be determined by images that are non-blurred, crisp, and properly integrated with the vehicle data received by the virtual weigh station system.

C.2.2.3 Continuous Operating Test

Following successful completion of the site acceptance test, a continuous operating test (COT) shall be conducted for a period of 56 calendar days. During this period the weigh station and its weight sorter system shall operate under normal conditions and attain a level of service of 98.0% or better of the total station operating hours within any period of 56 consecutive days.

The WIM scale system shall be considered unavailable when:

1. A major system component completely fails which significantly degrade the performance or operation of the weigh station. This situation is said to have prevailed if either the WIM system or the communication system has failed.
2. More than one system component fails to operate or respond to operator commands and/or system automation for more than 30 minutes.
3. Weekly WIM accuracy is not met. The State shall have the capability to run this report on their own.

During the continuous operating test, the entire WIM system shall be fully operational under normal traffic conditions and operate trouble free for 56 consecutive days. During the continuous operating test the WIM accuracy test/database shall be printed by the engineer and met weekly as previously specified for the WIM system.

In the event that one of the above mentioned conditions persists and the specified availability cannot be achieved, the WIM vendor will be informed and problem(s) shall be corrected and the continuous operating test shall start over until 56 continuous days of trouble free operation are experienced. This re-start can only occur three times. In order for this test to be valid, the static scale must be fully operational for the 56 day period. The WIM vendor must leave the site prior to the start of the continuous test and may only return if a problem is encountered or accompanied by the engineer.

Payment:

1. Payment upon safe and secure delivery of all equipment at a storage location approved by the engineer	40%
2. Complete installation of the entire system	25%
3. Completion of calibration and burn-in	10%
4. Completion of the COT to the satisfaction of the engineer	25%

The continuous operating test will be the basis for acceptance or rejection of the WIM system as a result of demonstrated performance. If the system is rejected and there have been more than three strikes and re-starts of the COT, the parties will negotiate, in good faith, an acceptable resolution. Following such negotiations, if the same are unsuccessful, the department may execute the performance bond. Notwithstanding the foregoing, the contractor will retain/be entitled to receive all amounts paid or payable to the contractor in accordance to the above payment schedule, agreed-to by the parties:

The department shall issue a certificate of final acceptance upon successful completion of the continuous operating test and training program.

This calibration/acceptance procedure follows latest version ASTM E1318 Standards. Calibration is to be performed by the running of one calibration truck. The five-axle, test vehicle should be of a tractor/trailer combination (3S2), complete with air ride suspension and a non-shifting static load. The truck will be loaded to within 90 to 100% of allowable

gross vehicle weight for the road under test. The truck will be in excellent mechanical condition.

The calibration procedure is as follows:

1. The vehicle will be weighed at a government certified static weigh scale. The weight information on the front (single axle), drive (tandem axle group), and trailer (tandem axle group), should be recorded. The gross vehicle weight (GVW) of the vehicle will be calculated by adding the three weights together.
2. The distance between the five individual axles on the truck will be measured and recorded.
3. The test vehicle will make three test passes over the system under test at a selected speed which is indicative of the truck traffic at the site. Adjustments will be made by vendor personnel on site during this time to fine-tune the axle spacing, and weight output of the WIM system.
4. Once all initial adjustments have been made, the test vehicle will make an additional two test passes to confirm the accuracy of the adjustments. If all the readings fall within the latest version ASTM ranges for the WIM type under test, and vendor personnel do not feel that additional adjustments are required, the tests will continue. If this is not the case, additional adjustments will be performed and two more confirming passes will be made by the test truck.
5. The test truck should then make an additional ten passes at a selected speed that is indicative of the truck traffic at the test site.
6. Record all of the data and place it into a spreadsheet.
7. The mean error and standard deviation for all recorded measurements will be calculated at the end of the ten test passes. The calculations will be as follows:
   a) For weight measurements, the percent error for each test pass will be calculated using the following formula:

- [(WIM Weight - Static Weight)/Static Weight] x 100 = % error

   b) The mean error for each weight type (single, group, GVW) will be calculated as follows:

- % errors for single, group or GVW/# of samples = Mean error
- (Each weight type calculated individually)

   c) The error for individual axle spacings will be calculated using the following formula:

- 10 of [(WIM Axle Spacings - Actual Axle Spacing)]/10 = Mean Axle Spacing Error
- (Each of the four axle spacings calculated individually)

8. All of the calculated errors will also be entered into the spreadsheet.
9. A check will be made of the calculated result against the acceptable range for the latest version ASTM WIM type under test. There will be one of two results:
   a) If 95% of all recorded test results, (single axles, axle groups, GVW, axle spacing) fall within the specified tolerance for the latest version ASTM E1318 WIM type under test then the system will have passed the requirements.
   b) If less than 95% of the calculated differences fall within the specified tolerance for the latest version ASTM E1318 WIM type under test then the system will be readjusted and an additional ten test passes will be required to retest the system.

10. The testing will continue until the system passes all criteria according to latest version ASTM E1318 standards.

C.2.3 Training

The vendor shall set up and conduct formal training programs for the State Patrol personnel on the operation, maintenance and installation of the system components of the WIM Systems. The training shall include the following:

1. Two half-day operator training sessions providing an introduction to the operation and installation of the WIM Systems, and to the functions performed by the major system components. A class size of up to eight individuals per session can be expected.
2. Two one-day "hands-on" guidance sessions for operators in the operation of the systems. A class size of up to four individuals per session can be expected. This training will occur during the first two days of the continuous operating test.

Schedule the training program for the week prior to the start of the operations test. The cost for the first training sessions shall be included in the contract price. The department will provide classroom space for training session.

C.3 Warranty

The WIM vendor shall warrant all subsystems and system components as supplied and installed. This warranty and associated maintenance work are covered under a separate bid item.

The portable static wheel load scales and portable manual test stand for portable scale calibration shall each have a minimum three year warranty, to include parts, labor, shipping, updates, modifications and recalls.

D Measurement

The department will measure Weigh-In-Motion Scale System, as a single lump sum unit of work completed and accepted in accordance to the terms of the contract.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.05	Weigh-In-Motion Scale System	LS

Payment is full compensation for furnishing and installing all materials, pavement grinding, restoration, for furnishing all labor, supervision, equipment, calibration and testing, warranties, training, tools and incidentals. Materials and equipment included in the WIM system: load cells, scale hardware, portable static wheel load scales, portable manual test stands, piezoelectric sensors, system electronics (including all interface cards), station system, cameras, camera poles and bases, lane control system, open/closed signs, modem,

X-terminal, manual console, printer, wiring, cabling, conduit, junction boxes, software and software licenses.

Sawing Concrete, Removing Pavement, Base Aggregate Dense, Concrete Pavement 10-Inch and Asphaltic Surface will be paid for under separate bid items.

14. Weigh-In-Motion Scale System Warranty Maintenance, Item SPV.0105.06.

A Description

Provide warranty and maintenance service for the Weigh-in-motion Scale System for a period of five years. This system, which includes two weigh-in-motion scales, cameras, sensors, system components and ancillary equipment, is located at the Coloma SWEF. Provide routine maintenance on all major systems, system components and ancillary equipment at 6-month intervals. Provide emergency repair services on an as-required basis.

A.1 Warranty Bond

The contractor shall provide a warranty bond for the Weigh-In-Motion Scale System Warranty Maintenance. The bond will be in effect for the entire five year warranty period beginning when the Weigh-In-Motion Scale System is completed, operational and accepted. The bonding company must have an AM Best rating of "A-" or better and the contractor will provide proof of a five year bond commitment before execution of the contract.

The warranty bond amount will be for $25,000. The bond will ensure the proper and prompt completion of required warranty work following completion of the contract work, including payments for furnishing all labor, equipment, and materials used according to this specification.

The contract bond, which remains in effect for one year beyond the completion of the project, will also include warranty work as described in this article. For the remaining four year warranty period, provide documentation that the warranty bond will be provided in a single term four year warranty bond.

Failure of the contractor or its surety to issue the warranty bond will be considered a default and will result in forfeiture of the face amount of the bond to the department.

All warranty work will be as prescribed in this article. At the end of the warranty period, the contractor will be relieved of the responsibility to perform further warranty work, provided all previous warranty work has been completed.

Maintain insurance, in the course of performing warranty work, as specified in standard spec 107.26 throughout the five year warranty period.

B (Vacant)

C Methods

The WIM vendor shall warrant all subsystems and system components as supplied for five years from the date of issuance of the certificate of final acceptance of the WIM System by the engineer.

The warranty shall cover all WIM system components, hardware and software, included in the contract for any defects in material and workmanship. This shall include:

- All loops, WIM Scales, off scale sensors and piezoelectric sensors on site
- Interface operations and system electronics
- WIM cables, connectors, terminal strips and back-up batteries
- Structures.
- Communication systems
- Overview image cameras and equipment.
- Ramp Lane Control Systems
- Electrical power wiring and conduit.
- Weigh Station computer system
- Station Console
- Scale Manager
- Vehicle Display
- Station PC
- Override Console
- Printer (if existing not used)
- LED Open/Closed and Arrow ↙/Closed signs

The warranty agreement shall include all:

- Mobilization, parts, labor and shipping.
- Equipment updates, upgrades, modifications and recalls.
- System interface and electronics updates, upgrades, modifications and recalls
- Traffic control
- Training for major system updates or upgrades
- Lightning protection

The weigh-in-motion system shall be warranted by the WIM vendor, in writing, against defects in or from material, workmanship, lightning, and to perform as required by these technical special provisions, giving proper and continuous service under all conditions required and specified, or which may reasonably be inferred, for a period of five years from the date of acceptance. The written vendor's warranty shall be furnished to the engineer by the vendor at the time the equipment performance supporting data is submitted. The ramp sorter equipment weighing instruments, load cells, weigh bridge, hardware, and software shall be warranted by the manufacturer, in writing, against defects in or from material, workmanship, lightning, and perform as required by these technical special provisions for the specified period or as described above from the date of final acceptance of the project.

C.1 Maintenance Services

The scheduled maintenance service shall include the following:

- Visual inspection, signal checks and testing measures on all loops,
- Cleaning, repair and testing measures on all WIM Scales (Weigh-in-motion Scale System),
- Visual inspection and testing measures on all off-scale sensors,
- Visual inspection, testing measures and signal checks on all piezoelectric sensors,
- Visual inspection and cleaning of cabinet and system electronics,
- Maintenance of WIM cables, connectors, terminal strips and back-up batteries,
- Electrical inspection,
- Cabinet mechanical condition inspection,
- Heating, ventilation and air conditioning maintenance,
- Interface card operation inspection, testing measures and maintenance,
- Notification sign inspection, testing and maintenance,
- Structural integrity check of all poles and mast arms,
- Inspection and verification of computer communication systems.
- Camera and video inspection, testing and maintenance, including cleaning of camera lenses.
- Parts, labor and shipping.
- Mobilization and traffic control necessary to perform the maintenance services.
- WIM scale accuracy and calibration
- Check and record all load cell readings (raw counts, millivolts, ohms and grounding) and provide in report
- Perform linearity and repeatability tests then adjust as required. This test must be performed with a minimum 4,000 LBS certified test weights
- Apply certified test weight for calibration and adjust as required. This test must be performed with a minimum 4,000 LBS certified test weights
- Perform in-motion tests and adjust as required to comply with standards
- Provide print outs of the test
- WIM scale maintenance
- Lubricate load cell bolts
- Remove all grease and apply new grease to O-rings & pins
- Visually check scale platforms for visible damage
- Remove cover plates, preload bolts, and anti-lift bolts and check platform for level or rocking
- Remove platform
- Check shims for damage and replace as needed.
- Remove load pin from load cells and check gasket for wear
- Check torque on load cell bolts (390 feet lbs.)
- Check all bolts in frame for tightness
- Reinstall platform, pre-load bolts torque (300 feet lbs.), and install anti lift blocks (1/32 gap)
- Replace shims and o-rings

A report shall accompany the scheduled maintenance service and shall be submitted to the department. The report shall include:

- Pass/Fail grading of all loops, scales, off-scale sensors and piezoelectric sensors,
- A checklist of all components checked as listed above, as well as the location of the components and comments on their general state.
- A checklist and commentary detailing whether each component (as listed above) met standards or required repairs.

C.2 Emergency Repair Services

Emergency repair services shall be completed on an as-required basis. The maximum response time for emergency repair services shall not exceed 48 hours after written receipt of notice by fax. The vendor shall initiate on-site repairs within four business days of notification. Emergency repair services shall include all parts, labor, shipping, mobilization and traffic control necessary to perform the work.

D Measurement

The department will measure Weigh-In-Motion Scale System Warranty Maintenance, as a single lump sum unit of work completed and accepted in accordance to the terms of the contract.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.06	Weigh-In-Motion Scale System Warranty Maintenance	LS

Payment is full compensation for providing all warranty maintenance service and emergency repair service for a period of five years and shall include all labor, tools, parts, shipping, mobilization, traffic control and incidentals necessary to perform the maintenance service.

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
ASP 6 - Modifications to the standard specifications

Make the following revisions to the 2013 edition of the standard specifications:

106.3.4.3.1 General

Replace paragraph two with the following effective with the November 2012 letting:

(2) Required sampling and testing methodologies and documentation are specified in CMM chapter 8.

(3) If disputed, approval of materials and components, as well as acceptance of the work incorporating those materials or components, is subject to review under the QMP dispute resolution process.

107.17.3 Railroad Insurance Requirements

Replace the entire text with the following effective with the August 2012 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. 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.

460.2.8.3.1.4 Department Verification Testing Requirements

Replace paragraph four with the following effective with the December 2012 letting:

(4) The department will randomly test each design mixture at the following minimum frequency:

FOR TONNAGES TOTALING:	
Less than 501 tons	no tests required
From 501 to 5,000 tons	one test
More than 5,000 tons	add one test for each additional 5,000-ton increment

501.2.1 Portland Cement

Replace paragraph one with the following effective with the March 2013 letting:

(1) Use cement conforming to ASTM specifications as follows:

- Type I portland cement; ASTM C150.
- Type II portland cement; ASTM C150.
- Type III portland cement; ASTM C150, for high early strength.
- Type IP portland-pozzolan cement; ASTM C595, except maximum loss on ignition is 2.0 percent.
- Type IS portland blast-furnace slag cement; ASTM C595.
- Type IL portland-limestone cement; ASTM C595, except maximum nominal limestone content is 10 percent with no individual test result exceeding 12.0 percent.

501.2.5.5 Sampling and Testing

Replace the entire text with the following effective with the January 2013 letting:

(1) Sample and test aggregates for concrete according to the following:

Sampling aggregates	AASHTO T2
Lightweight pieces in aggregate	AASHTO T113
Material finer than No. 200 sieve	AASHTO T11
Unit weight of aggregate	AASHTO T19
Organic impurities in sands	AASHTO T21
Sieve analysis of aggregates	AASHTO T27
Effect of organic impurities in fine aggregate	AASHTO T71
Los Angeles abrasion of coarse aggregate	AASHTO T96
Freeze-thaw soundness of coarse aggregate	AASHTO T103
Sodium sulfate soundness of aggregates	AASHTO T104
Specific gravity and absorption of fine aggregate	AASHTO T84
Specific gravity and absorption of coarse aggregate	AASHTO T85
Flat & elongated pieces based on a 3:1 ratio	ASTM D4791[1]
Sampling fresh concrete	AASHTO R60
Making and curing concrete compressive strength test specimens	AASHTO T23
Compressive strength of molded concrete cylinders	AASHTO T22

[1] As modified in CMM 8-60.

501.2.6 Fly Ash

Replace paragraph three with the following effective with the March 2013 letting:

(3) Test fly ash using a recognized laboratory, as defined in 501.2.2(1), starting at least 30 days before its proposed use, and continuing at ASTM-required frequencies as the work progresses. The manufacturer shall test the chemical and physical properties listed in tables 1 and 2 of ASTM C618 at the frequencies and by the test methods prescribed in ASTM C311.

501.3.1.1.1 Air-Entrained Concrete

Replace paragraph one with the following effective with the March 2013 letting:

(1) Prepare air-entrained concrete with type I, IL, II, IS, or IP portland cement and sufficient air-entraining admixture to produce concrete with the air content specified in 501.3.2.4.

503.2.2 Concrete

Replace paragraph five with the following effective with the March 2013 letting:

(5) Furnish prestressed concrete members cast from air-entrained concrete, except I-type girders may use non-air-entrained concrete. Use type I, IL, IS, , IP, II, or III portland cement. The contractor may replace up to 30 percent of type I, IL, II, or III portland cement with an equal weight of fly ash, slag, or a combination of fly ash and slag, except for prestressed box girders and slabs, the contractor shall replace 20-30 percent of the cement with fly ash, slag, or a combination of fly ash and slag. Ensure that fly ash conforms to 501.2.6 and slag conforms to 501.2.7. Use only one source and replacement rate for work under a single bid item. Use a department-approved air-entraining admixture conforming to 501.2.2 for air-entrained concrete. Use only size No. 1 coarse aggregate conforming to 501.2.5.4.

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.

507.2.2.1 General

Replace paragraph four with the following effective with the December 2012 letting:

(4) Ensure that there are no unsound knots or knot holes. Also ensure that there are no tight knots of a diameter exceeding one-quarter of the greater dimension at the point where they occur. Measure a knot by taking its diameter at right angles to the length of the timber. Ensure that the sum of sizes of all knots in any one-foot length does not exceed 2 times the size of the largest allowed single knot. The engineer will treat cluster knots as if they were a single knot. A cluster knot is 2 or more knots grouped together, with the fibers of the wood deflected around the entire unit.

512.3.1 Driving and Cutting Off

Replace the entire text with the following effective with the December 2012 letting:

512.3.1.1 General

(1) Coordinate driving operations to prevent damage or displacement of concrete in substructure units or damage to adjacent facilities due to vibrations.

(2) Drive sheeting with a variation of 1/4 inch or less per foot from the vertical or from the batter the plans show. Ensure that the sheetpiles are within 6 inches of the plan position after driving. Do not damage sheetpiles attempting to correct for misalignment.

(3) Remove and replace, or otherwise correct, sheetpiles the engineer deems unacceptable under 105.3. Submit details of planned corrections to the engineer for review and approval before initiating any corrective actions.

(4) Drive sheetpiles to or beyond the required tip elevation the plans show.

512.3.1.2 Driving System

(1) Furnish a sheetpile driving system capable of driving the sheetpiles to the required minimum tip elevation the plans show.

(2) The engineer may order the contractor to remove a pile driving system component from service if it causes insufficient energy transfer or damages the sheetpiles. Do not return a component to service until the engineer determines that it has been satisfactorily repaired or adjusted.

(3) Drive sheetpiles with diesel, air, steam, gravity, hydraulic, or vibratory hammers.

512.3.1.3 Cut-Offs

(1) Cut off sheetpiles at the elevations the plans show or as the engineer directs. Pile cut-offs become the property of the contractor. Dispose of cut-offs not incorporated into the work.

518.2.1 General

Replace paragraph one with the following effective with the March 2013 letting:

(1) Furnish portland cement and water as specified in 501.2. Unless the engineer allows an alternate, use either type I, IL, IS, , or IP portland cement.

526.3.3 Temporary Structures

Replace paragraphs two through four with the following effective with the January 2013 letting:

(2) Inspect temporary structures conforming to the National Bridge Inspection Standards (NBIS) and the department's structure inspection manual before opening to traffic. Perform additional inspections, as the department's structure inspection manual requires, based on structure type and time in service. Submit inspection reports on department form DT2007 to the engineer and electronic copies to the department's bureau of structures maintenance section. Ensure that a department-certified active team leader, listed online in the department's highway structures information system (HSIS), performs the inspections.

(3) Maintain temporary structures and approaches in place until no longer needed. Unless the engineer directs otherwise, completely remove and dispose of as specified in 203.3.4. Contractor-furnished materials remain the contractor's property upon removal.

614.2.5 Wood Posts and Offset Blocks

Retitle and replace the entire text with the following effective with the July 2012 letting:

614.2.5 Posts and Offset Blocks

614.2.5.1 Wood Posts and Offset Blocks

(1) Furnish sawed posts and offset blocks of one of the following species:

Douglas fir	Southern pine	Ponderosa pine	Jack pine	White pine
Red pine	Western hemlock	Western larch	Hem-fir	Oak

(2) Ensure that posts are the size the plans show and conform to the nominal and minimum dimensions tabulated in 507.2.2.3. The contractor does not have to surface the posts. Provide posts of the net length the plans show after setting and cut off.

(3) Use stress graded posts rated at 1200 psi f_b or higher. Determine the stress grade rating for douglas fir, western larch, and southern pine as specified in 507.2.2.4.

(4) For hem-fir, hemlock, red pine, white pine, jack pine, ponderosa pine, and oak conform to the following:

TABLE 614-1 PROPERTIES FOR WOOD POSTS AND BLOCKS

SPECIES			WESTERN HEMLOCK, HEM-FIR, RED PINE, WHITE PINE, JACK PINE, PONDEROSA PINE		OAK	
MAXIMUM SLOPE OF GRAIN			1 in 15		1 in 12	
NOMINAL WIDTH OF FACE			6"	8"	6"	8"
SHAKES, CHECKS, AND SPLITS		GREEN	1"	1 3/8"	2 3/8"	3 1/8"
		SEASONED	1 1/2"	2"	2 5/8"	3 1/2"
MAXIMUM WANE			1"	1 3/8"	1 1/8"	1 5/8"
MAXIMUM ALLOWABLE KNOTS	NARROW FACE	MIDDLE 1/3 OF LENGTH	1 3/8"	1 5/8"	2 1/8"	2 3/8"
		END[1]	2 3/4"	3 1/4"	4 1/4"	4 3/4"
		SUM IN MIDDLE 1/2 OF LENGTH[2]	11"	13"	17"	19
	WIDE FACE	EDGE KNOT N MIDDLE 1/3 OF LENGTH	1 3/8"	1 5/8"		
		EDGE KNOT AT END[1]	2 3/4" 7	3 1/4"		
		CENTERLINE	1 3/8"	1 7/8"	2 1/4"	2 7/8"
		SUM IN MIDDLE 1/2 OF LENGTH	5 1/2"	7 1/2"	9"	11 1/2"

[1] But do not exceed the maximum allowable knot on the centerline of the wide face of the same piece.

[2] But do not exceed 4 times the maximum allowable knot on the centerline of the wide face of the same piece.

(5) Pressure treat posts and offset blocks as specified in 507.2.2.6. Use one of the oil-soluble preservatives or chromated copper arsenate conforming to 507.2.3. Use the same material for offset blocks and posts and treat material used in each continuous installation with the same type of preservative.

614.2.5.2 Steel Posts

(1) Furnish steel posts conforming to AASHTO M270 Grade 36 and galvanized according to AASTHO M111.

614.2.5.3 Plastic Offset Blocks

(1) Furnish plastic offset blocks from the department's approved products list.

614.3.1 General

Replace the entire text with the following effective with the July 2012 letting:

(1) Paint the ends of cut-off galvanized posts, rail, bolts, cut or drilled surfaces of galvanized components, and areas of damaged zinc coating with 2 coats of zinc dust/zinc oxide paint. Clean the damaged and adjacent areas thoroughly before applying paint.

(2) Apply 2 coats of wood preservative to cut surfaces of wood components. Use the same preservative originally used to treat that component or use a 2-percent solution of copper naphthenate conforming to AWPA Standard P8 or P36.

614.3.2.1 Installing Posts

Replace paragraph four with the following effective with the July 2012 letting:

(4) Cut post tops to the finished elevation the plans show.

628.2.13 Rock Bags

Replace paragraph one with the following effective with the November 2012 letting:

(1) Furnish rock bags made of a porous, ultraviolet resistant, high-density polyethylene or geotextile fabric that will retain 70% of its original strength after 500 hours of exposure according to ASTM D4355 and a minimum in-place filled size of 18-inches long by 12-inches wide by 6-inches high. Ensure that the fabric conforms to the following:

TEST REQUIREMENT	METHOD	VALUE
Minimum Tensile	ASTM D4632	
Machine direction		70 lb minimum
Cross direction		40 lb minimum
Elongation	ASTM D4632	
Machine direction		20% minimum
Cross direction		10 % min
Puncture	ASTM 4833	65 lbs minimum
Minimum Apparent Opening		0.0234 inches (No. 30 sieve)
Maximum Apparent Opening		0.0787 inches (No. 10 sieve)

639.2.1 General

Replace paragraph two with the following effective with the March 2013 letting:

(2) For grout use fine aggregate conforming to 501.2.5.3 and type I, IL, IS, or IP portland cement.

649.3.1 General

Replace paragraphs three and four with the following effective with the March 2013 letting:

(3) For pavements open to all traffic, apply centerline and no-passing barrier line markings as follows:

- On intermediate pavement layers, including milled surfaces, on the same day the pavement is placed or milled.
- On the upper layer of pavement, on the same day the pavement is placed unless the contractor applies permanent marking on the same day the pavement is placed.

If weather conditions preclude same-day application, apply as soon as weather allows. Do not resume next-day construction operations until these markings are completed unless the engineer allows otherwise.

(4) If required to apply no passing zone temporary pavement marking, reference the beginning and end of all existing no-passing barrier lines. Apply temporary no-passing barrier lines at those existing locations. If the contract contains the Locating No-Passing Zones bid item, relocate the no-passing zones as specified in section 648 for permanent marking.

701.4.2 Verification Testing

Replace paragraph two with the following effective with the December 2012 letting:

(2) The department will sample randomly at locations independent of the contractor's QC tests and use separate equipment and laboratories. The department will conduct a minimum of one verification test for each 5 contractor QC tests unless specific QMP provisions specify otherwise.

715.2.3.1 Pavements

Replace paragraph two with the following effective with the March 2013 letting:

(2) Provide a minimum cement content of 565 pounds per cubic yard, except if using type I, IL, or III portland cement in a mix where the geologic composition of the coarse aggregate is primarily igneous or metamorphic materials, provide a minimum cement content of 660 pounds per cubic yard.

715.3.1.3 Department Verification Testing

Replace paragraph one with the following effective with the December 2012 letting:

(1) The department will perform verification testing as specified in 701.4.2 except as follows:

- Air content, slump, and temperature: a minimum of 1 verification test per lot.
- Compressive strength: a minimum of 1 verification test per lot.

Errata

Make the following corrections to the 2013 edition of the standard specifications:

102.12 Public Opening of Proposals

Correct 102.12(1) errata by changing htm to shtm in the web link.

(1) The department will publicly open proposals at the time and place indicated in the notice to contractors. The department will post the total bid for each proposal on the Bid Express web site beginning at 9:30 AM except as specified in 102.8. If a proposal has no total bid shown, the department will not post the bid. After verification for accuracy under 103.1, the department will post bid totals on the department's HCCI web site.

http://roadwaystandards.dot.wi.gov/hcci/bid-letting/index.shtm

107.22 Contractor's Responsibility for Utility Facilities, Property, and Services

Correct errata by eliminating references to the department. Costs are determined by statute.

(3) If the contractor damages or interrupts service, the contractor shall notify the utility promptly. Coordinate and cooperate with the utility in the repair of the facility. Determine who is responsible for repair costs according to Wisconsin statutes 66.0831 and 182.0175(2).

204.3.2.2 Removing Items

Correct errata by changing the reference from 490.3.2 to 490.3.

(5) Under the Removing Asphaltic Surface Milling bid item, remove and dispose of existing asphaltic pavement or surfacing by milling at the location and to the depth the plans show. Mill the asphaltic pavement or surfacing as specified for milling salvaged asphaltic pavement in 490.3.

501.2.9 Concrete Curing Materials.

Correct errata by changing AASHTO M171 to ASTM C171.

(4) Furnish polyethylene-coated burlap conforming to ASTM C171 for white burlap-polyethylene sheets.

506.2.6.5.2 Pad Construction

Correct errata by changing ASTM A570 to ASTM A1011.

(4) For the internal steel plates use rolled mild steel conforming to ASTM A36, or ASTM A1011 grade

512.3.3 Painting

Correct errata by changing 511.3.5 to 550.3.11.3.

(1) Paint permanent steel sheet piling as specified for painting steel piling in 550.3.11.3.

513.2.2.8 Toggle Bolts

Correct errata by changing ASTM A570 to ASTM A1011.

(1) Use toggle bolts made of steel, conforming to the plans. Make the assembly from the material specified below:

Toggle bolt and pin ..... Cold finished steel heat-treated Brinell 311-363 ASTM A354.

Toggle washer ..... Hot rolled steel ASTM A1011. Manufacturer's standard washer.

Spacer nut ..... Grade 1213, ASTM A108. Cold finished steel heat-treated ASTM A325.

660.2.1 General

Correct errata by changing section 511 to 550.

(1) Furnish materials conforming to the following:

Concrete ..... section 501

Concrete bridges ..... section 502

Luminaires ..... section 659

Steel piling ..... section 550

Steel reinforcement ..... section 505

660.3.2.3 Pile Type Foundations

Correct errata by changing section 511 to 550.

(1) Drive piles as specified in for steel piling in section 550.

701.3 Contractor Testing

Correct errata by updating AASHTO T141 to AASHTO R60 and changing AASHTO T309 to ASTM C1064.

(1) Perform contract required QC tests for samples randomly located according to CMM 8-30. Also perform other tests as necessary to control production and construction processes, and additional testing enumerated in the contractor's quality control plan or that the engineer directs. Use test methods as follows:

TABLE 701-2 TESTING STANDARDS

TEST	TEST STANDARD
Washed P 200 analysis	AASHTO T11[1]
Sieve analysis of fine and coarse aggregate	AASHTO T27[1]
Aggregate moisture	AASHTO T255[1]
Sampling freshly mixed concrete	AASHTO R60
Air content of fresh concrete	AASHTO T152[2]
Concrete slump	AASHTO T119[2]
Concrete temperature	ASTM C1064
Concrete compressive strength	AASHTO T22
Making and curing concrete cylinders	AASHTO T23
Standard moist curing for concrete cylinders	AASHTO M201

[1] As modified in CMM 8-60.

[2] As modified in CMM 8-70.

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 pages 17-22 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/crc-basic-info.pdf

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
WAUSHARA COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on May 1, 2013

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions reqarding the proper trade or classification to be used for any worker on a public works project.

OVERTIME: Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

FUTURE INCREASE: If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

PREMIUM PAY: If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

SUBJOURNEY: Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Bricklayer, Blocklayer or Stonemason	35.58	19.20	54.78
Carpenter	30.16	15.31	45.47
Cement Finisher	30.52	15.84	46.36
Electrician	37.25	15.50	52.75
Fence Erector	28.00	4.50	32.50
Ironworker	28.03	21.97	50.00
Line Constructor (Electrical)	31.29	15.34	46.63
Painter	28.00	11.15	39.15
Pavement Marking Operator	24.10	17.54	41.64
Piledriver	30.66	15.31	45.97
Roofer or Waterproofer	21.00	9.67	30.67
Teledata Technician or Installer	18.86	6.86	25.72
Tuckpointer, Caulker or Cleaner	30.76	16.42	47.18
Underwater Diver (Except on Great Lakes)	37.45	19.45	56.90
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	33.35	14.21	47.56
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	35.50	15.09	50.59
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.94	13.57	39.51
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.08	12.96	37.04
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	11.90	33.65
TRUCK DRIVERS			
Single Axle or Two Axle	33.22	18.90	52.12
Three or More Axle	23.31	17.13	40.44

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Future Increase(s): Add $1.85/hr on 6/1/2013. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	27.77	19.90	47.67
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Pavement Marking Vehicle	23.84	14.86	38.70
Shadow or Pilot Vehicle	33.22	18.90	52.12
Truck Mechanic	22.50	16.19	38.69
LABORERS			
General Laborer	28.07	13.90	41.97
Future Increase(s): 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. DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	24.51	11.43	35.94
Landscaper	28.07	13.90	41.97
Future Increase(s): Add $1.70/hr on 6/1/13; Add $1.60/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	24.70	13.90	38.60
Future Increase(s): Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	13.00	6.21	19.21
Railroad Track Laborer	23.41	15.14	38.55
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.,	35.22	19.90	55.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
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. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	34.72	19.90	54.62
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. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	34.22	19.90	54.12
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	33.96	19.90	53.86

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
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. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
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. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	33.67	19.90	53.57
Fiber Optic Cable Equipment.	25.74	15.85	41.59

CONTRACT: 20130514041 PROJECT(S): 1166-03-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 PROJECT ITEMS					
0010	204.0100 REMOVING PAVEMENT	1,244.000 SY		.		.
0020	204.0110 REMOVING ASPHALTIC SURFACE	660.000 SY		.		.
0030	305.0115 BASE AGGREGATE DENSE 3/4-INCH	154.000 CY		.		.
0040	415.0100 CONCRETE PAVEMENT 10-INCH	1,244.000 SY		.		.
0050	416.0620 DRILLED DOWEL BARS	80.000 EACH		.		.
0060	465.0105 ASPHALTIC SURFACE	200.000 TON		.		.
0070	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	150.000 LF		.		.
0080	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	150.000 LF		.		.
0090	619.1000 MOBILIZATION	1.000 EACH		.		.
0100	643.0100 TRAFFIC CONTROL (PROJECT) 01. 1166-03-70	1.000 EACH		.		.

CONTRACT: 20130514041 PROJECT(S): 1166-03-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0110	643.0300 TRAFFIC CONTROL DRUMS	2,130.000 DAY		.		.
0120	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	620.000 DAY		.		.
0130	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	960.000 DAY		.		.
0140	643.0900 TRAFFIC CONTROL SIGNS	310.000 DAY		.		.
0150	646.0106 PAVEMENT MARKING EPOXY 4-INCH	1,480.000 LF		.		.
0160	690.0150 SAWING ASPHALT	96.000 LF		.		.
0170	690.0250 SAWING CONCRETE	240.000 LF		.		.
0180	SPV.0105 SPECIAL 01. REMOVING WEIGHT SCALE	LUMP	LUMP			.
0190	SPV.0105 SPECIAL 02. REMOVING WEIGH-IN-MOTION SCALE SYSTEM	LUMP	LUMP			.
0200	SPV.0105 SPECIAL 03. STATIC SCALE SYSTEM	LUMP	LUMP			.
0210	SPV.0105 SPECIAL 04. STATIC SCALE SYSTEM WARRANTY MAINTENANCE	LUMP	LUMP			.

SCHEDULE OF ITEMS REVISED:

CONTRACT: 20130514041 PROJECT(S): 1166-03-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0220	SPV.0105 SPECIAL 05. WEIGH-IN-MOTION SCALE SYSTEM	LUMP	LUMP			.
0230	SPV.0105 SPECIAL 06. WEIGH-IN-MOTION SCALE SYSTEM WARRANTY MAINTENANCE	LUMP	LUMP			.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE