REHABILITATION STRUCTURE SURVEY REPORT

Wisconsin Department of Transportation
DT1696 4/2017

RECEIVED
1/16/2019
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 5730-00-30	Construction Project ID 5730-00-60	Highway (Project Name) STH 56		
Final Plan Due Date June 1, 2019	Preliminary Plan Due Date November 2018	☒ Town ☐ Village ☐ City Marshall		
PS&E Date August 1, 2019	Letting Date November 12, 2019	County Richland		
Structure Number B-52-35		Section 10	Town T11N	Range R1W
Station 606+12.88	Latitude: 43°26'40.23"N Longitude: 90°28'34.28"W	☐ YES ☒ NO Structure Located on National Highway System		
For Survey and CADD Files Horizontal Coordinate System: Richland County Coordinates Vertical Datum: NAVD88 (2012 adjusted)		**Traffic Forecast Data**		
		Design Year	Average Daily Traffic (ADT)	Roadway Design Speed	Functional Class
Feature On STH 56		Feature On 2041	1300	55 MPH	Minor Arterial
Feature Under Fancy Creek		Feature Under			
Region Contact: Dan Kleinertz (Area Code) Telephone Number(s): (608) 789-5709 Email: daniel.kleinertz@dot.wi.gov		Consultant Contact: Joshua Sweno (Area Code) Telephone Number(s): (608) 355-8852 Email: jsweno@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. 13	
Preparation, Decks, Type 2	Sq. Yd. 5	
Full Depth Deck Repair	Sq. Yd. 3	Galvanic Anodes? _____
Concrete Surface Repair Superstructure	Sq. Ft. 5	Galvanic Anodes? _____
Concrete Surface Repair Substructure	Sq. Ft. 40	Galvanic Anodes? _____
Curb Repair	LF. 70	Galvanic Anodes? _____

☒13. Sufficiency number: 76.2 (obtain from HSI Bridge Inventory System)

☒14. Appraisal and Condition Rating

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

☒ 15. Load Ratings

	Inventory	Operational
Current Calculated Date: 09/03/2013	HS14.7	HS38.6
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: The existing rail consists of the orignial concrete parapet and Type H Rail with wood blocks bolted through the concrete parapet and a steel Class A guard rail mounted to the wood posts. The existing guard rail and wood blocks and posts will be removed and replaced with an MGS system adjusting the height of the thrie rail up slightly to meet current standards. The existing Type H Rail will remain in place. See item 22 for more information regarding the Type H aluminum rail. The railing replacement detail was reviewed with Bureau of Structures personnel when being developed, see Attachment D for correspondence.

☒ 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? All quadrants

☒ 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: N/A - Wings skewed

☐ 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 3.0 In.

☒ 27. Benchmark description to be shown

☒ 28. Desired final cross slopes on bridge 0.02 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. The last inspection date was March 8, 2018. The bridge was constructed in 1963. It is a single span 36" prestressed concrete girder bridge with a span length of 66'. It received a concrete overlay and new railing in 1990. See Attachment A for the current Inspection Report.

2. See Attachment B for details of deficient areas.

3. See Attachment A and Attachment C for photos of areas requiring repairs.

10. STH 56 will be closed and detoured during construction. An optional longitudinal construction joint will be included.

11. There is an existing longitudinal construction joint on the centerline of the bridge. This joint is from the concrete overlay that was placed in 1990.

12. Deck preparation areas are based on coordination with the SW Region DOT and the SW Region Bridge Maintenance Engineer. See Attachment D for correspondence with the DOT regarding work on the structure.

18. The existing deck drains were removed during the concrete overlay completed in 1990.

19. STH 56 will be closed and detoured during construction.

20. The approach roadway guardrail will be replaced at all 4 quadrants of the bridge with MGS guardrail and EAT terminals.

22. Hazardous waste (asbestos) was found in the gaskets located under Type H railing attachment plates on the concrete parapet as well as the caulk located around the bolts in the railing attachment plates. Since these bridge elements will not be disturbed, STSP 107-120 will be included in the Special Provisions. See Attachment E for Asbestos Inspection Report.

26. The grade increase at the centerline of the bridge will be approximately 3", accounting for a 2" minimum overlay at the edges and a crown correction of 0.5% over 15 feet.

27. A benchmark will not be shown on the plans. There will be no references to elevations on the plans.

28. The normal crown cross slope on the bridge will be improved from 1.5% to 2%.

DNR:
See Attachment E for DNR Initial Review comments.

Utility Conflicts:
No utility conflicts are anticipated.

Aesthetics:
No aesthetic treatments are anticipated.