Wisconsin Department of Transportation

Division of Transportation Systems Development
Bureau of Project Development
4822 Madison Yards Way, 4th Floor South
Madison, WI 53705

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March 31, 2022

NOTICE TO ALL CONTRACTORS:

Proposal #04: 5020-01-60, WISC 2022283
Lavalle - Mauston
Sth 33 TO 0.05 Mi N Sara Lane
STH 58
Juneau County

Letting of April 12, 2022

This is Addendum No. 02, which provides for the following:

Special Provisions:

Revised Special Provisions	
Article No.	Description
3	Prosecution and Progress
5	Holiday and Special Event Work Restrictions

Added Special Provisions	
Article No.	Description
21	UV GRP CIPP 36-Inch, Item SPV.0090.01

Schedule of Items:

Revised Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
465.0105	Asphaltic Surface	TON	500	1000	1500
628.7504	Temporary Ditch Checks	LF	300	30	330

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
SPV.0090.01	UV GRP CIPP 36-Inch	LF	0	188	188

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
4	Changed labels and depths of existing pavement structure.
5	Changed labels and depths of existing pavement structure.
20	Changed quantity of Asphaltic Surface
22	Changed quantity of Temporary Ditch Checks

Added Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of why sheet was added)
8A	A culvert liner was added, and additional information is needed for bidding.

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. 02

5020-01-60

March 31, 2022

Special Provisions

3. Prosecution and Progress.

Add the following to section titled **Construction Staging***:*

No work can take place between STA 815+00 - STA 853+87 (EOP) between 6:00 AM August 14, 2022 to 6:00 AM, August 22, 2022 due to the Juneau County Fair. If new pavement is placed between STA 815+00 – STA 853+87 prior to this closure, aggregate shoulder must be installed prior to 6:00 AM August 14, 2022.

5. Holiday and Special Event Work Restrictions.

Add the following work restriction:

From noon Friday, August 19, 2022 to 6:00 AM Monday, August 22, 2022, Juneau County Fair.

21. UV GRP CIPP 36-Inch, Item SPV.0090.01;

A Description

This special provision describes furnishing, preparing, installing, and verifying ultraviolet (UV) glass reinforced plastic (GRP) cured-in-place-pipe (CIPP) liners for storm sewer or culvert pipe that when cured provides a structurally sound, smooth, joint less and watertight pipe.

A.1 Referenced Documents

The following documents form a part of this specification to the extent stated herein:

- ASTM F2019 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastic (GRP) Cured-in-Place Resin Pipe (CIPP)
- ASTM F1216 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube
- ASTM F1743 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pull In and Inflate and Curing of a Resin-Impregnated Tube.
- ASTM D543 Test Method for Resistance of Plastics to Chemical Reagents
- ASTM D578 Standard Specification Glass Fiber Strands
- ASTM D638 Standard Test Method for Tensile Properties of Plastics
- ASTM D790 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
- ASTM D2122 Standard 1 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
- ASTM D3567 Standard Practice for Determining Dimensions of “Fiberglass” (Glass- Fiber Reinforced Thermosetting Resin) Pipe and Fittings

- ASTM D5813 Standard Specification for Cured-in Place Thermosetting Resin Sewer Pipe

B Materials

B.1 General

Provide a UV cured GRP system adhering to ASTM F2019 that has a minimum 500,000 linear feet or 1000 lined sections of successful installations in the United States and that has been continuously available and in service for a minimum of 5 years.

Allow the engineer to inspect all liner to be installed under this work at the manufacturer's plant(s) and wet-out facility for compliance with these specifications if requested. Require the wet-out facility's cooperation in these inspections.

B.2 Fiberglass Liner

Provide a liner that is homogeneous throughout, uniform in color, free of cracks, holes, foreign materials, blisters, and deleterious faults. Inspect glass fiber tube liner for defects at time of manufacturer and prior to installation.

Obtain compound samples and prepare test specimens according to the latest applicable ASTM standards from the manufacturer if directed by the engineer.

B.3 Tube

Furnish a flexible fiber glass tube meeting the requirements of ASTM F2019 as appropriate that when installed, will tightly fit the internal circumference and length of the original pipe.

Provide a wet out tube that when compressed at installation pressures will meet or exceed the design thickness. Construct the tube to withstand installation pressures and curing temperatures, have sufficient strength to bridge missing pipe, stretch to fit irregular pipe sections, and invert smoothly around bends.

Conduct liner wet out in an indoor environmentally controlled manufacturing setting. No onsite wet out will be allowed. The engineer may inspect the wet out facility at the manufacturer's plant(s) for compliance with these specifications. Saturate the glass fiber tube with the appropriate resin using a resin bath system to allow for the lowest possible amount of air entrapment.

Fabricate any seams in the tube stronger than the unseamed material. Do not utilize overlapped layers of the liner in longitudinal seams that cause lumps in the final product. Form spirally formed and sewn joints for length as required. Do not form joints perpendicular to the long axis. The tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material included in the tube may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.

Utilize an outer and inner film to ensure that the liner remains intact during the insertion process and to protect the resin at all times during the installation and curing process from water and debris contamination, and resin migration. Provide liners that are both impervious to airborne styrene, with the outer material also having UV blocking characteristics.

The liner should be seamless in its cured state to ensure homogenous physical properties around the circumference of the cured liner. The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.

Mark the tube for distance at regular intervals along its entire length, not to exceed 5 feet. Include the manufacturers name or identifying symbol.

B.4 Resin

Furnish a corrosion resistant polyester, vinyl ester, or orthothalic (either ppg or npg grade) and catalyst resin system, compatible with the installation process, that when properly cured within the tube creates a composite that meets the requirements of ASTM F1216, ASTM D5813, and ASTM F2019, the physical

properties in Table 1, and those requirements which are to be utilized in the structural design of the CIPP for this project. Resins created from recycled materials are not allowed.

Table 1 CIPP Minimum Physical Properties

Flexural Modulus (minimum)	725,000 psi
Flexural Strength (minimum)	15,000 psi
Long term E-modulus	675,000 psi
Long term tensile bending strength	13,500 psi

Use resin requiring a UV light to cure the liner. A photo-initiator system must be added to the resin prior to the impregnation. The photo-initiator system shall be tuned to the UV-curing equipment used or vice-versa. The liquid UV resin shall saturate the tube and produce a properly cured liner, which is resistant to abrasion due to solids, grit, and sand.

B.5 Structural Requirements

A minimum of 14 days prior to delivery of the liner materials, submit design calculations prepared by an engineer licensed in the State of Wisconsin that meet the requirements of the manufacturer and that are designed as suggested by ASTM F2019, Appendix X1. The designer may use ASTM F1216, Appendix XI as modified in ASTM F2019 X1.1.2 for each pipe segment with less than 10% ovality. If the ovality is 10% or greater, use either the ASCE or the WRc Sewerage Rehabilitation Manual, Type II Design, Section 5.3.2.iii for non-round pipe. Assume the fully deteriorated condition and assume no bonding to the original pipe wall for the CIPP design. Verify the Long-Term Flexural Modulus used in design by independent testing and provide documentation to the Department per Section B.6.1. Do not exceed 50% of the short-term values for the Long-Term Modulus in design. CIPP thickness shall not be less than that which is computed from the design requirements in the table below, for resin systems with physical properties shown.

Table 2 - CIPP Design Criteria

Design Variable	Value
Culvert Inside Diameter	36 Inches
Soil Density: w	120 pcf
Live Load: Ws	Follow AASHTO LRFD Bridge Design Specifications (AASHTO, 2012) Article 3.6.1.2.6
Minimum Height of Water above Culvert Crown: Hw	Depth of Water Above Culvert
Height of Soil above Culvert Crown: H	Culvert Depth of Cover
Culvert Deflection: Δ	2% minimum. To be verified by liner designer.
Modulus of Soil Reaction E's	Follow AASHTO LRFD Bridge Design Specifications (AASHTO, 2012) Article 12.12.3.5.1
Long-term Modulus of Elasticity of CIPP Liner: E_L	362,500 psi minimum, 50% of initial value in ASTM F2019. Actual value per the manufacturer can be used. Provide supporting data verified by independent testing.
Factor of Safety: N	2
Flexural Stress	15,000 psi Actual value per the manufacturer can be used. Provide supporting data verified by independent testing

B.6 Experience and Quality Control

B.6.1 Experience

Demonstrate a minimum of five (5) years experience in the installation of cured in place liners by the installation contractor with at least 5 projects in that time totaling over 50,000 feet of installed liner. The installing contractor must be trained and certified by the UV GRP manufacturer and have documented experience with a fiberglass UV cured liner.

Provide an experienced inspector or supervisor to oversee the installation of the CIPP liner, who completed the NASSCO cured-in-place-pipe inspector training class or equivalent and has at least three (3) years experience with cured in place pipe liner installation having previously supervised a minimum of 50,000

linear feet of CIPP lining using a similar resin and flexible tube and using the specific method of installation and curing proposed.

If the contractor does not have 50,000 linear feet of CIPP lining experience with the UV curing system being used, then a manufacturer's onsite representative must be present during installations of the CIPP system until such time the Department is confident in the contractor's ability. The contractor is to provide the engineer with the manufacturer representative's work experience for approval. Do not begin prior to the engineer's approval of the manufacturer's onsite representative.

Provide five (5) references of completed projects of similar installations by the contractor.

B.6.1 Installation and Quality Control Plan

Furnish a detailed installation and quality control plan, to be discussed at the preconstruction meeting outlining measures to assure the quality requirements of the contract are met including but not limited to;

- A summary table of CIPP material properties, including short-term flexural modulus of elasticity, 50-year flexural modulus of elasticity, short-term flexural strength (bending stress), 50-year flexural strength (bending stress), and chemical resistance.
- Manufacturer's product certifications and available standard written warranty for materials used in the liner system including documentation of testing to confirm a minimum 50-year design life for the liner, adherence to applicable ASTM standards and safety data sheets
- Liner and resin/catalyst type including, manufacturer, product names and mixing ratios, the location of the facility where each was manufactured, and a list of appurtenant materials and accessories to be furnished.
- Independent third-party certified laboratory test reports demonstrating that the exact resin/liner combination to be used for this project meets the requirements for initial structural properties and chemical resistance (performed according to ASTM F1216).

  Independent third-party certified laboratory test reports demonstrating that the exact resin and liner to be used for this project has been tested for long-term flexural modulus of elasticity and long-term flexural strength (i.e. 10,000 hour creep testing performed according to ASTM 2990 or DIN 761 for design conditions applicable to this project). When filled resins are proposed, complementary data of the same data for unfilled resin shall also be provided. If the data submitted is not for the exact liner to be used on this project, submit a detailed description of the physical properties of both the liner used in the test and the liner to be used for this project to demonstrate that the two liners are comparable in terms of physical properties.

  Perform testing for 10,000 hours under test conditions and loadings described below. The data points from 1,000 hours to 10,000 hours, or such other time period as determined by the engineer based on the curve or slope of the plotted data, of the long-term flexural modulus shall be extrapolated using a log-log scale linear regression analysis to determine the minimum service life performance of the resin-tube.

  Testing shall be conducted at:

  - Temperature 21°C to 25°C
  - Relative humidity: 50% minimum
  - Load: Load shall be calculated at 0.25% of the short-term E-modulus as tested per ASTM D790 or ISO 178, or as approved by engineer.
- Perform wet out at a facility with a quality management system registered according to and conforming with the current ISO 9001 standard or having implemented a quality system similar to that in the ISO 9001 requirements. Ensure that proper materials and amounts are used in the resin saturation process and in liner shipping and storage. At a minimum, the quality control documentation shall include resin lot numbers, volumes of resin, catalyst, enhancers, date of wet-out, storage / transportation controls, and quality assurance procedures.
  - Method of installation.
- Proposed quality controls checks that will be performed and in place by the contractor

- Method of curing and monitoring including:
    - Curing speed
    - Light source size and wattage
    - Inner air pressure
    - Curing temperatures

  These parameters are to be controlled and documented during installation and curing and provided to the engineer including date and time and length of installed liner.
- Manufacturer's product literature, and application and installation requirements for materials used in the liner including
    - Maximum, minimum and ideal installation temperatures
    - Minimum pressure required to hold tube tight to the host conduit and maximum pressure so not damage the tube
    - Curing times
    - Maximum pulling forces as applicable
- Product sampling, liner thickness compliance, and notification/resolution of observed liner defects and/or wrinkling observed by the contractor during post lining televising operations.
- Defined responsibilities, as assigned to specific contractor's personnel, for assuring that all the quality assurances are met.
- An outline of specific repair or replacement procedures for potential defects that may occur in the installed CIPP. Provide recommended repair/replacement procedures per the CIPP system manufacturer.
- Bypass flow plan if required.
- An odor control plan that will show project specific odors will be minimized at the project site and surrounding area.

B.7 Quality and Inspection Report

Submit a report of the inspection and quality activities performed during and after lining. Inspect pipes with a color pan and tilt, 360° rotating head camera specifically designed and constructed for sewer inspection. Provide pre and post lining video inspection files upon completion of the lining. Format files for viewing on a standard PC without additional media software. Perform video work in accordance with NASSCO PACP standards or engineer approved equal.

B.8 Cured Liner Properties

B.8.1 Color

Provide a tube where the cured interior pipe surface after installation is a light reflective color so that a clear, detailed examination with closed circuit television inspection can be made.

B.8.2 Chemical Resistance

Provide a chemically resistance tube. Evaluate the inner surface of the cured resin/fiberglass liner matrix in a laminate for qualification testing of long term chemical exposure to a variety of chemical effluents in a manner consistent with 6.4.1 and 6.4.2 of ASTM D5813.

Provide samples of tube and resin similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meets these chemical testing requirements.

B.8.3 Hydraulic Capacity

Maintain the overall hydraulic profile as large as possible with the CIPP having a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.

C Construction

C.1 General

No change of material, design values, or procedures as developed before bidding the contract may be made during the course of the work without the prior written approval of the engineer.

Coordinate with the engineer to field verify pipe lining locations and lengths before beginning work. The department will locate and designate all right of way areas open and accessible for the work and provide rights of access to these points. If a shoulder must be closed to traffic because of the work, institute the actions necessary to do this upon concurrence of the Department for the mutually agreed time period.

C.2 Handling and Storage

Take care in shipping, handling and storage to avoid damaging the liner. Store liner as recommended by manufacturer and as approved by the engineer. Avoid exposure to light prior to installation. Any liner damaged in shipment, storage, or installation shall be replaced as directed by the Engineer at no additional cost.

C.3 Accessibility of Water

This site is rural and without access to public waters systems. Supply water for cleaning the host pipe or other processes.

C.4 Cleaning Existing Conduits

Remove internal debris from the existing pipeline including any roots and protruding service connections. Clean the pipes with hydraulically powered equipment, high-velocity jet cleaners, or mechanically powered equipment capable of sufficiently cleaning and clearing the existing pipe. Use precautions during the cleaning operations to prevent additional damage to the existing pipe. Properly dispose of all sediment removed from the cleaning process.

C.5 Inspection of Pipeline

Inspect the interior of the pipeline carefully to determine the location of any conditions which may prevent proper installation of CIPP into the pipelines, note these so that these conditions can be corrected. Keep a digital video and suitable log for later reference by the Department.

C.6 Repair Techniques & Material Installation

Fill any voids in the host pipe that can not be bridged prior to the installation of the CIPP liner. Small gaps and offsets in the pipe culvert joints can be bridged by the CIPP liner. Repair significant gaps and offsets and stop water infiltration that may impact CIPP curing.

C.7 Installation

C.7.1 Installation of Glass Fiber Tubing

Use a constant tension winch, as specified by the liner manufacturer, to pull the glass fiber liner into position in the pipe. Provide a longitudinal fiberglass reinforcement band which runs the entire length of the liner ensuring that the pulling force is transferred to the band and not the fiberglass liner. Pull the liner keeping the force below the system recommendation for the tubing installed. Provide end plugs to cap each end of the glass fiber liner to prepare for pressurizing the liner. Secure the end caps to prevent them from being expelled due to pressure. Use liner restraints in manholes.

Use a slip sheet/gliding foil on the bottom one third to one half of the pipe prior to liner insertion (if it is not already part of the manufactured outer film of the liner), for the purpose of protecting the liner during insertion and reduce the drag, or as recommend by the liner manufacturer.

C.7.2 Curing Liner

Cure the glass fiber liner with UV light sources at a constant inner pressure. Hold the liner tight to the host pipe per the manufacturer's recommended equipment and methods. Do not release liner inner pressure until liner reaches curing parameters specified by the manufacturer.

Assemble the UV light sources according to the manufacturer's specifications for the liner diameter. Draw a multi-lamp ultraviolet light curing assembly fitted with CCTV equipment through the pipe while the tube is

expanded under pressure. Verify that the liner is properly fitted to the host pipe without any wrinkles or fins that should be avoidable given the current cross-sectional configuration (geometry) of the host pipe. Correct defects before proceeding on to the UV-light curing process. Take care not to damage the liner or inner film material when inserting the curing equipment.

Use curing speeds as recommended by the manufacturer and determined by contractor based on various site specific field conditions. The optimal curing speed, or travel speed of the energized UV light sources, is determined for each length of liner based on liner diameter, liner thickness, and exothermic reaction temperature. Use infrared sensors during the curing process to record curing data that will be submitted to the engineer with a post CCTV inspection. Monitor and control the parameters stated in the quality control plan, giving the engineer a record of the curing parameters over every segment of the entire length of the liner.

Remove the inner film material if the liner is manufactured with a removable inner film as recommended by the manufacturer after curing and discard.

Once cured, the cured-in-place pipe should be continuous and tight fitting. Cut the pipe liner neatly and smoothly at each end of the host pipe to prevent snagging and collection of debris.

C.8 Quality Control and Testing

Prepare cured liner samples and test physical properties in accordance with ASTM F2019, Section 7. Test for conformance with the manufacturer's final CIPP design values and the CIPP Design Criteria requirement of this special provision including flexural properties listed.

Provide documentation of quality checks performed according to this part and as described in the project quality control plan.

C.9 Workmanship and Inspection

Perform an initial visual and final television inspection to document the as-built condition after the completion of the liner installation Inspect the CIPP in accordance with ASTM F2019, Section 7.3 and this part. Provide copies of as-built inspection documentation to the engineer in digital format that can be read without specialized software.

Provide a finished liner that is continuous over the entire length of the conduit section and that tightly conforms to the walls of the existing (host) conduit pipe that is homogeneous throughout and free of any dry spots, lifts, delaminations, wrinkles, protrusions, holes, cracks, foreign material, blisters, or other deleterious faults or defects, which in the opinion of the engineer, will affect the liner's structural integrity, hydraulic performance, future maintenance access, and overall liner performance. Provide a finished liner with no visible gaps or annular space between the finished liner and the existing (host) pipe at the manhole, sewer service connection, or other exposed points within the finished lined section. Where the CIPP does not meet the requirements of Section 7 of ASTM F2019 or this specification, the affected portions of the CIPP shall be removed and replaced with an acceptable repair as specified in 6.2 of ATSM Specification D5813 as approved by the engineer. Any excavation or restoration necessary is incidental with no additional payment.

Upon acceptance of the installation work and testing, restore the project area affected by the operations to its original condition.

D Measurement

The department will pay for UV GRP CIPP 36-Inch by the linear foot, acceptably completed.

E Payment

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

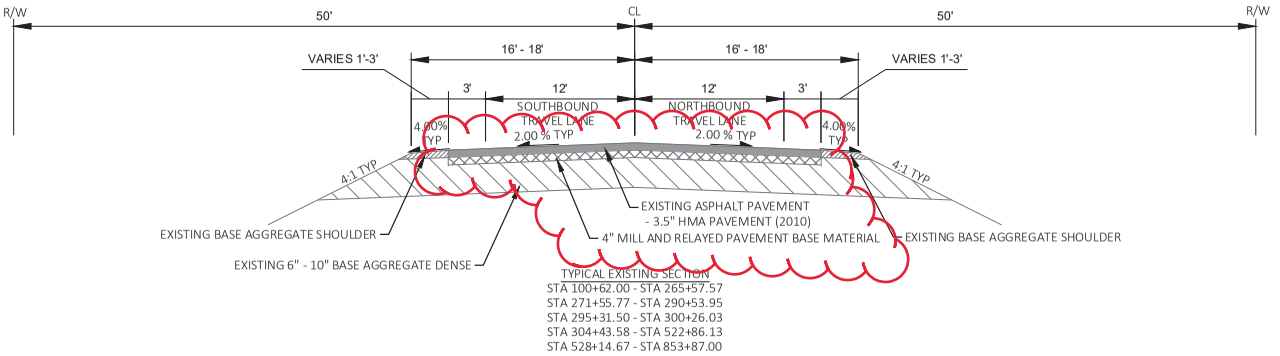
ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	UV GRP CIPP 36-Inch	LF

Payment is full compensation for furnishing all labor, tools, equipment, materials, testing, reports and incidentals, including any required bypass pumping or flow diversion, cleaning of the host pipe, gap, void and offset repair in the host pipe, and disposal of wastes including curing or cleaning water necessary to complete the contract work according to the above stated specifications.

Schedule of Items
Attached, dated March 31, 2022, are the revised Schedule of Items Pages 1 – 5.

Plan Sheets
The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:
Revised: 4, 5, 20, 22
Added: 8A

END OF ADDENDUM



TYPICAL EXISTING SECTION
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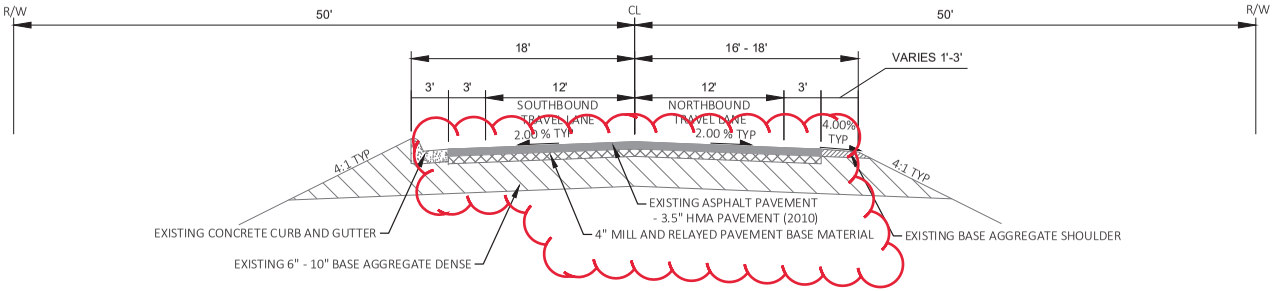
STA 271+55.77 - STA 290+53.95
STA 295+31.50 - STA 300+26.03
STA 304+43.58 - STA 522+86.13
STA 528+14.67 - STA 853+87.00



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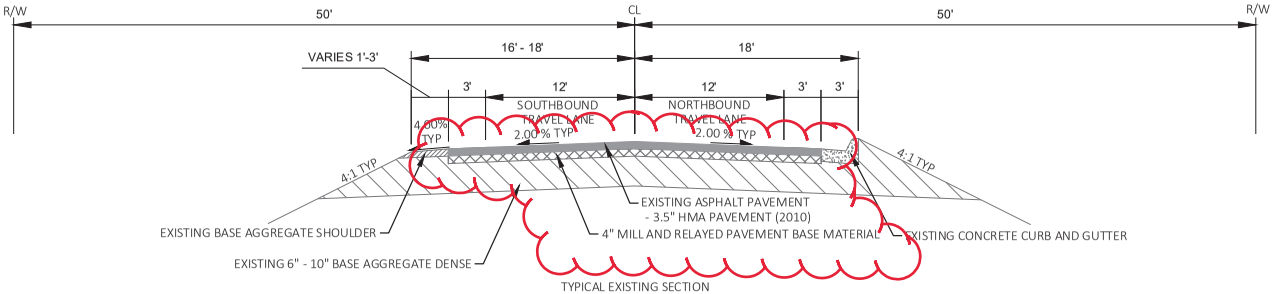

TYPICAL EXISTING SECTION
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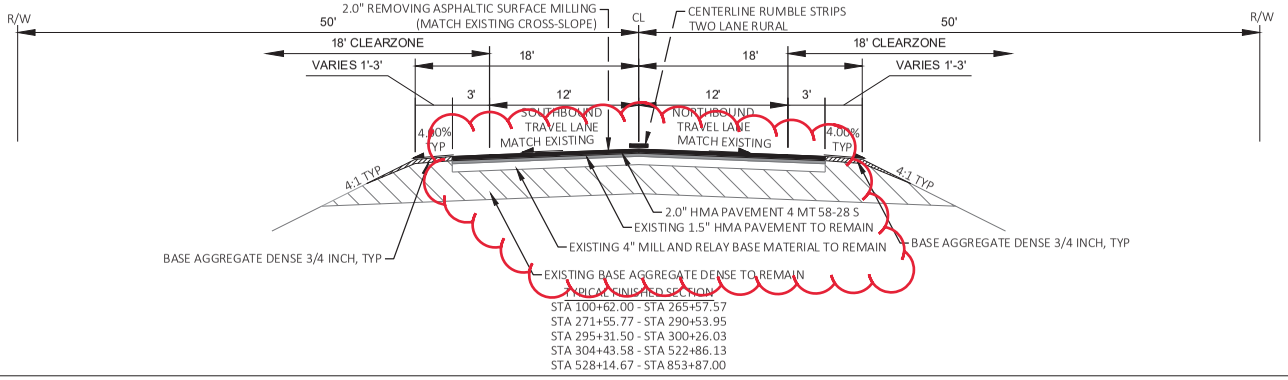
STA 290+53.95 - STA 295+31.50
STA 300+26.03 - STA 304+43.58

Addendum No. 02
ID 5020-01-60
Revised Sheet 4
March 31, 2022

PROJECT NO: 5020-01-60	HWY: STH 58	COUNTY: JUNEAU	TYPICAL SECTIONS: EXISTING	SHEET 4	E

FILE NAME : P:\PROJECTS_CURRENT\JUNEAU\WISDOT-SWR-LACROSSE\STH 58 - MILL-FILL\ACAD\SHEETSPLAN\020301_TS\020301_TS.DWG
LAYOUT NAME - 01
PLOT DATE : 3/30/2022 1:41 PM
PLOT BY : DEXTER KAETTERHENRY
PLOT NAME :
PLOT SCALE : 1 IN:10 FT



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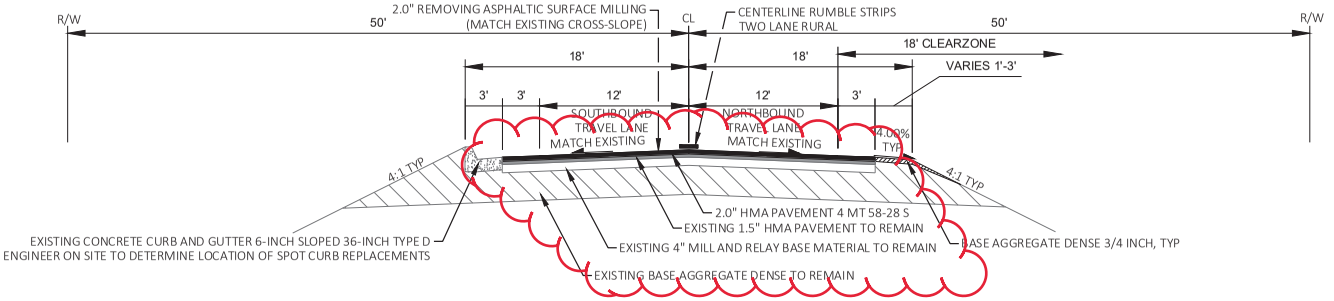
STA 271+55.77 - STA 290+53.95
STA 295+31.50 - STA 300+26.03
STA 304+43.58 - STA 522+86.13
STA 528+14.67 - STA 853+87.00



TYPICAL FINISHED SECTION
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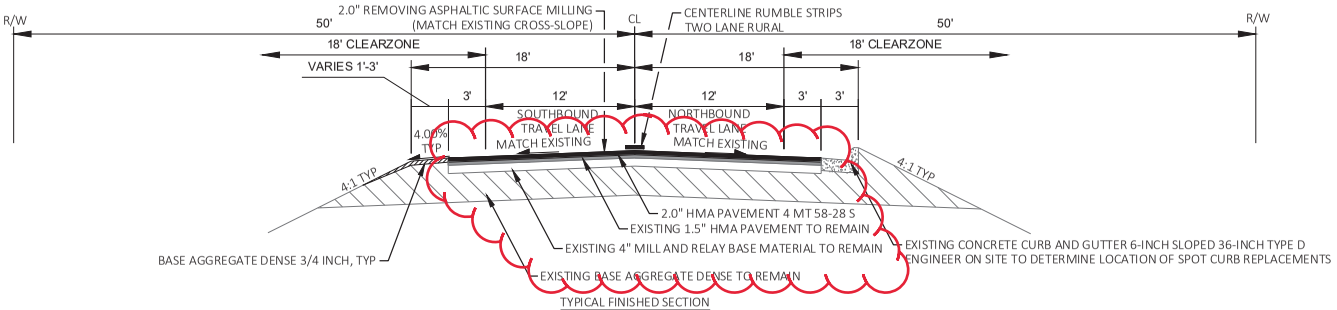

TYPICAL FINISHED SECTION
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STA 290+53.95 - STA 295+31.50
STA 300+26.03 - STA 304+43.58

Addendum No. 02
ID 5020-01-60
Revised Sheet 5
March 31, 2022

PROJECT NO: 5020-01-60	HWY: STH 58	COUNTY: JUNEAU	TYPICAL SECTIONS: FINISHED	SHEET 5	E

FILE NAME : P:\PROJECTS_CURRENT\JUNEAU\WISDOT-SWR-LACROSSE\STH 58 - MILL-FILL\ACAD\SHEETSPLAN\020301_TS\020301_TS.DWG
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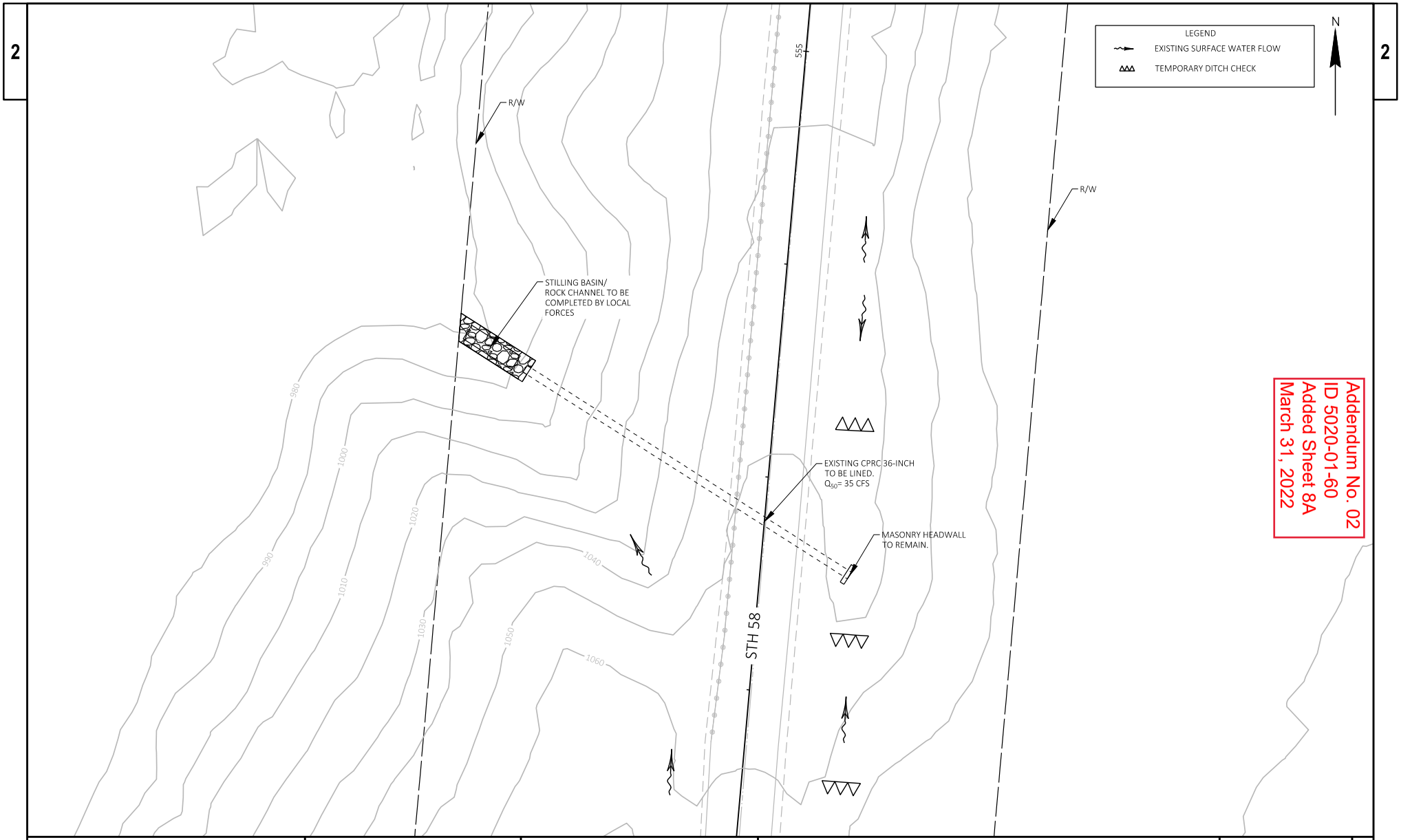
PLOT DATE : 3/30/2022 1:47 PM PLOT BY : DEXTER KAETTERHENRY PLOT NAME : PLOT SCALE : 1 IN:10 FT



Addendum No. 02
ID 5020-01-60
Added Sheet 8A
March 31, 2022

PROJECT NO: 5020-01-60	HWY: STH 58	COUNTY: JUNEAU	CONSTRUCTION DETAIL-CULVERT LINER	SHEET 8A	E

FILE NAME : C:\CIVIL 3D PROJECTS\50200130 STH 58\021010_CD.DWG
LAYOUT NAME - Plan 1 IN 200 FT
PLOT DATE : 3/29/2022 9:44 AM
PLOT BY : GREINER JR, MICHAEL
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

REMOVING ASPHALTIC SURFACE BUTT JOINTS

STATION - STATION	LOCATION	204.0115 SY	COMMENTS
100+62	CL	55	BEGIN PROJECT
119+50	LT	30	SEFKAR ROAD
126+00	RT	40	PIERCE ROAD
137+10	RT	28	WILKE ROAD
182+00	RT	35	SECTION 11 ROAD
225+00	LT	30	WILKINSIN ROAD
264+95	RT	25	LUCHT ROAD
276+75	RT	36	CTH F
304+50	LT	30	SPRINGER ROAD
327+50	LT	28	MILLER ROAD
343+90	RT	28	CLARK ROAD
385+50	LT	35	GEIER ROAD
391+00	LT	75	FOX ROAD
398+00	RT	38	LUCHT ROAD
466+00	LT	28	WAFLE ROAD
466+10	RT	27	WAFLE ROAD
508+80	LT	40	DARROW ROAD
517+50	RT	25	HILL ROAD
569+75	RT	28	HILL ROAD
603+75	RT	28	CHAPEL ROAD
616+50	LT	35	CTH I
663+70	RT	35	CTH O
663+80	LT	35	CTH O
702+75	RT	25	STEINER ROAD
753+50	LT	25	DONLIN ROAD
777+20	RT	30	MILE BLUFF ROAD
825+60	RT	24	POWERS STREET
833+30	LT	27	JUNEAU COUNTY FAIRGROUNDS ROAD
833+30	RT	25	HESS STREET
844+75	LT	25	JUNEAU COUNTY FAIRGROUNDS ROAD
851+80	RT	30	SARA LANE
853+87	CL	30	END PROJECT
TOTALS		**1,035**	

REMOVING ASPHALTIC SURFACE

STATION - STATION	LOCATION	204.0110 SY	COMMENTS
99+94 - 100+36	LT	40	ISLAND
100+62 - 853+87	LT & RT	100	CURB & GUTTER
100+62 - 853+87	LT & RT	60	DRIVEWAYS
TOTALS		**200**	

REMOVING CURB AND GUTTER

STATION - STATION	LOCATION	204.0150 LF	COMMENTS
99+95 - 100+35	LT	95	CONC ISLAND
UNDISTRIBUTED	LT/RT	405	SPOT REPLACEMENT
TOTAL		**500**	

REMOVING ASPHALTIC SURFACE MILLING

STATION - STATION	LOCATION	204.0120 SY
100+62 - 853+87	LT & RT	253,000
TOTALS		**253,000**

REMOVING DISTRESSED PAVEMENT MILLING

STATION - STATION	LOCATION	SPV.0180.01 REMOVING DISTRESSED PAVEMENT MILLING SY
CATEGORY CODE 0010		
100+62 - 853+87	CL	13,000
TOTALS		**13,000**

EXCAVATION COMMON ITEMS

STATION	LOCATION	205 0100 EXCAVATION COMMON CY
CATEGORY CODE 0010		
659+50 - 660+20	LT/RT	100
767+00 - 768+20	LT/RT	100
TOTALS		**200**

BASE AGGREGATE DENSE ITEMS

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	COMMENTS
CATEGORY CODE 0010				
100+62 - 853+87	RT / LT	4,500	--	SHOULDERING
UNDISTRIBUTED	RT / LT	--	500	CURB & GUTTER
TOTALS		**4,500**	**500**	

ASPHALTIC ITEMS

STATION - STATION	LOCATION	455.0605 TACK COAT GAL	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0105 ASPHALTIC SURFACE TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
CATEGORY CODE 0010					
100+62 - 853+87	CL / RT/ LT	19,050	31,300	1,500	75
TOTALS		**19,050**	**31,300**	**1,500**	**75**

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ID 5020-01-60
Revised Sheet 20
March 31, 2022

PWL ITEMS

STATION - STATION	460.0105.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS EACH	460.0110.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY EACH
CATEGORY CODE 0010		
PROJECT 5020-01-60	1	1
TOTALS	**1**	**1**

LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12' Driving Lane	100+62 - 853+87	Upper Layer	Existing HMA Surface	4 MT 58-28 S	25,000	2"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
3' Shoulder / Side Roads / Guardrail	100+62 - 853+87	Upper Layer	Existing HMA Surface	4 MT 58-28 S	6,300	2"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by the department, not eligible for incentive

MISC. SHEET 1

MARKING LINE ITEMS

STATION - STATION	LOCATION	646.1020 EPOXY 4-INCH YELLOW LF	646.1040 GROOVED WET REFLECTIVE EPOXY 4-INCH WHITE LF	646.3020 EPOXY 8-INCH WHITE LF	646.6120 STOP LINE EPOXY 18-INCH WHITE LF	646.8120 CURB EPOXY YELLOW LF	646.8220 ISLAND NOSE EPOXY YELLOW EACH	648.0100 LOCATING NO PASSING ZONES MI	649.0105 TEMPORARY PAINT 4-INCH YELLOW LF	649.0120 TEMPORARY EPOXY 4-INCH YELLOW LF	COMMENTS
CATEGORY CODE 0010											
100+00 - 853+87	LT/ RT/CL	137,500	147,500	40	30	90	3	14.3	137,500	137,500	TEMP PAINT FOR MILLED SURFACE
	TOTALS	**137,500**	**147,500**	**40**	**30**	**90**	**3**	**14.3**	**137,500**	**137,500**	

DITCH CHECK ITEMS

STATION	LOCATION	628.7504 TEMPORARY DITCH CHECKS LF	COMMENTS
CATEGORY CODE 0010			
UNDISTRIBUTED	LT/RT	330	PERPENDICULAR TO EX DIRECTION OF FLOW AS NEEDED
	TOTAL	**330**	

TRAFFIC CONTROL ITEMS

LOCATION	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0900 SIGNS DAYS	643.1050 PCMS DAYS	643.5000 TRAFFIC CONTROL EACH
CATEGORY CODE 0010					
Project 5020-01-60	1,200	80	2,000	14	1
TOTALS	**1,200**	**80**	**2,000**	**14**	**1**

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ID 5020-01-60
Revised Sheet 22
March 31, 2022

CONSTRUCTION STAKING ITEMS

STATION - STATION	LOCATION	650.8000 RESURFACING REFERENCE LF	650.9910 SUPPLEMENTAL CONTROL LS
CATEGORY CODE 0010			
PROJECT 5020-01-60	CL	73,550	1
TOTALS		**73,550**	**1**

STAKING ITEMS FOR CURB AND GUTTER SHOWN ELSEWHERE

REFERENCE MONUMENTS ITEMS

STATION	LOCATION	SPV.0060.01 LANDMARK REFERENCE MONUMENT SPECIAL EACH	SPV.0060.02 VERIFY LANDMARK REFERENCE MONUMENT EACH
CATEGORY CODE 0010			
576+12	1' RT	1	1
602+63	7' LT	1	1
640+05	24' LT	1	1
	TOTALS	**3**	**3**

SAWING ITEMS

STATION - STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	COMMENTS
100+62	CL	280	--	BEGIN PROJECT
119+50	LT	30	--	SEFKAR ROAD
126+00	RT	30	--	PIERCE ROAD
137+10	RT	30	--	WILKE ROAD
182+00	RT	30	--	SECTION 11 ROAD
225+00	LT	30	--	WILKINSIN ROAD
264+95	RT	30	--	LUCHT ROAD
276+75	RT	30	--	CTH F
304+50	LT	30	--	SPRINGER ROAD
327+50	LT	30	--	MILLER ROAD
343+90	RT	30	--	CLARK ROAD
385+50	LT	30	--	GEIER ROAD
391+00	LT	60	--	FOX ROAD
398+00	RT	45	--	LUCHT ROAD
466+00	LT	30	--	WAFLE ROAD
466+10	RT	30	--	WAFLE ROAD
508+80	LT	45	--	DARROW ROAD
517+50	RT	30	--	HILL ROAD
569+75	RT	30	--	HILL ROAD
603+75	RT	30	--	CHAPEL ROAD
616+50	LT	35	--	CTH I
663+70	RT	35	--	CTH O
663+80	LT	35	--	CTH O
702+75	RT	30	--	STEINER ROAD
753+50	LT	30	--	DONLIN ROAD
777+20	RT	30	--	MILE BLUFF ROAD
825+60	RT	30	--	POWERS STREET
833+30	LT	40	--	JUNEAU COUNTY FAIRGROUNDS ROAD
833+30	RT	30	--	HESS STREET
844+75	LT	35	--	JUNEAU COUNTY FAIRGROUNDS ROAD
851+80	RT	30	--	SARA LANE
853+87	CL	30	--	END PROJECT
UNDISTRIBUTED	LT/RT	500	20	CURB & GUTTER REPLACEMENT
	TOTALS	**1,800**	**20**	

MISC. SHEET 3

Proposal ID: 20220412004 **Project(s):** 5020-01-60

Federal ID(s): WISC 2022283

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	204.0110 Removing Asphaltic Surface	200.000 SY	_____.____	_____.____
0004	204.0115 Removing Asphaltic Surface Butt Joints	1,035.000 SY	_____.____	_____.____
0006	204.0120 Removing Asphaltic Surface Milling	253,000.000 SY	_____.____	_____.____
0008	204.0150 Removing Curb & Gutter	500.000 LF	_____.____	_____.____
0010	205.0100 Excavation Common	200.000 CY	_____.____	_____.____
0012	211.0100 Prepare Foundation for Asphaltic Paving (project) 01. 5020-01-60	LS	LUMP SUM	_____.____
0014	213.0100 Finishing Roadway (project) 01. 5020-01-60	1.000 EACH	_____.____	_____.____
0016	305.0110 Base Aggregate Dense 3/4-Inch	4,500.000 TON	_____.____	_____.____
0018	305.0120 Base Aggregate Dense 1 1/4-Inch	500.000 TON	_____.____	_____.____
0020	455.0605 Tack Coat	19,050.000 GAL	_____.____	_____.____
0022	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	1.000 EACH	_____.____	_____.____
0024	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	1.000 EACH	_____.____	_____.____
0026	460.2005 Incentive Density PWL HMA Pavement	25,000.000 DOL	1.00000	25,000.00
0028	460.2007 Incentive Density HMA Pavement Longitudinal Joints	29,420.000 DOL	1.00000	29,420.00
0030	460.2010 Incentive Air Voids HMA Pavement	31,300.000 DOL	1.00000	31,300.00

Proposal ID: 20220412004 **Project(s):** 5020-01-60

Federal ID(s): WISC 2022283

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0032	460.6224 HMA Pavement 4 MT 58-28 S	31,300.000 TON	_____.____	_____.____
0034	465.0105 Asphaltic Surface	1,500.000 TON	_____.____	_____.____
0036	465.0120 Asphaltic Surface Driveways and Field Entrances	75.000 TON	_____.____	_____.____
0038	465.0315 Asphaltic Flumes	85.000 SY	_____.____	_____.____
0040	465.0475 Asphalt Centerline Rumble Strips 2-Lane Rural	73,550.000 LF	_____.____	_____.____
0042	601.0407 Concrete Curb & Gutter 18-Inch Type D	95.000 LF	_____.____	_____.____
0044	601.0415 Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	255.000 LF	_____.____	_____.____
0046	601.0557 Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	150.000 LF	_____.____	_____.____
0048	602.2400 Concrete Safety Islands	320.000 SF	_____.____	_____.____
0050	606.0050 Riprap Extra-Light	10.000 CY	_____.____	_____.____
0052	606.0200 Riprap Medium	105.000 CY	_____.____	_____.____
0054	618.0100 Maintenance And Repair of Haul Roads (project) 01. 5020-01-60	1.000 EACH	_____.____	_____.____
0056	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0058	624.0100 Water	50.000 MGAL	_____.____	_____.____
0060	625.0100 Topsoil	4,000.000 SY	_____.____	_____.____

Proposal ID: 20220412004 **Project(s):** 5020-01-60

Federal ID(s): WISC 2022283

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0062	628.1504 Silt Fence	1,500.000 LF	_____.____	_____.____
0064	628.1520 Silt Fence Maintenance	750.000 LF	_____.____	_____.____
0066	628.2008 Erosion Mat Urban Class I Type B	4,000.000 SY	_____.____	_____.____
0068	628.7504 Temporary Ditch Checks	330.000 LF	_____.____	_____.____
0070	629.0210 Fertilizer Type B	2.000 CWT	_____.____	_____.____
0072	630.0140 Seeding Mixture No. 40	60.000 LB	_____.____	_____.____
0074	630.0500 Seed Water	80.000 MGAL	_____.____	_____.____
0076	634.0612 Posts Wood 4x6-Inch X 12-FT	2.000 EACH	_____.____	_____.____
0078	634.0616 Posts Wood 4x6-Inch X 16-FT	10.000 EACH	_____.____	_____.____
0080	638.2102 Moving Signs Type II	12.000 EACH	_____.____	_____.____
0082	638.3000 Removing Small Sign Supports	12.000 EACH	_____.____	_____.____
0084	642.5001 Field Office Type B	1.000 EACH	_____.____	_____.____
0086	643.0300 Traffic Control Drums	1,200.000 DAY	_____.____	_____.____
0088	643.0420 Traffic Control Barricades Type III	80.000 DAY	_____.____	_____.____
0090	643.0900 Traffic Control Signs	2,000.000 DAY	_____.____	_____.____
0092	643.1050 Traffic Control Signs PCMS	14.000 DAY	_____.____	_____.____
0094	643.5000 Traffic Control	1.000 EACH	_____.____	_____.____

Proposal ID: 20220412004 **Project(s):** 5020-01-60

Federal ID(s): WISC 2022283

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0096	645.0120 Geotextile Type HR	160.000 SY	_____.____	_____.____
0098	646.1020 Marking Line Epoxy 4-Inch	137,500.000 LF	_____.____	_____.____
0100	646.1040 Marking Line Grooved Wet Ref Epoxy 4-Inch	147,500.000 LF	_____.____	_____.____
0102	646.3020 Marking Line Epoxy 8-Inch	40.000 LF	_____.____	_____.____
0104	646.6120 Marking Stop Line Epoxy 18-Inch	30.000 LF	_____.____	_____.____
0106	646.8120 Marking Curb Epoxy	90.000 LF	_____.____	_____.____
0108	646.8220 Marking Island Nose Epoxy	3.000 EACH	_____.____	_____.____
0110	648.0100 Locating No-Passing Zones	14.300 MI	_____.____	_____.____
0112	649.0105 Temporary Marking Line Paint 4-Inch	137,500.000 LF	_____.____	_____.____
0114	649.0120 Temporary Marking Line Epoxy 4-Inch	137,500.000 LF	_____.____	_____.____
0116	650.5500 Construction Staking Curb Gutter and Curb & Gutter	500.000 LF	_____.____	_____.____
0118	650.8000 Construction Staking Resurfacing Reference	73,550.000 LF	_____.____	_____.____
0120	650.9910 Construction Staking Supplemental Control (project) 01. 5020-01-60	 LS	LUMP SUM	_____.____
0122	690.0150 Sawing Asphalt	220.000 LF	_____.____	_____.____
0124	690.0250 Sawing Concrete	20.000 LF	_____.____	_____.____
0126	740.0440 Incentive IRI Ride	36,775.000 DOL	1.00000	36,775.00

Proposal ID: 20220412004 **Project(s):** 5020-01-60

Federal ID(s): WISC 2022283

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID / Description	Approximate Quantity and Units	Unit Price	Bid Amount
0128	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	500.000 HRS	5.00000	2,500.00
0130	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	600.000 HRS	5.00000	3,000.00
0132	SPV.0060 Special 01. Landmark Reference Monument Special	3.000 EACH	_____.____	_____.____
0134	SPV.0060 Special 02. Verify Landmark Reference Monument	3.000 EACH	_____.____	_____.____
0136	SPV.0180 Special 01. Removing Distressed Pavement Milling	13,000.000 SY	_____.____	_____.____
0138	SPV.0090 Special 01. UV GRP CIPP 36-Inch	188.000 LF	_____.____	_____.____
	Section: 0001		**Total:**	_____.____
			Total Bid:	_____.____