Coney Island/Gravesend Sustainable Development Transportation Study

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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

Sustainable Development – a definition…

"(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.

Sub-Regional Context

Legend
- — SBTIS Boundary
- ▉ Coney Island Rezoning
- — Coney Island/Gravesend Study Boundary
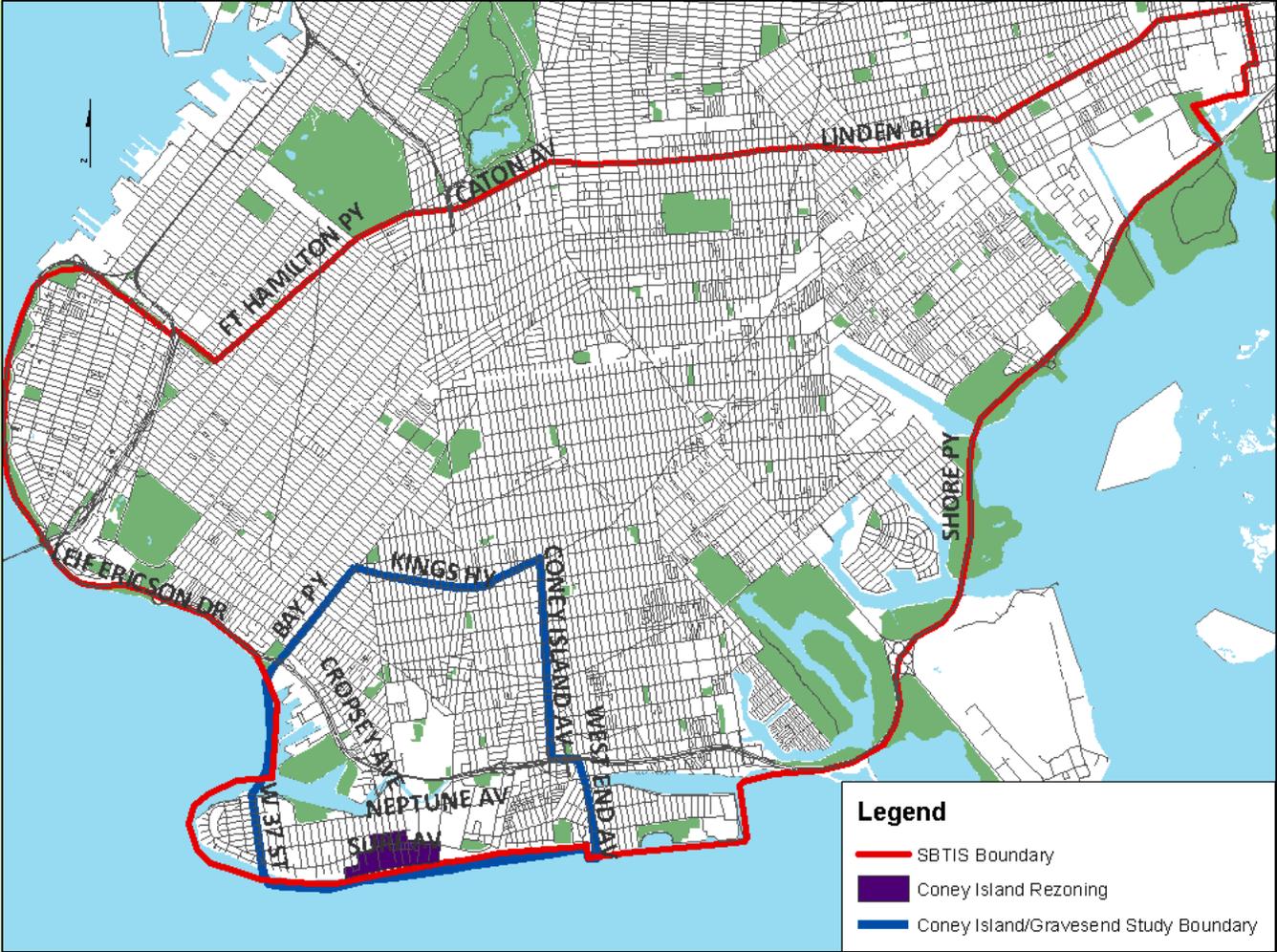
Southern Brooklyn Transportation Investment Study

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.
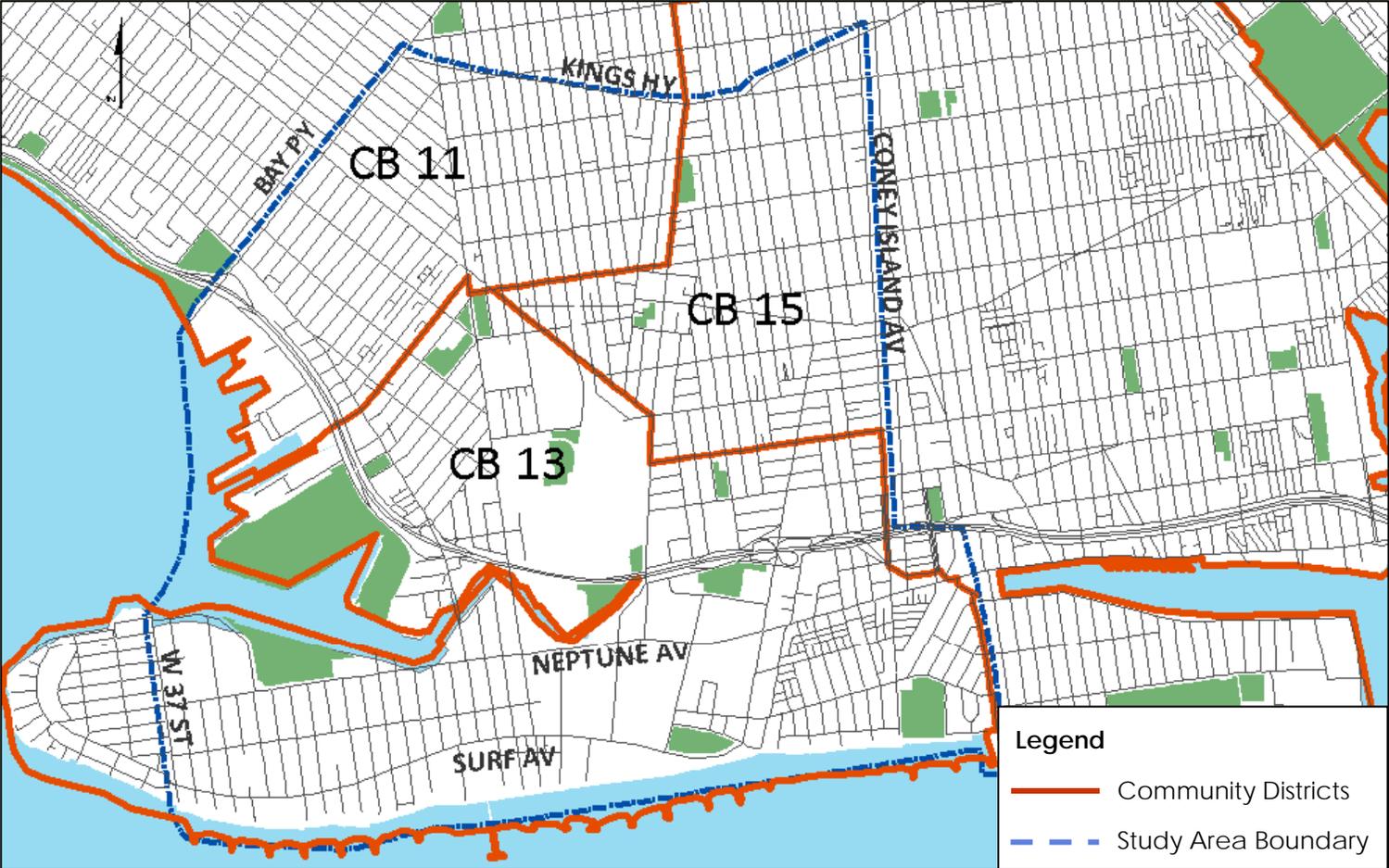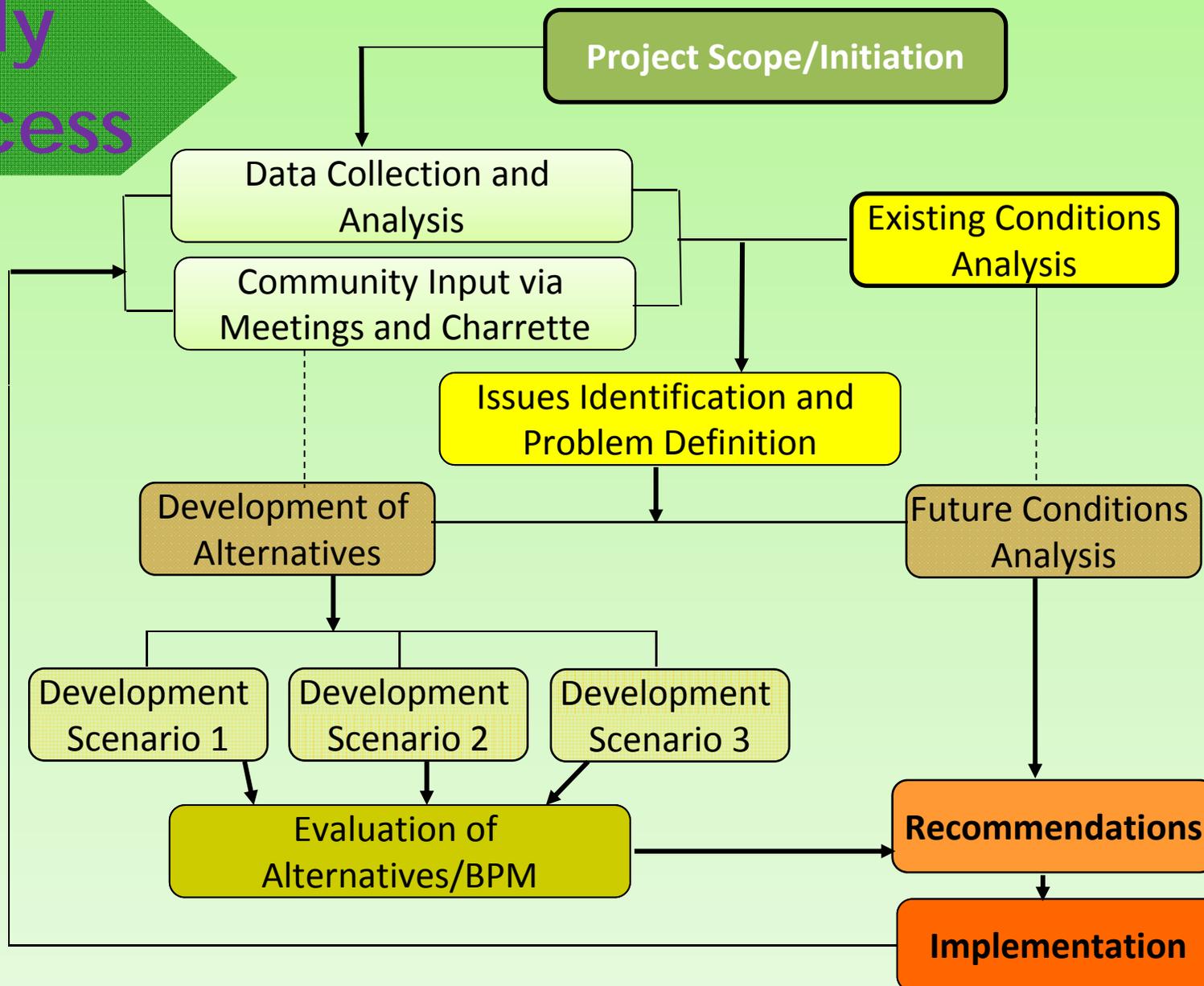
Scenarios

- 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

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Study Process

Project Scope/Initiation

Data Collection and Analysis

Community Input via Meetings and Charrette

Existing Conditions Analysis

Issues Identification and Problem Definition

Development of Alternatives

Future Conditions Analysis

Development Scenario 1

Development Scenario 2

Development Scenario 3

Evaluation of Alternatives/BPM

Recommendations

Implementation
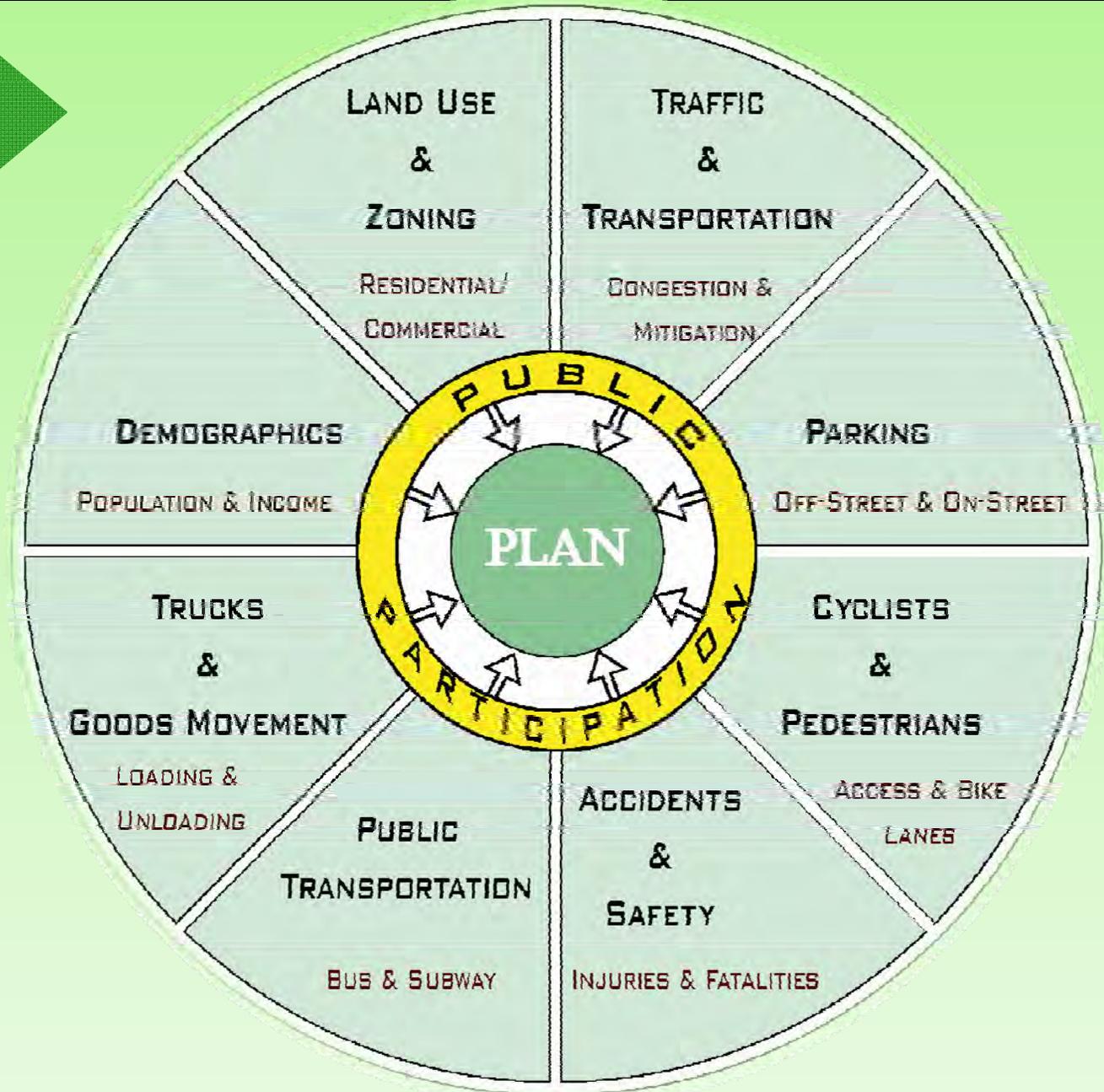
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Planning Inputs

Existing & Future Analysis - Traffic & Transportation

- 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

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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)

Transportation & Land Use Scenario Matrix

TRANSPORTATION \ LAND USE	1 Current Trend	2 Moderate Development	3 Significant Development
1 Current Programmed Projects			
2 Transportation Management Strategies			
3 Transit Focused Improvements			
4 Major Roadway Improvements			

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Transportation Scenarios

LAND USE → TRANSPORTATION ↓	1 Current Trend	2 Moderate Development	3 Significant Development
Current			
1 Programmed Projects			
2 Transportation Management Strategies	EXAMPLES: →	•Ferry service between Coney Island and the Rockaways and/or Manhattan •Inter-Neighborhood Transit (Bus service between Coney Island, Brighton Beach, and Manhattan Beach	
3 Transit Focused Improvements			
4 Major Roadway Improvements	EXAMPLE: →	•New Belt Parkway exit ramp at Stillwell Avenue	

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Land Use Scenarios

TRANSPORTATION \ LAND USE →	1 Current Trend	2 Moderate Development	3 Significant Development
Current			
1 Programmed Projects			
2 Transportation Management Strategies			
3 Transit Focused Improvements			
4 Major Roadway Improvements			

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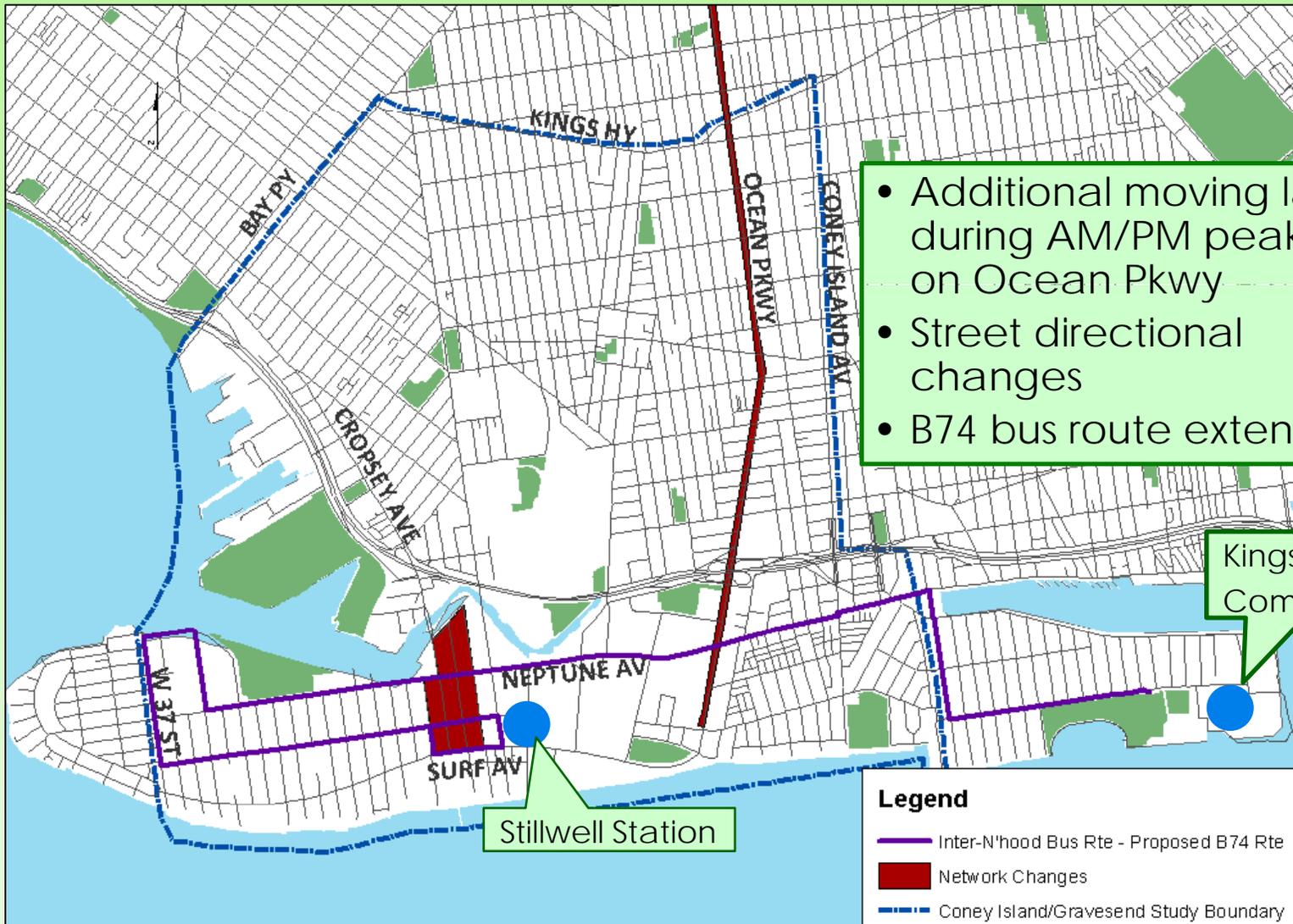
- Additional moving lane during AM/PM peak hour on Ocean Pkwy
- Street directional changes
- B74 bus route extension

Kings Boro Comm Coll.

Stillwell Station

Legend

— Inter-N'hood Bus Rte - Proposed B74 Rte

▬ Network Changes

–■–■– Coney Island/Gravesend Study Boundary

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Coney Island Rezoning+
Land Use Scenario 3

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
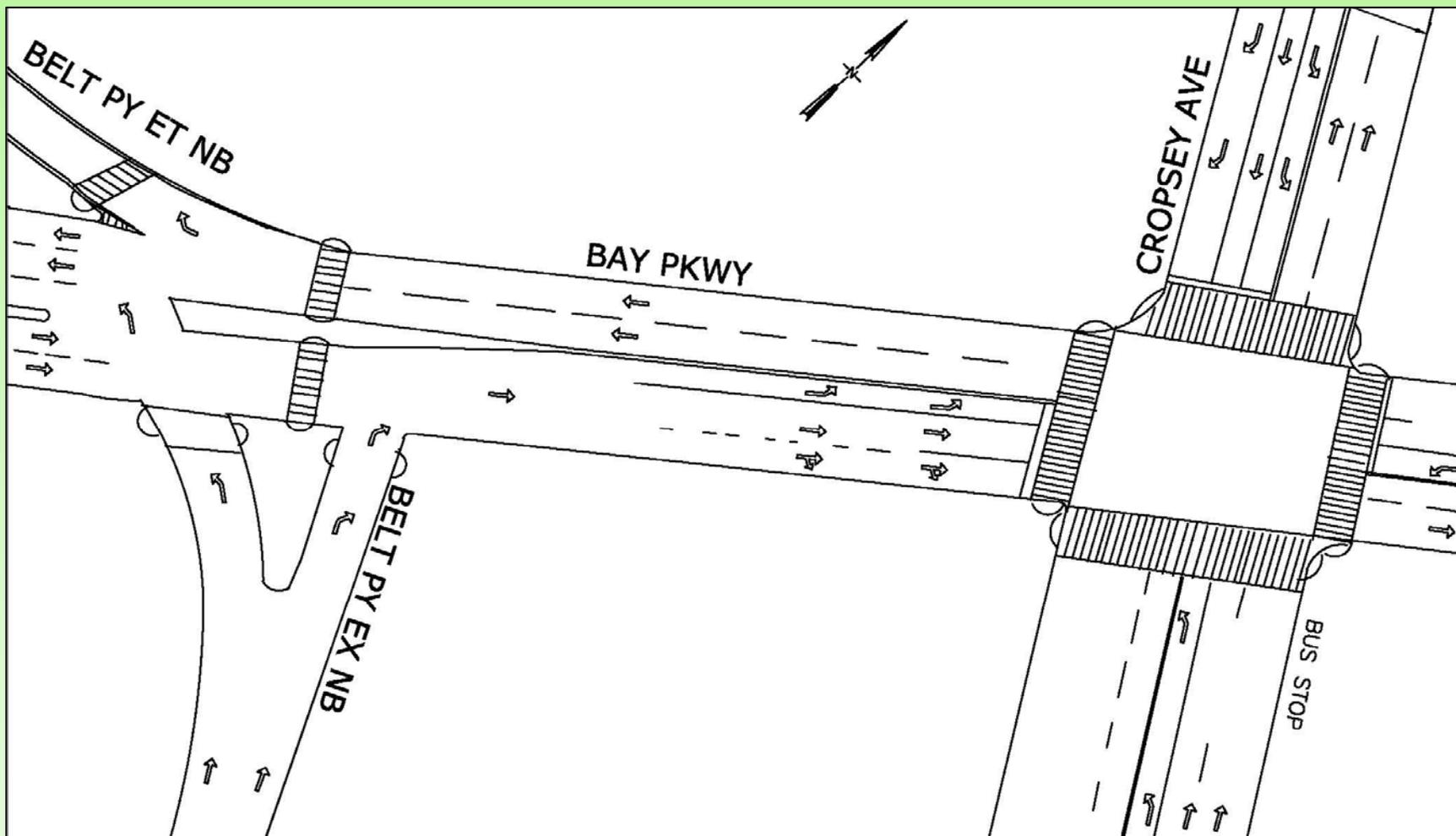
Bay Pkwy b/w Belt Pkwy WB & Cropsey Ave

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

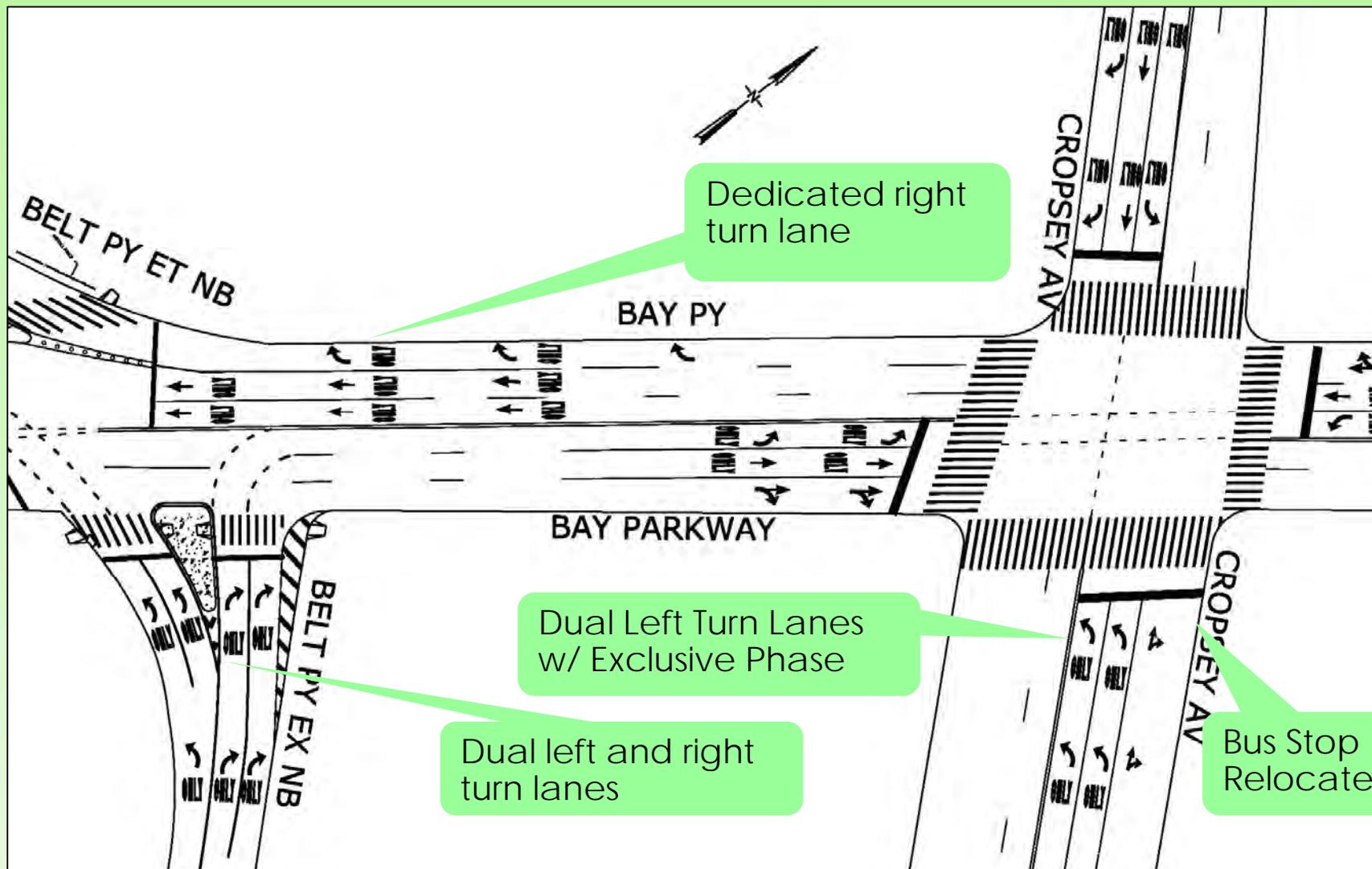**Solution:**
- Roadway changes
- Signal redesign
- Signs and markings

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

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Bay Pkwy b/w Belt Pkwy WB & Cropsey Ave
Proposed/Implemented

Bay Pkwy b/w Belt Pkwy WB & Cropsey Ave

BEFORE

AFTER

Bay Pkwy SB at Belt Pkwy WB Entrance

BEFORE

AFTER

Bay Pkwy Looking North

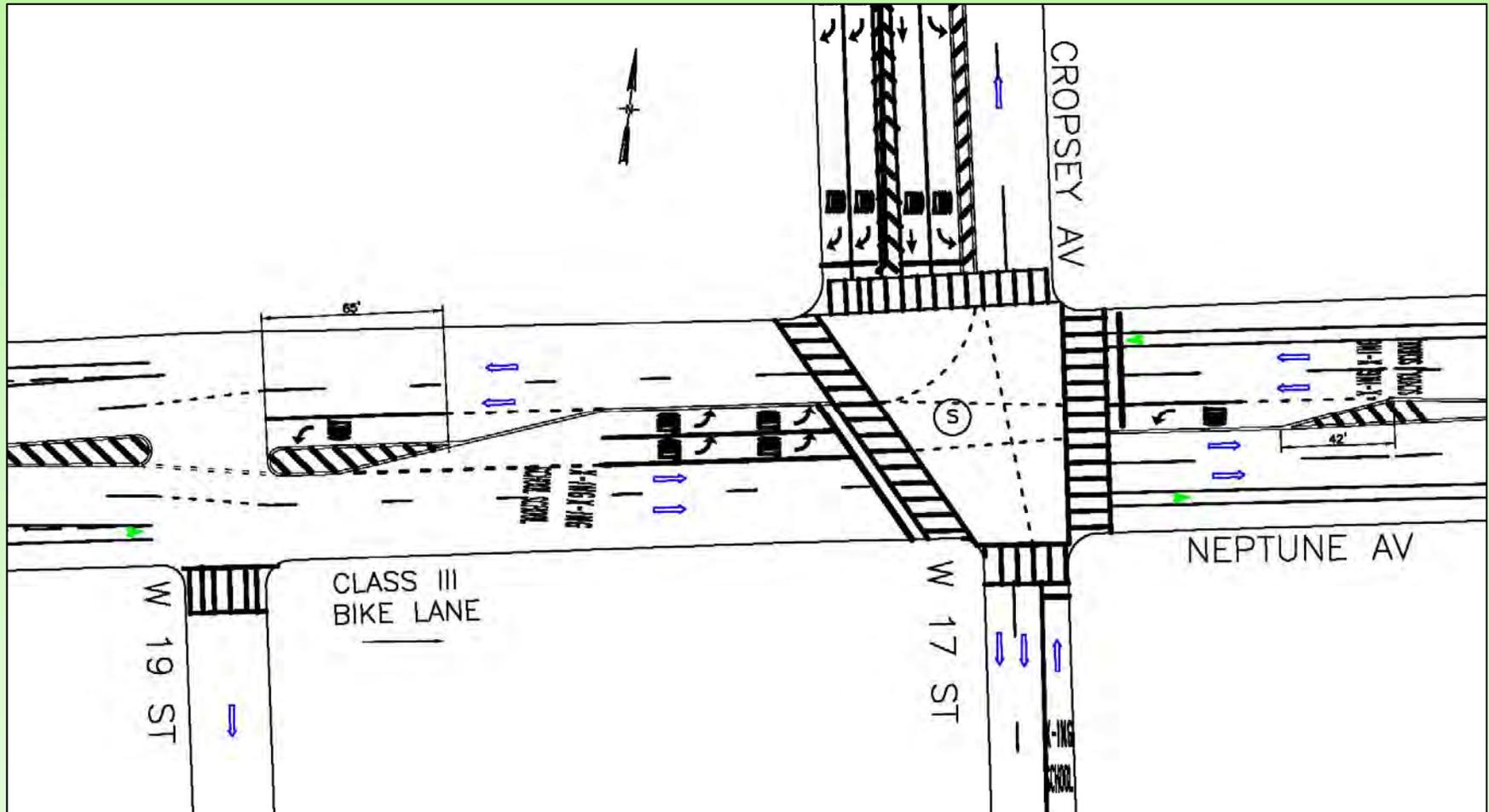28

Neptune Ave & Cropsey Ave/West 17 St

Problems:

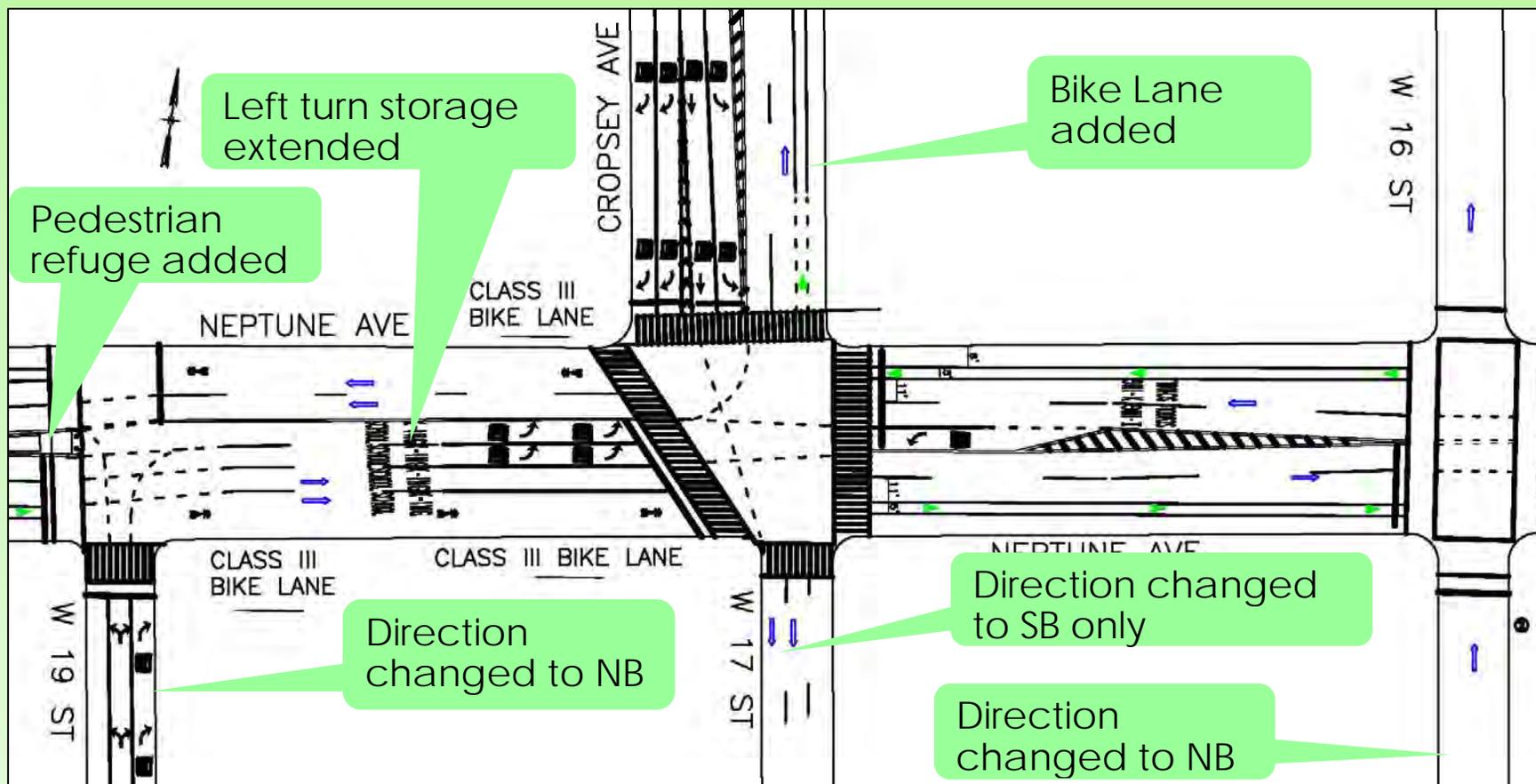- Congestion
- Pedestrian Safety

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 NB

Direction changed to SB only

Direction changed to NB

CROPSEY AVE

NEPTUNE AVE

CLASS III BIKE LANE

CLASS III BIKE LANE

CLASS III BIKE LANE

NEPTUNE AVE

W 16 ST

W 19 ST

W 17 ST

Directions Reversed

33

Neptune Ave & Cropsey Ave/West 17 St

BEFORE

AFTER

Cropsey Avenue Looking North

BEFORE

AFTER

West 17th Street Looking South

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!

Questions??