

# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

## BRIDGE INSPECTION FIELD REPORT

Structure File Number: 1802887

Inventory Bridge Number: CUY 00021 06.980

Bridge Type: 1 - CONCRETE/9 - CULVERT/5 - FILLED

Sufficiency Rating: 63.3

Date Built: 7/1/1928

District: 12 Place Code (FIPS): INDEPENDENCE

SR 21 over HEMLOCK CRK N OF SELIG B

Type of Service on: HIGHWAY

### APPROACH ITEMS

- c1. Approach Wearing Surface (EA)
- c2. Approach Slabs (SF)
- c3. Relief Joint (LF)
- c4. Embankment (EA) d
- c5. Guardrail (EA)
- N36. Safety Features: Tr, Gr, Tm
- c6. Approach Summary

QTY.	condition state				cr
	1	2	3	4	TR
2					1
2					1

36)B    N 36)C    N 36)D    N (9-0)    7

### DECK ITEMS

- c7.1 Floor/Slab (SF)
- c7.2 Edge of Floor/Slab (LF)
- c8. Wearing Surface (SF)
- c9. Curb/Sidewalk/Walkway (LF)
- c10. Median (LF)
- c11. Railing (LF)
- N36. Safety Features: Rail
- c12. Drainage (EA) d
- c13. Expansion Joint (LF) d
- N58. Deck Summary

QTY.	condition state				cr
	1	2	3	4	TR

36)A    N (9-0)    N

### SUPERSTRUCTURE ITEMS

- c14. Alignment (EA) d
- c15.1 Beams/Girders (LF)
- c15.2 Slab (SF)
- c16. Diaphragm/X-Frames (EA)
- c17. Stringers (LF)
- c18. Floorbeams (LF)
- c19. Truss Verticals (EA)
- c20. Truss Diagonals (EA)
- c21. Truss Upper Chord (EA)
- c22. Truss Lower Chord (EA)
- c23. Truss Gusset Plate (EA) d
- c24. Lateral Bracing (EA)
- c25. Sway Bracing (EA)
- c26. Bearing Devices (EA) d
- c27. Arch (LF)
- c28. Arch Column/Hanger (EA)
- c29. Arch Spandrel Walls (LF)
- c30. Prot. Coating System (LF) d
- c31. Pins/Hangers/Hinges (EA) d
- c32. Fatigue (LF) d
- N59. Superstructure Summary

QTY.	condition state				cr
	1	2	3	4	TR

(9-0)    N

### SUBSTRUCTURE ITEMS

- c33. Abutment Walls (LF)
- c34. Abutment Caps (LF)
- c35. Abut. Columns/Bents (EA)
- c36. Pier Walls (LF)
- c37. Pier Caps (LF)
- c38. Pier Columns/Bents (EA)
- c39. Backwalls (LF)
- c40. Wingwalls (EA)
- c42. Scour (EA) d
- c43. Slope Protection (EA) d
- N60. Substructure Summary

QTY.	condition state				cr
	1	2	3	4	TR

(9-0)    N

### CULVERT ITEMS

- c44. General (LF)
- c45. Alignment (LF) d
- c46. Shape (LF) d
- c47. Seams (LF) d
- c48. Headwall/Endwall (LF)
- c49. Scour (LF) d
- c50. Abutments (LF)
- N62. Culvert Summary

QTY.	condition state				cr
	1	2	3	4	TR
20					2
20					1
2					3
2					2

(9-0)    5

### CHANNEL ITEMS

- c51. Alignment (LF) d
- c52. Protection (LF) d
- c53. Hydraulic Opening (EA) d
- c54. Navigation Lights (EA) d
- N61. Channel Summary

QTY.	condition state				cr
	1	2	3	4	TR
200.0					1
200.0					3
1					2

(9-0)    4

### SIGN/UTILITY ITEMS

- c55. Signs (EA) d
- c56. Sign Supports (EA) d
- c57. Utilities (LF) d

QTY.	condition state				cr
	1	2	3	4	TR
0.0					4
0.0					

(9-0)    5

### General Appraisal

N41. Operating Status

Inspector Name Sutak, Mike

Inspection Date/Type 05/22/2019 Routine

PE Number

Reviewer Name Seif, Youssef

Review Date 07/23/2019

PE Number 59487

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Key: "Qty" = Quantity for Element Level inspection; "(LF)" = Linear Feet; "(SF)" = Square Feet; "(EA)" = Each or count; "CR" = 1-4 Condition Rating or average of worst span unless Summary item 9-0, then the average of entire bridge influenced by the bold boxes; "TR" = Transition Rating or weighted average of condition states; "d" = dedicated or specific chart and guidance, all others use Material specific chart/guidance; "c" = condition prefix; "N" = NBIS rating

**Inspection Procedures**

**Comments**

**APPROACH**

c1. Approach Wearing Surface

MANY CRACKS, MOST SEALED.

**CULVERT**

c44. General

DEEP SCALING OF CONCRETE CHANNEL BOTTOM. WALLS AND CEILING HAVE LEACHING CRACKS WITH EFFLORESCENCE, HONEYCOMBING, DELAMS, SPALLS WITH EXPOSED REBAR, SOME UNDER ROADWAY (APPROX 400+ SF OF CEILING SPALLS & DELAMS THROUGHOUT). SPALLS REVEAL AREAS OF SEVERED / HANGING REBAR WITH RUSTING SECTION LOSS (APPROX 10' OF 360° REBAR EXPOSURE). WATER INFILTRATING CULVERT IN SEVERAL LOCATIONS.

c48. Headwall/Endwall

LEACHING THRU CRACKS, SCALING & SPALLS WITH EXPOSED REBAR TO INLET HEADWALL. CONCRETE DETERIORATION WITH SEVERE RUSTING SECTION LOSS OF EXPOSED REBAR THAT CONNECTS NORTHWEST WINGWALL TO NORTH WALL OF CULVERT (7 RUST SEVERED & 30" OF 360° EXPOSURE). SEVERE DETERIORATION OF OUTLET HEADWALL THAT GOES INTO CULVERT CEILING WITH HANGING REBAR & OTHER 360° REBAR EXPOSURE. NOTE: BOTH HEADWALLS ARE OUTSIDE RIGHT OF WAY.

c49. Scour

AS MUCH AS 10" OF INLET TOE WALL IS EXPOSED TO FLOWING WATER. OUTLET CONCRETE CHANNEL PROTECTION IS UNDERMINED OUTSIDE THE RIGHT OF WAY.

**CHANNEL**

c52. Protection

SEVERE CONCRETE DETERIORATION WITH 2 LARGE SECTIONS THAT HAVE COLLAPSED INTO CHANNEL (1 SECTION NEAR CULVERT OUTLET & 1 SECTION NEAR END OF OUTLET CHANNEL WALLS). AS MUCH AS LAST 15' OF

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**BOTH OUTLET CHANNEL WALLS COMPLETELY UNDERMINED. NOTE: ALL  
OUTSIDE RIGHT OF WAY.**

c53. Hydraulic Opening

**FALLEN TREES, DEBRIS & LARGE SECTION OF CONCRETE (THAT HAS  
WASHED UP ONTO NORTH CHANNEL WALL) BLOCKS 10% @ OUTLET.**