



THE
NASSAU HUB STUDY
ALTERNATIVES ANALYSIS / ENVIRONMENTAL IMPACT STATEMENT



The Nassau Hub Study TAC Presentation

June 2, 2011



NYS DOT



Agenda

- 1) Study Update
- 2) Alternatives Development
- 3) Screening Process
- 4) Screen 1: Fatal Flaw Screening
- 5) Refined Long-List Alternatives
- 6) Next Steps



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Study Update



Study Update

- Completed The Problem Statement, Purpose & Need And Goals & Objectives
- Defined Study Area Characteristics
- Identified Preliminary Long-List Alternatives
- Developed Conceptual Information On Alternatives
- Initiated Fatal Flaw Screening



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Alternatives Development

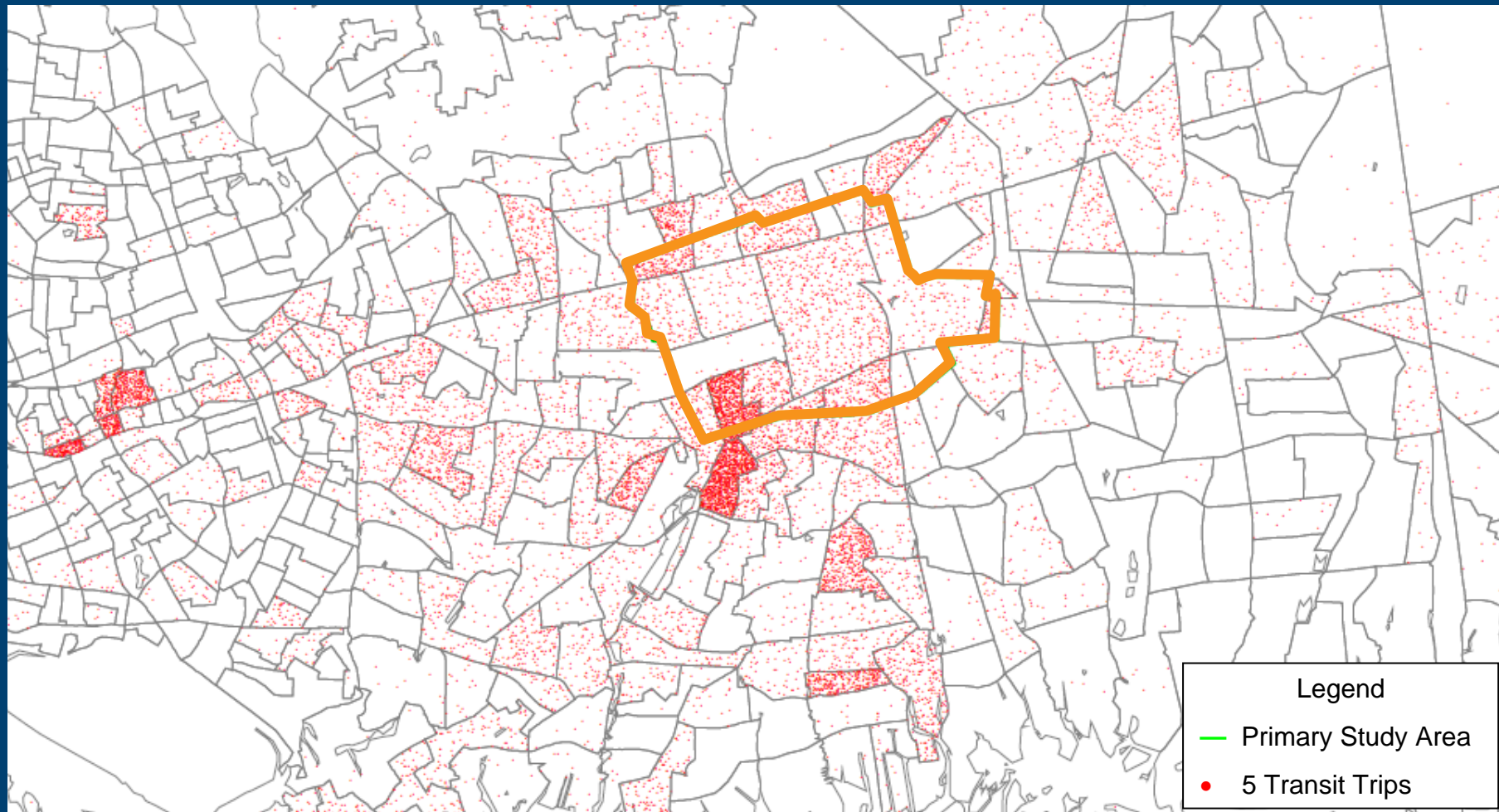


Origin/Destination Survey

- Surveyed Travel Patterns Of Existing Long Island Bus Users
- Established A Baseline For Existing Hub-Related Transit Travel
- Collected Data To Calibrate Forecasting Model
- Identified Geographic Location Of Current Transit Trip Making

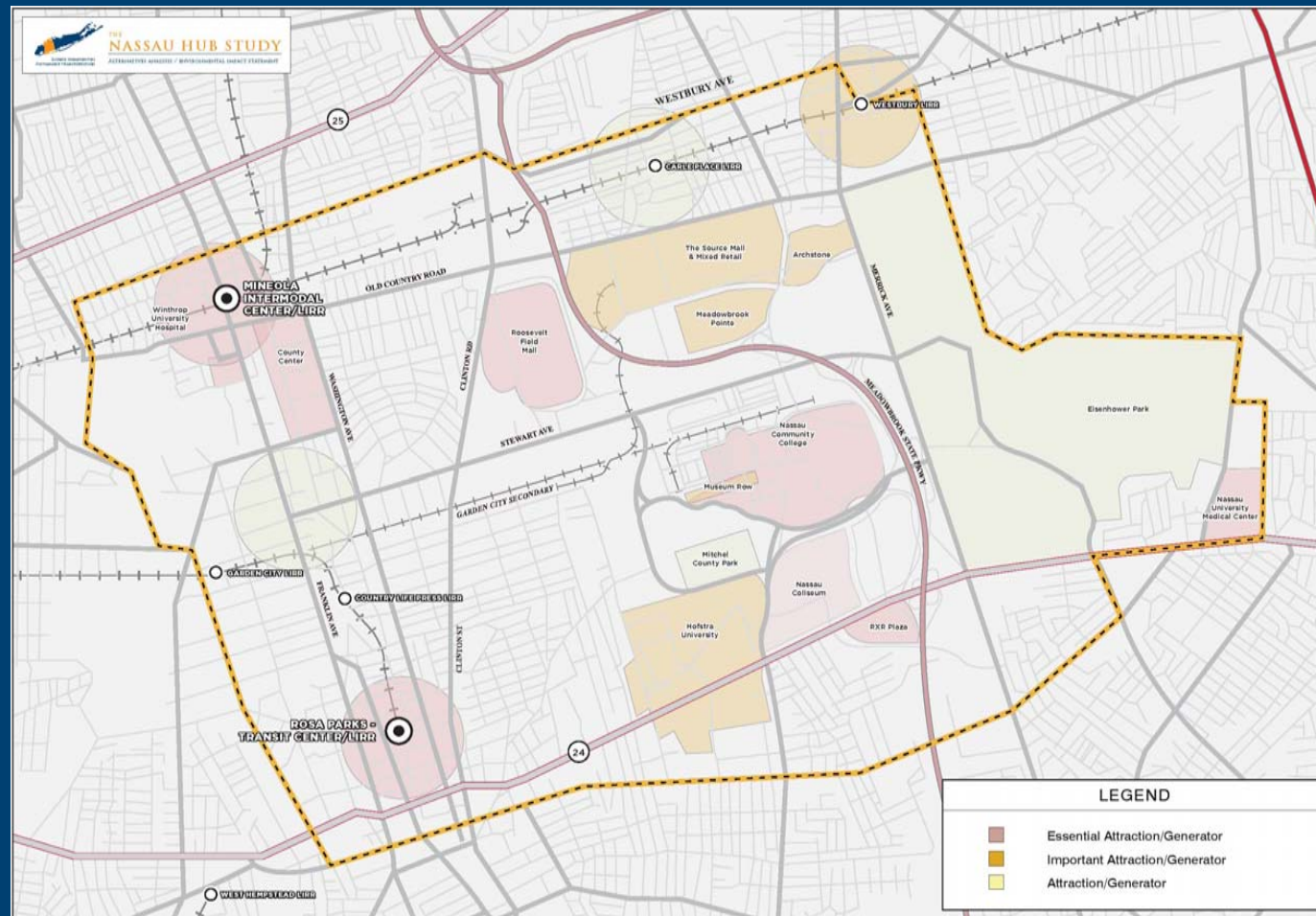


- Where Are People Going In The Study Area?



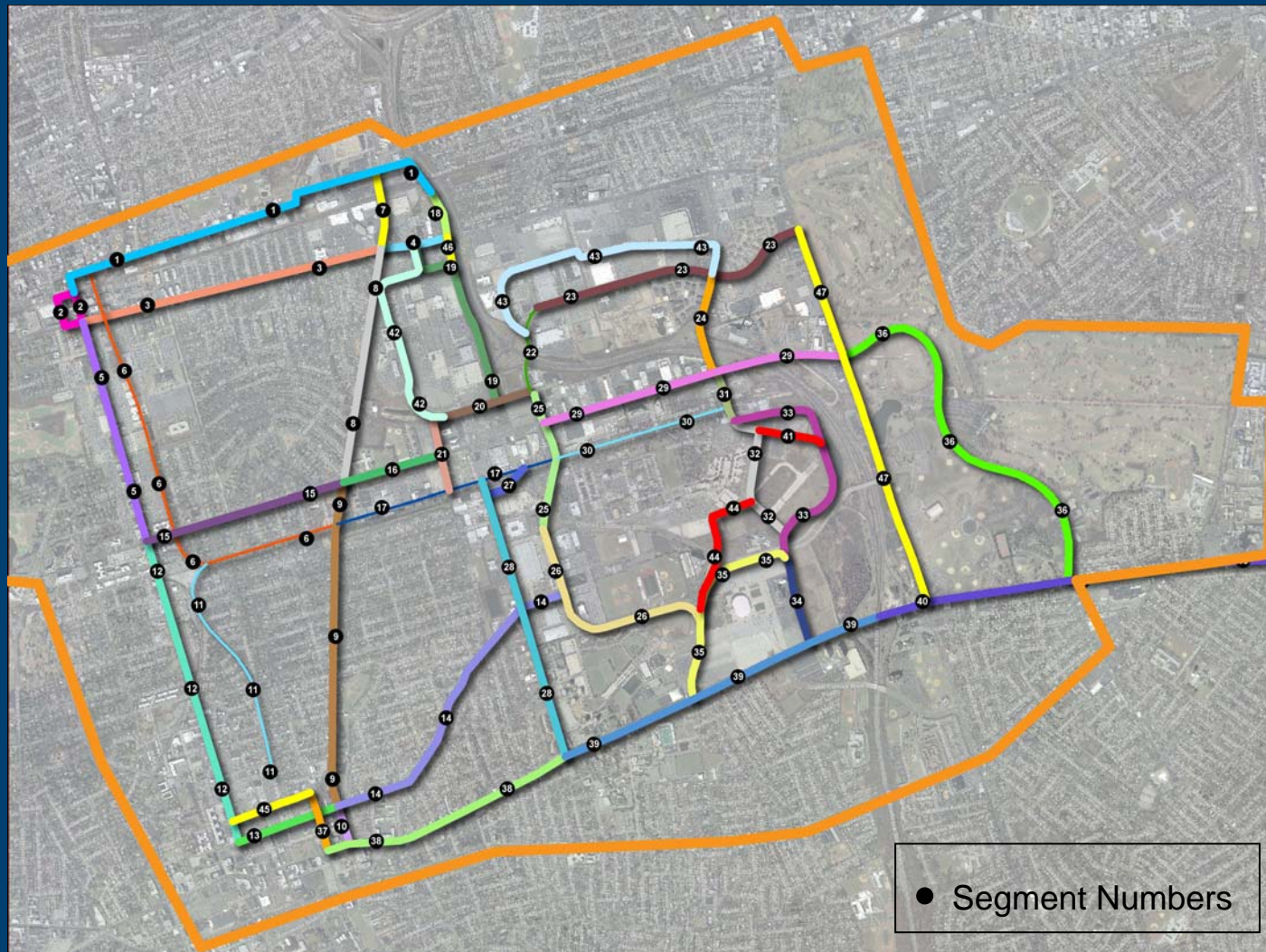


- Why Are They Going There?
 - Identified Major Study Area Trip Generators & Attractors





- What Routes Connect The Generators & Attractors?





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Screening Process



Screening Process

Screen 1:

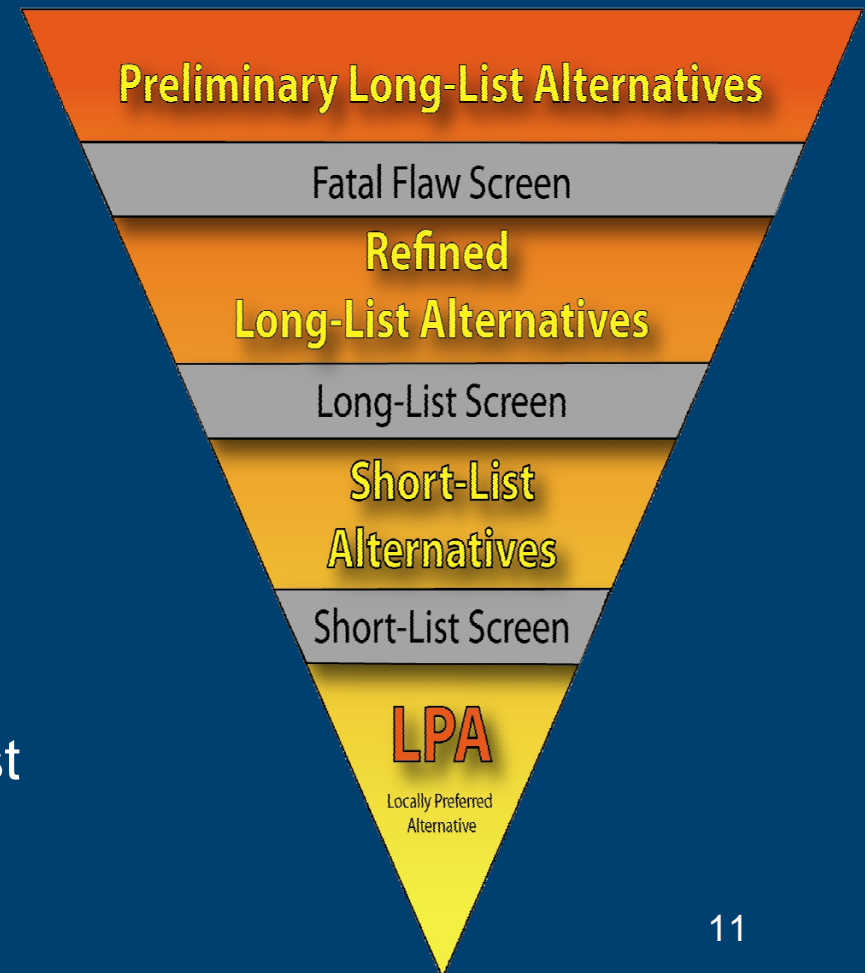
Eliminate Infeasible Alternatives Due To Fatal Flaw(s)

Screen 2:

Qualitative And Quantitative Analyses Against Goals And Objectives

Screen 3:

Detailed Quantitative Analyses Against Multiple Criteria / Measures By Alignment And Mode





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Screen 1: Fatal Flaw Screening



What Is A Fatal Flaw?

A Fatal Flaw Is A Significant Barrier To The Implementation Of The Transit Alternative.



Screen 1: Fatal Flaw Screening - Objectives

1. Provide Improved Transit Access To, From And Within The Study Area.
2. Use Transit To Better Serve Existing Activity Centers.
3. Coordinate Transit Infrastructure And Services With Land Use To Promote Sustainability And Livability And Enhance Quality Of Life.
4. Develop A Transit Alternative That Takes Advantage Of The Use Of Existing Transportation Infrastructure, Where Appropriate.



Fatal Flaw Screening: Results

1. Does the Alternative's Alignment Contain Institutional Or Physical Restrictions That Would Not Permit Its Realistic Implementation Or Operation?

Flaws Identified

- Garden City Secondary Between Franklin Avenue & Clinton Road: ROW Unavailable Due To Potential Purchase
- LIRR Hempstead Branch: Proximity To Active LIRR Line; Insufficient Space Within The ROW To Run A Second Service
- Portions Of The ROW Between Mineola And Garden City (Running Parallel To Franklin Avenue) Have Been Encroached Upon By Development

Flawed Alternatives: 13 &14



Fatal Flaw Screening: Results

2. Does the Alternative's Alignment Provide Service To Areas That Have Low Demand For Transit As Identified In The O-D Survey?

Flaws Identified

—Alignments That Go Through Areas Of Large-Lot, Low-Density Residential Development Which Is Not Consistent With Transit Ridership.

Flawed Alternatives: 9, 10, 11, 12, 13 &14



Fatal Flaw Screening: Results

3. Does the Alternative's Alignment Provide Connection To Most Of The Identified Essential Attractions And Trip Generators Located Within The Study Area?

Flaws Identified

–No Flaw Identified: All Alternatives Found To Serve The Essential Attractors/ Generators

Flawed Alternatives: None



Fatal Flaw Screening: Results

4. Does The Alternative's Alignment Have Physical Attributes That Will Conceptually Permit Integration Within The Community?

Flaws Identified

–Existing & Future Land Use In Areas Of Hempstead And Garden City Is Large-Lot, Low-Density, Single-Family Residential Which Does Not Have The Characteristics To Conceptually Permit Integration Within The Community.

Flawed Alternatives: 9, 10, 11, 12, 13 &14



Screen 1: Fatal Flaw Screening

ALTS	Alignment Restrictions?	Low Demand?	Land Use Not Transit-Supportive?	Attractions/Generators Not Served?
1	No	No	No	No
2	No	No	No	No
3	No	No	No	No
4	No	No	No	No
5	No	No	No	No
6	No	No	No	No
7	No	No	No	No
8	No	No	No	No
9	No	Yes	Yes	No
10	No	Yes	Yes	No
11	No	Yes	Yes	No
12	No	Yes	Yes	No
13	Yes	Yes	Yes	No
14	Yes	Yes	Yes	No

ADVANCED FOR FURTHER SCREENING

FATALLY FLAWED



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Any Comments Or Questions On The
Alternatives Proposed To Be Eliminated Due
To Fatal Flaws?



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Refined Long-List Alternatives



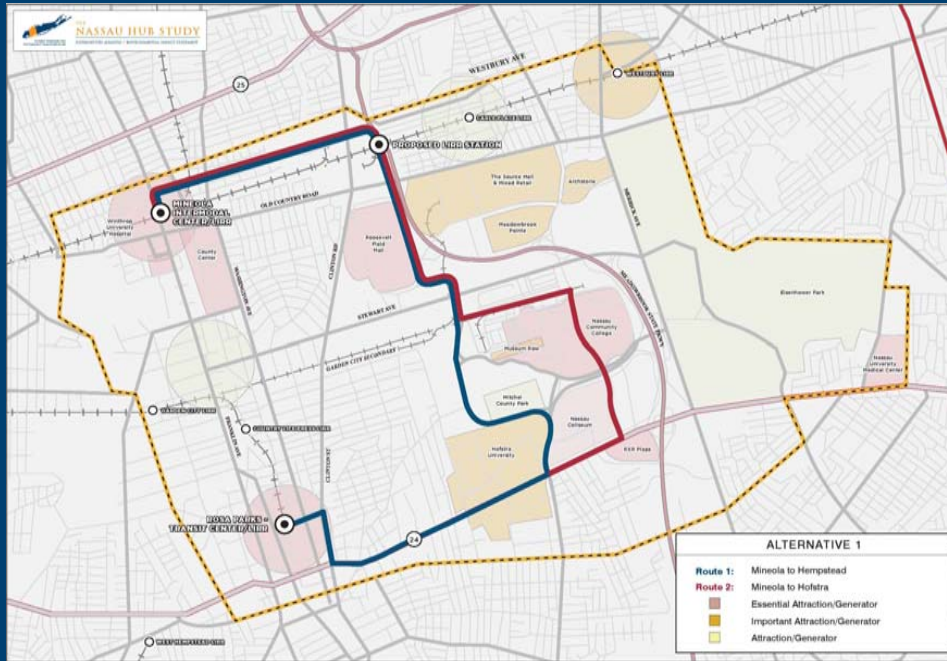
Refined Long-List Alternatives

- Conceptual Definition of Alternatives
 - Infrastructure Needs - Track/Lane Miles
 - Transit Operations - Vehicle Miles Traveled
 - Headway Assumptions – 10 Minutes Peak / 15 Minutes Off-Peak
 - Travel Times – Between Selected Activity Center Pairs
 - Planning Level Demand Potential
 - FTA Planning Model Applied
 - Attractors / Generators Served



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Alternative 1

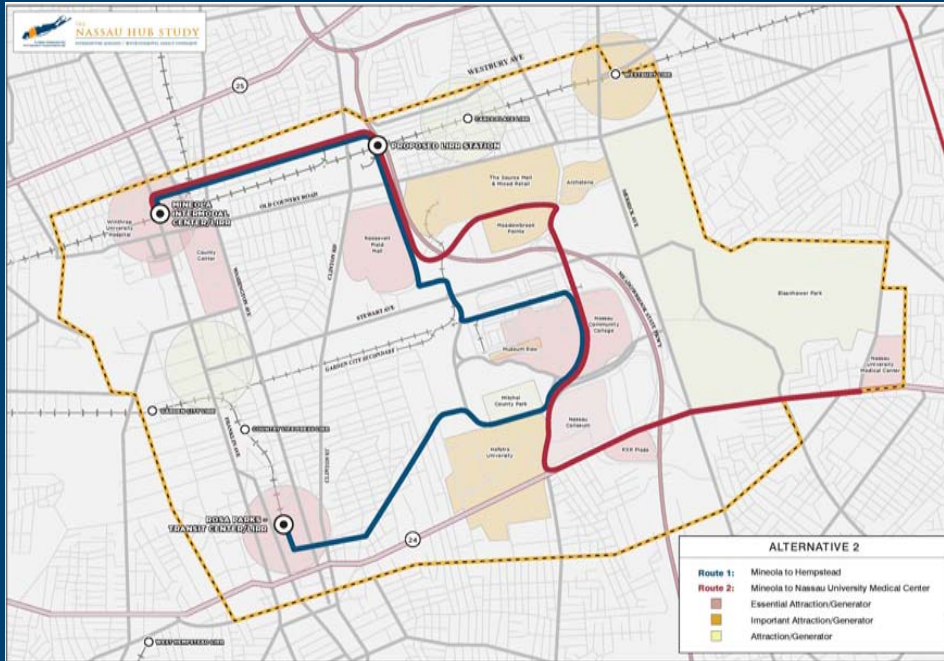
Conceptual Definition (Preliminary Order Of Magnitude Estimates)

Track/Lane Miles	Annual Transit Vehicle Miles	Activity Centers Served	Operating Scenario	Travel Time, Hempstead to Roosevelt Field Mall	Travel Time, Mineola to Coliseum	Demand Potential
18.8 miles	679,000 miles	6 Essential / 3 Important	<u>Mixed Flow</u>	14:30	17:30	4,000-6,000 trips
			<u>Exclusive ROW</u>	10:30	12:30	6,000-8,000 trips



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Alternative 2

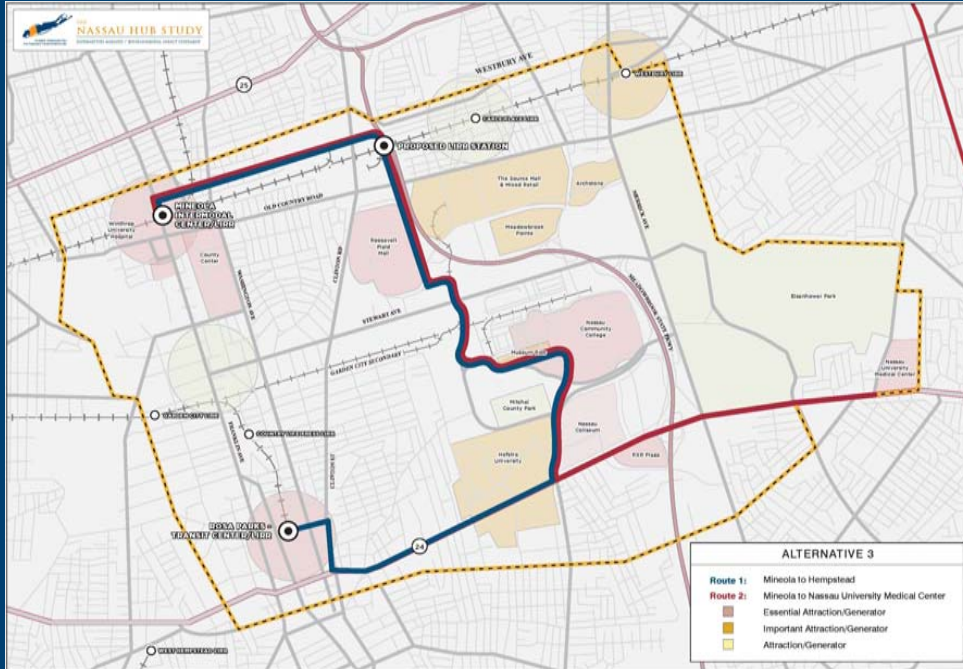
Conceptual Definition (Preliminary Order Of Magnitude Estimates)

Track/Lane Miles	Annual Vehicle Miles	Activities Center Served	Operating Scenario	Travel Time, Hempstead to Roosevelt Field Mall	Travel Time, Mineola to Coliseum	Demand Potential
20.9 miles	772,000miles	6 Essential / 3 Important	<u>Mixed Flow</u>	15:30	17:30	6,000-8,000 trips
			<u>Exclusive ROW</u>	11:00	12:30	8,000-10,000 trips



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Alternative 3

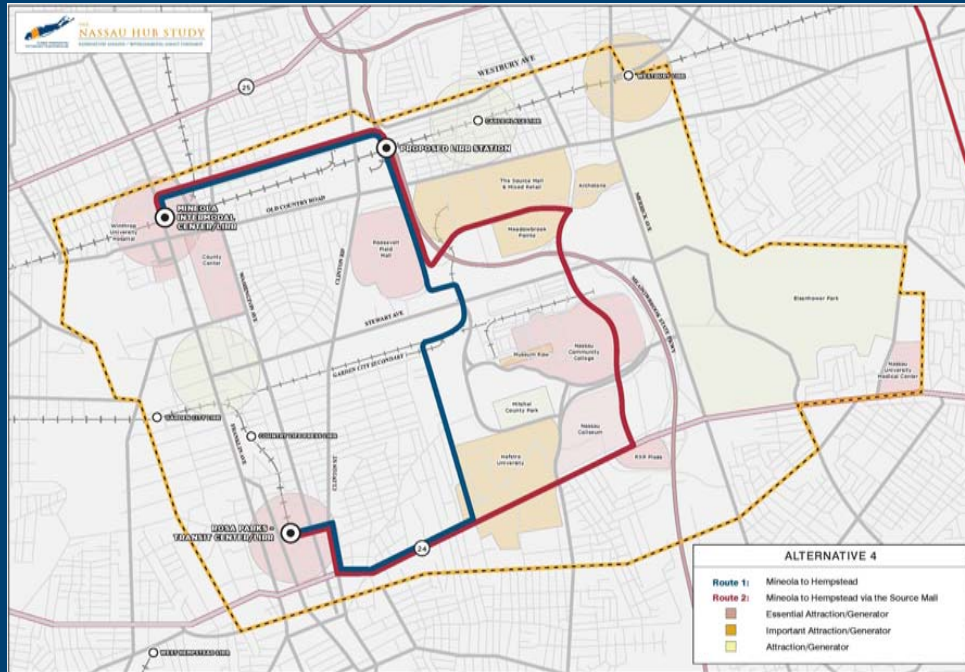
Conceptual Definition (Preliminary Order Of Magnitude Estimates)

Track/Lane Miles	Annual Vehicle Miles	Activities Center Served	Operating Scenario	Travel Time, Hempstead to Roosevelt Field Mall	Travel Time, Mineola to Coliseum	Demand Potential
17.1 miles	722,000 miles	7 Essential / 3 Important	<u>Mixed Flow</u>	15:15	15:30	6,000-8,000 trips
			<u>Exclusive ROW</u>	11:15	11:00	8,000-10,000 trips



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Alternative 4

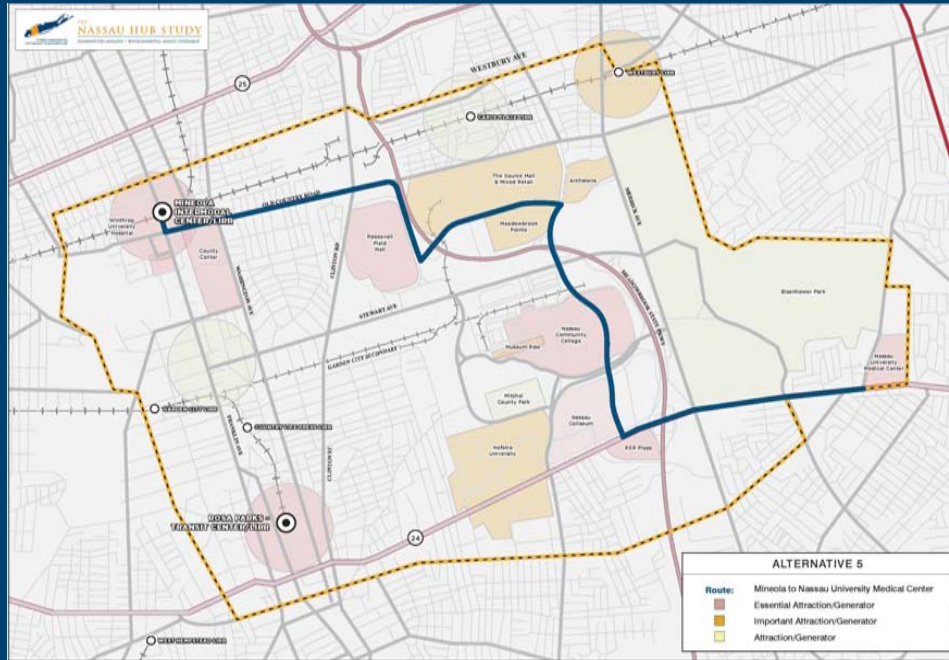
Conceptual Definition (Preliminary Order Of Magnitude Estimates)

Track/Lane Miles	Annual Vehicle Miles	Activities Center Served	Operating Scenario	Travel Time, Hempstead to Roosevelt Field Mall	Travel Time, Mineola to Coliseum	Demand Potential
17.3 miles	722,000 miles	7 Essential / 3 Important	<u>Mixed Flow</u>	11:00	18:00	4,000-6,000 trips
			<u>Exclusive ROW</u>	8:00	13:00	6,000-8,000 trips



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Alternative 5

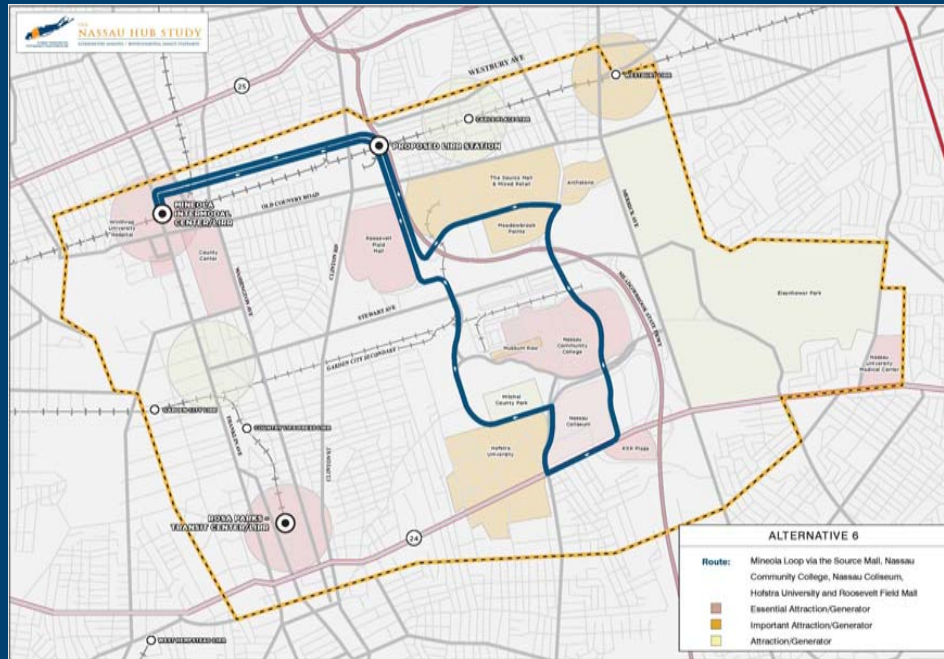
Conceptual Definition (Preliminary Order Of Magnitude Estimates)

Track/Lane Miles	Annual Vehicle Miles	Activities Center Served	Operating Scenario	Travel Time, Hempstead to Roosevelt Field Mall	Travel Time, Mineola to Coliseum	Demand Potential
15.0 miles	410,000 miles	6 Essential / 3 Important	<u>Mixed Flow</u>	-	17:45	2,000-4,000 trips
			<u>Exclusive ROW</u>	-	12:45	4,000-6,000 trips



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Alternative 6

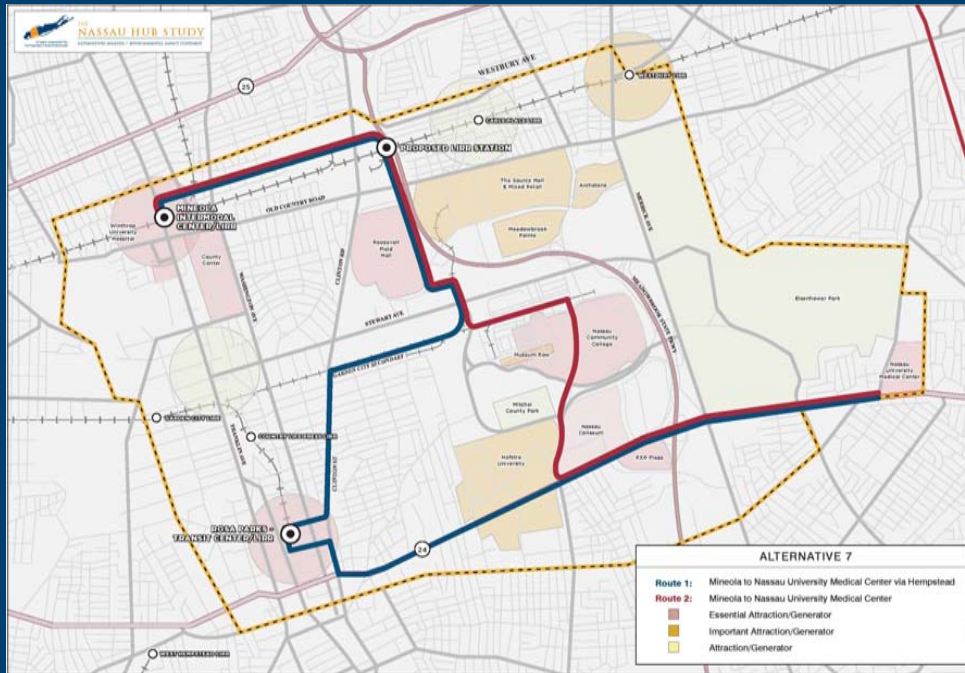
Conceptual Definition (Preliminary Order Of Magnitude Estimates)

Track/Lane Miles	Annual Vehicle Miles	Activities Center Served	Operating Scenario	Travel Time, Hempstead to Roosevelt Field Mall	Travel Time, Mineola to Coliseum	Demand Potential
15.3 miles	575,000 miles	5 Essential / 3 Important	<u>Mixed Flow</u>	-	17:15	2,000-4,000 trips
			<u>Exclusive ROW</u>	-	12:15	4,000-6,000 trips



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Alternative 7

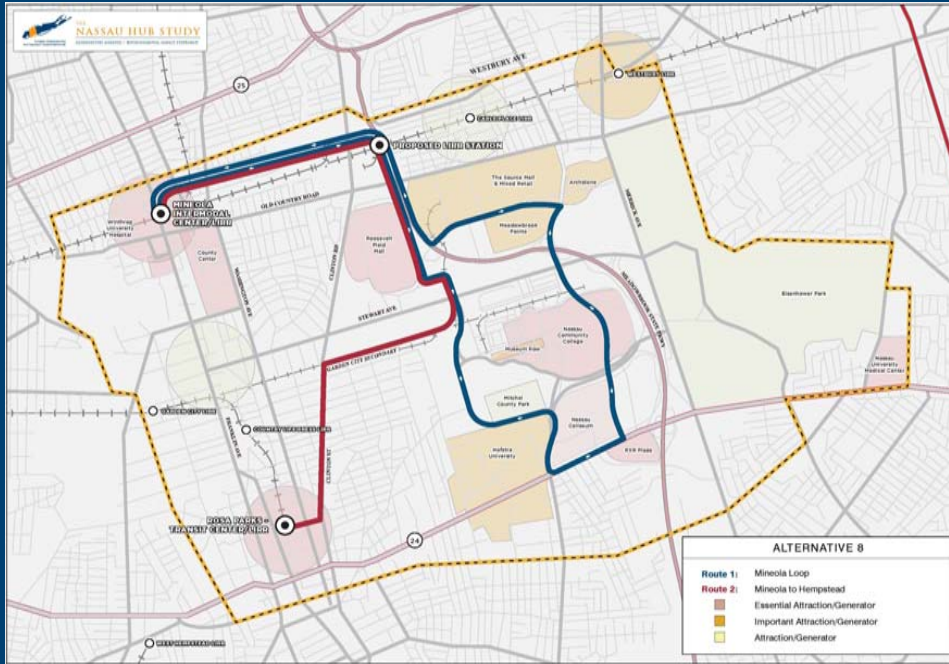
Conceptual Definition (Preliminary Order Of Magnitude Estimates)

Track/Lane Miles	Annual Vehicle Miles	Activities Center Served	Operating Scenario	Travel Time, Hempstead to Roosevelt Field Mall	Travel Time, Mineola to Coliseum	Demand Potential
21.4 miles	859,000 miles	6 Essential / 3 Important	<u>Mixed Flow</u>	7:30	15:00	2,000-4,000 trips
			<u>Exclusive ROW</u>	5:45	11:00	4,000-6,000 trips



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Alternative 8

Conceptual Definition (Preliminary Order Of Magnitude Estimates)

Track/Lane Miles	Annual Vehicle Miles	Activities Center Served	Operating Scenario	Travel Time, Hempstead to Roosevelt Field Mall	Travel Time, Mineola to Coliseum	Demand Potential
24.3 miles	820,000 miles	6 Essential / 3 Important	<u>Mixed Flow</u>	9:45	17:15	4,000-6,000 trips
			<u>Exclusive ROW</u>	7:30	12:15	6,000-8,000 trips



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Next Steps



Stated Preference Survey

- Identify Key Factors For Making Transit Attractive To Potential Users
- Assess Market Potential For Transit Investment
- Take The Survey At www.nassauhub.com



Next Steps

- Incorporate Input On Fatal Flaw Screening Results
- Confirm Refined Long-List Alternatives
- Screening Of Refined Long-List Alternatives



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We Need To Hear From You!!



Contact Us!

- Comment Sheets
- Contact Satish Sood at 516-571-9344 or ssood@nassaucountyny.gov
- www.nassauhub.com



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Q&A



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NYSDOT



Problems

1. **Traffic congestion is currently pervasive and recurrent** at many locations within the Study Area making it difficult to travel to, from and within the Study Area.
2. **Transit Service does not adequately serve trips** to, from and within the Study Area.
3. **Dispersed and disjointed land use patterns** within the Study Area limit transit service and increase reliance on auto travel.
4. The **lack of transit choices** within the Study Area limits the County's ability to positively affect environmental quality and sustainability and degrades the area's livability.



Purpose

- Improve public transit service to, from, and within the Study Area.
- Enhance regional connectivity to and from the Study Area.
- Increase transit ridership by expanding transit services and facilities.
- Help mitigate congestion by providing attractive, efficient travel options.



Purpose, cont.

- Support transportation solutions that will be instrumental in improving the economic vitality of the Study Area.
- Improve mobility for residents, employees, and visitors to employment, educational, medical and retail centers.
- Improve regional air quality by reducing or slowing the growth in auto emissions.
- Support local and regional land use plans.



Need

- Support transit-oriented economic development opportunities and land use plans.
- Expand transportation system capacity.
- Increase travel choices.
- Improve environmental quality.
- Improve transit access and connectivity.
- Better integrate LIRR into local and regional transit options.
- Provide better off-peak and reverse-peak trip-making options.
- Improve operational efficiency.
- Provide more reliable travel times.



Goals

Develop transit improvements that will:

- Provide additional realistic and practical travel options and help to mitigate congestion on roadways in a cost-effective manner.
- Enhance mobility to, from and within the Study Area in a cost-effective manner.
- Encourage the development of sustainable, transit-friendly land use patterns and support economic development activities.
- Enhance quality of life and minimize adverse environmental impact.
- Support and complement transit-friendly and economically sustainable parking strategies.