Coney Island/Gravesend Sustainable Development Transportation Study

NYMTC Brown Bag Presentation
September 21, 2011

Commissioner Janette Sadik-Khan
NYCDOT, Traffic Planning
Study Background

• Development Pressures/Discretionary Actions
  - Home Depot (Cropsey Avenue) – 2000
  - MCU Park (formerly Keyspan Park) – 2001
  - Oceana – Residential Development (approx. 900 DUs)

• Anticipated growth from new developments

• Observed congestion accessing the peninsula

• Community request to address congestion

• Need to coordinate planning initiatives in the area
“(It) is development that delivers basic environmental, social, and economic services to all, without threatening the viability of the ecological and community systems upon which these services depend.”

The Local Agenda 21 Planning Guide, UNEP
Study Goal

To develop and implement a plan that supports growth, is compatible with community needs, addresses community concerns, and promotes mobility and safety.
Study Objectives

• To examine the spatial distribution and intensity of land uses and its implication for transportation
• To identify the travel and traffic characteristics
• To analyze the existing and future traffic and transportation conditions
• To develop recommendations to reduce vehicular congestion, improve safety, and facilitate public transit/alternative modes
• Facilitate cooperation among communities and agencies.
Southern Brooklyn Transportation Investment Study

Goals
- Improve efficiency of region’s transportation system for travel within the study area and beyond
- Expand/extend the existing transit system to underserved, unserved, and growing areas
- Improve existing transportation systems to encourage more efficient movement of people and goods
- Manage system-wide congestion
- Improve quality of life and address environmental issues.

Scenarios
- Bus Priority Measures
- Passenger Ferry Service
- Grade Separation (Flatbush Ave/Ave I)
- JFKIA Truck Freight Ferry
- Subway Improvements
- Downtown Brooklyn Regional Bus Terminal
- Bus Rapid Transit
- Non-motorized modes
Study Area

Legend

- Community Districts
- Study Area Boundary

CB 11
CB 15
CB 13

Introduction
Introduction

Community Input via Meetings and Charrette

Data Collection and Analysis

Existing Conditions Analysis

Issues Identification and Problem Definition

Future Conditions Analysis

Development of Alternatives

Development Scenario 1

Development Scenario 2

Development Scenario 3

Evaluation of Alternatives/BPM

Recommendations

Implementation
• **Bus/Subway service supply/demand**

• **Traffic Capacity**
  • Intersection Analysis – 53
  • Corridor Analysis – 14
  • Pedestrian Analysis – 32

• **AM, Midday, PM, and Saturday Midday Peak Hours**

• **Summer counts at selected locations**
Public Participation - Stakeholders and Process

• Elected Officials
• Community Boards 11, 13, & 15
• Civic Associations
• General Public

• Technical Advisory Committee
• Visioning sessions
  • Identify issues and any problem locations
• Progress Meetings
Community Issues

- Provide a new exit from Belt Parkway between Cropsey Avenue and Ocean Parkway
- Improve bus service in the area linking all communities on the peninsula and other key destinations
- Provide ferry service to the Rockaways and Manhattan
- Enhance commercial development around Stillwell Avenue station
Future Conditions Analysis (2015/2025)

- Scenarios
  - Four transportation
  - Three land use (BPM)

- Traditional Analysis (HCS)
<table>
<thead>
<tr>
<th>TRANSPORTATION</th>
<th>LAND USE</th>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Programmed Projects</td>
<td>LAND USE</td>
<td>Current Trend</td>
<td>Moderate Development</td>
<td>Significant Development</td>
</tr>
<tr>
<td>Transportation Management Strategies</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transit Focused Improvements</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Roadway Improvements</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Transportation Scenarios**

<table>
<thead>
<tr>
<th>LAND USE</th>
<th>TRANSPORTATION</th>
<th>Current</th>
<th>Moderate</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSPORTATION</td>
<td>Current Programmed Projects</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Transportation Management Strategies</td>
<td></td>
<td>EXAMPLES:</td>
<td>• Ferry service between Coney Island and the Rockaways and/or Manhattan</td>
</tr>
<tr>
<td></td>
<td>Transit Focused Improvements</td>
<td></td>
<td>EXAMPLE:</td>
<td>• Inter-Neighborhood Transit (Bus service between Coney Island, Brighton Beach, and Manhattan Beach)</td>
</tr>
<tr>
<td></td>
<td>Major Roadway Improvements</td>
<td></td>
<td>EXAMPLE:</td>
<td>• New Belt Parkway exit ramp at Stillwell Avenue</td>
</tr>
</tbody>
</table>

**EXAMPLES:**
- New Belt Parkway exit ramp at Stillwell Avenue
- Ferry service between Coney Island and the Rockaways and/or Manhattan
- Inter-Neighborhood Transit (Bus service between Coney Island, Brighton Beach, and Manhattan Beach)
## Land Use Scenarios

<table>
<thead>
<tr>
<th>TRANSPORTATION</th>
<th>LAND USE</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Programmed Projects</td>
<td>Current Trend</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation Management</td>
<td>Moderate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategies</td>
<td>Development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transit Focused Improvements</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Roadway Improvements</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EXAMPLES:**

- Full build out vacant lots under current zoning
- Rezoning proposal to increase density (Coney Island Rezoning)
- Increased amusement/recreational facilities, hotel and commercial uses
Network Changes Modeled/BPM

- Additional moving lane during AM/PM peak hour on Ocean Pkwy
- Street directional changes
- B74 bus route extension
Scenarios

EIS Proposal
- Residential - 2,408 units
- Entertainment - 251,500 gsf
- Themed, Destination, and Local Retail - 655,630 gsf
- Hotel - 606 rooms
- Amusement Park (Active) - 261,360 gsf
- Amusement Park (Passive) - 3.0 acres
- Parking - 6,830 to 8,830 accessory spaces

In-Fill Development
- Full build out of vacant lots
- Increased Amusement/Recreational Activities
Existing/Future Conditions Analyses

Findings

• Significant growth in Coney Island and steady growth with minor land use changes outside rezoned area
• Parking shortfall in areas where commercial and amusement activities are concentrated – Brighton Beach Ave, 86 Street, Surf Ave, and Kings Highway
• High pedestrian volumes in commercial and entertainment areas – Surf Avenue, Brighton Beach Avenue, 86th Street, etc.
• Fairly accessible public transportation (bus and subway)
• Existing traffic - 35% of intersections had LOS D or worse during one or more peak hours
• Future traffic - more than 50% of intersections would operate at LOS D or worse during one or more peak hours.
Developments and Congestion
Main Planning Recommendations

• Roadway/Intersection Capacity Enhancements
• Street directional changes
• Redesign Signals (Timing and Phasing Plans)
• Installation of Bicycle Facilities
• Signs and Marking Changes
• Parking Regulation Changes
• Safety Improvements
Project Development & Implementation

- Bay Parkway & Cropsey Avenue
- Neptune Avenue & Cropsey Ave/West 17th Street
Implementation

Bay Pkwy b/w Belt Pkwy WB & Cropsey Ave

Problems:
• Congestion
• Geometric constraints
• Traffic controls (signal coordination)

Solution:
• Roadway changes
• Signal redesign
• Signs and markings
Bay Pkwy b/w Belt Pkwy WB & Cropsey Ave
Existing
Bay Pkwy b/w Belt Pkwy WB & Cropsey Ave

Proposed/Implemented

- Dedicated right turn lane
- Dual Left Turn Lanes w/ Exclusive Phase
- Dual left and right turn lanes
- Bus Stop Relocated
Bay Pkwy b/w Belt Pkwy WB & Cropsey Ave
Proposed/Implemented
Bay Pkwy b/w Belt Pkwy WB & Cropsey Ave

Implementation

Bay Pkwy Looking North

Bay Pkwy SB at Belt Pkwy WB Entrance
Neptune Ave & Cropsey Ave/West 17 St

Problems:
- Congestion
- Pedestrian Safety

Solutions:
- Street direction changes
- Signals redesign
- Restriping
Neptune Ave & Cropsey Ave/West 17 St
Street Directional Changes

Existing

Proposed
Neptune Ave & Cropsey Ave/West 17 St
Existing
Neptune Ave & Cropsey Ave/West 17 St

Proposed

- Left turn storage extended
- Bike Lane added
- Pedestrian refuge added
- Direction changed to SB only
- Direction changed to NB
- Direction changed to NB
Neptune Ave & Cropsey Ave/West 17 St
Post Implementation

Directions Reversed
Neptune Ave & Cropsey Ave/West 17 St

BEFORE

Cropsey Avenue Looking North

AFTER

BEFORE

West 17th Street Looking South

AFTER
Challenges...

• Planning process
• Community support & opposition
• Constrained network configuration
• Transportation modeling
• Simulating the optimization of the land use/transportation mix
• Challenges resolving long-term and short-term objectives
Conclusions...

Public Participation

- support and opposition

Traffic congestion and the need to:

- Balance pedestrian needs v. need to process vehicles
- Improve capacity to ensure demand is in balance with development density
Thank you!

Contact:
Michael Griffith
Email: mgriffith@dot.nyc.gov