


MICHIGAN DEPARTMENT OF TRANSPORTATION

STR 8249

BRIDGE SAFETY INSPECTION REPORT

Facility SOUTH STREET	Latitude / Longitude 42.8482 / -83.4469	MDOT Structure ID 634505000112B01	Structure Condition Good Condition(8)	
Feature KEARSLEY CREEK	Length / Width / Spans 52 / 38.2 / 1	Owner City: ORTONVILLE(5050)		
Location IN ORTONVILLE	Built / Recon. / Paint / Ovly. 2004 / / /	TSC Oakland(23)	Operational Status A Open, no restriction(A)	
Region / County Metro(7) / Oakland(63)	Material / Design 7 Wood or Timber / 72 Multi Str Timb Deck	Last NBI Inspection 09/29/2017 / TPD7	Scour Evaluation 8 Stable Above Footing	

NBI INSPECTION

TPD7

Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date
Amanda Hemeyer	Rowe Professional Services Company	24	09/29/2017

GENERAL NOTES

Assisted by: James Brock

Single span timber glulam stringer and deck structure.

DECK

	09/13	09/15	09/17	
1. Surface (SIA-58A)	6	5	5	HMA surface. Transverse cracks spaced at approx. 4 ft at deck panel joints. Some longitudinal cracks. Map cracking throughout. Some cracks are sealed. There are some longitudinal ruts. (09/17) HMA surface. Transverse cracks spaced at approx. 4 ft at deck panel joints. Some longitudinal cracks. Map cracking throughout. Some cracks are sealed. There are some longitudinal ruts. (09/15) HMA surface. Transverse cracks spaced at approx. 4 ft at deck panel joints. Some longitudinal cracks. Map cracking along transverse and longitudinal cracks. Some cracks are sealed. There are some longitudinal ruts. (09/13)
2. Expansion Joints	6	6	6	HPR along each abutment reference line. Patches along east reference line. (09/17) HPR along each abutment reference line. Patches along east reference line. (09/15) HPR along each abutment reference line. 2' of east joint is punched and leaking. (09/13)
3. Other Joints	N	N	N	(09/17) (09/15) (09/13)
4. Railings	7	7	7	Timber barrier rails on timber posts. The timber brush block hardware is slightly corroded near ends. Slight impact to NWQ approach guardrail. Bolts in SWQ on inside of beam are rusting. (09/17) Timber barrier rails on timber posts. The timber brush block hardware is slightly corroded near ends. Slight impact to NWQ approach guardrail. (09/15) Timber barrier rails on timber posts. The timber brush block hardware is slightly corroded near ends. Slight impact to NWQ approach guardrail. (09/13)
5. Sidewalks or Curbs	8	8	8	Timber sidewalk bridge on north fascia only. No deficiencies noted. (09/17) Timber sidewalk bridge on north fascia only. No deficiencies noted. (09/15) Timber sidewalk bridge on north fascia only. No deficiencies noted. (09/13)
6. Deck Bottom Surface (SIA-58B)	8	8	8	(10) transverse glulam deck panels, reflective cracking in HMA above. Evidence of leakage on panels. (09/17) (10) transverse glulam deck panels, reflective cracking in HMA above. No deficiencies noted on bottom surface. (09/15) (10) transverse glulam deck panels, reflective cracking in HMA above. No deficiencies noted on bottom surface. (09/13)
7. Deck (SIA-58)	8	8	8	(10) transverse glulam deck panels, reflective cracking in HMA above. No deficiencies noted on bottom surface. All hardware in place. (09/17) (10) transverse glulam deck panels, reflective cracking in HMA above. No deficiencies noted on bottom surface. All hardware in place. (09/15) (10) transverse glulam deck panels, reflective cracking in HMA above. No deficiencies noted on bottom surface. All hardware in place. (09/13)
8. Drainage				Through timber scuppers. (09/17) Through timber scuppers. (09/15) Through timber scuppers. (09/13)

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SUPERSTRUCTURE

	09/13	09/15	09/17	
9. Stringer (SIA-59)	8	8	8	(9) timber glulam beams. No deficiencies noted. (09/17) (9) timber glulam beams. No deficiencies noted. (09/15) (9) timber glulam beams. No deficiencies noted. (09/13)
10. Paint (SIA-59A)	N	N	N	(09/17) (09/15) (09/13)
11. Section Loss	N	N	N	(09/17) (09/15) (09/13)
12. Bearings	8	8	8	Elastomeric pads in steel saddle anchorage. No deficiencies noted on elastomeric. Steel saddles have surface rust. (09/17) Elastomeric pads in steel saddle anchorage. No deficiencies noted. (09/15) Elastomeric pads in steel saddle anchorage. No deficiencies noted. (09/13)

SUBSTRUCTURE

	09/13	09/15	09/17	
13. Abutments (SIA-60)	8	8	8	Concrete curtainwall abutments. Rust stains at west abutment at the expansion joint. (09/17) Concrete curtainwall abutments. Rust stains at west abutment at the expansion joint. (09/15) Concrete curtainwall abutments. No deficiencies noted. (09/13)
14. Piers (SIA-60)	N	N	N	(09/17) (09/15) (09/13)
15. Slope Protection	7	7	7	Heavy riprap in place. Sparse in various locations. (09/17) Heavy riprap in place. Some is missing along waterline of east abutment. (09/15) Heavy riprap in place. Some is missing along waterline of east abutment. (09/13)
16. Channel (SIA-61)	7	7	7	Straight alignment, small rock dam with debris downstream. Well vegetated and stable. (09/17) Straight alignment, small rock dam with debris downstream. Well vegetated and stable. (09/15) Straight alignment, small rock dam with debris downstream. Well vegetated and stable. (09/13)
17. Scour Inspection			7	No scour. Riprap in place. (09/17) (09/15) (09/13)

APPROACH

	09/13	09/15	09/17	
18. Approach Pavement	8	8	8	Concrete approach slabs with HMA beyond. No deficiencies noted. (09/17) Concrete approach slabs with HMA beyond. No deficiencies noted. (09/15) Concrete approach slabs with HMA beyond. No deficiencies noted. (09/13)
19. Approach Shoulders Sidewalks	8	7	7	Concrete curb and gutter in all 4 quadrants, vegetation growth along NEQ, SEQ settled 1" near catch basin. Concrete sidewalk along north side, no deficiencies noted. (09/17) Concrete curb and gutter in all 4 quadrants, vegetation growth along NEQ, SEQ settled 1" near catch basin. Concrete sidewalk along north side, no deficiencies noted. (09/15) Concrete curb and gutter in all 4 quadrants, no deficiencies noted. Concrete sidewalk along north side, no deficiencies noted. (09/13)

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20. Approach Slopes Well vegetated with grass and brush. (09/17)
Well vegetated with grass and brush. (09/15)
Well vegetated with grass and brush. (09/13)

21. Utilities None noted. (09/17)
None noted. (09/15)
None noted. (09/13)

22. Drainage Culverts None noted. (09/17)
None noted. (09/15)
None noted. (09/13)

MISCELLANEOUS

Guard Rail

Item	Rating
36A. Bridge Railings	1
36B. Transitions	1
36C. Approach Guardrail	1
36D. Approach Guardrail Ends	1

Other Items

Item	Rating
71. Water Adequacy	8
72. Approach Alignment	8
Temporary Support	0 No Temporary Supports
High Load Hit (M)	No
Special Insp. Equipment	
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		

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SUPPORTING IMAGES

TPD7 09/29/2017




Document Name: DSCN0429.JPG
 Category: Elevation
 Comments:

Document Name: DSCN0428.JPG
 Category: Deck
 Comments:

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STRUCTURE INVENTORY AND APPRAISAL

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Bridge History, Type, Materials

27 - Year Built	2004
106 - Year Reconstructed	
202 - Year Painted	
203 - Year Overlay	
43 - Main Span Bridge Type	7 72
44 - Appr Span Bridge Type	
77 - Steel Type	0
78 - Paint Type	0
79 - Rail Type	9
80 - Post Type	1
107 - Deck Type	8
108A - Wearing Surface	6
108B - Membrane	2
108C - Deck Protection	0

Structure Dimensions

34 - Skew	0
35 - Struct Flared	0
45 - Num Main Spans	1
46 - Num Apprs Spans	0
48 - Max Span Length	50
49 - Structure Length	52
50A - Width Left Curb/SW	5
50B - Width Right Curb/SW	0
33 - Median	0
51 - Width Curb to Curb	29.9
52 - Width Out to Out	38.2
112 - NBIS Length	Y

Inspection Data

90 - Inspection Date	09/29/2017
91 - Inspection Freq	24
92A - Frac Crit Req/Freq	N
93A - Frac Crit Insp Date	
92B - Und Water Req/Freq	N
93B - Und Water Insp Date	
92C - Oth Spec Insp Req/Freq	N
93C - Oth Spec Insp Date	
92D - Fatigue Req/Freq	N
93D - Fatigue Insp Date	
176A - Und Water Insp Method	1
58 - Deck Rating	8
58A/B - Deck Surface/Bottom	5 8
59 - Superstructure Rating	8
59A - Paint Rating	N
60 - Substructure Rating	8
61 - Channel Rating	7
62 - Culvert Rating	N

Navigation Data

38 - Navigation Control	0
39 - Vertical Clearance	0
40 - Horizontal Clearance	0
111 - Pier Protection	
116 - Lift Brdg Vert Clear	0

Route Carried By Structure(ON Record)

5A - Record Type	1
5B - Route Signing	5
5C - Level of Service	0
5D - Route Number	00000
5E - Direction Suffix	0
10L - Best 3m Unclr-Lt	0 0
10R - Best 3m Unclr-Rt	99 99
PR Number	
Control Section	
11 - Mile Point	0
12 - Base Highway Network	0
13 - LRS Route-Subroute	0000006545 06
19 - Detour Length	2
20 - Toll Facility	3
26 - Functional Class	07
28A - Lanes On	2
29 - ADT	5760
30 - Year of ADT	2004
32 - Appr Roadway Width	29.9
32A/B - Ap Pvt Type/Width	4 29.99
42A - Service Type On	5
47L - Left Horizontal Clear	0.0
47R - Right Horizontal Clear	30.0
53 - Min Vert Clr Ov Deck	99 99
100 - STRAHNET	0
102 - Traffic Direct	2
109 - Truck %	3
110 - Truck Network	0
114 - Future ADT	12570
115 - Year Future ADT	2024
Freeway	0

Structure Appraisal

36A - Bridge Railing	1
36B - Rail Transition	1
36C - Approach Rail	1
36D - Rail Termination	1
67 - Structure Evaluation	8
68 - Deck Geometry	3
69 - Underclearance	N
71 - Waterway Adequacy	8
72 - Approach Alignment	8
103 - Temporary Structure	
113 - Scour Criticality	8

Miscellaneous

37 - Historical Significance	5
98A - Border Bridge State	
98B - Border Bridge %	
101 - Parallel Structure	N
EPA ID	
Stay in Place Forms	
143 - Pin & Hanger Code	
148 - No. of Pin & Hangers	

Route Under Structure (UNDER Record)

5A - Record Type	
5B - Route Signing	
5C - Level of Service	
5D - Route Number	
5E - Direction Suffix	
10L - Best 3m Unclr-Lt	
10R - Best 3m Unclr-Rt	
PR Number	
Control Section	
11 - Mile Point	
12 - Base Highway Network	
13 - LRS Route-Subroute	
19 - Detour Length	
20 - Toll Facility	
26 - Functional Class	
28B - Lanes Under	
29 - ADT	
30 - Year of ADT	
42B - Service Type Under	5
47L - Left Horizontal Clear	
47R - Right Horizontal Clear	
54A - Left Feature	
54B - Left Underclearance	99 99
54C - Right Feature	
54D - Right Clearance	99 99
Under Clearance Year	
55A - Reference Feature	N
55B - Right Horiz Clearance	99.9
56 - Left Horiz Clearance	0
100 - STRAHNET	
102 - Traffic Direct	
109 - Truck %	
110 - Truck Network	
114 - Future ADT	
115 - Year Future ADT	
Freeway	

Proposed Improvements

75 - Type of Work	
76 - Length of Improvement	0
94 - Bridge Cost	0
95 - Roadway Cost	0
96 - Total Cost	0
97 - Year of Cost Estimate	

Load Rating and Posting

31 - Design Load	5
41 - Open, Posted, Closed	A
63 - Fed Oper Rtg Method	7
64F - Fed Oper Rtg Load	1.74
64MA - Mich Oper Rtg Method	7
64MB - Mich Oper Rtg	1.08
64MC - Mich Oper Truck	17
65 - Inv Rtg Method	7
66 - Inventory Load	1.31
70 - Posting	5
141 - Posted Loading	
193 - Overload Class	N

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WORK RECOMMENDATIONS

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WORK RECOMMENDATIONS

TPD7

Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date
Amanda Hemeyer	Rowe Professional Services Company	24	09/29/2017

RECOMMENDATIONS & ACTION ITEMS

Recommendation Type	Priority	Description
Brush Cut	L	Keep brush around bridge/drainage structure outfalls trimmed back.
Railing Repair	L	Repair impacted guardrail.
Joint Repair	H	Reseal E3 joints at the ends of the bridge.
Overlay	H	Mill and overlay with new waterproof membrane.