Wisconsin Department of Transportation

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June 02, 2016

NOTICE TO ALL CONTRACTORS:

Proposal #11: 1150-60-71, WISC 2016 225
Green Bay - Oconto
USH 141 – Kruegers Quarry Road
USH 41
Oconto County

Letting of June 14, 2016

This is Addendum No. 01, which provides for the following:

Special Provisions

Revised Special Provisions	
Article No.	Description
26	Installing Pole Mounted Cabinet, Item SPV.0060.01
27	Installing 2 Solar Panels on one Bracket, Item SPV.0060.02
28	Installing Wavetronix Click 200 Module, Item SPV.0060.03
29	Installing Wavetronix Detector Module, Item SPV.0060.04
30	Installing Concrete Maintenance Platform, Item SPV.0060.05
31	Grading, Shaping & Finishing for ATR Site, Item SPV.0060.06

Added Special Provisions	
Article No.	Description
32	HMA Pavement 4 LT 58-28 S 3.0% Va Regression Special, Item SPV.0195.01; HMA Pavement 4 MT 58-28 S 3.0% Va Regression Special, Item SPV.0195.02

Deleted Special Provisions	
Article No.	Description
18	HMA Pavement 4 LT 58-28 S, Item 460.5224; HMA Pavement 4 MT 58-28 S, Item 460.6224

Schedule of Items

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
SPV.0195.01	HMA Pavement 4 LT 58-28 S 3.0% Va Regression Special	TON	0	13,858	13,858
SPV.0195.02	HMA Pavement 4 MT 58-28 S 3.0% Va Regression Special	TON	0	17,357	17,357

Deleted Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
460.5224	HMA Pavement 4 LT 58-28 S	TON	13,858	-13,858	0
460.6224	HMA Pavement 4 MT 58-28 S	TON	17,357	-17,357	0

Plan Sheets

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
53	The new asphalt items had to be replaced with the old in the Miscellaneous Quantities tables.

Added Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of why sheet was added)
44A	Wavetronix Pole Mounted Cabinet Detail
44B	Wavetronix Pole Mounted Cabinet Layout Detail
44C	Wavetronix Detector Installation on Type 3 Pole Detail

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

ADDENDUM NO. 01

1150-60-71

June 02, 2016

Special Provisions

18. DELETED

26. Installing Pole Mounted Cabinet, Item SPV.0060.01.

Replace entire article language with the following:

A Description
This special provision describes installing a department furnished aluminum cabinet on a Type 3 pole for traffic counting equipment, as shown on the plans and as hereinafter provided.

B Materials
The unit will consist of a pole-mounted cabinet. All mounting hardware such as the U- bolts, nuts, and washers that are subject to corrosion shall be stainless steel unless otherwise specified. The Cabinet and U-bolt mounts can be picked up at the Green Bay, WI DOT – Contact Randy Asman at 920-492-7719. Notify Jane Oldenburg, Wisconsin DOT, Travel Survey Shop 608-245-2679 three weeks prior to pickup, so items can be placed at the pickup location.
All conductors, terminals, and parts that could be hazardous to maintenance personnel shall be protected with suitable insulating material.

The cabinet and detector will protected by a Wavetronix Click 200 Surge arrestor module.

C Construction
The Contractor shall securely fasten the field cabinet onto a pole (pole paid separately) with bolted stainless steel connections with lock washers, lock nuts, or other engineer-approved means to prevent the connection nuts from backing off. When applicable, install the bottom U-bolt so that it is above the battery case. Isolate dissimilar materials from one another by stainless steel fittings.

Make all power connections to the cabinet as specified in detail plans.

The cabinet shall be drilled and tapped, as necessary, to mount the “Din Rail and other attachments, to provide an entrance on the bottom back of the cabinet for the cable from the pole mounted Wavetronix Detector equipment. Sharp edges, or burrs, caused by the cutting or drilling process shall be removed. All openings shall be sealed to prevent water from entering the cabinet.

The surge protector shall be mounted to the Din Rail.

D Measurement
The department will measure Install Pole Mounted Cabinet as each individual assembly acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	Installing Pole Mounted Cabinet	Each

Payment for Install Pole Mounted Cabinet is full compensation for installing the pole mounted cabinet, for making all connections (to Traffic Detector and electrical service pedestal) and conduit/wire entrances, and for all testing.

27. Installing 2 Solar Panels on one Bracket, Item SPV.0060.02.

Replace entire article language with the following:

A Description

This section describes installing department furnished solar power units.

B Materials

The units will consist of 2 solar panels, solar panel rack, 2 U-bolts, 10 AWG Gauge stranded-wire wiring. Provide any other mounting or wiring hardware not furnished by the State. The 2 solar panels, solar panel rack, 2 U-bolts, and 10 AWG Gauge stranded-wire wiring can be picked up at the Green Bay, WI DOT – Contact Randy Asman at 920-492-7719. Notify Jane Oldenburg, Wisconsin DOT, Travel Survey Shop 608-245-2679 three weeks prior to pickup, so items can be placed at the pickup location.

C Construction

Install and test the solar charge regulator and solar batteries (in parallel). Make the necessary electrical connections between the components of the solar power unit. Mount the solar panels and enclosure; all necessary hardware for mounting is incidental. Connect solar panels to the solar power unit according to the manufacturer's instructions.

The solar power unit shall be activated and left on for 30 consecutive days. During this period, all materials and components of the solar power unit shall operate as specified and without any failure. In event of a failure, the project engineer will suspend the 30-day test until the failures are corrected, at which time the test will resume.

D Measurement

The department will measure Installing 2 Solar Power Panels on one Bracket as each individual assembly acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.02	Installing 2 Solar Power Panels on one Bracket	Each

Payment for Installing 2 Solar Power Panels on one Bracket is full compensation for installing the solar power unit on a pole, for making all connections, and for all testing.

28. Installing Wavetronix Click 200 Module, Item SPV.0060.03.

Replace entire article language with the following:

A Description

This special provision describes installing State Furnished Wavetronix Click 200 Module as shown on the plans and as hereinafter provided.

B Materials

The units will consist of Wavetronix Click 200 Module. DIN racks, terminal block, wiring, and stainless steel bolts. Provide any other mounting or wiring hardware not furnished by the State. The Wavetronix Click 200 Module units can be picked up at the Green Bay, WI DOT – Contact Randy Asman at 920-492-7719. Notify Jane Oldenburg, Wisconsin DOT, Travel Survey Shop 608-245-2679 three weeks prior to pickup, so items can be placed at the pickup location.

C Construction

Install the Wavetronix Click 200 Module in the cabinet on to the DIN rail as shown on the plans.

Connect the Wavetronix Click 200 Module to the Wavetronix Power Module and to the Wavetronix unit as shown on the plan. The power is wired to the bottom of the Click 200 Module.

After the Wavetronix Click 200 Module is installed and the Wavetronix cable is connected to the Wavetronix unit, test to see that all of the traffic lanes are being collected correctly.

D Measurement

The department will measure Install Wavetronix Click 200 Module, as each Wavetronix Click 200 Module is acceptably installed and operational.

E Payment.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Installing Wavetronix Click 200 Module	EACH

The payment is full compensation for installing antennas and connections; for furnishing and installing mast brackets and mounting hardware; for testing; and for all labor, tools, equipment, transportation, and incidentals necessary to complete the work.

29. Installing Wavetronix Detector Module, Item SPV.0060.04.

A Description

This special provision describes installing, testing, and completing the calibration of the state-furnished Wavetronix Detector (HD 126) Module, mounting bracket and stainless steel hose clamps as shown on the Plans and as hereinafter provided.

B Materials

The department will furnish the Wavetronix Detector (HD 126) Module, Wavetronix Cable, Mounting Bracket, and stainless steel hose clamps from the Project ID. The department will provide a Wavetronix Service Report form for the completion of the calibration requirements. The Wavetronix Detector (HD126) Module, mounting bracket and stainless steel hose clamps can be picked up at the Green Bay, WI DOT- Contact Randy Asman at 920-492-7719. Notify Jane Oldenburg, Wisconsin DOT, Travel Survey Shop 608-245-2679 three weeks prior to pickup, so items can be placed at the pickup location.

C Construction

Attach the Wavetronix Detector (HD126) Module to a 30 ft. Type 3 pole utilizing the Wavetronix Mounting Bracket and stainless steel hose clamps. Do not use permanent straps. The bracket may need to be moved if it the Detector goes out of alignment. Use manual installation height guidelines located at website: http://www.wavetronix.com/support/

Connect the Wavetronix 40 ft. Detector cable to the Wavetronix Detector (HD125) Module mounted up on the pole, put drip loop outside the pole and then snake the cable down through the pole (leave slack in cable so the unit can be moved up or down and do not cut the cable) and make the appropriate cable connections to the Click 200 Surge Arrestor inside the pole-mounted cabinet.

The Contractor shall demonstrate the functionality and operational accuracy of the Wavetronix Detector (HD126) Module. The contractor using a laptop computer running Windows and the Wavetronix Setup and Calibration software program SSM HD and manual located website: http://www .Wavetronix .com / support/ to connect to the Wavetronix unit and verify the detector is properly aimed. Under the Sensor Setting heading, enter the last four digits of the Wavetronix number. Description is "USH 41, N. OF USH 41-141. Location is 420256521111. Follow the manual for the remaining setup. Use the software, run the "lane auto-configuration" to detect all traffic lanes. All lanes must be open to free-flowing traffic to complete this process.

The Wavetronix Detector (HD126) Module shall be setup to collect 4-bin length data. Bin length (ft) shall be 0-7, 7-19, 19-33, 33+. Collect speed into 15 bins starting with 20-25, 25-30 and 5 mph increments until 85 +.

In the "lane verification" mode of the software, set display so speed is indicated on each vehicle crossing the screen. The Wavetronix Detector unit needs to be adjusted so that speed is indicated for 98 %(normal accuracy) of vehicles with a minimum of 95% accuracy, per lane. Vehicles not being detected for speed, display "no speed (blank)". Record the data on the Wavetronix Service Report Form.

In the class 1 (C1) display mode, vehicles detected must be 90% accurate, per lane. Record the data on the Wavetronix Service Report Form.

A 15-minute volume count shall be taken. The accuracy between the display and the manual count must be 98%-99% typical with a minimum of 95% accuracy per lane. Recommend counting each lane in one direction at once. Record the data on the Wavetronix Service Report Form.

A field test shall be successfully conducted by (insert Installer's name) of (insert Installation Contractor Name) . A signed and dated Wavetronix Service Report Form, indicating the results of accuracy, speed, and class tests, shall be provided to Jane Oldenburg, Wisconsin DOT, Travel Survey Shop, 3633 Pierstorff St., Madison, WI 53704, 608-245-2679. You may scan and email document to: jane.oldenburg@dot.wi.gov or fax to 608-246-5401.
The Travel Survey Shop will verify the data after all of the construction work, wire and cable connections are made, the Wavetronix Service Report calibration form is complete, and the detector is declared operational by the contractor. The test is designed to demonstrate that Wavetronix Detector (HD 126) Module operates correctly, and that all functions are in conformance with these Specifications.

Following successful completion of the above tests, the Wavetronix Detector (HD 126) Module shall be activated and left on for 30 consecutive days. During this period, all materials and components of the Wavetronix Detector (HD 126) Module shall operate as specified and without any failure.

In the event any component of the Wavetronix (HD 126) Detector Module system malfunctions or operates below the level specified, the test period will be terminated, and the contractor shall be required to determine the problem, repair the problem and report the findings to the Travel Survey Shop within 7 to 10 calendar days of notification. Upon correction of the problems, to the satisfaction of the Travel Survey Shop, a new 30-day test period will be started.

D Measurement

The department will pay for installing the Wavetronix Detector (HD 126) Module, Wavetronix Cable, Wavetronix Mounting bracket, and a completed Wavetronix Service Report after they are acceptably installed and operational.

WAVETRONIX SERVICE REPORT

Date:

REPORT TYPE	STATION NAME	STATION ID.
☐ CALIBRATION ☐ SERVICE		
WORK ORDER:		

SPEED CALIBRATION (NUMBER OF VEHICLES WITH "NO SPEED") ACCURACY REQUIREMENT: 98% NORMAL, 95% MIN.			CLASS CALIBRATION ACCURACY REQUIREMENT: 90%			
LANE #	SPEED CALIBRATION # NO SPEED	SPEED CALIBRATION TOTAL SAMPLE #	LANE #	CLASS CALIBRATION #WRONG CLASS	CLASS CALIBRATION TOTAL SAMPLE #	LENGTH ADJUSTMENT FT.
Lane 1			Lane 1			
Lane 2			Lane 2			
Lane 3			Lane 3			
Lane 4			Lane 4			
Lane 5			Lane 5			
Lane 6			Lane 6			
Lane 7			Lane 7			
Lane 8			Lane 8			

VOLUME CALIBRATION MANUAL VS WAVETRONIX 15 MINUTE COUNT ACCURACY REQUIREMENT: 98% TYPICAL (95% MINIMUM) *	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5	Lane 6	Lane 7	Lane 8
Manual								
Wavetronix (WTX)								
Accuracy Percentage (%) (Manual ÷ WTX x 100 = %)								

*May use "per direction" totals for obstructed views. Accuracy Requirement: 98% (95% minimum)

EQUIPMENT NO: WAVETRONIX UNIT (LAST 4 DIGITS)#				MODEM NO:(LAST 6 DIGITS) #				
	LANE 1	LANE 2	LANE 3	LANE 4	LANE 5	LANE 6	LANE 7	LANE 8
LANE WIDTH								

COMMENTS/WORK COMPLETED:	
COMPLETED BY: (COMPANY & NAME)	DATE:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.04	Installing Wavetronix Detector Module	EACH

The payment is full compensation for installing the Wavetronix Detector (HD 125) Module, Wavetronix Cable and Wavetronix Mounting Bracket; for making all cable connections; for all testing and completion of the Wavetronix Service Report form; and for all labor, tools, equipment, transportation, and incidentals necessary to complete this item of work.

30. Installing Concrete Maintenance Platform, Item SPV.0060.05.

Replace entire article language with the following:

A Description
This special provision describes installing a concrete maintenance platform at an automatic traffic recorder station.

B Materials
The Contractor may furnish a pre-cast concrete slab, or furnish materials conforming to the following: For concrete, provide materials in accordance with subsection 602.2 of the standard specifications. For forms, provide materials in accordance with subsection 602.3.2.2 of the standard specifications.

C Construction
Install concrete maintenance platform as specified in the plan details.

Before installation of the pre-cast concrete slab, or concrete maintenance platform, the earth shall be leveled and compacted around the type 2 concrete or helix pole base.

Earth shall be removed and leveled on the side of the pole opposite the roadway. (When you are standing on the platform looking into the cabinet you are also looking straight ahead at the roadway.)

If pouring a concrete maintenance platform, 2 x 4 lumber forms shall be constructed and laid in the area that the earth was removed from. The forms shall be leveled and squared before the concrete is poured.

Place and finish the platform or concrete in accordance to subsection 602.3.2.3 (1) of the standard specifications.

D Measurement
The department will measure concrete maintenance platform as each individual concrete maintenance platform completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.05	Installing Concrete Maintenance Platform	Each

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

31. Grading, Shaping & Finishing for ATR Site, Item SPV.0060.06.

Replace entire article language with the following:

A Description
This special provision describes the excavating, filling, grading, shaping, compacting, and finishing necessary to accommodate ATR Site, as shown on the plans, in accordance to the pertinent requirements of the standard specifications, and as hereinafter provided.

B Materials
The contractor will furnish the topsoil, fertilizer, seed, and mulch for placement around the base and maintenance platform.

C Construction
Construct embankment slopes as shown on the plans.

Properly dispose of all surplus and unsuitable material in accordance to 205.3.12 of the standard specifications.

D Measurement
The department will measure Grading, Shaping & Finishing for ATR Site as each individual terminal acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.06	Grading, Shaping & Finishing for ATR Site	Each

Payment is full compensation for all excavating, grading, shaping and compacting; furnishing and placing fill, topsoil, fertilizer, seed, and mulch; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

32. HMA Pavement 4 LT 58-28 S 3.0% Va Regression Special, Item SPV.0195.01; HMA Pavement 4 MT 58-28 S 3.0% Va Regression Special, Item SPV.0195.02.

A Description
This special provision describes providing HMA pavement including the binder under a combined bid item along with air void regression as described here within.

Define gradations, traffic levels, and asphaltic binder designation levels as follows:

GRADATIONS (NMAS)		TRAFFIC VOLUME		DESIGNATION LEVEL	
1	37.5 mm	LT	Low	S	Standard

2	25.0 mm	MT	Medium	H	Heavy
3	19.0 mm	HT	High	V	Very Heavy
4	12.5 mm			E	Extremely Heavy
5	9.5 mm				
6	4.75 mm				

Construct HMA pavement of the type the bid item indicates encoded as follows:

3 LT 58-34 S

Gradation Traffic Binder Designation

Conform to standard spec 460 as modified in this special provision.

B Materials

Add the following to standard spec 460.2:

Design mixtures conforming to tables 460-1 and 460-2 to 4.0% air voids to establish the aggregate structure.

Determine the target JMF Asphalt Binder content for production from the mix design data corresponding to 3.0% air voids (97% Gmm) target at Ndes. The air voids at the design number of gyrations, (Ndes) shall be achieved by the addition of liquid asphalt meeting the contract specifications.

Production shall conform to VMA and Dust to Binder Ratio requirements of table 460-1 and 460-2.

Replace standard spec table 460-1 with the following to change the footnotes to refer to LT and MT mixes instead of E-0.3 and E-3 mixes:

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENTS PASSING DESIGNATED SIEVES						
	NOMINAL SIZE						
	37.5 mm (#1)	25.0 mm (#2)	19.0 mm (#3)	12.5 mm (#4)	9.5 mm (#5)	SMA 12.5 mm (#4)	SMA 9.5 mm (#5)
50.0-mm	100						
37.5-mm	90 –100	100					
25.0-mm	90 max	90 -100	100				
19.0-mm	___	90 max	90 -100	100		100	
12.5-mm	___	___	90 max	90 -100	100	90 - 97	100
9.5-mm	___	___	___	90 max	90 -100	58 - 72	90 - 100
4.75-mm	___	___	___	___	90 max	25 - 35	35 - 45
2.36-mm	15 – 41	19 - 45	23 - 49	28 - 58	20 - 65	15 - 25	18 - 28
75-µm	0 – 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	8.0 - 12.0	10.0 - 14.0
% MINIMUM VMA	11.0	12.0	13.0	14.0[1]	15.0[2]	16.0	17.0

[1] 14.5 for LT and MT mixes

[2] 15.5 for LT and MT mixes

Replace standard spec table 460-2 with the following to switch from E mixes to LT, MT, and HT mixes; and change the tensile strength ratio requirements to 0.75 without antistripping additive and 0.80 with antistripping additive:

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	LT	MT	HT	SMA
ESALs x 106 (20 yr design life)	<2.0	2 - <8	>8	> 5 mil
LA Wear (AASHTO T96) 100 revolutions(max % loss) 500 revolutions(max % loss)	 13 50	 13 45	 13 45	 13 40
Soundness (AASHTO T104) (sodium sulfate, max % loss)	12	12	12	12
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	18	18	18	18
Fractured Faces (ASTM 5821) (one face/2 face, % by count)	65/ __	75 / 60	98 / 90	100/90
Flat & Elongated (ASTM D4791) (max %, by weight)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	20 (3:1 ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40	43	45	45
Sand Equivalency (AASHTO T176, min)	40	40	45	50
Gyratory Compaction Gyrations for Nini Gyrations for Ndes Gyrations for Nmax	 6 40 60	 7 75 115	 8 100 160	 8 65 160
Air Voids, %Va (%Gmm Ndes)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)
% Gmm Nini	<= 91.5[1]	<= 89.0[1]	<= 89.0	___
% Gmm Nmax	<= 98.0	<= 98.0	<= 98.0	___
Dust to Binder Ratio[2] (% passing 0.075/Pbe)	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	68 - 80[4] [5]	65 – 75[3] [4]	65 - 75[3] [4]	70 - 80
Tensile Strength Ratio (TSR) (ASTM 4867) no antistripping additive with antistripping additive	 0.75 0.80	 0.75 0.80	 0.75 0.80	 0.75 0.80
Draindown at Production Temperature (%)	___	___	___	0.30

[1] The percent maximum density at initial compaction is only a guideline.

[2] For a gradation that passes below the boundaries of the caution zone (ref. AASHTO MP3), the dust to binder ratio limits are 0.6 - 1.6.

[3] For #5 (9.5mm) and #4 (12.5 mm) nominal maximum size mixtures, the specified VFB range is 70 - 76%.

[4] For #2 (25.0mm) nominal maximum size mixes, the specified VFB lower limit is 67%.

[5] For #1 (37.5mm) nominal maximum size mixes, the specified VFB lower limit is 67%.

Replace standard spec 460.2.8.2.1.7 paragraph six with the following to base payment adjustment on the combined bid item unit price:

(6) The department will reduce payment for nonconforming QMP HMA mixtures, starting from the stop point to the point when the running average is back inside the warning limits, as follows:

PAYMENT FOR MIXTURE[1] [2]

ITEM	PRODUCED WITHIN WARNING BANDS	PRODUCED OUTSIDE JMF LIMITS
Gradation	90%	75%
Asphalt Content	85%	75%
Air Voids	70%	50%
VMA	90%	75%

[1] For projects or plants where the total production of each mixture design requires less than 4 tests refer to CMM 8-36.

[2] Payment is in percent of the contract unit price for the HMA Pavement bid item. The department will reduce pay based on the nonconforming property with lowest percent pay. The department will administer pay reduction under the Nonconforming QMP HMA Mixture administrative item.

Replace standard spec 465.2 with the following:

(1) Under the Asphaltic Surface, Asphaltic Surface Detours, and Asphaltic Surface Patching bid items; submit a mix design. Furnish asphaltic mixture meeting the requirements specified for either type LT or MT mix under 460.2; except the engineer will not require the contractor to conform to the quality management program specified under 460.2.8.

(2) Under the other 465 bid items, the contractor need not submit a mix design. Furnish aggregates mixed with a type AC asphaltic material. Use coarse and fine mineral aggregates uniformly coated and mixed with the asphaltic material in an engineer-approved mixing plant. The contractor may include reclaimed asphaltic pavement materials in the mixture.

C Construction

Replace standard spec table 460-3 with the following to switch from E mixes to LT, MT, and HT mixes and to increase field density requirements by 1.5% when operating under this HMA Pavement 3.0% Va Regression SPV:

TABLE 460-3 MINIMUM REQUIRED DENSITY[1]

LOCATION	LAYER	PERCENT OF TARGET MAXIMUM DENSITY		
		MIXTURE TYPE		
		LT AND MT	HT	SMA[5]
TRAFFIC LANES[2]	LOWER	93.0[3]	93.0[4]	____
	UPPER	93.0	93.0	____
SIDE ROADS, CROSSOVERS, TURN LANES, & RAMPS	LOWER	93.0[3]	93.0[4]	____
	UPPER	93.0	93.0	____
SHOULDERS & APPURTENANCES	LOWER	91.0	91.0	____
	UPPER	92.0	92.0	____

[1] The table values are for average lot density. If any individual density test result falls more than 3.0 percent below the minimum required target maximum density, the engineer may investigate the acceptability of that material.

[2] Includes parking lanes as determined by the engineer.

[3] Minimum reduced by 2.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

[4] Minimum reduced by 1.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

[5] The minimum required densities for SMA mixtures are determined according to CMM 8-15.

Delete standard spec 460.2.8.2.1.5(1) and replace with the following:

(1) Conform to the following control limits for the JMF and warning limits based on a running average of the last 4 data points:

ITEM	JMF LIMITS	WARNING LIMITS
Percent passing given sieve:		
37.5-mm	+/- 6.0	+/- 4.5
25.0-mm	+/- 6.0	+/- 4.5
19.0-mm	+/- 5.5	+/- 4.0
12.5-mm	+/- 5.5	+/- 4.0
9.5-mm	+/- 5.5	+/- 4.0
2.36-mm	+/- 5.0	+/- 4.0
75-µm	+/- 2.0	+/- 1.5
Asphaltic content in percent	- 0.3	- 0.2
Air voids in percent	+ 1.3/-1.0	+ 1.0/-0.7
VMA in percent[1]	- 0.5	- 0.2

[1] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in table 460-1.

Delete standard spec 460.2.8.3.1.6(1) and replace with the following:

(1) The engineer will provide test results to the contractor within 2 mixture-production days after obtaining the sample. The quality of the product is acceptably verified if it meets the following limits:

1. - Va is within a range of 2.0 to 4.3 percent.
2. - VMA is within minus 0.5 of the minimum requirement for the mix design nominal maximum aggregate size.

D Measurement

The department will measure HMA Pavement (type) 3.0% Va Regression Special conforming to standard spec 460.4.

E Payment

Add the following to standard spec 460.5 to switch from E mixes to LT, MT, and HT mixes; to combine the pavement and binder bid items; and to specify a pay reduction for pavement placed with nonconforming binder:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.01	HMA Pavement 4 LT 58-28 S 3.0% Va Regression Special	TON
SPV.0195.02	HMA Pavement 4 MT 58-28 S 3.0% Va Regression Special	TON

Payment is full compensation for providing HMA Pavement including asphaltic binder.

In addition to any pay adjustment under standard spec 460.2.8.2.1.7(6), the department will adjust pay for nonconforming binder under the Nonconforming QMP Asphaltic Material administrative item.

The department will deduct 25 percent of the contract unit price of the HMA Pavement bid item per ton of pavement placed with nonconforming PG binder the engineer allows to remain in place.

Delete standard spec 460.5.2.3(1) and replace with the following:

(1)If the lot density is greater than the minimum specified in table 460-3 and all individual air voids test results for that mixture placed during the same day are within 2.5 - 4.0 percent, the department will adjust pay for that lot as follows:

INCENTIVE PAY ADJUSTMENT FOR HMA PAVEMENT DENSITY

PERCENT LOT DENSITY ABOVE SPECIFIED MINIMUM	PAY ADJUSTMENT PER TON[1]
From -0.4 to 1.0 inclusive	$0
From 1.1 to 1.8 inclusive	$0.40
More than 1.8	$0.80

[1] The department will prorate the pay adjustment for a partial lot.

APPENDIX A: Test Procedures for HMA Pavement 3% Va Regression SPV

Delete CMM 8-15.10.1 Target maximum Density and replace with the following:

For pavement density determination, the target value in lb/ft^3 (PCF) is established using the mixture maximum specific gravity (G_{mm}). For the first day of a paving mixture design, the target maximum density will be the G_{mm} value corresponding to 3.0% air voids on the mix design multiplied by 62.24 lb/ft^3 (PCF). The target maximum density for all other days will be the four G_{mm} test running average value from the end of the previous days' production multiplied by 62.24 lb/ft^3 (PCF). If four tests have not been completed by the end of the first day, the average of the completed G_{mm} test values multiplied by 62.24 lb/ft^3 (PCF) will be used until a running average of 4 is established.

The following data must be recorded for each test on the worksheet for MRS entry

- Density standard and moisture standard
- Density count, moisture counts or contact and air gap counts
- Total wet density or bulk density
- % Compaction
- Manufacturer name and serial number
- Operators name
- Mix design number (WisDOT 250 ID) and daily Target max density target number (G_{mm} x 62.24 lb/ft^3)

Delete CMM 8-15.15.2.1 Examples of Computing Incentive/Disincentive for Density and replace with the following:

Example 1 (nominal tonnage lots):

HMA Pavement, Type 4 HT 58-34 S   Lot 2R
Total HMA Tonnage for Project: 20,000 Tons
% Density of Target Maximum (G_{mm}) = 90.4%
Required % Density of the G_{mm} = 93.0%
Lot Tonnage = 750
Contract Price per Ton = $26.50

From Table 460-3 of this SPV.0195 and 460.5.2.2:

- Amount below Specified Minimum (Table 460-3 of this SPV) = 93.0 - 90.4 = 2.6
- Payment Factor (SS 460.5.2.2) = 70% (30% Credit to the Department)
- Credit to the Department (HMA Mix) = 30% x $26.50/Ton x 750 Tons = $5,962.50

If this were the only failing lot on the project, the final quantities on the estimate would be as shown in Table 3.

Example 2 (nominal tonnage lots):

HMA Pavement, Type 4 HT 58-34 S   Lot 3R
% Density of Target Maximum (G_{mm}) =   94.6%
Required % Density of the G_{mm} =   93.0%
Lot Tonnage =   750
Air Voids for day = 2.9-3.2%
Payment Factor = 94.6 – 93.0 (Table 460-3)= 1.6
Adjusted Unit Price = $0.40/Ton x 750 Tons (SS 460.5.2.3(1) of this SPV)= $300

If this is the only lot with a higher density than required on the project, the final quantities on the estimate would be as shown in Table 3 below:

Table 3 Estimate for Pay Adjustment for Incentive/Disincentive Density

Bid Item	Description	Unit	Cost/Unit	Total Quantity	Total
460.7244	HMA Type 4 HT 58-34 S	TON	$26.50	20,000	$530,000.00
460.2000	Incentive Density HMA Pavement	DOL	$1.00	300.00	$300.00
804.2005	Disincentive Density HMA Pavement	DOL	$1.00	-(5,962.5)	-($5,962.50)

Project Information for Examples 3 and 4 (daily tonnage lots & linear sublots):

A project begins at station 56+78 and ends at station 234+25. It is a 2-lane roadway with a shoulder on each side. The traffic lanes are 12 feet wide and the shoulders are 3 feet wide. Shown in the figure below is the eastbound traffic lane and shoulder for the length of the project. The contractor will be paving the shoulder integrally with the traffic lane. The pavement is a 2-inch overlay and the same HMA mix type is used on the entire project. The HMA mixture includes 5.5% asphaltic material. The bid price for the HMA pavement item is $41.75 per ton. The specified target density for the traffic lane is 93.0%. The target density for the shoulder is 92.0%.

Day 1:

The contractor begins paving at station 56+78 and ends the day at station 102+97, a total length of 4,619 feet. A quantity of 677 tons was placed on the eastbound traffic lane, and 169 tons was placed on the integral shoulder.

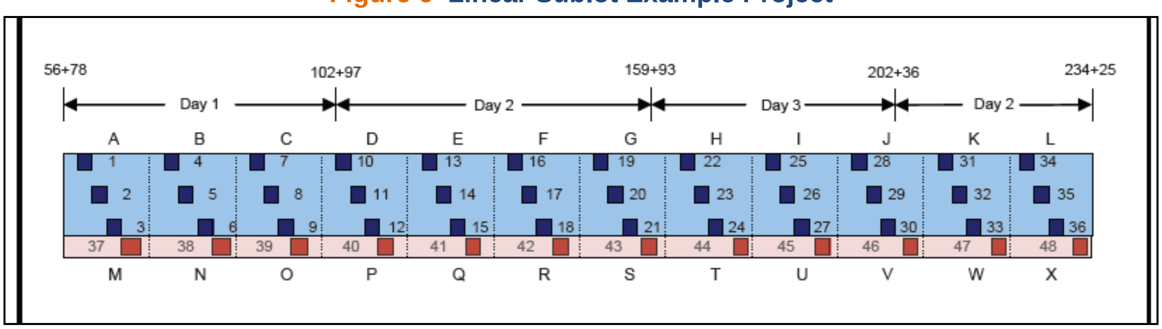
Day 2:

The contractor begins paving at station 102+97. Due to traffic staging requirements, the contractor stops paving at station 159+93, 5,696 feet, and begins paving again at station 202+36. They end the day at the end of the project, station 234+25, 3,189 additional feet. A quantity of 1303 tons was paved on the eastbound traffic lane, and 326 tons was placed on the integral shoulder.

Day 3:

The contractor begins paving at station 159+93 and ends the day at station 202+36, 4,243 feet. A total of 622 tons was placed on the eastbound traffic lane, and 156 tons was placed on the integral shoulder.

Figure 6 Linear Sublot Example Project



Example 3 (daily tonnage lot & linear sublots):

Use the example project information and the following test results from day 1. All of the day's air voids tests were acceptable. (Density Calculated off the PCF value, sublot is the average of the density %)

Sublot ID	Test ID	% Density	Sublot Avg % Density
A 56+78 to 71+78	1	93.8	94.1
	2	94.2	
	3	94.4	
B 71+78 to 86+78	4	94.1	94.5
	5	94.7	
	6	94.6	
C 86+78 to 101+78	7	93.6	94.1
	8	94.5	
	9	94.3	
M	37	93.2	93.2
N	38	94.2	94.2
O	39	93.0	93.0

3. Compute the average density for each traffic lane sublot and each shoulder sublot.

   SOLUTION: See the results in the table above.

2. Compute the density incentive or disincentive for the day's paving.

   SOLUTION:
   - Traffic Lane:

   The specified target density for the traffic lane is 93.0%. All of the sublot averages were no more than one percent below the target density, so all of the day's traffic lane test results are used to compute the daily lot density and the lot incentive pay.
   - Lot density = (93.8 + 94.2 + 94.4 + 94.1 + 94.7+ 94.6+ 93.6 + 94.5 + 94.3) / 9 tests = 94.2%

   According to 460.5.2.3(1) of this SPV, this lot density is eligible for incentive pay of $0.40 per ton. 677 tons of HMA was placed on the traffic lane on day 1, therefore the contractor receives $270.80 density incentive for the day 1 traffic lane lot. This is for all of sublot A, B & C and the 119' in sublot D that did not reach the random number.
   - Shoulder:

   The minimum required density is 92.0%. All of the sublot averages were acceptable, so all of the day's shoulder tests are used to compute the shoulder lot density. The average of all the shoulder tests is 93.5%. According to the specification, this lot density is eligible for incentive pay of $0.40 per ton. 169 tons of HMA was placed on the shoulder on day 1, therefore the contractor receives $67.60 density incentive for the day 1 shoulder lot.

Example 4 (daily tonnage lot & linear sublots):

Use the example project information and the following test results from day 3. All of the day's air voids tests were acceptable.

Sublot ID	Test ID	% Density	Sublot Avg % Density
H 161+78 to 176+78	22	91.8	91.8
	23	91.9	
	24	91.7	
I 176+78 to 191+78	25	95.1	94.9
	26	94.8	
	27	94.9	
J 191+78 to 202+36	28	92.0	91.9
	29	91.8	
	30	91.9	
T	44	91.9	91.9
U	45	94.4	94.4
V	46	92.1	92.1

Compute the density incentive or disincentive for the day's paving.

SOLUTION:

1. Traffic Lane:

   According to the specification, a minimum density of 93.0% is required for the traffic lane. When verifying whether or not the sublot densities meet the requirements, it is found that sublot H and sublot J have average densities that are more than one percent below the required minimum. According to the specification, the quantity of HMA pavement placed this day in each of these sublots is subject to disincentive, and the day's test results within these sublots are not included when computing the incentive for the remainder of the lot.

2. Sublot H:

   Day 3 began inside the limits of sublot G, at station 159+93, but beyond its random test location. The tests for sublot G represent material placed on day 2. The tests in sublot H represent the day 3 material from station 159+93 to 176+78, a total length of 1685 feet long (185' from sublot G, paved on day 3, and 1500' in sublot H) by 12 feet wide.

   Quantity represented by tests in sublot H =

$$\frac{(1685' \times 12')}{(9\ sf/sy)} \times \frac{(2\ in. \times 110\ lb/sy/in)}{(2000\ lb/ton)} = 247\ tons$$

According to the disincentive pay table in the specification, the quantities are subject to a pay factor equal to 95 percent of the contract price. This is equivalent to a 5 percent pay reduction.

Disincentive Density HMA Pavement = 247 tons x ($41.75/ton x 0.05) = -$515.61

3. Sublot I:

   Quantity represented by tests in sublot I =

$$\frac{(1500' \times 12')}{(9\ sf/sy)} \times \frac{(2\ in. \times 110\ lb/sy/in)}{(2000\ lb/ton)} = 220\ tons$$

   According to the incentive pay table, 220 tons of the HMA pavement item are eligible for an incentive of $0.80 per ton, or a total of $176.00.

4. Sublot J:

   Day 3 ended within the limits of sublot J, beyond its random test location. The day 3 quantity placed within sublot J, from station 191+78 to 202+36, at length of 1,058 feet, is represented by its tests. The day 2 quantity placed toward the end of sublot J is represented by the tests taken on day 2 within sublot K.

   Quantity represented by tests in sublot J=

$$\frac{(1058' \times 12')}{(9\ sf/sy)} \times \frac{(2\ in. \times 110\ lb/sy/in)}{(2000\ lb/ton)} = 155\ tons$$

   According to the disincentive pay table in the specification, the quantities are subject to a pay factor equal to 95 percent of the contract price. This is equivalent to a 5 percent pay reduction.

   Disincentive Density HMA Pavement = 155 tons x ($41.75/ton x 0.05) = -$323.56

5. Shoulder:

   All of the day 3 shoulder sublots have acceptable density values, so we use all of the results to compute the day's shoulder lot density.

   Day 3 shoulder lot density = (91.9 + 94.4 + 92.1) / 3 tests = 92.8%

   The lot density of 92.8% is not more than 1.0% above the required minimum of 92.0%, therefore the day 3 shoulder pavement does not receive any density incentive.

Day 3 Incentive/Disincentive Summary:

Incentive Density HMA Pavement (Lot I) = $176.00

Disincentive Density HMA Pavement (Lot H) = -$515.61

Disincentive Density HMA Pavement (Lot J) = -$323.56

Delete CMM 8-36.6.1 QC Tests and replace with the following:

QC testing must be completed, and data posted, on the day the sample was taken or as approved by the engineer.

For administration of projects requiring only one, two, or three single tests per mix design, apply the following tolerances table for mixture evaluation:

- Va = 2.0 – 5.0%
- VMA = - 1.3 from required minimums for Table 460-1 as revised in STSP 460-025
- AC = within -0.1of JMF Pb after regression

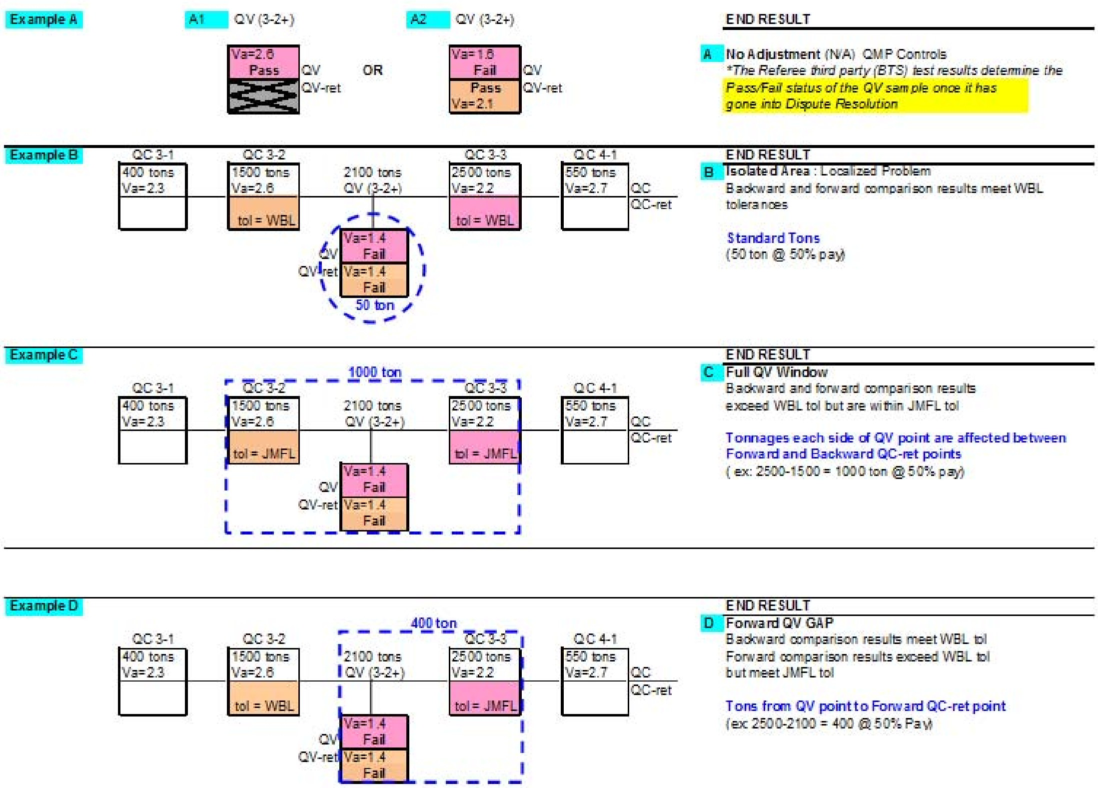
Delete CMM 8-36 Figure 8 HMA Verification Dispute Resolution Scenarios and replace with the following:

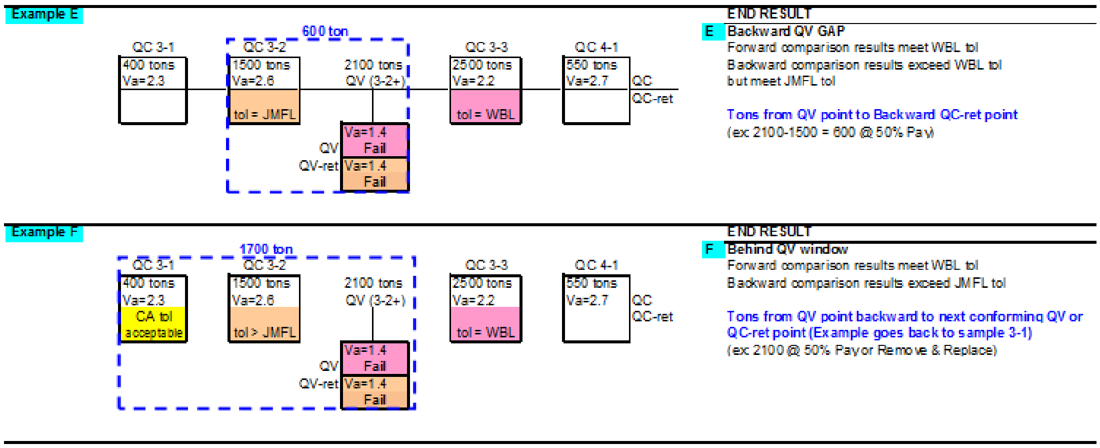
HMA Verification Dispute Resolution Scenario Examples

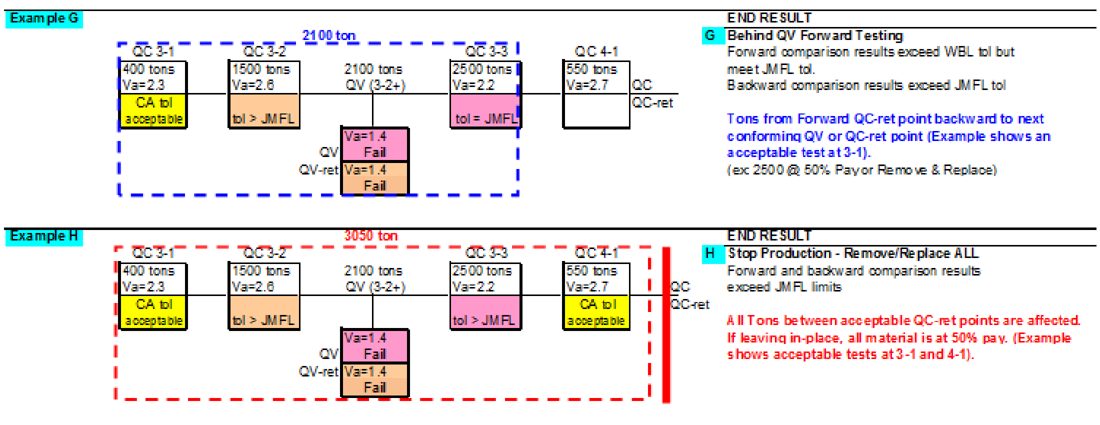
NOTE: *The following diagrams (A-H) represent standard scenarios. Specific project detail and troubleshooting activities may present cause for adjustment to this guidance*

= Testing performed by the Region
= Testing performed by the Referee third party (BTS)
= QC random production sample

Test Values	*Tolerance between QC & QC-ret*	*Category*
Gmm	*0.00-0.015*	*=WBL*
Gmm	*0.016-0.020*	*=JMFL*
Gmm	*> 0.020*	*> JMFL*
Gmb	*0.00-0.020*	*=WBL*
Gmb	*0.021-0.025*	*=JMFL*
Gmb	*> 0.025*	*> JMFL*







Delete CMM 8-66.2.2(3) and replace with the following:

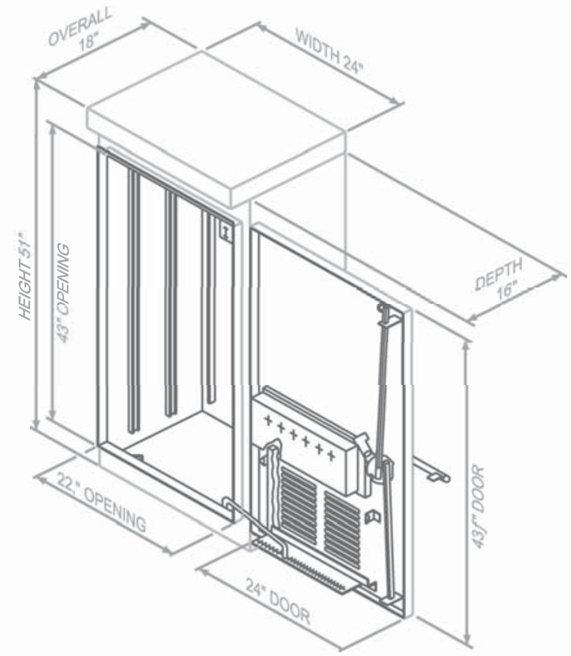
3. Determine trial asphalt binder contents (estimated by experience or by calculation based on aggregate properties of trial blends).
   - Compact gyratory specimens using a minimum of 3 asphalt binder contents (0.5% increments) and covering a range to include the estimated optimum design binder content as well as 3.0% air voids. Use N_{des} for compaction effort.
   - Compare trial binder content results. The design binder content (by either graphing or interpolating the trial data results) is determined as that meeting requirements stated in standard spec 460. The department will determine the optimum binder content corresponding to 3.0% air voids by linear regression of the trial gyratory specimens.

Schedule of Items
Attached, dated June 02, 2016, are the revised Schedule of Items Pages 1 – 9.

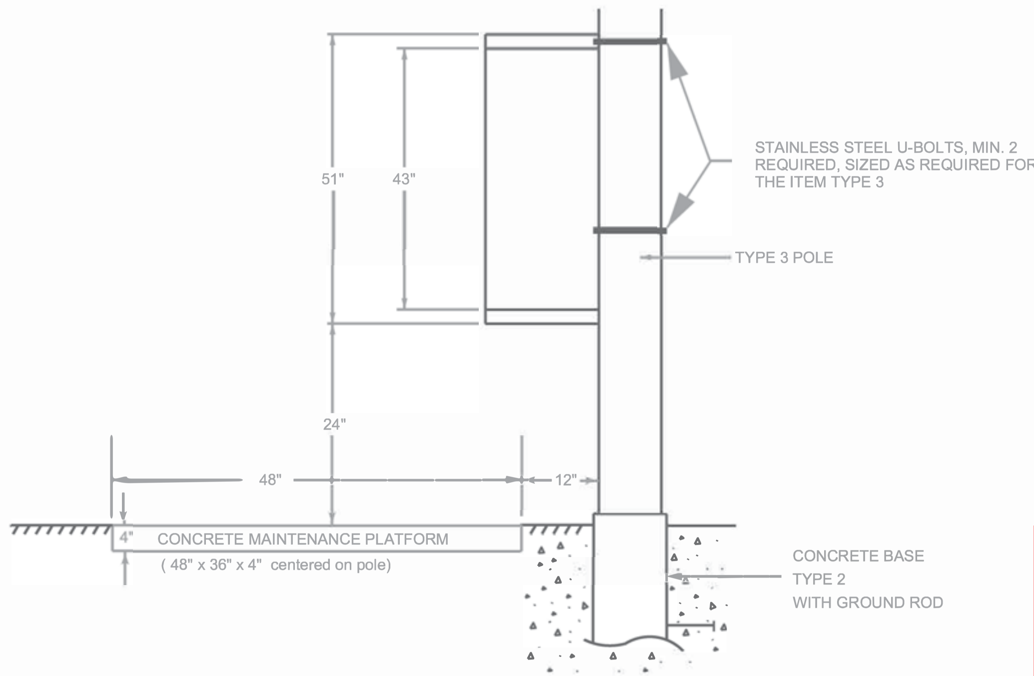
Plan Sheets
The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:
Revised: 53
Added: 44A, 44B, and 44C

END OF ADDENDUM

2



CCTV POLE-MOUNTED CABINET
USED IN SOLAR INSTALLATION



Addendum No. 01
ID 1150-60-71
Added Sheet 44A
June 2, 2016

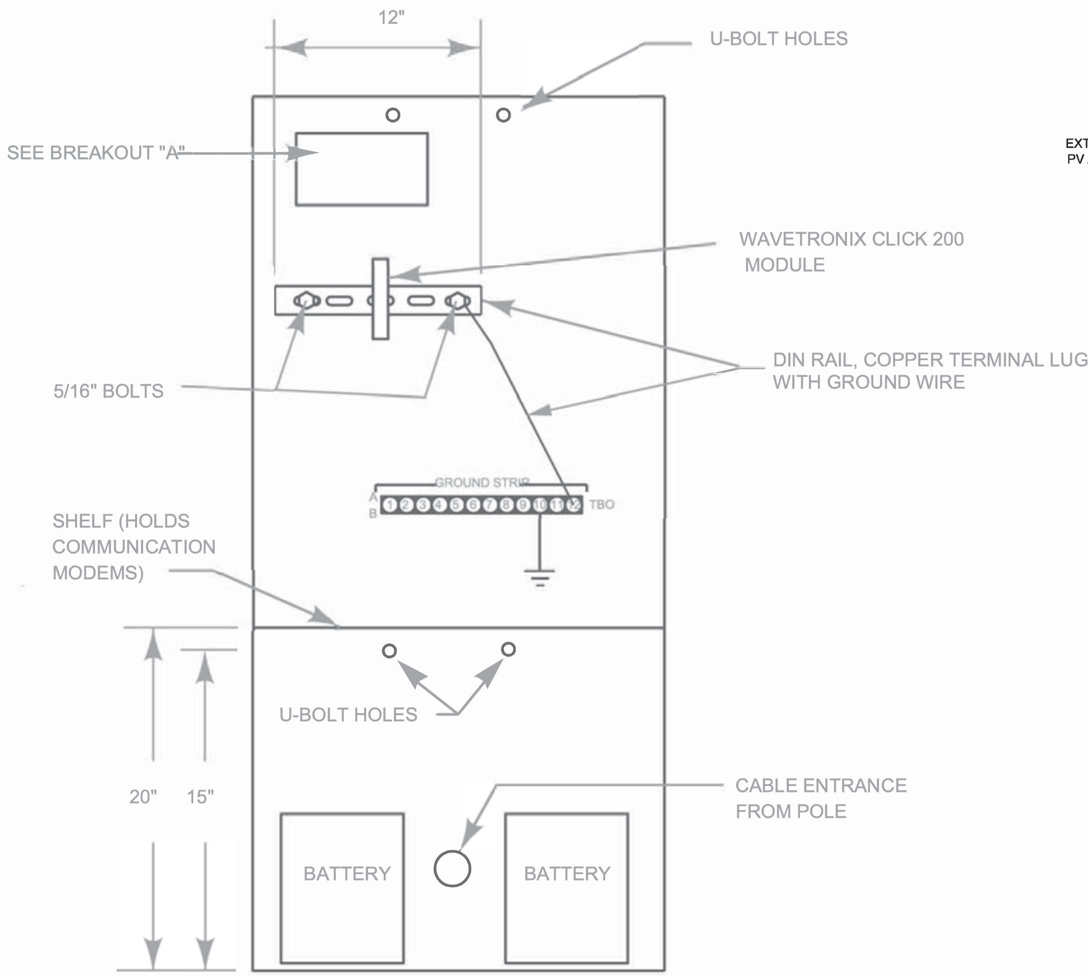
DESIGNED BY WISDOT CO
SHEET 1 OF 2

CCTV POLE-MOUNTED CABINET

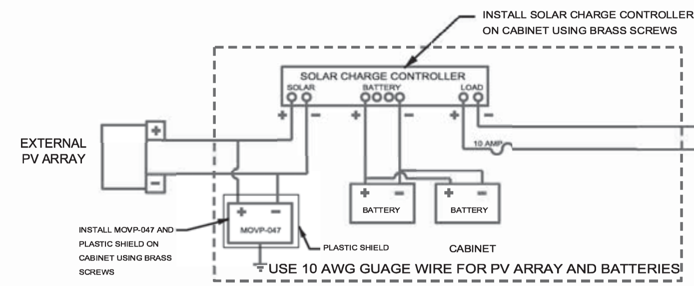
ATR - WAVETRONIX

PROJECT NO: 1150-60-71	HWY: USH 41	COUNTY: OCONTO	INSTALLATION OF ATR CABINET/WAVETRONIX ATR 42-0256	SHEET 44A

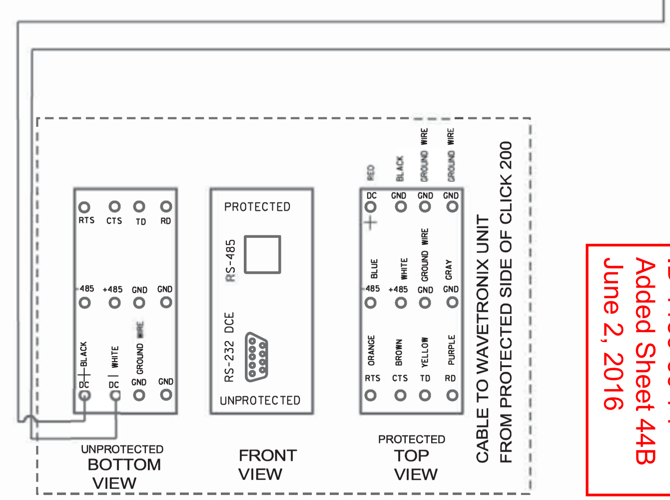
2



FRONT VIEW/LAYOUT
(NOT TO SCALE)



BREAKOUT "A" WIRING DIAGRAM
(NOT TO SCALE)



WAVETRONIX CLICK 200 MODULE WIRING DIAGRAM
(NOT TO SCALE)

Addendum No. 01
ID 1150-60-71
Added Sheet 44B
June 2, 2016

CCTV POLE-MOUNTED CABINET LAYOUT

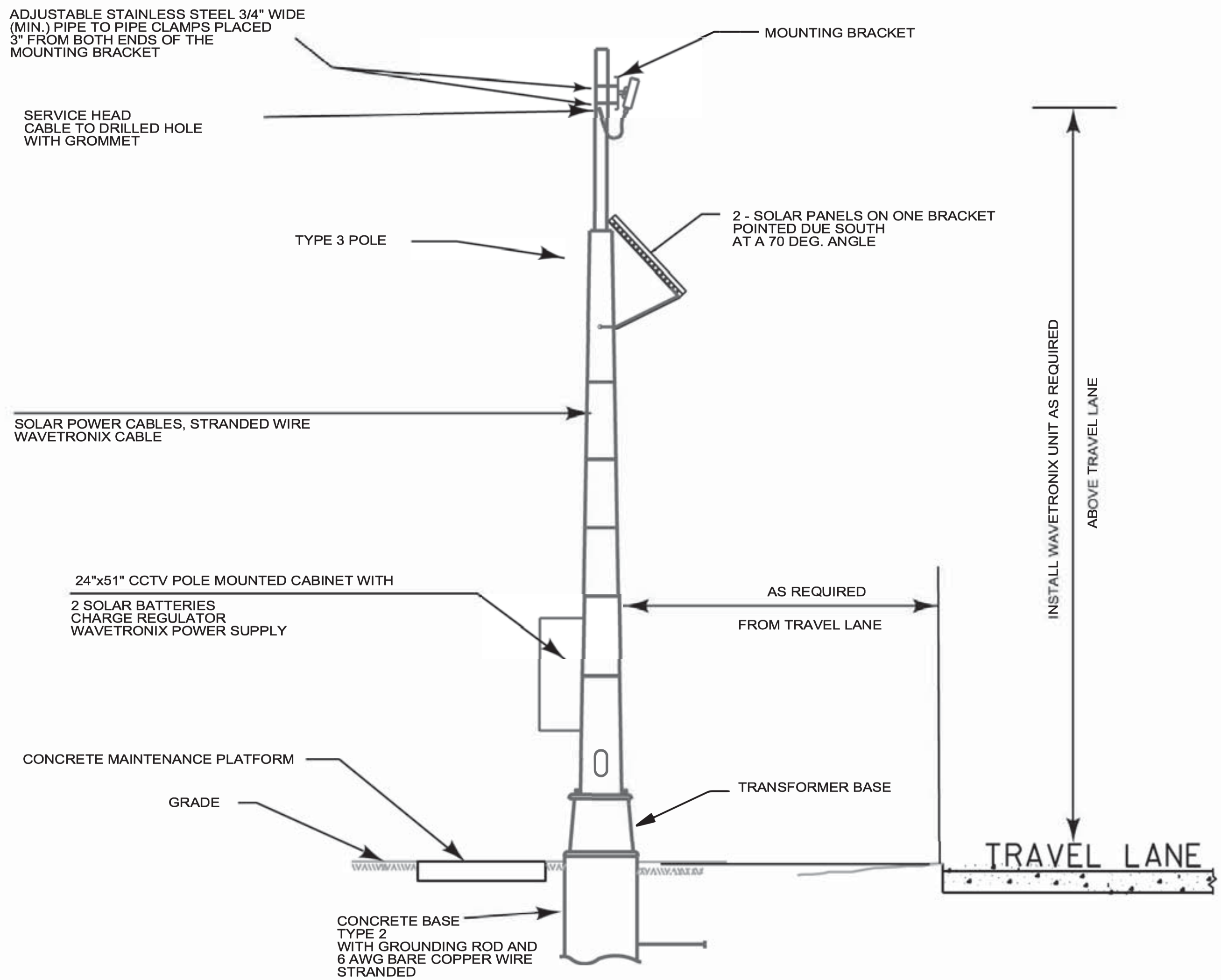
ATR - WAVETRONIX

DESIGNED BY WISDOT DOT CO
SHEET 2 OF 2

CCTV POLE-MOUNTED CABINET USED IN SOLAR INSTALLATION

PROJECT NO: 1150-60-71	HWY: USH 41	COUNTY: OCONTO	INSTALLATION OF ATR - WAVETRONIX DETECTOR 420256	SHEET 44B	E

FILE NAME: $$...designfile....$$ PLOT DATE: $$...plottingdate...$$ PLOT BY: $$...plotuser...$$ PLOT NAME : PLOT SCALE: $$....plotscale.....$$



Addendum No. 01
ID 1150-60-71
Added Sheet 44C
June 2, 2016

WAVETRONIX DETECTOR INSTALLATION

SOLAR POWER, ON TYPE 3 POLE

(NOT TO SCALE)

DESIGNED BY WISDOT CO

PROJECT NO: 1150-60-71	HWY: USH 41	COUNTY: OCONTO	WAVETRONIX DETECTOR POLE LAYOUT (ATR 420256)	SHEET 44C	E

Addendum No. 01
ID 1150-60-71
Revised Sheet 53
June 2, 2016

ASPHALT ITEMS

STATION TO STATION	LOCATION	TACK COAT 455.0605 GAL	HMA PAVEMENT 4 MT 58-28 S SPV.0195.02 TON	HMA PAVEMENT 4 LT 58-28 S SPV.0195.01 TON	REHEATING HMA LONGITUDINAL JOINTS 460.4110.S LF	ASPHALTIC SURFACE 465.0105 TON	ASPHALTIC SURFACE PATCHING 465.0110 TON	REMARKS
STAGE 1A								
316+00 SB - 316+23 SB	SOUTHBOUND LANES/SHOULDERS	5	36	---	---	---	---	FOR PIPE REPLACEMENT
STAGE 1B								
105+30 SB - 359+24 SB	SOUTHBOUND LANES	2539	5150	---	---	---	---	
126+16 SB - 342+69 SB	SOUTHBOUND INTERSECTION CROSSOVERS	438	876	---	---	---	---	
359+24 SB - 523+70 SB	SHOULDERS	329	---	1196	---	---	---	
128+00 NB - 379+47 NB	SHOULDERS	503	---	1777	---	---	---	
379+47 NB 396+47 NB	NORTHBOUND LANES	175	353					
397+80 NB - 523+70 NB	NORTHBOUND LANES	1270	2566	---	---	---	---	
402+71 NB - 503+91 NB	NORTHBOUND MEDIAN CROSSOVERS	207	---	---	---	188	---	
371+46 NB - 466+66 NB	NORTHBOUND INTERSECTION CROSSOVERS	207	413	---	---	---	---	
PROJECT	USH 41	---	---	---	---	---	20	UNDISTRIBUTED
	STAGE 1B TOTALS	5668	9358	2973	0	188	20	
STAGE 2								
128+00 NB - 379+47 NB	SHOULDERS	1006	---	3831	---	---	---	
105+30 SB - 359+24 SB	SOUTHBOUND LANES & SHOULDER	3392	4075	2709	25395	---	---	
359+24 SB - 523+70 SB	SHOULDERS	658	---	2500	---	---	---	
128+65 NB - 341+22 NB	SOUTHBOUND SIDE ROADS	424	847	---	---	---	---	
379+47 NB 396+47 NB	NORTHBOUND LANES & SHOULDER	232	301	163				
397+80 NB - 523+70 NB	NORTHBOUND LANES & SHOULDER	1686	2189	1183	14296	---	---	
428+29 NB - 464+51 NB	NORTHBOUND SIDE ROADS	276	551	---	---	---	---	
158+59 SB 171+97 SB	SOUTHBOUND, OUTSIDE SHOULDER	71	---	143	---	---	---	TO FIX SUPERELEVATION
235+36 SB 268+75 SB	SOUTHBOUND, OUTSIDE SHOULDER	178	---	356	---	---	---	TO FIX SUPERELEVATION
PROJECT	USH 41	---	---	---	---	---	20	UNDISTRIBUTED
	STAGE 2 TOTALS	7923	7963	10885	39691	0	20	
	TOTAL	13,596	17357	13858	39691	188	40	

CULVERT PIPE ITEMS

STATION	LOCATION	CONCRETE MASONRY ENDWALL 504.0900 CY	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH 522.0124 LF	APRON ENDWALLS FOR CULVERT PIPE 24-INCH 520.1024 EACH	CULVERT PIPE SALVAGED 24-INCH 524.0124 LF	CULVERT PIPE SALVAGED 30-INCH 524.0130 LF	CULVERT PIPE SALVAGED 36-INCH 524.0136 LF	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 24-INCH 524.0624 EACH	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 30-INCH 524.0630 EACH	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 36-INCH 524.0636 EACH	MARKERS CULVERT END 633.5200 EACH	* JOINT TIES	REMARKS
110+08 SB	USH 41 LT	---	---	1	10	---	---	---	---	---	1	4	TIE AEW & FIRST PIPE SECTION
117+17 SB	USH 41 LT	---	---	---	10	---	---	1	---	---	1	4	TIE AEW & FIRST PIPE SECTION
136+63 SB	USH 41 LT	---	---	---	---	18	---	---	1	---	1	6	TIE AEW & FIRST TWO PIPE SECTIONS
258+99 SB	USH 41 LT	---	---	---	---	---	2	---	---	1	1	2	TIE AEW
316+11 SB	USH 41	---	160	---	---	---	---	---	---	---	---	---	SEE CONSTRUCTION DETAIL
316+11 SB	USH 41 LT	2	---	---	---	---	---	---	---	---	2	---	
	TOTAL	2	160	1	20	18	2	1	1	1	6	16	

* NON-BID ITEM (FOR INFORMATION ONLY)

CONTRACT: 20160614011
PROJECT(S): 1150-60-71
FEDERAL ID(S): WISC 2016225

CONTRACTOR :____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS

SECTION 0001 Contract Items

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0010	203.0100 Removing Small Pipe Culverts	2.000 EACH	.		.	
0020	204.0100 Removing Pavement	61.000 SY	.		.	
0030	204.0110 Removing Asphaltic Surface	41,475.000 SY	.		.	
0040	204.0115 Removing Asphaltic Surface Butt Joints	50.000 SY	.		.	
0050	204.0120 Removing Asphaltic Surface Milling	179,470.000 SY	.		.	
0060	204.0185 Removing Masonry	2.000 CY	.		.	
0070	204.9060.S Removing (item description) 01. Apron Endwall 24-Inch	1.000 EACH	.		.	
0080	205.0100 Excavation Common	126.000 CY	.		.	
0090	208.1100 Select Borrow	41.000 CY	.		.	

CONTRACT: 20160614011
PROJECT(S): 1150-60-71
FEDERAL ID(S): WISC 2016225

CONTRACTOR :____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS | CTS	BID AMOUNT DOLLARS | CTS
0100	211.0100 Prepare Foundation for Asphaltic Paving (project) 01. 1150-60-71	LUMP	LUMP	.
0110	211.0400 Prepare Foundation for Asphaltic Shoulders	885.000 STA	.	.
0120	213.0100 Finishing Roadway (project) 01. 1150-60-71	1.000 EACH	.	.
0130	305.0110 Base Aggregate Dense 3/4-Inch	13,123.000 TON	.	.
0140	305.0120 Base Aggregate Dense 1 1/4-Inch	638.000 TON	.	.
0150	305.0500 Shaping Shoulders	753.000 STA	.	.
0160	416.1110 Concrete Shoulder Rumble Strips	39,550.000 LF	.	.
0170	440.4410 Incentive IRI Ride	30,160.000 DOL	1.00000	30160.00
0180	455.0605 Tack Coat	13,596.000 GAL	.	.
0190	460.2000 Incentive Density HMA Pavement	19,980.000 DOL	1.00000	19980.00

CONTRACT: 20160614011
PROJECT(S): 1150-60-71
FEDERAL ID(S): WISC 2016225

CONTRACTOR :____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0200	460.4110.S Reheating HMA Pavement Longitudinal Joints	39,691.000 LF		.		.
0230	465.0105 Asphaltic Surface	188.000 TON		.		.
0240	465.0110 Asphaltic Surface Patching	40.000 TON		.		.
0250	465.0315 Asphaltic Flumes	194.000 SY		.		.
0260	465.0400 Asphaltic Shoulder Rumble Strips	106,373.000 LF		.		.
0270	504.0900 Concrete Masonry Endwalls	2.000 CY		.		.
0280	520.1024 Apron Endwalls for Culvert Pipe 24-Inch	1.000 EACH		.		.
0290	522.0124 Culvert Pipe Reinforced Concrete Class III 24-Inch	160.000 LF		.		.
0300	524.0124 Culvert Pipe Salvaged 24-Inch	20.000 LF		.		.
0310	524.0130 Culvert Pipe Salvaged 30-Inch	18.000 LF		.		.
0320	524.0136 Culvert Pipe Salvaged 36-Inch	2.000 LF		.		.

CONTRACT: 20160614011
PROJECT(S): 1150-60-71
FEDERAL ID(S): WISC 2016225

CONTRACTOR :____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0330	524.0624 Apron Endwalls for Culvert Pipe Salvaged 24-Inch	1.000 EACH		.		.
0340	524.0630 Apron Endwalls for Culvert Pipe Salvaged 30-Inch	1.000 EACH		.		.
0350	524.0636 Apron Endwalls for Culvert Pipe Salvaged 36-Inch	1.000 EACH		.		.
0360	614.0010 Barrier System Grading Shaping Finishing	4.000 EACH		.		.
0370	614.2300 MGS Guardrail 3	225.000 LF		.		.
0380	614.2340 MGS Guardrail 3 L	112.500 LF		.		.
0390	614.2610 MGS Guardrail Terminal EAT	1.000 EACH		.		.
0400	614.2620 MGS Guardrail Terminal Type 2	1.000 EACH		.		.
0410	618.0100 Maintenance And Repair of Haul Roads (project) 01. 1150-60-71	1.000 EACH		.		.
0420	619.1000 Mobilization	1.000 EACH		.		.
0430	624.0100 Water	137.600 MGAL		.		.

CONTRACT: 20160614011
PROJECT(S): 1150-60-71
FEDERAL ID(S): WISC 2016225

CONTRACTOR :____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0440	625.0500 Salvaged Topsoil	573.000 SY		.		.
0450	628.1504 Silt Fence	1,463.000 LF		.		.
0460	628.1520 Silt Fence Maintenance	1,463.000 LF		.		.
0470	628.1905 Mobilizations Erosion Control	2.000 EACH		.		.
0480	628.1910 Mobilizations Emergency Erosion Control	2.000 EACH		.		.
0490	628.2004 Erosion Mat Class I Type B	2,698.000 SY		.		.
0500	628.7555 Culvert Pipe Checks	22.000 EACH		.		.
0510	628.7570 Rock Bags	180.000 EACH		.		.
0520	629.0210 Fertilizer Type B	0.370 CWT		.		.
0530	630.0130 Seeding Mixture No. 30	11.000 LB		.		.
0540	630.0200 Seeding Temporary	6.000 LB		.		.

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CONTRACTOR :____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0550	633.5200 Markers Culvert End	6.000 EACH	.		.	
0560	634.0614 Posts Wood 4x6-Inch X 14-FT	120.000 EACH	.		.	
0570	634.0616 Posts Wood 4x6-Inch X 16-FT	56.000 EACH	.		.	
0580	634.0618 Posts Wood 4x6-Inch X 18-FT	39.000 EACH	.		.	
0590	637.2210 Signs Type II Reflective H	2,628.630 SF	.		.	
0600	637.2230 Signs Type II Reflective F	176.000 SF	.		.	
0610	638.2602 Removing Signs Type II	209.000 EACH	.		.	
0620	638.3000 Removing Small Sign Supports	232.000 EACH	.		.	
0630	642.5201 Field Office Type C	1.000 EACH	.		.	
0640	643.0100 Traffic Control (project) 01. 1150-60-71	1.000 EACH	.		.	
0650	643.0300 Traffic Control Drums	55,968.000 DAY	.		.	

CONTRACT: 20160614011 | PROJECT(S): 1150-60-71 | FEDERAL ID(S): WISC 2016225

CONTRACTOR :____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0660	643.0420 Traffic Control Barricades Type III	1,664.000 DAY		.		.
0670	643.0705 Traffic Control Warning Lights Type A	3,328.000 DAY		.		.
0680	643.0715 Traffic Control Warning Lights Type C	1,560.000 DAY		.		.
0690	643.0800 Traffic Control Arrow Boards	104.000 DAY		.		.
0700	643.0900 Traffic Control Signs	8,476.000 DAY		.		.
0710	643.1050 Traffic Control Signs PCMS	14.000 DAY		.		.
0720	646.0106 Pavement Marking Epoxy 4-Inch	159,615.000 LF		.		.
0730	646.0805.S Pavement Marking Outfall	166.000 EACH		.		.
0740	646.0841.S Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	20,789.000 LF		.		.
0750	646.0883.S Pavement Marking Grooved Wet Reflective Tape 8-Inch	2,925.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS | CTS	BID AMOUNT DOLLARS | CTS
0760	650.6000 Construction Staking Pipe Culverts	2.000 EACH	.	.
0770	650.8000 Construction Staking Resurfacing Reference	81,413.000 LF	.	.
0780	650.9910 Construction Staking Supplemental Control (project) 01. 1150-60-71	LUMP	LUMP	.
0790	654.0102 Concrete Bases Type 2	1.000 EACH	.	.
0800	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	1.000 EACH	.	.
0810	657.0310 Poles Type 3	1.000 EACH	.	.
0820	690.0150 Sawing Asphalt	673.000 LF	.	.
0830	690.0250 Sawing Concrete	71.000 LF	.	.
0840	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	2,000.000 HRS	5.00000	10000.00
0850	ASP.1T0G On-the-Job Training Graduate at $5. 00/HR	1,320.000 HRS	5.00000	6600.00

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0860	SPV.0060 Special 01. Installing Pole Mounted Cabinet	1.000 EACH	.		.	
0870	SPV.0060 Special 02. Installing 2 Solar Panels on One Bracket	1.000 EACH	.		.	
0880	SPV.0060 Special 03. Installing Wavetronix Click 200 Module	1.000 EACH	.		.	
0890	SPV.0060 Special 04. Installing Wavetronix Detector Module	1.000 EACH	.		.	
0900	SPV.0060 Special 05. Installing Concrete Maintenance Platform	1.000 EACH	.		.	
0910	SPV.0060 Special 06. Grading, Shaping, & Finishing For ATR Site	1.000 EACH	.		.	
0920	SPV.0195 Special 01. HMA Pavement 4 LT 58-28 S 3.0% Va Regression Special	13,858.000 TON	.		.	
0930	SPV.0195 Special 02. HMA Pavement 4 MT 58-28 S 3.0% Va Regression Special	17,357.000 TON	.		.	
	SECTION 0001 TOTAL				.	
	TOTAL BID				.	