

BIN: 5516071 **MP:** 225.49

Region: 2 **County:** 3 HERKIMER

Feature Carried: 90IX WB

Feature Crossed: CR 53 MILLERS GROVE RD

General Recommendation: 4

Condition Rating: 3.77

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: 5516071

MP: 225.49

LOCATION MAP

Feature Carried: 90IX WB

Feature Crossed: CR 53 Millers Grove Rd



INSPECTION

TP349

NYS DEPT OF TRANSPORTATION
BRIDGE INSPECTION REPORT

SHEET 1 OF 12

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

RC - BIN: 2 3 - 5 5 1 6 0 7 1 MP: 225.49
1 2 3 4 5 6 7 8 9

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: 21 TYPE OF INSPECTION: 1
19 20 21 1-BIENNIAL 3- IN DEPTH 5- SPECIAL
2- INTERIM 4- NONE (UNDER CONTRACT)

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

FEATURE(S) CARRIED: 90IX WB

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>	NONE	<u>06</u> <u>2</u> <small>118 120</small>
	<u>0</u> Ft <u>0</u> In <small>19 20 21 22</small>	<u> </u> Ft <u> </u> In <small>23 24 25 26</small>	Loading: <u> </u> TONS <small>27 28</small>	

ABUTMENTS:	Begin	End	WINGWALLS:	Begin	End	APPROACHES:
Joint with deck	<u>3</u> <small>22</small>	<u>2</u> <small>23</small>	Walls	<u>4</u> <small>40</small>	<u>3</u> <small>41</small>	Drainage <u>5</u> <small>53</small>
Bearings, anchors bolts, pads	<u>4</u> <small>24</small>	<u>3</u> <small>25</small>	Footings	<u>9</u> <small>42</small>	<u>9</u> <small>43</small>	Embankment <u>6</u> <small>54</small>
Bridge seat and pedestals	<u>4</u> <small>26</small>	<u>4</u> <small>27</small>	Erosion or scour	<u>5</u> <small>44</small>	<u>5</u> <small>45</small>	Settlement <u>5</u> <small>55</small>
Backwall	<u>4</u> <small>28</small>	<u>4</u> <small>29</small>	Piles	<u>9</u> <small>46</small>	<u>9</u> <small>47</small>	Erosion <u>6</u> <small>56</small>
Stem (breastwall)	<u>3</u> <small>30</small>	<u>3</u> <small>31</small>	STREAM CHANNEL:		Pavement <u>3</u> <small>57</small>	
Erosion or scour	<u>5</u> <small>32</small>	<u>5</u> <small>33</small>	Stream Alignment	<u>8</u> <small>48</small>	Guide Railing <u>5</u> <small>58</small>	
Footings	<u>9</u> <small>34</small>	<u>9</u> <small>35</small>	Erosion And Scour	<u>8</u> <small>49</small>	GENERAL RECOMMEND <u>4</u> <small>60</small>	
Piles	<u>9</u> <small>36</small>	<u>9</u> <small>37</small>	Waterway Opening	<u>8</u> <small>50</small>		
Recommendation	<u>4</u> <small>38</small>	<u>4</u> <small>39</small>	Bank Protection	<u>8</u> <small>51</small>		

ACCESS CATEGORY:

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

FLAG ISSUED?

NONE:
YELLOW:
RED:
SAFETY:

BRIEF REASON

Vulnerability Reassessment Review Recommended?

HYD 3 OVL X STL 2 COL X CON X SMC X
1 = YES
2 = NO
3 = NA
X = NOT USED THIS CYCLE

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

RC - BIN:

2	3	-	5	5	1	6	0	7	1
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
13 14 15 16 17 18

 DAY

16
13 14 15 16 17 18

 YEAR

15
13 14 15 16 17 18

OTHERS: _____

FEATURE(S) CARRIED: 90IX WB

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 CapBeam	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	2	3	3	8	8	8	8	3	5	6	4	8	5	8	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
19

 1 = NO
2 = YES

REMARKS

FIELD NOTES

DATE	TIME OF ARRIVAL	TIME OF DEPARTURE	TEMP (F/C)	WEATHER CONDITIONS / ACCESS EQUIPMENT	Field Notes
04/14/2015	9:15:00 am	11:00:00 am	61/16	Sunny/Walking	
04/16/2015	11:30:00 am	1:45:00 pm	61/16	Sunny/Bucket Truck	Inspection Complete

INSPECTED BY: Douglas Hilleges TITLE: Syracuse BSIE

FEATURE(S) CARRIED: 90IX WB

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 type="checkbox"/> End Abutment <input checked="" type="checkbox"/> Begin Abutment
	Begin stem at right side.
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 type="checkbox"/> Deck | <input checked="" type="checkbox"/> Bridge Rail Split railing posts repaired |
| <input type="checkbox"/> Wearing Surface | <input type="checkbox"/> Approach Rail |
| <input type="checkbox"/> Appr. Pavement | <input type="checkbox"/> Signage |
| <input checked="" type="checkbox"/> Substructure Deteriorated area of begin backwall repaired. | <input type="checkbox"/> Other (explain below) |

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

SPECIAL EMPHASIS:

1. Web gap < 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 WB

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.

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

WEST 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

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) Both joints leak throughout as both stems and backwalls are damp and stained. There is no joint material present in the median shoulder area at either abutment, only foam backer board. In travel lanes, begin joint header has surface scaling and 1" deep spalling along edge of seal. End joint header is worse as previous concrete repairs are cracked and breaking up 2" to 3" wide along seal for majority of travel lane widths; header in passing lane also has several asphalt patches to 2sf in area. Seal is loose, debonded and/or torn for majority of both joint widths. Begin joint rate 3; end joint rate 2 due to header spall.	3	3	1, 2
23	Joint With Deck (End) Both joints leak throughout as both stems and backwalls are damp and stained. There is no joint material present in the median shoulder area at either abutment, only foam backer board. In travel lanes, begin joint header has surface scaling and 1" deep spalling along edge of seal. End joint header is worse as previous concrete repairs are cracked and breaking up 2" to 3" wide along seal for majority of travel lane widths; header in passing lane also has several asphalt patches to 2sf in area. Seal is loose, debonded and/or torn for majority of both joint widths. Begin joint rate 3; end joint rate 2 due to header spall.	2	3	2, 3
24	Bearings, Anchor Bolts, Pads (Begin) Begin fixed bearings have minor rusting and delamination, fascias are slightly worse with minor flowering of anchor bolt nuts. Right side anchor bolt at begin bearing 3 has rusted/sheared off at top of sole plate. Bearings 1, 6, & 7 have minor accumulations of backwall spallings; extensive build up of spallings at bearings 6 & 7 have been cleaned with backwall repair in this area.	4	4	4, 5
25	Bearings, Anchor Bolts, Pads (End) All end sliding expansion bearings are rusting with minor delamination. All except bearing 7 are overextended to 3/4" beyond masonry plate at 55 degrees F. Formwork from past backwall rehab is wedged between ends of girders and backwall hindering movement. Expansion bearing at G6 is partially buried with concrete spall from backwall.	3	3	6, 7
26	Bridge Seat and Pedestals (Begin) Front edge and top of begin seat is cracked, hollow and spalled to 1 1/2" deep from pedestal 3 to two feet right of pedestal 6; seat spalling extends to 5" deep for the 2' length in bay 6. Seat area has been cleared of spallings in bays 5 & 6; top of seat is typically spalled 1" deep in bay 5 with spalling typically 3" deep in bay 6 and extending to 5" deep at edge. A hairline to 1/16" open vertical crack extends from anchor bolt on both sides of pedestal 4; concrete remains solid. Remainder of seat & concrete pedestals are good.	4	4	8, 9

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

27	Bridge Seat and Pedestals (End) Front edge of seat in bays 3, 4, 5, & 6 has cracking with areas of minor hollowness; worst area of delamination is 4' each side of pedestal 4. Face of pedestal 4 is delaminated and spalled 1" deep and right side has a hairline vertical crack extending from right side anchor bolt; concrete remains solid. Pedestal 6 has 1" deep spalling on left and right sides. Remainder of pedestals are good.	4	4	7, 10
28	Backwall (Begin) Previous severe (12" deep) spalling at the right (outside) of G7 has been repaired by maintenance. Lower half +/- of begin backwall in bay 6 and extending 2' into bay 5 is spalled 4" to 5" deep typical. Remainder of begin backwall is solid. Rating upgraded to 4.	4	3	5, 11, 12
29	Backwall (End) End backwall is in fairly good condition with the exception of a 6' length behind G6 that is very hollow and spalled to 3" deep; concrete within spall area is loose and crumbly. 30% of area in bay 6 is delaminated, remainder of end backwall is solid.	4	4	13, 14
30	Stem (Breastwall) (Begin) 30% +/- of begin stem (mainly right 1/3 of stem) has honeycombed concrete that is hollow to very hollow; Upper half for a 10' width below pedestal 6 is extremely hollow, soft, and spalling 3" to 4" deep.	3	3	9
31	Stem (Breastwall) (End) Right 2/3 of end stem remains deteriorated having surface scaling and areas of delamination throughout. Worst is 13' wide x full height at right side having hollow to very hollow concrete throughout; 1' to 3' wide at right end is soft and spalling to 8" deep. Overall, 20% to 25% of end stem area is very delaminated and/or spalled.	3	3	10
32	Erosion or 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 base of vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have slabs of sidewalk 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 of eastbound structure (MP 225.48) was exposed and the weep pipe was cleaned by Thruway personnel. These procedures continue to alleviated 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 #:	

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 base of vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have slabs of sidewalk 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 of eastbound structure (MP 225.48) was exposed and the weep pipe was cleaned by Thruway personnel. These procedures continue to alleviated the problem as no water problems are evident during this inspection. Piles exist at structure.

5 5

40 Walls (Begin)

Begin left wingwall is cracked, hollow and spalled 2" to 5" deep full height for up to 5' wide adjacent to stem. Remainder has fine, damp pattern cracking for 30% area but concrete is solid. Begin right wingwall is good.

4 4 15

41 Walls (End)

End left wingwall has light pattern cracking and hollow to very hollow concrete for 70% to 75% total area. A 2' to 3' width adjacent to stem is spalled to 6" deep for majority of height. Inside of curtain wall area adjacent to backwall is spalled to 8" deep with delaminated reinforcing bars exposed. End right wingwall has tight pattern cracking throughout. Concrete is delaminated 4' high along base and to 6' wide full height adjacent to stem; 2' wide adjacent to stem is soft and spalled to 4" deep.

3 3 16, 17

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 base of vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have slabs of sidewalk 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 of eastbound structure (MP 225.48) was exposed and the weep pipe was cleaned by Thruway personnel. These procedures continue to alleviated 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 #:	

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 base of vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have slabs of sidewalk 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 of eastbound structure (MP 225.48) was exposed and the weep pipe was cleaned by Thruway personnel. These procedures continue to alleviated the problem as no water problems are evident during this inspection. Piles exist at structure.

5 5

53 Drainage

Per 2014 inspection manual, condition of approach curb is now included with the rating of curb element on the structure. Minor berm beneath rail in end left quad impedes drainage slightly, no ponding evident. Drainage in other quads is very good.

5 5

57 Pavement

Asphalt pavement on both approaches has minor wheel path rutting with centerline and random transverse alligator cracking to 18" wide, condition would rate 4. Begin approach driving lane at 70' from structure has a 60sf area that is depressed 1' +/- with alligator cracking that is near breaking up, rate 3.

3 4 18

58 Guide Railing

Concrete mounted strong steel post in end left quad adjacent to bridge rail has 2 of 4 anchor bolts that are slightly loose; remainder of posts and rail in other quads are solid, rate 5.

5 6

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

20 Curbs

Both curbs are losing mortar bond along base and at back with safety walk. Begin 7' of both curbs and end 11' of left curb are loose and displaced to 1 1/2". The end 11' of the right curb is broken out and missing.
Approach curbs in all quads are settled, separated, and tilted to varying degrees, last section of curb in end right quad is totally displaced. Rating lowered to 2 due to large section of missing curb.

1 2 3 19, 20

21 Sidewalks & Fascias

Left fascia has full length longitudinal crack actively leaching water and leaching efflorescence 6" +/- above lower edge; the end 10' has 2" to 3" deep spalling along crack. Lower edge of left fascia has minor hollowness and should be removed prior to another winter season of freeze/thaw cycles. A bridge maintenance report has been submitted to have area chipped off. The end half of the right fascia has two 2' to 3' lengths of 3" deep lower edge spalling, all concrete is solid.
Top of left sidewalk has areas of 1" to 2" deep spalling beneath rail undermining numerous railing post base plates. Top of right sidewalk remains good.

1 3 4 21, 22

22 Railings & Parapets

Right Railing:
Previous cracks at base of right railing posts 1 & 4 have been weld repaired; posts remain bulged at base. Right post 1 now has a 6" vertical split on end right corner and a 1" high x 3" wide rust through hole on begin face just below bottom rail end cap. Remainder of right railing posts have areas of pitting/delamination at base with up to 20% section loss; right side top rail has underside rusted through for 2' length at begin and 1' each side of post 2. Right railing rates 4.
Left Railing:
Base plates of left railing posts 2, 3, 4, & 5 are undermined by sidewalk spalling exposing anchor bolts to weathering and lessening embedment depth; all ring solid. Anchor bolt nuts and washers are delaminated with up to 50% section loss typical; outside nut at post 6 is worst having 100% section loss. At left posts 4 & 5, several nuts are raised slightly due to complete loss of washers; nuts do not lend complete connection to base plate and railing is slightly loose. Left post 1 welded connection at base plate has a cracked weld on begin right corner extending 1" each direction from corner of post. Last 10' of left side top rail has underside completely rusted through; inside face of top rail has a 1" diameter hole near post 5 and top of post 5 is very thin and has a 1" diameter hole on inside face. Left railing rates 3.
A bridge maintenance report has been submitted for repair of cracked/split railing posts.

1 3 4 22, 23, 24, 25, 26, 27, 28, 29

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

27 Deck Structural

Deck has random spalled areas to 2" deep with delaminated reinforcing exposed; worst areas are bays 1 & 2 near midspan adjacent to previous full depth repairs and 1' wide at each side of G5 top flange for begin half of span.
Deck is damp and discolored from leakage along top flanges of the following: both fascia girders; end 3/4 of G3; full length of G5, end 1/4 of G7, and other random localized areas.
20% of total deck area has chalky, damp pattern cracking, right fascia bay is worst. See deck sketch.
Deck can be seen pumping under load causing impact to and noticeable deflection of girders. Left half worse with squeaking evident. Shear studs are not indicated on plans.

1 3 3 30, 31

28 Primary Members

Some deflection in girders is observed from traffic impacts and deck deflection.
Fascia girders have delamination and minor section loss of bottom flanges; G1 is worst having areas of 5% overall bottom flange loss.
Fascia girders also have random areas of delamination and pitting to lower 2" to 4" of girder webs (including the end 4" to 5" in the bearing areas [1/2 width of total web column bearing area]). Begin of G1 web is worst where end 5" of web measures 5/16" +/- (40% section loss) for an overall bearing area web loss of 20%.
G4 & G5 have minor kinks to bottom flanges near end bearings

1 5 5 32

30 Paint

10% +/- overall paint failure with surface rust typical at: fascia girder flanges, top and bottom flanges of girders in areas of deck leakage, outside face of fascia girder webs, and end diaphragms in areas of joint leakage.

1 4 4 30

44 Sign Structure

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

1 6 5 33



BIN: 5516071

M.P.: 225.49

**NYS THRUWAY AUTHORITY
BRIDGE INSPECTION REPORT
SHEET 12 OF 12**

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

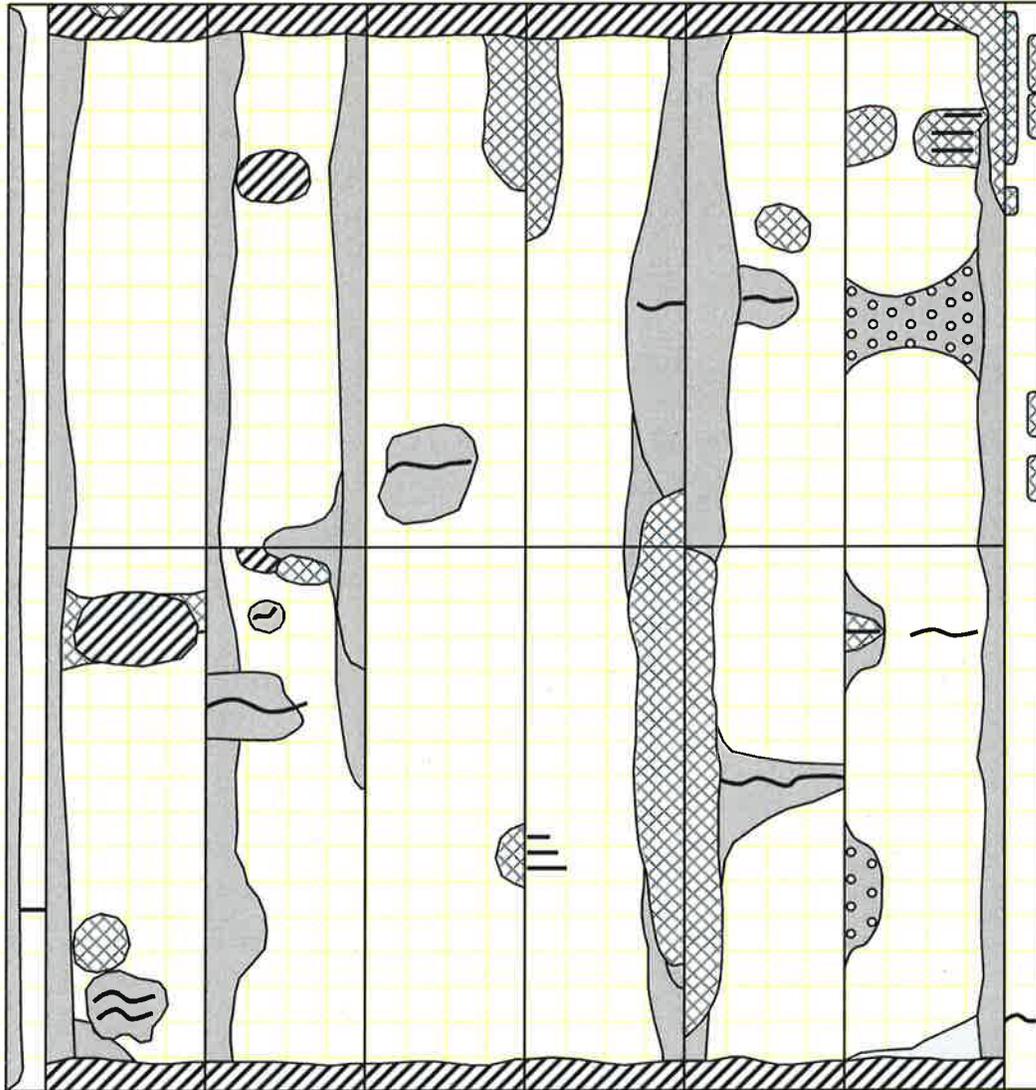
Feature Carried: 90IX WB

Feature Crossed: CR 53 MILLERS GROVE RD

DECK UNDERSIDE SKETCH

END

N.T.S.



G-1

G-7

BEGIN

LEGEND:

- | | | | | | | | | | |
|--|------------------------------|--|--------------------------------|--|-------------------|--|---------------------|--|-----------------|
| | DELAMINATED/
HOLLOW CONC. | | SPALL WITH
EXPOSED REBAR | | SPALL | | REPAIR | | WOOD
SHORING |
| | DISCOLORED/
DAMP CONC. | | HONEYCOMBED,
DAMP W/EFFLOR. | | CHALKY
EFFLOR. | | CRACK W/
EFFLOR. | | CRACK |

PHOTOGRAPHS



NYS THRUWAY AUTHORITY
BRIDGE INSPECTION REPORT
SHEET 1 OF 18

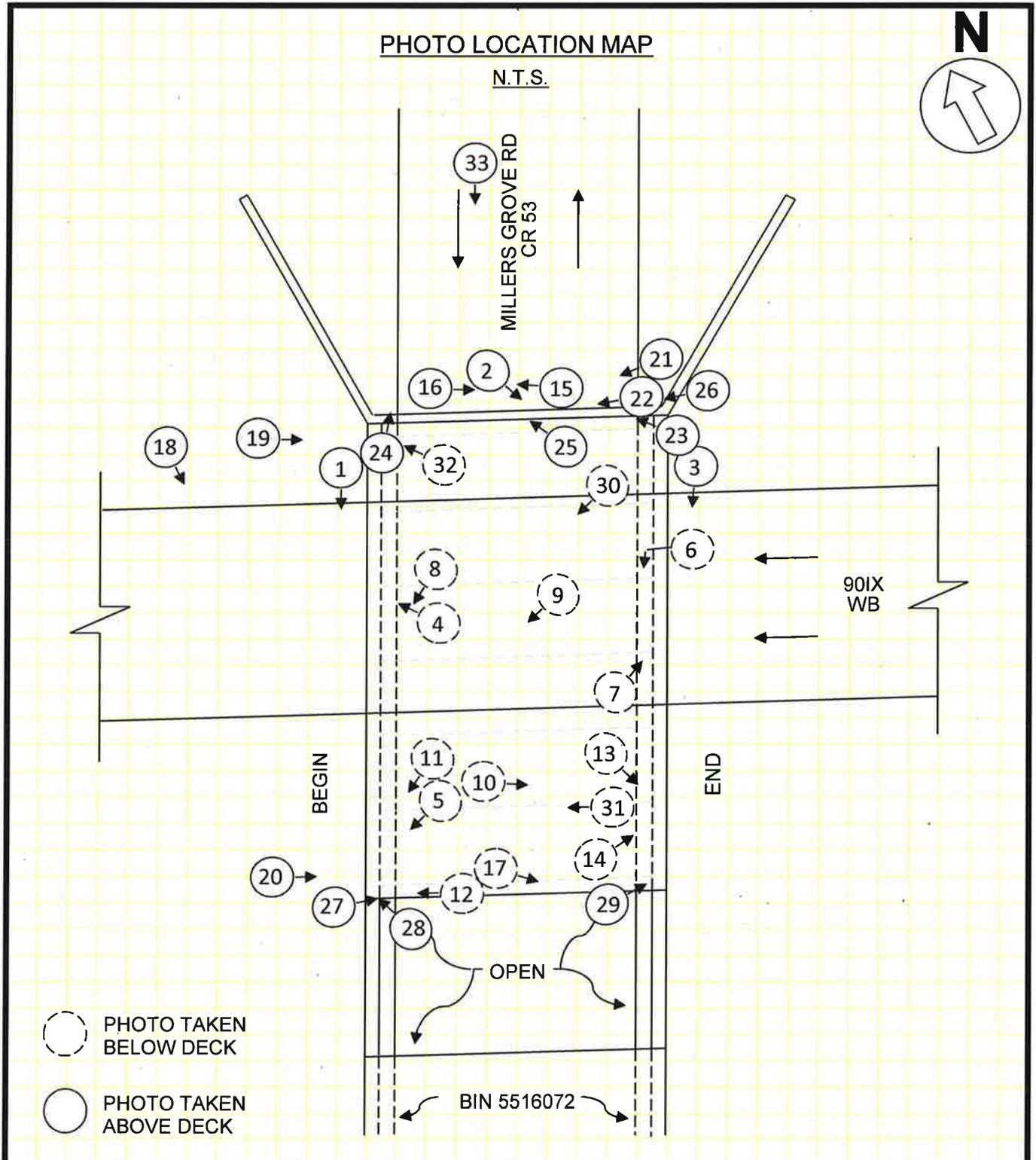
BIN: 5516071

M.P.: 225.49

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

Feature Carried: 90IX WB

Feature Crossed: CR 53 MILLERS GROVE RD



Location:	Photo Name:	Photo #:
Top of begin joint from left side.	225.49-349-22-00-15BgLtRt.JPG	1

Description(s):

- 1" spall of header along seal; seal loose, torn and debonded.



Reference:

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

Location:	Photo Name:	Photo #:
End stem left side.	225.49-349-23-00-15EndLt_.JPG	2

Description(s):

- Extensive stains on stem due to joint leakage (typ of begin stem).



Reference:

Form:	Item:	Item Desc:	Rate:
349	22	Joint With Deck (Begin)	3
349	23	Joint With Deck (End)	2

Location:	Photo Name:	Photo #:
Top of end joint from left side.	225.49-349-23-00-15EnLtRt.JPG	3

Description(s):

- Header spalled to 3" wide along seal with asphalt patches in passing lane; seal torn, debonded or missing.



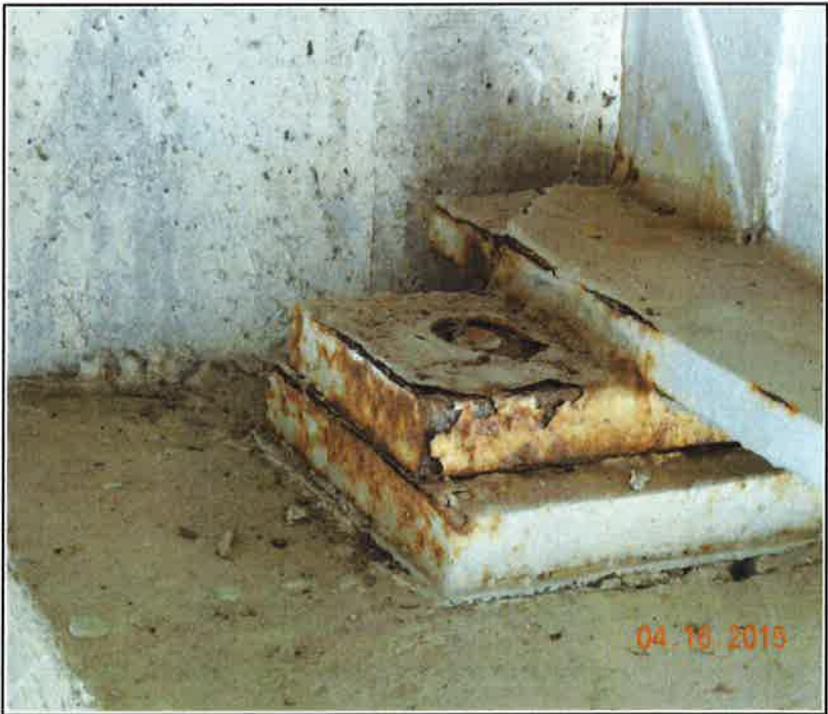
Reference:

Form:	Item:	Item Desc:	Rate:
349	23	Joint With Deck (End)	2

Location:	Photo Name:	Photo #:
Begin bearing 3.	225.49-349-24-00-15Brg3Rt.JPG	4

Description(s):

- Anchor bolt rusted/sheared off at top of sole plate.



Reference:

Form:	Item:	Item Desc:	Rate:
349	24	Bearings, Anchor Bolts, Pads (Begin)	4

Location:	Photo Name:	Photo #:
Begin backwall, bay 6.	225.49-349-28-00-15Bay6_.JPG	5

Description(s):

- Bearing 7 delaminated; backwall spallings cleared.
- Backwall spalled to 5" deep.



Reference:

Form:	Item:	Item Desc:	Rate:
349	24	Bearings, Anchor Bolts, Pads (Begin)	4
349	28	Backwall (Begin)	4

Location:	Photo Name:	Photo #:
End bearing 3.	225.49-349-25-00-15Brg3Lt.JPG	6

Description(s):

- Bearing overextended 3/4" beyond masonry plate.



Reference:

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

Location:	Photo Name:	Photo #:
End pedestal & bearing 4.	225.49-349-27-00-15Ped4Rt.JPG	7

Description(s):

- Bearing overextended.
- Pedestal spalled on front; vertical crack at anchor bolt.



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 3 and pedestal 4.	225.49-349-26-00-15Ped4Lt.JPG	8

Description(s):

- Seat cracked and delaminated; vertical crack in pedestal at anchor bolt.



Reference:

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

Location:	Photo Name:	Photo #:
Begin stem; right side.	225.49-349-30-00-15RtSide.JPG	9

Description(s):

- Bridge seat area is cracked and delaminated; spalled 5" deep in bay 6.
- Right side of stem delaminated having spalled/soft concrete for upper half.



Reference:

Form:	Item:	Item Desc:	Rate:
349	26	Bridge Seat and Pedestals (Begin)	4
349	30	Stem (Breastwall) (Begin)	3

Location:	Photo Name:	Photo #:
End stem, right side.	225.49-349-31-00-15RtSide.JPG	10

Description(s):

- Seat concrete delaminated at pedestal 4 & 6.
- Delaminated/spalled area of stem



Reference:

Form:	Item:	Item Desc:	Rate:
349	27	Bridge Seat and Pedestals (End)	4
349	31	Stem (Breastwall) (End)	3

Location:	Photo Name:	Photo #:
Begin backwall, bays 5 & 6.	225.49-349-28-00-15Bay5&6.JPG	11

Description(s):

- Backwall spalled to 5" deep.



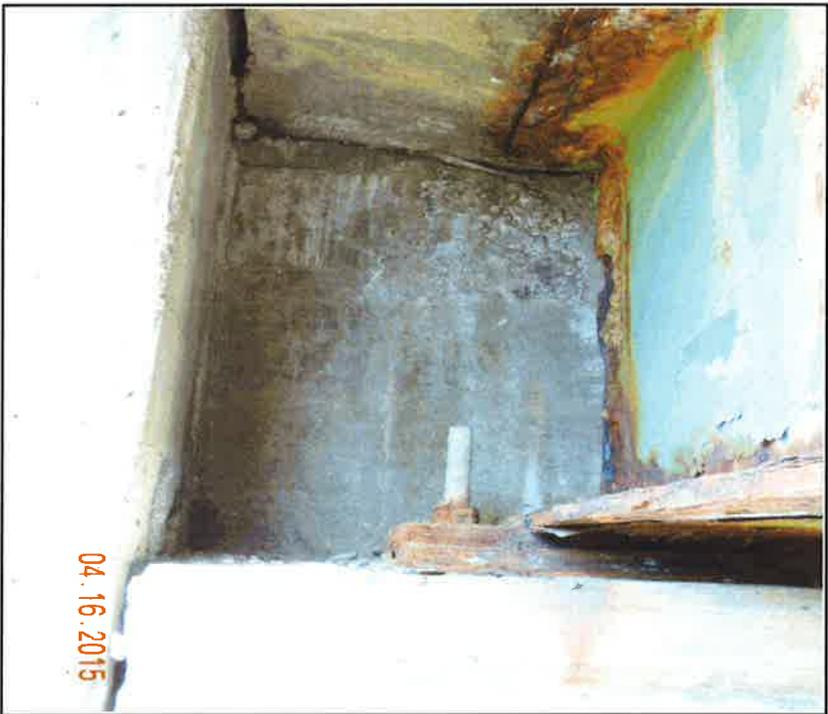
Reference:

Form:	Item:	Item Desc:	Rate:
349	28	Backwall (Begin)	4

Location:	Photo Name:	Photo #:
Begin backwall right of girder 7.	225.49-349-28-00-15RtSdG7.JPG	12

Description(s):

- Area of severely spalled backwall repaired.



Reference:

Form:	Item:	Item Desc:	Rate:
349	28	Backwall (Begin)	4

Location:	Photo Name:	Photo #:
End backwall, bay 5 behind G6.	225.49-349-29-00-15Bay5G6.JPG	13

Description(s):

- Concrete delaminated, spalled 3" deep and soft.



Reference:

Form:	Item:	Item Desc:	Rate:
349	29	Backwall (End)	4

Location:	Photo Name:	Photo #:
End backwall, bay 6.	225.49-349-29-00-15Bay6_.JPG	14

Description(s):

- Delaminated area of backwall; spalled, soft concrete behind G6.



Reference:

Form:	Item:	Item Desc:	Rate:
349	29	Backwall (End)	4

Location:	Photo Name:	Photo #:
Begin left wingwall.	225.49-349-40-00-15BgLtWW.JPG	15

Description(s):

- Delaminated/spalled to 5" deep full height adjacent to stem.



Reference:

Form:	Item:	Item Desc:	Rate:
349	40	Walls (Begin)	4

Location:	Photo Name:	Photo #:
End left wingwall.	225.49-349-41-00-15EnLtWW.JPG	16

Description(s):

- Very delaminated across 75% area; spalled to 5" deep adjacent to stem.



Reference:

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

Location:	Photo Name:	Photo #:
End right wingwall.	225.49-349-41-00-15EnRtWW.JPG	17

Description(s):

- Delaminated concrete along base and abutment stem; soft spalling concrete adjacent to stem



Reference:

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

Location:	Photo Name:	Photo #:
Begin approach pavement.	225.49-349-57-00-15BegApp.JPG	18

Description(s):

- 60sf area of alligator cracking near to breaking up.



Reference:

Form:	Item:	Item Desc:	Rate:
349	57	Pavement	3

Location:	Photo Name:	Photo #:
Left curb line,	225.49-350-20-00-15LtBgEn.JPG	19

Description(s):

- Curb loose and displaced at begin and end of span.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	20	Curbs	1	2

Location:	Photo Name:	Photo #:
Right curb line,	225.49-350-20-01-15RtBgEn.JPG	20

Description(s):

- Curb displaced at begin of span and 11' length missing at end.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	20	Curbs	1	2

Location:	Photo Name:	Photo #:
Left fascia.	225.49-350-21-00-15LtFsEn.JPG	21

Description(s):

- Horizontal crack along fascia; active water, efflorescence and minor hollowness.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	21	Sidewalks & Fascias	1	3

Location:	Photo Name:	Photo #:
Left railing, posts 5 & 4.	225.49-350-22-00-15LtP5&4.JPG	22

Description(s):

- Sidewalk spalled 1" to 2" deep beneath rail undermining railing base plates.



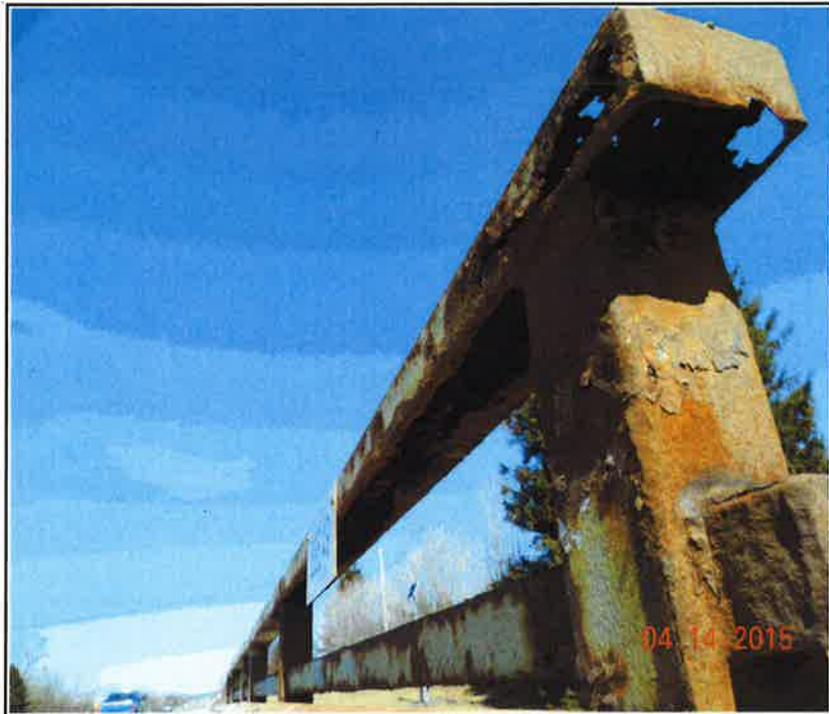
Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	21	Sidewalks & Fascias	1	3
350	22	Railings & Parapets	1	3

Location:	Photo Name:	Photo #:
Left railing at end of span.	225.49-350-22-00-15LtEnd_.JPG	23

Description(s):

- Underside of top rail rusted through.



Reference:

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

Location:	Photo Name:	Photo #:
Left railing, post 1.	225.49-350-22-00-15LtP1_.JPG	24

Description(s):

- Cracked weld at base plate connection.



Reference:

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

Location:	Photo Name:	Photo #:
Left railing, posts 4 & 3.	225.49-350-22-00-15LtP4&3.JPG	25

Description(s):

- Sidewalk spall exposing anchor bolts; Bolt washers rusted completely away.



Reference:

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

Location:	Photo Name:	Photo #:
Left railing, posts 6 & 5.	225.49-350-22-00-15LtP6&5.JPG	26

Description(s):

- Anchor bolt nut rusted away; anchor bolts exposed by sidewalk spall.



Reference:

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

Location:	Photo Name:	Photo #:
Right railing post 1,	225.49-350-22-00-15RtP1Bg.JPG	27

Description(s):

- Previous split corner weld repaired; 1" x 3" rust through beneath bottom rail end cap.



Reference:

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

Location:	Photo Name:	Photo #:
Right railing post 1, end right corner.	225.49-350-22-00-15RTP1En.JPG	28

Description(s):

- 6" vertical split on corner of post.



Reference:

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

Location:	Photo Name:	Photo #:
Right railing post 5.	225.49-350-22-00-15RtP5Pt.JPG	29

Description(s):

- Pitting at base of post.



Reference:

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

Location:	Photo Name:	Photo #:
Underside of deck, bays 2, 3, & 4 looking from end.	225.49-350-27-00-15Bay234.JPG	30

Description(s):

- Areas of deck leakage evident along girder top flanges.
- Paint failure to girder flanges in areas of deck leakage.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	27	Deck Structural	1	3
350	30	Paint	1	4

Location:	Photo Name:	Photo #:
Underside of deck, bays 5 & 6 looking from end.	225.49-350-27-00-15Bay5&6.JPG	31

Description(s):

- Chalky efflorescence in bay 6; areas of deck leakage in bay 5.



Reference:

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

Location:	Photo Name:	Photo #:
Begin of girder 1.	225.49-350-28-00-15G1WbBg.JPG	32

Description(s):

- 40% web loss for end 5" of girder (1/2 of web bearing width).



Reference:

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

NYS THRUWAY AUTHORITY
BRIDGE INSPECTION REPORT

MILEPOST 225.49

SHEET 18 OF 18

RC: 23

BIN: 5516071

INSPECT DATE: 04/16/2015

Location:	Photo Name:	Photo #:
Left elevation.	225.49-350-44-00-15LtElev.JPG	33

Description(s):

- New signs installed.

Reference:

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



INVENTORY



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

MP: 225.49 SHEET 2 OF 3
 BIN: 5516071 DATE: 04/16/2015

Bridge Orientation: Southeast
 TWY Traffic Direction: WEST

Feature Crossed: Millers Grove Road (Co Rd 53)

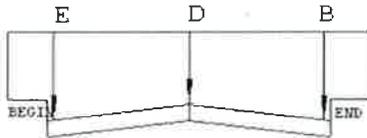
Date	A	B	C	D	E	F	G	H	A'	B'	C'	D'	E'	F'	G'	H'
04/13/2009		14.49		14.34	14.46											
04/12/2011		14.49		14.34	14.46											
04/16/2013		14.54		14.37	14.48											
04/16/2015		14.43		14.30	14.45											

REMARKS: 90IX WB over CR 53 Millers Grove

NOTES:

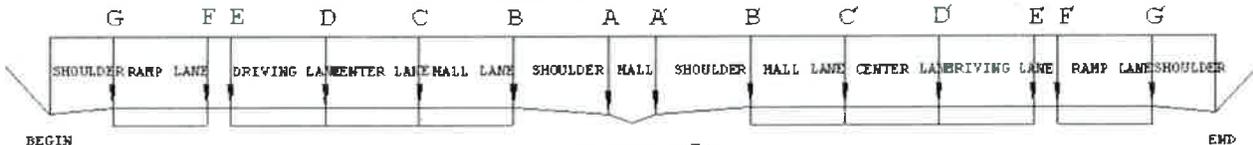
- 1) Use appropriate profile sketch 'A' or 'B'
- 2) When using sketch 'B' use points E,D & B and E', D' & B' to record measurements for 2 lane sections.
- 3) When using sketch 'B', use point F for detached ramps only
- 4) H and H' measurements taken at any other needed location or NA. Note location in 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'
(NOW-DIVIDED HIGHWAY UNDER TWY)
PROFILE VIEW

THRUWAY MAINLINE BRIDGE



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

ACCESS CATEGORY CODING FORM

RC - BIN:

2	3
---	---

 -

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

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: 225.49 BIN: 5516071

REGION: 2 COUNTY: HERKIMER

FEATURE CARRIED: 90IX WESTBOUND

FEATURE CROSSED: MILLERS GROVE ROAD (CR 53)

LEVEL 2 LOAD RATING REVIEW

VIRTIS RUN DATE: 5/2/2013

*✓ Douglas L. Heller 4/16/15
No changes to configuration, dead loads,
or previously noted section losses.*

CHANGES TO INPUT DATA: 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	34.9 (HS-19)	58.2 (HS-32)
H-20	22.6 (H-22)	37.8 (H-37)

* ANALYSIS METHOD: LOAD FACTOR

CONTROLLING MEMBER FOR RATING

LOCATION: MIDSPAN

COMPONENT: FASCIA GIRDERS G1 & 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 2/1/13

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: 225.49 / 5516071

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

Dead Load:

WS Thickness & Material Shown on Plans - 4" concrete wearing surface + 2 1/2" Asp. overlay
Changes Noted in Field: None ✓

Railing Type Shown on Plans - 4 Rail steel w/ Thrie Beam
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 fascia beam: 20% overall web loss in bearing area.

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

New Section Loss noted? - None ✓ no changes
Brief Description (attach sketches if helpful) - _____

Additional Notes: None ✓

Attachments: yes **no** (please circle)

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

Signature: Douglas R. Hilleges

Date: 4/16/15