Illinois Department of Transportation

Routine Inspection Report

SN: 016-0194	District: 1	Spans: 9	Appr. Spans: 0	Skew: 0	ADT: 7950	Truck Pct: 6
ADT Un: 0	Maint. Co: 16 - Cook		Twsp: 05 - Calumet		Status: 1-Open, no restrictions	
Facility Carried: IL 1 (HALSTED ST)			Feature Crossed: RR- CSXT			
Location: 1.5 M N IL 83	Municipality: Riverdale		Team/Sub Section: 032/110		Insp/Rte: 500	
Bridge Name:			Material & Type: Steel Continuous / Multi-beam			
Insp. Intervals Routine: 12	Fracture Critical: 0		Underwater: 0	Special: 0	Element Level: 24	

90 - Inspection Date:	6/14/2023	90C - Temp (°F):	60	90B1 - In Depth:	☐
Is Delinquent: ☐	Reason:				
90A - Agency Program Manager:	Wilson, Sarah M				
90A1 - Team Leader:	Adeis-Dahhan, Raghad	90A2 - Inspector:			

90B - Previous Inspection Remarks

(2022)

Notes: "This inspection was completed over multiple days, however all photos are dated with the initial day of the inspection regardless of the actual date that the photos were taken." Inspection dates: 6/15/2022 & 7/1/2022.

(2021)

Notes: "This inspection was completed over multiple days, however all photos are dated with the initial day of the inspection regardless of the actual

Resources

Time to Inspect (H:M):	Traffic Control:

Inspector's Appraisals

	Prev	New	Comments
58 - Deck Condition:	5	5	Top: Numer-HL-nar transv cracks w/scatt HPs & bit filled shallow large spalls worst in Sp3 NB north of P2. Long crack along sidewalk. Tines worn out. Soffit: Numer HL-transv leaching cracks along with scattered long and intersecting cracks, HPs & spalls with exposed corroded rebars throughout worst along CL bay and lg spalls @ deck ends and at drains. num areas of HP and delamination, and wetness spots along with rust staining.
59 - Superstructure Condition:	3	3	Due to upper bm end web section loss @ P2 worst Sp2 side. Bm ends: Most have pitting and loss taking place to upper web portion worst on backside of end diaphrs. P2 Sp2 side bay 2, 4, & 7 & P7 bay 5 Sp8 side end diaphrs have holes. Bms: Lt surf rust throughout, moderate flaking rust all spans interior bm's bott flanges including near P7 similar Sp2 near P2 along with rust to top flanges near deck transverse cracks. Bm 6 Span 5, bottom flange west edge bent approx. 3/8"; bend is located approx. 6.9' N of P4 with overall bend length of 1.6'. Bm 9 north of S Abut: approx. 1/2" deep notch in east side of bottom flange; notch is located approx. 5.74' north of S Abut backwall. Bearings: Bm end Brg 2 Sp2 & 3 side & 9 Sp2 side @ P2 along with brg 2 @ N abt not bearing properly. Numerous bearings at P2 and P7 are misaligned and the rocker has moved beyond the edge of the bearing assembly bottom plate. Rocker tilt varies from 0 degrees to 10 degrees. Beam 2 ; P2; SP2 side: NW corner of rocker moved approx. 2" beyond the masonry plate. Beam 1; P2; SP2 side: rocker moved approx. 5/8" beyond masonry plate. Bm 1; P2; SP3: rocker moved approx. 3/8" beyond edge of masonry plate. Bm 1; P7; SP8 side: rocker moved approx. 1/2" beyond masonry plate. Bm 2; P7; SP8: rocker moved approx. 3/8" beyond masonry plate .
60 - Substructure Condition:	3	3	

P7 & P2: for cap and column notes see Remarks below.

Abutments:
S Abut: Rust staining to abut cap. Horizontal cracks to cap west of Bm 4. scattered moderate vertical cracks.
N abut: Rust staining to abut cap. Horizontal cracking to west half of cap. spall with exp rusted reinforcement to top of cap, west half. scattered moderate vertical cracks throughout.

Piers Walls: Scattered vertical and map cracking.
P2 & 7 - Large spalls with exposed rusted reinforcement both faces.
P3 - Spall to top of wall at 3rd bay from W; shallow spall to east end of north face.
P4 - Map cracking to wall both N and S face. Shallow exp spalls at w end of north face.
P5 - Map cracking to wall NF-W half

62 - Culvert Condition:	N	N
61 - Channel Condition:	N	N
71 - Waterway Adequacy:	N	N
72 - Approach Rdwy Align:	8	8
111 - Pier Navig Protection:	N	N

	Prev	New
36A - Bridge Railing Adequacy:	2	2

	Prev	New		Prev	New		Prev	New
Approach Guardrail Adequacy: 36B - Transitions:	2	2	36C - Guardrail:	2	2	36D - Ends:	2	2

Additional Inventory Data - To Be Verified During Routine Inspection

108A - Wearing Surface Type: A	108B - Type of Membrane: F	108C - Deck Protection: A	
108D - Total Deck Thickness (In.): 7.5			
59A - Paint Date (Mo/Yr): 06/2008	59B - Paint Type: A AA - -		
59C - Utilities Attached: 7 9 N			
113A - Scour Critical Analysis Date: -	113 - Scour Critical Rating: -	113B - Evaluation Method: -	

Weight Limit Posting:	70A2 - Single Unit Vehicles:	-
	70B2 - Combination Type 3S-1 (3 or 4 axles):	-
	70C2 - Combination Type 3S-2 (5 or more axles):	-
	70D2 - One Truck at a Time:	-

90B - Inspection Remarks

InDepth (2021):
A-52 used; CSX flaggers used 6/29/2021 6/30/2021, and used bucket truck at abuts for hands-on inspection of beam ends.
Beams numbered per plans W to E.
N. Abut Bm End 5 was measured and found to have 4.9% loss in the bearing area.
Resources: A-52, Bucket truck, Thickness Gage

Item 59: Visually Bm 3 & 8 at pier 2 Span 2 side appear to be the worst, they were remeasured by V3 consultants and they measured up to 49% & 47% loss respectively to upper webs. The ends at P7 visually appear no worse than at P2.

Item 60:
P2:
cap @ E end spalled undermine Brg 10 2" along E edge of masonry plate. Large spall with exposed rusted reinforcement at east end of cap and to N face bet cols 3&4.
Columns:
Col 1: large spall to bottom of col with exposed vertical and spiral corroded reinf.
Col 2: large spall to col with 4 exp corroded vert and 10 exp corroded spirals of which 2 are broken.
Col 3: Large spall to col with 4 exp corroded vert and 6 exp corroded spirals of which 2 are broken.
Col 6: large spall to col at drain with 1 exp corroded vert and 7 exp corroded spirals.

P7:
Cap: spalls with exp corroded rebars, HP and cracking both faces of cap
Columns:
Col 1: large spalls to N&S faces of col. large spall to top of N face with 1-exp corroded vertical and 4 exp corroded spirals. Large spall to full height of south face with 5 exp corroded vert bars of which 3 have deboned from concrete and 6- consecutive broken spirals.
Col 2: HP and small spalls to col's N & W faces. large spall to South face with 3-V & 7-Spiral exposed and corroded with 1-spiral broken.
Col 3: large spall to south face of col with 3-vertical bars corroded and deboneded with 9 spirals exposed and corroded of which 7 consecutives are broken.
Col's 4 & 5: spalls with exp corroded rebars and HP
Col 6: HP & Large spall to S face with 2-V corroded and 5-exp debonded spirals.

In-depth inspection notes: Bm ends @ both abutments & piers 2 & 7. Bm ends @ abts accessible by means of a bucket truck, A-52 or tall ladder, ends over piers A-52 or tall ladder. Flagman needed @ all times.

Elements #ed per plans S-N & W-E. Pier Col's numbered W - E

	Signature	Date
Inspection Team Leader:	Raghad Adeis-Dahhan	09/09/2023
Agency Program Manager:	Sarah Wilson	09/12/2023

Use Additional Forms as Needed

Illinois Department of Transportation

Element Level Inspection Report

SN: 016-0194	District: 1	Spans: 9	Appr. Spans: 0	Skew: 0	ADT: 7950	Truck Pct: 6
ADT Un: 0	Maint. Co: 16 - Cook		Twsp: 05 - Calumet		Status: 1-Open, no restrictions	
Facility Carried: IL 1 (HALSTED ST)			Feature Crossed: RR- CSXT			
Location: 1.5 M N IL 83	Municipality: Riverdale		Team/Sub Section: 032/110		Insp/Rte: 500	
Bridge Name:			Material & Type: Steel Continuous / Multi-beam			
Insp. Intervals Routine: 12	Fracture Critical: 0	Underwater: 0	Special: 0	Element Level: 24		
93C - Inspection Date: 6/14/2023		93C6 - Temp (°F): 60				
Is Delinquent: ☐	Reason:					
90E - Agency Program Manager: Wilson, Sarah M						
90E1 - Team Leader: Adeis-Dahhan, Raghad		90E2 - Inspector:				

Resources

Time to Inspect (H:M):

Traffic Control:

Inspector's Appraisals

EN	EPN	Element Description	Env	Quantity	Unit	CS1	CS2	CS3	CS4
12		Reinforced Concrete Deck	4	37886	SF	34136	1750	1500	500
		Remarks: Delamination/Spall (1080); Exposed Rebar (1090); Efflorescence/rust staining (1120); Cracking (1130); Abrasion/Wear (1190). Top: Numer HL-nar transv cracks w/scatt HPs & bit filled shallow large spalls worst in sp3 NB north of P2. Long crack along sidewalk. tines worn out. Soffit: Numer HL-transv leaching cracks, HPs & spalls throughout worst along CL bay, lg spalls @ deck ends and at drains. num areas of HP and delaminations, and wet spots.							
520	12	Concrete Reinforcing Steel Protective System	4	37886	SF	37886	0	0	0
		Remarks:							
521	12	Concrete Protective Coating	4	37886	SF	37886	0	0	0
		Remarks:							
107		Steel Open Girder/Beam	3	5554	LF	4494	940	120	0
		Remarks: Corrosion (1000): Due to upper bm end web section loss @ P2 worst sp2 side, Bm ends: most have pitting and loss taking place to upper web portion worst on backside of end diaphrs. P2 sp2 side bay 2, 4, & 7. P7 bay 5 sp8 side end diaphrs have holes. Bms: Lt surf rust throughout, moderate flaking rust sp8 interior bm bott fls near P7 similar sp2 near P2, Bm 7 bott flange S of P2. Bm 6 span 5, bottom flange west edge bent approx. 3/8"; bend is located approx. 6.9' N of P4 with overall bend length of 1.6'. Beam 9 north of S Abut: approx. 1/2" deep notch in east side of bottom flange; notch is located approx. 5.74' north of S Abut backwall. Bm 3 & 8 at pier 2 Span 2 side appear to be the worst, they were remeasured by V3 consultants and they measured up to 49% & 47% loss respectively to upper webs. The ends at P7 visually appear no worse than at P2. Memo dated 03-09-2018 in response to the 2016 LRI noted that posting and special inspections were not required.							
8102	107	Steel Beam/Girder/Stringer End Under Joint	3	60	EA	0	17	43	0
		Remarks: Corrosion (1000): Due to upper bm end web section loss @ P2 worst sp2 side, most beam ends have pitting and loss taking place to upper web portion worst on backside of end diaphrs. P2 Sp2 side bay 2, 4, & 7. P7 bay 5 sp8 side end diaphrs have holes. Bm 3 & 8 at pier 2 Span 2 side appear to be the worst, they were remeasured by V3 consultants and they measured up to 49% & 47% loss respectively to upper webs. Memo dated 03-09-2018 in response to the 2016 LRI noted that posting and special inspections were not required. The ends at P7 visually appear no worse than at P2.							
515	107	Steel Protective Coating	3	47932	SF	2182	18750	19500	7500
		Remarks: Chalking (3410) (CS2) Surface dulled throughout except fascias; Peeling (3420); (CS2) Scattered small peels throughout. Effectiveness (3440) (CS2) Areas with init/freckled rust remain substantially effective. (CS3) Large areas of limited effectiveness w/lt-mod rusting throughout along lwr flanges. (CS4) Num areas of paint failures with laminated rust particularly along lwr flange bottoms/edges.							
205		Reinforced Concrete Column	3	48	EA	32	6	7	3

		Remarks:	CS2: Cracking (1130) to P1 columns. CS3: Spall (1080); Exposed rebar (1090); Cracking (1130): P2 & P7 CS4: P7: Cols 1, 2 & 3 P2: Col 1: large spall to bottom of col with exposed vertical and spiral corroded reinf. Col 2: large spall to col with 4 exp corroded vert and 10 exp corroded spirals of which 2 are broken. Col 3: Large spall to col with 4 exp corroded vert and 6 exp corroded spirals of which 2 are broken. Col 6: large spall to col at drain with 1 exp corroded vert and 7 exp corroded spirals. P7: Col 1: large spalls to N&S faces of col. large spall to top of N face with 1-exp corroded vertical and 4 exp corroded spirals. Large spall to full height of south face with 5 exp corroded vert bars of which 3 have deboned from concrete and 6- consecutive broken spirals. Col 2: HP and small spalls to col's N & W faces. large spall to South face with 3-V & 7-Spiral exposed and corroded with 1- spiral broken. Col 3: large spall to south face of col with 3-vertical bars corroded and deboneded with 9 spirals exposed and corroded of which 7 consecutives are broken. Col's 4 & 5: spalls with exp corroded rebars and HP Col 6: HP & Large spall to S face with 2-V corroded and 5-exp debonded spirals.							
210		Reinforced Concrete Pier Wall		3	537	LF	186	150	201	0
		Remarks:	CS2: Cracking (1130); Scattered vertical and map cracking. CS3: Cracking (1130); Spall (1080); Exposed Rebar (1090); Rust Staining (1120); P4: Map cracking to wall both N and S face. Shallow exp spalls at w end of north face. P2 & 7: Large spalls with exposed rusted reinforcement both faces. P3: Spall to top of wall at 3rd bay from W; shallow spall to east end of north face.							
215		Reinforced Concrete Abutment		3	182	LF	147	0	35	0
		Remarks:	S Abut: Rust staining to abut cap. Horizontal cracks to cap west of Bm 4. Scattered vertical cracks. N abut: Rust staining to abut cap. Horizontal cracking to west half of cap. Spall with exp rusted reinforcement to top of cap, west half. Scattered vertical cracks throughout.							
234		Reinforced Concrete Pier Cap		3	546	LF	509	10	25	2
		Remarks:	Cracking (1130); Spall/Delamination (1080); Exposed rebar (1090): P2 & 7: Large spall with exposed rusted reinforcement; HP and cracking. P2 Undermining at brng 10 Sp3.							
301		Pourable Joint Seal		4	216	LF	0	0	0	216
		Remarks:	at N & S Abutment and P2. Leakage (2310); Seal Adhesion (2320); Seal Damage (2330); Adjacent Deck (2360)							
306		Other Joint		4	72	LF	0	0	0	72
		Remarks:	Neoprene joint at P7. Debris Impaction (2350); Adjacent deck (2360); Leakage (2310); Leaks, broken sections in both NB and SB directions.							
311		Movable Bearing		3	90	EA	0	30	39	21
		Remarks:	Corrosion (1000); Movement (2210); Alignment (2220); Loss of bearing area (2240): Lt surf rust; Many have mod-hvy pack rust at all joints. Numerous bearings at P2 and P7 are misaligned and the rocker has moved beyond the edge of the bearing assembly bottom plate. Rocker tilt varies from 0 degrees to 10 degrees. Beam 2 ; P2; SP2 side: NW corner of rocker moved approx. 2" beyond the masonry plate. Beam 1; P2; SP2 side: rocker moved approx. 5/8" beyond masonry plate. Bm 1; P2; SP3: rocker moved approx. 3/8" beyond edge of masonry plate. Bm 1; P7; SP8 side: rocker moved approx. 1/2" beyond masonry plate. Bm 2; P7; SP8: rocker moved approx. 3/8" beyond masonry plate .							
313		Fixed Bearing		3	30	EA	0	30	0	0
		Remarks:	Corrosion (1000): Lt surf rust.							
321		Reinforced Concrete Approach Slab		4	13600	SF	12040	0	960	600
		Remarks:	Settlement (4000): Lt settle at N&S apprs. Leveling patch placed over S. Approach in SB direction. SB - S app edge of curb at abut joint is breaking away. N&S app; NB - Spalls along abutment line and along gutter line full length and between lanes 1&2 (HMA filled).							

330		Metal Bridge Railing	4	1111	LF	1091	0	0	20
		Remarks: Impact damage to S approach west railing. Minor kink S appr east railing. Impact damage to west railing.							
331		Reinforced Concrete Bridge Railing	4	1111	LF	1109	0	0	2
		Remarks: West parapet spall at metal railing post attachment in span 8.							

	Signature	Date
Inspection Team Leader:	Raghad Adeis-Dahhan	09/09/2023
Agency Program Manager:	Sarah Wilson	09/12/2023

Use Additional Forms as Needed

Illinois Department of Transportation

D1 Bridge Repairs Report

Structure Number: 016-0194

Location & Inventory Information

Facility Carried: IL 1 (Halsted St) Feature Crossed: RR-CSXT

Location: 1.5 M N IL 83 Team Section: 032

Mat/Type/#Spans: Steel Cont/Multi-Beam/9 Spans

****** PROPOSED MAINTENANCE REPAIRS ******

Repair Code	Repair Description / Comments	Date of Inspection	Assigned-to Agency Code	Priority Code	Quantity	Inspector Initials
	61D99:					
	Scope of work: *Brg replacement at P2, P7, abutments.					
	* Expansion joint replacement at abutments;P2;P7.					
	* Beam end concrete encasement at P2; P7.					
	*deck & approach repair. *latex concrete overlay.					
	*Substructure repairs.					

AGENCY CODES: Bridge Crew, Team Section, Contract Maintenance, Day Labor, Multi-Year Program, Other

PRIORITY CODES: H – High, M – Medium, L - Low

(Add new sheets as needed)