BQE Atlantic to Sands Project Overview

1. Project Background
2. Current Conditions & Findings
3. Upcoming Activities
THE PROJECT TEAM

Robert Collyer, P.E.  Deputy Commissioner for Bridges
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Madeleine Ehrlich  Special Projects - Community Affairs

For questions and concerns:

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www.facebook.com/BQEAAtlantictoSands
THE 21 BRIDGES

Atlantic Avenue Interchange
ATLANTIC AVENUE INTERCHANGE

Atlantic Avenue Structure:
- New York State rehabilitated - 1998
- Rated in good condition in 2014

Substandard Ramps: Traffic study
- To determine ramp improvements
- Improve pedestrian connectivity
- Van Voorhees Park Configuration
“...community groups developed a Citizen Alternative Plan that proposed a three-decked structure immediately along the Brooklyn Heights waterfront.” *NYC Roads.com*
Brooklyn’s Only Interstate

A vital connector to/from:
- I-495 Nassau/Suffolk
- I-678 RFK/Points North
- I-278 Staten Island/Points West
- I-95/NJ Turnpike/Points South
CURRENT OPERATION

One of the most heavily traveled roads in NYC

Annual Average Daily Traffic 2014 - over 140,000

2010 crash rate on 15 of 18 segments exceeds the statewide average

Heavy Usage by Trucks:

Trucks account for 11% of volume, on average

As high as 17% during peak times

Old Structure with Substandard Conditions:

• Non-standard geometry (tight turns, lack of acceleration lanes)
• Deficient vertical and horizontal clearances
• Deficient connectivity to Manhattan Bridge
### WHAT WE HAVE HEARD…

<table>
<thead>
<tr>
<th>Condition</th>
<th>Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving safety issues</td>
<td>Narrow lanes, ramp geometry</td>
</tr>
<tr>
<td>Major delays due to breakdowns</td>
<td>No shoulders</td>
</tr>
<tr>
<td>Noise and vibrations</td>
<td>Poor structural joints and potholes</td>
</tr>
<tr>
<td>Difficult Pedestrian Crossings</td>
<td>Poor intersection plan</td>
</tr>
<tr>
<td>Lane closures</td>
<td>Maintenance and repairs</td>
</tr>
<tr>
<td>Leakage and debris</td>
<td>Deteriorating structures</td>
</tr>
<tr>
<td>Sidewalk obstructions</td>
<td>Temporary supports</td>
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</table>
CURRENT CONDITIONS: JOINTS & BEARINGS

BQE Cantilever

Old Fulton Street
CURRENT CONDITIONS: UNDERCLEARANCE

Under Columbia Heights
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>March 2006</td>
<td>Accelerated construction &amp; innovative design workshop (ACTT)</td>
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<tr>
<td>May 2009</td>
<td>Identified six potential tunnel alignments</td>
</tr>
<tr>
<td>2010</td>
<td>Study ended without selection of a preferred alternative</td>
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<tr>
<td>February 2011</td>
<td>Draft scoping report submitted to NYSDOT</td>
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CURRENT NYCDOT PROJECT

- DOT has forecast $1.7B for this project in the City’s Ten Year Plan
- NYCDOT is working with Federal and State partners for additional funding
PROJECT CHALLENGES

• Engineering
• Maintaining traffic
• Protecting adjacent structures
• Recent development
• Environmental/SHPO/Landmarks issues
• Transit structures
TRANSIT STRUCTURES

Old Fulton and Cranberry Streets

Old Furman Street and Montague Streets

TA Vent

TA Power

Furman Street
## PROJECT BENEFITS

Significant Benefits - Local Residents/Motorists

<table>
<thead>
<tr>
<th>Design Decisions</th>
<th>User Experience</th>
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</thead>
<tbody>
<tr>
<td>• Geometry Improvements</td>
<td>• Safer Travel</td>
</tr>
<tr>
<td>• Rehabilitated or Fewer Joints</td>
<td>• Quieter Roadway</td>
</tr>
<tr>
<td>• New Deck</td>
<td>• Improved Ridability/No Overhead Debris</td>
</tr>
<tr>
<td>• Improved Intersections</td>
<td>• Improved Pedestrian/Bike Connectivity</td>
</tr>
<tr>
<td>• Improved Ramp Configuration</td>
<td>• Improved Traffic flow</td>
</tr>
<tr>
<td>• New/Improved Drainage</td>
<td>• No Ponding</td>
</tr>
<tr>
<td>• New Lighting</td>
<td>• Safer/More Attractive</td>
</tr>
</tbody>
</table>
NYCDOT RECENT EFFORTS

Key Steps

BQE Project Panel of Experts

• Origin/Destination Study

• Tunnel Feasibility Analysis

• Belt Parkway Alternatives Study
QUEENS BOUND TRAFFIC BREAKDOWN

Queens-Bound AM:
• 58% of cars start in Brooklyn and have a destination within NYC
• 60% of trucks are traveling within NYC
  • 33% of these trucks began their trips in Brooklyn

Queens-Bound PM:
• 65% of cars start in Brooklyn and have a destination within NYC
• 68% of trucks are traveling within NYC
  • 44% of these trucks began their trips in Brooklyn

Over 60% of truck traffic has a destination within NYC, and of that, over 30% serve Brooklyn
Statte Island-Bound AM:
• 40% of cars start in Brooklyn and have a destination within NYC
• 90% of trucks are traveling within NYC
  • 23% of these trucks began their trips in Brooklyn

Statte Island-Bound PM:
• 32% of cars start in Brooklyn and have a destination within NYC
• 95% of trucks are traveling within NYC
  • 28% of these trucks began their trips in Brooklyn

Over 90% of truck traffic has a destination within NYC, and of that, over 20% serve Brooklyn.
Seven Tunnel Options Studied:

- **T1**  Henry Street Alignment
- **W-1**  Hicks Street Alignment
- **T-2**  Exist. BQE Alignment
- **T-3**  Outboard tunnel
- **W-2**  Straight-line between exits 24 & 30
- **W-3**  Outboard tunnel-Sunset Park to exit 33
- **W-4**  Fourth Avenue outboard tunnel between exits 24 and 30
TUNNEL STUDY RESULTS

Option T3

Tunnel entrance/exit: Rapelye Street/Exit 26

Tunnel entrance/exit: 20th Street/Exit 24

Option W2

Tunnel entrance/exit: Clinton Avenue/Exit 30
Major Obstacles

- All but 2 configurations conflict with DEP’s water tunnel.
- Feasible cross-section allows only two lanes of traffic in each direction.
- Tunnel requires that we also maintain the existing BQE structure:
  - to accommodate existing volume
  - to provide connectivity to the Brooklyn and Manhattan Bridges (50% of BQE traffic currently uses exits that the tunnel would not serve)
- Tunnel options are prohibitively expensive, costing at least several billion
The Belt Parkway is not a feasible alternative:

• Low vertical clearance, including NYCT active lines
• Narrow lane widths
• Sub-standard geometry at ramps
• Carrying capacity
• Cost $800M - $2B
WHERE WE ARE NOW

• In-depth investigation
• Condition Assessment
• Load Rating
• Inter-agency coordination
PROJECT DESIGN SCHEDULE

Request For Proposal Released: June 2016
Environmental Review/Design Start: Early 2017
Alternative Analysis/Draft EIS: 2018
Preliminary Design Completion: 2019

Decision Point – Design/Build or Design-Bid-Build

DESIGN-BID-BUILD Vs DESIGN-BUILD

Owner/Agency → Designer → Owner/Agency → Contractor

Owner/Agency → Pre-Designer
Design-Build Entity
BQE Project: Design-Bid-Build

- Design-Bid-Build
- Design RFP 2016
- Complete Design 2017-2022
- Const. Bid 2023
- Const. 2024-2029

BQE Project: Design/Build

- Design-Build
- Design RFP 2016
- Pre-Design 2017-2019
- Design-Build RFP 2020
- Design/Const. 2021-2026

Construction Duration - 5 Years
Public Outreach Plan - Design

**During Scoping Phase (on-going):**
- Informational meetings with community boards
- Public Project Briefing
- Finalize key stakeholder list

**During Design Contract (early 2017 through 2022):**
- Formal Public Outreach Plan
- Create Notification Network of local businesses, organizations, residents
- Form project Working Group
- Formal public information sessions
During Construction Contract (2021 through Completion):

- On-site information booth for on-going activities
- Continue outreach through Working Group
- Use of social media for up-to-date construction activity related news

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Thank You!