90 Inspection Date - 8/13/14 Inspector - MEDWARDS (282)

Inspection Report with SI&A Data

Milepoint: 0.310

Structure Description: 186.02 Foot - 3 Span Steel continuous Frame (except frame culverts)

16 Latitude: 36°53′25.00″ 2 District: 08 3 County: Pulaski 7 Longitude: 84°32′24.00″

7 Facility Carried SHELTON LN

6A Feature Intersected: NS (CNO&TP) SYSTEM 9 Location: .8 MI NW OF MCCREARY CL

| NBI | Х |
|-------------------|---|
| Element | Χ |
| Fracture Critical | |
| Underwater | |
| Special | |

| | NBI CONDITION RATINGS | | | | | |
|------------|-----------------------|---|---------------------|------|--|--|
| 5 8 | Deck: | 6 | 61 Channel: | N | | |
| 59 | Superstructure: | 6 | 62 Culvert: | N | | |
| 60 | Substructure: | 5 | Sufficiency Rating: | 59.5 | | |

| | | 550 | 1011 | |
|----|-----------------|-----|---------------------|------|
| 60 | Substructure: | 5 | Sufficiency Rating: | 59.5 |
| 59 | Superstructure: | 6 | 62 Culvert: | N |
| 58 | Deck: | 6 | 61 Channel: | N |

| DESIGN | | | | |
|-------------------------|--------------------|----------------------|--|--|
| Substandard: No | | | | |
| Fracture Criti | cal: | No FC Details | | |
| 43A Main S _l | oan Material: | (4) Steel Continuous | | |
| 43B Main S _l | oan Design: | (07) Frame | | |
| 45 Numbe | r of Spans Main: | 3 | | |
| 44A Approa | ch Span Material: | Not Applicable | | |
| 44B Approa | ch Span Design: | Not Applicable | | |
| 46 Numbe | r of Approach Span | s: 0 | | |

| 40 | Number of Approach Spans: | U |
|-------|---------------------------|----------------------------|
| 107 | Deck Type: | (1) Concrete-Cast-in-Place |
| 108A | Wearing Surface: | (1) Monolithic Concrete |
| 108B | Membrane: | (0) None |
| 108C | Deck Protection: | (0) None |
| Overl | ay Y/N: | No |
| Overl | ay Type: | None |

Overlay Thickness: -1.000 in Overlay Date: -1

| | APPRAISAL | | | | |
|------|--------------------------|--------------------------|--|--|--|
| 36A | Bridge Railings: | (0) Substandard | | | |
| 36B | Transitions | (0) Substandard | | | |
| 36C | Approach Guardrail: | (0) Substandard | | | |
| 36D | Approach Guardrail Ends: | (0) Substandard | | | |
| 71 | Waterway Adequacy: | (N) Not Applicable | | | |
| 72 | Approach Alignment: | (8) Equal Desirable Crit | | | |
| 113 | Scour Critical: | (N) Not over Waterway | | | |
| Reco | mmended Scour Critical: | (9) On Dry Land | | | |

| | | LOAD RATINGS |
|-------|--------------------|----------------------|
| 63 | Operating Type: | (1) Load Factor (LF) |
| 64 | Operating Rating: | 22.0 tons |
| 65 | Inventory Type: | (1) Load Factor (LF) |
| 66 | Inventory Rating: | 15.0 tons |
| Truck | Capacity Type I: | tons |
| Truck | Capacity Type II: | tons |
| Truck | Capacity Type III: | tons |
| Truck | Capacity Type IV: | tons |

| | GEOMETRIC DATA | | | | |
|-----------|------------------------|---------------|--|--|--|
| 48 | Max Length Span: | 76.115 ft | | | |
| 49 | Structure Length: | 186.024 ft | | | |
| 32 | Approach Roadway: | 15.092 ft | | | |
| 33 | Median: | (0) No Median | | | |
| 34 | Skew: | 0° | | | |
| 35 | Flare: | No Flare | | | |
| 50A | Curb/Sidewalk Width L: | 0.833 ft | | | |
| 50B | Curb/Sidewalk Width R: | 0.833 ft | | | |
| 47 | Horiz. Clearance: | 21.982 ft | | | |
| 51 | Width Curb to Curb: | 21.982 ft | | | |
| 52 | Width Out to Out: | 23.950 ft | | | |

| | ADMINISTRATIVE | | | | |
|-----|-----------------------------------|----------------------------|--|--|--|
| 27 | Year Built: | 1962 | | | |
| 106 | Year Reconstructed: | 0 | | | |
| 42A | Type of Service On: | (1) Highway | | | |
| 42B | Type of Service Under: | (2) Railroad | | | |
| 37 | Historical Significance: | (5) Not Eligible | | | |
| 21 | Maintenance Responsibility | :(02) County Hwy Agency | | | |
| 22 | Owner: | (02) County Hwy Agency | | | |
| 101 | Parallel Structure: | (N) No II Structure Exists | | | |

| | CLEARANCES | | | | |
|-----------|-----------------------------|------------------------------|--|--|--|
| 10 | Vert. Clearance: | 99.999 ft | | | |
| 53 | Min. Vert. Clearance Over: | 99.999 ft | | | |
| 54A | Vert. Under Reference: | (R) Railroad beneath struct. | | | |
| 54B | Min. Vert. Underclearance: | 328.051 ft | | | |
| 55A | Lateral Under Reference: | (R) Railroad beneath struct. | | | |
| 55B | Min. Lat. Underclearance R: | 34.777 ft | | | |
| 56 | Min. Lat. Underclearance L: | 0.000 ft | | | |

| POSTINGS | | | | | |
|----------------------------|--------------------------|--|--|--|--|
| 41 Posting Status: | (A) Open, No Restriction | | | | |
| Signs Posted Cardinal: | No | | | | |
| Signs Posted Non-Cardinal: | No | | | | |
| Field Postings Gross: | -1 tons | | | | |
| Field Postings Type I: | -1 tons | | | | |
| Field Postings Type II: | -1 tons | | | | |
| Field Postings Type III: | -1 tons | | | | |
| Field Postings Type IV: | -1 tons | | | | |

90 Inspection Date - 8/13/14 **Inspector -** MEDWARDS (282)

Inspection Report with SI&A Data

| 12: Re Concrete Deck | | | | | | | | | |
|----------------------|-----------|------------|--------|------------|--------|------------|--------|------------|--------|
| Units | Total Qty | Qty. St. 1 | % in 1 | Qty. St. 2 | % in 2 | Qty. St. 3 | % in 3 | Qty. St. 4 | % in 4 |
| SQ.FT | 4,455.29 | 4,232.53 | 95% | 222.76 | 5% | 0 | 0% | 0 | 0% |

The concrete deck is rough with moderate transversal cracking and aggregate popouts throughout.

| 520: Co | 520: Conc Re Prot Sys | | | | | | | | | | |
|---------|-----------------------|------------|--------|------------|--------|------------|--------|------------|--------|--|--|
| Units | Total Qty | Qty. St. 1 | % in 1 | Qty. St. 2 | % in 2 | Qty. St. 3 | % in 3 | Qty. St. 4 | % in 4 | | |
| SQ.FT | 4,455.29 | 4,232.53 | 95% | 222.76 | 5% | 0 | 0% | 0 | 0% | | |
| | | | | | | | | | | | |

| 107: Steel Opn Girder/Beam | | | | | | | | | | | |
|----------------------------|-----------|------------|--------|------------|--------|------------|--------|------------|--------|--|--|
| Units | Total Qty | Qty. St. 1 | % in 1 | Qty. St. 2 | % in 2 | Qty. St. 3 | % in 3 | Qty. St. 4 | % in 4 | | |
| FT | 740 | 0 | 0% | 740 | 100% | 0 | 0% | 0 | 0% | | |

Steel beams are rusty throughout and the paint system is flaking/failing.

| 515: Ste | 515: Steel Protective Coating | | | | | | | | | | |
|----------|-------------------------------|------------|--------|------------|--------|------------|--------|------------|--------|--|--|
| Units | Total Qty | Qty. St. 1 | % in 1 | Qty. St. 2 | % in 2 | Qty. St. 3 | % in 3 | Qty. St. 4 | % in 4 | | |
| FT | 0.3 | 0.3 | 100% | 0 | 0% | 0 | 0% | 0 | 0% | | |
| | | | | | | | | | | | |

| 202: Ste | eel Column | | | | | | | | |
|----------|------------|------------|--------|------------|--------|------------|--------|------------|--------|
| Units | Total Qty | Qty. St. 1 | % in 1 | Qty. St. 2 | % in 2 | Qty. St. 3 | % in 3 | Qty. St. 4 | % in 4 |
| EACH | 4 | 0 | 0% | 4 | 100% | 0 | 0% | 0 | 0% |

Steel bents are rusty and have heavy flake rust on the connection plates. Bent 3 has had rocks slide onto the bottom horizontal and diagonal bracing that have caused 1 ft. to 1.5 ft. deflection in the cross bracing.

Inspection Report with SI&A Data

| 515: Ste | 515: Steel Protective Coating | | | | | | | | | | | |
|----------|-------------------------------|------------|--------|------------|--------|------------|--------|------------|--------|--|--|--|
| Units | Total Qty | Qty. St. 1 | % in 1 | Qty. St. 2 | % in 2 | Qty. St. 3 | % in 3 | Qty. St. 4 | % in 4 | | | |
| EACH | 0.09 | 0.09 | 100% | 0 | 0% | 0 | 0% | 0 | 0% | | | |
| | | | | | | | | | | | | |

| 215: Re | Conc Abutment | | | | | | | | |
|---------|---------------|------------|--------|------------|--------|------------|--------|------------|--------|
| Units | Total Qty | Qty. St. 1 | % in 1 | Qty. St. 2 | % in 2 | Qty. St. 3 | % in 3 | Qty. St. 4 | % in 4 |
| FT | 76 | 68 | 89% | 8 | 11% | 0 | 0% | 0 | 0% |

The abutments have minor vertical cracking and are discolored due to leaking joints.

| 311: Mo | veable Bearing | | | | | | | | |
|---------|----------------|------------|--------|------------|--------|------------|--------|------------|--------|
| Units | Total Qty | Qty. St. 1 | % in 1 | Qty. St. 2 | % in 2 | Qty. St. 3 | % in 3 | Qty. St. 4 | % in 4 |
| EACH | 16 | 8 | 50% | 8 | 50% | 0 | 0% | 0 | 0% |

The rockers have been cleaned and painted since last inspection and appear to be in good condition.

| 515: Steel Protective Coating | | | | | | | | | | |
|-------------------------------|------------|--------|------------|--------|------------|--------|------------|-----------|-------|--|
| % in 4 | Qty. St. 4 | % in 3 | Qty. St. 3 | % in 2 | Qty. St. 2 | % in 1 | Qty. St. 1 | Total Qty | Units | |
| 0% | 0 | 0% | 0 | 0% | 0 | 100% | 0.09 | 0.09 | EACH | |
| 1 | 0 | 0% | 0 | 0% | 0 | 100% | 0.09 | 0.09 | EACH | |

| 330: Me | etal Bridge Railing | g | | | | | | | |
|---------|---------------------|------------|--------|------------|--------|------------|--------|------------|--------|
| Units | Total Qty | Qty. St. 1 | % in 1 | Qty. St. 2 | % in 2 | Qty. St. 3 | % in 3 | Qty. St. 4 | % in 4 |
| FT | 370 | 0 | 0% | 370 | 100% | 0 | 0% | 0 | 0% |

Metal rail is substandard and rusted.

90 Inspection Date - 8/13/14 **Inspector -** MEDWARDS (282)

Inspection Report with SI&A Data

| 515: Ste | 515: Steel Protective Coating | | | | | | | | | | | |
|----------|-------------------------------|------------|--------|------------|--------|------------|--------|------------|--------|--|--|--|
| Units | Total Qty | Qty. St. 1 | % in 1 | Qty. St. 2 | % in 2 | Qty. St. 3 | % in 3 | Qty. St. 4 | % in 4 | | | |
| FT | 0.3 | 0.3 | 100% | 0 | 0% | 0 | 0% | 0 | 0% | | | |
| | | | | | | | | | | | | |

| 803: Cu | ırb | | | | | | | | |
|---------|-----------|------------|--------|------------|--------|------------|--------|------------|--------|
| Units | Total Qty | Qty. St. 1 | % in 1 | Qty. St. 2 | % in 2 | Qty. St. 3 | % in 3 | Qty. St. 4 | % in 4 |
| (LF) | 370 | 0 | 0% | 370 | 100% | 0 | 0% | 0 | 0% |

The curbs have cracking throughout with aggregate popouts.

| 857: Em | nbankment Erosi | on | | | | | | | |
|---------|-----------------|------------|--------|------------|--------|------------|--------|------------|--------|
| Units | Total Qty | Qty. St. 1 | % in 1 | Qty. St. 2 | % in 2 | Qty. St. 3 | % in 3 | Qty. St. 4 | % in 4 |
| (EA) | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 100% |

There is embankment erosion around the bearing footers from surface drainage that has nearly covered the rockers @ A4. All legs in bent 3 are exposed and could be undermined if no action is taken.

| 859: Vegetation | | | | | | | | | |
|-----------------|-----------|------------|--------|------------|--------|------------|--------|------------|--------|
| Units | Total Qty | Qty. St. 1 | % in 1 | Qty. St. 2 | % in 2 | Qty. St. 3 | % in 3 | Qty. St. 4 | % in 4 |
| (EA) | 1 | 0 | 0% | 0 | 0% | 1 | 100% | 0 | 0% |

Trees and brush at end bents need cut and sprayed.

STRUCTURE NOTES

INSPECTION NOTES

This inspection was performed with the hydra-platform to gain access to beams and bents of span 2. Myself (Evan Dick), Russell Hines, and Harry Greer were present. Access to Bent three was gained by rope. 9-29-2010.

Inspection Report with SI&A Data

| WORK | | | | | | |
|---------|---|--|--|--|--|--|
| Action: | - | | | | | |
| | | | | | | |