

HIGHWAY WORK PROPOSAL

Wisconsin Department of Transportation
 DT1502 01/2020 s.66.0901(7) Wis. Stats

Proposal Number: **041**

<u>COUNTY</u>	<u>STATE PROJECT</u>	<u>FEDERAL</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>
Walworth	3170-12-70	WISC 2022391	Delavan - Lake Geneva; Geneva National To Forest	STH 050

ADDENDUM REQUIRED ATTACHED AT BACK

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

Proposal Guaranty Required: \$100,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: May 10, 2022 Time (Local Time): 11:00 am	Firm Name, Address, City, State, Zip Code <h3 style="margin: 0;">SAMPLE</h3> <h3 style="margin: 0;">NOT FOR BIDDING PURPOSES</h3>
Contract Completion Time November 18, 2022	This contract is exempt from federal oversight.
Assigned Disadvantaged Business Enterprise Goal 7%	

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

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

Subscribed and sworn to before me this date _____

 (Signature, Notary Public, State of Wisconsin)

 (Bidder Signature)

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

 (Print or Type Bidder Name)

 (Date Commission Expires)

 (Bidder Title)

Notary Seal

Type of Work: Mill, Grade, Concrete Pavement, Asphalt Pavement, Curb & Gutter, Beam Guard, Signing, Pavement Marking, Structures C-64-86, 87	For Department Use Only
Notice of Award Dated	Date Guaranty Returned

26. Marking Chevron Epoxy 12-Inch, Item SPV.0090.01.

A Description

Perform work according to the applicable provisions of standard spec 646 and as detailed in the plans.

B Materials

Perform work according to the applicable provisions of standard spec 646 and as detailed in the plans.

C Construction

Perform work according to standard spec 646 and as shown in the plans.

D Measurement

The department will measure Marking Chevron Epoxy 12-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	Marking Chevron Epoxy 12-Inch	LF

Payment is full compensation for providing all materials; and for remarking as required under standard spec 646.3.1.2(2).

27. Geosynthetic Cementitious Composite Mat Lining, Item SPV.0165.01.

A Description

This special provision describes furnishing and installing a Geocomposite Cementitious Composite Mat (GCCM) lining over the invert of the existing corrugated pipe arch culvert as detailed in the plans and as hereinafter provided.

A.1 General

Geosynthetic Concrete Composite Mat shall consist of a flexible, three-dimensional fiber matrix impregnated with cement that hardens when hydrated to form a durable concrete layer. The base fabric shall be evenly distributed throughout the concrete layer to reinforce the concrete, preventing crack propagation and providing a safe plastic failure mode. The GCCM shall have a PVC backing on one surface to ensure the material from edge to edge is water resistant allowing for water resistant performance when needed with the proper joint details. The GCCM shall not be simply made of cells of concrete between two containment layers void of any internal fiber reinforcement and the concrete shall be continuous so that it acts monolithically. In addition, the base fabric shall resist swelling in the thickness direction sufficiently to prevent over-hydration of the cement during wetting or immersion.

B Materials

B.1 Geosynthetic Cementitious Composite Mat

Submit manufacturer's product data and installation instructions. Include required substrate preparation and a list of fastening devices to be used.

Submit shop drawings showing the fastener layout and adhesive placement.

Deliver materials and products in a sealed factory labeled package to prevent moisture from the air or other sources from reaching the GCCM. Store and handle in strict compliance with manufacturer's instructions and recommendations. Protect from damage, weather, excessive temperatures and construction operations.

Manufacturer shall submit a letter of certification that the product meets or exceeds all technical and packaging requirements.

Property	Test Method	Indicative Properties
Physical		
Thickness (uncured)	ASTM D5199	0.31 inches
Thickness (cured)	ASTM D5199	0.25 inches
Mass/unit area (uncured)	ASTM D5993	2.2 psf
Mass/unit area (cured)	ASTM D5993	2.8 psf
Performance		
Compressive Strength of Cement (3 Day)	ASTM C109	4000 psi
Ultimate Tensile Strength (MD) (cured)	ASTM D6768	190 psf
Ultimate Tensile Strength (MD) (uncured)	ASTM D6768	85 psf
Flexural Strength	ASTM D8058	475 psi

All components shall be pre-packaged by the Manufacturer to assure material performance properties. The GCCM shall be a polyester fiber matrix, which is cement impregnated and PVC backed, manufactured in rolls and conforms to the shape of its substrate and hardens when watered.

Components:

1. Fabric – 3D Polyester Matrix
2. Cement – Specialty Formulation (high alumina, non-Portland cement)
3. PVC Backing

B.2 Accessories

Fastening Screws: Stainless Steel #10 or #12 Hex head self-tapping coarse thread, 1/2 to 1 inch in length (depending on subsurface conditions) used for securing all overlaps together.

Adhesive Caulk: Product recommended by the manufacturer and that has been demonstrated in laboratory tests to adhere to both sides of GCCM and the corrugated steel pipe. Seal the upper edge of GCCM along the length of the culvert pipe with polyurethane sealant recommended by the manufacturer. Strictly comply with manufacturer's installation instructions and recommendations.

C Construction

C.1 Substrate Preparation

Examine substrates and conditions where materials will be applied. Clean all debris from the substrate. During placing when adhesive seaming of the overlaps are required, the subgrade shall be kept free of all standing water to allow the adhesive to cure per manufacturer's requirements unless the adhesive manufacturer lists application of the adhesive underwater as a recommended use.

C.2 Installation

Strictly comply with manufacturer's installation instructions/recommendations and drawings.

A manufacturer's representative shall be on the site during the initial installation and hydration of the GCCM to provide guidance and technical assistance.

Each panel of the GCCM shall be rolled out and installed according to the approved shop drawings. The layout shall be designed to keep field seams of the GCCM to a minimum and consistent with proper methods of manufacturer's installation requirements. The GCCM shall be free of tensile stresses, folds, and wrinkles.

GCCM Bulk rolls shall be placed using proper spreader and rolling bars so that the GCCM would not be stretched during deployment.

Inspect each panel, after placement and prior to seaming, for damage and/or defects. Defective or damaged panels shall be replaced or repaired.

Do not drag the GCCM sheets on rough subbase.

Personnel working on the GCCM shall not wear damaging shoes or involve themselves in any activity that may damage the GCCM.

The GCCM shall be kept free of debris, unnecessary tools and materials. In general, the GCCM area shall remain neat in appearance.

No equipment shall be allowed to remain on top of the installed GCCM overnight. All equipment must be removed and stored away from the installed GCCM.

Care shall be taken during installation to avoid damage occurring to the GCCM as a result of the installation process. Should the GCCM be damaged during installation, a GCCM patch shall be placed over the damaged area extending a minimum of 6 inches in all directions beyond the damaged area and attach the GCCM in place according to the manufacturer's instructions.

Remove the protective plastic cover of each GCCM roll only when ready to deploy and install to prevent undue exposure to humidity, precipitation or other construction activities that would otherwise cause the GCCM to hydrate prior to completing the installation of the roll.

When overlapping successive GCCM rolls or edge rolls, the rolls shall be overlapped upstream over downstream and/or upslope over downslope to allow for shingling and to prevent water from striking exposed edges in the direction of water flow.

Begin at the downstream end of the culvert. Unroll and cut the GCCM to the desired length with the PVC side facing down. Position the successive panel with a 4 inch overlap from the previous panel installation. Only install what can be fully installed and hydrated before the end of construction day to minimize any adverse effect on the installation and/or performance capabilities of the product.

Repair or replace torn or damaged GCCM. Perform repairs according to manufacturer's requirements. Remove and replace GCCM rolls which cannot be repaired. Repairs shall be performed at no additional cost to the department.

Visually inspect the GCCM, seams, and non-seam areas for defects, holes, or damage due to weather conditions or construction activities. A daily inspection report will note the area of inspection, time, date and who inspected the area, when the GCCM was installed and when it was fully hydrated (weather: temperature and precipitation events). At the engineer's discretion, the surface of the GCCM shall be brushed, blown, or cleared by other methods if the amount of dust, mud, or foreign material inhibits inspection or functioning of the GCCM. Refer to the MSDS for personal protective equipment recommendations when blowing dust off the surface of the GCCM. Inspection shall be completed prior to and after hydration.

C.3 Hydration

Hydration shall be completed according to the manufacturer's requirements. Spray the fiber surface multiple times until the GCCM is fully saturated. Depending on the size and duration of the installation, the hydration can be done in sections. Do not spray high pressure water directly onto the GCCM. The GCCM shall be hydrated using fresh water. If found to be under hydrated, re-wet immediately. Do not over hydrate GCCM. Minimum water volume for the GCCM is 0.2 gals/sqft. Repeat hydration of the GCCM after 1 hour from the initial hydration if needed.

If the temperature is expected to fall below 32 degrees Fahrenheit within 8 hours following hydration, hydration shall not be allowed unless directed by engineer. Design a system according to the manufacturer's recommendations to prevent water from freezing before it reacts with the cement and hardens. A combination of accelerators, plastic covers, heat blankets, warm water, and or heaters may be considered.

D Measurement

The department will measure Geosynthetic Cementitious Composite Mat Lining by the square foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.01	Geosynthetic Cementitious Composite Mat Lining	SF

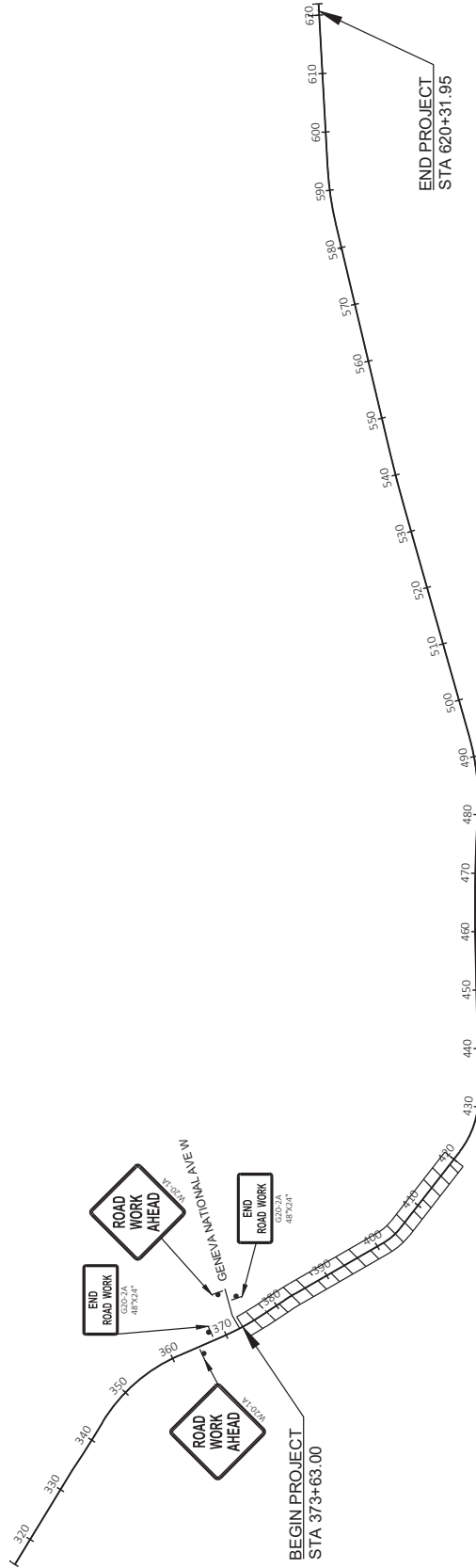
Payment is full compensation for preparing the substrate; for providing and installing, fasteners, and adhesives; and for hydrating the lining.

STAGE 3 CONSTRUCTION

- MILL AND OVERLAY SECTION OF STH 50 WITHIN THE TWO LANE UNDIVIDED SECTION.
- INSTALL NEW BEAM GUARD.

STAGE 3 TRAFFIC

- ONE LANE FLAGGING OPERATION THROUGH TWO LANE SECTION
- ~~PLACE TRAFFIC CONE AT THE END OF EACH HALF MILE~~
- ~~PRECEED BY THE ENGINEER~~
- UTILIZE SDD TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION FOR SIGNS AND DEVICES.



Addendum No. 01
 ID 3170-12-70
 Revised Sheet 109
 April 28, 2022



PROJECT NO: 3170-12-70	COUNTY: WALWORTH	TRAFFIC CONTROL - STAGE 3 OVERVIEW	SHEET 109	E
FILE NAME: C:\USERS\WALF\DESKTOP\PROJECTS\3170-12-70\3170-12-70-109.dwg	PLOT DATE: 4/19/2022 5:12 PM	PLOT BY: WALBON/LATIFI	PLOT SCALE: 1 IN=10 FT	WISDOT/CADD SHEET 44
LAYOUT NAME: -01				