LAYING THE GROUNDWORK FOR COMMUNITY PLANNING:
Long Island Community Planning Initiative

Emily Heard
September 11th Recipient
2013-2014
SETTING THE TONE:

The First Step in a Much Bigger Project

1. Analyze potential effects of ESA on the communities around LIRR
2. Begin Community Outreach
3. Work With Communities to Plan around ESA

Iterative Processes
CLARIFYING THE APPROACH:
Phases of Analysis

I
Identify preliminary study stations based off published travel time and ridership effects

II
Identify and map variables of interest community planning around East Side Access such as current planning environment, current growth trends, etc.

III
Codify these variables into an index to be used as a tool to prioritize planning areas for initial outreach. Index also allows for easier re-evaluation based on feedback.

IV
Create a station area level land suitability analysis to be used as a tool for beginning community outreach and discussion. Again, designed to be easily modified based on feedback.

V
Take tool results to the communities to start the discussion about planning around East Side Access, re-evaluate models based on community priorities, etc.
DEFINING THE PRELIMINARY FOCUS AREAS

Ridership Growth and Travel Time Changes

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BAND OF HIGHEST PROJECTED RIDERSHIP GROWTH FROM EAST SIDE ACCESS

41,888 Daily Riders Gained

Sources: The daily ridership numbers are taken directly from MTA's published environmental impact statement for the East Side Access project. NYMTC provided base files for boundaries, stations, and rail line locations.
STATIONS WITH ESTIMATED PEAK TRIP TIMES UNDER 60 MINUTES AFTER EAST SIDE ACCESS

39,536 Riders Gained

Sources: MTA.info provided current scheduled trip times to Penn Station. Google Maps provided the current subway times from Penn Station to Grand Central. Trip time reductions were based off from statements made by the MTA on MTA.info and elsewhere. NYMTC provided base files for boundaries, stations, and rail line locations.
PRELIMINARY DECISION BAND

47,992 Total Riders Gained
40,178 In Decision Band

Sources: MTA.info provided current scheduled trip times to Penn Station. Google Maps provided the current subway times from Penn Station to Grand Central. Trip time reductions were based off from statements made by the MTA on MTA.info and elsewhere. ESA EIS provided ridership projections. NYMTC provided base files for boundaries, stations, and rail line locations.
IDENTIFYING SECONDARY VARIABLES THAT WILL AFFECT DEVELOPMENT AROUND LIRR

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CREATING A WAY TO THINK ABOUT THE ISSUES
Categorizing the Secondary Variables

**INTEREST**
- PLANS
- POPULATION
- EMPLOYMENT
- RIDERSHIP

**MOMENTUM**
- PLANS
- POPULATION
- EMPLOYMENT
- RIDERSHIP

**CAPACITY**
- SEWERS
- PARKING

**CONNECTIVITY**
- BUS ROUTES
- SERVICE AREA
- FARE ZONES
COMPARING PEAK TO OFFPEAK RIDERSHIP

% Offpeak Ridership
- Up to 10%
- 10 - 20%
- 20 - 30%

% Peak Ridership
- Up to 40.7%
- 40.7 - 50%
- 50 - 60%
- 60 - 70%
- 70 - 80%
- 80% and Up

Sources: 2006 Station level ridership from 2012 LIRR Briefing Book.
NYMTC provided base files for boundaries, stations, and rail line locations.
NARROWING THE PRIORITY AREAS
Codifying the Variables Into a GIS Model and Index for Future Use

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THE RYHME AND REASON BEHIND THE INDEX
A Flexible Tool to Apply Decision Values

- Raw Variable
  - INTEREST
  - MOMENTUM
  - CAPACITY
  - CONNECTIVITY

- Geographical Manipulation/Cleaning

- Score
  - SIMPLE STATION INDEX: \( \frac{\text{Score } 1 + \text{Score } 2 + \ldots + \text{Score } n}{N} \)
  - WEIGHTED STATION INDEX: \( \frac{\text{Score } 1 \times \text{Rank Wt} + \text{Score } 2 \times \text{Rank Wt} + \ldots + \text{Score } n \times \text{Rank Wt}}{N} \)
THE RESULTING PRIORIZATION
An Example With a Simple Index

Simple Index Score (out of 6)

- 2.400000 - 2.500000
- 2.500001 - 3.000000
- 3.000001 - 3.500000
- 3.500001 - 4.000000
- 4.000001 - 4.500000

Sources: MTA, NYMTC, Nassau County, and Analyst for Index Data. NYMTC provided base data.
A METHOD TO RE-EVALUATE BASED ON FEEDBACK: An Example With a Weighted Index

<table>
<thead>
<tr>
<th>Complex_Index</th>
<th>Up to 2.5</th>
<th>2.5 - 3</th>
<th>3 - 3.5</th>
<th>3.5 - 4</th>
<th>4 and Up</th>
</tr>
</thead>
</table>

Sources: MTA, NVMT, Nassau County, and Analyst for Index Data, NYMT provided base data.
CREATING A TOOL TO TARGET THE CONVERSATION

Land Suitability Analysis to Highlight Developable Land

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IDENTIFYING VACANT PUBLIC PARCELS
One Way to Begin the Development Conversation

- Vacant Parcels
- Publicly Owned Parcels
- 15 And 30 Min Service Areas
- Select By Parcel Size
- LOW-HANGING FRUIT
15 AND 30 MINUTE BUS+WALKING SERVICE AREAS AROUND LIRR STATIONS

Sources: Network Design used MTA and NICE GTSF data for station and route locations. NYMTC provided routes for Suffolk County. Analyst heavily estimated for Suffolk Stations, and Analyst heavily estimated for all transfers. NYMTC provided base files for boundaries, stations, street network and rail line locations.
NARROWING IN ON MORE SUITABLE LAND FOR DEVELOPMENT ex. Mineola
<table>
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<tr>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
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WHAT’S NEXT?

Long Island Community Planning Initiative

Analyze potential effects of ESA on the communities around LIRR

Begin Community Outreach

Work With Communities to Plan around ESA

Iterative Processes
THANK YOU/QUESTIONS?

EMILY HEARD
emilygheard@gmail.com
THE INTERCONNECTEDNESS OF STATION AREAS: Bus Routes on Long Island

Sources: NYMTC provided base files for boundaries, stations, bus and rail line locations.

- LIRR Lines
- NYCT Bus Routes in Queens
- Suffolk County Transit
- NICE Bus
15 AND 30 MINUTE BUS+WALKING SERVICE AREAS AROUND LIRR STATIONS

Sources: Network Design used MTA and NICE GTSF data for station and route locations. NYMTC provided routes for Suffolk County. Analyst heavily estimated for Suffolk Stations, and Analyst heavily estimated for all transfers. NYMTC provided base files for boundaries, stations, street network and rail line locations.
APPENDIX

PARTIALLY SEWERED
- Central Islip
- Manhasset

SEWERS IN CONSTRUCTION
- Wyandanch

NO SEWERS
- Ronkonkoma
- Brentwood
- Deer Park
- Huntington
- Cold Spring Harbor

SEWERED

ALL OTHER STATIONS

Source: LI Index Interactive Map, Suffolk County.
MINIMIZING INFRASTRUCTURE CONCERNS:
Current Parking Capacity and Utilization

LIRR Lines
- RONKONKOMA
- LONG BEACH BRANCH
- PORT JEFFERSON BRANCH
- BABYLON BRANCH
- HEMPSTEAD BRANCH
- OYSTER BAY BRANCH
- WEST HEMPSTEAD BRANCH
- NEW YORK TERMINAL DISTRICT
- FAR ROCKAWAY BRANCH
- MONTAUK BRANCH

% Parking Utilized
- No Parking
- Up to 25%
- 25 - 50%
- 50 - 75%
- 75 - 90%
- 90 +

Sources: Parking capacity and utilization is from LIRR 2012 Briefing Book. NYMTNC provided base files for boundaries, stations, and rail line locations.
ALREADY EXCEEDING RIDERSHIP PROJECTIONS
THE GREATEST CHANGE 10YRS AFTER ESA, 2010-2035: Employment Growth Projections and Concentrations

LIRR Lines
- RONKONKOMA
- PORT JEFFERSON BRANCH
- BABYLON BRANCH
- HEMPSTEAD BRANCH
- OYSTER BAY BRANCH
- NEW YORK TERMINAL DISTRICT
- LONG BEACH BRANCH
- FAR ROCKAWAY BR
- MONTAUK BRANCH
- PORT WASHINGTON BR
- WEST HEMPSTEAD BRANCH

Projected Employment Gains 10 yrs After ESA
- -12352 to 0
- 0 to 500
- 500 to 1000
- 1000 to 2000
- 2000 to 5000
- 5000 to 10000

Sources: NYMTC provided the most recent employment projections (updated in 2013 and TAZ geography. NYMTC provided base files for boundaries, stations, and rail line locations.)
THE GREATEST CHANGE 10YRS AFTER ESA, 2010-2035: Population Growth Projections and Concentrations