Final Design Report

APPENDICES

Appendix A – SEQR
Appendix B – NEPA Assessment Checklist
Appendix C – Design Speed Study
Appendix D – Accident Analysis
Appendix E – Tree Survey Graphics
Appendix F – MHSTCC TIP Application 2006-2010
Appendix G – Correspondence
Appendix H – Public Information Meeting Materials
Appendix I – Existing Topographic Survey
Appendix J – Existing Project Photograph Log
Appendix K – Existing Bridge Condition Photographs
Appendix L – Programmatic Section 4(f) Evaluation
Appendix M – Non-Standard Feature Justification Forms for the Preferred Alternative (In Accordance With HDM § 2.8)
Appendix N – Value Engineering Report & Disposition Forms
Appendix O – Hazardous Waste Screening Form
Appendix P – Right-of-Way Estimate
Appendix Q – Memorandum of Agreement
Appendix R – Floodplain Evaluation

February 9, 2010
APPENDIX H

Public Information Meeting Materials
The following is a summary of the Public Involvement for this project:

- In January 2007, Westchester County held a stakeholders meeting at the Westchester County Center in the City of White Plains. The purpose of that meeting was to inform the involved agencies and community groups of the project scope and schedule.

- In October 2007, Westchester County held a public information meeting at the Westchester County Center in the City of White Plains. The purpose of that meeting was to inform the public of the condition of the bridge, options being investigated, and to solicit comments.

- In January 2008, Westchester County held a public information meeting at the Westchester County Center in the City of White Plains. The purpose of the meeting was to screen the six original alternatives being evaluated and select three Build alternatives for further analysis and documentation to be presented in the Design Approval Document.

- In April 2008, Westchester County held a public information meeting at the Westchester County Center in the City of White Plains. The purpose of the meeting was to present the findings of the detailed alternative evaluation.

- In April 2009, Westchester County held a public information meeting at the Westchester County Center, in the city of White Plains. The purpose of the meeting was to present the preferred alternative to be presented in the Final Design Approval Document.

In addition to the public information meetings, Westchester County created a website for the public to access information regarding the project. The website contained a brief project background, an explanation of the environmental process being followed for the project, electronic copies of the presentations provided at the public meetings, and question and comment forms. The website address is as follows:

www.westchestergov.com/dpw/CraneRoadCommentform.htm
PIN 8110.13, Agreement No. 06-929
Replacement/Reconstruction of the Structures Carrying the
Bronx River Parkway over the Bronx River and Metro-North Railroad
Village of Scarsdale / Town of Greenburgh, Westchester County
BIN’s 3-34877-9 & 3-34878-9

STAKEHOLDER DISTRIBUTION LIST

Arthur Manor Neighborhood Asso.
55 Carmen Rd.
Scarsdale, NY 10583
John Bonanno, Co-President
(914) 723-7026

Beczak Environmental Education Center
35 Alexander Street
Yonkers, NY 10701
(914) 377-1900
Fax: (914) 377-1173
BWalters@beczak.org
www.beczak.org
Bob Walters, Executive Director
Nortrud Spero, President

Bronx River Parkway Reservation Conservancy
(914) 725-3829
Lowell Tooley, President
ltooley2@aol.com

Central Westchester Audubon Society
P.O. Box 359
White Plains, NY 10602
(914) 949-3486
cwas@centralwestchesteraudubon.org
www.centralwestchesteraudubon.org
Gladys Goldman, Co-President
Jeanne Alpert, Co-President
(914) 946-1780

Drake-Edgewood Neighborhood Asso.
270 Madison Rd.
Scarsdale, NY 10583
Jennifer Armas, Co-President
(914) 713-4680
mjarmas@msn.com
Eastchester Historical Society
Town of Eastchester
Town Hall
40 Mill Rd.
Eastchester, NY 10709

Federated Conservationists of Westchester County, Inc.
E House, Pace University School of Law
78 North Broadway
White Plains, NY 10603
(914) 289-0537
Fax: (914) 289-0539
fcwc@law.pace.edu
www.fcwc.org
Edna Sussman, Executive Director

Friends of the Scarsdale Parks
P. O. Box 53
Scarsdale, NY 10583
(914) 472-7461
Michelle Abelson, President

Garth Woods Conservancy
97 Montgomery Street
Scarsdale, NY 10583
(914) 725-4600
Fax: (914) 725-0346
Robert F. Borg, Chairman

Greenburgh Nature Center
99 Dromore Rd.
Scarsdale, NY 10583
(914) 723-3470
Fax: (914) 725-6599
Wm. Lawyer, Exec. Director
(914) 813-1837
gncdirectr@aol.com

Hudson River Audubon Society of Westchester
P. O. Box 616
Yonkers, NY 10703
(914) 237-9331
bochnikm@cs.com
www.hras.org
Michael Bochnik, President
League of Women Voters of Westchester
200 Hamilton Avenue
White Plains, NY 10601
(914) 949-0507
Fax: (914) 997-9354
lwvlwvw@aol.com
www.WATpa.org/lwv
Erin Malloy, President
Catherine Wachs, Natural Resources Chairperson
Heather Baker-Sullivan, Land Use Chair

Ludlow Park Homeowners' Association
63 Sunnyside Drive
Yonkers, NY 10705
Nortrud Spero, Contact Person

Native Plant Center
Westchester Community College
Hartford Hall
75 Grasslands Road
Valhalla, NY 10595
(914) 785-7870
Fax: (914) 785-6143
wcc.nativeplant@sunywcc.edu
Brooke Beebe, Project Director

New York League of Conservation Voters
Westchester County Chapter
P.O. Box 936
Mohegan Lake, NY 10547
(914) 788-9571
Fax: (914) 788-9572
kmcloughlin@nylcv.org
www.nylcv.org
Katharine McLoughlin, Westchester County Coordinator

Pace Land Use Law Center
Pace University School of Law
78 North Broadway
White Plains, NY 10603
(914) 422-4090
Fax: (914) 422-4168
www.law.pace.edu
John Nolon, Director
jnolon@law.pace.edu
Parent Teacher Association
Westchester District Office
29 Roundabend Rd.
Tarrytown, NY 10591
(914) 631-5667
Fax: (914) 631-5667
pamp913@aol.com
www2.lhric.org/westchpta
Pam Perricone, District Director

Park Hill Land Conservancy
P.O. Box 8
Yonkers, NY 10705
phlc@parkhillyonkers.org
Lee Wecker, Acting President

Scarsdale Audubon Society
42 Mt. Joy Road
Scarsdale, NY 10583
(914) 472-2071
www.audubonweb.net/scarsdale
Tom Clark, Contact
Dr. John Moyle, President
(914) 723-4609

Scarsdale Chamber of Commerce
26 E. Parkway
Scarsdale, NY 10583
(914) 725-1602

Scarsdale Community Center
PO Box 612
Scarsdale, NY 10583-0612
Contact: Nick Bushnell
(914) 723-1565
www.scarsdalecommunitycenter.org

Town and Village Civic Club
24 E. Parkway
Scarsdale, NY 10583
(914) 723-2829
Trout Unlimited
Croton Watershed Chapter
P. O. Box 298
White Plains, NY 10602
(914) 946-7161
jkeane1093@aol.com
www.tu.org
John Keane, President and Conservation Chairman

Westchester County Historical Society
2199 Saw Mill River Road
Elmsford, NY 10523
(914) 592-4323
Fax: (914) 231-1515
info@westchesterhistory.com
www.westchesterhistory.com
Katherine Hite, Director
Elizabeth Fuller, Librarian

Westchester Environmental Coalition at WESPAC
255 Dr. Martin Luther King Blvd., 2nd. Floor
White Plains, NY 10601
(914) 682-0488
Fax: (914) 682-9499
info@wespac.org
www.wespac.org
Nada Khader, Director

Westchester Land Trust
31 Main Street
Bedford Hills, NY 10507
(914) 241-6346
Fax: (914) 241-4508
wlandtrust@aol.com
www.westchesterlandtrust.org
Paul Gallay, Executive Director

Westchester Trails Association
46 Ogden Ave.
White Plains, NY 10605-2323
(914) 582-1237
www.nynjtc.org (Click on Member Clubs, scroll down to Westchester Trails Assoc.)
Stewart Manville, President
Woman’s Club of White Plains
305 Ridgeway
White Plains, NY 10605
(914) 948-0958

Yonkers Environmental Coalition
63 Sunnyside Drive
Yonkers, NY 10705
Nortrud Spero, Chair

Yonkers Historical Society
Grinton I. Will Library
1500 Central Park Ave.
Yonkers, NY 10710
Informational Meeting

Tuesday, October 23, 2007 - 7:30 p.m.
Westchester County Center, White Plains, NY

Meeting Agenda

1. welcome and Introduction
2. Background
   - Bridge Inspection Findings
   - Need for Major Rehabilitation
   - Need for Environmental Studies
3. Project Overview
   - existing conditions
   - Goals & Objectives
     Maintain Traffic on Parkway
     Improve Traffic and Safety
     Avoid Impacts to Adjacent Properties
     Minimize Impacts to BRPR and Historic Facilities
     Accelerate Start of Construction
     Improve pedestrian access to train station
   - Alternative Options
     No Action
     Bridge Rehabilitation
     Bridge Replacement
   - Environmental Process
4. Public Participation
   - Identification of Involved Agencies/Applicable Regulations
   - Public Process
5. Schedule
6. Questions and Answers
**Background**

The Bronx River Parkway (BRP) is a major north-south transportation artery in southern Westchester County. The BRP is on the National Highway System and the northernmost portions, including the project area, are on the National Register of Historic Places. Approximately midway on this route in Westchester are two interconnected bridges that cross the Bronx River and the MTA Metro-North Railroad. Located immediately south of Exit 12 (Crane Road) in Scarsdale, and straddling the Greenburgh/Scarsdale municipal border, the two connected bridges are referred to as a single structure that is known as the Crane Road Bridge (or Viaduct). Built in 1924, the Crane Road Bridge was designed by one of New York’s premier architectural firms, Delano & Aldrich, who designed many historic structures, including the Marine Air Terminal at LaGuardia Airport, and Kykuit, the Rockefeller family estate in Sleepy Hollow, NY. The bridge’s circular concrete piers, covered with rustic stone, are reminiscent of a clutch of mushrooms supporting a bridge deck that curves gently around Scarsdale Lake, over the Bronx River and the adjacent Metro-North railroad, and through the Bronx River Parkway Reservation.

The connected bridges are deteriorated and will require rehabilitation or replacement.

Currently, the portion of the bridge supporting the roadway that spans the Bronx River is in need of repair, which was initiated in the Summer of 2006 and will continue as necessary. Interim lane closures have been required, and lane closures will continue until the repairs are completed.

**Environmental Process**

An environmental study will be completed to identify potential impacts resulting from the rehabilitation or replacement of the Crane Road Bridge. This study is part of the federal National Environmental Policy Act (NEPA) and New York State’s State Environmental Quality Review Act (SEQR) process. Public Participation is a key element in the environmental review process.

**If you have any questions or comments, please submit them today or contact one of the Westchester County DPW representatives listed below.**

John Hsu (914) 995-2552 or Kevin Roseman (914) 995-4084
Westchester County Department of Public Works, 148 Martine Avenue, White Plains NY 10601
www.westchestergov.com/dpw/craneroadcommentform.htm
Informational Meeting
Crane Road Bridge Project
October 23, 2007

The Crane Road Bridge Project

Project Team
Reconstruction / Replacement of the Crane Road Bridge

Stantec
Management
Highway / Bridge Design
Surveying / Mapping
Traffic Engineering
Landscape Architecture

Mueser Rutledge
Consulting Engineers
Geotechnical Investigations & Recommendations

Malcomb Pirnie, Inc.
Environmental Studies
Community Outreach

Mary Delaney Krugman
Associates, Inc.
Historic Resources

Savin Engineers, PC
Structural Engineering
Construction Management
Construction Inspection
Existing Conditions

Reconstruction / Replacement of the Crane Road Bridge
Existing Conditions
Reconstruction / Replacement of the Crane Road Bridge

- Viaduct Approaches Signed for 20 MPH
- Narrow Travel Lanes
- Minimum Shoulders
- Sharp Curves
- Limited Sight Distance

Existing Conditions
Reconstruction / Replacement of the Crane Road Bridge

Northbound Ardsley Road Bridge
Northbound Approach to Viaduct
Northbound Crane Road Exit
Southbound at Crane Road Exit
Existing Conditions
Reconstruction / Replacement of the Crane Road Bridge

Southbound at Pipeline Drive
Southbound at Atlas Road
Southbound on Pipeline Drive
Southbound Crane Road / Parkway Access

Crane Road Viaduct Existing Structural Conditions
Reconstruction / Replacement of the Crane Road Bridge

- Condition Rating: 4.6 (2005 Biennial Inspection)
- Load Rating: HS20
- Deck & Brackets in Fair Condition
- Random Spalls & Cracks
- Random Hollow Areas
- Efflorescence Throughout
- Severe Joint Leaking
- Median Barrier Connection to Deck Slab is Questionable
- Extensive Previous Repairs
Crane Road Viaduct Existing Structural Conditions

Deck in Poor Condition
Numerous Spalls & Map Cracking
Steel Members in Fair Condition
Concrete Stringers have Numerous Vertical Cracks (Controls Load Rating)
Cracked Encasement Concrete on Through Girders

- Condition Rating: 4.40 (2005 Interim Inspection)
- Load Posted for 12 Tons (Load Ratings Suggest Posting < 12 Tons)
- 15.6' Vertical Clearance over Railroad
- Non-redundant Members
- Originally Designed to Span 4 Tracks

Existing Conditions
Existing Conditions Documentation
Reconstruction / Replacement of the Crane Road Bridge

- Survey / Mapping
- Bridge Inspection / Testing
- Cultural Resources Investigations
- Natural Resource Surveys
- Vehicular Traffic / Noise Monitoring
- Pedestrian Traffic Counts
- Air Quality Documentation

Alternative Options
Bridge Rehabilitation Option I
Reconstruction / Replacement of the Crane Road Bridge

- Roadway Approaches Widened
- Construction Staging Required to Maintain Traffic
- Deck Widened

Bridge Rehabilitation Option II
Reconstruction / Replacement of the Crane Road Bridge

- At-grade Crossing at Crane Road Maintained
- Similar Alignment
- Construction Staging Required to Maintain Traffic
- Separate Structures for NB / SB Traffic
- Crane Road Exit Improved

Proposed Structure
Rehabilitated Structure
Bridge Replacement

Reconstruction / Replacement of the Crane Road Bridge

Goals & Objectives
## Screening of Replacement Alternatives

**Reconstruction / Replacement of the Crane Road Bridge**

### GOAL: MINIMIZE POTENTIAL IMPACTS TO ADJACENT PROPERTIES

#### Measures

1. Maintain or Improve Distance from Parkway to Adjacent Facilities
   - Greenburg Residences
   - Scarsdale Residences

   **Note:**
   Current screening involves distance as the measure for impacts to adjacent properties. Future screening for impacts will involve air & noise.

<table>
<thead>
<tr>
<th>Measure</th>
<th>RECONSTRUCTION</th>
<th>Replacement Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No-Build 76'</td>
<td>#2 73' #3 86' #4 87' #5 86' #6 87'</td>
</tr>
<tr>
<td>2</td>
<td>#1 75'</td>
<td></td>
</tr>
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</table>

**Note:** (+) = further away from property, (-) = closer to property.

### Screened Measures

1. Maintain or Improve Distance from Parkway to Adjacent Facilities
2. Minimize Visual Impacts

## Screening of Replacement Alternatives

**Reconstruction / Replacement of the Crane Road Bridge**

### GOAL: MINIMIZE IMPACTS TO BRPR

#### Measures

1. Minimize Area of BRPR Permanently Affected
   - Bridge & Approach Widening
   - New Columns / Abutments

2. Minimize Visual Impacts
   - Alignment & Structure consistent with BRPR characteristics

<table>
<thead>
<tr>
<th>Measure</th>
<th>RECONSTRUCTION</th>
<th>Replacement Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No-Build 3,300</td>
<td>#2 7,800 #3 10,400 #4 30,000 #5 25,800 #6 81,000</td>
</tr>
<tr>
<td>2</td>
<td>#1 43'</td>
<td></td>
</tr>
</tbody>
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#### Legend

- **Does not meet measure** (< 10% increase in area)
- **Partially meets measure** (10 - 25% increase in area)
- **Meets measure** (> 25% increase in area)

### Screened Measures

1. Minimize Area of BRPR Permanently Affected
2. Minimize Visual Impacts
**NEPA/SEQR Environmental Process**

*Reconstruction / Replacement of the Crane Road Bridge*

- Proposed Action
- Public Meetings / Input
- Environmental Screening
- Determine Impact Significance
- Environmental Documentation
- FONSI & Neg Doc /ROID

---

**Public Participation**
Public Participation
Reconstruction / Replacement of the Crane Road Bridge

Involved Agencies:

- Westchester County Department of Public Works
- Westchester County Department of Planning
- Westchester County Department of Parks Recreation & Conservation
- Westchester County Department of Environmental Facilities
- New York State Department of Transportation
- Federal Highway Administration (FHWA)

Public Participation
Reconstruction / Replacement of the Crane Road Bridge

Activities to date:

- Coordination with FWHA, NYSDOT, NYSDEC, SHPO, Towns of Scarsdale and Greenburgh
- Informational meeting – January 2007
- Project Fact Sheet
- Project website
- Public meeting – October 2007
Public Participation
Reconstruction / Replacement of the Crane Road Bridge

Upcoming activities:
• Public meeting on project status - Winter 2008
• Public meeting on findings of Alternative Evaluation - early Spring 2008
• Meetings with individual stakeholder groups and property owners
• Public meeting – Spring 2008 – identification of Preferred Alternative

Schedule
Introduction
Reconstruction / Replacement of the Crane Road Bridge

1. Project Overview
   - Existing Conditions
   - Goals & Objectives

2. Follow Up Items

3. Alternatives
   - Alternatives Considered
   - Alternatives Screening and Results

4. Next Steps

5. Questions and Answers
Existing Conditions

Existing Parkway Conditions
Reconstruction / Replacement of the Crane Road Bridge

Profile
Goals & Objectives

- Maintain Traffic on Parkway
- Improve Traffic Operations & Safety
- Minimize Potential Impacts to Adjacent Properties
- Minimize Impacts to BRPR
- Enhance Pedestrian Access

Reconstruction / Replacement of the Crane Road Bridge
Follow Up Items

BRIDGE PEDESTRIAN ACCESS
Reconstruction / Replacement of the Crane Road Bridge
Alternative - Crane Road Underpass
Reconstruction / Replacement of the Crane Road Viaduct

Alternative Discarded:
- Impacts to Maintenance Facility
- Additional Retaining Walls & Structures Required
- Drainage Concerns

Alternatives
Alternatives To Be Considered For Further Environmental Analyses / Documentation
Reconstruction / Replacement of the Crane Road Bridge

- **No-Build**
  - Required in the Environmental Review Process (SEQR, FHWA)
  - [Selected for Further Analysis & Documentation]

---

Alternatives To Be Considered For Further Environmental Analyses / Documentation
Reconstruction / Replacement of the Crane Road Bridge

- **Bridge Reconstruction** (Alternative # 1)
  - Historical significance of umbrella structure & Bronx River Parkway Reservation requires further analyses and SHPO input
  - [Selected for Further Analysis & Documentation]

**Alternative 1 - Bridge Reconstruction**
Reconstruction / Replacement of the Crane Road Bridge

- Existing Bridge in place
- Temporary Bridge
- Replacement Bridge
- No Build
Alternatives To Be Considered For Further Environmental Analyses / Documentation

Reconstruction / Replacement of the Crane Road Bridge

- **Bridge Replacement** (Alternatives #2 - #6)
  - Five Alternatives identified that vary in location & potential for impacts
  - [Select Two Alternatives for Analysis & Documentation]

SCREENING OF REPLACEMENT ALTERNATIVES
### Screening of Replacement Alternatives

**Reconstruction / Replacement of the Crane Road Bridge**

**GOAL:** MAINTAIN TRAFFIC ON PARKWAY

**Measures**

1. Minimize potential for disruption during construction
   - Maintain four parkway travel lanes
   - Minimize number of construction stages

2. Minimize long term maintenance on bridges

<table>
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<tr>
<th>Measure</th>
<th>Replacement Alternatives</th>
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<tbody>
<tr>
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<tr>
<td>1</td>
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<tr>
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<td>●</td>
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</table>

**Legend**

- Does not meet measure
- Partially meets measure
- Meets measure

### Screening of Replacement Alternatives

**Reconstruction / Replacement of the Crane Road Bridge**

**GOAL:** IMPROVE TRAFFIC OPERATIONS & SAFETY

**Measures**

1. Improve Travelway Sight Distance / Design Speed
   - Lane & Shoulder Width, Grades, & Pavement

<table>
<thead>
<tr>
<th>Measure</th>
<th>Replacement Alternatives</th>
</tr>
</thead>
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<td></td>
<td>RECONST No-Build #1</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Bridge Lane Width</td>
<td>8.5’ 10’</td>
</tr>
<tr>
<td>Bridge Shoulder Width</td>
<td>0’ 2’</td>
</tr>
<tr>
<td>Total Bridge Width</td>
<td>83’ 53’</td>
</tr>
<tr>
<td>Design Speed</td>
<td>22 mph 24.7 mph</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure</th>
<th>Replacement Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#2</td>
</tr>
<tr>
<td></td>
<td>11’ 11’ 11’ 11’ 12’</td>
</tr>
<tr>
<td></td>
<td>2.5’ 2.5’ 2.5’ 2.5’ 11’-14’</td>
</tr>
<tr>
<td></td>
<td>59’ 59’ 59’ 71’ 94’</td>
</tr>
<tr>
<td></td>
<td>30.1 mph 35.4 mph 31.2 mph 26.2 mph 50.6 mph</td>
</tr>
</tbody>
</table>

**Measure**

1. ○ ● ● ● ○ ●
## Screening of Replacement Alternatives

### Reconstruction / Replacement of the Crane Road Bridge

**GOAL:** MINIMIZE POTENTIAL IMPACTS TO ADJACENT PROPERTIES

**Measures**
1. Maintain or Improve Distance from Parkway to Adjacent Facilities
   - Greenburg Residences
   - Scarsdale Residences

**Note:**
- Current screening involves distance as the measure for impacts to adjacent properties.
- Future screening for impacts will involve air & noise.

<table>
<thead>
<tr>
<th>Measures</th>
<th>RECONSTRUCTION No-Build</th>
<th>RECONSTRUCTION #1</th>
<th>Replacement Alternatives #2</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
<th>#6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance of Bridge to Town of Greenburg Residences</td>
<td>76' - 4'</td>
<td></td>
<td>- 3'</td>
<td>+ 13'</td>
<td>+ 56'</td>
<td>- 6'</td>
<td>+ 4'</td>
</tr>
<tr>
<td>Distance of Bridge to Village of Scarsdale Residences</td>
<td>76' - 1'</td>
<td></td>
<td>+ 14'</td>
<td>+ 27'</td>
<td>- 3'</td>
<td>- 10'</td>
<td>+ 20'</td>
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</tbody>
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**Measure**
1

## Screening of Replacement Alternatives

### Reconstruction / Replacement of the Crane Road Bridge

**GOAL:** MINIMIZE IMPACTS TO BRPR

**Measures**
1. Minimize Area of BRPR Permanently Affected
   - Bridge & Approach Widening
   - New Columns / Abutments

2. Minimize Visual Impacts
   - Alignment & Structure consistent with BRPR characteristics

**Legend**
- Does not meet measure (> 50% increase in area)
- Partially meets measure (10–25% increase in area)
- Meets measure (< 10% increase in area)

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<tr>
<th>Measures</th>
<th>RECONSTRUCTION No-Build</th>
<th>RECONSTRUCTION #1</th>
<th>Replacement Alternatives #2</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
<th>#6</th>
</tr>
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<tbody>
<tr>
<td>Additional BRPR Area Permanently Affected by Proposed Action (sq. ft.)</td>
<td>0 3,300</td>
<td></td>
<td>7,800 10,400 30,000 25,800 81,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Bridge Width</td>
<td>43' 59'</td>
<td></td>
<td>59' 59' 59' 71' 94'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Measure**
1
2
### Screening of Replacement Alternatives

**Reconstruction / Replacement of the Crane Road Bridge**

**GOAL: ENHANCE PEDESTRIAN ACCESS**

**Measures**

1. Provide for Improved Permanent Pedestrian Access between BRPR/Greenburg/Scarsdale/MNR
2. Pedestrian disruption during construction
   - Maintain BRPR Access

<table>
<thead>
<tr>
<th>Measure</th>
<th>Replacement Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#2</td>
</tr>
<tr>
<td>1</td>
<td></td>
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<tr>
<td>2</td>
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</tbody>
</table>

### Screening of Alternatives

**Reconstruction / Replacement of the Crane Road Bridge**

**SUMMARY**

<table>
<thead>
<tr>
<th>Goal</th>
<th>Measure</th>
<th>No-Build</th>
<th>RECONST</th>
<th>Replacement Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>#1</td>
<td>#2</td>
</tr>
<tr>
<td>Maintain Traffic on Parkway</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve Traffic Operations and Safety</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimize Potential Impacts to Adjacent Properties</td>
<td>1</td>
<td></td>
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</table>
Screening of Alternative Results
Reconstruction / Replacement of the Crane Road Bridge

Alternatives To Undergo Further Environmental Analyses / Documentation

- No-Build
- Alternative #1 (Bridge Reconstruction)
- Alternative #3 (Bridge Replacement)
- Alternative #4 (Bridge Replacement)

Next Steps
**Next Steps** (Spring – Summer 2008)

Reconstruction / Replacement of the Crane Road Bridge

- Alternative Analysis & Documentation (For 3 Alts)
  - Engineering
  - Traffic
  - Environmental
    (Air, Noise, Water, Cultural)
  - Constructability
  - Cost

- Draft Design Approval Document (DAD)
- Agency Review & Comment on DAD
- Final Design Report

**QUESTIONS & ANSWERS**
Introduction

1. Introduction
2. Project Update
3. Alternatives Comparison
4. Next Steps
5. Questions and Answers
Project Update

Summary of January 29, 2008 Meeting
Reconstruction / Replacement of the Crane Road Bridge

Alternatives Identified for Environmental Analyses / Documentation

- No Build
- Alternative A
  - Alternative #1
    - (Bridge Reconstruction)
- Alternative B
  - Alternative #3
    - (Bridge Replacement)
- Alternative C
  - Alternative #4
    - (Bridge Replacement)
Alternative B – Bridge Replacement
Reconstruction / Replacement of the Crane Road Bridge

- 4 LANE TEMPORARY PGT BRIDGE
- EXISTING BRIDGE DEMOLISHED
- NEW BRIDGE CONSTRUCTED

Alternative C – Bridge Replacement
Reconstruction / Replacement of the Crane Road Bridge

- 4 TRAVEL LANES MAINTAINED ON EXISTING BRIDGE
- NEW PARALLEL BRIDGE CONSTRUCTED
- EXISTING BRIDGE DEMOLISHED
On-Going Coordination / Outreach
Reconstruction / Replacement of the Crane Road Bridge

- Metro-North Railroad – (April 3, 2008)
- Village of Scarsdale – (February 15 & April 10, 2008)
- Town of Greenburgh – (April 18, 2008)
- NYSDOT – (May 13, 2008)

Alternatives Comparison
Environmental Issues Considered

- Regional and Community Growth
- Conservation/Preservation
- Surface Water Quality
- Archaeological Resources
- Historic Resources
- Parks and Recreational Facilities
- Socioeconomic Conditions
- Air Quality
- Noise
- Traffic
- Hazardous Waste/Contaminated Materials

Environmental Baseline Surveys

- Archaeology
- Historic Resources
- Wetlands
- Floodplain
- Vegetation & Wildlife
- Contaminated Materials Screening
- Noise Monitoring
Archaeology

Reconstruction / Replacement of the Crane Road Bridge

- Phase Ia Investigation
- Phase Ib Investigation

Historic Resources

Reconstruction / Replacement of the Crane Road Bridge

Legend

- Area of Potential Effect

KEY:

A. Bronx River Parkway Reservation
   Historic District (BRP-HD - NR listed)
B. Contributing Bridges (BRP-VG)
C. Vicinity of other contributing features (BRP-VG)
D. Scarsdale Railroad Station (NR Listed)
E. Scarsdale Post Office (NR Listed)
F. Scarsdale Village Center Historic Dist. (NR Eligible)
G. Edgemont Historic District (NR Eligible)
H. Scarsdale Chateau (Potentially NR Eligible)
I. BRP Bridge over Bronx River
   (BNR 3340779 - Individually NR Eligible)

Project Area

Boundaries of APE
Wetlands

- Bronx River – a USFWS mapped open water wetland
- Anvil-shaped sediment bar south of bridge
- No State-mapped jurisdictional wetlands

Floodplain

- Bronx River 100-year Floodplain
- Floodplain elevation ~ 140
- Bridge deck elev. 152 - 164
- Floodplain within BRPR
Vegetation

Reconstruction / Replacement of the Crane Road Bridge

- No Threatened or Endangered Species
- Native and Invasive Species Identified
- Tree Survey Identified >200 Large (> 6 in. diameter) Trees

Wildlife & Aquatic Species

Reconstruction / Replacement of the Crane Road Bridge

- No threatened or endangered species identified
- Aquatic
  - No threatened or endangered fish species
  - Benthic community typical of already impacted waters
Contaminated Materials Screening

- Research and Reconnaissance for:
  - Asbestos Containing Material (ACM)
  - Contaminated Soil or Groundwater
  - Lead Based Paint
- Sampling will be performed during construction
- Abatement, if necessary, will be completed

Noise Monitoring

- Leaf-off conditions
- 24-hour period
- East of Parkway
- West of Parkway
- Within BRPR
**Existing Noise Levels**

*Reconstruction / Replacement of the Crane Road Bridge*

- Elevated Noise Levels (>66 dBA standard) at:
  - East of Bronx River
  - North of Crane Rd Bridge
  - North of Crane Road
  - East of Bronx River Parkway
  - South of Crane Rd Bridge
  - West of Bronx River Parkway

**Environmental Screening Results**

*Reconstruction / Replacement of the Crane Road Bridge*

- Conservation and Preservation
  - Fish and Benthic
    - Some loss of benthic habitat from piers
  - Wetlands
    - No impacts anticipated
Environmental Screening Results
Reconstruction / Replacement of the Crane Road Bridge

- Vegetation – Alternative A

- Vegetation – Alternative B
**Environmental Screening Results**

**Reconstruction / Replacement of the Crane Road Bridge**

- **Vegetation – Comparison of Alternatives**

<table>
<thead>
<tr>
<th></th>
<th>Alternative A</th>
<th>Alternative B</th>
<th>Alternative C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Trees to be Removed (&gt; 6 inches)</strong></td>
<td></td>
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<td>Permanent Bridge</td>
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<tr>
<td>Temporary Bridge</td>
<td>70</td>
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<td>0</td>
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</table>

Minor increase (+/- 2 in.) in 100-year floodplain under all alternatives

Floodplain impacts limited to BRPR

No impacts on pedestrian/bicycle path
Environmental Screening Results
Reconstruction / Replacement of the Crane Road Bridge

- Surface Water Quality
  - Sampling shows DO, pH meet standards
  - Analyses show no harmful effects on biota
- Archaeological Resources – No impacts from alternatives
- Historic Resources
- Visual Resources
- Parks & Recreational Facilities

Environmental Screening Results
Reconstruction / Replacement of the Crane Road Bridge

Social Conditions
- Continued vehicular access to/from BRP under Alts A, B, & C
- Potential for improved pedestrian access with Alts A, B, C
- Public Safety
  - Alternative A - Slight improvements
  - Alternatives B & C - Significant improvements
Environmental Screening Results
Reconstruction / Replacement of the Crane Road Bridge

Economic Conditions
- No Build - adverse impacts in future closure of BRP
- CBD & region benefit under Alts A, B & C from ongoing access
- Alts A, B & C generate temporary jobs during construction

Environmental Screening Results
Reconstruction / Replacement of the Crane Road Bridge

- Traffic on Bronx River Parkway
  - Improved safety under Alts A, B & C
  - During construction:
    - Temporary bridge (Alts A&B) maintains traffic
    - Alternative C – traffic uses existing bridge
Environmental Screening Results

- Air Quality
- No significant impacts
- Noise
- Modeling completed using FHWA TNM
- All Alternatives similar

Environmental Screening Results

Summary

<table>
<thead>
<tr>
<th>Environmental Issues</th>
<th>No Build</th>
<th>Alt A</th>
<th>Alt B</th>
<th>Alt C</th>
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</thead>
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<td>Floodplains</td>
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<td>Surface Water Quality</td>
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<td>Archaeological Resources</td>
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<td>Historic Resources</td>
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<tr>
<td>Parks &amp; Recreational Facilities</td>
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</table>

- Neutral
- Minor/Moderate Impact
- Significant Benefit
- Large Impact
### Environmental Screening Results

**Reconstruction / Replacement of the Crane Road Bridge**

#### Summary

<table>
<thead>
<tr>
<th>Environmental Issues</th>
<th>No Build</th>
<th>Alt A</th>
<th>Alt B</th>
<th>Alt C</th>
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<tbody>
<tr>
<td>Regional and Community Growth</td>
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<td>Social Conditions</td>
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<td>Economic Conditions</td>
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<td>Traffic</td>
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<td>Pedestrian &amp; Bicyclists</td>
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<td>Air Quality</td>
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<td>Noise – East of Parkway</td>
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<td>Noise – West of Parkway</td>
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<tr>
<td>Haz./Contaminated Materials</td>
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#### Environmental Screening Results

**Reconstruction / Replacement of the Crane Road Bridge**

#### Summary

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<th>Other Factors</th>
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<td>Construction Cost (in millions 2007$)</td>
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<td>37</td>
<td>43</td>
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Next Steps

(Spring – Fall 2008)

Reconstruction / Replacement of the Crane Road Bridge

• Continued Agency Consultation
  • NYSDOT/FHWA, NYS SHPO, Metro North
  • Village of Scarsdale, Town of Greenburgh
• Preparation of Design Approval Document
• Agency Review & Comment on Engineering & Environmental Considerations
• Final Public Information Meeting
**Introduction**

Reconstruction / Replacement of the Crane Road Bridge

1. Existing Conditions
2. Alternatives Considered & Environmental Process
3. Preferred Alternative
4. Next Steps
5. Questions and Answers
Existing Conditions

Existing Parkway Conditions
Reconstruction / Replacement of the Crane Road Bridge
Existing Structural Conditions
Reconstruction / Replacement of the Crane Road Bridge

- Bridge Designed by Delano & Aldrich Architects & Constructed in 1924
- Bridge is in Poor Condition
- Requires Extensive Reconstruction or Replacement

Bridge Designed by Delano & Aldrich Architects & Constructed in 1924
- Bridge is in Poor Condition
- Non-Standard Vertical Clearance over Railroad
- Outdated Bridge Type
Existing Structural Conditions
Reconstruction / Replacement of the Crane Road Bridge

- On-Going Deck Repairs / Rehabilitation (2007 – Present)
- Temporary Repairs to Maintain Traffic
- Short Term Lane Closures
- Costly

Alternatives Considered & Environmental Process
Alternatives Considered
Reconstruction / Replacement of the Crane Road Bridge

Alternatives Evaluated for Environmental Analyses / Documentation

- No Build
- Alternative A (Bridge Reconstruction)
- Alternative B (Bridge Replacement)
- Alternative C (Bridge Replacement)

Schedule of Environmental Processes
Reconstruction / Replacement of the Crane Road Bridge

<table>
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<tr>
<th>TASK</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
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<td>Project Scoping / Data Collection</td>
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<td>1/07</td>
<td>12/07</td>
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<tr>
<td>Alternative Screening / Evaluation</td>
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<td>12/08</td>
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<td>6/09</td>
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<tr>
<td>Design Report / Findings</td>
<td>2/07</td>
<td>10/07</td>
<td>2/09</td>
<td>5/09</td>
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<td>Public Information Meetings</td>
<td>10/07</td>
<td>2/08</td>
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Preferred Alternative

Alternative C – Plan

Reconstruction / Replacement of the Crane Road Bridge

- 4 TRAVEL LANES MAINTAINED ON EXISTING BRIDGE
- NEW PARALLEL BRIDGE CONSTRUCTED
- EXISTING BRIDGE DEMOLISHED
Preferred Alternative

Reconstruction / Replacement of the Crane Road Bridge

- Eliminates Structural Deficiencies in the Bridges
- Improves Traffic Operation and Safety Deficiencies
- Maintains Traffic on Parkway
- Enhances Pedestrian Access to BRPR
- Construction Duration – 2 Years
- Cost - $39,000,000

Alternative C – Rendering – Elevation View

Reconstruction / Replacement of the Crane Road Bridge
Alternative C – Rendering – Aerial View

Reconstruction / Replacement of the Crane Road Bridge

Next Steps
# Design and Construction Schedule

**Reconstruction / Replacement of the Crane Road Bridge**

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<tr>
<th>TASK</th>
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**QUESTIONS & ANSWERS**