NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: SUPPLEMENTAL INSPECTION / IMPACT DAMAGE / SPAN 2 ONLY/ PAR REQUESTED

Structure Safety Report

Supplemental Element Inspection

INSPECTION DATE: 11/03/2020

DIVISION: 13 COUNTY: BUNCOMBE STRUCTURE NUMBER: 100387 FREQUENCY: None

FACILITY CARRIED: SR1727 MILE POST:

LOCATION: .15 MI.W.JCT.US19 BUS.

FEATURE INTERSECTED: US19,23

LATITUDE: 35° 42' 41.64" LONGITUDE: 82° 33' 49.96"

SUPERSTRUCTURE:

SUBSTRUCTURE:

SPANS: 4 SPANS. SEE SPAN PROFILE SHEET FOR SPAN DETAILS

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

NBI GRADES: DECK 7 SUPERSTRUCTURE 5 SUBSTRUCTURE 6 CULVERT N

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: DELINEATORS (4) NARROW BRIDGE (2) 14'-6"

LOOKING EAST

Sign noticed issued for		Number Required
NO	WEIGHT LIMIT	0
NO	DELINEATORS	0
NO	NARROW BRIDGE	0
NO	ONE LANE BRIDGE	0
NO	LOW CLEARANCE	0

DIRECTION OF INSPECTION: W-E

DIRECTION MATCHES PLANS:

INSPECTED BY	SIGNATURE	ASSISTED BY
ME.RENFRO		BA.WILCOX

IDENTIFICATION

(1) STATE NAME	NORTH CAROLINA	BRIDGE	100387
(8) STRUCTURE NUMBER (FEDERAL)			0210387
(5) INVENTORY ROUTE (ON/UNDER)	ON		131017270
(2) STATE HIGHWAY DEPARTMENT DISTRICT			13
(3) COUNTY CODE (FEDERAL)	21	(4) PLACE CODE	71560
(6) FEATURE INTERSECTED	US19,23		
(7) FACILITY CARRIED	SR1727		
(9) LOCATION	.15 MI.W.JCT.US19 BUS.		
(11) MILEPOINT			0.0
(12) BASE HIGHWAY NETWORK			0
(13) LRS INVENTORY ROUTE & SUBROUTE			
(16) LATITUDE	35° 42' 41.64"	(17) LONGITUDE	82° 33' 49.96"
(98) BORDER BRIDGE STATE CODE		PERCENT SHARED	
(99) BORDER BRIDGE STRUCTURE NUMBER			

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN			Steel
TYPE	Stringer/Multi-beam or girder	CODE	302
(44) STRUCTURE TYPE APPROACH			
TYPE		CODE	
(45) NUMBER OF SPANS IN MAIN UNIT			4
(46) NUMBER OF SPANS IN APPROACH			0
(107) DECK STRUCTURE TYPE		CODE	1
(108)WEARING SURFACE/PROTECTIVE SYSTEM			
(A) TYPE OF WEARING SURFACE		CODE	3
(B) TYPE OF MEMBRANE		CODE	0
(C) TYPE OF DECK PROTECTION		CODE	0

AGE AND SERVICE

(27) YEAR BUILT			1963
(106) YEAR RECONSTRUCTED			2013
(42) TYPE OF SERVICE ON -			Overpass Structure
OFF -		Highway CODE	61
(28) LANES ON STRUCTURE	2	LANES UNDER STRUCTURE	4
(29) AVERAGE DAILY TRAFFIC			7900
(30) YEAR OF ADT	2016	(109) TRUCK ADT PCT	7
(19) BYPASS OR DETOUR LENGTH			0.0

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN			73.0
(49) STRUCTURE LENGTH			276.0
(50) CURB OR SIDEWALK: LEFT	1.6	RIGHT	1.6
(51) BRIDGE ROADWAY WIDTH, CURB TO CURB			28.0
(52) DECK WIDTH OUT TO OUT			33.3
(32) APPROACH ROADWAY WITH (W/ SHOULDERS)			23.0
(33) BRIDGE MEDIAN		No median CODE	0
(34) SKEW	41	(35) STRUCTURE FLARED	0
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			28.0
(53) MIN VERT CLEAR OVER BRIDGE RDWY			999.9
(54) MIN VERT UNDERCLEAR: REFERENCE		H	14.5
(55) MIN LAT UNDERCLEARANCE RT: REFERENCE		H	9.3
(56) MIN LAT UNDERCLEARANCE LT:			18.1

NAVIGATION DATA

(38) NAVIGATION CONTROL -	CODE	N
(111) PIER PROTECTION	CODE	
(39) NAVIGATION VERTICAL CLEARANCE		0.0
(116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR		0.0
(40) NAVIGATION HORIZONTAL CLEARANCE		0.0

SUFFICIENCY RATING	66.00
STATUS =	Functionally Obsolete

CLASSIFICATION

		CODE
(112) NBIS BRIDGE SYSTEM		YES
(104) HIGHWAY SYSTEM	Inventory Route not on NHS	0
(26) FUNCTIONAL CLASS	Urban Local	19
(100) STRAHNET HIGHWAY	Not a STRAHNET Route	0
(101) PARALLEL STRUCTURE	No parallel structure exists	N
(102) DIRECTION OF TRAFFIC	2-way traffic	2
(103) TEMPORARY STRUCTURE		
(110) DESIGNATED NATIONAL NETWORK - on national network for trucks		0
(20) TOLL	On Free Road	3
(21) MAINT -		01
(22) OWNER -		01
(37) HISTORICAL SIGNIFICANCE -		5

CONDITION

	CODE
(58) DECK	7
(59) SUPERSTRUCTURE	5
(60) SUBSTRUCTURE	6
(61) CHANNEL & CHANNEL PROTECTION	N
(62) CULVERTS	N

LOAD RATING AND POSTING

		CODE
(31) DESIGN LOAD	HS 15	3
(63) OPERATING RATING METHOD -	Load Factor	1
(64) OPERATING RATING -	HS-37	67
(65) INVENTORY RATING METHOD -		1
(66) INVENTORY RATING	HS-22	40
(70) BRIDGE POSTING	No Posting Required	5
(41) STRUCTURE OPEN, POSTED, OR CLOSED		A
DESCRIPTION	Open, no restriction	

APPRAISAL

	CODE
(67) STRUCTURAL EVALUATION	5
(68) DECK GEOMETRY	4
(69) UNDERCLEARANCES, VERT & HORIZ	3
(71) WATERWAY ADEQUACY	5
(72) APPROACH ROADWAY ALIGNMENT	4
(36) TRAFFIC SAFETY FEATURES	0010
(113) SCOUR CRITICAL BRIDGES	N

PROPOSED IMPROVEMENTS

(75) TYPE OF WORK	CODE
(76) LENGTH OF STRUCTURE IMPROVEMENT	
(94) BRIDGE IMPROVEMENT COST	
(95) ROADWAY IMPROVEMENT COST	
(96) TOTAL PROJECT COST	
(97) YEAR OF IMPROVEMENT COST ESTIMATE	
(114) FUTURE ADT 12,800	YEAR OF FUTURE ADT 2040

INSPECTION

(90) INSPECTION DATE	11/20	(91) FREQUENCY	24
(92) CRITICAL FEATURE INSPECTION		(93) CFI DATE	
A) FRACTURE CRIT DETAIL	A)		
B) UNDERWATER INSP	B)		
C) OTHER SPECIAL INSP	C)		
SCOUR			

Structure Number 100387 County BUNCOMBE Run Date 12/10/2020

Span Number	Facility Carried	Inventory Route	Maximum Minimum Vertical Clearance	Milepoint	Base Highway	LRS Inventory Route	Functional Classification	Number of Lanes	Average Daily Traffic	Year of Average Daily Traffic	Total Horizontal Clearance	See Note Below					STRAHNET Highway	Direction of Traffic	National Highway System	National Truck Network
												Reference Feature	Minimum Vertical Underclearance	Rigth Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade				
	7	5	10	11	12	13	26	28	29	30	47	54A	54	55	56	69	100	102	104	110
2	US 19 E,US 23 E	21000190	14.5	0.0	1	20019	12	2	18500	2017	41.5	H	14.5	7.5	19.3	3		1	☐	☐
2	US 19 E,US 23 E	21000190	14.5		1	20019	12	2	18500	2017	41.5	H	14.5	7.5	19.3	3	0	1	☐	☐
3	US 19 W,US 23 W	21000190	14.6		1	20019	12	2	18500	2017	43.3	H	14.5	9.3	18.1	3	0	1	☐	☐
3	US 19 W,US 23 W	21000190	14.6		1	20019	12	2	18500	2017	43.3	H	14.5	9.3	18.1		0	1	☐	☐

Note: Items 54, 55, and 56 are not reported FHWA under route data points but are collected for each under route to determine the minimum value for Underclearance Appraisal Item 69.

SCATTERED CRACKING IN CAP AT INT BENT 1 BENEATH BEAM 1 SPAN 2

DIAPHRAGM 1 BAY 1 SPAN 2 WELD BROKEN LOOSE ON THE BACK SIDE 3" LONG .(PAR)

BEAM 1 SPAN 2 BEAM SWEPT EASTWARD 1 1/2" (PAR)

BEAM 1 SPAN 2 POINT OF IMPACT 2' LONG X WITH 1/16" INDENTIONS AT 14'-6" OUT FROM INT. BENT 1(PAR)

DIAPHRAGM 1 BAY 1 SPAN 2 CRACK IN BASE OF DIAPHRAGM 3" LONG X 1/16" WIDE

DIAPHRAGM 1 BAY 1 SPAN 2 BOWED

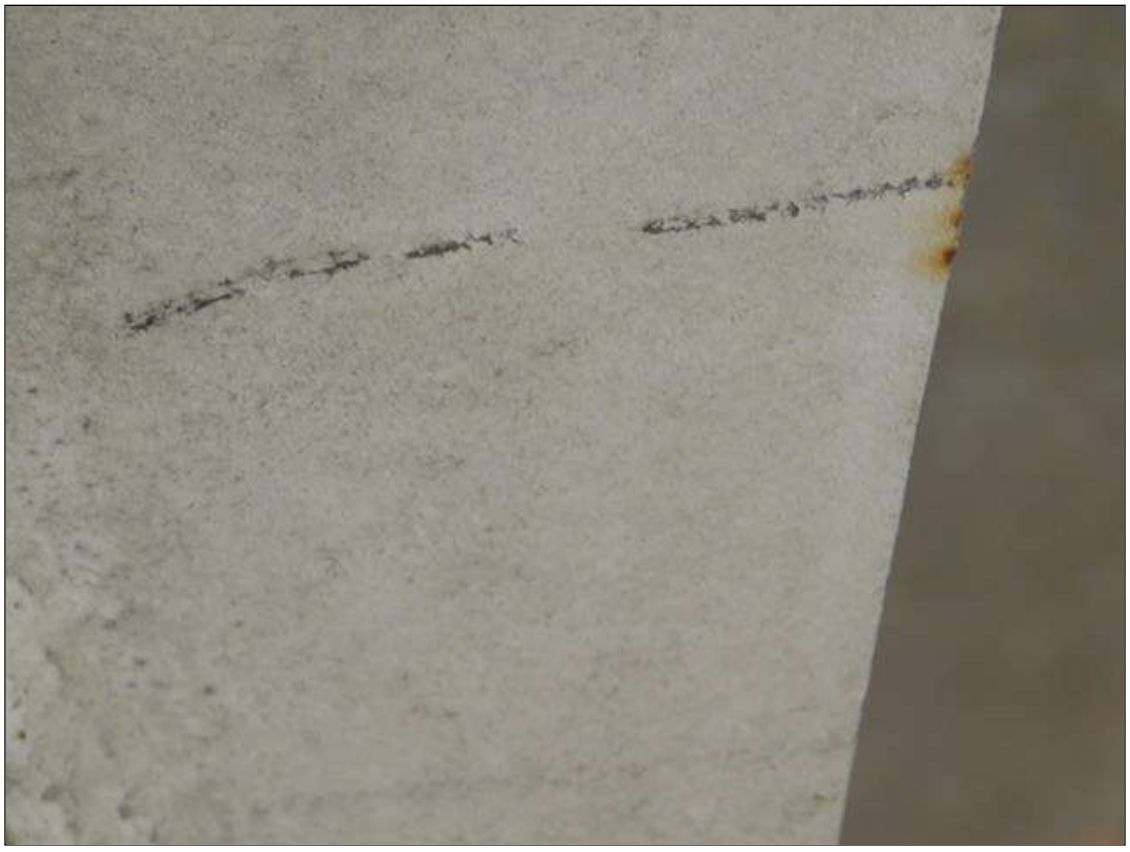
BEAM 2 SPAN 2 POINT OF IMPACT 20" LONG X BOWED UPWARD 1 1/2" LEFT FLANGE AT 4'-3" OUT FROM INT. BENT 1

BEAM 2 SPAN 1 , 12" LONG X 1/16" DEEP SCRAPES ALONG THE BOTTOM FLANGE OF BEAM

BEAM 2 SPAN 1 SWEPT EASTWARD 1 1/2" (PAR)

BEAM 2 SPAN 1 SCATTERED SCRAPES BOTTOM FLANGE OF BEAM 2

BEAM 3 SPAN 1 SCATTERED SCRAPES ALONG THE WEB OF BEAM 3



BEAM 3 SPAN 1 SCATTERED SCRAPES ALONG THE BOTTOM FLANGE

INT. BENT 1 CAP SPALLING BENEATH BEAM 3 AT THE BOTTOM OF CAP 3'-3" LONG X 11" HIGH X 8" DEEP WITH 1 REINFORCING BAR EXPOSED (PAR)

INT. BENT 1 CAP SPALLING BENEATH BEAM 3 AT THE BOTTOM OF CAP 3'-3" LONG X 11" HIGH X 8" DEEP WITH 1 REINFORCING BAR EXPOSED (PAR)

INT. BENT 1 CAP SPALLING BENEATH BEAM 3 AT THE BOTTOM OF CAP 3'-3" LONG X 11" HIGH X 8" DEEP WITH 1 REINFORCING BAR EXPOSED (PAR)

INT. BENT 1 CAP SPALL 26" LONG X 9" HIGH X5" DEEP AT 8'-6" FROM EAST END BAY 3 WITH 1 REINFORCING BAR EXPOSED (PAR)

INT. BENT 1 CAP SPALL 26" LONG X 9" HIGH X5" DEEP AT 8'-6" FROM EAST END BAY 3 WITH 1 REINFORCING BAR EXPOSED (PAR)

COLUMN 3 INT. BENT 1 SPALL 2'-10" HIGH X 2'88" LONG X 7" DEEP AT THE TOP OF NEW SECTION (PAR)

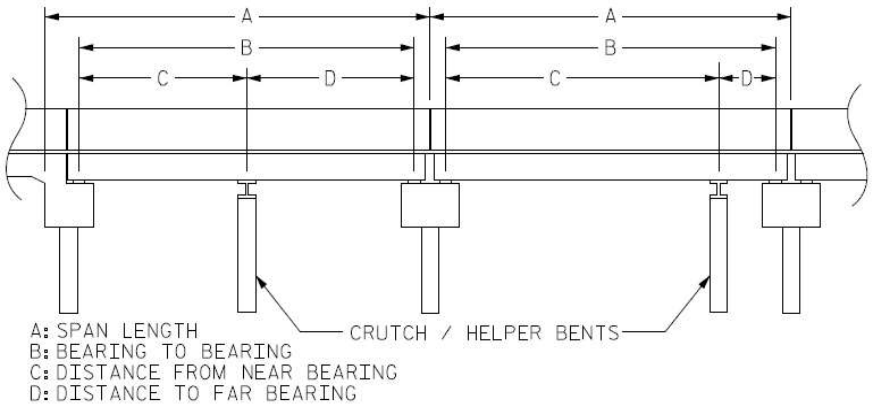
COLUMN 3 INT. BENT 1 SPALL 2'-10" HIGH X 2'88" LONG X 7" DEEP AT THE TOP OF NEW SECTION (PAR)

BEAM 4 SPAN 1 SCRAPE 11" LONG X 1/16" DEEP AT 9'-3" OUT FROM INT. BENT 1

Structure Data Worksheet

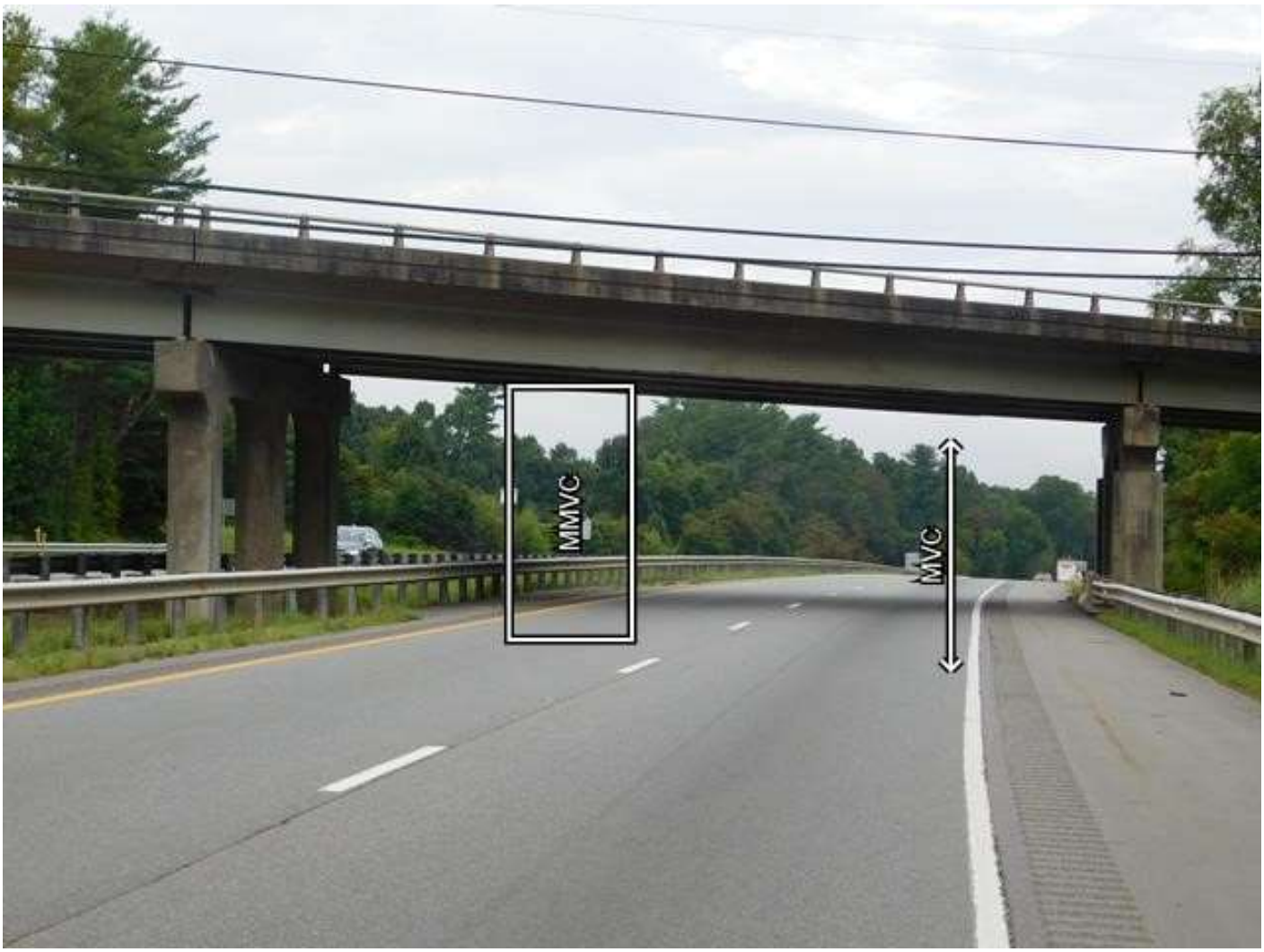
Span Profile

County: BUNCOMBE Structure Number: 100387



Span Number	Span Length	Bearing to Bearing	Crutch/ Helper Bent	Distance to Near Bearing	Distance to Far Bearing
1	62.500	61.500			
2	73.500	72.500			
3	73.500	72.500			
4	66.500	65.500			

Structure Number: 100387 Span: 2 Route Name: US 19 E,US 23 E



EAST CLEARANCE

Route Number: 21000190	Route Name: US 19 E,US 23 E			Reference Feature: H
Minimum Vertical Clearance 14.500 feet	Maximum Minimum Vertical Clearance 14.500 feet			
Total Horizontal Clearance 41.500 feet	Lateral Clearances: Left: 19.300 feet Right 7.500 feet			
☑ Base Highway Network	LRS Inventory Route, Sub Route Number 20019			
Milepost: 0.000	Number of Lanes: 2	ADT: 18500	Year of ADT: 2017	Percentage of Trucks: 12
☑ National Highway System	☐ STRAHNET Highway Designator			
Functional Classification 12	Local Principal Arterial - Other	Direction of Traffic: 1	1 - way traffic	

LOOKING EAST

OVERVIEW OF DAMAGE SPAN 2 INT. BENT1

COLUMN 3 INT. BENT 1 SPALL 2'-10" HIGH X 2'-8" LONG X 7" DEEP AT THE TOP OF NEW SECTION (PAR)

LOW CLEARANCE SIGN WEST OF BRIDGE 300' FUTURE I-26

LOW CLEARANCE SIGN WEST OF BRIDGE 300' FUTURE I-26

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: SUPPLEMENTAL INSPECTION IMPACT DAMAGE SPAN 2 ONLY, PLEASE REFER TO (PAR)S ISSUED 08/25/2021

Structure Safety Report

Supplemental Element Inspection

INSPECTION DATE: 10/26/2021

DIVISION: 13 COUNTY: BURKE STRUCTURE NUMBER: 110129 FREQUENCY: None

FACILITY CARRIED: SR1102 MILE POST: 100.85

LOCATION: .1 MI.S.JCT.SR1159

FEATURE INTERSECTED: I-40

LATITUDE: 35° 43' 5.82" LONGITUDE: 81° 43' 57.53"

SUPERSTRUCTURE: REINFORCED CONCRETE FLOOR ON I-BEAMS

SUBSTRUCTURE: E.BTS:RC CAPS/PPC PILES;INT.BTS:RCP&B/PILE FOOTINGS

SPANS: 4 SPANS. SEE SPAN PROFILE SHEET FOR SPAN DETAILS

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

GRADES: (Inspector/NBI Coding) DECK 5 / 5 SUPERSTRUCTURE 6 / 6 SUBSTRUCTURE 5 / 5 CULVERT N / N

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: NONE

LOOKING EAST

Sign noticed issued for		Number Required
NO	WEIGHT LIMIT	0
NO	DELINEATORS	0
NO	NARROW BRIDGE	0
NO	ONE LANE BRIDGE	0
NO	LOW CLEARANCE	0

DIRECTION OF INSPECTION: S-N

DIRECTION MATCHES PLANS:

INSPECTED BY	SIGNATURE	ASSISTED BY
MICHAEL CARTER		MICHAEL RENFRO

IDENTIFICATION

(1) STATE NAME NORTH CAROLINA BRIDGE 110129
(8) STRUCTURE NUMBER (FEDERAL) 0230129
(5) INVENTORY ROUTE (ON/UNDER) ON 131011020
(2) STATE HIGHWAY DEPARTMENT DISTRICT 13
(3) COUNTY CODE (FEDERAL) 23 (4) PLACE CODE 44400
(6) FEATURE INTERSECTED I-40
(7) FACILITY CARRIED SR1102
(9) LOCATION .1 MI.S.JCT.SR1159
(11) MILEPOINT 100.9
(12) BASE HIGHWAY NETWORK 0
(13) LRS INVENTORY ROUTE & SUBROUTE
(16) LATITUDE 35° 43' 5.82" (17) LONGITUDE 81° 43' 57.53"
(98) BORDER BRIDGE STATE CODE PERCENT SHARED
(99) BORDER BRIDGE STRUCTURE NUMBER

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN Steel
TYPE Stringer/Multi-beam or girder CODE 302
(44) STRUCTURE TYPE APPROACH
TYPE CODE
(45) NUMBER OF SPANS IN MAIN UNIT 4
(46) NUMBER OF SPANS IN APPROACH 0
(107) DECK STRUCTURE TYPE CODE 1
(108)WEARING SURFACE/PROTECTIVE SYSTEM
(A) TYPE OF WEARING SURFACE CODE 6
(B) TYPE OF MEMBRANE CODE 0
(C) TYPE OF DECK PROTECTION CODE 0

AGE AND SERVICE

(27) YEAR BUILT 1956
(106) YEAR RECONSTRUCTED 0
(42) TYPE OF SERVICE ON - Highway
OFF - Highway CODE 11
(28) LANES ON STRUCTURE 2 LANES UNDER STRUCTURE 4
(29) AVERAGE DAILY TRAFFIC 2000
(30) YEAR OF ADT 2019 (109) TRUCK ADT PCT 6
(19) BYPASS OR DETOUR LENGTH 7.0

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN 69.0
(49) STRUCTURE LENGTH 272.0
(50) CURB OR SIDEWALK: LEFT 1.6 RIGHT 1.6
(51) BRIDGE ROADWAY WIDTH, CURB TO CURB 28.0
(52) DECK WIDTH OUT TO OUT 33.5
(32) APPROACH ROADWAY WITH (W/ SHOULDERS) 25.0
(33) BRIDGE MEDIAN No median CODE 0
(34) SKEW 42 (35) STRUCTURE FLARED 0
(10) INVENTORY ROUTE MIN VERT CLEAR 999.9
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 28.0
(53) MIN VERT CLEAR OVER BRIDGE RDWY 999.9
(54) MIN VERT UNDERCLEAR: REFERENCE H 14.8
(55) MIN LAT UNDERCLEARANCE RT: REFERENCE H 11.0
(56) MIN LAT UNDERCLEARANCE LT: 12.8

NAVIGATION DATA

(38) NAVIGATION CONTROL - CODE N
(111) PIER PROTECTION CODE
(39) NAVIGATION VERTICAL CLEARANCE 0.0
(116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR 0.0
(40) NAVIGATION HORIZONTAL CLEARANCE 0.0

SUFFICIENCY RATING 74.02
STATUS = Functionally Obsolete

CLASSIFICATION		CODE
(112) NBIS BRIDGE SYSTEM		YES
(104) HIGHWAY SYSTEM	Inventory Route not on NHS	0
(26) FUNCTIONAL CLASS	Urban Minor Collector	16
(100) STRAHNET HIGHWAY	Not a STRAHNET Route	0
(101) PARALLEL STRUCTURE	No parallel structure exists	N
(102) DIRECTION OF TRAFFIC	2-way traffic	2
(103) TEMPORARY STRUCTURE		
(110) DESIGNATED NATIONAL NETWORK - on national network for trucks		0
(20) TOLL	On Free Road	3
(21) MAINT -		01
(22) OWNER -		01
(37) HISTORICAL SIGNIFICANCE -		5

CONDITION	CODE
(58) DECK	5
(59) SUPERSTRUCTURE	6
(60) SUBSTRUCTURE	5
(61) CHANNEL & CHANNEL PROTECTION	N
(62) CULVERTS	N

LOAD RATING AND POSTING		CODE
(31) DESIGN LOAD	HS 15	3
(63) OPERATING RATING METHOD -	Load Factor	1
(64) OPERATING RATING -	HS-42	75
(65) INVENTORY RATING METHOD -		1
(66) INVENTORY RATING	HS-25	45
(70) BRIDGE POSTING	No Posting Required	5
(41) STRUCTURE OPEN, POSTED, OR CLOSED		A
DESCRIPTION	Open, no restriction	

APPRAISAL	CODE
(67) STRUCTURAL EVALUATION	5
(68) DECK GEOMETRY	5
(69) UNDERCLEARANCES, VERT & HORIZ	3
(71) WATERWAY ADEQUACY	N
(72) APPROACH ROADWAY ALIGNMENT	8
(36) TRAFFIC SAFETY FEATURES	0111
(113) SCOUR CRITICAL BRIDGES	N

PROPOSED IMPROVEMENTS

(75) TYPE OF WORK CODE
(76) LENGTH OF STRUCTURE IMPROVEMENT
(94) BRIDGE IMPROVEMENT COST
(95) ROADWAY IMPROVEMENT COST
(96) TOTAL PROJECT COST
(97) YEAR OF IMPROVEMENT COST ESTIMATE
(114) FUTURE ADT 4,000 YEAR OF FUTURE ADT 2040

INSPECTION

(90) INSPECTION DATE 08/21 (91) FREQUENCY 24
(92) CRITICAL FEATURE INSPECTION (93) CFI DATE
A) FRACTURE CRIT DETAIL A)
B) UNDERWATER INSP B)
C) OTHER SPECIAL INSP C)
SCOUR

Structure Number 110129 County BURKE Run Date 01/04/2022

Span Number	Facility Carried	Inventory Route	Maximum Minimum Vertical Clearance	Milepoint	Base Highway	LRS Inventory Route	Functional Classification	Number of Lanes	Average Daily Traffic	Year of Average Daily Traffic	Total Horizontal Clearance	See Note Below					STRAHNET Highway	Direction of Traffic	National Highway System	National Truck Network
												Reference Feature	Minimum Vertical Underclearance	Rigth Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade				
	7	5	10	11	12	13	26	28	29	30	47	54A	54	55	56	69	100	102	104	110
2	I 40 EBL	11000400	14.8	100.9	1	10040	11	2	17000	2015	43.0	H	14.8	11.0	12.8	3		1	☐	☐
2	I 40 E	11000400	14.8	100.9	1	10040	11	2	17000	2015	43.0	H	14.8	11.0	12.8	3	1	1	☐	☐
3	I 40 W	11000400	15.8	100.9	1	10040	11	2	17000	2015	48.3	H	15.4	10.0	13.6	4	1	1	☐	☐
3	I 40 W	11000400	15.8	100.9	1	10040	11	2	17000	2015	48.3	H	15.4	10.0	13.6	4		1	☐	☐

Note: Items 54, 55, and 56 are not reported FHWA under route data points but are collected for each under route to determine the minimum value for Underclearance Appraisal Item 69.

Span 2 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 : Initial point of impact on beam 1 19'-7" from face of bent 1. Beam 1 is out of plumb 2" in the direction of traffic FOR THE LENGTH OF 20' and indention in cover plate 3' X 2" in the impact area. An indention in flange 8" X 1/4" at 21'-3", A 8" X 1/4" at 22'-11", a 5" X 1/16" at 17'-4", a 29" X 1/2" at 27'-0" all from face of bent 1. Indentions in flange cover plate 6" X 1/16" at 23'-4", a 6" X 1/16" at 22'-9", a 8" X 1/32" at 21'-6", a 8" X 1/16" at 21'-1", a 8" X 1/16" at 18'-9", a 6" X 1/32" at 16'-4", a 1" X 1/32" at 25'-5" all from face of bent 1. Gouges in flange cover plate 1" X 4" X 1/16" at 21'-1" and 3/4" X 3" X 1/16" at 27'-2" from face of bent 1.

Span 2 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 : Initial point of impact on beam 1 19'-7" from face of bent 1. Beam 1 is out of plumb 2" in the direction of traffic FOR THE LENGTH OF 20' and indention in cover plate 3' X 2" in the impact area. An indention in flange 8" X 1/4" at 21'-3", A 8" X 1/4" at 22'-11", a 5" X 1/16" at 17'-4", a 29" X 1/2" at 27'-0" all from face of bent 1. Indentions in flange cover plate 6" X 1/16" at 23'-4", a 6" X 1/16" at 22'-9", a 8" X 1/32" at 21'-6", a 8" X 1/16" at 21'-1", a 8" X 1/16" at 18'-9", a 6" X 1/32" at 16'-4", a 1" X 1/32" at 25'-5" all from face of bent 1. Gouges in flange cover plate 1" X 4" X 1/16" at 21'-1" and 3/4" X 3" X 1/16" at 27'-2" from face of bent 1.

Span 2 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 : Initial point of impact on beam 1 19'-7" from face of bent 1. Beam 1 is out of plumb 2" in the direction of traffic FOR THE LENGTH OF 20' and indention in cover plate 3' X 2" in the impact area. An indention in flange 8" X 1/4" at 21'-3", A 8" X 1/4" at 22'-11", a 5" X 1/16" at 17'-4", a 29" X 1/2" at 27'-0" all from face of bent 1. Indentions in flange cover plate 6" X 1/16" at 23'-4", a 6" X 1/16" at 22'-9", a 8" X 1/32" at 21'-6", a 8" X 1/16" at 21'-1", a 8" X 1/16" at 18'-9", a 6" X 1/32" at 16'-4", a 1" X 1/32" at 25'-5" all from face of bent 1. Gouges in flange cover plate 1" X 4" X 1/16" at 21'-1" and 3/4" X 3" X 1/16" at 27'-2" from face of bent 1.

Span 2 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 : Initial point of impact on beam 1 19'-7" from face of bent 1. Beam 1 is out of plumb 2" in the direction of traffic FOR THE LENGTH OF 20' and indention in cover plate 3' X 2" in the impact area. An indention in flange 8" X 1/4" at 21'-3", A 8" X 1/4" at 22'-11", a 5" X 1/16" at 17'-4", a 29" X 1/2" at 27'-0" all from face of bent 1. Indentions in flange cover plate 6" X 1/16" at 23'-4", a 6" X 1/16" at 22'-9", a 8" X 1/32" at 21'-6", a 8" X 1/16" at 21'-1", a 8" X 1/16" at 18'-9", a 6" X 1/32" at 16'-4", a 1" X 1/32" at 25'-5" all from face of bent 1. Gouges in flange cover plate 1" X 4" X 1/16" at 21'-1" and 3/4" X 3" X 1/16" at 27'-2" from face of bent 1.

Span 2 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 : Initial point of impact on beam 1 19'-7" from face of bent 1. Beam 1 is out of plumb 2" in the direction of traffic FOR THE LENGTH OF 20' and indention in cover plate 3' X 2" in the impact area. An indention in flange 8" X 1/4" at 21'-3", A 8" X 1/4" at 22'-11", a 5" X 1/16" at 17'-4", a 29" X 1/2" at 27'-0" all from face of bent 1. Indentions in flange cover plate 6" X 1/16" at 23'-4", a 6" X 1/16" at 22'-9", a 8" X 1/32" at 21'-6", a 8" X 1/16" at 21'-1", a 8" X 1/16" at 18'-9", a 6" X 1/32" at 16'-4", a 1" X 1/32" at 25'-5" all from face of bent 1. Gouges in flange cover plate 1" X 4" X 1/16" at 21'-1" and 3/4" X 3" X 1/16" at 27'-2" from face of bent 1.

Span 2 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 : Initial point of impact on beam 1 19'-7" from face of bent 1. Beam 1 is out of plumb 2" in the direction of traffic FOR THE LENGTH OF 20' and indention in cover plate 3' X 2" in the impact area. An indention in flange 8" X 1/4" at 21'-3", A 8" X 1/4" at 22'-11", a 5" X 1/16" at 17'-4", a 29" X 1/2" at 27'-0" all from face of bent 1. Indentions in flange cover plate 6" X 1/16" at 23'-4", a 6" X 1/16" at 22'-9", a 8" X 1/32" at 21'-6", a 8" X 1/16" at 21'-1", a 8" X 1/16" at 18'-9", a 6" X 1/32" at 16'-4", a 1" X 1/32" at 25'-5" all from face of bent 1. Gouges in flange cover plate 1" X 4" X 1/16" at 21'-1" and 3/4" X 3" X 1/16" at 27'-2" from face of bent 1.

Span 2 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 : Initial point of impact on beam 1 19'-7" from face of bent 1. Beam 1 is out of plumb 2" in the direction of traffic FOR THE LENGTH OF 20' and indention in cover plate 3' X 2" in the impact area. An indention in flange 8" X 1/4" at 21'-3", A 8" X 1/4" at 22'-11", a 5" X 1/16" at 17'-4", a 29" X 1/2" at 27'-0" all from face of bent 1. Indentions in flange cover plate 6" X 1/16" at 23'-4", a 6" X 1/16" at 22'-9", a 8" X 1/32" at 21'-6", a 8" X 1/16" at 21'-1", a 8" X 1/16" at 18'-9", a 6" X 1/32" at 16'-4", a 1" X 1/32" at 25'-5" all from face of bent 1. Gouges in flange cover plate 1" X 4" X 1/16" at 21'-1" and 3/4" X 3" X 1/16" at 27'-2" from face of bent 1.

Span 2 Beam 2: SUPPLEMENTAL INSPECTION 2021: Point of impact on beam 2 West approach slab 27'-6" from face of bent 1. Gouges in flange cover plate 1/2" X 14" X 1/16" and a indention in flange cover plate 6" X 1/32", a indention in flange 1 1/2" X 1/16" all in the impact area.

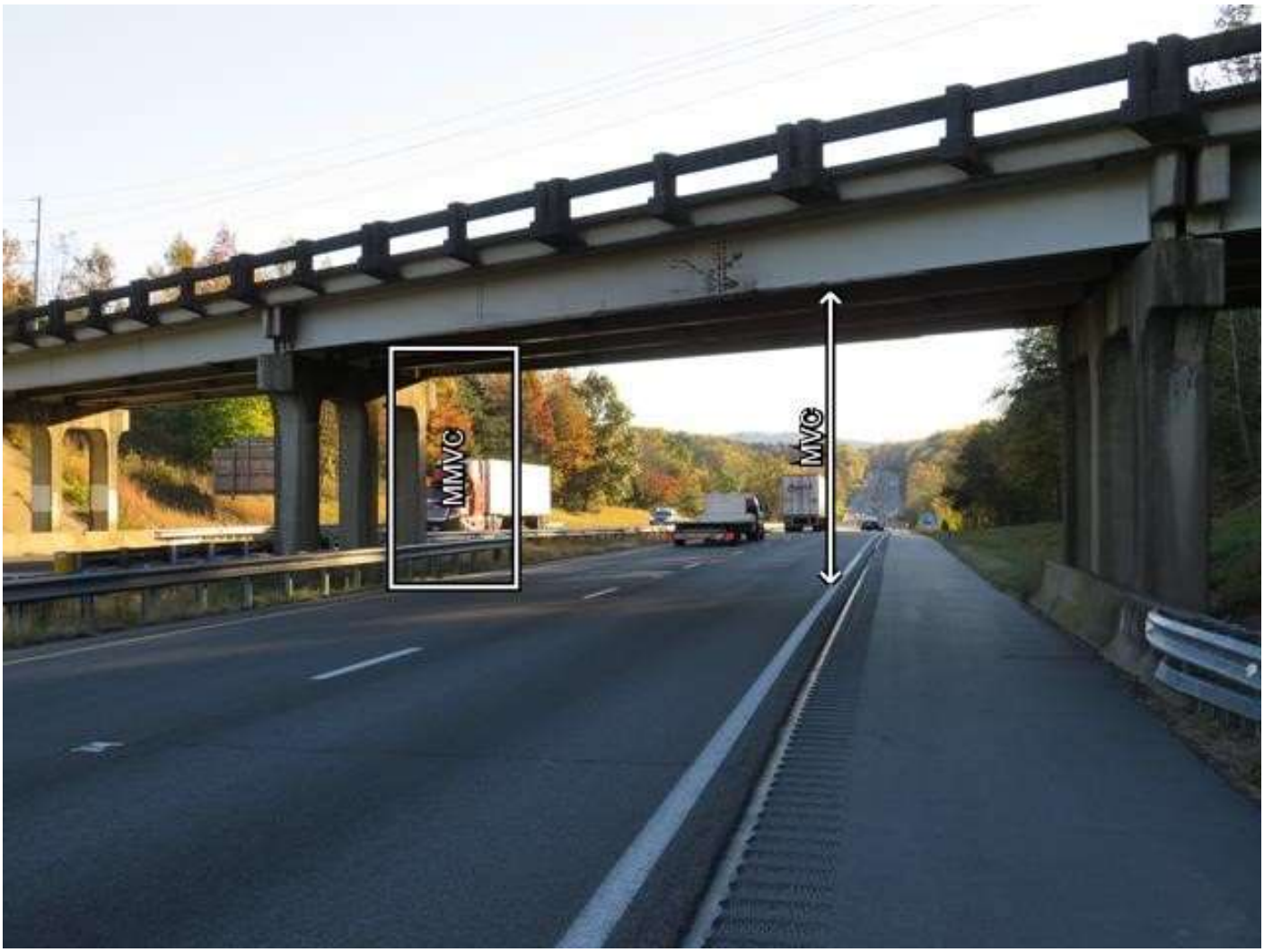
Span 2 Beam 3: SUPPLEMENTAL INSPECTION 2021: Point of impact on beam 3 West approach slab 26'-1" from face of bent 1. Beam 1 is out of plumb 2 1/2" +/- in the direction of traffic and a indention in cover plate 3" X 1/2" and a 2" X 1/2" in the impact area.

Span 2 Beam 3: SUPPLEMENTAL INSPECTION 2021: Point of impact on beam 3 West approach slab 26'-1" from face of bent 1. Beam 1 is out of plumb 2 1/2" +/- in the direction of traffic and a indention in cover plate 3" X 1/2" and a 2" X 1/2" in the impact area.

Span 2 Beam 4: SUPPLEMENTAL INSPECTION 2021: SCATTERED SCRAPS THROUGHOUT ON BOTTOM COVER PLATE

EAST CLEARANCE

Structure Number: 110129 Span: 2 Route Name: I 40 EBL



EAST CLEARANCE

Route Number: 11000400	Route Name: I 40 EBL			Reference Feature: H
Minimum Vertical Clearance 14.790 feet	Maximum Minimum Vertical Clearance 14.810 feet			
Total Horizontal Clearance 42.970 feet	Lateral Clearances: Left: 12.780 feet Right 11.000 feet			
☑ Base Highway Network	LRS Inventory Route, Sub Route Number 10040			
Milepost: 100.850	Number of Lanes: 2	ADT: 17000	Year of ADT: 2015	Percentage of Trucks: 16
☑ National Highway System	☐ STRAHNET Highway Designator			
Functional Classification 11	Local Principal Arterial - Interstate	Direction of Traffic: 1	1 - way traffic	

Structure Number: 110129 Span: 3 Route Name: I 40 W

span 3 vertical clearance looking West

Route Number: 11000400	Route Name: I 40 W			Reference Feature: H
Minimum Vertical Clearance 15.390 feet	Maximum Minimum Vertical Clearance 15.790 feet			
Total Horizontal Clearance 48.320 feet	Lateral Clearances: Left: 13.610 feet Right 10.000 feet			
☑ Base Highway Network	LRS Inventory Route, Sub Route Number 10040			
Milepost: 100.850	Number of Lanes: 2	ADT: 17000	Year of ADT: 2015	Percentage of Trucks: 16
☑ National Highway System	☐ STRAHNET Highway Designator			
Functional Classification 11	Local Principal Arterial - Interstate	Direction of Traffic: 1	1 - way traffic	

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: IMPACT DAMAGE SPAN 2 ONLY / PAR X1 / CHANGE IN CLEARANCE FOR SPAN 2

Structure Safety Report

Supplemental Element Inspection

INSPECTION DATE: 11/07/2019

DIVISION: 13 COUNTY: BURKE STRUCTURE NUMBER: 110144 FREQUENCY: None

FACILITY CARRIED: SR1704 MILE POST:

LOCATION: .2 MI.N.JCT.SR1712

FEATURE INTERSECTED: I-40

LATITUDE: 35° 43' 31.13" LONGITUDE: 81° 38' 10.85"

SUPERSTRUCTURE: REINFORCED CONCRETE FLOOR ON I-BEAMS

SUBSTRUCTURE: E.BTS:RC CAPS/TIMBER PILES;INT.BTS:RC POST&BEAM

SPANS: 4 SPANS. SEE SPAN PROFILE SHEET FOR SPAN DETAILS

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

NBI GRADES: DECK 6 SUPERSTRUCTURE 5 SUBSTRUCTURE 5 CULVERT N

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: NONE

LOOKING EAST

Sign noticed issued for		Number Required
NO	WEIGHT LIMIT	0
NO	DELINEATORS	0
NO	NARROW BRIDGE	0
NO	ONE LANE BRIDGE	0
NO	LOW CLEARANCE	0

DIRECTION OF INSPECTION: S-N

DIRECTION MATCHES PLANS:

INSPECTED BY	SIGNATURE	ASSISTED BY
ME.RENFRO		BA.WILCOX

IDENTIFICATION

(1) STATE NAME	NORTH CAROLINA	BRIDGE	110144
(8) STRUCTURE NUMBER (FEDERAL)			0230144
(5) INVENTORY ROUTE (ON/UNDER)	ON		131017040
(2) STATE HIGHWAY DEPARTMENT DISTRICT			13
(3) COUNTY CODE (FEDERAL)	23	(4) PLACE CODE	44400
(6) FEATURE INTERSECTED	I-40		
(7) FACILITY CARRIED	SR1704		
(9) LOCATION	.2 MI.N.JCT.SR1712		
(11) MILEPOINT			0.0
(12) BASE HIGHWAY NETWORK			0
(13) LRS INVENTORY ROUTE & SUBROUTE			
(16) LATITUDE	35° 43' 31.13"	(17) LONGITUDE	81° 38' 10.85"
(98) BORDER BRIDGE STATE CODE		PERCENT SHARED	
(99) BORDER BRIDGE STRUCTURE NUMBER			

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN			Steel
TYPE	Stringer/Multi-beam or girder	CODE	302
(44) STRUCTURE TYPE APPROACH			
TYPE		CODE	
(45) NUMBER OF SPANS IN MAIN UNIT			4
(46) NUMBER OF SPANS IN APPROACH			0
(107) DECK STRUCTURE TYPE		CODE	1
(108)WEARING SURFACE/PROTECTIVE SYSTEM			
(A) TYPE OF WEARING SURFACE		CODE	6
(B) TYPE OF MEMBRANE		CODE	0
(C) TYPE OF DECK PROTECTION		CODE	0

AGE AND SERVICE

(27) YEAR BUILT			1955
(106) YEAR RECONSTRUCTED			0. 0000000000000
(42) TYPE OF SERVICE ON -			Overpass Structure
OFF -		Highway CODE	61
(28) LANES ON STRUCTURE	2	LANES UNDER STRUCTURE	4
(29) AVERAGE DAILY TRAFFIC			3050
(30) YEAR OF ADT	2012	(109) TRUCK ADT PCT	7
(19) BYPASS OR DETOUR LENGTH			0.0

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN			51.0
(49) STRUCTURE LENGTH			182.0
(50) CURB OR SIDEWALK: LEFT	3.3	RIGHT	3.3
(51) BRIDGE ROADWAY WIDTH, CURB TO CURB			26.0
(52) DECK WIDTH OUT TO OUT			34.3
(32) APPROACH ROADWAY WITH (W/ SHOULDERS)			31.0
(33) BRIDGE MEDIAN		No median CODE	0
(34) SKEW	7	(35) STRUCTURE FLARED	0
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			26.0
(53) MIN VERT CLEAR OVER BRIDGE RDWY			999.9
(54) MIN VERT UNDERCLEAR: REFERENCE		H	14.8
(55) MIN LAT UNDERCLEARANCE RT: REFERENCE		H	10.9
(56) MIN LAT UNDERCLEARANCE LT:			13.1

NAVIGATION DATA

(38) NAVIGATION CONTROL -	CODE	N
(111) PIER PROTECTION	CODE	
(39) NAVIGATION VERTICAL CLEARANCE		0.0
(116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR		0.0
(40) NAVIGATION HORIZONTAL CLEARANCE		0.0

SUFFICIENCY RATING	59. 710000000000
STATUS =	Functionally Obsolete 00

CLASSIFICATION

		CODE
(112) NBIS BRIDGE SYSTEM		YES
(104) HIGHWAY SYSTEM	Inventory Route not on NHS	0
(26) FUNCTIONAL CLASS	Urban Collector	17
(100) STRAHNET HIGHWAY	Not a STRAHNET Route	0
(101) PARALLEL STRUCTURE	No parallel structure exists	N
(102) DIRECTION OF TRAFFIC	2-way traffic	2
(103) TEMPORARY STRUCTURE		
(110) DESIGNATED NATIONAL NETWORK - on national network for trucks		0
(20) TOLL	On Free Road	3
(21) MAINT -		01
(22) OWNER -		01
(37) HISTORICAL SIGNIFICANCE -		5

CONDITION

	CODE
(58) DECK	6
(59) SUPERSTRUCTURE	5
(60) SUBSTRUCTURE	5
(61) CHANNEL & CHANNEL PROTECTION	N
(62) CULVERTS	N

LOAD RATING AND POSTING

		CODE
(31) DESIGN LOAD	HS 15	3
(63) OPERATING RATING METHOD -	Load Factor	1
(64) OPERATING RATING -	HS-25	48
(65) INVENTORY RATING METHOD -		1
(66) INVENTORY RATING	HS-15	28
(70) BRIDGE POSTING	No Posting Required	5
(41) STRUCTURE OPEN, POSTED, OR CLOSED		A
DESCRIPTION	Open, no restriction	

APPRAISAL

	CODE
(67) STRUCTURAL EVALUATION	5
(68) DECK GEOMETRY	3
(69) UNDERCLEARANCES, VERT & HORIZ	3
(71) WATERWAY ADEQUACY	5
(72) APPROACH ROADWAY ALIGNMENT	3
(36) TRAFFIC SAFETY FEATURES	0111
(113) SCOUR CRITICAL BRIDGES	N

PROPOSED IMPROVEMENTS

(75) TYPE OF WORK	CODE
(76) LENGTH OF STRUCTURE IMPROVEMENT	
(94) BRIDGE IMPROVEMENT COST	
(95) ROADWAY IMPROVEMENT COST	
(96) TOTAL PROJECT COST	
(97) YEAR OF IMPROVEMENT COST ESTIMATE	
(114) FUTURE ADT 6,100	YEAR OF FUTURE ADT 2025

INSPECTION

(90) INSPECTION DATE	08/19	(91) FREQUENCY	24
(92) CRITICAL FEATURE INSPECTION		(93) CFI DATE	
A) FRACTURE CRIT DETAIL		A)	
B) UNDERWATER INSP		B)	
C) OTHER SPECIAL INSP		C)	
SCOUR			

Structure Number 110144 County BURKE Run Date 12/14/2019

Span Number	Facility Carried	Inventory Route	Maximum Minimum Vertical Clearance	Milepoint	Base Highway	LRS Inventory Route	Functional Classification	Number of Lanes	Average Daily Traffic	Year of Average Daily Traffic	Total Horizontal Clearance	See Note Below					STRAHNET Highway	Direction of Traffic	National Highway System	National Truck Network
												Reference Feature	Minimum Vertical Underclearance	Rigth Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade				
	7	5	10	11	12	13	26	28	29	30	47	54A	54	55	56	69	100	102	104	110
2	I 40 E	11000400	15.3	106.4	1	10040	11	2	22500	2015	42.4	H	15.0	10.9	13.1	3	1	1	☐	☐
3	I 40 W	11000400	17.0	106.4	1	10040	11	2	22500	2015	42.7	H	16.3	10.6	13.8	4	1	1	☐	☐

Note: Items 54, 55, and 56 are not reported FHWA under route data points but are collected for each under route to determine the minimum value for Underclearance Appraisal Item 69.

Span 2 Beam 1: INDENTION IN LEFT SIDE OF BOTTOM FLANGE AT 14'7" FROM INT. BENT 1, 2" LONG X 1" WIDE X 1/8" DEEP (PAR)

Span 2 Beam 1: POINT OF IMPACT TO BEAM 1 AT 24'8" FROM INT. BENT 1 FOR A LENGTH OF 15'.

Span 2 Beam 2: SCATTERED SCRAPES TO BOTTOM FLANGE THROUGHOUT BEAM 2

Span 2 Beam 3: SCATTERED SCRAPES TO LEFT SIDE OF WEB THROUGHOUT BEAM 3 SPAN 2

Span 2 Beam 3: SCRAPES TO BOTTOM FLANGE AT 20'9" FROM INT. BENT 1

Span 2 Beam 4: SCATTERED SCRAPES TO BOTTOM FLANGE

Span 2 Beam 4: SCATTERED SCRAPES TO LEFT SIDE OF WEB.

Span 2 Beam 5: SCATTERED SCRAPES TO BOTTOM FLANGE

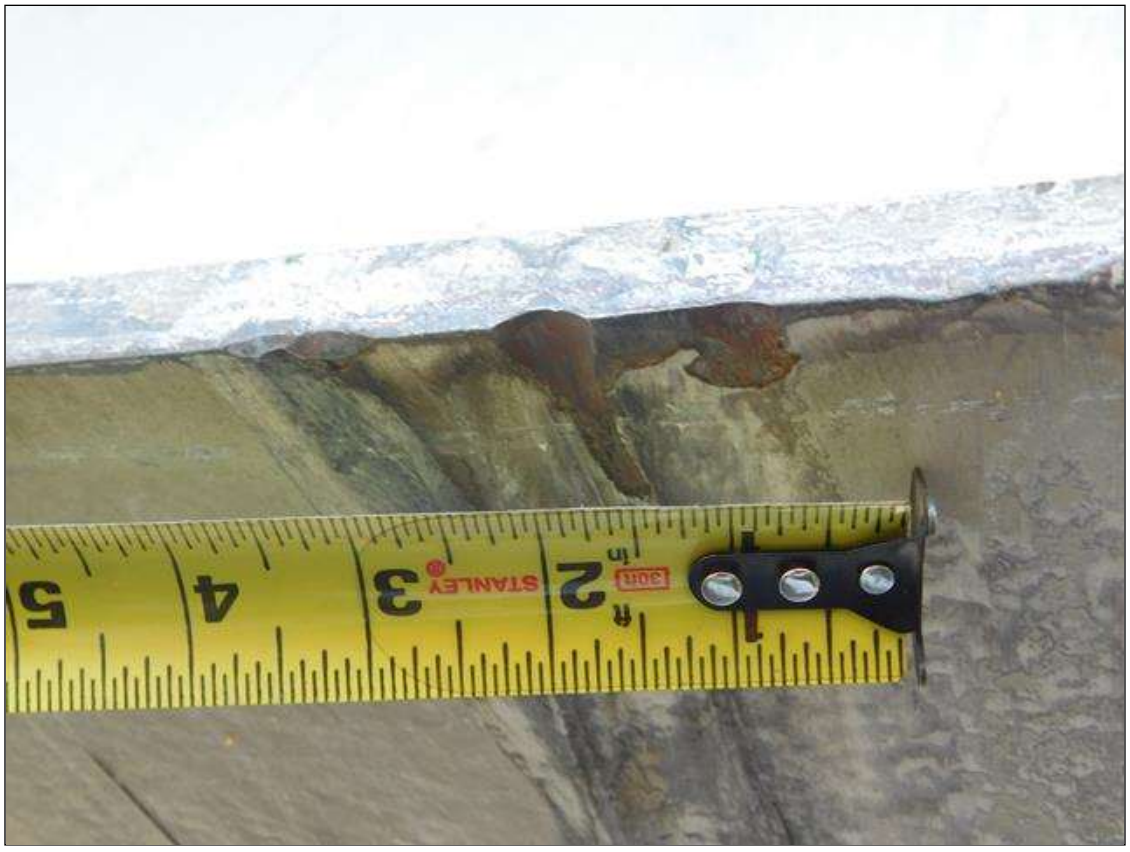
SCATTERED POPOUTS IN BOTTOM DECK AT LEFT SIDE OF BEAM 1 AT BOTTOM FLANGE

SPAN 2 BEAM 1: SCATTERED SCRAPES IN LEFT SIDE OF BOTTOM WEB

SPAN 2 BEAM 1: SCATTERED SCRAPES TO BOTTOM WEB

SPAN 2 BEAM 1: BEAM 1 SWEPT EASTWARD 1" FOR A LENGTH OF 20' (PAR)

SPAN 2 BEAM 1: SCATTERED SCRAPES TO BOTTOM FLANGE



SPAN 2 BEAM 1: INDENTION TO LEFT SIDE OF BOTTOM FLANGE AT 20' 9" FROM INT. BENT 1, 2" LONG X 1" WIDE X 1/8" DEEP (PAR)

SPAN 2 BEAM 1: OVERVIEW OF IMPACT DAMAGE TO BEAM 1 (PAR)

LOOKING EAST

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: IMPACT DAMAGE SUPPLEMENTAL INSPECTION / SPAN 2 ONLY / REFER TO PARS FOR BEAMS 1 AND, 4 8/26/21 / PARS

Structure Safety Report

Supplemental Element Inspection

INSPECTION DATE: 09/02/2021

DIVISION: 13 COUNTY: BURKE STRUCTURE NUMBER: 110147 FREQUENCY: None

FACILITY CARRIED: SR1734 MILE POST: 110.72

LOCATION: .05 MI.N.JCT.SR1737

FEATURE INTERSECTED: I-40

LATITUDE: 35° 43' 37.03" LONGITUDE: 81° 33' 37.85"

SUPERSTRUCTURE:

SUBSTRUCTURE:

SPANS: 4 SPANS. SEE SPAN PROFILE SHEET FOR SPAN DETAILS

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

GRADES: (Inspector/NBI Coding) DECK 5 / 5 SUPERSTRUCTURE 5 / 5 SUBSTRUCTURE 5 / 5 CULVERT N / N

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: 2 VERTICAL CLEARANCE SIGNS AT 1500 ' WEST OF BRIDGE

LOOKING EAST

Sign noticed issued for		Number Required
NO	WEIGHT LIMIT	0
NO	DELINEATORS	0
NO	NARROW BRIDGE	0
NO	ONE LANE BRIDGE	0
NO	LOW CLEARANCE	0

DIRECTION OF INSPECTION: S-N

DIRECTION MATCHES PLANS:

INSPECTED BY	SIGNATURE	ASSISTED BY
ME.RENFRO	Mike Renfro	ME.CARTER

IDENTIFICATION

(1) STATE NAME	NORTH CAROLINA	BRIDGE	110147
(8) STRUCTURE NUMBER (FEDERAL)			0230147
(5) INVENTORY ROUTE (ON/UNDER)	ON		131017340
(2) STATE HIGHWAY DEPARTMENT DISTRICT			13
(3) COUNTY CODE (FEDERAL)	23	(4) PLACE CODE	69520
(6) FEATURE INTERSECTED	I-40		
(7) FACILITY CARRIED	SR1734		
(9) LOCATION	.05 MI.N.JCT.SR1737		
(11) MILEPOINT			110.7
(12) BASE HIGHWAY NETWORK			0
(13) LRS INVENTORY ROUTE & SUBROUTE			
(16) LATITUDE	35° 43' 37.03"	(17) LONGITUDE	81° 33' 37.85"
(98) BORDER BRIDGE STATE CODE		PERCENT SHARED	
(99) BORDER BRIDGE STRUCTURE NUMBER			

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN			Steel
TYPE	Stringer/Multi-beam or girder	CODE	302
(44) STRUCTURE TYPE APPROACH			
TYPE		CODE	
(45) NUMBER OF SPANS IN MAIN UNIT			4
(46) NUMBER OF SPANS IN APPROACH			0
(107) DECK STRUCTURE TYPE		CODE	1
(108)WEARING SURFACE/PROTECTIVE SYSTEM			
(A) TYPE OF WEARING SURFACE		CODE	6
(B) TYPE OF MEMBRANE		CODE	0
(C) TYPE OF DECK PROTECTION		CODE	0

AGE AND SERVICE

(27) YEAR BUILT			1955
(106) YEAR RECONSTRUCTED			0
(42) TYPE OF SERVICE ON -			Highway - Pedestrian
OFF -		Highway CODE	51
(28) LANES ON STRUCTURE	2	LANES UNDER STRUCTURE	4
(29) AVERAGE DAILY TRAFFIC			3900
(30) YEAR OF ADT	2019	(109) TRUCK ADT PCT	6
(19) BYPASS OR DETOUR LENGTH			3.0

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN			52.0
(49) STRUCTURE LENGTH			184.0
(50) CURB OR SIDEWALK: LEFT	3.2	RIGHT	3.2
(51) BRIDGE ROADWAY WIDTH, CURB TO CURB			26.0
(52) DECK WIDTH OUT TO OUT			34.0
(32) APPROACH ROADWAY WITH (W/ SHOULDERS)			28.0
(33) BRIDGE MEDIAN		No median CODE	0
(34) SKEW	0	(35) STRUCTURE FLARED	0
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			26.0
(53) MIN VERT CLEAR OVER BRIDGE RDWY			999.9
(54) MIN VERT UNDERCLEAR: REFERENCE		H	14.4
(55) MIN LAT UNDERCLEARANCE RT: REFERENCE		H	11.5
(56) MIN LAT UNDERCLEARANCE LT:			14.0

NAVIGATION DATA

(38) NAVIGATION CONTROL -	CODE	N
(111) PIER PROTECTION	CODE	
(39) NAVIGATION VERTICAL CLEARANCE		0.0
(116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR		0.0
(40) NAVIGATION HORIZONTAL CLEARANCE		0.0

SUFFICIENCY RATING	58.19
STATUS =	Functionally Obsolete

CLASSIFICATION

		CODE
(112) NBIS BRIDGE SYSTEM		YES
(104) HIGHWAY SYSTEM	Inventory Route not on NHS	0
(26) FUNCTIONAL CLASS	Urban Minor Collector	16
(100) STRAHNET HIGHWAY	Not a STRAHNET Route	0
(101) PARALLEL STRUCTURE	No parallel structure exists	N
(102) DIRECTION OF TRAFFIC	2-way traffic	2
(103) TEMPORARY STRUCTURE		
(110) DESIGNATED NATIONAL NETWORK - on national network for trucks		0
(20) TOLL	On Free Road	3
(21) MAINT -		01
(22) OWNER -		01
(37) HISTORICAL SIGNIFICANCE -		5

CONDITION

	CODE
(58) DECK	5
(59) SUPERSTRUCTURE	5
(60) SUBSTRUCTURE	5
(61) CHANNEL & CHANNEL PROTECTION	N
(62) CULVERTS	N

LOAD RATING AND POSTING

		CODE
(31) DESIGN LOAD	HS 15	3
(63) OPERATING RATING METHOD -	Load Factor	1
(64) OPERATING RATING -	HS-27	49
(65) INVENTORY RATING METHOD -		1
(66) INVENTORY RATING	HS-16	29
(70) BRIDGE POSTING	No Posting Required	5
(41) STRUCTURE OPEN, POSTED, OR CLOSED		A
DESCRIPTION	Open, no restriction	

APPRAISAL

	CODE
(67) STRUCTURAL EVALUATION	5
(68) DECK GEOMETRY	3
(69) UNDERCLEARANCES, VERT & HORIZ	3
(71) WATERWAY ADEQUACY	5
(72) APPROACH ROADWAY ALIGNMENT	3
(36) TRAFFIC SAFETY FEATURES	0111
(113) SCOUR CRITICAL BRIDGES	N

PROPOSED IMPROVEMENTS

(75) TYPE OF WORK	CODE
(76) LENGTH OF STRUCTURE IMPROVEMENT	
(94) BRIDGE IMPROVEMENT COST	
(95) ROADWAY IMPROVEMENT COST	
(96) TOTAL PROJECT COST	
(97) YEAR OF IMPROVEMENT COST ESTIMATE	
(114) FUTURE ADT 7,800	YEAR OF FUTURE ADT 2040

INSPECTION

(90) INSPECTION DATE	09/21	(91) FREQUENCY	24
(92) CRITICAL FEATURE INSPECTION		(93) CFI DATE	
A) FRACTURE CRIT DETAIL		A)	
B) UNDERWATER INSP		B)	
C) OTHER SPECIAL INSP		C)	
SCOUR			

Structure Number 110147 County BURKE Run Date 10/19/2021

Span Number	Facility Carried	Inventory Route	Maximum Minimum Vertical Clearance	Milepoint	Base Highway	LRS Inventory Route	Functional Classification	Number of Lanes	Average Daily Traffic	Year of Average Daily Traffic	Total Horizontal Clearance	See Note Below					STRAHNET Highway	Direction of Traffic	National Highway System	National Truck Network
												Reference Feature	Minimum Vertical Underclearance	Rigth Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade				
	7	5	10	11	12	13	26	28	29	30	47	54A	54	55	56	69	100	102	104	110
2	I40 EBL	11000400	15.0	110.7	1	10040	11	2	23000	2015	43.1	H	14.4	11.5	14.0	3		1	☐	☐
2	I 40 E	11000400	15.0	110.7	1	10040	11	2	23000	2015	43.1	H	14.4	11.5	14.0	3	1	1	☐	☐
3	I 40 WBL	11000400	16.9	110.7	1	10040	11	2	23000	2015	43.5	H	16.1	12.1	13.0	5		1	☐	☐
3	I 40 WBL	11000400	16.9	110.7	1	10040	11	2	23000	2015	43.5	H	16.1	12.1	13.0	5	1	1	☐	☐

Note: Items 54, 55, and 56 are not reported FHWA under route data points but are collected for each under route to determine the minimum value for Underclearance Appraisal Item 69.

Span 2 Beam 2: SUPPLEMENTAL INSPECTION 2021: POINT OF IMPACT 8" LONG WTH A 1/2" DEEP GOUGE AT 18'-8" FROM INT. BENT 2 , WITH BEAM BEING SWEPT EASTWARD 1/2". SCATTERED SCRAPES ALONG THE BEAM (PAR) THERE IS A BENT UP SECTION ON THE WEST BOTTOM FLANGE 4" LONG X 1" HIGH AT 20' OUT FROM INT. BENT 1 (PAR)

Span 2 Beam 2: SUPPLEMENTAL INSPECTION 2021: POINT OF IMPACT 8" LONG WTH A 1/2" DEEP GOUGE AT 18'-8" FROM INT. BENT 2 , WITH BEAM BEING SWEPT EASTWARD 1/2". SCATTERED SCRAPES ALONG THE BEAM (PAR) THERE IS A BENT UP SECTION ON THE WEST BOTTOM FLANGE 4" LONG X 1" HIGH AT 20' OUT FROM INT. BENT 1 (PAR)

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Span 2 Beam 2: SUPPLEMENTAL INSPECTION 2021: POINT OF IMPACT 8" LONG WTH A 1/2" DEEP GOUGE AT 18'-8" FROM INT. BENT 2 , WITH BEAM BEING SWEPT EASTWARD 1/2". SCATTERED SCRAPES ALONG THE BEAM (PAR) THERE IS A BENT UP SECTION ON THE WEST BOTTOM FLANGE 4" LONG X 1" HIGH AT 20' OUT FROM INT. BENT 1 (PAR)

Span 2 Beam 5: 2021 SUPPLEMENTAL INSPECTION 2021 : BEAM 5 SPAN 2 POINT OF IMPACT 10" LONG X 1" HIGH AT 14'10" OUT FROM INT. BENT 2 , WITH THE BEAM BEING SWEPT EAST WARD UP TO 3" .SCATTERD SCRAPES ALONG THE BOTTOM FLANGE . PREVIOUS IMPACT DAMAGE AS NOTED IN THE ADDITIONAL COMMENTS SECTION. (PAR)

Span 2 Beam 5: 2021 SUPPLEMENTAL INSPECTION 2021 : BEAM 5 SPAN 2 POINT OF IMPACT 10" LONG X 1" HIGH AT 14'10" OUT FROM INT. BENT 2 , WITH THE BEAM BEING SWEPT EAST WARD UP TO 3" .SCATTERD SCRAPES ALONG THE BOTTOM FLANGE . PREVIOUS IMPACT DAMAGE AS NOTED IN THE ADDITIONAL COMMENTS SECTION. (PAR)

Span 2 Beam 5: 2021 SUPPLEMENTAL INSPECTION 2021 : BEAM 5 SPAN 2 POINT OF IMPACT 10" LONG X 1" HIGH AT 14'10" OUT FROM INT. BENT 2 , WITH THE BEAM BEING SWEPT EAST WARD UP TO 3" .SCATTERD SCRAPES ALONG THE BOTTOM FLANGE . PREVIOUS IMPACT DAMAGE AS NOTED IN THE ADDITIONAL COMMENTS SECTION. (PAR)

Span 2 Beam 5: 2021 SUPPLEMENTAL INSPECTION 2021 : BEAM 5 SPAN 2 POINT OF IMPACT 10" LONG X 1" HIGH AT 14'10" OUT FROM INT. BENT 2 , WITH THE BEAM BEING SWEPT EAST WARD UP TO 3" .SCATTERD SCRAPES ALONG THE BOTTOM FLANGE . PREVIOUS IMPACT DAMAGE AS NOTED IN THE ADDITIONAL COMMENTS SECTION. (PAR)

Span 2 Deck: SUPPLEMENTAL INSPECTION 2021 : THERE ARE 2 HAIRLINE CRACK IN THE RIGHT OVERHANG ABOVE POINT OF IMPACT

Structure Number: 110147 Span: 2 Route Name: I40 EBL

LOOKING EAST

Route Number: 11000400	Route Name: I40 EBL			Reference Feature: H
Minimum Vertical Clearance 14.417 feet	Maximum Minimum Vertical Clearance 14.950 feet			
Total Horizontal Clearance 43.110 feet	Lateral Clearances: Left: 13.970 feet Right 11.460 feet			
☑ Base Highway Network	LRS Inventory Route, Sub Route Number 10040			
Milepost: 110.720	Number of Lanes: 2	ADT: 23000	Year of ADT: 2015	Percentage of Trucks: 16
☑ National Highway System	☐ STRAHNET Highway Designator			
Functional Classification 11	Local Principal Arterial - Interstate	Direction of Traffic: 1	1 - way traffic	

Structure Number: 110147 Span: 3 Route Name: I 40 WBL

Span 3 vertical clearance looking West

Route Number: 11000400	Route Name: I 40 WBL			Reference Feature: H
Minimum Vertical Clearance 16.070 feet	Maximum Minimum Vertical Clearance 16.900 feet			
Total Horizontal Clearance 43.540 feet	Lateral Clearances: Left: 13.020 feet Right 12.060 feet			
☑ Base Highway Network	LRS Inventory Route, Sub Route Number 10040			
Milepost: 110.720	Number of Lanes: 2	ADT: 23000	Year of ADT: 2015	Percentage of Trucks: 16
☑ National Highway System		☐ STRAHNET Highway Designator		
Functional Classification 11	Local Principal Arterial - Interstate	Direction of Traffic: 1	1 - way traffic	

LOOKING EAST

REP OF LOW CLEARANCE SIGNS 1500' WEST OF BRIDGE

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: IMPACT DAMAGE REPORT FOR SPAN 3, GRADES ARE FOR DAMAGED AREAS ONLY .ROAD RESURFACED BENEATH SPANS 2 AND 3, CHANGE IN MMVC IN SPAN 3, PAR X 1

Structure Safety Report

Supplemental Element Inspection

INSPECTION DATE: 04/29/2019

DIVISION: 13 COUNTY: BURKE STRUCTURE NUMBER: 110169 FREQUENCY: None

FACILITY CARRIED: SR1765 MILE POST: 117.3

LOCATION: .3 MI.S.JCT.US64,70

FEATURE INTERSECTED: I-40

LATITUDE: 35° 42' 53.08" LONGITUDE: 81° 27' 10.93"

SUPERSTRUCTURE: REINFORCED CONCRETE FLOOR ON I-BEAMS

SUBSTRUCTURE: E.BTS:RC CAPS/H-PILES;INT.BTS: RC POST & BEAM

SPANS: 4 SPANS. SEE SPAN PROFILE SHEET FOR SPAN DETAILS

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

NBI GRADES: DECK 6 SUPERSTRUCTURE 5 SUBSTRUCTURE 6 CULVERT N/A

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: NONE

LOOKING WEST

Sign noticed issued for		Number Required
NO	WEIGHT LIMIT	0
NO	DELINEATORS	0
NO	NARROW BRIDGE	0
NO	ONE LANE BRIDGE	0
NO	LOW CLEARANCE	0

DIRECTION OF INSPECTION: E-W

DIRECTION MATCHES PLANS:

INSPECTED BY	SIGNATURE	ASSISTED BY
ME.RENFRO		BA.WILCOX

NATIONAL BRIDGE INVENTROY ----- STRUCTURE INVENTORY AND APPRAISAL

IDENTIFICATION

(1) STATE NAME NORTH CAROLINA BRIDGE 110169
(8) STRUCTURE NUMBER (FEDERAL) 0230169
(5) INVENTORY ROUTE (ON/UNDER) ON 131017650
(2) STATE HIGHWAY DEPARTMENT DISTRICT 13
(3) COUNTY CODE (FEDERAL) 23 (4) PLACE CODE 31060
(6) FEATURE INTERSECTED I-40
(7) FACILITY CARRIED SR1765
(9) LOCATION .3 MI.S.JCT.US64,70
(11) MILEPOINT 117.3
(12) BASE HIGHWAY NETWORK 0
(13) LRS INVENTORY ROUTE & SUBROUTE
(16) LATITUDE 35° 42' 53.08" (17) LONGITUDE 81° 27' 10.93"
(98) BORDER BRIDGE STATE CODE PERCENT SHARED
(99) BORDER BRIDGE STRUCTURE NUMBER

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN Steel
TYPE Stringer/Multi-beam or girder CODE 302
(44) STRUCTURE TYPE APPROACH
TYPE CODE
(45) NUMBER OF SPANS IN MAIN UNIT 4
(46) NUMBER OF SPANS IN APPROACH 0
(107) DECK STRUCTURE TYPE CODE 1
(108)WEARING SURFACE/PROTECTIVE SYSTEM
(A) TYPE OF WEARING SURFACE CODE 1
(B) TYPE OF MEMBRANE CODE 0
(C) TYPE OF DECK PROTECTION CODE 0

AGE AND SERVICE

(27) YEAR BUILT 1956
(106) YEAR RECONSTRUCTED 0.000000
(42) TYPE OF SERVICE ON - Highway - Pedestrian
OFF - Highway CODE 51
(28) LANES ON STRUCTURE 2 LANES UNDER STRUCTURE 4
(29) AVERAGE DAILY TRAFFIC 800
(30) YEAR OF ADT 2015 (109) TRUCK ADT PCT 7
(19) BYPASS OR DETOUR LENGTH 2.0

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN 52.0
(49) STRUCTURE LENGTH 189.0
(50) CURB OR SIDEWALK: LEFT 3.1 RIGHT 3.1
(51) BRIDGE ROADWAY WIDTH, CURB TO CURB 26.0
(52) DECK WIDTH OUT TO OUT 34.4
(32) APPROACH ROADWAY WITH (W/ SHOULDERS) 21.0
(33) BRIDGE MEDIAN No median CODE 0
(34) SKEW 0 (35) STRUCTURE FLARED 0
(10) INVENTORY ROUTE MIN VERT CLEAR 999.9
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 26.0
(53) MIN VERT CLEAR OVER BRIDGE RDWY 999.9
(54) MIN VERT UNDERCLEAR: REFERENCE H 14.8
(55) MIN LAT UNDERCLEARANCE RT: REFERENCE H 10.9
(56) MIN LAT UNDERCLEARANCE LT: 13.6

NAVIGATION DATA

(38) NAVIGATION CONTROL - CODE N
(111) PIER PROTECTION CODE
(39) NAVIGATION VERTICAL CLEARANCE 0.0
(116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR 0.0
(40) NAVIGATION HORIZONTAL CLEARANCE 0.0

SUFFICIENCY RATING 68.480000
STATUS = Functionally Obsolete

CLASSIFICATION — CODE

(112) NBIS BRIDGE SYSTEM YES
(104) HIGHWAY SYSTEM Inventory Route not on NHS 0
(26) FUNCTIONAL CLASS Urban Local 19
(100) STRAHNET HIGHWAY Not a STRAHNET Route 0
(101) PARALLEL STRUCTURE No parallel structure exists N
(102) DIRECTION OF TRAFFIC 2-way traffic 2
(103) TEMPORARY STRUCTURE
(110) DESIGNATED NATIONAL NETWORK - on national network for trucks 0
(20) TOLL On Free Road 3
(21) MAINT - 01
(22) OWNER - 01
(37) HISTORICAL SIGNIFICANCE - 5

CONDITION — CODE

(58) DECK 6
(59) SUPERSTRUCTURE 5
(60) SUBSTRUCTURE 6
(61) CHANNEL & CHANNEL PROTECTION N
(62) CULVERTS N

LOAD RATING AND POSTING — CODE

(31) DESIGN LOAD HS 15 3
(63) OPERATING RATING METHOD - Load Factor 1
(64) OPERATING RATING - HS-27 51
(65) INVENTORY RATING METHOD - 1
(66) INVENTORY RATING HS-16 30
(70) BRIDGE POSTING No Posting Required 5
(41) STRUCTURE OPEN, POSTED, OR CLOSED A
DESCRIPTION Open, no restriction

APPRAISAL — CODE

(67) STRUCTURAL EVALUATION 5
(68) DECK GEOMETRY 5
(69) UNDERCLEARANCES, VERT & HORIZ 3
(71) WATERWAY ADEQUACY 5
(72) APPROACH ROADWAY ALIGNMENT 5
(36) TRAFFIC SAFETY FEATURES 0111
(113) SCOUR CRITICAL BRIDGES N

PROPOSED IMPROVEMENTS

(75) TYPE OF WORK CODE
(76) LENGTH OF STRUCTURE IMPROVEMENT
(94) BRIDGE IMPROVEMENT COST
(95) ROADWAY IMPROVEMENT COST
(96) TOTAL PROJECT COST
(97) YEAR OF IMPROVEMENT COST ESTIMATE
(114) FUTURE ADT 1,600 YEAR OF FUTURE ADT 2025

INSPECTION

(90) INSPECTION DATE 10/17 (91) FREQUENCY 24
(92) CRITICAL FEATURE INSPECTION (93) CFI DATE
A) FRACTURE CRIT DETAIL 0 A)
B) UNDERWATER INSP 0 B)
C) OTHER SPECIAL INSP 0 C)
SCOUR

Structure Number 110169 County BURKE Run Date 08/12/2019

Span Number	Facility Carried	Inventory Route	Maximum Minimum Vertical Clearance	Milepoint	Base Highway	LRS Inventory Route	Functional Classification	Number of Lanes	Average Daily Traffic	Year of Average Daily Traffic	Total Horizontal Clearance	See Note Below					STRAHNET Highway	Direction of Traffic	National Highway System	National Truck Network
												Reference Feature	Minimum Vertical Underclearance	Rigth Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade				
	7	5	10	11	12	13	26	28	29	30	47	54A	54	55	56	69	100	102	104	110
2	I 40 E	11000400	15.5	117.2	1	10040	11	2	26500	2017	43.3	H	15.2	11.9	13.9	4	1	1	☐	☐
3	I 40 W	11000400	14.7	117.2	1	10040	11	2	26500	2017	43.0	H	14.7	12.5	13.6	3	1	1	☐	☐

Note: Items 54, 55, and 56 are not reported FHWA under route data points but are collected for each under route to determine the minimum value for Underclearance Appraisal Item 69.

Span 3 Beam 1: DAMAGE TO BEAM 1 SPAN 3 STARTING AT 13.5' FROM INTERIOR BENT 3 FOR A TOTAL LENGTH OF 10'. POINT OF IMPACT MEASURED AT 17.417' FROM INTERIOR BENT 3, WITH SCATTERED SCRAPES AND INDENTIONS THROUGHOUT.

Span 3 Beam 1: DAMAGE TO BEAM 1 SPAN 3 STARTING AT 13.5' FROM INTERIOR BENT 3 FOR A TOTAL LENGTH OF 10'. POINT OF IMPACT MEASURED AT 17.417' FROM INTERIOR BENT 3, WITH SCATTERED SCRAPES AND INDENTIONS THROUGHOUT.

Span 3 Beam 1: DAMAGE TO BEAM 1 SPAN 3 STARTING AT 13.5' FROM INTERIOR BENT 3 FOR A TOTAL LENGTH OF 10'. POINT OF IMPACT MEASURED AT 17.417' FROM INTERIOR BENT 3, WITH SCATTERED SCRAPES AND INDENTIONS THROUGHOUT.

Span 3 Beam 1: DAMAGE TO BEAM 1 SPAN 3 STARTING AT 13.5' FROM INTERIOR BENT 3 FOR A TOTAL LENGTH OF 10'. POINT OF IMPACT MEASURED AT 17.417' FROM INTERIOR BENT 3, WITH SCATTERED SCRAPES AND INDENTIONS THROUGHOUT.

Span 3 Beam 1: BEAM 1 SPAN 3 IS DEFLECTED UPWARD 1" STARTING AT 14.583' FROM INTERIONR BENT 3 FOR A TOTAL LENGTH OF 6'

Span 3 Beam 1: BEAM 1 SPAN 3 IS DEFELCTED WESTWARD 1" FOR A TOTAL LENGTH OF 10'. PAR

Span 3 Beam 1: CRACK IN WELD OF PLATE AT BOTTOM FLANGE OF BEAM 1 SPAN 3 MEASURED AT 17' FROM INTERIOR BENT 3 FOR A LENGTH OF 1'

Span 3 Beam 2: SPALL AT TOP FLANGE OF WEST SIDE OF BEAM 2 SPAN 3. 17" LONG BY 6" WIDE BY 1/4" DEEF MEASURED AT 15.417' FROM INTERIOR BENT 3

Span 3 Beam 2: DAMAGE TO BEAM 2 SPAN 3 STARTING AT 15.333' FROM INTERIOR BENT 3 FOR A TOTAL LENGH OF 5', WITH SCRAPES THROUGHOUT BOTTOM FLANGE. POINT OF IMPACT MEASURED AT 16.917' FROM INTERIOR BENT 3

Span 3 Beam 2: DAMAGE TO BEAM 2 SPAN 3 STARTING AT 15.333' FROM INTERIOR BENT 3 FOR A TOTAL LENGH OF 5', WITH SCRAPES THROUGHOUT BOTTOM FLANGE. POINT OF IMPACT MEASURED AT 16.917' FROM INTERIOR BENT 3

Span 3 Beam 2: DAMAGE TO BEAM 2 SPAN 3 STARTING AT 15.333' FROM INTERIOR BENT 3 FOR A TOTAL LENGH OF 5', WITH SCRAPES THROUGHOUT BOTTOM FLANGE. POINT OF IMPACT MEASURED AT 16.917' FROM INTERIOR BENT 3

Span 3 Beam 2: BEAM 2 SPAN 3 DEFLECTED UPWARD 1/2" AT POINT OF IMPACT FOR A LENGTH OF 5'

Span 3 Beam 2: MINOR INDENTIONS IN BEAM 2 SPAN 3 STARTING AT 18.167' FROM INTERIOR BENT 3 FOR A TOTAL LENGTH OF 2'

Span 3 Beam 3: BEAM 4 SPAN 3 HAS SCRAPES TO BOTTOM FLANGE AT 16.917' FROM INTERIOR BENT 3 FOR A TOTAL LENGTH OF 2'

Span 3 Beam 4: BEAM 4 SPAN 3 HAS SCRAPES TO BOTTOM FLANGE AT 16.75' FROM INTERIOR BENT 3 FOR A TOTAL LENGTH OF 1'

Span 3 Beam 5: BEAM 5 SPAN 3 HAS SCRAPES ON BOTTOM FLANGE AT 16.5' FROM INTERIOR BENT 3 FOR A TOTAL LENGTH OF 1'. INDENTION AT 16.417' FROM INTERIOR BENT 3, 1" LONG BY 1/4" DEEP

Span 3 Beam 5: BEAM 5 SPAN 3 HAS SCRAPES ON BOTTOM FLANGE AT 16.5' FROM INTERIOR BENT 3 FOR A TOTAL LENGTH OF 1'. INDENTION AT 16.417' FROM INTERIOR BENT 3, 1" LONG BY 1/4" DEEP

Span 3 Beam 1: BEAM 1 SPAN 3 HAS INDENTION AT 21.167' FROM INTERIOR BENT 2 FOR A LENGTH OF 2', WITH UPWARD DEFLECTION OF 1/2". ONE INDENTION 15.5' FROM INTERIOR BENT 2 FOR A LENGTH OF 1', WITH UPWARD DEFLECTION OF 1/4"

Span 3 Beam 1: BEAM 1 SPAN 3 HAS INDENTION AT 21.167' FROM INTERIOR BENT 2 FOR A LENGTH OF 2', WITH UPWARD DEFLECTION OF 1/2". ONE INDENTION 15.5' FROM INTERIOR BENT 2 FOR A LENGTH OF 1', WITH UPWARD DEFLECTION OF 1/4"

Span 3 Beam 1: BEAM 1 SPAN 3 DEFLECTED UPWARD 1/2" AT 22.75' FROM INTERIOR BENT 2 FOR A LENGTH OF 1'

Span 3 Beam 2: BEAM 2 SPAN 3 DEFLECTED UPWARD 1/2" AT 19.5" FROM INTERIOR BENT 2 FOR A LENGTH OF 4', WITH SCRAPES ON BOTTOM FLANGE

Span 3 Beam 2: BEAM 2 SPAN 3 DEFLECTED UPWARD 1/2" AT 19.5" FROM INTERIOR BENT 2 FOR A LENGTH OF 4', WITH SCRAPES ON BOTTOM FLANGE

Span 3 Beam 3: TWO INDENTIONS IN BOTTOM FLANGE OF BEAM 3 SPAN 3. ONE 1/4" DEEP AND ONE 1/2" DEEP AT 15.583" FROM INTERIOR BENT 2 FOR A TOTAL LENGTH OF 1'

Span 3 Beam 3: BEAM 3 SPAN 3 DEFLECTED UPWARD 1/4" FOR A LENGTH OF 3' AT 15' FROM INTERIOR BENT 2

Span 3 Beam 3: SPALL AT EAST SIDE OF TOP FLANGE OF BEAM 3 SPAN 3. 3' LONG AT 12' FROM INTERIOR BENT 2

Span 3 Beam 3: SPALL AT EAST SIDE OF TOP FLANGE OF BEAM 3 SPAN 3. 3' LONG AT 12' FROM INTERIOR BENT 2. SPALL. SPALL AT EAST SIDE OF TOP FLANGE OF BEAM 3 SPAN 2. 2' LONG AT 20' FROM INTERIOR BENT 2

Span 3 Beam 5: TWO 1/4" DEEP INDENTIONS IN BOTTOM FLANGE OF BEAM 5 SPAN 3 AT 16.5' FROM INTERIOR BENT 2 FOR A LENGTH OF 1'

Span 3 Beam 5: BEAM 5 SPAN 3 IS DEFLECTED UPWARD 1/4" AT 16.417' FROM INTERIOR BENT 2 FOR A LENGTH OF 3'

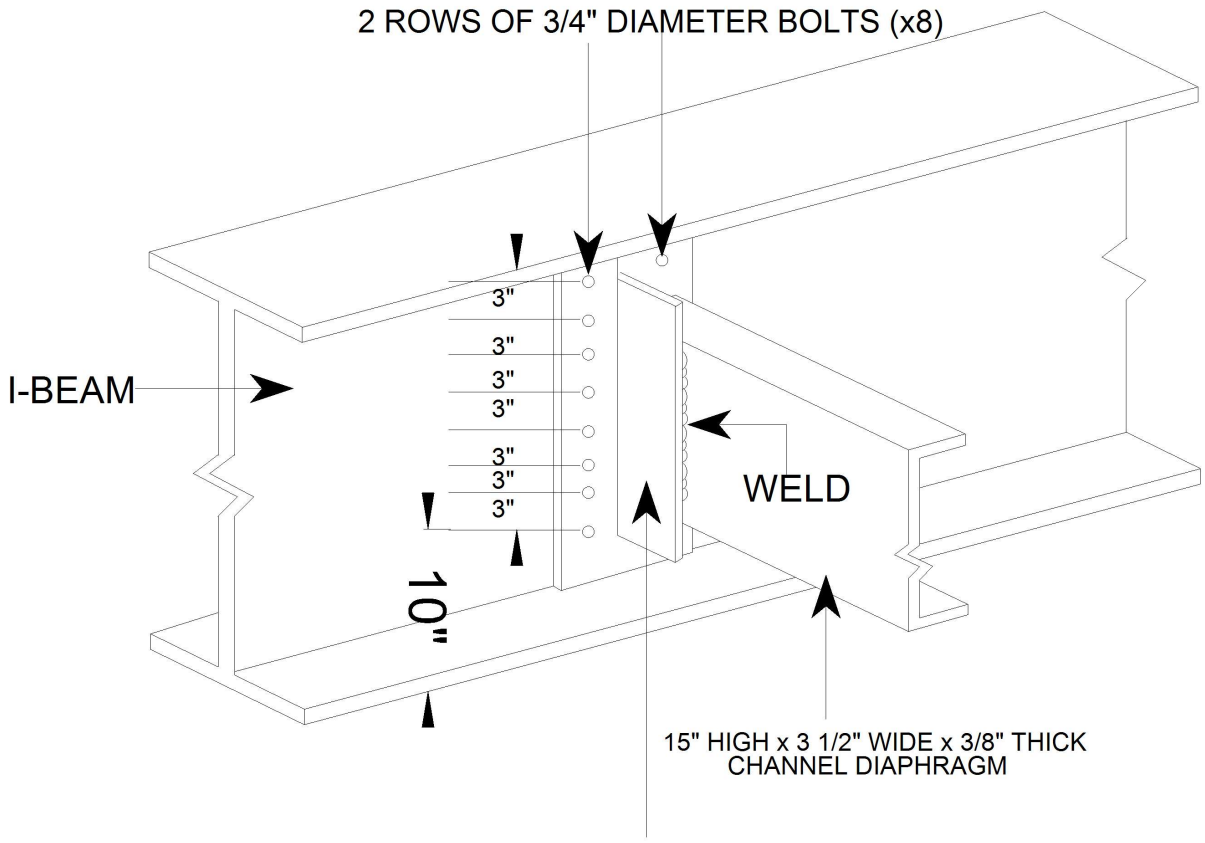
BEAM 1 SPAN 3: DIAPHRAGM 2 BAY 2 DEFLECTED SOUTHWARD FOR 1/2"

LOOKING WEST

Bridge Inspection Field Sketch

DIAPHRAGM DETAILS

LOCATIONS : MIDPOINT OF SPANS #1 & 4, 1/3 POINTS OF SPANS # 2 & 3

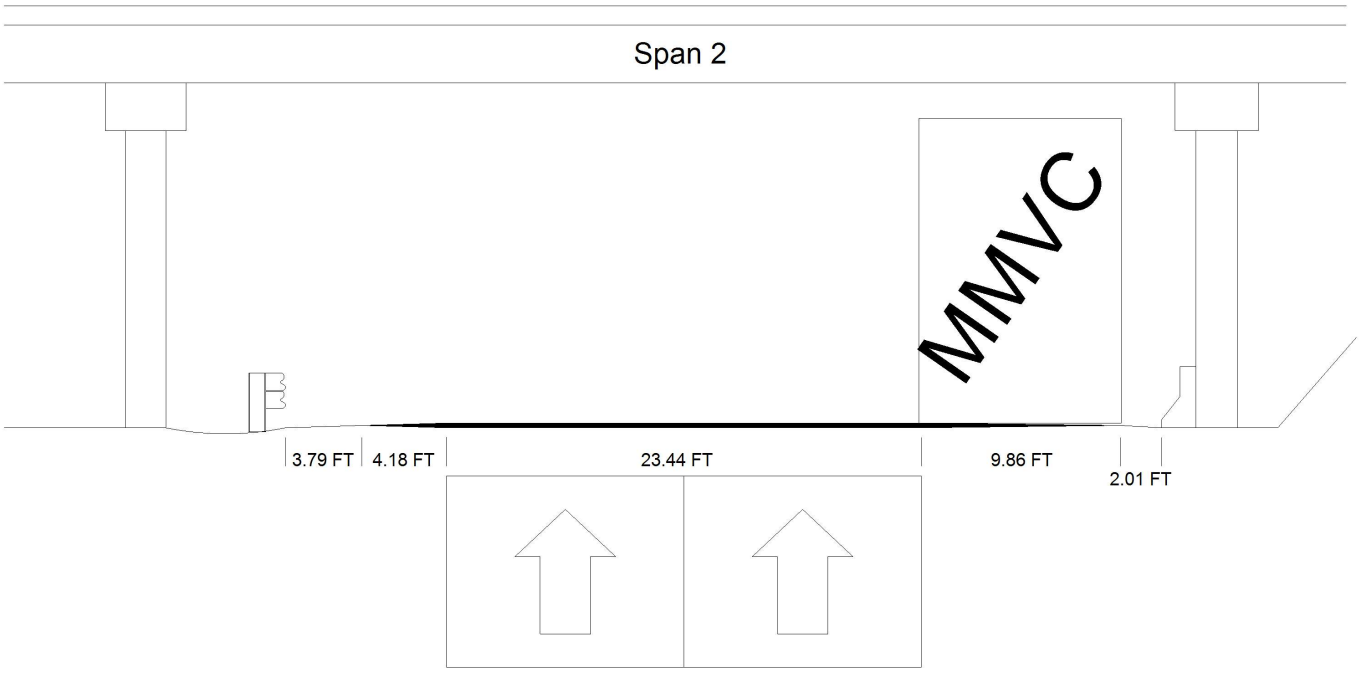


NOTE: DEEPER BEAMS HAVE TWO ROWS OF 10 BOLTS

MEASUREMENTS VERIFIED BY AKO/WOK 10/18/2017

Title	**Description**		
INTERMEDIATE DIAPHRAGMS	DATA WORKSHEET		
Bridge No: 110169	**Drawn By:** DELVIN ADAMS	**Date:** 10/24/2011	**File Name:** S0146031588

Bridge Inspection Field Sketch



I-40 EBL
Mile Marker 117.23

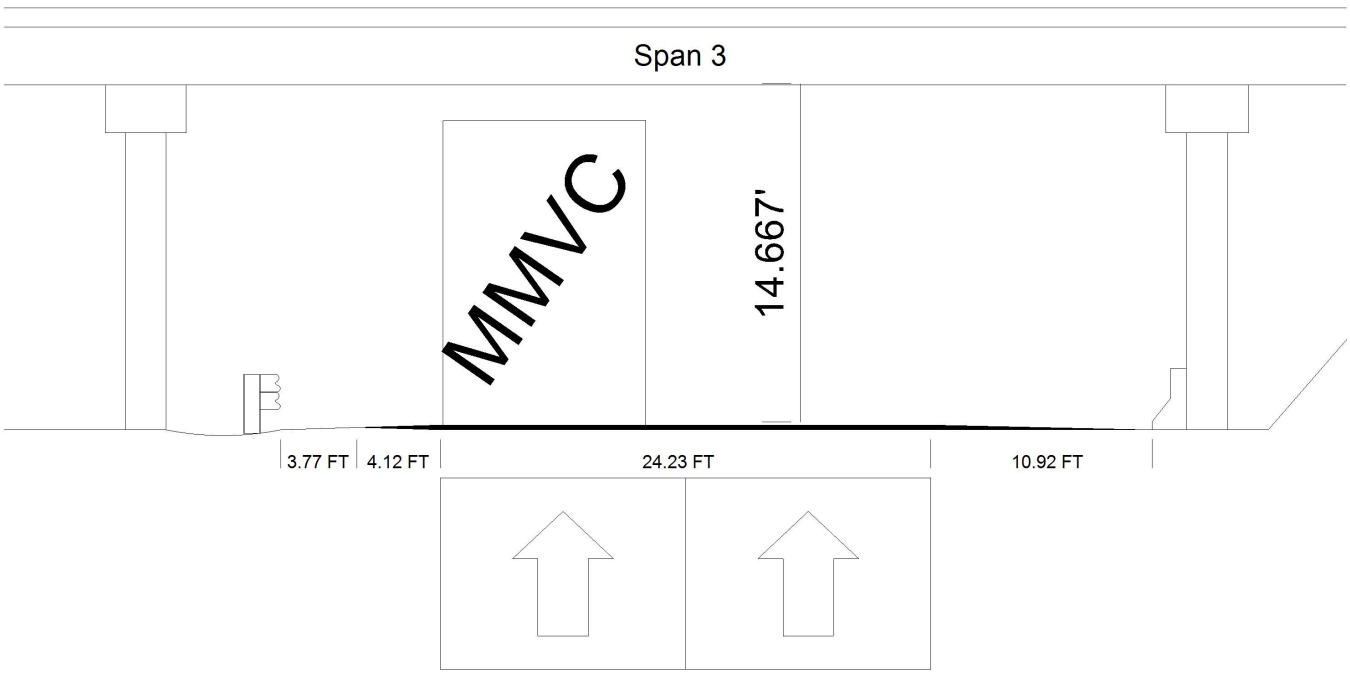
Roadway 1		Direction of Traffic	East
Distance to Left Rail	7.97FT	Distance to Right Rail	11.87FT
Distance to Left Toe of Slope		Distance to Left Bent	13.86FT
Distance to Right Toe of Slope		Distance to Right Bent	12.98FT
MMVC	15.45 Ft at Beam 1, 10 FT from EDGE OF RIGHT PAVED SHOULDER		
MVC	15.22 Ft at Beam 1, 6 FT from LEFT EDGE OF THRU LANES		

MEASUREMENTS RECORDED BY LIDAR ON 5.30.13

Title	**Description**
UNDER CLEARANCE, EBL	SPAN 2, I-40 EBL

Bridge No: 110169	**Drawn By:** DCR	**Date:** 9/27/07	**File Name:** S0146007690

Bridge Inspection Field Sketch



I-40 WBL
Mile Marker 117.23

Roadway 1		Direction of Traffic	West
Distance to Left Rail	7.89FT	Distance to Right Rail	10.92FT
Distance to Left Toe of Slope		Distance to Left Bent	13.55FT
Distance to Right Toe of Slope		Distance to Right Bent	12.5FT
MMVC	14.667 Ft at Beam 1, 10 FT from EDGE OF LEFT PAVED SHOULDER		
MVC	14.667 Ft at Beam 1, 6 FT from RIGHT EDGE OF THRU LANES		

VERIFIED AND REVISED BY ME RENFRO AND BA WILCOX ON 5/31/18

VERIFIED AND REVISED BY ME RENFRO AND BA WILCOX ON 4/29/19

1-40 RESURFACED BENEATH THE BRIDGE 4/29/2019 CHANGE IN MMVC

MEASUREMENTS RECORDED BY LIDAR ON 5.30.13

Title	**Description**
UNDER CLEARANCE, WBL	SPAN 3, I-40 WBL

Bridge No: 110169	**Drawn By:** DCR	**Date:** 9/27/07	**File Name:** S0146007691

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: SUPPLEMENTAL INSPECTION SPAN 3 IMPACT DAMAGE / CHANGE IN VERTICAL CLEARANCE SPAN 3 / POA REQUESTED

Structure Safety Report

Supplemental Element Inspection

INSPECTION DATE: 03/29/2022

DIVISION: 13 COUNTY: BURKE STRUCTURE NUMBER: 110169 FREQUENCY: None

FACILITY CARRIED: SR1765 MILE POST: 117.3

LOCATION: .3 MI.S.JCT.US64,70

FEATURE INTERSECTED: I-40

LATITUDE: 35° 42' 53.08" LONGITUDE: 81° 27' 10.93"

SUPERSTRUCTURE: REINFORCED CONCRETE FLOOR ON I-BEAMS

SUBSTRUCTURE: E.BTS:RC CAPS/H-PILES;INT.BTS: RC POST & BEAM

SPANS: 4 SPANS. SEE SPAN PROFILE SHEET FOR SPAN DETAILS

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

GRADES: (Inspector/NBI Coding) DECK 5 / 5 SUPERSTRUCTURE 6 / 6 SUBSTRUCTURE 6 / 6 CULVERT N / N

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: NONE

LOOKING WEST

Sign noticed issued for		Number Required
NO	WEIGHT LIMIT	0
NO	DELINEATORS	0
NO	NARROW BRIDGE	0
NO	ONE LANE BRIDGE	0
NO	LOW CLEARANCE	0

DIRECTION OF INSPECTION: S-N

DIRECTION MATCHES PLANS:

INSPECTED BY	SIGNATURE	ASSISTED BY
ME.RENFRO	Mike Renfro	ME.CARTER

IDENTIFICATION

(1) STATE NAME	NORTH CAROLINA	BRIDGE	110169
(8) STRUCTURE NUMBER (FEDERAL)			0230169
(5) INVENTORY ROUTE (ON/UNDER)	ON		131017650
(2) STATE HIGHWAY DEPARTMENT DISTRICT			13
(3) COUNTY CODE (FEDERAL)	23	(4) PLACE CODE	33320
(6) FEATURE INTERSECTED	I-40		
(7) FACILITY CARRIED	SR1765		
(9) LOCATION	.3 MI.S.JCT.US64,70		
(11) MILEPOINT			117.3
(12) BASE HIGHWAY NETWORK			0
(13) LRS INVENTORY ROUTE & SUBROUTE			
(16) LATITUDE	35° 42' 53.08"	(17) LONGITUDE	81° 27' 10.93"
(98) BORDER BRIDGE STATE CODE		PERCENT SHARED	
(99) BORDER BRIDGE STRUCTURE NUMBER			

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN			Steel
TYPE	Stringer/Multi-beam or girder	CODE	302
(44) STRUCTURE TYPE APPROACH			
TYPE		CODE	
(45) NUMBER OF SPANS IN MAIN UNIT			4
(46) NUMBER OF SPANS IN APPROACH			0
(107) DECK STRUCTURE TYPE		CODE	1
(108)WEARING SURFACE/PROTECTIVE SYSTEM			
(A) TYPE OF WEARING SURFACE		CODE	1
(B) TYPE OF MEMBRANE		CODE	0
(C) TYPE OF DECK PROTECTION		CODE	0

AGE AND SERVICE

(27) YEAR BUILT			1956
(106) YEAR RECONSTRUCTED			0
(42) TYPE OF SERVICE ON -		Highway - Pedestrian	
OFF -	Highway	CODE	51
(28) LANES ON STRUCTURE	2	LANES UNDER STRUCTURE	4
(29) AVERAGE DAILY TRAFFIC			800
(30) YEAR OF ADT	2019	(109) TRUCK ADT PCT	7
(19) BYPASS OR DETOUR LENGTH			3.0

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN			52.0
(49) STRUCTURE LENGTH			189.0
(50) CURB OR SIDEWALK: LEFT	3.1	RIGHT	3.1
(51) BRIDGE ROADWAY WIDTH, CURB TO CURB			26.0
(52) DECK WIDTH OUT TO OUT			34.4
(32) APPROACH ROADWAY WITH (W/ SHOULDERS)			21.0
(33) BRIDGE MEDIAN		No median CODE	0
(34) SKEW	0	(35) STRUCTURE FLARED	0
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			26.0
(53) MIN VERT CLEAR OVER BRIDGE RDWY			999.9
(54) MIN VERT UNDERCLEAR: REFERENCE		H	14.6
(55) MIN LAT UNDERCLEARANCE RT: REFERENCE		H	12.5
(56) MIN LAT UNDERCLEARANCE LT:			13.6

NAVIGATION DATA

(38) NAVIGATION CONTROL -	CODE	N
(111) PIER PROTECTION	CODE	
(39) NAVIGATION VERTICAL CLEARANCE		0.0
(116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR		0.0
(40) NAVIGATION HORIZONTAL CLEARANCE		0.0

SUFFICIENCY RATING	78.43
STATUS =	Functionally Obsolete

CLASSIFICATION

		CODE
(112) NBIS BRIDGE SYSTEM		YES
(104) HIGHWAY SYSTEM	Inventory Route not on NHS	0
(26) FUNCTIONAL CLASS	Urban Local	19
(100) STRAHNET HIGHWAY	Not a STRAHNET Route	0
(101) PARALLEL STRUCTURE	No parallel structure exists	N
(102) DIRECTION OF TRAFFIC	2-way traffic	2
(103) TEMPORARY STRUCTURE		
(110) DESIGNATED NATIONAL NETWORK - on national network for trucks		0
(20) TOLL	On Free Road	3
(21) MAINT -		01
(22) OWNER -		01
(37) HISTORICAL SIGNIFICANCE -		5

CONDITION

	CODE
(58) DECK	5
(59) SUPERSTRUCTURE	6
(60) SUBSTRUCTURE	6
(61) CHANNEL & CHANNEL PROTECTION	N
(62) CULVERTS	N

LOAD RATING AND POSTING

		CODE
(31) DESIGN LOAD	HS 15	3
(63) OPERATING RATING METHOD -	Load Factor	1
(64) OPERATING RATING -	HS-28	51
(65) INVENTORY RATING METHOD -		1
(66) INVENTORY RATING	HS-17	30
(70) BRIDGE POSTING	No Posting Required	5
(41) STRUCTURE OPEN, POSTED, OR CLOSED		A
DESCRIPTION	Open, no restriction	

APPRAISAL

	CODE
(67) STRUCTURAL EVALUATION	6
(68) DECK GEOMETRY	5
(69) UNDERCLEARANCES, VERT & HORIZ	3
(71) WATERWAY ADEQUACY	N
(72) APPROACH ROADWAY ALIGNMENT	8
(36) TRAFFIC SAFETY FEATURES	0111
(113) SCOUR CRITICAL BRIDGES	N

PROPOSED IMPROVEMENTS

(75) TYPE OF WORK	CODE
(76) LENGTH OF STRUCTURE IMPROVEMENT	
(94) BRIDGE IMPROVEMENT COST	
(95) ROADWAY IMPROVEMENT COST	
(96) TOTAL PROJECT COST	
(97) YEAR OF IMPROVEMENT COST ESTIMATE	
(114) FUTURE ADT 1,600	YEAR OF FUTURE ADT 2040

INSPECTION

(90) INSPECTION DATE	10/21	(91) FREQUENCY	24
(92) CRITICAL FEATURE INSPECTION		(93) CFI DATE	
A) FRACTURE CRIT DETAIL		A)	
B) UNDERWATER INSP		B)	
C) OTHER SPECIAL INSP		C)	
SCOUR			

Priority Actions Request

Structure Number 110169

Span3

3314 Beam 1 Plate Girder

Priority Level	Defect Type	Quantity	Defect Description
2	Cracking	1	Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022. Crack in weld of plate at bottom flange of beam 1 span 3 measured at 17ft from bent 3 for a length of 1ft
2	Distortion	20	Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1/2" TO THE WEST. .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE. (PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

Removal of Hazard

Removal of Hazard Removal of Hazard

Priority Level	Defect Type	Quantity	Defect Description
2		1	SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022: SPAN 3 DIAPHRAGM 2 BAY 1: 20 BOLTS WITH 6 MISSING ON BEAM 1, UP TO 1' HIGH CRACKING STRATING AT 1/32" WIDE AT TOP AND UP TO 1 1/8" AT BOTTOM OF DIAPHRAGM (PAR) .

Span 3 Deck: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022. spalling up to 12" WIDE X 1" deep, full length, underside of deck along both sides of beam 1.

Span 3 Deck: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022. spalling up to 12" WIDE X 1" deep, full length, underside of deck along both sides of beam 1.

Span 3 Deck: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: full length x up to 1/2in deep surface spalling, in underside of deck, along edges of beam 3.

Span 3 Deck: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.surface spalling up to 1/2in deep, full length, underside of deck along both sides of beam 2.

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1/2" TO THE WEST. .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE. (PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1/2" TO THE WEST. .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE. (PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1/2" TO THE WEST. .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE. (PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1/2" TO THE WEST. .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE. (PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

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Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1/2" TO THE WEST. .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE. (PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022. Crack in weld of plate at bottom flange of beam 1 span 3 measured at 17ft from bent 3 for a length of 1ft

Span 3 Beam 2: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: beam 2 span 3 deflected upward 1/2in at 19.5in from bent 2 for a length of 4ft, with scrapes on bottom flange

Span 3 Beam 2: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: beam 2 span 3 deflected upward 1/2in at 19.5in from bent 2 for a length of 4ft, with scrapes on bottom flange

Span 3 Beam 2: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: beam 2 span 3 deflected upward 1/2in at 19.5in from bent 2 for a length of 4ft, with scrapes on bottom flange

Span 3 Beam 2: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: SCATTERED SCRAPES WEB OF BEAM 2 .

Span 3 Beam 3: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022. : SCATTERED SCRAPES ALONG BOTTOM FLANGE OF BEAM 3

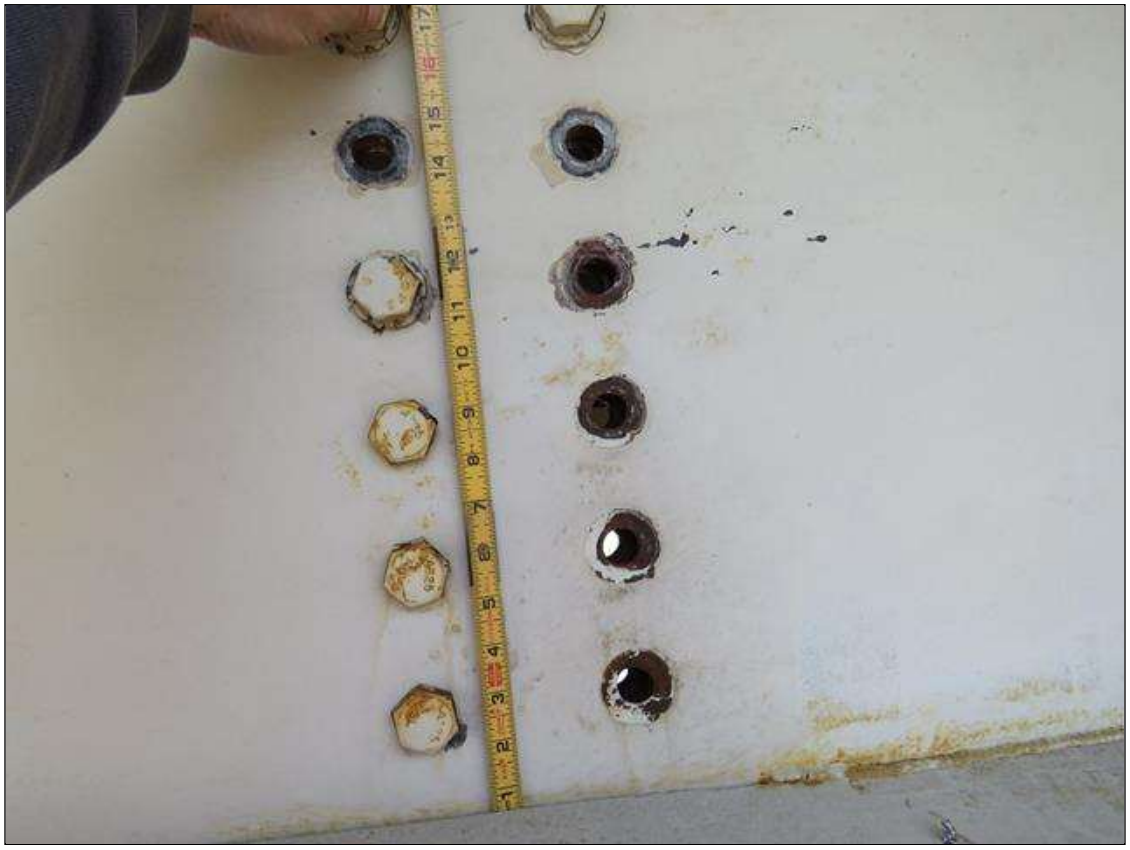
Span 3 Beam 4: bSUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: Beam 4 Span 3 has scrapes to bottom flange at 16.75ft from bent 3 for a total length of 1ft

Span 3 Beam 5: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: two 1/4in deep indentions in bottom flange of beam 5 span 3 at 16.5ft from bent 2 for a length of 1ft

Span 3 Beam 5: beam 5 span 3 has scrapes on bottom flange

SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022: SPAN 3 DIAPHRAGM 2 BAY 1: 20 BOLTS WITH 6 MISSING ON BEAM 1, UP TO 1' HIGH CRACKING STRATING AT 1/32" WIDE AT TOP AND UP TO 1 1/8" AT BOTTOM OF DIAPHRAGM (PAR) .

SPAN 3 DIAPHRAGM 2 BAY 1: 20 BOLTS WITH 6 MISSING ON BEAM 1, UP TO 1' HIGH CRACKING STRATING AT 1/32" WIDE AT TOP AND UP TO 1 1/8" AT BOTTOM OF DIAPHRAGM (PAR) .



SPAN 3 DIAPHRAGM 2 BAY 1: 20 BOLTS WITH 6 MISSING ON BEAM 1, UP TO 1' HIGH CRACKING STRATING AT 1/32" WIDE AT TOP AND UP TO 1 1/8" AT BOTTOM OF DIAPHRAGM (PAR) .

SCATTERED SCRAPES ALONG WEB BEAM 2 SPAN 3

Structure Number: 110169 Span: 2 Route Name: I 40 E

vertical clearance looking East [span 2]

Route Number: 11000400	Route Name: I 40 E			Reference Feature: H
Minimum Vertical Clearance 15.220 feet	Maximum Minimum Vertical Clearance 15.450 feet			
Total Horizontal Clearance 43.280 feet	Lateral Clearances: Left: 13.860 feet Right 11.870 feet			
☑ Base Highway Network	LRS Inventory Route, Sub Route Number 10040			
Milepost: 117.230	Number of Lanes: 2	ADT: 26500	Year of ADT: 2017	Percentage of Trucks: 16
☑ National Highway System	☐ STRAHNET Highway Designator			
Functional Classification 11	Local Principal Arterial - Interstate	Direction of Traffic: 1	1 - way traffic	

Structure Number: 110169 Span: 3 Route Name: I40W

LOOKING WEST

Route Number: 11000400	Route Name: I40W			Reference Feature: H
Minimum Vertical Clearance 14.583 feet	Maximum Minimum Vertical Clearance 14.583 feet			
Total Horizontal Clearance 43.040 feet	Lateral Clearances: Left: 13.550 feet Right 12.500 feet			
☑ Base Highway Network	LRS Inventory Route, Sub Route Number 10040			
Milepost: 117.230	Number of Lanes: 2	ADT: 26500	Year of ADT: 2017	Percentage of Trucks: 16
☑ National Highway System	☐ STRAHNET Highway Designator			
Functional Classification 11	Local Principal Arterial - Interstate	Direction of Traffic: 1	1 - way traffic	

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: SUPPLEMENTAL INSPECTION / IMPACT DAMAGE SPAN 3/ PAR ISSUED / CHANGE IN VERTICAL CLEARANCE

Structure Safety Report

Supplemental Element Inspection

INSPECTION DATE: 05/11/2022

DIVISION: 13 COUNTY: BURKE STRUCTURE NUMBER: 110169 FREQUENCY: None

FACILITY CARRIED: SR1765 MILE POST: 117.3

LOCATION: .3 MI.S.JCT.US64,70

FEATURE INTERSECTED: I-40

LATITUDE: 35° 42' 53.08" LONGITUDE: 81° 27' 10.93"

SUPERSTRUCTURE: REINFORCED CONCRETE FLOOR ON I-BEAMS

SUBSTRUCTURE: E.BTS:RC CAPS/H-PILES;INT.BTS: RC POST & BEAM

SPANS: 4 SPANS. SEE SPAN PROFILE SHEET FOR SPAN DETAILS

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

GRADES: (Inspector/NBI Coding) DECK 5 / 5 SUPERSTRUCTURE 6 / 6 SUBSTRUCTURE 6 / 6 CULVERT N / N

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: NONE

LOOKING WEST

Sign noticed issued for		Number Required
NO	WEIGHT LIMIT	0
NO	DELINEATORS	0
NO	NARROW BRIDGE	0
NO	ONE LANE BRIDGE	0
NO	LOW CLEARANCE	0

DIRECTION OF INSPECTION: S-N

DIRECTION MATCHES PLANS:

INSPECTED BY	SIGNATURE	ASSISTED BY
ME.RENFRO	Mike Renfro	ME.CARTER

IDENTIFICATION

(1) STATE NAME	NORTH CAROLINA	BRIDGE	110169
(8) STRUCTURE NUMBER (FEDERAL)			0230169
(5) INVENTORY ROUTE (ON/UNDER)	ON		31017650
(2) STATE HIGHWAY DEPARTMENT DISTRICT			13
(3) COUNTY CODE (FEDERAL)	23	(4) PLACE CODE	33320
(6) FEATURE INTERSECTED	I-40		
(7) FACILITY CARRIED	SR1765		
(9) LOCATION	.3 MI.S.JCT.US64,70		
(11) MILEPOINT			117.3
(12) BASE HIGHWAY NETWORK			0
(13) LRS INVENTORY ROUTE & SUBROUTE			
(16) LATITUDE	35° 42' 53.08"	(17) LONGITUDE	81° 27' 10.93"
(98) BORDER BRIDGE STATE CODE		PERCENT SHARED	
(99) BORDER BRIDGE STRUCTURE NUMBER			

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN			Steel
TYPE	Stringer/Multi-beam or girder	CODE	302
(44) STRUCTURE TYPE APPROACH			
TYPE		CODE	
(45) NUMBER OF SPANS IN MAIN UNIT			4
(46) NUMBER OF SPANS IN APPROACH			0
(107) DECK STRUCTURE TYPE		CODE	1
(108)WEARING SURFACE/PROTECTIVE SYSTEM			
(A) TYPE OF WEARING SURFACE		CODE	1
(B) TYPE OF MEMBRANE		CODE	0
(C) TYPE OF DECK PROTECTION		CODE	0

AGE AND SERVICE

(27) YEAR BUILT			1956
(106) YEAR RECONSTRUCTED			0
(42) TYPE OF SERVICE ON -		Highway - Pedestrian	
OFF -	Highway	CODE	51
(28) LANES ON STRUCTURE	2	LANES UNDER STRUCTURE	4
(29) AVERAGE DAILY TRAFFIC			800
(30) YEAR OF ADT	2019	(109) TRUCK ADT PCT	7
(19) BYPASS OR DETOUR LENGTH			3.0

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN			52.0
(49) STRUCTURE LENGTH			189.0
(50) CURB OR SIDEWALK: LEFT	3.1	RIGHT	3.1
(51) BRIDGE ROADWAY WIDTH, CURB TO CURB			26.0
(52) DECK WIDTH OUT TO OUT			34.4
(32) APPROACH ROADWAY WITH (W/ SHOULDERS)			21.0
(33) BRIDGE MEDIAN		CODE	5
(34) SKEW	0	(35) STRUCTURE FLARED	0111
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			
(53) MIN VERT CLEAR OVER BRIDGE RDWY			999.9
(54) MIN VERT UNDERCLEAR: REFERENCE		H	14.6
(55) MIN LAT UNDERCLEARANCE RT: REFERENCE		H	12.5
(56) MIN LAT UNDERCLEARANCE LT:			13.6

NAVIGATION DATA

(38) NAVIGATION CONTROL -	CODE	6
(111) PIER PROTECTION	CODE	
(39) NAVIGATION VERTICAL CLEARANCE		
(116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR		0.0
(40) NAVIGATION HORIZONTAL CLEARANCE		

SUFFICIENCY RATING	78.43
STATUS =	Functionally Obsolete

CLASSIFICATION

		CODE
(112) NBIS BRIDGE SYSTEM		YES
(104) HIGHWAY SYSTEM	Inventory Route not on NHS	0
(26) FUNCTIONAL CLASS	Urban Local	19
(100) STRAHNET HIGHWAY	Not a STRAHNET Route	0
(101) PARALLEL STRUCTURE		0
(102) DIRECTION OF TRAFFIC	2-way traffic	2
(103) TEMPORARY STRUCTURE		
(110) DESIGNATED NATIONAL NETWORK - on national network for trucks		0
(20) TOLL	On Free Road	3
(21) MAINT -		01
(22) OWNER -		01
(37) HISTORICAL SIGNIFICANCE -		5

CONDITION

	CODE
(58) DECK	5
(59) SUPERSTRUCTURE	6
(60) SUBSTRUCTURE	6
(61) CHANNEL & CHANNEL PROTECTION	N
(62) CULVERTS	N

LOAD RATING AND POSTING

		CODE
(31) DESIGN LOAD	HS 15	3
(63) OPERATING RATING METHOD -	Load Factor	1
(64) OPERATING RATING -	HS-28	51
(65) INVENTORY RATING METHOD -		1
(66) INVENTORY RATING	HS-17	30
(70) BRIDGE POSTING	No Posting Required	5
(41) STRUCTURE OPEN, POSTED, OR CLOSED		A
DESCRIPTION	Open, no restriction	

APPRAISAL

	CODE
(67) STRUCTURAL EVALUATION	6
(68) DECK GEOMETRY	5
(69) UNDERCLEARANCES, VERT & HORIZ	3
(71) WATERWAY ADEQUACY	N
(72) APPROACH ROADWAY ALIGNMENT	8
(36) TRAFFIC SAFETY FEATURES	N
(113) SCOUR CRITICAL BRIDGES	N

PROPOSED IMPROVEMENTS

(75) TYPE OF WORK	CODE
(76) LENGTH OF STRUCTURE IMPROVEMENT	
(94) BRIDGE IMPROVEMENT COST	
(95) ROADWAY IMPROVEMENT COST	
(96) TOTAL PROJECT COST	
(97) YEAR OF IMPROVEMENT COST ESTIMATE	
(114) FUTURE ADT 1,600	YEAR OF FUTURE ADT 2040

INSPECTION

(90) INSPECTION DATE	10/21	(91) FREQUENCY	24
(92) CRITICAL FEATURE INSPECTION		(93) CFI DATE	
A) FRACTURE CRIT DETAIL		A)	
B) UNDERWATER INSP		B)	
C) OTHER SPECIAL INSP		C)	
SCOUR			

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1" TO THE WEST. TOP FLANGE PULLED LOOSE FROM BEAM EAST SIDE FOR A LENGTH OF 30' X 3/4" .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE AND WEB(PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1" TO THE WEST. TOP FLANGE PULLED LOOSE FROM BEAM EAST SIDE FOR A LENGTH OF 30' X 3/4" .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE AND WEB(PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1" TO THE WEST. TOP FLANGE PULLED LOOSE FROM BEAM EAST SIDE FOR A LENGTH OF 30' X 3/4" .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE AND WEB(PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1" TO THE WEST. TOP FLANGE PULLED LOOSE FROM BEAM EAST SIDE FOR A LENGTH OF 30' X 3/4" .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE AND WEB(PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1" TO THE WEST. TOP FLANGE PULLED LOOSE FROM BEAM EAST SIDE FOR A LENGTH OF 30' X 3/4" .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE AND WEB(PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1" TO THE WEST. TOP FLANGE PULLED LOOSE FROM BEAM EAST SIDE FOR A LENGTH OF 30' X 3/4" .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE AND WEB(PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

Span 3 Deck: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.surface spalling up to 1/2in deep, full length, underside of deck along both sides of beam 1.

Span 3 Deck: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.surface spalling up to 1/2in deep, full length, underside of deck along both sides of beam 2.

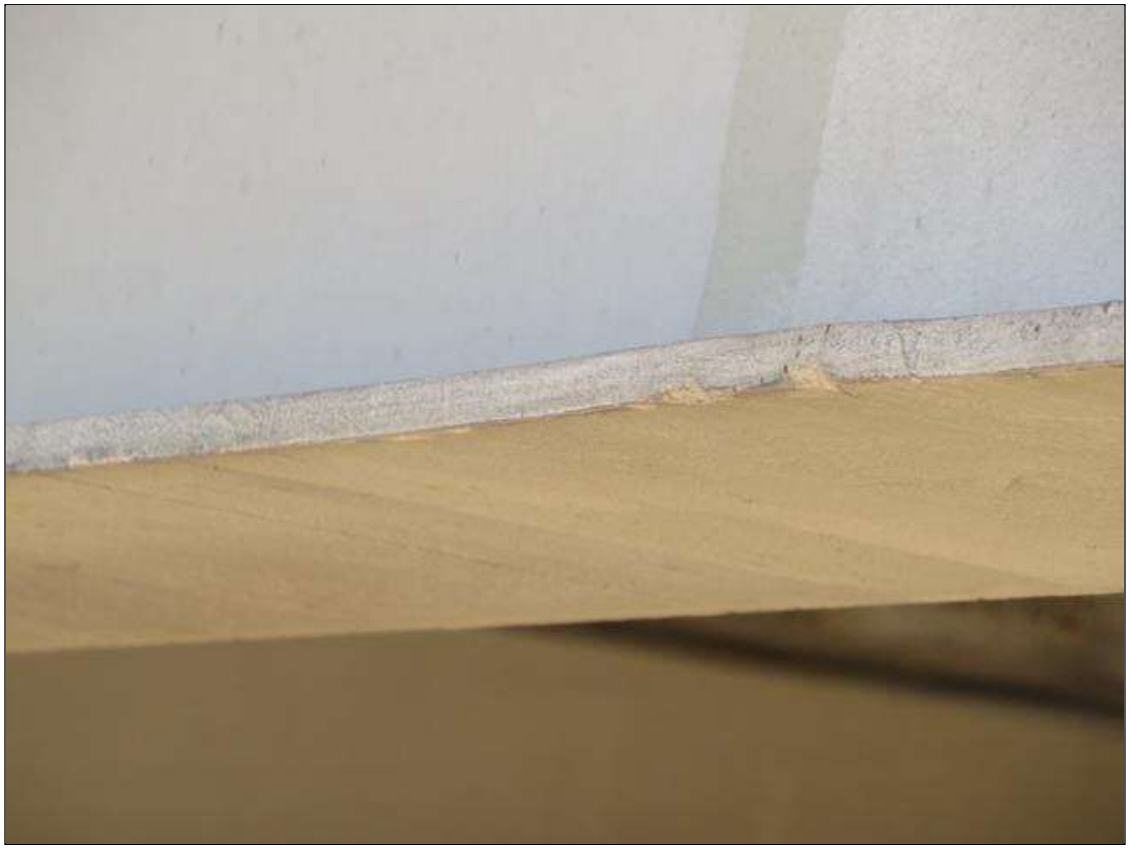
Span 3 Deck: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: full length x up to 1/2in deep surface spalling, in underside of deck, along edges of beam 3.

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1" TO THE WEST. TOP FLANGE PULLED LOOSE FROM BEAM EAST SIDE FOR A LENGTH OF 30' X 3/4" .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE AND WEB(PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022. Crack in weld of plate at TOP flange of beam 1 span 3 measured at 17ft from bent 3 for a length of 1ft

Span 3 Beam 2: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: beam 2 span 3 deflected upward 1/2in at 19.5in from bent 2 for a length of 4ft, with scrapes on bottom flange . SCATTERED SCRAPES ALONG THE WEB .

Span 3 Beam 4: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: Beam 4 Span 3 has scrapes to bottom flange at 16.75ft from bent 3 for a total length of 1ft



Span 3 Beam 5: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: two 1/4in deep indentions in bottom flange of beam 5 span 3 at 16.5ft from bent 2 for a length of 1ft . SCATTERED SCRAPES

Span 3 Beam 5: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: two 1/4in deep indentions in bottom flange of beam 5 span 3 at 16.5ft from bent 2 for a length of 1ft . SCATTERED SCRAPES

UP TO 1" WIDE CRACKING DIAPHRAGM 2 BAY 1

UP TO 1" WIDE CRACKING DIAPHRAGM 2 BAY 1

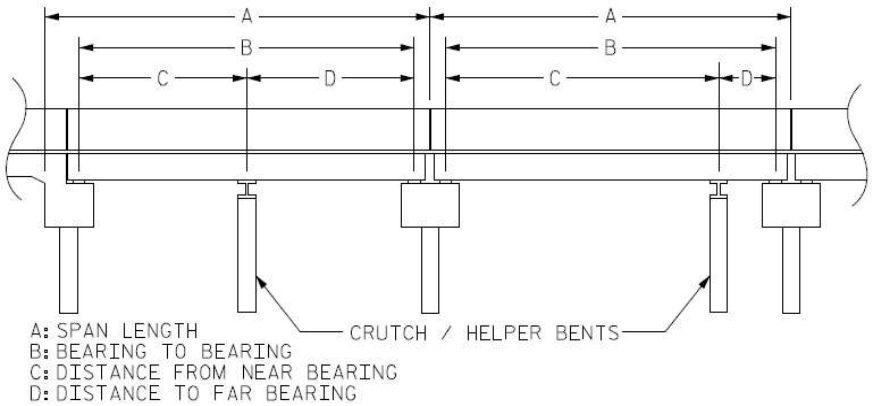
Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022.: POINT OF IMPACT 9' LONG WITH SCATTERD 1" DEEP INDENTIONS THROUGH OUT BOTTOM FLANGE , AT 12'-9" OUT FROM INT. BENT 3 . BEAM 1 DEFLECTION 1" TO THE WEST. TOP FLANGE PULLED LOOSE FROM BEAM EAST SIDE FOR A LENGTH OF 30' X 3/4" .,EAST SIDE OF BOTTOM FLANGE BENT UPWARD 1/2in. SCATTERED SCRAPES ALONG BOTTOM FLANGE AND WEB(PAR) . SCATTERED OLD SCRAPES AND INDENTIONS ALONG BOTTOM FLANGE .

6 DIAPHRAGM BOLTS MISSING BEAM 1

Structure Data Worksheet

Span Profile

County: BURKE Structure Number: 110169



Span Number	Span Length	Bearing to Bearing	Crutch/ Helper Bent	Distance to Near Bearing	Distance to Far Bearing
1	42.000	40.250			
2	52.500	51.500			
3	52.500	51.500			
4	42.000	40.250			

Structure Number: 110169 Span: 2 Route Name: I40E

vertical clearance looking East [span 2]

Route Number: 11000400	Route Name: I40E			Reference Feature: H
Minimum Vertical Clearance 15.220 feet	Maximum Minimum Vertical Clearance 15.450 feet			
Total Horizontal Clearance 43.280 feet	Lateral Clearances: Left: 13.860 feet Right 11.870 feet			
☑ Base Highway Network	LRS Inventory Route, Sub Route Number 10040			
Milepost: 117.230	Number of Lanes: 2	ADT: 26500	Year of ADT: 2017	Percentage of Trucks: 16
☑ National Highway System	☐ STRAHNET Highway Designator			
Functional Classification 11	Local Principal Arterial - Interstate	Direction of Traffic: 1	1 - way traffic	

Structure Number: 110169 Span: 3 Route Name: I40W

LOOKING WEST

Route Number: 11000400	Route Name: I40W			Reference Feature: H
Minimum Vertical Clearance 14.583 feet	Maximum Minimum Vertical Clearance 14.583 feet			
Total Horizontal Clearance 43.040 feet	Lateral Clearances: Left: 13.550 feet Right 12.500 feet			
☑ Base Highway Network	LRS Inventory Route, Sub Route Number 10040			
Milepost: 117.230	Number of Lanes: 2	ADT: 26500	Year of ADT: 2017	Percentage of Trucks: 16
☑ National Highway System	☐ STRAHNET Highway Designator			
Functional Classification 11	Local Principal Arterial - Interstate	Direction of Traffic: 1	1 - way traffic	

Structure Number: 110169 Span: 3 Route Name: I40W

LOOKING WEST

Route Number: 11000400	Route Name: I40W	Reference Feature: H
Minimum Vertical Clearance 14.500 feet	Maximum Minimum Vertical Clearance 14.583 feet	
Total Horizontal Clearance 43.040 feet	Lateral Clearances: Left: 13.550 feet Right 12.500 feet	
☑ Base Highway Network	LRS Inventory Route, Sub Route Number 10040	
Milepost: 117.230	Number of Lanes: 2	ADT: 25500	Year of ADT: 2019	Percentage of Trucks: 16
☑ National Highway System	☐ STRAHNET Highway Designator	
Functional Classification 11	Local Principal Arterial - Interstate	Direction of Traffic: 1	1 - way traffic	

LOOKING WEST

TOP OF DECK SPAN 3

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: SUPPLEMENTAL INSPECTION / IMPACT DAMAGE / SPAN 3 / PAR

Structure Safety Report

Supplemental Element Inspection

INSPECTION DATE: 11/30/2021

DIVISION: 13 COUNTY: BURKE STRUCTURE NUMBER: 110173 FREQUENCY: None

FACILITY CARRIED: SR1002 MILE POST:

LOCATION: .2 MI.N.JCT.SR1780

FEATURE INTERSECTED: I-40

LATITUDE: 35° 42' 19.14" LONGITUDE: 81° 25' 24.74"

SUPERSTRUCTURE: REINFORCED CONCRETE FLOOR ON I-BEAMS (WIDENED)

SUBSTRUCTURE: E.BTS:RC CAPS/TIM.PILES&H-PILES;INT.BTS:RC POST&BEAM

SPANS: 4 SPANS. SEE SPAN PROFILE SHEET FOR SPAN DETAILS

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

GRADES: (Inspector/NBI Coding) DECK 5 / 5 SUPERSTRUCTURE 4 / 4 SUBSTRUCTURE 4 / 4 CULVERT n / N

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: NONE

LOOKING WEST

Sign noticed issued for		Number Required
NO	WEIGHT LIMIT	0
NO	DELINEATORS	0
NO	NARROW BRIDGE	0
NO	ONE LANE BRIDGE	0
NO	LOW CLEARANCE	0

DIRECTION OF INSPECTION: S-N

DIRECTION MATCHES PLANS:

INSPECTED BY	SIGNATURE	ASSISTED BY
ME.RENFRO		ME.CARTER

IDENTIFICATION

(1) STATE NAME	NORTH CAROLINA	BRIDGE	110173
(8) STRUCTURE NUMBER (FEDERAL)			0230173
(5) INVENTORY ROUTE (ON/UNDER)	ON		131010020
(2) STATE HIGHWAY DEPARTMENT DISTRICT			13
(3) COUNTY CODE (FEDERAL)	23	(4) PLACE CODE	31500
(6) FEATURE INTERSECTED	I-40		
(7) FACILITY CARRIED	SR1002		
(9) LOCATION	.2 MI.N.JCT.SR1780		
(11) MILEPOINT			0.0
(12) BASE HIGHWAY NETWORK			0
(13) LRS INVENTORY ROUTE & SUBROUTE			
(16) LATITUDE	35° 42' 19.14"	(17) LONGITUDE	81° 25' 24.74"
(98) BORDER BRIDGE STATE CODE		PERCENT SHARED	
(99) BORDER BRIDGE STRUCTURE NUMBER			

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN			Steel
TYPE	Stringer/Multi-beam or girder	CODE	302
(44) STRUCTURE TYPE APPROACH			
TYPE		CODE	
(45) NUMBER OF SPANS IN MAIN UNIT			4
(46) NUMBER OF SPANS IN APPROACH			0
(107) DECK STRUCTURE TYPE		CODE	1
(108)WEARING SURFACE/PROTECTIVE SYSTEM			
(A) TYPE OF WEARING SURFACE		CODE	6
(B) TYPE OF MEMBRANE		CODE	0
(C) TYPE OF DECK PROTECTION		CODE	0

AGE AND SERVICE

(27) YEAR BUILT			1956
(106) YEAR RECONSTRUCTED			1975
(42) TYPE OF SERVICE ON -			Overpass Structure
OFF -		Highway CODE	61
(28) LANES ON STRUCTURE	4	LANES UNDER STRUCTURE	4
(29) AVERAGE DAILY TRAFFIC			5850
(30) YEAR OF ADT	2019	(109) TRUCK ADT PCT	7
(19) BYPASS OR DETOUR LENGTH			0.0

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN			57.0
(49) STRUCTURE LENGTH			207.0
(50) CURB OR SIDEWALK: LEFT	0.0	RIGHT	0.0
(51) BRIDGE ROADWAY WIDTH, CURB TO CURB			67.4
(52) DECK WIDTH OUT TO OUT			70.0
(32) APPROACH ROADWAY WITH (W/ SHOULDERS)			58.0
(33) BRIDGE MEDIAN		No median CODE	0
(34) SKEW	27	(35) STRUCTURE FLARED	0
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			67.4
(53) MIN VERT CLEAR OVER BRIDGE RDWY			999.9
(54) MIN VERT UNDERCLEAR: REFERENCE		H	14.8
(55) MIN LAT UNDERCLEARANCE RT: REFERENCE		H	8.7
(56) MIN LAT UNDERCLEARANCE LT:			13.3

NAVIGATION DATA

(38) NAVIGATION CONTROL -	CODE	N
(111) PIER PROTECTION	CODE	
(39) NAVIGATION VERTICAL CLEARANCE		0.0
(116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR		0.0
(40) NAVIGATION HORIZONTAL CLEARANCE		0.0

SUFFICIENCY RATING	61.86
STATUS =	Structurally Deficient

CLASSIFICATION

		CODE
(112) NBIS BRIDGE SYSTEM		YES
(104) HIGHWAY SYSTEM	Inventory Route not on NHS	0
(26) FUNCTIONAL CLASS	Urban Collector	17
(100) STRAHNET HIGHWAY	Not a STRAHNET Route	0
(101) PARALLEL STRUCTURE	No parallel structure exists	N
(102) DIRECTION OF TRAFFIC	2-way traffic	2
(103) TEMPORARY STRUCTURE		
(110) DESIGNATED NATIONAL NETWORK - on national network for trucks		0
(20) TOLL	On Free Road	3
(21) MAINT -		01
(22) OWNER -		01
(37) HISTORICAL SIGNIFICANCE -		5

CONDITION

	CODE
(58) DECK	5
(59) SUPERSTRUCTURE	4
(60) SUBSTRUCTURE	4
(61) CHANNEL & CHANNEL PROTECTION	N
(62) CULVERTS	N

LOAD RATING AND POSTING

		CODE
(31) DESIGN LOAD	HS 15	3
(63) OPERATING RATING METHOD -	Load Factor	1
(64) OPERATING RATING -	HS-27	49
(65) INVENTORY RATING METHOD -		1
(66) INVENTORY RATING	HS-16	29
(70) BRIDGE POSTING	No Posting Required	5
(41) STRUCTURE OPEN, POSTED, OR CLOSED		A
DESCRIPTION	Open, no restriction	

APPRAISAL

	CODE
(67) STRUCTURAL EVALUATION	4
(68) DECK GEOMETRY	9
(69) UNDERCLEARANCES, VERT & HORIZ	3
(71) WATERWAY ADEQUACY	N
(72) APPROACH ROADWAY ALIGNMENT	8
(36) TRAFFIC SAFETY FEATURES	0110
(113) SCOUR CRITICAL BRIDGES	N

PROPOSED IMPROVEMENTS

(75) TYPE OF WORK	CODE
(76) LENGTH OF STRUCTURE IMPROVEMENT	
(94) BRIDGE IMPROVEMENT COST	
(95) ROADWAY IMPROVEMENT COST	
(96) TOTAL PROJECT COST	
(97) YEAR OF IMPROVEMENT COST ESTIMATE	
(114) FUTURE ADT 11,700	YEAR OF FUTURE ADT 2040

INSPECTION

(90) INSPECTION DATE	10/21	(91) FREQUENCY	24
(92) CRITICAL FEATURE INSPECTION		(93) CFI DATE	
A) FRACTURE CRIT DETAIL		A)	
B) UNDERWATER INSP		B)	
C) OTHER SPECIAL INSP		C)	
SCOUR			

Structure Number 110173 County BURKE Run Date 01/04/2022

Span Number	Facility Carried	Inventory Route	Maximum Minimum Vertical Clearance	Milepoint	Base Highway	LRS Inventory Route	Functional Classification	Number of Lanes	Average Daily Traffic	Year of Average Daily Traffic	Total Horizontal Clearance	See Note Below					STRAHNET Highway	Direction of Traffic	National Highway System	National Truck Network
												Reference Feature	Minimum Vertical Underclearance	Rigth Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade				
	7	5	10	11	12	13	26	28	29	30	47	54A	54	55	56	69	100	102	104	110
2	I 40 EB - LIDAR 05/30/13	1100040	16.4	119.0	1	10040	11	2	22500	2015	42.7	H	16.1	11.6	12.3	5		1	☐	☐
3	I 40 WB - LIDAR 05/30/13	1100040	15.0	119.0	1	10040	11	2	22500	2015	43.3	H	14.8	8.7	13.3	3		1	☐	☐
3	I 40 W	1100040	15.0	119.0	1	10040	11	2	25750	2019	43.3	H	14.8	8.7	13.3	3	1	1	☐	☐

Note: Items 54, 55, and 56 are not reported FHWA under route data points but are collected for each under route to determine the minimum value for Underclearance Appraisal Item 69.

Span 3 Beam 11: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 area of previous impact damage, distortion of bottom flange vertical up to 2" lateral up to 1/2" with broken cover plate weld [10" long]. new area of impact damage 6" long x 2" high at 13'-5" out from int. bent 3 . with the bottom cover plate being broken loose from bottom flange 10" long x 2" deep . there are also two older 1/2" indentions in the same area . Beam 11 is swept westward up to 1 1/2". (par) there is a 2" diameter torch cut hole at both ends of of the 6' length .

Span 3 Beam 11: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 area of previous impact damage, distortion of bottom flange vertical up to 2" lateral up to 1/2" with broken cover plate weld [10" long]. new area of impact damage 6" long x 2" high at 13'-5" out from int. bent 3 . with the bottom cover plate being broken loose from bottom flange 10" long x 2" deep . there are also two older 1/2" indentions in the same area . Beam 11 is swept westward up to 1 1/2". (par) there is a 2" diameter torch cut hole at both ends of of the 6' length .

Span 3 Beam 11: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 area of previous impact damage, distortion of bottom flange vertical up to 2" lateral up to 1/2" with broken cover plate weld [10" long]. new area of impact damage 6" long x 2" high at 13'-5" out from int. bent 3 . with the bottom cover plate being broken loose from bottom flange 10" long x 2" deep . there are also two older 1/2" indentions in the same area . Beam 11 is swept westward up to 1 1/2". (par) there is a 2" diameter torch cut hole at both ends of of the 6' length .

Span 3 Beam 11: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 area of previous impact damage, distortion of bottom flange vertical up to 2" lateral up to 1/2" with broken cover plate weld [10" long]. new area of impact damage 6" long x 2" high at 13'-5" out from int. bent 3 . with the bottom cover plate being broken loose from bottom flange 10" long x 2" deep . there are also two older 1/2" indentions in the same area . Beam 11 is swept westward up to 1 1/2". (par) there is a 2" diameter torch cut hole at both ends of of the 6' length .

Span 3 Beam 11: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 area of previous impact damage, distortion of bottom flange vertical up to 2" lateral up to 1/2" with broken cover plate weld [10" long]. new area of impact damage 6" long x 2" high at 13'-5" out from int. bent 3 . with the bottom cover plate being broken loose from bottom flange 10" long x 2" deep . there are also two older 1/2" indentions in the same area . Beam 11 is swept westward up to 1 1/2". (par) there is a 2" diameter torch cut hole at both ends of of the 6' length .

Span 3 Beam 11: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 area of previous impact damage, distortion of bottom flange vertical up to 2" lateral up to 1/2" with broken cover plate weld [10" long]. new area of impact damage 6" long x 2" high at 13'-5" out from int. bent 3 . with the bottom cover plate being broken loose from bottom flange 10" long x 2" deep . there are also two older 1/2" indentions in the same area . Beam 11 is swept westward up to 1 1/2". (par) there is a 2" diameter torch cut hole at both ends of of the 6' length .

Span 3 Beam 11: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 area of previous impact damage, distortion of bottom flange vertical up to 2" lateral up to 1/2" with broken cover plate weld [10" long]. new area of impact damage 6" long x 2" high at 13'-5" out from int. bent 3 . with the bottom cover plate being broken loose from bottom flange 10" long x 2" deep . there are also two older 1/2" indentions in the same area . Beam 11 is swept westward up to 1 1/2". (par) there is a 2" diameter torch cut hole at both ends of of the 6' length .

Span 3 Beam 11: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 area of previous impact damage, distortion of bottom flange vertical up to 2" lateral up to 1/2" with broken cover plate weld [10" long]. new area of impact damage 6" long x 2" high at 13'-5" out from int. bent 3 . with the bottom cover plate being broken loose from bottom flange 10" long x 2" deep . there are also two older 1/2" indentions in the same area . Beam 11 is swept westward up to 1 1/2". (par) there is a 2" diameter torch cut hole at both ends of of the 6' length .

Span 3 Beam 10: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021: 1 indention 1" long x 1/2" deep at 18'-8" from int. bent 3 . scattered scrapes along the web .

Span 3 Beam 10: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021: 1 indention 1" long x 1/2" deep at 18'-8" from int. bent 3 . scattered scrapes along the web .

Span 3 Beam 10: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021: 1 indention 1" long x 1/2" deep at 18'-8" from int. bent 3 . scattered scrapes along the web .

Span 3 Beam 9: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021: 1 indention 1" long x 1/4" deep at 18'-7" from int. bent 3

Span 3 Beam 4: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021: scattered scrapes

Span 3 Beam 3: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 :scattered scrapes

Span 3 Beam 2: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 :scattered scrapes

Span 3 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2021 :scattered scrapes

Structure Number: 110173 Span: 2 Route Name: I 40 EB - LIDAR 05/30/13

vertical clearance looking East Span 2 (choose 1)

Route Number: 1100040	Route Name: I 40 EB - LIDAR 05/30/13			Reference Feature: H
Minimum Vertical Clearance 16.060 feet	Maximum Minimum Vertical Clearance 16.360 feet			
Total Horizontal Clearance 42.650 feet	Lateral Clearances: Left: 12.250 feet Right 11.580 feet			
☑ Base Highway Network	LRS Inventory Route, Sub Route Number 10040			
Milepost: 119.020	Number of Lanes: 2	ADT: 22500	Year of ADT: 2015	Percentage of Trucks: 16
☑ National Highway System	☐ STRAHNET Highway Designator			
Functional Classification 11	Local Principal Arterial - Interstate	Direction of Traffic: 1	1 - way traffic	

Structure Number: 110173 Span: 3 Route Name: I 40 WB - LIDAR 05/30/13

LOOKING WEST CLEARANCE

Route Number: 1100040	Route Name: I 40 WB - LIDAR 05/30/13	Reference Feature: H
Minimum Vertical Clearance 14.770 feet	Maximum Minimum Vertical Clearance 14.950 feet	
Total Horizontal Clearance 43.270 feet	Lateral Clearances: Left: 13.280 feet Right 8.670 feet	
☑ Base Highway Network	LRS Inventory Route, Sub Route Number 10040	

Milepost: 119.020	Number of Lanes: 2	ADT: 22500	Year of ADT: 2015	Percentage of Trucks: 16

☑ National Highway System	☐ STRAHNET Highway Designator
Functional Classification 11 Local Principal Arterial - Interstate	Direction of Traffic: 1 1 - way traffic

LOOKING WEST

LOOKING WEST CLEARANCE

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: SUPPLEMENTAL INSPECTION / IMPACT DAMAGE SPAN 2 ONLY / PAR X2 / CHANGE IN MMVC

Structure Safety Report

Supplemental Element Inspection

INSPECTION DATE: 01/25/2022

DIVISION: 13 COUNTY: MCDOWELL STRUCTURE NUMBER: 580143 FREQUENCY: None

FACILITY CARRIED: I-40 WBL MILE POST: 86.38

LOCATION: 1.8 MI.E.JCT.US221

FEATURE INTERSECTED: NC226

LATITUDE: 35° 39' 29.71" LONGITUDE: 81° 57' 44.59"

SUPERSTRUCTURE: RC FLOOR ON I-BEAMS (S.I.P. METAL FORMS)(WIDENED)

SUBSTRUCTURE: E.BTS:RC CAPS/PPC PILES;INT BT:RC P&B/PILE FTGS.

SPANS: 3 SPANS. SEE SPAN PROFILE SHEET FOR SPAN DETAILS

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

GRADES: (Inspector/NBI Coding) DECK 5 / 5 SUPERSTRUCTURE 6 / 6 SUBSTRUCTURE 6 / 6 CULVERT N / N

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: NONE

LOOKING SOUTH

Sign noticed issued for		Number Required
NO	WEIGHT LIMIT	0
NO	DELINEATORS	0
NO	NARROW BRIDGE	0
NO	ONE LANE BRIDGE	0
NO	LOW CLEARANCE	0

DIRECTION OF INSPECTION: W-E

DIRECTION MATCHES PLANS:

INSPECTED BY	SIGNATURE	ASSISTED BY
ME.RENFRO	Mike Renfro	ME.CARTER

IDENTIFICATION

(1) STATE NAME	NORTH CAROLINA	BRIDGE	580143
(8) STRUCTURE NUMBER (FEDERAL)			1110143
(5) INVENTORY ROUTE (ON/UNDER)	ON		11000400
(2) STATE HIGHWAY DEPARTMENT DISTRICT			13
(3) COUNTY CODE (FEDERAL)	111	(4) PLACE CODE	41420
(6) FEATURE INTERSECTED	NC226		
(7) FACILITY CARRIED	I-40 WBL		
(9) LOCATION	1.8 MI.E.JCT.US221		
(11) MILEPOINT			86.4
(12) BASE HIGHWAY NETWORK			1
(13) LRS INVENTORY ROUTE & SUBROUTE			10040
(16) LATITUDE	35° 39' 29.71"	(17) LONGITUDE	81° 57' 44.59"
(98) BORDER BRIDGE STATE CODE		PERCENT SHARED	
(99) BORDER BRIDGE STRUCTURE NUMBER			

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN			Steel
TYPE	Stringer/Multi-beam or girder	CODE	302
(44) STRUCTURE TYPE APPROACH			
TYPE		CODE	
(45) NUMBER OF SPANS IN MAIN UNIT			3
(46) NUMBER OF SPANS IN APPROACH			0
(107) DECK STRUCTURE TYPE		CODE	1
(108)WEARING SURFACE/PROTECTIVE SYSTEM			
(A) TYPE OF WEARING SURFACE		CODE	1
(B) TYPE OF MEMBRANE		CODE	0
(C) TYPE OF DECK PROTECTION		CODE	1

AGE AND SERVICE

(27) YEAR BUILT			1958
(106) YEAR RECONSTRUCTED			1997
(42) TYPE OF SERVICE ON -			Overpass Structure
OFF -		Highway CODE	61
(28) LANES ON STRUCTURE	3	LANES UNDER STRUCTURE	2
(29) AVERAGE DAILY TRAFFIC			13500
(30) YEAR OF ADT	2013	(109) TRUCK ADT PCT	16
(19) BYPASS OR DETOUR LENGTH			2.0

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN			57.0
(49) STRUCTURE LENGTH			174.0
(50) CURB OR SIDEWALK: LEFT	0.0	RIGHT	0.0
(51) BRIDGE ROADWAY WIDTH, CURB TO CURB			48.2
(52) DECK WIDTH OUT TO OUT			51.0
(32) APPROACH ROADWAY WITH (W/ SHOULDERS)			48.0
(33) BRIDGE MEDIAN		CODE	5
(34) SKEW	5	(35) STRUCTURE FLARED	1111
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			
(53) MIN VERT CLEAR OVER BRIDGE RDWY			999.9
(54) MIN VERT UNDERCLEAR: REFERENCE		H	14.7
(55) MIN LAT UNDERCLEARANCE RT: REFERENCE		H	2.5
(56) MIN LAT UNDERCLEARANCE LT:			0.0

NAVIGATION DATA

(38) NAVIGATION CONTROL -	CODE	6
(111) PIER PROTECTION	CODE	
(39) NAVIGATION VERTICAL CLEARANCE		
(116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR		0.0
(40) NAVIGATION HORIZONTAL CLEARANCE		

SUFFICIENCY RATING	88.79
STATUS =	Functionally Obsolete

CLASSIFICATION — CODE

(112) NBIS BRIDGE SYSTEM		YES
(104) HIGHWAY SYSTEM	Inventory Route is on NHS	1
(26) FUNCTIONAL CLASS	Urban Principal Arterial - Interstate	11
(100) STRAHNET HIGHWAY	Interstate STRAHNET Route	1
(101) PARALLEL STRUCTURE		1
(102) DIRECTION OF TRAFFIC	1-way traffic	1
(103) TEMPORARY STRUCTURE		
(110) DESIGNATED NATIONAL NETWORK - on natiional network for trucks		1
(20) TOLL	On Free Road	3
(21) MAINT -		01
(22) OWNER -		01
(37) HISTORICAL SIGNIFICANCE -		5

CONDITION — CODE

(58) DECK	5
(59) SUPERSTRUCTURE	6
(60) SUBSTRUCTURE	6
(61) CHANNEL & CHANNEL PROTECTION	N
(62) CULVERTS	N

LOAD RATING AND POSTING — CODE

(31) DESIGN LOAD	H 20 + Mod	6
(63) OPERATING RATING METHOD -	Load Factor	1
(64) OPERATING RATING -	HS-55	99
(65) INVENTORY RATING METHOD -		1
(66) INVENTORY RATING	HS-33	60
(70) BRIDGE POSTING	No Posting Required	5
(41) STRUCTURE OPEN, POSTED, OR CLOSED		A
DESCRIPTION	Open, no restriction	

APPRAISAL — CODE

(67) STRUCTURAL EVALUATION	6
(68) DECK GEOMETRY	4
(69) UNDERCLEARANCES, VERT & HORIZ	3
(71) WATERWAY ADEQUACY	6
(72) APPROACH ROADWAY ALIGNMENT	8
(36) TRAFFIC SAFETY FEATURES	N
(113) SCOUR CRITICAL BRIDGES	N

PROPOSED IMPROVEMENTS

(75) TYPE OF WORK	CODE
(76) LENGTH OF STRUCTURE IMPROVEMENT	
(94) BRIDGE IMPROVEMENT COST	
(95) ROADWAY IMPROVEMENT COST	
(96) TOTAL PROJECT COST	
(97) YEAR OF IMPROVEMENT COST ESTIMATE	
(114) FUTURE ADT 27,000	YEAR OF FUTURE ADT 2040

INSPECTION

(90) INSPECTION DATE	04/20	(91) FREQUENCY	24
(92) CRITICAL FEATURE INSPECTION		(93) CFI DATE	
A) FRACTURE CRIT DETAIL	A)		
B) UNDERWATER INSP	B)		
C) OTHER SPECIAL INSP	C)		
SCOUR			

Structure Number 580143 County MCDOWELL Run Date 02/08/2022

Span Number	Facility Carried	Inventory Route	Maximum Minimum Vertical Clearance	Milepoint	Base Highway	LRS Inventory Route	Functional Classification	Number of Lanes	Average Daily Traffic	Year of Average Daily Traffic	Total Horizontal Clearance	See Note Below					STRAHNET Highway	Direction of Traffic	National Highway System	National Truck Network
												Reference Feature	Minimum Vertical Underclearance	Rigth Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade				
	7	5	10	11	12	13	26	28	29	30	47	54A	54	55	56	69	100	102	104	110
2	NC226 N	31002260	15.0	0.0	0		16	4	13000	2013	53.0	H	14.7	2.5	2.0	3		2	☐	☐

Note: Items 54, 55, and 56 are not reported FHWA under route data points but are collected for each under route to determine the minimum value for Underclearance Appraisal Item 69.

Span 2 Beam 1: SUPPLEMENTAL INSPECTION IMPACT DAMAGE 2022: SPAN 2 BEAM 1 ,BEAM SWEPT SOUTHWARD UP TO 3" X 25' LONG . (POI)8' OUT FROM INT. BENT 1 WITH A LENGTH OF 10' . 1 INDENTION 1/8" DEEP X 3" LONG AT 10' OUT FROM INT. BENT 1. WITH 2 OTHER INDENTIONS AT 16'-7" OUT FROM INT. BENT 1 , 22" LONG 1/4" WIDE X 1/16" DEEP AND 1/2" LONG X 1/4" DEEP . BOTTOM FLANGE OF BEAM BOWED UPWARD 1/2" . ANCHOR BOLT 1 LEFT SIDE BEAM 1 BENT WESTWARD . SCATTERED SCRAPES BEAM 1 BOTTOM FLANGE . (PAR)

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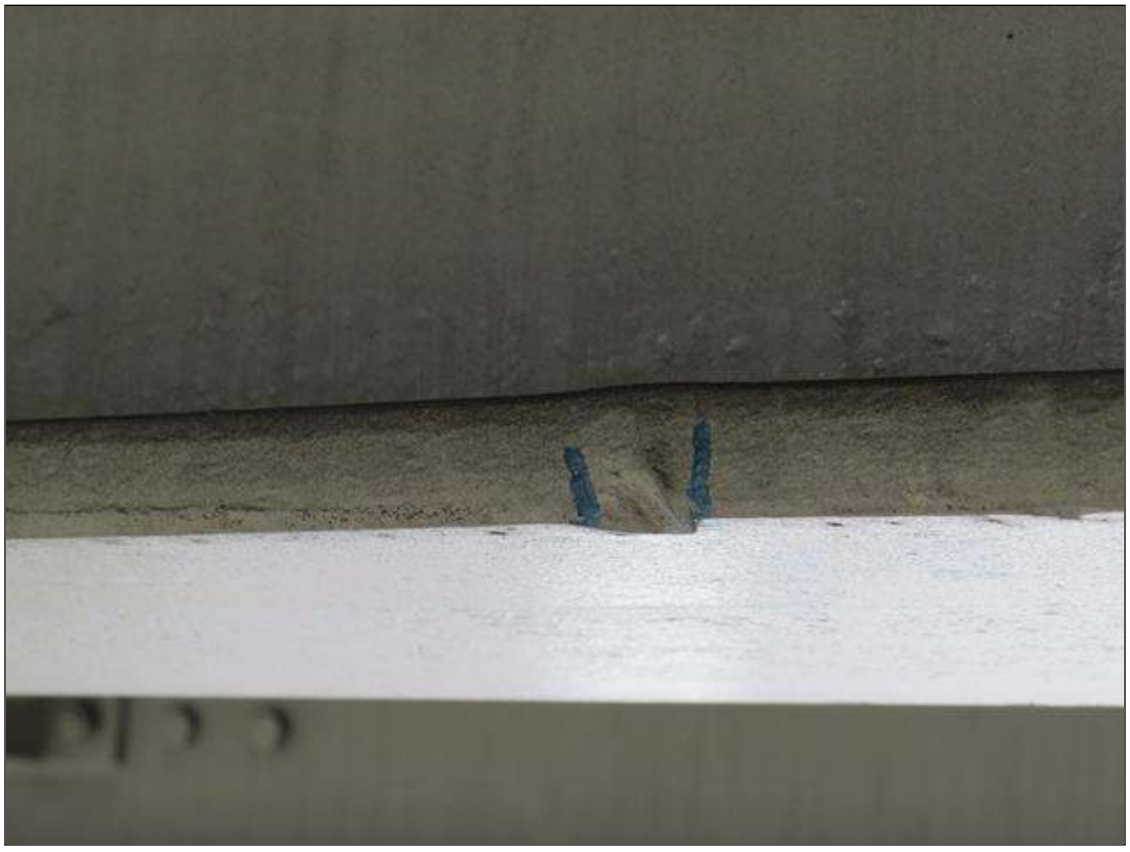
Span 2 Beam 2: 2022 OLD INDENTIONS BEAM 4

Span 2 LEFT RAIL SCATTERED INDENTIONS BOTTOM

Span 2 Left Bridge Rail: 2022 SUPPLEMENTAL INSPECTION SCATTERED SCRAPES ON BEAM 2



Span 2 Beam 2: 2022 OLD INDENTIONS BEAM 4

Span 2 Beam 1: SCATTERED SCRAPES

SPAN 2 BAY 1 DIAPHRAM 2 ALL 4 BOLTS MISSING AT DIAPHRAM ATTACHMENT TO BEAM 1 (PAR)

SPAN 2 BAY 1 BOTTOM LOWER BASE PLATE WELD BROKEN LOOSE FROM BEAM 1 DIAPHRAM 2 , 3 3/4" LONG X 1/16" DEEP AT 3" UP FROM BOTTOM OF PLATE .(PAR)

Structure Number: 580143 Span: 2 Route Name: NC226 N

CLEARANCE PHOTO

Route Number: 31002260	Route Name: NC226 N			Reference Feature: H
Minimum Vertical Clearance 14.667 feet	Maximum Minimum Vertical Clearance 15.000 feet			
Total Horizontal Clearance 53.000 feet	Lateral Clearances: Left: 2.000 feet Right 2.500 feet			
☐ Base Highway Network	LRS Inventory Route, Sub Route Number			
Milepost: 0.000	Number of Lanes: 4	ADT: 13000	Year of ADT: 2013	Percentage of Trucks: 6
☐ National Highway System		☐ STRAHNET Highway Designator		
Functional Classification 16 Local Minor Arterial		Direction of Traffic: 2 2 - way traffic		

TOP OF DECK

LOOKING SOUTH

CLEARANCE PHOTO