ORIGINAL

MASSACE SETTS DEPARTMENT OF TRAI PORTATION PAGE 1 OF 14

B.I.N. 0DY

STRUCTURES INSPECTION FIELD REPORT ROUTINE INSPECTION

BR. DEPT. NO. P-10-002

CITY/TOWN PITTSFIELD	8STRUCTURE NO. P10002-0[DY-DOT-634	1	1-Kilo. POINT 000.000	A:OPEN	90-ROUTINE INSP. DATE MAY 22, 2018			
07-FACILITY CARRIED	MEMORIAL NAM	E/LOCAL NAME	-	27-YR BUILT	106-YR REBUILT	YR REHAB'D (NON 106)			
HWY HOLMES RD			,	1977	0000	2011			
06-FEATURES INTERSECTED	26-FUNCTIONAL	26-FUNCTIONAL CLASS DIST, 1			T. BRIDGE INSPECTION ENGINEER L. A. Briggs				
RR HRR	Urban Minor	Arterial	0	anne	A. Br	ill			
43-STRUCTURE TYPE 505 : Prestressed Concrete Box Beam or Girders - Multiple	22-OWNER State Highway Agency	21-MAINTAINER State Highway Agency	TEAM L	EADER N. P.E. I					
107-DECK TYPE	WEATHER	TEMP. (air)	TEAM N	IEMBERS (and the same of th				
2 : Concrete Precast Panels	Rain	20°C	D. ST	OKES	1 42				

ITEM 58	5	1	
DECK .] DEF	s
1.Wearing surface	7	-	1
2.Deck Condition	5	S-A	2
3.Stay in place forms	N	-	3
4.Curbs	7	-	4
5.Median	N	-	5
6.Sidewalks	7	_	L
7.Parapets	N	-	L
8.Railing	7	-	_
9.Anti Missile Fence	8	-	⊩
10.Drainage System	N	_	ŀ
11.Lighting Standards	N	-	\parallel
12.Utilities	N	-	6
13.Deck Joints	5	M-P	7.
14.	N	_	8.
15.	N	_	9.
16.	N		10
	E 80	w 305	1: 1:
APPROACHES		DEF	14
a. Appr. pavement condition	8	-	1
b. Appr. Roadway Settlement	8	-	Y
c. Appr. Sidewalk Settlement	N	-	C
d.	N	-	
OVERHEAD SIGNS (Attached to bridge)	(Y/N)	N DEF	LC LC
a. Condition of Welds	N	-	L
b. Condition of Bolts	N	-	Aı
c. Condition of Signs	N	-	

	IXalli		20 0	,	D. 0101
ITE	M 59		Γ	5	
SUPI	ERSTRUCT	URE			DEF
1.Stri	ngers			N	-
2.Floo	orbeams	-		N	-
3.Floo	or System Bra	N	-		
4.Gird	ders or Beam	5	S-A		
5.Trus	sses - Genera	al		N	-
a. U	Jpper Chords		, N		-
b. L	ower Chords		N		-
c. V	Veb Members		N		-
d. L	ateral Bracing	0)	N		-
e. S	Sway Bracings		N		-
f. F	Portals		N		
g. E	nd Posts		N		-
6.Pin	& Hangers			N	-
7.Con	n Plt's, Guss	ets & A	ngles	N	-
8.Cov	er Plates			N	-
9.Bea	ring Devices			Н	-
10. Dia	aphragms/Cro	oss Frai	nes	N	-
11. Riv	ets & Bolts			N	-
12. We	elds			N	-
13. Me	mber Alignm	ent		6	-
14.Pa	int/Coating			N	-
15.				N	-
Year F	Painted		N		
COLLIS	SION DAMAGE (X) Minor (: <i>Please</i>) Mode			vere ()
LOAD I None	DEFLECTION: (X) Minor (Please) Mode	e <i>expla</i> rate (vere ()
	VIBRATION: (X) Minor (Please) Mode			vere ()
Any Fi	racture Critic	al Meml	ber: (Y	//N)	N
Any C	racks: (Y/N)	N			

_	Mass	<u>'</u>	7		
	ITEM 60	Г	6		
	SUBSTRUCTURE		0		DEF
	1. Abutments	Dive	Cur	6	* 4 3
	a. Pedestals	N	N		-
1	b. Bridge Seats	N	Н	1	-
	c. Backwalls	N	N		-
	d. Breastwalls	N	6		-
	e. Wingwalls	N	6		-
	f. Slope Paving/Rip-Rap	N	N		-
	g. Pointing	N	N		-
	h, Footings	N	Н		-
	i, Piles	N	Н		-
	j. Scour	N	N		_
П	k. Settlement	N	7		_
	I.	N	N		
ı	m.	N	N		
	2. Piers or Bents			N	
		N	N		
	a. Pedestals b. Caps	N	N		
ı	c. Columns	N	N		
	d. Stems/Webs/Pierwalls	N	N		
	e. Pointing	N	N		-
	f. Footing	N	N		
۱	g. Piles	N	N		
		N	N	-	-
	h. Scour	-	N		-
ı	i. Settlement	N N	N	-	
ı	j.	1505		-	-
	k.	N	N		
ı	3. Pile Bents			N	
	a. Pile Caps	N	N		-
	b. Piles	N	N		-
ı	c. Diagonal Bracing	N	N		-
ı	d. Horizontal Bracing	N	N		-
ı	e. Fasteners	N	N		-
	UNDERMINING (Y/N) If YE	S plea	ase ex	xplain	N
	COLLISION DAMAGE: None (X) Minor () Mo	derate	e () Sev	rere ()
	SCOUR: Please explain None (X) Minor () Mo	derate	e () Sev	rere ()
	I-60 (Dive Report):	<i>I-60</i>	(This	Repor	n): 6
	93B-U/W (DIVE) Insp		00/	00/00	000

CITY/					B.I.I				UCTUR			INSPECTIO		
PITTE	SFIEL	.D			0D)2-0D	Y-DOT-63		MAY 2	2, 20	J18
ITI	EM 6				N		ITEM 36 TRAFFIC SA	FETY 36	COND	DEF	ACCESSIE		(Y/N	,
	INNE			ļ		A	A. Bridge Railing	0	7	-	Lift Bucket		Needed N	Used N
CHA	NNE	EL PROTECTIO	N				3. Transitions	0	7	- 1	Ladder		P	N
			Dive	Cur	DEF	С	C. Approach Guardrail	0	5	M-P	Boat		N	N
1.Ch	annel	Scour	N	N	-	D	D. Approach Guardrail Ends	0	7	M-P	Waders		N	N
2.Em	ıbankı	ment Erosion	N	N	-	W]	EIGHT POSTING	Not A	pplicabl	le X	Inspector 50)	Υ	Υ
3.Del	bris		N	N	-		H	3	3S2 Si	ingle	Rigging		N	N
4.Ve	getatio	on	N	N	-	A	Actual Posting N	N	N	N	Staging		N	N
5.Uti	lities		N	N	-	R	Recommended Posting N	N	N	N	Traffic Cont	roi	Y	Y
6.Rip	-Rap/	/Slope Protection	N	N	-	w	Vaived Date: 00/00/0000	JDMT D	ate: 00	0/00/0000	Police		Y	Y
7.Ag	grada	tion	N	N			At bridg			Advance	Other:			
8.Fer	nder S	System	N	N	-	I (Y	igns In Place N Y=Yes,N=No,	S	N	S			N	N
						ŇF	IR=NotRequired) egibility/				TOTAL HO	OHDC		=
						Vi	egibility/ isibility				TUTALIN	JUKS		16
							LEARANCE POSTING	E	V		PLANS	(Y/N	1):	Υ
							Vot X ft	in 0	ft	in meter				
STRE	:AM FL	OW VELOCITY:					ctual Field Measurement osted Clearance	0			(V.C.R.)	(Y/N):	N	
Tidal () Hig	h () Moderate () L	_ow () Non	ıe (X)	' `	At bridg		Adv	vance	TAPE#:			
ITEM 61	(Dive F	Report): N ITEM 61	1 (This	s Repo	rt): N		igns In Place E Y=Yes,N=No,	W	E	W				-
			•			ŇF	R=Not Required)				List of field tes	sts performed:	•	
93b-l	J/W IN	ISP. DATE: 00)/00/	/0000)		egibility/ isibility							
RATI						(To	be filled out by DBIE)			If YES	S please give pr	riority:		
Rating	Repo	ort (Y/N): Y				Rec	quest for Rating or Rerating	(Y/N):	N	HIG	SH() MEDIUM	() LOW ()	
Date:		02/01/2005				RE	ASON:							
		ion data at time of e				E - 100 - 111								- 4
I 58: 6	1 59	9: 6 160: 6 Da	ite :0)1/09/	/2004									
							CONDITION RA	TING	GUII	DE (For	Items 58, 59, 60	and 61)		
	CODE	CONDITION					DEFECTS							
	N	NOT APPLICABLE												
G	9	EXCELLENT	E:	xcellen	nt condition.									
G	8	VERY GOOD		bont - Charles D	lem noted.									
G	7	GOOD			inor problem		and a color detection the						-	
F	6	SATISFACTORY	_				r some minor deterioration. nents are sound but may have minor se	etion loss.	cracking, si	palling or scour.				
P	5	POOR	-				eterioration, spalling or scour.	Allon 1000,	Clacking, of	palling of socal.				
P	3	SERIOUS	Lo	oss of s	section, dete	eriorati	tion, spalling or scour have seriously aff	ected prim	ary structur	ral components. Lo	ocal failures are po	ssible. Fatigue cra	acks	
			Ad	Advance	ed deteriorat	tion of	n concrete may be present. f primary structural elements. Fatigue cr							
С	2	CRITICAL	re	emoved	d substructur	re sup	pport. Unless closely monitored it may b	e necessa	ry to close t	the bridge until cor	rective action is tak	ken.		
С	1	"IMMINENT" FAILURE	Br	ridge is	closed to tr	or secu	ction loss present in critical structural co but corrective action may put it back in l	ght service	e.	vertical or norizona	al movement allect	ing structure stabi	ility.	
	0	FAILED	0	Out of se	ervice - beyo	ond co	orrective action.							
							DEFICIENCY REP	ORTI	NG G	UIDE				
DEFI	CIENC	CY: A defect in a stru	ucture	that rec	quires corre	ctive a	20/							
		IES OF DEFICIENC								*				
		noies, minor	COLLOSIC	ion of stee	ei, Minor scou	inng, Ci	r do not impact the structural integrity of the brid Clogged drainage, etc.							
S= Se	vere/N	Agior Deficiency - De	eficienci	cies which	h are more ext	ensive i	e in nature and need more planning and effort to nent, Considerable scouring or undermining, Mo	repair. Exam	nples include l	but are not limited to:	Moderate to major dete with measurable loss of	rioration in concrete, f section, etc.	Exposed	and
C-S=	Critic			_ A defic	iciency in a str		l element of a bridge that poses an extreme uns						ıral integr	ity
		al Hazard Deficienc	cv - A	A deficier	ency in a comp	onent o	or element of a bridge that poses an extreme h	azard or unsa	afe condition t	to the public, but does	not impair the structura	al integrity of the bridg	ge. Exam	ples
	i.		i	include b etc.	ut are not limi	ted to:	: Loose concrete hanging down over traffic or pe	destrians, A	hole in a side	walk that may cause i	njuries to pedestrians, i	Missing section of bild	dge railing	g.
100000000000000000000000000000000000000		OF REPAIR:			THE CHARGE IN		AT AS ASSESSED.							
I = Imi	mediate SAP-						on Engineer (DBIE) to report the Deficiency and Engineer or the Responsible Party (if not a Stal				Report].			
P = Pri							he Responsible Party (if not a State owned bridge							

CITY/TOWN B.I.N. BR. DEPT. NO. 8.-STRUCTURE NO. INSPECTION DATE P10002-0DY-DOT-634 MAY 22, 2018

REMARKS

BRIDGE ORIENTATION

Holmes Road travels east and west at this location. The Housatonic Railroad travels north and south. This single span structure consists of ten prestressed butted concrete box beams, which also act as the deck, supporting an asphalt wearing surface. The beams are numbered from north to south, in accordance with the plans. See sketch 1 and photos 1 & 2.

GENERAL REMARKS

Railroad Clearance: The minimum clearance over the railroad tracks is 18'-3".

ITEM 58 - DECK

Item 58.1 - Wearing surface

Throughout the wearing surface, there are longitudinal cracks (reflective cracking), full length x up to 1/16" wide.

Item 58.2 - Deck Condition

Refer to item 59.4 - Beams, for deficiencies.

Item 58.8 - Railing

Both concrete rail bases have random hairline cracks.

The undersides of both rail base overhangs have several full width horizontal cracks.

Item 58.9 - Anti Missile Fence

At the east ends of both anti missile fences, there is moderate vegetation growth.

Item 58.13 - Deck Joints

Both deck joints have laminated rusting of the steel headers near the seals and isolated tears / separations in the seals, allowing leakage to below. See photo 3.

Both deck joints have areas with accumulations of sand and debris. See photo 3.

At the west joint, in the westbound wheel path near the center, the span side steel header is broken, approximately 18" long. See photo 3.

ITEM 59 - SUPERSTRUCTURE

Item 59.4 - Girders or Beams

The joints between all beams have evidence of leakage. See photo 2.

Between beams 1 - 4 and 8 - 10, the post tensioning strands have moderate corrosion with delamination. See photo 4.

In several locations, the internal cardboard formwork is damp (as seen through the PVC drains).

Also refer to item 59.13 - Member Alignment, for related conditions.

Note: Beam notes are given from south to north as the snooper deploys from the south side of the structure.

CITY/TOWN PITTSFIELD B.I.N. BR. DEPT. NO. P-10-002 B.S. STRUCTURE NO. P10002-0DY-DOT-634 INSPECTION DATE MAY 22, 2018

REMARKS

Item 59.4 - Girders or Beams (Cont'd)

Beam 10:

There is active leakage along the joint with beam 9.

Beam 9:

At 6' from the west abutment, there is a coverspall, 12" in diameter.

At 34' from the west abutment, there is a spall, 1' long x 2' wide x 1" deep. At the same location, the north edge has a spall, 2' long x 3"wide x 4" high.

Between 35' & 40' from the west abutment, there are three spalls, 6" diameter, with rebar stirrups exposed.

At approximately 2' from the east abutment, there is a PVC drain clogged with concrete.

Beam 8:

Just east of midspan, one PVC drain is clogged with concrete.

Beam 7:

At the west abutment, the north edge is spalled, 12" wide x 24" long x 1-1/2" deep, with one exposed and corroded tendon. See photo 5.

Concentrated near mid-span, there are fifteen spalls, 1' in diameter x 1" deep.

At 24' from the west abutment, there is a spall starting at the north edge, 3' long x 2' wide x 8" high x 2" deep, with five tendons exposed and corroded. See photo 6.

At 35' from the west abutment, the north edge is spalled, $3' \log x 3'$ wide x 1-1/2'' deep, with two tendons exposed and corroded or broken.

At 40' from the west abutment, the south edge has a spall, 4' long x 4" wide x 8" high, with three drape tendons exposed and corroded or broken.

At 40' from the west abutment, the north edge has a spall, 6' long x 20" wide x 8" high, with six tendons exposed and corroded or broken. See photo 7.

At the east abutment, the north edge is spalled, 8" long x 3" wide x 4" high x 1" deep, with one exposed tendon.

Beam 6:

At the west abutment, the south edge has a corner spall, 12' long x 6" wide x 4" high, with two tendons exposed and corroded or broken. Extending from this spall, the corner is hollow and has longitudinal cracks, 5' long x up to 1/8" wide. See photo 8.

At 16' from the west abutment, the south edge has a longitudinal crack, 1' long x 1/16" wide.

At 24' from the west abutment, the south edge has a spall, 6' long x 3" wide x 6" high, with two drape tendons exposed and corroded or broken.

REMARKS

Item 59.4 - Girders or Beams (Cont'd)

Beam 4:

The bottom face, along the south side, has seven hollow areas, 1' in diameter, and five spalls, 1' in diameter x 1" deep.

Beam 3:

At the west abutment, the north edge has a spall, 4' long x 6" wide x 4" high, with one drape tendon exposed and corroded or broken.

At 6' from the west abutment, the south edge has a spall, 4' long x 4" wide x 4" high, with one drape tendon exposed and corroded or broken. Extending from this spall, the corner is hollow and has longitudinal cracks, 12' long x up to 1/16" wide.

At 11' from the west abutment, the north edge has a spall, 6' long x 6" wide x 4" high, with one drape tendon exposed and corroded or broken.

At 21' from the west abutment, the south edge has a spall, 6' long x 3" wide x 9" high, with one drape tendon exposed and corroded or broken.

At 38' from the west abutment, the south edge has a spall, 4' long x 4" wide x 7" high, with three drape tendons exposed and corroded or broken.

Beam 2:

At 1' from the west abutment, the south edge has a spall, 2' long x 4" wide x 4" high, with one tendon exposed and corroded or broken.

At 35' to 46' from the west abutment, the north edge has several spalls, up to 3' long x 4" wide x 4" high, with one tendon exposed and corroded. There are hollow areas between these spalls. See photo 9.

At 5' from the east abutment, the north edge has a hollow area, 16" long x 1' wide.

At the east abutment, the bottom has a hollow and delaminated area, 1' long x 3' wide.

Beam 1:

At 25' from the west abutment, the south edge has a spall, 10' long x 4" wide x 4" high, with one tendon exposed and broken. See photo 9.

At the east abutment, the bottom has a hollow and delaminated area, 1' long x 3' wide.

Item 59.9 - Bearing Devices

Most of the bearings are hidden by design.

Bearing 8, at the west abutment, is exposed at the edge. It appears to have 'walked' to the east slightly.

REMARKS

Item 59.13 - Member Alignment

At several locations, the beams adjacent to one another are misaligned by up to 1-1/2". This appears to be an as-built condition.

At both abutments, the beam edges are in contact with the steps in the seats. This appears to be an as-built condition.

ITEM 60 - SUBSTRUCTURE

Item 60.1 - Abutments

Item 60.1.b - Bridge Seats

The seats are hidden by design. Refer to item 60.1.d - Breastwalls, for related conditions.

Item 60.1.d - Breastwalls

Both breastwalls, the top 2' +/- near the seat, have evidence of or active leakage, moderate to heavy horizontal or mapcracking, up to 1/4" wide, with rust staining, and random spalls. See photo 10.

Both breastwalls have random height vertical hairline cracks above the weepholes and isolated hairline cracks throughout.

West Breastwall

Below beam 10, the top has an area of shallow rebar, 6' wide x 4' high, causing cover spalls and heavy mapcracking with efflorescence and rust staining. See photo 11.

East Breastwall:

Below beam 1, there is a 3' long x 4" high x 4" deep, spalled and hollow area at the top of the wall.

Below beam 9, there is a 1' long x 8" high x 2" deep spall, near the top. See photo 10.

Below beam 10, there is a spall, 3' wide x 8" high x 3" deep, with rust stains and leakage. The concrete surrounding this spall is hollow. See photo 10.

Item 60.1.e - Wingwalls

The southwest wingwall and both east wingwalls have moderate mapcracking, up to 1/16" wide, with areas of rust staining and efflorescence throughout.

The southwest wingwall, at the top near the center, has crack, 10' long x up to 1/4" wide; the top above this crack is hollow.

The southeast wingwall, at the top near center, has a spall, 18" long x 3" high x 2" deep.

Item 60.1.h - Footings

The footings are hidden by design.

Item 60.1.i - Piles

The piles are hidden by design.

REMARKS

TRAFFIC SAFETY

Item 36a - Bridge Railing

Both bridge railings consist of type AL-3 aluminum railing on aluminum posts mounted to the concrete rail base / sidewalk. The aluminum railings are not tied into the blunt concrete end posts.

Item 36b - Transitions

All transitions consist of nested steel W-beam panels, tied into blunt end posts, mounted on steel posts with steel blockouts, spaced at 3'.

Item 36c - Approach Guardrail

The approach guardrail consists of single steel W-beam panels mounted on steel posts with steel blockouts.

A portion of the southeast approach guardrail is tipped away from the road.

Item 36d - Approach Guardrail Ends

The southwest approach guardrail has a steel terminal end swept away from traffic.

The northeast and southeast approach guardrails have buried ends, not swept.

The northwest approach guardrail has a buried end, swept from traffic.

Sketch / Photo Log

Sketch 1: Framing plan.

Photo 1: General topside, looking east.

Photo 2: Typical underside.

Photo 3: Broken section of the west joint header. Also, note the debris lodged in the joint.

Photo 4: Typical rusted post tensioning strand.

Photo 5: Spall at the west end of beam 7 with one exposed tendon.

Photo 6: Exposed tendons in beam 7 at 24' from the west abutment.

Photo 7: Beam 7 at 40' from the west abutment. Note all of the exposed tendons.

Photo 8: Spall and severed tendon at the west end of beam 6.

Photo 9: Spalling near mid-span of beams 1 & 2.

Photo 10: Rust staining and minor spalls in the east breastwall.

Photo 11: Spalls, cracking and rust staining at the south end of the west breastwall.

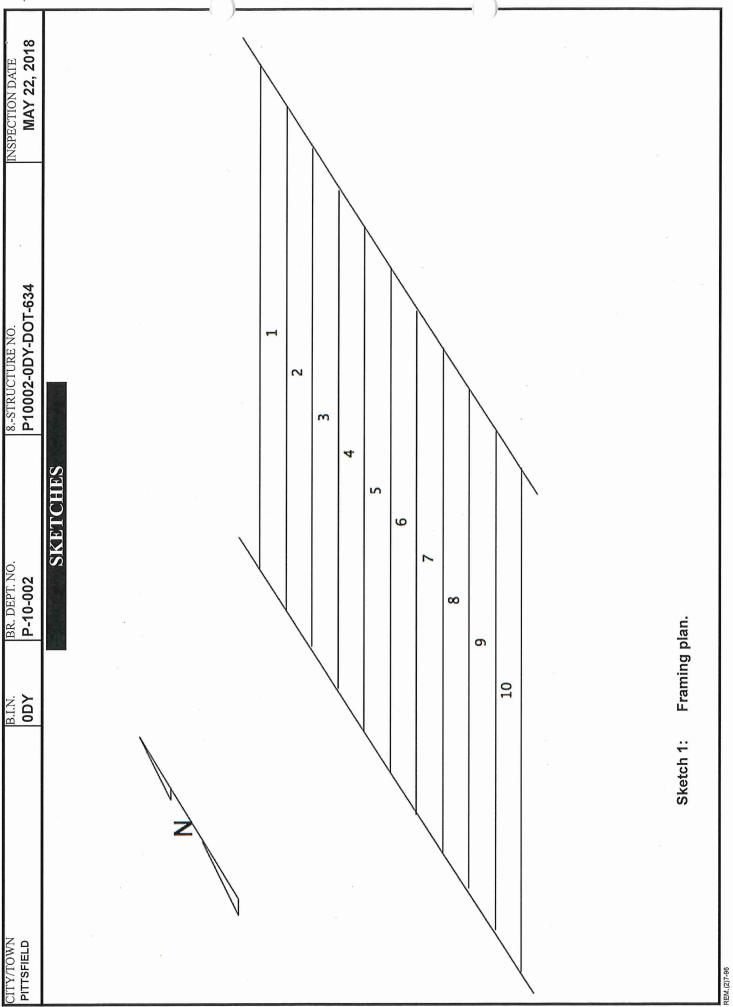




Photo 1: General topside, looking east.

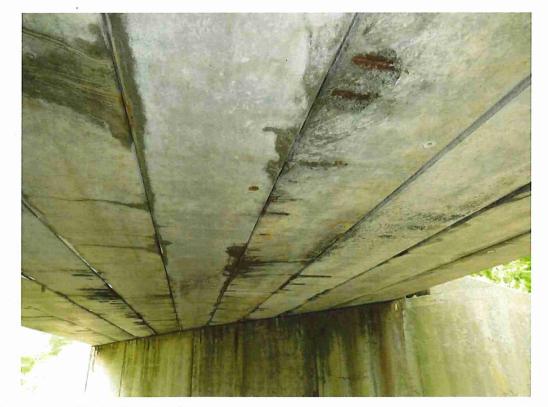


Photo 2: Typical underside.



Photo 3: Broken section of the west joint header. Also, note the debris lodged in the joint.

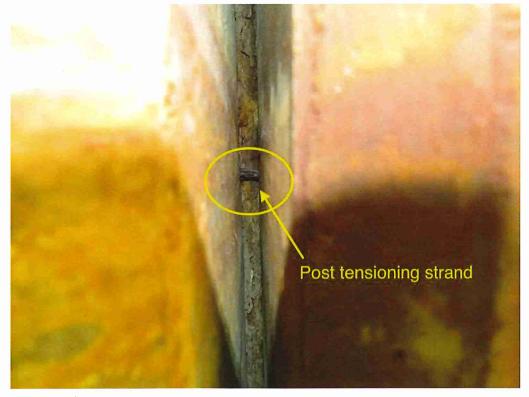


Photo 4: Typical rusted post tensioning strand.

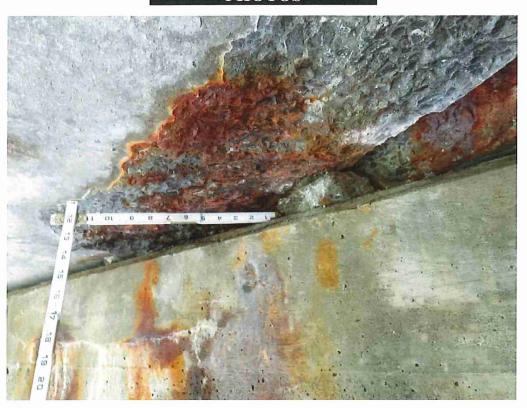


Photo 5: Spall at the west end of beam 7 with one exposed tendon.



Photo 6: Exposed tendons in beam 7 at 24' from the west abutment.



Photo 7: Beam 7 at 40' from the west abutment. Note all of the exposed tendons.



Photo 8: Spall and severed tendon at the west end of beam 6.



Photo 9: Spalling near mid-span of beams 1 & 2.



Photo 10: Rust staining and minor spalls in the east breastwall.



Photo 11: Spalls, cracking and rust staining at the south end of the west breastwall.

National Bridge Element Inspection

BDEPT# P-10-002 Date 05/22/2018 District Bridge Inspection Eng'r Laurie A. Briggs B.I.N. ODY Inspecting Agency Mass. Highway Dept. Item 8 P10002-0DY-DOT-634 Team Leader Michael P.E. McCabe Span Group 1 **David Stokes** Town Pittsfield Team Member(s)

District 1

El#	Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4
15	Pre Concrete Top Flange		2	2,934.000	<u></u> %	2,934.000			
Notes:									
> 510	Wearing Surfaces	sq feet	2	2,329.000	%	2,329.000		ζ.	
Notes:						· · · · · · · · · · · · · · · · · · ·			
104	Pre Clsd Box Girder	feet	2	611.000	\ \ \ \ \ \ \ \		523.000	88.000	
Notes:						•			
> 1100	Exposed Prestressing	feet	2	88.000	%			88.000	
Notes: A	pproximately 10' in CS3 is associated with	rusted po	st tensi	oning.					
> 1120	Efflorescence/Rust Staining	feet	2	523.000	%		523.000		,
Notes:									
104	Pre Clsd Box Girder	feet	3	100.000	\ \ \ \ \ \ \ \ \ \ \ \ \ \		86.000	14.000	
Notes:								Maria de la Companya del Companya de la Companya de la Companya del Companya de la Companya de l	
> 1100	Exposed Prestressing	feet	3	14.000	□ %			14.000	
Notes: A	pproximately 4' in CS3 is associated with a	rusted pos	t tensio	ning.					4
> 1120	feet	3	86.000	\ \ \ \ \ \ \		86.000			
Notes:		1							
215	Re Conc Abutment	feet	3	201.000	%		195.000	6.000	
Notes:									
> 1130	Cracking (RC and Other)	feet	3	201.000	%		195.000	6.000	
Notes:									
302	Compressn Joint Seal	feet	2	142.000	\ \ \ \ \ \ \ \ \ \ \ \ \ \	TIT	140.000	2.000	
Notes:									
> 2310	Leakage	feet	2	140.000	\ \ \ \ \ \ \ \ \ \		140.000	1	
Notes :		1			11				

National Bridge Element Inspection

Date 05/22/2018 BDEPT# P-10-002 District Bridge Inspection Eng'r Laurie A. Briggs B.I.N. ODY Item 8 P10002-0DY-DOT-634 Inspecting Agency Mass. Highway Dept. Team Leader Michael P.E. McCabe Span Group 1 Town Pittsfield Team **David Stokes** Member(s)

District 1

El# % or Q Units Env. Total Q. State 1 State 2 State 3 State 4 Element Name 7% > 2360 2 2.000 Adjacent Deck or Header feet 2.000 Notes: 2 7% feet 2.000 2.000 > 7000 Damage Notes: 310 40 40 each Elastomeric Bearing Notes: 330 feet 119.000 119.000 Metal Bridge Railing Notes: 331 feet 2 19.000 7% 19.000 Re Conc Bridge Railing Notes: