

Highway Bridge Inspection Report

**SOUADABSCOOK EAST NB
I 95 NB
over
SOUADABSCOOK STREAM**



Inspection Date: 05/07/2015

Inspected By: Jamie Hannum

Inspection Type(s): Routine

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Inspector: Jamie Hannum

Inspection Date: 05/07/2015

Structure Number: 5949

Facility Carried: I 95 NB

Highway Bridge Inspection Report

Location Map

National Bridge Inventory

Status: 1 - SD

Bridge Name: SOUADABSCOOK EAST NB

Sufficiency Rating: 84.1

Inspections

(90) INSPECTION DATE	& (91) DESIGNATED INSPECTION FREQUENCY	24	05/07/2015
(92) CRITICAL FEATURE INSPECTION	& (93) CFI DATE		
(92A) FRACTURE CRITICAL DETAIL		N	
(92B) UNDERWATER INSPECTION		Y	60
(92C) OTHER SPECIAL INSPECTION		N	10/26/2011

Identification

(1) STATE CODE	231 - Maine
(8) STRUCTURE NUMBER	5949
(5) INVENTORY ROUTE	
(5A) RECORD TYPE	1: Route carried "on" the structure
(5B) ROUTE SIGNING PREFIX	3 - STATE HIGHWAY
(5C) DESIGNATED LEVEL OF SERVICE	1 - MAINLINE
(5) INVENTORY ROUTE	95
(5) INVENTORY ROUTE	1 - NORTH
(2) HIGHWAY AGENCY DISTRICT	04 - Eastern
(3) COUNTY CODE	019 Penobscot
(4) PLACE CODE	30795
(6) FEATURES INTERSECTED	SQUADABSCOOK STREAM
(7) FACILITY CARRIED	I 95 NB
(9) LOCATION	3.3 MI E TL / 95 MI 177.9
(11) MILEPOINT	176.310
(12) BASE HIGHWAY NETWORK	Inventory Route is on the Base Network
(13) LRS INVENTORY ROUTE, SUBROUTE	
(13A) LRS INVENTORY ROUTE	000000095X
(13B) SUBROUTE NUMBER	00
(16) LATITUDE	44.764938888 8889
(17) LONGITUDE	68.894219444 4444
(98A) BORDER BRIDGE CODE	
(98B) PERCENT RESPONSIBILITY	0
(99) BORDER BRIDGE STRUCT NO.	n/a

Structure Type and Material

(43) STRUCTURE TYPE, MAIN	
(43A) KIND OF MATERIAL/DESIGN	4 - Steel continuous
(43B) TYPE OF DESIGN/CONSTR	02 - Stringer/Multi-beam or Girder
(44) STRUCTURE TYPE, APPROACH SPANS	
(44A) KIND OF MATERIAL/DESIGN	
(44B) TYPE OF DESIGN/CONSTRUCTION	
(45) NUMBER OF SPANS IN MAIN UNIT	3
(46) NUMBER OF APPROACH SPANS	0
(107) DECK STRUCTURE TYPE	1 - Concrete Cast-in-Place
(108) WEARING SURFACE/PROTECTIVE SYSTEMS	
(108A) WEARING SURFACE	2 - Integral Concrete (separate non-modified layer of concrete added to
(108B) DECK MEMBRANE	0 - None
(108C) DECK PROTECTION	0 - None

Age of Service

(27) YEAR BUILT	1961
(106) YEAR RECONSTRUCTED	-4
(42) TYPE OF SERVICE	
(42A) TYPE OF SERVICE ON BRIDGE	1 - Highway
(42B) TYPE OF SERVICE UNDER BRIDGE	5 - Waterway
(28) LANES	
(28A) LANES ON THE STRUCTURE	02
(28B) LANES UNDER THE STRUCTURE	00
(29) AVERAGE DAILY TRAFFIC	12090
(30) YEAR OF AVERAGE DAILY TRAFFIC	2014
(109) AVERAGE DAILY TRUCK TRAFFIC	11
(19) BYPASS DETOUR LENGTH	4

Geometric Data

(48) LENGTH OF MAXIMUM SPAN (ft.)	50
(49) STRUCTURE LENGTH (ft.)	135
(50) CURB/SIDEWALK WIDTHS	
(50A) LEFT CURB SIDEWALK (ft.)	0.2
(50B) RIGHT CURB SIDEWALK (ft.)	0.2
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.)	40
(52) DECK WIDTH, OUT-TO-OUT (ft.)	42.4
(32) APPROACH ROADWAY WIDTH (ft.)	40
(33) BRIDGE MEDIAN	0 - No median
(34) SKEW (deg.)	15
(35) STRUCTURE FLARED	0 - No flare
(10) INV RTE, MIN VERT CLEARANCE (ft.)	328.05
(47) TOTAL HORIZONTAL CLEARANCE (ft.)	40
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.)	327.76
(54) MIN VERTICAL UNDERCLEARANCE	
(54A) REFERENCE FEATURE	N - Feature not a highway or railroad
(54B) MIN VERTICAL UNDERCLENRECE (ft.)	0
(55) MIN LATERAL UNDER CLEARANCE RIGHT	
(55A) REFERENCE FEATURE	N - Feature not a highway or railroad
(55B) MIN LATERAL UNDER CLEARANCE RIGHT (ft.)	327.76
(56) MIN LATERAL UNDER CLEARANCE (ft.)	99.9

Classification

(112) NBIS BRIDGE LENGTH	Yes
(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	1 - Structure/Route is on NHS
(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	01 - Rural - Principal Arterial - Interstate
(100) STRAHNET HIGHWAY DESIGNATION	Is on an Interstate STRAHNET route
(101) PARALLEL STRUCTURE DESIGNATION	R - Right structure (North or East)
(102) DIRECTION OF TRAFFIC	1-way traffic
(103) TEMP STRUCTURE	
(105) FEDERAL LANDS HIGHWAYS	Not Applicable
(110) DESIGNATED NATIONAL NETWORK	Inventory route on National Truck Network
(20) TOLL	3 - On Free Road
(21) MAINTENANCE RESPONSIBILITY	01 - State Highway Agency
(22) OWNER	01 - State Highway Agency
(37) HISTORICAL SIGNIFICANCE	4 - Not determinable

Condition

(58) DECK	4 - Poor Condition (advanced deterioration)
(59) SUPERSTRUCTURE	6 - Satisfactory Condition (minor deterioration)
(60) SUBSTRUCTURE	6 - Satisfactory Condition (minor deterioration)
(61) CHANNEL & CHANNEL PROTECTION	6 - Bank slump. widespread minor damage
(62) CULVERT	N - Not Applicable

Load Rating and Posting

(31) DESIGN LOAD	6 - HS 20+Mod
(63) METHOD USED TO DETERMINE OPERATING RATING	3 - Load and Resistance Factor
(64) OPERATING RATING	35.3
(65) METHOD USED TO DETERMINE INVENTORY RATING	3 - Load and Resistance Factor
(66) INVENTORY RATING	27.1
(70) BRIDGE POSTING	5 - Equal to or above legal
(41) STRUCTURE OPEN/POSTED/CLOSED	A - Open

Appraisal

(67) STRUCTURAL EVALUATION	6
(68) DECK GEOMETRY	7
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(71) WATERWAY ADEQUACY	9 - Bridge Above Flood Water Elevations
(72) APPROACH ROADWAY ALIGNMENT	8 - Equal to present desirable criteria
(36) TRAFFIC SAFETY FEATURE	
36A) BRIDGE RAILINGS:	1 - Meets acceptable standards
36B) TRANSITIONS:	1 - Meets acceptable standards
36C) APPROACH GUARDRAIL	1 - Meets acceptable standards
36D) APPROACH GUARDRAIL ENDS	1 - Meets acceptable standards
(113) SCOUR CRITICAL BRIDGES	8 - Stable for scour conditions

Proposed Improvements

(75) TYPE OF WORK

(75A) TYPE OF WORK PROPOSED

(75B) WORK DONE BY

(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.)

(94) BRIDGE IMPROVEMENT COST (\$K)

(95) ROADWAY IMPROVEMENT COST (\$K)

(96) TOTAL PROJECT COST

(97) YEAR OF IMPROVEMENT COST ESTIMATE

(114) FUTURE ADT 16926

(115) YEAR OF FUTURE ADT 2034

Navigation Data

(38) NAVIGATION CONTROL 0 - No navigation control on waterway (bridge)

(111) PIER OR ABUTMENT PROTECTION

(39) NAV VERT CLEARANCE 0

(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE 0

(40) NAV HORIZONTAL CLEARANCE 0

General Bridge Data

Structure Number: 5949

Structure Name: SOUADABSCOOK EAST NB

Owner: 1 State DOT

Town: Hampden

Co-Owner: N Not applicable

Town2:

Region: 04 Eastern

Maintainer: 1 State DOT

Bridge Plans: ☐

Co-Maintainer: N Not applicable

Structure Type

Main Span

Type: 1 Girder

Sub Type: 1 Deck

Construction: 1 Rolled

Material: 1 Steel

Continuity: 2 Continuous

Composite: 1 Non Composite

Moveable: 0 No

Deck Area: 5724.28507560 (SF)
000000

Curb Reveal Lt: 7.9 (in)

Curb Reveal Rt: 7.8 (in)

Approach Span

Type: _

Sub Type: _

Construction: _

Material: _

Continuity: _

Composite: _

Moveable: _

Repairs Done:

Year How

Scope

Substructures

Shaft	Notes
Abutment 1	
Pier	
Pier	
Pier	
Abutment 2	

Foundation	Notes
Abutment 1	
Pier	
Pier	
Pier	
Abutment 2	

Roadway

Road/Route Name	I 95 NB
Abut-Abut Detour	83.952102424000000
Corridor Priority	1

Inspection Notes

Structure Number: 5949

Town: Hampden

Structure Name: SOUADABSCOOK EAST NB

Inspection Date: 05/07/2015

Structure Notes

Three span steel painted girders. Concrete deck, abutments, piers, wings and wearing surface.

Wearing Surface

Did not chain wearing surface due to heavy traffic, but observed approximately 25% cracking and patched areas. Isolated transverse cracking.

Deck

NBI Item 58: 4

Bottom of deck has spalling at blocking and joint areas and large areas of staining. Approximately 20% complete seal failure with additional leakage.

Superstructure

NBI Item 59: 6

Approximately 25% paint system distress with moderate rusting at exterior beam end areas (see photos). Recommend painting of beam ends & repairs to damaged bridge rail bars & posts. Several bearing anchor bolts are missing.

Substructure

NBI Item 60: 6

See 2011 dive report for substructure and channel details. Moderate cracking, staining and scaling of abutment bridge seats & back-walls. West pier has a full height crack that is 1/8" wide at the top down to fine cracking at the bottom.

Culvert

NBI Item 62: N

Channel

NBI Item 61: 6

Other

Special Inspection

Monitoring

Pontis Notes

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Highway Bridge Inspection Report

Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	2 - Low	5724	sq. ft.	0	5724		
107 - Steel Open Girder/Beam	2 - Low	810	ft.	760	50		
515 - Steel Protective Coating		810	sq. ft.	710	100		
210 - Reinforced Concrete Pier Wall	2 - Low	85	ft.	75	5	5	
215 - Reinforced Concrete Abutment	2 - Low	102	ft.	42	10	10	40
302 - Compression Joint Seal	2 - Low	85	ft.	51	34	51	
311 - Movable Bearing	2 - Low	12	each	6	6		
515 - Steel Protective Coating		12	sq. ft.	6			6
313 - Fixed Bearing	2 - Low	12	each	6	6		
515 - Steel Protective Coating		12	sq. ft.	6			6
801 - Beam End	2 - Low	12	each	6		6	
843 - Rigid Wearing Surface	2 - Low	5400	sq. ft.	4300	1000	100	
861 - Beam End – Protective Coating	2 - Low	12	each	6		6	

Underwater Dive Inspection Report

Structure Number: 5949

Bridge Name: SOUADABSCOOK EAST NB

Town 1: 19280 - Hampden

Town 2:

Division: Bangor

DiveID: 5158

☐ Tidal:

Location: 3.3 MI E TL / 95 MI 177.9

Tide Information:

Dive Entry Location: Either end - usually from trailing edge of bridge, DS side of lft pier.

Scour:

Comments/Hazards:

swim up to SB bridge.

Streambed Description:

Ledge covered with silt.

Channel Description:

Irregular bottom contour

Substructure Description:

2 piers on ledge in good condition. Inspected with SB bridge. No significant change in exposed footing. Piers on ledge per plans. 2011: No major changes. Exposed footing similar to previous report.

Inspection Team:

Edwards

Role:

TL,SD

Merrithew

SD

Falla

D

Wathen

D

Russell

T

Dive Conditions:

Time: Entry: 3:30 AM/PM PM

Time: Exit: 4:08 AM/PM PM

Water Temp: 52

Visibility (ft): 3

Max Depth (ft): 11

Current: slight

Weather: sunny

Underwater Inspection Date: 10262011

Channel Condition: 7

Substr/Culvert Condition: 6

Inspection Cycle: Y60

Ratings Comments:

Inspector: Jamie Hannum
Inspection Date: 05/07/2015

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Highway Bridge Inspection Report

Pictures



PHOTO 1

Description Roadway looking East



PHOTO 2

Description General view of concrete wearing surface

Inspector: Jamie Hannum
Inspection Date: 05/07/2015

Structure Number: 5949
Facility Carried: I 95 NB

Highway Bridge Inspection Report

Pictures



PHOTO 3

Description West joint



PHOTO 4

Description Down stream end

Inspector: Jamie Hannum
Inspection Date: 05/07/2015

Structure Number: 5949
Facility Carried: I 95 NB

Highway Bridge Inspection Report

Pictures



PHOTO 5

Description Exterior bearing, back wall and beam end deterioration, West end



PHOTO 6

Description West side of the West pier

Inspector: Jamie Hannum
Inspection Date: 05/07/2015

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Facility Carried: I 95 NB

Highway Bridge Inspection Report

Pictures



PHOTO 7

Description West abutment



PHOTO 8

Description Bottom of the deck, West end

Inspector: Jamie Hannum
Inspection Date: 05/07/2015

Structure Number: 5949
Facility Carried: I 95 NB

Highway Bridge Inspection Report

Pictures



PHOTO 9

Description Crack at center of West pier, West side, 1/8" wide at top



PHOTO 10

Description Spalled West abutment bearing block with crack

Inspector: Jamie Hannum
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Highway Bridge Inspection Report

Pictures



PHOTO 11

Description Spalled joint header, typical of both East and West ends



PHOTO 12

Description Up stream end

Inspector: Jamie Hannum
Inspection Date: 05/07/2015

Structure Number: 5949
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Highway Bridge Inspection Report

Pictures



PHOTO 13

Description Map cracking of end posts



PHOTO 14

Description Patching of wearing surface

Inspector: Jamie Hannum
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Facility Carried: I 95 NB

Highway Bridge Inspection Report

Pictures



PHOTO 15

Description Failed East joint



PHOTO 16

Description East abutment

Inspector: Jamie Hannum
Inspection Date: 05/07/2015

Structure Number: 5949
Facility Carried: I 95 NB

Highway Bridge Inspection Report

Pictures



PHOTO 17

Description East side of East pier



PHOTO 18

Description Spalled patch

Maintenance Work Items

Structure Number: 5949

Structure Name: SOUADABSCOOK EAST NB

Town 19280

Owner: Hannum, Jamie

:

er:

Type	Work Item	Priority	Notes
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MaineDOT NBIS Bridge Safety Inspection JSA

Inspector: Hannum, Jamie

Structure Number: 5949

Inspection Date: 02/04/2016

Structure Name: SOUADABSCOOK EAST NB

Team Leader: Jamie Hannum

Additional Team Members/Visitors:

- 1.)
- 2.)
- 3.)
- 4.)
- 5.)
- 6.)
- 7.)
- 8.)
- 9.)

Job being performed:

Bridge inspection

Hazard:

- ☒ Exposure to traffic

Control:

- ☒ Parked off road with strobe
- ☒ Less than 1 hour on bridge
- ☒ Wear standard reflective clothing and hard hat
- ☐ Spotter
- ☐ Traffic Control Crew

Hazard:

- ☒ Steep slopes and uneven working areas (rip rap, mud, loose fill, etc)

Control:

- ☒ Wear appropriate, prudent footwear
- ☐ Rope or fall protection

Hazard:

- ☒ Chipped Concrete or Steel (hand tools only)

Control:

- ☒ Wear appropriate, prudent eye/hand protection

Hazard:

- ☒ 6' Vertical drops

Control:

- ☒ Stay away from areas

Hazard:

- ☒ Water Hazards

Control:

- ☒ Evaluate conditions. Wear appropriate, prudent PPE

Hazard:

- ☒ Insects, Poison Ivy, or other environmental hazards

Control:

- ☒ Apply insect repellent and/or sunscreen
- ☒ Protect skin with appropriate, prudent clothing

Hazard:

- ☒ Lead paint and Avian excrement

Control:

- ☒ Wear gloves, do not scrape

Hazard:

- ☐ Heavy Manual Lifting

Control:

- ☐ Ask for assistance in donning dive gear, lifting equipment

Hazard:

- ☐ DCS, Lung Expansion

Control:

- ☐ Ascend slowly, use computers, Safety Stops (15' mark for 3 min.)

Hazard:

- ☐ Entanglement U/W

Control:

- ☐ Use knife, Comm gear

Hazard:

- ☐ Boat Traffic

Control:

- ☐ Fly Dive Flag, use spotter, contact bridge on Chan. 13

Hazard:

- ☐ Cold Water

Control:

- ☐ Use adequate dry suit underwear for water temperature

Hazard:☐ Live Boating**Control:**☐ Keep track of divers, avoid powering during drop-off/pick-up**Other Hazards****Other Controls****Safety Equipment Required:**☒ Hard hat☒ Vest☒ Glasses☒ Gloves☒ PFD☐ Rain Gear☒ Bug Spray☒ Sunscreen☒ First Aid☐ O2☐ AED☐ Comm Gear☒ Cell Phone**Other Safety Equipment:****Emergency Action Plan:**☒ Call 911☒ First Aid Kit☐ Fall Rescue Plan☐ Water Rescue Plan☐ Dan 1-919-684-9111☐ USCG 741-5465**Other Emergency Action Plan:**

I certify that the MaineDOT NBIS Bridge Safety Inspection JSA has been completed according to all proper procedures required by the Maine Department of Transportation.

☒ Complete

Jamie Hannum