REHABILITATION STRUCTURE SURVEY REPORT

Wisconsin Department of Transportation
DT1696 4/2017

RECEIVED
06/28/2019
BUREAU OF STRUCTURES

☐ **Grade Separation** ☒ **Stream Crossing** ☐ **Culvert**

☐ **Railroad** ☐ **Retaining Wall** ☐ **Noise Barrier**

☐ **Sign Structure** ☐ **Other:** _____

For guidance see: http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/strct/survey.aspx

Design Project ID 1050-01-11	Construction Project ID 1050-01-81	Highway (Project Name) Chippewa Falls - Abbotsford		
Final Plan Due Date June 1, 2021	Preliminary Plan Due Date July 1, 2019	☒ Town ☐ Village ☐ City Lafayette		
PS&E Date August 1, 2021	Letting Date February 2, 2022	County Chippewa		
Structure Number B-09-175		Section 17	Town T28N	Range R07W
Station 298"EB"+71.23	Latitude: 44°54'40"N Longitude: 91°15'09"W	☒ YES ☐ NO Structure Located on National Highway System		
For Survey and CADD Files Horizontal Coordinate System: N/A (No Survey) Vertical Datum: N/A (No Survey)		**Traffic Forecast Data**		
		Design Year	Average Daily Traffic (ADT)	Roadway Design Speed	Functional Class
Feature On STH 29 EB		Feature On 2042	11,300	70	Principal Arterial
Feature Under Paint Creek		Feature Under			
Region Contact: Tyler Rongstad, P.E. (Area Code) Telephone Number(s): (715) 461-0372 Email: Tyler.Rongstad@dot.wi.gov		Consultant Contact: Sean Spromberg, P.E. (Area Code) Telephone Number(s): (715) 304-0451 Email: sspromberg@msa-ps.com		

Work To Be Performed

Field Information Required
Item Number *(see Pages 2–4)*

- ☐ A. Structural Repair 1–3, 22
- ☒ B. Overlay 1–3, 10–22, 26–28, 32, 34
  - ☒ Concrete Overlay ☐ Asphalt Overlay
  - ☐ Polymer Modified Asphalt Overlay ☐ Thin Bonded Polymer Overlay
  - ☐ Other: _____
- ☐ C. New Bearings 3, 8, 9, 22
- ☐ D. New Railings 15–17, 20–23
- ☐ E. Curb and Sidewalk Repair 2, 3, 16, 22, 23
- ☐ F. Abutment Repair 2, 3, 12, 16
- ☐ G. Pier Repair 2, 3, 12, 16
- ☐ H. New Deck 1–6, 9, 10, 13–28, 32–34
- ☐ I. Widening 1–28, 30, 32–35
- ☐ J. Joint Repair 2, 3, 8, 16, 19, 22
- ☐ K. Surface Repair 2, 3, 22
- ☐ L. Raising Bridge 3, 6, 9, 16, 20–24
- ☐ M. Slope Stabilization 1–3, 30
- ☒ N. Scour Repair ..... 1, 2 or 3, 16, 19, 21, 27, 29, 31–35
- ☐ O. Painting 16, 22, 24
- ☐ P. Other: _____

Field Information Required

If no structure number exists provide the following: Small County Map on which the location of proposed structure is shown in red and any highway relocation in green. In addition, provide Location Map of scale not less than 1" = 2000' showing the structure location and number.

☒ 1. Most recent inspection report, brief history of bridge construction date, and description of repairs with dates.

☒ 2. Outline deficient areas on existing structure plan or drawing.

☒ 3. Photographs of details requiring repairs or modifications, such as: bearings, x-frames, joints, etc. Photograph all deficient areas. Clearly label all photographs.

☐ 4. Provide proposed typical section for roadway and structure showing dimensions and cross slopes.

☐ 5. Survey beam seat or girder elevations at both sides of bridge at all substructure units.

☐ 6. Provide cross-section elevations at 10 foot intervals extending across the structure and a minimum of 100 feet beyond each end. Sections should be normal to centerline and show elevations at centerline roadway and gutter line. Take elevations along joints and at floor drains.

☐ 7. Show and identify starting stationing on bridge.

☐ 8. Record measurement, temperature of the structure, and date taken for each of the following:
(a) Joint opening measured normal to joint at centerline of roadway and both curb lines.
(b) Clearance between girder ends at piers.
(c) Distance from front face of abutment backwall to closest point of girder end measured parallel to girder.
(d) Temperature of structure determined by averaging top and under deck (if accessible) readings.

☐ 9. Fixed and expansion bearings - condition and orientation.

☒10. Number and width of proposed pours including construction staging sequence.

☒11. Location of existing construction joints in the deck.

☒12. Estimated Quantities:

Preparation, Decks, Type 1	Sq. Yd. 23	
Preparation, Decks, Type 2	Sq. Yd. 9	
Full Depth Deck Repair	Sq. Yd. 1	Galvanic Anodes? _____
Concrete Surface Repair Superstructure	Sq. Ft. _____	Galvanic Anodes? _____
Concrete Surface Repair Substructure	Sq. Ft. _____	Galvanic Anodes? _____
Curb Repair	LF. _____	Galvanic Anodes? _____

☒13. Sufficiency number: 91.0 (obtain from HSI Bridge Inventory System)

☒14. Appraisal and Condition Rating

	Deck Condition	Superstructure Condition	Substructure Condition	Load Capacity Appraisal	Structural EVAL Appraisal
Current	6 - Satifactory Condition	6 - Satisfactory Condition	7 - Good Condition	5 - Legal Load Stress Not Exceeded	6 - Condition Equal to Minimum Criteria

☒ 15. Load Ratings

	Inventory	Operational
Current Calculated Date: May 24, 2013	HS25	HS42
After Completed by Bridge Designer	TBD	TBD

☒ 16. Utilities on/near Structure. (WisDOT policy is to avoid placing utilities on the structure.)
☐ Yes ☒ No

Type	Owner and Contact Information	Size	Opening at Abutment	Weight	Pressure

☒ 17. Is existing bridge railing deficient?
☐ Yes ☒ No If Yes – Replacement Rail Type:

☒ 18. Drains to be:
☐ Raised ☐ Closed ☐ Downspouted ☐ New

☒ 19. Traffic maintained on bridge during work?
☒ Yes ☐ No If Yes – Include sketches

☒ 20. Will guard rail be attached?
☐ Yes ☒ No If Yes – Which corners?

☒ 21. Will work to be performed eliminate all deficiencies?
☒ Yes ☐ No If No – Explain:

☒ 22. Hazardous waste (asbestos) to be removed?
☐ Yes ☒ No If Yes – Explain:

☐ 23. Wing location(s) for surface drain anchors:

☐ 24. Painting?
☐ Yes ☐ No If Yes – Explain on Page 4
(all, part, railing, color system, containment, bid items)

☐ 25. Desired roadway width: *(new deck / widening)* _____ Ft.
Desired sidewalk clear width: Left: _____ Ft. Right: _____ Ft.

☒ 26. Maximum increase in grade line elevation 0.50 In.

☒ 27. Benchmark description to be shown

☒ 28. Desired final cross slopes on bridge 0.020 Ft./Ft.

☒ 29. Underwater Inspection Report including:
- Streambed Cross Section With Pier, Footing and Seal Elevations
- Pier Elevation Drawings
- Pier Layout
- Hydrographic Survey

☐ 30. Slope stabilization, provide:
Type: _____ Quantity: _____ CY.
Slope: _____ Ft./Ft. Fill: _____ CY.

☒ 31. Preliminary layout of grout bags or proposed scour repair.
C.I.P. Articulated Mats (for Scour) _____ CY.
Grout Bags (for Scour) _____ CY.
Heavy Riprap 85 CY.
Extra Heavy Riprap _____ CY.

☒ 32. Report submitted with Preliminary Plan requires **no** CADD file submittal *(See ESubmittal instructions)*.

☒ 33. Report submitted for development of Preliminary Plan to structure design engineer requires CADD file (if available) submittal and Report submittal to Soils Engineer if project involves foundation modifications.

☒ 34. Coordinate with structure design engineer **before** going into the field if existing structure has no available plans, if staged construction is planned, or if there are adjoining/adjacent structures that will remain in place.

☒ 35. If project involves substructure widening coordinate with structure and/or hydraulic design engineer to determine if information on the separation and/or stream crossing SSR will be required.

Additional Information

Elaborate on other concerns such as: DNR, Local, Utility Conflicts, Aesthetics, Railing Type and Staged Construction.
Please be as detailed and specific as possible.

1. The last inspection date was April 23, 2019. The bridge was constructed in 1993. The structure is a 3-span haunched slab bridge with a 31'-0" length for the exterior spans and a 43'-0" length for the center span. See Attachment A for the current inspection report.

2. See Attachment B for existing structure plans detailing deficient areas.

3. See Attatchment C for photos of details requiring repairs.

10. The work activities along STH 29 EB will be broken up into construction stages. Traffic will be controlled with lane closures using concrete barriers. See preliminary plans for construction staging details.

11. There are no construction joints in the existing deck.

12. Quantities for Preparation Decks Type 1 and Preparation Decks Type 2, and concrete deck repair are based on recent inspections and photographs. A small quanitity of Full Depth Deck Repair is included in the plans to be implemented as needed and as directed by the field engineer.

17. Bridge railing modification or replacement is not within the scope of this rehabilitation project.

18. There are no existing or proposed drains on the structure.

19. The work activities along STH 29 EB will be broken out into construction stages. Traffic will be controlled with lane closures using concrete barriers. The order and number of construction stages are shown in the road plans.

22. There is no hazardous waste (asbestos) per the asbestos inspection completed on April 23, 2019.

26. Concrete Overlay: A minimum of 1" will be removed from the existing deck. The minimum concrete overlay thickness will be 1.5" and there will be no change to the roadway cross slope.

27. No benchmark description or elevation will be shown. There was no survey conducted for this project. All dimensions shown are based on the as-built bridge plans.

29. An underwater inpection report is not within the scope of this project. The NW region maintenance engineer requested to add some riprap heavy as a maintenance item to address the scour hole on the SE corner of the structure concurrent with this project. See Attachment D for the most recent underwater inspection report from HSI and the coordination with Bureau of Structures regarding the scour hole. See Attachment C for photos.

DNR:
Initial concurrence received January 7, 2019 and a revised concurrence received June 14, 2019. See Attachment E. There are no known Endangered Resource or suitable habitat that could be impacted by this project.

Utility Conflicts:
No conflicts anticipated.

Aesthetics:
No aesthetic treatments are anticipated.

Staged Construction:
The work activities along STH 29 EB will be broken out into construction stages. Traffic will be controlled with lane closures using concrete barriers.

Rehabilitation Scope:
The rehabilitation scope for this project was provided by WisDOT NW Region. Repairs for this structure include a concrete overlay with deck repairs, cleaning and sealing of parapets, and riprap heavy.

Note: wing numbering convention was selected to match that used in the as-built structure drawings.