

MASSACHUSETTS HIGHWAY DEPARTMENT
STRUCTURES INSPECTION FIELD REPORT

2-DIST 05	B.I.N. 437
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ROUTINE INSPECTION

BR. DEPT. NO. C-07-001

CITY/TOWN CHATHAM	8-STRUCTURE NO. C07001-437-MUN-NBI	11-Kilo. POINT 000.322	41-STATUS A:OPEN	90-ROUTINE INSP. DATE OCT 10, 2006
07-FACILITY CARRIED HWY BRIDGE ST	MEMORIAL NAME/LOCAL NAME	27-YR BUILT 1936	106-YR REBUILT 1980	YR REHAB'D (NON 106) 0000
06-FEATURES INTERSECTED WATER MITCHELL RIVER	26-FUNCTIONAL CLASS Urban Collector	DIST. BRIDGE INSPECTION ENGINEER D.A. Palmer		
43-STRUCTURE TYPE Timber Movable - Bascule	22-OWNER Town Agency	21-MAINTAINER Town Agency	TEAM LEADER S. Reichl	PROJ MGR HNTB Corporation
107-DECK TYPE Timber	WEATHER Sunny	TEMP. (air) 21°C	TEAM MEMBERS D. MYKULAK	

ITEM 58	6	
DECK		<i>DEF</i>
1. Wearing surface	5	M-P
2. Deck Condition	6	M-P
3. Stay in place forms	N	-
4. Curbs	5	M-P
5. Median	N	-
6. Sidewalks	6	M-P
7. Parapets	N	-
8. Railing	6	M-P
9. Anti Missile Fence	N	-
10. Drainage System	N	-
11. Lighting Standards	N	-
12. Utilities	5	M-P
13. Deck Joints	4	S-P
14.	N	-
15.	N	-
16.	N	-
CURB REVEAL (In millimeters)	N 330	S 330

APPROACHES		<i>DEF</i>
a. Appr. pavement condition	5	M-P
b. Appr. Roadway Settlement	5	M-P
c. Appr. Sidewalk Settlement	5	M-P
d.	N	-

OVERHEAD SIGNS (Attached to bridge)	(Y/N)	N
		<i>DEF</i>
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

ITEM 59	5	
SUPERSTRUCTURE		<i>DEF</i>
1. Stringers	6	M-P
2. Floorbeams	N	-
3. Floor System Bracing	N	-
4. Girders or Beams	5	M-P
5. Trusses - General	N	-
a. Upper Chords	N	-
b. Lower Chords	N	-
c. Web Members	N	-
d. Lateral Bracing	N	-
e. Sway Bracings	N	-
f. Portals	N	-
g. End Posts	N	-
6. Pin & Hangers	N	-
7. Conn Plt's, Gussets & Angles	N	-
8. Cover Plates	N	-
9. Bearing Devices	N	-
10. Diaphragms/Cross Frames	6	M-P
11. Rivets & Bolts	5	M-P
12. Welds	6	M-P
13. Member Alignment	6	M-P
14. Paint/Coating	5	M-P
15. Kingposts	6	M-P
Year Painted	N	

COLLISION DAMAGE: <i>Please explain</i> None () Minor X Moderate () Severe ()
LOAD DEFLECTION: <i>Please explain</i> None () Minor X Moderate () Severe ()
LOAD VIBRATION: <i>Please explain</i> None () Minor X Moderate () Severe ()

Any Fracture Critical Member: (Y/N)	N
Any Cracks: (Y/N)	N

ITEM 60	4			
SUBSTRUCTURE		<i>DEF</i>		
1. Abutments	Dive	Cur	5	
a. Pedestals	N	N		-
b. Bridge Seats	N	7		-
c. Backwalls	N	6		M-P
d. Breastwalls	N	6		M-P
e. Wingwalls	N	6		M-P
f. Slope Paving/Rip-Rap	N	7		-
g. Pointing	N	N		-
h. Footings	N	5		M-P
i. Piles	N	H		-
j. Scour	N	7		-
k. Settlement	N	7		-
l.	N	N		-
m.	N	N		-
2. Piers or Bents			N	
a. Pedestals	N	N		-
b. Caps	N	N		-
c. Columns	N	N		-
d. Stems/Webs/Pierwalls	N	N		-
e. Pointing	N	N		-
f. Footing	N	N		-
g. Piles	N	N		-
h. Scour	N	N		-
i. Settlement	N	N		-
j.	N	N		-
k.	N	N		-
3. Pile Bents			5	
a. Pile Caps	N	6		M-P
b. Piles	4	5		S-P
c. Diagonal Bracing	4	4		S-A
d. Horizontal Bracing	5	4		S-A
e. Fasteners	3	4		S-P

UNDERMINING (Y/N) If YES please explain	N
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COLLISION DAMAGE: None () Minor X Moderate () Severe ()
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SCOUR: <i>Please explain</i> None (X) Minor () Moderate () Severe ()

I-60 (Dive Report):	4	I-60 (This Report):	5
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93B-U/W (DIVE) Insp	02/15/2006
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X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

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ITEM 61 **5**

CHANNEL & CHANNEL PROTECTION

	Dive	Cur	DEF
1.Channel Scour	7	7	-
2.Embankment Erosion	7	7	-
3.Debris	7	7	-
4.Vegetation	7	7	-
5.Utilities	7	H	-
6.Rip-Rap/Slope Protection	7	7	-
7.Aggradation	7	7	-
8.Fender System	3	3	S-A

STREAM FLOW VELOCITY:
Tidal (X) High () Moderate () Low () None ()

ITEM 61 (Dive Report): **5** ITEM 61 (This Report) **5**

93b-U/W INSP. DATE: **02/15/2006**

ITEM 36 TRAFFIC SAFETY

	36	COND	DEF
A. Bridge Railing	0	6	M-P
B. Transitions	0	0	-
C. Approach Guardrail	0	5	M-P
D. Approach Guardrail Ends	0	7	-

WEIGHT POSTING Not Applicable

Actual Posting: H 3 3S2 Single N

Recommended Posting: N N N N

Waived Date: **03/26/1997** EJDMT Date: **00/00/00**

At bridge		Other Advance	
E	W	E	W
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Signs In Place (Y=Yes, N=No, NR=Not Required)
Legibility/Visibility

CLEARANCE POSTING Not Applicable

N		S		
ft	in	ft	in	meter
<input type="checkbox"/>				

Actual Field Measurement
Posted Clearance

At bridge		Advance	
N	S	N	S
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Signs In Place (Y=Yes, N=No, NR=Not Required)
Legibility/Visibility

ACCESSIBILITY (Y/N/P)

	Needed	Used
Lift Bucket	N	N
Ladder	N	N
Boat	Y	Y
Waders	N	N
Inspector 50	N	N
Rigging	N	N
Staging	Y	Y
Traffic Control	N	N
RR Flagger	N	N
Police	N	N
Other:	N	N

TOTAL HOURS **41**

PLANS (Y/N): Y

(VCR) (Y/N): N

TAPE#: _____

List of field tests performed:
Visual and Hands On

RATING

Rating Report (Y/N): Y

Date: **02/01/1997**

(To be filled out by DBIE)

Request for Rating or Rerating (Y/N): N

REASON: _____

If YES please give priority:
HIGH () MEDIUM () LOW ()

CONDITION RATING GUIDE

(For Items 58, 59, 60 and 61)

CODE	CONDITION	DEFECTS
N	NOT APPLICABLE	
G 9	EXCELLENT	Excellent condition.
G 8	VERY GOOD	No problem noted.
G 7	GOOD	Some minor problems.
F 6	SATISFACTORY	Structural elements show some minor deterioration.
F 5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
P 4	POOR	Advance section loss, deterioration, spalling or scour.
P 3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
C 2	CRITICAL	Advance deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
C 1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put it back in light service.
0	FAILED	Out of service - beyond corrective action.

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

M= Minor Deficiency - Deficiencies which are minor in nature, generally do not impact the structural integrity of the bridge and could easily be repaired. Examples include but are not limited to: Spalled concrete, Minor pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

S= Severe/Major Deficiency - Deficiencies which are more extensive in nature and need more planning and effort to repair. Examples include but are not limited to: Moderate to major deterioration in concrete, Exposed and corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency in a structural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity of the bridge.

C-H= Critical Hazard Deficiency - A deficiency in a component or element of a bridge that poses an extreme hazard or unsafe condition to the public, but does not impair the structural integrity of the bridge. Examples include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate - [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP - [Action/Repair should be initiated by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) upon receipt of the Inspection Report].

P = Prioritize - [Shall be prioritized by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) and repairs made when funds and/or manpower is available].

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REMARKS

GENERAL REMARKS

The superstructure consists of eleven (11) multi-timber stringer approach spans (Spans 1-7 and 9-12) with a timber deck, one (1) movable multi-timber stringer bascule span (Span 8) with a timber deck and two (2) cast-in-place concrete abutment spans. The substructure consists of concrete abutments and timber pile bents. The timber pile bents are numbered 1-6, 7A and 8-11 from west to east. The structure carries Bridge Street over the Mitchell River in the town of Chatham.

ITEM 58 - DECK

Item 58.1 - Wearing surface

(Poor): The timber wearing surface generally exhibits minor to moderate wear, particularly in the wheel lines, with minor punkiness, splitting and checking throughout. The knots in the wood and the nail heads generally protrude above the surface. Span 6 exhibits the heaviest wear (**see Photo 3**). There are local areas of moderate to heavy deterioration within several of the spans and a few areas with loose and slightly raised up planking in Spans 1 and 12. The approximate area of moderate to heavy deterioration is as follows: Span 1 - 1 s.f., Span 5 - 2 s.f., Span 8 - 4 s.f., Span 9 - 2 s.f. and Span 12 - 5 s.f. (**see Photo 4**).

The bituminous wearing surface for the abutment spans is in fair condition with random cracking up to 3/8" wide and minor wear, particularly in the wheel lines.

Item 58.2 - Deck Condition

(Satisfactory): The timber deck exhibits some random minor punkiness on the underside, but there are no significant deteriorated areas.

The cast-in-place concrete deck for the abutment spans exhibits a 1'-0" diameter by 2" deep spall around a weep hole with heavy efflorescence on the underside at the northeast corner of the bridge.

Item 58.4 - Curbs

(Fair): The timber curbs exhibit minor punkiness, splitting and checking throughout. The worst case is at the south curb of the bascule span (Span 8) at the east end where there is a 3'-0" length of curb with moderate to heavy deterioration (**see Photo 5**). At several locations the curbs are also slightly misaligned transversely (**see Photo 6**).

Item 58.6 - Sidewalks

(Satisfactory): The timber sidewalks generally exhibit minor wear, splitting and checking throughout with a minor build up of sand and debris along the curbs.

Item 58.8 - Railing

(Satisfactory): See comments for Item 36a.

Item 58.12 - Utilities

(Fair): There are several deteriorated, broken and loose or missing support brackets for the electrical conduit running along the north side of the bridge (**see Photo 7**). There are deteriorated, broken and loose electrical conduits with exposed wiring running along the west side of Bents 5 and 7A (**see Photo 8**).

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REMARKS

Item 58.13 - Deck Joints

(Poor): The steel armoring at both abutment deck joints exhibits minor scraping and gouging, particularly at the east abutment. The timber joint at the east end of the bascule span (Span 8) is extremely tight when the bridge is closed (**see Photo 5**). Based upon previous inspections, the bascule span deck remains approximately 1/2" higher than the adjacent span deck at this joint after an opening and does not close completely until traffic drives over the joint. The bascule span was not operating during this inspection due to the fact that the winch on the south side of the bridge was malfunctioning. See the Electrical/Mechanical Inspection Report for more information regarding this issue. The four (4) northern most steel hinge plates for the timber joint at the west end of the bascule span (Span 8) are missing screws, loose and banging under live load impacts (**see Photo 9**).

APPROACHES

Approaches a - Appr. pavement condition

(Fair): The bituminous pavement at both approaches exhibits minor longitudinal and transverse cracking. The cracks have generally been sealed (**see Photo 10**).

Approaches b - Appr. Roadway Settlement

(Fair): There is some minor settlement in the westbound lane of the east approach (**see Photo 10**). The settlement noted during the previous inspection in the westbound lane of the west approach appears to have been repaired (**see Photo 11**).

Approaches c - Appr. Sidewalk Settlement

(Fair): There is up to 1.25" of settlement at the northwest and southwest approach sidewalks. The northeast approach sidewalk exhibits a 4'-0" long area with up to 2.5" of settlement.

ITEM 59 - SUPERSTRUCTURE

Item 59.1 - Stringers

(Satisfactory): The timber stringers generally exhibit minor splitting and checking. Isolated stringers exhibit checks up to 5/16" wide by 5'-0" long with a maximum depth of 1 7/8" (**see Photo 12**). There is some minor collision damage (scrapes and gouges) to the underside of the stringers in the bascule span (Span 8). There is a 3'-0" long by 6" high spall with exposed and rusted rebar on the south side of the abutment span beam at the northeast corner of the bridge.

Item 59.4 - Girders or Beams

(Fair): The north end of the bascule span (Span 8) timber lifting beam, located at the bascule span toe beneath the stringers, has been temporarily repaired with steel through bolts and metal straps around its perimeter (**see Photo 13**). The Harbor Master informed the inspection crew that the beam had major cracking and splitting at this location and that this is only an interim repair. A new beam has been ordered and will be installed in the near future.

Item 59.10 - Diaphragms/Cross Frames

(Satisfactory): The timber spacer blocks between the stringers are generally loose and/or have rotated. Random blocks exhibit minor checking.

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REMARKS

Item 59.11 - Rivets & Bolts

(Fair): There is minor corrosion of the bolts throughout the superstructure. The bascule span (Span 8) counterweight steel shell connection bolts (located in Span 7) exhibit moderate to heavy corrosion with some very minor section loss (see Photo 14).

Item 59.12 - Welds

(Satisfactory): The bascule span (Span 8) counterweight steel shell welds (located in Span 7) are generally in satisfactory condition with some minor rusting (see Photo 14).

Item 59.13 - Member Alignment

(Satisfactory): The toe of the bascule span (Span 8) appears to have shifted 1.5" to the north (see Photo 5).

Item 59.14 - Paint/Coating

(Fair): The bascule span (Span 8) counterweight steel shell galvanized coating (located in Span 7) exhibits moderate to heavy corrosion with some very minor section loss on its west end (see Photo 14).

Item 59.15 - Kingposts

(Satisfactory): The timber kingposts exhibit checks up to 1/4" wide by 4'-0" long with a maximum depth of 3.5" along their entire length, particularly at the south post.

SuperStructure Collision Notes

See comments for Item 59.1.

SuperStructure Load Deflection Notes

There is minor deflection under live load.

SuperStructure Load Vibration Notes

There is minor vibration under live load.

ITEM 60 - SUBSTRUCTURE

Item 60.1.c - Backwalls

(Satisfactory): There are several vertical and diagonal cracks in the east abutment backwall.

Item 60.1.d - Breastwalls

(Satisfactory): There is a horizontal crack along the south half of the east abutment breastwall. Additionally, there is a 3'-0" long by 4" high by 2" deep spall on the south half of the east abutment breastwall. Both the east and west abutment breastwalls exhibit hairline cracks with efflorescence. The timber sill attached to the west abutment breastwall exhibits minor checking.

Item 60.1.e - Wingwalls

(Satisfactory): The southeast wingwall is covered with a concrete skim coat which exhibits isolated cracks up to 1/16" wide with efflorescence. The southwest wingwall exhibits a full length horizontal hairline crack with several vertical hairline cracks extending from the horizontal crack.

Item 60.1.h - Footings

(Fair): There are 2" wide cracks through the south corner of the west abutment footing (see Photo 15). Both the east and west abutment footings at the south end are partially exposed through the rip-rap. Note these footings appear to be only a concrete apron, but there are no available plans to support this.

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REMARKS

Item 60.3.a - Pile Caps

(Satisfactory): The timber pile caps generally exhibit horizontal checks up to 1/16" wide on all surfaces.

Item 60.3.b - Piles

(Fair): The timber piles generally exhibit heavy marine growth with minor to moderate brooming and section loss in the tidal zone (see Photo 16). Above the tidal zone, the piles generally exhibit vertical checks up to 1/8" wide at random locations. There is little to no protective creosote coating remaining on the piles.

Protective sleeves have been placed around random piles at Bents 1, 2, 3 and 4 (see Photo 16). See the Routine Underwater Inspection Report for more information.

Item 60.3.c - Diagonal Bracing

(Poor): (DEF=S/A) The timber bracing (for each individual pile bent) generally exhibits moderate to heavy deterioration and section loss in the tidal zone. **The worst cases are at the north end of Bent 5 where there is a 5'-0" section of the bracing missing (see Photo 17) and at Bent 6 where the center bracing is missing.**

Item 60.3.d - Horizontal Bracing

(Poor): (DEF=S/A) The timber bracing (between pile bents) generally exhibits moderate to heavy deterioration and section loss in the tidal zone. **The worst case is at the south end of Bent 8 where there is a 4'-0" section of the bracing missing (see Photo 18).**

Item 60.3.e - Fasteners

(Poor): The fasteners that attach the bracing generally exhibit moderate to heavy corrosion with moderate to heavy section loss in the tidal zone (primarily at the bolt ends, the washers and the nuts) (see Photos 17 and 18).

SubStructure Collision Notes

See Item 61.8.d

ITEM 61 - CHANNEL AND CHANNEL PROTECTION

Item 61.8 - Fender System

Horizontal timber members supporting the vertical timber fender members are attached directly to the piles at Bent #7A and Bent #8. Newer pressure treated horizontal planks on either side of the vertical fender members hold the vertical timbers in place.

Item 61.8.c - Horizontal Bracing

(Poor): (DEF=S/A) The horizontal timber members generally exhibit moderate splitting and checking above the tidal zone. **In the tidal zone, these members exhibit heavy marine growth with moderate to heavy deterioration and section loss (up to 100%) (see Photo 18).** See Routine Underwater Inspection Report for more information.

Item 61.8.d - Vertical Bracing

(Serious): (DEF=S/A) The vertical timber members generally exhibit moderate splitting and checking above the tidal zone. **In the tidal zone, these members exhibit heavy marine growth with moderate to heavy deterioration and section loss (up to 100%).** The east fender also exhibits impact damage at its north and south ends with several vertical timber members leaning/rotated (see Photo 19). This impact damage is due to the angle of approach of marine traffic to the bridge from the north and south. See the Routine Underwater Inspection Report for more information.

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REMARKS

Item 61.8.e - Fasteners

(Fair): Fasteners have heavy surface rust and are deteriorated within the tidal zone. See Routine Underwater Inspection Report for more information.

TRAFFIC SAFETY

Item 36a - Bridge Railing

(Satisfactory): Some timber rails exhibit minor splitting and checking. Some timber posts exhibit moderate splitting and checking.

Item 36b - Transitions

There are no transitions between the timber bridge rail and the approach thrie beam guardrail at all four corners of the bridge.

Item 36c - Approach Guardrail

(Fair): The approach guardrails exhibit minor to moderate impact damage at the northwest (15'-0" long by 3" deflection), northeast (25'-0" long by 1'-6" deflection) (**see Photo 1**) and southeast (20'-0" long by 4" deflection) corners of the bridge. The southeast guardrail also has five (5) posts that are not up tight against the abutment wingwall with up to a 1.25" gap (**see Photo 2**). The guardrails consist of multiple types of construction and material and are not continuous for their entire length.

Photo Log

- Photo 1 : Impact damage to the northeast approach guardrail, looking west.
- Photo 2 : 1 1/4" gap between the southeast approach guardrail post and wingwall, looking east.
- Photo 3 : Typical condition of the timber wearing surface in Span 6, looking northwest.
- Photo 4 : Moderate to heavy deterioration of the timber wearing surface in Span 12, looking northwest.
- Photo 5 : Mod/hvy deterioration of curb in bascule span at toe, looking east. Note tight deck joint & 1 1/2" shift of bascule span toe to north.
- Photo 6 : Transverse misalignment of the north curb at the east end of Span 12, looking west.
- Photo 7 : Temporary nylon rope support for the electrical conduit on the north side of the bridge at Bent 10, looking down.
- Photo 8 : Deteriorated, broken & loose electrical conduit with exp. wiring on west side of Bent 5 at north end, looking northeast.
- Photo 9 : Loose steel hinge plate for the deck joint at the west end of the bascule span (Span 8), looking north.
- Photo 10 : Minor cracking and settlement at the east approach, looking south.
- Photo 11 : Apparent repair to the westbound lane of the west approach, looking north.
- Photo 12 : 5/16" wide by 5'-0" long check on the north side of Stringer 9 from the south in the bascule span (Span 8), looking southeast.
- Photo 13 : Temporary repair to the north end of the bascule span (Span 8) timber lifting beam, looking west and down.
- Photo 14 : Mod/hvy corrosion of bascule span cntwrght steel shell & connection bolts (Span 7), looking north. Note steel welds ok.
- Photo 15 : 2" wide cracks through the south corner of the west abutment footing, looking northwest.
- Photo 16 : Typ. condition of timber piles/bracing, south end of Bent 3, looking west. Note protective sleeve repairs on other piles in view.
- Photo 17 : Missing sect. of diag. bracing, north end of Bent 5, looking NE. Note condition of fasteners on remaining portion at pile.
- Photo 18 : Missing sect. of horiz. bracing, south end of Bent 8, looking NW. Note cond. of fasteners on remaining portion & fender walers.
- Photo 19 : Typical condition of the vertical timber members of the fender at Bent 8, looking northeast. Note the impact damage at both ends.

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OCT 10, 2006**PHOTOS**

Photo 1: Impact damage to the northeast approach guardrail, looking west.

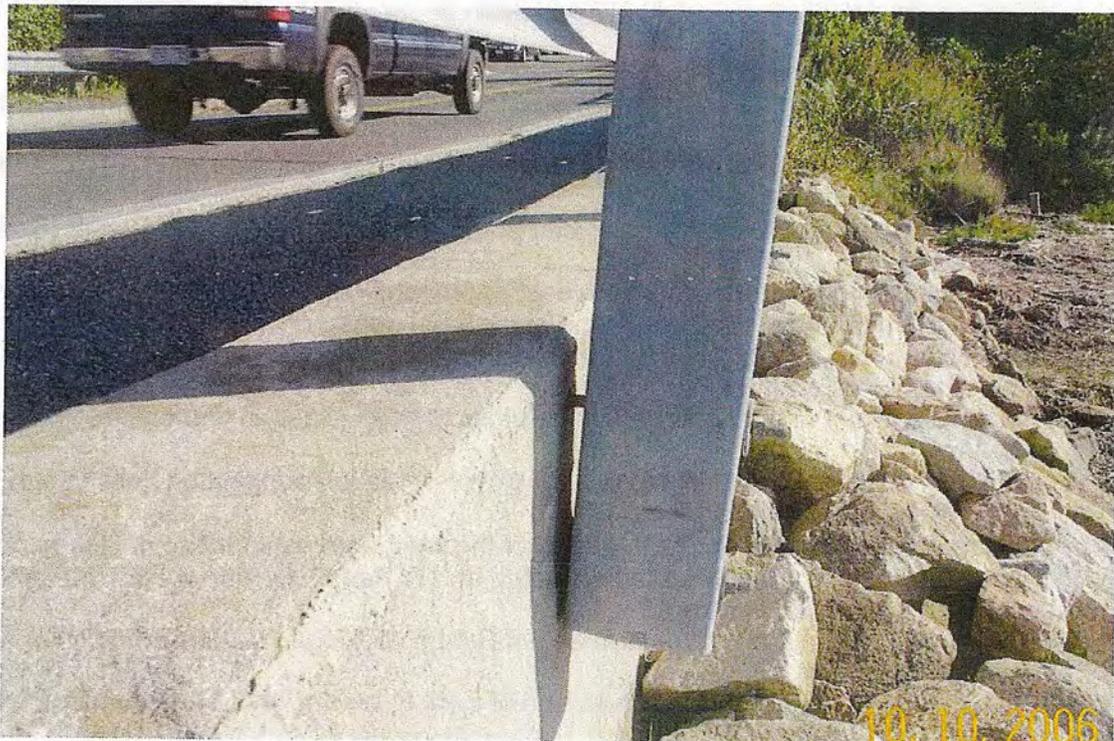


Photo 2: 1 1/4" gap between the southeast approach guardrail post and wingwall, looking east.

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PHOTOS



Photo 3: Typical condition of the timber wearing surface in Span 6, looking northwest.



Photo 4: Moderate to heavy deterioration of the timber wearing surface in Span 12, looking northwest.

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PHOTOS

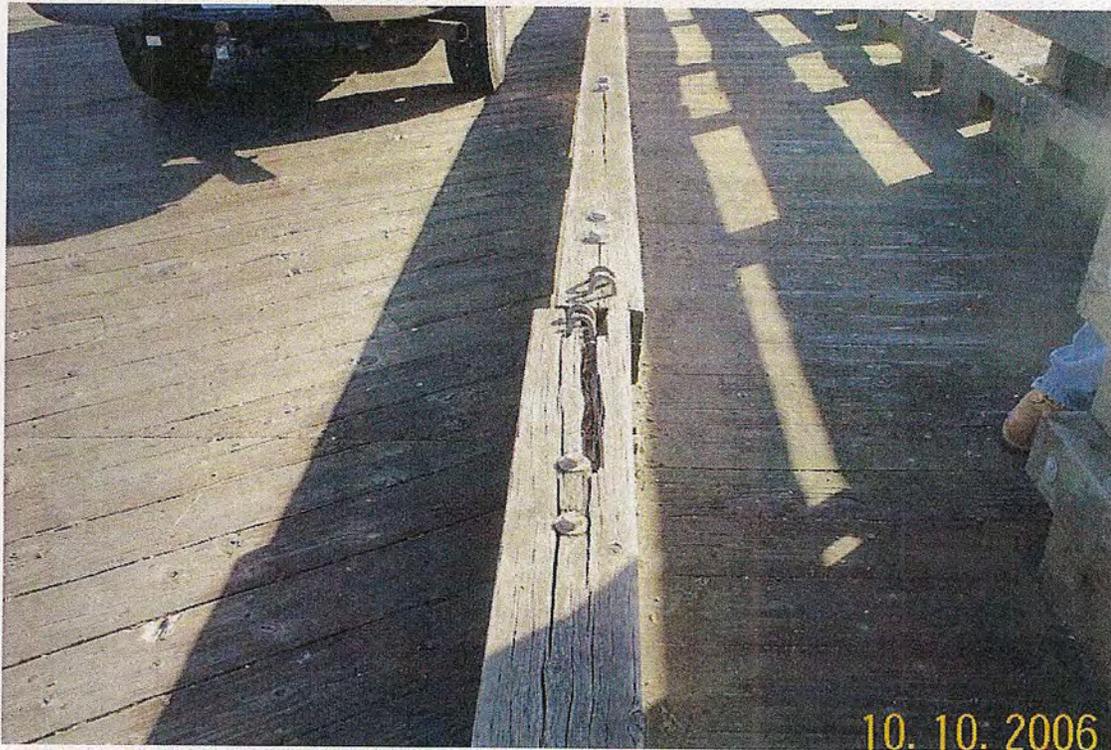


Photo 5: Mod/hvy deterioration of curb in bascule span at toe, looking east. Note tight deck joint & 1 1/2" shift of bascule span toe to north.

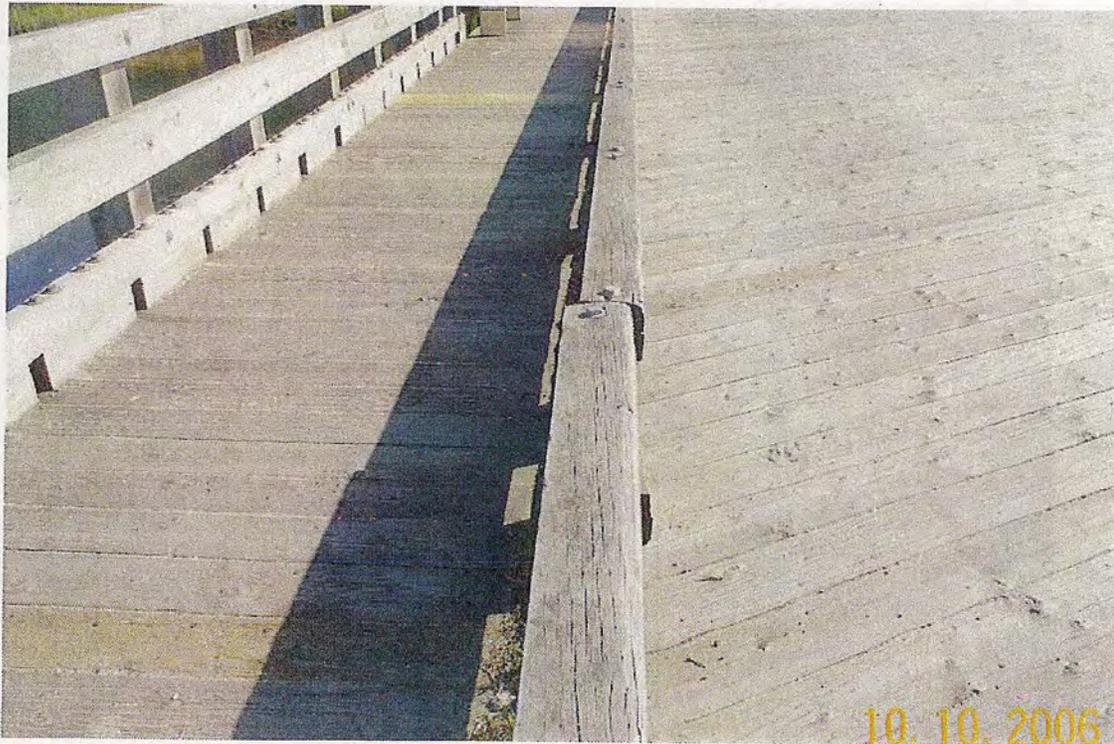


Photo 6: Transverse misalignment of the north curb at the east end of Span 12, looking west.

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PHOTOS



Photo 7: Temporary nylon rope support for the electrical conduit on the north side of the bridge at Bent 10, looking down.



Photo 8: Deteriorated, broken & loose electrical conduit with exp. wiring on west side of Bent 5 at north end, looking northeast.

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PHOTOS



Photo 9: Loose steel hinge plate for the deck joint at the west end of the bascule span (Span 8), looking north.



Photo 10: Minor cracking and settlement at the east approach, looking south.

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PHOTOS

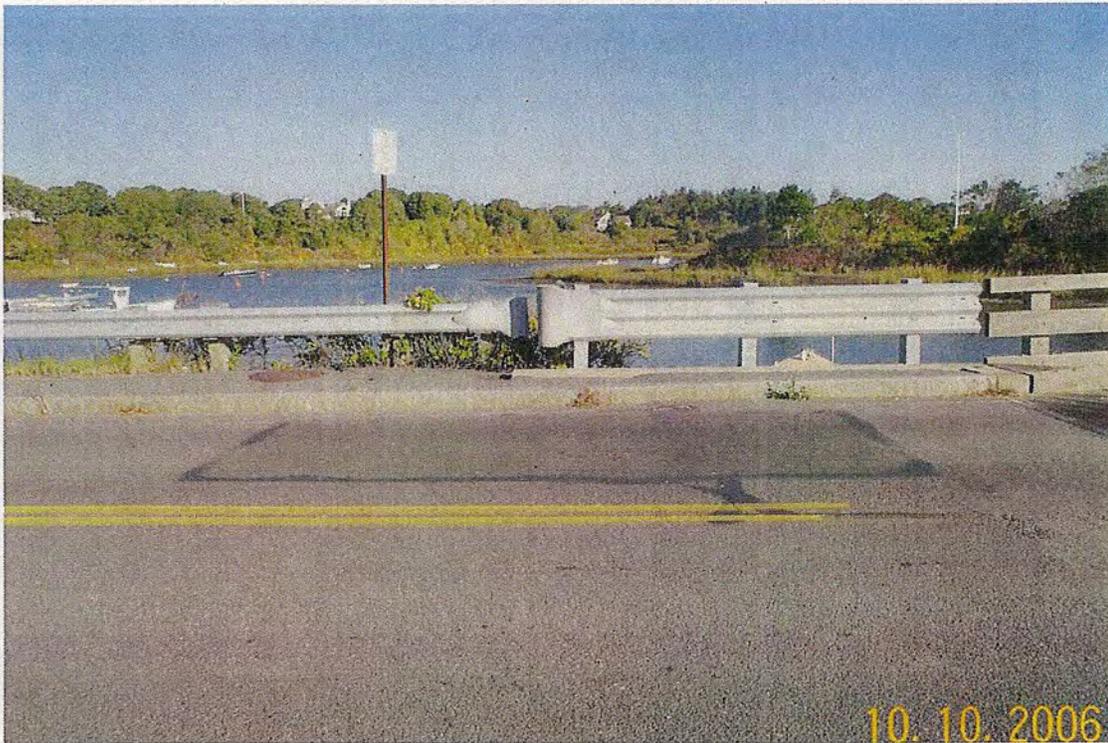


Photo 11: Apparent repair to the westbound lane of the west approach, looking north.



Photo 12: 5/16" wide by 5'-0" long check on the north side of Stringer 9 from the south in the bascule span (Span 8), looking southeast.

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C07001-437-MUN-NBIINSPECTION DATE
OCT 10, 2006

PHOTOS

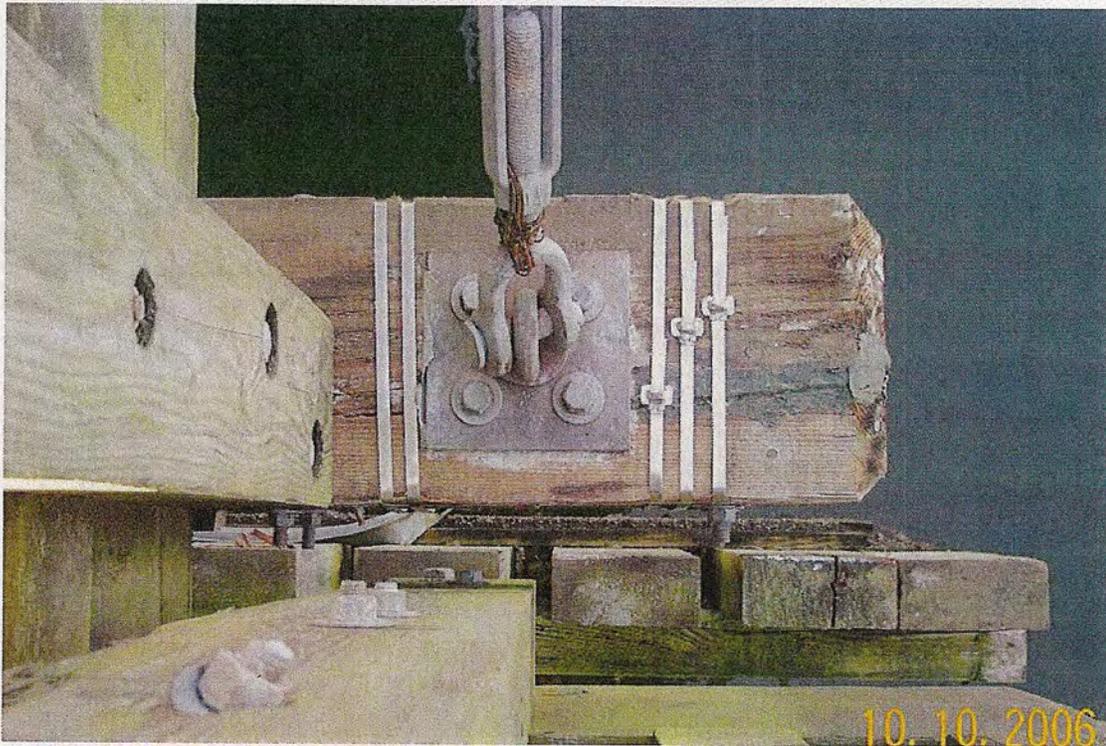


Photo 13: Temporary repair to the north end of the bascule span (Span 8) timber lifting beam, looking west and down.



Photo 14: Mod/hvy corrosion of bascule span ctrnwght steel shell & connection bolts (Span 7), looking north. Note steel welds ok.

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PHOTOS

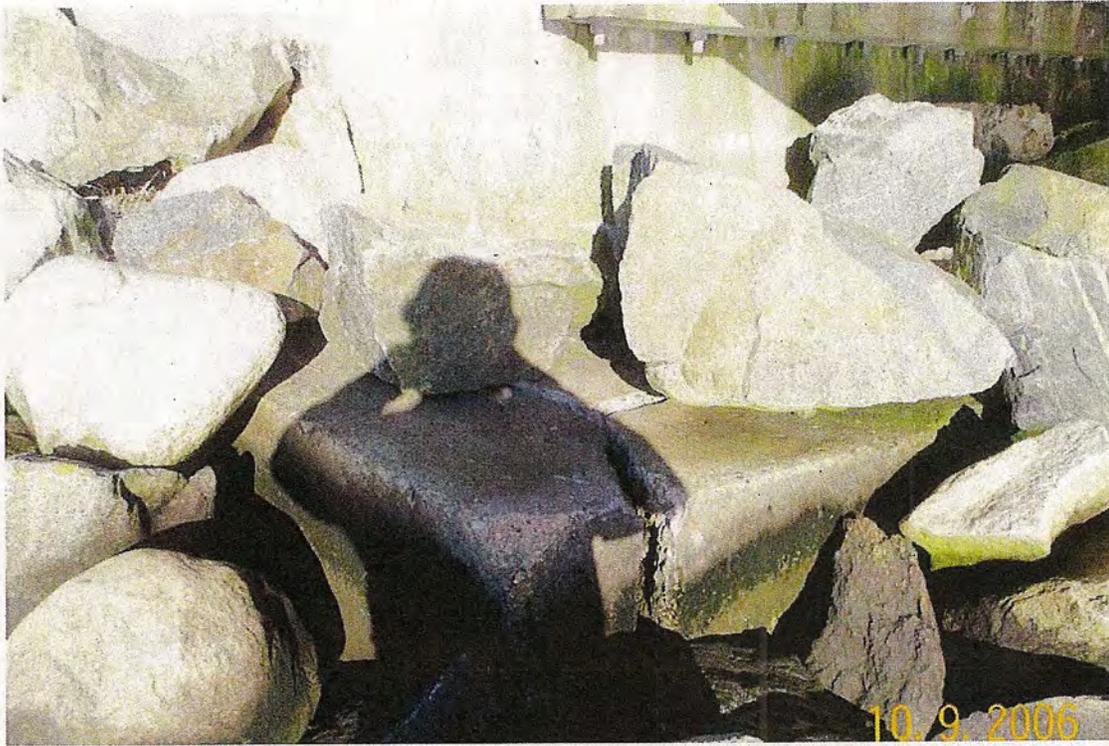


Photo 15: 2" wide cracks through the south corner of the west abutment footing, looking northwest.

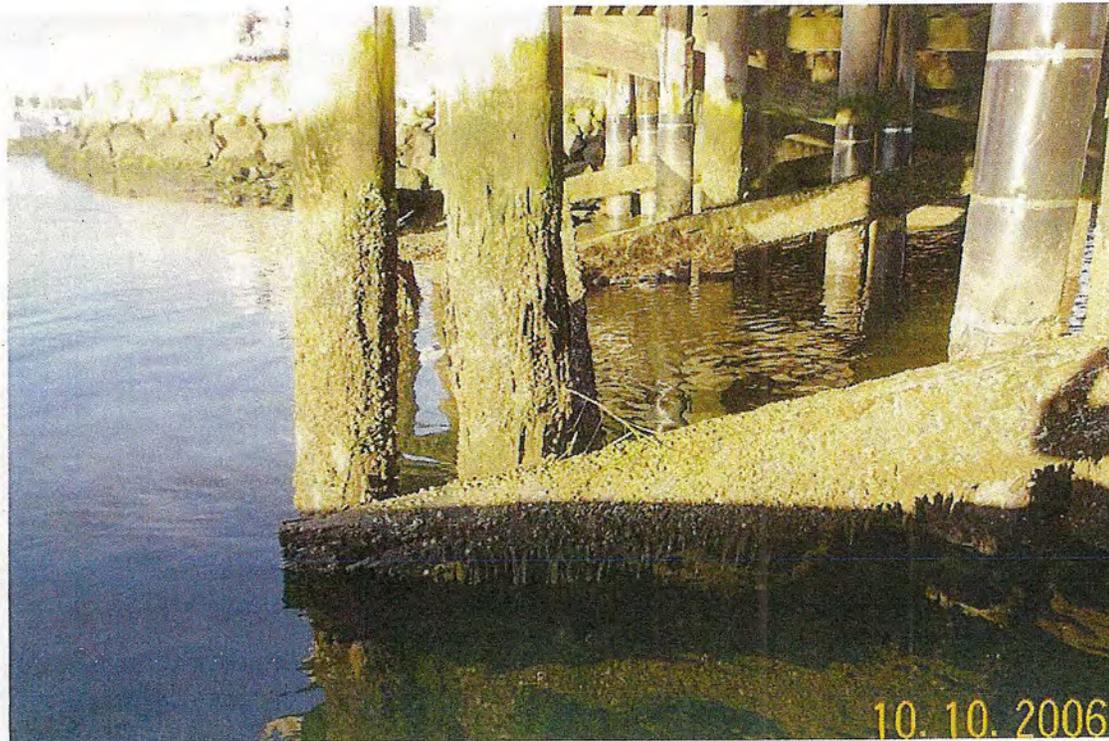


Photo 16: Typ. condition of timber piles/bracing, south end of Bent 3, looking west. Note protective sleeve repairs on other piles in view.

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PHOTOS

Photo 17: Missing sect. of diag. bracing, north end of Bent 5, looking NE. Note condition of fasteners on remaining portion at pile.



Photo 18: Missing sect. of horiz. bracing, south end of Bent 8, looking NW. Note cond. of fasteners on remaining portion & fender walers.

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PHOTOS

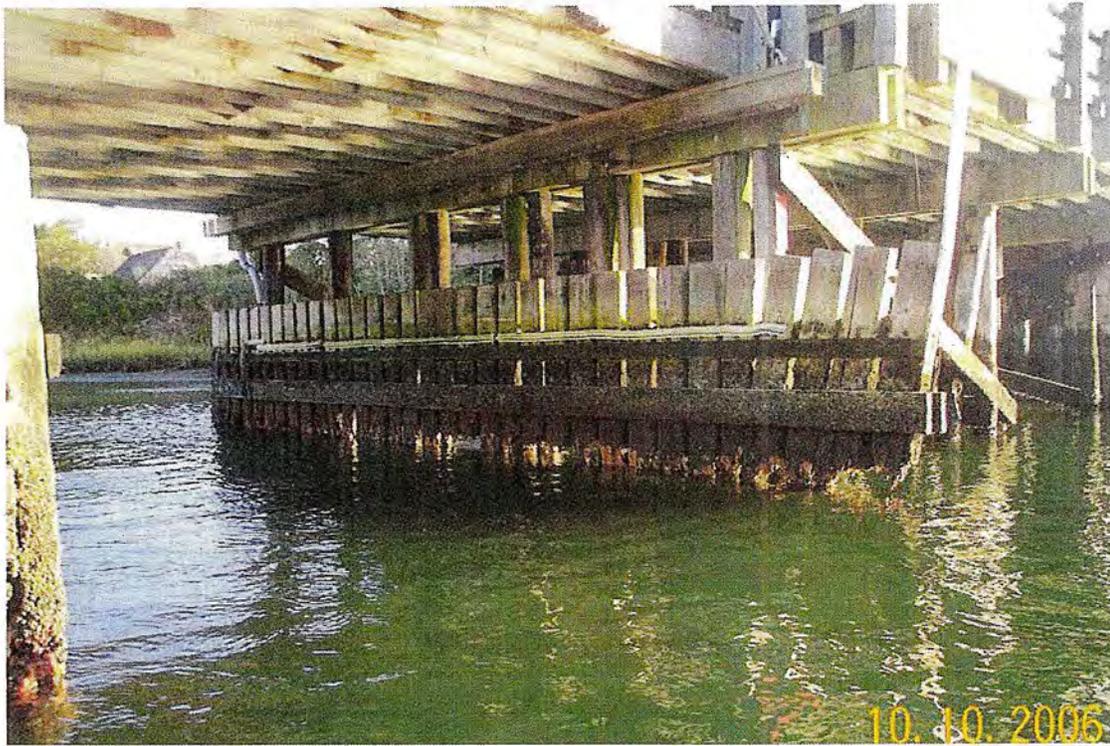


Photo 19: Typical condition of the vertical timber members of the fender at Bent 8, looking northeast. Note the impact damage at both ends.