

**TUSCOLA COUNTY ROAD COMMISSION
REQUEST FOR PROPOSAL
PROFESSIONAL ENGINEERING AND BRIDGE DESIGN SERVICES
Dutcher over Northwest Drain Bridge Design
Letting Date: February 1, 2024**

Consultant: _____

Address: _____

Sign & Print: _____

Date: _____

Phone & Fax: _____

Email: _____

Bridge Design:

Structure No 10471, Dutcher Road over the Northwest Drain, Gilford Township

Cost for Innovative Design Package: \$ _____

Proposed Innovative Process: _____

Estimated Construction Cost: \$ _____

Cost for 2027 MDOT Local Bridge Funding Application \$ _____

Qualification statements/quote proposals shall be received no later than 8:45 AM Thursday February 1st, 2024, to Brent Dankert P.E., Acting County Highway Engineer. Late proposals will not be considered. See notice to bidder. Proposals must be delivered in a plainly marked and seal envelope. No electronic bids will be accepted.

Proposal Intent

The Tuscola County Road Commission seeks to hire a qualified, professional engineering team to provide design services, any necessary environmental permitting, and preparation of plans, specifications, and preliminary estimates of cost for the innovative design associated to Structure No. 10471, Dutcher Road over the Northwest Drain. The TCRC expects consultants proposing on this project to have the qualifications, experience, personnel, and overall understanding of the work.

Background

Structure No. 10471, Dutcher Road over the Northwest Drain, has reached the point that it requires rehabilitation, and the TCRC is looking for an innovative design that will remove the current weight limit on the bridge and extend the service life of the structure. The existing bridge is a single-span structure with steel beams, a concrete deck, an HMA wearing surface, and concrete cantilever abutments. The bridge has a total length of 42 feet and a clear width of 38 feet. Dutcher Road is a Minor Collector Road with an average daily traffic of 295 vehicles per day. The Dutcher Road Bridge over the Northwest Drain maybe used for the Tuscola County Road Commission 2027 Local Bridge Application Program. The 2023 Application is included as reference. **Final plans, special provisions, preliminary estimates of cost and Approved EGLE permit must be completed and submitted to the Tuscola County Road Commission by August of 2025. The design and deliverables must be in accordance with MDOT LAP standards and guidelines.**

Proposal Submittal

The Tuscola County Road Commission (TCRC) is soliciting qualification statements and quote proposals to perform bridge design services for the structure listed on page one. The proposal shall contain, at a minimum, the following items:

- Proposed bridge design including the innovative process the to be utilized to remove the weight limit on the structure and how this will extend the service life of the project. type of structure intended for the location and estimated cost of construction to build the proposed design.
- Qualifications for all team members Involved.
- An understanding of the requested design services.
- Design fee and breakdown
 - Cost to include hydraulic analysis, all permitting costs, and any other services necessary for a complete design.
 - If soil borings are necessary they shall be included in the fee.
 - Include an hourly fee schedule with the proposal.
- The proposed bridge design must follow all MDOT Local Agency design standards and guidelines and include the following:
 - A clear width of 32 feet inside-of-rail to inside-of-rail
 - Minimum of a 50-foot bridge approach
 - Tuscola County Road Commission standard name plate

- A final plan set with all necessary special provisions associated to the construction of the proposed design.
- The successful firm will be responsible for preparing a 2027 MDOT Local Bridge Application for the Tuscola County Road Commission. The 2023 Application is included for reference.
-
- Final Deliverables
 - A signed and sealed completed plan set, a copy of all special provisions, load rating calculations and computations, a preliminary estimate of construction cost completed in MERL, and an electronic copy of all design files.

The following items shall not be included in the proposal:

- Any cost or qualifications for ROW or land acquisition. If these services are required, a cost will be determined prior to beginning the work.
- Any cost related to asbestos or lead testing. The Tuscola County Road Commission will be responsible for obtaining any testing or related items if deemed necessary.

Scoring

The scoring of the submitted proposal will be based on the following criteria:

20%	Innovation
20%	Understanding of Services
20%	Qualifications of Team
20%	Design Fee
15%	Past Performance
5%	Location

Award and Payment

Award will be made in the best interest of the Road Commission. Payment will be made by monthly invoicing. Please limit your package to a maximum of five (5) pages and submit your company's hourly fee schedule with the proposal. The completed first page of the RFP does not count towards the maximum 5 pages. Any questions should be made to Brent Dankert at highwayengineer@tuscolaroad.org or 989-751-3873.

Attachments

- Agreement
- Title IV and VI Compliance
- Current Bridge Inspection Report
- 2023 MDOT Programming Application
- Current Bridge Inspection
- Location map
- Existing Structure Plans

LIABILITY

The consultant shall always exercise extreme care and shall assume all liability for any damages resulting from their operation. Furthermore, they shall hold the Tuscola County Road Commission harmless from any such claims or damages.

NON-COMPLIANCE WITH PROJECT SPECIFICATION PROVISIONS

Any variation from the specifications of the project herein without written approval from the Tuscola County Road Commission and/or its authorized representative may result in, at the discretion of the Tuscola County Road Commission, the voiding and/or cancelling of the acceptance of any contract, resulting from this project.

The Tuscola County Board of Road Commissioners reserves the right to accept or reject any or all proposals and to re-advertise or to accept the proposal, that in their opinion, is in the best interest of Tuscola County.

AGREEMENT

TUSCOLA COUNTY ROAD COMMISSION – 1733 S. MERTZ ROAD, CARO, MI 48723

PAGE 1 OF 1

This agreement made this _____ day of _____, 20_____
by and between the Board of Tuscola County Road Commissioners and _____

1. _____ hereby agrees to undertake the following work
in the status of an independent contractor performing the following job:

Perform all design and permit tasks pertaining to the professional bridge
design for Structure No. 10471 on Dutcher Road over the Northwest Drain

2. Said contractor, _____, shall at all
times exercise extreme care and shall assume any and all liability for property damage or bodily
injury resulting from the above operation by this employees, agents, assigns, sub-contractors
and anyone else acting under his control or direction; and will indemnify, hold harmless and
defend the Tuscola County Road Commission, its Commissioners or employees from any and all
claims for property damage or bodily injury arising out of this Agreement.

3. Said contractor, _____, while
engaged in said job shall maintain and furnish certificates of insurance, naming the Tuscola
County Road Commission and Commissioners as an additional insured under the policy, with
policy limits of \$500,000/\$1,000,000 for property damage and bodily injury, and shall furnish
the Tuscola County Road Commission copies of said certificates of insurance prior to
commencing any work on said project.

Additionally, said contractor, _____, shall furnish
prior to start of said job with the Board of Tuscola County Road Commissioners, a policy of
insurance certifying he carries and has in effect worker's compensation insurance on all those
required to be covered under Michigan law.

4. The address of the Board of Tuscola County Road Commissioners is 1733 S, Mertz Rd., Caro, MI
48723.

Witnessed:

Board of Tuscola County Road Commissioners

Contractor

Contractor bid will not be accepted unless the enclosed Agreement is Signed and Returned with you bid.

TUSCOLA COUNTY ROAD COMMISSION

TITLE IV COMPLIANCE

APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:


1. Compliance with Regulations: The contractor shall comply with the Regulations relative to non-discrimination in Federally-assisted programs of the Department of Transportation, Title 49, code of Federal Regulations, Part 21 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
2. Non-discrimination: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment.
3. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulation, including employment practices when the contractor covers a program set forth in Appendix B of the Regulations.
4. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to non-discrimination on the grounds of race, color, or national origin.
5. Information and Reports: The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Tuscola County Road Commission to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses this information, the contractor shall so certify to the State highway department, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.
6. Sanctions for Non-compliance: In the event of the contractor's non-compliance with the non-discrimination provisions of this contract, the Tuscola County Road Commission Shall Impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
 - a) Withholding of payments to the contractor under the contract until the contractor complies, and/or
 - b) Cancellation, termination, or suspension of the contract, in whole or in part.
7. Incorporation of Provisions: The contractor shall Include the provisions of paragraphs (1) through (6) in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations, or directives Issues pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Tuscola County Road Commission may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event u contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Tuscola County Road Commission to enter into such litigation to protect the interests of the County, and, in addition, the contractor may request the State highway department to enter into such litigation to protect the interests of the State and/or the United States to enter into such litigation to protect the interests of the United States.

"The TUSCOLA COUNTY ROAD COMMISSION, in accordance with Title VI of the Civil Rights Act of 1964, 78-252, 42 U.S.C. 2000d-222d-4, the Civil Rights Act of 1987, P.L. 100-259, and Title 49, Code of Federal Regulations, Department of Transportation, subtitle A, Office of the Secretary, Part 21, Non- discrimination in federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, Disadvantaged Business Enterprise firms will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of Race, Color, Sex, Age, National Origin, or Handicap in consideration for an award. For additional compliance information, please see Appendix A."

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

NBI INSPECTION

9504

Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date
James Brock	ROWE Professional Services Company	24	05/24/2023

GENERAL NOTES

Assisted by: Ethan Kahlenberg
Established directions: Dutcher Rd E/W, NW Drain N/S
TCRC ID: B-GIL-P-10

Weight limit signs in place on both ends of bridge	YES
Weight limit shown on signs at bridge	273243
Required advance warning weight limit signs in place	NO

Frequency Justification Comments (required when Poor Condition and frequency is equal to 24 months)

Bridge structural elements are in fair condition and can remain on a 24 month inspection cycle.


DECK

	05/19	05/21	05/23	
1. Surface (SIA-58A)	5	6	6	HMA surface with chip seal application. Open transverse/longitudinal cracks up to 3/4 inches wide spaced 5' apart. Deep longitudinal crack along westbound, partially sealed. (05/23) Chip seal. Open transverse/longitudinal cracks spaced 5' apart. Deep longitudinal crack along westbound, partially sealed. (05/21) Chip seal. Open transverse/longitudinal cracks; deep longitudinal crack along westbound (05/19)
2. Expansion Joints	5	N	N	End joints have been paved over. Reflective cracking above each reference line partially sealed with chip seal application. (05/23) End joints have been paved over; partially sealed transverse cracks (05/21) Paved over; partially sealed transverse cracks (05/19)
3. Other Joints	N	N	N	(05/23) (05/21) (05/19)
4. Railings	7	7	7	Steel I-post barriers with two steel angle beams on the south and three steel angle beams on the north side of structure. Thrie beam retrofit has been placed in front of old barrier system with wood offset blocks. Light rust on railing posts. (05/23) Steel I-post barriers with two steel angle beams on the south and three steel angle beams on the north side of structure. Thrie beam retrofit has been placed in front of old barrier system. Light rust on railing posts. (05/21) Steel I-post barriers with two steel angle beams on the south and three steel angle beams on the north side of structure. Thrie beam retrofit has been placed in front of old barrier system. Light rust on railing posts. (05/19)
5. Sidewalks or Curbs	N	N	N	(05/23) (05/21) (05/19)
6. Deck Bottom Surface (SIA-58B)	7	7	7	Concrete deck. No deficiencies noted. (05/23) Concrete bottom surface, no deficiencies noted. (05/21) Concrete bottom surface, no deficiencies noted. (05/19)

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

7. Deck (SIA-58) 6 6 6 Deck surface: HMA surface with chip seal application. Open transverse/longitudinal cracks up to 3/4 inches wide spaced 5' apart. Deep longitudinal crack along westbound, partially sealed. Deck bottom: Concrete deck. No deficiencies noted. Fascia: Both north and south fascia spalled 35'. (05/23)
 Deck surface: Chip seal. Open transverse/longitudinal cracks spaced 5' apart. Deep longitudinal crack along westbound, partially sealed. Deck bottom: Concrete bottom surface, no deficiencies noted. Fascia: Both north and south fascia spalled 35'. (05/21)
 Deck surface: Chip seal. Open transverse/longitudinal cracks; deep longitudinal crack along westbound. Deck bottom: Concrete bottom surface, no deficiencies noted. Fascia: south - 15' spalling; north - 35' spalling (05/19)

8. Drainage Off fascias. (05/23)
 Off fascias. (05/21)
 Off fascias. (05/19)

SUPERSTRUCTURE

05/19 05/21 05/23

9. Stringer (SIA-59) 5 5 5 (10) Steel I-beams with square end cover plates. Cover plates applied in 4' +/- sections in 1990. Steel channel diaphragms at midspan. Splice Plates for cover plates loose and rusty at beam 1s and 10s. Missing splice plates 3w at south fascia beam and 4w at north fascia beam. Several tack welds at cover plate splices. Beam 1S, 6S and 10S have pairs of drilled holes through webs, (6) pairs per beam. Painted over pitting evident in some locations. Rust forming at beam ends. Paint degradation and surface rust covers 60% of the outside of south fascia beam and 15% of the outside of north fascia beam. (05/23)
 10 steel I-beams with square end cover plates applied in 4' +/- sections in 1990. Steel channel diaphragms at midspan. Splice Plates for cover plates loose and rusty at beam 1s and 10s. Missing splice plates 3w at south fascia beam and 4w at north fascia beam. Several tack welds at cover plate splices. Beam 1S, 6S and 10S have pairs of drilled holes through webs, (6) pairs per beam. Painted over pitting evident in some locations. Rust forming at beam ends. Paint failure and surface rust covers 60% of the outside of south fascia beam and 15% of the outside of north fascia beam. (05/21)
 10 steel I-beams with square end cover plates applied in 4' +/- sections in 1990. Steel channel diaphragms at midspan. Splice Plates for cover plates loose and rusty at beam 1s and 10s. Several tack welds at cover plate splices. Beam 1S, 6S and 10S have pairs of drilled holes through webs, (6) pairs per beam. Painted over pitting in some locations is evident. Rust on bottom flange of beam 10s at west abutment. Top flanges of fascia beams have scaled rust on the outside. (05/19)

10. Paint (SIA-59A) 6 5 5 Paint system applied in 2011, but without proper prep. Scattered speckled rust is apparent throughout, especially at edge of flanges and beam ends. Outside web and flange of south fascia beam exhibits up to 60% paint degradation and surface rust while north fascia has 15%. (05/23)
 New paint applied in 2011, but without proper prep. Scattered speckled rust is apparent throughout, especially at edge of flanges and beam ends. Outside web and flange of south fascia beam has 60% paint failure and surface rust while north fascia has 15%. (05/21)
 New paint applied in 2011, but blast cleaning not done prior as a result speckled rust is already evident. (05/19)


11. Section Loss 2 2 2 Painted over pitting is evident in some locations. Rust is forming at beam ends, edge of flanges, and outside of fascia beams. (05/23)
 Painted over pitting is evident in some locations. Rust is forming at beam ends, edge of flanges, and outside of fascia beams. (05/21)
 Painted over pitting in some locations is evident. Rust on bottom flange of beam 10s at west abutment. Top flanges of fascia beams have scaled rust on the outside. (05/19)

12. Bearings 7 6 6 Steel plate bearings at each beam end. Steel plates have uniform surface rust throughout, heaviest along fascia's. (05/23)
 Steel plate bearings at each beam end. Steel plates have uniform surface rust throughout. (05/21)
 Steel plate bearings at each beam end. Steel plates have uniform surface rust throughout. (05/19)

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

SUBSTRUCTURE

	05/19	05/21	05/23	
13. Abutments (SIA-60)	7	7	7	Concrete cantilever abutment walls. Minor hairline cracks above weep holes. There are three 2" diameter weep holes per wall. (05/23) Concrete abutment walls. Minor hairline cracks off weep holes. There are three 2" diameter weep holes per wall. (05/21) Concrete abutment walls. Minor hairline cracks off weep holes. There are three 2" diameter weep holes per wall. (05/19)
14. Piers (SIA-60)	N	N	N	(05/23) (05/21) (05/19)
15. Slope Protection	N	N	N	(05/23) (05/21) (05/19)
16. Channel (SIA-61)	7	6	6	Flow south to north. Improved county drain with grass banks. Sloughing banks upstream and downstream of bridge. Entire channel is heavily vegetated at the south end. (05/23) Flow south to north. Improved county drain with grass banks. Sloughing banks upstream and downstream of bridge. Entire channel is heavily vegetated at the south end. (05/21) Flow south to north. Improved county drain with grass banks. Sloughing banks upstream and downstream of bridge. (05/19)
17. Scour Inspection	7	7	7	Probed, no scour noted. Water flows along 60% of east abutment and 5% of west abutment. (05/23) No water along either abutment. No scour noted. (05/21) Water along both abutments. Probed, no exposed footings. (05/19)


APPROACH

	05/19	05/21	05/23	
18. Approach Pavement	5	6	4	Chip sealed HMA approaches. Random reflective cracks up to 3/4 inches wide through chip seal. Estimate 1" of settlement at each approach. (05/23) Chip seal with random reflective cracks through chip seal. Estimate 1" of settlement at each approach. (05/21) Chip seal with reflective cracks through chip seal. Estimate 1" of settlement at each approach. (05/19)
19. Approach Shoulders Sidewalks	6	6	4	Tapered HMA with chip seal applied and gravel shoulders in all four quadrants. Transverse cracks in all quadrants mostly sealed with chip seal application. Up to 1.5 inches of settlement in all quads. Rating based on settlement. (05/23) Tapered HMA and gravel shoulders in all four quadrants. Transverse cracks in all quadrants. NE - longitudinal crack (05/21) Tapered HMA shoulders in all four quadrants. Sealed transverse cracks in all quadrants. NE - longitudinal crack (05/19)
20. Approach Slopes				Some large pieces of broken concrete along return wingwalls in all four quadrants, mostly along south end. 1 on 2 grass covered slopes with a minor slumped bank in the southeast quadrant. Approach guardrail: thrie beam / type B. No impact damage. (05/23) Some large pieces of broken concrete along return wingwalls in all four quadrants. 1 on 2 grass covered slopes with a minor slumped bank in the southeast quadrant. Approach guardrail: thrie beam / type B. No impact damage. (05/21) Some large pieces of broken concrete along return wingwalls in all four quadrants. 1 on 2 grass covered slopes with a minor slumped bank in the southeast quadrant. Approach guardrail: thrie beam / type B. No impact damage. (05/19)

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

21. Utilities

(2) 2" diameter galvanized steel conduits mounted to barrier along the north fascia. Telephone pedestals between the guardrail and return walls in the NE and NW quadrants, with the one in the NW quadrant lying in the brush. Large Ameritech access panel box is also directly behind the guardrail in the NE quadrant. (05/23)
There are two 2" diameter galvanized steel conduits mounted to barrier along the north fascia. There are telephone pedestals between the guardrail and return walls in the NE and NW quadrants, with the one in the NW quadrant lying in the brush. A large Ameritech access panel box is also directly behind the guardrail in the NE quadrant. (05/21)
There are two 2" diameter galvanized steel conduits mounted to barrier along the north fascia. (05/19)

22. Drainage Culverts

(1) 12 inch dia CMP in NEQ (05/23)
(05/21)
(05/19)

MISCELLANEOUS

Guard Rail

<u>Item</u>	<u>Rating</u>
36A. Bridge Railings	1
36B. Transitions	0
36C. Approach Guardrail	0
36D. Approach Guardrail Ends	0

Other Items

<u>Item</u>	<u>Rating</u>
71. Water Adequacy	7
72. Approach Alignment	6
Temporary Support	0 No Temporary Supports
High Load Hit (M)	No
Special Insp. Equipment	2
Underwater Insp. Method	1

False Decking (Timber) Removed to Complete Inspection

N/A - No False Decking


Critical Feature Inspections (SIA-92)

	<u>Freq</u>	<u>Date</u>
92A. Fracture Critical		
92B. Underwater		
92C. Other Special		
92D. Fatigue Sensitive		

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

SUPPORTING IMAGES

9504 05/24/2023



Document Name: IMG_2327.jpeg
Category: Elevation
Span Number:
Comments: North elevation



Document Name: IMG_2329.jpeg
Category: Elevation
Span Number:
Comments: South elevation



Document Name: IMG_9436.jpeg
Category: Posting
Span Number:
Comments: Posting sign at west end of structure




Document Name: IMG_9440.jpg
Category: Posting
Span Number:
Comments: Posting sign at east end of structure

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	



Document Name: IMG_9454.jpeg
Category: Posting
Span Number:
Comments: Advanced posting sign west of structure



Document Name: IMG_9437.jpeg
Category: Railing
Span Number:
Comments: Post 1W, north railing



Document Name: IMG_9444.jpeg
Category: Railing
Span Number:
Comments: Railing, typical




Document Name: IMG_2331.jpeg
Category: Deck
Span Number:
Comments: Concrete deck bottom surface

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	



Document Name: IMG_2333.jpeg
Category: Deck
Span Number:
Comments: Concrete deck bottom surface



Document Name: IMG_9441.jpeg
Category: Deck
Span Number:
Comments: East reference line



Document Name: IMG_9442.jpeg
Category: Deck
Span Number:
Comments: Chip sealed HMA surface




Document Name: IMG_2334.jpeg
Category: Superstructure
Span Number:
Comments: Steel I-beams

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	



Document Name: IMG_2328.jpeg
Category: Substructure
Span Number:
Comments: East abutment



Document Name: IMG_2330.jpeg
Category: Substructure
Span Number:
Comments: West abutment



Document Name: IMG_9438.jpeg
Category: Channel
Span Number:
Comments: Looking south off structure




Document Name: IMG_9443.jpeg
Category: Channel
Span Number:
Comments: Looking north off structure

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

STRUCTURE INVENTORY AND APPRAISAL

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

Bridge History, Type, Materials		Route Carried By Structure(ON Record)		Route Under Structure (UNDER Record)	
27 - Year Built	1970	5A - Record Type	1	5A - Record Type	
106 - Year Reconstructed		5B - Route Signing	4	5B - Route Signing	
202 - Year Painted		5C - Level of Service	1	5C - Level of Service	
203 - Year Overlay	1995	5D - Route Number	00000	5D - Route Number	
43 - Main Span Bridge Type	3 02	5E - Direction Suffix	0	5E - Direction Suffix	
44 - Appr Span Bridge Type		10L - Best 3m Unclr-Lt	0 0	10L - Best 3m Unclr-Lt	
77 - Steel Type	3	10R - Best 3m Unclr-Rt	99 99	10R - Best 3m Unclr-Rt	
78 - Paint Type	1	PR Number		PR Number	
79 - Rail Type		Control Section		Control Section	
80 - Post Type		11 - Mile Point		11 - Mile Point	
107 - Deck Type	1	12 - Base Highway Network	0	12 - Base Highway Network	
108A - Wearing Surface	6	13 - LRS Route-Subroute	0000002743 10	13 - LRS Route-Subroute	
108B - Membrane	0	19 - Detour Length	5	19 - Detour Length	
108C - Deck Protection	0	20 - Toll Facility	3	20 - Toll Facility	
Structure Dimensions		26 - Functional Class	08	26 - Functional Class	
34 - Skew	0	28A - Lanes On	2	28B - Lanes Under	
35 - Struct Flared	N	29 - ADT	980	29 - ADT	
45 - Num Main Spans	1	30 - Year of ADT	2009	30 - Year of ADT	
46 - Num Apprs Spans	0	32 - Appr Roadway Width	34.1	42B - Service Type Under	5
48 - Max Span Length	40	32A/B - Ap Pvt Type/Width	4 22.01	47L - Left Horizontal Clear	
49 - Structure Length	42	42A - Service Type On	1	47R - Right Horizontal Clear	
50A - Width Left Curb/SW	0	47L - Left Horizontal Clear	0.0	54A - Left Feature	
50B - Width Right Curb/SW	0	47R - Right Horizontal Clear	36.4	54B - Left Underclearance	99 99
33 - Median	0	53 - Min Vert Clr Ov Deck	99 99	54C - Right Feature	
51 - Width Curb to Curb	34.8	100 - STRAHNET	0	54D - Right Clearance	99 99
52 - Width Out to Out	37.7	102 - Traffic Direct	2	Under Clearance Year	
112 - NBIS Length	Y	109 - Truck %	3	55A - Reference Feature	N
Inspection Data		110 - Truck Network	0	55B - Right Horiz Clearance	99.9
90 - Inspection Date	05/24/2023	114 - Future ADT	1770	56 - Left Horiz Clearance	0
91 - Inspection Freq	24	115 - Year Future ADT	2029	100 - STRAHNET	
92A - Frac Crit Req/Freq	N	Freeway	0	102 - Traffic Direct	
93A - Frac Crit Insp Date		Structure Appraisal		109 - Truck %	
92B - Und Water Req/Freq	N	36A - Bridge Railing	1	110 - Truck Network	
93B - Und Water Insp Date		36B - Rail Transition	0	114 - Future ADT	
92C - Oth Spec Insp Req/Freq	N	36C - Approach Rail	0	115 - Year Future ADT	
93C - Oth Spec Insp Date		36D - Rail Termination	0	Freeway	
92D - Fatigue Req/Freq	N	67 - Structure Evaluation	4	Proposed Improvements	
93D - Fatigue Insp Date		68 - Deck Geometry	6	75 - Type of Work	37 1
176A - Und Water Insp Method	1	69 - Underclearance	N	76 - Length of Improvement	42
58 - Deck Rating	6	71 - Waterway Adequacy	7	94 - Bridge Cost	285
58A/B - Deck Surface/Bottom	6 7	72 - Approach Alignment	6	95 - Roadway Cost	20
59 - Superstructure Rating	5	103 - Temporary Structure		96 - Total Cost	332
59A - Paint Rating	5	113 - Scour Criticality	U	97 - Year of Cost Estimate	2003
60 - Substructure Rating	7	Miscellaneous		Load Rating and Posting	
61 - Channel Rating	6	37 - Historical Significance	5	31 - Design Load	4
62 - Culvert Rating	N	98A - Border Bridge State		41 - Open, Posted, Closed	P
Navigation Data		98B - Border Bridge %		63 - Fed Oper Rtg Method	6
38 - Navigation Control	0	101 - Parallel Structure	N	64F - Fed Oper Rtg Load	.91
39 - Vertical Clearance	0	EPA ID		64MA - Mich Oper Rtg Method	6
40 - Horizontal Clearance	0	Stay in Place Forms		64MB - Mich Oper Rtg	.59
111 - Pier Protection		143 - Pin & Hanger Code		64MC - Mich Oper Truck	17
116 - Lift Brdg Vert Clear		148 - No. of Pin & Hangers		65 - Inv Rtg Method	6
				66 - Inventory Load	.55
				70 - Posting	0
				141 - Posted Loading	273243
				193 - Overload Class	

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

SAFETY INSPECTION REPORT - CORE ELEMENTS

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)
Feature	Length / Width / Spans	Owner	
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)	
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour



NBI INSPECTION

2LNU

Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date
		24	10/23/1997

CoRE ELEMENTS


(English Units)

Element Number	Element Name	Total Quantity	Unit	State 1	State 2	State 3	State 4	State 5
Decks/Slabs								
13/ 3	Conc Dk HMA No Memb	1582	(SF)	1582 100%	0 0%	0 0%	0 0%	0 0%
Superstructure								
107/ 3	Pnted Stl Girder /Bm	420	(LF)	420 100%	0 0%	0 0%	0 0%	0 0%
330/ 3	Uncoated Metal Rail	85	(LF)	0 0%	85 100%	0 0%	0 0%	xxxxx xxxxx
Substructure								
215/ 3	Reinf Conc Abut	75	(LF)	75 100%	0 0%	0 0%	0 0%	xxxxx xxxxx

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

WORK RECOMMENDATIONS

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

WORK RECOMMENDATIONS

9504

Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date
James Brock	ROWE Professional Services Company	24	05/24/2023


RECOMMENDATIONS & ACTION ITEMS

Recommendation Type	Priority	Description
Approach Repair	M	Wedge approaches and seal cracks in HMA. Upgrade approach guardrail system to meet current standards. (21) (23)
Seal Cracks	H	Seal cracks in HMA (21) (23)
Super Repair	H	Beam repair to replace missing splice plates. (21) (23)
Super Repl.	L	Consider superstructure replacement due to weight restrictions. (21) (23)
Other	H	Install advance posting signs for WB traffic. (21) (23)

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

SCOUR CRITICAL BRIDGE ACTION PLAN

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

PLAN OF ACTION AUTHORS

Name	Agency	Phone	Email	Last Modified Date
Brent Dankert	Spicer acting as Tuscola OWNER	989-751-3873	brentd@spicergroup.com	
William Green	Tuscola County Road Commission	989-550-3205	wgreen@tuscolaroad.org	
Korrina Young	Spicer Group (acting as Tuscola County)	989-492-8001	korrina.young@spicergroup.com	
Hugh Dickie	Spicer Group	989-737-5031	hugh.dickie@spicergroup.com	08/08/2022

SCOUR VULNERABILITY

Item 113 Scour Criticality	U	Source of Item 113	Assessed
Item 71 Waterway Adequacy	7		
Level I Assessment	N		
Level II Analysis	N		

Executive Summary Scour Evaluation

Unknown plans.

Calculated Values

Scour Analysis Event Frequency	25 year	50 year	100 year	500 year	Comments
Anticipated Surface Elevation (ft)					
Distance Below Bottom chord (ft)					
Anticipated Flow (cubic ft/sec)					
Anticipated Pressure Flow (Y/N)					

Substructure Information

Foundation	Normally in Water	Normal Water Depth (ft)	In Water (100 yr)	Footing Type	Depth Known	Soil Type
Abutment A	N	N/A		U Unknown	N	Unknown
Abutment B	N	N/A		U Unknown	N	Unknown

COUNTERMEASURE RECOMMENDATIONS

- ☐ Only Monitoring Required **Estimated Cost \$**
- ☐ Structural/Hydraulic Countermeasures Considered

Countermeasure Comments

MONITORING PROGRAM

Recommended Monitoring Requirements


No scour noted 5/19/21.

Type	Frequency/ Amount	Comments
X Regular Inspection	24	
O Other Special Inspection		

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

SCOUR CRITICAL BRIDGE ACTION PLAN

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

- ☐ Underwater Inspection
- ☐ Stream Bed Cross Sections
- ☐ Monitoring Devices (Fixed, Sonar, etc.)
- ☐ Flood Monitoring - Initiate monitoring when any of the following occur
 - ☐ NOAA Flood Warning (This includes both Flash Flood and Flood Warnings)
 - ☐ Flow Information
 - ☐ Discharge
 - ☐ Rainfall
 - ☐ WS Elevation Measured from
 - ☐ Pressure Flow
 - ☐ Debris Accumulation

Items to Watch During Monitoring

Foundation	Items to Watch
Abutment A	
Abutment B	

Inspection Summary

Type	Latest Date Completed	Current Frequency	Inspector	Agency
Routine	05/24/2023	24	BROCKJ5252	ROWE Professional Services Company
Underwater				
Cross Section				
Scour Inspection				
High Flow Monitoring				

BRIDGE CLOSURE

Conditions To Consider Bridge Closure

- ☐ Water Surface Elevation
- ☐ Overtopping of Road or Structure
- ☐ Pressure Flow
- ☐ High Debris Accumulation
- ☒ **Observed Structure Movement/Settlement**
- ☐ Loss of Scour Countermeasures

Contacts Responsible for BRIDGE CLOSURE

Name	Title	Agency	Phone Number	Cell Number
Brent Dankert	Acting Highway Engineer	Tuscola County Road Commission	989-751-3873	989-751-3873


Contacts Responsible for OPENING Bridge

Name	Title	Agency	Phone Number	Cell Number
Brent Dankert	Acting Highway Engineer	Tuscola County Road Commission	989-751-3873	989-751-3873

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

SCOUR CRITICAL BRIDGE ACTION PLAN

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

DETOUR ROUTE

Possible Detour Route

Dutcher Road east to Bradleyville Road south to Fairgrove Road west to Van Buren Road north to Dutcher Road west.

Bridges/Culverts on Detour Route

Detour Bridge Numbers	Feature Intersected	Load Limitations	Scour Rating
10602	CENTER LINE DRAIN		8
10397	NO NAME DRAIN		8
10404	GIBSON DRAIN		6
10470	VCCM&S DRAIN		5
10493	NORTHWEST DRAIN OUTLET 1		5

SCOUR INSPECTIONS

Date	Type	Freq	Inspector	Agency
05/11/2017	ROUTINE	24	Eric Rickert	Great Lakes Engineering Group
	Comments	No scour noted.		
	Recommendations	Appr. Pavement	Wedge approaches	
		Other	Install advance posting signs for WB traffic.	
05/24/2019	ROUTINE	24	Ryan Lefere	Great Lakes Engineering Group, LLC
	Comments	Water along both abutments.	Probed, no exposed footings.	
	Recommendations	Approach Repair	Wedge approaches	
		Seal Cracks	Deck	
		Other	Install advance posting signs for WB traffic.	
05/19/2021	ROUTINE	24	Rich Kathrens, P.E.	Spicer Group, Inc.
	Comments	No water along either abutment.	No scour noted.	
	Recommendations	Approach Repair	Wedge approaches and seal cracks in HMA.	
			Upgrade approach guardrail system to meet current standards.	
		Deck Patching	Seal cracks in HMA	
		Super Repair	Beam repair to replace missing splice plates.	
		Super Repl.	Consider superstructure replacement due to weight restrictions.	
		Other	Install advance posting signs for WB traffic.	
05/24/2023	ROUTINE	24	James Brock	ROWE Professional Services Company
	Comments	Probed, no scour noted.	Water flows along 60% of east abutment and 5% of west abutment.	
	Recommendations	Approach Repair	Wedge approaches and seal cracks in HMA.	
			Upgrade approach guardrail system to meet current standards. (21) (23)	
		Seal Cracks	Seal cracks in HMA (21) (23)	
		Super Repair	Beam repair to replace missing splice plates. (21) (23)	
		Super Repl.	Consider superstructure replacement due to weight restrictions. (21) (23)	
		Other	Install advance posting signs for WB traffic. (21) (23)	


HIGH FLOW EVENTS

No Recorded High Flow Events

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

SCOUR CRITICAL BRIDGE ACTION PLAN

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

SUPPORTING IMAGES

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

LOAD RATING ASSUMPTIONS

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)
Feature	Length / Width / Spans	Owner	
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)	
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour



Rating Considers Field Condition of Members: Yes **Inspection Date:** 05/24/2019

Deterioration:

Only minor pitting below paint noted.

Most Recent Year Construct / Reconstruct / Overlay: 1995

History of Work Impacting Load Rating:

None.

Superstructure Component: 3 Steel **Beam fy:** 36.0 ksi **Beam f'c / fb:** 3.0 ksi

Composite: No **Number of Beams:** 10 **Shop Drawings Verified:** No

Beam Size(s) & Names (each span): W21x62, 10 each, 1 span.

Deck: **Thickness (in.):** 7.5 **Fy / f'c:** 40.0 / 3.0 ksi **Deck Design Load > H15:** Yes

Wearing Surface: **Mat'l:** HMA **Thickness (in.):** 4.0 **Unit Weight (pcf.):** 145.0

LEFT**CENTER****RIGHT**

Barrier: Type / Weight (plf.): Guardrail / 50.0 / Guardrail / 50.0

Sidewalk: Width / Thick (in.): / / /

Clear Roadway (ft.): 34.8

Additional Loads:

None.

Unique Factors That Affect Capacity:

None.


Analyzed By: Casey Collings

Date: 05/29/2019

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

LOAD RATING SUMMARY

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

Compliance Issue: None

Compliance Verified: No

Analysis Program: AASHTOWare Bridge Rating (BrR)

Analysis Program Version: 6.8.3

Rating Considers Field Condition of Members: Yes **Inspection Date:** 05/24/2019

Controlling component and failure mode:

Interior beam, flexure

NEW INVENTORY CODING

NBI Item 63 - Operating Rating Method 6 LFR in Rating Factor

NBI Item 64F - Federal Operating Ratings 0.91

MDOT Item 64MA - Michigan Operating Method 6 LFR in Rating Factor

MDOT Item 64MB - Michigan Operating Rating 0.59

MDOT Item 64MC - Michigan Operating Truck 17

NBI Item 65 - Inventory Rating Method 6 LFR in Rating Factor

NBI Item 66 - Federal Inventory Rating 0.55

NBI Item 41 - Structure Open Posted Closed P P Posted for load

NBI Item 70 - Bridge Posting 0 0 - 59% or less

Posted By Truck Type

MDOT Item 141 - Posted Loading 273243

MDOT Item 193A - Michigan Overload Class

MDOT Item 193C - Overload Status

Sample Sign



R12-5


Analyzed By: Casey Collings **Date:** 05/29/2019

Checked By: Eric Rickert **Date:** 05/29/2019

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

REQUEST FOR ACTION


Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

No inspections available for bridge key 79200098000B020

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

OUTSTANDING WORK

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

WORK RECOMMENDATIONS

DECKSLABS

Request For	Contact/User	Agency/Company Name	Estimated Quantity	Unit
Seal Cracks				
Activity	Material	Other Material	Actual Quantity	Unit
Personnel Hours	Equipment			Complete Date

Comments

Seal cracks in HMA (21) (23) (James Brock 07/11/2023)

SUPERSTRUCTURE

Request For	Contact/User	Agency/Company Name	Estimated Quantity	Unit
Super Repair				
Activity	Material	Other Material	Actual Quantity	Unit
Personnel Hours	Equipment			Complete Date

Comments

Beam repair to replace missing splice plates. (21) (23) (James Brock 07/11/2023)

Request For	Contact/User	Agency/Company Name	Estimated Quantity	Unit
Super Repl.				
Activity	Material	Other Material	Actual Quantity	Unit
Personnel Hours	Equipment			Complete Date

Comments

Consider superstructure replacement due to weight restrictions. (21) (23) (James Brock 07/11/2023)

OTHER

Request For	Contact/User	Agency/Company Name	Estimated Quantity	Unit
Other				
Activity	Material	Other Material	Actual Quantity	Unit
Personnel Hours	Equipment			Complete Date

Comments

Install advance posting signs for WB traffic. (21) (23) (James Brock 07/11/2023)
completed 10/19 (Brent Dankert 10/07/2020)


Request For	Contact/User	Agency/Company Name	Estimated Quantity	Unit
Approach Repair				
Activity	Material	Other Material	Actual Quantity	Unit
Personnel Hours	Equipment			Complete Date

Comments

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

OUTSTANDING WORK

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

Wedge approaches and seal cracks in HMA.

Upgrade approach guardrail system to meet current standards. (21) (23) (James Brock 07/11/2023)

TUSCOLA COUNTY ROAD COMMISSION
APPLICATION FOR
MICHIGAN DEPARTMENT OF TRANSPORTATION LOCAL BRIDGE FUND
DUTCHER ROAD OVER NORTHWEST DRAIN OUTLET #1 (SN 10471)
GILFORD TOWNSHIP
T13N, R07E, SECTION 5 & 8
TUSCOLA COUNTY

I. INTRODUCTION

The Dutcher Road Bridge over the Northwest Drain Outlet #1 is the first priority for Tuscola County to be rehabilitated in the 2023 fiscal year. Superstructure replacement is needed.

The Dutcher Road Bridge was originally constructed in 1970. The bridge is a single-span structure with steel beams, a concrete deck, and a chip seal surface. The structure has concrete abutment walls. The bridge has a length of 42 feet and a clear width of 34.8 feet.

Dutcher Road is an east-west road and is classified as a Rural Minor Collector. The bridge is approximately 0.5 miles east of Van Buren Road. The average daily traffic on Dutcher Road over the Northwest Drain Outlet #1 is approximately 980 vehicles per day.

II. GENERAL CONDITION OF THE DUTCHER ROAD BRIDGE

The Dutcher Road Bridge is currently posted at 27/32/43 tons. The deficiencies noted from a May 2019 inspection included the following:

- 10 steel I-beams with square end cover plates applied in 4' +/- sections in 1990. Steel channel diaphragms at midspan. Splice Plates for cover plates loose and rusty at beam 1s and 10s. Several tack welds at cover plate splices. Beam 1S, 6S and 10S have pairs of drilled holes through webs, (6) pairs per beam. Painted over pitting in some locations is evident. Rust on bottom flange of beam 10s at west abutment. Top flanges of fascia beams have scaled rust on the outside.
- Beams were painted in 2011, but speckled rust is already visible along all beams.
- Replacement of the bridge superstructure is needed due to the condition of the beams, the paint system, and the posting.

III. NARRATIVE SUPPORTING THE APPLICATION

A. Contact Person

The contact person for the Tuscola County Road Commission is:

Mr. Brent Dankert, P.E.
Director of Engineering
Tuscola County Road Commission
1733 Mertz Road
Caro, MI 48723
Phone: 989-751-3873

B. Economic Importance

The economic importance of the Dutcher Road Bridge over the Northwest Drain Outlet #1 includes the following:

- Dutcher Road is an east-west road serving commuters, residential and agricultural users. Due to other posted bridges in the surrounding area, farmers have to detour around the bridge during spring planting and fall harvest costing additional travel time during the extremely tight planting and harvest time.

C. Existing Impact of Closed Structure

The existing structure is posted for load which causes truck traffic to detour 8 miles to bypass this bridge due to the number of posted structures in the county. Additionally, if the bridge were to close the average daily traffic of 980 vehicles per day would have to follow the 8 miles detour.

D. Structure Maintenance

The Tuscola County Road Commission has performed an overlay in 1995 and painted the steel beams in 2011.

IV. COST BREAKDOWN FOR DUTCHER ROAD BRIDGE

The following is the estimated cost for the replacement of the Dutcher Road Bridge over the Northwest Drain Outlet #1, SN 10471.

ITEM	COST ITEM		COST
A.	Approach Construction	(A)	\$510,400
B.	Structure Construction	(B)	\$251,600
		Total (A&B)	\$762,000

V. PRIORITY LIST

The following is the priority list for bridges in Tuscola County:

1. Dutcher Road over Northwest Drain Outlet #1, Superstructure Replacement
2. Akron Road over Northwest Drain Outlet #3, Replacement
3. Barnes Road (Mid) over Perry Creek, Replacement
4. Barnes Road (East) over Perry Creek, Replacement

2020

LAP - BRIDGE COST ESTIMATE WORKSHEET

- CPM, REHAB, REPLACE -

REV. 2/1/2020

DATE: 5/19/2020

ENGINEER: Casey Collings

OWNER: Tuscola County
 REGION: Bay
 TSC: Huron

FISCAL YEAR: 2023

PR: 274310 MP: 1.335

Out to Out Curb to Curb
 LENGTH WIDTH WIDTH
 42.0 37.7 34.8

STRUCTURE ID: 10471
 BRIDGE ID: N/A

LOCATION: DUTCHER ROAD over NORTHWEST DRAIN OUTLET 1
 PRIMARY WORK ACTIVITY Superstructure Replacement
 OTHER WORK:

DECK AREA: 1,583 SFT
 CLEAR ROADWAY: 1,462 SFT

STR. TYPE: Steel
 Multi-Stringer, W or I-Bear

WORK ACTIVITY	Michigan Bridge Design Manual	QUANTITY	UNIT	UNIT COST	TOTAL
NEW BRIDGE (increase deck area based on design standards and hydraulic requirements)					
Single or Multiple Spans, Grade Separation	(add demo, approach, MOT)		SFT	\$220.00 /SFT	
Single Span, Over Water	Length < 100ft (add demo, approach, MOT)		SFT	\$350.00 /SFT	
Multiple Spans, Over Water	Length > 100ft (add demo, approach, MOT)		SFT	\$220.00 /SFT	
Precast Culvert	Length < 40ft (add demo, approach, MOT)		SFT	\$350.00 /SFT	
NEW SUPERSTRUCTURE					
New Superstructure, Grade Separation	(incl. remove exist deck/super; add MOT & approach)		SFT	\$170.00 /SFT	
New Superstructure, Over Water	(incl. remove exist deck/super; add MOT & approach)	1,583.0	SFT	\$200.00 /SFT	\$316,600
WIDENING					
Structure Widening, _____ ft	(incl. deck/super/sub widening, add approach transition)		SFT	\$270.00 /SFT	
NEW DECK					
New Bridge Deck & Barrier	(incl. remove exist deck/railing, add approach, MOT)		SFT	\$75.00 /SFT	
DEMOLITION					
Entire Structure, Grade Separation			SFT	\$33.00 /SFT	
Entire Structure, Over Water			SFT	\$46.00 /SFT	
DECK REPAIR / TREATMENTS					
Bridge Railing Replacement	(incl. removal and replacement)		FT	\$400.00 /FT	
Concrete Brush Block / Curb Patch	(incl. hand chipping and formwork)		FT	\$24.00 /FT	
Concrete Barrier Patch	(incl. hand chipping and formwork)		SFT	\$45.00 /SFT	
Concrete Deck Patch	(incl. hand chipping)		SFT	\$30.00 /SFT	
Deep Overlay	(incl. joint repl & hydro)		SFT	\$33.00 /SFT	
Epoxy Overlay	(incl. warranty)		SYD	\$30.00 /SYD	
Expansion Joint Gland Replacement	(remove and replace elastomeric gland)		FT	\$85.00 /FT	
Expansion Joint Replacement	(incl. removal)		FT	\$600.00 /FT	
Full Depth Patch			SFT	\$76.00 /SFT	
Healer / Sealer	(penetrates cracks in bridge deck)		SYD	\$15.00 /SYD	
HMA Overlay with WP membrane			SYD	\$53.00 /SYD	
Overlay Removal	(Epoxy: \$8/syd Latex: \$16/syd HMA: \$7/syd)		SYD	\$16.00 /SYD	
Reseal Bridge Joints			FT	\$16.00 /FT	
Shallow Overlay	(incl. joint repl & hydro)		SFT	\$22.00 /SFT	
SUPERSTRUCTURE REPAIR					
Bearing Realignment / Replacement	(incl. temporary supports)		EA	\$5,000.00 EA	
Heat Straightening	(incl. clean and coat)		EA	\$50,000.00 EA	
Pack Rust Repair	(greater than 3/8" separation)		FT	\$500.00 /FT	
Paint - Complete	(incl. clean & coat)		SFT	\$30.00 /SFT	
Paint - Partial / Spot / Zone	(incl. clean & coat - \$20k minimum)		SFT	\$60.00 /SFT	
PCI Beam End Blockout	(incl. temporary supports)		EA	\$7,200.00 EA	
Pin & Hanger Replacement	(incl. temporary supports)		EA	\$8,000.00 EA	
Structural Steel Repair	(based on 6ft length; for stiffeners use \$1,200 ea)		EA	\$3,000.00 EA	
SUBSTRUCTURE REPAIR					
Substructure Patching	(measured x 2) replace if repair area > 30%		CFT	\$300.00 /CFT	
Substructure Replacement	(incl. temporary supports, excavation)		CFT	\$180.00 /CFT	
Substructure Horizontal Surface Sealer			SYD	\$40.00 /SYD	
Temporary Supports	(add \$1,200 for ea steel beam - stiffeners)		EA	\$2,500.00 EA	
MISCELLANEOUS					
Articulating Concrete Block System (ACB)			SYD	\$150.00 /SYD	
Concrete Surface Coating			SYD	\$28.00 /SYD	
Culvert Cleanout			FT	\$30.00 /FT	
Epoxy Crack Injection	(structural crack repair)		FT	\$50.00 /FT	
Metal Mesh Panels	(48" width, max 6'-6" length)		SFT	\$20.00 /SFT	
Pressure Relief Joint	(use when approach concrete roadway exceeds 1,000ft)		FT	\$100.00 /FT	
Riprap	(assume 10ft distance around perimeter of substructure)	400.0	SYD	\$175.00 /SYD	\$70,000
Silane Treatment	(penetrating sealer for concrete surfaces)		SFT	\$4.50 /SFT	
Slope Protection Repairs			SYD	\$100.00 /SYD	
Other					

STRUCTURE CONSTRUCTION BUDGET **\$386,600**

ROAD WORK					
Approach Pavement, 12" RC	(incl. removal; add curb, gutter, guardrail) 20' ea. end	60.0	SYD	\$175.00 /SYD	\$10,500
Approach Curb & Gutter	(incl. removal) 20' ea. quadrant	80.0	FT	\$56.00 /FT	\$4,480
Guardrail Anchorage to Bridge	(each quadrant)	4.0	EA	\$1,600.00 /EA	\$6,400
Guardrail	(incl. removal) < 200ft beyond reference line		FT	\$28.00 /FT	
Guardrail Terminal	(each quadrant)	4.0	EA	\$2,300.00 /EA	\$9,200
Roadway Approach Work	(beyond approach pavement)	1.0	LSUM	\$150,000.00 /LSUM	\$150,000
Utilities			LSUM		
TRAFFIC CONTROL <i>Unit Cost to be determined by Region or TSC Traffic & Safety</i>					
Part Width Construction			LSUM		
Crossovers			EA	\$300,000.00 /EA	
Temporary Traffic Signals			set	\$25,000.00 /set	
RR Flagging			LSUM		
Detour		1.0	LSUM	\$10,000.00 /LSUM	\$10,000

RELATED ROAD/TRAFFIC CONSTRUCTION BUDGET **\$190,580**

CONTINGENCY	(10% - 20%) (use higher contingency for small projects)	10	%	\$577,000.00	\$58,000
MOBILIZATION	(estimate at 10%)	10	%	\$635,000.00	\$64,000
INFLATION	(assume 3% per year, beginning in 2021)	9	%	\$699,000.00	\$63,000


(Does not include PE or CE)

TOTAL CONSTRUCTION BUDGET **\$762,000**

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

STRUCTURE INVENTORY AND APPRAISAL


Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	

Bridge History, Type, Materials		Route Carried By Structure(ON Record)		Route Under Structure (UNDER Record)	
27 - Year Built	1970	5A - Record Type	1	5A - Record Type	
106 - Year Reconstructed		5B - Route Signing	4	5B - Route Signing	
202 - Year Painted		5C - Level of Service	1	5C - Level of Service	
203 - Year Overlay	1995	5D - Route Number	00000	5D - Route Number	
43 - Main Span Bridge Type	3 02	5E - Direction Suffix	0	5E - Direction Suffix	
44 - Appr Span Bridge Type		10L - Best 3m Unclr-Lt	0 0	10L - Best 3m Unclr-Lt	
77 - Steel Type	3	10R - Best 3m Unclr-Rt	99 99	10R - Best 3m Unclr-Rt	
78 - Paint Type	1	PR Number		PR Number	
79 - Rail Type		Control Section		Control Section	
80 - Post Type		11 - Mile Point		11 - Mile Point	
107 - Deck Type	1	12 - Base Highway Network	0	12 - Base Highway Network	
108A - Wearing Surface	6	13 - LRS Route-Subroute	0000002743 10	13 - LRS Route-Subroute	
108B - Membrane	0	19 - Detour Length	5	19 - Detour Length	
108C - Deck Protection	0	20 - Toll Facility	3	20 - Toll Facility	
Structure Dimensions		26 - Functional Class	08	26 - Functional Class	
34 - Skew	0	28A - Lanes On	2	28B - Lanes Under	
35 - Struct Flared	N	29 - ADT	980	29 - ADT	
45 - Num Main Spans	1	30 - Year of ADT	2009	30 - Year of ADT	
46 - Num Apprs Spans	0	32 - Appr Roadway Width	34.1	42B - Service Type Under	5
48 - Max Span Length	40	32A/B - Ap Pvt Type/Width	4 22.01	47L - Left Horizontal Clear	
49 - Structure Length	42	42A - Service Type On	1	47R - Right Horizontal Clear	
50A - Width Left Curb/SW	0	47L - Left Horizontal Clear	0.0	54A - Left Feature	
50B - Width Right Curb/SW	0	47R - Right Horizontal Clear	36.4	54B - Left Underclearance	99 99
33 - Median	0	53 - Min Vert Clr Ov Deck	99 99	54C - Right Feature	
51 - Width Curb to Curb	34.8	100 - STRAHNET	0	54D - Right Clearance	99 99
52 - Width Out to Out	37.7	102 - Traffic Direct	2	Under Clearance Year	
112 - NBIS Length	Y	109 - Truck %	3	55A - Reference Feature	N
Inspection Data		110 - Truck Network	0	55B - Right Horiz Clearance	99.9
90 - Inspection Date	05/24/2019	114 - Future ADT	1770	56 - Left Horiz Clearance	0
91 - Inspection Freq	24	115 - Year Future ADT	2029	100 - STRAHNET	
92A - Frac Crit Req/Freq	N	Freeway	0	102 - Traffic Direct	
93A - Frac Crit Insp Date		Structure Appraisal		109 - Truck %	
92B - Und Water Req/Freq	N	36A - Bridge Railing	1	110 - Truck Network	
93B - Und Water Insp Date		36B - Rail Transition	0	114 - Future ADT	
92C - Oth Spec Insp Req/Freq	N	36C - Approach Rail	0	115 - Year Future ADT	
93C - Oth Spec Insp Date		36D - Rail Termination	0	Freeway	
92D - Fatigue Req/Freq	N	67 - Structure Evaluation	4	Proposed Improvements	
93D - Fatigue Insp Date		68 - Deck Geometry	6	75 - Type of Work	37 1
176A - Und Water Insp Method	1	69 - Underclearance	N	76 - Length of Improvement	42
58 - Deck Rating	6	71 - Waterway Adequacy	7	94 - Bridge Cost	285
58A/B - Deck Surface/Bottom	5 7	72 - Approach Alignment	6	95 - Roadway Cost	20
59 - Superstructure Rating	5	103 - Temporary Structure		96 - Total Cost	332
59A - Paint Rating	6	113 - Scour Criticality	5	97 - Year of Cost Estimate	2003
60 - Substructure Rating	7	Miscellaneous		Load Rating and Posting	
61 - Channel Rating	7	37 - Historical Significance	5	31 - Design Load	4
62 - Culvert Rating	N	98A - Border Bridge State		41 - Open, Posted, Closed	P
Navigation Data		98B - Border Bridge %		63 - Fed Oper Rtg Method	6
38 - Navigation Control	0	101 - Parallel Structure	N	64F - Fed Oper Rtg Load	.91
39 - Vertical Clearance	0	EPA ID		64MA - Mich Oper Rtg Method	6
40 - Horizontal Clearance	0	Stay in Place Forms		64MB - Mich Oper Rtg	.59
111 - Pier Protection		143 - Pin & Hanger Code		64MC - Mich Oper Truck	17
116 - Lift Brdg Vert Clear		148 - No. of Pin & Hangers		65 - Inv Rtg Method	6
				66 - Inventory Load	.55
				70 - Posting	0
				141 - Posted Loading	273243
				193 - Overload Class	

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	

NBI INSPECTION

VU9X

Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date
Ryan Lefere	Great Lakes Engineering Group, LLC	24	05/24/2019

GENERAL NOTES

TCRC ID: B-GIL-P-10

Posted at 54 tons.

No advanced posting sign east of structure at Quanicassee Rd.

Weight limit signs in place on both ends of bridge YES

Weight limit shown on signs at bridge

Required advance warning weight limit signs in place


DECK

	05/15	05/17	05/19	
1. Surface (SIA-58A)	5	6	5	Chip seal. Open transverse/longitudinal cracks; deep longitudinal crack along westbound (05/19) Chip seal, previous cracks partially filled. (05/17) HMA surface with block cracks that are partially sealed. Reflective unsealed transverse cracks along abutment reference lines. (05/15)
2. Expansion Joints	N	N	5	Paved over; partially sealed transverse cracks (05/19) (05/17) None present. (05/15)
3. Other Joints	N	N	N	(05/19) (05/17) (05/15)
4. Railings	7	7	7	Steel I-post barriers with two steel angle beams on the south and three steel angle beams on the north side of structure. Thrie beam retrofit has been placed in front of old barrier system. Light rust on railing posts. (05/19) Steel I-post barriers with two steel angle beams on the south and three steel angle beams on the north side of structure. Thrie beam retrofit has been placed in front of old barrier system. Light rust on railing posts. (05/17) Steel I-post barriers with two steel angle beams on the south and three steel angle beams on the north side of structure. Thrie beam retrofit has been placed in front of old barrier system. (05/15)
5. Sidewalks or Curbs	N	N	N	(05/19) (05/17) (05/15)
6. Deck Bottom Surface (SIA-58B)	7	7	7	Concrete bottom surface, no deficiencies noted. (05/19) Concrete bottom surface, no deficiencies noted. (05/17) Concrete bottom surface, no deficiencies noted. (05/15)

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	

7. Deck (SIA-58)	6	6	6	Deck surface: Chip seal. Open transverse/longitudinal cracks; deep longitudinal crack along westbound. Deck bottom: Concrete bottom surface, no deficiencies noted. Fascia: south - 15' spalling; north - 35' spalling (05/19) Surface: Chip seal, previous cracks partially filled. Bottom Surface: No deficiencies noted. Fascias: South fascia has 15' of spalling, north fascia spalled along full length. (05/17) Surface: HMA surface with block cracks that are partially sealed. Reflective unsealed transverse cracks along abutment reference lines. Bottom Surface: No deficiencies noted. Fascias: Minor spalling along the bottom of the deck along both fascias. (05/15)
8. Drainage				Off fascias. (05/19) (05/17) Off fascias. (05/15)

SUPERSTRUCTURE

	05/15	05/17	05/19	
9. Stringer (SIA-59)	5	5	5	10 steel I-beams with square end cover plates applied in 4' +/- sections in 1990. Steel channel diaphragms at midspan. Splice Plates for cover plates loose and rusty at beam 1s and 10s. Several tack welds at cover plate splices. Beam 1S, 6S and 10S have pairs of drilled holes through webs, (6) pairs per beam. Painted over pitting in some locations is evident. Rust on bottom flange of beam 10s at west abutment. Top flanges of fascia beams have scaled rust on the outside. (05/19) There are 10 steel I-beams with square end cover plates applied in 4' +/- sections in 1990. Steel channel diaphragms at midspan. Splice Plates for cover plates loose and rusty at beam 1s and 10s. Several tack welds at cover plate splices. Beam 1S, 6S and 10S have pairs of holes through webs, (6) pairs per beam. (05/17) There are 10 steel I-beams with square end cover plates applied in 4' +/- sections in 1990. Steel channel diaphragms at midspan. Splice Plates for cover plates loose and rusty at beam 1s and 10s. Several tack welds at cover plate splices. Beam 1S, 6S and 10S have pairs of holes through webs, (6) pairs per beam. (05/15)
10. Paint (SIA-59A)	6	6	6	New paint applied in 2011, but blast cleaning not done prior as a result speckled rust is already evident. (05/19) New paint applied in 2011, but blast cleaning not done prior as a result speckled rust is already evident. (05/17) New paint applied in 2011, but blast cleaning not done prior as a result speckled rust is already evident. (05/15)
11. Section Loss	2	2	2	Painted over pitting in some locations is evident. Rust on bottom flange of beam 10s at west abutment. Top flanges of fascia beams have scaled rust on the outside. (05/19) Painted over pitting in some locations is evident. Rust on bottom flange of beam 10s at west abutment. Top flanges of fascia beams have scaled rust on the outside. (05/17) Painted over pitting in some locations is evident. Rust on bottom flange of beam 10s at west abutment. Top flanges of fascia beams have scaled rust on the outside. (05/15)
12. Bearings	7	7	7	Steel plate bearings at each beam end. Steel plates have uniform surface rust throughout. (05/19) Steel plate bearings at each beam end. Steel plates have uniform surface rust throughout. (05/17) Steel plate bearings at each beam end. Steel plates have uniform surface rust throughout. (05/15)


SUBSTRUCTURE

	05/15	05/17	05/19	
13. Abutments (SIA-60)	7	7	7	Concrete abutment walls. Minor hairline cracks off weep holes. There are three 2" diameter weep holes per wall. (05/19) Concrete abutment walls. Minor hairline cracks off weep holes. There are three 2" diameter weep holes per wall. (05/17) Concrete abutment walls. Minor hairline cracks off weep holes. There are three 2" diameter weep holes per wall. (05/15)

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	

14. Piers (SIA-60)	N	N	N	(05/19) (05/17) (05/15)
15. Slope Protection	N	N	N	(05/19) No slope protection under the structure protecting the abutment walls. (05/17) No slope protection under the structure protecting the abutment walls. (05/15)
16. Channel (SIA-61)	7	7	7	Flow south to north. Improved county drain with grass banks. Sloughing banks upstream and downstream of bridge. (05/19) Improved county drain with grass banks. Sloughing banks upstream and downstream of bridge. (05/17) Improved county drain. Stable banks with straight flow under structure. No scour along abutments. (05/15)
17. Scour Inspection		7	7	Water along both abutments. Probed, no exposed footings. (05/19) No scour noted. (05/17) (05/15)

APPROACH

	05/15	05/17	05/19	
18. Approach Pavement	6	6	5	Chip seal with reflective cracks through chip seal. Estimate 1" of settlement at each approach. (05/19) Chip seal with reflective cracks through chip seal. Estimate 1" of settlement at each approach. (05/17) HMA approach pavement off each end of the structure. Sealed transverse and longitudinal cracks in both approach pavements. (05/15)
19. Approach Shoulders Sidewalks	6	6	6	Tapered HMA shoulders in all four quadrants. Sealed transverse cracks in all quadrants. NE - longitudinal crack (05/19) Tapered HMA shoulders in all four quadrants. (05/17) Tapered HMA shoulders in all four quadrants. (05/15)
20. Approach Slopes				Some large pieces of broken concrete along return wingwalls in all four quadrants. 1 on 2 grass covered slopes with a minor slumped bank in the southeast quadrant. Approach guardrail: thrie beam / type B. No impact damage. (05/19) Some large pieces of broken concrete along return wingwalls in all four quadrants. 1 on 2 grass covered slopes with a minor slumped bank in the southeast quadrant. (05/17) Some large pieces of broken concrete along return wingwalls in all four quadrants. 1 on 2 grass covered slopes with a minor slumped bank in the southeast quadrant. (05/15)
21. Utilities				There are two 2" diameter galvanized steel conduits mounted to barrier along the north fascia. (05/19) There are two 2" diameter galvanized steel conduits mounted to barrier along the north fascia. (05/17) There are two 2" diameter galvanized steel conduits mounted to barrier along the north fascia. (05/15)
22. Drainage Culverts				(05/19) 12" diameter pipe in the southwest quadrant. (05/17) 12" diameter pipe in the southwest quadrant. (05/15)


MISCELLANEOUS

Guard Rail		Other Items	
<u>Item</u>	<u>Rating</u>	<u>Item</u>	<u>Rating</u>
36A. Bridge Railings	1	71. Water Adequacy	7
36B. Transitions	0	72. Approach Alignment	6
36C. Approach Guardrail	0	Temporary Support	0 No Temporary Supports
36D. Approach Guardrail Ends	0	High Load Hit (M)	No

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	

Special Insp. Equipment 2

Underwater Insp. Method 1

False Decking (Timber) Removed to Complete Inspection

N/A - No False Decking

Critical Feature Inspections (SIA-92)

Freq Date

92A. Fracture Critical

92B. Underwater


92C. Other Special

92D. Fatigue Sensitive

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	

SUPPORTING IMAGES

VU9X 05/24/2019



Document Name: 77.JPG
Category: Elevation
Span Number:
Comments: Looking south off



Document Name: 78.JPG
Category: Elevation
Span Number:
Comments: Looking north off



Document Name: 84.JPG
Category: Elevation
Span Number:
Comments: South




Document Name: 91.JPG
Category: Elevation
Span Number:
Comments: South fascia, spalling

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	



Document Name: 92.JPG
Category: Elevation
Span Number:
Comments: South



Document Name: 72.JPG
Category: Posting
Span Number:
Comments: East



Document Name: 73.JPG
Category: Posting
Span Number:
Comments: West




Document Name: Dutcher Road bridge between Van Buren and Quanicassee 1.jpg
Category: Posting
Span Number:
Comments: Advanced East

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	



Document Name: Dutcher Road bridge between Van Buren and Quanicasssee 2.jpg
Category: Posting
Span Number:
Comments: East



Document Name: Dutcher Road bridge between Van Buren and Quanicasssee 3.jpg
Category: Posting
Span Number:
Comments: Advanced West



Document Name: Dutcher Road bridge between Van Buren and Quanicasssee 4.jpg
Category: Posting
Span Number:
Comments: West




Document Name: 70.JPG
Category: Approach
Span Number:
Comments: Advanced, west

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	



Document Name: 71.JPG
Category: Approach
Span Number:
Comments: Looking west



Document Name: 74.JPG
Category: Approach
Span Number:
Comments: West



Document Name: 76.JPG
Category: Approach
Span Number:
Comments: Deck surface




Document Name: 80.JPG
Category: Approach
Span Number:
Comments: East

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	



Document Name: 81.JPG
Category: Approach
Span Number:
Comments: Southeast approach guardrail



Document Name: 82.JPG
Category: Railing
Span Number:
Comments: South



Document Name: 83.JPG
Category: Railing
Span Number:
Comments: North




Document Name: 88.JPG
Category: Deck
Span Number:
Comments: Deck bottom

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	



Document Name: 75.JPG
Category: Joints
Span Number:
Comments: West end joint



Document Name: 79.JPG
Category: Joints
Span Number:
Comments: East end joint



Document Name: 87.JPG
Category: Superstructure
Span Number:
Comments: Beams




Document Name: 89.JPG
Category: Superstructure
Span Number:
Comments: Beam 1s, drilled holes

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

BRIDGE SAFETY INSPECTION REPORT

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	



Document Name: 90.JPG
Category: Superstructure
Span Number:
Comments: Beam 10s, drilled holes



Document Name: 93.JPG
Category: Superstructure
Span Number:
Comments: Beam 10s, west abutment, scale



Document Name: 85.JPG
Category: Substructure
Span Number:
Comments: West abutment




Document Name: 86.JPG
Category: Substructure
Span Number:
Comments: East abutment

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

STRUCTURE INVENTORY AND APPRAISAL


Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	

Bridge History, Type, Materials		Route Carried By Structure(ON Record)		Route Under Structure (UNDER Record)	
27 - Year Built	1970	5A - Record Type	1	5A - Record Type	
106 - Year Reconstructed		5B - Route Signing	4	5B - Route Signing	
202 - Year Painted		5C - Level of Service	1	5C - Level of Service	
203 - Year Overlay	1995	5D - Route Number	00000	5D - Route Number	
43 - Main Span Bridge Type	3 02	5E - Direction Suffix	0	5E - Direction Suffix	
44 - Appr Span Bridge Type		10L - Best 3m Unclr-Lt	0 0	10L - Best 3m Unclr-Lt	
77 - Steel Type	3	10R - Best 3m Unclr-Rt	99 99	10R - Best 3m Unclr-Rt	
78 - Paint Type	1	PR Number		PR Number	
79 - Rail Type		Control Section		Control Section	
80 - Post Type		11 - Mile Point		11 - Mile Point	
107 - Deck Type	1	12 - Base Highway Network	0	12 - Base Highway Network	
108A - Wearing Surface	6	13 - LRS Route-Subroute	0000002743 10	13 - LRS Route-Subroute	
108B - Membrane	0	19 - Detour Length	5	19 - Detour Length	
108C - Deck Protection	0	20 - Toll Facility	3	20 - Toll Facility	
Structure Dimensions		26 - Functional Class	08	26 - Functional Class	
34 - Skew	0	28A - Lanes On	2	28B - Lanes Under	
35 - Struct Flared	N	29 - ADT	980	29 - ADT	
45 - Num Main Spans	1	30 - Year of ADT	2009	30 - Year of ADT	
46 - Num Apprs Spans	0	32 - Appr Roadway Width	34.1	42B - Service Type Under	5
48 - Max Span Length	40	32A/B - Ap Pvt Type/Width	4 22.01	47L - Left Horizontal Clear	
49 - Structure Length	42	42A - Service Type On	1	47R - Right Horizontal Clear	
50A - Width Left Curb/SW	0	47L - Left Horizontal Clear	0.0	54A - Left Feature	
50B - Width Right Curb/SW	0	47R - Right Horizontal Clear	36.4	54B - Left Underclearance	99 99
33 - Median	0	53 - Min Vert Clr Ov Deck	99 99	54C - Right Feature	
51 - Width Curb to Curb	34.8	100 - STRAHNET	0	54D - Right Clearance	99 99
52 - Width Out to Out	37.7	102 - Traffic Direct	2	Under Clearance Year	
112 - NBIS Length	Y	109 - Truck %	3	55A - Reference Feature	N
Inspection Data		110 - Truck Network	0	55B - Right Horiz Clearance	99.9
90 - Inspection Date	05/24/2019	114 - Future ADT	1770	56 - Left Horiz Clearance	0
91 - Inspection Freq	24	115 - Year Future ADT	2029	100 - STRAHNET	
92A - Frac Crit Req/Freq	N	Freeway	0	102 - Traffic Direct	
93A - Frac Crit Insp Date		Structure Appraisal		109 - Truck %	
92B - Und Water Req/Freq	N	36A - Bridge Railing	1	110 - Truck Network	
93B - Und Water Insp Date		36B - Rail Transition	0	114 - Future ADT	
92C - Oth Spec Insp Req/Freq	N	36C - Approach Rail	0	115 - Year Future ADT	
93C - Oth Spec Insp Date		36D - Rail Termination	0	Freeway	
92D - Fatigue Req/Freq	N	67 - Structure Evaluation	4	Proposed Improvements	
93D - Fatigue Insp Date		68 - Deck Geometry	6	75 - Type of Work	37 1
176A - Und Water Insp Method	1	69 - Underclearance	N	76 - Length of Improvement	42
58 - Deck Rating	6	71 - Waterway Adequacy	7	94 - Bridge Cost	285
58A/B - Deck Surface/Bottom	5 7	72 - Approach Alignment	6	95 - Roadway Cost	20
59 - Superstructure Rating	5	103 - Temporary Structure		96 - Total Cost	332
59A - Paint Rating	6	113 - Scour Criticality	5	97 - Year of Cost Estimate	2003
60 - Substructure Rating	7	Miscellaneous		Load Rating and Posting	
61 - Channel Rating	7	37 - Historical Significance	5	31 - Design Load	4
62 - Culvert Rating	N	98A - Border Bridge State		41 - Open, Posted, Closed	P
Navigation Data		98B - Border Bridge %		63 - Fed Oper Rtg Method	6
38 - Navigation Control	0	101 - Parallel Structure	N	64F - Fed Oper Rtg Load	.91
39 - Vertical Clearance	0	EPA ID		64MA - Mich Oper Rtg Method	6
40 - Horizontal Clearance	0	Stay in Place Forms		64MB - Mich Oper Rtg	.59
111 - Pier Protection		143 - Pin & Hanger Code		64MC - Mich Oper Truck	17
116 - Lift Brdg Vert Clear		148 - No. of Pin & Hangers		65 - Inv Rtg Method	6
				66 - Inventory Load	.55
				70 - Posting	0
				141 - Posted Loading	273243
				193 - Overload Class	

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

WORK RECOMMENDATIONS

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	

WORK RECOMMENDATIONS

VU9X

Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date
Ryan Lefere	Great Lakes Engineering Group, LLC	24	05/24/2019


RECOMMENDATIONS & ACTION ITEMS

Recommendation Type	Priority	Description
Approach Repair	M	Wedge approaches
Seal Cracks	M	Deck
Other	H	Install advance posting signs for WB traffic.

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

LOAD RATING ASSUMPTIONS

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	

Rating Considers Field Condition of Members: Yes **Inspection Date:** 05/24/2019

Deterioration:

Only minor pitting below paint noted.

Most Recent Year Construct / Reconstruct / Overlay: 1995

History of Work Impacting Load Rating:

None.

Superstructure Component: 3 Steel **Beam fy:** 36.0 ksi **Beam f'c / fb:** 3.0 ksi

Composite: No **Number of Beams:** 10 **Shop Drawings Verified:** No

Beam Size(s) & Names (each span): W21x62, 10 each, 1 span.

Deck: **Thickness (in.):** 7.5 **Fy / f'c:** 40.0 / 3.0 ksi **Deck Design Load > H15:** Yes

Wearing Surface: **Mat'l:** HMA **Thickness (in.):** 4.0 **Unit Weight (pcf.):** 145.0

	LEFT	CENTER	RIGHT
Barrier: Type / Weight (plf.):	Guardrail / 50.0	/	Guardrail / 50.0

Sidewalk: Width / Thick (in.):	/	/	/
---------------------------------------	---	---	---

Clear Roadway (ft.): 34.8

Additional Loads:

None.

Unique Factors That Affect Capacity:

None.


Analyzed By: Casey Collings

Date: 05/29/2019

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 10471

LOAD RATING SUMMARY

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	

Compliance Issue: None
Compliance Verified: No
Analysis Program: AASHTOWare Bridge Rating (BrR)
Analysis Program Version: 6.8.3
Rating Considers Field Condition of Members: Yes **Inspection Date:** 05/24/2019
Controlling component and failure mode:

Interior beam, flexure

NEW INVENTORY CODING

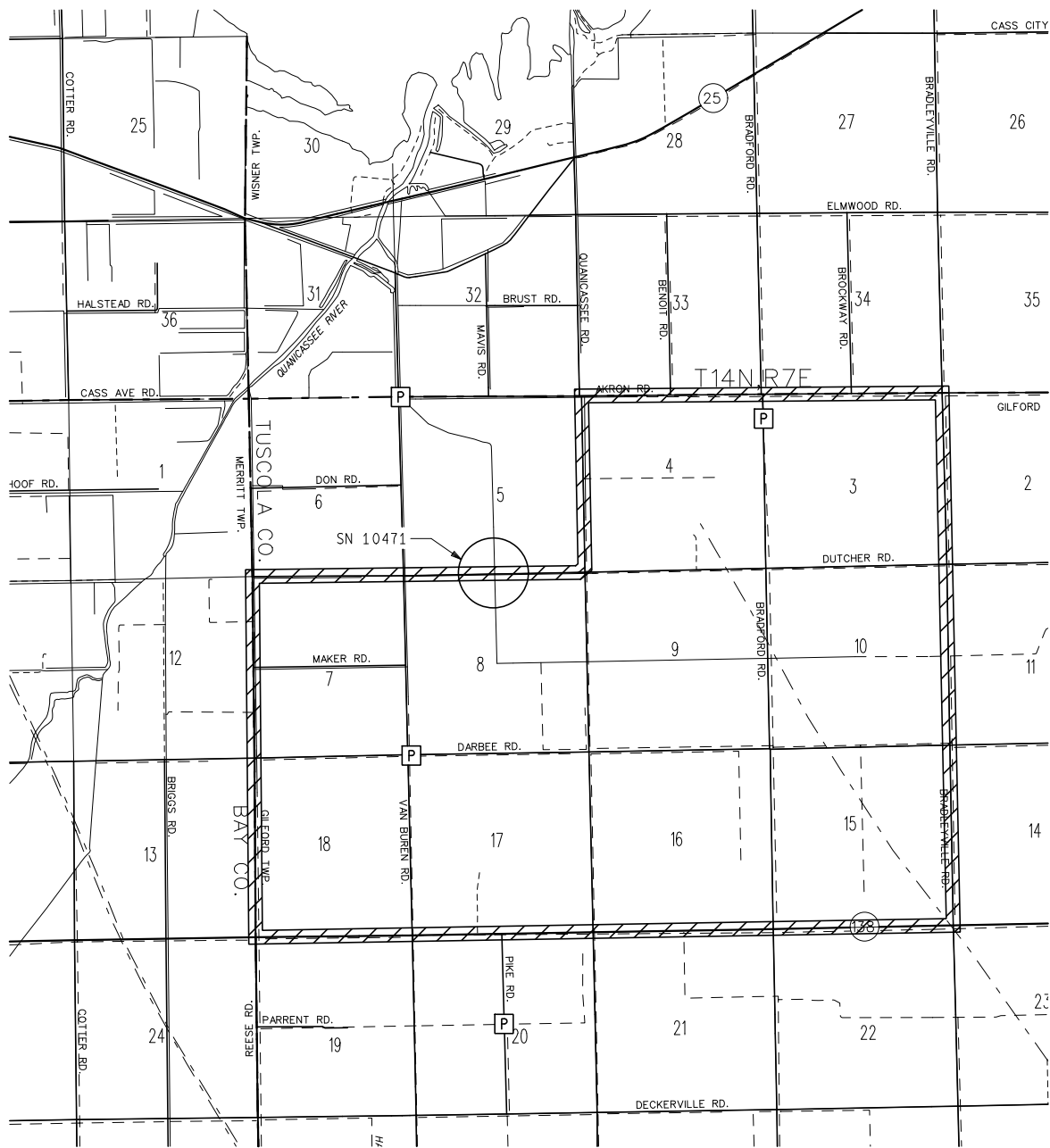
NBI Item 63 - Operating Rating Method	6 LFR in Rating Factor
NBI Item 64F - Federal Operating Ratings	0.91
MDOT Item 64MA - Michigan Operating Method	6 LFR in Rating Factor
MDOT Item 64MB - Michigan Operating Rating	0.59
MDOT Item 64MC - Michigan Operating Truck	17
NBI Item 65 - Inventory Rating Method	6 LFR in Rating Factor
NBI Item 66 - Federal Inventory Rating	0.55
NBI Item 41 - Structure Open Posted Closed	P P Posted for load
NBI Item 70 - Bridge Posting	0 0 - 59% or less
Posted By	Truck Type
MDOT Item 141 - Posted Loading	273243
MDOT Item 193A - Michigan Overload Class	
MDOT Item 193C - Overload Status	

Sample Sign



R12-5

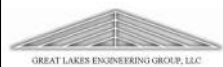
Analyzed By:	Casey Collings	Date:	05/29/2019
Checked By:	Eric Rickert	Date:	05/29/2019



DUTCHER ROAD OVER
NORTHWEST DRAIN OUTLET 1
SECTION 5 & 8/GILFORD TWP
T13N, R7E, TUSCOLA COUNTY

LEGEND

- POSTED BRIDGE
 DETOUR ROUTE



NO SCALE

DESIGN UNIT: GLEG

SN: 10471

JN: 1019-2-610

TSC: HURON

DUTCHER ROAD OV NORTHWEST DRAIN OUTLET 1

TUSCOLA COUNTY ROAD COMMISSION

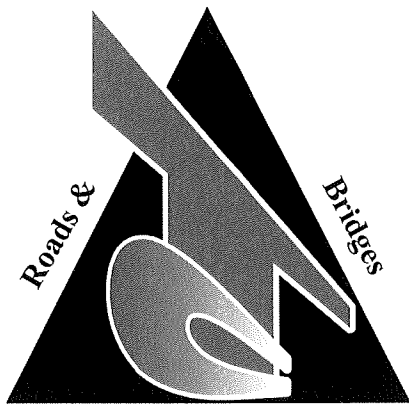
PRIORITY 1

DATE: 06/01/20

DRAWING SHEET

1

FILE:10471 Map.dgn



Tuscola County Road Commission
1733 Mertz
Caro, MI 48723
Phone 989 673-2128
Fax 989 673-3294



To Our Future

TUSCOLA COUNTY BOARD OF ROAD COMMISSIONERS
RESOLUTION OF
SUPPORT FOR THE SUPER STRUCTURE REPLACEMENT OF THE
DUTCHER ROAD BRIDGE
OVER THE NORTHWEST DRAIN OUTLET 1, SECTIONS 5 & 8 – GILFORD
TOWNSHIP
STRUCTURE NUMBER 10471

Commissioner Parsell offered the following resolution and moved for its adoption:

BE IT RESOLVED, the Tuscola County Board of Road Commissioners supports the application for State and/or Federal funding participation in the replacement of the Dutcher Road Bridge over the Northwest Drain Outlet 1 (Structure Number 10471),

BE IT FURTHER RESOLVED, that the Board of Road Commissioners, County of Tuscola, concurs that this replacement is urgently needed.

Motion supported and resolution adopted on a roll call vote:

AYES: Weber, Kennard, Matuszak, Parsell, Laurie
NAYS: None

I hereby certify that the foregoing is a true and correct copy of a motion made and adopted at a regular meeting of the Board held on the 28th day of May, 2020.

Signed: _____

Secretary-Clerk of the Board

VILLAGE of FAIRGROVE

5005 W. Center • PO Box 227

Fairgrove, MI 48733

Phone (989) 693- 6572 Fax (989) 693- 6881

e-mail: VillageofFairgrove@gmail.com

www.fairgrovevillage.org

April 14, 2020

Gilford Township
6230 Gilford Rd.
Fairgrove, MI 48733

Tuscola County Road Commission
1733 Mertz Rd.
Caro, MI 48723

To Whom it may Concern

The Village of Fairgrove is writing to increase support for the critical bridge funding for the Tuscola County Road Commission budget. This is a rural farm community and keeping this farming community operating is very important and voicing our support in this matter is our major concern. If there is more information you need for your consideration, we look forward to hearing from you.



Cristi Smith-

Village of Fairgrove Clerk- On behalf of the Village Council
NEW E-MAIL: VillageofFairgrove@gmail.com
Phone: 989-693-6572
5005 Center St.
P.O. Box 227
Fairgrove, MI 48733



The Village of Fairgrove is an Equal Opportunity Employer and Service Provider



GILFORD TOWNSHIP

Tuscola County

6230 Gilford Rd., Fairgrove, MI 48733

Hall Number: 989-693-6394 Fax Number: 989-693-6407

Tuscola County Road Commission

Gilford Township

James E. Stockmeyer

To whom it concerns,

At our regular Township meeting held on April 11, 2019, It was asked of us to write a letter to your board in favor of replacing bridges in our Township that have weight limits on them. I know this can be a burden on some of the farmers with big equipment and trucks having issues making corners. I know there use to be critical bridge funding and its determined which ones are the most critical. Please consider looking into this issue and we are hoping that something could be done.

I'm sending you the map our resident , Rich Sylvester, gave us showing the bridges he feels are the most critical to there operation and to many of our bigger farmers in that area. He has said he talked to your board about this issue and you needed a letter from us .

Thank you,

James E. Stockmeyer

Sylvester Farms

Richard, Nancy, & Mark Sylvester

3486 N. Quanicassee Rd.

Fairgrove, MI 48733

sylvesterfarms@live.com

989-693-6046

April 11, 2019

Gilford Township Board of Trustees

Re: Bridges and narrow road in Gilford Township

I am requested the Gilford Township Board of Trustees write a letter to the Tuscola County Road Commission supporting bridge replacements and paving the gravel mile of Quanicassee Rd. in Gilford Township.

As residents and farm owners in Gilford Township our farm operation is being affected because of the limited use of many of the bridges in our township. I have enclosed a map of the north half of our township showing my areas of concern.

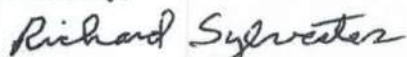
In the northern half of Gilford Township, where our farm operates, there are 7 bridges that have weight limits and 3 bridges that are too narrow to turn on with a semi-truck or farm equipment.

Another concern we have is a portion of Quanicassee Rd. north of Darbee Rd. that is too narrow, making it impossible for 2 semi-trucks to meet. This is not safe and very dangerous. We are in support of widening and paving this mile of Quanicassee Rd. from Darbee to Dutcher Rds. Years ago residents that owned land along a road that was being upgraded would pay towards that project. We would be willing to do that. We are also willing to give additional land for needed right of way, as I have told the Road Commission this in the past.

I previously discussed both of these issues at a Tuscola County Road Commission meeting in November 2018. Their board stated it would be better if I had Gilford Township Board support.

Please show your support of these projects in Gilford Township by writing a letter to the Tuscola County Road Commission requesting work be done on our bridges instead of putting up more weight limit signs and improving Quanicassee Rd. Thank you for your time and consideration.

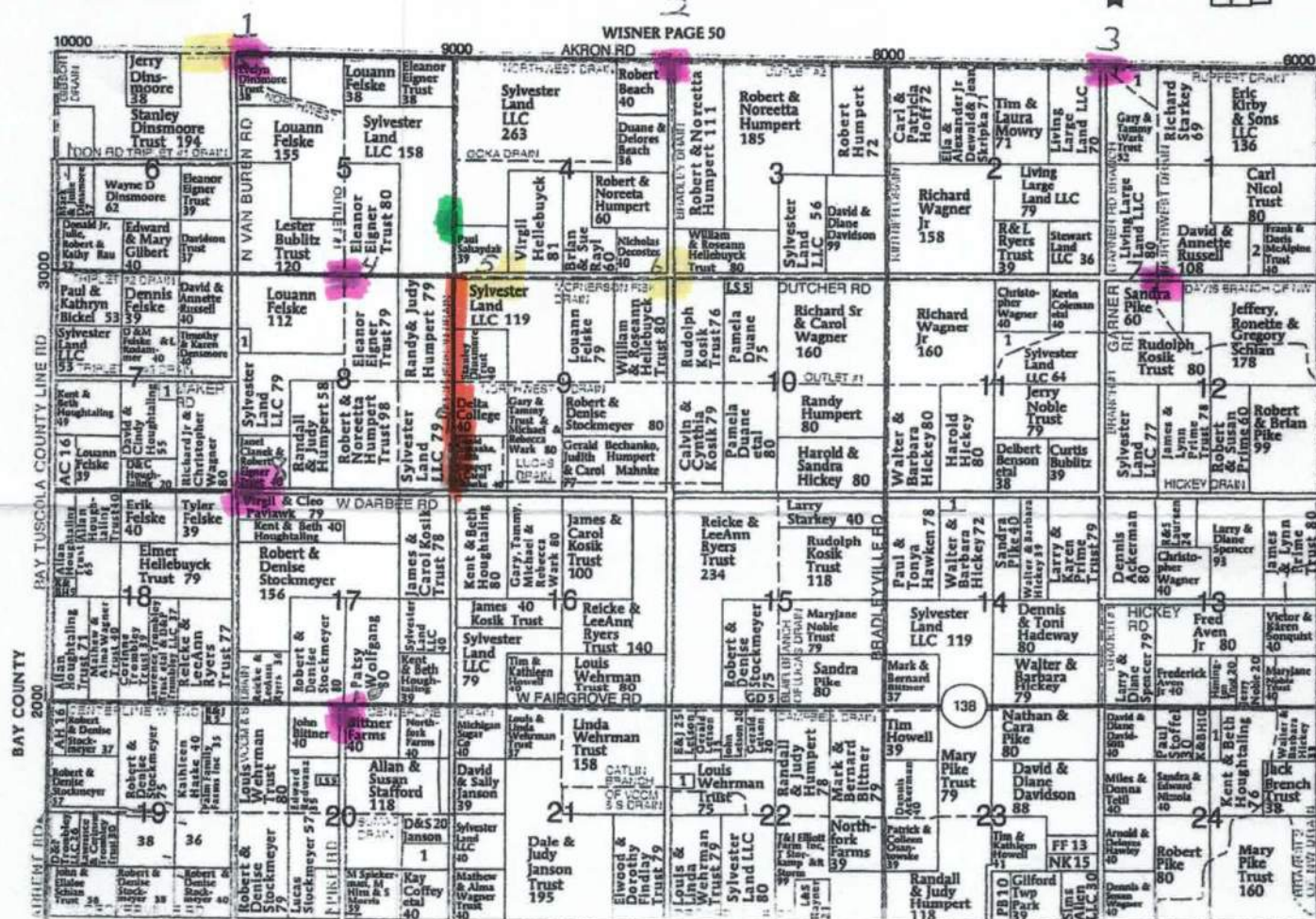
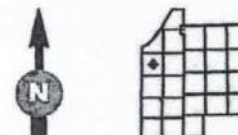
Sincerely,



Richard Sylvester
Enclosure

T-13-N • R-7-E

See Pages 98-101 For Additional Names.



FAIRGROVE PAGE 42

Yellow Bridges that are too narrow
to turn on with semi truck
or farm equipment

Orange Narrow road - Impassable
with Trucks



Green Farm Shop

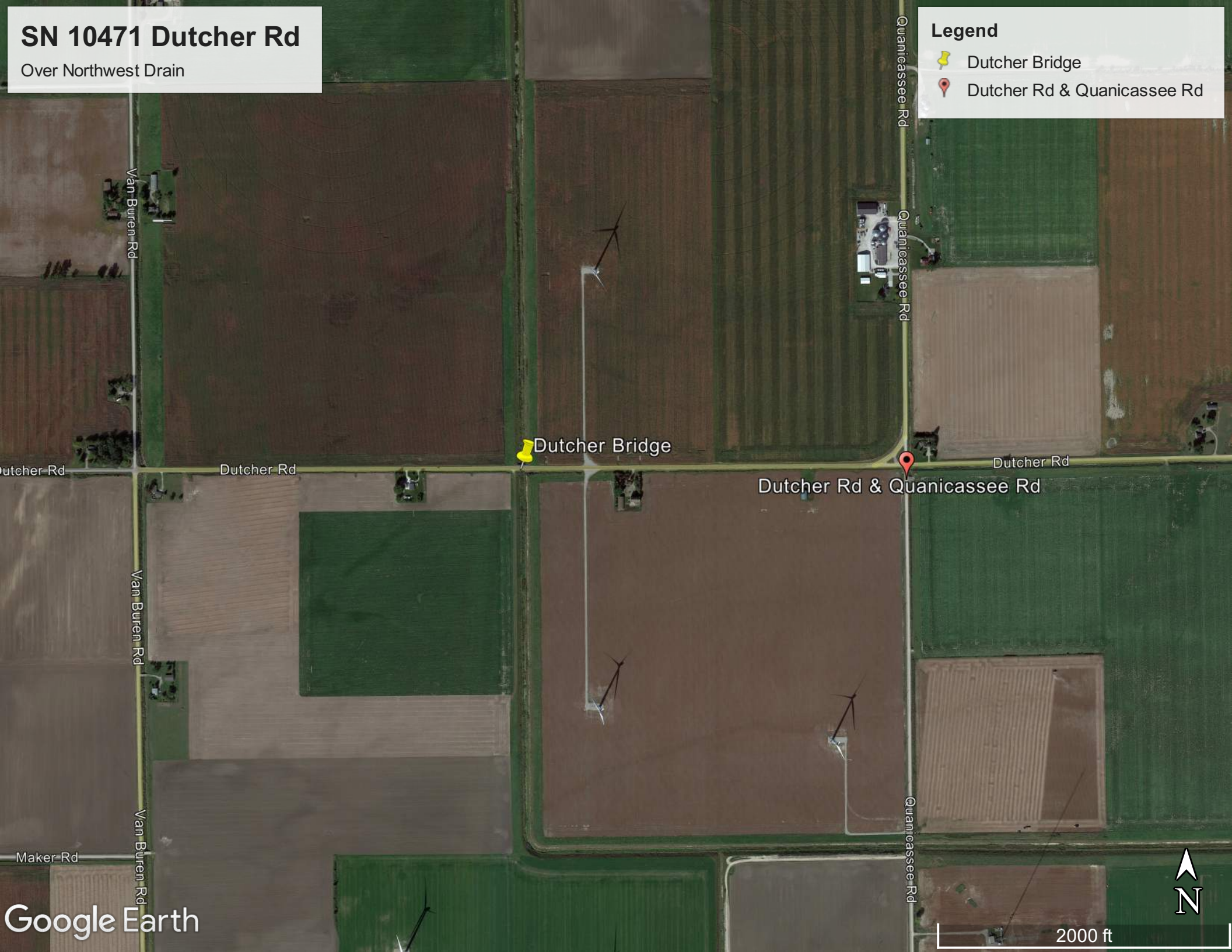
April 11, 2019
Richard Sylvester

SN 10471 Dutcher Rd

Over Northwest Drain

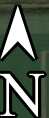
Legend

-  Dutcher Bridge
-  Dutcher Rd & Quanicassee Rd



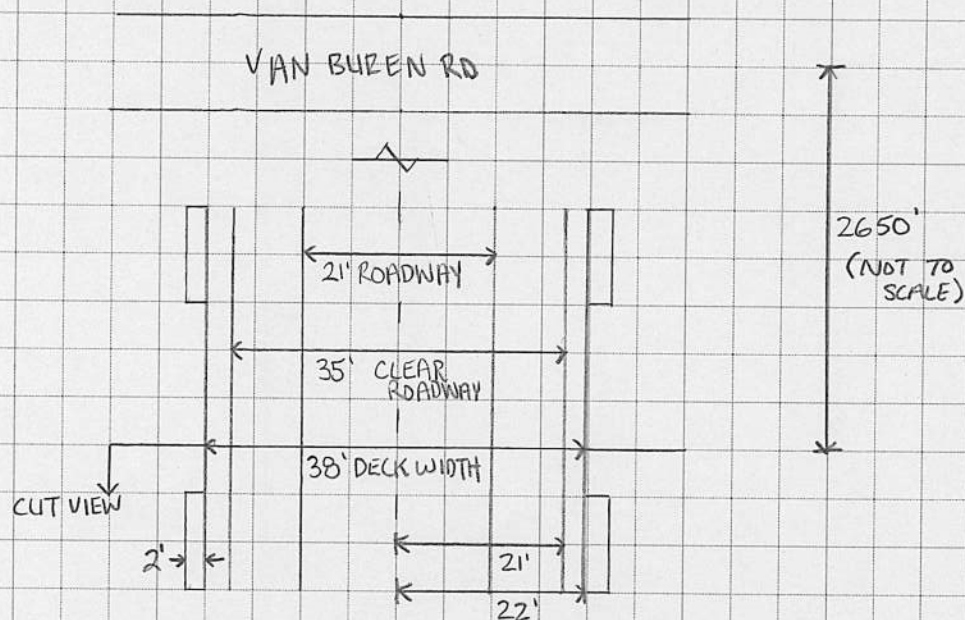
Dutcher Bridge

Dutcher Rd & Quanicassee Rd

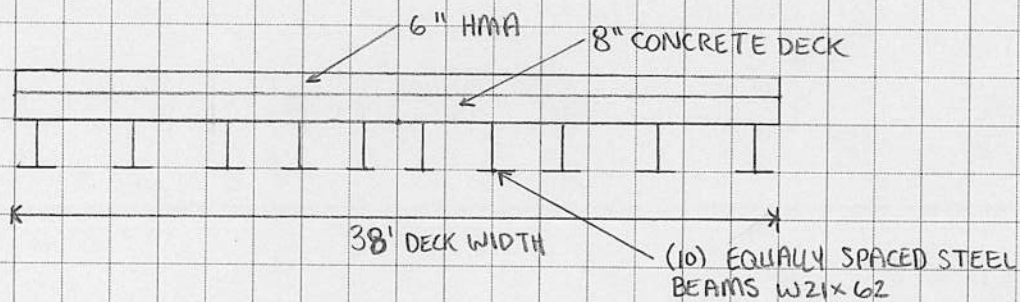


2000 ft

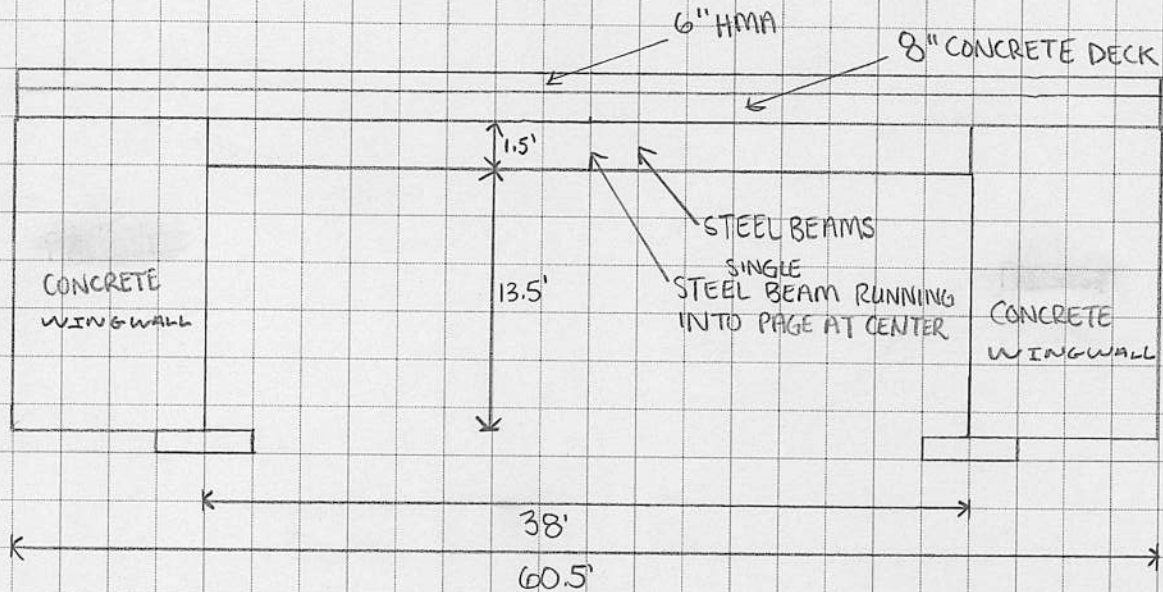
→ N
SCALE 1" = 20'



SCALE 1" = 10'



SCALE 1"=10'



GUARDRAIL LAYOUT

