
Montgomery County
Department of Transportation
Division of Transportation Engineering



2019 BRIDGE INSPECTION REPORT
December 27, 2019



BRIDGE NO. M-0056X01
REDLAND ROAD
OVER
MILL CREEK

Prepared by

AECOM

Montgomery County
Department of Transportation
Division of Transportation Engineering
2019 BRIDGE INSPECTION REPORT

BRIDGE NO. M-0056X01

REDLAND ROAD

OVER

MILL CREEK

Prepared by

AECOM



Handwritten signature of Scott Scheine in black ink.

Inspection Team Leader: SCOTT SCHEINE, P.E.

03/26/2020

Date

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Quality Assurance: JORDAN LAIR, P.E.

03/26/2020

Date

Handwritten signature of Jordan Lair in blue ink.

Professional Engineer: JORDAN LAIR, P.E.

03/26/2020

Date

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No.: 35187

Expiration Date: 06/06/2020

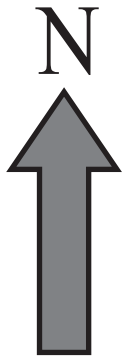
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2019 BRIDGE INSPECTION REPORT

BRIDGE DESCRIPTION SUMMARY

Roadway	REDLAND ROAD
Bridge Orientation	North-South
Crossing	MILL CREEK
Crossing Orientation	East-West
Inspection Date	12/27/2019
Inspected By	AECOM
Spans	1
Type	Concrete Slab
Structure Organization	The numbering convention for reporting purposes is from the north and the west
Deck	N/A
Railing	Concrete ornamental and thrie beam
Abutments	Concrete gravity
Wing Walls	Concrete
Piers	N/A
Overall Length	24'-5" +/-
Clear Roadway	25'-5" +/-
No. of Lanes	2
Out-to-Out Width	28'-0" +/-
Year Built	1925
Year Reconstructed	None
Approach Section	23'-9" +/- wide asphalt roadway
Shoulders	None
Alignment	The North Approach is located on a slight horizontal curve to the west. The South Approach is straight.
Profile	The roadway is on a moderate south to north downgrade across the bridge.
Guardrail	Thrie beam transitions; W-beam on approaches
Current Postings	None
Overall Condition	Fair
Remarks	A Letter of Concern was submitted on 10/6/2017 in regards to the condition of the concrete bridge railing and the soffit of the concrete slab. As of the 2019 inspection: There is a thrie beam traffic barrier in front of the deteriorated concrete bridge railing. The concrete slab has been patched, but the patches are hollow sounding.



Bridge No. M-0056
Redland Road over Mill Creek

ADC Street Grid Location: 5048-G-9
2010 Edition

ADC Street Grid Location: 20-C-11
Previous Editions

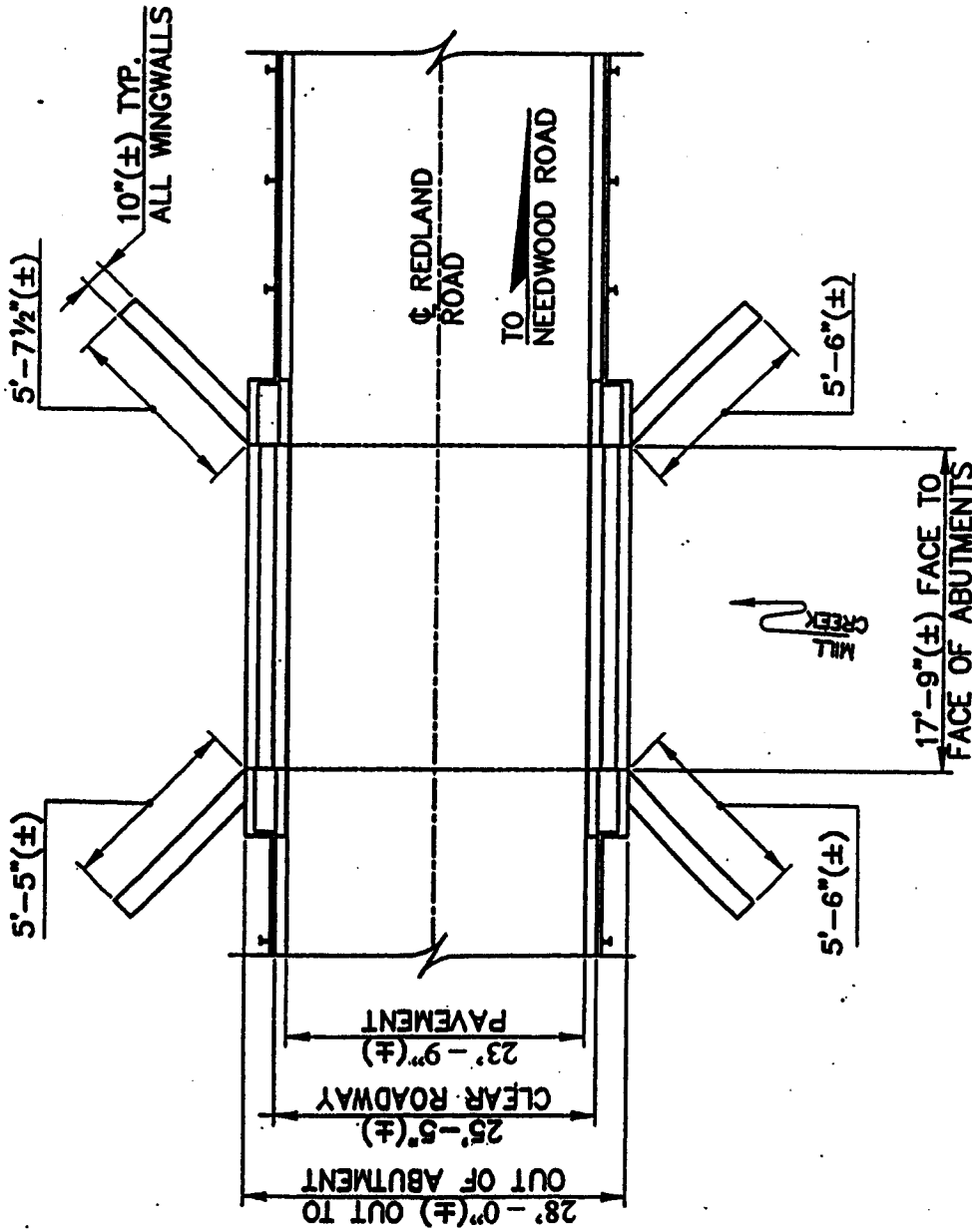
LOCATION MAP

SCALE: 1" = 2,000'

Copyright ADC The Map People
Permitted Use Number: BJE051055
Expiration Date: June 1, 2020

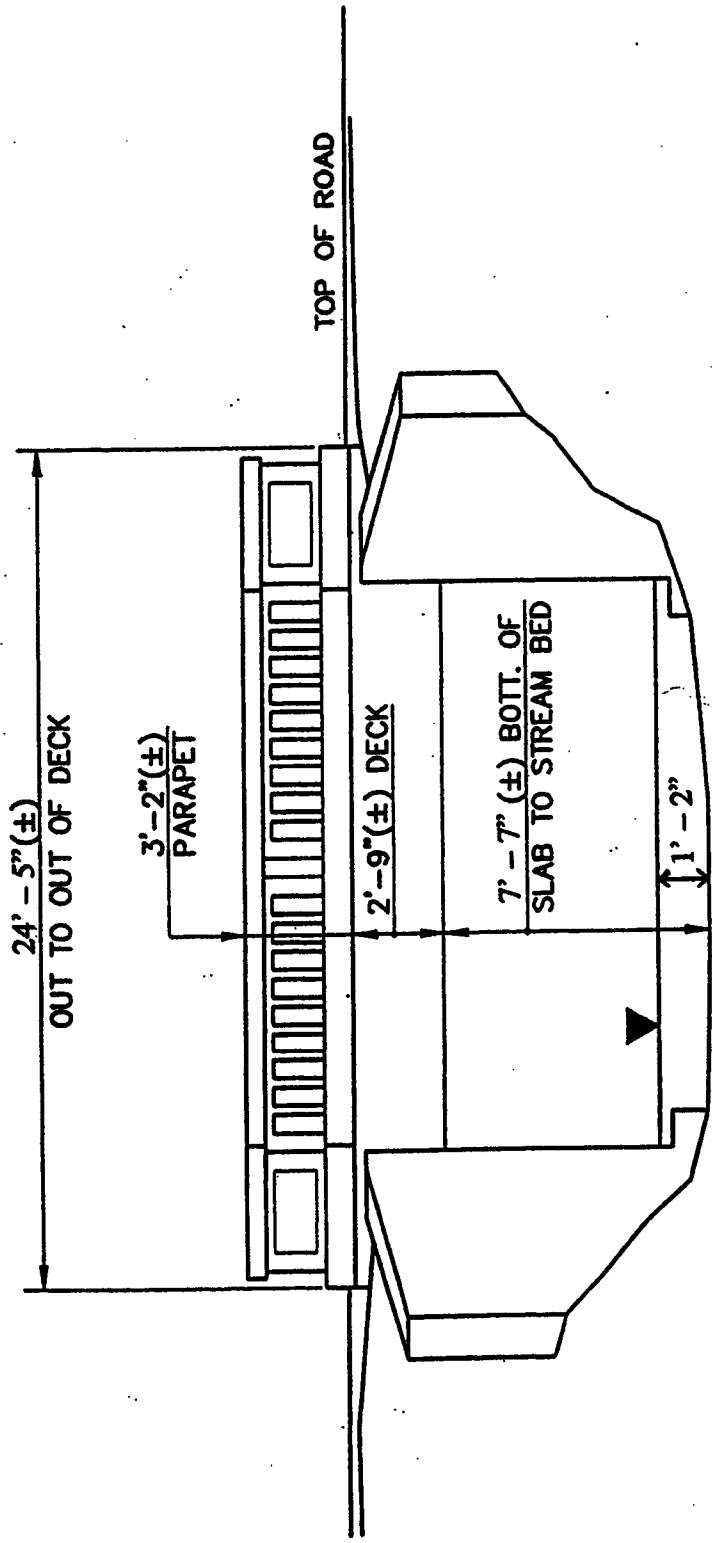
APPROXIMATE

MONTGOMERY COUNTY
BRIDGE INSPECTION
BRIDGE NO. M-056B
REDLAND ROAD
OVER
MILL CREEK



PLAN
NO SCALE







MONTGOMERY COUNTY
BRIDGE INSPECTION
BRIDGE NO. M-056B
REDLAND ROAD
OVER
MILL CREEK



EAST ELEVATION
NO SCALE

2019 BRIDGE INSPECTION REPORT

COMPARATIVE EVALUATION SUMMARY TABLE

<u>PONTIS ELEMENT</u>	<u>STATUS</u>	<u>CONDITION</u>	<u>REMARKS</u>
Roadway Approach Transition (8322)		Satisfactory	Thrie beam transitions installed since the previous inspection
Reinforced Concrete Slab (38)		Fair	Spalls in the fascias and slab have been patched, but the patches are hollow sounding
Reinforced Concrete Abutment (215)		Satisfactory	
Metal Bridge Railing (330)		Good	Thrie beam traffic barriers installed since the previous inspection
Reinforced Concrete Bridge Railing (331)		Very Poor	Large spalls throughout both bridge railings
Stream Channel (8345)		Satisfactory	
Overall		Fair	



= Condition Improved



= Condition Unchanged



= Condition Worse

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CONDITION SUMMARY

Roadway Approach Transition (8322)

23'-9" wide asphalt roadway, no shoulders

The roadway approaches are in satisfactory condition. There is typical 1/8" to 1/2" cracking throughout both approaches. There are small potholes within an asphalt patch along the centerline of the South Approach.

The approach traffic barriers are set too low to meet standard height and have isolated areas of 100% section loss. Thrie-beam transitions and railings over the bridge have been installed since the previous inspection. There is reduced post spacing for the thrie-beam transitions at all corners except the southeast corner.

Reinforced Concrete Slab (38)

Reinforced concrete

The reinforced concrete slab is in fair condition. The large spalls with exposed reinforcement on the West and East Fascias have been patched since the previous inspection; however, the patches are hollow sounding. The soffit is hollow sounding over approximately 20% of its area. The large spall along the west edge of the soffit has been patched since the previous inspection; however, the patch is hollow sounding.

Reinforced Concrete Abutment (215)

Reinforced concrete

The abutments are in satisfactory condition. Both abutment footings are exposed, but there is no undermining. The wingwalls are in good condition. All of the wingwalls have a new parging coating.

Metal Bridge Railing (330)

Thrie beam traffic barrier attached to concrete bridge railing and fascias

Thrie beam traffic barriers have been installed in front of the concrete Bridge Railings since the previous inspection. The traffic barriers are connected by wooden posts and steel channel brackets that have been drilled into the concrete bridge railings and fascias. The traffic barrier heights do not meet MSHA standards; the East Traffic Barrier is 2'-3" high and the West Traffic Barrier is 2'-0" high.

Reinforced Concrete Bridge Railing (331)

Reinforced concrete ornamental railing

Both concrete Bridge Railings are in very poor condition with heavy spalling and impending spalls. Balusters 1 and 2 of the East Bridge Railing are missing, and Balusters 3, 5, 6, and 7-12 of the East Bridge Railing are spalled with exposed reinforcement. Balusters 10 and 11 of the West Bridge Railing are spalled with exposed reinforcement.

Stream Channel (8345)

Sandy gravel stream bottom

The stream channel is in satisfactory condition. Mill Creek flows from the west to the east. The streambed consists of gravel, sand and large stones. There is moderate to severe erosion of the embankments. The Southwest Slope Protection has failed due to erosion and riprap has fallen into the channel and mostly washed away.

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BRIDGE DESCRIPTION SUMMARY

LOAD RATING SUMMARY

The Load Ratings were established in previous inspection reports. Calculations were not previously prepared for this structure and the values listed below were based on engineering judgement, AASHTO Manual for Bridge Evaluation 1st Edition, and the structure's condition. Below are the ratings presented in the previous inspection report. AECOM does not assume responsibility for the correctness of the ratings provided:

Vehicle	Gross Vehicle Weight (Tons)	Inventory Rating (Tons)	Operating Rating (Tons)
H-15	15	15	15
HS-20	36	36	36
MD Type 3	33	33	33
MD Type 3S2	40	40	40

Note: MD Type-3 is no longer considered legal per SHA

Vehicle	Gross Vehicle Weight (Tons)	Inventory Rating (Tons)	Operating Rating (Tons)
MD Type-4	35	-	-

Based on the above chart and in accordance with Montgomery County's current policy, no posting is required; however, the condition of the structure has deteriorated since the load ratings were established. The ratings for Items 58 and 59 have been lowered to 5-FAIR (previously rated 6-SATISFACTORY). Repairs to the deteriorated concrete slab were performed, but the concrete patches are hollow sounding and not considered a bridge strengthening rehabilitation. Visual distress of the structure was not observed under live load. The bridge was placed on a 24-month inspection cycle based on direction from the MBE 1st Edition. Since the information necessary to load rate the bridge is unavailable (complete set of plans are not on file), the following is recommended:

1. Maintain the increased inspection frequency of 24 months, or
2. Load proof test the structure in accordance with MDSHA PPM D-97-47(4) to determine safe capacity.

REVIEW OF ITEM 113 - SCOUR POTENTIAL RATING

Item 113 was previously rated a 5B, which indicates that the bridge foundations determined to be stable due to the assessed scour conditions. Based on the observed conditions, this rating is still valid and does not require re-evaluation.

GUARDRAIL REQUIREMENT FORM

Corners	Bridge Railings Meet SHA Standard		Transition				Approach Guardrail									Approach Rail Ends					
			Approach Guardrail at Corners of Struct.		Attached to Bridge		Average Post Spacing Near Struct.	Type of Posts			Type of Rail			Spacing of Approach Guardrail			Flared	Buried	Shielded	Hazard	Breakaway
	Yes	No	Yes	No	Yes	No		Timber	Steel	Jersey	Cable	Steel	Timber	12'-6"	6'-3"	Other					
1		✓	✓		✓		3'-5"	✓	✓			✓			✓		✓	✓			
2		✓	✓		✓		3'-1"	✓	✓			✓			✓		✓			✓	
3		✓	✓		✓		6'-3"	✓	✓			✓			✓		✓	✓			
4		✓	✓		✓		3'-5"	✓	✓			✓			✓		✓			✓	

Bridge No.: M-0056
 County: Montgomery
 Road Carried: REDLAND ROAD
 Crossing: MILL CREEK
 Date Inspected: 12/27/2019
 Inspector: S. Scheine, M. Billips

DOES THE APPROACH GUARDRAIL EXTEND A LONG ENOUGH DISTANCE TO PROTECT TRAFFIC AT BRIDGE AREA FROM EMBANKMENT?

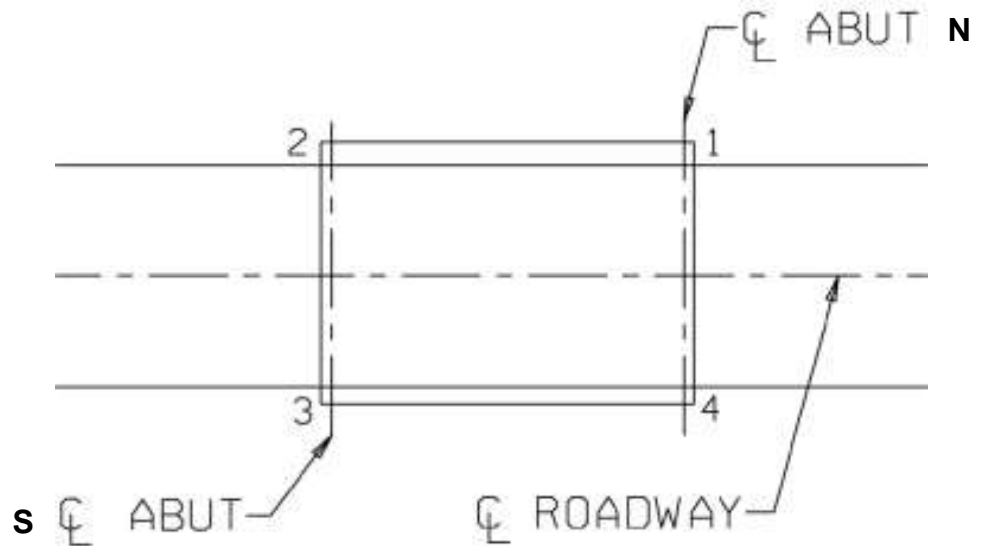
YES NO

IS THE FACE OF THE GUARDRAIL MORE THAN 6" BACK FROM THE GUTTER LINE AT THE BRIDGE?

YES NO

IF YES, SUCH AS WHERE A SIDEWALK IS ON THE BRIDGE, HAS A RAMP OF CONCRETE BEEN PROVIDED TOWARD TRAFFIC?

YES NO N/A



Comments: Bridge rail consists of thrie beam traffic barriers in front of ornamental concrete parapets.

Montgomery County, MD Dept. of Transportation Bridge Coating Rating Form

Bridge No. M-0056 **Name** REDLAND ROAD **Date** 12/27/2019
Weathering Steel NO **Crossing** MILL CREEK
Inspectors S. Scheine, M. Billips

COMPONENTS

	% Rating 1	% Rating 2	% Rating 3	% Rating 4	Total
Girders					
Fascias					
Bearings					
Edges					
End Dam					
Deck Pans (<input type="checkbox"/> Galv <input type="checkbox"/> Paint)					
Railings	100				1
Other					
1)					
2)					
3)					
4)					
5)					
Overall Rating					1

Comments:

The structure is a concrete slab bridge.

Recommendations:

None.

2019 BRIDGE INSPECTION REPORT

BRIDGE INSPECTION NOTES

VISUAL INSPECTION NOTE

The condition report and recommendations presented herein are based upon a visual/hands-on inspection of accessible portions of the existing structure. No responsibility is assumed by AECOM for the presence of any latent structural defects that cannot be detected by such visual/hands-on inspection.

BRIDGE SKETCHES NOTE

The bridge sketches included in this report were prepared by others and are reproduced herein from materials furnished by Montgomery County. No responsibility is assumed by AECOM for the accuracy of the sketches and the correctness of any detail dimensions.

INSPECTION ACCESS NOTE

The following equipment was used to access Bridge No. M-0056:

Waders
Ladder

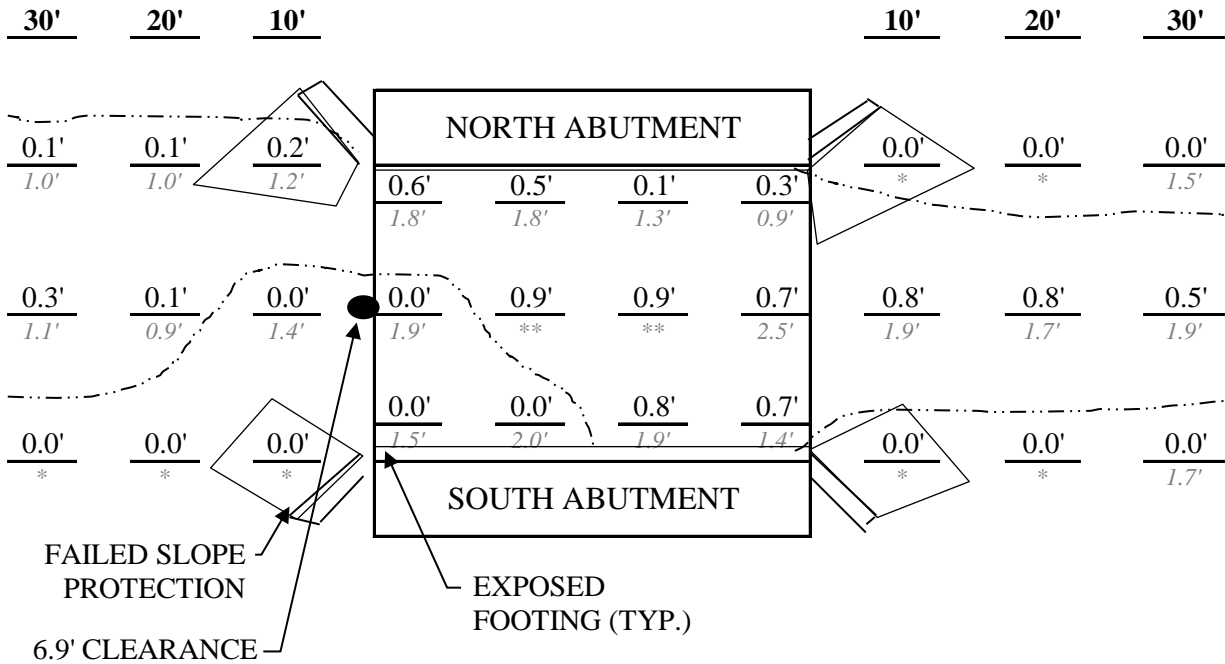
SOUNDING SHEET

(All measurements are in feet)

Bridge No.: M-0056
 Inspectors: SS/MB

Inspection Date: 12/27/2019
 Clearance Location: UNDERSIDE OF SLAB AT MIDSPAN, UPSTREAM

Clearance is the distance measured from the water surface to the clearance location.



Legend: X.X Current Soundings
X.X 1996 Base Year Soundings (Adjusted)

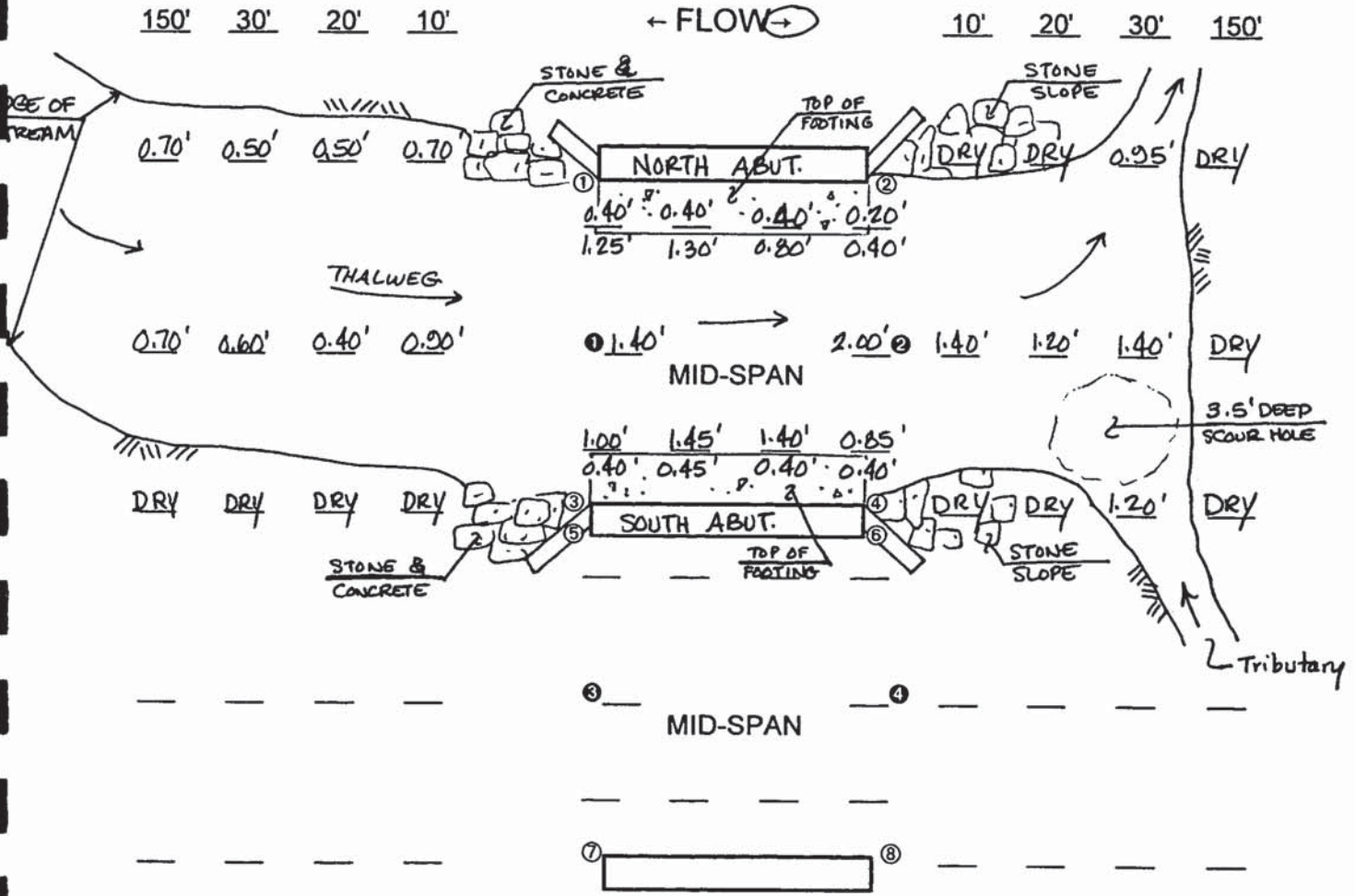
- * Base year sounding was dry
- ** No measurement taken during base year

1996
MONTGOMERY COUNTY BRIDGE INSPECTION
SOUNDINGS SHEET

BRIDGE NO. M0056 B



INSPECTION DATE: 8/22/06 CLEARANCE LOCATION: BOTTOM OF SLAB TO CHANNEL



CLEARANCES:

① 7.30' / 6.35'* ② 6.30' / 6.20'* ③ 6.95' / 6.40'* ④ 6.90' / 6.40'*

* TOP OF FOOTING

⑤ _____ ⑥ _____ ⑦ _____ ⑧ _____

① 7.40' ② 7.90' ③ _____ ④ _____



2019 BRIDGE INSPECTION REPORT

Bridge No. M-0056 **Inspection Crew** S. Scheine, M. Billips **Date** 12/27/2019
Name REDLAND ROAD **Crossing** MILL CREEK
Bridge Type Concrete Slab **Year Built** 1925

BRIDGE INSPECTOR'S RECOMMENDATIONS FOR MAINTENANCE REPAIRS

DESCRIPTION	PRIORITY	QUANTITY	UNIT COST	TOTAL COST
1. Replace both concrete bridge railings.	2	1 L.S.	L.S.	\$28000
2. Install additional posts for the thrie beam transition at the southeast corner.	2	1 L.S.	\$1000/L.S.	\$1000
3. Seal the cracks in the approach roadways.	3	50 L.F.	\$10/L.F.	\$500
4. Place riprap for slope protection at all four corners of the bridge.	3	12 S.Y.	\$261/S.Y.	\$3132
5. Repair delaminations and hollow sounding patches in the concrete soffit and fascias.	2	375 S.F.	\$70/S.F.	\$26250
6. Patch potholes along the centerline of the South Approach.	3	20 S.F.	\$20/S.F.	\$400
7. Replace the missing Southwest and Northwest Object Markers. Install Northeast Object Marker that is lying on the ground.	3	3 Ea.	\$250/Ea.	\$750
8. Replace approach traffic barrier sections with 100% section loss.	3	15 L.F.	\$55/L.F.	\$825
9. Replace the Southwest Approach Traffic Barrier End Treatment.	3	1 Ea.	\$2327/Ea.	\$2327
10. Install missing splice bolts and change lapped splice connection on the Southeast Approach Traffic Barrier.	3	1 L.S.	\$200/L.S.	\$200
Total:				\$ 63384

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BRIDGE NO. M-0056X01 - REDLAND ROAD OVER MILL CREEK



1. North Approach Looking South



2. North Approach Looking North

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BRIDGE INSPECTION REPORT

BRIDGE NO. M-0056X01 - REDLAND ROAD OVER MILL CREEK



3. South Approach Looking North



4. South Approach Looking South

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BRIDGE INSPECTION REPORT

BRIDGE NO. M-0056X01 - REDLAND ROAD OVER MILL CREEK



5. Looking West (Upstream)



6. Looking East (Downstream)

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7. West (Upstream) Elevation



8. East (Downstream) Elevation

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9. Typical underside of superstructure



10. North Abutment Elevation

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11. Hollow sounding patch on the East Fascia



12. Delamination on the East Fascia just south of the patch

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13. Hollow sounding patch on the West Fascia



14. Hollow sounding patch in the soffit at the west edge

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15. Exposed reinforcement in the south end of the patch in the soffit at the west edge



16. Spall at the base of the north end post on the West Bridge Railing

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17. Balusters 10 and 11 of the West Bridge Railing are spalled with exposed reinforcement



18. Spall with exposed reinforcement in the top face of the West Bridge Railing at the south end

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19. Spalls in the top face of the East Bridge Railing



20. Spall in the base of the east face of the north end post on the East Bridge Railing

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21. Spall with exposed reinforcement in the base of the west face of the East Bridge Railing, at the first traffic barrier post from the north end



22. Balusters 1 and 2 of the East Bridge Railing are missing

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23. Front face of the newly installed three beam traffic barrier (West Traffic Barrier shown)



24. Back face of the newly installed three beam traffic barrier (West Traffic Barrier shown)

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25. Southwest Slope Protection has failed due to erosion and riprap has fallen into the channel and mostly washed away



26. Section loss on the Northwest Approach Traffic Barrier between the 1st and 2nd posts from the north end

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27. Impact damage to the Southwest Approach Traffic Barrier End Treatment



28. Missing W-beam splice bolts and the W-beam splice is lapped incorrectly at the 2nd post from the bridge for the Southeast Approach Traffic Barrier

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29. Section loss on the Southeast Approach Traffic Barrier between the 2nd and 3rd posts from the south end



30. Typical three beam transition (northeast shown)

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31. Map cracking at the Northwest Approach, 3' north of the bridge rail



32. Potholes within the patch along the centerline of the South Approach

2019 BRIDGE INSPECTION REPORT

Bridge No. M-0056 **Inspection Crew** S. Scheine, M. Billips **Date** 12/27/2019
Name REDLAND ROAD **Crossing** MILL CREEK
Bridge Type Concrete Slab **Year Built** 1925

58 DECK	CONDITION RATING	
1. Wearing Surface (302)	6	Asphalt
2. Deck - Topside (301)	-	
3. Deck - Underside (301)	5	Concrete slab
4. Curbs (304)	-	
5. Median (304)	-	
6. Sidewalks (304)	-	
7. Parapets (303)	3	Concrete
8. Railing (303)	7	Thrie beam
9. Roadway Joints	-	
10. Drainage System (314)	-	
11. Lighting Standards	-	
12. Utilities	8	
13. Other	-	
Inspector's Condition Rating (58)		5

58.1 - The asphalt wearing surface over the bridge is in satisfactory condition with moderate wear. There is a 1/2" wide longitudinal crack along the centerline of the roadway. There is an up to 1/8" wide longitudinal crack along the west edge of the southbound lane.

58.2 - There is debris and vegetation growth along both gutter lines.

58.3 - Fascia: Five steel channel brackets have been drilled into both fascias for the newly installed traffic barrier system [Photo 8]. The epoxy coating on both fascias has failed. The delamination and spalling on the East Fascia noted in the previous report has been patched with a 13'-0" long x up to 1'-9" high concrete patch; however, the patch is entirely hollow sounding [Photo 11]. There are efflorescence stalactites with active leakage at the bottom of the patch. Just south of the patch, the East Fascia is delaminated for a 5'-0" long x 1'-4" high area [Photo 12]. The delamination and spalling on the West Fascia noted in the previous report has been patched with a full-length x up to 1'-6" high concrete patch; however, the entire patch is hollow sounding [Photo 13].

Soffit: The soffit is hollow sounding over approximately 20% of its area. There is a 12'-0" x 2'-0" wide hollow sounding area at the east end of the soffit at the North Abutment. There are random hairline cracks with efflorescence in the soffit. There are efflorescence stalactites in the eastern and western thirds of the soffit. The delamination and spalling in the west edge of the soffit noted in the previous report has been patched with a full-length x up to 5'-8" wide patch; however, a majority of the patch is hollow sounding [Photo 14]. There is active leakage and heavy efflorescence with stalactites throughout the patch. There is one exposed longitudinal bar near the south end of the patch [Photo 15].

58.7 - Both concrete Bridge Railings are in very poor condition with heavy spalling and impending spalls. All baluster reinforcement that is exposed has up to 50% section loss.

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Name REDLAND ROAD **Crossing** MILL CREEK
Bridge Type Concrete Slab **Year Built** 1925

West Bridge Railing: The West Bridge Railing has up to 1/16" wide vertical cracks throughout. The balusters are typically hollow sounding. There is a 1'-0" long x 9" high x 2" deep spall at the north end of the West Bridge Railing on the west face. The base of the north end post on the West Bridge Railing has a 1'-10" wide x 1'-1" high x up to 5" deep spall. The area under the spall is filled with sediment [Photo 16]. There is a 9" long x 7" high x 3" deep spall in the top east face of the West Bridge Railing at mid-span. Balusters 10 and 11 are spalled with exposed reinforcement [Photo 17]. There is a 1'-6" wide x 1'-3" high x 1" deep spall with exposed reinforcement in the base of the east face of the West Bridge Railing, 2' from the south end. There is a 1'-7" long x 8" high x 4" deep spall with exposed reinforcement in the top face of the West Bridge Railing at the south end [Photo 18]. There is a 6" wide x 1'-1" high x 1" deep spall with exposed reinforcement in the base of the east face of the West Bridge Railing at the south end.

East Bridge Railing: The top face of the East Bridge Railing is hollow sounding for 75% of the length and the inside and outside edges of the top face are spalled throughout [Photo 19]. The base of the east face of the north end post on the East Bridge Railing has a 1'-11" wide x 1'-3" high x 1" deep spall [Photo 20]. There is a 1'-4" wide x 1'-9" high x 1 1/2" deep spall with exposed reinforcement in the base of the west face of the East Bridge Railing, at the first traffic barrier post from the north end [Photo 21]. All balusters are delaminated and have up to 1/8" wide cracks. Balusters 1 and 2 are missing [Photo 22]. Balusters 3, 5, 6, and 7-12 have spalls with exposed reinforcement on the west face. Balusters 3-5 are disconnected from the bridge railing at the top.

58.8 - Thrie beam traffic barriers have been installed in front of the concrete Bridge Railings since the previous inspection. The traffic barriers are connected by wooden posts and steel channel brackets that have been drilled into the concrete bridge railings and fascias [Photos 23-24]. The traffic barrier heights do not meet MDSHA standards; the East Traffic Barrier is 2'-3" high and the West Traffic Barrier is 2'-0" high.

58.12 - There are overhead utilities on the east side of the bridge.

2019 BRIDGE INSPECTION REPORT

Bridge No. M-0056 Inspection Crew S. Scheine, M. Billips Date 12/27/2019
Name REDLAND ROAD Crossing MILL CREEK
Bridge Type Concrete Slab Year Built 1925

59 SUPERSTRUCTURE

Number of Spans 1
Type of Construction Concrete Slab

CONDITION RATING

- | | |
|-------------------------------------|---|
| 1. Bearing Devices (311) | - |
| 2. Girders or Beams (312) | - |
| 3. Stringers (312) | - |
| 4. Floor Beams (312) | - |
| 5. Diaphragms/Crossframes | - |
| 6. Paint (313) | - |
| 7. Other | - |
| 8. Rivets or Bolts | - |
| 9. Welds - Cracks | - |
| 10. Rust | - |
| 11. Timber Decay | - |
| 12. Concrete Cracking | - |
| 13. Collision Damage | - |
| 14. Deflection Under Load | - |
| 15. Alignment of Members | - |
| 16. Vibrations Under Load | - |
| 17. Fracture Critical Members (325) | - |

Inspector's Condition Rating (59) 5

See item 58 rating.

Bridge is a concrete slab.

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Bridge No. M-0056 **Inspection Crew** S. Scheine, M. Billips **Date** 12/27/2019
Name REDLAND ROAD **Crossing** MILL CREEK
Bridge Type Concrete Slab **Year Built** 1925

60 SUBSTRUCTURE

CONDITION RATING

1. Abutments	-Wingwalls	<input style="width: 80%; height: 20px;" type="text" value="7"/>	
	-Backwalls	<input style="width: 80%; height: 20px;" type="text" value="-"/>	
	-Stems	<input style="width: 80%; height: 20px;" type="text" value="6"/>	
	-Footings	<input style="width: 80%; height: 20px;" type="text" value="6"/>	
	-Piles	<input style="width: 80%; height: 20px;" type="text" value="-"/>	
	-Scour/Erosion	<input style="width: 80%; height: 20px;" type="text" value="6"/>	
	-Settlement	<input style="width: 80%; height: 20px;" type="text" value="8"/>	
	Overall Abutment Rating (322)	<input style="width: 80%; height: 20px;" type="text" value="6"/>	Abutment Type <u>Concrete</u>
2. Piers or Bents	-Caps	<input style="width: 80%; height: 20px;" type="text" value="-"/>	
	-Columns	<input style="width: 80%; height: 20px;" type="text" value="-"/>	
	-Footings	<input style="width: 80%; height: 20px;" type="text" value="-"/>	
	-Piles	<input style="width: 80%; height: 20px;" type="text" value="-"/>	
	-Scour/Erosion	<input style="width: 80%; height: 20px;" type="text" value="-"/>	
	-Settlement	<input style="width: 80%; height: 20px;" type="text" value="-"/>	
	Overall Pier Rating	<input style="width: 80%; height: 20px;" type="text" value="-"/>	Pier Type
3. Pile Bents	-Caps	<input style="width: 80%; height: 20px;" type="text" value="-"/>	
	-Piles (324)	<input style="width: 80%; height: 20px;" type="text" value="-"/>	
4. Concrete Cracking or Spalling		<input style="width: 80%; height: 20px;" type="text" value="7"/>	
5. Steel Corrosion		<input style="width: 80%; height: 20px;" type="text" value="-"/>	
6. Timber Decay		<input style="width: 80%; height: 20px;" type="text" value="-"/>	
7. Other _____		<input style="width: 80%; height: 20px;" type="text" value="-"/>	
8. Debris on Seats		<input style="width: 80%; height: 20px;" type="text" value="-"/>	
9. Paint		<input style="width: 80%; height: 20px;" type="text" value="-"/>	
10. Collision Damage		<input style="width: 80%; height: 20px;" type="text" value="-"/>	
11. Overall Undermining/Scour		<input style="width: 80%; height: 20px;" type="text" value="7"/>	

Inspector's Condition Rating (60)

60.1 - The wingwalls have a parging coating. The Southwest and Southeast Wingwalls have minor wear at the base of the wall. The Southeast Wingwall has minor scaling at the base of the wall.

The drains at the North and South Abutments are corroded with efflorescence and rust staining

2019 BRIDGE INSPECTION REPORT

Bridge No. M-0056 **Inspection Crew** S. Scheine, M. Billips **Date** 12/27/2019
Name REDLAND ROAD **Crossing** MILL CREEK
Bridge Type Concrete Slab **Year Built** 1925

below the drains. Both abutments have a parging coating. The North Abutment Footing is exposed up to 1'-1" high. The South Abutment Footing is exposed up to 1'-6" high along the full length. No undermining was noted at the time of the inspection. The exposed footings and base of the abutment walls have moderate scaling. The North Abutment has minor honeycombing near the east end. There is efflorescence buildup on the North Abutment at the east end, west end, and 7' from the east end. The South Abutment has two full height vertical cracks with minor efflorescence located above the middle and east drain pipe.

2019 BRIDGE INSPECTION REPORT

Bridge No. M-0056 **Inspection Crew** S. Scheine, M. Billips **Date** 12/27/2019
Name REDLAND ROAD **Crossing** MILL CREEK
Bridge Type Concrete Slab **Year Built** 1925

61 CHANNEL AND CHANNEL PROTECTION

	CONDITION RATING	
1. Channel Scour	<input style="width: 50px; height: 20px;" type="text" value="6"/>	
2. Embankment Erosion	<input style="width: 50px; height: 20px;" type="text" value="5"/>	
3. Drift/Debris	<input style="width: 50px; height: 20px;" type="text" value="6"/>	
4. Vegetation	<input style="width: 50px; height: 20px;" type="text" value="6"/>	
5. Channel Alignment	<input style="width: 50px; height: 20px;" type="text" value="8"/>	
6. Fender System	<input style="width: 50px; height: 20px;" type="text" value="-"/>	
7. Spur Dikes and Jetties	<input style="width: 50px; height: 20px;" type="text" value="-"/>	
8. Riprap/Slope Protection	<input style="width: 50px; height: 20px;" type="text" value="5"/>	<u>Stone masonry and riprap</u>

Inspector's Condition Rating (61)

61.2 - The upstream embankments have moderate erosion with up to 4' high vertically cut banks. The downstream embankments, beginning 50' from the bridge, have severe erosion with up to 8' high vertically cut banks and exposed and undermined tree roots.

61.3 - There are two fallen trees over the upstream channel approximately 120' from the bridge. There is a fallen tree over the downstream channel approximately 100' from the bridge.

61.5 - Mill Creek flows from the west to the east. The upstream channel is straight, and then curves to the north. The downstream channel curves to the north. The streambed consists of gravel, sand and large stones.

61.8 - The upstream and downstream banks have scattered riprap bank protection. The Southwest Slope Protection has failed due to erosion and riprap has fallen into the channel and mostly washed away [Photo 25].

2019 BRIDGE INSPECTION REPORT

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71 WATERWAY ADEQUACY

Opening	Good	<input type="text" value="Fair"/>	Poor
Alignment	<input type="text" value="Good"/>	<input type="text" value="Fair"/>	Poor
Frequency of Overtopping	Remote	<input type="text" value="Slight"/>	Occasional Frequent

Inspector's Condition Rating (71)

2019 BRIDGE INSPECTION REPORT

Bridge No. M-0056 **Inspection Crew** S. Scheine, M. Billips **Date** 12/27/2019
Name REDLAND ROAD **Crossing** MILL CREEK
Bridge Type Concrete Slab **Year Built** 1925

72 APPROACH ROADWAY ALIGNMENT APPRAISAL RATING

- | | | | | | |
|--------------------------|---|----------|--------------|-------------|--|
| 1. Vertical Alignment | N | Good | Fair | Poor | Moderate south to north tangent downgrade across the bridge. |
| | S | Good | Fair | Poor | |
| 2. Horizontal Alignment | N | Good | Fair | Poor | Slight horizontal curve north of the bridge. |
| | S | Good | Fair | Poor | Straight |
| 3. Speed Limit Reduction | | None | Minor | Substantial | |
| 4. Sight Distance | | Adequate | Not Adequate | | |

Inspector's Condition Rating (72) 8

APPROACH ROADWAY

- | | CONDITION RATING | |
|---|------------------|--|
| 5. Approach Guardrail | 5 | |
| 6. Approach Pavement | 6 | |
| 7. Approach Embankments | 6 | |
| 8. Approach Slabs | - | |
| 9. Relief Joints | - | |
| 10. Signing - Legibility and Visibility | Good | Fair |
| | | Poor |
| | | Some object markers knocked over or missing |
| 11. Posted Load Limits | None | Posted Bridge Speed Limit - MPH |
| | | Normal Roadway Speed Limit 35 MPH |

12. Traffic Safety Features (36)
- | | | | | |
|----------------------------------|---|---|---|--|
| a. Bridge Railing | 0 | 1 | N | Thrie beam, Concrete |
| b. Transitions | 0 | 1 | N | Thrie beam, unstiffened at SE corner |
| c. Approach Traffic Barrier | 0 | 1 | N | W-beam does not extend far enough to protect embankments |
| d. Approach Traffic Barrier Ends | 0 | 1 | N | Flared, buried, hazard |

72.5 - The approach traffic barrier consists of a W-beam supported by steel posts. The traffic barriers are set too low to meet standard height and have small dents throughout. The Northwest and Southeast Approach Traffic Barriers have corrosion with isolated areas of 100% section loss. There is a 2'-2" long x 2" wide area of 100% section loss on the Northwest Approach Traffic Barrier between

2019 BRIDGE INSPECTION REPORT

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the 1st and 2nd posts from the north end [Photo 26]. There is a 7'-6" long x up to 2" high area of 100% section loss on the Northwest Approach Traffic Barrier at the 3rd post from the north end. The Southwest Approach Traffic Barrier End Treatment has impact damage over a 7' length with two leaning and twisted posts [Photo 27]. There are six (6) missing W-beam splice bolts and the W-beam splice is lapped incorrectly at the 2nd post from the bridge for the Southeast Approach Traffic Barrier [Photo 28]. There is a 4'-6" long area of 100% section loss on the Southeast Approach Traffic Barrier between the 2nd and 3rd posts from the south end [Photo 29]. The Northeast and Southwest Approach End Treatments are turned away from the road and have blunt ends. The Northwest and Southeast Approach End Treatments are turned down, flared and buried with heavy vegetation on the end treatments.

Thrie-beam transitions and railings over the bridge have been installed since the previous inspection [Photo 30]. The thrie beam transitions are supported by wood posts. There is reduced post spacing for the thrie-beam transitions at all corners except the southeast corner.

72.6 - The North Approach Pavement has up to 1/2" wide longitudinal and 1/4" wide map cracking along the East Shoulder and down the centerline of the North Approach. There is a 1/8" to 1/4" wide longitudinal crack along the west shoulder and edge of the Southbound Lane of the North Approach. The patched area at the Northwest Approach 3' north of the bridge rail along the edge of the pavement is surrounded by up to 1/8" wide map cracking [Photo 31]. The South Approach has up to 1/2" longitudinal cracking at the centerline of the roadway. There is 1/8" wide map cracking along the edges of the travel lanes of the South Approach. There are isolated up to 5'-0" long x up to 1/8" wide transverse cracks in the southbound lane of the South Approach. There is an up to 10" drop off at the edge of the pavement along the west side of the South Approach. There is a 42' long x 1'-6" wide asphalt patch along the centerline of the South Approach. Within the patch, there are small up to 1'-0" diameter x 1" deep potholes [Photo 32].

72.7 - The embankment erosion at the north end of the West Railing noted in the previous report has been filled in with sediment.

72.10 - The Southeast Object Marker is leaning. The Southwest and Northwest Object Markers are missing. The Northeast Object Marker is lying on the ground.

Bridge Inspection Report Element Form

Bridge No: M-0056X01

Inspection Date: 12/27/2019

REDLAND ROAD OVER MILL CREEK

Milepoint: 0001040

(58) Deck

(59) Superstructure

(60) Substructure

(61) Channel

(62) Culvert

Element

Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
1 - Ben.	684	sq. ft.	341	166	177	0

38 - Reinforced Concrete Slab

Eng Req FYI

District Inaccessible? Eng Comments

510 - Wearing Surfaces

	580	sq. ft.	530	50	0	0
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Eng Req FYI

District Inaccessible? Eng Comments

215 - Reinforced Concrete Abutment

1 - Ben.	78	ft.	73	5	0	0
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Eng Req FYI

District Inaccessible? Eng Comments

330 - Metal Bridge Railing

1 - Ben.	50	ft.	50	0	0	0
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Eng Req FYI

District Inaccessible? Eng Comments

515 - Steel Protective Coating

	160	sq. ft.	160	0	0	0
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Eng Req FYI

District Inaccessible? Eng Comments

331 - Reinforced Concrete Bridge Railing

1 - Ben.	50	ft.	0	17	25	8
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Eng Req FYI

District Inaccessible? Eng Comments

8251 - Wingwalls, Reinforced Concrete

1 - Ben.	22	Ft.	22	0	0	0
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Eng Req FYI

District Inaccessible? Eng Comments

8322 - Roadway Approach Transition

1 - Ben.	2	Each	2	0	0	0
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Eng Req FYI

District Inaccessible? Eng Comments

8345 - Stream Channel

1 - Ben.	1	Entire Bridge	1	0	0	0
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Eng Req FYI

District Inaccessible? Eng Comments

8359 - Soffit (underside) of concrete decks and slabs

1 - Ben.	1	Entire Bridge	0	1	0	0
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Eng Req FYI

District Inaccessible? Eng Comments

STRUCTURE INVENTORY AND APPRAISAL REPORT

BRIDGE NUMBER: M-0056X01

IDENTIFICATION

FORM 1 OF 13

(8) STRUCTURE NUMBER: Small Structure Bridges <= 20' 0" Single Structure

(8) FHWA NUMBER:

(7) FACILITY CARRIED:

(6) FEATURE INTERSECTED:

(255) FEDERAL SUBMITTAL INDICATOR: No

(262) NAME OF STRUCTURE:

(27) YEAR BUILT: (106) YEAR RECONSTRUCTED:

(263) ADDITIONAL RECONSTRUCTION YEARS:

(1) STATE CODE: Maryland (2) DISTRICT CODE: 03

(3) COUNTY CODE: Y (4) PLACE CODE:

(5) INVENTORY ROUTE: Route carried "on" the structure County Route (Route Prefix) Mainline (Level of Service) (Number) Always (Direction)

(9) LOCATION:

(11) MILEPOINT:

(12) BASE HIGHWAY NETWORK: Inv. Route is NOT on the Base Network

(266) GIS ROUTE ID:

(267) GIS MILEPOINT:

(268) SCENIC ROUTE:

(13) LRS INVENTORY ROUTE, SUBROUTE NUMBER:

(16) LATITUDE: (A) (B) (C) (D)

(17) LONGITUDE: (A) (B) (C) (D)

(28) LANES ON: LANES UNDER:

(42) TYPE OF SERVICE ON: Highway

TYPE OF SERVICE UNDER: Waterway

(98) BORDER STATE: BORDER STATE'S SHARE %:

(99) BORDER STATE'S NUMBER:

CLASSIFICATION

FORM 2 OF 13

(104) HWY SYSTEM: No, Inventory Route is not on the NHS (103) TEMPORARY STRUCTURE:

(105) FEDERAL LANDS HWYS: Not applicable (110) NATIONAL NETWORK: No, the inventory route is not part of the national network for trucks.

(26) FUNCTIONAL CLASS: Urban Local (20) TOLL: On free road

(100) DEFENSE HWY: The inventory route is not a STRAHNET route (21) MAINTENANCE: County Highway Agency

(101) PARALLEL STRUCTURE: No parallel structure (22) OWNER: County Highway Agency

(102) DIRECTION: 2-way traffic (37) HISTORICAL SIGNIFICANCE: Not eligible

TRAFFIC

(19) DETOUR:
 (29) ADT:
 (114) FUTURE ADT:

(109) TRUCK ADT %:
 (30) ADT YEAR:
 (115) FUTURE ADT YEAR:

STRUCTURE TYPE AND MATERIAL

(43) STRUCT TYPE: Concrete Slab
 (44) STRUCT TYPE - APPR: Not Applicable Other
 (232) BOX CULVERT ON PILES: None Entire Structure
 (208) STRUCT TYPE - WIDENED/EXTENDED:
 (219) SLOPE PROTECTION: Heavy stone
 (228) FOOTING - ABUTMENT: Concrete None Entire Structure
 (229) SUBSTRUCT ABUTMENT: Concrete Gravity Entire Structure
 (230) FOOTING - PIER: Not Applicable
 (231) PIER TYPE: Not Applicable
 (242) BEARING TYPE: None or N/A None or N/A None or N/A
 (108) WEARING SURFACE: Bituminous Unknown Unknown
 (243) JOINT TYPE: None None None
 (206) STRUCT SUBTYPE - MAIN: Not Applicable (207) STRUCT SUBTYPE - APPR: Not Applicable
 (257) SCOUR PROTECTION: (270) CONC. DECK SPECIAL TYPE: Not Applicable
 (221) STRUCTURAL STEEL: Not Applicable (233) DECK - COMP/NON-COMP: Non-Composite
 (107) DECK STRUCTURE TYPE: Concrete Cast-in-Place (259) STAY-IN-PLACE FORMS:
 (235) PARAPET: Concrete ornamental (open)
 (236) RAILING: Steel - One Strand (structural) None - None
 (237) FENCING: None - None
 (278) PAINT SYSTEM: Not Applicable
 (344) PAINT COLOR/NUMBER: Not Applicable
 (345) YEARS PAINTED:

GEOMETRICS

(112) NBIS BRIDGE LENGTH:	<input type="text" value="N"/>	(49) STRUCTURE LENGTH:	<input type="text" value="0000244"/>
(210) NUMBER OF SPANS:	<input type="text" value="001"/>	(45) # SPANS IN MAIN UNIT:	<input type="text" value="001"/>
(46) # APPROACH SPANS:	<input type="text" value="0000"/>	(209) CONTINUOUS SPANS:	<input type="text" value="N"/>
(48) LENGTH MAX SPAN:	<input type="text" value="0018"/>	(238) # STRINGERS - ORIGINAL:	<input type="text" value="00"/>
(240) SPACING - ORIGINAL:	<input type="text" value="N"/>	(239) # STRINGERS - WIDENED:	<input type="text" value="00"/>
(241) SPACING - WIDENED:	<input type="text" value="N"/>	(33) BRIDGE MEDIAN:	<input type="text" value="0"/>
(50) CURB/SIDEWALK WIDTHS:	<input type="text" value="000"/> <input type="text" value="000"/>	(205) MEDIAN WIDTH:	<input type="text" value="000"/>
(51) DECK CURB-CURB WIDTH:	<input type="text" value="0254"/>	(32) APPROACH ROAD WIDTH:	<input type="text" value="00"/> <input type="text" value="024"/> <input type="text" value="00"/>
(52) DECK OUT-OUT WIDTH:	<input type="text" value="0280"/>	(10) INVENT ROUTE, MIN VERT CLEAR:	<input type="text" value="9999"/>
(53) BRIDGE ROADWAY, MIN VERTCLEAR:	<input type="text" value="9999"/>	(47) INVENT ROUTE, TOTAL HORIZ CLEAR:	<input type="text" value="254"/>
(54) MIN. VERT. UNDERCLEARANCE:	<input type="text" value="N"/> Feature not a highway or a railroad	<input type="text" value="A"/> < 10'	
(55) MIN. LAT. CLEARANCE (RIGHT):	<input type="text" value="N"/> Feature not a highway or a railroad	<input type="text" value="000"/>	
(56) MIN. LAT. CLEARANCE (LEFT):	<input type="text" value="000"/>	(342) HORIZ CLEARANCE (ON):	<input type="text" value="2504"/> <input type="text"/>
(34) SKEW, IN DEGREES:	<input type="text" value="00"/>	(280) HORIZ CLEARANCE (UNDER):	<input type="text" value="N"/> <input type="text"/>
(35) STRUCTURE FLARED:	<input type="text" value="N"/>	(253) NUMBER OF CELLS:	<input type="text" value="N"/>
(256) SPAN OF CELLS:	<input type="text" value="N"/>	(254) RISE:	<input type="text" value="N"/>
		(258) EARTH FILL:	<input type="text" value="N"/>
		(343) CENTERLINE LENGTH (Culverts/Pipes):	<input type="text" value="N"/>
(223) SHOULDER WIDTHS:	<input type="text" value="N"/> <input type="text" value="N"/> <input type="text" value="N"/> <input type="text" value="N"/>		
(264) TYPE AND SPAN:	<input type="text" value="CS 17'-9"/>		

BRIDGE NUMBER: M-0056X01

LOAD RATINGS AND POSTINGS

- (41) STATUS: Open, no restriction
- (31) DESIGN LOAD: Unknown
- (398) PEDESTRIAN LOADING:
- (399) RAILROAD LOADING:
- (70) POSTING: Equal to or above legal loads
- (65) METHOD USED TO DETERMINE INVENTORY RATING: 5 No rating analysis performed
- (63) METHOD USED TO DETERMINE OPERATING RATING: 5 No rating analysis performed

(224) WEIGHT POSTED:

(New Split)

(66) INVENTORY RATING:

(64) OPERATING RATING:

(400) DATE OF RATING:

FORM 6 OF 13

	INVENTORY RATING	OPERATING RATING
HL-93 Vehicle	(402)	(401)
H-15 Vehicle	(404) 150	(403) 150
T3 (Dump Truck) Vehicle	(406) 330	(405) 330
T4 Reduced Lift Axle Vehicle	(408)	(407)
HS Vehicle	(410) 360	(409) 360
3S2 Vehicle	(412) 400	(411) 400
150K Vehicle	(414)	(413)
90K Permit Combination Vehicle	(416)	(415)
90K Mobile Crane Vehicle	(418)	(417)
90K Cargo Vehicle	(420)	(419)
80K Cargo Vehicle	(422)	(421)
120K Vehicle	(424)	(423)
108K Mobile Crane Vehicle	(426)	(425)
120K Mobile Crane Vehicle	(428)	(427)

- (225) SPEED LIMIT ON STRUCTURE:
- (226) MIN VERT CLEARANCE OVER ROADWAY POSTED: Posting signs not required
- (227) MIN VERT UNDERCLEARANCE POSTED: Posting signs not required

CONDITION INSPECTION

FORM 7 OF 13

Routine Inspection Inspection Month (91) Frequency Due Date (90) Inspection Date (290) Inspection Report Completion Date
 09 24 12/27/2021 12/27/2019 11/09/2017

Critical Feature Inspections	(291) Inspection Month	(92) Frequency	Due Date	(93) Critical Feature Inspection Date
(A) Fracture Critical Members		N		
(B) Underwater Inspection		N		
(C) Special Inspection		N		
(D) Hands-on Railroad		N		
(E) Confined Space		N		
(F) Ultrasonic Testing (UT) Pin		N		
(G) Ultrasonic Testing (UT) Anchor		N		
(H) Post Tensioning Bar		N		
(I) Cathodic Protection		N		
(J) Consultant		N		
(K) Movable Bridge		N		
(L) Suspension Bridge		N		
(M) Cable		N		
(N) Monitor		N		
(P) Flood				
(Q) Damages				
(R) Inquires				

(58) DECK: Fair Condition (59) SUPERSTRUCTURE: Fair Condition
 (60) SUBSTRUCTURE: Satisfactory Condition (61) CHANNEL/PROTECTION: Bank slump, widespread minor damage
 (62) CULVERTS: Not Applicable
 (310) INSPECTION DATA UPDATE DATE: (312) LEAD INSPECTOR:
 (311) INSPECTION TEAM: (313) BRIDGE INSPECTOR:
 (314) HOURS TO INSPECT: (316) DECK PLANKING %: (315) DECK PUNCTURES %:
 (317) DECK PATCHING %: (318) BLOCKING: (319) POWER WASHING:
 (320) IDENTIFICATION NO.: (321) INVENTORY DIRECTION:
 (324) NIGHT WORK: (325) WEEKEND WORK:
 (322) LOOKING TOWARD:
 (326) MAINTENANCE OF TRAFFIC STANDARDS:
 (327) MOT COMMENTS:
 (328) LOCATION OF MIN. VERT. UNDERCLEARANCE:

BRIDGE NUMBER: M-0056X01

(329A) CRITICAL FINDINGS: (329B) CRITICAL FINDINGS DATE:

(330) CRITICAL FINDINGS COMMENTS:

(331) CAUTION COMMENTS:

(332) UNDERCLEARANCE POSTING SIGNS: Posting signs not required

(340) INSPECTION EQUIPMENT:

<input type="checkbox"/> W	Waders	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> L	Ladder	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		<input type="checkbox"/>	

(333) MHOI: N (334) MHOI LOCATIONS:

(335) ADVANCED NOTIFICATION: N

(336) ADVANCED NOTIFICATION COMMENTS:

APPRAISAL

FORM 8 OF 13

(67) STRUCTURAL EVALUATION:	<input type="text" value="5"/>	BSR	(68) DECK GEOMETRY:	<input type="text" value="2"/>
(69) UNDERCLEARANCE:	<input type="text" value="N"/>	64.4	(72) APPROACH ALIGNMENT:	<input type="text" value="8"/>
(71) WATERWAY ADEQUACY:	<input type="text" value="6"/>			
(36) TRAFFIC SAFETY FEATURES	RAILINGS: <input type="text" value="0"/>	Does NOT meet Standards		
	TRANSITIONS: <input type="text" value="0"/>	Does NOT meet Standards		
	APPROACH BARRIER: <input type="text" value="0"/>	Does NOT meet Standards		
	APPROACH BARRIER ENDS: <input type="text" value="1"/>	Meets Standards		
(113) SCOUR EVALUATION:	<input type="text" value="5B"/>	Bridge foundations determined to be stable due to assessment of scour conditions. Scour is determined to be within the limits of footings or piles. Scour has been found during an inspection.		
(DT) DEDUCT CODE:	<input type="text" value="Z"/>	<input type="text"/>		
(STAT) STATUS:	<input type="text" value="2"/>	Functionally Obsolete		

NAVIGATION

FORM 9 OF 13

(38) NAVIGATION CONTROL:	<input type="text" value="0"/>	(39) NAV VERT CLEARANCE:	<input type="text" value="000"/>
(40) NAV HORIZONTAL CLEARANCE:	<input type="text" value="0000"/>		
(111) PIER/ABUTMENT PROTECTION:	<input type="text"/>		
(116) MIN NAV VERT CLEARANCE, VERT LIFT BRIDGE:	<input type="text"/>		
(247) DESIGN YEAR STORM:	<input type="text" value="000"/>	(248) RUN-OFF Q:	<input type="text" value="000000"/>
(249) DRAINAGE AREA:	<input type="text" value="000000"/>	(250) STRUCTURE IN TIDAL AREA:	<input type="text" value="N"/> No
(251) HIGH WATER ELEVATION:	<input type="text" value="0000"/>		
(252) YEAR HIGH WATER ELEVATION - LATEST:	<input type="text" value="0000"/>		

HISTORY AND PROPOSED IMPROVEMENTS

FORM 10 OF 13

(201) CONTRACT NUMBERS:	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>
(203) SHA SPEC- YEAR:	<input type="text" value="0000"/>	<input type="text"/>
(204) AASHTO SPEC-YEAR:	<input type="text" value="0000"/>	<input type="text"/>
(75) TYPE OF PROPOSED WORK:	<input type="text"/>	(76) LENGTH OF IMPROVEMENT:
(94) BRIDGE IMPROVE COST:	<input type="text" value="000000"/>	(95) ROADWAY IMPROVE COST:
(96) TOTAL PROJECT COST:	<input type="text" value="000000"/>	(97) YEAR OF IMPROVEMENT:

MISCELLANEOUS

FORM 11 OF 13

(244) SIGNS ON STRUCTURE: No

(245) BRIDGE ROADWAY LIGHTING: No

(246) PROVISION FOR ROADWAY LIGHTING: No

(260) UTILITIES - ON:

(261) UTILITIES - UNDER:

- Not Applicable
- Not Applicable
- Not Applicable
- Not Applicable
- Not Applicable

- Electric
- Telephone
- T.V. Cable
- Not Applicable
- Not Applicable

REMARKS:

2018 ADT=11601 per SHA website; Future ADT value was revised based on an MNCPPC annual growth rate of 0.83%. Year Rated estimated.

NOISE BARRIER

FORM 12 OF 13

(501) TYPE:

(502) ALIGNMENT:

(503) LENGTH: (504) MAXIMUM HEIGHT:

(505) FOUNDATION TYPES: (506) FOUNDATION LENGTH:

(507) PANEL WIDTH: (508) NUMBER OF SPECIAL PANEL(S):

(509) PANEL MATERIAL: (510) FACING (Acoustic Treatment):

(511) PANEL FINISH: (512) PANEL COLOR:

(513) FEDERAL COLOR: (514) STACKED PANELS:

(515) NOISE BARRIER POST MATERIAL: (516) ACCESS DOORS:

(517) FIRE HYDRANTS: (518) RETROFITS:

RETAINING WALL

FORM 13 OF 13

(550) TYPE: (551) ALIGNMENT:

(552) SEGMENT LENGTH(S): (553) MAX. EXPOSED HEIGHT:

(554) FOUNDATION TYPES: (555) TIEBACK:

(556) FACING: (557) WITH FENCE OR RAIL:

(558) WITH NOISE BARRIER: (559) PURPOSE:



Montgomery County, Maryland
Department of Transportation
Division of Transportation Engineering
100 Edison Park Drive, 4th Floor
Gaithersburg, Maryland 20878