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

TOWN OF GREENBURGH

VILLAGE OF SCARSDALE
Goals & Objectives
Goals and Objectives

Reconstruction / Replacement of the Crane Road Bridge

- Maintain Traffic on Parkway
- Improve Traffic Operations & Safety
- Minimize Potential Impacts to Adjacent Properties
- Minimize Impacts to BRPR
- Enhance Pedestrian Access
Follow Up Items
BRIDGE PEDESTRIAN ACCESS

Reconstruction / Replacement of the Crane Road Bridge

Existing Sidewalk / Stair Access to BRPR

Sidewalk / Stair Option With Replacement Alternatives

Existing Sidewalk / Stair Access to BRPR
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
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

VILLAGE OF SCARSDALE

TOWN OF GREENBURG

VILLAGE OF SCARSDALE
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

- 4 LANE TEMPORARY MPT BRIDGE
- EXISTING BRIDGE RECONSTRUCTED IN PLACE

**Map Diagram**

- Existing Parkway
- Widened Approach
- Deck Widening with Rehabilitated Piers
- Replacement Bridge
- Temporary 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
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

Legend

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

<table>
<thead>
<tr>
<th>Measure</th>
<th>Replacement Alternatives</th>
<th># 2</th>
<th># 3</th>
<th># 4</th>
<th># 5</th>
<th># 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>□</td>
<td>●</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
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>RECONST.</th>
<th>Replacement Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No-Build</td>
<td>#1</td>
</tr>
<tr>
<td>Bridge Lane Width</td>
<td>9.5'</td>
<td>10'</td>
</tr>
<tr>
<td>Bridge Shoulder Width</td>
<td>0'</td>
<td>2'</td>
</tr>
<tr>
<td>Total Bridge Width</td>
<td>43'</td>
<td>53'</td>
</tr>
<tr>
<td>Design Speed</td>
<td>22 mph</td>
<td>24.7 mph</td>
</tr>
</tbody>
</table>

**Legend**

- Does not meet measure  
  \( \Delta \) design speed = 0-3 mph
- Partially meets measure  
  \( \Delta \) design speed = 4-7 mph
- Meets measure  
  \( \Delta \) design speed = > 8 mph
### 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>No-Build</th>
<th># 1</th>
<th># 2</th>
<th># 3</th>
<th># 4</th>
<th># 5</th>
<th># 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>76’</td>
<td>- 4’</td>
<td>- 3’</td>
<td>+ 13’</td>
<td>+ 56’</td>
<td>- 6’</td>
<td>+ 4’</td>
</tr>
<tr>
<td>1</td>
<td>76’</td>
<td>- 1’</td>
<td>+ 14’</td>
<td>+ 27’</td>
<td>- 3’</td>
<td>- 10’</td>
<td>+ 20’</td>
</tr>
</tbody>
</table>

Note: (+) = further away from property; (-) = closer to property
**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** (> 25% increase in area)
- **Partially meets measure** (10 - 25% increase in area)
- **Meets measure** (< 10% increase in area)

<table>
<thead>
<tr>
<th>Measure</th>
<th>RECONSTR.</th>
<th>Replacement Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No-Build</td>
<td># 1</td>
</tr>
<tr>
<td>Additional BRPR Area Permanently Affected by Proposed Action (sq. ft.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Bridge Width</td>
<td>43’</td>
<td>53’</td>
</tr>
</tbody>
</table>

Measure 1: Minimize Area of BRPR Permanently Affected

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

Measure 2: Minimize Visual Impacts

- Meets measure
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>
</tr>
<tr>
<td>2</td>
<td>○</td>
</tr>
</tbody>
</table>
## 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>Maintain Traffic on Parkway</td>
<td>1</td>
<td></td>
<td># 1</td>
<td># 2 # 3 # 4 # 5 # 6</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>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimize Impacts to BRPR</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>Enhance Pedestrian Access</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>Selected for Further Analysis and Documentation</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</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