

BIN: 5516072 **MP:** 225.48

Region: 2 **County:** 3 HERKIMER

Feature Carried: 90IX EB

Feature Crossed: CR 53 MILLERS GROVE RD

General Recommendation: 4

Condition Rating: 3.83

Inspect Date: 04/16/2015



New York State Thruway Authority - Bridge Inspection Report

2015 INSPECTION

FLAGS	<input type="checkbox"/> RED	<input type="checkbox"/> YELLOW	<input type="checkbox"/> SAFETY	<input checked="" type="checkbox"/> NONE
	<input type="checkbox"/> PIA		<input type="checkbox"/> PIA	<input type="checkbox"/> REMOVE / INACTIVE

REVIEWED BY: Michael Sullivan
Michael Sullivan

TITLE: Quality Control Engineer PE# 72693

NEW YORK STATE THRUWAY AUTHORITY



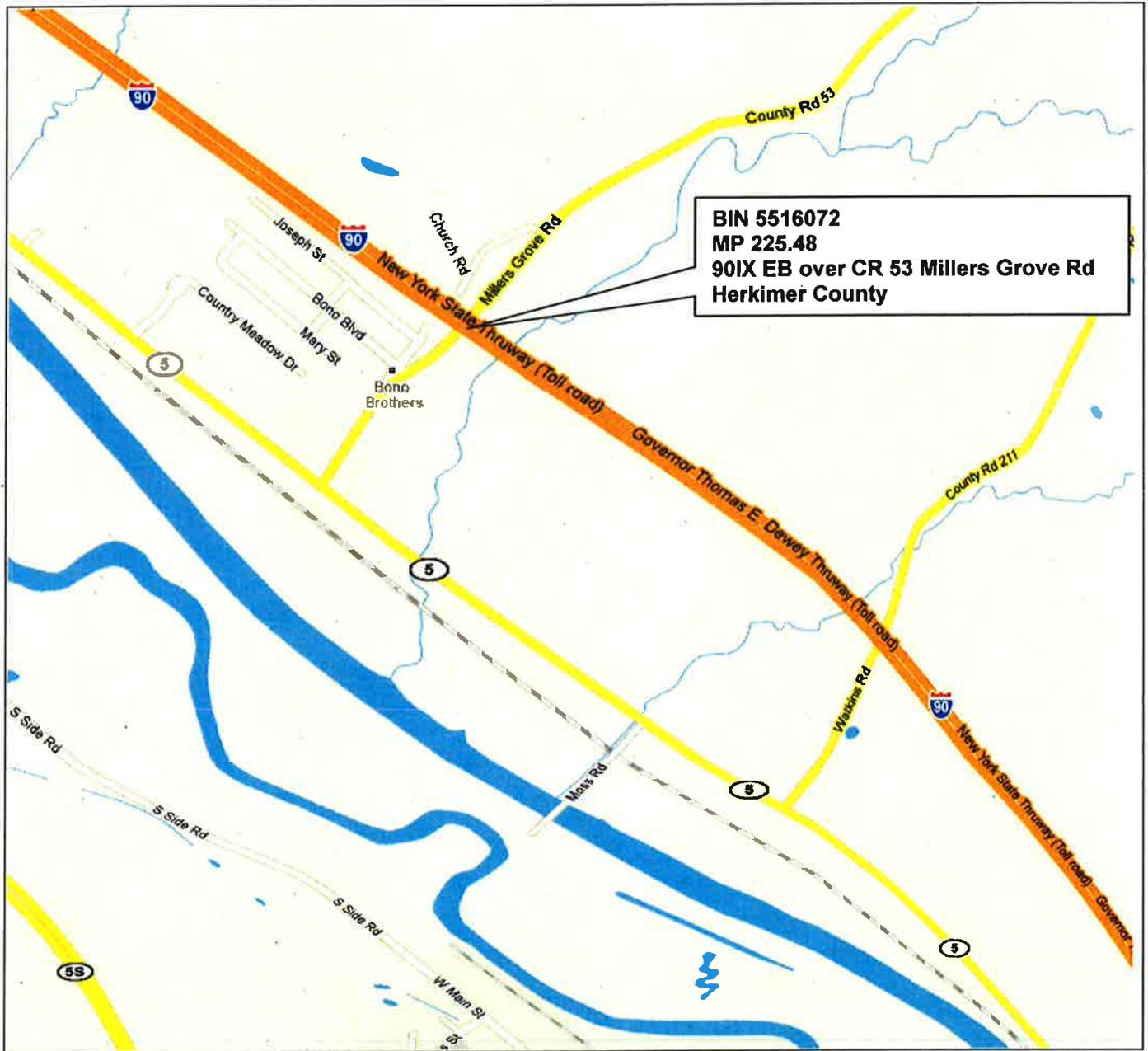
BIN: 5516072

MP: 225.48

LOCATION MAP

Feature Carried: 90IX EB

Feature Crossed: CR 53 Millers Grove Rd



INSPECTION

TP349

NYS DEPT OF TRANSPORTATION
BRIDGE INSPECTION REPORT

SHEET 1 OF 12

DATE: MO DAY YEAR

13 14 15 16 17 18

RC - BIN:

2	3	-	5	5	1	6	0	7	2
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 MP: 225.48

TEAM LEADER: Douglas Hilleges
Signature: *Douglas Hilleges*

P.E. NUMBER: 63759 STATE: NY

ASST. TEAM LEADER: Michael Jauch

RAMP BRIDGE ATTACHED TO SPAN: _____ BIN: _____

INSPECTION AGENCY: TYPE OF INSPECTION: 1-BIENNIAL 3- IN DEPTH 5- SPECIAL
2- INTERIM 4- NONE (UNDER CONTRACT)

STATE HWY. NO: _____ MILEPOINT: _____ POLIT. UNIT: Schuyler

FEATURE(S) CARRIED: 90IX EB

FEATURE(S) CROSSED: CR 53 MILLERS GROVE RD

TOTAL SPANS: 1 BRIDGE ORIENTED: Southeast YEAR BUILT: 1954

BRIDGE TYPE: Steel Stringer/Multi-Beam or Girder AADT/YEAR: 10940/2012

VERTICAL CLEARANCE AND LOAD POSTINGS	ON: <u>NOT POSTED</u>	Under: <u>NOT POSTED</u>	Loading: _____	<input type="text" value="06"/> <input type="text" value="2"/> <small>118 120</small>
	<input type="text" value="0"/> Ft <input type="text" value="0"/> In <small>19 20 21 22</small>	<input type="text" value=""/> Ft <input type="text" value=""/> In <small>23 24 25 26</small>	<input type="text" value=""/> TONS <small>27 28</small>	

	Begin	End	WINGWALLS:	Begin	End	APPROACHES:
Joint with deck	<input type="text" value="3"/> <small>22</small>	<input type="text" value="3"/> <small>23</small>	Walls	<input type="text" value="4"/> <small>40</small>	<input type="text" value="3"/> <small>41</small>	Drainage <input type="text" value="4"/> <small>53</small>
Bearings, anchors bolts, pads	<input type="text" value="3"/> <small>24</small>	<input type="text" value="3"/> <small>25</small>	Footings	<input type="text" value="9"/> <small>42</small>	<input type="text" value="9"/> <small>43</small>	Embankment <input type="text" value="6"/> <small>54</small>
Bridge seat and pedestals	<input type="text" value="4"/> <small>26</small>	<input type="text" value="4"/> <small>27</small>	Erosion or scour	<input type="text" value="5"/> <small>44</small>	<input type="text" value="5"/> <small>45</small>	Settlement <input type="text" value="5"/> <small>55</small>
Backwall	<input type="text" value="3"/> <small>28</small>	<input type="text" value="3"/> <small>29</small>	Piles	<input type="text" value="9"/> <small>46</small>	<input type="text" value="9"/> <small>47</small>	Erosion <input type="text" value="5"/> <small>56</small>
Stem (breastwall)	<input type="text" value="3"/> <small>30</small>	<input type="text" value="4"/> <small>31</small>	STREAM CHANNEL:			Pavement <input type="text" value="5"/> <small>57</small>
Erosion or scour	<input type="text" value="5"/> <small>32</small>	<input type="text" value="5"/> <small>33</small>	Stream Alignment	<input type="text" value="8"/> <small>48</small>		Guide Railing <input type="text" value="5"/> <small>58</small>
Footings	<input type="text" value="9"/> <small>34</small>	<input type="text" value="9"/> <small>35</small>	Erosion And Scour	<input type="text" value="8"/> <small>49</small>		GENERAL RECOMMEND <input type="text" value="4"/> <small>60</small>
Piles	<input type="text" value="9"/> <small>36</small>	<input type="text" value="9"/> <small>37</small>	Waterway Opening	<input type="text" value="8"/> <small>50</small>		
Recommendation	<input type="text" value="3"/> <small>38</small>	<input type="text" value="4"/> <small>39</small>	Bank Protection	<input type="text" value="8"/> <small>51</small>		

ACCESS CATEGORY:

Walk-Up
Lift Small (<= 30 ft.)

FLAG ISSUED?

NONE:
YELLOW:
RED:
SAFETY:

BRIEF REASON

Vulnerability Reassessment Review Recommended?

HYD OVL STL COL CON SMC

65 70
1 = YES
2 = NO
3 = NA
X = NOT USED THIS CYCLE

REVIEWED BY:	<u>Michael Sullivan</u> Michael Sullivan
P.E. NUMBER:	<u>72693</u>
DATE:	<u>06/10/2015</u>

RC - BIN:

2	3	-	5	5	1	6	0	7	2
1	2	3	4	5	6	7	8	9	

NYS DEPT OF TRANSPORTATION
BRIDGE INSPECTION REPORT

SHEET 2 OF 12

TEAM LEADER: Douglas Hilleges

ASST. TEAM LEADER: Michael Jauch

DATE: MO 04 DAY 16 YEAR 15
13 14 15 16 17 18

OTHERS: _____

FEATURE(S) CARRIED: 90IX EB

FEATURE(S) CROSSED: CR 53 MILLERS GROVE RD

SPAN NO.	DECK ELEMENTS						SUPERSTRUCTURE						PIER						UTILITIES										
	Wearing surface	Curbs	Sidewalk & Fascias	Railings & Parapets	Scuppers	Gratings	Median	Mono Deck Surface	Deck Structural	Primary Members	Secondary Members	Paint	Joints	Recommendation	Brgs., Anchor Bolts, Pads	Pedestals	Top of Pier Cap Beam	Stem Solid Pier	Capbeam	Pier Columns	Footings	Erosion or Scour	Piles	Recommendation	Lighting Standards and Fixtures	Sign Structures	Utilities and Utilities Supports		
10	11	12	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
0	0	1	5	3	5	3	8	8	8	8	3	5	6	3	8	4	8	8	8	8	8	8	8	8	8	8	8	6	8

DIVING INSPECTION REQUIRED? Yes No If yes, indicate year of last diving inspection.

SPECIAL EMPHASIS INSPECTION REQUIRED: Yes No
If yes, indicate type below

- NON-REDUNDANT/FRACTURE CRITICAL
- PIN AND HANGERS
- FATIGUE-PRONE WELDS (AASHTO D, E, OR E') Cat E field welds at jacking stiff, 100% hands-on insp. performed.
- NON-CATEGORIZED FATIGUE-PRONE DETAILS
- OTHERS (SPECIFY) Out-of-plane bending 100% hands-on inspection performed.

RECOMMEND FURTHER INVESTIGATION 1 = NO 2 = YES
19

REMARKS

FIELD NOTES

DATE	TIME OF ARRIVAL	TIME OF DEPARTURE	TEMP (F/C)	WEATHER CONDITIONS / ACCESS EQUIPMENT	Field Notes
04/14/2015	11:00:00 am	12:45:00 pm	61/16	Sunny/Walking	
04/16/2015	9:15:00 am	11:30:00 am	61/16	Sunny/Bucket Truck	Inspection Complete

FEDERAL RATING FORM

NYS DEPT OF TRANSPORTATION
BRIDGE INSPECTION REPORT

MP: 225.48

RC - BIN:

1	2	3	4	5	6	7	8	9	
2	3	-	5	5	1	6	0	7	2

SHEET 3 **OF** 12

TEAM LEADER: Douglas Hilleges

DATE:

MO	DAY	YEAR
04	16	15
13 14	15 16	17 18

ASST. TEAM LEADER: Michael Jauch

FEATURE(S) CARRIED: 90IX EB

FEATURE(S) CROSSED: CR 53 MILLERS GROVE RD

Description	Deck	Superstructure	Substructure	Channel	Culvert
Fed. Item #	58	59	60	61	62
RATING	4	6	4	N	N
	19	20	21	22	23

Notes:

- 1) See attached explanations for Federal Item Nos. a) 58- Deck, 59- Superstructure, 60- Substructure; b) 61- Channel and Channel Protection; c) 62- Culverts.

- 2) Item Nos. 58, 59, and 60 shall be coded N for all culverts.

- 3) A rating or an N must be entered for all Federal Items. Blanks are not acceptable.

INSPECTED BY: Douglas Hilleges TITLE: Syracuse BSIE

FEATURE(S) CARRIED: 901X EB

FEATURE(S) CROSSED: CR 53 MILLERS GROVE RD

BRIDGE INSPECTION AND CONDITION REPORT
SUPPLEMENTARY INSPECTION ACTIVITIES

BIN PLATE LOCATION/ CONDITION	<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Missing <input type="checkbox"/> Damaged/Defaced <input checked="" type="checkbox"/> End Abutment <input type="checkbox"/> Begin Abutment
	Located near toe of end right wingwall.
FLOOD ELEVATION MARKINGS	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Satisfactory <input type="checkbox"/> Missing <input type="checkbox"/> Damaged/Illegible (described below)
ELECTRICAL	<input checked="" type="checkbox"/> Class A (Caution) <input type="checkbox"/> Class B (Warning) <input type="checkbox"/> Class C (Danger)
SPECIAL EMPHASIS	<input type="checkbox"/> Not Required <input checked="" type="checkbox"/> A 100% Hands-On Inspection Given To: See General Comments below.
	<input checked="" type="checkbox"/> No Defects Found <input type="checkbox"/> Defects Described Below
UPGRADES REPORT	<input type="checkbox"/> None <input checked="" type="checkbox"/> Minor (see below) <input type="checkbox"/> Major Rehab (see below) (Contract #:)

The following work was completed (explain to the right of any item checked: repaired, replaced, begin, end, left, right, etc. Use space below to explain complex or unusual situations or other work):

- | | |
|--|---|
| <input type="checkbox"/> Superstructure | <input type="checkbox"/> Curb, Sidewalk, Fascia |
| <input checked="" type="checkbox"/> Deck
Delaminated area of concrete removed by maintenance personnel. | <input checked="" type="checkbox"/> Bridge Rail
Split left railing post 3 repaired by maintenance personnel. |
| <input type="checkbox"/> Wearing Surface | <input type="checkbox"/> Approach Rail |
| <input type="checkbox"/> Appr. Pavement | <input type="checkbox"/> Signage |
| <input type="checkbox"/> Substructure | <input type="checkbox"/> Other (explain below) |

GENERAL COMMENTS/UNUSUAL CONDITIONS: Unusual Conditions (explain below)

SPECIAL EMPHASIS:

1. Web gap at diaphragm connections to fascia girders is < 4Tw, however detail is not vulnerable to out-of-plane fatigue cracking as skew < 30 degrees and structure has no history of cracking. 100% hands-on inspection was performed. No defects found.
2. Category E field welds at jacking stiffeners received 100% hands-on inspection, no defects found.

INSPECTED BY: Douglas Hilleges TITLE: Syracuse BSIE

FEATURE(S) CARRIED: 90IX EB

FEATURE(S) CROSSED: CR 53 MILLERS GROVE RD

BRIDGE INSPECTION MPT REQUIREMENTS

Instructions: Circle Thruway direction, then check yes or no for each lane/shoulder closure.
Comment on reason for each closure. Examples: cover plates, impact damage, etc.

EAST BOUND	LANE CLOSURE			
Driving lane shoulder	<input type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Comments: None
Driving lane	<input type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Comments: None
Center lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A
Mall lane	<input type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Comments: None
Mall lane shoulder	<input type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Comments: None
Ramp lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A

	LANE CLOSURE			
Driving lane shoulder	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A
Driving lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A
Center lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A
Mall lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A
Mall lane shoulder	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A
Ramp lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A

NOTES:

No MPT needed on Thruway. Lane closures with flaggers are required on CR 53 Millers Grove Rd where traffic volumes are very low. Traffic control performed by bridge inspection crew.

RATING FORM: TP349				
ITEM:	TITLE:	RATINGS		
	REMARKS:	NEW:	PRE:	PHOTO #:

22	Joint With Deck (Begin)			
	Saw & seal of asphalt over joint with deck was placed across only the passing lane at both joints; asphalt is transversely cracked atop the remainder of the joint area at both abutments. Both joints have leakage below causing deterioration; leakage is more extensive at begin in bays 1, 2, & 6 and at end in bays 1, 2, 3 & 6.	3	3	1, 2
23	Joint With Deck (End)			
	Saw & seal of asphalt over joint with deck was placed across only the passing lane at both joints; asphalt is transversely cracked atop the remainder of the joint area at both abutments. Both joints have leakage below causing deterioration; leakage is more extensive at begin in bays 1, 2, & 6 and at end in bays 1, 2, 3 & 6.	3	3	1, 2
24	Bearings, Anchor Bolts, Pads (Begin)			
	All begin fixed bearings have minor rusting, fascias are worst having minor delamination building. Begin right fascia bearing is buried with backwall spillings; bearing 1 has minor build up of spillings. Remainder of begin bearings are clear.	3	3	3
25	Bearings, Anchor Bolts, Pads (End)			
	End expansion bearings 3 thru 7 are overextended and cantilevered off back of masonry plate by up to 1/2". End of girder 3 is in contact with backwall preventing further expansion of bearing. End bearing 2 is even with back of masonry plate; end bearing 1 is in good position. Bearing 7 is delaminated and appears frozen.	3	3	4, 5
26	Bridge Seat and Pedestals (Begin)			
	Begin seat area in bay 6 is partially covered with wet backwall spillings. Where exposed, top of seat is hollow, soft, and spalled 3" to 4" deep; spalling extends to 5" deep along front edge of seat in bay 6. Remainder of seat and all begin pedestals are solid having areas of minor surface scale.	4	4	6
27	Bridge Seat and Pedestals (End)			
	End seat between pedestals 3 & 4 is surface scaled, hollow and spalling 1 1/2" deep. Front edge of seat for a 4' length at pedestal 6 (incorrectly noted at ped 5 in 2013) is cracked with minor hollowness. End pedestal 4 on right side and end pedestal 6 on right side each have a hairline to 1/16" open vertical crack extending from anchor bolt, concrete remains solid. End pedestals 4 & 5 both have hairline vertical crack on left side at 1" +/- from backwall. Remainder of seat and end pedestals are good, having minor areas of surface scale/spall.	4	4	5, 7

RATING FORM: TP349					
ITEM:	TITLE:	RATINGS			
	REMARKS:	NEW:	PRE:	PHOTO #:	

28	Backwall (Begin)	3	3	8, 9
<p>Begin backwall has minor honeycombed concrete in upper 1/2 +/- of all bays with random vertical cracks and areas of hollowness as follows: bay 1, 10% hollow with minor 1" deep spalling behind G1; bay 2, 60% hollow with 1" deep spalling to 6" wide along top edge; bay 3, 40% hollow; bay 4, 15% hollow; bay 5, 0; bay 6 has honeycombed concrete with efflorescence and hollowness throughout, the upper 3/4 for a 4 1/2' length behind G7 is spalled 6" to 9" deep (total depth of backwall is 15") with reinforcing bars exposed; remaining concrete in spall area is wet and soft.</p>				
29	Backwall (End)	3	4	10
<p>End backwall, bay 3 has a horizontal/diagonal crack/fracture near mid-height with concrete spalled to 18" wide x 4" deep along crack; area above crack is hollow. Remainder of end backwall has minor honeycombed concrete throughout bays 3, 4, 5 & 6 and random hairline vertical cracks. Backwall has full height hairline to 1/8" open vertical crack above construction joint in stem just left of pedestal 5. Additionally, at 3" to 6" from each side, backwall has a vertical/diagonal crack open 1/4" to 1/2".</p>				
30	Stem (Breastwall) (Begin)	3	3	11
<p>Begin stem has map cracked/hollow concrete leaching efflorescence full height for 5' to 9' wide at left side. 15' wide, full height at right side has honeycombed concrete with upper half leaching efflorescence, very hollow, soft and spalling to 5" deep. Remainder of begin stem is solid with random hairline vertical cracks.</p>				
31	Stem (Breastwall) (End)	4	4	12
<p>Lower 6' of end stem is very hollow for 10' at left side with 3" to 4" deep spalling for 1' adjacent to end left wingwall. Delaminated concrete to 3' wide extends full height adjacent to previous repair at both sides. 6sf area of delaminated concrete is also present at base adjacent to construction joint at left of G5. Remainder of end stem is solid with minor areas of honeycombed concrete, worst area is upper 1/3 between pedestals 3 & 4.</p>				
32	Erosion or Scour (Begin)	5	5	
<p>Area around bridge has a high water table and significant runoff in wet weather. In the past, ground water flow has been evident through vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have sidewalk slab units settled to 6" due to water flow and wash out of underlying fine material. In 2009 the County installed an underdrain beneath Millers Grove Road. The end abutment weep drain, which outlets in front of the end right wingwall, was exposed and cleaned out by Thruway personnel. These procedures continue to alleviate the problem as no water problems are evident during this inspection. Piles exist at structure.</p>				

RATING FORM: TP349					
ITEM:	TITLE:			RATINGS	
	REMARKS:			NEW:	PRE:
				PHOTO #:	

33 Erosion or Scour (End)

Area around bridge has a high water table and significant runoff in wet weather. In the past, ground water flow has been evident through vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have sidewalk slab units settled to 6" due to water flow and wash out of underlying fine material. In 2009 the County installed an underdrain beneath Millers Grove Road. The end abutment weep drain, which outlets in front of the end right wingwall, was exposed and cleaned out by Thruway personnel. These procedures continue to alleviate the problem as no water problems are evident during this inspection. Piles exist at structure.

5 5

40 Walls (Begin)

Begin right wingwall has cracking with efflorescence and hollow concrete full height for 4' to 5' wide adjacent to stem; remainder has fine damp tight pattern cracking for 70% area. Begin left wingwall is okay.

4 4 11

41 Walls (End)

End left wingwall has cracking with hollow to very hollow concrete for 80% +/- of its area; 3' to 6' wide adjacent to stem is leaching efflorescence and starting to spall 2" to 3" deep.
End right wingwall has delaminated concrete for 60% +/- of its area. 4' to 6' wide full height adjacent to stem has cracking with efflorescence and very hollow concrete; upper 6' in this area is spalled to 4" deep with reinforcing exposed.

3 3 13, 14

44 Erosion and Scour (Begin)

Area around bridge has a high water table and significant runoff in wet weather. In the past, ground water flow has been evident through vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have sidewalk slab units settled to 6" due to water flow and wash out of underlying fine material. In 2009 the County installed an underdrain beneath Millers Grove Road. The end abutment weep drain, which outlets in front of the end right wingwall, was exposed and cleaned out by Thruway personnel. These procedures continue to alleviate the problem as no water problems are evident during this inspection. Piles exist at structure.

5 5

45 Erosion And Scour (End)

Area around bridge has a high water table and significant runoff in wet weather. In the past, ground water flow has been evident through vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have sidewalk slab units settled to 6" due to water flow and wash out of underlying fine material. In 2009 the County installed an underdrain beneath Millers Grove Road. The end abutment weep drain, which outlets in front of the end right wingwall, was exposed and cleaned out by Thruway personnel. These procedures continue to alleviate the problem as no water problems are evident during this inspection. Piles exist at structure.

5 5

RATING FORM: TP349					
ITEM:	TITLE:			RATINGS	
	REMARKS:			NEW:	PRE:
				PHOTO #:	

53 Drainage

Median shoulder areas of both approaches are settled 3" to 4" adjacent to bridge allowing water to pond; end approach is slightly worse having a 10' diameter depressed area allowing water ponding to reach within 5' +/- from edge of passing lane. Very minimal settlement is evident in travel lanes. Per 2014 inspection manual, condition of approach curb is now included with the rating of curb element on the structure.

4 4 15

55 Settlement

Median shoulder areas of both approaches are settled 3" to 4" adjacent to bridge allowing water to pond; end approach is slightly worse having a 10' diameter depressed area. Very minimal settlement is evident in travel lanes.

5 5

RATING FORM: TP350				
ITEM:	TITLE:		RATINGS	
	REMARKS:	SPAN:	NEW:	PRE:
				PHOTO #:

20 Curbs

Approach curbs are settled, displaced, and uneven to varying degrees in all quads. Begin right is worst as first 6' section of curb adjacent to bridge is broken, separated 3", and very loose in place.
Granite curb on both sides of bridge remains solidly in place.

1 3 5 16

22 Railings & Parapets

Rail and posts of 4 rail bridge rail have areas of pitting and delamination. Worst post locations are outside leg of right railing posts 3, 5, & 6 having pitting to 1/8" deep resulting in 50% loss to outside leg of these posts. Worst rail location is end 18" of right side top rail which is rusted completely through.
Right post 1 has a 1 1/2" x 3" rust through hole located on begin face at 5" above base just below bottom rail end cap.
Previous split post at left railing post 3 has been weld repaired.
Post remains bulged at base.

1 3 4 17, 18, 19

27 Deck Structural

70% +/- of overall deck area has damp and discolored concrete with cracking and efflorescence. Bays 1, 3, 5 & 6 are worse with deterioration full length of bridge. Bays 4, 5, & 6 have extensive areas of 2" +/- deep spalling with delaminated reinforcing bars exposed; worst are full length for 1' to 3' wide along each side of G5 top flange and a 15sf area near midspan of both bay 5 & bay 6. Previous small delaminated area near midspan of bay 5 has been removed by maintenance personnel.
Bay 3 has wood shoring installed to prevent deteriorated loose deck concrete from falling onto traffic, timbers are becoming discolored from water penetration.
Water and efflorescence are actively leaking along full length of right fascia girder top flange. Rusting and deck leakage is also evident along top flange for full length of G1 and end half of G3. See deck sketch.
Deck actively pumps under load causing impact to and deflection of girders. Full length of right 3 girders is worst where areas of deck spall expose up to 1/4" gaps between deck and girder top flanges. Plans indicate no shear studs.

1 3 3 20, 21, 22

28 Primary Members

Fascia girders have delamination and minor section loss of flanges; outside leg of right fascia girder is worst having 10% to 15% section loss randomly throughout bottom flange; remaining girders have < 5% bottom flange loss.
Fascia girders also have random areas of delamination and 1/8" deep pitting to lower 2" to 6" of girder webs resulting in locations of 15% to 20% section loss to the lower 6" of web.
Lower 6" of web in bearing area at end of girders 1 & 7 (fascia girders) are worst having pitting to 3/16" deep across entire width of web "column" bearing area resulting in an overall web loss of 20% in the bearing area.
Girders have minor deflection from live load impact.

1 5 5 23, 24, 25

RATING FORM: TP350

ITEM:	TITLE:		RATINGS			
	REMARKS:	SPAN:	NEW:	PRE:	PHOTO #:	

30 Paint

Paint failure with surface rust and delamination with minor section loss along fascia girder flanges and lower areas of webs. Interior girder flanges in areas of deck leakage have paint failure and minor surface rust, minimal section loss. 5% to 10% overall paint failure. Right fascia girder is worst having 70% paint failure to flanges and outside of web.

1 3 3 22, 24

44 Sign Structure

New horizontal clearance signs have been installed on existing posts at right (south) side of bridge on CR 53, Millers Grove Road.

1 6 5 26

PHOTOGRAPHS



NYS THRUWAY AUTHORITY BRIDGE INSPECTION REPORT SHEET 1 OF 15

BIN: 5516072

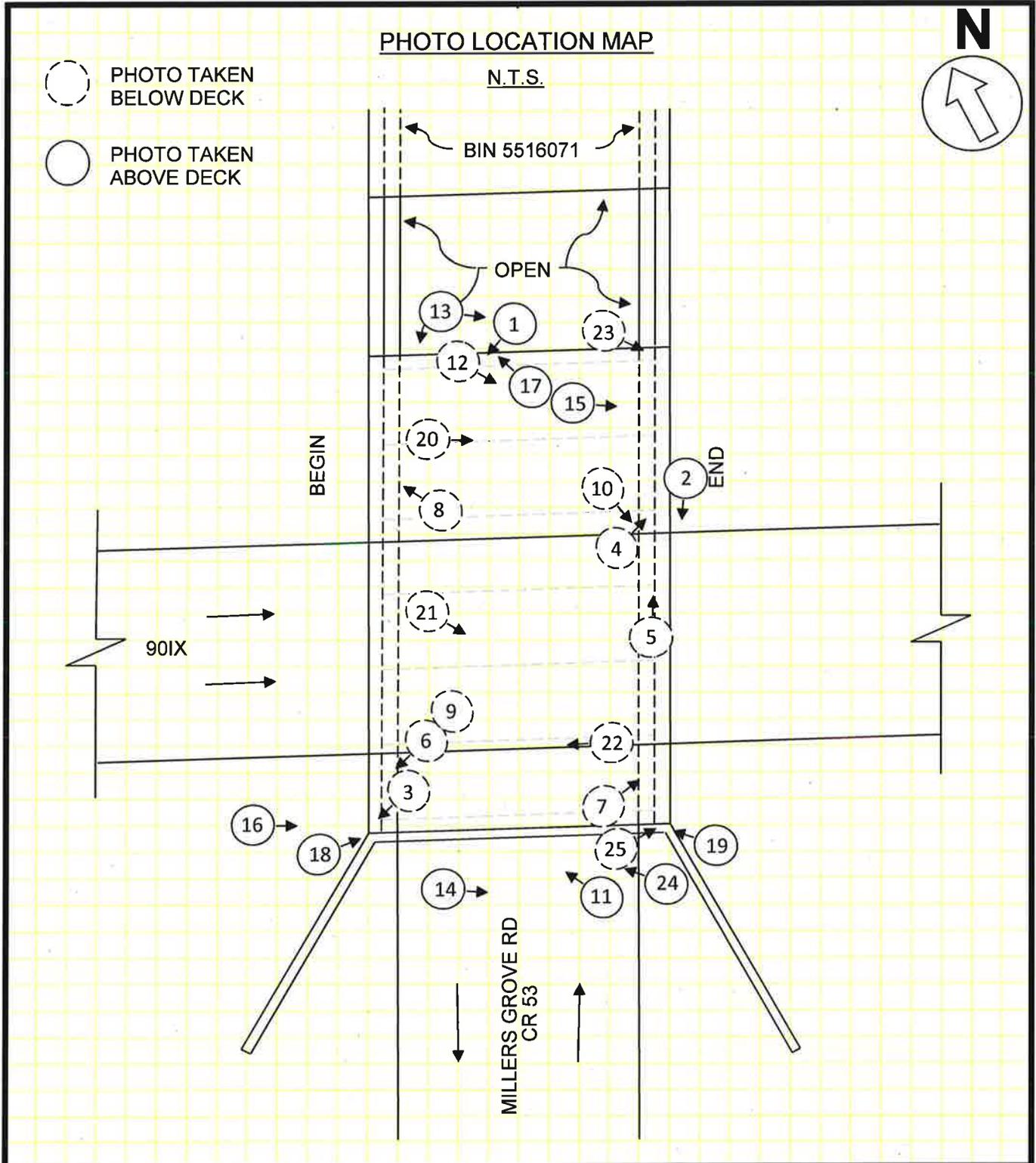
M.P.: 225.48

TEAM _____ **ASST. TEAM** _____

LEADER: Douglas R. Hilleges, P.E. **LEADER:** Michael Jauch **DATE:** 04/16/2015

Feature Carried: 90IX EB

Feature Crossed: CR 53 MILLERS GROVE RD



Location:	Photo Name:	Photo #:
Begin abutment.	225.48-349-22-00-15BegLt_.JPG	1

Description(s):

- Wet and stained due to joint leakage (typ of end joint).

Reference:

Form:	Item:	Item Desc:	Rate:
349	22	Joint With Deck (Begin)	3
349	23	Joint With Deck (End)	3



Location:	Photo Name:	Photo #:
Top of end joint.	225.48-349-23-00-15EnJtLt.JPG	2

Description(s):

- Saw cut placed only in passing lane, remainder of asphalt has transverse crack (typ of beg).

Reference:

Form:	Item:	Item Desc:	Rate:
349	22	Joint With Deck (Begin)	3
349	23	Joint With Deck (End)	3



Location:	Photo Name:	Photo #:
Begin bearing 7.	225.48-349-24-00-15BgBrg7.JPG	3

Description(s):

- Fixed bearing rusted and covered with backwall spallings.



Reference:

Form:	Item:	Item Desc:	Rate:
349	24	Bearings, Anchor Bolts, Pads (Begin)	3

Location:	Photo Name:	Photo #:
End expansion bearing 3.	225.48-349-25-00-15EnBrg3.JPG	4

Description(s):

- Bearing overextended; girder in contact with backwall preventing further expansion.



Reference:

Form:	Item:	Item Desc:	Rate:
349	25	Bearings, Anchor Bolts, Pads (End)	3

Location:	Photo Name:	Photo #:
End bearing & pedestal 4, right side.	225.48-349-27-00-15EnPed4.JPG	5

Description(s):

- Bearing overextended 1/2" beyond masonry plate.
- 1/16" open vertical crack at anchor bolt; concrete rings solid.



Reference:

Form:	Item:	Item Desc:	Rate:
349	25	Bearings, Anchor Bolts, Pads (End)	3
349	27	Bridge Seat and Pedestals (End)	4

Location:	Photo Name:	Photo #:
Begin seat, bay 6.	225.48-349-26-00-15Bay6_.JPG	6

Description(s):

- Seat area soft and spalled to 5" deep.



Reference:

Form:	Item:	Item Desc:	Rate:
349	26	Bridge Seat and Pedestals (Begin)	4

Location:	Photo Name:	Photo #:
End seat and pedestal 6.	225.48-349-27-00-15EnPed6.JPG	7

Description(s):

- Seat area cracked with minor delamination; vertical crack in pedestal.



Reference:

Form:	Item:	Item Desc:	Rate:
349	27	Bridge Seat and Pedestals (End)	4

Location:	Photo Name:	Photo #:
Begin backwall, bay 2.	225.48-349-28-00-15Bay2_.JPG	8

Description(s):

- Delaminated area of backwall (typ in most bays).



Reference:

Form:	Item:	Item Desc:	Rate:
349	28	Backwall (Begin)	3

Location:	Photo Name:	Photo #:
Begin backwall, bay 6.	225.48-349-28-00-15Bay6_.JPG	9

Description(s):
- Soft, severely spalled area of backwall.



Reference:

Form:	Item:	Item Desc:	Rate:
349	28	Backwall (Begin)	3

Location:	Photo Name:	Photo #:
End backwall, bay 3.	225.48-349-29-00-15Bay3_.JPG	10

Description(s):
- Diagonal crack/fracture of backwall.



Reference:

Form:	Item:	Item Desc:	Rate:
349	29	Backwall (End)	3

Location:	Photo Name:	Photo #:
Begin stem, right side.	225.48-349-30-00-15BgStem.JPG	11

Description(s):

- Delaminated, very soft/spalled area of concrete.
- Begin right wingwall is cracked/delaminated adjacent to stem.



Reference:

Form:	Item:	Item Desc:	Rate:
349	30	Stem (Breastwall) (Begin)	3
349	40	Walls (Begin)	4

Location:	Photo Name:	Photo #:
End stem, left half.	225.48-349-31-00-15EnStem.JPG	12

Description(s):

- Delaminated concrete at base and full height adjacent to repair.



Reference:

Form:	Item:	Item Desc:	Rate:
349	31	Stem (Breastwall) (End)	4

Location:	Photo Name:	Photo #:
End left wingwall.	225.48-349-41-00-15EnLtWW.JPG	13

Description(s):

- Delaminated across 80% of face; spalling adjacent to stem.



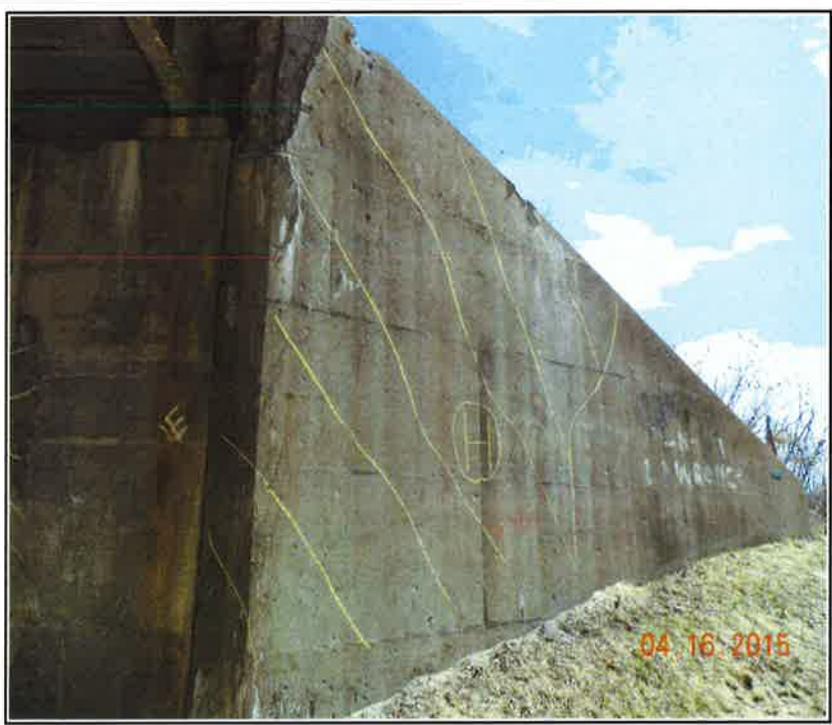
Reference:

Form:	Item:	Item Desc:	Rate:
349	41	Walls (End)	3

Location:	Photo Name:	Photo #:
End right wingwall.	225.48-349-41-00-15EnRtWW.JPG	14

Description(s):

- Delaminated across 60% of face; spalling at top adjacent to stem.



Reference:

Form:	Item:	Item Desc:	Rate:
349	41	Walls (End)	3

NYS THRUWAY AUTHORITY
BRIDGE INSPECTION REPORT

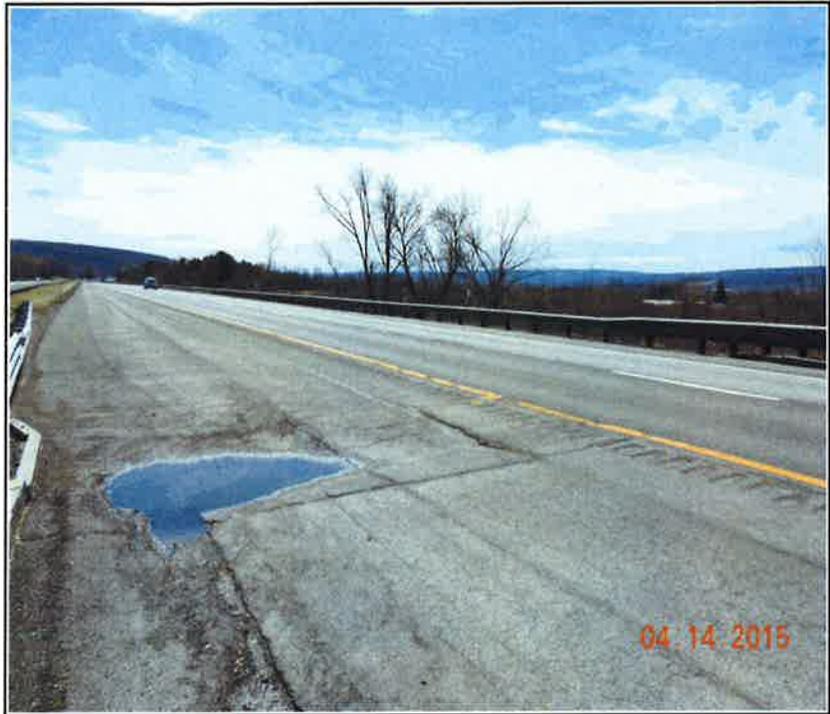
MILEPOST: 225.48 SHEET 9 OF 15
RC: 23 BIN: 5516072 INSPECT DATE: 04/16/2015

Location:	Photo Name:	Photo #:
Median shoulder on end approach.	225.48-349-53-00-15EnLtPd.JPG	15

Description(s):
- Depressed area which ponds water.

Reference:

Form:	Item:	Item Desc:	Rate:
349	53	Drainage	4



Location:	Photo Name:	Photo #:
Right side curb line.	225.48-350-20-00-15BegRt_.JPG	16

Description(s):

- Approach curbs settled, displaced, and loosely in place.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	20	Curbs	1	3

Location:	Photo Name:	Photo #:
Left railing, post 3.	225.48-350-22-00-15LtP3Rp.JPG	17

Description(s):

- Split corner of post repaired.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	22	Railings & Parapets	1	3

Location:	Photo Name:	Photo #:
Right railing, post 1.	225.48-350-22-00-15RtP1_.JPG	18

Description(s):

- 1 1/2" x 3" rust through hole near base of post.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	22	Railings & Parapets	1	3

Location:	Photo Name:	Photo #:
Right railing, post 6.	225.48-350-22-00-15RtP6Pt.JPG	19

Description(s):

- Pitted at base; 50% section loss to outside leg of post (typ of right posts 3 & 5).



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	22	Railings & Parapets	1	3

Location:	Photo Name:	Photo #:
Underside of deck, bays 1 & 2 from begin.	225.48-350-27-00-15Bay1&2.JPG	20

Description(s):

- Chalky, damp, discolored areas of deck leakage.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	27	Deck Structural	1	3

Location:	Photo Name:	Photo #:
Underside of deck, bay 4 along G5.	225.48-350-27-00-15Bay4G5.JPG	21

Description(s):

- Spalled deck along G5 due to leakage.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	27	Deck Structural	1	3

Location:	Photo Name:	Photo #:
Underside of deck, bays 5 & 6 from end.	225.48-350-27-00-15Bay5&6.JPG	22

Description(s):

- Deteriorated areas of deck; active water/efflorescence along G7 top flange.
- Fascia girder has significant paint failure; 5% paint failure elsewhere.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	27	Deck Structural	1	3
350	30	Paint	1	3

Location:	Photo Name:	Photo #:
End of girder 1.	225.48-350-28-00-15G1WbEn.JPG	23

Description(s):

- Lower 6" of web pitted to 3/16" deep; 20% overall web loss in bearing area.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	28	Primary Members	1	5

Location:	Photo Name:	Photo #:
Outside face of girder 7.	225.48-350-28-00-15G7EnBg.JPG	24

Description(s):

- Delaminated girder; 15% loss to outside leg of bottom flange.
- 70% paint failure to outside of girder.



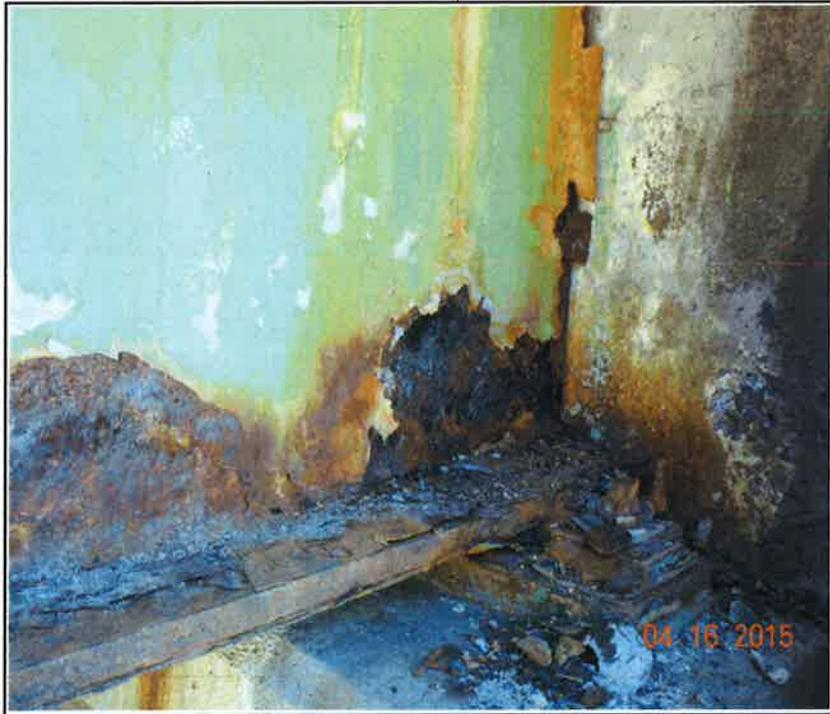
Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	28	Primary Members	1	5
350	30	Paint	1	3

Location:	Photo Name:	Photo #:
End of girder 7.	225.48-350-28-00-15G7WbEn.JPG	25

Description(s):

- Lower 6" of web pitted to 3/16" deep; 20% overall web loss in bearing area.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	28	Primary Members	1	5

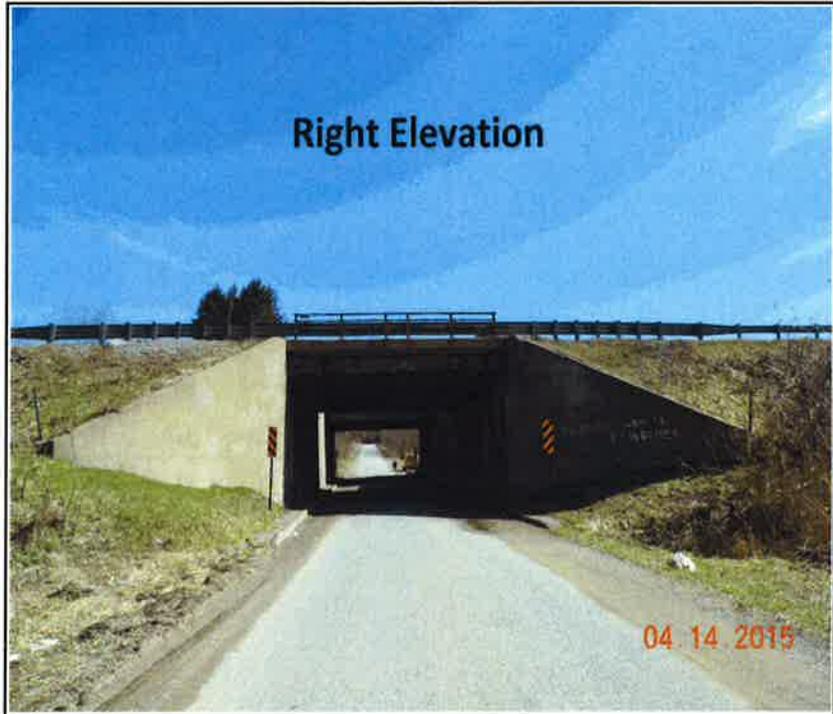
Location:	Photo Name:	Photo #:
Right elevation.	225.48-350-44-00-15RtElev.JPG	26

Description(s):

- New horizontal clearance markers on existing posts.

Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	44	Sign Structure	1	6



INVENTORY

184

INVENTORY FIELD VERIFICATION FORM

The accuracy and completeness of the data in the BIMS data base has been compared to field observation of elements that appear to have been improved and to current underclearance measurements recorded during this year's inspection.

NO CHANGES ARE REQUIRED

BIN: 5516072

MP: 225.48

DATE	PREPARED BY	REVIEWED BY	REMARKS
4/16/15	M. Jauch	D. Hilleges	done



**MINIMUM BRIDGE UNDERCLEARANCE
MAINLINE BRIDGES
SYRACUSE DIVISION
NEW YORK STATE THRUWAY AUTHORITY**

MP: 225.48 SHEET 2 OF 4
BIN: 5516072 DATE: 04/16/2015

Bridge Orientation: Southeast
TWY Traffic Direction: EAST

Feature Crossed: Millers Grove Road (Co Rd 53)

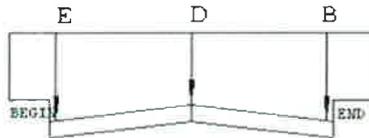
Date	A	B	C	D	E	F	G	H	A'	B'	C'	D'	E'	F'	G'	H'
04/16/2013		15.47		15.27	15.29											
04/16/2015		15.34		15.14	15.24											

REMARKS: 90IX EB over CR 53 Millers Grove

NOTES:

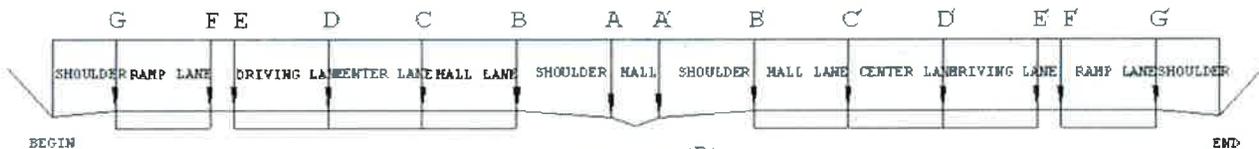
- 1) Use appropriate profile sketch 'A' or 'B'
- 2) When using sketch 'B' use points E,D & B and E', D' & B' to record measurements for 2 lane sections.
- 3) When using sketch 'B', use point F for detached ramps only
- 4) H and H' measurements taken at any other needed location or NA. Note location in remarks.
- 5) Only one row of measurements should be recorded(i.e. only the lowest measurements of each point should be recorded)
- 6) For thruway ramp over other roadway use this form and specify "ramp" under thruway traffic direction column.
The measurement and recording should be done in the same manner as stated in '4' above.
- 7) For riveted construction stringers, Dimensions shall be taken to the bottom of the rivet heads.

THRUWAY MAINLINE BRIDGE



SKETCH 'A'
(NON-DIVIDED HIGHWAY UNDER TWY)
PROFILE VIEW

THRUWAY MAINLINE BRIDGE



SKETCH 'B'
(DIVIDED HIGHWAY UNDER TWY)
PROFILE VIEW



**MINIMUM BRIDGE UNDERCLEARANCE
MAINLINE BRIDGES
SYRACUSE DIVISION
NEW YORK STATE THRUWAY AUTHORITY**

MP: 225.48 SHEET 3 OF 4
 BIN: 5516072 DATE: 04/16/2015

Bridge Orientation: Southeast
 TWY Traffic Direction: EAST

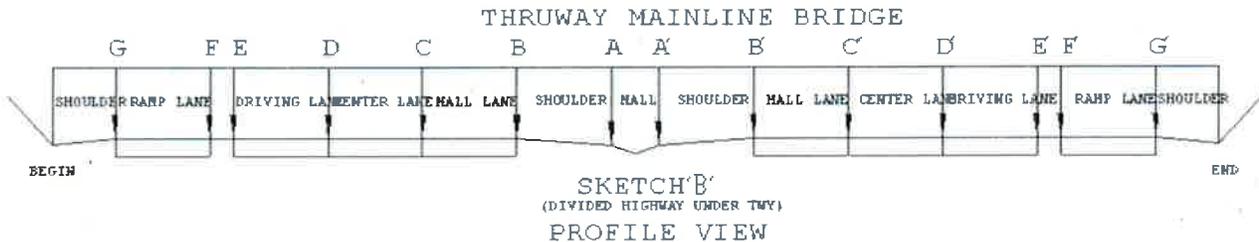
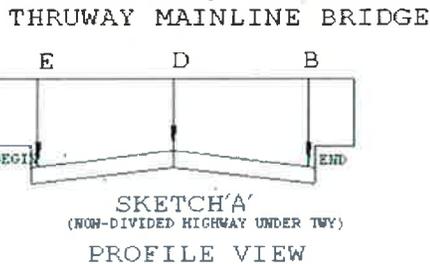
Feature Crossed: Millers Grove Road

Date	A	B	C	D	E	F	G	H	A'	B'	C'	D'	E'	F'	G'	H'
04/13/2009		15.42		15.24	15.28											
04/12/2011		15.42		15.24	15.27											

REMARKS: 90I X EB over CR 53 Millers Grove Rd.
 Clearances taken along left fascia girder. Clearances at B and E were taken at edge of travel lane, not the curb line.

NOTES:

- 1) Use appropriate profile sketch 'A' or 'B'
- 2) When using sketch 'B' use points E, D & B and E', D' & B' to record measurements for 2 lane sections.
- 3) When using sketch 'B', use point F for detached ramps only
- 4) H and H' measurements taken at any other needed location or NA. Note location in remarks.
- 5) Only one row of measurements should be recorded (i.e. only the lowest measurements of each point should be recorded)
- 6) For thruway ramp over other roadway use this form and specify "ramp" under thruway traffic direction column.
 The measurement and recording should be done in the same manner as stated in '4' above.
- 7) For riveted construction stringers, Dimensions shall be taken to the bottom of the rivet heads.



**NEW YORK STATE DEPARTMENT OF TRANSPORTATION
BRIDGE INVENTORY AND INSPECTION SYSTEM
ACCESS CATEGORY CODING FORM**

MP: 225.48
SHEET 4 OF 4

RC - BIN:

2	3
---	---

 -

5	5	1	6	0	7	2
---	---	---	---	---	---	---

INSPECT DATE: 04/16/2015
TEAM LEADER: Douglas Hilleges

Span No			Walking	Step Ladder	Extension	40' UBIU	60' UBIU	LGWT - UBIU	<= 30' Lift	30 -90' Lift	> 90' Lift	Row Boat	Barge	Diving	RR Flagging	Electric RR	Scaffolding	Lane Closure	W/Shad Veh	Other	Contractor Code	Record Code	Tx Code	
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		116	118	120
B	R	I	X						X													63	17	2
0	0	1	X						X													63	17	2

INSTRUCTIONS: - Only a single BIN will be addressed on any single sheet -

- a) Complete the date, preparer, and sheet number headings.
- b) Enter the region, county and BIN number.
- c) In the first line of the form, having a span number of "BRI", place an "X" in each access category necessary for a proper inspection of the entire bridge and enter the contractor code.
- d) In all subsequent rows, WITH ONE SPAN PER LINE AND USING AS MANY LINES AS THERE ARE SPANS FOR THE ENTIRE BRIDGE STRUCTURE, enter the span number being addressed (columns 10-12, right justified and zero filled) place an "X" in each access category necessary for a proper inspection of that span (and the two substructure faces facing that span) and enter the contractor code.
- e) IF DIVING ACCESS IS REQUIRED (as directed by Inspection TA 87-012) FOR EITHER OF THE TWO SUBSTRUCTURE FACES FACING THE SPAN BEING CODED, INDICATE SO WITH AN "X", THIS MUST BE DONE EVEN IF A DIVING INSPECTION IS NOT REQUIRED DURING THE CURRENT INSPECTION SEASON. NOTE that some NYSDOT documents refer to bridges requiring diving inspection as having an "I" ACCESS CATEGORY.
- f) Recode the entire bridge if ANY UPDATING of the Access Category is necessary.
- g) Use col. 28 for situations requiring lane closure WITHOUT a shadow vehicle and col. 29 for lane closure WITH a shadow vehicle.

LOAD RATING

LEVEL 2 LOAD RATING (VIRTIS LFD)

MILEPOST: 225.48 BIN: 5516072

REGION: 2 COUNTY: HERKIMER

FEATURE CARRIED: 90IX EASTBOUND

FEATURE CROSSED: MILLERS GROVE ROAD (CR 53)

LEVEL 2 LOAD RATING REVIEW

VIRTIS RUN DATE: 5/2/2013 *4/16/15*
✓ Daylis it better no changes to dead loads or configuration;

CHANGES TO INPUT DATA: *Increase fascia girder web loss in bearing area to 20% overall.*
Member load added to G2 for timber shoring.
Section loss updated per 2013 report.
See list of changes on page 2 of VIRTIS
load rating in BIN folder.

LOADING	INVENTORY RATING (TONS)	OPERATING RATING (TONS)
HS-20	35.4 (HS-19)	59.1 (HS-32)
H-20	23.0 (H-23)	38.4 (H-38)

* ANALYSIS METHOD: LOAD FACTOR

CONTROLLING MEMBER FOR RATING

LOCATION: MIDSPAN

COMPONENT: FASCIA GIRDER G7

FAILURE TYPE: FLEXURAL CAPACITY

EFFECTIVE SPAN LENGTH: 32' ✓

H EQUIVALENT OF LEGAL LOAD: H22

PRIMARY MEMBER RATING: 5

SAFE LOAD CAPACITY: H32 ✓

SLC COMPUTATION USED (IN BOLD)				
0.60 HOR	0.70 HOR	0.80 HOR	0.85 HOR	HOR

ACTION TAKEN: NONE REQUIRED X

RECOMMEND LEVEL 1 _____

UNRATABLE _____

COMPLETED BY

Michael Gaskill
 MICHAEL GASKILL
 LOAD RATING ENGINEER

REVIEWED BY

Garret Hoffmann 7/1/13
 GARRET HOFFMANN
 PE # 070686
 QUALITY CONTROL ENGINEER

NEW YORK STATE THRUWAY AUTHORITY
BRIDGE INSPECTION FIELD VERIFICATION OF LOAD RATING DATA

Date: 4/16/15

MP/BIN: 225.48 / 5516072

Feature Carried / Crossed: 90IX EB / CR 53 MILLERS GROVE RD

Dead Load:
WS Thickness & Material Shown on Plans - 3' Asphalt
Changes Noted in Field: None ✓

Railing Type Shown on Plans - 4 Rail Steel with Thrie Beams Upgrade
Changes Noted in Field: None ✓

Other DL Contributions (e.g. utilities) on Plans - _____
Changes Noted in Field: None

Section Loss:
Existing Documentation (sketches, etc.)? - None Yes - fascia girder bottom flange
and web loss

Location of Documentation (previous report, blue folder, etc.)? - Previous Report

New Section Loss noted? - None Yes
Brief Description (attach sketches if helpful) - no changes to noted bottom flange loss.
Increase fascia girder web loss in bearing area to 20% overall.

Additional Notes: None

Attachments: yes no (please circle)

Team Leader: DOUGLAS R. HILLEGES, P.E.

Signature: Douglas R Hilleges

Date: 4/16/15