

# **Wisconsin Department of Transportation**

November 7, 2019

Division of Transportation Systems Development

Bureau of Project Development 4822 Madison Yards Way, 4<sup>th</sup> Floor South Madison, WI 53705

Telephone: (608) 266-1631 Facsimile (FAX): (608) 266-8459

### **NOTICE TO ALL CONTRACTORS:**

Proposal #15: 1080-18-70, WISC 2019 684

EB Lake Geneva - Genoa City

STH 50 to CTH H

**USH 012** 

**Walworth County** 

1080-19-70, WISC 2019 685

WB Lake Geneva – Genoa City STH 50 to II State Line

USH 012

**Walworth County** 

# Letting of November 12, 2019

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

### **Special Provisions:**

	Revised Special Provisions
Article No.	Description
4	Traffic
26	Resin Binder High Friction Surface Treatment, Item SPV.0180.01

### Schedule of Items:

	Revised Bid Item Quant	ities			
Bid Item	Item Description	Unit	Old	Revised	Proposal
Did itelli	item Description	Ullit	Quantity	Quantity	Total
204.0125	Removing Asphaltic Surface Milling	TON	42,341	485	42,826
415.0095	Concrete Pavement 9 1/2-Inch	SY	8,378	-419	7,959
460.2005	Incentive Density PWL HMA Pavement	DOL	53,310	710	54,020
460.2010	Incentive Air Voids HMA Pavement	DOL	68,230	710	68,940
460.6223	HMA Pavement 3 MT 58-28 S	TON	36,703	-4,000	32,703
643.0300	Traffic Control Drums	DAY	57,429	10,167	67,596
643.0420	Traffic Control Barricades Type III	DAY	6,698	1,035	7,733
643.0705	Traffic Control Warning Lights Type A	DAY	14,328	2,163	16,491
643.0715	Traffic Control Warning Lights Type C	DAY	14,434	2,036	16,470
643.0800	Traffic Control Arrow Boards	DAY	644	78	722
643.0900	Traffic Control Signs	DAY	38,887	4,572	43,459
643.0920	Traffic Control Covering Signs Type II	EACH	74	4	78
643.1070	Traffic Control Cones 42-Inch	DAY	17,063	2,182	19,245
690.0150	Sawing Asphalt	LF	4,509	48	4,557
SPV.0180.01	Resin Binder High Friction Surface Treatment	SY	17,334	-3,468	13,866

	Added Bid Item Quanti	ties			
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
465.0105	Asphaltic Surface	TON	0	485	485

# **Plan Sheets:**

	Revised Plan Sheets
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
	Project ID 1080-18-70
183	Miscellaneous Quantities (Revised asphalt quantities used for shoulder repair)
190	Miscellaneous Quantities (Revised sawing asphalt quantities used for shoulder repair)
191	Miscellaneous Quantities (Revised traffic control quantities for HFST application)
	Project ID 1080-19-70
143	Miscellaneous Quantities (Removed asphalt quantities used for shoulder repair)
144	Miscellaneous Quantities (Corrected concrete pavement quantities)
147	Miscellaneous Quantities (Revised traffic control quantities for HFST application)
179	Miscellaneous Quantities (Updated PWL Mixture Use Table)

	Added Plan Sheets
Plan Sheet	Plan Sheet Title (brief description of why sheet was added)
	Project ID 1080-18-70
83A	Traffic Control – Typical Section – Stage 1 – Westbound Shoulder Repair (Shows shoulder repair work and indicates when work is to be done)

### Other

Revise the contract time for completion from a completion date of October 23, 2020, to a completion date of October 30, 2020.

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 1080-18-70 and 1080-19-70 November 7, 2019

### **Special Provisions**

### 4. Traffic

Add the following under section titled Traffic Control:

### 1080-18-70 and 1080-19-70 High Friction Surface Treatment

 EB and WB USH 12 single lane closures using SDD Traffic Control, Lane Closure, Speed Reduction and Traffic Control Cones 42-inch

### 26. Resin Binder High Friction Surface Treatment Modified, Item SPV.0180.01.

Replace the entire article language with the following:

#### A Description

This special provision describes providing a high friction surface treatment (HFST) composed of aggregate in a resin binder on HMA or concrete pavements.

#### **B** Materials

#### **B.1 Resin Binder**

Supply a two-part thermosetting resin binder which is compatible with the pavement type, bonds to the pavement surface, holds the aggregate firmly in place in a broad range of climates including below-freezing temperatures, and meets the requirements specified in Table 1. Supply a primer if recommended by the resin binder manufacturer.

**Table 1. Resin Binder Properties** 

Droporty	Poquiromente	Test Method*
Property	Requirements	
Viscosity	7 – 30 poises	ASTM D2556
Viscosity	7 – 30 poises	1-pint specimen
O . L Time .	40	AASHTO M 235M/M 235
Gel Time	10-minute minimum	Type III
		AASHTO M 235M/M 235
Ultimate Tensile Strength	2,000 – 5,000 psi @ 7 days	Type III
		l ype iii
Elongation at Proak	30% - 70% @ 7 days	AASHTO M 235M/M 235
Elongation at Break	30% - 70% @ 7 days	Type III
	> 1000 pai @ 2 bra 9	
Compressive Strength	≥ 1000 psi @ 3 hrs &	ASTM C579
, ,	≥ 5000 psi @ 7 days	
Water Absorption	≤ 1.0 % @ 24-hr	AASHTO M 235M/M 235
Water Absorption	3 1.0 70 @ 24-111	Type III
		ASTM D2240**
Shore D Hardness	60 – 80 @ 7 days	Type 1 precision, Type D
Shere B Haranees		method
	≤ 3 hours	ASTM D1640
Cure Rate	_	
_	(Dry Through Time)	50-55 wet mil thickness**
Adhesive Strength	250 psi @ 24 hours or 100%	ASTM D4541**
Adilesive Strength	substrate failure	ASTIVI D404 I

Prepare samples per manufacturer's recommendation; cure two sets of specimens at  $73 \pm 2^{\circ}$  F and at  $50 \pm 2^{\circ}$  F; and test all specimens at  $73 \pm 2^{\circ}$  F

\*\* Conduct testing on applicable pavement type

#### **B.2 Aggregate**

Furnish calcined bauxite aggregate that is fractured or angular in shape; resistant to polishing and crushing; clean and free of surface moisture; free from silt, clay, asphalt, or other organic materials; compatible with the resin binder; and meet the properties and gradation requirements in Tables 2 and 3. Check with resin binder manufacturer for any compatibility requirements or concerns. The calcined bauxite will be delivered to the construction site in clearly labeled packaging; which protects the aggregate from any contaminates on the jobsite and from exposure to rain or other moisture.

**Table 2. Aggregate Properties** 

Property	Requirements	Test Method
Moisture     Content	• ≤ 0.2%	AASHTO T 255
<ul> <li>Fine         Aggregate         Angularity</li> </ul>	• ≥ 45%	AASHTO T 304,     Method A
LA Wear	• ≤ 10% loss @ 100 revolutions and ≤ 25% loss @ 500 revolutions	AASHTO T 96
<ul> <li>Freeze- Thaw Soundness</li> </ul>	• ≤ 9% loss @ 50, 16, or 25 cycles using Procedure A, B, or C, respectively	AASHTO T 103
<ul> <li>Aluminum Oxide</li> </ul>	• ≥87%	• ASTM C 25

**Table 3. Aggregate Gradation (AASHTO T27)** 

Sieve Size	% Passing by Weight
• No. 4	• 100
• No. 6	• 95-100
• No. 16	• 0-5
• No. 30	• 0-1

#### **B.3** Approval of High Friction Surface Treatment

A minimum of 20 working days before applying HFST, submit product data sheets and specifications from the manufacturer, and a certified test report from an independent laboratory verifying that the resin binder and the calcined bauxite aggregate meet all the requirements specified in Tables 1, 2 and 3. Documents must be dated within three years of project letting date; must be representative of the material used on the project.

If resin binder has not been previously used in Wisconsin, also submit a list of at least five reference projects where the resin binder has been used for similar applications and in locations that have similar climatic conditions as Wisconsin. Supply a description of the projects along with contact information of the facility owner.

If the engineer requests, provide samples of the resin binder and aggregate for department testing before applying HFST.

#### **C** Construction

#### C.1 General

The contractor will provide documentation showing HFST application experience from at least three previous projects completed for WisDOT or other agencies.

Conduct a meeting with the resin binder manufacturer representatives before applying HFST to establish procedures for maintaining optimum working conditions and coordination of the work. Submit recommended application procedures, including quality control practices, to the engineer for approval. Ensure that a resin

binder manufacturer representative is on site to provide technical assistance and quality assurance during surface preparation and for application of HFST.

Ensure that the resin binder components maintain their original properties during storage and handling. Store all aggregate in a dry environment and protect from contaminants on the job site.

### **C.2 Pavement Surface Preparation**

#### C.2.1. Pavement Surface Repair

Remove visibly unsound or disintegrated areas of the pavement surface as the plans show or the engineer directs.

Check with resin binder manufacturer to ensure that products used for pavement repairs or patches are compatible with the resin HFST. **Ensure that any new concrete or repairs are fully cured before placing the HFST.** Allow a minimum 30-day curing time after placing new asphalt or concrete pavement before installing the HFST.

#### **C.2.2 Surface Preparation**

Cover and protect utilities, drainage structures, expansion joints on bridge decks, and other structures within or adjacent to the application location to prevent materials from adhering to or entering those structures.

Remove pavement markings that are within the treatment area. Cover existing pavement markings adjacent to the application if they are to remain in place.

Pretreat all joints and cracks, or any portion of cracks, that are greater than ¼ inch wide, with the mixed binder resin system specified herein. Once the binder resin in the pretreated area has galled, the installation may proceed.

Completely remove any grease, oil or other deleterious materials resting on the pavement surface with a mild detergent solution, rinsed with clean potable water, and dried using a hot compressed air lance. Ensure the pavement surface has no curing compound, loosely bonded mortar, pavement marking, or other foreign matter resting on the pavement surface.

Sufficiently clean HMA pavement surface using mechanical sweepers and high-pressure air wash with sufficient oil traps, just before applying HFST. Mechanically sweep all surfaces to remove dirt, loose aggregate, debris, and deleterious material. Vacuum sweep or air wash using a minimum of 180 cfm of clean and dry compressed air, all surfaces to remove all dust, debris, and deleterious material. Maintain air lance perpendicular to the surface and the tip of the air lance within 12 in. of surface.

Clean concrete pavement surface by shot blasting and vacuum sweeping. Shot blast all surfaces to remove all curing compound, loosely bonded mortar, surface carbonation, and deleterious material. After shot blasting, vacuum sweep or air wash, with a minimum of 180 cfm of clean and dry compressed air, all surfaces to remove all dust, debris, and deleterious material. Maintain air lance perpendicular to the surface and the tip of the air lance within 12 in. of the surface.

If the engineer requires additional verification of adequate surface preparation of the pavement, test the bond strength according to ASTM D4541. The surface is acceptable if the tensile bond strength is greater than or equal to 250 psi, or failure is in the substrate. Repeat cleaning, and testing, if needed, until passing test results are obtained or the surface is acceptable to the engineer.

Keep vehicles and unnecessary equipment off the cleaned surface; only allow HFST application equipment on the clean surface. Apply HFST as soon as possible after pavement surface preparations are completed.

### C.3 Application of the HFST

Do not apply the HFST if any of the following exists:

Pavement surface is wet, damp, or has received rainfall in the previous 24 hours.

Pavement surface is not sufficiently clean.

Ambient air or pavement surface temperature is below 50° F or below the manufacturer's recommendations

If the anticipated weather conditions would prevent adequate curing of the HFST.

Rain is predicted before HFST completion or proper cure is achieved.

Pavement preparation is inadequate or didn't pass pull-off test.

Close treatment areas to traffic until HFST is completely cured and pavement surface has been vacuumswept.

Construct HFST to the full width of the existing pavement surface, or as the plans show. Extend the HFST application 2'-3' onto the shoulders if application site is on a curve where no rumble strip exists. If the rumble strip exists, apply HFST only on the main lane not on the shoulder.

Apply a primer to the pavement surface if recommended by the resin binder manufacturer, and according to their application recommendations. Abide by the established quality control practices and adhere to any additional manufacturer recommendations for HFST application.

Blend and mix the resin binder components at the manufacturer's specified ratio using equipment capable of providing the desired results.

Apply the resin binder uniformly over the pavement surface manually or with automated equipment at a uniform thickness of 50-65 mils (25-32 ft2/gal). Use enough resin to cover the pavement surface and sufficiently embed half the thickness of the aggregate; do not apply so much that it covers the aggregate and creates a slick surface. Adjust application rate, as needed, based on the pavement surface type, profile, and condition.

If using automated equipment, the binder resin system manufacturer shall approve the use of automated continuous application device with their material. Ensure that the equipment features positive displacement, volumetric metering, and can store, mixing, heating, monitoring, and distributing the binder components at the proper mix ratio. Adjust the pressure and the speed of the equipment to achieve the proper application thickness. Coverage rate is based upon expected variance in the surface profile of the pavement.

Do not contaminate the wet binder or allow the binder material to separate or cure, and impair bonding of the aggregate.

Immediately after applying the resin binder, distribute a sufficient quantity of dry calcined bauxite aggregate to completely cover the resin binder by hand broadcasting or by using a standard chip spreader or equivalent machine. Ensure aggregate is placed within five minutes of the resin binder placement, before it begins to cure. When broadcasting, sprinkle or drop the aggregate onto the resin binder vertically. Do not distribute aggregate in a way that will cause it to roll in the resin binder before coming to a rest; do not push the aggregate into position with a broom or any other hand tool. If using a chip spreader, the machine shall follow closely behind the crew or equipment applying the resin binder. Immediately cover any visible wet or bare spots, or areas with excessive binder, with additional calcined bauxite aggregate before the resin binder begins to set.

Allow the HFST to properly cure, adhering to manufacturer recommendations for minimum cure times at applicable temperatures.

After the HFST is fully cured, remove excess loose surface aggregate by sweeping, blowing, or vacuuming. Do not tear or otherwise damage the surface. Excess calcined bauxite aggregate that is recovered by a vacuum sweeper can be reused if clean, uncontaminated and dry. Remove and replace damaged areas or areas with excess or insufficient aggregate coverage. Uncover pavement markings and repair damages that occur by covering and uncovering markings. Clean expansion joints, utilities, and drainage structures of all

debris before opening to traffic.

Additionally, within 3 to 7 days after opening to traffic, the contractor shall vacuum sweep the pavement surface to remove loosened aggregate from the high friction surface area, the shoulders, and any other areas within and immediately adjacent to the HFST site.

#### **D** Measurement

The department will measure Resin Binder High Friction Surface Treatment by the square yard acceptably completed.

#### E Payment

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

ITEM NUMBER DESCRIPTION UNIT

SPV.0180.01 Resin Binder High Friction Surface Treatment SY

Payment for Resin Binder High Friction Surface Treatment is full compensation for testing materials; for surface preparation; for providing the HFST; for cleanup including uncovering and restoration of pavement markings; and for vacuum sweeping and disposing of excess material after the completion and again 3 to 7 days after completion.

The department will pay for pavement repairs, and traffic control separately under other contract bid items or, absent the appropriate bid items, as extra work.

#### Schedule of Items

Attached, dated November 7, 2019, are the revised Schedule of Items Pages 1 – 10.

#### **Plan Sheets**

The following  $8\frac{1}{2}$  x 11-inch sheets are attached and made part of the plans for this proposal:

Revised: 1080-18-70 – 183, 190 and 191. 1080-19-70 – 143, 144, 147, and 149.

Added:1080-18-70 - 83A

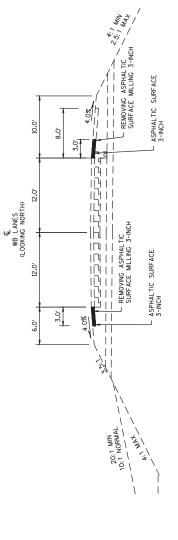
**END OF ADDENDUM** 



2

Addendum No. 1 ID 1080-18-70 Added Sheet 83A

11/6/2019

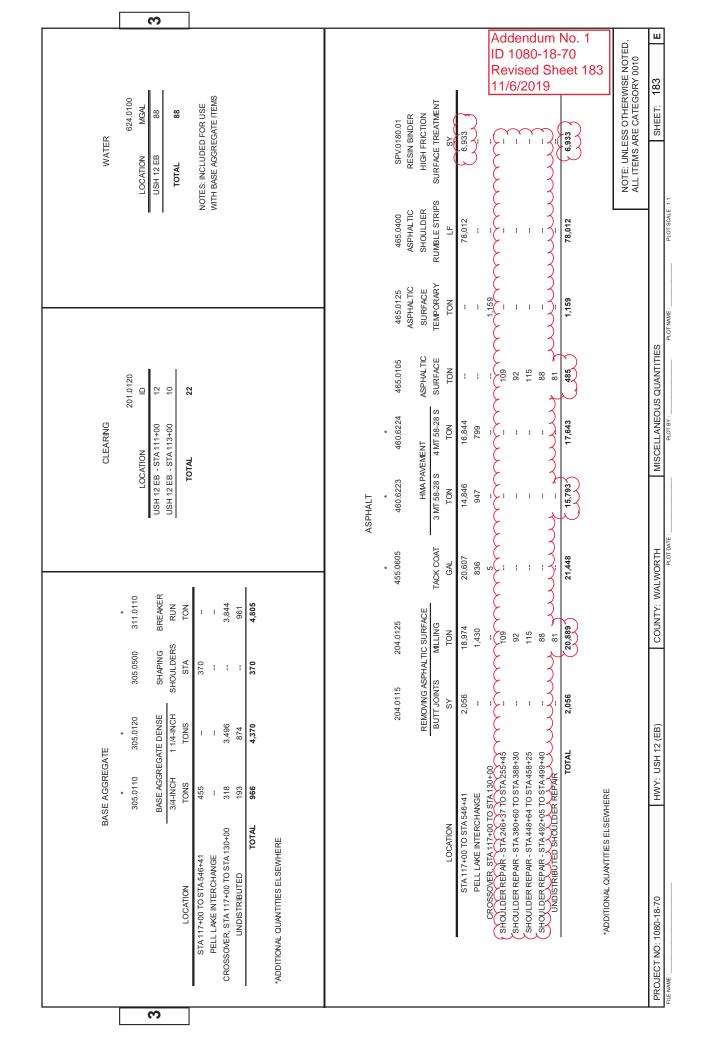


PROPOSED TYPICAL SECTION - STAGE 1 WB SHOULDER REPAIR

STA. 246+37 - STA. 255+45 - CTH U STA. 380+60 - STA. 388+30 - CLOVER RD STA. 448+64 - STA. 458+25 - N. BLOOMFIELD RD. STA. 492+05 - STA. 499+40 - E. TOWNLINE RD.

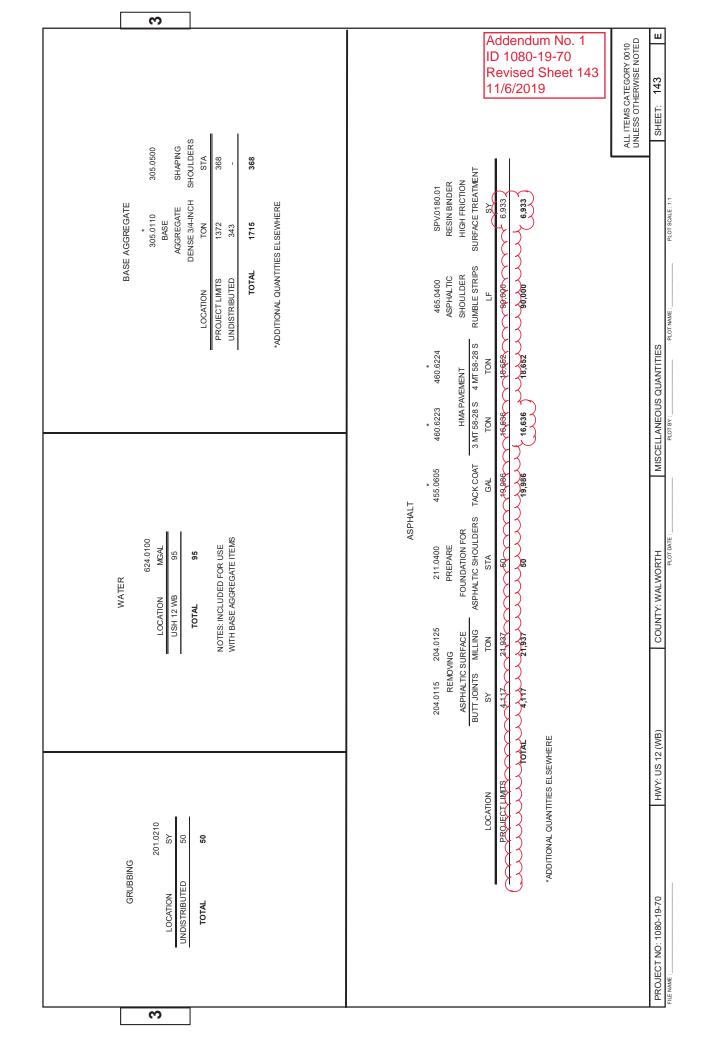
COUNTY: WALWORTH

TRAFFIC CONTROL - TYPICAL SECTION - STAGE 1 - WESTBOUND SHOULDER REPAIR



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	305.0110	BASE AGGREGATE DENSE 3/4-INCH 11/4-INC	NOT	06	93	87	89	338	RE		645.0111		GEOTEXTILE	TYPE DF	SCHEDULEA	SY	1,012	1,044	980	3,036		
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				STA 24	STA 44	STA 49	<u> </u>		*ADDITI	DRAIN	612.0206	PIPE	UNDERDRAIN	UNPERFORATED	HONI-9	LF	126	144	162	432		
	205.0100 EXCAVATION	CY	2,225	2,296	2,161	92	36 8	46 95 662	7,613	UNDERDRAIN	612.0106		PIPE	AN		LF	1,516	1,564	1,470	4,550		
MON	20 EXC	3				35+13, LT	35+13, RT 35±13   T	.35+13, RT	TOTAL		310.0110			BASE AGGREGATE	OPEN-GRADED	TON	132	136	128	396		
EXCAVATION COMMON		LOCATION	USH 12, STA 246+37 TO STA 253+95	USH 12, STA 448+64 TO STA 456+46	USH 12, STA 492+05 TO STA 499+40	WALWORTH ST, EB, STA 20+30 TO STA 35+13, LT	WALWORTH ST, EB, STA 20+30 TO STA 35+13, RT	WALWORTH ST, WB, STA 19+80 TO STA 35+13, LT WALWORTH ST, WB, STA 19+80 TO STA 35+13, RT IINDISTRIBITED								US 12 WB	STA 246+37 TO STA 253+95	STA 448+64 TO STA 456+46	STA 492+05 TO STA 499+40	TOTAL		
						\$	<b>* *</b>	<b>S</b> S														

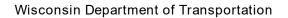
	쀨	<u> </u>	(*)	<u> </u>			<u> </u>			Addendum No ID 1080-19-70	. 1	<u></u>	ш
646.9000 MARKING	REMOVAL LINE 4-INCH LF	6,256	165	165	165			6,751		ID 1080-19-70 Revised Sheet 11/6/2019	147	TEGORY 0010 RWISE NOTE	147
643.1070	CONES 42-INCH EACH DAY			44 836		36 216	183	2,009		1,011		ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED	SHEET
643.1000 TROL	SIGNS FIXED MESSAGE SF	22		22				44.0	HALT				
643.0920 64 TRAFFIC CONTROL	COVERING SIGNS TYPE II EACH	7	-				-	6	SAWING ASPHALT	CTH HAWAL WORTH ST STA 98+58, STA 107+00 STA 288+00 PELL LAKE DR STA 300+00 STA 388+40 STA 388+40 CRETE PAVEMENT SECTIC END PROJECT  TO  TG  HRS HRS	I		
643.0900	SIGNS EACH DAY	250 19,750				16 160 8 48	2,159	23,745		LOCATION CTH H/WAL/WORTH ST STA 984-58, STA 107-60 STA 288-00 PELL LAKE DR STA 300-60 STA 380-40 STA 388-40 CONCRETE PAVEMENT SECTIONS END PROJECT TOTA  NINSCELLANEOUS HRS	50 - 1	50	
643.0800	ARROW BOARDS EACH DAY	3 237			2 20	7 20 L	36	383		650.9910 SUPPLEMENTAL CONTROL (1080-19-70) LS	- : :	-	OHANTITIES
643.0715	IGHTS TYPEC EACH DAY	81 6,399			10 100	18 108	711	7,818		650.8000 RESURFACING REFERENCE LF	48,974 	48,974	SELLIANELIO SI IOENE I IESCEM
643.0705	WARNING LIGHTS TYPE A TYPE EACH DAY EACH	81 6,399			10 100	\$ 24 T	¥ 704	7,745		CONSTRUCTION STAKING 0.6000 650.7000 PIPE CONCRETE VERTS PAVEMENT FACH LF		2,275	2
.00 643.0600 TRAFFIC CONTROL	l.,						82	857		65 CUL	1 2 1	. 2	MORTH
643.0500 TRAFFIC	FLEXIBLE TUBULAR MARKER POSTS BASES EACH EACH	779					78	857		650.4500 LF	2 275	2,275	COUNTY: WAI WORTH
643.0420	BARRICADES TYPE III EACH DAY	36 2,844			5 50	سيسي	309	3,400	Q	MARKING LINE  REMOVABLE TAPE 4-INCH  (WHITE) (YELLOW)  LF	PROJECT LIMITS CULVERT PIPE REPLACEMENT CONCRETE PAVEMENT	TOTAL	
643.0300	DRUMS EACH DAY	259 20,461		•		33 198	2,480	27,278	TRAFFIC CONTROL CONTINUED	TEMPORARY 4-INCH (YELLOW) LF 80,000	CULVERT		HWY-US 12 (WB)
637.0620 SIGN FLAGS	PERMANENT TYPE II EACH	2					)   - )   )	ഹ	TRAFFIC COI				
633.1100 DELINEATORS	TEMPORARY (SINGLE-SIDED) EACH	37	,					IL 37		LOCATION STAGE 3 STAGE 4A STAGE 4B STAGE 4B STAGE 4C WALWORTH STREET UNDISTRIBUTED TOTAL			30-19-70
	LOCATION	STAGE 3	STAGE 4A	STAGE 4B	STAGE 4C	WA WORTH STREET HFST APPLICATION	UNDISTRIBUTED	TOTAL					PRO: IECT NO: 1080-19-70

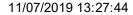
Quality Management Program to be used for:

PWL Mixture Use Table

Addendum No. 1 ID 1080-19-70 Revised Sheet 149 11/6/2019

Mixture Use Underlying Surface
Lower Layer Milled Existing HMA Surface
Upper Layer 3 MT 58-28 S
Upper Layer Milled Existing HMA Surface
Lower Layer Milled Existing HMA Surface
Upper Layer 3 MT 58-28 S
Lower Layer Milled Existing HMA Surface
Upper Layer 3 MT 58-28 S
Lower Layer  Miled Existing HMASurface
Upper Layer 3 MT 58-28 S
Lower Layer Base Aggregate
Upper Layer 3 MT 58-28 S
Lower Layer Milled Existing HMA Surface
Upper Layer 3 MT 58-28 S
Lower Layer Base Aggregate
Upper Layer 3 MT 58-28 S
Upper Layer Milled Existing HMA Surface
LTACW IAW STALLOO







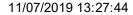
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Federal ID(s): WISC 2019684, WISC 2019685

SECTION: 0001 Contract Items

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	201.0120 Clearing	22.000 ID	<u> </u>	
0004	201.0210 Grubbing	50.000 SY		<u> </u>
0006	203.0100 Removing Small Pipe Culverts	10.000 EACH	<u> </u>	
8000	204.0115 Removing Asphaltic Surface Butt Joints	6,173.000 SY		
0010	204.0125 Removing Asphaltic Surface Milling	42,826.000 TON		
0012	204.0165 Removing Guardrail	48.000 LF		
0014	204.9060.S Removing (item description) 01. Existing Endwall	15.000 EACH		·
0016	204.9060.S  Removing (item description) 02.  Corrugated Steel Culvert Pipe and Restoring Cut End	22.000 EACH	·	·
0018	205.0100 Excavation Common	12,901.000 CY	<u> </u>	
0020	211.0400 Prepare Foundation for Asphaltic Shoulders	50.000 STA		
0022	213.0100 Finishing Roadway (project) 01. 1080- 18-70	1.000 EACH		·
0024	213.0100 Finishing Roadway (project) 02. 1080- 19-70	1.000 EACH		·
0026	305.0110 Base Aggregate Dense 3/4-Inch	3,103.000 TON	<u></u>	
0028	305.0120 Base Aggregate Dense 1 1/4-Inch	10,478.000 TON		
0030	305.0500 Shaping Shoulders	738.000 STA		







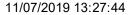
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Federal ID(s): WISC 2019684, WISC 2019685

SECTION: 0001 Contract Items

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0032	310.0110 Base Aggregate Open-Graded	465.000 TON		
0034	311.0110 Breaker Run	12,237.000 TON	·	·
0036	415.0095 Concrete Pavement 9 1/2-Inch	7,959.000 SY		<u> </u>
0038	455.0605 Tack Coat	41,505.000 GAL	·	·
0040	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	2.000 EACH	<del></del>	·
0042	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	2.000 EACH		·
0044	460.2005 Incentive Density PWL HMA Pavement	54,020.000 DOL	1.00000	54,020.00
0046	460.2007 Incentive Density HMA Pavement Longitudinal Joints	32,960.000 DOL	1.00000	32,960.00
0048	460.2010 Incentive Air Voids HMA Pavement	68,940.000 DOL	1.00000	68,940.00
0050	460.6223 HMA Pavement 3 MT 58-28 S	32,703.000 TON		·
0052	460.6224 HMA Pavement 4 MT 58-28 S	37,173.000 TON	·	<u> </u>
0054	465.0125 Asphaltic Surface Temporary	1,159.000 TON		·
0056	465.0400 Asphaltic Shoulder Rumble Strips	168,012.000 LF	·	·
0058	504.0900 Concrete Masonry Endwalls	10.000 CY	·	
0060	520.8000 Concrete Collars for Pipe	2.000 EACH	<u>:</u>	
0062	520.8700 Cleaning Culvert Pipes	4.000 EACH		







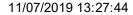
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Federal ID(s): WISC 2019684, WISC 2019685

SECTION: 0001 Contract Items

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0064	520.9700.S Culvert Pipe Liners (size) 01. 30-Inch CMP	90.000 LF	·	<u></u> .
0066	520.9700.S Culvert Pipe Liners (size) 02. 36-Inch CMP	371.000 LF	<u> </u>	<u> </u>
0068	520.9750.S Cleaning Culvert Pipes for Liner Verification	4.000 EACH		·
0070	521.0348 Apron Endwalls for Culvert Pipe Sloped Cross Drains Steel 48-Inch 4 to 1	1.000 EACH	<u> </u>	<u> </u>
0072	521.1018 Apron Endwalls for Culvert Pipe Steel 18-Inch	29.000 EACH		
0074	521.1024 Apron Endwalls for Culvert Pipe Steel 24-Inch	1.000 EACH	<u> </u>	
0076	521.1030 Apron Endwalls for Culvert Pipe Steel 30-Inch	2.000 EACH		·
0078	521.1036 Apron Endwalls for Culvert Pipe Steel 36-Inch	1.000 EACH		<u> </u>
0800	521.1507 Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 36-Inch 4 to 1	1.000 EACH		
0082	522.0124 Culvert Pipe Reinforced Concrete Class III 24-Inch	152.000 LF		<u> </u>
0084	522.0424 Culvert Pipe Reinforced Concrete Class IV 24-Inch	336.000 LF	·	<del></del>
0086	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	2.000 EACH		
0088	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	15.000 EACH		·







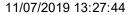
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Federal ID(s): WISC 2019684, WISC 2019685

SECTION: 0001 Contract Items

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0090	522.2329 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	384.000 LF	<u> </u>	
0092	603.8000 Concrete Barrier Temporary Precast Delivered	1,816.000 LF		·
0094	603.8125 Concrete Barrier Temporary Precast Installed	1,816.000 LF		·
0096	606.0100 Riprap Light	12.000 CY		
0098	608.0424 Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	78.000 LF	·	·
0100	611.0530 Manhole Covers Type J	1.000 EACH	·	·
0102	611.2004 Manholes 4-FT Diameter	1.000 EACH	·	·
0104	612.0106 Pipe Underdrain 6-Inch	5,410.000 LF		
0106	612.0206 Pipe Underdrain Unperforated 6-Inch	504.000 LF		<u> </u>
0108	612.0806 Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	28.000 EACH		·
0110	614.0010 Barrier System Grading Shaping Finishing	2.000 EACH		
0112	614.0200 Steel Thrie Beam Structure Approach	50.000 LF		<u></u>
0114	614.0305 Steel Plate Beam Guard Class A	480.000 LF		
0116	614.0370 Steel Plate Beam Guard Energy Absorbing Terminal	2.000 EACH		·







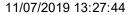
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Federal ID(s): WISC 2019684, WISC 2019685

SECTION: 0001 Contract Items

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0118	614.0905 Crash Cushions Temporary	6.000 EACH		<u> </u>
0120	614.0950 Replacing Guardrail Posts and Blocks	10.000 EACH		·
0122	614.0951 Replacing Guardrail Rail and Hardware	100.000 LF		
0124	618.0100 Maintenance And Repair of Haul Roads (project) 01. 1080-18-70	1.000 EACH	<del>.</del>	
0126	618.0100 Maintenance And Repair of Haul Roads (project) 02. 1080-19-70	1.000 EACH	<u> </u>	·
0128	619.1000 Mobilization	1.000 EACH	·	
0130	624.0100 Water	175.000 MGAL	·	·
0132	625.0100 Topsoil	200.000 SY	·	
0134	625.0500 Salvaged Topsoil	1,797.000 SY	<u> </u>	
0136	627.0200 Mulching	1,797.000 SY		
0138	628.1504 Silt Fence	500.000 LF		
0140	628.1520 Silt Fence Maintenance	500.000 LF		
0142	628.1905 Mobilizations Erosion Control	15.000 EACH		
0144	628.1910  Mobilizations Emergency Erosion Control	7.000 EACH		
0146	628.7504 Temporary Ditch Checks	648.000 LF		
0148	628.7555 Culvert Pipe Checks	62.000 EACH		







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SECTION: 0001 Contract Items

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0150	629.0210 Fertilizer Type B	2.080 CWT		·
0152	630.0130 Seeding Mixture No. 30	130.000 LB		·
0154	630.0200 Seeding Temporary	50.000 LB		
0156	630.0300 Seeding Borrow Pit	50.000 LB		·
0158	633.1100 Delineators Temporary	103.000 EACH		·
0160	633.5200 Markers Culvert End	84.000 EACH		
0162	634.0618 Posts Wood 4x6-Inch X 18-FT	6.000 EACH		<u> </u>
0164	634.0814 Posts Tubular Steel 2x2-Inch X 14-FT	2.000 EACH		·
0166	637.0620 Sign Flags Permanent Type II	24.000 EACH	·	·
0168	637.2210 Signs Type II Reflective H	24.000 SF	·	·
0170	638.2102 Moving Signs Type II	2.000 EACH	·	·
0172	638.2602 Removing Signs Type II	1.000 EACH	·	<u></u>
0174	638.3000 Removing Small Sign Supports	7.000 EACH		
0176	642.5401 Field Office Type D	1.000 EACH		
0178	643.0300 Traffic Control Drums	67,596.000 DAY	·	<u> </u>
0180	643.0420 Traffic Control Barricades Type III	7,733.000 DAY		



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## Proposal Schedule of Items

Federal ID(s): WISC 2019684, WISC 2019685

SECTION: 0001 Contract Items

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0182	643.0500 Traffic Control Flexible Tubular Marker Posts	1,827.000 EACH	·	<del>.</del>
0184	643.0600 Traffic Control Flexible Tubular Marker Bases	1,827.000 EACH		:
0186	643.0705 Traffic Control Warning Lights Type A	16,491.000 DAY		
0188	643.0715 Traffic Control Warning Lights Type C	16,470.000 DAY	<u> </u>	
0190	643.0800 Traffic Control Arrow Boards	722.000 DAY	<u>-</u>	·
0192	643.0900 Traffic Control Signs	43,459.000 DAY	<u>-</u>	·
0194	643.0920 Traffic Control Covering Signs Type II	78.000 EACH	<u> </u>	
0196	643.1000 Traffic Control Signs Fixed Message	435.000 SF	<u> </u>	
0198	643.1070 Traffic Control Cones 42-Inch	19,245.000 DAY	<u> </u>	
0200	643.5000 Traffic Control	1.000 EACH	<u>-</u>	
0202	645.0111 Geotextile Type DF Schedule A	3,580.000 SY	<u>-</u>	
0204	645.0130 Geotextile Type R	33.000 SY	<u>-</u>	
0206	646.1020 Marking Line Epoxy 4-Inch	10,770.000 LF		
0208	646.1040 Marking Line Grooved Wet Ref Epoxy 4- Inch	184,912.000 LF		·
0210	646.1545 Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	560.000 LF	·	·



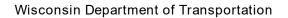


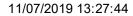
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Federal ID(s): WISC 2019684, WISC 2019685

SECTION: 0001 Contract Items

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0212	646.1555 Marking Line Grooved Contrast Permanent Tape 4-Inch	22,737.000 LF	·	·
0214	646.3545 Marking Line Grooved Wet Ref Contrast Epoxy 8-Inch	2,191.000 LF	·	·
0216	646.3555 Marking Line Grooved Contrast Permanent Tape 8-Inch	3,979.000 LF	·	·
0218	646.5020 Marking Arrow Epoxy	18.000 EACH	·	<del></del>
0220	646.5120 Marking Word Epoxy	5.000 EACH		·
0222	646.5520 Marking Outfall Epoxy	368.000 EACH	<u> </u>	<u> </u>
0224	646.6120 Marking Stop Line Epoxy 18-Inch	133.000 LF		·
0226	646.7120 Marking Diagonal Epoxy 12-Inch	481.000 LF		
0228	646.7220 Marking Chevron Epoxy 24-Inch	328.000 LF	·	·
0230	646.8120 Marking Curb Epoxy	86.000 LF		
0232	646.9000 Marking Removal Line 4-Inch	19,725.000 LF	·	·
0234	646.9100 Marking Removal Line 8-Inch	500.000 LF		
0236	646.9200 Marking Removal Line Wide	34.000 LF		
0238	649.0105 Temporary Marking Line Paint 4-Inch	240,445.000 LF		
0240	649.0120 Temporary Marking Line Epoxy 4-Inch	37,730.000 LF		
0242	649.0150 Temporary Marking Line Removable Tape 4-Inch	6,490.000 LF		







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Federal ID(s): WISC 2019684, WISC 2019685

SECTION: 0001 Contract Items

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0244	650.4000 Construction Staking Storm Sewer	3.000 EACH		
0246	650.4500 Construction Staking Subgrade	4,285.000 LF	·	·
0248	650.5000 Construction Staking Base	1,300.000 LF	·	·
0250	650.6000 Construction Staking Pipe Culverts	13.000 EACH	·	·
0252	650.7000 Construction Staking Concrete Pavement	2,985.000 LF	<del>.</del>	<u></u>
0254	650.8000 Construction Staking Resurfacing Reference	89,818.000 LF		·
0256	650.9910 Construction Staking Supplemental Control (project) 01. 1080-18-70	LS	LUMP SUM	<del></del>
0258	650.9910 Construction Staking Supplemental Control (project) 02. 1080-19-70	LS	LUMP SUM	·
0260	650.9920 Construction Staking Slope Stakes	625.000 LF		
0262	690.0150 Sawing Asphalt	4,557.000 LF		
0264	715.0415 Incentive Strength Concrete Pavement	2,514.000 DOL	1.00000	2,514.00
0266	740.0440 Incentive IRI Ride	66,000.000 DOL	1.00000	66,000.00
0268	ASP.1T0A On-the-Job Training Apprentice at \$5.00/HR	3,000.000 HRS	5.00000	15,000.00
0270	ASP.1T0G On-the-Job Training Graduate at \$5.00/HR	4,500.000 HRS	5.00000	22,500.00
0272	SPV.0060 Special 01. Sand Bags	40.000 EACH		





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Federal ID(s): WISC 2019684, WISC 2019685

SECTION: 0001 Contract Items

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0274	SPV.0060 Special 02. Apron Endwall for Culvert Pipe Steel 22x36-Inch	1.000 EACH	·	<u>-</u>
0276	SPV.0075 Special 01. Contractor Staking Miscellaneous	40.000 HRS		
0278	SPV.0090 Special 01. Pipe Underdrain Unperforated 24-Inch	27.000 LF	·	·
0280	SPV.0180 Special 01. Resin Binder High Friction Surface Treatment Modified	13,866.000 SY		·
0282	465.0105 Asphaltic Surface Section: 0	485.000 TON 0001	 Total:	
	3331611.		Total Bid:	