

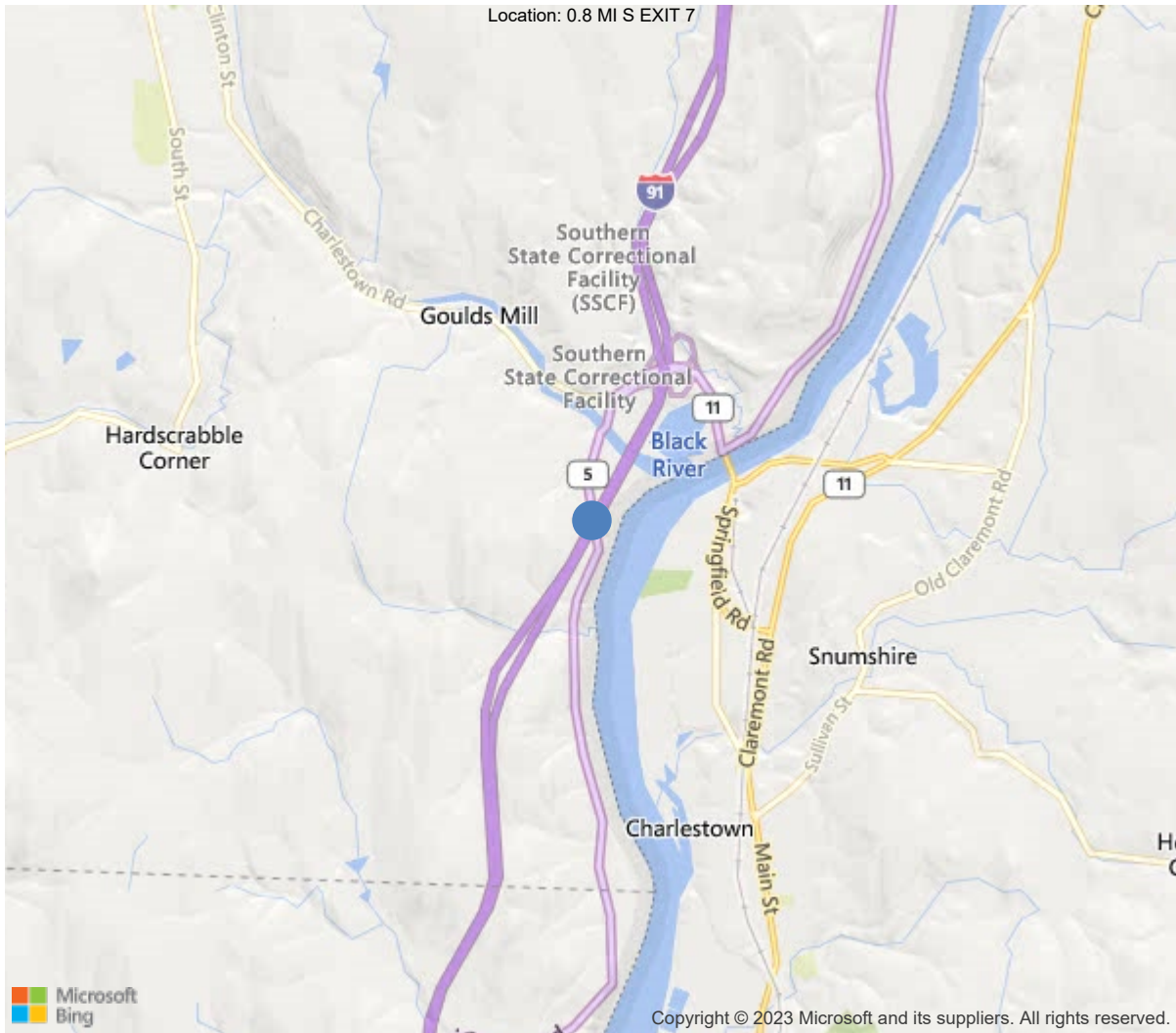


Town: 206 - SPRINGFIELD

District 2, 27 - WINDSOR County

Owner: 1 - State Highway Agency

Maintenance Responsibility: 1 - State Highway Agency



43.25694, -72.43909



IDENTIFICATION	
(1) State Names	50 - Vermont
(8) Structure Number	200091025S14182
(5) Inventory Route	1
(2) Highway Agency District	2 - District 2
(3) County Code	27 - WINDSOR
(4) Place Code	69550
(6) Features Intersected	I 91 OVER US 5
(7) Facility Carried	I 00091 ML
(9) Location	0.8 MI S EXIT 7
(11) Mile Point	40.911 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0270000091
(16) Latitude	43.2569416666667
(17) Longitude	-72.4390888888889
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	42
Material	4 - Steel continuous
Type	2 - Stringer/Multi-beam or girder
(44) Approach Structure Type	00
Material	0 - Other
Type	0 - Other
(45) No. of Spans in Main Unit	3
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	6 - Bituminous
Type of Membrane	2 - Preformed Fabric
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1965
(106) Year Reconstructed	0
(42) Type of Service	11
On	1 - Highway
Under	1 - Highway, with or without pedestrian
(28) Lane	
On	2
Under	2
(29) Average Daily Traffic	15000
(30) Year of ADT	2018
(109) Truck ADT	13 %
(19) Bypass, Detour Length	1 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	90 ft
(49) Structure Length	211 ft
(50) Curb or Sidewalk Width	
Left	0.7 ft
Right	0.7 ft
(51) Bridge Roadway Width Curb to Curb	30 ft
(52) Deck Width Out to Out	35.2 ft
(32) Approach Roadway Width (W/Shoulders)	38 ft
(33) Bridge Median	1 - Open median
(34) Skew	45 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	30 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	14.25 ft
Ref:	
(55) Min Lat Underclear RT	13 ft
Ref:	
(56) Min Lat Underclear LT	0 ft
NAVIGATION DATA	
(38) Navigation Control	N - Not applicable, no waterwa
(111) Pier Protection	
(39) Navigation Vertical Clearance	0 ft
(116) Vert-Lift Bridge Nav Min Vert Clear	0 ft
(40) Navigation Horizontal Clearance	0 ft

CLASSIFICATION	
(112) NBIS Bridge Length	Y
(104) Highway System	1
(26) Functional Class	1 - Rural Principal Arterial -
(100) Defense Highway	1 - The inventory route is on
(101) Parallel Structure	L - The left structure of para
(102) Direction of Traffic	1 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0 - N/A
(110) Designated National Network	1 - The inventory route is par
(20) Toll	3 - On free road. The structu
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	6
(59) Superstructure	6
(60) Substructure	6
(61) Channel & Channel Protection	N
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	5 - MS 18 / HS 20
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	75
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	45
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	5
(68) Deck Geometry	4
(69) Clearances, Vertical/Horizontal	5
(71) Waterway Adequacy	N
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	1 - Inspected feature meets current
(36B) Transitions	1 - Inspected feature meets current
(36C) Approach Guardrail	1 - Inspected feature meets current
(36D) Approach Guardrail Ends	1 - Inspected feature meets current
(113) Scour Critical Bridges	N - Bridge not over waterway.
PROPOSED IMPROVEMENTS	
(75) Type of Work	35 - Bridge rehabilitation bec
(76) Length of Structure Improvement	211 ft
(94) Bridge Improvement Cost	\$ 2600
(95) Roadway Improvement Cost	\$ 50
(96) Total Project Cost	\$ 2650
(97) Year of Improvement Cost Estimate	2020
(114) Future ADT	15750
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			05/24/2022
(91) Frequency			24
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection			
* The inspection date and frequency information in this box contains the current NBI date and frequency information. Please refer to the report header for the date this inspection was conducted.			

**Deck**

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
<b>12</b>	Reinforced Concrete Deck	SF	7427	5527	700	1200	0
<b>1080</b>	Delamination/Spall/Patched Area	SF	1000	0	0	1000	0
<b>1120</b>	Efflorescence/Rust Staining	SF	600	0	400	200	0
<b>1130</b>	Cracking (RC and Other)	SF	300	0	300	0	0
<b>510</b>	Wearing Surfaces	SF	6330	6267	63	0	0
<b>3220</b>	Crack (Wearing Surface)	SF	63	0	63	0	0
<b>301</b>	Pourable Joint Seal	LF	84	72	12	0	0
<b>2330</b>	Seal Damage	LF	12	0	12	0	0
<b>330</b>	Metal Bridge Railing	LF	422	211	211	0	0
<b>7000</b>	Damage	LF	211	0	211	0	0
<b>804</b>	Concrete Fascia	LF	422	237	120	65	0
<b>1080</b>	Delamination/Spall/Patched Area	LF	35	0	20	15	0
<b>1120</b>	Efflorescence/Rust Staining	LF	75	0	50	25	0
<b>1130</b>	Cracking (RC and Other)	LF	75	0	50	25	0

**58 - Deck (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)**

Reinforced concrete deck is in okay condition having multiple areas of concrete patches throughout the bays and spans. Other various light transverse cracking with light efflorescence leakage is present throughout the deck. Bay #3 in span #2 has catch form below small spall and delaminated area to catch falling debris.

**200 - Existing pavement depth on bridge (3")**
**A21 - Deck Wearing Surface Condition (2 - Good)**

Asphalt is in satisfactory condition with minor wear in tire tracks and some areas of minor cracking that has been sealed.

**A24 - Deck Curb Condition (3 - Satisfactory)**

Concrete curbing with granite block facing is in satisfactory condition having some light cracking along the top surface and some very light concrete scaling behind the granite face with recent concrete patches along the heaviest scaling.

**A28 - Deck Rail Condition (3 - Satisfactory)**

Galvanized two (2) tier box beam rail is in satisfactory condition having some minor scrapes and dents with some light surface rusting around scrapes.

**A31 - Deck Post Condition (2 - Good)**

Pedestal mounted galvanized steel tube posts are generally in fairly good condition with some minor rusting around bases and some light freckling rust along surfaces.

**A34 - Deck Joint Condition (2 - Good)**

Asphaltic plug joints are present at both ends of structure with recent joint elimination / rehabilitation project having minor wearing in the travel lanes and some various cracking starting to form.

**A38 - Deck Drain Condition (2 - Good)**

Weep tubes are present along both fascias hanging below superstructure and are in fairly good condition.

**A39 - Deck Fascia Condition (3 - Satisfactory)**



**Team Lead:** Stephen Piro, **Inspection Date:** 05/24/2022

Concrete fascia's are in satisfactory condition with light to minor cracking and some efflorescence leakage throughout. Small spalls with rust staining are present along the soffit of both fascias with small delaminations forming and various cracking.

## **APPROACH**

### **72 - Approach Roadway Alignment (8 - Equal to present desirable criteria)**

Roadway alignment is straight with a significant elevation gain in the direction of traffic flow.

### **A13 - Approach Rail Condition (2 - Good)**

Galvanized steel beam rail is in fairly good condition having a few areas of some minor scrapes and dents along the face of rail. Older Sections of rail has freckling surface rusting starting to form.

### **A16 - Approach Post Condition (2 - Good)**

Galvanized steel posts with mixture of steel and composite offsets are in fairly good condition with some minor wear present.

### Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
<b>107</b>	Steel Open Girder/Beam	LF	1040	966	53	21	0
<b>1000</b>	Corrosion	LF	74	0	53	21	0
<b>515</b>	Steel Protective Coating	SF	8424	7999	0	250	175
<b>3420</b>	Peeling/Bubbling/Cracking	LF	425	0	0	250	175
<b>311</b>	Movable Bearing	EA	15	5	0	10	0
<b>1000</b>	Corrosion	EA	10	0	0	10	0
<b>313</b>	Fixed Bearing	EA	5	5	0	0	0

#### 59 - Superstructure (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Five (5) painted continuous steel rolled beams are in satisfactory condition with cover plates present over both piers. Beam ends have minor to moderate rust scaling and pitting where joint leakage has initiated steel corrosion. Paint distress is present below joint areas with minor to moderate paint distress such as peeling and flaking. Superstructure is also grease coated over both abutments below both joints. Other light various areas along webs and flanges with paint starting to bubble, flake and peel. Beam #1 has a few small scrapes present along the lower flange where overheight vehicles have rubbed scraping off the protective layer in the northern travel lane of US-5.

#### A55 - Lateral Bracing Condition (3 - Satisfactory)

Eleven (11) painted steel c-channel are present per bay that are bolted to plates that are welded to the webs of the rolled beams are in satisfactory condition. Diaphragms have small areas of surface rusting and paint peeling and flaking.

#### A63 - Bearing Condition (4 - Fair)

Rocker bearings are present over both abutments and at pier #1 in fair condition with areas of minor to moderate rust scaling and pitting present. Fascia bearings at piers and bearings at both abutments have the heaviest deterioration. Sole plate below bearing #5 over abutment #1 has base plate mitigating out from under rocker. Pier #2 has fixed rocker bearings having minor rusting.

Team Lead: Stephen Piro, Inspection Date: 05/24/2022

### Substructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
<b>205</b>	Reinforced Concrete Column	EA	6	5	0	1	0
<b>1120</b>	Efflorescence/Rust Staining	EA	1	0	0	1	0
<b>215</b>	Reinforced Concrete Abutment	LF	100	62	8	30	0
<b>1080</b>	Delamination/Spall/Patched Area	LF	18	0	0	18	0
<b>1120</b>	Efflorescence/Rust Staining	LF	20	0	8	12	0
<b>234</b>	Reinforced Concrete Pier Cap	LF	100	94	0	6	0
<b>1080</b>	Delamination/Spall/Patched Area	LF	6	0	0	6	0
<b>800</b>	Reinforced Concrete Wing/Retaining Wall	EA	4	2	2	0	0
<b>1130</b>	Cracking (RC and Other)	EA	2	0	2	0	0

#### 60 - Substructure (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Abutment #1 is in satisfactory condition with some saturated concrete with rust staining and cracking along the outer edges. Recent concrete patches are present along the bridge seat and upper portions of stem scattered throughout and are in sound condition. Scattered rust staining and cracking are present along the upper portions of stem and bridge seat. Minor debris build up and small areas of spalling are present along the bridge seat.

Abutment #2 is in okay condition having recent concrete patching repairs completed with spalled / scaled areas being patched along the western end of the abutment stem / bridge seat and below bearing #3. Other areas of various cracking with scattered rust stains are present along the abutment bridge seat / stem and minor debris build up along the bridge seats scattered throughout.

#### A71 - Abutment End Walls Condition (4 - Satisfactory)

Reinforced concrete backwalls are in satisfactory condition having the upper portion being recently replaced with joint elimination project and the lower portions having some various levels of wearing with rust stains and staining present.

#### A77 - Retaining/Wingwall Condition (4 - Satisfactory)

Concrete wingwalls are in satisfactory condition having some minor map cracking.

#### A81 - Pier Seat/Cap Condition (3 - Good)

Concrete pier caps are in fairly good condition with concrete patches present along the western end of pier #1.

#### A85 - Pier Columns Condition (3 - Good)

Both piers have three (3) columns a piece and are in good condition.

### CHANNEL

#### 61 - Channel/Channel Protection (N - Not applicable.)

### GENERAL OBSERVATION

Structure has had a recent small rehabilitation project which consisted of cleaning / patching of concrete curbs along with joint elimination at both ends of structure along with associated cleaning / patching along abutment stems / backwalls. Concrete curbing still has some small areas of concrete deterioration along the top surface of curbs behind the granite blocks that could be cleaned and patched. Bearings should be fully replaced at both abutments or heavily rehabbed with having rust scaling cleaned, repainted and reset to allow for proper structure expansion with missing anchor bolts replaced. Bearing #5 over abutment #1 has base plate sliding out of place and should be set back.



ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	7427	5527	700	1200	0
1080	Delamination/Spall/Patched Area	SF	1000	0	0	1000	0
1120	Efflorescence/Rust Staining	SF	600	0	400	200	0
1130	Cracking (RC and Other)	SF	300	0	300	0	0
510	Wearing Surfaces	SF	6330	6267	63	0	0
3220	Crack (Wearing Surface)	SF	63	0	63	0	0
107	Steel Open Girder/Beam	LF	1040	966	53	21	0
1000	Corrosion	LF	74	0	53	21	0
515	Steel Protective Coating	SF	8424	7999	0	250	175
3420	Peeling/Bubbling/Cracking	LF	425	0	0	250	175
205	Reinforced Concrete Column	EA	6	5	0	1	0
1120	Efflorescence/Rust Staining	EA	1	0	0	1	0
215	Reinforced Concrete Abutment	LF	100	62	8	30	0
1080	Delamination/Spall/Patched Area	LF	18	0	0	18	0
1120	Efflorescence/Rust Staining	LF	20	0	8	12	0
234	Reinforced Concrete Pier Cap	LF	100	94	0	6	0
1080	Delamination/Spall/Patched Area	LF	6	0	0	6	0
301	Pourable Joint Seal	LF	84	72	12	0	0
2330	Seal Damage	LF	12	0	12	0	0
311	Movable Bearing	EA	15	5	0	10	0
1000	Corrosion	EA	10	0	0	10	0
313	Fixed Bearing	EA	5	5	0	0	0
330	Metal Bridge Railing	LF	422	211	211	0	0
7000	Damage	LF	211	0	211	0	0
800	Reinforced Concrete Wing/Retaining Wall	EA	4	2	2	0	0
1130	Cracking (RC and Other)	EA	2	0	2	0	0
804	Concrete Fascia	LF	422	237	120	65	0
1080	Delamination/Spall/Patched Area	LF	35	0	20	15	0
1120	Efflorescence/Rust Staining	LF	75	0	50	25	0
1130	Cracking (RC and Other)	LF	75	0	50	25	0



Abutment #1



Abutment #1



Bearing #1 at Abutment #1



Bearing #3 at Abutment #1





Abutment #1 Top Edge Bridge Seat Between Bearings #3 and #4



East End Abutment #1



Bearing #5 at Abutment #1



Bearing #5 at Abutment #1





Pier #1 Span #1



Span #1 Deck Soffit Bays #2 and #3



Span #1 Superstructure



Span #2 Superstructure





Span #2 Deck



Span #1 Deck



Pier #2 Span #2



Span #2 Superstructure





Western Elevation



Span #3 Superstructure



Span #3 Deck



Abutment #2





Bearing #5 at Abutment #2



Bearing #1 at Abutment #2



Deck Wearing Surface from Abutment #2



Deck Wearing Surface from Abutment #2





Asphaltic Plug Joint over Abutment #2



Eastern Curb Repairs



Eastern Curb Spalling



Asphaltic Plug Joint over Abutment #1





Asphaltic Plug Joint over Abutment #1



Eastern Fascia Soffit over US-5



Eastern Elevation



Eastern Elevation



**Maintenance Needs**

**Date Reported:** 05/24/2022  
**Priority:** 4 - Maintenance Finding - Next Inspection Cycle  
**Type of Work:** 24 - Superstructure - Bearing repair/replacement  
**Status:** Open  
**Component:** Superstructure

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**Deficiency Description**

Movable bearings at both abutments have minor to moderate rust scaling forming and light pitting present with no protective coating and continue to have corrosion progress. Bearings should be cleaned and painted or fully replaced. Bearing #5 at Abutment #1 has twisted sole plate and is no longer functioning as intended.

**Remarks**

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Bearing #1 at Abutment #1



Bearing #3 at Abutment #1



Bearing #5 at Abutment #1



Bearing #5 at Abutment #2





Bearing #1 at Abutment #2