

**2018 UPDATE  
BRIDGE INSPECTION REPORT**



**BRIDGE # 6290  
TH 210 over OTTER CREEK**

**DISTRICT:** District 1

**COUNTY:** Carlton

**CITY/TOWNSHIP:** TWIN LAKES

**STATE:** Minnesota

**Date of Inspection:** 12/03/2018

**Reason for Update Report:** Inspection & Inventory Item Updates

**Equipment Used:**

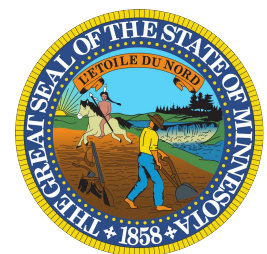
**Owner:** State Highway Agency

**Inspected By:** Rohling, Kevin

**Report Written By:** Kevin Rohling

**Report Reviewed By:** Kevin Rohling

**Final Report Date:** 12/03/2018



# Table of Contents

<u>SECTION</u>	<u>PAGE</u>
COVER	1
STRUCTURE INVENTORY	2
ELEMENTS	3
PICTURES	5

# Minnesota Structure Inventory Report

Bridge ID: 6290

TH 210 over OTTER CREEK

+ GENERAL +	+ ROADWAY ON BRIDGE +	+ INSPECTION +
<b>Agency Br. No.</b> <b>District</b> 01 <b>Maint. Area</b> 1A <b>County</b> 009 - Carlton <b>City</b> <b>Township</b> 09017 - TWIN LAKES <b>Desc. Loc.</b> 0.2 MI W OF JCT TH 35 SB <b>Sect., Twp., Range</b> 10 - 048N - 17W <b>Latitude</b> 46 d 39 m 48.74 s <b>Longitude</b> -92 d 28 m 54.82 s <b>Custodian</b> 01 - State Highway Agency <b>Owner</b> 01 - State Highway Agency  <b>Year Built</b> 1930 <b>Date Opened to Traffic</b> 9/1/1966 <b>MN Year Remodeled</b> 1965 <b>FHWA Year Reconstructed</b> <b>Bridge Plan Location</b> 0 - NO PLAN <b>Potential ABC</b> 2 - N/A	<b>Road Name</b> MN 210 <b>Functional Class.</b> 02 - Rural - Principal Arterial - Other <b>ADT</b> 4100 <b>YEAR</b> 2008 <b>HCA DT</b> <b>ADTT</b> 15 % <b>National Highway System</b> <b>Route Sys/Nbr</b> 03 - MNTH / 210 <b>Ref. Point (TIS)</b> 215+00.813 <b>Detour Length</b> 7 mi. <b>Lanes</b> 4 <b>Lanes ON Bridge</b> <b>Control Section (TH Only)</b> 15 <b>Function</b> 1 - MAINLINE <b>Type</b> 2 - 2-way traffic <b>Bridge Match ID</b> 0 <b>Roadway Key</b> Route On Structure	<b>Structurally Deficient</b> Y <b>Functionally Obsolete</b> N <b>Sufficiency Rating</b> 52.0 <b>Last Routine Insp Date</b> 09/19/2017 <b>Routine Insp Frequency</b> 24 <b>Inspector Name</b> Rohling, Kevin <b>Status</b> A - Open
		<b>+ NBI CONDITION RATINGS +</b>
		<b>Deck</b> N <b>Superstructure</b> N <b>Substructure</b> N <b>Channel</b> 8 <b>Culvert</b> 4
	<b>+ RDWY DIMENSIONS ON BRIDGE +</b>	<b>+ NBI APPRAISAL RATINGS +</b>
	If Divided: NB-EB SB-WB <b>Roadway Width</b> 35.00 ft 35.00 ft <b>Vertical Clearance</b> ft ft <b>Max. Vert. Clear.</b> ft ft <b>Horizontal Clear.</b> 34.9 ft ft <b>Appr. Surface Width</b> 100.0 ft <b>Bridge Roadway Width</b> 0.0 ft <b>Median Width On Bridge</b> 30.00 ft	<b>Structure Evaluation</b> 4 <b>Deck Geometry</b> N <b>Underclearances</b> N <b>Waterway Adequacy</b> 7 <b>Approach Alignment</b> 8
<b>+ STRUCTURE +</b>	<b>+ MISC. BRIDGE DATA +</b>	<b>+ SAFETY FEATURES +</b>
<b>Service On</b> 1 - Highway <b>Service Under</b> 5 - Waterway <b>Main Span Type</b> 1 - Concrete <b>Main Span Design</b> 13 - Box Culvert <b>Main Span Detail</b> <b>Appr. Span Type</b> <b>Appr. Span Design</b> <b>Appr. Span Detail</b> <b>Skew</b> 0 <b>Culvert Type</b> W1010D <b>Barrel Length</b> 118  <b>Number of Spans</b> <b>MAIN:</b> 2 <b>APPR:</b> 0 <b>TOTAL:</b> <b>Main Span Length</b> 10.0 ft <b>Structure Length</b> 22.0 ft <b>Deck Width (Out-to-Out)</b> 0.0 ft <b>Deck Material</b> N - Not Applicable <b>Deck Installation Year</b> <b>Wear Surf Type</b> 6 - Bituminous <b>Wear Surf Install Year</b> <b>Wear Course/Fill Depth</b> 4.30 ft <b>Deck Membrane</b> N - Not Applicable (applies only to <b>Deck Rebars</b> N - Not Applicable (no deck) <b>Structure Area (Out-to-Out)</b> 0 sq ft <b>Roadway Area (Curb-to-Curb)</b> sq ft <b>Sidewalk Width - L/R</b> 0.00 ft 0.00 ft <b>Curb Height - L/R</b> 0.00 ft 0.00 ft <b>Rail Codes - L/R</b> NN NN	<b>Structure Flared</b> 0 - No flare <b>Parallel Structure</b> N - No parallel structure <b>Field Conn. ID</b> <b>Can'tilever ID</b>  <b>Foundations (Material/Type)</b> <b>Abutment</b> N - N/A <b>Pier</b> N - N/A <b>Historic Status</b> 5 - Not eligible <b>On - Off System</b> 1 - ON	<b>Bridge Railing</b> N - NOT REQUIRED <b>GR Transition</b> N - NOT REQUIRED <b>Appr. Guardrail</b> 1 - MEETS STANDARDS <b>GR Termini</b> 0 - SUBSTANDARD
	<b>+ PAINT +</b>	<b>+ SPECIAL INSPECTIONS +</b>
	<b>Year Painted</b> <b>Painted Area</b> sq ft <b>Primer Type</b> <b>Finish Type</b>	Y/N Freq Date  <b>Frac. Critical</b> <b>Underwater</b> <b>Pinned Asbly.</b>
	<b>+ BRIDGE SIGNS +</b>	<b>+ WATERWAY +</b>
	<b>Posted Load</b> 0 - Not Required <b>Traffic</b> 0 - Not Required <b>Horizontal</b> 0 - Not Required <b>Vertical</b> N - Not Applicable	<b>Drainage Area (sq mi)</b> <b>Waterway Opening (sq ft)</b> 180 <b>Navigation Control</b> 0 - No nav. control on waterway <b>Pier Protection</b> <b>Nav. Clr. (ft)</b> <b>Vert.</b> 0.0 <b>Horiz.</b> 0.0 <b>Nav. Vert. Lift Bridge Clear. (ft)</b> <b>MN Scour Code</b> E - CULVERT <b>Scour Evaluation Year</b>
		<b>+ CAPACITY RATINGS +</b>
		<b>Design Load</b> 2 - H 15 <b>Operating Rating</b> 2 - HS TRUCK 24.0 <b>Inventory Rating</b> 2 - HS TRUCK 18.0 <b>Posting VEH:</b> <b>SEMI:</b> <b>DBL:</b> <b>Rating Date</b> 07/08/2013 <b>Overweight Permit Codes</b> A: N B: N C: N

## 12/03/2018

County:	Carlton	Location:	0.2 MI W OF JCT TH 35 SB	Length:	22.0 ft.
City:		Route:	03 - MNTH 210 Ref. Pt.: 215+00.813	Deck Width:	0.0 ft.
Township:	09017 - TWIN LAKES	Control Section:	15	Rdwy. Area/ Pct. Unsnd:	sq. ft. / %
Section:	10	Township:	048N Range: 17W Maint. Area: 1A	Paint Area/ Pct. Unsnd:	sq. ft. / %
Span Type:	1 - Concrete 19 - Culvert (includes frame culverts)	Local Agency Bridge Nbr.:		Culvert:	W1010D
List:				Postings:	
NBI Deck:	N	Super:	N	Sub:	N
		Chan:	8	Culv:	4
				Open, Posted, Closed:	A - Open
				MN Scour Code:	E - CULVERT
Appraisal Ratings - Approach:	8	Waterway:	7	Unofficial Structurally Deficient	Y
Required Bridge Signs - Load Posting:	0 - Not Required	Traffic:	0 - Not Required	Unofficial Functionally Obsolete	N
	Horizontal: 0 - Not Required	Vertical:	N - Not Applicable	Unofficial Sufficiency Rating	52.0

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
241	Reinforced Concrete Culvert	Update	12/03/2018	236 LF	0	186	50	0
		Update	11/30/2018	236 LF	0	186	50	0
	Notes: 2017-No Change							
2015- South end , east pipe, 2' x 6" x 6" spall with exposed rusted rebar and 8' of delamination at top of pipe. Southwest barrel has scale on roof 4 in. x 4 in. x 2 ft. long with exposed rebar and leaches water. West Barrel: 1/2" -3/4" crack at junction with old and new sections of culverts. East & West Barrel: 3" -10" spall with exposed rusted rebar at junction with old and new section Honeycombed areas throughout, some leaching water.								
2013/- The west barrel has a full section crack 1/4 in. wide with spalling. The east wall has heavy scaling at the water line with 25 LF of spalled areas 2 - 6 in. deep with exposed rebar (picture 1). The east barrel has a full section crack 1/4 in. wide . There is 24 LF of spall at the south end and 14 light to moderate cracks. The South headwall, west pipe, is scaled on the top 6 in. deep x 9 ft.. with exposed rebar.								
800	Critical Deficiencies or Safety Hazards	Update	12/03/2018	1 EA	1	0	0	0
		Update	11/30/2018	1 EA	1	0	0	0
	Notes: 2017- Nothing time of inspection							
870	Culvert End Treatment	Update	12/03/2018	4 EA	2	2	0	0
		Update	11/30/2018	4 EA	2	2	0	0
	Notes: 2017-No Change							
2015- The South headwall scaled 22' x 4" x 4". The south wings have light honeycomb on the tops. The SE wing has 1 diagonal crack and the SW wing has 2 scale areas on the top - 12 in. x 5 in. x 2 in. deep and 8 in. x 4 in. x 1 in. deep.								
871	Roadway Over Culvert	Update	12/03/2018	1 EA	1	0	0	0
		Update	11/30/2018	1 EA	1	0	0	0
	Notes: 2017/2015- No Change							
891	Other Bridge Signing	Update	12/03/2018	1 EA	1	0	0	0
		Update	11/30/2018	1 EA	1	0	0	0
	Notes: 2017- SE wing marker is bent							
2015-No Change								
892	Slopes & Slope Protection	Update	12/03/2018	1 EA	1	0	0	0
		Update	11/30/2018	1 EA	1	0	0	0
	Notes: 2017- No Change							

**BRIDGE 6290 TH 210 OVER OTTER CREEK**

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
893	Guardrail	Update	12/03/2018	1 EA	1	0	0	0
		Update	11/30/2018	1 EA	1	0	0	0
	Notes: 2017- End treatments substandard down side of traffic							
	2015- No Change							
894	Deck & Approach Drainage	Update	12/03/2018	1 EA	1	0	0	0
		Update	11/30/2018	1 EA	1	0	0	0
	Notes: 2017- No Change							
900	Protected Species	Update	12/03/2018	1 EA	0	1	0	0
		Update	11/30/2018	1 EA	0	1	0	0
	Notes: 2017- Nothing at time of inspection							

General Notes: 08/27/2009 Inspection: G. Wright/ J. Loons (2009 -Water level too high for internal inspection)  
Inspection Conducted By D.Rychlak/I.Schaatz 09/13/11  
09/16/2013 Inspeiton: G. Elmquist/ F. Anderson, boat inspectio  
2015-9-14 Inspection: D Rychlak/S Danielson walk thru inspection  
2017-9-19 Routine D Rychlak/ J Zetah  
2018-11-30 Update D Rychlak/C Werner. KMR added notes for NBI culvert rating of 4 based on review of notes for element ratings, maintenance items and discussion with inspector.  
2018-12-03 Update report KMR to restore photos from 2017 report.

58. Deck NBI:

36A. Brdg Railings NBI:

36B. Transitions NBI:

36C. Appr Guardrail NBI:

36D. Appr Guardrail End treatments exiting side substandard  
Terminal NBI:

59. Superstructure NBI:

60. Substructure NBI:

61. Channel NBI:

62. Culvert NBI: Repairs are necessary at construction joint area. Structural integrity is compromised with delamination, spalling and exposed rusted rebar leaching and leakage. KMR 12-3-2018.

71. Waterway Adeq NBI:

72. Appr Roadway  
Alignment NBI:

Kevin Rohling  
Inspector's Signature

Kevin Rohling  
Reviewer's Signature

# Pictures



Photo 1 -



Photo 2 -



## Pictures



Photo 3 -



Photo 4 -