



October 25, 2005

Mr. David Bagdigian  
Senior Staff Engineer  
Massachusetts Water Resources Authority  
Charlestown Navy Yard  
100 First Avenue  
Boston, Massachusetts 02129

Re: DCR Bridge No. P44  
Structure No. N040339X0MDCPED  
MWRA Echo Bridge  
Needham, Massachusetts

Dear Mr. Bagdigian:

Attached, for your information, is a copy of the Massachusetts Highway Department Routine Arch Inspection Report for the subject bridge dated September 8, 2005.

Also included is a memorandum from the DCR's Bridge Inspection Team which describes safety issues at the bridge where railing sections are missing. It is my understanding that the DCR owns the bridge and the MWRA is responsible for maintenance and repairs. Therefore, I am requesting your help in having the MWRA replace the missing railing sections.

If you have any questions or require any additional information, please contact me at (617) 626-1490.

Sincerely,

Mark P. Griffin, P.E.  
Bridge Section Head

cc: Jonathan Yeo, Director, Division  
G. O'Connor

251 Causway Street  
Boston, Massachusetts 02114  
(617) 626-1250  
(617) 626-1331 FAX  
[www.mass.gov/dcr](http://www.mass.gov/dcr)

MITT ROMNEY  
Governor

KERRY HEALEY

# STRUCTURES INSPECTION FIELD REPORT

## ROUTINE ARCH INSPECTION

Z-DIST  
**04**

B.I.N.  
**9X0**

BR. DEPT. NO.  
**NO4033**

CITY/TOWN: **NEEDHAM**      8-STRUCTURE NO.: **NO40339XOMDCPED**      11-KBO. POINT: **000.016**      41-STATUS: **R**      90-ROUTINE INSP DATE: **9/8/05**

1-DECK TYPE: **PEDESTRIAN**      2-ARCH NO.: **ECHO BRIDGE #P44**      3-ARCH YEAR: **1876**      4-ARCH YEAR: **1993**      5-ARCH YEAR: **0000**

06-FEATURES INTERSECTED: **CHARLES RIVER + ELLIS ST.**      26-FUNCTIONAL CLASS: **URBAN LOCAL**      DIST. BRIDGE INSPECTION ENGINEER: *Mark P. Sullivan*

43-STRUCTURE TYPE: **GRANITE ARCH**      22-OWNER: **DCR**      21-MAINTAINER: **DCR**      TEAM LEADER: *Jerry O'Connor*

107-DECK TYPE: **N**      WEATHER: **SUNNY**      TEMP. (air): **82°**      TEAM MEMBERS: **JOHN DAVISON**

ITEM 58		
DECK	7	DEF.
1. Wearing surface	7	I
2. Deck Condition	H	I
3. Spandrel Fill	8	I
4. Curbs	N	I
5. Median	N	I
6. Sidewalks	N	I
7. Parapets/Coping	8	M.P.
8. Railing	4	S.P.
9. Anti Missile Fence	N	I
10. Drainage System	N	I
11. Lighting Standards	N	I
12. Utilities	H	I
13. Deck Joints	N	I
14. STAIRWAY	5	M.P.
15.		
16.		

ITEM 59		
SUPERSTRUCTURE	7	DEF.
1. Arch/Arch Ring	7	I
2. Keystone Area	8	I
3. Stringers/Tee Beams	N	I
4. Floor Beams	N	I
5. Spandrel Walls	8	I
6. Spring Lines	7	I
7. Diaphragms	N	I
8. Conn Pl's, Gussets & Angles	N	I
9. Hangers	N	I
10. Masonry Joints	7	I
11. Rivets & Bolts	N	I
12. Welds	N	I
13. Deformation/Flattening	N	I
14. Member Alignment	N	I
15. Paint/Coating	N	I
16.		

ITEM 60		
SUBSTRUCTURE	8	DEF.
1. Abutments	8	I
a. Pedestals	N	I
b. Bridge Beams	N	I
c. Backwalls	N	I
d. Breastwalls	N	I
e. Wingwalls	N	I
f. Slope Facing/Rip-Rap	N	I
g. Pointing	N	I
h. Footings	N	I
i. Piles	N	I
l. Scour	N	I
k. Settlement	N	I
l.		
m.		
2. Piers or Bents	8	I
a. Pedestals	N	I
b. Caps	N	I
c. Columns	N	I
d. Braces/Web of Framing	N	I
e. Pointing	N	I
f. Footing	N	I
g. Piles	N	I
h. Scour	N	I
i. Settlement	N	I
j.		
k.		
3. Pile Bents	N	I
a. Pile Caps	N	I
b. Piles	N	I
c. Diagonal Bracing	N	I
d. Horizontal Bracing	N	I
e. Fasteners	N	I

CURB REVEAL (In inches)      N/E      S/W

**N**      **N**

APPROACHES		
	DEF.	
a. Appr. pavement condition	7	I
b. Appr. Roadway Settlement	N	I
c. Appr. Sidewalk Settlement	7	I
d. APPY. STAIRWAY	7	I

COLLISION DAMAGE: *Please explain*

None (  ) Minor ( ) Moderate ( ) Severe ( )

LOAD DEFLECTION: *Please explain*

None (  ) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: *Please explain*

None (  ) Minor ( ) Moderate ( ) Severe ( )

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

Any Fracture Critical Member? (Y/N) **N**

Any Cracks? (Y/N)  *If YES Please explain*

UNDERMINING (Y/N)  *If YES please explain*

COLLISION DAMAGE: *Please explain*

None (  ) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): **N**      I-60 (This Report): **8**

93b-U/W (DIVE) INSP DATE: **0000**

X=UNKNOWN      N=NOT APPLICABLE      H=HIDDEN/INACCESSIBLE      R=REMOVED

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF CONSERVATION AND RECREATION  
DIVISION OF URBAN PARKS AND RECREATION

SECOND NOTICE

TO: MARK GRIFFIN, BRIDGE SECTION HEAD  
From: JOHN C. DAVISON, BRIDGE INSPECTION TEAM  
Date: SEPTEMBER 8, 2005

RE: DAMAGED AND MISSING RAILING AT ECHO PEDESTRIAN  
BRIDGE (NO 40339XOMDCPED; # P44), NEEDHAM.

ON OUR RECENT INSPECTION, IT WAS NOTED THAT THERE IS FIVE SECTIONS OF BOTTOM RAIL MISSING TO GO ON THE SOUTH SIDE (AT POST #16 + #17 AND AT POST #28 + #29 FROM THE EAST ABUTMENT) AND THREE ON THE NORTH SIDE (AT POST #31 + #32, POST #45 + #46 AND AT POST #46 + #47 FROM THE EAST ABUTMENT). A DIAGONAL SECTION (CROSS BRACING) IS GONE BETWEEN THE 32ND AND 33RD POST FROM THE EAST ABUTMENT (NORTH SIDE). ONE SECTION AT THE SOUTHWEST CORNER (POST #59 FROM EAST ABUT. TO WEST ABUTMENT) THE TOP RAIL IS BENT AND THE DIAGONALS ARE GONE. AT THE NORTHWEST CORNER THERE IS A BOTTOM RAIL THAT IS DETACHED AT ONE END (POST #57 FROM EAST ABUTMENT) AND RESTING ON THE DECK. AT THE 2ND POST (SOUTH SIDE) FROM THE EAST ABUTMENT THE BOTTOM RAIL IS DETACHED. THE 1ST POST AT THIS LOCATION HAS MISSING SECTIONS OF ITS BASE. POST #20 FROM EAST ABUTMENT SOUTH RAILING HAS THREE SIDES OF ITS BASE GONE. POST #49 FROM EAST SOUTH RAILING HAS ONE SIDE OF ITS BASE GONE. SEVERAL POSTS ARE CRACKED/SPLITTING AT THE BASE. MODERATE TO HEAVY RUST ON POSTS AND BOTTOM RAILING. THERE ARE 18 ORNAMENTAL TOPS MISSING.