REHABILITATION STRUCTURE SURVEY REPORT

DT1696 6/2012

Wisconsin Department of Transportation

RECEIVED
6/12/2019
BUREAU OF STRUCTURES

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

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

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

For guidance see: http://dotnet/dtid_bos/extranet/structures/reports-checklists.htm

Design Project ID 6243-08-00	Construction Project ID 6243-00-64	Highway (Project Name) Shawano Crk to Menominee Co Line			
Final Plan Due Date December 1, 2019	Preliminary Plan Due Date June 2019	☐ Town ☐ Village ☒ City Shawano			
PS&E Date February 1, 2020	Letting Date May 2020	County Shawano			
Structure Number B-58-60		Section 25	Town 27N	Range 15E	
Station 20+00	Latitude: 44d 47' 09" Longitude: 88d 36' 34"	☐ YES ☒ NO Structure Located on National Highway System			
For Survey and CADD Files Horizontal Coordinate System: Shawano County Coordinate System NAD83(2011) Vertical Datum: NAVD88(2012)		**Traffic Forecast Data**			
		Design Year	Average Daily Traffic (ADT)	Roadway Design Speed	Functional Class
Feature On STH 47		Feature On 2040	12,900	25	principal-arterial
Feature Under Shawano Creek		Feature Under			
Region Contact: Jim Volkmann (Area Code) Telephone Number(s): (715) 365-5773 Email: Jim.Volkmann@dot.wi.gov		Consultant Contact: Stephanie Christensen (Area Code) Telephone Number(s): 715-845-1081 Email: schristensen@emcsinc.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. _____	
Preparation, Decks, Type 2	Sq. Yd. _____	
Full Depth Deck Repair	Sq. Yd. _____	Galvanic Anodes? _____
Concrete Surface Repair Superstructure	Sq. Ft. 120	Galvanic Anodes? _____
Concrete Surface Repair Substructure	Sq. Ft. _____	Galvanic Anodes? _____
Curb Repair	LF. 0	Galvanic Anodes? _____

☒13. Sufficiency number: 82.4 (obtain from HSI Bridge Inventory System)

☒14. Appraisal and Condition Rating

	Deck Condition	Superstructure Condition	Substructure Condition	Load Capacity Appraisal	Structural EVAL Appraisal
Current	NBI-6	NBI-7	NBI-7	5-Legal Load Stress Not Exceeded	7-COND BETTER THAN MIN CRITERIA

☒ 15. Load Ratings

	Inventory	Operational
Current Calculated Date: 03/06/2015	21	36
After Completed by Bridge Designer		

☒ 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
Water	City of Shawano East of Bridge	6"			
Sewer	City of Shawano located West of Bridge	6"			
Elec and Com	Shawano Municipal Utilities OH west of Bridge				

☒ 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? New guardrail attached to NE and NW corners. Other corners have existing guardrail connections.

☒ 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 2.0 In.

☒ 27. Benchmark description to be shown

☒ 28. Desired final cross slopes on bridge .02 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 _____ 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. New structure constructed in 2000. Minor maintenance repairs were performed in 2014. See Attachment 1 for the most recent bridge inspection report in the folder B-58-0060_oth for details.

2. Final deficient area quantities to be determined in the field by the field engineer. See Attachment 2 in the folder B-58-0060_oth for the deficient areas outlined on the existing plans.

3. See attached photographs in the file B-58-0060_pic.

10. See B-58-0060_pln for attached cross section drawing.

11. Existing construction joint in deck at centerline of bridge.

12. Concrete Surface Repair quantity is an estimate for railing surface repair and for repair of concrete overlay over pier. Final quantities will be paid for based off of field measurements.

16. No utilities on structure. OH lines to the west of the structure.

17. Existing rail will have surface repair at the pier and other locations (see plans).

18. No drains on the bridge.

19. Traffic will be maintained during construction. There will be one lane of bi-directional traffic on the opposing side of each stage of construction. Bi-directional traffic will be controlled by temporary signals. See preliminary bridge plan for staging scheme.

20. Guardrail will be replaced at the north side of the bridge. The NE and NW wingwall attachements will be upgraded and paid for under the roadway quantities. Existing guardrail on the SE and SW corners of the bridge will remain.

27. Benchmark Description: Aluminum cap on northwest wingwall

28. Proposed cross section slope will match the existing 2% cross slope.

In spring 2019, the scope was modified from a thin polymer overlay to an HMA asphalt overlay with a waterproofing membrane to prevent water infiltration into the deck. The existing concrete overlay is to remain intact. A profile raise of 2" is expected on top of the existing concrete overlay. Additionally, the Region requested joint filler at the paving notch, concrete surface repairs at the paving notch, and concrete surface repair at the pier in order to smooth the bumpy ride over the pier. Concrete repair over pier will be completed prior to completing the HMA overlay.