

ROUTE 110 ALTERNATIVES ANALYSIS

Appendix A:
Task 1 Technical Memorandum

TOWN OF BABYLON
SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

Task 1: Summary of Existing Information and Previous Planning Efforts

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Submitted by:

PARSONS BRINCKERHOFF

QUALITY ASSURANCE/QUALITY CONTROL

Created by:		July 3, 2014
	Maxwell Sokol / Parsons Brinckerhoff	**Date**
Reviewed by:		July 3, 2014
	Kenneth Lin / Parsons Brinckerhoff	**Date**
Approved by:		July 3, 2014
	Lawrence Lennon / Parsons Brinckerhoff	**Date**

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APPENDIX A: INVENTORY OF PREVIOUS AND ONGOING PLANNING EFFORTS

1. Introduction & Project Overview

Implementation of a bus rapid transit (BRT) system along Route 110 with seamless "last mile" connections to nearby major generators, as envisioned in the *Connect Long Island Plan*, will result in a wide range of mutually supportive benefits to the Town of Babylon and Suffolk County, including capturing East End and reverse peak customers and significantly improving mobility while providing expanded transit connections to both local and regional destinations in an environmentally sustainable manner. The Route 110 Alternatives Analysis will include an assessment of existing conditions and will build upon previous and ongoing studies to select a Locally Preferred Alternative (LPA) to advance to Project Development with the Federal Transit Administration (FTA).

The Moving Ahead for Progress in the 21st Century Act (MAP-21), enacted by Congress in 2012, made substantial changes to FTA programs and requirements. Specifically, MAP-21 reformed FTA's discretionary program for funding New Starts and Small Starts. The rules on eligibility, the approval process, and the rating criteria have all changed. Significantly, MAP-21 eliminated the requirement for a Federal "Alternatives Analysis." However, good planning practice dictates the importance of looking at reasonable options in a transportation corridor to ensure that the public and decision-makers do not rush to judgment on a solution in search of a problem. Additionally, the Town of Babylon decided to move forward with an Alternatives Analysis because the grant to conduct the study was specifically awarded for this purpose, and because the Town can still get reliable information through the study to streamline the National Environmental Policy Act (NEPA) process.

As such, the purpose of this project is to conduct a focused Alternatives Analysis for Route 110, based upon the following:

- A firm understanding of transportation needs and problems in the corridor
- The establishment of clear goals and objectives for the transportation improvements in the corridor
- The definition of various technologies and operating plans designed to address corridor problems, goals, and objectives
- The evaluation of alternatives against multiple measures—including financial feasibility of the grantee/operator/sponsor (in this case the Town of Babylon)

This will collectively result in a local decision that is well informed, demonstrates strong consensus, and is less vulnerable to delays in the planning and implementation process.

2. Summary of Previous and Ongoing Planning Efforts

As a precursor to the data collection work in Task 2, this technical memorandum offers an inventory and summary of previous and ongoing planning efforts with pertinence to the Route 110 corridor. The purpose of this inventory is to document the well-established issues and opportunities along and in the vicinity of Route 110 to serve as a backdrop for the BRT Alternatives Analysis.

What follows is a detailed summary of three significant studies/reports—the Route 110 BRT Study (2010), Connect Long Island (2011), and Phase I of the Suffolk County BRT Feasibility Study (forthcoming)—that sets the foundation for the work to be completed in this project. These three studies/reports provide much of the existing information and background data that will be used in this Alternatives Analysis to draft a purpose and need statement and project goals and objectives, and to subsequently develop and evaluate alternatives. Appendix A includes a comprehensive inventory of planning efforts with a high-level summary of the purpose and key findings that are pertinent to the Route 110 corridor, organized by functional category of the study/report (i.e., BRT/bus, TOD, rail, traffic/roadway, comprehensive plans/land use studies, etc.) and by year published within each functional category. The summaries that follow are generally excerpted from the original studies/reports, and much of Appendix A is excerpted from a similar document that Parsons Brinckerhoff compiled as part of the Suffolk County BRT Feasibility Study.

2.1 ROUTE 110 BRT STUDY (2010)

ROUTE 110 BEFORE AND AFTER POTENTIAL BRT, STREETSCAPE, AND TOD IMPROVEMENTS

BEFORE



AFTER



Source: Route 110 BRT Study Final Report (2010)

- Commissioned by the Town of Babylon—in partnership with the Town of Huntington and the MTA Long Island Rail Road (LIRR)—to examine the feasibility and benefits of implementing a program of BRT improvements along the Route 110 corridor, with an ancillary goal to identify opportunities for TOD, in order to address the following issues:
  - How can we continue the economic vitality of Route 110?
  - How can we continue to make Route 110 a desirable place to work, shop, study, live, and visit?
  - How can we accommodate future growth along Route 110 without exacerbating current traffic conditions?
  - How can we foster future development along Route 110 in a "smarter and greener" and environmentally sustainable manner?
- Guided by the goals listed below, which led to the corresponding study objectives.

ROUTE 110 BRT STUDY GOALS AND OBJECTIVES

- Facilitate the growth of an effective, economical, environmentally sensitive transportation system.
  - Evaluate benefits of BRT on Route 110.
- Improve transit mobility for Suffolk County residents, visitors, and employees along the corridor.
  - Determine whether BRT on Route 110 is feasible.
  - Coordinate with existing transit services (Suffolk County Transit, Long Island Bus, HART, and LIRR).
- Encourage job creation and retention along Route 110.
  - Develop BRT for multiple markets.
- Reduce dependence on automobile use.
  - Transform Route 110 into a more pedestrian- and transit-friendly corridor
  - Help foster transit-supportive land uses along Route 110.

Source: Route 110 BRT Study Final Report (2010), p. 2

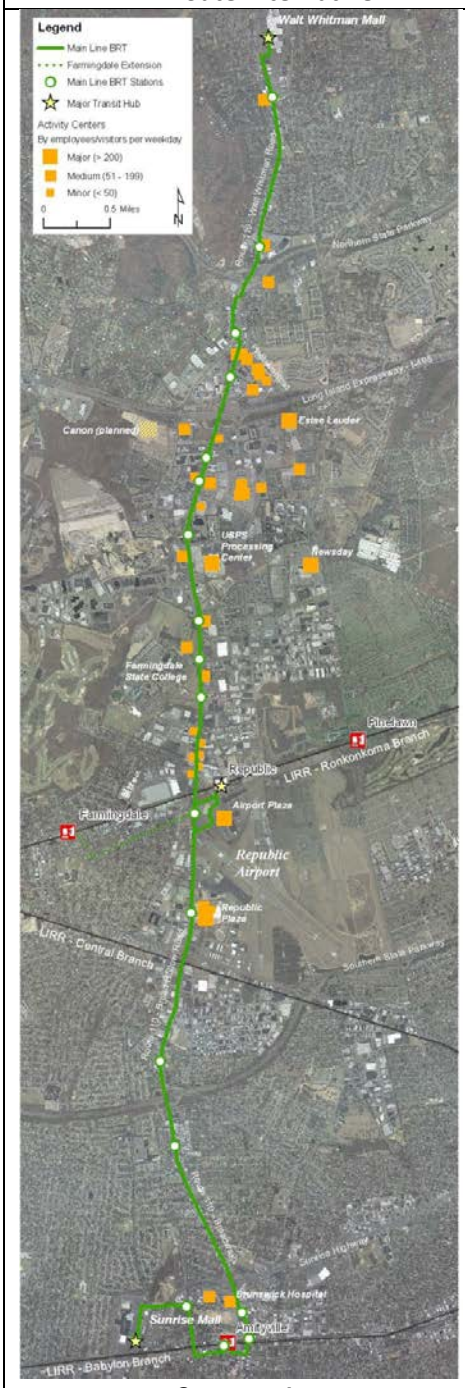
- Identified multiple factors that make BRT a practical concept for Route 110, including cost effectiveness compared to other modes (i.e., monorail, light rail, underground transportation systems), the ability to provide new transportation capacity and absorb new traffic growth in the increasingly congested corridor, the potential to reduce reliance upon automobile travel by providing mobility choice, and the opportunity to integrate transportation planning with effective land use planning and zoning to encourage TOD along the corridor.
- Consisted of a primary study area and a secondary study area, the boundaries of which are consistent with those defined for the Route 110 BRT Alternatives Analysis. The original study area was expanded to a wider area to capture more origins, and it was extended south to capture a major regional shopping mall (i.e., Sunrise Mall) following an earlier transit route study to optimize ridership capture.
  - The primary study area corresponds to the area where the project is most focused, and includes the following roadway segments: Route 110 from Oak Street to Pinelawn Road/Sweet Hollow Road; Pinelawn Road/Wellwood Avenue from Route 110 to Conklin Street; Conklin Street from Route 110 to Wellwood Avenue, including the Airport Plaza shopping center; New Highway from Conklin Street to Ruland Road; and Ruland Road from Route 110 to New Highway.
  - The secondary study area works in concert with the primary study area to provide linkages to major destinations and regional transportation nodes, as well as to capture more trip origins, and it includes the following roadway segments: Route 110 from Pinelawn Road/Sweet Hollow Road to Jericho Turnpike; West Oak Street/Old Sunrise Highway from Route 110 to Sunrise Highway; and Conklin Street from Route 110 to Secatogue Avenue.
- Included an assessment of existing conditions for transit services, land use, and zoning within and in the vicinity of the study area. This information helped to characterize the study area and its potential to accommodate/attract BRT ridership, and also informed the suggested location of BRT stations.

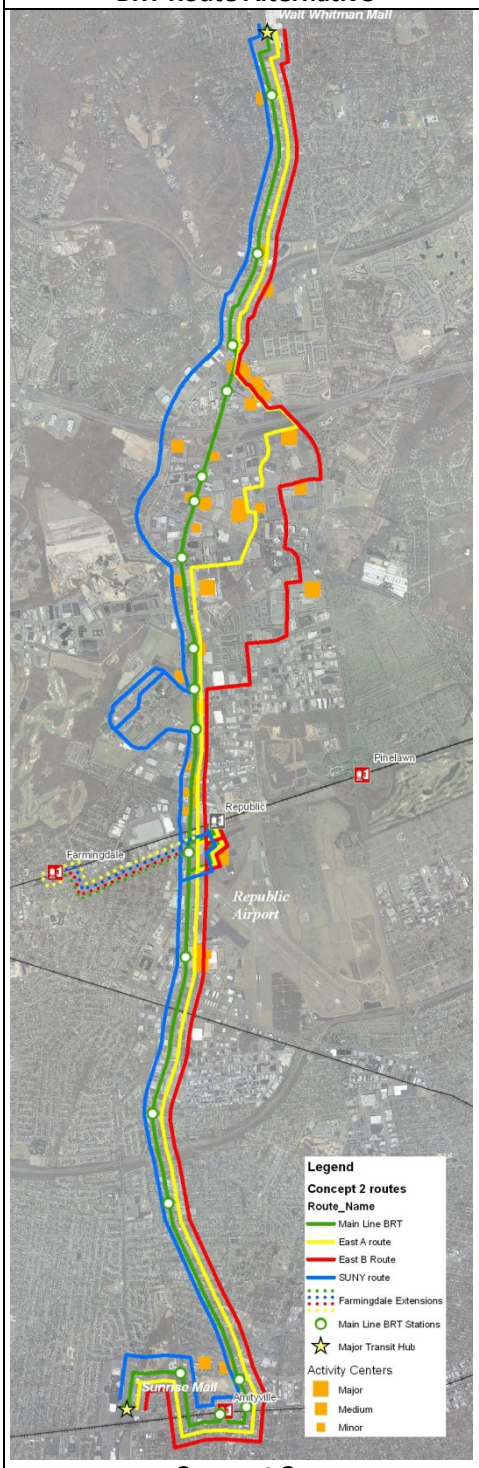
  - Appendix 3 in the Route 110 BRT Study featured a detailed analysis of land use and zoning, as well as identification and preliminary evaluation of future TOD opportunity areas, which are discussed below.

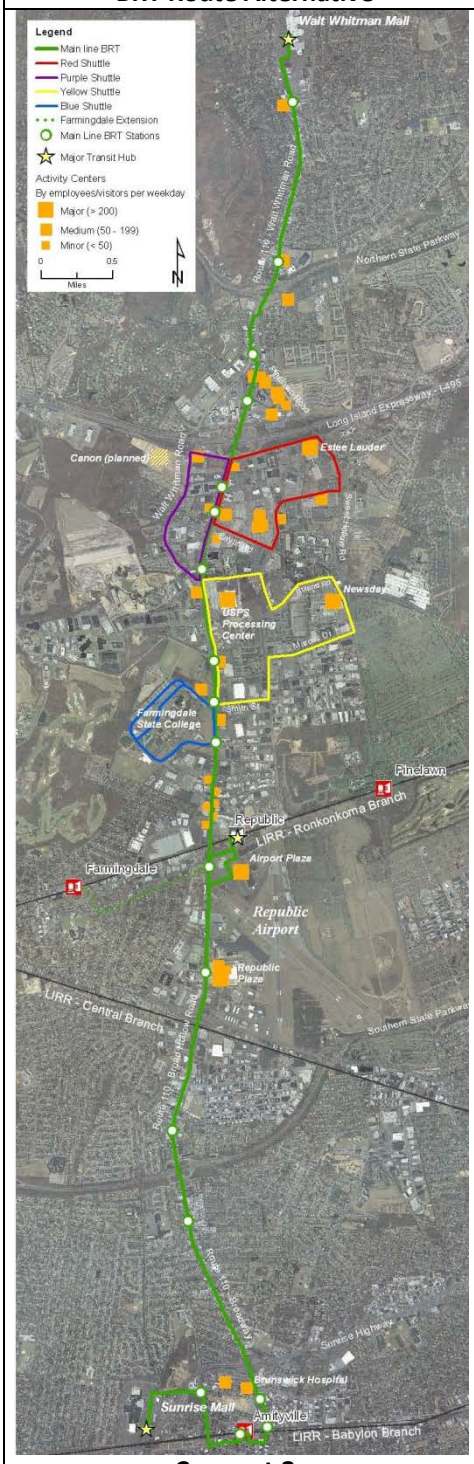
- Included an evaluation of suitability for BRT along different segments of the corridor within the primary study area, based on criteria including: ability of roadway to host BRT lanes and/or queue jumpers at intersections; ability of roadway to host other BRT elements (e.g., traffic signal priority [TSP]); compatibility of BRT with adjacent land uses; presence of weekday and seven-day-per-week activity centers and major traffic generators; presence of existing public transportation services; ability to connect with existing and proposed public transportation services; and ability to support future transit-oriented development. Several potential roadway alignments within the primary study area were considered candidates for BRT service.
- Proposed and evaluated four BRT routing concepts to satisfy the project's goals and objectives and to address a key challenge in planning BRT service to serve the Route 110 study area, namely that major destinations (e.g., employment centers, universities, institutional, shopping, cultural, entertainment venues, etc.) are dispersed across a wide area of predominantly low-density land uses. In addition, the routing concepts were developed to address the need to serve several potential markets, including: LIRR customers commuting from New York City and Nassau County to employment centers; non-work trips (i.e., college trips, leisure and entertainment trips) from LIRR stations to Route 110 destinations; peak direction trips from Route 110 catchment areas to LIRR stations for connecting rail services to New York City; peak direction trips to Route 110 destinations from LIRR stations east of Route 110; off-peak trips from Route 110 catchment areas to LIRR stations for connecting rail services to New York City; induced customer trips along Route 110 generated by new TOD along Route 110; and through customers along Route 110 using Route 110 as a shortcut between the different LIRR branches or between towns. The four BRT routing concepts would address the dispersed nature of Route 110 corridor development in different ways, including the use of connecting circulator mini-buses and diversions from Route 110, as follows:
  - (1) main line BRT service only;
  - (2) main line BRT service that splits off Route 110 and circulates within office parks;
  - (3) main line BRT service with coordinated/connecting shuttle bus loops off main line stations; and
  - (4) main line BRT service with coordinated/connecting shuttle bus loops from gateway transit terminals.
- The Final Report identified advantages and disadvantages associated with each of these four BRT routing concepts, which are summarized in the table below.[1]

[1] In coordination with the previous BRT concepts proposed in the Route 110 BRT Study, Task 5 in this project will include development of a list of potentially feasible Route 110 BRT alternatives to be examined in the alternatives analysis, including a No-Build Alternative, a baseline Transportation System Management (TSM) Alternative, a dedicated running-way BRT Alternative, and an Enhanced Rapid Bus Alternative which operates in mixed traffic with some sections of dedicated bus lanes where feasible.

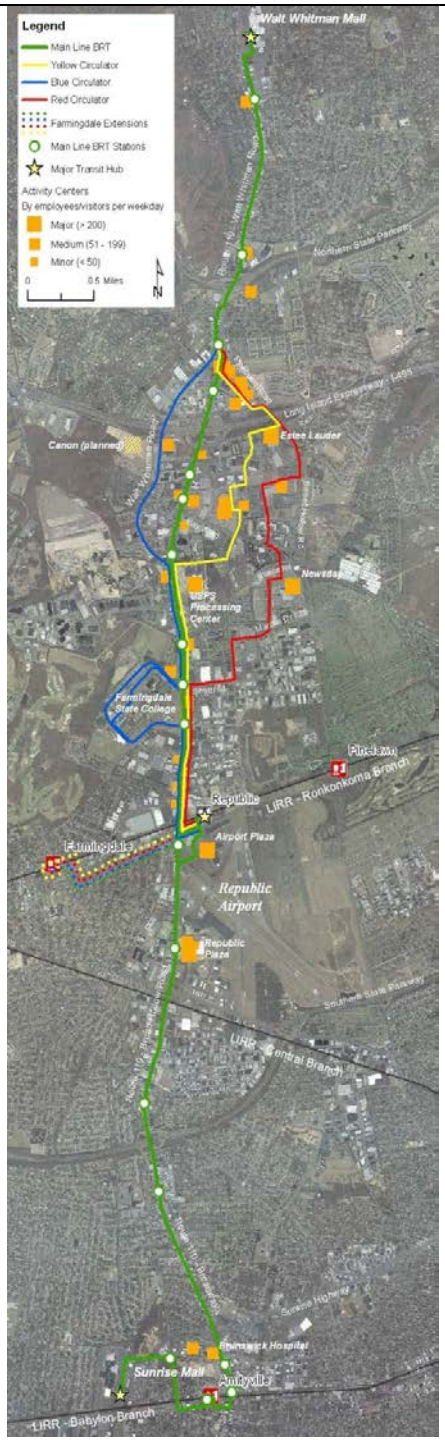
SUMMARY OF BRT ROUTING CONCEPTS FROM ROUTE 110 BRT STUDY FINAL REPORT (2010)

BRT Route Alternative	Description of Concept	Advantages	Disadvantages
 **Concept 1**: *Main Line BRT Service Only*	Concept 1 would serve destinations along Route 110 via BRT but would not provide a connection to destinations located off Route 110. To capture as much ridership as possible, the service would be anchored at two regional shopping centers: Sunrise Mall at the south end of the service corridor, and the Walt Whitman Shops (previously the Walt Whitman Mall) at the north end of the service corridor.	▪ This concept would offer improved transit service along Route 110 at lower cost than the other alternatives. ▪ This concept would provide supplemental service to the local S1 bus with limited stop BRT service along Route 110, providing faster service. ▪ For customers going to destinations served by both BRT and the S1, there would be more frequent transit service.	▪ Customers going to destinations off Route 110 could have a long walk, or if beyond walking distance, no direct transit service.

BRT Route Alternative	Description of Concept	Advantages	Disadvantages
 **Concept 2**: *Main Line BRT Service that Splits Off Route 110 and Circulates within Office Parks*	Concept 2 would provide Route 110 BRT service with route diversions to circulate through adjacent office parks. Like a rope frayed in the middle, this service concept envisions Main Line BRT operating between Sunrise Mall and the Walt Whitman Shops. To serve the various employment centers that are located east and west of Route 110, there are multiple BRT route variations, as follows: ▪ Would remain entirely on Route 110 ▪ Would split off Route 110 at a reopened Republic LIRR Station to serve New Highway ▪ Would split off Route 110 at Republic LIRR Station to serve Wellwood Avenue ▪ Would split off Route 110 to serve Farmingdale State College and Walt Whitman Road. At the northern end, near Pinelawn Road and Route 110, these various routes would rejoin to operate via Route 110 to the Walt Whitman Shops.	▪ This concept would provide a one-seat ride from the northern and southern portions of the service corridor to destinations in the middle of the service corridor. ▪ Due to multiple overlapping BRT routes in the northern and southern portion of the service corridor, BRT service could be very frequent.	▪ There would be lower service frequency on the individual sub-routes off Route 110. ▪ This concept would be the most capital and service intensive as it would involve multiple overlapping BRT routes. ▪ This concept would require a larger fleet of BRT vehicles and bus drivers compared to the other alternatives, which would translate into higher capital cost as well as operating and maintenance costs.

BRT Route Alternative	Description of Concept	Advantages	Disadvantages
 **Concept 3**: *Main Line BRT Service with Coordinated/Connecting Shuttle Bus Loops Off Main Line Stations*	Concept 3 would provide Route 110 BRT service with coordinated connecting shuttle-bus loops off Route 110 BRT stations. This concept would combine the directness of the Main Line BRT service with timed, shuttle-bus connections at major BRT stations between a reopened Republic LIRR Station and Pinelawn Road.	▪ This concept would provide front-door service to minimize walking distances. ▪ Shuttle buses or vans would be timed to meet arriving BRT vehicles and would offer connections placed as close as possible to minimize connecting distances. ▪ The shuttle bus loops would be limited in route length in order to provide service to specific off-line destinations without incurring lengthy travel times that could reduce their reliability. ▪ Circulator routes routed to specific office parks could provide an opportunity for corporate partnership, such as branding and sponsorship.	▪ This concept would require customers to transfer between BRT buses and shuttles, which could reduce potential ridership.[2] ▪ While Main Line BRT vehicle needs would be reduced compared to Concept 2 (as there would be less overlapping Main Line BRT Service), this would be somewhat offset by the need to procure and operate several connecting vans.[3]

[2] However, if convenient and reliable transfers are offered, they can help overcome some of this "transfer penalty."
[3] However, such vans would be less expensive than Main Line BRT vehicles.

BRT Route Alternative	Description of Concept	Advantages	Disadvantages
 **Concept 4**: *Main Line BRT Service with Coordinated/Connecting Shuttle Bus Loops from Gateway Transit Terminals*	Concept 4 would provide coordinated connecting shuttle-bus loops (similar to Concept 3) from transit centers located at Farmingdale or Republic LIRR Stations and at Sweet Hollow Road. This concept is a variation of Concept 3, in that the loop shuttles would be lengthened and extended to originate from two transit gateways: a southern gateway at a reopened Republic LIRR Station and a new northern gateway transit center proposed at Route 110 and Sweet Hollow Road (or vicinity). Three or four circulator BRT shuttle routes would provide connections from both transit gateways, as well as from select Route 110 BRT stations to serve different sections of the service area to the east and west of Route 110. An unusual feature of this service would be that some shuttles could be routed via parking lots located at the rear of employment centers. BRT stations could be located in the parking lot, not on the street in front of the major employment centers.	▪ Both transit gateways would be anchors that could provide convenient connections to other transit services, offer car rental or car sharing, bike station parking, and serve as a TOD focal point. ▪ BRT stations located at the rear of buildings (where many motorists enter the building) could offer a more inviting place to wait for the BRT shuttle—away from fast-moving street traffic—while offering a shorter walk to the building. ▪ In some instances, if agreement could be reached to build short (typically less than 30 feet) sections of connecting busways, several parking lots could be linked, which would allow BRT shuttles to travel in a more direct path between major employment centers, than if the shuttles had to return to the street. ▪ Circulator routes to specific office parks could provide an opportunity for corporate partnership, such as branding/sponsorship. ▪ Unlike Concept 2, Main Line BRT vehicles would be limited to Route 110, where ridership demand is greatest. This combination of Main Line BRT vehicles and smaller, less costly circulator vehicles would reduce capital/operating costs.	▪ This concept would require customers to transfer between services, which could reduce potential ridership.[4] ▪ This concept would require a transfer to access destinations located off Route 110.

Source: Route 110 BRT Study Final Report (2010)

[4] However, if convenient and reliable transfers are offered, they can help overcome some of this "transfer penalty."

- Evaluated the four BRT concepts based on total route miles, number of stations/stops, access/total travel time, frequency, in-vehicle travel time (as a proportion of total travel time), number of transfers, capital cost (including vehicles), and annual operating cost. The table below shows the complete evaluation matrix for the four concepts. Appendices 1 and 2 in the Route 110 BRT Study provided detailed capital and operating cost estimates, respectively, for the four BRT concepts.

ROUTE 110 BRT CONCEPTS EVALUATION MATRIX

	Concept 1	Concept 2	Concept 3	Concept 4
Total Route Miles	12	52	23	28
Number of Stations/Stops	20	41	37	41
Access/Total Travel Time				
Republic Station to Huntington Quadrangle (eastern entrance)	◑	●	●	●
Amityville to Farmingdale State College	◑	●	●	●
Walt Whitman Mall to Newsday	○	●	●	●
Estee Lauder to Ruby Tuesday (Route 110, just north of Daniel)	○	●	●	●
Frequency				
Republic Station to Huntington Quadrangle (eastern entrance)	●	○	●	●
Amityville to Farmingdale State College	◑	○	●	●
Walt Whitman Mall to Newsday	○	○	●	●
Estee Lauder to Red Robin (Route 110)	○	○	●	●
In-vehicle travel time (as a proportion of total travel time)				
Republic Station to Huntington Quadrangle (eastern entrance)	◑	●	●	●
Amityville to Farmingdale State College	◑	●	●	●
Walt Whitman Mall to Newsday	NA	●	●	●
Estee Lauder to Red Robin (Route 110)	NA	●	●	●
Number of transfers				
Republic Station to Huntington Quadrangle (eastern entrance)	●	●	◑	◑
Amityville to Farmingdale State College	●	●	◑	◑
Walt Whitman Mall to Newsday	NA	●	◑	◑
Estee Lauder to Red Robin (Route 110)	NA	●	◑	◑
Capital Cost (including vehicles)	$34.96M	$36.85M	$37.00M	$37.30M
Annual Operating Cost	$2.8M	$3.0M	$3.9M	$4.3M

● = Good ◑ = Fair ○ = Poor

Source: Route 110 BRT Study Final Report, Table 5

- Suggested the following BRT elements that could be applicable, regardless of the specific routing concept: attractive vehicles; branding; BRT stations with multi-modal access; traffic priority (including bus lanes, queue jumpers, and TSP); real-time passenger information; off-board, pre-paid fare collection; transit-oriented development.
- Identified existing roadway conditions along the Route 110 corridor, including the presence and width of shoulders and whether there are curb-side parking regulations, and suggested potential BRT treatments (i.e., exclusive lane or queue jump) that could be implemented along the individual segments that comprise the corridor.

- Included a computerized simulation of potential BRT priority treatments to evaluate the benefits of implementation to transit users and the potential negative impact to traffic operations for non-BRT vehicles, based on a number of measures of effectiveness, including average travel times, travel time delay, travel speed, vehicular queue lengths, and intersection approach delays.
  - The simulation was performed on a two-mile segment of Route 110—from Bethpage-Spagnoli Road south to Conklin Street—which was selected as the sub-area because it showed significant traffic operation challenges under existing (2009) conditions, and thus could be used to conservatively assess the feasibility of implementation within the overall study area.
  - The assessment compared three scenarios—existing (2009) conditions; no-build (2015) conditions; and build (2015) conditions with implementation of BRT priority treatments—and included an evaluation of traffic operations at the following 6 intersections within the sub-area: Route 110 and Bethpage-Spagnoli Road, Route 110 and Ruland Road, Route 110 and Smith Street, Route 110 and Melville Road/Milbar Boulevard, Route 110 and Daniel Street/Gazza Boulevard, and Route 110 and Conklin Street (Route 24).
  - The assessment confirmed the preliminary feasibility of implementing BRT priority treatments in the sub-area, and concluded that additional in-depth study and evaluation would be warranted to determine the benefits and potential impacts along the entire corridor over several study periods.
  - The detailed results of this sub-area simulation were included as Appendix 4 of the Route 110 BRT Study.
- Identified potential transit-oriented development sites in the vicinities of potential BRT stations/stops, which could help focus higher-density, more pedestrian-friendly development around BRT stations and thereby feed potential new customers to BRT.
  - The study identified a number of future opportunity areas, which are those parcels or areas that are: vacant; underutilized based on zoning potential; characterized by uses that have the potential for redevelopment due to market conditions; located at key points or locations along the Route 110 corridor; and/or owned by local, state, or federal governments. Specifically, the future opportunities areas were identified as: Walt Whitman Road/Pinelawn Road intersection; Long Island Expressway to Duryea Road frontage; vacant parcels at Ruland Road; vacant parcels at Town of Huntington/Town of Babylon border; Farmingdale State College frontage; potential re-opened Republic LIRR Station; vacant parcels south of Conklin Street; former golf driving range north of Michael Road; Great Neck Road; former New York State Department of Motor Vehicles building south of the Southern State Parkway; mobile homes park in North Amityville/Village of Amityville; vacant parcels at Ronald Drive; vacant parcels at Smith Street; former Brunswick Hospital south of Sunrise Highway; surface parking at Amityville LIRR Station.[5]
- Indicated that implementation of BRT in the Route 110 corridor would require identification of both initial funding for construction and long-term funding for operations and maintenance, and potential funding sources could include public funding from federal, state, and local sources, as well as private funding.

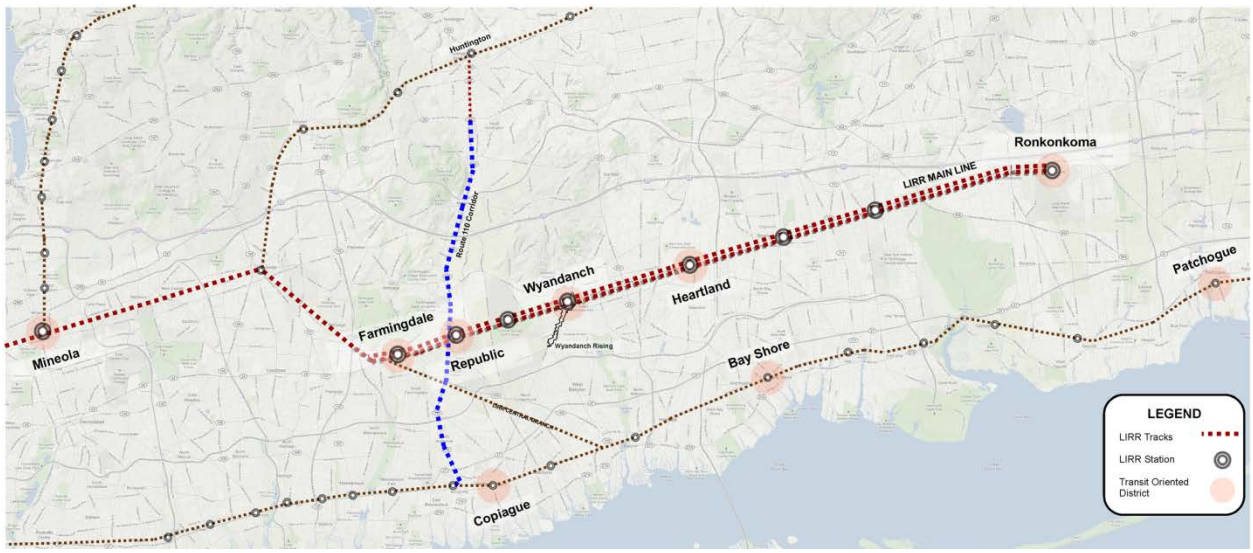
[5] An updated assessment of future opportunities areas will be included in a subsequent task as part of the alternatives analysis project.

- Concluded that: (1) significant transit demand exists within the Route 110 corridor; (2) the available right-of-way is capable of accommodating transit priority treatments; and (3) strong activity centers to support BRT are located throughout the study area.
- Identified that next steps in advancing BRT for Route 110 would include preparation of ridership estimates, development of preliminary design plans and detailed BRT operating plans, assessment of potential environmental and community issues, public outreach, and preparation of refined capital and operational cost estimates. Evaluation and refinement of alternatives would be followed by selection of a Locally Preferred Alternative (LPA) to enter project development, consistent with the requirements of FTA's New Starts process.[6]

2.2 CONNECT LONG ISLAND: A REGIONAL TRANSPORTATION AND DEVELOPMENT PLAN (2011)

In October 2011, Parsons Brinckerhoff prepared the *Connect Long Island* plan for the Town of Babylon as a complement to the Route 110 BRT Study. Articulated in this plan is County Executive (then Babylon Town Supervisor) Steven Bellone's vision for an integrated transportation and development strategy to achieve sustainable economic growth for the region.

ROUTE 110 & THE CONNECT LONG ISLAND PLAN



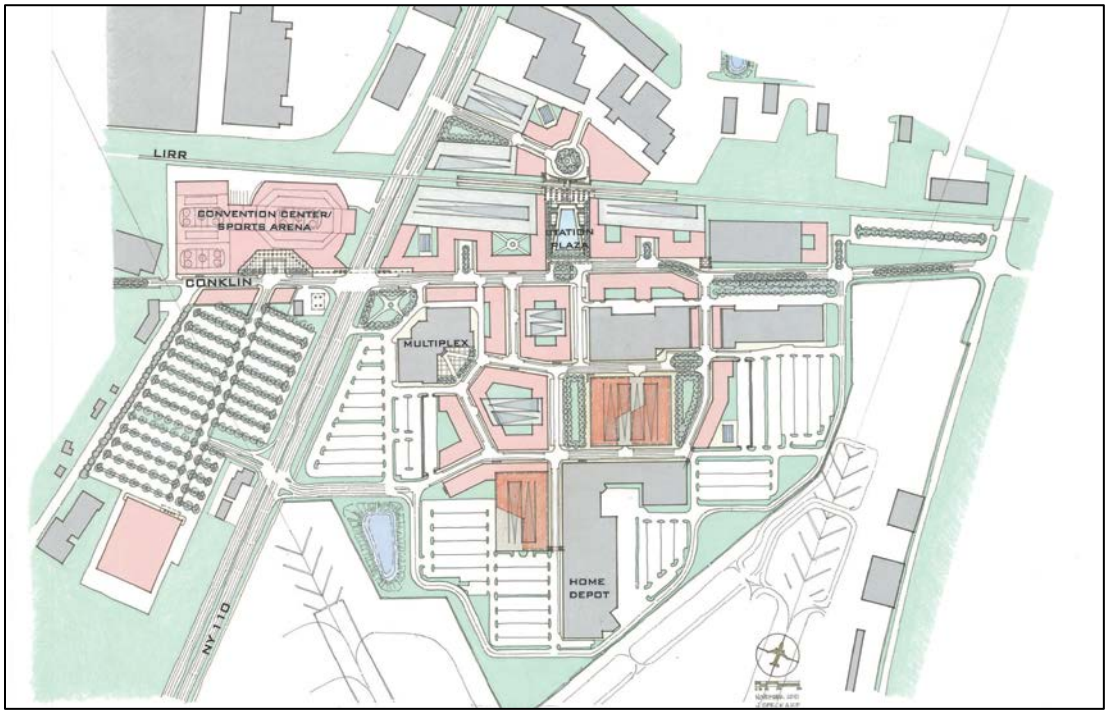
Source: Connect Long Island (2011)

- Outlined three mutually-supportive mandates that can collectively enable Long Island to realize its long-term economic development potential.
  - (1) Build mixed-use communities around Long Island Rail Road stations to create walkable, transit friendly development hubs (i.e. transit oriented developments).
    - Pertinent to Route 110 BRT, the Connect Long Island Plan calls for an East Farmingdale TOD clustered around the new (re-opened) LIRR Republic Station. Currently a traditional strip

[6] As discussed previously, MAP-21 reformed FTA's discretionary program for funding New Starts and Small Starts, and thus the rules on eligibility, the approval process, and the rating criteria have all changed.

shopping center, this site is proposed to be transformed into a walkable town center with an active blend of retail, residential, and entertainment options reoriented around pedestrian access. (Refer to Appendix A for additional details about the proposed East Farmingdale TOD.) The new Republic Station would be the anchor for the surrounding, proposed TOD and would be a new multi-modal transportation center for Route 110 BRT service. BRT shuttle buses would fan out from this station, providing "last mile" connections to/from major employers, universities, and other areas of interest.

THE ILLUSTRATIVE PLAN FOR EAST FARMINGDALE TOD



Source: East Farmingdale Center, Babylon, NY: A Transit-Oriented Redevelopment Plan (2011); Speck & Associates LLC

- (2) Make transportation investments to improve LIRR connections and services between development hubs. These investments include:
  - LIRR Second Track/Ronkonkoma Yard, which will reduce overcrowding, enhance service reliability, enable reverse commuting, and support the mixed-use developments on the Main Line;
  - Reopening the Republic Station, which will permit the development of a TOD at this location and improve access to destinations along Route 110; and
  - The East Side Access project, which will improve access to Manhattan's East Side while increasing peak hour service to Penn Station and reverse commute service.
- (3) Connect development hubs to regional job centers by creating north-south mass transit connections.

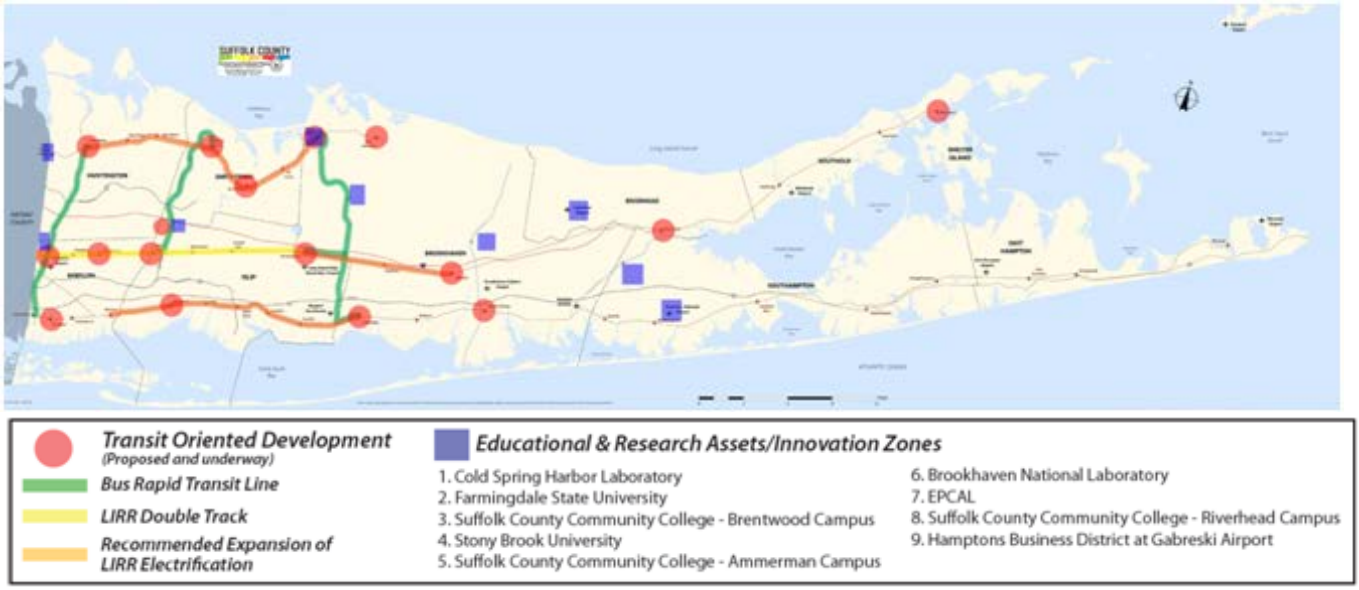
- BRT on Route 110 would directly connect the Babylon and Ronkonkoma Branches of the LIRR, and would provide a connection to the Huntington Branch via a transfer to the HART Bus System.

- Summarized the benefits of implementation of the Connect Long Island Plan, which include job creation and economic growth, housing opportunities and livability, mobility, and sustainability.

2.3 SUFFOLK COUNTY BRT FEASIBILITY STUDY, PHASE I (2014)

In 2013, Suffolk County initiated a BRT Feasibility Study to advance the *Connect Long Island Plan* by identifying key north-south corridors within the County suitable for BRT service. The principal objectives of the study were to identify three preferred BRT corridors, describe the BRT elements suitable for each conceptual corridor, and develop a preliminary implementation plan, along with recommended next steps.

SUFFOLK COUNTY & THE CONNECT LONG ISLAND PLAN



Source: Suffolk County Department of Economic Development and Planning, distributed at Suffolk County BRT Feasibility Study Kick-off Meeting, 06/06/2013

- Included the following interim deliverables: identification of 10 potential corridors (selected from 35 initial corridors) for BRT consideration; development of a criteria screening process that was used to evaluate the 10 potential corridors; technology assessment, including the need for and feasibility of implementing BRT priority treatments along each of the 10 potential BRT corridors; corridor assessment of the 10 potential BRT corridors, resulting in the identification of the three preferred north-south BRT corridors; and development of service plans, treatments, and funding options for the three preferred north-south BRT corridors.

CORRIDOR EVALUATION PROCESS



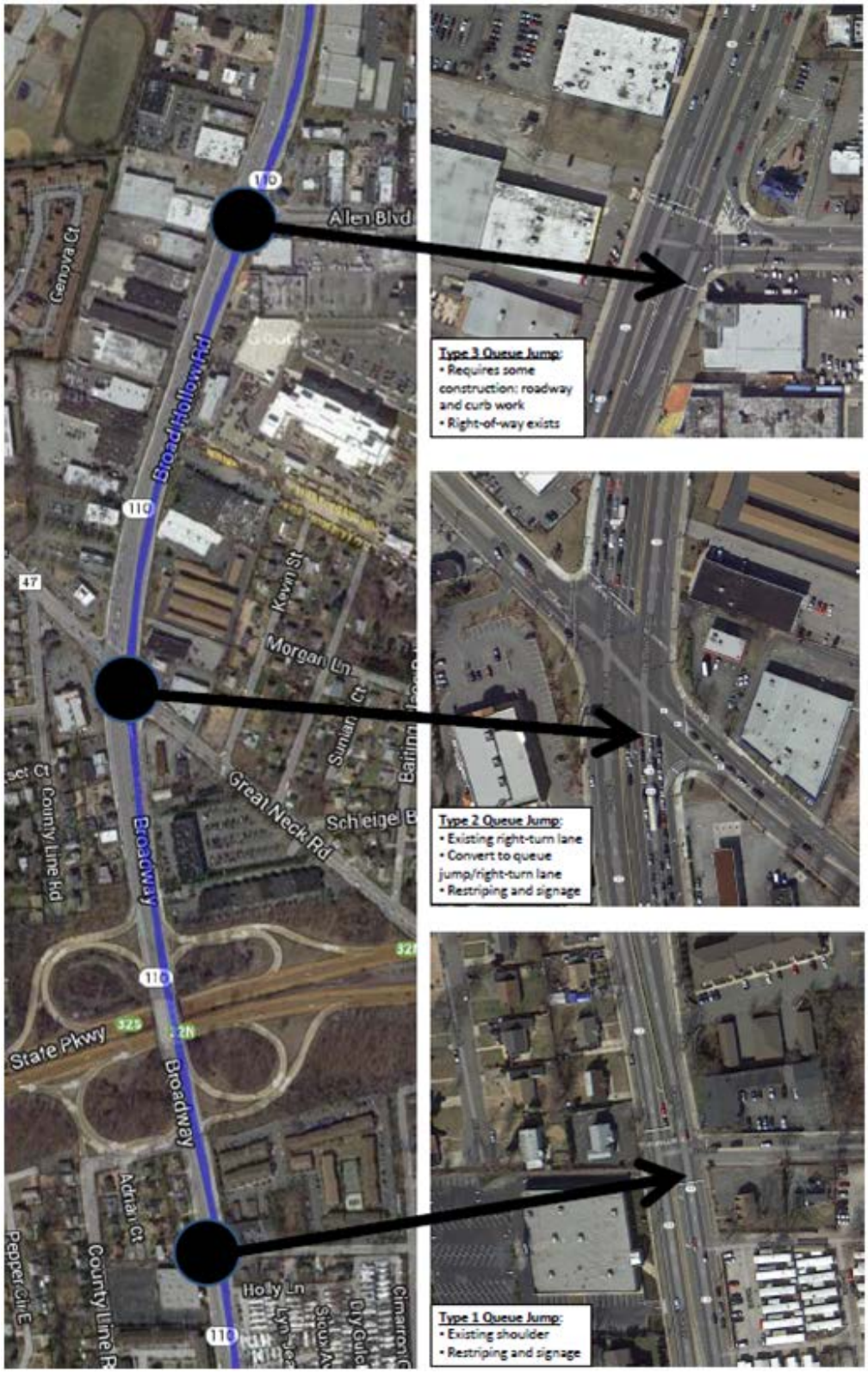
Source: Suffolk County BRT Feasibility Study, Phase I Final Report (Draft, 03/11/14)

- Identified the following three preferred north-south BRT corridors:
  - Amityville-Huntington (via Route 110)
  - Patchogue-Stony Brook (via Nicolls Road)
  - Deer Park-Kings Park (via Sagtikos Parkway)
- Divided BRT implementation into two phases along each of the three preferred corridors, distinguishing between near-term (Phase I) and long-term (Phase II) improvements based on relative ease of implementation—informed by an intersection typology (Type 1, Type 2, and Type 3) described and shown in the figure below—as well as consideration of existing and projected future traffic congestion.[7] Phase I implementation consisted all Type I and some Type 2 intersections, and Phase II consisted of some Type 2 and all Type 3 intersections, with the latter requiring some construction work to add queue jumps, which would therefore be more costly and complex.
  - Type 1 Intersection – The existing shoulder could be used for a queue jump. Implementation would require restriping of the shoulder—and potentially the restriping of existing travel lanes—as well as the addition of signage to identify the portion of the ROW that is dedicated exclusively to buses. Type 1 intersections could also potentially require changes to curbside regulations if on-street parking or loading is currently permitted. Additionally, depending on the frequency of BRT service along the respective corridors, it would need to be confirmed whether the existing shoulders are full-depth to accommodate the weight of BRT vehicles.
  - Type 2 Intersection – An existing right-turn lane could be converted to a combined queue jump/right-turn lane. Implementation would require restriping of the existing right-turn lane—and potentially the restriping of portions of the shoulder—as well as the addition of signage to identify the portion of the ROW that is dedicated exclusively to buses and turning vehicles.

[7] While the addition of dedicated shoulder-running bus lanes could be considered as part of a longer term implementation strategy, the implementation plans for the three preferred BRT corridors focused on intersection-specific recommendations for queue jumps with TSP. Based on field observations, most of the travel delay along the corridors was concentrated at and near the approaches to signalized intersections, and thus it was concluded that queue jumps with TSP could provide a cost-effective means to improve travel times.

- Type 3 Intersection – It is possible to add a queue jump to the intersection using the existing mapped ROW, but implementation would require some roadway widening and/or curb construction work, in addition to roadway restriping and signage.

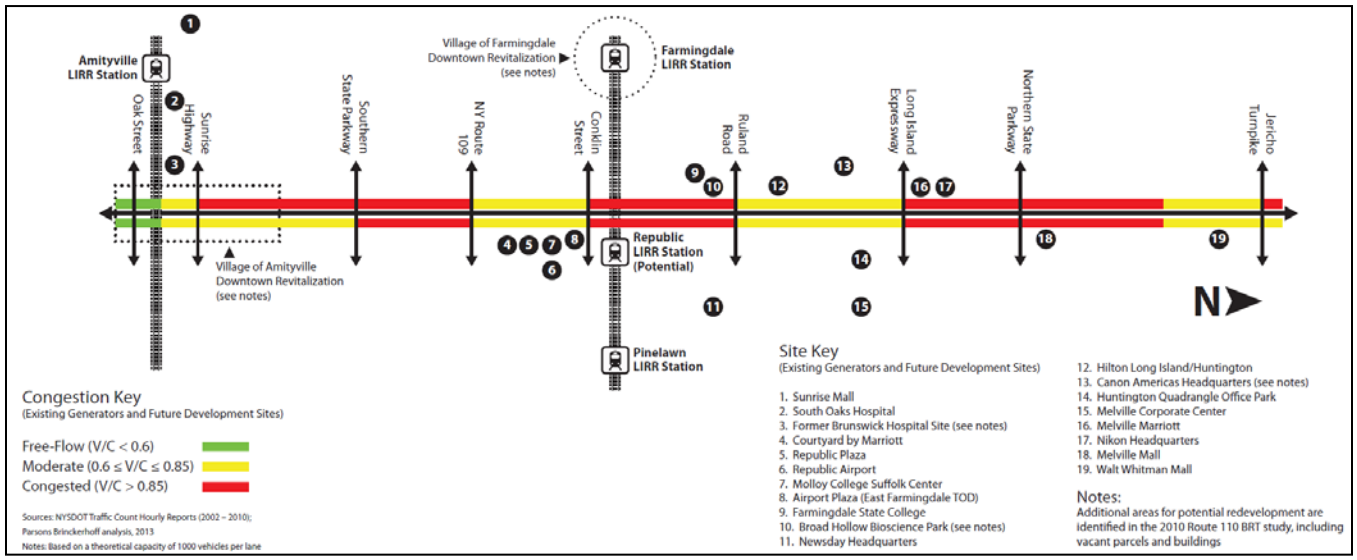
REPRESENTATIVE INTERSECTION TYPES FOR QUEUE JUMP IMPLEMENTATION



Source: Suffolk County BRT Feasibility Study, Phase I Final Report (Draft, 03/11/14)

- Included the following pertinent findings regarding the Route 110 corridor:
  - The BRT service plan and route system that were developed for Route 110 were generally consistent with the recommendations made in the 2010 Route 110 BRT Study, except that the route extended north of Jericho Turnpike to Halesite (to reflect the full corridor length of Route 110) and did not consider alternative concepts to serve the "last mile" connections off Route 110 because the focus was on the main spine of the corridor. It was noted in the study that the Town of Babylon would be conducting an Alternatives Analysis for the Route 110 corridor to develop a locally preferred alternative.
  - Service would operate every 15 minutes during the peak periods between the Amityville LIRR Station and the Walt Whitman Shops. Off-peak service would operate approximately every 20 minutes.
    - No specific adjustments are recommended for the local service along NY 110 at this time; however, adjustments should be considered as needed. For example, Route S1, which serves most of the corridor, may be able to serve some of the offline stops in order to allow the BRT service to remain on NY 110, thus keeping BRT travel times low. Route S1 also could be adjusted to serve parallel/nearby roadways at some locations, providing some of the feeder route service that would be needed to access many of the employers along the corridor.
  - Service would operate seven days per week, from early in the morning to late in the evening. The span would be shorter on weekends than during the week.
  - Nearly the entire corridor experiences moderate to severe congestion during the peak period under existing conditions, and future traffic conditions are estimated to become more severely congested, which indicates that the corridor could benefit from implementation of preferential BRT treatments.

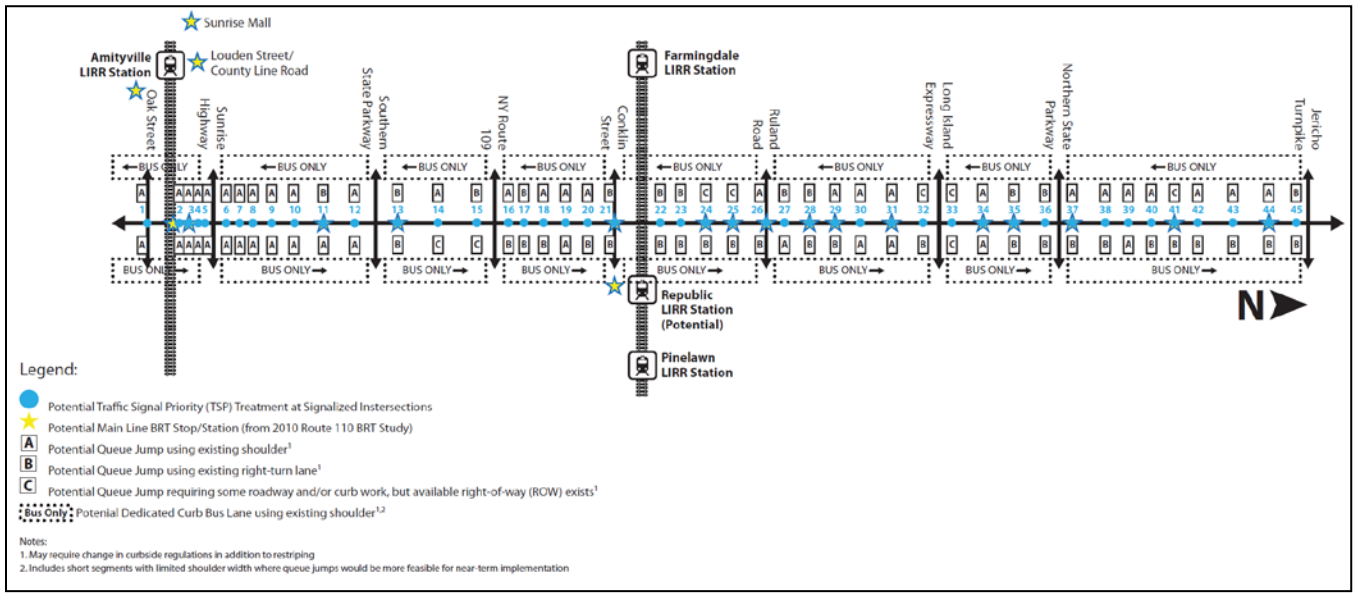
PROBLEMS & OPPORTUNITIES ALONG THE ROUTE 110 CORRIDOR



Source: Parsons Brinckerhoff, 2013

- The section of the corridor that is most conducive to implementation of a dedicated bus lane is the approximately 9-mile stretch along NY 110 between the Southern State Parkway and Jericho Turnpike, where there is a consistent shoulder of sufficient width (10+ feet) with minimal on-street parking based on field observations.[8]
- Along the southern section of the corridor—south of the Southern State Parkway—the opportunities to implement a dedicated bus lane are more constrained due to the combination of narrower shoulders and moderate to heavy utilization of available curbside parking.
- Throughout the corridor, there are many opportunities to implement targeted BRT treatments at signalized intersections, specifically, queue jumps with TSP.
  - While some signalized intersections could accommodate queue jumps/TSP by either using the existing shoulder or converting existing right-turn lanes into shared queue jumps/right-turn lanes, other intersections would require redesign and construction work.

POTENTIAL BRT TREATMENTS ALONG THE ROUTE 110 CORRIDOR



Source: Parsons Brinckerhoff, 2013

- Ridership estimates for BRT and local bus routes along the corridor are shown below.[9] The last column illustrates the projected number of new trips that would be generated; these "new trips"

[8] The evaluation of the feasibility of implementing dedicated bus lanes was based on a preliminary assessment of the physical characteristics of the roadway and surrounding ROW. This preliminary assessment would need to be supplemented by a detailed analysis of such factors as pavement depth of existing shoulders (for shoulder running), potential restrictions caused by overpass clearances at grade-separated crossings, potential environmental impacts resulting from roadway widening, and consistency with State, County, and municipal complete streets legislation.

[9] Estimates of existing (local bus) ridership were prepared using a methodology (described in the Task 7 Report from the Suffolk County BRT Feasibility Study) based on existing Suffolk County Transit bus ridership at each stop, utilizing ridecheck data collected for the 2008 *Suffolk County Transit Study*. Projections were then prepared for future ridership (upon implementation of BRT service) on both the new BRT service in the corridor, as well as remaining local bus ridership, based on elasticities for frequency and travel time improvements, as well as proposed development projects along the corridors. For each development, the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition (2012) was

represent a combination of trips that are made by a different mode (e.g., rail, private automobile) today, and trips that are generated by new development along the corridor. Due to the uncertainty of long-term development, as well as the horizon date for Phase 2 implementation, ridership estimates are only provided for Phase 1.

ESTIMATED LOCAL BUS AND BRT RIDERSHIP ON THE ROUTE 110 CORRIDOR

Corridor	Existing Ridership	Phase 1 Ridership			Net Gain in Ridership
		Local	BRT	Total	
Amityville-Huntington (via ***NY Route 110***)	3,000	2,400	1,300	3,700	23%

Source: Suffolk County BRT Feasibility Study, Phase I Final Report (Draft, 03/11/14)

- Included order-of-magnitude travel times that were calculated based on existing transit schedules (existing travel times) and travel time runs conducted by the Suffolk County BRT Study Team along each corridor (projected travel times). Additionally, an interim deliverable included an appendix of estimated travel time savings by corridor that were calculated for illustrative purposes based on standard assumptions that do not reflect specific conditions along each corridor.
  - Indicated that a subsequent phase of analysis in the Suffolk County BRT Study will include a closer look at individual intersections and decisions as to where roadway and signal improvements will take place, and thus will allow for a more accurate analysis of travel time savings.
- Concluded that the following items would need to be developed more fully during a subsequent design phase: the location, type and size of new regulatory signs governing priority bus operations (e.g., ground mounted versus overhead signs); modifications to adjacent signs governing curb and on-street parking regulations; possible application of unique (color) pavement marking treatments to designate bus lanes; dimension (width and length) of bus lane and transitions; location of bus stops; and modifications to traffic signal heads and poles to accommodate TSP.
  - Noted that implementation of TSP would require jurisdictional coordination regarding traffic signalization/timing and the maintenance of signals.
  - Noted that the findings for the feasibility of implementing TSP, as well as queue jumps, were not based on traffic analyses or impact assessment on through and cross-street traffic, which should be conducted in a subsequent phase of study.
- Identified the following next steps in advancing the three preferred BRT routes for implementation: coordinate land use and transportation planning; analyze each individual preferred corridor and select an LPA; engage County and Town agencies and local elected officials; and develop a funding strategy.
- Included the following key overall findings:

consulted to estimate the total number of trips likely to be generated by each development. These numbers were then adapted to represent only transit trips, based on Suffolk County's current transit mode share. The ridership forecasting methodology from the Suffolk County BRT Feasibility Study can be included in an Appendix of the Alternatives Analysis or a technical memorandum for Task 10 (Evaluation of Remaining Alternatives), as the work in Task 10 includes an analysis of ridership forecasts.

- BRT is feasible in Suffolk County; three north-south corridors have the most potential for BRT implementation. There are a number of strong assets, and existing and planned developments located along each corridor to support BRT.
- BRT service on the Amityville-Huntington (via NY Route 110), Deer Park-Kings Park (via Sagtikos Parkway) and Patchogue-Stony Brook (via Nicolls Road) corridors is physically and operationally viable. BRT can be implemented along these corridors incrementally, beginning with key segments and stations, and can be expanded to additional stops as new development is completed and demand warrants.
- The proposed BRT improvements and technologies, and service and implementation plans along each priority corridor, provide strategic connections to many of Suffolk County's unique assets and TODs, and are aligned with the goals and objectives of County Executive Steven Bellone's *Connect Long Island* regional transportation and development plan.
- This study identified a number of benefits associated with the implementation of BRT in Suffolk County, illustrating its potential to generate significant economic growth, transform the existing transportation network and improve quality of life for Suffolk County residents.
- Implementation of the suggested BRT concepts, in conjunction with the appropriate land use and zoning policies, could transform travel along each of the preferred corridors, and reap enormous economic benefits similar to other BRT systems throughout the United States.
- Additional analysis is planned to further define the BRT program and to quantify the measures required by the FTA to evaluate the merits of the project for funding.
    - Specifically, a subsequent study will conform to FTA's requirements to apply for funding under the Small Starts Program, consistent with the requirements according to MAP-21. Through this subsequent study, the County will:
        - Conduct the service and financial planning necessary to establish an LPA;
        - Refine service plans, capital and operating costs, estimate ridership and develop measures of the project's effectiveness;
        - Complete the FTA's project delivery application and the environmental review required under the National Environmental Policy Act; and
        - Secure a place in the NYMTC Transportation Improvement Plan to become eligible for additional Federal funding to implement BRT for each corridor.

Appendix A:

Inventory of Previous and Ongoing Planning Efforts

BRT/Bus Studies & Reports			
Report/Study	**Year Published & Sponsor**	**Overview & Findings**	**Link (if available online)**
Suffolk County BRT Feasibility Study, Phase I	Forthcoming, Suffolk County	▪ Refer to Section 3.3 in the main body of this technical memorandum for a detailed summary.	N/A
Route 110 BRT Study Final Report	2010, Town of Babylon, Town of Huntington, and MTA LIRR	▪ Refer to Section 3.1 in the main body of this technical memorandum for a detailed summary.	townofbabylon.com/DocumentCenter/View/492
Modernization Study for HART Bus Operations	2010, Town of Huntington	▪ The Town of Huntington undertook this analysis of individual bus routes and the entire bus network with the goal to assure that service satisfies current needs and responds to those of the future. ▪ The report includes a summary of service area characteristics, the existing transit system, a bus rider survey, stakeholder interviews, route diagnostics analysis, service standards, and recommendations. ▪ Various route alternatives were considered and evaluated, ultimately leading to a recommended plan. The recommended plan changes the current bus routes in terms of alignment and coverage, and makes suggestions with regard to the frequency and span of service.[10] A staging plan is specified to indicate the year in which the changes are slated for implementation during the next five years. In addition to service changes, the recommended plan presents a capital program which includes new bus purchases, maintenance and passenger facilities, as well as passenger amenities such as bus stop signs and shelters. Key operating, ridership and financial forecasts are presented which indicate the impacts of the study recommendations.	N/A
Comprehensive Bus Route Analysis and Service Development for the Suffolk County Transit Public Bus System	2008, Suffolk County	▪ To respond to changes in Suffolk County (i.e., growth in population, jobs and activity centers, as well as changing mobility needs), Suffolk County Transit embarked on a program to analyze individual bus routes and the overall bus system. Based on this evaluation, a comprehensive public transportation development plan will be prepared. ▪ This interim report presented a number of alternatives for the future which includes changes to the existing Suffolk County Transit bus routes and proposals for entirely new bus lines.[10] In the long-term, the new bus lines would suggest that consideration be given to operating a transit network which is a timed-transfer system at additional "pulse points" than just those which are operated today. The proposed modifications to Suffolk Transit include changes to alignment, frequency, and span. They range from relatively modest changes with limited impact on necessary resources to ambitious proposals that would mandate greatly increased funding levels. The timing and dimensions of service changes will depend on available funding along with the pace of residential and commercial development.	http://www.suffolkcountyny.gov/Portals/30/reports/2008/InterimReportServiceProposals.pdf

[10] The proposals within this document with pertinence to the Route 110 corridor and the last mile connections will be considered as part of the alternatives development process in Task 5 of this project.

TOD Studies & Reports			
Report/Study	**Year Published & Sponsor**	**Overview & Findings**	**Link (if available online)**
Request for Qualifications (RFQ) for a Master Developer for the Hamlet of East Farmingdale, Town of Babylon[11]	2013, Town of Babylon	▪ The Town of Babylon wishes to solicit qualifications for the purpose of selecting a master developer or master development team to implement a major mixed-use redevelopment of the intersection of Conklin Street and Route 110 in East Farmingdale into an attractive, transit-oriented, pedestrian-friendly, and environmentally sustainable downtown. Through this RFQ, the Town seeks qualifications from experienced mixed-use developers/development teams for the redevelopment of approximately 140 acres that comprise the site located at the intersection of Conklin Street and Route 110. This site development will complement the reopening of the Long Island Rail Republic Road Station and the future planned Bus Rapid Transit (BRT) line on Route 110. ▪ The overall goal of this project is to redevelop the project area with businesses that are economically viable and sustainable through a well-managed and constructed mixed-use development that provides much needed amenities to the community. This project is intended to attract private investment while stabilizing the existing residential neighborhood and should reflect the community's needs as identified in the East Farmingdale Vision Plan, East Farmingdale Transit-Oriented Redevelopment Plan and the Connect Long Island Regional Transportation and Development Plan. ▪ Objectives of the redevelopment of this area include: create a regionally significant destination in a vibrant and mixed-use setting that will meet the needs of East Farmingdale residents today and in the future; secure a feasible and sustainable development; secure a development which integrates its components, operational aspects, designs, and site layouts within the context of existing and proposed transit networks; and provide sufficient development to support the re-opening of the Republic Station and the creation of Bus Rapid Transit on Route 110.	http://bids.townofbabylon.com/awarded-bids/rfp-13g89-request-for-qualifications-for-a-master-developer-for-the-hamlet-of-east-farmingdale-town-of-babylon
East Farmingdale Center, Babylon, NY: A Transit-Oriented Redevelopment Plan	2011, Town of Babylon	▪ The plan described existing conditions of the East Farmingdale TOD redevelopment site, the history of the visioning process, an overview of the design workshop, and the illustrative plan and associated regulating plan/design regulations that emerged from the design workshop. ▪ The illustrative plan called for approximately 3.5 million square feet of mixed-used development, served by just over 11,000 parking spaces, on the site, separated into an Airport Plaza Area, Northern Sector, and Western Sector. The plan noted that the site is planned to serve as the hub of a regional BRT system designed to connect the LIRR to the adjacent Route 110 corridor. ▪ The proposed regulating plan and design regulations would dictate requirements for public spaces, civic structures, streets, sidewalks, alleys, parking, parking design, building uses, building heights, building frontages, building attachments, openings, roofs, retail design, retail signage, LEED requirements, design consistency, block variety, and building variety.	http://www.townofbabylon.com/DocumentCenter/View/597
Connect Long Island: A Regional Transportation and Development Plan	2011, Town of Babylon	▪ Refer to Section 3.2 in the main body of this technical memorandum for a detailed summary.	http://townofbabylon.com/DocumentCenter/View/393
East Farmingdale Vision Plan (East Farmingdale Downtown Center)	2010, Town of Babylon	▪ The East Farmingdale Vision Process dates to 2002, when Suffolk County Executive (then Babylon Town Supervisor) Steven Bellone held a press conference calling for the reopening of the Republic Train Station. A major step forward occurred in 2007, when the East Farmingdale Civic Association issued a letter calling for the reopening of Republic Station, improved bus service, and the development of a vibrant downtown center. Between March and November of 2010, the residents of East Farmingdale gathered on four separate occasions to build on the work previously done and to develop a new, updated vision for their community. The details and results of these meetings are discussed in the Vision Plan. ▪ The visioning process focused on the redevelopment of the 67-acre Airport Plaza shopping center, which is a typical suburban strip retail center with several anchors, including Modell's, a Home Depot, a Borders Books & Music, and Farmingdale Multiplex Cinemas, and approximately 5,000 parking spaces. In general, participants expressed a desire to retain the suburban character of the residential areas of East Farmingdale, while using a regional destination center, such as a museum, convention center, sports arena, or live entertainment venue, to attract people to the Airport Plaza area. This destination center could reflect the identity of the East Farmingdale community. Mixed-use development, with ground-floor retail and office and residential spaces above, was also envisioned for this site. ▪ The plan noted that the Airport Plaza site would host a new/re-opened Republic LIRR Station and a major node of the Route 110 BRT system, providing easy transfer between the two transit modes. Additionally, the plan indicated that designing a walkable, pedestrian-friendly area between the transit stop and the Airport Plaza development would encourage visitors to use mass transit, reducing the need for parking.	http://www.townofbabylon.com/DocumentCenter/View/597

[11] While neither a study nor a report, this RFQ is included in the table because it reflects the next step towards implementation of the TOD as called for in the East Farmingdale Vision Plan, East Farmingdale Transit-Oriented Redevelopment Plan, and the Connect Long Island Regional Transportation and Development Plan.

TOD Studies & Reports			
Report/Study	**Year Published & Sponsor**	**Overview & Findings**	**Link (if available online)**
Places to Grow: An Analysis of the Potential for Transit Accessible Housing and Jobs in Long Island's Downtowns and Station Areas	2010, Long Island Index	▪ This analysis delves into the question of whether or not Long Island has sufficient redevelopment capacity in its downtowns. Using a combination of land use, demographic and infrastructure data, redevelopment potential was evaluated for areas within a half mile of downtown centers and LIRR stations. A key finding was the identification of over 8,300 acres of vacant land and parking lots that could be used for new housing, commercial development and public spaces and facilities. ▪ Amityville and Farmingdale were identified as downtowns with high potential for redevelopment, with 124 acres and 60 acres, respectively, of surface parking, vacant land, and unprotected open space. ▪ The report indicates that new transit investments could significantly expand the potential for TOD. For instance, possible future investments, such as Main Line improvements on the LIRR or rapid bus service on Route 110, could significantly enhance intra-Long Island travel by transit and create the potential for larger employment as well as residential centers.	http://www.longislandindex.org/
Suffolk County Smart Growth Committee Report: Analysis and Prioritization of the Recommendations of the Smart Growth Policy Plan for Suffolk County	2003, Suffolk County	▪ The Policy Plan contains 43 recommendations for County implementation of Smart Growth principles. The recommendations cover a broad spectrum of topics ranging from the provision of training opportunities for zoning and planning board members to the transfer of development rights from County acquired open space.	http://www.suffolkcountyny.gov/Portals/0/planning/Publications/SG112003.pdf
Applying Smart Growth Principles to Suffolk County Towns and Villages	2000, Suffolk County	▪ This report outlined several ways of incorporating Smart Growth initiatives into Suffolk County towns and villages by analyzing encouraging mixed land uses and buildings, a range of housing opportunities, multiple transportation modes, preserving open space and making cost effective development decisions.	http://www.suffolkcountyny.gov/Portals/0/planning/Publications/SG032000.pdf

Rail Studies & Reports			
Report/Study	**Year Published & Sponsor**	**Overview & Findings**	**Link (if available online)**
The Economic and Fiscal Impacts of the Long Island Rail Road Main Line Third Track	2014, Long Island Index	▪ The Third Track project would add an additional track to a 9.8 mile segment of the LIRR Main Line between Floral Park and Hicksville, and would improve reliability through the entire LIRR network, allow significant levels of reverse peak and intra-Island service to Main Line stations, increase capacity for the Port Jefferson / Montauk / Ronkonkoma / Oyster Bay Branches, and achieve the full benefits of East Side Access. ▪ Based on higher levels of service that would be enabled by Third Track, the study quantified time savings that would accrue to existing passengers, increases in ridership, and improvements in the accessibility of workers to Long Island employers. ▪ Key economic and fiscal impacts that would result from the Third Track project include new jobs, increased personal income, increased gross regional product, increase in population, and increases in county sales tax revenue and property tax revenue.	http://www.longislandindex.org/
LIRR Double Track Project – Environmental Assessment (EA)	2013, LIRR	▪ This EA was prepared pursuant to the procedures established under the New York State Environmental Quality Review Act (SEQRA). The proposed action would involve the completion of double-tracking along the LIRR Ronkonkoma Branch between Ronkonkoma and Farmingdale, including ancillary facilities, such as crossovers and platforms, required for operation of the project. ▪ The 17.9-mile Ronkonkoma Branch Main Line operates with 12.6 miles of single electrified track. Completing a continuous second track between Ronkonkoma and Farmingdale would provide several key benefits for LIRR operations and customers: improve service reliability and on-time performance; improve recovery from severe service disruptions; reduce cascading delays from late trains; provide better scheduling of maintenance; improve mobility; increase bi-directional off-peak and intra-Island service; provide reverse service in peak hours; provide reliable rail service for projected local and regional economic growth; support opportunity for additional rail service in the future; and enhance Long Island South Shore resiliency. ▪ Based on the analyses set forth in the EA, no significant environmental impacts would result from the Proposed Action.	http://web.mta.info/lirr/doubletrack/environmentalassessment.htm
How the Long Island Rail Road Could Shape the Next Economy	2013, Long Island Index	▪ The report looks at two LIRR projects that are underway (East Side Access and Double Track to Ronkonkoma) and a third potential project (Main Line Third Track), identifying benefits and challenges associated with each project. ▪ The report discusses the role of the LIRR in the past and future as a catalyst for economic growth. ▪ The report indicates that— in conjunction with improvements to the LIRR—complementary land use regulations, development policies, and investments in sewers and other infrastructure are needed in order to realize the economic development potential of Long Island. ▪ The report notes the ambitious proposal by the Town of Babylon and Suffolk County to create a BRT service along Route 110, as well as the plans for a new Republic LIRR Station and potential redevelopment of the surrounding area. A new Republic Station would provide a hub on the Route 110 corridor that could link improved transit serving employers along the corridor.	http://www.rauchfoundation.org/files/9913/5818/7008/How_the_LIRR_Could_Shape_the_Next_Economy.pdf
MTA Twenty-Year Capital Needs Assessment 2015-2034	2013, MTA	▪ The needs assessment focuses on two areas of capital investment over the next 20 years. First is continuing to rebuild and replace the thousands of assets that comprise the MTA transportation network's vast infrastructure to ensure that the existing systems continue to deliver transportation services safely and reliably for the region. Second is enhancing and expanding the network to address critical transportation needs and to respond to the region's changing travel demands. ▪ The needs assessment indicates that a key element of the economic development and regional mobility aspects of the Long Island Strategic Improvements is the construction of a Republic Hub station. This new hub station along with added Main Line track capacity will provide LIRR access to the Route 110 Corridor, linking with planned BRT initiatives by local governments to improve transit access, spur economic growth, and encourage more intermodal transit trips.	http://web.mta.info/mta/capital/pdf/TYN2015-2034.pdf
Study of Railroad Usage By Residents of Multi-unit Housing Complexes Near Railroad Stations	2001, Suffolk County	▪ The study included an analysis of transportation-related census data, and used a survey to assess: use of the railroad to get to work; means of transportation to get to work; variations in railroad use by type of housing; and use of the railroad for leisure travel. ▪ The study included the following recommendations: encourage the construction of new multi-unit housing near railroad stations, especially railroad stations adjacent to business districts; encourage the redevelopment of abandoned, underutilized, or "eyesore" properties near railroad stations for multi-unit housing; encourage the construction of individual apartments above existing commercial buildings located near railroad stations; the LIRR should continue to upgrade its station facilities, and partner with the towns and villages to create attractive, vibrant, and safe areas around railroad stations; and the LIRRR and the towns and villages should improve pedestrian access to railroad stations.	http://www.suffolkcountyny.gov/Portals/0/planning/Publications/RRStudy052001.pdf

Traffic/Roadway Studies & Reports			
Report/Study	**Year Published & Sponsor**	**Overview & Findings**	**Link (if available online)**
Evaluation of Traffic Conditions Related to Canon, U.S.A.	Forthcoming, Town of Huntington	▪ This study, being conducted by Greenman-Pedersen, Inc. on behalf of the Town of Huntington, comprises a traffic impact assessment associated with the already constructed Canon U.S.A. Inc. headquarters building that is located along the Long Island Expressway (LIE) South Service Road and Walt Whitman Road in Melville. The study is focusing on the effectiveness of mitigation measures that were proposed and implemented on the surrounding roadway system as a result of this project. ▪ The study is anticipated to be completed by July 2014.	N/A
NY Route 110 Reconstruction and Bridge Projects	2013, NYSDOT	▪ Three separate projects will reconstruct NY Route 110, the I-495 (Long Island Expressway)/NY Route 110 bridge and the Northern State Parkway/NY Route 110 bridge to provide safety and mobility improvements for motorists, bicyclists and pedestrians. Three projects extend 1.74 miles along Route 110 between the I-495 (Long Island Expressway) South Service Road to Arrowwood Lane, north of the Northern State Parkway. ▪ In November 2013, NYSDOT Commissioner Joan McDonald announced the substantial completion of the Route 110-Northern State Parkway Interchange replacement project, which complements the adjacent Route 110 safety and mobility improvement project underway between the Long Island Expressway (LIE/I-495) and Arlington Road and between Fletcher Place and Amityville Road, and the Route 110-LIE Bridge reconstruction project that was completed in 2011.	https://www.dot.ny.gov/ny110reconstruction ; https://www.dot.ny.gov/news/press-releases/2013/2013-11-13
Most Dangerous Roads for Walking and How States Can Make Them Safer	2013, Tri-State Transportation Campaign	▪ This report uses three years (2009, 2010 and 2011) of federal data to pinpoint the exact location of each pedestrian death in Connecticut, New Jersey and the 12 downstate New York counties and examines the roadway classifications at each fatality location. ▪ With nine pedestrian fatalities between 2009 and 2011, Route 110 is one of the eight most dangerous roads in the region for walking. ▪ Recommendations include: create a Long Island Safe Routes to Transit program that would target areas around transit stations and stops for pedestrian safety improvements; and increase funding for pedestrian and bicycle projects in the NYSDOT capital plan.	http://www.tstc.org/reports/danger13/dangerous-roads-2013-final.pdf
2012 Traffic Volume Report	2013, NYSDOT	▪ This report contains average annual daily traffic (AADT) data for the year 2012 and the three preceding years for roadways, including Route 110, broken down into segments. ▪ The NYSDOT traffic data website (https://www.dot.ny.gov/divisions/engineering/technical-services/highway-data-services/traffic-data) includes traffic volume reports from 2004 through 2012.	https://www.dot.ny.gov/divisions/engineering/technical-services/hds-respository/NYSDOT_Traffic_Volume_Report_2012.pdf
NYS Traffic Safety Data	2013, Institute for Traffic Safety Management and Research / Governor's Traffic Safety Committee	▪ The document provides various crash and ticket data for New York State. Ticket data are presented for the years 2009-2011. Four summary reports provide detailed crash data for the three years 2009-2011. The four crash reports provide data for 1) all crashes, 2) alcohol-related crashes, 3) speed-related crashes, and 4) motorcycle crashes.	http://www.safeny.ny.gov/11data/NYState-11.pdf
Suffolk County Complete Streets Policy	2012, Suffolk County	▪ Suffolk County formally adopted a Complete Streets Program, whereby the Suffolk County Department of Public Works is required to consider all modes of travel within its design projects, and also evaluate the feasibility of implementing Complete Streets design features in the planning stage of each project.	https://www.dot.ny.gov/programs/completestreets/repository/CompleteStreetsResolution_suffolkcounty.pdf
New York State Complete Streets Act	2011, NYSDOT	▪ Governor Andrew M. Cuomo signed the Complete Streets Act (Chapter 398, Laws of New York) on August 15, 2011, requiring state, county and local agencies to consider the convenience and mobility of all users when developing transportation projects that receive state and federal funding. The law applies to projects that are undertaken by NYSDOT, or to local projects that receive both federal and state funding and are subject to NYSDOT oversight. Projects that are 100% locally funded are not subject to the law, but local agencies can choose to adopt Complete Streets practices.	https://www.dot.ny.gov/programs/completestreets
2011 Traffic Data Report for New York State	2011, NYSDOT	▪ This report summarizes the collection and reporting of highway data in New York State by the NYSDOT Highway Data Services Bureau. The data is used to assess transportation needs and system performance as well as to develop highway planning and programming recommendations. Traffic data is also important for route planning and in the design of highway projects. The NYSDOT traffic data website (https://www.dot.ny.gov/divisions/engineering/technical-services/highway-data-services/traffic-data) includes traffic data reports from 2004 through 2011. ▪ The report includes an overview of the traffic data collecting program, continuous count program, coverage count program, adjustment factors, the traffic data viewer, and the traffic growth forecasting and estimation techniques. Appendices include New York State Reference (900 Series) Routes, New York Parkways by jurisdiction, AADT values for select toll facilities, NYSDOT regions and county codes, continuous count sites by factor group, and the traffic volume report. ▪ Route 110—specifically, the section between Pinelawn Road and the Northern State Parkway—was included in the continuous count program for 2011.	https://www.dot.ny.gov/divisions/engineering/technical-services/hds-respository/Traffic%20Data%20Report%202011.pdf

Traffic/Roadway Studies & Reports			
Report/Study	**Year Published & Sponsor**	**Overview & Findings**	**Link (if available online)**
Town of Babylon Sustainable Complete Streets Policy	2010, Town of Babylon	▪ The purpose of this policy is to promote modes of transportation other than the automobile, including walking, biking, and mass transit, to make these modes safe and convenient for users of all ages and abilities, to reduce vehicle miles traveled within the Town and the associated negative environmental impacts, to promote healthy lifestyles, to reduce the cost of commuting, and to anticipate and facilitate future demand for walking, biking, and other alternative transportation modes.	https://www.dot.ny.gov/programs/completestreets/repository/Babylon_Complete_Streets_Policy.pdf
Student-Assisted Community Related Research Project: A Case Study on Route 110 Traffic Issues	2007, SUNY Farmingdale, American Society for Engineering Education	▪ This case study was performed by SUNY Farmingdale faculty/students and it identified traffic patterns along the Route 110 corridor, including traffic flow, travel demand, and traffic capacity. ▪ The case study also included a popular opinion survey of people who work along the Route 110 corridor.	http://search.asee.org/search/fetch;jsessionid=2pmjfrkitr2fo?url=file%3A%2F%2Flocalhost%2FE%3A%2Fsearch%2Fconference%2F14%2FAC%25202007Full488.pdf&index=conference_papers&space=129746797203605791716676178&type=application%2Fpdf&charset=
Long Island Non-Motorized Transportation Study	2005, NYSDOT and NYMTC	▪ The objective of this study was to identify and prioritize projects and programs that would support pedestrian travel, bicycling, and other non-motorized modes as safe, convenient alternatives and complements to vehicular modes of transportation on Long Island, in coordination with the adjoining region. ▪ One of the key themes was to promote access to and integration with transit. ▪ The study discussed existing conditions of the bicycle and pedestrian network on Long Island, and made recommendations for expanding the bicycle network, including identification of pilot projects.	http://www.nymtc.org/files/RTP05files/appx_D.pdf
Suffolk County Highway Needs Assessment Report	2004 (updated from 2001), Suffolk County	▪ This study examined existing and future traffic and roadway conditions on all roads maintained by Suffolk County. The report identified deficiencies, recommended improvements, developed cost estimates, and prioritized improvement projects. ▪ The purpose of the project was to provide the Suffolk County Department of Public Works (DPW) with a tool to help the Department prioritize capital expenditures for future years, and also to modernize the process of data collection to allow for accurate reproduction and recollection of the data in future years.	N/A

Comprehensive Plans / Land Use Studies & Reports			
Report/Study	**Year Published & Sponsor**	**Overview & Findings**	**Link (if available online)**
Melville/Route 110 Land Use Study	Forthcoming, Town of Huntington	▪ This study was suggested in Horizons 2020, the Town of Huntington's 2008 Comprehensive Plan Update (see below). ▪ The study will yield a road map that will "enable the Melville employment center to continue to be an economic-development success." The study will determine if land along Melville's Route 110 corridor might be better utilized in other capacities. The study will also be key to understanding what Huntington can do to attract more large-scale employers to the area, akin to the relocated Canon USA headquarters in Melville. ▪ Depending on the study's findings, zoning changes could occur along the corridor, and the Town might also consider programs to explore and fund architectural, landscaping and other infrastructure-based improvements. ▪ A Request for Proposals to conduct this study is forthcoming from the Huntington Town Board.	http://libn.com/2014/04/03/huntington-eyes-route-110-land-use-study/
Amityville Downtown Revitalization	Ongoing, Village of Amityville	▪ In 2013, Village of Amityville downtown revitalization Mayor James Wandell formed a downtown revitalization committee to develop a "comprehensive, 21st century plan for our downtown," which includes the southern stretch of the Route 110 corridor. The plan would likely include zoning amendments and improvements to Route 110 to make the corridor more pedestrian-friendly. Village Trustees are also considering the formation of a BID, which can help with beautification, marketing, and capital improvements.	http://www.newsday.com/long-island/towns/amityville-route-110-downtown-revitalization-plans-eyed-1.6268508
Suffolk County Comprehensive Plan 2035	2011 (Phase One A), ongoing (Phase One B and Phase Two), Suffolk County	▪ The Phase One A report provides an inventory of Suffolk County's changing population, economy, and quality of life. The work in Phase One B (ongoing) will include collecting additional inventory data with respect to transportation, housing, and natural resources. Phase Two will analyze the information gathered in Phase One and provide policy recommendations and implementation strategies for the short-, mid-, and long-term. One of the results of the comprehensive planning effort will be to identify the key transportation corridors for economic development in Suffolk County.	http://www.suffolkcountyny.gov/Portals/0/planning/CompPlan/vol1/Vol1_FrontEnd_Re082211.pdf
Suffolk County Transfer of Development Rights (TDR) Study	2013, Suffolk County, New York-Connecticut Sustainable Communities Consortium	▪ Funded through the Sustainable Communities Regional Planning Grant, Suffolk County is tasked with preparing a Regional Transfer of Development Rights (TDR) study that examines existing local, county and regional TDR programs and propose recommendations that 1) encourage better participation within existing TDR programs, 2) coordinate development right absorption within identified and designated growth zones in the County while discouraging development in environmentally sensitive areas, and 3) develop better coordination and implementation between local land use decisions and regional transportation policies. ▪ The Task N.1 report is an inventory of existing TDR programs. Subsequent reports will include an analysis of all existing programs and development of specific strategies. Anticipated outcomes include the containment of suburban sprawl through the preservation of remaining open spaces and the promotion of development patterns that direct growth to where it is warranted – in close proximity to transportation hubs, downtowns, designated growth zones, and infrastructure. ▪ The Tasks N.2-N.4 report summarizes the analysis of existing programs, recommendations, and the public outreach process. The report includes the following five recommendations: develop a publicly accessible database of County TDRs; explore the feasibility, interest, cost, and revenue potential to create a countywide TDR clearinghouse and bank with local towns and the Pine Barrens Commission; explore the feasibility of requiring the use of TDRs for increases in development density or intensity; explore local support for standardizing TDR floor area equivalents; and explore the feasibility of creating a public/private open space Master list TDR Program.	http://www.sustainablenyct.org/pss/doc/HUD_TASKN1_ALL61313r.pdf; http://www.sustainablenyct.org/projects/SuffolkCountyTDRStudyJune062014.pdf; http://www.suffolkcountyny.gov/Departments/Planning/SpecialProjects/HUDSustainableCommunitiesGrant.aspx
Long Island Government Survey: Land Use Planning Practices	2011, Long Island Index	▪ The survey examines the planning practices of 36 jurisdictions – 14 cities and towns and 22 villages – with respect to (1) what are considered smart growth principles and (2) practices considered supportive of transit-oriented development. ▪ The Town of Babylon is cited as one of the few jurisdictions that have made progress in planning for and implementing mixed-use and TOD projects.	https://lii-production.s3.amazonaws.com/cms-uploads/presses/22/land-use-planning-practices-report-2011.pdf
Downtown Farmingdale Master Plan 2035 / Brownfield Opportunity Area (BOA) Nomination Study / Generic Environmental Impact Statement (GEIS)	2011, Village of Farmingdale	▪ This Master Plan is intended to highlight and enhance the distinct characteristics of the downtown area along with preserving the residential character of the village's neighborhoods. The vision for downtown Farmingdale's future is to make it a more attractive, vibrant, and desirable center that draws a residential population that can afford to live and shop in Farmingdale. ▪ Downtown Farmingdale seeks to enhance its position as a vibrant transit-oriented location and a lively commercial center through a balanced program of beautification, redevelopment, and connection. The Master Plan includes strategies and proposals for land use and zoning, design, economic development, traffic, parking, transportation, and infrastructure. ▪ The Master Plan indicates that downtown Farmingdale experiences competition from Route 110 retailers and should offer commercial options that differ from and complement Route 110, as opposed to compete with it. ▪ The area around the Farmingdale LIRR Station is identified as one of several "village gateways" that should be highlighted by special signage, monuments, landscaping, or through the incorporation of banners that foster a sense of identity and arrival. New construction envisioned at the train station and Farmingdale Corners will not only create a sense of place and arrival, but will also improve urban form overall through a better connection between the downtown center along Main Street to the train station. ▪ New zoning was proposed (and ultimately adopted) for the downtown area, permitting residential and a mix of uses at varying densities.	http://www.farmingdalevillage.com/BOA-DGEIS.htm

Comprehensive Plans / Land Use Studies & Reports			
Report/Study	**Year Published & Sponsor**	**Overview & Findings**	**Link (if available online)**
Long Island 2035 Visioning Initiative Final Report	2009, NYMTC	▪ The visioning initiative was intended as a multi-phase project that would implement a consensus-driven preferred vision for Long Island's future, including an evaluation of alternative scenarios of how Long Island could develop to the year 2025. ▪ The report identifies improved north-south connectivity on corridors such as Route 110 through enhanced bus service, BRT, or light rail, as one of the major themes that emerged during a day-long workshop. Other themes included system-wide improvements to public transportation and the needs to address congestion and parking concerns. ▪ The report presents and evaluates three alternative development scenarios: (1) Distributing Growth Throughout Long Island; (2) Transit Communities; and (3) Growth Centers.	http://www.longisland2035.org/files/LI2035-Visioning-Initiative-Report.pdf
Horizons 2020: Comprehensive Plan Update, Town of Huntington, New York	2008, Town of Huntington	▪ The Plan identifies existing conditions and key issues, and also recommends policies and strategies, with respect to environmental resources and open space, community character, community facilities, land use, economic development, transportation, and housing. With respect to transportation, the Plan offers an overview of roads, public transportation, pedestrian and bicycle facilities, parking, and programmed transportation improvements. One of six key initiatives identified in the Plan is to work with state and county agencies to retrofit the road network with state-of-the-art signalization and other targeted improvements to enhance operational efficiency and reduce traffic congestion. ▪ The Plain identifies a number of geographic focal areas, including hamlet centers (i.e., Cold Spring Harbor, East Northport, Greenlawn, Huntington Station, and Huntington Village) and commercial centers and corridors (i.e., Melville Employment Center, Jericho Turnpike, Route 110 from Jericho Turnpike to Melville, and minor commercial corridors). ▪ For the Melville Employment Center, the stated goal is to manage growth and change to maintain Melville's position as an employment hub, address community impacts, and improve development character. The strategy to achieve this goal is to develop and implement an area plan for the Melville Employment Center to address land use, circulation, and infrastructure issues in an integrated manner. With relevance for the Route 110 BRT Alternatives Analysis, noteworthy objectives in this Melville Employment Center area plan would include: addressing traffic congestion (including access management/control of curb cuts along major roadways, traffic impact requirements for new developments, and development of a capital improvements program in coordination with NYSDOT and Suffolk County); working with transit providers to improve transit service; promoting pedestrian/bicycle connectivity; initiating a transportation management program with major employers to reduce the number of single-occupancy vehicles; considering establishment of a Special Improvement District funded through assessments on properties within the Melville Employment Center to help manage and fund implementation actions; encouraging mixed-use hamlet center(s) to meet local needs for retail and services and reduce traffic (e.g., in the vicinity of the Maxess Road/Ruland Road intersection); establishing design standards for new development to promote a campus-like environment (including building height and form in relationship to parking and open space requirements); and revising existing zoning districts to reflect the desired land use pattern. ▪ For Route 110 (Jericho Turnpike to Melville), the stated goals are to: manage future expansion or redevelopment of Walt Whitman Mall to address community impacts and provide needed infrastructure improvements; improve the character and viability of smaller commercial uses; and protect adjacent residential neighborhoods and maintain the existing balance between residential and commercial uses. The strategies to achieve these goals include: changing existing zoning to better "fit" land use character and to promote quality, compatible development along Route 110; establishing guidelines for expansion/redevelopment of the Walt Whitman Mall to minimize negative impacts, enhance visual character, and improve its role as a center of community activity; improving the visual character of Route 110 through physical improvements; and addressing traffic congestion and neighborhood cut-through traffic by applying access management strategies to smaller commercial properties, working with NYSDOT to implement traffic flow improvements to the Route 110/Jericho Turnpike intersection, and implementing traffic calming to reduce cut-through traffic on neighborhood streets.	http://www.huntingtonny.gov/filestorage/13749/13847/16804/16874/16878/20879/872sm.pdf
A Review of Selected Growth and Development Areas, Suffolk County, New York	2006, Suffolk County	▪ The Suffolk County Department of Planning performed an evaluation and analysis of proposed development in five major growth and development areas within the county, one of which was the Route 110 Office-Industrial Corridor. ▪ This report presents an overview of existing conditions and includes information on employment, types of businesses, population, office and industrial markets, retail centers, and traffic data.	http://www.suffolkcountyny.gov/Portals/0/planning/Publications/MajGrowth082006.pdf

Other Studies & Reports			
Report/Study	**Year Published & Sponsor**	**Overview & Findings**	**Link (if available online)**
State Fiscal Year 2014-2015 Unified Planning Work Program (UPWP)	2014, NYMTC	▪ The UPWP was adopted on February 27, 2014 and defines the planning priorities in the NYMTC planning area and describes all transportation-related planning activities anticipated within the given program year. The work program also indicates which of these planning activities will receive federal funding. Its successful completion each year enables federal funding assistance to undertake planning activities by NYMTC's staff and its members. ▪ Phase II of the Suffolk County BRT Feasibility Study (i.e., the Suffolk County BRT Corridor Study) is included in the UPWP as a federally funded strategy performance planning project. The study will perform a detailed analysis of BRT along one of the most feasible corridors in Suffolk County. The study will put a strong emphasis on land use opportunities, economic development, and benefits commonly associated with BRT. Alternative BRT configurations will be developed leading to the selection of a Locally Preferred Alternative (LPA), and an environmental review will be completed consistent with the FTA's New Starts/Small Starts Project Development requirements.	http://www.nymtc.org/files/UPWP%20SFY%202014%20Docs_021214/UPWP_Full%20Document_040914.pdf
Village of Amityville / Copiague NY Rising Community Reconstruction Plan	2014, New York State Governor's Office of Storm Recovery	▪ The NY Rising Community Reconstruction (NYRCR) Program, announced by Governor Cuomo in April of 2013, is a more than $650 million planning and implementation process established to provide rebuilding and resiliency assistance to communities severely damaged by Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy. ▪ Amityville/Copiague is one of 45 NYRCR Communities, and is eligible for up to $14.2 million—provided through the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant-Disaster Recovery (CDBG-DR) program—to implement eligible projects. ▪ The LIRR's Babylon Branch, including the stations in Amityville and Copiague, are cited as infrastructure assets for the Amityville/Copiague NYRCR Community.	http://stormrecovery.ny.gov/sites/default/files/crp/community/documents/amityville-copiague_nyrcr_plan_0.pdf
Plan 2040 Regional Transportation Plan: A Shared Vision for a Sustainable Region	2013, NYMTC	▪ *Plan 2040* is the 25-year, long-term plan for investing in the region's transportation network, and was developed by NYMTC member agencies across the 10-county region. The plan, adopted on September 4, 2013, highlights the need for developing sustainable transportation and land use projects, supporting the equitable development of regional growth, and creating strategic policy guidelines and transportation investments. ▪ The plan cites Connect Long Island, including the identification of transit options for the Route 110 corridor, as a study that will have a notable impact on the transportation system. ▪ The plan cites the Suffolk County BRT Feasibility Study as a near-term action to advance the goal of providing a convenient and flexible transportation system within the region.	http://www.nymtc.org/aboutrtp.cfm
NYMTC 2014-2018 Transportation Improvement Program (TIP)	2013, NYMTC	▪ The TIP documents the NYMTC region's transportation improvements that are eligible for federal funding over the course of five years (i.e., 2014-2018), including capital projects for bridges, highways, transit services, bikeways and walkways. ▪ The TIP was adopted on September 4, 2013, and the Long Island project listings were updated in April 2014. ▪ Projects relevant to Route 110 include: the provision of Suffolk express commuter bus service along the Long Island Expressway from central Suffolk County to the Hauppauge Industrial Park and the Route 110 corridor; signal timing upgrades and arterial optimization on various state highways in Suffolk County; the intersection realignment of Pinelawn Road/Wellwood Road with Conklin Street and Long Island Avenue to improve safety and traffic congestion; the replacement of an aluminum bridge on Route 110 over Route 27; roadway repairs on Route 110 between the Southern State Parkway and Route 24; and roadway repairs on Route 24 between the Meadowbrook State Parkway and Route 110	http://www.nymtc.org/abouttip-down.cfm
2013 Regional Economic Development Council Awards	2013, NYS Regional Economic Development Councils	▪ The Town of Babylon was the recipient of two awards, as follows:(1) $500,000 to support a redevelopment study for implementing a mixed use development at a key site located at the intersection of Conklin Street and Route 1110 in East Farmingdale; (2) $200,000 to support development of a conceptual site plan, a regulating plan, and a form-based code to guide the East Farmingdale redevelopment. ▪ Suffolk County was the recipient of one award in the amount of $1.5 million to advance the creation of a BRT demonstration corridor in support of the Connect Long Island Plan.	http://regionalcouncils.ny.gov/assets/documents/2013REDCBooklet.pdf
Cleaner Greener Long Island Regional Sustainability Plan	2013, Cleaner Greener Consortium of Long Island	▪ The plan articulates a community-based vision for a more sustainable future. Consisting of municipalities, non-governmental organizations, and the planning consultant team, the Cleaner Greener Consortium of Long Island and its partners established goals and strategies for a regional framework through which to pursue the standards of sustainability: economic prosperity, social responsibility, and environmental health and well-being. ▪ Several strategies are identified to achieve the goal of improving transportation options for all Long Islanders to reduce vehicle miles travel (VMT), fuel consumption, and greenhouse gas emissions. Strategies include: expand and improve public transportation across the Island (rail and bus); increase the number of Long Island employers providing incentives/services to employees for VMT reduction, and improve safety of streets for pedestrians and cyclists through implementation of Complete Streets, signal optimization, and a comprehensive bike plan.	http://www.nyserda.ny.gov/-/media/Files/About/Statewide-Initiatives/CGC-Plans/Long-Island-CGC-Plan-Report.pdf

Other Studies & Reports			
Report/Study	**Year Published & Sponsor**	**Overview & Findings**	**Link (if available online)**
Tracking Residential Satisfaction on Long Island	2012, Long Island Index	▪ Telephone interviews were conducted with a randomly selected sample of 810 Long Island residents asking a series of questions to assess the attitudes of Long Island's residents on the important issues facing them. ▪ Common themes among respondents included: concern for high cost of local living; growing support for non-traditional housing options (i.e., alternatives to the single-family home); economic inequality; educational equality and value; losing the young population; and long commutes and the importance of public transportation. ▪ Approximately half of the respondents rated living within walking distance of a train or bus stop as somewhat or very important.	http://www.stonybrook.edu/commcms/surveys/docs/Tracking%20Residential%20Satisfaction%202012.pdf
Getting It Done: Aligning Long Island's Development Process with Sustainable Growth	2011, Long Island Index	▪ This report focuses on Long Island's development review processes and land use regulations which are necessary to provide clear rules and protect the public interest. ▪ Based on findings from two surveys of municipal officials, the report identified a number of Island-wide goals could help the region as a whole adopt new development patterns that emphasize well-designed downtown and transit-oriented development: all jurisdictions should undertake reviews of development practices every five to ten years; both counties, the LIRPC, and the town and village associations should establish a mechanism to synchronize practices and review processes; establish timelines and tracking systems for review process; get ahead of the curve on technological productivity and service improvements, including appropriate management reforms and staff training to make best use of technology; develop an Island-wide TOD strategy with participation from MTA, LIRR, counties, towns, cities, key villages, and NYS agencies; and NYS should provide incentives for municipalities to reform housing, parking, density and other restrictions that impede well-designed downtown development.	https://lii-production.s3.amazonaws.com/lii-data/download/4146381487/download_Getting_it_Done_2011_LI_Index_Special_Analysis.pdf
Long Island's Future Economy: A Strategic Economic Development Plan For The Long Island Region	2011, Long Island Regional Economic Development Council	▪ This is a five-year plan that identifies strategies to encourage job creation and economic growth. ▪ As part of the infrastructure strategy to repair and upgrade aging infrastructure, the plan calls for developing bus/multimodal rapid transit, which could serve as a solution to providing transit on north-south corridors not served by the LIRR. Specifically, the plan calls for: supporting and expanding existing bus/multimodal transit options, particularly to maximize access to emergent job centers and revitalizing downtowns; encouraging transit use to minimize the impact of congestion and air pollution in the short run, and of greenhouse gas emissions in the long run; and developing Hub transportation that reduces use of autos. Additionally, the plan advocates for building the LIRR Second Track from Farmingdale to Ronkonkoma, as well as constructing a new Republic Station, which would play a critical role in supporting the proposed BRT service on Route 110.	http://regionalcouncils.ny.gov/sites/default/files/documents/2013/HI-RESFINALLIEconomyBookPRINT.pdf
New York State Economic Impacts of Aviation, 2010 Technical Report	2011, NYSDOT	▪ The purpose of the study is to highlight the impacts of the aviation sector - specifically the impacts derived from public-use airports - to the economy of the state. It provides a benchmark of aviation's contribution to the NYS economy in 2009 by looking at the economic activity, jobs, and taxes generated by this sector. ▪ The study indicates that Republic Airport has the highest economic impact of any general aviation airport in New York State. The significance of the airport to area commerce is in many ways defined by its business clientele (i.e., prominent corporate and institutional organization users). Study surveys of sponsors and businesses revealed that 874 full- and part-time jobs and $147.1 million in expenditures are the direct result of on-airport businesses, including airport sponsor expenditures, and visitor spending at the airport. Including indirect expenditures, the total impact for Republic Airport in 2009 was $214.1 million, supporting 1,384 jobs. ▪ Findings from the study demonstrate the rationale for investments in the aviation mode by showing aviation's contributions to the state's economy. The Department's multi-year capital plans stress the importance of a sound transportation system as a vital component of the state's economy.	https://www.dot.ny.gov/divisions/operating/opdm/aviation/repository/NYS%20Economic%20Study%202010%20Technical%20Report_0.pdf
Sustainable Strategies for Long Island 2035 Report	2010, Long Island Regional Planning Council (LIRPC)	▪ This report presents a number of strategies to address challenging issues on Long Island that span the following thematic areas: Tax & Governance; Economy; Environment & Infrastructure; and Equity. The report identifies proposed actions to implement each strategy, as well as agencies, costs, procedures, and challenges related to the implementation of the strategy. ▪ Within the Environment & Infrastructure category, the report suggests 10 strategies to achieve sustainable transportation, including--but not limited to--creating transit-supported communities, establishing transit-served job centers, implementing a meaningful suburban transit system, and taking action to manage congestion and make transit competitive. The report indicates that one role for the LIRPC is to work with the Towns of Babylon and Huntington on the Route 110 BRT Study to assess how new transit service can assist in the creation and enhancement of employment centers, and to partner with the Route 110 Study team to develop a set of best practices guidelines for application on future Long Island corridors.	http://www.lirpc.org/3.2010-12-02_LI2035StrategiesReport.pdf

Other Studies & Reports			
Report/Study	**Year Published & Sponsor**	**Overview & Findings**	**Link (if available online)**
Land Available for Development and Population Analysis Western Suffolk County	2009, Suffolk County	▪ The study examined land available for development in western Suffolk County: (1) residentially zoned lots with greater than or equal to 6,000 square feet that are vacant, or agriculturally used with intact development rights; or (2) commercially or industrially zoned lots that are vacant. ▪ The study includes a "Land Available for Development" map for the Town of Babylon, which indicates a number of vacant industrially-zoned lots along the Route 110 corridor.	http://www.suffolkcountyny.gov/Portals/0/planning/Publications/LandAvail_WSC2009.pdf
Draft/Final Supplemental Environmental Impact Statement prepared for Canon U.S.A., Inc.	2008, Town of Huntington	▪ This report is an environmental review of the proposed development of Canon America's headquarters. ▪ The document notes that the development would result in some adverse environmental impacts, including an increase in traffic. ▪ The document indicates specific mitigation measure, notably traffic improvements.	http://www.huntingtonny.gov/filestorage/13749/13847/16804/16874/16878/20861/826.pdf; http://www.huntingtonny.gov/filestorage/13749/13847/16804/16874/16878/20861/830.pdf
Demographic, Economic, and Development Trends	2008, Suffolk County	▪ The report is separated into (3) sections which analyze the demographic, economic and development trends within Suffolk County. ▪ Some key trends that are noted in the report include an increasing population, a decrease in new home construction because of the unstable economy, and a strong industrial market.	http://www.suffolkcountyny.gov/Portals/0/planning/Publications/demoecon_all_012309.pdf
Access to Transportation on Long Island Technical Report	2007, NYMTC	▪ The report identified service gaps and mobility needs, as well as potential strategies for improving access to transportation on Long Island, including expanding use of non-motorized transportation options, transportation demand management measures, employer services, inclusion of taxi services in the transportation network, volunteer driver networks, coordination among transportation services, increasing awareness of existing transportation services, enhancing transportation services and information through technology, and encouraging transit-supportive land use decisions.	http://www.nymtc.org/project/LIS_access/documents/Final_TechRpt.pdf
Shopping Centers and Central Business Districts: Suffolk County, New York	2001, Suffolk County	▪ This study followed a survey undertaken by the Suffolk County Planning Department of shopping centers and central business districts in Suffolk County to update the department's retail center inventory. The study examined the trends in square footage, vacancy rates, and retailing in Suffolk County.	http://suffolkcountyny.gov/Portals/0/planning/Publications/retail072001.pdf
Long Island Transportation Plan 2000	2000, NYSDOT	▪ The plan was developed as a response to current and future traffic demand on Long Island, with the goal to suggest long-term and realistic transportation improvements for people and goods. ▪ The plan called for the implementation of a new Long Island Rapid Commute Transit System (LIRC) to provide service to major travel generators (including the Route 110 corridor), improvements to local bus systems and the LIRR, selective roadway improvements developed in consultation with Long Island's communities, a rail-truck intermodal freight center to reduce long-haul truck trips, and pedestrian and bicycle strategies to facilitate non-motorized travel. ▪ The plan called for rapid commute vehicle (RVC) stations, transit bypass lanes and signal priority at key intersections along Route 110 between the Amityville LIRR Station and Route 25A.	N/A
Melville – Route 110 Area Draft/Final Generic Environmental Impact Statement (D/F GEIS)	1988, Town of Huntington	▪ The EIS was prepared to study the cumulative effects of industrial development in the Melville area, especially traffic impacts. ▪ The EIS notes that transit plays a minor role as a means of travel because of congestion, lack of direct service, minimal frequency during peaks, limited bus service to rail, and lack of sidewalks, shelters, and other amenities.	http://www.huntingtonny.gov/filestorage/13749/13847/16804/16874/16878/20879/592.pdf



ROUTE 110 ALTERNATIVES ANALYSIS

Appendix B:
Task 2 Technical Memorandum

TOWN OF BABYLON
SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

Task 2: Data Collection

September 8, 2014

Submitted by:

PARSONS BRINCKERHOFF

Version Final

QUALITY ASSURANCE/QUALITY CONTROL

Created by:		September 7, 2014
	Maxwell Sokol / Parsons Brinckerhoff	**Date**
Reviewed by:		September 8, 2014
	Nicole Bucich / Parsons Brinckerhoff	**Date**
Approved by:		September 8, 2014
	Daniel Baer / Parsons Brinckerhoff	**Date**

REVISIONS

Date	Version Number	Revision
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August 25, 2014	2.0	Addressing Town of Babylon comments, received August 8, 2014
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1. Introduction

This technical memorandum summarizes data collected to date, and outlines next steps in the data collection effort, in support of the Route 110 Alternatives Analysis. Much of the data summarized in this technical memorandum is focused on the primary study area (defined below), which will guide the development, screening, and evaluation of transit alternatives in subsequent tasks. Other data are summarized at a broader geographic scale to inform a more regional definition of the study corridor and to capture the potential ridership shed/travel market. For instance, socioeconomic and demographic data are summarized for an area encompassing a two-mile buffer around the portion of the Route 110 corridor that is located within the study area. Furthermore, in the Task 3 technical memorandum (Travel Market Analysis), origin and destination data to and from the Route 110 corridor will be summarized for the 28-county region as modeled by the New York Metropolitan Transportation Council (NYMTC). The result is a comprehensive definition of the Route 110 corridor that includes a combination of data sources aggregated at different geographic scales.

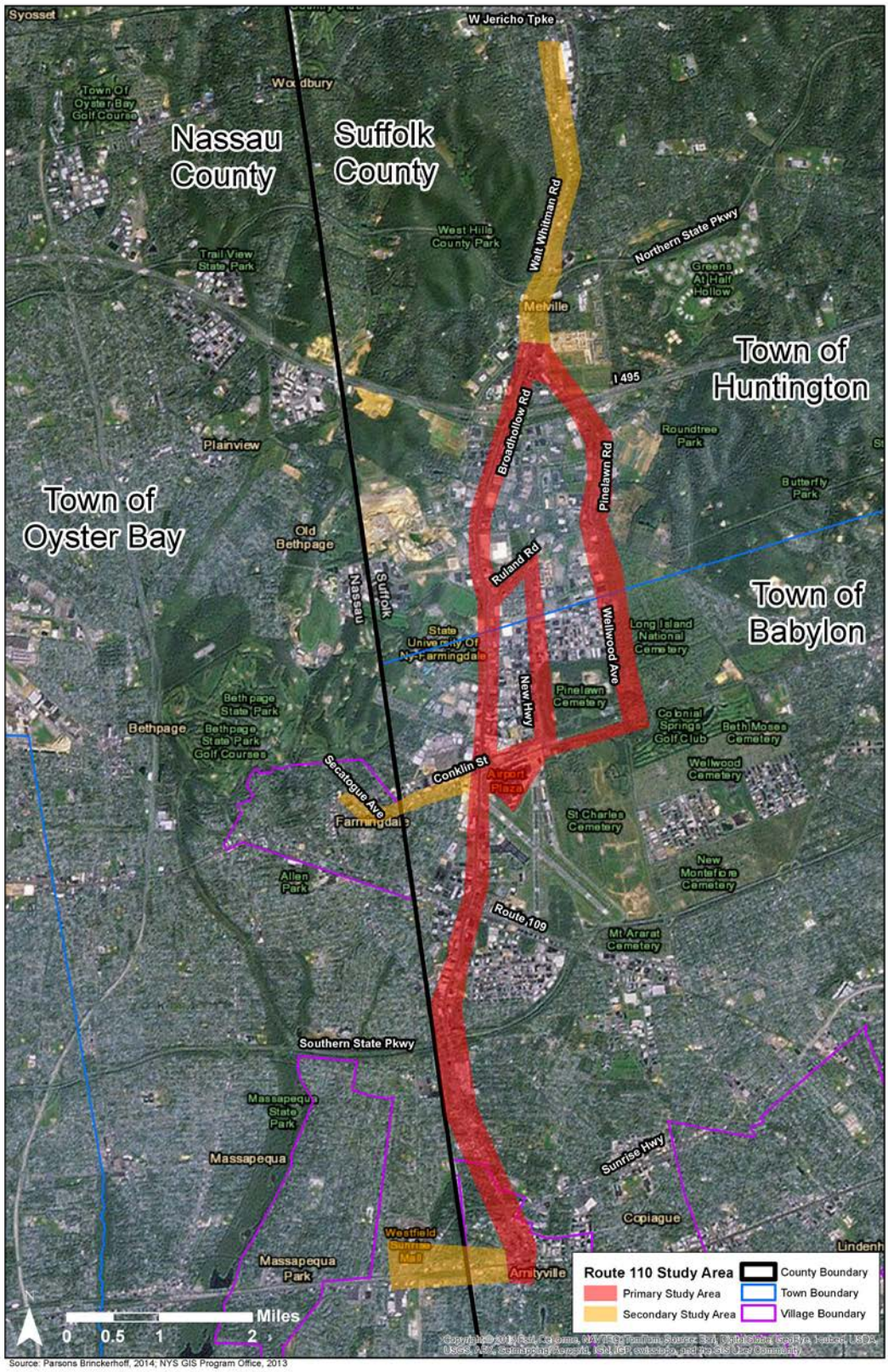
The 2010 *Route 110 BRT Study* included a preliminary assessment of existing conditions within and in the vicinity of the study area, and this technical memorandum includes updated information and additional details to support the work in subsequent tasks. The purpose of the Alternatives Analysis is to facilitate the evaluation of alternatives to address the transportation demand in the corridor. The data collection in the Alternatives Analysis—including the summary in this technical memorandum and additional items outlined in "Next Steps"—will build upon the work completed in the 2010 *Route 110 BRT Study* to select a Locally Preferred Alternative (LPA) to advance to Project Development with the FTA.

2. Study Area

The Alternatives Analysis includes a primary study area and a secondary study area consistent with those defined in the 2010 *Route 110 BRT Study* (Figure 1).

- The primary study area (indicated in red in Figure 1) corresponds to the area where the project is most focused, and includes the following roadway segments: Route 110 from Oak Street in the Village of Amityville to Pinelawn Road/Sweet Hollow Road in the Melville portion of the Town of Huntington; Pinelawn Road/Wellwood Avenue from Route 110 in Melville to Conklin Street in the East Farmingdale portion of the Town of Babylon; Conklin Street from Route 110 to Wellwood Avenue in East Farmingdale, including the Airport Plaza shopping center; New Highway from Conklin Street in East Farmingdale to Ruland Road in Melville; and Ruland Road from Route 110 to New Highway in Melville.
- The secondary study area (indicated in orange in Figure 1) works in concert with the primary study area to provide linkages to major destinations and regional transportation nodes, as well as to capture more trip origins, and it includes the following roadway segments: Route 110 from Pinelawn Road/Sweet Hollow Road in Melville to the Walt Whitman Shops in Huntington; West Oak Street/Old Sunrise Highway from Route 110 in the Village of Amityville to Sunrise Highway in the East Massapequa portion of the Town of Oyster Bay; and Conklin Street from Route 110 in East Farmingdale to Secatogue Avenue in the Village of Farmingdale.

Figure 1: Route 110 Alternatives Analysis Study Area Boundaries (Primary and Secondary)



The approximately 10.3-mile stretch of the Route 110 corridor in the study area can generally be broken up into the following sections based on municipal/postal boundaries and land use characteristics, from north to south:

- Huntington: Walt Whitman Shops to Schwab Road (0.6 miles)
- Melville: Schwab Road to the Town of Huntington/Town of Babylon boundary, just north of Smith Street (4.2 miles)
- East Farmingdale: Town of Huntington/Town of Babylon boundary to the Southern State Parkway (3.4 miles)
- North Amityville: Southern State Parkway to Smith Street (1.1 miles)
- Village of Amityville: Smith Street to Oak Street (1.0 miles)

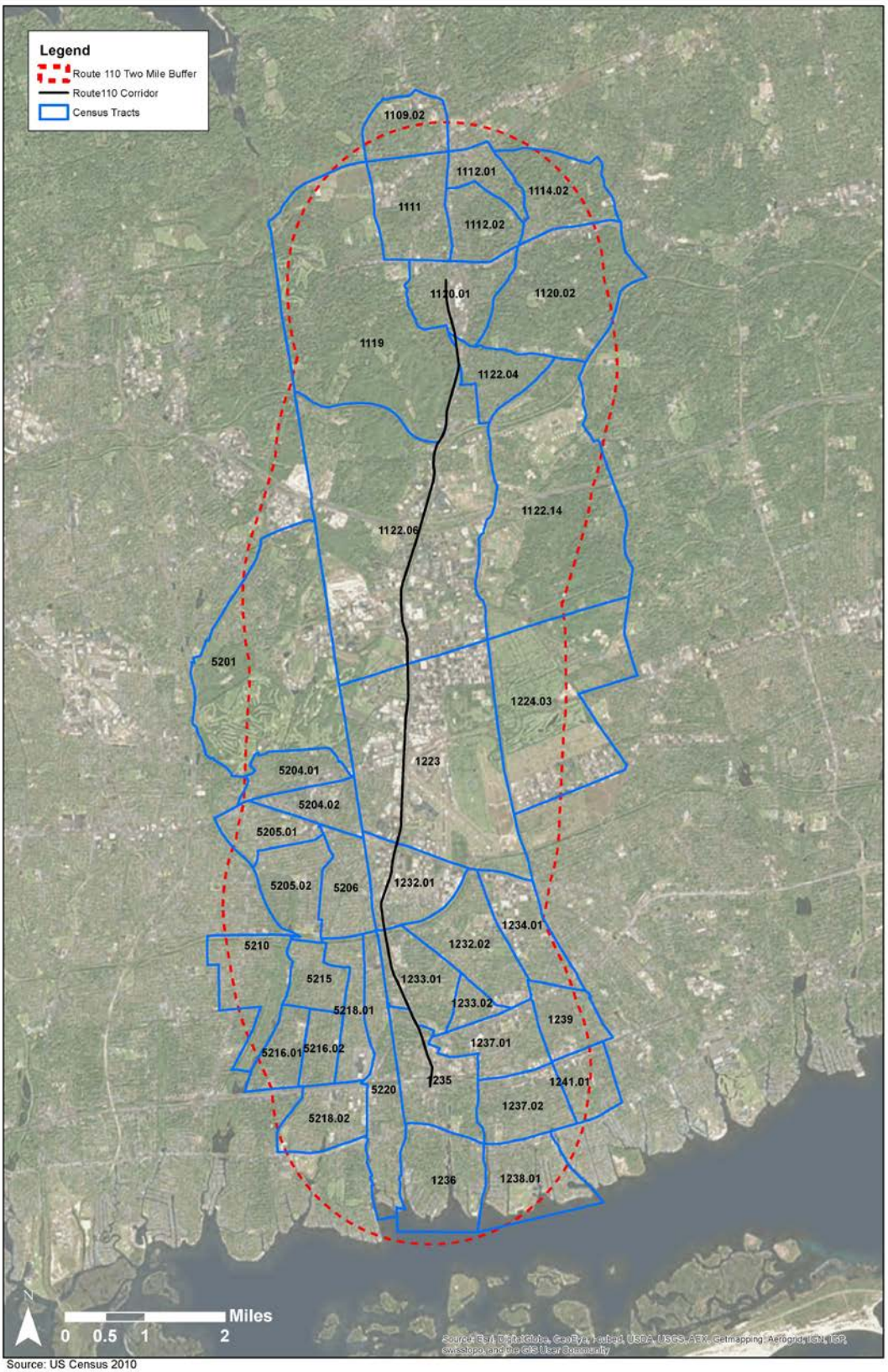
3. Socioeconomic and Demographic Data

A socioeconomic and demographic profile of the Route 110 corridor was prepared by compiling data from the 2010 Census and 2008-2012 American Community Survey (ACS) 5-Year Estimates provided by the United States Census Bureau for the census tracts within a two-mile buffer of the study corridor.[1] All census tracts with 50 percent or more of their area within the two-mile buffer were included in the analysis (Figure 2). This area encompasses a total of 38 census tracts, located in both Suffolk and Nassau Counties. The data was aggregated from the census tract level to create a profile for the area within the two-mile buffer of the corridor, which was compared to Suffolk and Nassau Counties to illustrate the regional context.

Table 1 identifies the age breakdown of the population in the two-mile radius of Route 110, compared to that in Nassau and Suffolk Counties. For all three geographies, the 0-19 year old population accounts for the largest single age cohort, constituting approximately one-quarter of the total population (i.e., 25.4% in the two-mile radius of Route 110, compared to 25.8% in Nassau County and 26.6% in Suffolk County), followed by the 35-49 year old cohort. The 65 and over age cohort constitutes the smallest percentage of the total population in all three geographies. It is worth noting that the 20-34 year old age cohort in the two-mile radius of Route 110 accounts for a larger percent of the area's total population (17.6%) than the respective percentages for these age cohorts in Nassau and Suffolk Counties (16.6% and 17.%). Nevertheless, the 20-34 year old age population constitutes the second smallest age cohort in all three geographies, which follows the trends throughout Long Island that a large percentage of young professionals are choosing to live and work in locations other than Long Island.

[1] The 2008-2012 ACS 5-Year Estimates included the most up-to-date data at the time this technical memorandum was prepared. The 2009-2013 ACS 5-Year Estimates are tentatively scheduled to be released in December 2014.

Figure 2: Route 110 Two-Mile Radius for Socioeconomic and Demographic Data Collection



Source: US Census 2010

TABLE 1: Age of Population in the Two-Mile Radius of Route 110, IN COMPARISON TO NASSAU AND SUFFOLK COUNTIES

	2-Mile Radius of Route 110		Nassau County		Suffolk County	
	Number of People	Percent of Total	Number of People	Percent of Total	Number of People	Percent of Total
Total Population	189,876	100.0%	1,339,532	100.0%	1,493,350	100.0%
0-19 years	48,139	25.4%	344,970	25.8%	397,162	26.6%
20-34 years	33,391	17.6%	221,932	16.6%	257,056	17.2%
35-49 years	42,455	22.4%	287,550	21.5%	341,800	22.9%
50-64 years	37,818	19.9%	280,399	20.9%	295,539	19.8%
65+ years	28,073	14.8%	204,681	15.3%	201,793	13.5%

Source: 2010 US Census, Summary File 1, DP-1

As shown in Table 2, the racial and ethnic composition of the area within a two-mile radius of Route 110 is comparable to that of Suffolk and Nassau Counties. The two-mile radius has a total population of 189,876, and the white population accounts for the majority (74.8%) of this area, followed by the Black or African American population (11.9%), and Some Other Race (6.7%). Similarly, in Nassau and Suffolk Counties, the white population is the largest racial group (73.0% and 80.8%, respectively), also followed by Black or African American (11.1% and 7.4%, respectively), and Some Other Race (5.6%). The population of the area within a two-mile radius of Route 110 that identifies as Hispanic or Latino comprises 17.9% of the total population of the area, which is comparable but slightly larger than the respective percentages in Nassau and Suffolk Counties (14.6% and 16.5%).

TABLE 2: RACE & ETHNICITY IN THE TWO-MILE RADIUS OF ROUTE 110, IN COMPARISON TO NASSAU AND SUFFOLK COUNTIES

	2-Mile Radius of Route 110		Nassau County		Suffolk County	
	Number of People	Percent of Total	Number of People	Percent of Total	Number of People	Percent of Total
Total Population	189,876	100.0%	1,339,532	100.0%	1,493,350	100.0%
One Race	184,921	97.4%	1,307,624	97.6%	1,457,319	97.6%
White	142,046	74.8%	977,577	73.0%	1,206,297	80.8%
Black or African American	22,534	11.9%	149,049	11.1%	111,224	7.4%
American Indian and Alaska Native	653	0.3%	3,185	0.2%	5,366	0.4%
Asian	6,884	3.6%	102,266	7.6%	50,972	3.4%
Native Hawaiian and Other	48	0.0%	336	0.0%	495	0.0%
Some Other Race	12,756	6.7%	75,211	5.6%	82,965	5.6%
Two or More Races	4,955	2.6%	31,908	2.4%	36,031	2.4%
Hispanic or Latino (of any race)	34,039	17.9%	195,355	14.6%	246,239	16.5%

Source: 2010 US Census, Summary File 1, DP-1

Table 3 shows housing occupancy in the two-mile radius of Route 110 as compared to that in Nassau and Suffolk Counties. Of all 66,287 housing units within the two-mile radius of Route 110, 96.1% (63,720) are occupied and 3.9% (2,567) are vacant. The housing occupancy rate within the Route 110 two-mile radius is

slightly higher than that for Nassau County (95.8%), and more than 8% higher than that for Suffolk County (87.7%). Therefore, the residential vacancy rate within the two-mile radius of the corridor is slightly lower than Nassau County and much lower than Suffolk County.

TABLE 3: HOUSING OCCUPANCY IN THE TWO-MILE RADIUS OF ROUTE 110, IN COMPARISON TO NASSAU AND SUFFOLK COUNTIES

	2-Mile Radius of Route 110		Nassau County		Suffolk County	
	Number of Housing Units	Percent of Total	Number of Housing Units	Percent of Total	Number of Housing Units	Percent of Total
Total Housing Units	66,287	100.0%	468,346	100.0%	569,985	100.0%
Occupied Housing Units	63,720	96.1%	448,528	95.8%	499,922	87.7%
Vacant Housing Units	2,567	3.9%	19,818	4.2%	70,063	12.3%

Source: 2010 US Census, Summary File 1, DP-1

Data about housing type is presented in Table 4 for the two-mile radius of Route 110, Nassau County, and Suffolk County. Similar to Nassau and Suffolk Counties, one-unit detached housing is the predominant housing type in the two-mile radius of Route 110, accounting for more than 75% of the total housing stock. One-unit attached and two-unit housing together account for approximately 11% of the housing stock in the two-mile radius of Route 110, and buildings with 20 or more units account for approximately 4% of the housing stock, which is slightly greater than that in Suffolk County (3%) but approximately half of that in Nassau County (8%).

TABLE 4: HOUSING TYPE IN THE TWO-MILE RADIUS OF ROUTE 110, IN COMPARISON TO NASSAU AND SUFFOLK COUNTIES

	2-Mile Radius of Route 110		Nassau County		Suffolk County	
	Number of Housing Units	Percent of Total	Number of Housing Units	Percent of Total	Number of Housing Units	Percent of Total
Total Housing Units	67,059	100.0%	467,418	100.0%	568,570	100.0%
1-unit, detached	51,649	77.0%	354,902	75.9%	456,331	80.3%
1-unit, attached	3,161	4.7%	12,747	2.7%	25,967	4.6%
2 units	4,372	6.5%	35,102	7.5%	21,056	3.7%
3 or 4 units	1,778	2.7%	10,461	2.2%	13,166	2.3%
5 to 9 units	850	1.3%	7,448	1.6%	14,494	2.5%
10 to 19 units	1,673	2.5%	8,604	1.8%	14,940	2.6%
20 or more units	2,805	4.2%	37,296	8.0%	17,069	3.0%
Mobile home	761	1.1%	745	0.2%	5,526	1.0%
Boat, RV, van, etc.	10	0.0%	113	0.0%	21	0.0%

Source: 2008-2012 American Community Survey 5-Year Estimates, DP04

As shown in Table 5, most of the housing units within the two-mile radius of Route 110 were built between 1950 and 1969, with approximately 56% of the total housing units constructed during this two-decade

period. Nearly half of the housing units in Nassau County were similarly built between 1950 and 1969, with an additional 35% of the housing stock built before 1950, while most (approximately 5%) of the housing stock in Suffolk County was built between 1950 and 1979.

TABLE 5: AGE OF HOUSING STOCK IN THE TWO-MILE RADIUS OF ROUTE 110, IN COMPARISON TO NASSAU AND SUFFOLK COUNTIES

	2-Mile Radius of Route 110		Nassau County		Suffolk County	
	Number of Housing Units	Percent of Total	Number of Housing Units	Percent of Total	Number of Housing Units	Percent of Total
Total Housing Units	67,059	100.0%	467,418	100.0%	568,570	100.0%
Built 2005 or later	37	0.1%	526	0.1%	640	0.1%
Built 2000 to 2004	4,736	7.1%	15,242	3.3%	43,369	7.6%
Built 1990 to 1999	3,546	5.3%	12,993	2.8%	49,704	8.7%
Built 1980 to 1989	3,819	5.7%	19,788	4.2%	57,603	10.1%
Built 1970 to 1979	5,937	8.9%	26,424	5.7%	101,652	17.9%
Built 1960 to 1969	11,741	17.5%	59,451	12.7%	118,096	20.8%
Built 1950 to 1959	25,658	38.3%	167,076	35.7%	108,877	19.1%
Built 1940 to 1949	5,512	8.2%	66,847	14.3%	31,625	5.6%
Built 1939 or earlier	6,073	9.1%	99,071	21.2%	57,004	10.0%

Source: 2008-2012 American Community Survey 5-Year Estimates, DP04

As shown in Table 6, the range of household incomes for the area within a two-mile radius of Route 110 is comparable with that of both Nassau and Suffolk Counties. Of the 63,066 households within the two-mile area, more than 20% of the households earn between $100,000 and $149,999, which constitutes the largest percentage of the total households for this area for a single household income range. Similarly, the greatest percentage of the total households of Nassau and Suffolk Counties also earn between $100,000 to $149,999 (21.0% and 21.7%, respectively). The median household income in the two-mile radius of Route 110 ranges widely from $46,014 to $121,222 among the 38 census tracts that comprise the area. The average median household income for the census tracts that comprise the two-mile radius is $87,953, which is comparable to the median household income in Suffolk County ($87,778) and less than that in Nassau County ($97,049).

TABLE 6: HOUSEHOLD INCOME IN THE TWO-MILE RADIUS OF ROUTE 110, IN COMPARISON TO NASSAU AND SUFFOLK COUNTIES

	2-Mile Radius of Route 110		Nassau County		Suffolk County	
	Number of Households	Percent of Total	Number of Households	Percent of Total	Number of Households	Percent of Total
Total Households	63,066	100.0%	442,869	100.0%	496,349	100.0%
Less than $10,000	1,906	3.0%	13,651	3.1%	15,564	3.1%
$10,000 to $14,999	1,659	2.6%	10,567	2.4%	12,207	2.5%
$15,000 to $24,999	3,945	6.3%	24,697	5.6%	29,536	6.0%
$25,000 to $34,999	3,986	6.3%	24,627	5.6%	29,352	5.9%
$35,000 to $49,999	6,414	10.2%	36,650	8.3%	45,656	9.2%
$50,000 to $74,999	9,559	15.2%	60,979	13.8%	77,436	15.6%
$75,000 to $99,999	8,896	14.1%	56,223	12.7%	71,945	14.5%
$100,000 to $149,999	12,944	20.5%	92,925	21.0%	107,773	21.7%
$150,000 to $199,999	7,153	11.3%	54,818	12.4%	54,709	11.0%
$200,000 or more	6,604	10.5%	67,732	15.3%	52,171	10.5%

Source: 2008-2012 American Community Survey 5-Year Estimates, DP03

Table 7 lists employment data for the area within a two-mile radius of Route 110 as compared with that for Nassau and Suffolk Counties. There are nearly 100,000 individuals in the civilian labor force (age 16 and over) within the two-mile radius of Route 110, of which approximately 7.2% are unemployed. The unemployment rate in the two-mile radius of Route 110 is slightly higher than that in Nassau County (6.9%) and Suffolk County (7.0%).

TABLE 7: UNEMPLOYMENT RATE IN THE TWO-MILE RADIUS OF ROUTE 110, IN COMPARISON TO NASSAU AND SUFFOLK COUNTIES

	2-Mile Radius of Route 110	Nassau County	Suffolk County
	Number of People; Percent	Number of People; Percent	Number of People; Percent
Civilian Labor Force	99,885	701,129	783,474
Employed	92,714	652,817	728,795
Unemployed	7,171	48,312	54,679
Percent Unemployed	7.2%	6.9%	7.0%

Source: 2008-2012 American Community Survey 5-Year Estimates, DP03

Table 8 summarizes the means of transportation to work for workers above the age of 16 in the area within a two-mile radius of Route 110 as compared with that in Nassau and Suffolk Counties.[2] In the two-mile radius of Route 110, approximately three of every four workers 16 years and older (75.1%) drive alone to work, which is slightly higher than that in Nassau County (69.7%) and slightly lower than that in Suffolk County (79.1%), although driving alone constitutes the largest means of transportation to work in all three geographies. Public transportation is a distant second in the ranking of means of transportation for work for

[2] The Task 3 technical memorandum will present additional data about means of transportation to work—extracted from the NYMTC 2010/2011 Regional Household Travel Survey—that will also include details about origins and destinations.

the two-mile radius of Route 110. Similar to driving alone, the percentage of the workers 16 years and over in the two-mile radius of Route 110 who take public transportation to work (9.9%) is slightly smaller than that of Nassau County (15.6%) and slightly larger than that of Suffolk County (6.2%). For the remaining categories of means of transportation to work (e.g., carpool, walk, bicycle, worked at home, or taxicab/motorcycle/other means), the percentages for the area within a two-mile radius of Route 110 are very much in line with those of Nassau and Suffolk Counties. Not surprisingly, the data shows that the vast majority of workers who live in the two-mile radius of Route 110—similar to that in Nassau and Suffolk Counties—drive alone to their place of work, and only about one in every 10 workers uses public transportation as their means of transportation to work, although this is approximately twice the national average.

TABLE 8: MEANS OF TRANSPORTATION TO WORK IN THE TWO-MILE RADIUS OF ROUTE 110, IN COMPARISON TO NASSAU AND SUFFOLK COUNTIES

	2-Mile Radius of Route 110		Nassau County		Suffolk County	
	Number of People*	Percent of Total	Number of People	Percent of Total	Number of People	Percent of Total
Workers 16 Years and Over	91,250	100.0%	639,524	100.0%	713,596	100.0%
Car, truck, or van	75,948	83.2%	493,713	77.2%	624,397	87.5%
Drove alone	68,578	75.1%	344,118	69.7%	493,898	79.1%
Carpooled	7,374	8.1%	37,028	7.5%	51,825	8.3%
In 2-person carpool	6,027	6.6%	2,222	6.0%	3,369	6.5%
In 3-person carpool	750	0.8%	333	0.9%	518	1.0%
In 4-or-more person carpool	593	0.7%	222	0.6%	415	0.8%
Public transportation (excluding taxicab)	9,031	9.9%	99,766	15.6%	44,243	6.2%
Walked	1,608	1.8%	16,628	2.6%	11,418	1.6%
Bicycle	436	0.5%	1,919	0.3%	1,427	0.2%
Taxicab, motorcycle, or other means	1,232	1.4%	5,116	0.8%	7,136	1.0%
Worked at home	3,012	3.3%	22,383	3.5%	25,689	3.6%

Source: 2008-2012 American Community Survey 5-Year Estimates, S0801
* Numbers may not add to total due to rounding.

As shown in Table 9, only approximately 2.6% of workers who live within a two-mile radius of Route 110 have no vehicle available, which is slightly greater than the percentage of workers who live in Suffolk County who have no vehicle available (2.2%) and slightly less than that for Nassau County (3.5%). Similar to Nassau and Suffolk Counties, the vast majority of workers who live within a two-mile radius of Route 110—more than three out of every four—have more than one vehicle available.

TABLE 9: NUMBER OF VEHICLES AVAILABLE AMONG WORKERS IN THE TWO-MILE RADIUS OF ROUTE 110, IN COMPARISON TO NASSAU AND SUFFOLK COUNTIES

	2-Mile Radius of Route 110		Nassau County		Suffolk County	
	Number of People*	Percent of Total	Number of People	Percent of Total	Number of People	Percent of Total
Workers 16 Years and Over in Households	91,006	100.0%	635,372	100.0%	709,109	100.0%
No vehicle available	2,363	2.6%	22,238	3.5%	15,600	2.2%
1 vehicle available	13,528	14.9%	102,930	16.2%	94,311	13.3%
2 vehicle available	40,606	44.6%	286,553	45.1%	300,662	42.4%
3 or more vehicles available	34,510	37.9%	223,651	35.2%	298,535	42.1%

Source: 2008-2012 American Community Survey 5-Year Estimates, S0801
* Numbers may not add to total due to rounding.

As shown in Table 10, more than half (58.4%) of the total workers who live in the area within a two-mile radius of Route 110 have less than a 30-minute travel time to work, which is somewhat larger than the respective percentages in Nassau and Suffolk Counties overall (49.9%). Approximately 26.4% of workers who live within the two-mile radius of Route have a 30–59 minute travel time to work, which is slightly less than that for in Nassau and Suffolk Counties (29.7%), and the remaining 15.2% of the workers travel for more than one hour to get to work, which is also slightly less than that in Nassau and Suffolk Counties (20.4%). The data indicates that there is significant variation in commuting time among workers who live in the two-mile radius of Route 110, which is likely due in part to the geographic distribution of workplaces throughout the metropolitan area. As a region, the New York-Newark NY-NJ-CT Urbanized Area has the fourth highest yearly delay per automobile commuter in the nation (59 hours), according to the Texas Transportation Institute's 2012 *Urban Mobility Report*.

TABLE 10: TRAVEL TIME TO WORK IN THE TWO-MILE RADIUS OF ROUTE 110, IN COMPARISON TO NASSAU AND SUFFOLK COUNTIES

	2-Mile Radius of Route 110		Nassau County		Suffolk County	
	Number of People*	Percent of Total	Number of People	Percent of Total	Number of People	Percent of Total
Total Workers	91,250	100.0%	639,524	100.0%	713,596	100.0%
<30 Minutes	53,279	58.4%	319,123	49.9%	356084	49.9%
30-59 Minutes	24,059	26.4%	189,939	29.7%	211938	29.7%
60+ Minutes	13,912	15.2%	130,462	20.4%	145574	20.4%

Source: 2008-2012 American Community Survey 5-Year Estimates, S0801
* Numbers may not add to total due to rounding.

4. Population and Employment Trends

Table 11 shows the change in population and employment from 2000 to 2010 in the two-mile radius of Route 110, based on data compiled by the United States Census Bureau. In this area, the population increased by approximately 7,500 in the decade between 2000 and 2010, corresponding to an increase of approximately 4.0%. Despite the recession in the latter half of the decade, the two-mile radius around Route 110 also experienced an increase of more than 15,500 jobs (or an approximately 13.1% increase from 2000), up to a total of nearly 119,000 jobs.

TABLE 11: 2000 TO 2010 ABSOLUTE AND PERCENT CHANGE IN POPULATION AND EMPLOYMENT IN THE TWO-MILE RADIUS OF ROUTE 110

	2000	2010	Absolute Change (2000 – 2010)	Percent Change (2000 – 2010)
Population	182,286	189,876	7,590	4.0%
Employment	103,205	118,725	15,520	13.1%

Sources: 2006-2010 Census Transportation Planning Package (CTPP) American Community Survey 5-Year Estimates, Table A202100; 2000 CTPP, P2-004; 2010 and 2000 US Census, Summary File 1, DP-1

Note: 2000 population and employment numbers are based on census tract boundaries from the 2000 US Census, which were revised for the 2010 US Census. For the 2000 data, all census tracts with 50 percent or more of their area within the two-mile buffer were included in the analysis, consistent with the approach used for the 2010 data.

Figures 3 through 5 show existing (2014) and projected future population growth to 2040 (in absolute and percent change) at the census tract level for the two-mile radius around Route 110, and Figures 6 through 8 show comparable data for employment. These figures were prepared using Parsons Brinckerhoff's working set of 2010 – 2040 socioeconomic and demographic (SED) data for the New York Best Practice Model (BPM) 2010 Update project. The BPM is the travel demand forecasting model for the New York metropolitan area, developed by NYMTC for 28 counties in New York, New Jersey, and Connecticut. Through a series of area-based conversion tables, NYMTC's original SED is converted to the 2010 Census-tract-based geography shown in the maps. For the year 2010, Census data is used directly to fill the population data, and the growth rates from NYMTC are used to calculate future year population forecasts. The employment data are derived from ACS 2006-2010 data, which was the latest available at the time of the BPM project. Year 2014 data is interpolated assuming uniform yearly growth between 2010 and 2015.

Figure 3: Existing (2014) Population for the Route 110 Two-Mile Radius

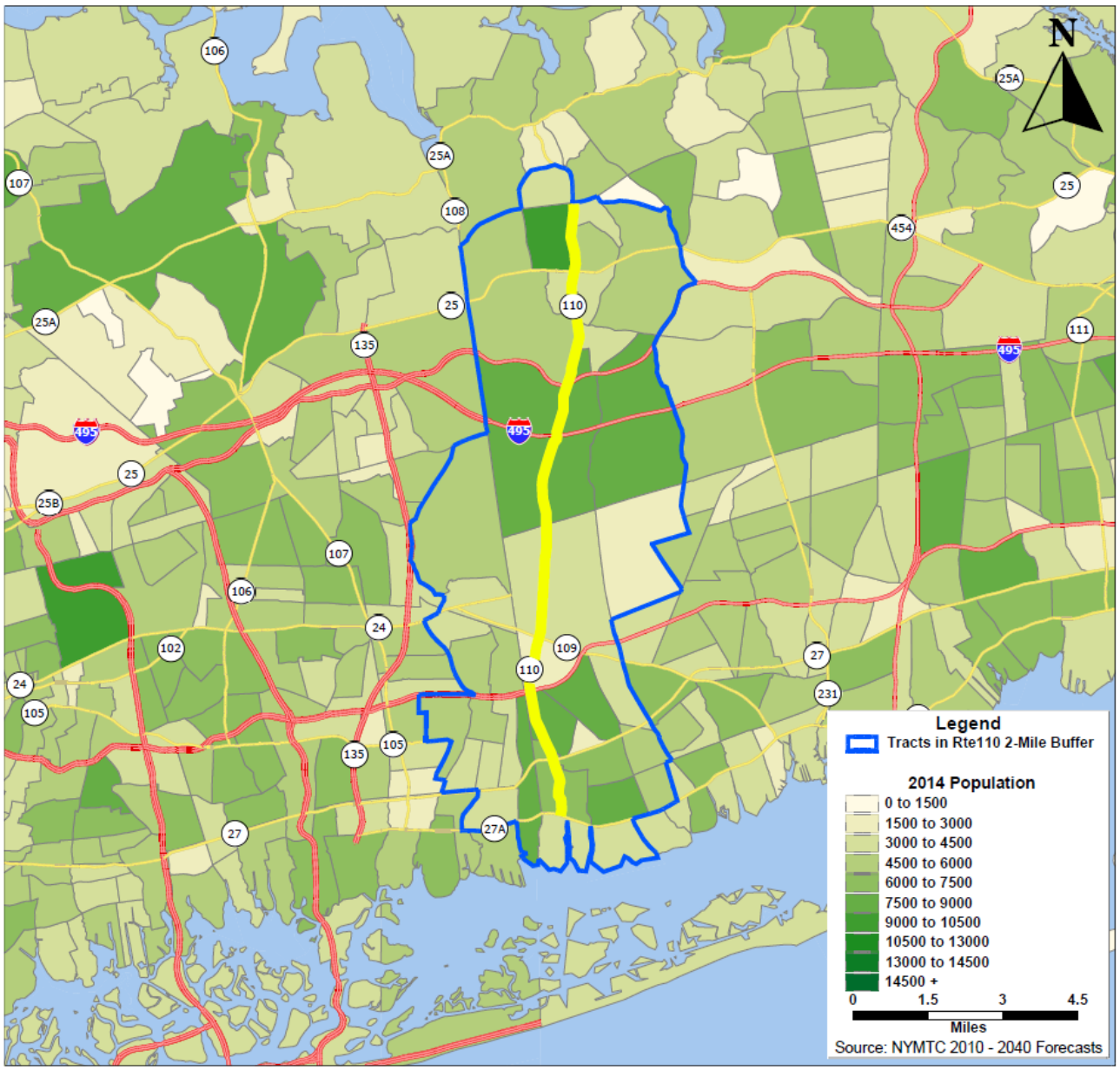


Figure 4: Projected Future Population Growth (2014 to 2040) for the Route 110 Two-Mile Radius (Absolute Change)

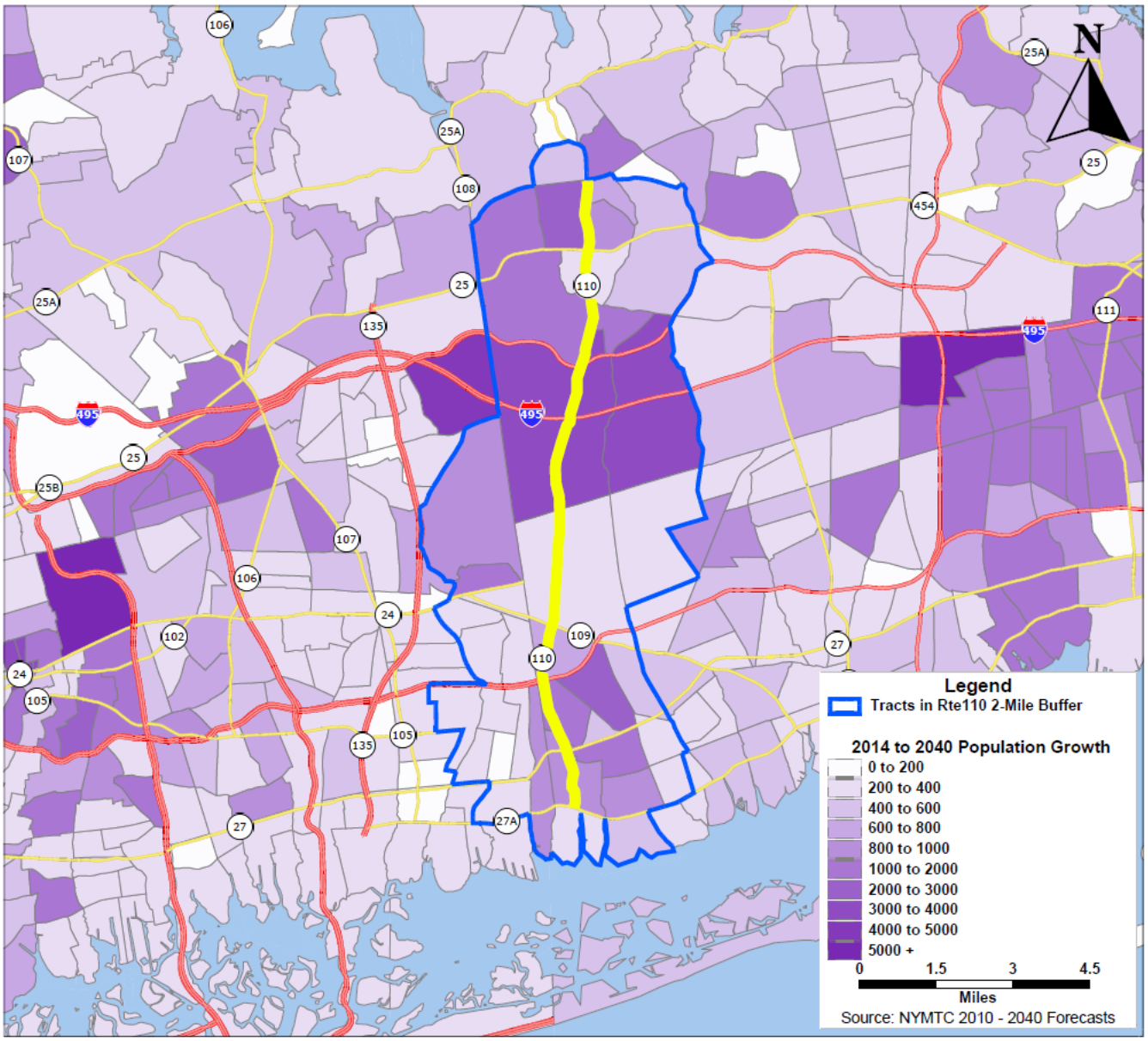


Figure 5: Projected Future Population Growth (2014 to 2040) for the Route 110 Two-Mile Radius (Percent Change)

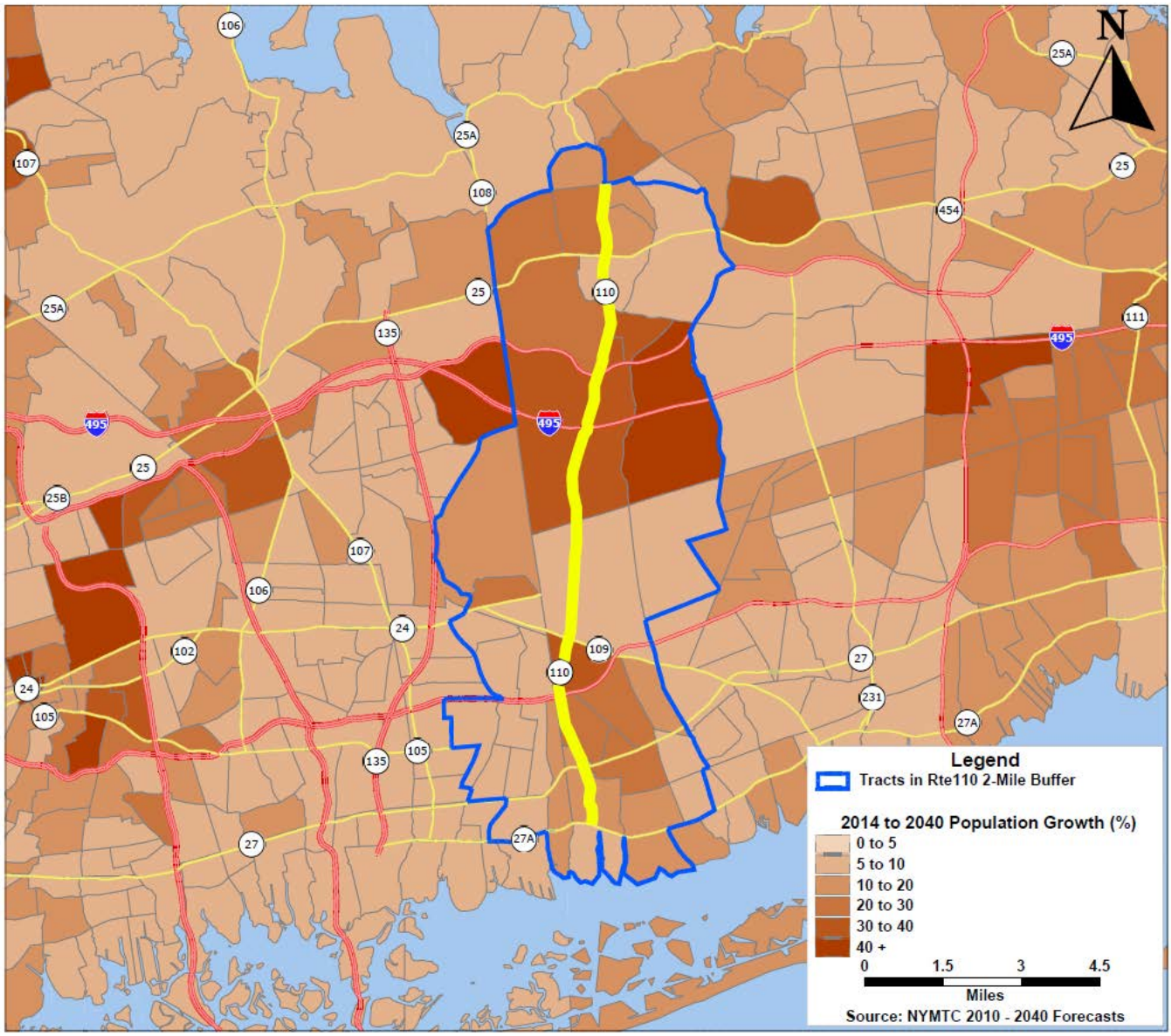


Figure 6: Existing (2014) Employment for the Route 110 Two-Mile Radius

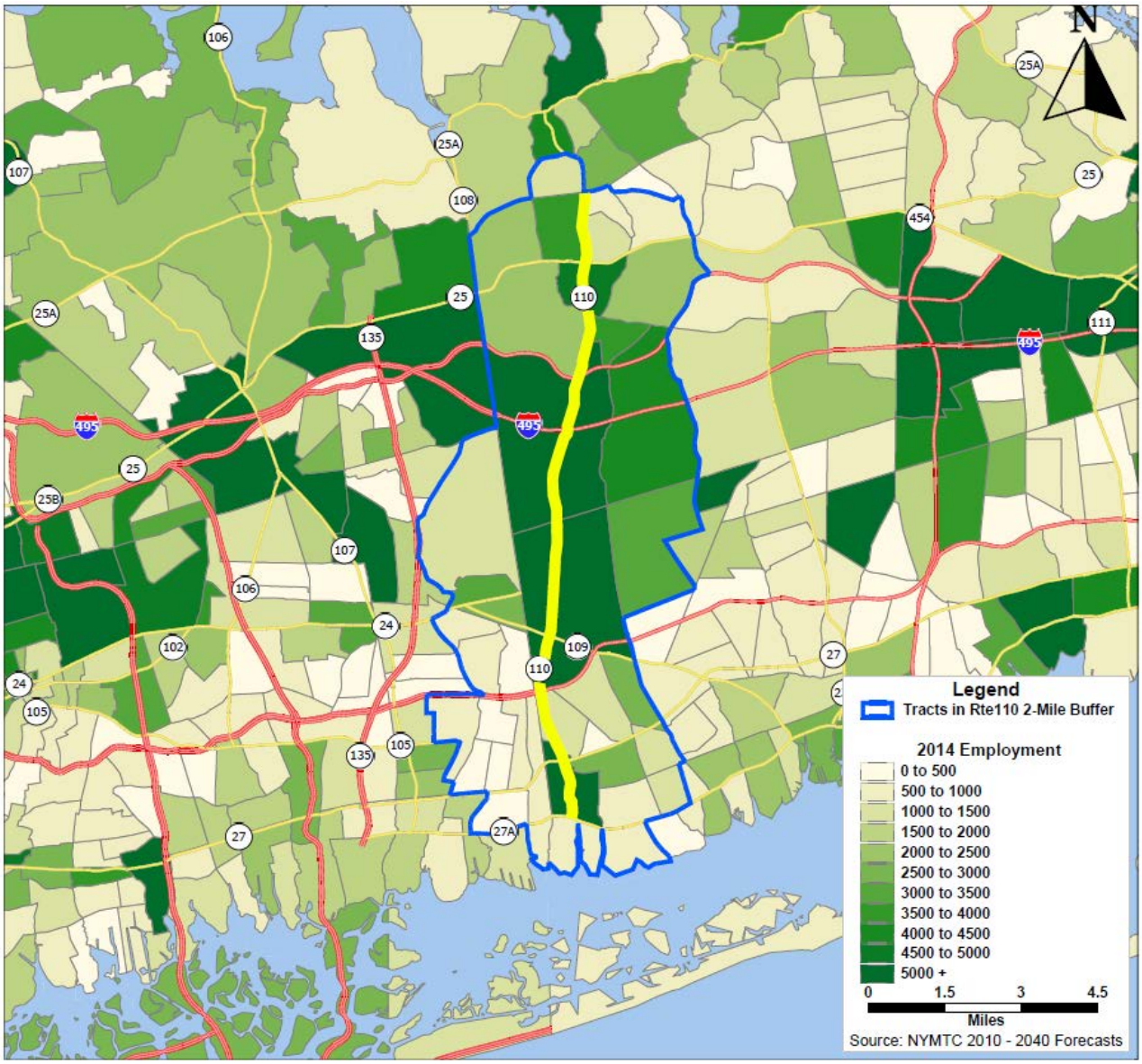


Figure 7: Projected Future Employment Growth (2014 to 2040) for the Route 110 Two-Mile Radius (Absolute Change)

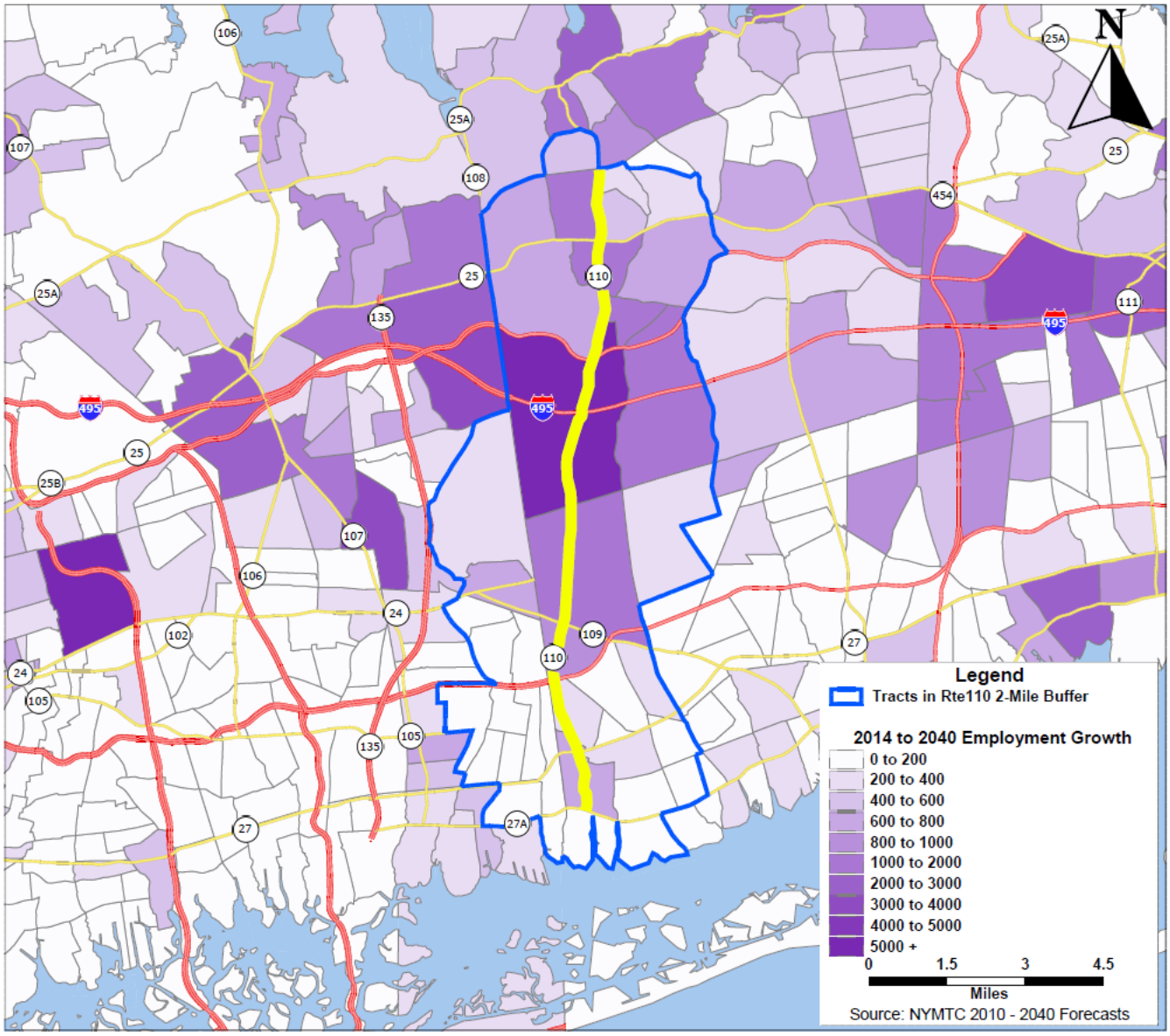
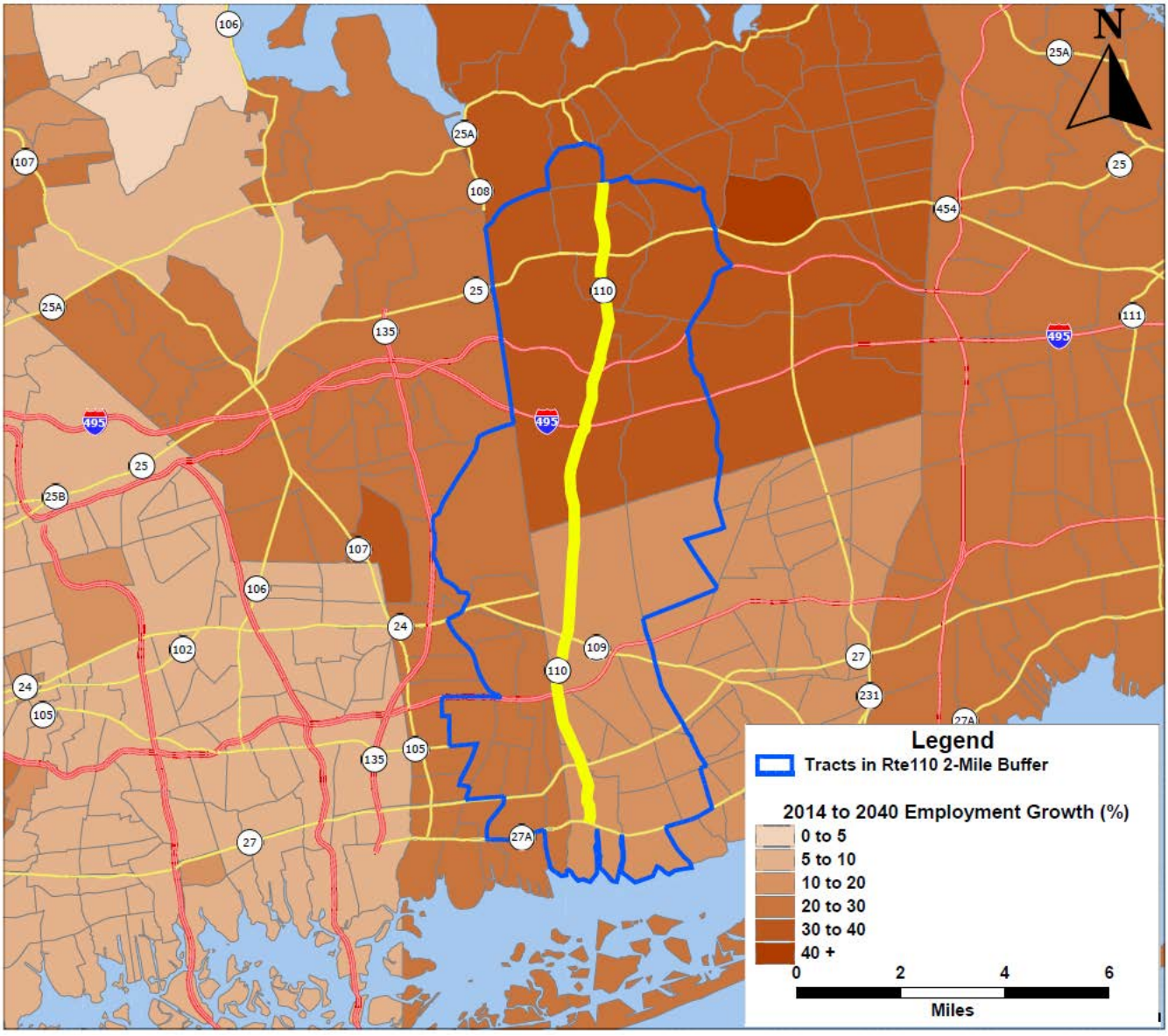


Figure 8: Projected Future Employment Growth (2014 to 2040) for the Route 110 Two-Mile Radius (Percent Change)



As shown in Figure 3, although primarily a commercial/office/industrial corridor, existing concentrations of population are dispersed along the corridor. While the census tract with the largest population is located north of Route 25 (Jericho Turnpike), other census tracts with a large existing population are located primarily between the Town of Babylon/Town of Huntington boundary and the Northern State Parkway, as well as south of the Southern State Parkway. As indicated in Figures 4 and 5, while some population growth to 2040 is projected in the Town of Babylon, primarily in North Amityville and the Village of Amityville south of the Southern State Parkway, the largest projected growth is located in the Town of Huntington, and the greatest increase among census tracts directly along the corridor—both in absolute number (3,079 individuals) and percent change (34.5 percent)—is forecast for the census tract that is primarily between the Town of Babylon/Town of Huntington boundary and the Northern State Parkway. Overall, within the two-mile radius around Route 110, the population is projected to increase by approximately 32,000 individuals from 2014 to 2040, from approximately 195,000 to approximately 227,000, corresponding to an approximately 16.5% increase over the 26-year time horizon.

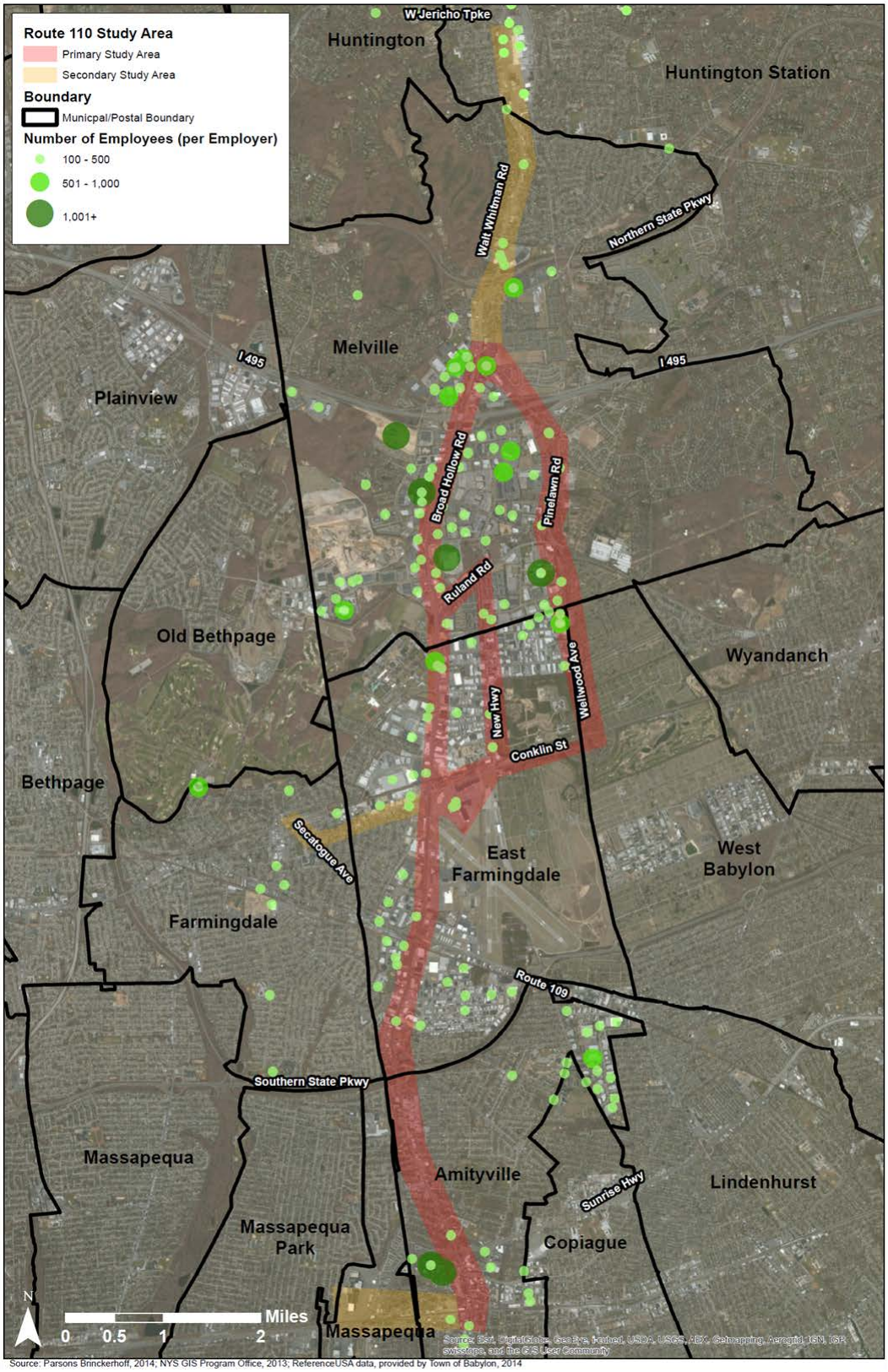
Figure 6 shows that the concentrations of existing employment along Route 110 are located between the Southern State Parkway and the Northern State Parkway, with additional areas of high employment located primarily just south of Route 25, as well as just south of Route 27 (Sunrise Highway). As indicated in Figures 7 and 8, employment growth to 2040 is projected for all of the census tracts along the corridor. The largest growth in absolute number of jobs is forecast for the census tract located primarily between the Town of Babylon/Town of Huntington boundary and the Northern State Parkway (i.e., an increase of 12,279 jobs), and the largest percent increase in number of jobs is forecast for the census tract that includes the Walt Whitman Shops (i.e., an increase of approximately 34.3 percent). Overall, within the two-mile radius around Route 110, employment is projected to increase by approximately 29,000 jobs from 2014 to 2040, from approximately 116,000 to approximately 145,000, corresponding to an approximately 24.8% increase over the 26-year time horizon.

5. Employment Distribution

Employment data was compiled by zip code for the communities along the Route 110 corridor—Amityville (11701), Farmingdale (11735), Melville (11747), Huntington (11743), and Huntington Station (11746)—by the Town of Babylon through ReferenceUSA, a service of Infogroup that is a provider of business and consumer research. The ReferenceUSA tabular data, which includes number of employees per employer by address, was geocoded in ArcGIS to spatially represent the distribution of employment in the vicinity of the Route 110 corridor. Figure 9 identifies businesses with 100 or more employees in these communities (between the northern and southern boundaries of the study area), and Appendix A includes details about the top 20 employers within each community/zip code.

As shown in Table 12, the top 20 employers in these communities all have more than 500 employees, ranging from 501 employees at Underwriters Laboratories Inc. in Melville to 5,200 employees at American Technical Ceramics in Huntington Station. Several of these large employers are located either directly along or just off Route 110, including Prestige Employee Administrators, the US Post Office Processing Center, and Farmingdale State College, and several others are located near Route 110, such as This Week's Pennysaver (Newsday) to the east of Route 110 and Canon USA Inc. to the west of Route 110.

Figure 9: Employers with 100+ Employees in the Communities along Route 110 (ReferenceUSA)



Source: Parsons Brinckerhoff, 2014; NYS GIS Program Office, 2013; ReferenceUSA data, provided by Town of Babylon, 2014

TABLE 12: TOP 20 EMPLOYERS BY NUMBER OF EMPLOYEES FOR COMMUNITIES ALONG ROUTE 110 (REFERENCEUSA)*

Rank (Number of Employees)	Employer Name	Address	Community	Number of Employees
1	American Technical Ceramics	17 Stepar Place	Huntington Station	5,200
2	Prestige Employee Administrators	538 Broad Hollow Road # 311w	Melville	4,100
3	This Week's Pennysaver	235 Pinelawn Road	Melville	1,800
4	US Post Office Processing Center	160 Duryea Road	Melville	1,600
5	Canon USA Inc.	1 Canon Park	Melville	1,500
6	South Oaks Hospital	400 Sunrise Highway	Amityville	1,150
7	Arrow/Schweber Electro Group	25 Hub Drive	Melville	1,000
8	Farmingdale State College	2350 Broad Hollow Road	Farmingdale	1,000
9	Honeywell Security	2 Corporate Center Drive # 100	Melville	1,000
10	Exelis Electronic Systems	1500 New Horizons Boulevard	Amityville	850
11	Roy K Davis Bus Inc.	Pulaski Road & 5th Avenue	Huntington Station	850
12	Huntington Union Free School District	50 Tower Street	Huntington Station	800
13	MSC Industrial Direct Co Inc	75 Maxess Road	Melville	750
14	Adecco	175 Broad Hollow Road	Melville	700
15	J D'Addario & Co Inc.	595 Smith Street	Farmingdale	700
16	Lend America	201 Old Country Road	Melville	700
17	Carlyle On The Green	99 Quaker Meeting House Road	Farmingdale	600
18	Leviton Manufacturing Co Inc	201 N Service Road	Melville	600
19	Nikon Americas Inc.	1300 Walt Whitman Road	Melville	537
20	Underwriters Laboratories Inc.	1285 Walt Whitman Road	Melville	501

Sources: Parsons Brinckerhoff, 2014; ReferenceUSA data, provided by Town of Babylon, 2014

* Includes employers located outside of the primary and secondary study area; excludes Brunswick Hospital Ctr Inc. (1,500 employees, per ReferenceUSA) because the Brunswick Hospital is now closed.

Much of the existing employment—as well as the projected future employment growth—along and surrounding the corridor is located within Melville. Figure 10 shows the employment distribution in Melville overlaid on the primary and secondary study area boundaries. The map spatially depicts the number of employees per building in Melville (combining individual employers located in a single building), which offers insight into concentrations of employment both along and near Route 110. Many buildings with significant numbers of employees are located off the main spine of the Route 110 corridor, including in the office parks between Route 110 and Pinelawn Road, some of which are beyond a convenient walking distance (quarter- to half-mile) from Route 110. There is considerable variation in the number of employees per building, ranging from less than 100 to more than 1,000. Table 13 lists the top 20 buildings ranked by number of employees. Prestige Employee Administrators, with 4,100 employees, is the largest employer in Melville along the corridor, and is also the largest employer in the primary and secondary study area.[3]

[3] As shown in Table 12, the largest employer in the communities along Route 110 is American Technical Ceramics, with 5,200 employees. This employer is located in Huntington Station, approximately one mile north of the secondary study area boundary.

Figure 10: Employment Distribution in Melville (ReferenceUSA)

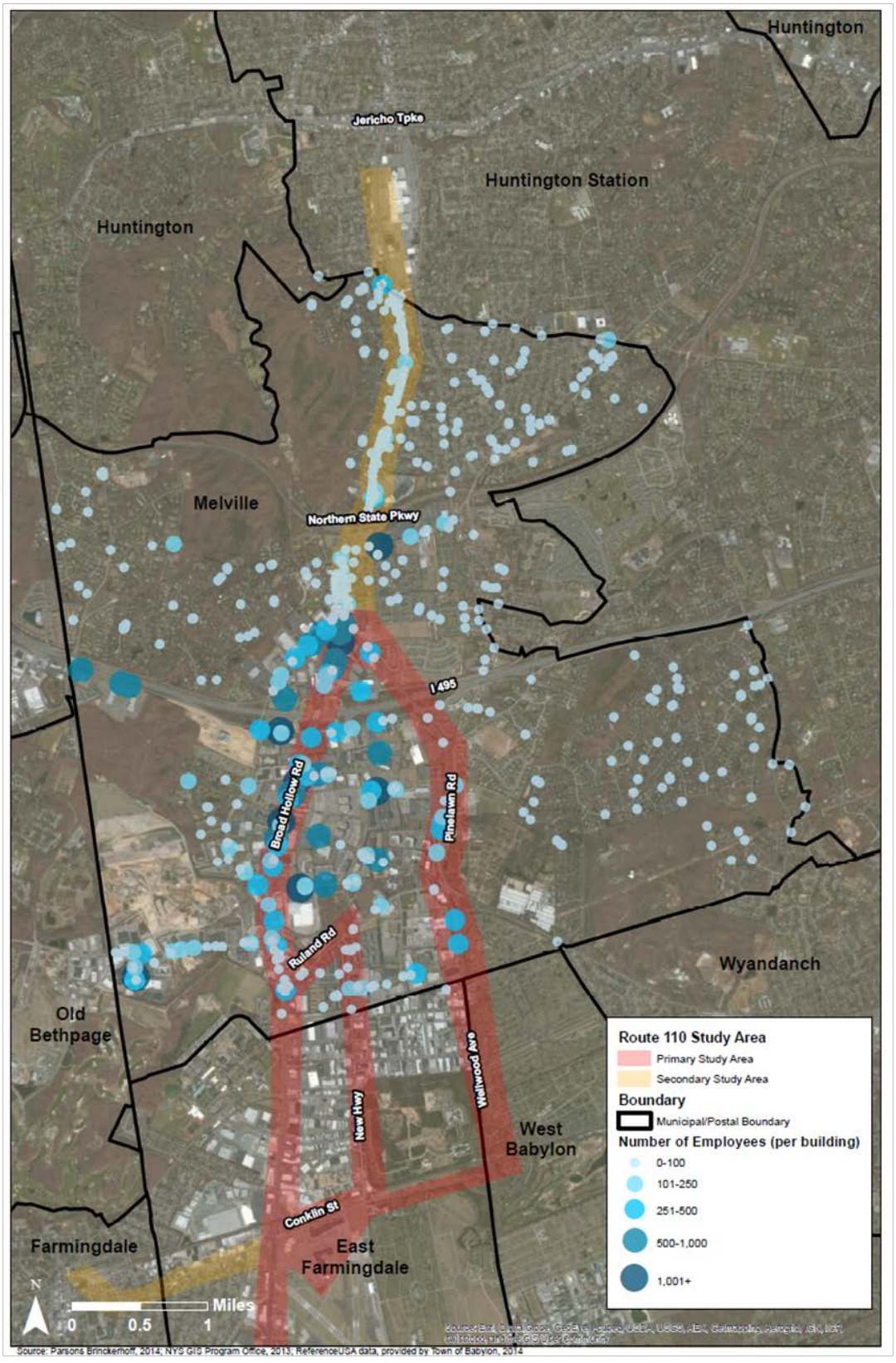


TABLE 13: MELVILLE EMPLOYMENT DATA – TOP 20 BUILDINGS BY NUMBER OF EMPLOYEES (REFERENCEUSA)

Rank (Number of Employees per Building)	Address	Number of Companies	Number of Employees	Dominant Companies (Number of Employees)
1	538 Broad Hollow Road	25	4,792	Prestige Employee Administrators (4,100)
2	160 Duryea Road	5	1,617	US Post Office (1,600)
3	1 Canon Park	1	1,500	Canon USA Inc (1,500)
4	201 Old Country Road	16	1,451	Lend America (700); Marchon Eyewear Inc (500)
5	445 Broad Hollow Road	137	1,327	Creative Staffing (300); Bruno Gerbino & Soriano LLP (150)
6	25 Hub Drive	2	1,132	Arrow/Schweber Electro Group (1,000)
7	175 Broad Hollow Road	3	1,104	Adecco (700)
8	2 Corporate Center Drive	2	1,003	Honeywell Security (1,000)
9	60 Baylis Road	2	1,000	Fougera Pharmaceuticals Inc (500); Savage Laboratories (500)
10	68 S Service Road	176	961	Shaheen Williams G Inc (112)
11	48 S Service Road	82	849	Cigna (125); Nastel Technologies Inc (99)
12*	2 Huntington Quadrangle	15	825	ADP (300); Aip Publishing LLC (200); American Institute of Physics (100)
13	58 South Service Road	35	811	Ladenburg Thalmann & Co (200); Zurich (160)
14	75 Maxess Road	1	750	MSC Industrial Direct Co Inc (750)
15	1300 Walt Whitman Road	6	666	Nikon USA (537)
16*	1 Huntington Quadrangle	74	660	EMC Corp (55)
17	201 North Service Road	6	648	Leviton Manufacturing Co Inc (600)
18	225 Broad Hollow Road	29	601	Esselte Corp (150)
19	125 Baylis Road	23	582	Key Management Group (325)
20	200 Broad Hollow Road	76	567	Accurecord Inc (100)

Sources: Parsons Brinckerhoff, 2014; ReferenceUSA data, provided by Town of Babylon, 2014
* Buildings that are part of the Huntington Quadrangle.



Huntington Quadrangle, east of Route 110 in Melville

Source: Parsons Brinckerhoff, 2009

Overall, it is worth noting that there are 154,913 jobs in these communities along the corridor, according to the ReferenceUSA data, compared to 531,776 jobs in Suffolk County and 511,467 jobs in Nassau County, according to the US Economic Census. Based on this comparison, this translates to approximately 15% of Long Island's workforce in these communities along the corridor. The corridor jobs are within the following employment sectors, based on the North American Industry Classification System (NAICS):

- Retail Trade (NAICS codes 44-45): 21,216 jobs
- Professional, Scientific, and Technical Services (NAICS code 54): 19,802 jobs
- Manufacturing (NAICS codes 31-33): 19,779 jobs
- Health Care and Social Assistance (NAICS code 62): 15,988 jobs
- Wholesale Trade (NAICS code 42): 12,169 jobs
- Accommodation and Food Services (NAICS code 72): 9,331 jobs
- Finance and Insurance (NAICS code 52): 9,266 jobs
- Educational Services (NAICS code 61): 8,954 jobs
- Construction (NAICS code 23): 6,542 jobs
- Other (including—but not limited to—Unclassified Establishments, Other Services (except Public Administration), Administrative and Support and Waste Management and Remediation Services, and Information): 31,866 jobs

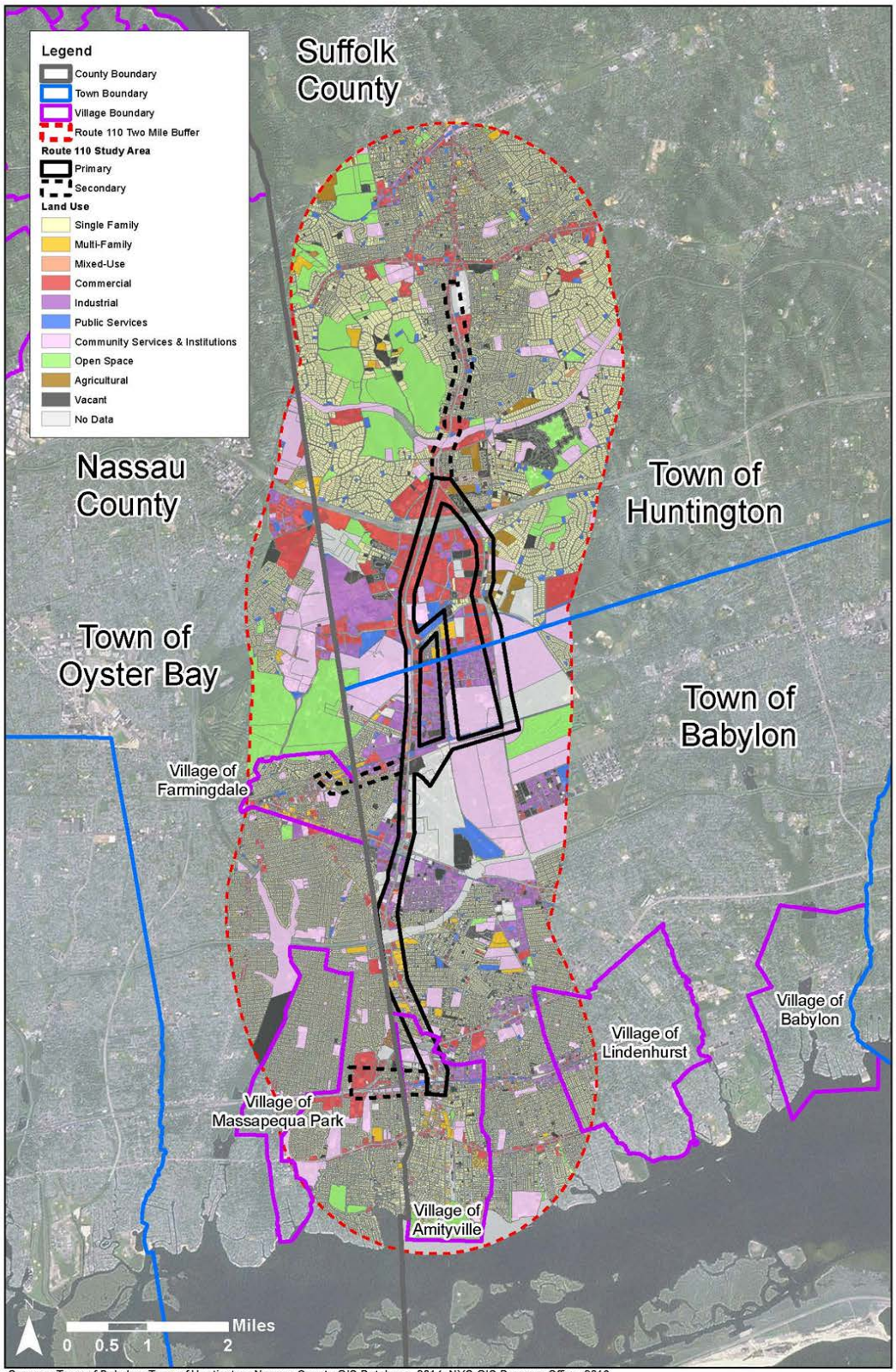
6. Land Use and Zoning

6.1 LAND USE

Tax parcel data for the area within a two-mile radius of Route 110 was compiled from the Town of Babylon, the Town of Huntington, and Nassau County, and existing land use was extrapolated from the data using the "New York State Department of Taxation and Finance Property Class Codes – Assessors' Manual Data Collection" (http://www.tax.ny.gov/research/property/assess/manuals/vol6/ref/prclas.htm). The hundreds of Property Type Classification Codes that are assigned to parcels were converted to the following 10 land use categories to facilitate an assessment of existing land use in the vicinity of the Route 110 corridor: agricultural, single-family residential, multi-family residential, mixed-use, vacant, commercial, community services and institutions, industrial, public services, and open space. Appendix B includes the list of which Property Type Classification Codes correspond to which of the 10 land use categories. Parcel-specific land use classifications can subsequently be updated in this study based on field reconnaissance, Google Earth aerials, and known changes in land use that are not reflected in the tax lot data.

Existing land use within a two-mile buffer of Route 110 is shown in Figure 11. Although there is a wide variety of land uses along the Route 110 corridor, Route 110 itself is predominantly mixed commercial (including office, retail, and service) and industrial (mostly light industrial and storage/warehouse).

Figure 11: Existing Land Use within a Two-Mile Radius of Route 110



Sources: Town of Babylon; Town of Huntington; Nassau County GIS Database, 2014; NYS GIS Program Office, 2013
NYS Department of Taxation and Finance, Property Class Codes - Assessors' Manual Data Collection

Huntington

Along the northern section of the Route 110 corridor in the study area, located in Huntington north of Melville, the land use character is largely a combination of commercial with some limited single-family residential, with additional residential development located along the side streets. The northern edge of the study area is anchored by the Walt Whitman Shops, which serves as the major trip generator in this portion of the corridor. In November 2013, the Walt Whitman Shops opened its 70,000 square foot expansion, which included the addition of more than 30 new retailers.



Walt Whitman Shops at the northern section of the study area
Source: Simon Property Group

Melville

From Schwab Road to the Town of Huntington/Town of Babylon boundary, just north of Smith Street, is the Melville area, located in the Town of Huntington. As discussed in the "Employment Distribution" section previously, the Melville area has a number of large suburban office buildings and office parks (e.g., Huntington Quadrangle). Several headquarters for large companies are located in this area, including Nikon and Capital One, and in 2013, Canon USA opened its new headquarters on Walt Whitman Road across from WLNY TV55 near Exit 49 of the Long Island Expressway (LIE). In addition to these destinations, other major trip generators within Melville include the Broad Hollow Bioscience Park, Newsday, Estee Lauder, the United States Post Office distribution center, the Hilton Long Island/Huntington, the Melville Marriott, the Melville Mall, and a number of office buildings within and near the Huntington Quadrangle as well as along Pinelawn Road north of the LIE. Other uses in Melville along Route 110 include industrial, retail, and hotel uses, and there are a number of residential uses (including subdivisions and senior developments) just off the Route 110 corridor.



One Canon Park, the headquarters of Canon U.S.A., Inc. in Melville
Source: Canon

East Farmingdale

South of Melville is the hamlet of East Farmingdale, which runs from the municipal border between the Town of Babylon and the Town of Huntington to the Southern State Parkway. This portion of the Route 110 corridor exhibits a number of differing land use patterns. North of the Ronkonkoma Branch of the Long Island Rail Road (LIRR), this portion of Route 110 contains retail uses (a combination of strip commercial and national-chain large-format stores), with industrial uses in the adjacent parcels, as well as the prominent uses of Farmingdale State College off the west side of Route 110 and the Adventureland amusement park on the east side of Route 110. Between the Ronkonkoma Branch of the LIRR and Route 109, the west side of Route 110 contains primarily industrial and commercial uses with some vacant parcels, and the east side of Route 110 includes a combination of shopping centers, hotels, offices/light industrial uses, Republic Airport, Molloy College, SUNY-Farmingdale Aerospace Education Center, and a number of vacant parcels that were related to the former Republic Airport LIRR Station and Fairchild Aircraft.[4] From Route 109 to the Southern State Parkway, the land use composition is largely industrial (with a combination of light industrial, manufacturing, and storage uses), with some small commercial offices and automobile-oriented uses. Overall, major trip generators in this portion of the corridor include the Republic Plaza and Airport Plaza shopping centers, Farmingdale Marriott, Molloy College and Adventureland on the east side of Route 110, and Farmingdale State College on the west side of Route 110.

[4] The Town of Babylon is currently in the process of selecting a master developer to redevelop approximately 140 acres near the intersection of Route 110 and Conklin Street.



Airport Plaza shopping center in East Farmingdale
Source: Parsons Brinckerhoff, 2013

North Amityville and Village of Amityville

The southern end of the Route 110 corridor, south of the Southern State Parkway and located in the Village of Amityville and the hamlet of North Amityville, contains a mix of uses, primarily comprising single- and multi-family residential (including mobile homes) and strip commercial uses. Additionally, north and south of Sunrise Highway are two large institutional uses: 1) the Edmund W Miles Middle School north of Sunrise Highway on the east side of Route 110, and 2) the now vacant Brunswick Hospital and associated building and parking areas.[5] The major existing trip generator in this southern portion of the corridor is the Amityville LIRR Station.



Downtown Amityville along Route 110, at the southern end of the study area
Source: Parsons Brinckerhoff, 2014

[5] There are plans to redevelop the 7.67-acre property into a mixed retail and rental apartment complex.

Broader Two-Mile Radius from Route 110

Within the broader two-mile radius from Route 110, properties are located in the Town of Oyster Bay, the Village of Farmingdale, and the Village of Massapequa Park in Nassau County, as well as the Village of Lindenhurst in Suffolk County, in addition to the Town of Babylon, Village of Amityville, and Town of Huntington. The land use character in the area within a two-mile radius of Route 110 varies widely among different sections of the area, including a combination of small- and large-lot single-family residential subdivisions, local downtowns with a mix of retail and residential, strip commercial development, shopping centers, large industrial uses, parks and open space, and community services and institutions. Major trip generators within the broader two-mile radius and in proximity to Route 110 include the Sunrise Mall in East Massapequa, the Farmingdale LIRR station, and the Huntington LIRR station. Origin and destination data within, to, and from this two-mile radius of Route 110 will be summarized in the Task 3 technical memorandum for the 28-county region as modeled by NYMTC.



Sunrise Mall in East Massapequa, west of Route 110 within the secondary study area
Source: Parsons Brinckerhoff, 2014

6.2 ZONING

The 2010 *Route 110 BRT Study* included an assessment of existing zoning along the portion of the Route 110 corridor in the primary study area and extending an approximate quarter-mile radius around Route 110, and this assessment remains relevant for the Alternatives Analysis. In the 2010 study, zoning information was identified through a review of local and regional planning documents, as well as GIS data obtained from the individual municipalities and Suffolk County, and aerials of the community. The resultant zoning maps, which are included as Figures 12 and 13, show that there are 26 different zoning districts within this portion of the Route 110 corridor. Appendix C includes a description of these zoning districts, as documented in the 2010 study. The Route 110 frontage is primarily zoned industrial and commercial, with residential zoning primarily beginning off the Route 110 corridor.

With respect to zoning, an assessment of transit-oriented development (TOD) opportunities as part of the Alternatives Analysis (in the alternatives development and screening process in Tasks 5 and 8-11) will look at site-specific zoning as necessary to identify potential locations where existing zoning should be modified

to promote TOD. The purpose of examining land use and zoning is to evaluate the corridor and its potential for TOD.

7. Active Development Projects Along Route 110 in the Town of Babylon

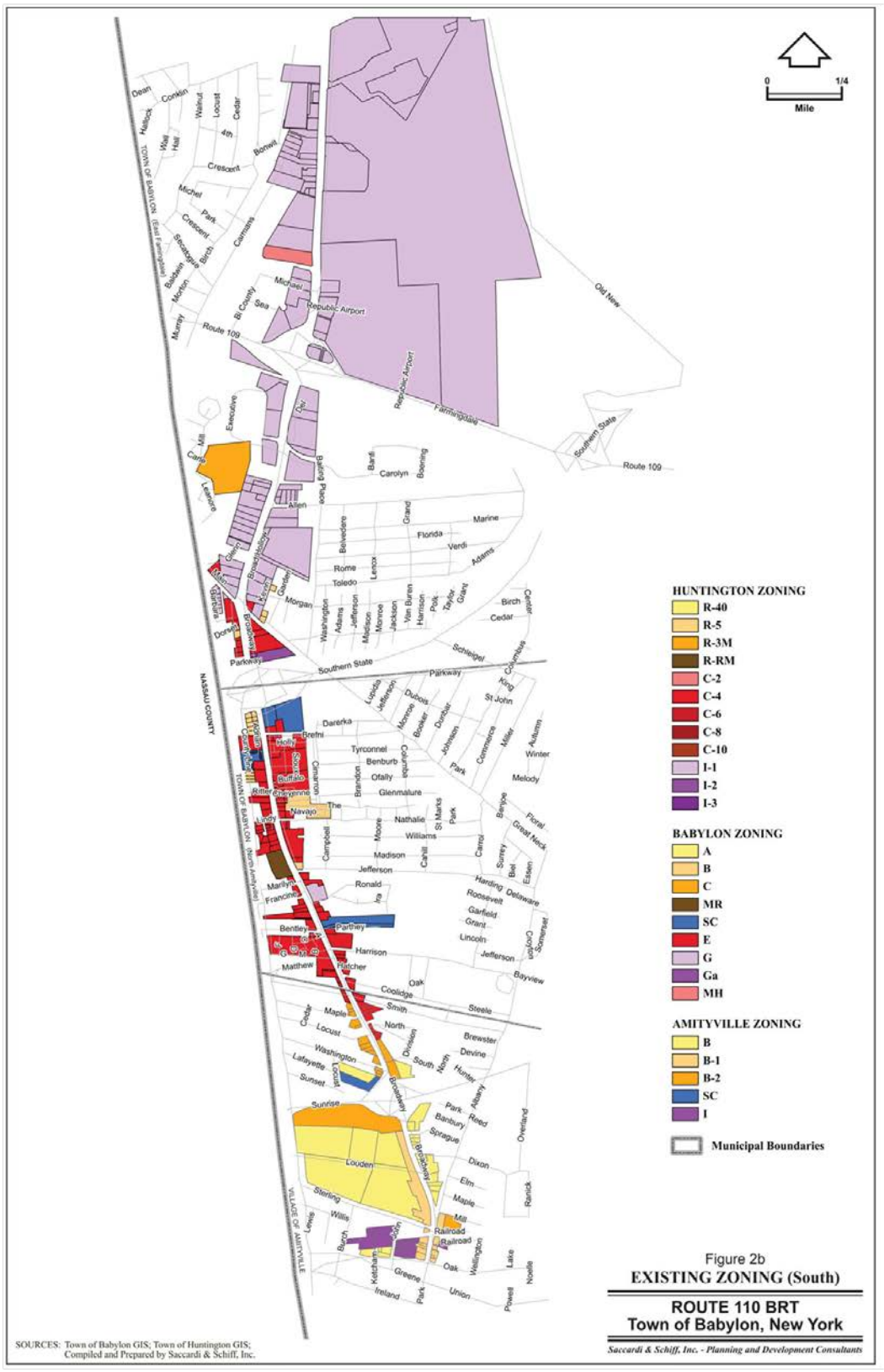
To supplement the summary of existing land uses on Route 110, Table 14 includes a list of projects that are active along the corridor within the Town of Babylon. Compiled by the Town of Babylon, the table includes projects that are planned, proposed, and approved, and includes the name, location, size, details, and status of the projects, as of June 17, 2014.

TABLE 14: PLANNED, PROPOSED, AND APPROVED DEVELOPMENT ALONG ROUTE 110 WITHIN THE TOWN OF BABYLON

Name	Address	Acreage	Program
1278 Route 110	1637 Broad Hollow Road	1.85 acres	10,000 sf commercial (possibly a restaurant); 112 parking spaces (28 landbanked)
Broad Hollow Commons (Acadia)	Southwest corner of Route 110 and Conklin Street	19.4 acres	Upwards of 170,000 sf of retail/restaurant; possibly 860 spaces
Lexus	2040-2100 Broad Hollow Road (northeast corner of Route 110 and Daniel)	3 acres	Renovation of 31,000 sf building for service center and construction of 33,000 sf sales showroom
Parkway Properties	360 Eastern Parkway	1.16 acres	48 condominium units in a 2 ½-story building
New Frontier	East of Route 110; south, west, and north of Brefni, Geraldine, and Nathalie, respectively	20.26 acres	3-story mixed-use building containing 500 residential units (213 1-BR, 287 2-BR) and 42,131 sf retail
Stew Leonard's	Part of Airport Plaza	--	Stew Leonard's store

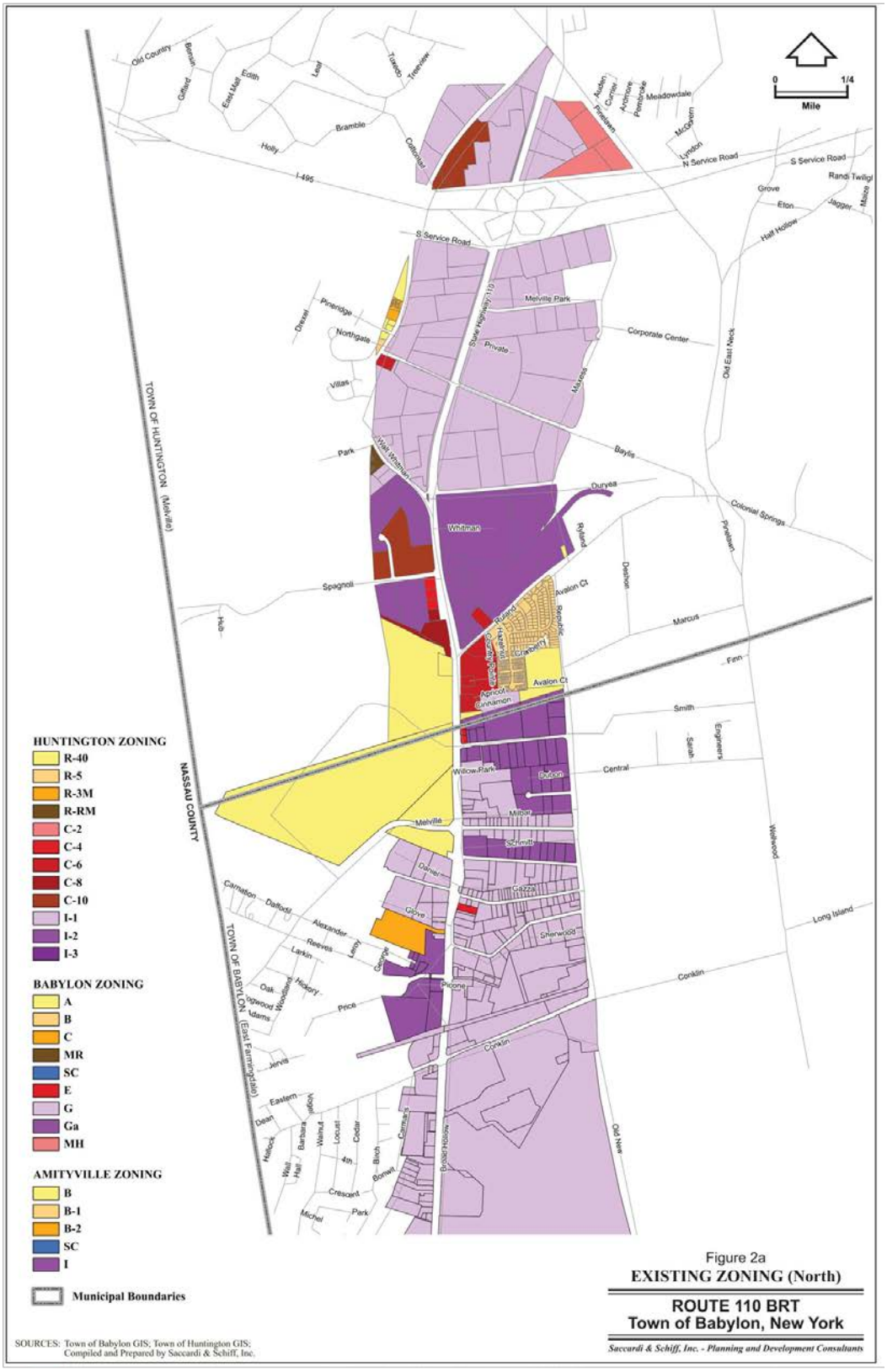
Source: Town of Babylon, June 17, 2014

Figure 12: Route 110 Existing Zoning (South)



Source: 2010 *Route 110 BRT Study*

Figure 13: Route 110 Existing Zoning (North)



Source: 2010 *Route 110 BRT Study*

8. Existing Transit Service

Many existing bus routes provide service along or cross Route 110, including routes operated/managed by Suffolk County Transit, Nassau Inter County Express (NICE), and Huntington Area Rapid Transit (HART). The portion of Route 110 within the study area also crosses three branches of the LIRR. Figure 14 depicts the existing transit service, and the following sections present an overview of the different services.

8.1 SUFFOLK COUNTY TRANSIT



Suffolk County Transit bus at the Amityville LIRR Station
Source: Parsons Brinckerhoff, 2013

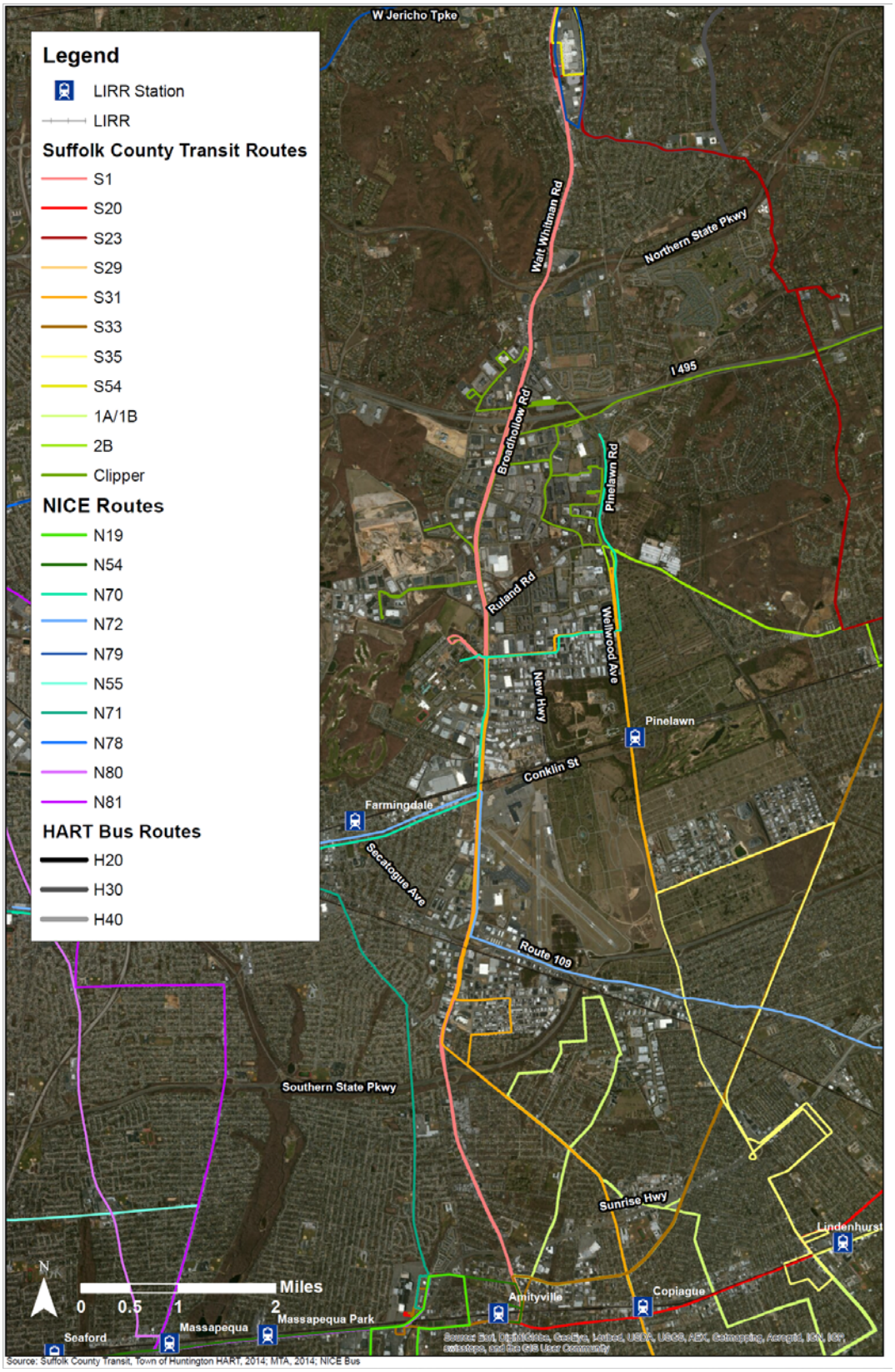
A number of existing Suffolk County Transit bus routes serve the Route 110 study area and offer connections to other bus routes, as well as the LIRR, as follows:

- **S1:** This route serves the length of the Route 110 corridor, from Halesite in the Town of Huntington to the Amityville LIRR station.
  - Serving: Amityville LIRR Station, North Amityville, East Farmingdale, Farmingdale State College, Melville, South Huntington, Walt Whitman Shops, Huntington, Halesite
  - LIRR connections: Amityville – Babylon Branch; Huntington – Port Jefferson Branch

S1 Connecting Bus Service	
Route Number	**Location**
S20, S33, 1A, N54	Amityville
S23, S29, S54, N79	Walt Whitman Shops
H6	Huntington
H9	Huntington, Walt Whitman Shops
N70, N72	East Farmingdale
2B, N70	Farmingdale State College

Source: Suffolk County Transit

Figure 14: Route 110 Existing Transit Service



- **S20:** This route connects the Babylon LIRR station with Sunrise Mall in Massapequa Park. It operates along Oak Street at the southern end of the Route 110 corridor.
  - Serving: Babylon LIRR Station, West Babylon, Great South Bay Shopping Center, Lindenhurst, Copiague, Amityville, Sunrise Mall
  - LIRR connections: Amityville, Copiague, Lindenhurst, Babylon – Babylon Branch

S20 Connecting Bus Service	
Route Number	**Location**
S1, S33, 1A, N54	Amityville
S23, S25, S27, S29, S40, S42, N19, N72	Babylon LIRR Station
S33, N19, N54, N55, N71, N80, N81	Sunrise Mall
S25, S29, S35	Great South Bay Shopping Center
S31	Copiague
S35	Wellwood Avenue & Hoffman Avenue
1B	Copiague, Lindenhurst

Source: Suffolk County Transit

- **S23:** This route connects the Walt Whitman Shops in South Huntington with both the Wyandanch and Babylon LIRR stations.
  - Serving: Babylon LIRR Station, North Babylon, Deer Park, Wyandanch, Wheatley Heights, Dix Hills, Five Towns College, Walt Whitman Shops
  - LIRR connections: Babylon – Babylon Branch; Wyandanch – Ronkonkoma Branch

S23 Connecting Bus Service	
Route Number	**Location**
S1, S54, H4, H9, N79	Walt Whitman Shops
S20, S25, S27, S29, S40, S42, N19, N72	Babylon LIRR Station
S33, 2A, 2B	Wyandanch

Source: Suffolk County Transit

- **S29:** This route connects the Walt Whitman Shops with Deer Park, North Babylon, and Babylon and continues past the Babylon LIRR station to Great South Bay Shopping Center.
  - Serving: Great South Bay Shopping Center, Babylon LIRR Station, North Babylon, Deer Park, Dix Hills, Walt Whitman Shops
  - LIRR connections: Babylon – Babylon Branch

S29 Connecting Bus Service	
Route Number	**Location**
S1, S54, H4, H9, N79	Walt Whitman Shops
S20, S25, S27, S40, S42, N19, N72	Babylon LIRR Station
S23	Babylon LIRR Station, Walt Whitman Road
S33, 2A	Deer Park
S35	Great South Bay Shopping Center
2B	North Babylon

Source: Suffolk County Transit

- **S31:** This route connects northwest Babylon with the Copiague LIRR station and operates on Route 110 between Allen Boulevard and Smith Street. It also serves Pinelawn, Farmingdale, and Melville.
  - Serving: Copiague, North Amityville, East Farmingdale, Farmingdale, Melville, Newsday, Pinelawn, Northwest Babylon
  - LIRR connections: Copiague – Babylon Branch; Pinelawn – Ronkonkoma Branch

S31 Connecting Bus Service	
Route Number	**Location**
S1, N70, N72	East Farmingdale
S1, 2B, N70	Farmingdale
S25, S33, S35	Five Corners (intersection of Edison Avenue, Straight Path, and Little East Neck Road in West Babylon)
S33, 1A, N19	Copiague
S20, 1B	Copiague LIRR Station

Source: Suffolk County Transit

- **S33:** This route connects the Sunrise Mall and the Hauppauge Industrial Park/Government Offices, and operates along several roadways which include: Straight Path, Grand Boulevard, Commack Road, LIE Service Road, Moreland Road, Oser Avenue, and Rabro Drive.
  - Serving: Sunrise Mall, Amityville, Copiague, North Lindenhurst, West Babylon, Wyandanch, Deer Park, Tanger Outlets (Deer Park), Pilgrim Psychiatric Center, Suffolk County Community College (Brentwood), Hauppauge Industrial Park, and Hauppauge Government Offices
  - LIRR connections: Amityville – Babylon Branch; Wyandanch – Ronkonkoma Branch

S33 Connecting Bus Service	
Route Number	**Location**
S1, S20, 1A, N54	Amityville
S23, 2A	Wyandanch, Deer Park
S25	Five Corners (intersection of Edison Avenue, Straight Path, and Little East Neck Road in West Babylon)
S27, S45, S54, S62	Hauppauge
S27, 2A	Tanger Outlets, Deer Park
S29	Deer Park
S31, 1B	Copiague
S35	West Babylon
S41, 3A	Suffolk County Community College, Brentwood
2B	Wyandanch
3A, 3B	Hauppauge Industrial Park
S20, N19, N71	Sunrise Mall

Source: Suffolk County Transit

- **S54:** This route operates from the Walt Whitman Shops east on Jericho Turnpike to Veterans Memorial Highway (NYS Route 454) to the Patchogue LIRR station. It serves both New York State and Suffolk County government offices in Hauppauge.

- Serving: Patchogue LIRR Station, Blue Point, Bayport, Sayville, Bohemia, Islandia, Hauppauge Government Offices, Commack, Elwood, Walt Whitman Shops
- LIRR connections: Patchogue – Montauk Branch

S54 Connecting Bus Service	
Route Number	**Location**
S40, S61, S63, S66, S68, 7A, 7B	Patchogue
S27, S33, S45, S62	Hauppauge
S42, S45, 3C	Central Islip
S56, S58, H6	Commack
S1, S23, S29, H4, H9, N79	Walt Whitman Shops
S41	East Northport
S57	Bohemia
S59	Holbrook
3D	Islandia

Source: Suffolk County Transit

- **S110 "Suffolk Clipper":** This route operates from several park & ride lots located along the LIE from central Suffolk County to various major businesses along and off the Route 110 corridor. Some trips also serve Hauppauge Industrial Park.
  - Serving: LIE Exit 63 (Farmingville), LIE Exit 58 (Islandia), Hauppauge Industrial Park, Route 110, Farmingdale State College

S110 "Suffolk Clipper" Connecting Bus Service	
Route Number	**Location**
S1, 2B, S31, N70	Farmingdale State College (or vicinity)
S27, S33, S62, 3A, 3B	Hauppauge Industrial Park

Source: Suffolk County Transit

- **1A/1B "Amityville Loop"** (Copiague to Lindenhurst LIRR Station): This route connects the Amityville LIRR station with the Copiague and Lindenhurst LIRR stations. It also serves Martin McNicholas Center and the Tri-Community Health Center.
  - Serving: Amityville LIRR Station, North Amityville, Copiague, Tanner Beach Park, Lindenhurst, Lindenhurst LIRR Station
  - LIRR connections: Amityville, Copiague, Lindenhurst – Babylon Branch

1A Connecting Bus Service	
Route Number	**Location**
S1, S33, N54	Amityville LIRR Station
S20	Amityville
1B	Copiague
1B Connecting Bus Service	
S20, S31	Copiague LIRR Station
S20, S35	Lindenhurst LIRR Station
S33, 1A	Copiague

Source: Suffolk County Transit

- **2B:** This route connects East Farmingdale and Wyandanch with the Bay Shore LIRR station, and operates on several roadways including Colonial Springs Road, Bay Shore Road, and Sunrise Highway.
  - Serving: Farmingdale State College, Wheatley Heights, Wyandanch, Deer Park, North Babylon, Gardiner Manor Plaza, South Shore Mall, Touro College, Bay Shore
  - LIRR connections: Wyandanch – Ronkonkoma Branch; Bay Shore – Montauk Branch

2B Connecting Bus Service	
Route Number	**Location**
S1, N70	Farmingdale State College
S23, S29	North Babylon
S23, S33, 2A	Wyandanch
S27	West Islip
S40, S41, S45, 2A	Bay Shore
S42, S45, 2A, 3A, 3B, 3C	South Shore Mall
2A, 3A, 3B	Gardiner Manor Plaza

Source: Suffolk County Transit

- **S35:** This route connects the Great South Bay Shopping Center to Crown Manor, and primarily operates on Straight Path, Wellwood Avenue, and Hoffman Avenue/Oak Street.
  - Serving: Great South Bay Shopping Center, Crown Manor, Lindenhurst
  - LIRR connections: Lindenhurst – Babylon Branch

S35 Connecting Bus Service	
Route Number	**Location**
S20, S25, S29, N19	Great South Bay Shopping Center
S25, S31, S33	Five Corners (intersection of Edison Avenue, Straight Path, and Little East Neck Road in West Babylon)
S20, 1B	Lindenhurst LIRR Station
N72	West Babylon

Source: Suffolk County Transit

Table 15 summarizes the hours of operation and peak-period frequency of service for the aforementioned Suffolk County Transit bus routes. As shown in the table, some services only operate during weekdays, while others also operate on Saturday. As of January 5, 2014, the S1 bus route also offers Sunday service.

TABLE 15: HOURS OF OPERATION AND PEAK-PERIOD FREQUENCY OF SERVICE FOR SELECT SUFFOLK COUNTY TRANSIT ROUTES

Route	Service Provided	Service Begin	Service End	Peak Period Frequency	Non-Peak Period Frequency	Notes
S1	Mon-Fri	5:40 AM	10:05 PM	15-20 min	30 min	Bus does not stop in selected locations in AM. Service runs hourly after 6:45 PM NB & 8:00 PM SB
	Sat/Sun	7:15 AM	7:45 PM	Hourly	Hourly	
S20	Mon-Fri	7:00 AM	7:00 PM	Hourly	Hourly	Bus does not stop in selected locations in early AM and late PM
	Sat	8:10 AM	7:00 PM	Hourly	Hourly	Bus does not stop in selected locations in early AM and late PM
S23	Mon-Fri	6:45 AM	7:20 PM	45-55 min	Hourly	
	Sat	6:50 AM	7:20 PM	Hourly	Hourly	
S29	Mon-Fri	6:00 AM	7:55 PM	10-20 min / Hourly	Hourly	Bus does not stop in selected locations in early AM & late PM
	Sat	7:10 AM	6:50 PM	Hourly	Hourly	Bus does not stop in selected locations in early AM & late PM
S31	Mon-Fri	7:10 AM	5:00 PM	N/A	N/A	One AM bus and one PM bus
S33	Mon-Fri	6:30 AM	9:10 PM	30 min	Hourly	Bus does not stop in selected locations in early AM & late PM
	Sat	7:00 AM	6:15 PM	Hourly	60-80 min	Bus does not stop in selected locations in early AM & late PM
S54	Mon-Fri	6:30 AM	10:15 PM	30 min	Hourly	Additional PM eastbound service provided
	Sat	7:50 AM	7:15 PM	40-50 min	Hourly	Some buses run 60+ min in between runs
Clipper	Mon-Fri	6:30 AM	6:10 PM	N/A	N/A	Bus does not stop in selected locations throughout the day. Buses run at infrequent times in AM & PM. Early AM & late PM trips only.
1A	Mon-Fri	5:45 AM	8:10 PM	20-45 min	Hourly	Bus does not stop in selected locations throughout the day
	Sat	5:46 AM	8:10 PM	30-60 min	Hourly	Bus does not stop in selected locations throughout the day. Buses run at infrequent times in each direction in AM.
1B	Mon-Fri	6:25 AM	6:35 PM	Hourly	Hourly	Bus does not stop in selected locations throughout the day
	Sat	6:30 AM	6:35 PM	Hourly	Hourly	Bus does not stop in selected locations throughout the day
2B	Mon-Fri	6:40 AM	7:05 PM	Hourly	Hourly	Bus does not stop in selected locations in AM
	Sat	6:48 AM	7:05 PM	Hourly	Hourly	Bus does not stop in selected locations in AM
S35	Mon-Fri	6:27 AM	6:25 PM	30 min	Hourly	Bus does not stop in selected locations in AM. Alternative routes may be taken.

Source: Suffolk County Transit

Table 16 shows ridership by route for weekdays and Saturdays for the aforementioned Suffolk County Transit bus routes (where data is available), with data collected the week of July 14-20, 2013. The S1 route has the highest weekday ridership of all Suffolk County Transit bus routes, as well as the second highest

Saturday ridership, and the S54 and S33 routes rank fourth and fifth respectively in weekday ridership. To supplement this high-level summary of ridership from the July 2013 data, Appendix D includes charts summarizing boardings by time of day, as well as route and direction summaries by stop and trip, from the 2007 Ridecheck Survey.

TABLE 16: RIDERSHIP BY ROUTE FOR WEEKDAYS AND SATURDAYS FOR SELECT AVAILABLE SUFFOLK COUNTY TRANSIT ROUTES (JULY 2013)

Route	Weekday	Saturday
S1	2,781	1,140
S20	233	132
S23	389	276
S29	390	155
S31	18	N/A
S33	1,301	558
S54	1,430	455
1A	182	76
1B	67	38
S35	39	N/A

Source: *Suffolk County BRT Feasibility Study*; Suffolk County Transit, week of July 14-20, 2013

Table 17 shows the annual ridership from 2008 to 2013, and Table 18 indicates the absolute and percent change in ridership by year.[6] It can be inferred that the decline in annual ridership from 2008 to 2009 and in subsequent years was in part due to the recession. Ridership began to bounce back on certain routes, including the S1, between 2010 and 2011, but once again dropped between 2011 and 2013. As noted in a technical memorandum from the *Suffolk County BRT Feasibility Study*, according to Suffolk County Transit, the decline in ridership in 2012 was "largely attributable to the economic recession and a May 2012 fare increase, as well as impacts caused by Hurricane Sandy (system shutdown October 29-November 1, 2012, and limited service span on November 2, 2012)."[7]

TABLE 17: SUFFOLK COUNTY TRANSIT ANNUAL RIDERSHIP FOR SELECT AVAILABLE ROUTES (2008-2013)

Route	2008	2009	2010	2011	2012	2013
S1	749,703	681,078	678,377	692,365	639,451	626,236
S20	62,855	56,351	57,979	59,032	56,177	53,200
S23	120,596	122,131	126,239	113,394	98,477	98,871
S29	88,439	81,086	86,483	89,011	95,660	87,048
S31	5,796	5,646	4,739	4,693	(Incomplete Data)	4,736
S33	281,054	268,523	280,156	294,480	263,516	271,978
S54	346,856	326,674	331,684	333,329	310,801	305,574

Source: *Suffolk County BRT Feasibility Study*; Suffolk County Transit

[6] Additionally, 2013 ridership for Suffolk County Transit routes 1A, 1B, 2B, and S35 was 45,517; 9,048; 88,903; and 10,229, respectively.

[7] Following Sandy, Suffolk County Transit resumed service on November 2, 2012, but service on that day was suspended after 6pm.

TABLE 18: ABSOLUTE AND PERCENT CHANGE IN SUFFOLK COUNTY TRANSIT ANNUAL RIDERSHIP FOR SELECT AVAILABLE ROUTES (2008-2012)

	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013	
	Absolute Change	Percent Change	Absolute Change	Percent Change	Absolute Change	Percent Change	Absolute Change	Percent Change	Absolute Change	Percent Change
S1	-68,625	-9.2%	-2,701	-0.4%	13,988	2.1%	-52,914	-7.6%	-13,215	-2.1%
S20	-6,504	-10.3%	1,628	2.9%	1,053	1.8%	-2,855	-4.8%	-2,977	-5.3%
S23	1,535	1.3%	4,108	3.4%	-12,845	-10.2%	-14,917	-13.2%	394	0.4%
S29	-7,353	-8.3%	5,397	6.7%	2,528	2.9%	6,649	7.5%	-8,612	-9.0%
S31	-150	-2.6%	-907	-16.1%	-46	-1.0%	Incomplete Data	Incomplete Data	43*	0.9%*
S33	-12,531	-4.5%	11,633	4.3%	14,324	5.1%	-30,964	-10.5%	8,462	3.2%
S54	-20,182	-5.8%	5,010	1.5%	1,645	0.5%	-22,528	-6.8%	-5,227	-1.7%

Source: Suffolk County Transit
*Change from 2011 to 2013 because incomplete data from 2012.

As shown in Table 19, four of the 20 busiest Suffolk County Transit stops (by number of weekday daily boardings) are located within Route 110 study area, according to the 2007 Ridecheck Survey. Three of these four are located near the southern boundary of the study area in Amityville, namely the Amityville LIRR Station, Oak Street/Broadway, and the Sunrise Mall. The busiest of the four stops—the Walt Whitman Shops—is located at the northern boundary of the study area. Another one of the top 20 stops, the Huntington LIRR Station, is located further north (outside the study area) near the Route 110 corridor. Figure 15 shows the average weekday total of boardings and alightings for each of the Suffolk County Transit stops within the study area from the 2007 data, combined for all Suffolk County Transit routes.[8]

TABLE 19: ROUTE 110 EXCERPT FROM 20 BUSIEST SUFFOLK COUNTY TRANSIT STOPS (BY NUMBER OF WEEKDAY DAILY BOARDINGS, 2007)

Rank	Stop	Daily Boardings (weekday)	Daily Alightings (weekday)	Routes
3	Walt Whitman Shops	656	631	S21, S23, S29, S54
12	Amityville LIRR Station	269	239	1A, S21, S33
16	Huntington LIRR Station	151	125	S21
17	Oak Street/Broadway	136	74	1A, S20 (EB), S21, S33
18	Sunrise Mall	126	139	S20 (WB), S33

Source: *Suffolk County BRT Feasibility Study*; Suffolk County Transit, Ridecheck Plus (2007 Ridecheck Survey)

[8] Figure 15 was prepared using data from the Suffolk County Transit Google Earth placemark file ("Bus Stops.kmz"), which includes the most up-to-date stop locations. There are minor discrepancies in the boarding and alighting data between the Google Earth placemark file and the document used to create Table 19 ("Stops Usage Sorted by Boardings-Weekday"), although both data sets represent the findings from the 2007 Ridecheck Survey.

Figure 15: Suffolk County Transit Average Weekday Total Boardings & Alightings by Stop (2007)

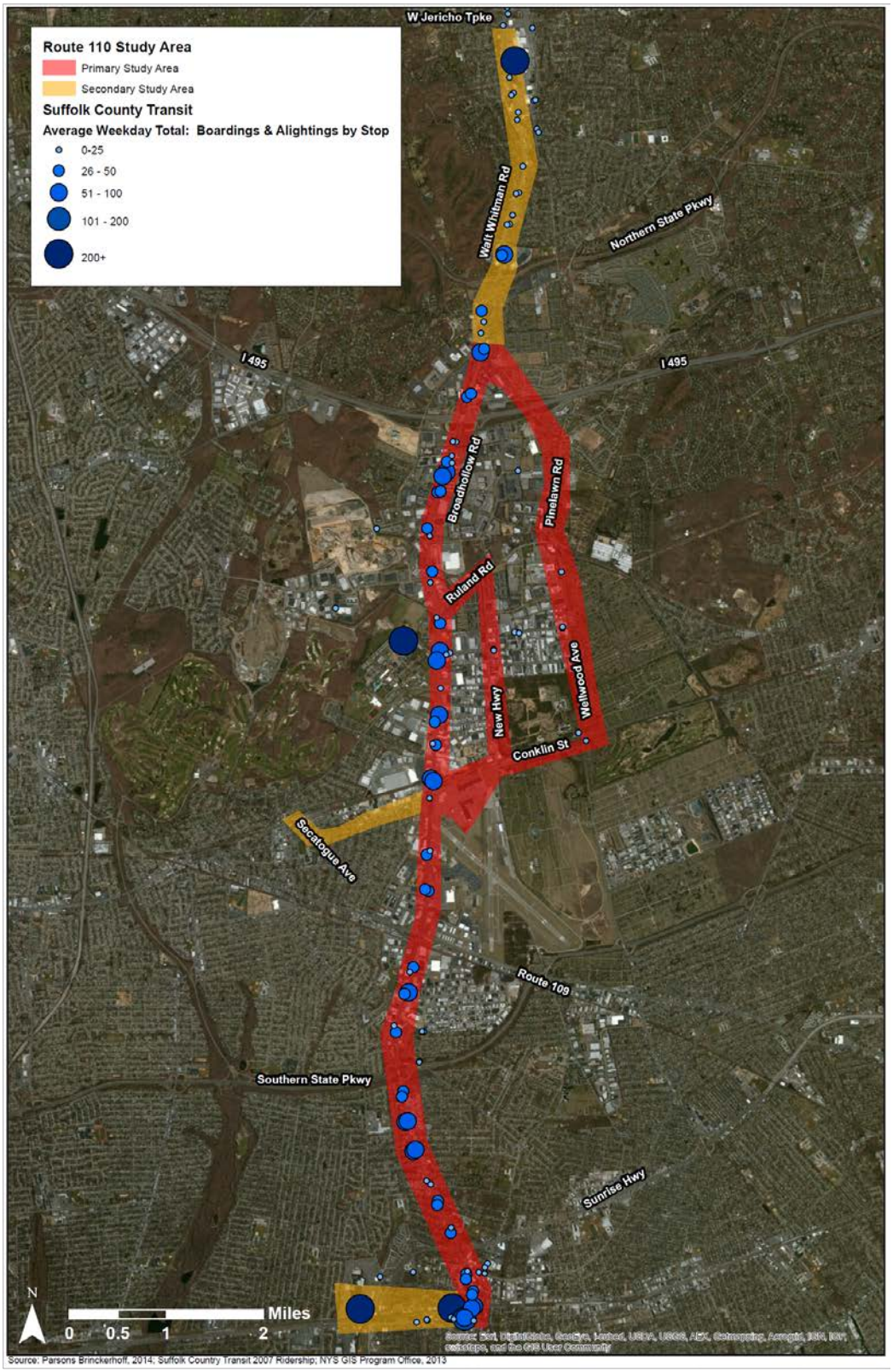


Table 20 identifies the scheduled speed as compared to the actual speed for select available Suffolk County Transit routes, and also lists the on-time performance for these routes. The S1 route, which travels the length of the Route 110 corridor in the study area and beyond, has the lowest scheduled and actual speed in both the northbound and southbound directions for all of the listed routes. According to the current Suffolk County Transit schedules, the travel time on the S1 route from the Amityville LIRR station to the Walt Whitman Shops is 45 minutes for most trips during the day, and the travel time in the reverse direction is 35 minutes for most trips. Based on the 2007 data, the S1 route operates on-time approximately 75 percent of the time, and runs either early or late for the remaining 25 percent of the time. The lowest on-time performance among the listed routes is the S20, which operates on-time less than 50 percent of the time in both directions, and the 1A route has the highest on-time performance, at just under 99 percent.

TABLE 20: SPEED AND ON-TIME PERFORMANCE FOR SELECT AVAILABLE SUFFOLK COUNTY TRANSIT ROUTES (WEEKDAY, 2007)

Route	Direction	Scheduled Speed (MPH)	Actual Speed (MPH)	On-time (%)*
S1	NB	14.2	14.3	75.5%
	SB	15.1	15.0	76.4%
S20	EB	23.7	20.7	40.0%
	WB	18.5	23.2	46.5%
S23	NB	16.3	16.5	65.8%
	SB	16.9	16.3	75.9%
S29	NB	17.1	16.8	73.0%
	SB	17.6	18.7	55.6%
S31	NB	18.6	18.2	54.5%
	SB	16.8	17.2	72.7%
S33	NB	33.3	33.8	50.5%
	SB	22.0	21.6	63.7%
S54	EB	35.1	35.2	66.7%
	WB	22.5	21.4	60.3%
1A	Loop	18.8	18.3	98.8%
1B	EB	37.3	38.2	71.0%
	WB	22.2	30.8	78.5%
2B	NB	16.7	15.9	81.7%
	SB	16.1	16.2	82.3%
S35	Loop	16.6	20.2	72.3%

Source: Suffolk County Transit, Ridecheck Plus (2007 Ridecheck Survey)
*Timepoint observations marked as on-time included those that were neither early nor late.

8.2 HUNTINGTON AREA RAPID TRANSIT (HART)



HART Bus at the Walt Whitman Shops
Source: Parsons Brinckerhoff, 2013

Three of the four existing HART bus routes provide service to and from the northern portion of the secondary study area, with connections to other destinations in the Town of Huntington (Figure 14). The H20, H30, and H40 routes all serve the Walt Whitman Shops, with the routes diverging to provide service to other destinations in the Town in Huntington to the north and east, as outlined below.

- **H20:** This route connects Route 110 at Park Avenue and the Walt Whitman Shops, and operates along portions of Route 110, Woodhull Road, and Park Avenue.
  - Serving: Halesite, Huntington, Huntington Station, Walt Whitman Shops, South Huntington, Huntington LIRR Station
  - LIRR connections: Huntington – Port Jefferson Branch

H20 Connecting Bus Service	
Route Number	**Location**
H30, S1	New York Avenue/Park Avenue
H30	Park Avenue/Main Street
H30	Village Green Center
S1	New York Avenue/Huntington LIRR Station
H10	Pulaski Road/Depot Road
H30, H40, S1, S23, S29, S54, N79	Walt Whitman Shops

Source: Town of Huntington HART

- **H30:** Similar to the H20 route, this route connects Route 110 at Park Avenue and the Walt Whitman Shops. This route operates along Main Street (Route 25A), Broadway, and pieces of Jericho Turnpike, Pigeon Hill Road, and Wolf Hill Road.
  - Serving: Halesite, Huntington, Centerport, Greenlawn, Elwood, Huntington Station, South Huntington, Walt Whitman Shops
  - LIRR connections: Greenlawn – Port Jefferson Branch

H30 Connecting Bus Service	
Route Number	**Location**
H20	New York Avenue/Park Avenue
H10, S1	New York Avenue/Main Street
H20	Main Street/Park Avenue
H20	Village Green Center
H10	Pulaski Road/Broadway (Greenlawn)
H40, S29, S54	Jericho Turnpike/Broadway (Greenlawn)
H40, S29, S54	Pidgeon Hill Road/Jericho Turnpike
H20	South Huntington Library
H20, S23	Pidgeon Hill Road/Wolf Hill Road
H20, H40, S1, S23, S29, S54, N79	Walt Whitman Shops

Source: Town of Huntington HART

- **H40:** This route connects the Northport Harbor, VA Medical Center, and the Walt Whitman Shops, and operates along Main Street, Laurel Road, Elwood Road, and Jericho Turnpike.
  - Serving: VA Medical Center, Northport, East Northport, Elwood, South Huntington, Walt Whitman Shops
  - LIRR connections: Northport – Port Jefferson Branch

H40 Connecting Bus Service	
Route Number	**Location**
S41	VA Medical Center
H10, S41	Larkfield Road/Pulaski Road
H30, S29, S54	Jericho Turnpike/Broadway (Greenlawn)
H30, S29, S54	Jericho Turnpike/Pidgeon Hill Road
H20, H30, S1, S23, S29, S54, N79	Walt Whitman Shops

Source: Town of Huntington HART

Table 21 summarizes the hours of operation and peak-period frequency of service for the aforementioned HART bus routes. The HART service operates weekdays and Saturdays, but does not provide Sunday service.

TABLE 21: HOURS OF OPERATION AND PEAK-PERIOD FREQUENCY OF SERVICE FOR SELECT HART ROUTES

Route	Service Provided	Service Begin	Service End	Peak Period Headway	Non-Peak Period Headway	Notes
H20	Mon-Fri	7:00 AM	6:57 PM	45 min	90 min	Bus runs at infrequent times throughout the day
	Sat	9:00 AM	6:42 PM	90 min	90 min	
H30	Mon-Fri	7:00 AM	6:53 PM	45 min	45 min	
	Sat	9:00 AM	6:37 PM	90 min	90 min	
H40	Mon-Fri	6:55 AM	6:42 PM	45 min	45-60 min	Bus runs at infrequent times throughout the day
	Sat	9:00 AM	6:32 PM	75+ min	75+ min	Bus runs at infrequent times throughout the day

Source: Town of Huntington HART

Table 22 shows a summary of 2013 passenger trips by day of the week for the previously discussed HART routes. The H40 route had the most passenger trips, both for weekdays overall and for Saturdays, followed by the H30 route and then the H20 route. Additional statistics from 2013 about each route, including—but not limited to—total vehicle mileage, total vehicle hours, and farebox revenues, are included in Appendix E.

TABLE 22: 2013 PASSENGER TRIPS FOR SELECT HART BUS ROUTES

	H20	H30	H40
Weekdays	25,734	32,454	35,117
Monday	4,769	6,022	5,998
Tuesday	4,926	6,300	7,417
Wednesday	5,747	6,923	7,237
Thursday	5,098	6,461	7,307
Friday	5,194	6,748	7,158
Saturday	1,686	2,536	2,876
Sunday	N/A	N/A	N/A

Source: Town of Huntington HART

8.3 NASSAU INTER-COUNTY EXPRESS (NICE)



NICE Bus at the Sunrise Mall

Source: Parsons Brinckerhoff, 2014

As shown in Figure 14, a number of existing NICE bus routes serve the Route 110 study area and offer connections to other bus routes, as well as the LIRR, as follows:

- **N70:** This is one of three services operating along Hempstead Turnpike from the Hempstead Transit Center in the Village of Hempstead to eastern Nassau County, and one of two services operating on Route 110. From Conklin Street, N70 operates on Route 110 as far north as Smith Street and terminates on Pinelawn Road, north of Smith Street.
  - Serving: Hempstead Transit Center, Uniondale, Hofstra University, Nassau Coliseum, East Meadow, Nassau University Medical Center (NUMC), Levittown, Plainedge, Farmingdale, Melville, Farmingdale State College, Sunrise Mall, North Lindenhurst, West Babylon, Babylon

- LIRR connections: Farmingdale – Ronkonkoma Branch; Hempstead Transit Center – Hempstead Branch

N70 Connecting Bus Service	
Route Number	**Location**
N6, N15, N16, N17, N23, N27, N31/32. N35, N40/41, N46, N47/48/49, N54/55, N70/71/72	Hempstead Transit Center
N24(W), N43, N45, N51(N)	Uniondale Avenue/Hempstead Turnpike, Uniondale
N24(E), N51(S)	Hempstead Turnpike/Glen Curtiss Boulevard, Uniondale
N47(E), N49(E)	Hempstead Turnpike, Carman Avenue, East Meadow
N48	Carman Avenue/Hempstead Turnpike, East Meadow
N49	NUMC
N47, N49, N50	Newbridge Road/Hempstead Turnpike, East Meadow
N73	Division Avenue/Hempstead Turnpike, Levittown
N73/N74	Jerusalem Avenue/Gardiners Avenue/Hempstead Turnpike, Levittown
N74	Wantagh Avenue/Hempstead Turnpike, Levittown
N80	Hicksville Road/Hempstead Turnpike, Plainedge
N81	Stewart Avenue/Hempstead Turnpike, Plainedge
S2B, S31	Newsday
S1, S2B	Farmingdale State College
N72(E)	Conklin Street/Route 110 from N70(W)
S1	Conklin Street/Route 110, East Farmingdale
N71(E)	Conklin Street/Fulton Street from N70(W)/N72(W)

Source: NICE Bus

- **N72:** This is another service from Hempstead Turnpike operating on the Route 110 corridor, from Conklin Street south to Route 109, where it continues to the Babylon LIRR station.
  - Serving: Hempstead Transit Center, Uniondale, Hofstra University, Nassau Coliseum, East Meadow, Nassau University Medical Center, Levittown, Plainedge, Sunrise Mall, North Lindenhurst, West Babylon, Babylon
  - LIRR connections: Babylon – Babylon Branch (Summer only); Farmingdale – Ronkonkoma Branch; Hempstead Transit Center – Hempstead Branch

N72 Connecting Bus Service	
Route Number	**Location**
N6, N15, N16, N17, N23, N27, N31/32. N35, N40/41, N46, N47/48/49, N54/55, N70/71/72	Hempstead Transit Center
N24(W), N43, N45, N51(N)	Uniondale Avenue/Hempstead Turnpike, Uniondale
N24(E), N51(S)	Hempstead Turnpike/Glen Curtiss Boulevard, Uniondale
N47(E), N49(E)	Hempstead Turnpike/Carman Avenue, East Meadow
N48	Carman Avenue/Hempstead Turnpike, East Meadow
N49	NUMC
N47, N49, N50	Newbridge Road/Hempstead Turnpike, East Meadow
N73	Division Avenue/Hempstead Turnpike, Levittown
N73/N74	Jerusalem Avenue/Gardiners Avenue/Hempstead Turnpike, Levittown
N74	Wantagh Avenue/Hempstead Turnpike, Levittown
N80	Hicksville Road/Hempstead Turnpike, Plainedge
N81	Stewart Avenue/Hempstead Turnpike, Plainedge
N19, S20, S23, S25, S27, S29, S40, S42, S47	Babylon LIRR Station
N70(E), S1, S31	Conklin Street/Route 110 from N72(W)
S33	Route 109/Straight Path
S35	Route 109/Wellwood Avenue
S1	Conklin Street/Route 110, East Farmingdale
N71(E)	Conklin Street/Fulton Street from N70(W)/N72(W)

Source: NICE Bus

- **N79:** This route travels west on Jericho Turnpike from the Walt Whitman Shops to Woodbury Road, Manetto Hill Road, and Old Country Road. It serves the communities of Plainview, Hicksville, and Mineola, including the LIRR stations at Hicksville and Mineola and Roosevelt Field Shopping Center.
  - Serving: Hicksville, Nassau County Plainview Complex, Woodbury, South Huntington, Walt Whitman Mall
  - LIRR connections: Hicksville – Ronkonkoma Branch

N79 Connecting Bus Service	
Route Number	**Location**
N20, N22, N24, N48/49, N50, N73/74, N80/81	Hicksville LIRR Station, Broadway Mall
S1, S23, S29, S54, H20, H30, H40	Walt Whitman Shops

Source: NICE Bus

- **N19:** This route connects Babylon LIRR station and Freeport Plaza, and operates along Montauk Highway, and Merrick Road.
  - Serving: Freeport, Merrick, Bellmore, Wantagh, Seaford, Massapequa, Massapequa Park, Sunrise Mall, Amityville, Copiague, Lindenhurst, Great South Bay Shopping Center, Babylon
  - LIRR connections: Freeport, Babylon – Babylon Branch

N19 Connecting Bus Service	
Route Number	**Location**
N72, S20, S23, S25, S27, S29, S40, S42	Babylon LIRR Station
S25, S35	Great South Bay Shopping Center
1B, S31	Montauk Highway/Great Neck Road
N54/55, N71, N80/81, S20, S33	Sunrise Mall, Massapequa Park
N54/55, N80/81	Sunrise Highway/Unqua Road, Massapequa
N73/74	Wantagh Avenue/Merrick Road, Wantagh
N45, N46, N50	Merrick Road/Centre Avenue, Bellmore
N51	Merrick Avenue/Merrick Road, Merrick
N4, N36, N40/41, N43, N62	Freeport LIRR Station

Source: NICE Bus

- **N54:** This route travels west along Sunrise Highway and Jerusalem Avenue from the Amityville LIRR station to the Hempstead Transit Center.
  - Serving: Hempstead, Hempstead Transit Center, Uniondale, North Merrick, North Bellmore, North Wantagh, Seaford, Massapequa, Massapequa Park, Sunrise Mall, Amityville
  - LIRR connections: Hempstead – Hempstead Branch; Seaford, Massapequa, Massapequa Park, Amityville – Babylon Branch

N54 Connecting Bus Service	
Route Number	**Location**
N6, N15, N16, N17, N23, N27, N31/32. N35, N40/41, N46, N47/48/49, N54/55, N70/71/72	Hempstead Transit Center
N40/41(S)	Greenwich Street/Angevine Avenue, Hempstead
N43, N45	Uniondale Avenue/Jerusalem Avenue, North Merrick
N51	Merrick Avenue/Jerusalem Avenue, North Merrick
N50(S)	Bellmore Avenue/Jerusalem Avenue, North Merrick
N50(N)	Bellmore Avenue/Schiller Avenue, North Bellmore
N46(N)	Bellmore Road/Janet Avenue, North Bellmore
N46(S)	Bellmore Road/Jerusalem Avenue, North Bellmore
N73/74	Wantagh Avenue/Jerusalem Avenue, North Wantagh
N80/81(N)	Sunrise Highway/Broadway, Massapequa
N19(W)	Unqua Road/Sunrise Highway, Massapequa Park
N19, N71, N80/81, S20, S33	Sunrise Mall, Massapequa Park
S1, S20, S33	Amityville LIRR Station

Source: NICE Bus

- **N55:** This route follows a very similar alignment when compared to the N54 route. However, this route diverts off Sunrise Highway and travels north along Broadway to continue along Jerusalem Avenue.
  - Serving: Hempstead, Hempstead Transit Center, Uniondale, North Merrick, North Bellmore, North Wantagh, Seaford, Massapequa, Massapequa Park, Sunrise Mall, Amityville
  - LIRR connections: Hempstead – Hempstead Branch; Seaford, Massapequa, Massapequa Park, Amityville – Babylon Branch

N55 Connecting Bus Service	
Route Number	**Location**
N6, N15, N16, N17, N23, N27, N31/32. N35, N40/41, N46, N47/48/49, N54/55, N70/71/72	Hempstead Transit Center
N40/41(S)	Greenwich Street/Angevine Avenue, Hempstead
N43, N45	Uniondale Avenue/Jerusalem Avenue, North Merrick
N51	Merrick Avenue/Jerusalem Avenue, North Merrick
N50(S)	Bellmore Avenue/Jerusalem Avenue, North Merrick
N50(N)	Bellmore Avenue/Schiller Avenue, North Bellmore
N46(N)	Bellmore Road/Janet Avenue, North Bellmore
N46(S)	Bellmore Road/Jerusalem Avenue, North Bellmore
N73/74	Wantagh Avenue/Jerusalem Avenue, North Wantagh
N80/81(N)	Sunrise Highway/Broadway, Massapequa
N19(W)	Unqua Road/Sunrise Highway, Massapequa Park
N19, N71, N80/81, S20, S33	Sunrise Mall, Massapequa Park
S1, S20, S33	Amityville LIRR Station
N80(N)	Hicksville Road/Jerusalem Avenue, Massapequa
N81(N)	Broadway/Jerusalem Avenue, Massapequa

Source: NICE Bus

- **N71:** This follows a similar alignment to the N70 and N72, except this route starts/terminates at the Sunrise Mall and serves the Hempstead Transit Center along Route 109 and Hempstead Turnpike.
  - Serving: Hempstead Transit Center, Uniondale, Hofstra University, Nassau Coliseum, East Meadow, Nassau University Medical Center, Levittown, Plainedge, Sunrise Mall, North Lindenhurst
  - LIRR connections: Hempstead Transit Center – Hempstead Branch

N71 Connecting Bus Service	
Route Number	**Location**
N6, N15, N16, N17, N23, N27, N31/32. N35, N40/41, N46, N47/48/49, N54/55, N70/71/72	Hempstead Transit Center
N24(W), N43, N45, N51(N)	Uniondale Avenue/Hempstead Turnpike, Uniondale
N24(E), N51(S)	Hempstead Turnpike/Glen Curtiss Boulevard, Uniondale
N47(E), N49(E)	Hempstead Turnpike/Carman Avenue, East Meadow
N48	Carman Avenue/Hempstead Turnpike, East Meadow
N49	NUMC
N47, N49, N50	Newbridge Road/Hempstead Turnpike, East Meadow
N73	Division Avenue/Hempstead Turnpike, Levittown
N73/N74	Jerusalem Avenue/Gardiners Avenue/Hempstead Turnpike, Levittown
N74	Wantagh Avenue/Hempstead Turnpike, Levittown
N80	Hicksville Road, Hempstead Turnpike, Plainedge
N81	Stewart Avenue/Hempstead Turnpike, Plainedge
N19, N54/55, N80/81, S20, S33	Sunrise Mall, Massapequa Park
N70(E)/N72(E)	Conklin Street/Fulton Street from N71(W)

Source: NICE Bus

- **N78:** This route connects the Broadway Mall and Hicksville LIRR Station, along Old Country Road.
  - Serving: Hicksville, NC Plainview Complex, Woodbury, South Huntington, Walt Whitman Shops
  - Long Island Rail Road Connection: Hicksville – Ronkonkoma Branch

N78 Connecting Bus Service	
Route Number	**Location**
N20, N22, N24, N48/49, N50, N73/74, N80/81	Hicksville LIRR Station, Broadway Mall
S1, S23, S29, S54, H20, H30, H40	Walt Whitman Shops

Source: NICE Bus

- **N80:** This route connects the Hicksville LIRR station and Sunrise Mall, along Hicksville Road and Sunrise Highway.
  - Serving: Hicksville, Bethpage, Plainedge, North Massapequa, Massapequa, Massapequa Park, Sunrise Mall
  - LIRR connections: Hicksville, Bethpage – Ronkonkoma Branch; Massapequa, Massapequa Park – Babylon Branch

N80 Connecting Bus Service	
Route Number	**Location**
N20, N22, N24, N48/49, N50, N73/74, N78/79, N81	Hicksville LIRR Station, Broadway Mall
N70/71/72	Hempstead Turnpike/Hicksville Road, Plainedge
N55(W)	Jerusalem Avenue/Hicksville Road, Massapequa
N54/55(W)	Sunrise Highway/Broadway, Massapequa
N19	Unqua Road/Sunrise Highway, Massapequa Park
N19, N54(E), N55(E)	Sunrise Mall, Massapequa Park

Source: NICE Bus

- **N81:** This route connects the Hicksville LIRR station and Sunrise Mall, along several roadways. Most notably, this route travels along Stewart Avenue, Broadway, and Sunrise Highway.
  - Serving: Hicksville, Bethpage, Plainedge, North Massapequa, Massapequa, Massapequa Park, Sunrise Mall
  - LIRR connections: Hicksville, Bethpage – Ronkonkoma Branch; Massapequa, Massapequa Park – Babylon Branch

N81 Connecting Bus Service	
Route Number	**Location**
N20, N22, N24, N48/49, N50, N73/74, N78/79, N81	Hicksville LIRR Station, Broadway Mall
N70/71/72	Hempstead Turnpike/Hicksville Road, Plainedge
N55(W)	Jerusalem Avenue/Hicksville Road, Massapequa
N54/55(W)	Sunrise Highway/Broadway, Massapequa
N19	Unqua Road/Sunrise Highway, Massapequa Park
N19, N54(E), N55(E)	Sunrise Mall, Massapequa Park

Source: NICE Bus

Table 23 summarizes the hours of operation and peak-period frequency of service for the aforementioned NICE bus routes. As shown in the table, some services only operate during weekdays, while others also operate on Saturdays, and some on Sundays.

TABLE 23: HOURS OF OPERATION AND PEAK-PERIOD FREQUENCY OF SERVICE FOR SELECT NICE ROUTES

Route	Service Provided	Service Begin	Service End	Peak Period Frequency	Non-Peak Period Frequency	Notes
N70	Mon-Fri	5:38 AM	9:55 PM	15-30	Hourly	Bus does not stop in selected locations throughout the day
N72	Mon-Fri	5:00 AM	12:23 AM	20-25 min	40-60 min	Bus does not stop in selected locations throughout the day
	Sat	5:25 AM	12:06 AM	15-20 min	Hourly	Bus does not stop in selected locations throughout the day
	Sun	6:45 AM	10:05 PM	Hourly	Hourly	Bus does not stop in selected locations throughout the day
N79	Mon-Fri	6:07 AM	10:55 PM	25-50 min	Hourly	Bus does not stop in selected locations throughout the day; buses run at infrequent times in each direction in AM
	Sat	8:50 AM	10:46 PM	Hourly	Hourly	
	Sun	9:30 AM	8:45 PM	Hourly	Hourly	Bus does not stop in selected locations throughout the day
N19	Mon-Fri	5:15 AM	10:29 PM	30 min	Hourly	Bus does not stop in selected locations throughout the day
	Sat	5:15 AM	10:45 PM	Hourly	Hourly	Bus does not stop in selected locations throughout the day
	Sun	9:15 AM	7:55 PM	Hourly	Hourly	Bus does not stop in selected locations throughout the day
N54	Mon-Fri	5:33 AM	9:54 PM	Hourly	60+ min	Bus does not stop in selected locations throughout the day
	Sat	6:00 AM	9:53 PM	Hourly	Hourly	Bus does not stop in selected locations throughout the day
N55	Mon-Fri	5:15 AM	10:48 PM	60-90 min	60-90 min	Bus does not stop in selected locations throughout the day
	Sat	6:00 AM	10:48 PM	Hourly	Hourly	Bus does not stop in selected locations throughout the day
	Sun	8:36 AM	8:52 PM	Hourly	Hourly	Bus does not stop in selected locations throughout the day
N71	Mon-Fri	12:00 AM	10:45 PM	Hourly	Hourly	Bus does not stop in selected locations throughout the day
	Sat	7:00 AM	10:36 PM	45-60 min	45-60 min	Bus does not stop in selected locations throughout the day
	Sun	7:15 AM	8:35 PM	Hourly	Hourly	Bus does not stop in selected locations throughout the day
N78	Mon-Fri	7:10 AM	6:56 PM	Hourly	60+ min	Bus does not stop in selected locations throughout the day
N80	Mon-Fri	6:30 AM	9:05 PM	Hourly	Hourly	
	Sat	7:42 AM	8:08 PM	Hourly	Hourly	
N81	Mon-Fri	6:53 AM	8:22 PM	Hourly	Hourly	
	Sat	8:03 AM	7:31 PM	Hourly	Hourly	

Source: NICE Bus

8.4 7 BUS

7 Bus is a private, for-profit bus operator that provides commuter bus service between Melville (Park and Ride Lot at LIE Exit 49) and the east side of Manhattan, with three departure locations on Lexington Avenue and three arrival locations on Third Avenue between 40th Street and 59th Street. The service operates eight departures from Melville to Manhattan during weekdays, with departures times beginning at 6:00am and ending at 5:15pm, and seven departures from Manhattan to Melville, with departures times beginning at 8:45am and ending at 9:45pm. Frequency of service varies considerably throughout the day, ranging from 25-minute intervals during the peak period to multiple hour-intervals during midday. 7 Bus also provides limited service on weekends, with four departures from Melville to Manhattan and five departures from Manhattan to Melville, scattered throughout the day. Therefore, 7 Bus provides service for the New York City-bound commuter, as well as those commuting on Long Island, including to the Route 110 corridor.

8.5 PARATRANSIT SERVICES



Suffolk County Transit paratransit vehicle at the Amityville LIRR Station
Source: Parsons Brinckerhoff, 2009

In addition to the fixed-route bus transit services provided by Suffolk County Transit, HART, and NICE, these agencies also provide curb-to-curb paratransit services within Suffolk County, the Town of Huntington, and Nassau County, respectively. Paratransit service is available to individuals with disabilities who meet the eligibility requirements of the Americans with Disabilities Act of 1990 (ADA). Suffolk County Transit's paratransit service is known as Suffolk County Accessible Transportation (SCAT) and has been in operation since 1994. Paratransit service is also offered within the Town of Huntington by HART's Special Needs Service, which is available for use by individuals with disabilities as well as non-driving senior citizen (60+) Town of Huntington residents who do not have access to transit services. Similarly, NICE Bus offers a paratransit (Able-Ride) program for individuals with disabilities. According to the New York Metropolitan Transportation Council's (NYMTC) *Plan 2040: Regional Transportation Plan*, as of December 31, 2012, the paratransit fleets for the various providers were as follows: 132 paratransit vehicles for Suffolk County Transit (to supplement 158 fixed-route vehicles); 12 paratransit vehicles for HART (to supplement 12 fixed-route vehicles); and 95 paratransit vehicles for NICE (to supplement 310 fixed-route vehicles).

8.6 CORPORATE-SPONSORED SHUTTLE SERVICES

Preliminary information about corporate-sponsored shuttle services was obtained by contacting Transit Solutions, a service of the MTA that was created to help improve air quality on Long Island by promoting the use of transit options. According to Transit Solutions, Capital One Bank had a program for their employees that provided service between their office on Route 110 (just north of the LIE North Service Road) and the Farmingdale and Huntington LIRR Stations, but it is unclear if this service is still provided. Additionally, Cablevision has a program that provides service between the Hicksville LIRR station and their facilities, but it is unclear if it serves the Melville location.

Another potential source of information is 511 NY Rideshare, a service of NYSDOT that includes a ridematching program that matches travelers who have similar origins and destinations. One type of ridematching service is an employee vanpool that can either be formed directly with employees (of one or more companies in an area) or with an employer. The traditional vanpool service is from employees' homes to the destination(s), but another option is to form a shuttle that links the work site(s) to nearby bus or train stations. According to Transit Solutions, the shuttle program has been promoted but there are no active shuttle routes at this time.

Additional information about previous, existing, and any planned corporate-sponsored shuttle services—in addition to any available compiled data about residential locations of employees—should be requested by the Town of Babylon during the outreach to businesses in the vicinity of Route 110 as part of the Alternatives Analysis.

8.7 LONG ISLAND RAIL ROAD (LIRR)



Farmingdale LIRR Station, west of Route 110 in the secondary study area
Source: LIRR

The Route 110 study area is crossed by three branches of the LIRR, as follows:

- The heavily used Babylon Branch along the South Shore of Long Island has an important station at Amityville.

- The Main Line (also shown as the Ronkonkoma Branch in LIRR timetables) is served by a station at Farmingdale. The former Republic Station was located just east of Route 110, and has been closed since 1986, when the Fairchild Republic aircraft plant closed.
- The Central Branch connects the Main Line (between Bethpage and Farmingdale) and Babylon Branch and parallels Route 109. Currently, there are no stations on this branch.

Further north, outside of the study area, the Port Jefferson Branch also crosses Route 110, and the Huntington LIRR station is located just off Route 110.

The LIRR is in the process of completing its 2013 Origin and Destination Survey, which will include count data and customer surveys, and the results are expected to be available in Fall 2014. Table 24 shows average and peak weekday morning boarding/alighting figures for the Amityville and Farmingdale stations, based on data from the 2006 LIRR Origin and Destination Study. (Appendix F includes tables summarizing additional off-peak, reverse peak, and weekend data.) This data was also presented in the 2010 *Route 110 BRT Study*, and remains the most up-to-date information at this time. During the weekday-morning peak-commute period, about 850 LIRR customers board at Amityville Station and about 2,000 LIRR customers board at Farmingdale Station. During the same peak commute period, about 280 customers exit the train at Amityville Station and over 500 customers exit the train at Farmingdale Station.

TABLE 24: LIRR PASSENGER COUNTS (2006)

	Boardings and Alightings										
	Westbound					Eastbound					Total Westbound and Eastbound Ons/Offs
	AM Peak		Average Weekday			AM Reverse Peak		Average Weekday			
Station	On	Off	On	Off	Total	On	Off	On	Off	Total	
Amityville	797	53	1,210	166	1,376	39	224	420	1,289	1,709	3,085
Farmingdale	1,477	215	2,432	320	2,752	319	314	689	1,184	1,873	4,625

Source: 2006 LIRR Origin and Destination Study

To Amityville from points west, the LIRR travel time from Penn Station varies from approximately 55 to 65 minutes, and the travel time from Jamaica varies from approximately 30 to 40 minutes. To Amityville from points east, the travel time from Babylon is approximately 10 minutes. From points further east, travel to Amityville requires a transfer at the Babylon LIRR station.

To Farmingdale from points west, the LIRR travel time from Penn Station varies from approximately 50 to 55 minutes, and the travel time from Jamaica is approximately 35 minutes. To Farmingdale from points east, the travel time from Ronkonkoma to Farmingdale varies from approximately 25 to 30 minutes. From points further east, travel to Farmingdale requires a transfer at the Ronkonkoma LIRR station.

9. Traffic Data



Traffic congestion southbound on Route 110 near the Southern State Parkway
Source: Unknown; Parsons Brinckerhoff presentation, 2014

Available traffic data was compiled for the portion of Route 110 within the study area using the NYSDOT Traffic Data Viewer (https://www.dot.ny.gov/tdv). The compiled data includes 24-hour/7-day directional NYSDOT Traffic Count Hourly Reports for individual roadway segments within the study area. For each roadway segment, estimated one-way Annual Average Daily Traffic (AADT) and estimated one-way average weekday peak hour volumes were extracted from the data. Table 25 summarizes this traffic data, and Appendix G includes the 24-hour/7-day directional Traffic Count Hourly Reports for these segments.

TABLE 25: ROUTE 110 AADT DATA AND AVERAGE WEEKDAY PEAK HOUR VOLUMES

Segment	Northbound		Southbound	
	Annual Average Daily Traffic (AADT)	Average Weekday Peak Hour Volume	Annual Average Daily Traffic (AADT)	Average Weekday Peak Hour Volume
Oak Street to Albany Avenue[1]	6,880	581	5,624	489
Albany Avenue to Sunrise Highway (Route 27)	15,058	1,221	17,407	1,470
Sunrise Highway (Route 27) to Southern State Parkway	20,206	1,618	21,598	1,937
Southern State Parkway to Route 109	26,722	2,619	26,641	2,631
Route 109 to Conklin Street (Route 24)	25,102	2,451	25,412	2,498
Conklin Street (Route 24) to Ruland Road	30,261	3,045	38,589	4,061
Ruland Road to LIE	27,912	2,130	25,676	2,325
LIE to Pinelawn Road	16,219	1,268	16,759	1,374
Pinelawn Road to Northern State Parkway	22,297	2,078	23,718	2,051
Northern State Parkway to Schwab Road	22,043	1,803	20,237	1,883
Schwab Road to Route 25	17,943	1,391	18,321	1,381

Source: NYSDOT Traffic Data Viewer (https://www.dot.ny.gov/tdv)
Notes: Data was collected between 2002 and 2010
[1] Data was taken between Montauk Highway (Route 27A) and Albany Avenue

As shown in Table 25, there is considerable variation in the AADT among the different segments of Route 110, ranging from 6,880 to 30,261 in the northbound direction and from 5,624 to 38,589 in the southbound direction. The segment of Route 110 with the highest AADT in both directions is the approximately 1.4-mile segment between Conklin Street (Route 24) and Ruland Road. This segment similarly has the highest average weekday peak hour volumes of all segments, with 3,045 in the northbound direction and 4,061 in the southbound direction.

Additionally, the Suffolk County Department of Public Works provided AADT data for the portion of Suffolk County Route 3 (Wellwood Avenue/Pinelawn Road) that is located within the study area. As shown in Table 26, the AADT along County Route 3 ranges from 9,100 and 23,400 in the northbound direction, and from 8,200 to 15,300 in the southbound direction. The segment with the highest AADT in the northbound direction is the approximately 0.1-mile segment between Conklin Street and Long Island Avenue, and the segment with the highest AADT in the southbound direction is the approximately 0.8-mile segment between Colonial Springs Road and Half Hollow Road.

TABLE 26: SUFFOLK COUNTY ROUTE 3 (WELLWOOD AVENUE/PINELAWN ROAD) AADT DATA

Segment	Northbound Annual Average Daily Traffic (AADT)	Southbound Annual Average Daily Traffic (AADT)
Conklin Street to Long Island Avenue	23,400	15,200
Long Island Avenue to 650 feet south of Central Avenue	12,500	12,800
650 feet south of Central Avenue to Central Avenue	N/A	N/A
Central Avenue to Smith Street	10,500	11,200
Smith Street to Town of Huntington/Town of Babylon Boundary	10,800	12,300
Town of Huntington/Town of Babylon Boundary to 800 feet north of Marcus Drive	N/A	N/A
800 feet north of Marcus Drive to Colonial Springs Road	N/A	N/A
Colonial Springs Road to Half Hollow Road	15,000	15,300
Half Hollow Road to LIE Southbound	12,700	13,500
LIE Southbound to LIE Northbound	10,000	13,000
LIE Northbound to Route 110	9,100	8,200

Source: Suffolk County Department of Public Works, 2014

10. Roadway Characteristics



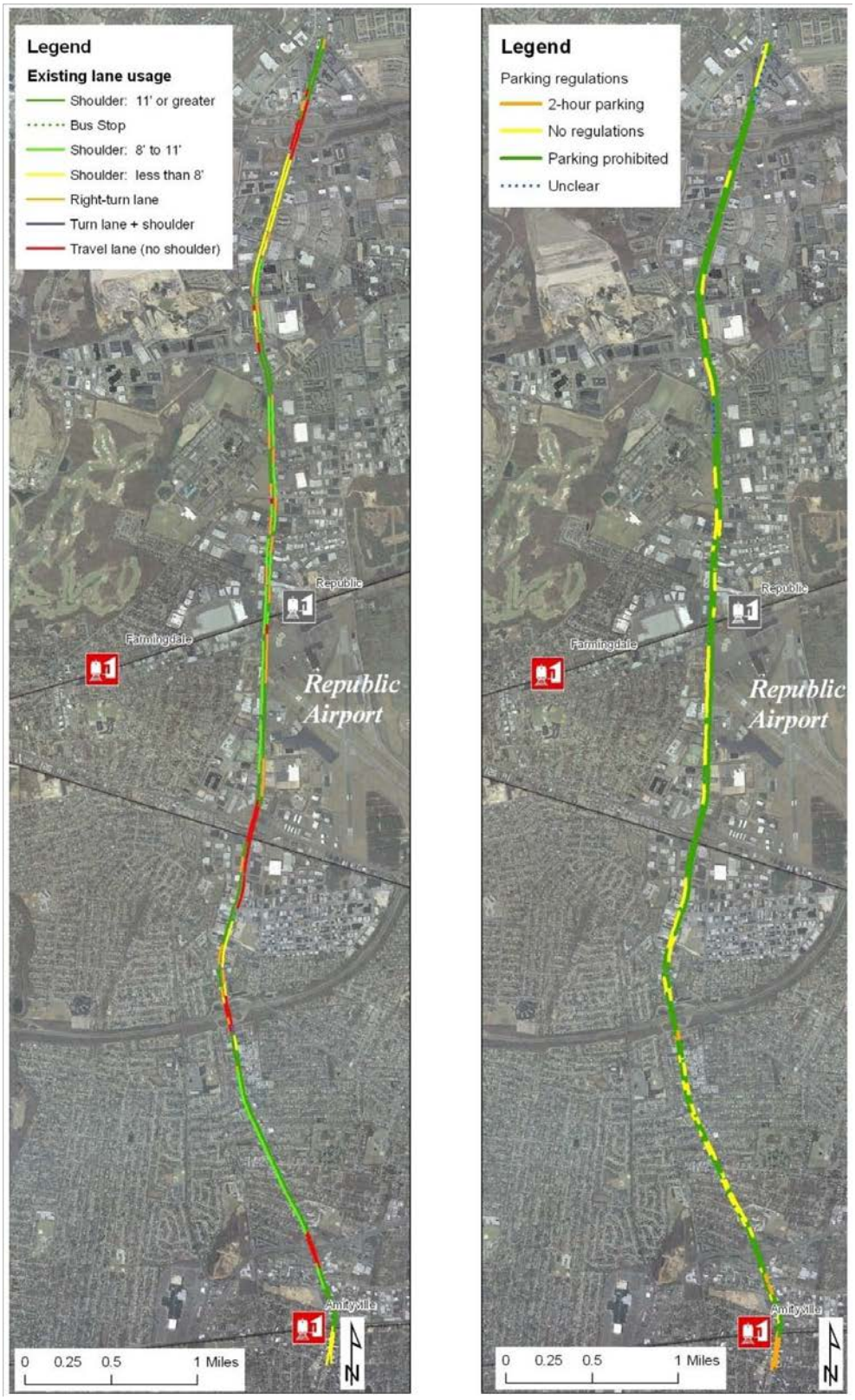
View northbound along Route 110, north of Great Neck Road
Source: Parsons Brinckerhoff, 2014

The roadway characteristics of Route 110 vary along different segments of the corridor. While the southern end of the corridor—between Oak Street and Albany Avenue in the Village of Amityville—has one northbound and one southbound lane, which increases to two travel lanes in each direction from Albany Avenue to the Southern State Parkway, much of the corridor has three northbound and three southbound lanes. Additionally, an ongoing NYSDOT project on Route 110 between the LIE and Arrowwood Lane—complementing the Northern State Parkway and LIE Interchange improvements project—is adding a third travel lane in each direction along this stretch of the corridor where there were previously two lanes in each direction. Along most roadway segments on Route 110, the northbound and southbound travel directions are divided by either a raised or painted median that ranges in width up to approximately 40 feet. Excluding the raised/painted median, the road width at a typical non-intersection location is generally 25-50 feet in both the northbound and southbound directions of Route 110, depending on the number of lanes. The 2010 *Route 110 BRT Study* graphically summarized the widths of shoulders along Route 110 and the existing on-street parking regulations, which are included as Figure 16. The existing roadway conditions as documented in the 2010 *Route 110 BRT Study* will be revisited, confirmed, and updated as necessary to reflect programmed improvement projects during the conceptual engineering task of the Alternatives Analysis (Task 11).

11. Accident Data

As discussed in a 2007 *Newsday* article ("Rating Long Island's Most Dangerous Roads"), and based on crash data from 2004 and 2005, the most dangerous location along all of the State-owned roadways on Long Island was a three-tenths-of-a-mile segment of Route 110 just north of the Southern State Parkway (to Main Street), which had 68 accidents with injuries and two fatalities in the two years. The article indicates that NYSDOT attributed the high accident number to the extreme congestion at the convergence of the roadways.

Figure 16: Existing Roadway Conditions on Route 110 (From 2010 *Route 110 BRT Study*)



Source: 2010 *Route 110 BRT Study*

In 2013, the Tri-State Transportation Campaign (TSTC) completed an analysis of the National Highway Traffic Safety Administration's Fatality Analysis Reporting System to identify the most dangerous roads in the tri-state region—excluding interstates, highways, and other roads where pedestrians are prohibited—based on number of pedestrian fatalities between 2009 and 2011. According to the analysis ("The Region's Most Dangerous Roads for Walking (2013)"), Route 110 ranked as the second most dangerous road in Suffolk County (second only to Jericho Turnpike, Route 25), with a total of nine pedestrian fatalities between 2009 and 2011. Five of the nine fatalities occurred within the Town of Babylon at the following locations on Route 110: the intersection with Locust Drive, the segment between Smith Street and Coolidge Avenue, the intersection with Ritter Avenue/Cheyenne Trail, the intersection with Conklin Street, and the intersection with Melville Road/Milbar Boulevard. The other four fatalities occurred within the Town of Huntington at the following locations on Route 110, three of which are located north of the study area: the intersection with Arlington Street, the intersection with West 21st Street, the intersection with East 15th Street, and the intersection with East 9th Street. Additional pedestrian fatalities in the immediate vicinity of Route 110 included the following locations: at the intersection of Sunrise Highway and County Line Road, just west of Route 110; at the intersection of Sunrise Highway and Albany Avenue, just east of Route 110; and on Route 109, just east of Route 110.

12. Pedestrian and Bicycle Summary

The majority of Route 110 within the study area has sidewalks on both sides of the street, providing infrastructure for pedestrians along the corridor, although the sidewalks do not have a consistent width. The east side of Route 110 provides sidewalks for most of the length of the corridor, while there are stretches on the west side of the street with no sidewalks. For instance, the west side of Route 110 lacks sidewalks along the approximately half-mile stretch from Executive Boulevard to just south of Michael Avenue across from the entrance to Republic Plaza in East Farmingdale, as well as the approximately quarter-mile stretch from Melville Road to just south of the main entrance to Farmingdale State College. Further north, approaching the Walt Whitman Shops, there are no sidewalks on the west side of the street from Lyons Street to just south of Overhill Road. Along the corridor, there are segments with breaks in the sidewalks on individual blocks from one lot to the next, particularly on the west side of the street. There are also instances in which individual lots have partial sidewalks, such as the southwest quadrant of the Route 110/Conklin Street intersection. Therefore, the corridor does not provide a continuous pedestrian network, which limits the "walkability" along and within the corridor.

However, there currently is an ongoing NYSDOT safety and mobility improvement project on Route 110 between the LIE and Arrowwood Lane to improve pedestrian infrastructure along this portion of the corridor in Melville. As discussed in the Final Design Report/Environmental Assessment for the NYSDOT project, the project will provide continuous sidewalks on both sides of Route 110 within the project area, completing gaps where there were no sidewalks, such as on the east side of the Route 110 from Arlington Street to Old Country Road and from the Melville Mall North Driveway to Arrowwood Lane, and on the west side of Route 110 from Old Country Road to just south of the Melville Mall South Driveway. Similar to the pedestrian environment along the corridor, there are limitations with regards to utilizing a bicycle along and within the corridor.

There are no designated bicycle lanes along Route 110 or within the study area. As discussed in the aforementioned Final Design Report/Environmental Assessment for the NYSDOT project on Route 110, "provisions for bicyclists are offered in the form of continuous shoulders" on Route 110. According to the NYSDOT Long Island Bikeways and Trailways map, there is a Class 3 on-road bicycle route (i.e., on-road signed route without a striped lane) on Conklin Street from Oakview Avenue in the Village of Farmingdale to Wellwood Avenue, and it continues further east on Long Island Avenue. Furthermore, there are a number of unsigned connecting routes within the study area, including: on Route 110 from Smith Street to Walt Whitman Road, and continuing further north along Walt Whitman Road; along Oak Street at the southern end of the study area; along Smith Street between Route 110 and Republic Road; along Republic Road from Smith Street to Baylis Road; and along Baylis Road from Republic Road to Walt Whitman Road. Additional unsigned connecting routes that cross Route 110 include the LIE North and South Service Roads and Old Country Road.

13. Next Steps

The compiled transit and traffic data will be reviewed in greater detail during the development of conceptual transit alignments for the Route 110 corridor and study area, and physical roadway characteristics (including existing conditions and programmed future improvements) will similarly be assessed as part of the conceptual engineering. As this project progresses, specific intersections will be identified for additional analysis. As discussed with the Town of Babylon, traffic data collection—and the collection of pedestrian volumes at a limited number of locations, as necessary—will commence after the summer months, when traffic returns to normal conditions. In the Task 3 technical memorandum, origin and destination data will be presented to summarize travel trends using the NYMTC Regional Household Travel Survey, including existing 2010 data and projected 2040 data based on forecasts of population and employment growth.

Appendix A: Employment Data for Communities Along Route 110 (ReferenceUSA)

AMITYVILLE (11701) EMPLOYMENT DATA – TOP 20 EMPLOYERS BY NUMBER OF EMPLOYEES (REFERENCEUSA)*

Rank (Number of Employees)	Employer Name	Address	Number of Employees
1	South Oaks Hospital	400 Sunrise Highway	1,150
2	Exelis Electronic Systems	1500 New Horizons Boulevard	850
3	Broadlawn Manor Nursing & Rehb	399 County Line Road	500
4	Hi-Tech Pharmacal Co Inc	369 Bayview Avenue	380
5	GKN Aerospace Monitor Inc	1000 New Horizons Boulevard	260
6	Outpatient Treatment	400 Sunrise Highway	250
7	Vision Communications Svc	6000 New Horizons Boulevard	250
8	Woodbury Automotive	605 Albany Avenue	218
9	Alarm Lock Systems Inc	333 Bayview Avenue	200
10	Bellco Health Corp	5500 New Horizons Boulevard	200
11	Kabco Pharmaceutical Inc	2000 New Horizons Boulevard	200
12	Us Dynamics Corp	425 Bayview Avenue	175
13	Park Avenue Memorial Elem Schl	140 Park Avenue	150
14	Pepsi Cola Bottling Co Of Ny	550 New Horizons Boulevard	150
15	Super Stop & Shop	351 Merrick Road	150
16	Topiderm Inc	5200 New Horizons Boulevard	150
17	Black Box Network Svc	6000 New Horizons Boulevard # 1	145
18	Kleer-Fax Inc	750 New Horizons Boulevard	130
19	Amityville Memorial High Schl	250 Merrick Road	125
20	Oracle	221 Broadway	125

Sources: Parsons Brinckerhoff, 2014; ReferenceUSA data, provided by Town of Babylon, 2014

* Excluding Brunswick Hospital Ctr Inc. (1,500 employees, per ReferenceUSA) because the Brunswick Hospital is now closed.

MELVILLE (11747) EMPLOYMENT DATA – TOP 20 EMPLOYERS BY NUMBER OF EMPLOYEES (REFERENCEUSA)

Rank (Number of Employees)	Employer Name	Address	Number of Employees
1	Prestige Employee Admnstrtrs	538 Broad Hollow Road # 311w	4,100
2	This Week's Pennysaver	235 Pinelawn Road	1,800
3	US Post Office Processing Ctr	160 Duryea Road	1,600
4	Canon USA Inc	1 Canon Park	1,500
5	Arrow/Schweber Elctro Group	25 Hub Drive	1,000
6	Honeywell Security	2 Corporate Center Drive # 100	1,000
7	MSC Industrial Direct Co Inc	75 Maxess Road	750
8	Adecco	175 Broadhollow Road	700
9	Lend America	201 Old Country Road	700
10	Leviton Manufacturing Co Inc	201 N Service Road	600
11	Nikon Americas Inc	1300 Walt Whitman Road	537
12	Underwriters Laboratories Inc	1285 Walt Whitman Road	501
13	Capital One Fncl Advisors LLC	265 Broad Hollow Road	500
14	Fougera Pharmaceuticals Inc	60 Baylis Road	500
15	Grifols	155 Duryea Road	500
16	Henry Schein Inc	135 Duryea Road	500
17	Marchon Eyewear Inc	201 Old Country Road # 3	500
18	Natural Organics Inc	548 Broadhollow Road	500
19	Savage Laboratories	60 Baylis Road	500
20	Adecco Group Na	175 Broad Hollow Road	400

Sources: Parsons Brinckerhoff, 2014; ReferenceUSA data, provided by Town of Babylon, 2014

FARMINGDALE (11735)* EMPLOYMENT DATA – TOP 20 EMPLOYERS BY NUMBER OF EMPLOYEES (REFERENCEUSA)

Rank (Number of Employees)	Employer Name	Address	Number of Employees
1	Farmingdale State College	2350 Broad Hollow Road	1,000
2	J D'Addario & Co Inc	595 Smith Street	700
3	Carlyle On The Green	99 Quaker Meeting House Road	600
4	Island Coffee	21 Banfi Plaza North	450
5	Access Direct Systems Inc	91 Executive Boulevard	424
6	Harold Levinson Assoc Inc	21 Banfi Plaza North	420
7	Heritage Mechanical Svc Inc	70 Schmitt Boulevard	400
8	Sunrise Credit Svc Inc	260 Airport Plaza Boulevard	400
9	Adventureland Amusement Park	2245 Broad Hollow Road	300
10	Bethpage State Park	99 Quaker Meeting House Road	300
11	Enzo Clinical Labs Inc	60 Executive Boulevard	300
12	Farmingdale Senior High School	150 Lincoln Street	300
13	Forster Garbus	500 Bi County Boulevard # 300	300
14	Hudson News	120 Adams Boulevard	300
15	Innovative Automation	595 Smith Street	300
16	P C Richard & Son	150 Price Parkway	300
17	Temco Service Industries Inc	171 Allen Boulevard	300
18	Home Depot	202 Airport Plaza Boulevard	272
19	Travel Impressions LTD	465 Smith Street # A	245
20	W E Howitt Middle School	70 Van Cott Avenue	210

Sources: Parsons Brinckerhoff, 2014; ReferenceUSA data, provided by Town of Babylon, 2014

* Includes East Farmingdale

HUNTINGTON (11743) EMPLOYMENT DATA – TOP 20 EMPLOYERS BY NUMBER OF EMPLOYEES (REFERENCEUSA)

Rank (Number of Employees)	Employer Name	Address	Number of Employees
1	Pederson-Krag Ctr Inc	55 Horizon Drive	400
2	Telephonics Corp	770 Park Avenue	400
3	Carillon Nursing & Rehab Ctr	830 Park Avenue	380
4	Sleepy's The Mattress Pros	1894 E Jericho Turnpike	339
5	North Shore Med Grp-Mt Sinai	325 Park Avenue	325
6	West Hills Day Camp	21 Sweet Hollow Road	301
7	Huntington Town Council Office	100 Main Street	300
8	Suffolk County Police Dept	1071 Park Avenue	300
9	YMCA	60 Main Street	300
10	Huntington Town Hall	100 Main Street	250
11	Developmental Disabilities	25 Little Plains Road # 1	220
12	Home Depot	839 New York Avenue	220
13	Huntington High School	188 Oakwood Road	200
14	Huntington Town General Svc	100 Main Street	200
15	Macy's	Walt Whitman Road	200
16	Chemical Resources Corp	36 New York Avenue # 3	180
17	Home Depot	785 New York Avenue	150
18	Super Stop & Shop	1100 E Jericho Turnpike	150
19	Resource Capital	224 Wall Street # 202	140
20	Finley Middle School	20 Greenlawn Road	130

Sources: Parsons Brinckerhoff, 2014; ReferenceUSA data, provided by Town of Babylon, 2014

HUNTINGTON STATION (11746) EMPLOYMENT DATA – TOP 20 EMPLOYERS BY NUMBER OF EMPLOYEES (REFERENCEUSA)

Rank (Number of Employees)	Employer Name	Address	Number of Employees
1	American Technical Ceramics	17 Stepar Place	5,200
2	Roy K Davis Bus Inc	Pulaski Road & 5th Avenue	850
3	Huntington Union Free Sch Dist	50 Tower Street	800
4	American Technical Ceramics	1 Norden Lane	452
5	Huntington Medical Group	180 Pulaski Road	340
6	Nordstrom	350 Walt Whitman Road # 9	313
7	King Kullen	275 W Jericho Turnpike	300
8	Northgate Electric Corp	63 Depot Road	230
9	Walt Whitman High School	301 W Hills Road	210
10	Center For Nursing & Rehab	78 Birchwood Drive	200
11	Cheesecake Factory	160 Walt Whitman Road # 1109b	200
12	Macy's	160 Walt Whitman Road	200
13	Saks Fifth Avenue	230 Walt Whitman Road	200
14	US Post Office	888 E Jericho Turnpike	196
15	Lord & Taylor	158 Walt Whitman Road	175
16	Target	124 E Jericho Turnpike	150
17	7-Eleven	901 E Jericho Turnpike	100
18	Best Buy	148 Walt Whitman Road	100
19	BRIO Tuscan Grille	160 Walt Whitman Road # 1140	100
20	Extended Family Care-New York	33 Walt Whitman Road # 304	100

Sources: Parsons Brinckerhoff, 2014; ReferenceUSA data, provided by Town of Babylon, 2014

Appendix B: Land Use Coding Summary

Land Use Category	Property Class Code[1]
Agricultural	100-199
Single Family	200-219, 240-269
Multi-Family	220-239, 270-279, 281, 411, 416
Mixed-Use	280, 283-299, 480-483
Vacant	300-399
Commercial	400-479, 484-499, 500-513, 515-530, 532, 533, 540-542, 544-551, 554-559, 570-589
Community Services & Institutions	514, 534-539, 543, 600-699
Industrial	700-799
Public Services	800-899
Open Space	531, 552, 553, 560-569, 590-599, 900-999

[1] Property class codes correspond to New York State Department of Taxation and Finance Property Class Codes – Assessors' Manual Data Collection: http://www.tax.ny.gov/research/property/assess/manuals/vol6/ref/prclas.htm

The New York State
Department *of* Taxation and Finance

Andrew M. Cuomo - *Governor* Thomas H. Mattox - *Commissioner*

Property class codes - Assessors' Manual Data Collection (formerly known as Volume 6)

Printable PDF Pages

- Waterfront/Property Ownership Codes: What are they and how are they used?
- How to Locate the Proper Property Type Classification Code
- Agricultural
- Residential
- Vacant Land
- Commercial
- Recreation and Entertainment
- Community Services
- Industrial
- Public Services
- Wild, Forested, Conservation Lands and Public Parks

WATERFRONT/PROPERTY OWNERSHIP CODES : What are they and how are they used?

Property Type Classification Codes were originally developed to describe the primary use of each parcel of real property on an assessment roll. They are **not** designed to describe land having water frontage or the type of ownership of parcels. A need exists for a field which can describe land having any significant water frontage and/or special forms of ownership, such as association, condominium, cooperative and time share. These kinds of ownership, and land that includes water frontage, may exist in many classes of property, for instance residential, commercial, recreation, etc. They may be found in various types of construction, ranging from single detached units to high-rise buildings to extended docking complexes.

Rather than create duplicate codes for all property types where ownership can vary, with or without water frontage, waterfront/ownership codes have been developed to be used with existing property type codes. The water front/ownership codes should be used only for those properties meeting the following definitions.

For those using the New York State Real Property System (RPS), the waterfront/ownership field is located on the property description and location update screen.

There are nine waterfront/ownership codes:

- A - **Association (without waterfront)** : The parcel is individually owned **without** any water frontage and, in addition, the owner of the parcel shares ownership with other members of the association in the ownership of common areas (i.e., land, lake frontage, docks, pools, tennis courts, etc.). The common areas should also have this code.
- B - **Association (with waterfront)** : The parcel is individually owned **with** water frontage and, in addition, the owner of the parcel shares ownership with other members of the association in the ownership of common areas (i.e., land, lake frontage, docks, pools, tennis courts, etc.). The common areas should also have this code.
- C - **Condominium (without waterfront)** : The property is held in condominium form of ownership **without** any water frontage. Typically a unit is individually owned, and an interest is owned in the land and in common improvements.
- D - **Condominium (with waterfront)** : The property is held in condominium form of ownership **with** water frontage. Typically a unit is individually owned, and an interest is owned in the land and in common

improvements.

- P - **Cooperative (without waterfront)e** : The property is held in cooperative form of ownership **without** any water frontage. The unit and improvements are not individually owned. Individuals own shares in the corporation which owns the entire property. The share defines the unit and its liabilities.
- Q - **Cooperative (with waterfront)** : The property is held in cooperative form of ownership **with** water frontage. The unit and improvements are not individually owned. Individual's own shares in the corporation that owns the entire property. The share defines the unit and its liabilities.
- T - **Time Share (without waterfront)** : There are multiple owners of the property, each with the right to use a specific unit for a specific time period annually. There is **no** water frontage.
- U - **Time Share (with waterfront)** : There are multiple owners of the property, each with the right to use a specific unit for a specific time period annually. There **is** water frontage.
- W - Property not held in any of these forms of ownership but having water frontage requires a "W" to signify the presence of water frontage.

Property not held in any of these forms of ownership that does not have water frontage requires no waterfront/ownership code.

The following examples of the use of the waterfront/ ownership code in conjunction with the property class code.

A condominium located in a two-story building with eight units and no water frontage, would be coded as 411-C.

A single-family townhouse held in condominium from of ownership and with water frontage would be classified as a 210-D. If the above townhouse were owned in fee simple in an association, it would be coded 210-B.

A piece of land best suited for improvement for residential or seasonal purpose with significant water frontage would be classified as a 311-W.

HOW TO LOCATE THE PROPER PROPERTY TYPE CLASSIFICATION CODE 

The New York State Office of Real Property Services has developed a simple and uniform classification system to be used in assessment administration in New York State.

The system of classification consists of numeric codes in nine categories. Each category is composed of divisions, indicated by the second digit, and subdivisions (where required), indicated by a third digit. The nine categories are:

- 100 - Agricultural - Property used for the production of crops or livestock.
- 200 - Residential - Property used for human habitation. Living accommodations such as hotels, motels, and apartments are in the Commercial category - 400.
- 300 - Vacant Land - Property that is not in use, is in temporary use, or lacks permanent improvement.
- 400 - Commercial - Property used for the sale of goods and/or services.
- 500 - Recreation & Entertainment - Property used by groups for recreation, amusement, or entertainment.
- 600 - Community Services - Property used for the well being of the community.
- 700 - Industrial - Property used for the production and fabrication of durable and nondurable man-made goods.
- 800 - Public Services - Property used to provide services to the general public.
- 900 - Wild, Forested, Conservation Lands & Public Parks - Reforested lands, preserves, and private hunting and fishing clubs

Below is part of the coding structure in the Recreation and Entertainment Category. It demonstrates how to decide what code to use when a property is either clearly described or inadequately described.

- 500 - Recreation and Entertainment **(Category)**
- 530 - Amusement Facilities **(Division)**
- 531 - Fairgrounds
- 532 - Amusement Parks **(Subdivision)**
- 533 - Game Farms
- 534 - Social Organizations

The number "0" has been reserved to fill in the coding structure where description of a property is inadequate to assign a code at the division level, subdivision level or where it was not necessary to establish a subdivision level.

A Recreation and Entertainment facility that cannot be classified at a division level, should be coded "500" (category).

An amusement facility that is not a fairground, amusement park, game farm, or a social organization should be coded "530" (division).

A fairground should be coded "531" (subdivision).

100 - AGRICULTURAL 

105 - Agricultural Vacant Land (Productive)
Land used as **part** of an operating farm. It does not have living accommodations and cannot be specifically related to any of the other divisions in the agricultural category. Usually found when an operating farm is made up of a number of contiguous parcels.

110 - Livestock and Products

111 - Poultry and Poultry Products: eggs, chickens, turkeys, ducks and geese

112 - Dairy Products: milk, butter and cheese

113 - Cattle, Calves, Hogs

114 - Sheep and Wool

115 - Honey and Beeswax

116 - Other Livestock: donkeys, goats

117 - Horse Farms

120 - Field Crops
Potatoes, wheat, hay, dry beans, corn, oats, and other field crops.

129 - Acquired Development Rights
Land for which development rights have been acquired by a governmental agency (e.g., certain agricultural lands in Suffolk County).

130 - Truck Crops - Mucklands
Muckland used to grow potatoes, sugar beets, onions, snap beans, tomatoes, cabbage, lettuce, cauliflower, sweet corn, celery, etc.

140 - Truck Crops - Not Mucklands
Nonmuckland used to grow onions, snap beans, tomatoes, cabbage, lettuce, cauliflower, sweet corn, celery, carrots, beets, peas, etc.

150 - Orchard Crops

151 - Apples, Pears, Peaches, Cherries, etc.

152 - Vineyards

160 - Other Fruits
Strawberries, raspberries, dewberries, currants, etc.

170 - Nursery and Greenhouse
Buildings, greenhouses and land used for growing nursery stock, trees, flowers, hothouse plants, mushrooms, etc.

180 - Specialty Farms

181 - Fur Products: mink, chinchilla, etc.

182 - Pheasant, etc.

183 - Aquatic: oysterlands, fish and aquatic plants

184 - Livestock: deer, moose, llamas, buffalo, etc.

190 - Fish, Game and Wildlife Preserves

200 - RESIDENTIAL 

210 - One Family Year-Round Residence
A one family dwelling constructed for year-round occupancy (adequate insulation, heating, etc.).

NOTE: If not constructed for year-round occupancy, see code 260.

This following property classification code changes will be established beginning with the 2007 assessment roll. Please make the necessary changes now, as you update your assessment roll.

215 - One Family Year-Round Residence with Accessory Apartment
A one family, year round residence with a secondary self contained dwelling unit. Accessory apartments are usually contained within or added to the principle residence and are often occupied by immediate family members.

220 - Two Family Year-Round Residence
A two family dwelling constructed for year-round occupancy.

230 - Three Family Year-Round Residence
A three family dwelling constructed for year-round occupancy.

240 - Rural Residence with Acreage
A year-round residence with 10 or more acres of land; it may have up to three year-round dwelling units.

241 - Primary residential, also used in agricultural production

242 - Recreational use

250 - Estate
A residential property of not less than 5 acres with a luxurious residence and auxiliary buildings.

260 - Seasonal Residences
Dwelling units generally used for seasonal occupancy; not constructed for year-round occupancy (inadequate insulation, heating, etc.). If the value of the land and timber exceeds the value of the seasonal dwelling, the property should be listed as forest land (see category 900).

NOTE: If constructed for year-round occupancy, see code 210.

270 - Mobile Home
A portable structure built on a chassis and used as a permanent dwelling unit.

271 - Multiple Mobile Homes
More than one mobile home on one parcel of land; not a commercial enterprise.

280 - Residential - Multi-Purpose/Multi-Structure

281 - Multiple Residences
More than one residential dwelling on one parcel of land. May be a mixture of codes 210's, 220's, and 230's, or all one type.

283 - Residence with Incidental Commercial Use
A residence which has been partially converted or adapted for commercial use (e.g. residence with small office in basement). Primary use is residential.

300 - VACANT LAND

The following property classification code changes will be established beginning with the 2004 assessment roll. Please make the necessary changes now, as you update your assessment roll.

New Description	New Class	Old Class	Old Description
Dropped		313	Waterfront Vacant Lots
Dropped		316	Waterfront Land Including a Small Improvement (not used for living accommodations)

310 - Residential

311 - Residential Vacant Land
Vacant lots or acreage located in areas.

312 - Residential Land Including a Small Improvement (not used for living accommodations)
Includes a private garage on a parcel of land separate from the residence. Does not include a small garage where space is being rented out (see code 439).

314 - Rural Vacant Lots of 10 Acres or Less
Located in rural residential areas.

315 - Underwater Vacant Land
Underwater land, in a seasonal residential area, not owned by a governmental jurisdiction.

320 - Rural

321 - Abandoned Agricultural Land
Nonproductive; not part of an operating farm.

322 - Residential Vacant Land Over 10 Acres
Located in rural areas.

323 - Other Rural Vacant Lands
Waste lands, sand dunes, salt marshes, swamps, rocky areas, and woods and brush of noncommercial tree species not associated with forest lands.

330 - Vacant Land Located in Commercial Areas

331 - Commercial Vacant Land with Minor Improvements

340 - Vacant Land Located in Industrial Areas

341 - Industrial Vacant Land with Minor Improvements

350 - Urban Renewal or Slum Clearance
Vacant lots or acreage undergoing urban renewal or slum clearance; improvements must be abandoned.

380 - Public Utility Vacant Land
Public utility company vacant land.

400 - commercial

410 - Living Accommodations

411 - Apartments

414 - Hotel

415 - Motel

416 - Mobile Home Parks (trailer parks, trailer courts)
The mobile homes are usually owner occupied but the land and facilities are rented or leased. (See code 270 for individual mobile homes.)

417 - Camps, Cottages, Bungalows
Usually rented on a seasonal basis.

418 - Inns, Lodges, Boarding and Rooming Houses, Tourist Homes, Fraternity and Sorority Houses
Sleeping accommodations with or without meals or kitchen privileges.

420 - Dining Establishments

421 - Restaurants
Facilities which serve full course meals with or without legal beverages.

422 - Diners and Luncheonettes
Usually year-round facilities with counter service and limited seating.

423 - Snack Bars, Drive-Ins, Ice Cream Bars
Usually seasonal, with window and/or car service, possibly limited counter service (e.g., A&W Root Beer, Tastee Freeze Ice Cream, etc.).

424 - Night Clubs
Facilities which feature an extensive menu, legal beverages and live entertainment.

425 - Bar
Facilities which serve only legal beverages, not food.

426 - Fast Food Franchises
Year-round, with counter service, limited menus and a drive-up window (e.g., McDonald's, Burger King, etc.).

430 - Motor Vehicle Services

431 - Auto Dealers - Sales and Service
Includes truck or farm machinery dealerships, auto or truck rental agencies, motor home sales and service facilities, etc.

432 - Service and Gas Stations
Sell gasoline and/or provide minor repairs and services.

433 - Auto Body, Tire Shops, Other Related Auto Sales
Specialized auto equipment and repair (e.g., Goodyear Tire Center, Firestone Stores, etc.).

434 - Automatic Car Wash
Car is pulled through a series of cleaning processes.

435 - Manual Car Wash
Car is driven into a stall; revolving brushes rotate around the car (semiautomatic).

436 - Self-Service Car Wash
Usually a multi stall structure featuring a car owner operated coin system with spray type hoses for washing and rinsing a car.

437 - Parking Garage
Usually a multistory structure with elevators and/or ramps, used mainly for car storage.

438 - Parking Lot
A commercial open parking lot for motor vehicles.

439 - Small Parking Garage
A garage with two or more stalls, usually found in a residential area, being rented for parking.

440 - Storage, Warehouse and Distribution Facilities

The following property classification code changes will be established beginning with the 2004 assessment roll. Please make the necessary changes now, as you update your assessment roll.

New Description	New Class	Old Class	Old Description
Fuel Storage and Distribution Facilities	**441**	441	Gasoline, Fuel, Oil, Liquid Petroleum Storage and/or Distribution
"	**441**	442	Bottled Gas, Natural Gas Facilities
"	**441**	445	Coal Yards, Bins
Mini Warehouse (Self Service Storage)	**442**	NA	
Open - Not Used	**445**		

441 - Fuel Storage and Distribution Facilities
Facility for fuel storage and distribution including gasoline, oil, liquid petroleum bottled gas, natural gas, and coal.

442 - Mini Warehouse (Self Storage)
This use reflects the partitioned warehouse space used for multiple tenant self service storage.

443 - Grain and Feed Elevators, Mixers, Sales Outlets

444 - Lumber Yards, Sawmills

445 - Coal Yards, Bins

446 - Cold Storage Facilities
Used for perishables, produce or other items.

447 - Trucking Terminals

448 - Piers, Wharves, Docks and Related Facilities

449 - Other Storage, Warehouse and Distribution Facilities

450 - Retail Services

451 - Regional Shopping Centers
Multi occupant facilities with ten or more stores, usually featuring a large department store or two, and ample paved parking.

452 - Area or Neighborhood Shopping Centers
Smaller shopping facilities which usually feature a junior department store, several other stores, and ample parking; may include a supermarket.

453 - Large Retail Outlets
These facilities are usually complemented by a large supermarket and have ample parking (e.g., Ames, Wal-Mart, etc.).

454 - Large Retail Food Stores
These facilities usually belong to a chain and sell food and sundry items (e.g., Price Chopper, Hannaford, Topps, Wegmans, P&C, Big M, etc.).

455 - Dealerships - Sales and Service (other than auto with large sales operation)
Boats (also refer to code 570), snowmobiles, garden equipment, etc.

460 - Banks and Office Buildings

461 - Standard Bank/Single Occupant

462 - Drive-In Branch Bank

463 - Bank Complex with Office Building

464 - Office Building

465 - Professional Building

470 - Miscellaneous Services

471 - Funeral Homes

472 - Dog Kennels, Veterinary Clinics

473 - Greenhouses

474 - Billboards

475 - Junkyards

480 - Multiple Use or Multi-purpose
A building readily adaptable, with little physical change, for more than one use or purpose.

481 - Downtown Row Type (with common wall)
Usually a two or three story older structure with retail sales/services on the first floor and offices and/or apartments on the upper floors; little or no on-site parking.

482 - Downtown Row Type (detached)
The same type of use as in code 481, above, but this is a separate structure without party walls.

483 - Converted Residence
A building usually located in a residential area, which has been partially converted or adapted for office space (e.g., a doctor's or dentist's office with an apartment upstairs).

484 - One Story Small Structure
Usually a modern, one occupant, building adaptable for several uses (e.g., retail clothing store, small office, warehouse, pet shop, etc.).

485 - One Story Small Structure - Multi occupant
Usually partitioned for two or more occupants, such as a liquor store, drug store, and a laundromat; limited parking on site.

486 - Minimart
Combination snack bar, market and gas station.

500 - RECREATION AND ENTERTAINMENT 

510 - Entertainment Assembly

511 - Legitimate Theaters
Used primarily for live presentations of the performing arts (opera, drama, musicals, symphonies, ballet, etc.).

512 - Motion Picture Theaters (excludes drive-in theaters)

513 - Drive-In Theaters

514 - Auditoriums, Exhibition and Exposition Halls

515 - Radio, T.V. and Motion Picture Studios

520 - Sports Assembly

521 - Stadiums, Arenas, Armories, Field Houses

522 - Racetracks
Used for auto, horse, motorcycle, go-cart, or drag racing.

530 - Amusement Facilities

531 - Fairgrounds

532 - Amusement Parks

533 - Game Farms

534 - Social Organizations
Elks, Moose, Eagles, and Veterans' Posts, etc., whose primary purpose is social activities for members.

540 - Indoor Sports Facilities

541 - Bowling Centers

542 - Ice or Roller Skating Rinks

543 - YMCA's, YWCA's, etc.

544 - Health Spas

545 - Indoor Swimming Pools

546 - Other Indoor Sports
Tennis courts, archery ranges, billiard centers, etc.

550 - Outdoor Sports Activities

551 - Skiing Centers
May include sleeping and dining facilities; not ski facilities of resort complexes.

552 - Public Golf Courses
May include other associated sports facilities and/or dining facilities.

553 - Private Golf Country Clubs
Includes those with other sports and dining facilities.

554 - Outdoor Swimming Pools

555 - Riding Stables

556 - Ice or Roller Skating Rinks (may be covered)

557 - Other Outdoor Sports
Driving ranges, miniature golf, tennis, baseball, batting ranges, polo fields, etc.

560 - Improved Beaches
Improvements include bath houses, parking facilities, etc.

570 - Marinas
Improvements include docks and piers, boat storage facilities, repair shops, etc.

580 - Camps, Camping Facilities and Resorts

581 - Camps
Used by groups of children and/or adults.

582 - Camping Facilities
Improved areas/parks with accommodations for tents, campers or travel trailers or RV's.

583 - Resort Complexes
Dude ranches, resort hotels with sports facilities, etc.

590 - Parks

591 - Playgrounds

592 - Athletic Fields

593 - Picnic Grounds

600 COMMUNITY SERVICES 

610 - Education

611 - Libraries

612 - Schools
General, elementary and secondary.

613 - Colleges and Universities

614 - Special Schools and Institutions
Used for the physically or mentally impaired.

615 - Other Educational Facilities

620 - Religious

630 - Welfare

631 - Orphanages

632 - Benevolent and Moral Associations

633 - Homes for the Aged

640 - Health

641 - Hospitals

642 - All Other Health Facilities

650 - Government

651 - Highway Garage
Used for the storage and maintenance of highway equipment by any governmental jurisdiction; includes associated land.

652 - Office Building
Owned by any governmental jurisdiction; includes associated land.

653 - Parking Lots
Owned by any governmental jurisdiction; includes land and appurtenant structures such as open single level lots as well as multilevel parking garages.

660 - Protection

661 - Army, Navy, Air Force, Marine and Coast Guard
Installations, Radar, etc.

662 - Police and Fire Protection, Electrical Signal
Equipment and Other Facilities for Fire, Police, Civil Defense, etc.

670 - Correctional
Used by any governmental jurisdiction for housing within the criminal justice system.

680 - Cultural and Recreational

681 - Cultural Facilities
Museums, art galleries, etc.

682 - Recreational Facilities
Nature trails, bike paths, etc.

690 - Miscellaneous

691 - Professional Associations

692 - Roads, Streets, Highways and Parkways, Express or Otherwise (if listed) Including Adjoining Land

693 - Indian Reservations

694 - Animal Welfare Shelters

695 - Cemeteries

700 - INDUSTRIAL

A parcel including an office building on land located adjacent to or near an automobile assembly plant and used principally by the automobile manufacturer for its own offices should be coded as industrial under the appropriate division below. However, if such building is used principally by tenants leasing space therein, the parcel should be coded as commercial.

Also, an office building used principally by an industrial concern but located remote from its manufacturing plant should be coded as commercial rather than industrial (e.g., office buildings in Manhattan occupied principally by industrial companies whose manufacturing activities are located elsewhere throughout the country).

Parcels used for research aimed primarily at improving products should be coded as industrial, while parcels used for marketing research should be coded as commercial.

This following property classification code changes will be established beginning with the 2004 assessment roll. Please make the necessary changes now, as you update your assessment roll.

New Description	New Class	Old Class	Old Description
High Tech Manufacturing and Processing	**712**	NA	
Light Industrial Manufacturing and Processing	**714**	NA	
Heavy Manufacturing and Processing	**715**	NA	
Mining and Quarrying	**720**	721	Sand and Gravel
"	**720**	722	Limestone
"	**720**	723	Trap Rock
"	**720**	724	Salt
"	**720**	725	Iron and Titanium

"	**720**	726	Talc
"	**720**	727	Lead and Zinc
"	**720**	728	Gypsum
"	**720**	729	Other

710 - Manufacturing and Processing

712 - High Tech. Manufacturing and Processing
These buildings are used as research laboratories with a high percentage of office/laboratory space. The construction costs of these facilities are higher than other warehouse/manufacturing facilities reflecting their architectural design, super adequate upgrades, and more comprehensive finish.

714 - Light Industrial Manufacturing and Processing
These structures may have been built for a specific manufacturing process. They feature high ceilings and open construction which allows for good workflow.

715 - Heavy Manufacturing and Processing
These are large area structures design and built for production. They will have extensive concrete foundations for industrial equipment and a high voltage electrical system.

720 - Mining and Quarrying
This category includes parcels used in or necessary adjunct to the provision of mining and quarrying, i.e., sand and gravel, limestone, trap rock, salt, iron and titanium, talc, lead and zinc, gypsum, and other mining and quarrying.

730 - Wells

731 - Oil - Natural Flow (for production)

732 - Oil - Forced Flow (for production)

733 - Gas (for production)

734 - Junk

735 - Water used for Oil Production

736 - Gas or Oil Storage Wells

740 - Industrial Product Pipelines
Pipelines used by nonutility companies, and not in Special Franchise.

741 - Gas

742 - Water

743 - Brine

744 - Petroleum Products

749 - Other

800 - PUBLIC SERVICES 

This category includes, but is not limited to, parcels used in or as a necessary adjunct to the provision of public services. Therefore, a parcel which includes a building used principally by a telephone company for accounting or customer billing should be coded in this category.

Similarly, parcels which are used to store, garage or repair motor vehicles and/or equipment used in providing these public utility services should be coded in the appropriate division below.

820 - Water

821 - Flood Control
Land used for the accumulation, storage or diversion of water for flood control purposes only.

822 - Water Supply
Land used for the accumulation, storage, transmission or distribution of water for purposes other than flood control or production of electricity (e.g., aqueducts and pipelines).

823 - Water Treatment Facilities

826 - Water Transmission - Improvements

827 - Water Transmission - Outside Plant

830 - Communication
Includes all telephones, telecommunications, telegraph, radio, television and CATV property.

831 - Telephone
Telephone and telecommunications land, buildings, towers, antennae, etc., except cellular telephone towers - see 837

832 - Telegraph

833 - Radio

834 - Television other than Community Antenna Television

835 - Community Antenna Television

836 - Telephone Outside Plant
Poles, wires, cable, etc.

837 - Cellular Telephone Towers

840 - Transportation

841 - Motor Vehicle
Land used in the provision of transportation services by motor vehicles (e.g., bus terminals, taxicab garages, truck terminals and warehouses, etc.). Does not include public highways, bridges, tunnels, subways and property used in the maintenance (except by persons providing transportation services), manufacture and sale of motor vehicles.

842 - Ceiling Railroad
Real property for which the State Board establishes the maximum taxable assessed value.

843 - Nonceiling Railroad

844 - Air

845 - Water
Land used for water transportation (e.g., canal).

846 - Bridges, Tunnels and Subways

847 - Pipelines
Pipelines used by utility companies for the transportation of petroleum products.

NOTE: This code will be deleted once the Utility Company Assessment Roll Standards (UCARS) have been adopted. After that the appropriate Pipeline designation should be chosen from the 740 series.

850 - Waste Disposal
Does **not** include facilities used exclusively for the disposal of waste from an industrial process, which should be coded

as industrial property.

851 - Solid Wastes
Incinerators and waste compacting facilities. Does not include landfills and dumps (see code 852).

852 - Landfills and Dumps

853 - Sewage Treatment and Water Pollution Control

854 - Air Pollution Control

860 - Special Franchise Property
Real property for which the State Board establishes assessments.

861 - Electric and Gas

862 - Water

866 - Telephone

867 - Miscellaneous

868 - Pipelines

869 - Television

870 - Electric and Gas

871 - Electric and Gas Facilities
General electric and gas facilities, buildings, and land including offices, garages, service centers, etc.

872 - Electric SubStation
Electric Power Generation Facilities
Includes all land and facilities associated with electric generating stations, i.e. power plant equipment, reservoirs, dams, power house, penstock pipe, waterway structures, etc.

873 - Gas Measuring and Regulation Station

874 - Electric Power Generation Facility - Hydro

875 - Electric Power Generation Facility - Fossil Fuel

876 - Electric Power Generation Facility - Nuclear

877 - Electric Power Generation Facility - Other Fuel

880 - Electric and Gas Transmission and Distribution

882 - Electric Transmission Improvement

883 - Gas Transmission Improvement

884 - Electric Distribution - Outside Plant Property

885 - Gas Distribution - Outside Plant Property

900 - WILD, FORESTED, CONSERVATION LANDS AND PUBLIC PARKS

910 - Private Wild and Forest Lands except for Private Hunting and Fishing Clubs
This division includes all private lands which are associated with forest land areas that do not conform to any other property type classification, plus plantations and timber tracts having merchantable timber.

911 - Forest Land Under Section 480 of the Real Property Tax Law

912 - Forest Land Under Section 480-a of the Real Property Tax Law

920 - Private Hunting and Fishing Clubs

930 - State Owned Forest Lands

931 - State Owned Land (Forest Preserve) in the Adirondack or Catskill Parks Taxable Under Section 532-a of the Real Property Tax Law

932 - State Owned Land Other Than Forest Preserve Covered Under Section 532-b, c, d, e, f, or g of the Real Property Tax Law

940 - Reforested Land and Other Related Conservation Purposes

941 - State Owned Reforested Land Taxable Under Sections 534 and 536 of the Real Property Tax Law

942 - County Owned Reforested Land

950 - Hudson River and Black River Regulating District Land

960 - Public Parks

961 - State Owned Public Parks, Recreation Areas, and Other Multiple Uses

962 - County Owned Public Parks and Recreation Areas

963 - City/Town/Village Public Parks and Recreation Areas

970 - Other Wild or Conservation Lands

971 - Wetlands, Either Privately or Governmentally Owned, Subject to Specific Restrictions as to Use

972 - Land Under Water, Either Privately or Governmentally Owned (other than residential - more properly classified as code 315)

980 - Taxable State Owned Conservation Easements

990 - Other Taxable State Land Assessments

991 - Adirondack Park Aggregate Additional Assessments (Real Property Tax Law, Section 542(3))

992 - Hudson River-Black River Regulating District Aggregate Additional Assessments (Environmental Conservation Law, Section 15-2115)

993 - Transition Assessments for Taxable State Owned Land (Real Property Tax Law, Section 545)

994 - Transition Assessments for Exempt State Owned Land (Real Property Tax Law, Section 545)

| Top of Page | | Commercial Section | | RFV Section

If you have questions or comments related to the use of this manual, please contact your Customer Services Team or the ORPTS Solutions Center.

Appendix C: Existing Zoning Districts Within ¼-Mile of Route 110 (From 2010 Route 110 BRT Study)

Zone	District Name	Type	MF Allowed?	Min. Lot Size	Max. Building Coverage	Stories	Height
TOWN OF HUNTINGTON							
R-40	Residence	Res.	N	1 acre	--	2	35
R-5	Residence	Res.	N (2-Family)	5,000/10,000	--	2	35
R-3M	Garden Apartment Special	Res.	Y	15,000	--	3	45
R-RM	Retirement Community	Res.	Y (Senior)	10 acres	25%	2	35
C-2	Single-Purpose Office Building	Com.	N	3 acres	25%	2	30
C-4	Neighborhood Business	Com.	N	5,000	40%	2	35
C-6	General Business	Com.	Y (mixed-use)	--		3	45
C-8	General Business A	Com.	N	5,000	50%	2	35
C-10	Planned Motel	Com.	Y	3 acres	25%	2	35
I-1	Light Industry	Ind.	N	6 acres	30%	--	45
I-2	Light Industry	Ind.	N	3 acres	33 1/3%	--	45
I-3	Light Industry	Ind.	N	1 acre	40%	--	45
TOWN OF BABYLON							
A	Residence	Res.	N	12,500	15%	2 ½	30
B	Residence	Res.	N	10,000	20%	2 ½	30
C	Residence	Res.	N	7,500	30%	2 ½	30
MR	Multiple Residence	Res.	Y	2 acres	--	2 ½	--
SC	Senior Citizens Multiple Use	Res.	N	2 acres	--	2 ½	--
E	Neighborhood Business	Com.	N	10,000	60%	3	35
G	Light Industrial	Ind.	N	15,000	40%	--	35
Ga	Light Industrial	Ind.	N	40,000	45%	--	35
MH	Planned Motel-Hotel	Hotel	N	3 acres	--	3	35
VILLAGE OF AMITYVILLE[1]							
B	Residence	Res.	N	7,500	32%	2 ½	35
B-1	Retail Business	Mix	N	--	60%	4	40
B-2	General Business	Mix	N	--	60%	4	40
SC	Senior Citizen Residence	Res.	Y	1.75 acres	20%	2 ½	--
I	Industrial	Ind.	N	12,500	40%	--	40

SOURCES: Town of Huntington Zoning Code; Town of Babylon Zoning Code; Village of Amityville Zoning Code. Compiled by Saccardi & Schiff, Inc.

NOTE: [1]The Village of Amityville Zoning Code is currently being revised; this table reflects the most recent adopted version.

Source: 2010 *Route 110 BRT Study*

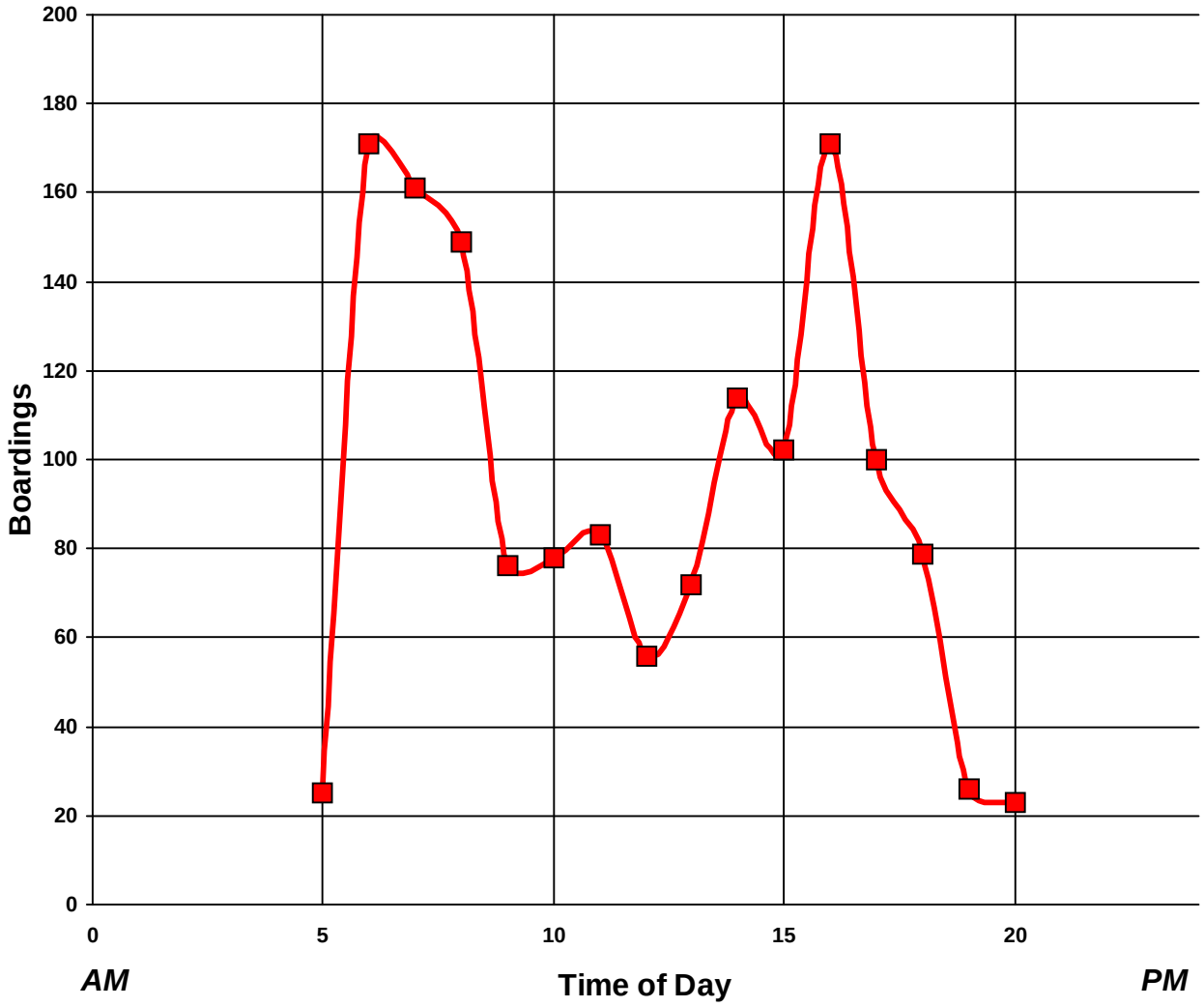
Appendix D: Suffolk County Transit Data from 2007 Ridecheck Survey for Select Routes

S1 Amityville RR Halesite - Northbound

All Valid Weekday Trips

Vehicle Trips	37	Boardings Per Mile	2.44	TP Ontime	363
Boardings	1,486	Boardings Per Hour	34.5	TP Early	38
Revenue Miles	609.6	Schedule Speed (MPH)	14.2	TP Late	80
Revenue Hours	43.1	Actual Speed (MPH)	14.3	Ontime (%)	75.5

Boardings



This data is property of Suffolk County Transit

S1 Amityville RR Halesite - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	AMITYVILLE RAILROAD STATIO	N	76	166	.	37	166	1,282	13	34	1	2	91.9	.
2	OAK ST/BROADWAY AVE	N	77	78	1	37	243	1,282	19					.
3	BROADWAY/STERLING PL	S	1040	54	2	37	295	1,282	23					.
4	BROADWAY/MILL ST	S	1039	27	4	37	318	1,282	25					.
5	BROADWAY/LOUDEN AVE	S	1038	34	6	37	346	1,282	27					.
6	Broadway (NYS110)/Washington	S	1037	17	6	37	357	1,282	28					.
7	BROADWAY/SMITH ST	S	1036	18	11	37	364	1,282	28					.
8	BROADWAY/BENTLEY RD	S	1035	22	3	37	383	1,282	30					.
9	BROADWAY/JEFFERSON AVE	S	1034	30	23	37	390	1,282	30					.
10	NYS Rte. 110/RITTER AVE	S	1033	41	27	37	404	1,282	32	26		11	70.3	.
11	BROADWAY/BREFNI ST	S	1032	25	17	37	412	1,282	32					.
12	BROAD HOLLOW RD/GREAT N	S	1031	27	12	37	427	1,282	33					.
13	NYS Rte. 110/ALLEN BLVD	S	1030	32	24	37	435	1,282	34	24		13	64.9	.
14	BROAD HOLLOW RD/EXECUTIV	S	1029	7	21	37	421	1,282	33					.
15	901 BROAD HOLLOW RD	N	1028	15	33	37	403	1,282	31					.
16	815 BROAD HOLLOW RD	N	1027	9	16	37	396	1,282	31					.
17	BROAD HOLLOW RD/CONKLIN	N	1026	38	38	37	396	1,282	31	24	1	12	64.9	.
18	BROAD HOLLOW RD/SHERWO	N	1025	11	18	37	389	1,282	30					.
19	BROAD HOLLOW RD/GAZZA BL	N	1024	27	36	37	380	1,282	30					.
20	BROAD HOLLOW RD/MILBAR B	N	1023	7	7	37	380	1,282	30					.
21	SUNY FARMINGDALE (HOTON	S	313	46	18	37	408	1,282	32	29		8	78.4	.
22	BROAD HOLLOW RD/SMITH ST	S	1022	49	12	37	445	1,282	35					.
23	BROAD HOLLOW RD/RULAND	S	1021	13	20	37	438	1,282	34					.
24	BROAD HOLLOW RD/SPAGNOL	S	1020	17	19	37	436	1,282	34					.
25	BROAD HOLLOW RD/WALT WHI	S	1019	11	13	37	434	1,282	34					.
26	BROAD HOLLOW RD/BAYLIS R	S	1018	9	20	37	423	1,282	33					.

This data is property of Suffolk County Transit

S1 Amityville RR Halesite - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced
							Load	Capacity	%	On	Early	Late	OT%	%
27	HUNTINGTON QUADRANGLE	S	1017	30	39	37	414	1,282	32	26	2	9	70.3	.
28	BROAD HOLLOW RD/MELVILLE	S	1016	16	11	37	419	1,282	33					.
29	BROAD HOLLOW RD/S SERVIC	S	1015	7	15	37	411	1,282	32					.
30	BROAD HOLLOW RD/N SERVIC	S	1014	12	22	37	401	1,282	31					.
31	BROAD HOLLOW RD/PINELAW	N	1013	20	16	37	405	1,282	32					.
32	BROAD HOLLOW RD/OLD COU	S	1012	9	14	37	400	1,282	31					.
33	MELLVILLE MALL/Walt Whitman	S	1011	27	41	37	386	1,282	30	19	5	13	51.4	.
34	WALT WHITMAN RD/DAVIS ST	S	1010	10	6	37	390	1,282	30					.
35	WALT WHITMAN RD/AMITYVILL	S	1009	10	8	37	392	1,282	31					.
36	WALT WHITMAN RD/LYONS ST	S	1008	9	7	37	394	1,282	31					.
37	WALT WHITMAN/SCHWAB RD	S	1007	3	14	37	383	1,282	30					.
38	350 WALT WHITMAN RD	N	1006	10	11	37	382	1,282	30					.
39	283 WALT WHITMAN RD	S	1005	4	3	37	383	1,282	30					.
40	WALT WHITMAN MALL	W	1004	204	107	37	480	1,282	37	31	6		83.8	.
41	WALT WHITMAN RD/DETROIT P	E	1003	5	10	37	475	1,282	37					.
42	WALT WHITMAN RD/BOSTON P	S	1002	15	4	37	486	1,282	38					.
43	NEW YORK AVE/E 20ST ST	S	1001	22	19	37	489	1,282	38					.
44	NEW YORK AVE/W 18TH ST	S	1000	12	29	37	472	1,282	37					.
45	NEW YORK AVE/W HILLS RD	S	999	4	17	37	459	1,282	36					.
46	NEW YORK AVE/W 12TH ST	S	998	13	27	37	445	1,282	35					.
47	NYS Rte. 110/W 11TH ST	S	997	34	59	37	420	1,282	33	32	1	4	86.5	.
48	NEW YORK AVE/W 9TH ST	S	996	35	58	37	397	1,282	31					.
49	NEW YORK AVE/DEPOT RD	S	995	30	53	37	374	1,282	29					.
50	HUNTINGTON RAILROAD STATI	S	994	55	79	37	350	1,282	27	33	2	2	89.2	.
51	NEW YORK AVE/LOWNDES AV	S	993	20	31	37	339	1,282	26					.
52	BIG H SHOPPING CENTER	S	992	27	83	37	283	1,282	22	27	8	2	73.0	.

This data is property of Suffolk County Transit

S1 Amityville RR Halesite - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
53	NEW YORK AVE/JACOBSON ST	N	991	3	21	37	265	1,282	21					.
54	NEW YORK AVE/GRANDVIEW S	S	990	.	19	37	246	1,282	19					.
55	NEW YORK AVE/HIGH ST	S	989	.	30	37	216	1,282	17					.
56	NYS Rte. 110/Main St	S	988	8	89	37	135	1,282	11	30	5	2	81.1	.
57	NEW YORK AVE/UNION PL	S	987	2	18	37	119	1,282	9					.
58	NEW YORK AVE/PRIME AVE	S	986	.	32	37	87	1,282	7					.
59	NEW YORK AVE/MILL LA	S	985	.	10	37	77	1,282	6					.
60	50 NEW YORK AVE	N	984	.	6	37	71	1,282	6					.
61	NEW YORK AVE/MILL DAM RD	S	983	.	4	37	67	1,282	5					.
62	NEW YORK AVE/KETEWOMOK	S	982	.	22	37	45	1,282	4					.
63	HALESITE FIRE DEPT.	S	981	.	45	37	0	1,282	.	28	7	2	75.7	.
All 63 Stops		Total		1,486	1,486					363	38	80	75.5	
		Average		27	24									.

This data is property of Suffolk County Transit

S1 Amityville RR Halesite - Northbound

All Valid Weekday Trips

Vehicle Trips	37	Boardings Per Mile	2.44	TP Ontime	363
Boardings	1,486	Boardings Per Hour	34.5	TP Early	38
Revenue Miles	609.6	Schedule Speed (MPH)	14.2	TP Late	80
Revenue Hours	43.1	Actual Speed (MPH)	14.3	Ontime (%)	75.5

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
154	5:40 am	10/9/07 Tue	2	25	25	17	16.5	1.2	1.52	21.4	15.2	14.1	46.2
155	6:00 am	10/8/07 Mon	4	46	46	25	16.5	1.1	2.79	42.5	15.2	15.2	84.6
156	6:15 am	10/9/07 Tue	6	41	41	16	16.5	1.2	2.49	35.1	15.2	14.1	30.8
157	6:30 am	10/9/07 Tue	8	26	26	15	16.5	1.2	1.58	22.3	15.0	14.1	61.5
158	6:45 am	10/9/07 Tue	10	58	58	23	16.5	1.2	3.52	49.7	14.1	14.1	100.0
159	7:00 am	10/9/07 Tue	12	32	32	14	16.5	1.2	1.94	27.4	15.2	14.1	53.8
160	7:15 am	10/9/07 Tue	14	51	51	25	16.5	1.2	3.10	43.7	14.1	14.1	61.5
161	7:30 am	10/9/07 Tue	16	27	27	9	16.5	1.2	1.64	23.1	15.0	14.1	46.2
162	7:45 am	10/9/07 Tue	18	51	51	37	16.5	1.2	3.10	43.7	15.7	14.1	30.8
163	8:15 am	10/9/07 Tue	20	82	82	29	16.5	1.2	4.98	70.3	13.2	14.1	76.9
164	8:45 am	10/9/07 Tue	22	67	67	29	16.5	1.2	4.07	57.4	12.8	14.1	23.1
165	9:15 am	10/9/07 Tue	24	40	40	23	16.5	1.2	2.43	34.3	14.1	14.1	100.0
166	9:45 am	10/9/07 Tue	26	36	36	13	16.5	1.2	2.18	30.9	14.1	14.1	100.0
167	10:15 am	10/9/07 Tue	28	51	51	20	16.5	1.2	3.10	43.7	15.7	14.1	61.5
168	10:45 am	10/9/07 Tue	30	27	27	10	16.5	1.2	1.64	23.1	15.2	14.1	53.8
2590	11:15 am	10/9/07 Tue	32	38	38	12	16.5	1.2	2.31	32.6	14.1	14.1	84.6
2472	11:45 am	10/9/07 Tue	32	45	45	16	16.5	1.2	2.73	38.6	14.1	14.1	92.3
2589	12:15 pm	10/9/07 Tue	34	24	24	12	16.5	1.2	1.46	20.6	14.1	14.1	92.3
2473	12:45 pm	10/9/07 Tue	36	32	32	15	16.5	1.2	1.94	27.4	14.5	14.1	84.6
2591	1:15 pm	10/9/07 Tue	40	37	37	16	16.5	1.2	2.25	31.7	15.0	14.1	46.2
2474	1:45 pm	10/9/07 Tue	40	35	35	18	16.5	1.2	2.12	30.0	14.1	14.1	61.5
2592	2:15 pm	10/9/07 Tue	44	45	45	17	16.5	1.2	2.73	38.6	14.1	14.1	100.0
2475	2:45 pm	10/9/07 Tue	44	69	69	33	16.5	1.2	4.19	59.1	14.1	14.1	100.0
2593	3:15 pm	10/10/07 Wed	48	37	37	18	16.5	1.2	2.25	31.7	14.1	14.1	100.0
2476	3:30 pm	10/9/07 Tue	48	23	23	15	16.5	1.2	1.40	19.7	14.1	14.1	92.3
2477	3:45 pm	10/9/07 Tue	50	42	42	28	16.5	1.2	2.55	36.0	14.1	14.1	92.3
2478	4:00 pm	10/9/07 Tue	52	49	49	23	16.5	1.2	2.97	42.0	12.7	14.1	15.4
2595	4:15 pm	10/9/07 Tue	56	36	36	23	16.5	1.2	2.18	30.9	13.2	14.1	100.0
2479	4:30 pm	10/9/07 Tue	56	44	44	22	16.5	1.2	2.67	37.7	14.1	14.1	84.6
2480	4:45 pm	10/9/07 Tue	58	42	42	25	16.5	1.2	2.55	36.0	14.1	14.1	100.0
2596	5:15 pm	10/9/07 Tue	62	54	54	29	16.5	1.2	3.28	46.3	14.1	14.1	100.0
2481	5:30 pm	10/10/07 Wed	62	28	28	15	16.5	1.2	1.70	24.0	13.2	14.1	84.6
2465	5:45 pm	10/10/07 Wed	64	18	18	9	16.5	1.2	1.09	15.4	14.1	14.1	100.0
2597	6:15 pm	10/9/07 Tue	68	58	58	45	16.5	1.2	3.52	49.7	13.5	14.1	76.9
2482	6:45 pm	10/9/07 Tue	68	21	21	14	16.5	1.2	1.27	18.0	13.4	14.1	84.6
2483	7:45 pm	10/10/07 Wed	70	26	26	6	16.5	1.2	1.58	22.3	14.1	14.1	100.0
2484	8:45 pm	10/10/07 Wed	72	23	23	12	16.5	1.2	1.40	19.7	14.3	14.1	69.2

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S1 Amityville RR Halesite - Northbound

All Valid Weekday Trips

Vehicle Trips	37	Boardings Per Mile	2.44	TP Ontime	363
Boardings	1,486	Boardings Per Hour	34.5	TP Early	38
Revenue Miles	609.6	Schedule Speed (MPH)	14.2	TP Late	80
Revenue Hours	43.1	Actual Speed (MPH)	14.3	Ontime (%)	75.5

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
	All 37 Trips		Total	1,486	1,486		609.6	43.1					
			Average	40	40	20	16.5	1.2	2.44	34.5			
			Minimum	18	18	6			1.09	15.4			
			Maximum	82	82	45			4.98	70.3			
			Standard Deviation	15	15	8			0.89	12.6			

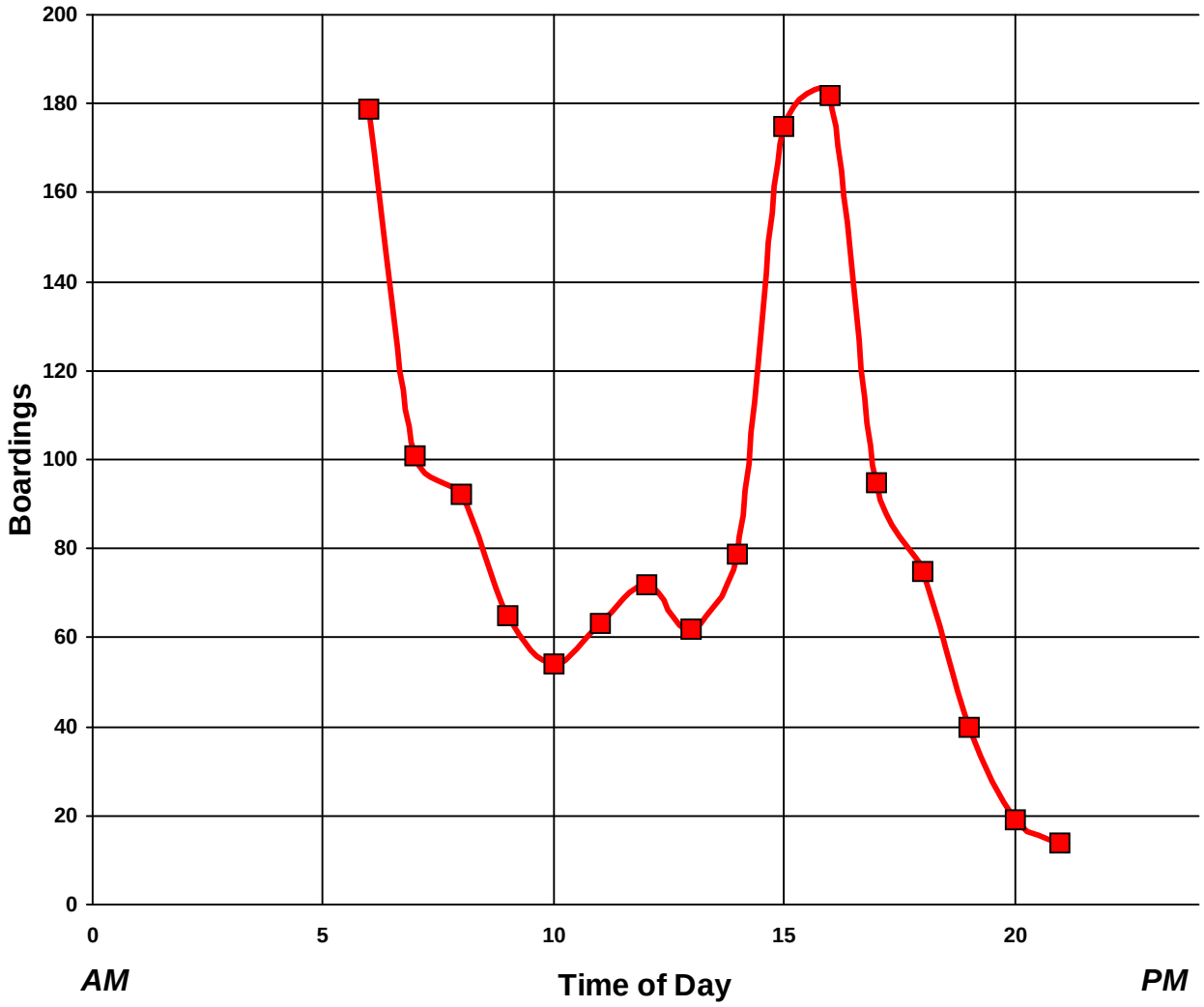
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S1 Amityville RR Halesite - Southbound

All Valid Weekday Trips

Vehicle Trips	39	Boardings Per Mile	2.23	TP Ontime	376
Boardings	1,367	Boardings Per Hour	33.3	TP Early	83
Revenue Miles	611.8	Schedule Speed (MPH)	15.1	TP Late	33
Revenue Hours	41.0	Actual Speed (MPH)	15.0	Ontime (%)	76.4

Boardings



This data is property of Suffolk County Transit

S1 Amityville RR Halesite - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced
							Load	Capacity	%	On	Early	Late	OT%	%
1	HALESITE FIRE DEPT.	S	981	8	.	38	8	1,318	1	37		1	97.4	.
1	NYS Rte. 110/RITTER AVE	S	1033	5	.	1	5	36	14	1			100.0	.
2	NEW YORK AVE/KETEWOMOK	S	982	25	.	38	33	1,318	3					.
2	BROADWAY/JEFFERSON AVE	S	1034	.	.	1	5	36	14					.
3	NEW YORK AVE/MILL DAM RD	S	983	15	.	38	48	1,318	4					.
3	BROADWAY/BENTLEY RD	S	1035	.	1	1	4	36	11					.
4	NEW YORK AVE/MILL LA	S	985	26	.	38	74	1,318	6					.
4	BROADWAY/SMITH ST	S	1036	.	2	1	2	36	6					.
5	NEW YORK AVE/PRIME AVE	S	986	41	.	38	115	1,318	9					.
5	Broadway (NYS110)/Washington	S	1037	.	.	1	2	36	6					.
6	NEW YORK AVE/UNION PL	S	987	16	1	38	130	1,318	10					.
6	BROADWAY/LOUDEN AVE	S	1038	.	1	1	1	36	3					.
7	NYS Rte. 110/Main St	S	988	73	2	38	201	1,318	15	31	3	4	81.6	.
7	BROADWAY/MILL ST	S	1039	.	.	1	1	36	3					.
8	NEW YORK AVE/HIGH ST	S	989	53	3	38	251	1,318	19					.
8	BROADWAY/STERLING PL	S	1040	.	.	1	1	36	3					.
9	OAK ST/BROADWAY AVE	N	77	.	.	1	1	36	3					.
9	NEW YORK AVE/GRANDVIEW S	S	990	4	2	38	253	1,318	19					.
10	AMITYVILLE RAILROAD STATIO	N	76	.	1	1	0	36	.	1			100.0	.
10	BIG H SHOPPING CENTER	S	992	58	25	38	286	1,318	22	28	2	4	82.4	.
11	NEW YORK AVE/LOWNDES AV	S	993	35	9	38	312	1,318	24					.
12	HUNTINGTON RAILROAD STATI	S	994	96	46	38	362	1,318	27	26	9	3	68.4	.
13	NEW YORK AVE/DEPOT RD	S	995	54	23	38	393	1,318	30					.
14	NEW YORK AVE/W 9TH ST	S	996	72	28	38	437	1,318	33					.
15	NYS Rte. 110/W 11TH ST	S	997	67	25	38	479	1,318	36	25	11	2	65.8	.
16	NEW YORK AVE/W 12TH ST	S	998	24	19	38	484	1,318	37					.

This data is property of Suffolk County Transit

S1 Amityville RR Halesite - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
17	NEW YORK AVE/W HILLS RD	S	999	32	16	38	500	1,318	38					.
18	NEW YORK AVE/W 18TH ST	S	1000	7	18	38	489	1,318	37					.
19	NEW YORK AVE/E 20ST ST	S	1001	12	17	38	484	1,318	37					.
20	WALT WHITMAN RD/BOSTON P	S	1002	6	11	38	479	1,318	36					.
21	WALT WHITMAN RD/DETROIT P	E	1003	2	3	38	478	1,318	36					.
22	WALT WHITMAN MALL	W	1004	158	208	38	428	1,318	32	32	5	1	84.2	.
23	283 WALT WHITMAN RD	S	1005	3	6	38	425	1,318	32					.
24	WALT WHITMAN/SCHWAB RD	S	1007	1	6	38	420	1,318	32					.
25	WALT WHITMAN RD/AMITYVILL	S	1009	1	5	38	416	1,318	32					.
26	WALT WHITMAN RD/LYONS ST	S	1008	6	8	38	414	1,318	31					.
27	WALT WHITMAN RD/DAVIS ST	S	1010	3	13	38	404	1,318	31					.
28	MELLVILLE MALL/Walt Whitman	S	1011	16	28	38	392	1,318	30	32	5	1	84.2	.
29	BROAD HOLLOW RD/OLD COU	S	1012	11	19	38	384	1,318	29					.
31	BROAD HOLLOW RD/PINELAW	N	1013	24	27	38	381	1,318	29					.
32	BROAD HOLLOW RD/N SERVIC	S	1014	25	12	38	394	1,318	30					.
33	BROAD HOLLOW RD/S SERVIC	S	1015	12	8	38	398	1,318	30					.
34	BROAD HOLLOW RD/MELVILLE	S	1016	16	10	38	404	1,318	31					.
35	HUNTINGTON QUADRANGLE	S	1017	45	24	38	425	1,318	32	30	6	2	78.9	.
36	BROAD HOLLOW RD/BAYLIS R	S	1018	20	10	38	435	1,318	33					.
37	BROAD HOLLOW RD/WALT WHI	S	1019	20	10	38	445	1,318	34					.
38	BROAD HOLLOW RD/SPAGNOL	S	1020	12	13	38	444	1,318	34					.
39	BROAD HOLLOW RD/RULAND	S	1021	4	2	38	446	1,318	34					.
40	SUNY FARMINGDALE (HOTON	S	313	27	41	38	432	1,318	33	28	8	2	73.7	.
41	BROAD HOLLOW RD/SMITH ST	S	1022	17	36	38	413	1,318	31					.
42	BROAD HOLLOW RD/GAZZA BL	N	1024	13	31	38	395	1,318	30					.
43	BROAD HOLLOW RD/SHERWO	N	1025	7	7	38	395	1,318	30					.

This data is property of Suffolk County Transit

S1 Amityville RR Halesite - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
44	1600 BROAD HOLLOW RD	S	1312	7	11	38	391	1,318	30					.
45	BROAD HOLLOW RD/CONKLIN	N	1026	42	51	38	382	1,318	29	27	8	3	71.1	.
46	815 BROAD HOLLOW RD	N	1027	25	11	38	396	1,318	30					.
47	901 BROAD HOLLOW RD	N	1028	10	28	38	378	1,318	29					.
48	BROAD HOLLOW RD/EXECUTIV	S	1029	9	14	37	369	1,284	29					.
48	1600 BROAD HOLLOW RD	S	1312	.	.	1	4	34	12					.
49	NYS Rte. 110/ALLEN BLVD	S	1030	14	28	38	359	1,318	27	27	9	2	71.1	.
50	BROAD HOLLOW RD/GREAT N	S	1031	6	11	38	354	1,318	27					.
51	BROADWAY/BREFNI ST	S	1032	10	25	38	339	1,318	26					.
52	NYS Rte. 110/RITTER AVE	S	1033	28	44	38	323	1,318	25	27	8	3	71.1	.
53	BROADWAY/JEFFERSON AVE	S	1034	19	37	38	305	1,318	23					.
54	BROADWAY/BENTLEY RD	S	1035	12	11	38	306	1,318	23					.
55	BROADWAY/SMITH ST	S	1036	6	20	38	292	1,318	22					.
56	Broadway (NYS110)/Washington	S	1037	1	26	38	267	1,318	20					.
57	BROADWAY/LOUDEN AVE	S	1038	1	42	38	226	1,318	17					.
58	BROADWAY/MILL ST	S	1039	3	19	38	210	1,318	16					.
59	BROADWAY/STERLING PL	S	1040	1	28	38	183	1,318	14					.
60	OAK ST/BROADWAY AVE	N	77	1	35	38	149	1,318	11					.
61	AMITYVILLE RAILROAD STATIO	N	76	.	149	38	0	1,318	.	24	9	5	63.2	.
	All 71 Stops	Total		1,367	1,367					376	83	33	76.4	
		Average		23	23									.

This data is property of Suffolk County Transit

S1 Amityville RR Halesite - Southbound

All Valid Weekday Trips

Vehicle Trips	39	Boardings Per Mile	2.23	TP Ontime	376
Boardings	1,367	Boardings Per Hour	33.3	TP Early	83
Revenue Miles	611.8	Schedule Speed (MPH)	15.1	TP Late	33
Revenue Hours	41.0	Actual Speed (MPH)	15.0	Ontime (%)	76.4

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
169	6:00 am	10/9/07 Tue	1	68	68	50	16.0	1.0	4.25	68.0	16.3	16.0	58.3
170	6:30 am	10/9/07 Tue	3	51	51	24	16.0	1.0	3.19	51.0	14.8	16.0	91.7
171	6:30 am	10/9/07 Tue	5	5	5	5	1.7	0.1	2.90	60.0	20.7	20.7	100.0
172	6:50 am	10/9/07 Tue	5	55	55	42	16.0	1.1	3.44	50.8	16.0	14.8	41.7
173	7:15 am	10/8/07 Mon	7	41	41	22	16.0	1.0	2.56	41.0	13.9	16.0	91.7
174	7:30 am	10/9/07 Tue	9	40	40	24	16.0	1.1	2.50	36.9	14.3	14.8	84.6
175	7:45 am	10/9/07 Tue	11	20	20	11	16.0	1.1	1.25	18.5	14.8	14.8	92.3
176	8:00 am	10/9/07 Tue	13	50	50	28	16.0	1.1	3.12	46.2	14.8	14.8	100.0
177	8:15 am	10/9/07 Tue	15	7	7	2	16.0	1.1	0.44	6.5	14.8	14.8	38.5
178	8:30 am	10/9/07 Tue	17	35	35	19	16.0	1.1	2.19	32.3	14.8	14.8	61.5
179	9:00 am	10/9/07 Tue	19	28	28	13	16.0	1.1	1.75	25.8	15.5	14.8	53.8
180	9:30 am	10/9/07 Tue	21	37	37	18	16.0	1.1	2.31	34.2	15.7	14.8	53.8
181	10:00 am	10/9/07 Tue	23	30	30	15	17.8	1.1	1.68	27.7	17.0	16.5	76.9
182	10:30 am	10/9/07 Tue	25	24	24	14	16.0	1.1	1.50	22.2	14.8	14.8	100.0
183	11:00 am	10/9/07 Tue	27	22	22	9	16.0	1.1	1.37	20.3	14.8	14.8	100.0
184	11:30 am	10/9/07 Tue	29	41	41	20	16.0	1.1	2.56	37.8	14.8	14.8	92.3
2448	12:00 pm	10/9/07 Tue	31	49	49	29	16.0	1.1	3.06	45.2	12.0	14.8	7.7
2449	12:30 pm	10/9/07 Tue	33	23	23	9	16.0	1.1	1.44	21.2	14.1	14.8	84.6
2450	1:00 pm	10/9/07 Tue	35	40	40	19	16.0	1.1	2.50	36.9	14.8	14.8	76.9
2451	1:30 pm	10/9/07 Tue	37	22	22	8	16.0	1.1	1.37	20.3	14.8	14.8	100.0
2452	2:00 pm	10/9/07 Tue	39	51	51	21	16.0	1.1	3.19	47.1	14.6	14.8	92.3
2453	2:30 pm	10/9/07 Tue	41	28	28	12	16.0	1.1	1.75	25.8	16.0	14.8	46.2
2454	3:00 pm	10/9/07 Tue	43	60	60	24	16.0	1.1	3.75	55.4	13.3	14.8	76.9
2455	3:15 pm	10/9/07 Tue	45	42	42	18	16.0	1.1	2.62	38.8	13.7	14.8	100.0
2456	3:30 pm	10/9/07 Tue	47	40	40	18	16.0	1.1	2.50	36.9	14.8	14.8	100.0
2457	3:45 pm	10/10/07 Wed	49	33	33	15	16.0	1.1	2.06	30.5	14.8	14.8	38.5
2458	4:00 pm	10/9/07 Tue	51	41	41	21	16.0	1.1	2.56	37.8	14.8	14.8	100.0
2459	4:15 pm	10/10/07 Wed	53	61	61	25	16.0	1.1	3.81	56.3	12.0	14.8	46.2
2460	4:30 pm	10/10/07 Wed	55	48	48	25	16.0	1.1	3.00	44.3	13.5	14.8	69.2
2461	4:45 pm	10/9/07 Tue	57	32	32	14	16.0	1.1	2.00	29.5	14.8	14.8	84.6
2462	5:00 pm	10/9/07 Tue	59	44	44	18	16.0	1.1	2.75	40.6	14.1	14.8	100.0
2463	5:15 pm	10/9/07 Tue	61	20	20	9	16.0	1.1	1.25	18.5	16.9	14.8	38.5
2464	5:30 pm	10/9/07 Tue	63	31	31	18	16.0	1.1	1.94	28.6	15.2	14.8	100.0
2466	6:00 pm	10/9/07 Tue	65	39	39	15	16.0	1.1	2.44	36.0	14.8	14.8	100.0
2467	6:30 pm	10/9/07 Tue	67	36	36	18	16.0	1.1	2.25	33.2	14.8	14.8	100.0
2468	7:00 pm	10/10/07 Wed	69	17	17	8	16.0	1.1	1.06	15.7	16.0	14.8	76.9
2469	7:30 pm	10/9/07 Tue	71	23	23	15	16.0	1.1	1.44	21.2	15.2	14.8	100.0

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S1 Amityville RR Halesite - Southbound

All Valid Weekday Trips

Vehicle Trips	39	Boardings Per Mile	2.23	TP Ontime	376
Boardings	1,367	Boardings Per Hour	33.3	TP Early	83
Revenue Miles	611.8	Schedule Speed (MPH)	15.1	TP Late	33
Revenue Hours	41.0	Actual Speed (MPH)	15.0	Ontime (%)	76.4

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
2470	8:00 pm	10/9/07 Tue	73	19	19	11	16.0	1.1	1.19	17.5	15.2	14.8	38.5
2471	9:00 pm	10/10/07 Wed	75	14	14	9	16.0	1.1	0.87	12.9	15.2	14.8	84.6
	All 39 Trips		Total	1,367	1,367		611.8	41.0					
			Average	35	35	18	15.7	1.1	2.25	34.1			
			Minimum	5	5	2			0.44	6.5			
			Maximum	68	68	50			4.25	68.0			
			Standard Deviation	15	15	9			0.88	14.0			

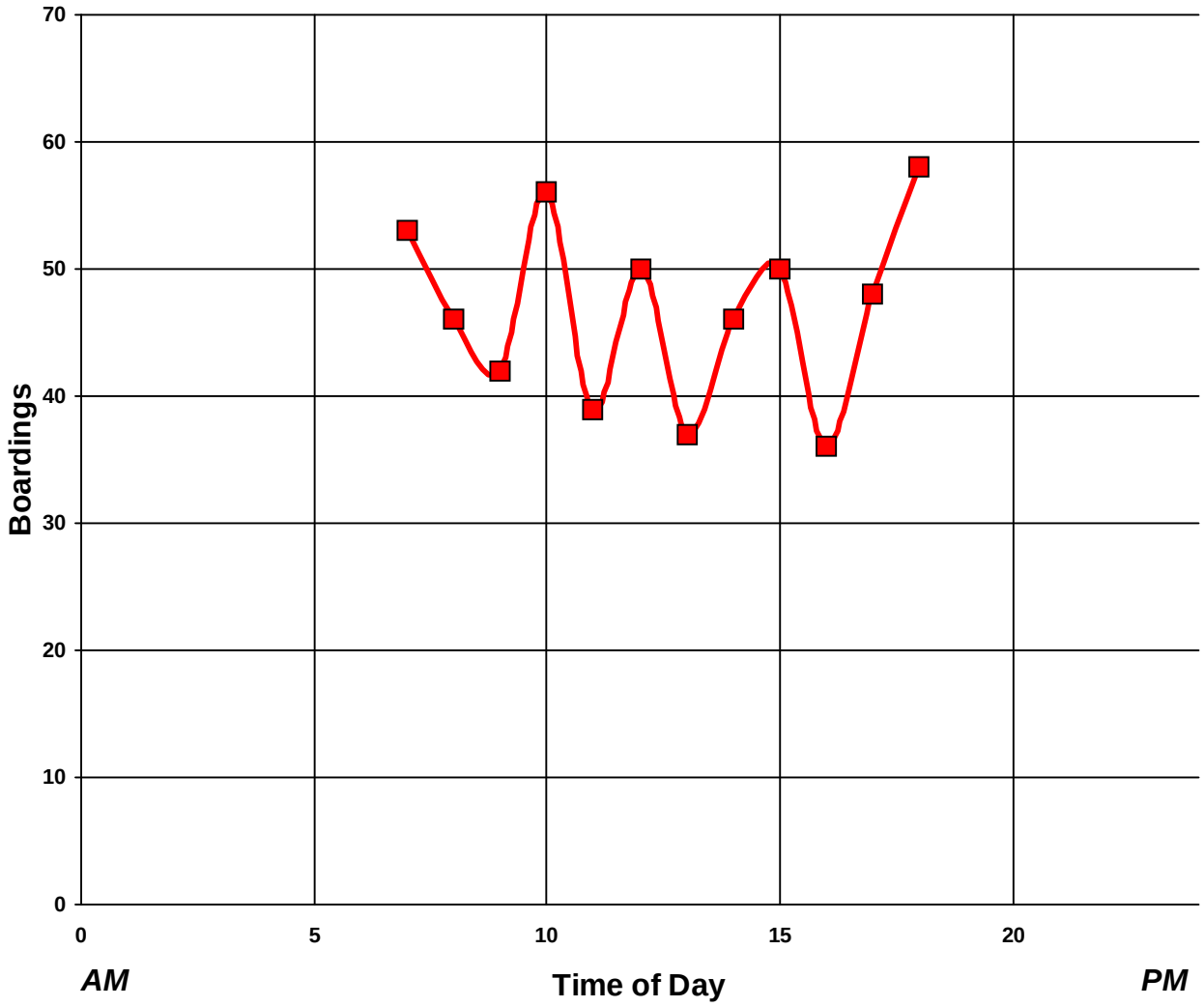
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S1 Amityville RR Halesite - Northbound

All Valid Saturday Trips

Vehicle Trips	12	Boardings Per Mile	2.84	TP Ontime	136
Boardings	561	Boardings Per Hour	40.1	TP Early	6
Revenue Miles	197.7	Schedule Speed (MPH)	14.1	TP Late	14
Revenue Hours	14.0	Actual Speed (MPH)	14.3	Ontime (%)	87.2

Boardings



This data is property of Suffolk County Transit

S1 Amityville RR Halesite - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	AMITYVILLE RAILROAD STATIO	N	76	31	.	12	31	410	8	11		1	91.7	.
2	OAK ST/BROADWAY AVE	N	77	22	1	12	52	410	13					.
3	BROADWAY/STERLING PL	S	1040	27	.	12	79	410	19					.
4	BROADWAY/MILL ST	S	1039	3	1	12	81	410	20					.
5	BROADWAY/LOUDEN AVE	S	1038	8	8	12	81	410	20					.
6	Broadway (NYS110)/Washington	S	1037	9	5	12	85	410	21					.
7	BROADWAY/SMITH ST	S	1036	5	3	12	87	410	21					.
8	BROADWAY/BENTLEY RD	S	1035	12	2	12	97	410	24					.
9	BROADWAY/JEFFERSON AVE	S	1034	10	14	12	93	410	23					.
10	NYS Rte. 110/RITTER AVE	S	1033	19	8	12	104	410	25	10		2	83.3	.
11	BROADWAY/BREFNI ST	S	1032	12	6	12	110	410	27					.
12	BROAD HOLLOW RD/GREAT N	S	1031	4	6	12	108	410	26					.
13	NYS Rte. 110/ALLEN BLVD	S	1030	9	1	12	116	410	28	10		2	83.3	.
14	BROAD HOLLOW RD/EXECUTIV	S	1029	3	2	12	117	410	29					.
15	901 BROAD HOLLOW RD	N	1028	3	11	12	109	410	27					.
16	815 BROAD HOLLOW RD	N	1027	4	5	12	108	410	26					.
17	BROAD HOLLOW RD/CONKLIN	N	1026	8	9	12	107	410	26	10		2	83.3	.
18	BROAD HOLLOW RD/SHERWO	N	1025	2	7	12	102	410	25					.
19	BROAD HOLLOW RD/GAZZA BL	N	1024	4	4	12	102	410	25					.
20	BROAD HOLLOW RD/MILBAR B	N	1023	5	7	12	100	410	24					.
21	SUNY FARMINGDALE (HOTON	S	313	20	3	12	117	410	29	11		1	91.7	.
22	BROAD HOLLOW RD/SMITH ST	S	1022	7	4	12	120	410	29					.
23	BROAD HOLLOW RD/RULAND	S	1021	.	2	12	118	410	29					.
24	BROAD HOLLOW RD/SPAGNOL	S	1020	5	4	12	119	410	29					.
25	BROAD HOLLOW RD/WALT WHI	S	1019	.	1	12	118	410	29					.
26	BROAD HOLLOW RD/BAYLIS R	S	1018	8	1	12	125	410	30					.

This data is property of Suffolk County Transit

S1 Amityville RR Halesite - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	HUNTINGTON QUADRANGLE	S	1017	15	9	12	131	410	32	10		2	83.3	.
28	BROAD HOLLOW RD/MELVILLE	S	1016	9	8	12	132	410	32					.
29	BROAD HOLLOW RD/S SERVIC	S	1015	1	6	12	127	410	31					.
30	BROAD HOLLOW RD/N SERVIC	S	1014	11	3	12	135	410	33					.
31	BROAD HOLLOW RD/PINELAW	N	1013	5	4	12	136	410	33					.
32	BROAD HOLLOW RD/OLD COU	S	1012	.	5	12	131	410	32					.
33	MELLVILLE MALL/Walt Whitman	S	1011	18	7	12	142	410	35	10		2	83.3	.
34	WALT WHITMAN RD/DAVIS ST	S	1010	5	3	12	144	410	35					.
35	WALT WHITMAN RD/AMITYVILL	S	1009	.	2	12	142	410	35					.
36	WALT WHITMAN RD/LYONS ST	S	1008	.	1	12	141	410	34					.
37	WALT WHITMAN/SCHWAB RD	S	1007	1	2	12	140	410	34					.
38	350 WALT WHITMAN RD	N	1006	2	2	12	140	410	34					.
39	283 WALT WHITMAN RD	S	1005	.	1	12	139	410	34					.
40	WALT WHITMAN MALL	W	1004	103	45	12	197	410	48	10	2		83.3	.
41	WALT WHITMAN RD/DETROIT P	E	1003	.	4	12	193	410	47					.
42	WALT WHITMAN RD/BOSTON P	S	1002	5	4	12	194	410	47					.
43	NEW YORK AVE/E 20ST ST	S	1001	7	8	12	193	410	47					.
44	NEW YORK AVE/W 18TH ST	S	1000	7	14	12	186	410	45					.
45	NEW YORK AVE/W HILLS RD	S	999	9	15	12	180	410	44					.
46	NEW YORK AVE/W 12TH ST	S	998	7	17	12	170	410	41					.
47	NYS Rte. 110/W 11TH ST	S	997	11	22	12	159	410	39	11		1	91.7	.
48	NEW YORK AVE/W 9TH ST	S	996	29	19	12	169	410	41					.
49	NEW YORK AVE/DEPOT RD	S	995	24	20	12	173	410	42					.
50	HUNTINGTON RAILROAD STATI	S	994	16	43	12	146	410	36	10	1	1	83.3	.
51	NEW YORK AVE/LOWNDES AV	S	993	10	16	12	140	410	34					.
52	BIG H SHOPPING CENTER	S	992	10	43	12	107	410	26	11	1		91.7	.

This data is property of Suffolk County Transit

S1 Amityville RR Halesite - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
53	NEW YORK AVE/JACOBSON ST	N	991	5	1	12	111	410	27					.
54	NEW YORK AVE/GRANDVIEW S	S	990	1	12	12	100	410	24					.
55	NEW YORK AVE/HIGH ST	S	989	3	21	12	82	410	20					.
56	NYS Rte. 110/Main St	S	988	2	33	12	51	410	12	11	1		91.7	.
57	NEW YORK AVE/UNION PL	S	987	1	4	12	48	410	12					.
58	NEW YORK AVE/PRIME AVE	S	986	.	10	12	38	410	9					.
59	NEW YORK AVE/MILL LA	S	985	2	3	12	37	410	9					.
60	50 NEW YORK AVE	N	984	.	1	12	36	410	9					.
61	NEW YORK AVE/MILL DAM RD	S	983	.	.	12	36	410	9					.
62	NEW YORK AVE/KETEWOMOK	S	982	2	5	12	33	410	8					.
63	HALESITE FIRE DEPT.	S	981	.	33	12	0	410	.	11	1		91.7	.
All 63 Stops		Total		561	561					136	6	14	87.2	
		Average		11	9									.

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S1 Amityville RR Halesite - Northbound

All Valid Saturday Trips

Vehicle Trips	12	Boardings Per Mile	2.84	TP Ontime	136
Boardings	561	Boardings Per Hour	40.1	TP Early	6
Revenue Miles	197.7	Schedule Speed (MPH)	14.1	TP Late	14
Revenue Hours	14.0	Actual Speed (MPH)	14.3	Ontime (%)	87.2

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1586	7:15 am	11/3/07 Sat	2	53	53	26	16.5	1.2	3.22	45.4	14.1	14.1	100.0
1587	8:15 am	11/10/07 Sat	4	46	46	19	16.5	1.2	2.79	39.4	15.2	14.1	61.5
1588	9:15 am	11/3/07 Sat	6	42	42	12	16.5	1.2	2.55	36.0	14.3	14.1	100.0
1589	10:15 am	11/3/07 Sat	8	56	56	21	16.5	1.2	3.40	48.0	14.5	14.1	100.0
1590	11:15 am	11/10/07 Sat	10	39	39	12	16.5	1.2	2.37	33.4	13.9	14.1	92.3
1591	12:15 pm	11/3/07 Sat	12	50	50	26	16.5	1.2	3.03	42.9	14.1	14.1	100.0
1592	1:15 pm	11/3/07 Sat	14	37	37	16	16.5	1.2	2.25	31.7	15.0	14.1	46.2
1593	2:15 pm	11/10/07 Sat	16	46	46	17	16.5	1.2	2.79	39.4	14.1	14.1	100.0
1594	3:15 pm	11/3/07 Sat	18	50	50	30	16.5	1.2	3.03	42.9	14.1	14.1	100.0
1595	4:15 pm	11/3/07 Sat	20	36	36	23	16.5	1.2	2.18	30.9	13.2	14.1	100.0
1596	5:15 pm	11/10/07 Sat	22	48	48	25	16.5	1.2	2.91	41.1	14.1	14.1	100.0
1597	6:15 pm	11/3/07 Sat	24	58	58	39	16.5	1.2	3.52	49.7	14.3	14.1	46.2
All 12 Trips			Total	561	561		197.7	14.0					
			Average	47	47	22	16.5	1.2	2.84	40.1			
			Minimum	36	36	12			2.18	30.9			
			Maximum	58	58	39			3.52	49.7			
			Standard Deviation	7	7	8			0.44	6.2			

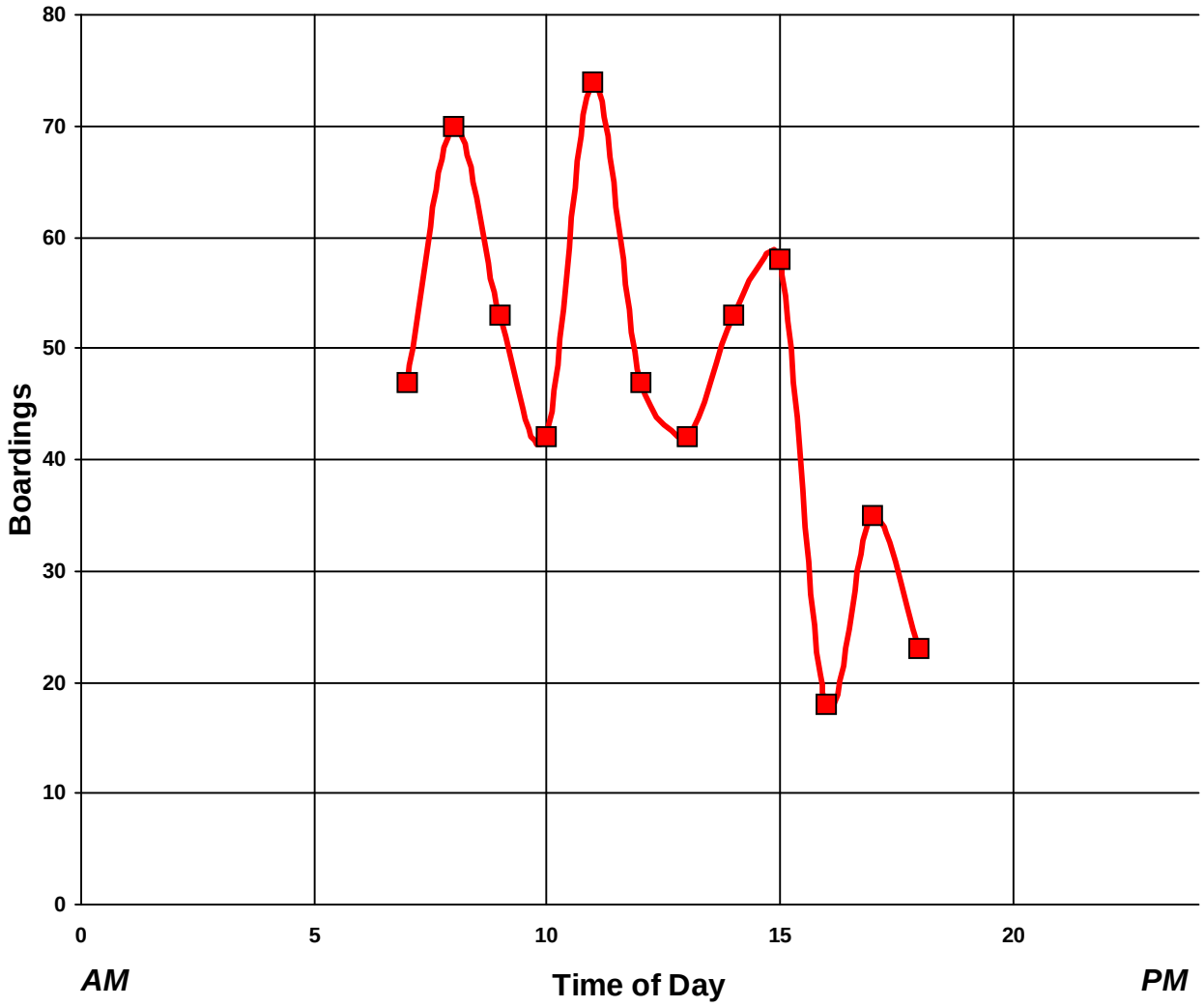
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S1 Amityville RR Halesite - Southbound

All Valid Saturday Trips

Vehicle Trips	12	Boardings Per Mile	2.96	TP Ontime	115
Boardings	562	Boardings Per Hour	37.5	TP Early	26
Revenue Miles	190.0	Schedule Speed (MPH)	12.7	TP Late	15
Revenue Hours	15.0	Actual Speed (MPH)	12.9	Ontime (%)	73.7

Boardings



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S1 Amityville RR Halesite - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	HALESITE FIRE DEPT.	S	981	11	.	12	11	408	3	10	1	1	83.3	.
2	NEW YORK AVE/KETEWOMOK	S	982	3	3	12	11	408	3					.
3	NEW YORK AVE/MILL DAM RD	S	983	4	.	12	15	408	4					.
4	NEW YORK AVE/MILL LA	S	985	6	.	12	21	408	5					.
5	NEW YORK AVE/PRIME AVE	S	986	13	6	12	28	408	7					.
6	NEW YORK AVE/UNION PL	S	987	17	3	12	42	408	10					.
7	NYS Rte. 110/Main St	S	988	29	5	12	66	408	16	9	1	2	75.0	.
8	NEW YORK AVE/HIGH ST	S	989	6	8	12	64	408	16					.
9	NEW YORK AVE/GRANDVIEW S	S	990	1	1	12	64	408	16					.
10	BIG H SHOPPING CENTER	S	992	60	12	12	112	408	27	10		2	83.3	.
11	NEW YORK AVE/LOWNDES AV	S	993	23	12	12	123	408	30					.
12	HUNTINGTON RAILROAD STATI	S	994	31	14	12	140	408	34	10		2	83.3	.
13	NEW YORK AVE/DEPOT RD	S	995	33	7	12	166	408	41					.
14	NEW YORK AVE/W 9TH ST	S	996	40	10	12	196	408	48					.
15	NYS Rte. 110/W 11TH ST	S	997	27	9	12	214	408	52	11		1	91.7	.
16	NEW YORK AVE/W 12TH ST	S	998	11	14	12	211	408	52					.
17	NEW YORK AVE/W HILLS RD	S	999	6	11	12	206	408	50					.
18	NEW YORK AVE/W 18TH ST	S	1000	6	6	12	206	408	50					.
19	NEW YORK AVE/E 20ST ST	S	1001	12	6	12	212	408	52					.
20	WALT WHITMAN RD/BOSTON P	S	1002	1	7	12	206	408	50					.
21	WALT WHITMAN RD/DETROIT P	E	1003	3	3	12	206	408	50					.
22	WALT WHITMAN MALL	W	1004	62	78	12	190	408	47	11		1	91.7	.
23	283 WALT WHITMAN RD	S	1005	.	8	12	182	408	45					.
24	WALT WHITMAN/SCHWAB RD	S	1007	2	4	12	180	408	44					.
25	WALT WHITMAN RD/AMITYVILL	S	1009	1	1	12	180	408	44					.
26	WALT WHITMAN RD/LYONS ST	S	1008	2	3	12	179	408	44					.

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S1 Amityville RR Halesite - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	WALT WHITMAN RD/DAVIS ST	S	1010	.	2	12	177	408	43					.
28	MELLVILLE MALL/Walt Whitman	S	1011	4	36	12	145	408	36	8	3	1	66.7	.
29	BROAD HOLLOW RD/OLD COU	S	1012	3	5	12	143	408	35					.
31	BROAD HOLLOW RD/N SERVIC	S	1014	4	1	12	146	408	36					.
32	BROAD HOLLOW RD/S SERVIC	S	1015	1	1	12	146	408	36					.
33	BROAD HOLLOW RD/MELVILLE	S	1016	7	3	12	150	408	37					.
34	HUNTINGTON QUADRANGLE	S	1017	2	7	12	145	408	36	7	4	1	58.3	.
35	BROAD HOLLOW RD/BAYLIS R	S	1018	4	8	12	141	408	35					.
36	BROAD HOLLOW RD/WALT WHI	S	1019	3	.	12	144	408	35					.
37	BROAD HOLLOW RD/SPAGNOL	S	1020	.	3	12	141	408	35					.
38	BROAD HOLLOW RD/RULAND	S	1021	1	3	12	139	408	34					.
39	SUNY FARMINGDALE (HOTON	S	313	5	6	12	138	408	34	7	4	1	58.3	.
40	BROAD HOLLOW RD/SMITH ST	S	1022	10	9	12	139	408	34					.
41	BROAD HOLLOW RD/GAZZA BL	N	1024	3	8	12	134	408	33					.
42	BROAD HOLLOW RD/SHERWO	N	1025	3	.	12	137	408	34					.
43	1600 BROAD HOLLOW RD	S	1312	.	4	12	133	408	33					.
44	BROAD HOLLOW RD/CONKLIN	N	1026	15	23	12	125	408	31	8	3	1	66.7	.
45	815 BROAD HOLLOW RD	N	1027	2	.	12	127	408	31					.
46	901 BROAD HOLLOW RD	N	1028	9	13	12	123	408	30					.
47	BROAD HOLLOW RD/EXECUTIV	S	1029	4	4	12	123	408	30					.
48	NYS Rte. 110/ALLEN BLVD	S	1030	5	18	12	110	408	27	7	4	1	58.3	.
49	BROAD HOLLOW RD/GREAT N	S	1031	11	3	12	118	408	29					.
50	BROADWAY/BREFNI ST	S	1032	5	4	12	119	408	29					.
51	NYS Rte. 110/RITTER AVE	S	1033	20	17	12	122	408	30	9	3		75.0	.
52	BROADWAY/JEFFERSON AVE	S	1034	11	11	12	122	408	30					.
53	BROADWAY/BENTLEY RD	S	1035	5	6	12	121	408	30					.

This data is property of Suffolk County Transit

S1 Amityville RR Halesite - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
54	BROADWAY/SMITH ST	S	1036	4	4	12	121	408	30					.
55	Broadway (NYS110)/Washington	S	1037	6	1	12	126	408	31					.
56	BROADWAY/LOUDEN AVE	S	1038	5	14	12	117	408	29					.
57	BROADWAY/MILL ST	S	1039	.	10	12	107	408	26					.
58	BROADWAY/STERLING PL	S	1040	.	18	12	89	408	22					.
59	OAK ST/BROADWAY AVE	N	77	.	13	12	76	408	19					.
60	AMITYVILLE RAILROAD STATIO	N	76	.	76	12	0	408	.	8	3	1	66.7	.
All 59 Stops		Total		562	562					115	26	15	73.7	
		Average		11	11									.

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S1 Amityville RR Halesite - Southbound

All Valid Saturday Trips

Vehicle Trips	12	Boardings Per Mile	2.96	TP Ontime	115
Boardings	562	Boardings Per Hour	37.5	TP Early	26
Revenue Miles	190.0	Schedule Speed (MPH)	12.7	TP Late	15
Revenue Hours	15.0	Actual Speed (MPH)	12.9	Ontime (%)	73.7

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1598	7:30 am	11/3/07 Sat	1	47	47	35	15.8	1.3	2.97	37.6	11.9	12.7	76.9
1599	8:30 am	11/3/07 Sat	3	70	70	33	15.8	1.3	4.42	56.0	12.7	12.7	100.0
1600	9:30 am	11/10/07 Sat	5	53	53	37	15.8	1.3	3.35	42.4	13.8	12.7	46.2
1601	10:30 am	11/3/07 Sat	7	42	42	32	15.8	1.3	2.65	33.6	12.7	12.7	92.3
1602	11:30 am	11/3/07 Sat	9	74	74	24	15.8	1.3	4.67	59.2	12.7	12.7	100.0
1603	12:30 pm	11/10/07 Sat	11	47	47	17	15.8	1.3	2.97	37.6	13.2	12.7	46.2
1604	1:30 pm	11/3/07 Sat	13	42	42	25	15.8	1.3	2.65	33.6	12.7	12.7	100.0
1605	2:30 pm	11/3/07 Sat	15	53	53	15	15.8	1.3	3.35	42.4	12.0	12.7	100.0
1606	3:30 pm	11/10/07 Sat	17	58	58	28	15.8	1.3	3.66	46.4	12.8	12.7	7.7
1607	4:30 pm	11/3/07 Sat	19	18	18	8	15.8	1.3	1.14	14.4	12.7	12.7	100.0
1608	5:30 pm	11/3/07 Sat	21	35	35	14	15.8	1.3	2.21	28.0	12.3	12.7	92.3
1609	6:30 pm	11/10/07 Sat	23	23	23	13	15.8	1.3	1.45	18.4	15.3	12.7	23.1
All 12 Trips			Total	562	562		190.0	15.0					
			Average	47	47	23	15.8	1.3	2.96	37.5			
			Minimum	18	18	8			1.14	14.4			
			Maximum	74	74	37			4.67	59.2			
			Standard Deviation	17	17	10			1.05	13.3			

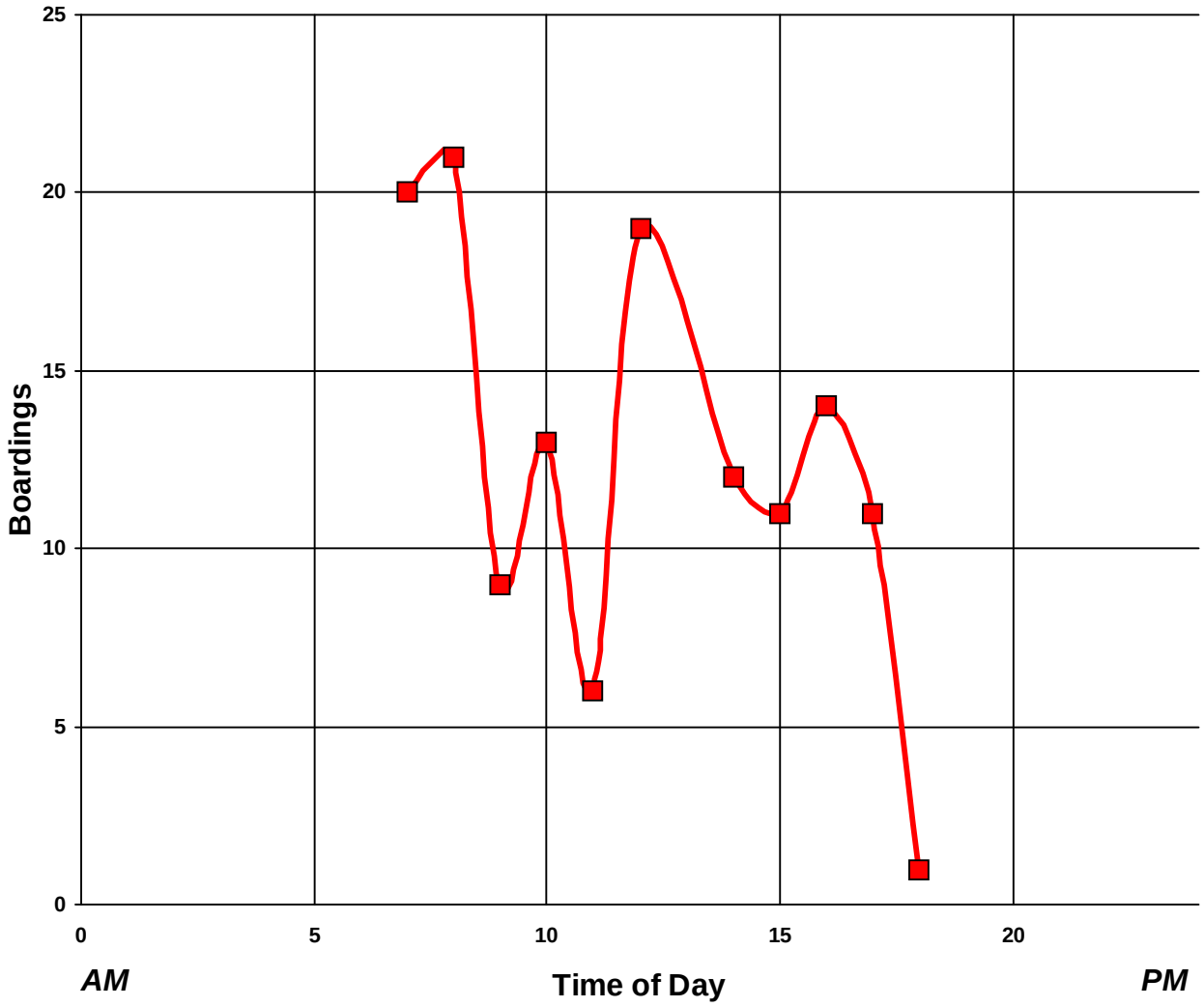
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S20 Babylon RR - Sunrise Mall - Eastbound

All Valid Weekday Trips

Vehicle Trips	11	Boardings Per Mile	1.26	TP Ontime	26
Boardings	137	Boardings Per Hour	29.9	TP Early	4
Revenue Miles	108.7	Schedule Speed (MPH)	23.7	TP Late	35
Revenue Hours	4.6	Actual Speed (MPH)	20.7	Ontime (%)	40.0

Boardings



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S20 Babylon RR - Sunrise Mall - Eastbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	KOHL'S SHOPPING CENTER	BL	1041	38	.	10	38	348	11	5	1	4	50.0	.
1	OAK ST/NYS 110	BL	1045	8	.	1	8	34	24	1			100.0	.
2	OLD SUNRISE HWY/COUNTY LI	BL	1043	.	2	10	36	348	10					.
2	OAK ST/BAY VIEW AVE	BL	1046	1	.	1	9	34	26					.
3	OAK ST/COUNTY LINE RD	BL	1044	4	3	10	37	348	11					.
3	OAK ST/BEACHVIEW ST	BL	1047	.	1	1	8	34	24					.
4	OAK ST/BROADWAY AVE	N	77	2	1	10	38	348	11					.
4	OAK ST/GREAT NECK RD	BL	1048	3	.	1	11	34	32	1			100.0	.
5	OAK ST/NYS 110	BL	1045	13	4	10	47	348	14	5		5	50.0	.
5	OAK ST/GARFIELD AVE	BL	1049	.	.	1	11	34	32					.
6	OAK ST/BAY VIEW AVE	BL	1046	4	.	10	51	348	15					.
6	OAK ST/STRONG AVE	BL	1050	2	.	1	13	34	38					.
7	OAK ST/BEACHVIEW ST	BL	1047	6	2	10	55	348	16					.
7	W HOFFMAN AVE/S 13TH ST	BL	1051	.	.	1	13	34	38					.
8	OAK ST/GREAT NECK RD	BL	1048	13	3	10	65	348	19	3		7	30.0	.
8	W HOFFMAN AVE/S 7TH ST	BL	1052	1	.	1	14	34	41					.
9	OAK ST/GARFIELD AVE	BL	1049	.	1	10	64	348	18					.
9	W HOFFMAN AVE/S 5TH ST	BL	1053	.	.	1	14	34	41					.
10	OAK ST/STRONG AVE	BL	1050	1	3	10	62	348	18					.
10	WELLWOOD AVE/HOFFMAN AV	BL	1054	1	1	1	14	34	41	1			100.0	.
11	W HOFFMAN AVE/S 13TH ST	BL	1051	.	.	10	62	348	18					.
11	E JOHN ST/N WELLWOOD AVE	BL	1055	.	.	1	14	34	41					.
12	W HOFFMAN AVE/S 7TH ST	BL	1052	1	3	10	60	348	17					.
12	E JOHN ST/HELING BLVD	BL	1056	.	.	1	14	34	41					.
13	W HOFFMAN AVE/S 5TH ST	BL	1053	1	1	10	60	348	17					.
13	E JOHN ST/N ERIE AVE	BL	1057	.	.	1	14	34	41					.

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S20 Babylon RR - Sunrise Mall - Eastbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
14	WELLWOOD AVE/HOFFMAN AV	BL	1054	4	12	10	52	348	15	2	1	7	20.0	.
14	E JOHN ST/N GREENE ST	BL	1058	.	.	1	14	34	41					.
15	E JOHN ST/N WELLWOOD AVE	BL	1055	.	1	10	51	348	15					.
15	E JOHN ST/N LEWIS AVE	BL	1059	.	.	1	14	34	41					.
16	E JOHN ST/HELING BLVD	BL	1056	.	4	10	47	348	14					.
16	E JOHN ST/N CENTRE AVE	BL	1060	.	.	1	14	34	41					.
17	E JOHN ST/N ERIE AVE	BL	1057	.	2	10	45	348	13					.
17	666 ALBIN AVE	BL	1061	.	.	1	14	34	41					.
18	E JOHN ST/N GREENE ST	BL	1058	1	1	10	45	348	13					.
18	ARNOLD AVE/ANCHOR CT	BL	1062	2	.	1	16	34	47	1			100.0	.
19	E JOHN ST/N LEWIS AVE	BL	1059	.	.	10	45	348	13					.
19	ARNOLD AVE/GREAT EAST NE	BL	1063	.	.	1	16	34	47					.
20	E JOHN ST/N CENTRE AVE	BL	1060	1	3	10	43	348	12					.
20	ARNOLD AVE/LITTLE EAST NE	BL	1064	.	1	1	15	34	44					.
21	666 ALBIN AVE	BL	1061	3	2	10	44	348	13					.
21	LITTLE EAST NECK RD/TROLLE	BL	1065	.	.	1	15	34	44					.
22	ARNOLD AVE/ANCHOR CT	BL	1062	3	3	10	44	348	13	5	1	4	50.0	.
22	MONTAUK HWY/LITTLE EAST N	S	1066	1	.	1	16	34	47					.
23	ARNOLD AVE/GREAT EAST NE	BL	1063	.	1	10	43	348	12					.
23	MONTAUK HGWY/GREAT EAST	BL	1067	.	.	1	16	34	47					.
24	ARNOLD AVE/LITTLE EAST NE	BL	1064	4	.	10	47	348	14					.
24	SOUTH BAY SHOPPING CENTE	BL	1068	.	.	1	16	34	47					.
25	LITTLE EAST NECK RD/TROLLE	BL	1065	.	.	10	47	348	14					.
25	PARK AVE/W MONTAUK HGWY	BL	1069	.	.	1	16	34	47					.
26	MONTAUK HWY/LITTLE EAST N	S	1066	.	.	10	47	348	14					.
26	PARK AVE/KANSAS ST	BL	1070	.	.	1	16	34	47					.

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S20 Babylon RR - Sunrise Mall - Eastbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	MONTAUK HGWY/GREAT EAST	BL	1067	.	.	10	47	348	14					.
27	730 SOUTH RAILROAD AVE	BL	1071	1	1	1	16	34	47					.
28	SOUTH BAY SHOPPING CENTE	BL	1068	.	.	10	47	348	14					.
28	TROLLY RD/GREAT EAST NEC	BL	1072	.	.	1	16	34	47					.
29	PARK AVE/W MONTAUK HGWY	BL	1069	.	2	10	45	348	13					.
29	TROLLEY LINE RD/LITTLE EAS	BL	1073	.	.	1	16	34	47					.
30	PARK AVE/KANSAS ST	BL	1070	.	.	10	45	348	13					.
30	BABYLON RAILROAD STATION	W	1074	.	16	1	0	34	.	1			100.0	.
31	730 SOUTH RAILROAD AVE	BL	1071	.	.	10	45	348	13					.
32	TROLLY RD/GREAT EAST NEC	BL	1072	.	3	10	42	348	12					.
33	TROLLEY LINE RD/LITTLE EAS	BL	1073	12	11	10	43	348	12					.
34	BABYLON RAILROAD STATION	W	1074	6	49	10	0	348	.	1	1	8	10.0	.
	All 64 Stops	Total		137	137					26	4	35	40.0	
		Average		5	5									.

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S20 Babylon RR - Sunrise Mall - Eastbound

All Valid Weekday Trips

Vehicle Trips	11	Boardings Per Mile	1.26	TP Ontime	26
Boardings	137	Boardings Per Hour	29.9	TP Early	4
Revenue Miles	108.7	Schedule Speed (MPH)	23.7	TP Late	35
Revenue Hours	4.6	Actual Speed (MPH)	20.7	Ontime (%)	40.0

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
132	7:00 am	10/9/07 Tue	2	20	20	16	8.8	0.4	2.27	48.0	19.6	21.2	100.0
134	8:00 am	10/9/07 Tue	6	21	21	12	10.0	0.4	2.10	50.4	19.3	24.0	50.0
136	9:00 am	10/9/07 Tue	10	9	9	9	10.0	0.4	0.90	21.6	18.2	24.0	33.3
138	10:00 am	10/9/07 Tue	14	13	13	8	10.0	0.4	1.30	31.2	26.1	24.0	0.0
140	11:00 am	10/9/07 Tue	18	6	6	3	10.0	0.4	0.60	14.4	26.1	24.0	0.0
142	12:00 pm	10/9/07 Tue	22	19	19	11	10.0	0.4	1.90	45.6	22.2	24.0	16.7
144	2:00 pm	10/9/07 Tue	26	12	12	7	10.0	0.4	1.20	28.8	28.5	24.0	50.0
146	3:00 pm	10/9/07 Tue	30	11	11	8	10.0	0.4	1.10	26.4	16.2	24.0	83.3
148	4:00 pm	10/9/07 Tue	34	14	14	8	10.0	0.4	1.40	33.6	17.1	24.0	33.3
150	5:00 pm	10/9/07 Tue	38	11	11	6	10.0	0.4	1.10	26.4	20.7	24.0	16.7
152	6:00 pm	10/9/07 Tue	42	1	1	1	10.0	0.4	0.10	2.4	13.9	24.0	66.7
	All 11 Trips		Total	137	137		108.7	4.6					
			Average	12	12	8	9.9	0.4	1.27	29.9			
			Minimum	1	1	1			0.10	2.4			
			Maximum	21	21	16			2.27	50.4			
			Standard Deviation	6	6	4			0.64	14.5			

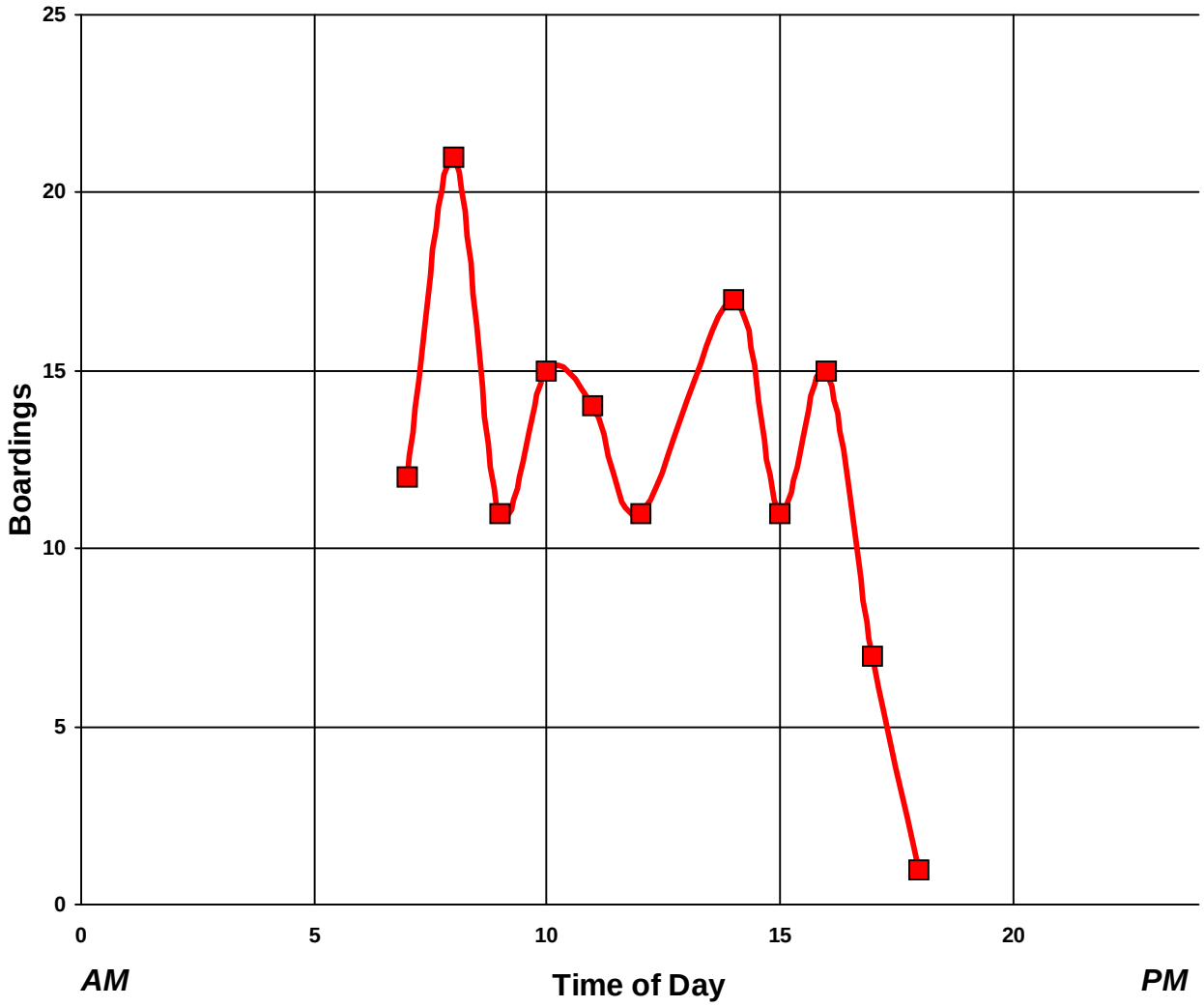
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S20 Babylon RR - Sunrise Mall - Westbound

All Valid Weekday Trips

Vehicle Trips	11	Boardings Per Mile	1.17	TP Ontime	40
Boardings	135	Boardings Per Hour	21.6	TP Early	2
Revenue Miles	115.4	Schedule Speed (MPH)	18.5	TP Late	44
Revenue Hours	6.3	Actual Speed (MPH)	23.2	Ontime (%)	46.5

Boardings



This data is property of Suffolk County Transit

S20 Babylon RR - Sunrise Mall - Westbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	BABYLON RAILROAD STATION	W	1074	58	.	11	58	382	15	3	1	7	27.3	.
2	TROLLEY LINE RD/LITTLE EAS	BL	1073	.	.	11	58	382	15					.
3	LITTLE EAST NECK RD/TROLLE	BL	1065	1	2	11	57	382	15					.
4	MONTAUK HWY/LITTLE EAST N	S	1066	1	.	11	58	382	15					.
5	MONTAUK HGWY/FLEETS POIN	BL	1075	4	1	11	61	382	16					.
6	MONTAUK HGWY/GREAT EAST	BL	1067	.	3	11	58	382	15					.
7	MONTAUK HGWY/BROOKVALE	BL	1076	.	.	11	58	382	15					.
8	SOUTH BAY SHOPPING CENTE	BL	1068	14	7	11	65	382	17	6		5	54.5	.
9	PARK AVE/W MONTAUK HGWY	BL	1069	1	2	11	64	382	17					.
10	PARK AVE/KANSAS ST	BL	1070	.	.	11	64	382	17					.
11	SOUTH RAILROAD AVE/PARK A	BL	1077	1	1	11	64	382	17					.
12	730 SOUTH RAILROAD AVE	BL	1071	1	2	11	63	382	16					.
13	LITTLE EAST NECK RD/TROLLE	BL	1065	.	2	11	61	382	16					.
14	LITTLE EAST NECK RD/PINE ST	BL	1078	.	.	11	61	382	16					.
15	ARNOLD AVE/LITTLE EAST NE	BL	1064	.	.	11	61	382	16					.
16	ARNOLD AVE/GREAT EAST NE	BL	1063	.	.	11	61	382	16					.
17	ARNOLD AVE/LEARNER ST	BL	1079	2	.	11	63	382	16					.
18	ARNOLD AVE/ANCHOR CT	BL	1062	.	.	11	63	382	16	6		5	54.5	.
19	ALBIN AVE/AVE A	BL	1080	.	.	11	63	382	16					.
20	E JOHN ST/GRAND AVE	BL	1081	.	.	11	63	382	16					.
21	E JOHN ST/N LEWIS AVE	BL	1059	2	.	11	65	382	17					.
22	E JOHN ST/N FULTON AVE	BL	1082	.	.	11	65	382	17					.
23	E JOHN ST/N DELAWARE AVE	BL	1083	1	1	11	65	382	17					.
24	E JOHN ST/HELING BLVD	BL	1056	.	1	11	64	382	17					.
25	N WELLWOOD/E JOHN ST	BL	1084	1	.	11	65	382	17					.
26	WELLWOOD AVE/HOFFMAN AV	BL	1054	9	4	11	70	382	18	5		6	45.5	.

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S20 Babylon RR - Sunrise Mall - Westbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced
							Load	Capacity	%	On	Early	Late	OT%	%
27	W HOFFMAN AVE/S 5TH ST	BL	1085	1	.	11	71	382	19					.
28	W HOFFMAN AVE/S 8TH ST	BL	1086	2	.	11	73	382	19					.
29	W HOFFMAN AVE/S 13TH ST	BL	1087	2	5	11	70	382	18					.
30	OAK ST/STRONG AVE	BL	1050	.	5	11	65	382	17					.
31	OAK ST/GARFIELD AVE	BL	1049	1	1	11	65	382	17					.
32	OAK ST/GREAT NECK RD	BL	1048	5	14	11	56	382	15	5		6	45.5	.
33	OAK ST/CEDAR ST	BL	1088	2	.	11	58	382	15					.
34	OAK ST/BAY VIEW AVE	BL	1046	3	5	11	56	382	15					.
35	OAK ST/NYS 110	BL	1045	10	21	11	45	382	12	5		6	45.5	.
36	OAK ST/KETCHAM AVE	S	1089	.	7	10	38	346	11					.
37	OAK ST/COUNTY LINE RD	BL	1044	.	2	10	36	346	10					.
38	LOUDEN AVE/COUNTY LINE RD	BL	1090	1	3	10	34	346	10					.
39	CARMANS RD/LOUDEN AVE	BL	1091	.	.	10	34	346	10					.
40	SUNRISE MALL	N	1042	12	26	10	20	346	6	3	1	6	30.0	.
41	KOHL'S SHOPPING CENTER	BL	1041	.	20	10	0	346	.	7		3	70.0	.
	All 41 Stops	Total		135	135					40	2	44	46.5	
		Average		6	6									.

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S20 Babylon RR - Sunrise Mall - Westbound

All Valid Weekday Trips

Vehicle Trips	11	Boardings Per Mile	1.17	TP Ontime	40
Boardings	135	Boardings Per Hour	21.6	TP Early	2
Revenue Miles	115.4	Schedule Speed (MPH)	18.5	TP Late	44
Revenue Hours	6.3	Actual Speed (MPH)	23.2	Ontime (%)	46.5

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
133	7:25 am	10/9/07 Tue	4	12	12	5	10.6	0.6	1.13	20.6	18.2	18.2	100.0
135	8:25 am	10/9/07 Tue	8	21	21	11	10.6	0.6	1.97	36.0	17.3	18.2	0.0
137	9:25 am	10/9/07 Tue	12	11	11	5	10.6	0.6	1.03	18.9	18.8	18.2	12.5
139	10:25 am	10/9/07 Tue	16	15	15	11	10.6	0.6	1.41	25.7	15.6	18.2	12.5
141	11:25 am	10/9/07 Tue	20	14	14	7	10.6	0.6	1.32	24.0	25.5	18.2	12.5
143	12:25 pm	10/9/07 Tue	24	11	11	7	10.6	0.6	1.03	18.9	22.8	18.2	50.0
145	2:25 pm	10/9/07 Tue	28	17	17	15	10.6	0.6	1.60	29.1	16.4	18.2	75.0
147	3:25 pm	10/9/07 Tue	32	11	11	8	10.6	0.6	1.03	18.9	18.2	18.2	100.0
149	4:25 pm	10/9/07 Tue	36	15	15	7	10.6	0.6	1.41	25.7	25.5	18.2	25.0
151	5:25 pm	10/9/07 Tue	40	7	7	5	10.6	0.6	0.66	12.0	53.2	18.2	50.0
153	6:25 pm	10/9/07 Tue	44	1	1	1	9.0	0.4	0.11	2.4	NA	21.5	83.3
	All 11 Trips		Total	135	135		115.4	6.3					
			Average	12	12	7	10.5	0.6	1.15	21.1			
			Minimum	1	1	1			0.11	2.4			
			Maximum	21	21	15			1.97	36.0			
			Standard Deviation	5	5	4			0.49	8.9			

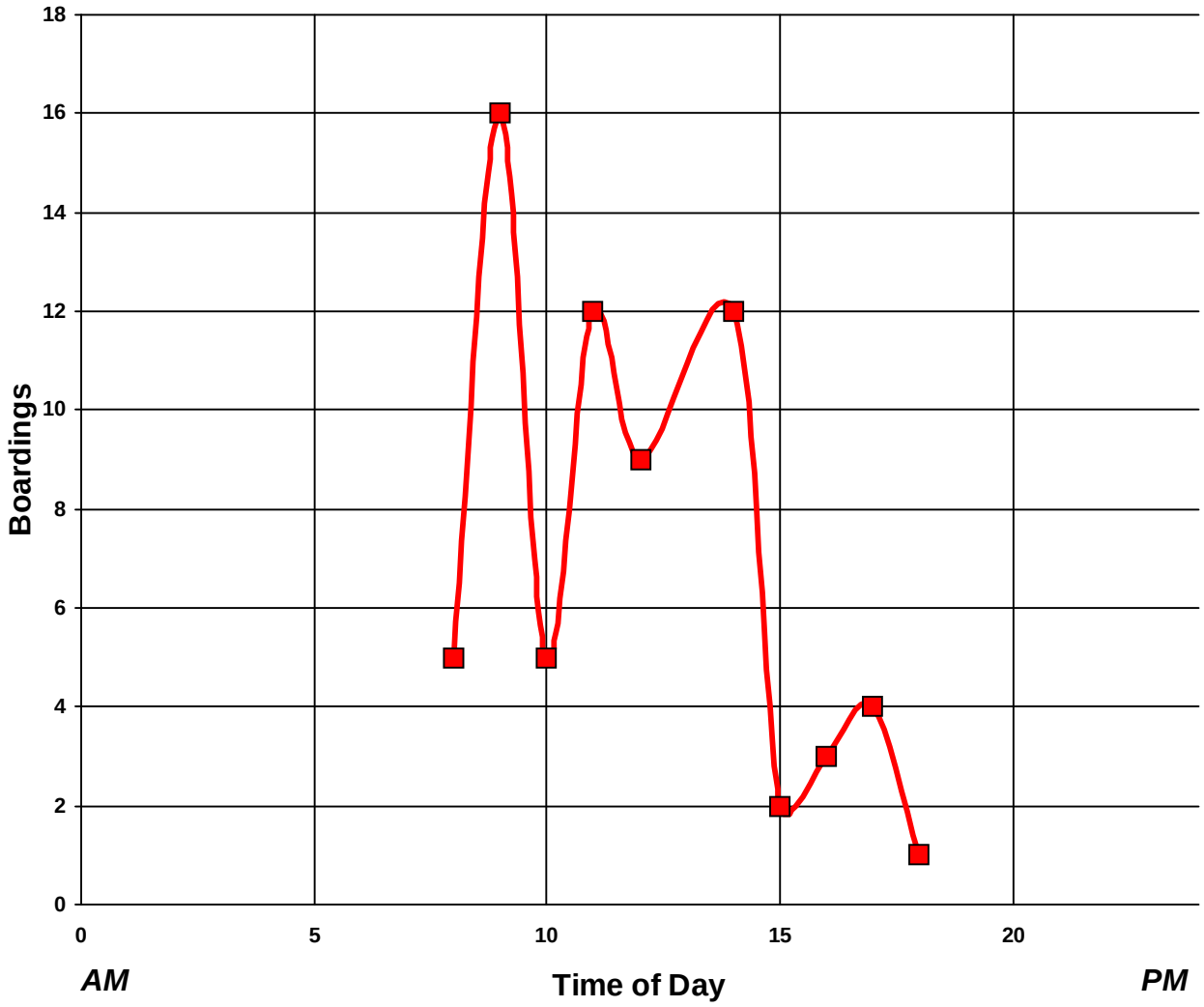
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S20 Babylon RR - Sunrise Mall - Eastbound

All Valid Saturday Trips

Vehicle Trips	10	Boardings Per Mile	0.69	TP Ontime	24
Boardings	69	Boardings Per Hour	16.6	TP Early	0
Revenue Miles	99.9	Schedule Speed (MPH)	24.0	TP Late	36
Revenue Hours	4.2	Actual Speed (MPH)	24.2	Ontime (%)	40.0

Boardings



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S20 Babylon RR - Sunrise Mall - Eastbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced
							Load	Capacity	%	On	Early	Late	OT%	%
1	KOHL'S SHOPPING CENTER	BL	1041	6	.	10	6	340	2	5		5	50.0	.
2	OLD SUNRISE HWY/COUNTY LI	BL	1043	2	.	10	8	340	2					.
3	OAK ST/COUNTY LINE RD	BL	1044	1	.	10	9	340	3					.
4	OAK ST/BROADWAY AVE	N	77	8	.	10	17	340	5					.
5	OAK ST/NYS 110	BL	1045	9	2	10	24	340	7	3		7	30.0	.
6	OAK ST/BAY VIEW AVE	BL	1046	.	.	10	24	340	7					.
7	OAK ST/BEACHVIEW ST	BL	1047	.	4	10	20	340	6					.
8	OAK ST/GREAT NECK RD	BL	1048	10	5	10	25	340	7	3		7	30.0	.
9	OAK ST/GARFIELD AVE	BL	1049	1	1	10	25	340	7					.
10	OAK ST/STRONG AVE	BL	1050	1	1	10	25	340	7					.
11	W HOFFMAN AVE/S 13TH ST	BL	1051	.	.	10	25	340	7					.
12	W HOFFMAN AVE/S 7TH ST	BL	1052	.	1	10	24	340	7					.
13	W HOFFMAN AVE/S 5TH ST	BL	1053	.	.	10	24	340	7					.
14	WELLWOOD AVE/HOFFMAN AV	BL	1054	16	5	10	35	340	10	4		6	40.0	.
15	E JOHN ST/N WELLWOOD AVE	BL	1055	2	.	10	37	340	11					.
16	E JOHN ST/HELING BLVD	BL	1056	.	.	10	37	340	11					.
17	E JOHN ST/N ERIE AVE	BL	1057	.	.	10	37	340	11					.
18	E JOHN ST/N GREENE ST	BL	1058	.	1	10	36	340	11					.
19	E JOHN ST/N LEWIS AVE	BL	1059	.	.	10	36	340	11					.
20	E JOHN ST/N CENTRE AVE	BL	1060	4	1	10	39	340	11					.
21	666 ALBIN AVE	BL	1061	1	2	10	38	340	11					.
22	ARNOLD AVE/ANCHOR CT	BL	1062	7	3	10	42	340	12	4		6	40.0	.
23	ARNOLD AVE/GREAT EAST NE	BL	1063	.	5	10	37	340	11					.
24	ARNOLD AVE/LITTLE EAST NE	BL	1064	.	.	10	37	340	11					.
25	LITTLE EAST NECK RD/TROLLE	BL	1065	.	2	10	35	340	10					.
26	MONTAUK HWY/LITTLE EAST N	S	1066	.	.	10	35	340	10					.

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S20 Babylon RR - Sunrise Mall - Eastbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	MONTAUK HGWY/GREAT EAST	BL	1067	.	.	10	35	340	10					.
28	SOUTH BAY SHOPPING CENTE	BL	1068	1	.	10	36	340	11					.
29	PARK AVE/W MONTAUK HGWY	BL	1069	.	.	10	36	340	11					.
30	PARK AVE/KANSAS ST	BL	1070	.	.	10	36	340	11					.
31	730 SOUTH RAILROAD AVE	BL	1071	.	.	10	36	340	11					.
32	TROLLY RD/GREAT EAST NEC	BL	1072	.	.	10	36	340	11					.
33	TROLLEY LINE RD/LITTLE EAS	BL	1073	.	.	10	36	340	11					.
34	BABYLON RAILROAD STATION	W	1074	.	36	10	0	340	.	5		5	50.0	.
	All 34 Stops	Total		69	69					24		36	40.0	
		Average		5	5									.

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S20 Babylon RR - Sunrise Mall - Eastbound

All Valid Saturday Trips

Vehicle Trips	10	Boardings Per Mile	0.69	TP Ontime	24
Boardings	69	Boardings Per Hour	16.6	TP Early	0
Revenue Miles	99.9	Schedule Speed (MPH)	24.0	TP Late	36
Revenue Hours	4.2	Actual Speed (MPH)	24.2	Ontime (%)	40.0

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1566	8:00 am	11/3/07 Sat	2	5	5	5	10.0	0.4	0.50	12.0	26.1	24.0	100.0
1568	9:00 am	11/3/07 Sat	6	16	16	10	10.0	0.4	1.60	38.4	28.5	24.0	100.0
1570	10:00 am	11/3/07 Sat	10	5	5	4	10.0	0.4	0.50	12.0	26.1	24.0	0.0
1572	11:00 am	11/3/07 Sat	14	12	12	11	10.0	0.4	1.20	28.8	27.2	24.0	0.0
1574	12:00 pm	11/3/07 Sat	18	9	9	9	10.0	0.4	0.90	21.6	24.0	24.0	0.0
1576	2:00 pm	11/3/07 Sat	22	12	12	6	10.0	0.4	1.20	28.8	23.1	24.0	0.0
1578	3:00 pm	11/3/07 Sat	26	2	2	2	10.0	0.4	0.20	4.8	20.0	24.0	33.3
1580	4:00 pm	11/3/07 Sat	30	3	3	2	10.0	0.4	0.30	7.2	17.6	24.0	0.0
1582	5:00 pm	11/3/07 Sat	34	4	4	3	10.0	0.4	0.40	9.6	24.0	24.0	66.7
1584	6:00 pm	11/3/07 Sat	38	1	1	1	10.0	0.4	0.10	2.4	25.0	24.0	100.0
	All 10 Trips		Total	69	69		99.9	4.2					
			Average	7	7	5	10.0	0.4	0.69	16.6			
			Minimum	1	1	1			0.10	2.4			
			Maximum	16	16	11			1.60	38.4			
			Standard Deviation	5	5	4			0.50	12.1			

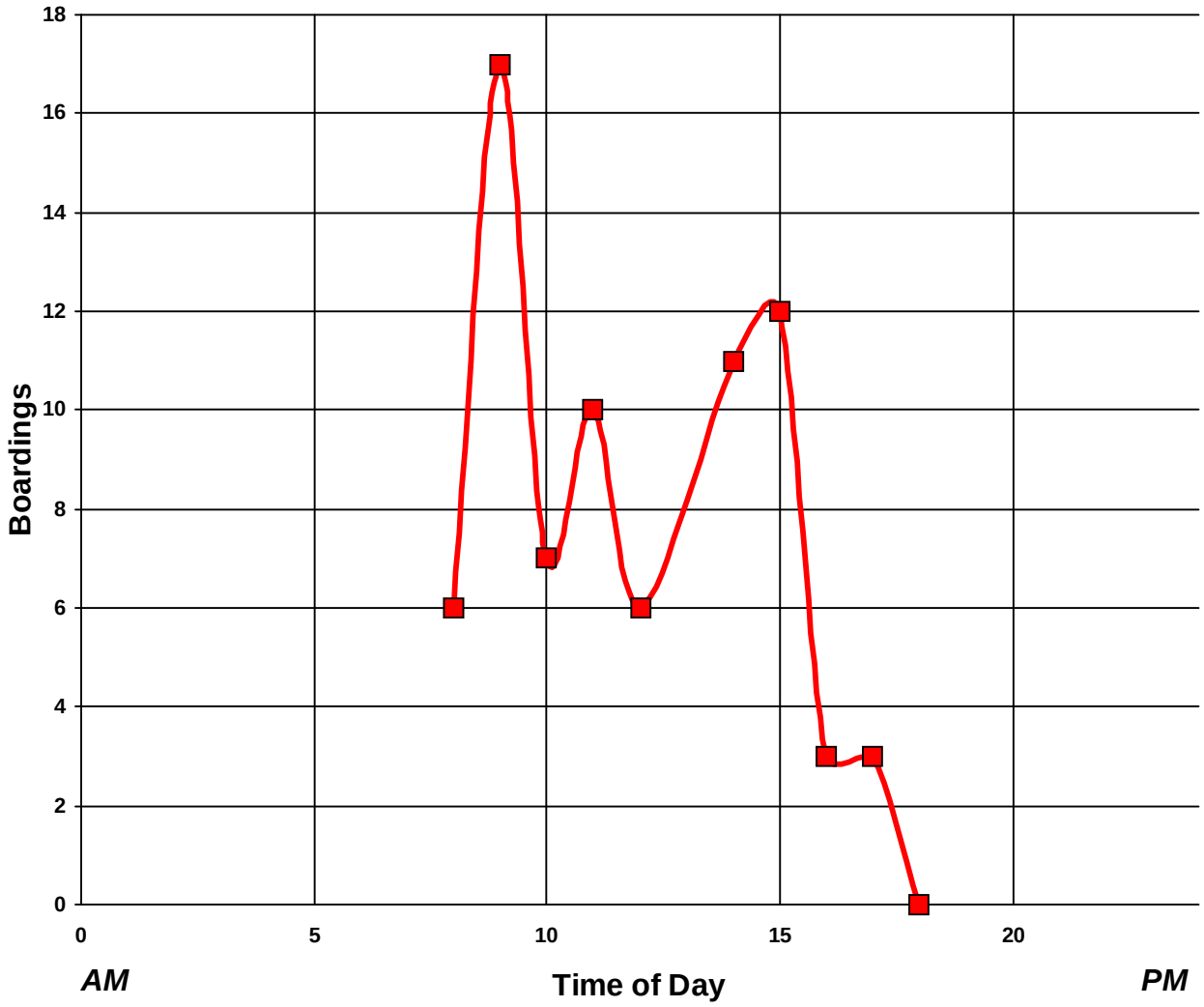
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S20 Babylon RR - Sunrise Mall - Westbound

All Valid Saturday Trips

Vehicle Trips	10	Boardings Per Mile	0.71	TP Ontime	36
Boardings	75	Boardings Per Hour	13.2	TP Early	0
Revenue Miles	105.2	Schedule Speed (MPH)	18.7	TP Late	42
Revenue Hours	5.7	Actual Speed (MPH)	17.4	Ontime (%)	46.2

Boardings



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S20 Babylon RR - Sunrise Mall - Westbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	BABYLON RAILROAD STATION	W	1074	35	.	10	35	340	10	6		4	60.0	.
2	TROLLEY LINE RD/LITTLE EAS	BL	1073	.	.	10	35	340	10					.
3	LITTLE EAST NECK RD/TROLLE	BL	1065	.	.	10	35	340	10					.
4	MONTAUK HWY/LITTLE EAST N	S	1066	.	.	10	35	340	10					.
5	MONTAUK HGWY/FLEETS POIN	BL	1075	.	2	10	33	340	10					.
6	MONTAUK HGWY/GREAT EAST	BL	1067	.	.	10	33	340	10					.
7	MONTAUK HGWY/BROOKVALE	BL	1076	.	.	10	33	340	10					.
8	SOUTH BAY SHOPPING CENTE	BL	1068	2	5	10	30	340	9	5		5	50.0	.
9	PARK AVE/W MONTAUK HGWY	BL	1069	.	1	10	29	340	9					.
10	PARK AVE/KANSAS ST	BL	1070	.	.	10	29	340	9					.
11	SOUTH RAILROAD AVE/PARK A	BL	1077	.	.	10	29	340	9					.
12	730 SOUTH RAILROAD AVE	BL	1071	.	.	10	29	340	9					.
13	LITTLE EAST NECK RD/TROLLE	BL	1065	.	.	10	29	340	9					.
14	LITTLE EAST NECK RD/PINE ST	BL	1078	.	.	10	29	340	9					.
15	ARNOLD AVE/LITTLE EAST NE	BL	1064	2	1	10	30	340	9					.
16	ARNOLD AVE/GREAT EAST NE	BL	1063	5	.	10	35	340	10					.
17	ARNOLD AVE/LEARNER ST	BL	1079	.	1	10	34	340	10					.
18	ARNOLD AVE/ANCHOR CT	BL	1062	.	.	10	34	340	10	7		3	70.0	.
19	ALBIN AVE/AVE A	BL	1080	.	.	10	34	340	10					.
20	E JOHN ST/GRAND AVE	BL	1081	1	.	10	35	340	10					.
21	E JOHN ST/N LEWIS AVE	BL	1059	.	.	10	35	340	10					.
22	E JOHN ST/N FULTON AVE	BL	1082	.	.	10	35	340	10					.
23	E JOHN ST/N DELAWARE AVE	BL	1083	1	.	10	36	340	11					.
24	E JOHN ST/HELING BLVD	BL	1056	.	.	10	36	340	11					.
25	N WELLWOOD/E JOHN ST	BL	1084	.	1	10	35	340	10					.
26	WELLWOOD AVE/HOFFMAN AV	BL	1054	11	3	10	43	340	13	4		6	40.0	.

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S20 Babylon RR - Sunrise Mall - Westbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	W HOFFMAN AVE/S 13TH ST	BL	1051	.	.	1	1	34	3					.
27	W HOFFMAN AVE/S 5TH ST	BL	1085	.	1	9	41	306	13					.
28	W HOFFMAN AVE/S 8TH ST	BL	1086	.	1	10	41	340	12					.
29	W HOFFMAN AVE/S 13TH ST	BL	1087	1	1	10	41	340	12					.
30	OAK ST/STRONG AVE	BL	1050	1	.	10	42	340	12					.
31	OAK ST/GARFIELD AVE	BL	1049	.	.	10	42	340	12					.
32	OAK ST/GREAT NECK RD	BL	1048	6	9	10	39	340	11	4		6	40.0	.
33	OAK ST/CEDAR ST	BL	1088	1	1	10	39	340	11					.
34	OAK ST/BAY VIEW AVE	BL	1046	.	.	10	39	340	11					.
35	OAK ST/NYS 110	BL	1045	.	10	10	29	340	9	4		6	40.0	.
36	OAK ST/KETCHAM AVE	S	1089	4	3	9	30	306	10					.
37	OAK ST/COUNTY LINE RD	BL	1044	.	4	9	26	306	8					.
38	LOUDEN AVE/COUNTY LINE RD	BL	1090	.	1	9	25	306	8					.
39	CARMANS RD/LOUDEN AVE	BL	1091	.	.	9	25	306	8					.
40	SUNRISE MALL	N	1042	5	20	9	10	306	3	3		6	33.3	.
41	KOHL'S SHOPPING CENTER	BL	1041	.	10	9	0	306	.	3		6	33.3	.
	All 42 Stops	Total		75	75					36		42	46.2	
		Average		6	4									.

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S20 Babylon RR - Sunrise Mall - Westbound

All Valid Saturday Trips

Vehicle Trips	10	Boardings Per Mile	0.71	TP Ontime	36
Boardings	75	Boardings Per Hour	13.2	TP Early	0
Revenue Miles	105.2	Schedule Speed (MPH)	18.7	TP Late	42
Revenue Hours	5.7	Actual Speed (MPH)	17.4	Ontime (%)	46.2

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1567	8:25 am	11/3/07 Sat	4	6	6	6	10.6	0.6	0.56	10.3	17.3	18.2	100.0
1569	9:25 am	11/3/07 Sat	8	17	17	15	10.6	0.6	1.60	29.1	15.6	18.2	37.5
1571	10:25 am	11/3/07 Sat	12	7	7	5	11.1	0.6	0.63	12.0	16.3	19.1	12.5
1573	11:25 am	11/3/07 Sat	16	10	10	3	10.6	0.6	0.94	17.1	14.9	18.2	0.0
1575	12:25 pm	11/3/07 Sat	20	6	6	5	10.6	0.6	0.56	10.3	20.0	18.2	0.0
1577	2:25 pm	11/3/07 Sat	24	11	11	7	10.6	0.6	1.03	18.9	16.0	18.2	25.0
1579	3:25 pm	11/3/07 Sat	28	12	12	10	10.6	0.6	1.13	20.6	19.4	18.2	12.5
1581	4:25 pm	11/3/07 Sat	32	3	3	3	10.6	0.6	0.28	5.1	15.6	18.2	87.5
1583	5:25 pm	11/3/07 Sat	36	3	3	3	10.6	0.6	0.28	5.1	17.7	18.2	100.0
1585	6:25 pm	11/3/07 Sat	40	0	0	0	9.0	0.4	0.00	0.0	21.5	21.5	100.0
	All 10 Trips		Total	75	75		105.2	5.7					
			Average	8	8	6	10.5	0.6	0.70	12.9			
			Minimum	0	0	0			0.00	0.0			
			Maximum	17	17	15			1.60	29.1			
			Standard Deviation	5	5	4			0.48	8.7			

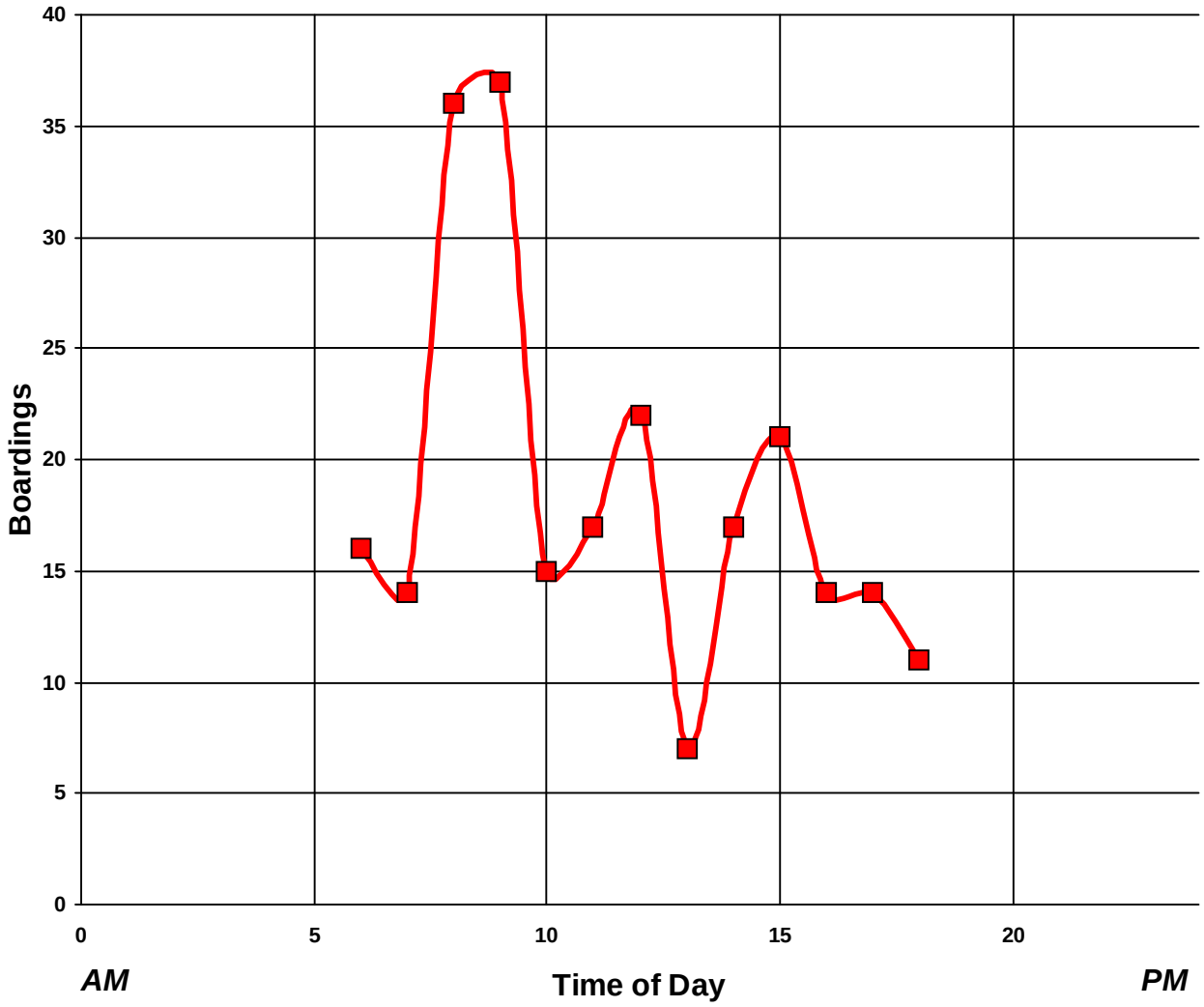
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S23 Babylon RR - Walt Whitman Mall - Northbound

All Valid Weekday Trips

Vehicle Trips	13	Boardings Per Mile	1.42	TP Ontime	77
Boardings	241	Boardings Per Hour	23.0	TP Early	15
Revenue Miles	170.2	Schedule Speed (MPH)	16.3	TP Late	25
Revenue Hours	10.5	Actual Speed (MPH)	16.5	Ontime (%)	65.8

Boardings



This data is property of Suffolk County Transit

S23 Babylon RR - Walt Whitman Mall - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	BABYLON RAILROAD STATION	W	1074	111	.	13	111	442	25	9	3	1	69.2	.
2	DEER PARK AVE/PARK AVE	S	1122	.	3	13	108	442	24					.
3	DEER PARK AVE/SMITH ST	N	1124	3	1	13	110	442	25					.
4	DEER PARK AVE/COCKONOE A	N	1125	2	.	13	112	442	25					.
5	DEER PARK AVE/FOSTER BLV	N	1126	1	4	13	109	442	25					.
6	DEER PARK AVE/EDMUNTON D	S	1118	1	1	13	109	442	25					.
7	DEER PARK AVE/SCOTT AVE	N	1117	2	4	13	107	442	24					.
8	DEER PARK AVE/COOPER RD	N	1127	.	.	13	107	442	24					.
9	DEER PARK AVE/PELL AVE	N	1128	2	2	13	107	442	24					.
10	SUNSET PLAZA	S	270	4	6	13	105	442	24	9	2	2	69.2	.
11	1510 DEER PARK AVE	N	1129	5	.	13	110	442	25					.
12	1369 DEER PARK AVE	N	1130	1	4	13	107	442	24					.
13	1473 DEER PARK AVE	N	273	3	.	13	110	442	25					.
14	DEER PARK AVE/OAKLAND AV	S	1114	1	1	13	110	442	25					.
15	DEER PARK AVE/WESTON AVE	S	1113	3	3	13	110	442	25					.
16	DEER PARK AVE/GRAND BLVD	S	1112	7	8	13	109	442	25	10	1	2	76.9	.
17	GRAND BLVD/W 4TH ST	N	1111	5	.	13	114	442	26					.
18	GRAND BLVD/W 8TH ST	N	1132	.	2	13	112	442	25					.
19	GRAND BLVD/W 13TH ST	N	1109	.	.	13	112	442	25					.
20	GRAND BLVD/W 18TH	S	1108	2	.	13	114	442	26					.
21	GRAND BLVD/W 23RD ST	N	262	.	.	13	114	442	26					.
22	GRAND BLVD/LAKE DR	N	261	1	1	13	114	442	26					.
23	GRAND BLVD/DOE ST	S	260	5	2	13	117	442	26					.
24	LONG ISLAND AVE/STRAIGHT	N	259	35	20	13	132	442	30	8	1	4	61.5	.
25	NICOLLS RD/STRAIGHT PATH	S	1106	3	2	13	133	442	30					.
26	NICOLLS RD/18TH ST	S	250	6	3	13	136	442	31					.

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S23 Babylon RR - Walt Whitman Mall - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	CONKLIN AVE/MAIN AVE	S	1105	3	3	13	136	442	31	8		5	61.5	.
28	CONKLIN AVE/LEE AVE	N	1133	5	2	13	139	442	31					.
29	BAGATELLE RD/TAMARA CT	S	1103	2	7	13	134	442	30					.
30	BAGATELLE RD/WILMINGTON	S	1102	.	.	13	134	442	30					.
31	BAGATELLE RD/PETTIT DR	N	1134	2	3	13	133	442	30					.
32	FIVE TOWN COLLEGE	S	1100	14	62	13	85	442	19	9		4	69.2	.
33	CARMAN RD/CARMAN CT	S	1099	.	2	13	83	442	19					.
34	CARMAN RD/LANGHANS CT	S	1098	4	1	13	86	442	19					.
35	CARMAN RD/WOLF HILL RD	S	1097	2	.	13	88	442	20	8		5	61.5	.
36	WOLF HILL RD/WINDSOR PL	N	1135	4	.	13	92	442	21					.
37	WOLF HILL RD/GREENWICH AV	N	1136	2	13	13	81	442	18					.
38	WOLF HILL RD/NEW YORK AVE	S	1094	.	2	13	79	442	18	9	3	1	69.2	.
39	NEW YORK AVE/EDISON DR	S	1093	.	.	13	79	442	18					.
40	NEW YORK AVE/STUART CT	N	1092	.	.	13	79	442	18					.
41	WALT WHITMAN MALL	W	1004	.	79	13	0	442	.	7	5	1	53.8	.
	All 41 Stops	Total		241	241					77	15	25	65.8	
		Average		8	9									.

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S23 Babylon RR - Walt Whitman Mall - Northbound

All Valid Weekday Trips

Vehicle Trips	13	Boardings Per Mile	1.42	TP Ontime	77
Boardings	241	Boardings Per Hour	23.0	TP Early	15
Revenue Miles	170.2	Schedule Speed (MPH)	16.3	TP Late	25
Revenue Hours	10.5	Actual Speed (MPH)	16.5	Ontime (%)	65.8

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
185	6:45 am	10/11/07 Thu	1	16	16	13	13.1	0.7	1.22	24.0	19.6	19.6	100.0
186	7:30 am	10/11/07 Thu	3	14	14	9	13.1	0.8	1.07	16.8	16.0	15.7	88.9
665	8:25 am	10/11/07 Thu	5	36	36	32	13.1	0.8	2.75	43.2	17.5	15.7	55.6
666	9:30 am	10/11/07 Thu	7	37	37	28	13.1	0.8	2.83	44.4	15.4	15.7	66.7
667	10:30 am	11/11/07 Sun	9	15	15	9	13.1	0.8	1.15	18.0	15.7	15.7	88.9
668	11:30 am	10/11/07 Thu	11	17	17	10	13.1	0.8	1.30	20.4	16.7	15.7	66.7
191	12:30 pm	10/11/07 Thu	13	22	22	13	13.1	0.8	1.68	26.4	15.4	15.7	55.6
670	1:30 pm	10/11/07 Thu	15	7	7	4	13.1	0.8	0.53	8.4	17.5	15.7	66.7
193	2:30 pm	10/11/07 Thu	17	17	17	13	13.1	0.8	1.30	20.4	16.7	15.7	22.2
672	3:30 pm	10/11/07 Thu	19	21	21	10	13.1	0.8	1.60	25.2	14.5	15.7	66.7
195	4:30 pm	10/11/07 Thu	21	14	14	8	13.1	0.8	1.07	16.8	15.1	15.7	11.1
674	5:30 pm	10/18/07 Thu	23	14	14	10	13.1	0.8	1.07	16.8	17.5	15.7	100.0
675	6:40 pm	10/11/07 Thu	25	11	11	5	13.1	0.7	0.84	16.5	17.1	19.6	66.7
	All 13 Trips		Total	241	241		170.2	10.5					
			Average	19	19	13	13.1	0.8	1.42	22.9			
			Minimum	7	7	4			0.53	8.4			
			Maximum	37	37	32			2.83	44.4			
			Standard Deviation	9	9	8			0.68	10.4			

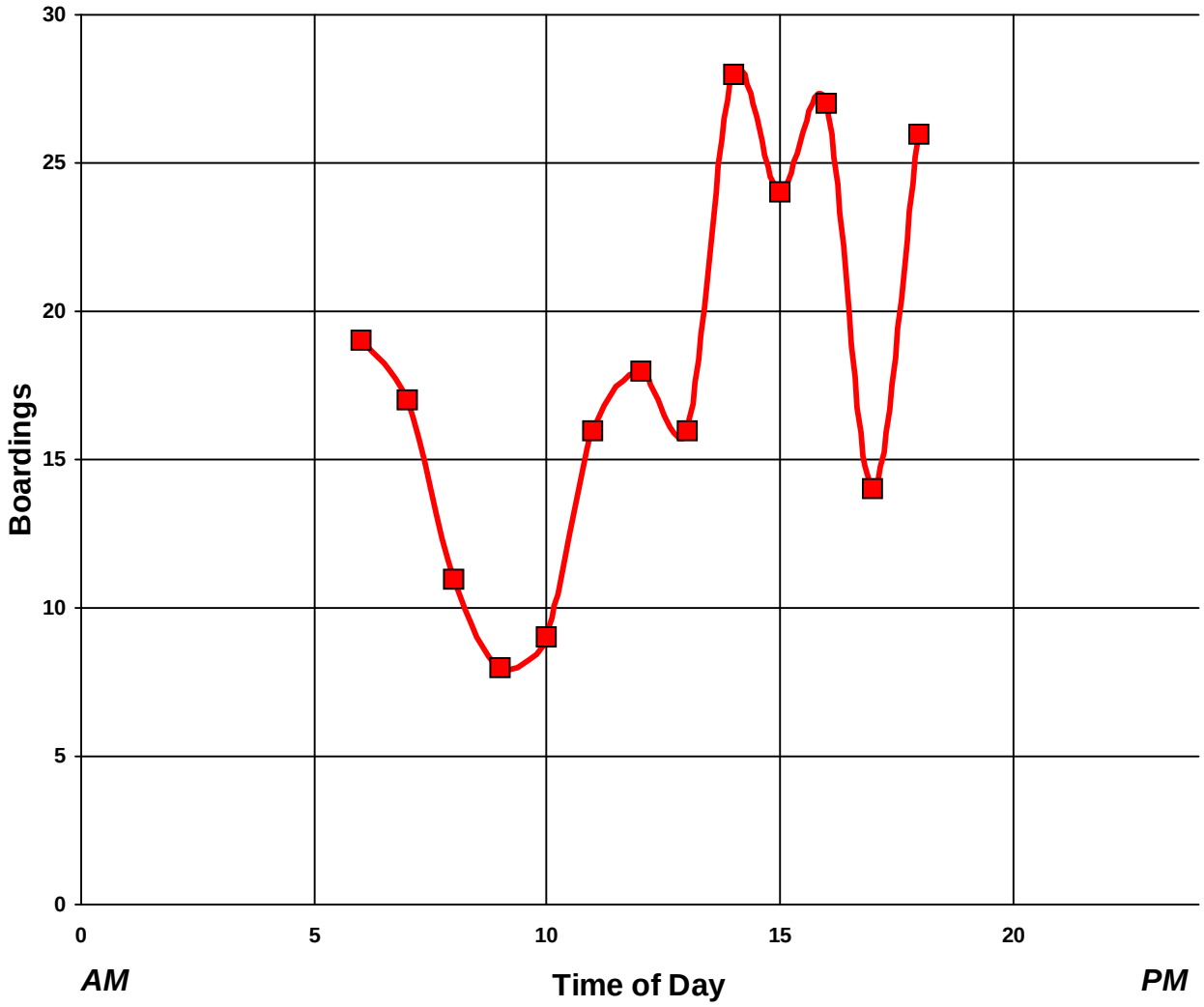
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S23 Babylon RR - Walt Whitman Mall - Southboun

All Valid Weekday Trips

Vehicle Trips	13	Boardings Per Mile	1.31	TP Ontime	88
Boardings	233	Boardings Per Hour	22.0	TP Early	21
Revenue Miles	177.7	Schedule Speed (MPH)	16.9	TP Late	7
Revenue Hours	10.6	Actual Speed (MPH)	16.3	Ontime (%)	75.9

Boardings



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S23 Babylon RR - Walt Whitman Mall - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	WALT WHITMAN MALL	W	1004	81	.	13	81	442	18	11	2		84.6	.
2	NEW YORK AVE/STUART CT	N	1092	1	.	13	82	442	19					.
3	NEW YORK AVE/EDISON DR	S	1093	2	3	13	81	442	18					.
4	WOLF HILL RD/NEW YORK AVE	S	1094	.	.	13	81	442	18	13			100.0	.
5	WOLF HILL RD/JAYNE AVE	S	1095	.	2	13	79	442	18					.
6	WOLF HILL RD/DUNFORD ST	S	1096	1	.	13	80	442	18					.
7	CARMAN RD/WOLF HILL RD	S	1097	1	17	13	64	442	14	13			100.0	.
8	CARMAN RD/LANGHANS CT	S	1098	.	1	13	63	442	14					.
9	CARMAN RD/CARMAN CT	S	1099	3	.	13	66	442	15					.
10	FIVE TOWN COLLEGE	S	1100	41	10	13	97	442	22	10	2		83.3	.
11	BAGATELLE RD/HEMINGWAY D	S	1101	6	.	13	103	442	23					.
12	BAGATELLE RD/WILMINGTON	S	1102	1	.	13	104	442	24					.
13	BAGATELLE RD/TAMARA CT	S	1103	1	.	13	105	442	24					.
14	BAGATELLE RD/LEE AVE	S	1104	5	.	13	110	442	25					.
15	CONKLIN AVE/MAIN AVE	S	1105	3	7	13	106	442	24	8	5		61.5	.
16	NICOLLS RD/18TH ST	S	250	1	8	13	99	442	22					.
17	NICOLLS RD/STRAIGHT PATH	S	1106	2	6	13	95	442	21					.
18	WYANDANCH RAILROAD STATI	S	248	15	32	13	78	442	18	10	3		76.9	.
19	GRAND BLVD/WOODLAND RD	S	1107	15	7	13	86	442	19					.
20	GRAND BLVD/LAKE DR	N	261	4	3	13	87	442	20					.
21	GRAND BLVD/W 23RD ST	N	262	.	2	13	85	442	19					.
22	GRAND BLVD/W 18TH	S	1108	2	2	13	85	442	19					.
23	GRAND BLVD/W 13TH ST	N	1109	.	.	13	85	442	19					.
24	GRAND BLVD/W 9TH ST	S	1110	.	.	13	85	442	19					.
25	GRAND BLVD/W 4TH ST	N	1111	.	1	13	84	442	19					.
26	DEER PARK AVE/GRAND BLVD	S	1112	9	2	13	91	442	21	8	5		61.5	.

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S23 Babylon RR - Walt Whitman Mall - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	DEER PARK AVE/WESTON AVE	S	1113	3	2	13	92	442	21					.
28	DEER PARK AVE/OAKLAND AV	S	1114	.	3	13	89	442	20					.
29	DEER PARK AVE/PRAIRIE DR	S	305	12	8	13	93	442	21					.
30	DEER PARK AVE/GARNET ST	S	306	3	4	13	92	442	21					.
31	DEER PARK AVE/RYDER AVE	S	307	3	3	13	92	442	21					.
32	SUNSET PLAZA	S	270	10	10	13	92	442	21	6	3	4	46.2	.
33	DEER PARK AVE/STRATHMOR	S	1115	1	.	13	93	442	21					.
34	DEER PARK AVE/PHELP'S LA	S	1116	5	1	13	97	442	22					.
35	DEER PARK AVE/SCOTT AVE	N	1117	.	.	13	97	442	22					.
36	DEER PARK AVE/EDMUNTON D	S	1118	1	1	13	97	442	22					.
37	DEER PARK AVE/BIRCHFIELD A	S	1119	1	1	13	97	442	22					.
38	DEER PARK AVE/WASHINGTON	S	1120	.	2	13	95	442	21					.
39	DEER PARK AVE/MASON AVE	S	1121	.	.	13	95	442	21					.
40	DEER PARK AVE/PARK AVE	S	1122	.	9	13	86	442	19					.
41	DEER PARK AVE/SOUTH RAILR	S	1123	.	.	13	86	442	19					.
42	BABYLON RAILROAD STATION	W	1074	.	86	13	0	442	.	9	1	3	69.2	.
All 42 Stops		Total		233	233					88	21	7	75.9	
		Average		8	9									.

This data is property of Suffolk County Transit

S23 Babylon RR - Walt Whitman Mall - Southbound

All Valid Weekday Trips

Vehicle Trips	13	Boardings Per Mile	1.31	TP Ontime	88
Boardings	233	Boardings Per Hour	22.0	TP Early	21
Revenue Miles	177.7	Schedule Speed (MPH)	16.9	TP Late	7
Revenue Hours	10.6	Actual Speed (MPH)	16.3	Ontime (%)	75.9

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
198	6:45 am	10/11/07 Thu	1	19	19	12	13.7	0.6	1.39	32.6	23.4	23.4	62.5
199	7:30 am	10/11/07 Thu	3	17	17	9	13.7	0.8	1.24	20.4	16.4	16.4	100.0
678	8:30 am	10/11/07 Thu	5	11	11	6	13.7	0.8	0.80	13.2	16.4	16.4	77.8
679	9:30 am	10/11/07 Thu	7	8	8	4	13.7	0.8	0.59	9.6	17.4	16.4	55.6
202	10:30 am	10/11/07 Thu	9	9	9	6	13.7	0.8	0.66	10.8	14.9	16.4	77.8
681	11:30 am	11/11/07 Sun	11	16	16	9	13.7	0.8	1.17	19.2	16.4	16.4	100.0
682	12:30 pm	10/11/07 Thu	13	18	18	12	13.7	0.8	1.32	21.6	13.9	16.4	33.3
205	1:30 pm	10/11/07 Thu	15	16	16	10	13.7	0.8	1.17	19.2	14.6	16.4	77.8
206	2:30 pm	10/11/07 Thu	17	28	28	13	13.7	0.8	2.05	33.6	16.1	16.4	66.7
207	3:30 pm	10/11/07 Thu	19	24	24	14	13.7	0.8	1.76	28.8	14.6	16.4	77.8
686	4:30 pm	10/11/07 Thu	21	27	27	20	13.7	0.8	1.98	32.4	15.5	16.4	66.7
687	5:30 pm	10/11/07 Thu	23	14	14	8	13.7	0.8	1.02	16.8	16.4	16.4	88.9
688	6:30 pm	10/18/07 Thu	25	26	26	19	13.7	0.8	1.90	31.2	16.4	16.4	100.0
	All 13 Trips		Total	233	233		177.7	10.6					
			Average	18	18	11	13.7	0.8	1.31	22.3			
			Minimum	8	8	4			0.59	9.6			
			Maximum	28	28	20			2.05	33.6			
			Standard Deviation	7	7	5			0.49	8.6			

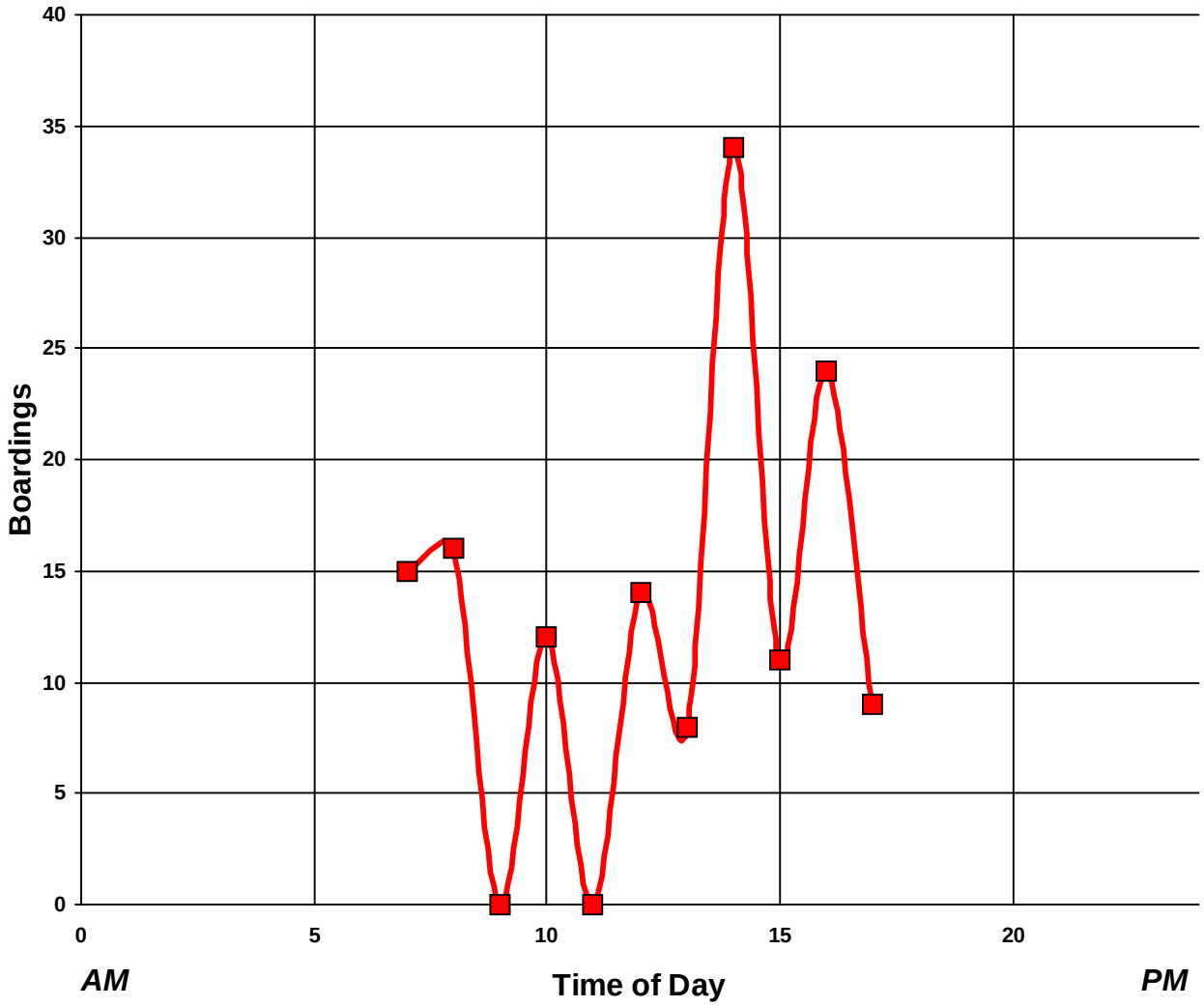
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S23 Babylon RR - Walt Whitman Mall - Northbound

All Valid Saturday Trips

Vehicle Trips	11	Boardings Per Mile	0.99	TP Ontime	78
Boardings	143	Boardings Per Hour	15.6	TP Early	21
Revenue Miles	144.0	Schedule Speed (MPH)	15.7	TP Late	0
Revenue Hours	9.2	Actual Speed (MPH)	15.1	Ontime (%)	78.8

Boardings



This data is property of Suffolk County Transit

S23 Babylon RR - Walt Whitman Mall - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	BABYLON RAILROAD STATION	W	1074	34	.	11	34	340	10	9	2		81.8	.
2	DEER PARK AVE/PARK AVE	S	1122	1	3	11	32	340	9					.
3	DEER PARK AVE/SMITH ST	N	1124	.	1	11	31	340	9					.
4	DEER PARK AVE/COCKONOE A	N	1125	2	1	11	32	340	9					.
5	DEER PARK AVE/FOSTER BLV	N	1126	.	1	11	31	340	9					.
6	DEER PARK AVE/EDMUNTON D	S	1118	3	1	11	33	340	10					.
7	DEER PARK AVE/SCOTT AVE	N	1117	.	.	11	33	340	10					.
8	DEER PARK AVE/COOPER RD	N	1127	7	.	11	40	340	12					.
9	DEER PARK AVE/PELL AVE	N	1128	.	.	11	40	340	12					.
10	SUNSET PLAZA	S	270	18	8	11	50	340	15	9	2		81.8	.
11	1510 DEER PARK AVE	N	1129	.	3	11	47	340	14					.
12	1369 DEER PARK AVE	N	1130	3	.	11	50	340	15					.
13	1473 DEER PARK AVE	N	273	1	1	11	50	340	15					.
14	DEER PARK AVE/OAKLAND AV	S	1114	.	3	11	47	340	14					.
15	DEER PARK AVE/WESTON AVE	S	1113	.	.	11	47	340	14					.
16	DEER PARK AVE/GRAND BLVD	S	1112	9	9	11	47	340	14	10	1		90.9	.
17	GRAND BLVD/W 4TH ST	N	1111	1	.	11	48	340	14					.
18	GRAND BLVD/W 8TH ST	N	1132	2	.	11	50	340	15					.
19	GRAND BLVD/W 13TH ST	N	1109	1	1	11	50	340	15					.
20	GRAND BLVD/W 18TH	S	1108	.	1	11	49	340	14					.
21	GRAND BLVD/W 23RD ST	N	262	.	.	11	49	340	14					.
22	GRAND BLVD/LAKE DR	N	261	.	.	11	49	340	14					.
23	GRAND BLVD/DOE ST	S	260	.	.	11	49	340	14					.
24	LONG ISLAND AVE/STRAIGHT	N	259	28	14	11	63	340	19	10	1		90.9	.
25	NICOLLS RD/STRAIGHT PATH	S	1106	1	1	11	63	340	19					.
26	NICOLLS RD/18TH ST	S	250	.	.	11	63	340	19					.

This data is property of Suffolk County Transit

S23 Babylon RR - Walt Whitman Mall - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	CONKLIN AVE/MAIN AVE	S	1105	4	3	11	64	340	19	10	1		90.9	.
28	CONKLIN AVE/LEE AVE	N	1133	.	2	11	62	340	18					.
29	BAGATELLE RD/TAMARA CT	S	1103	1	6	11	57	340	17					.
30	BAGATELLE RD/WILMINGTON	S	1102	.	6	11	51	340	15					.
31	BAGATELLE RD/PETTIT DR	N	1134	2	3	11	50	340	15					.
32	FIVE TOWN COLLEGE	S	1100	6	6	11	50	340	15	9	2		81.8	.
33	CARMAN RD/CARMAN CT	S	1099	.	.	11	50	340	15					.
34	CARMAN RD/LANGHANS CT	S	1098	.	1	11	49	340	14					.
35	CARMAN RD/WOLF HILL RD	S	1097	4	2	11	51	340	15	9	2		81.8	.
36	WOLF HILL RD/WINDSOR PL	N	1135	2	.	11	53	340	16					.
37	WOLF HILL RD/GREENWICH AV	N	1136	.	.	11	53	340	16					.
38	WOLF HILL RD/NEW YORK AVE	S	1094	10	4	11	59	340	17	7	4		63.6	.
39	NEW YORK AVE/EDISON DR	S	1093	.	5	11	54	340	16					.
40	NEW YORK AVE/STUART CT	N	1092	.	.	11	54	340	16					.
41	WALT WHITMAN MALL	W	1004	3	57	11	0	340	.	5	6		45.5	.
	All 41 Stops	Total		143	143					78	21		78.8	
		Average		7	6									.

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S23 Babylon RR - Walt Whitman Mall - Northbound

All Valid Saturday Trips

Vehicle Trips	11	Boardings Per Mile	0.99	TP Ontime	78
Boardings	143	Boardings Per Hour	15.6	TP Early	21
Revenue Miles	144.0	Schedule Speed (MPH)	15.7	TP Late	0
Revenue Hours	9.2	Actual Speed (MPH)	15.1	Ontime (%)	78.8

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1610	7:30 am	11/17/07 Sat	2	15	15	12	13.1	0.8	1.15	18.0	18.3	15.7	77.8
1611	8:25 am	11/17/07 Sat	4	16	16	8	13.1	0.8	1.22	19.2	17.8	15.7	11.1
1612	9:30 am	11/17/07 Sat	6	0	0	0	13.1	0.8	0.00	0.0	15.7	15.7	100.0
1613	10:30 am	11/17/07 Sat	8	12	12	8	13.1	0.8	0.92	14.4	15.4	15.7	88.9
2604	11:30 am		10	0	0	0	13.1	0.8	0.00	0.0	15.7	15.7	100.0
1615	12:30 pm	11/17/07 Sat	12	14	14	11	13.1	0.8	1.07	16.8	17.5	15.7	100.0
1616	1:30 pm	11/17/07 Sat	14	8	8	5	13.1	0.8	0.61	9.6	16.4	15.7	88.9
1617	2:30 pm	11/17/07 Sat	16	34	34	15	13.1	0.8	2.60	40.8	14.3	15.7	55.6
1618	3:30 pm	11/17/07 Sat	18	11	11	9	13.1	0.8	0.84	13.2	17.5	15.7	66.7
1619	4:30 pm	11/17/07 Sat	20	24	24	12	13.1	0.8	1.83	28.8	1.0	15.7	88.9
1620	5:30 pm	11/17/07 Sat	22	9	9	8	13.1	0.8	0.69	10.8	16.4	15.7	88.9
	All 11 Trips		Total	143	143		144.0	9.2					
			Average	13	13	8	13.1	0.8	0.99	15.6			
			Minimum	0	0	0			0.00	0.0			
			Maximum	34	34	15			2.60	40.8			
			Standard Deviation	10	10	5			0.75	11.8			

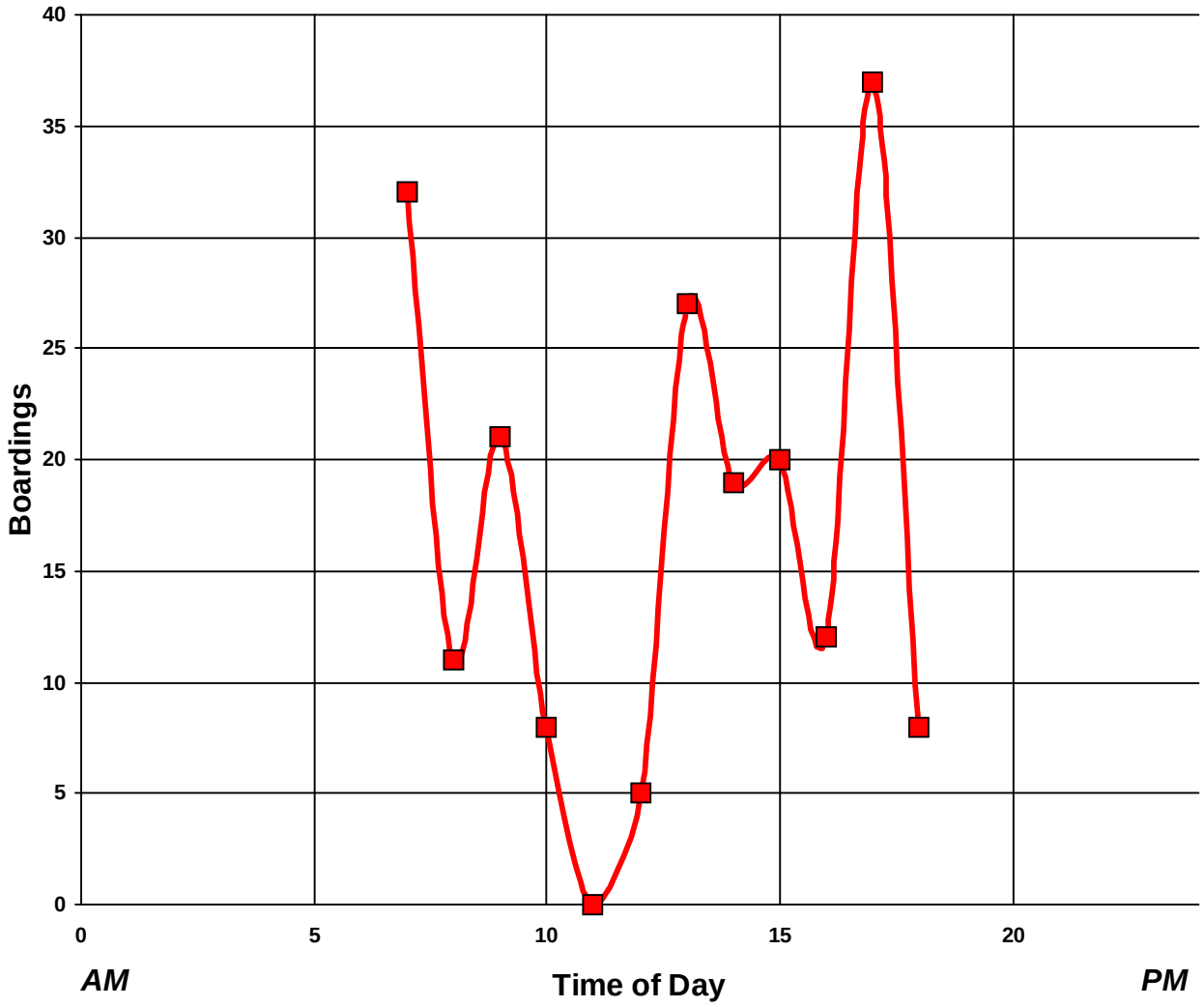
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S23 Babylon RR - Walt Whitman Mall - Southboun

All Valid Saturday Trips

Vehicle Trips	12	Boardings Per Mile	1.16	TP Ontime	80
Boardings	200	Boardings Per Hour	20.0	TP Early	26
Revenue Miles	172.8	Schedule Speed (MPH)	17.3	TP Late	2
Revenue Hours	10.0	Actual Speed (MPH)	18.2	Ontime (%)	74.1

Boardings



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S23 Babylon RR - Walt Whitman Mall - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	WALT WHITMAN MALL	W	1004	51	7	12	44	408	11	12			100.0	.
2	NEW YORK AVE/STUART CT	N	1092	3	1	12	46	408	11					.
3	NICOLLS RD/18TH ST	S	250	.	.	1	1	34	3					.
3	NEW YORK AVE/EDISON DR	S	1093	.	.	12	46	408	11					.
4	WOLF HILL RD/NEW YORK AVE	S	1094	17	13	12	50	408	12	12			100.0	.
5	WOLF HILL RD/JAYNE AVE	S	1095	.	2	12	48	408	12					.
6	WOLF HILL RD/DUNFORD ST	S	1096	.	.	12	48	408	12					.
7	CARMAN RD/WOLF HILL RD	S	1097	9	3	12	54	408	13	12			100.0	.
8	CARMAN RD/LANGHANS CT	S	1098	.	.	12	54	408	13					.
9	CARMAN RD/CARMAN CT	S	1099	.	.	12	54	408	13					.
10	FIVE TOWN COLLEGE	S	1100	11	3	12	62	408	15	11	1		91.7	.
11	BAGATELLE RD/HEMINGWAY D	S	1101	.	.	12	62	408	15					.
12	BAGATELLE RD/WILMINGTON	S	1102	.	.	12	62	408	15					.
13	BAGATELLE RD/TAMARA CT	S	1103	.	.	12	62	408	15					.
14	BAGATELLE RD/LEE AVE	S	1104	1	.	12	63	408	15					.
15	CONKLIN AVE/MAIN AVE	S	1105	8	5	12	66	408	16	6	6		50.0	.
16	NICOLLS RD/18TH ST	S	250	2	9	11	56	374	15					.
17	NICOLLS RD/STRAIGHT PATH	S	1106	2	4	12	57	408	14					.
18	WYANDANCH RAILROAD STATI	S	248	15	14	12	58	408	14	8	4		66.7	.
19	GRAND BLVD/WOODLAND RD	S	1107	13	5	12	66	408	16					.
20	GRAND BLVD/LAKE DR	N	261	5	3	12	68	408	17					.
21	GRAND BLVD/W 23RD ST	N	262	2	.	12	70	408	17					.
22	GRAND BLVD/W 18TH	S	1108	.	9	12	61	408	15					.
23	GRAND BLVD/W 13TH ST	N	1109	2	.	12	63	408	15					.
24	GRAND BLVD/W 9TH ST	S	1110	.	.	12	63	408	15					.
25	GRAND BLVD/W 4TH ST	N	1111	.	.	12	63	408	15					.

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S23 Babylon RR - Walt Whitman Mall - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
26	DEER PARK AVE/GRAND BLVD	S	1112	18	5	12	76	408	19	7	4	1	58.3	.
27	DEER PARK AVE/WESTON AVE	S	1113	.	.	12	76	408	19					.
28	DEER PARK AVE/OAKLAND AV	S	1114	.	3	12	73	408	18					.
29	DEER PARK AVE/PRAIRIE DR	S	305	2	6	12	69	408	17					.
30	DEER PARK AVE/GARNET ST	S	306	.	2	12	67	408	16					.
31	DEER PARK AVE/RYDER AVE	S	307	1	8	12	60	408	15					.
32	SUNSET PLAZA	S	270	9	2	12	67	408	16	7	5		58.3	.
33	DEER PARK AVE/STRATHMOR	S	1115	1	2	12	66	408	16					.
34	DEER PARK AVE/PHELP'S LA	S	1116	2	2	12	66	408	16					.
35	DEER PARK AVE/SCOTT AVE	N	1117	.	2	12	64	408	16					.
36	DEER PARK AVE/EDMUNTON D	S	1118	1	1	12	64	408	16					.
37	DEER PARK AVE/BIRCHFIELD A	S	1119	1	1	12	64	408	16					.
38	DEER PARK AVE/WASHINGTON	S	1120	.	.	12	64	408	16					.
39	DEER PARK AVE/MASON AVE	S	1121	.	2	12	62	408	15					.
40	DEER PARK AVE/PARK AVE	S	1122	.	1	12	61	408	15					.
41	DEER PARK AVE/SOUTH RAILR	S	1123	.	.	12	61	408	15					.
42	BABYLON RAILROAD STATION	W	1074	24	85	12	0	408	.	5	6	1	41.7	.
All 43 Stops		Total		200	200					80	26	2	74.1	
		Average		9	7									.

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S23 Babylon RR - Walt Whitman Mall - Southbound

All Valid Saturday Trips

Vehicle Trips	12	Boardings Per Mile	1.16	TP Ontime	80
Boardings	200	Boardings Per Hour	20.0	TP Early	26
Revenue Miles	172.8	Schedule Speed (MPH)	17.3	TP Late	2
Revenue Hours	10.0	Actual Speed (MPH)	18.2	Ontime (%)	74.1

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1621	7:30 am	11/17/07 Sat	1	32	32	8	13.7	0.8	2.34	38.4	15.5	16.4	77.8
1622	8:30 am	11/17/07 Sat	3	11	11	10	13.7	0.8	0.80	13.2	19.1	16.4	77.8
1623	9:30 am	11/17/07 Sat	5	21	21	11	13.7	0.8	1.54	25.2	14.4	16.4	77.8
1624	10:30 am	11/17/07 Sat	7	8	8	7	22.5	0.8	0.36	9.6	30.0	27.0	44.4
1625	11:30 am	11/17/07 Sat	9	0	0	0	13.7	0.8	0.00	0.0	16.4	16.4	100.0
1626	12:30 pm	11/17/07 Sat	11	5	5	4	13.7	0.8	0.37	6.0	18.2	16.4	44.4
1627	1:30 pm	11/17/07 Sat	13	27	27	5	13.7	0.8	1.98	32.4	18.2	16.4	100.0
1628	2:30 pm	11/17/07 Sat	15	19	19	14	13.7	0.8	1.39	22.8	17.4	16.4	55.6
1629	3:30 pm	11/17/07 Sat	17	20	20	7	13.7	0.8	1.46	24.0	16.4	16.4	100.0
1630	4:30 pm	11/17/07 Sat	19	12	12	9	13.7	0.8	0.88	14.4	18.2	16.4	44.4
1631	5:30 pm	11/17/07 Sat	21	37	37	20	13.7	0.8	2.71	44.4	16.4	16.4	100.0
1632	6:30 pm	11/17/07 Sat	23	8	8	8	13.7	0.8	0.59	9.6	18.2	16.4	66.7
All 12 Trips			Total	200	200		172.8	10.0					
			Average	17	17	9	14.4	0.8	1.20	20.0			
			Minimum	0	0	0			0.00	0.0			
			Maximum	37	37	20			2.71	44.4			
			Standard Deviation	11	11	5			0.85	13.6			

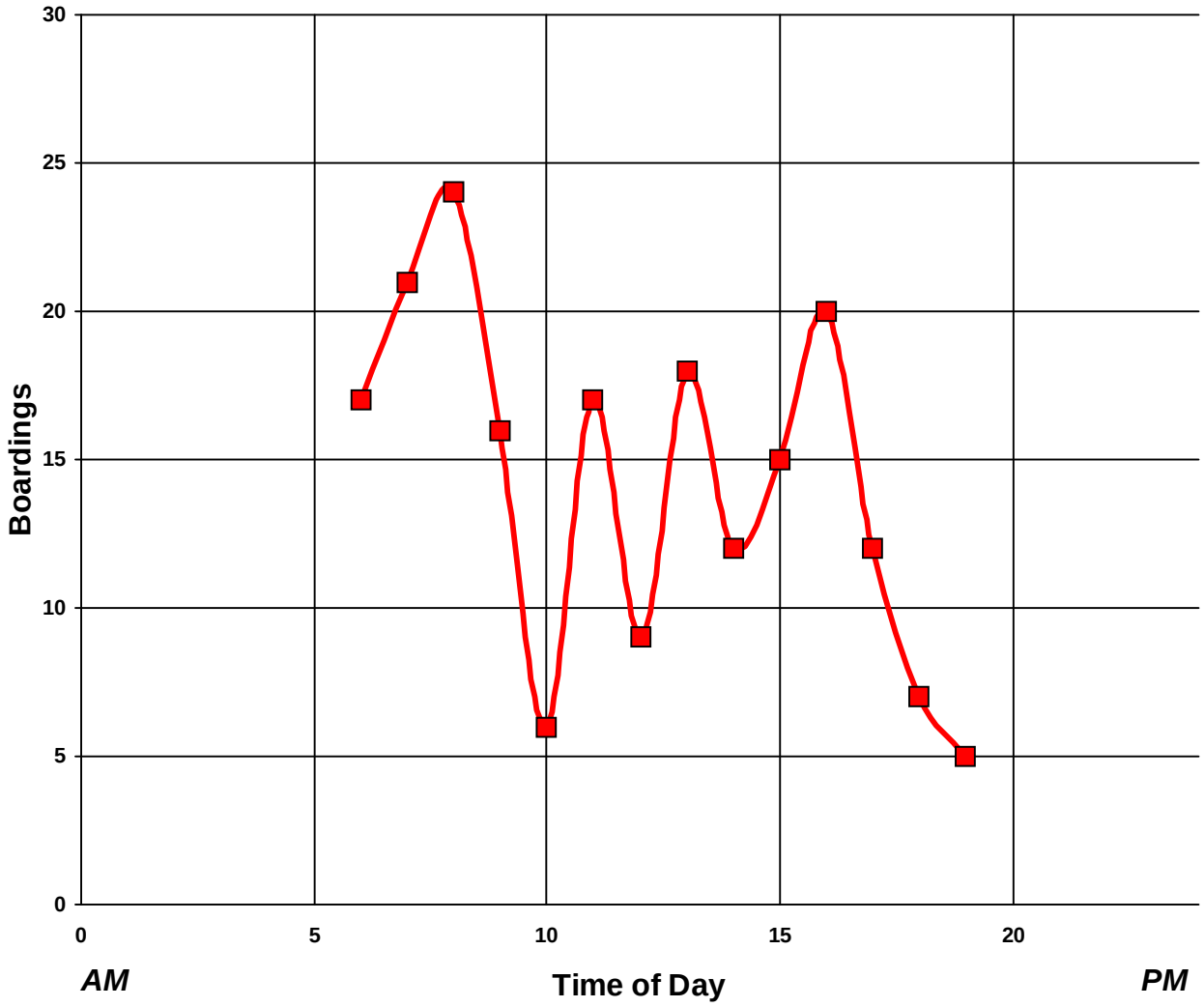
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S29 Babylon - Walt Whitman Mall - Northbound

All Valid Weekday Trips

Vehicle Trips	16	Boardings Per Mile	0.99	TP Ontime	89
Boardings	199	Boardings Per Hour	16.7	TP Early	23
Revenue Miles	200.8	Schedule Speed (MPH)	17.1	TP Late	10
Revenue Hours	11.9	Actual Speed (MPH)	16.8	Ontime (%)	73.0

Boardings



This data is property of Suffolk County Transit

S29 Babylon - Walt Whitman Mall - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	SOUTH BAY SHOPPING CENTE	BL	1068	19	.	10	19	342	6	10			100.0	.
1	BABYLON RAILROAD STATION	W	1074	27	.	6	27	204	13	4	1	1	66.7	.
2	DEER PARK AVE/PARK AVE	S	1122	.	.	6	27	204	13					.
2	W MONTAUK HWY/BERGEN AV	N	1289	4	.	10	23	342	7					.
3	DEER PARK AVE/SMITH ST	N	1124	1	4	6	24	204	12					.
3	W MONTAUK HWY/FLEETS POI	S	1286	2	.	10	25	342	7					.
4	DEER PARK AVE/COCKONOE A	N	1125	.	.	6	24	204	12					.
4	MONTAUK HWY/MELBURY RD	N	1290	6	2	10	29	342	8					.
5	DEER PARK AVE/FOSTER BLV	N	1126	1	.	6	25	204	12					.
5	MONTAUK HWY/BELTON RD	N	1291	.	1	10	28	342	8					.
6	DEER PARK AVE/EDMUNTON D	S	1118	1	.	6	26	204	13					.
6	MONTAUK HWY/CARLL AVE	S	1284	1	.	10	29	342	8					.
7	DEER PARK AVE/SCOTT AVE	N	1117	1	.	6	27	204	13					.
7	DEER PARK AVE/MONTAUK H	W	1216	.	2	10	27	342	8					.
8	BABYLON RAILROAD STATION	W	1074	49	10	10	66	342	19	7	3		70.0	.
8	DEER PARK AVE/COOPER RD	N	1127	.	.	6	27	204	13					.
9	DEER PARK AVE/PARK AVE	S	1122	1	1	10	66	342	19					.
9	DEER PARK AVE/PELL AVE	N	1128	1	.	6	28	204	14					.
10	SUNSET PLAZA	S	270	3	1	6	30	204	15	4	1	1	66.7	.
10	DEER PARK AVE/SMITH ST	N	1124	.	.	10	66	342	19					.
11	DEER PARK AVE/COCKONOE A	N	1125	5	1	10	70	342	20					.
11	DEER PARK AVE/MOHAWK DR	N	1292	.	1	6	29	204	14					.
12	1255 DEER PARK AVE	N	272	1	1	6	29	204	14					.
12	DEER PARK AVE/FOSTER BLV	N	1126	.	.	10	70	342	20					.
13	DEER PARK AVE/EDMUNTON D	S	1118	1	2	10	69	342	20					.
13	1369 DEER PARK AVE	N	1130	.	.	6	29	204	14					.

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S29 Babylon - Walt Whitman Mall - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
14	1473 DEER PARK AVE	N	273	.	1	6	28	204	14					.
14	DEER PARK AVE/SCOTT AVE	N	1117	2	1	10	70	342	20					.
15	DEER PARK AVE/COOPER RD	N	1127	2	2	10	70	342	20					.
15	DEER PARK AVE/OAKLAND AV	N	1293	.	.	6	28	204	14					.
16	DEER PARK AVE/WESTON AVE	S	1113	.	3	6	25	204	12					.
16	DEER PARK AVE/PELL AVE	N	1128	.	.	10	70	342	20					.
17	SUNSET PLAZA	S	270	5	11	10	64	342	19	6	3	1	60.0	.
17	DEER PARK AVE/GRAND BLVD	S	1281	2	4	6	23	204	11	3	2	1	50.0	.
18	DEER PARK AVE/LAKE AVE	S	243	4	2	6	25	204	12					.
18	DEER PARK AVE/MOHAWK DR	N	1292	3	3	10	64	342	19					.
19	DEER PARK AVE/LONG ISLAND	N	179	1	.	6	26	204	13					.
19	1255 DEER PARK AVE	N	272	2	6	10	60	342	18					.
20	1369 DEER PARK AVE	N	1130	.	1	10	59	342	17					.
20	DEER PARK AVE/NICOLLS AVE	S	1278	1	.	6	27	204	13					.
21	1473 DEER PARK AVE	N	273	1	3	10	57	342	17					.
21	DEER PARK AVE/LIBERTY ST	S	1277	1	3	6	25	204	12					.
22	DEER PARK AVE/OAKLAND AV	N	1293	1	3	10	55	342	16					.
22	DEER PARK AVE/CLAREMONT	N	1294	.	1	6	24	204	12					.
23	DEER PARK AVE/WESTON AVE	S	1113	.	.	10	55	342	16					.
23	DEER PARK AVE/KENMORE ST	S	1275	.	3	6	21	204	10	2	2	2	33.3	.
24	DEER PARK AVE/GRAND BLVD	S	1281	10	5	10	60	342	18	9		1	90.0	.
24	762 DEER PARK AVE	N	1295	.	.	2	21	68	31					.
25	DEER PARK AVE/LAKE AVE	S	243	2	3	10	59	342	17					.
25	DEER PARK AVE/STRAIGHT PA	S	1273	.	.	2	21	68	31					.
26	DEER PARK AVE/LONG ISLAND	N	179	2	1	10	60	342	18					.
26	DEER PARK AVE/HALF HOLLO	S	1272	.	.	2	21	68	31					.

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S29 Babylon - Walt Whitman Mall - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	DEER PARK AVE/NICOLLS AVE	S	1278	2	1	10	61	342	18					.
27	DEER PARK AVE/MAC NIECE P	N	1296	.	2	2	19	68	28					.
28	DEER PARK AVE/LIBERTY ST	S	1277	4	7	10	58	342	17					.
28	DEER PARK RD/TALISMAN DR	N	1297	.	.	2	19	68	28					.
29	DEER PARK RD/PARSONS DR	S	1269	.	.	2	19	68	28					.
29	DEER PARK AVE/CLAREMONT	N	1294	2	3	10	57	342	17					.
30	DEER PARK RD/VANDERBILT P	S	1268	1	.	2	20	68	29		1	1	0.0	.
30	DEER PARK AVE/KENMORE ST	S	1275	2	2	10	57	342	17	8	1	1	80.0	.
31	353 DEER PARK RD	S	1267	.	.	2	20	68	29					.
31	762 DEER PARK AVE	N	1295	.	.	10	57	342	17					.
32	DEER PARK AVE/STRAIGHT PA	S	1273	1	2	10	56	342	16					.
32	DEER PARK RD/DE FOREST RD	N	1298	.	.	2	20	68	29					.
33	DEER PARK RD/WOODFERN C	S	1264	.	.	2	20	68	29					.
33	DEER PARK AVE/HALF HOLLO	S	1272	.	1	10	55	342	16					.
34	DEER PARK RD/OLD COUNTRY	S	1263	.	.	2	20	68	29					.
34	DEER PARK AVE/MAC NIECE P	N	1296	2	1	10	56	342	16					.
35	DEER PARK RD/TALISMAN DR	N	1297	1	.	10	57	342	17					.
35	JERICHO TPKE/DEER PARK RD	E	1299	1	.	2	21	68	31		2		0.0	.
36	JERICHO TPKE/DIX HILLS RD	E	1260	.	5	2	16	68	24					.
36	DEER PARK RD/PARSONS DR	S	1269	.	1	10	56	342	16					.
37	DEER PARK RD/VANDERBILT P	S	1268	5	3	10	58	342	17	9		1	90.0	.
37	JERICHO TPKE/COOPER AVE	W	1300	.	.	2	16	68	24					.
38	353 DEER PARK RD	S	1267	.	.	10	58	342	17					.
38	JERICHO TPKE/LONGFELLOW	W	1301	3	.	2	19	68	28					.
39	DEER PARK RD/DE FOREST RD	N	1298	.	.	10	58	342	17					.
39	JERICHO TPKE/DEPOT RD	W	1302	.	.	2	19	68	28					.

This data is property of Suffolk County Transit

S29 Babylon - Walt Whitman Mall - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
40	JERICHO TPKE/MELVILLE RD	E	1256	.	2	2	17	68	25					.
40	DEER PARK RD/WOODFERN C	S	1264	.	2	10	56	342	16					.
41	DEER PARK RD/OLD COUNTRY	S	1263	.	2	10	54	342	16					.
41	JERICHO TPKE/POPLAR AVE	W	1303	.	1	2	16	68	24	1	1		50.0	.
42	JERICHO TPKE/DEER PARK RD	E	1299	1	3	10	52	342	15	7	3		70.0	.
42	NEW YORK AVE/ALBANY ST	W	1304	.	.	2	16	68	24					.
43	NEW YORK AVE/STUART CT	N	1092	.	2	2	14	68	21					.
43	JERICHO TPKE/DIX HILLS RD	E	1260	8	2	10	58	342	17					.
44	WALT WHITMAN MALL	W	1004	.	14	2	0	68	.	2			100.0	.
44	JERICHO TPKE/COOPER AVE	W	1300	2	4	10	56	342	16					.
45	JERICHO TPKE/LONGFELLOW	W	1301	1	4	10	53	342	15					.
46	JERICHO TPKE/DEPOT RD	W	1302	.	2	10	51	342	15					.
47	JERICHO TPKE/MELVILLE RD	E	1256	.	.	10	51	342	15					.
48	JERICHO TPKE/POPLAR AVE	W	1303	.	3	10	48	342	14	8	2		80.0	.
49	NEW YORK AVE/ALBANY ST	W	1304	.	5	10	43	342	13					.
50	NEW YORK AVE/STUART CT	N	1092	.	3	10	40	342	12					.
51	WALT WHITMAN MALL	W	1004	.	40	10	0	342	.	9	1		90.0	.
	All 95 Stops	Total		199	199					89	23	10	73.0	
		Average		4	4									.

This data is property of Suffolk County Transit

S29 Babylon - Walt Whitman Mall - Northbound

All Valid Weekday Trips

Vehicle Trips	16	Boardings Per Mile	0.99	TP Ontime	89
Boardings	199	Boardings Per Hour	16.7	TP Early	23
Revenue Miles	200.8	Schedule Speed (MPH)	17.1	TP Late	10
Revenue Hours	11.9	Actual Speed (MPH)	16.8	Ontime (%)	73.0

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
255	6:00 am	10/11/07 Thu	2	15	15	12	13.4	0.8	1.12	20.0	17.8	17.8	37.5
256	6:10 am	10/17/07 Wed	4	2	2	2	5.5	0.3	0.36	6.0	17.5	16.6	0.0
257	7:00 am	10/16/07 Tue	6	18	18	14	13.4	0.8	1.35	24.0	19.1	17.8	75.0
258	7:10 am	10/17/07 Wed	8	3	3	3	5.5	0.3	0.54	9.0	17.5	16.6	0.0
259	8:00 am	10/17/07 Wed	10	24	24	17	15.2	0.9	1.58	26.2	16.3	16.6	77.8
260	9:00 am	10/16/07 Tue	12	16	16	14	15.2	0.9	1.05	17.5	16.3	16.6	100.0
261	10:00 am	10/17/07 Wed	14	6	6	3	15.2	0.9	0.39	6.5	16.6	16.6	77.8
262	11:00 am	10/16/07 Tue	16	17	17	9	15.2	0.9	1.12	18.5	16.6	16.6	100.0
263	12:00 pm	10/16/07 Tue	18	9	9	4	15.2	0.9	0.59	9.8	16.9	16.6	44.4
742	1:00 pm	10/17/07 Wed	20	18	18	9	15.2	0.9	1.18	19.6	16.6	16.6	100.0
743	2:00 pm	10/16/07 Tue	22	12	12	7	15.2	0.9	0.79	13.1	16.6	16.6	88.9
744	3:00 pm	10/17/07 Wed	24	15	15	7	15.2	0.9	0.99	16.4	16.0	16.6	77.8
745	4:00 pm	10/16/07 Tue	26	20	20	10	15.2	0.9	1.32	21.8	16.6	16.6	88.9
268	5:10 pm	10/17/07 Wed	28	12	12	8	15.2	0.9	0.79	13.1	16.3	16.6	55.6
269	6:15 pm	10/16/07 Tue	30	7	7	5	5.5	0.3	1.26	21.0	16.6	16.6	100.0
270	7:15 pm	10/17/07 Wed	32	5	5	5	5.5	0.3	0.90	20.0	15.9	22.2	75.0
	All 16 Trips		Total	199	199		200.8	11.9					
			Average	12	12	8	12.6	0.7	0.96	16.4			
			Minimum	2	2	2			0.36	6.0			
			Maximum	24	24	17			1.58	26.2			
			Standard Deviation	7	7	4			0.36	6.2			

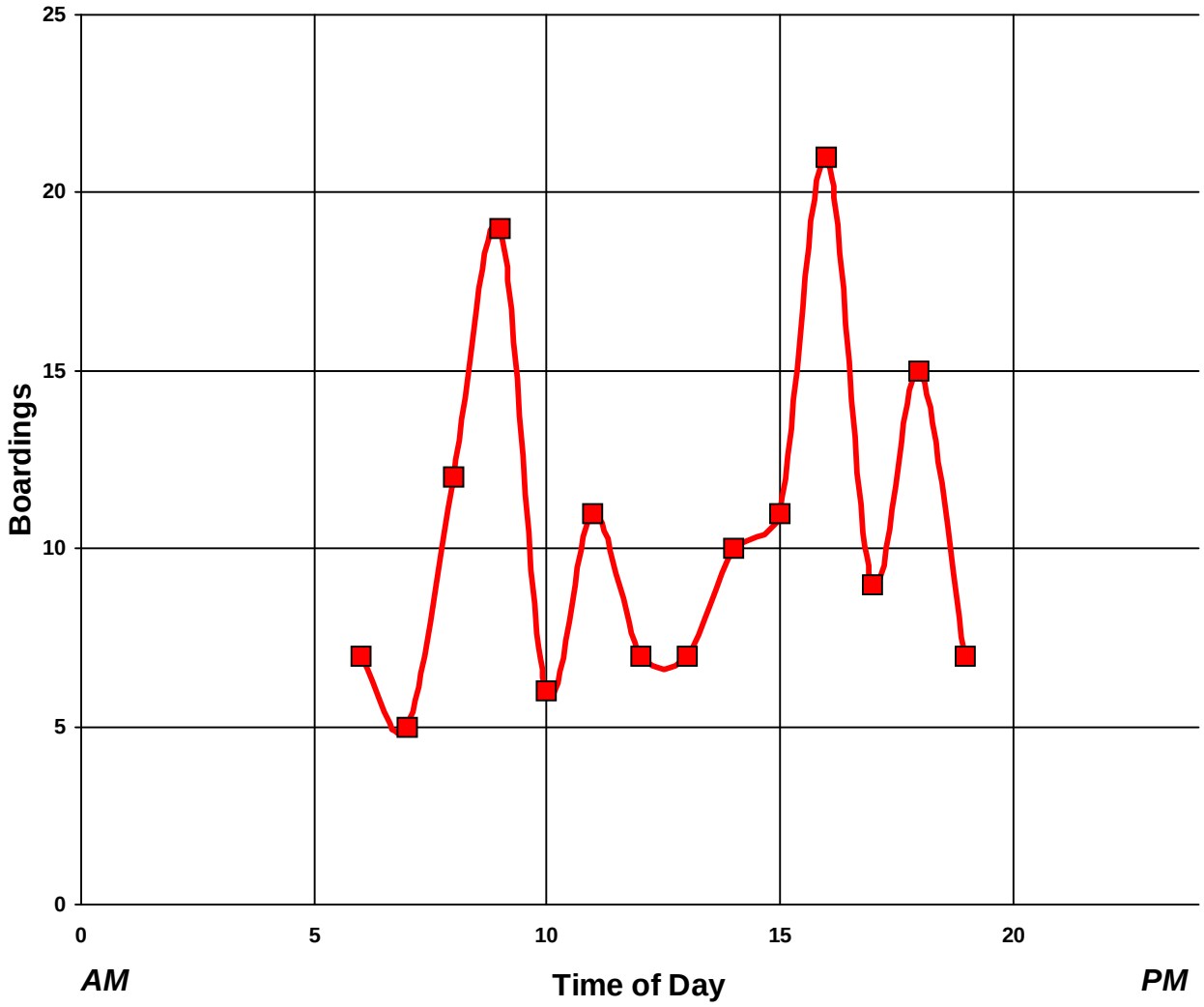
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S29 Babylon - Walt Whitman Mall - Southbound

All Valid Weekday Trips

Vehicle Trips	15	Boardings Per Mile	0.76	TP Ontime	65
Boardings	147	Boardings Per Hour	13.0	TP Early	38
Revenue Miles	193.6	Schedule Speed (MPH)	17.6	TP Late	14
Revenue Hours	11.3	Actual Speed (MPH)	18.7	Ontime (%)	55.6

Boardings



This data is property of Suffolk County Transit

S29 Babylon - Walt Whitman Mall - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	WALT WHITMAN MALL	W	1004	41	.	12	41	410	10	10		2	83.3	.
1	DEER PARK AVE/KENMORE ST	S	1275	.	.	2	0	68	.		1	1	0.0	.
1	DEER PARK AVE/GRAND BLVD	S	1281	2	.	1	2	34	6			1	0.0	.
2	WALT WHITMAN RD/DETROIT P	E	1003	3	.	12	44	410	11					.
2	DEER PARK AVE/WESTON AVE	S	1113	.	.	1	2	34	6					.
2	2122 DEER PARK AVE	S	1276	.	.	2	0	68	.					.
3	DEER PARK AVE/OAKLAND AV	S	1114	1	.	1	3	34	9					.
3	JERICHO TPKE/NEW YORK AV	E	1254	1	.	12	45	410	11					.
3	DEER PARK AVE/LIBERTY ST	S	1277	1	.	2	1	68	1					.
4	DEER PARK AVE/PRAIRIE DR	S	305	.	.	1	3	34	9					.
4	HUNTINGTON TOWN HOUSE	S	1255	4	.	12	49	410	12	6	5	1	50.0	.
4	DEER PARK AVE/NICOLLS AVE	S	1278	.	.	2	1	68	1					.
5	DEER PARK AVE/GARNET ST	S	306	.	.	1	3	34	9					.
5	JERICHO TPKE/MELVILLE RD	E	1256	3	.	12	52	410	13					.
5	1948 DEER PARK AVE	S	1279	.	.	2	1	68	1					.
6	DEER PARK AVE/RYDER AVE	S	307	.	.	1	3	34	9					.
6	JERICHO TPKE/PIDGEON HILL	E	1257	1	.	12	53	410	13					.
6	DEER PARK AVE/LONG ISLAND	S	1280	1	.	2	2	68	3					.
7	DEER PARK AVE/LAKE AVE	S	243	.	.	2	2	68	3					.
7	SUNSET PLAZA	S	270	1	.	1	4	34	12			1	0.0	.
7	JERICHO TPKE/BEVERLY RD	E	1258	.	.	12	53	410	13					.
8	DEER PARK AVE/STRATHMOR	S	1115	.	.	1	4	34	12					.
8	888 JERICHO TPKE	E	1259	.	.	12	53	410	13					.
8	DEER PARK AVE/GRAND BLVD	S	1281	.	.	2	2	68	3		1	1	0.0	.
9	DEER PARK AVE/WESTON AVE	S	1113	.	.	2	2	68	3					.
9	DEER PARK AVE/PHELP'S LA	S	1116	.	.	1	4	34	12					.

This data is property of Suffolk County Transit

S29 Babylon - Walt Whitman Mall - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
9	JERICHO TPKE/DIX HILLS RD	E	1260	2	.	12	55	410	13					.
10	DEER PARK AVE/OAKLAND AV	S	1114	.	.	2	2	68	3					.
10	JERICHO TPKE/STATE PL	S	1261	.	.	12	55	410	13					.
10	DEER PARK AVE/STONE LA	S	1282	1	.	1	5	34	15					.
11	DEER PARK AVE/PRAIRIE DR	S	305	1	.	2	3	68	4					.
11	DEER PARK AVE/EDMUNTON D	S	1118	.	.	1	5	34	15					.
11	DEER PARK RD/JERICHO TPKE	S	1262	1	2	12	54	410	13	7	5		58.3	.
12	DEER PARK AVE/GARNET ST	S	306	1	.	2	4	68	6					.
12	DEER PARK AVE/BIRCHFIELD A	S	1119	.	.	1	5	34	15					.
12	DEER PARK RD/OLD COUNTRY	S	1263	2	.	12	56	410	14					.
13	DEER PARK AVE/RYDER AVE	S	307	1	.	2	5	68	7					.
13	DEER PARK AVE/WASHINGTON	S	1120	.	.	1	5	34	15					.
13	DEER PARK RD/WOODFERN C	S	1264	.	.	12	56	410	14					.
14	SUNSET PLAZA	S	270	.	.	2	5	68	7	1	1		50.0	.
14	DEER PARK AVE/MASON AVE	S	1121	.	.	1	5	34	15					.
14	DEER PARK RD/WOODEDGE D	S	1265	.	.	12	56	410	14					.
15	DEER PARK AVE/STRATHMOR	S	1115	.	.	2	5	68	7					.
15	DEER PARK AVE/PARK AVE	S	1122	.	.	1	5	34	15					.
15	DEER PARK RD/CALEDONIA R	S	1266	.	.	12	56	410	14					.
16	DEER PARK AVE/PHELP'S LA	S	1116	.	.	2	5	68	7					.
16	353 DEER PARK RD	S	1267	1	.	12	57	410	14					.
16	DEER PARK AVE/RAILROAD AV	S	1283	.	.	1	5	34	15					.
17	BABYLON RAILROAD STATION	W	1074	.	5	1	0	34	.			1	0.0	.
17	DEER PARK RD/VANDERBILT P	S	1268	2	3	12	56	410	14	10	2		83.3	.
17	DEER PARK AVE/STONE LA	S	1282	.	.	2	5	68	7					.
18	DEER PARK AVE/EDMUNTON D	S	1118	.	.	2	5	68	7					.

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S29 Babylon - Walt Whitman Mall - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
18	DEER PARK RD/PARSONS DR	S	1269	.	2	12	54	410	13					.
19	DEER PARK AVE/BIRCHFIELD A	S	1119	.	.	2	5	68	7					.
19	DEER PARK RD/LANDVIEW DR	S	1270	2	.	12	56	410	14					.
20	DEER PARK AVE/WASHINGTON	S	1120	.	.	2	5	68	7					.
20	DEER PARK AVE/SOUTH SERVI	S	1271	5	3	12	58	410	14					.
21	DEER PARK AVE/MASON AVE	S	1121	.	.	2	5	68	7					.
21	DEER PARK AVE/HALF HOLLO	S	1272	1	.	12	59	410	14					.
22	DEER PARK AVE/PARK AVE	S	1122	.	.	2	5	68	7					.
22	DEER PARK AVE/STRAIGHT PA	S	1273	.	1	12	58	410	14					.
23	DEER PARK AVE/NEW JERSEY	S	1274	3	1	12	60	410	15					.
23	DEER PARK AVE/RAILROAD AV	S	1283	.	.	2	5	68	7					.
24	BABYLON RAILROAD STATION	W	1074	1	4	2	2	68	3	2			100.0	.
24	DEER PARK AVE/KENMORE ST	S	1275	3	3	12	60	410	15	3	9		25.0	.
25	DEER PARK AVE/MONTAUK H	W	1216	1	.	1	3	34	9					.
25	2122 DEER PARK AVE	S	1276	1	1	12	60	410	15					.
26	DEER PARK AVE/LIBERTY ST	S	1277	2	.	12	62	410	15					.
26	MONTAUK HWY/CARLL AVE	S	1284	.	.	1	3	34	9					.
27	DEER PARK AVE/NICOLLS AVE	S	1278	6	5	12	63	410	15					.
27	MONTAUK HWY/ARGYLE AVE	S	1285	.	.	1	3	34	9					.
28	MONTAUK HWY/LITTLE EAST N	S	1066	.	.	1	3	34	9					.
28	1948 DEER PARK AVE	S	1279	1	1	12	63	410	15					.
29	DEER PARK AVE/LONG ISLAND	S	1280	1	.	12	64	410	16					.
29	W MONTAUK HWY/FLEETS POI	S	1286	.	1	1	2	34	6					.
30	DEER PARK AVE/LAKE AVE	S	243	.	1	12	63	410	15					.
30	W MONTAUK HWY/GREAT EAS	S	1287	.	1	1	1	34	3					.
31	DEER PARK AVE/GRAND BLVD	S	1281	6	7	12	62	410	15	4	8		33.3	.

This data is property of Suffolk County Transit

S29 Babylon - Walt Whitman Mall - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced
							Load	Capacity	%	On	Early	Late	OT%	%
31	W MONTAUK HWY/BROOKVAL	S	1288	.	.	1	1	34	3					.
32	SOUTH BAY SHOPPING CENTE	BL	1068	.	1	1	0	34	.	1			100.0	.
32	DEER PARK AVE/WESTON AVE	S	1113	4	1	12	65	410	16					.
33	DEER PARK AVE/OAKLAND AV	S	1114	.	2	12	63	410	15					.
34	DEER PARK AVE/PRAIRIE DR	S	305	3	2	12	64	410	16					.
35	DEER PARK AVE/GARNET ST	S	306	1	5	12	60	410	15					.
36	DEER PARK AVE/RYDER AVE	S	307	2	6	12	56	410	14					.
37	SUNSET PLAZA	S	270	17	7	12	66	410	16	6	5	1	50.0	.
38	DEER PARK AVE/STRATHMOR	S	1115	3	2	12	67	410	16					.
39	DEER PARK AVE/PHELP'S LA	S	1116	3	.	12	70	410	17					.
40	DEER PARK AVE/STONE LA	S	1282	1	.	12	71	410	17					.
41	DEER PARK AVE/EDMUNTON D	S	1118	.	2	12	69	410	17					.
42	DEER PARK AVE/BIRCHFIELD A	S	1119	.	1	12	68	410	17					.
43	DEER PARK AVE/WASHINGTON	S	1120	.	.	12	68	410	17					.
44	DEER PARK AVE/MASON AVE	S	1121	.	.	12	68	410	17					.
45	DEER PARK AVE/PARK AVE	S	1122	.	1	12	67	410	16					.
46	DEER PARK AVE/RAILROAD AV	S	1283	.	1	12	66	410	16					.
47	BABYLON RAILROAD STATION	W	1074	7	60	12	13	410	3	9		3	75.0	.
48	DEER PARK AVE/MONTAUK H	W	1216	1	4	9	10	308	3					.
49	MONTAUK HWY/CARLL AVE	S	1284	.	2	9	8	308	3					.
50	MONTAUK HWY/ARGYLE AVE	S	1285	.	.	9	8	308	3					.
51	MONTAUK HWY/LITTLE EAST N	S	1066	1	.	9	9	308	3					.
52	W MONTAUK HWY/FLEETS POI	S	1286	.	1	9	8	308	3					.
53	W MONTAUK HWY/GREAT EAS	S	1287	.	1	9	7	308	2					.
54	W MONTAUK HWY/BROOKVAL	S	1288	.	.	9	7	308	2					.
55	SOUTH BAY SHOPPING CENTE	BL	1068	.	7	9	0	308	.	6	1	2	66.7	.

This data is property of Suffolk County Transit

S29 Babylon - Walt Whitman Mall - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
	All 104 Stops	Total		147	147					65	38	14	55.6	
		Average		3	4									.

This data is property of Suffolk County Transit

S29 Babylon - Walt Whitman Mall - Southbound

All Valid Weekday Trips

Vehicle Trips	15	Boardings Per Mile	0.76	TP Ontime	65
Boardings	147	Boardings Per Hour	13.0	TP Early	38
Revenue Miles	193.6	Schedule Speed (MPH)	17.6	TP Late	14
Revenue Hours	11.3	Actual Speed (MPH)	18.7	Ontime (%)	55.6

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
271	6:00 am	10/17/07 Wed	1	5	5	5	4.1	0.2	1.23	30.0	24.4	24.4	0.0
272	6:30 am	10/17/07 Wed	3	2	2	2	5.4	0.3	0.37	6.0	32.4	16.2	50.0
273	7:30 am	10/17/07 Wed	5	5	5	3	7.3	0.4	0.69	12.0	16.7	17.4	40.0
274	8:00 am	10/16/07 Tue	7	12	12	8	15.2	0.9	0.79	13.1	16.3	16.6	66.7
275	9:00 am	10/17/07 Wed	9	19	19	13	15.2	0.9	1.25	20.7	16.6	16.6	66.7
276	10:00 am	10/16/07 Tue	11	6	6	5	15.2	0.9	0.39	6.5	18.2	16.6	77.8
277	11:00 am	10/17/07 Wed	13	11	11	8	15.2	0.9	0.72	12.0	16.6	16.6	77.8
756	12:00 pm	10/16/07 Tue	15	7	7	4	15.2	0.9	0.46	7.6	14.7	16.6	11.1
279	1:00 pm	10/16/07 Tue	17	7	7	5	15.2	0.9	0.46	7.6	14.0	16.6	22.2
758	2:00 pm	10/17/07 Wed	19	10	10	6	15.2	0.9	0.66	10.9	17.5	16.6	33.3
281	3:00 pm	10/16/07 Tue	21	11	11	7	15.2	0.9	0.72	12.0	16.9	16.6	100.0
760	4:00 pm	10/17/07 Wed	23	21	21	12	15.2	0.9	1.38	22.9	16.3	16.6	44.4
761	5:00 pm	10/16/07 Tue	25	9	9	5	13.3	0.8	0.67	10.8	17.4	16.0	75.0
762	6:05 pm	10/17/07 Wed	27	15	15	8	13.3	0.8	1.12	20.0	18.6	17.8	75.0
285	7:20 pm	10/11/07 Thu	29	7	7	5	13.3	0.6	0.52	12.0	23.6	22.9	50.0
All 15 Trips			Total	147	147		193.6	11.3					
			Average	10	10	6	12.9	0.8	0.76	13.6			
			Minimum	2	2	2			0.37	6.0			
			Maximum	21	21	13			1.38	30.0			
			Standard Deviation	5	5	3			0.33	6.8			

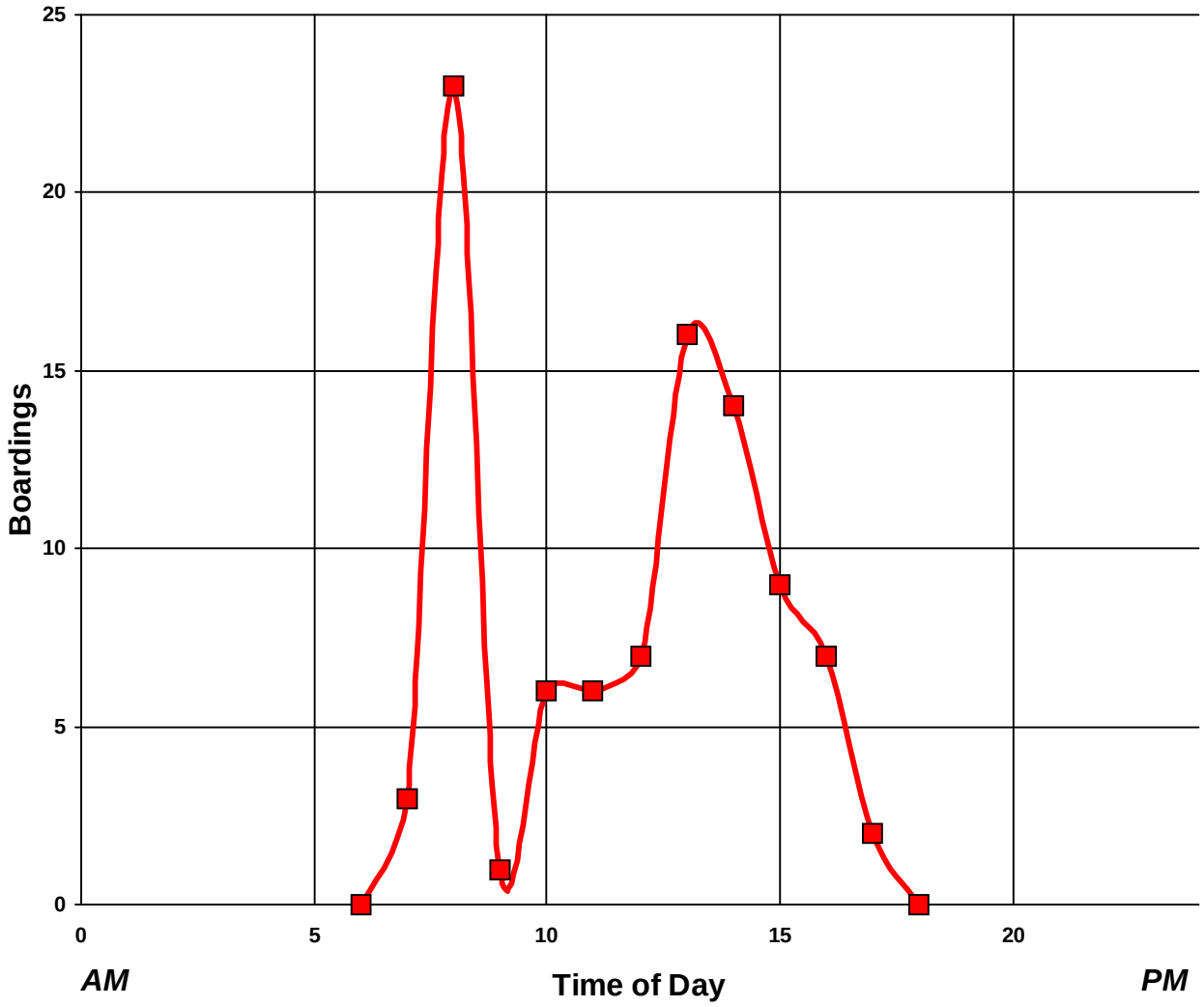
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S29 Babylon - Walt Whitman Mall - Northbound

All Valid Saturday Trips

Vehicle Trips	13	Boardings Per Mile	0.56	TP Ontime	85
Boardings	94	Boardings Per Hour	9.2	TP Early	7
Revenue Miles	168.6	Schedule Speed (MPH)	16.6	TP Late	10
Revenue Hours	10.2	Actual Speed (MPH)	16.8	Ontime (%)	83.3

Boardings



This data is property of Suffolk County Transit

S29 Babylon - Walt Whitman Mall - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	SOUTH BAY SHOPPING CENTE	BL	1068	11	.	10	11	350	3	9		1	90.0	.
1	BABYLON RAILROAD STATION	W	1074	.	.	3	0	102	.	3			100.0	.
2	DEER PARK AVE/PARK AVE	S	1122	.	.	3	0	102	.					.
2	W MONTAUK HWY/BERGEN AV	N	1289	.	.	10	11	350	3					.
3	DEER PARK AVE/SMITH ST	N	1124	.	.	3	0	102	.					.
3	W MONTAUK HWY/FLEETS POI	S	1286	3	.	10	14	350	4					.
4	DEER PARK AVE/COCKONOE A	N	1125	.	.	3	0	102	.					.
4	MONTAUK HWY/MELBURY RD	N	1290	.	.	10	14	350	4					.
5	DEER PARK AVE/FOSTER BLV	N	1126	.	.	3	0	102	.					.
5	MONTAUK HWY/BELTON RD	N	1291	.	.	10	14	350	4					.
6	DEER PARK AVE/EDMUNTON D	S	1118	.	.	3	0	102	.					.
6	MONTAUK HWY/CARLL AVE	S	1284	.	.	10	14	350	4					.
7	DEER PARK AVE/SCOTT AVE	N	1117	.	.	3	0	102	.					.
7	DEER PARK AVE/MONTAUK H	W	1216	2	2	10	14	350	4					.
8	BABYLON RAILROAD STATION	W	1074	34	9	10	39	350	11	7	1	2	70.0	.
8	DEER PARK AVE/COOPER RD	N	1127	.	.	3	0	102	.					.
9	DEER PARK AVE/PARK AVE	S	1122	.	1	10	38	350	11					.
9	DEER PARK AVE/PELL AVE	N	1128	.	.	3	0	102	.					.
10	SUNSET PLAZA	S	270	1	.	3	1	102	1	2	1		66.7	.
10	DEER PARK AVE/SMITH ST	N	1124	1	.	10	39	350	11					.
11	DEER PARK AVE/COCKONOE A	N	1125	1	.	10	40	350	11					.
11	DEER PARK AVE/MOHAWK DR	N	1292	.	.	3	1	102	1					.
12	1255 DEER PARK AVE	N	272	.	.	3	1	102	1					.
12	DEER PARK AVE/FOSTER BLV	N	1126	.	3	10	37	350	11					.
13	DEER PARK AVE/EDMUNTON D	S	1118	1	1	10	37	350	11					.
13	1369 DEER PARK AVE	N	1130	.	.	3	1	102	1					.

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S29 Babylon - Walt Whitman Mall - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
14	1473 DEER PARK AVE	N	273	1	.	3	2	102	2					.
14	DEER PARK AVE/SCOTT AVE	N	1117	.	.	10	37	350	11					.
15	DEER PARK AVE/COOPER RD	N	1127	1	1	10	37	350	11					.
15	DEER PARK AVE/OAKLAND AV	N	1293	.	.	3	2	102	2					.
16	DEER PARK AVE/WESTON AVE	S	1113	.	.	3	2	102	2					.
16	DEER PARK AVE/PELL AVE	N	1128	1	.	10	38	350	11					.
17	SUNSET PLAZA	S	270	4	4	10	38	350	11	8	1	1	80.0	.
17	DEER PARK AVE/GRAND BLVD	S	1281	1	.	3	3	102	3	2	1		66.7	.
18	DEER PARK AVE/LAKE AVE	S	243	.	.	3	3	102	3					.
18	DEER PARK AVE/MOHAWK DR	N	1292	.	2	10	36	350	10					.
19	DEER PARK AVE/LONG ISLAND	N	179	.	.	3	3	102	3					.
19	1255 DEER PARK AVE	N	272	1	5	10	32	350	9					.
20	1369 DEER PARK AVE	N	1130	4	1	10	35	350	10					.
20	DEER PARK AVE/NICOLLS AVE	S	1278	.	.	3	3	102	3					.
21	1473 DEER PARK AVE	N	273	.	3	10	32	350	9					.
21	DEER PARK AVE/LIBERTY ST	S	1277	.	2	3	1	102	1					.
22	DEER PARK AVE/OAKLAND AV	N	1293	.	2	10	30	350	9					.
22	DEER PARK AVE/CLAREMONT	N	1294	.	.	3	1	102	1					.
23	DEER PARK AVE/WESTON AVE	S	1113	.	.	10	30	350	9					.
23	DEER PARK AVE/KENMORE ST	S	1275	.	1	3	0	102	.	3			100.0	.
24	DEER PARK AVE/GRAND BLVD	S	1281	5	5	10	30	350	9	8	1	1	80.0	.
25	DEER PARK AVE/LAKE AVE	S	243	1	.	10	31	350	9					.
26	DEER PARK AVE/LONG ISLAND	N	179	.	.	10	31	350	9					.
27	DEER PARK AVE/NICOLLS AVE	S	1278	.	1	10	30	350	9					.
28	DEER PARK AVE/LIBERTY ST	S	1277	3	1	10	32	350	9					.
29	DEER PARK AVE/CLAREMONT	N	1294	1	1	10	32	350	9					.

This data is property of Suffolk County Transit

S29 Babylon - Walt Whitman Mall - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
30	DEER PARK AVE/KENMORE ST	S	1275	3	1	10	34	350	10	9		1	90.0	.
31	762 DEER PARK AVE	N	1295	.	.	10	34	350	10					.
32	DEER PARK AVE/STRAIGHT PA	S	1273	1	.	10	35	350	10					.
33	DEER PARK AVE/HALF HOLLO	S	1272	1	.	10	36	350	10					.
34	DEER PARK AVE/MAC NIECE P	N	1296	1	.	10	37	350	11					.
35	DEER PARK RD/TALISMAN DR	N	1297	4	.	10	41	350	12					.
36	DEER PARK RD/PARSONS DR	S	1269	.	.	10	41	350	12					.
37	DEER PARK RD/VANDERBILT P	S	1268	2	3	10	40	350	11	9		1	90.0	.
38	353 DEER PARK RD	S	1267	.	.	10	40	350	11					.
39	DEER PARK RD/DE FOREST RD	N	1298	1	1	10	40	350	11					.
40	DEER PARK RD/WOODFERN C	S	1264	.	.	10	40	350	11					.
41	DEER PARK RD/OLD COUNTRY	S	1263	.	.	10	40	350	11					.
42	JERICHO TPKE/DEER PARK RD	E	1299	3	5	10	38	350	11	7	2	1	70.0	.
43	JERICHO TPKE/DIX HILLS RD	E	1260	.	.	10	38	350	11					.
44	JERICHO TPKE/COOPER AVE	W	1300	1	.	10	39	350	11					.
45	JERICHO TPKE/LONGFELLOW	W	1301	.	3	10	36	350	10					.
46	JERICHO TPKE/DEPOT RD	W	1302	.	3	10	33	350	9					.
47	JERICHO TPKE/MELVILLE RD	E	1256	.	.	10	33	350	9					.
48	JERICHO TPKE/POPLAR AVE	W	1303	.	2	10	31	350	9	9		1	90.0	.
49	NEW YORK AVE/ALBANY ST	W	1304	.	.	10	31	350	9					.
50	NEW YORK AVE/STUART CT	N	1092	.	4	10	27	350	8					.
51	WALT WHITMAN MALL	W	1004	.	27	10	0	350	.	9		1	90.0	.
	All 74 Stops	Total		94	94					85	7	10	83.3	
		Average		3	3									.

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S29 Babylon - Walt Whitman Mall - Northbound

All Valid Saturday Trips

Vehicle Trips	13	Boardings Per Mile	0.56	TP Ontime	85
Boardings	94	Boardings Per Hour	9.2	TP Early	7
Revenue Miles	168.6	Schedule Speed (MPH)	16.6	TP Late	10
Revenue Hours	10.2	Actual Speed (MPH)	16.8	Ontime (%)	83.3

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1667	6:15 am	11/17/07 Sat	2	0	0	0	5.5	0.3	0.00	0.0	16.6	16.6	100.0
1668	7:10 am	11/17/07 Sat	8	3	3	3	5.5	0.3	0.54	9.0	16.6	16.6	50.0
1669	8:00 am	11/17/07 Sat	10	23	23	15	15.2	0.9	1.51	25.1	16.0	16.6	100.0
1670	9:00 am	11/24/07 Sat	12	1	1	1	15.2	0.9	0.07	1.1	14.5	16.6	11.1
1671	10:00 am	11/17/07 Sat	14	6	6	4	15.2	0.9	0.39	6.5	16.6	16.6	66.7
1672	11:00 am	11/24/07 Sat	16	6	6	3	15.2	0.9	0.39	6.5	16.6	16.6	100.0
1673	12:00 pm	11/17/07 Sat	18	7	7	3	15.2	0.9	0.46	7.6	16.6	16.6	100.0
1674	1:00 pm	11/17/07 Sat	20	16	16	10	15.2	0.9	1.05	17.5	18.6	16.6	77.8
1675	2:00 pm	11/17/07 Sat	22	14	14	9	15.2	0.9	0.92	15.3	18.2	16.6	77.8
1676	3:00 pm	11/24/07 Sat	24	9	9	6	15.2	0.9	0.59	9.8	16.6	16.6	100.0
1677	4:00 pm	11/17/07 Sat	26	7	7	3	15.2	0.9	0.46	7.6	18.2	16.6	100.0
1678	5:10 pm	11/24/07 Sat	28	2	2	2	15.2	0.9	0.13	2.2	16.6	16.6	100.0
2622	6:15 pm	11/17/07 Sat	28	0	0	0	5.5	0.3	0.00	0.0	16.6	16.6	100.0
All 13 Trips			Total	94	94		168.6	10.2					
			Average	7	7	5	13.0	0.8	0.50	8.3			
			Minimum	0	0	0			0.00	0.0			
			Maximum	23	23	15			1.51	25.1			
			Standard Deviation	7	7	4			0.44	7.4			

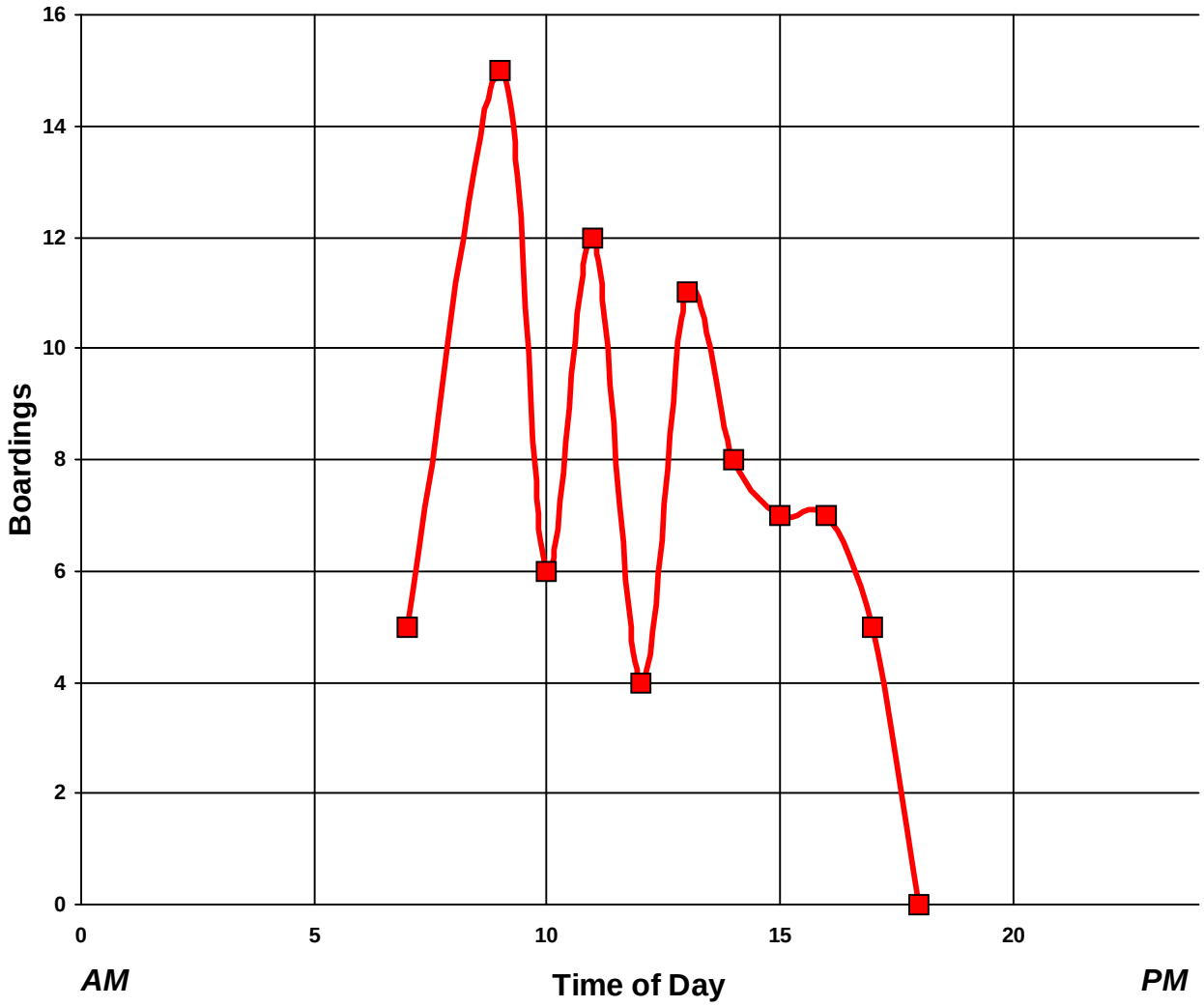
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S29 Babylon - Walt Whitman Mall - Southbound

All Valid Saturday Trips

Vehicle Trips	11	Boardings Per Mile	0.51	TP Ontime	71
Boardings	80	Boardings Per Hour	8.6	TP Early	20
Revenue Miles	155.6	Schedule Speed (MPH)	16.7	TP Late	2
Revenue Hours	9.3	Actual Speed (MPH)	17.6	Ontime (%)	76.3

Boardings



This data is property of Suffolk County Transit

S29 Babylon - Walt Whitman Mall - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	WALT WHITMAN MALL	W	1004	23	.	10	23	348	7	8		2	80.0	.
1	DEER PARK AVE/KENMORE ST	S	1275	1	.	1	1	34	3	1			100.0	.
2	WALT WHITMAN RD/DETROIT P	E	1003	.	.	10	23	348	7					.
2	2122 DEER PARK AVE	S	1276	.	.	1	1	34	3					.
3	JERICHO TPKE/NEW YORK AV	E	1254	1	.	10	24	348	7					.
3	DEER PARK AVE/LIBERTY ST	S	1277	.	.	1	1	34	3					.
4	HUNTINGTON TOWN HOUSE	S	1255	1	.	10	25	348	7	8	2		80.0	.
4	DEER PARK AVE/NICOLLS AVE	S	1278	.	.	1	1	34	3					.
5	JERICHO TPKE/MELVILLE RD	E	1256	.	1	10	24	348	7					.
5	1948 DEER PARK AVE	S	1279	.	.	1	1	34	3					.
6	JERICHO TPKE/PIDGEON HILL	E	1257	3	.	10	27	348	8					.
6	DEER PARK AVE/LONG ISLAND	S	1280	.	.	1	1	34	3					.
7	DEER PARK AVE/LAKE AVE	S	243	.	.	1	1	34	3					.
7	JERICHO TPKE/BEVERLY RD	E	1258	3	.	10	30	348	9					.
8	888 JERICHO TPKE	E	1259	2	1	10	31	348	9					.
8	DEER PARK AVE/GRAND BLVD	S	1281	1	.	1	2	34	6	1			100.0	.
9	DEER PARK AVE/WESTON AVE	S	1113	.	.	1	2	34	6					.
9	JERICHO TPKE/DIX HILLS RD	E	1260	1	.	10	32	348	9					.
10	DEER PARK AVE/OAKLAND AV	S	1114	.	.	1	2	34	6					.
10	JERICHO TPKE/STATE PL	S	1261	.	.	10	32	348	9					.
11	DEER PARK AVE/PRAIRIE DR	S	305	1	.	1	3	34	9					.
11	DEER PARK RD/JERICHO TPKE	S	1262	1	2	10	31	348	9	7	3		70.0	.
12	DEER PARK AVE/GARNET ST	S	306	.	.	1	3	34	9					.
12	DEER PARK RD/OLD COUNTRY	S	1263	.	.	10	31	348	9					.
13	DEER PARK AVE/RYDER AVE	S	307	.	.	1	3	34	9					.
13	DEER PARK RD/WOODFERN C	S	1264	1	.	10	32	348	9					.

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S29 Babylon - Walt Whitman Mall - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
14	SUNSET PLAZA	S	270	2	.	1	5	34	15		1		0.0	.
14	DEER PARK RD/WOODEDGE D	S	1265	1	1	10	32	348	9					.
15	DEER PARK AVE/STRATHMOR	S	1115	.	.	1	5	34	15					.
15	DEER PARK RD/CALEDONIA R	S	1266	1	.	10	33	348	9					.
16	DEER PARK AVE/PHELP'S LA	S	1116	.	.	1	5	34	15					.
16	353 DEER PARK RD	S	1267	.	.	10	33	348	9					.
17	DEER PARK RD/VANDERBILT P	S	1268	2	1	10	34	348	10	7	3		70.0	.
17	DEER PARK AVE/STONE LA	S	1282	.	.	1	5	34	15					.
18	DEER PARK AVE/EDMUNTON D	S	1118	.	.	1	5	34	15					.
18	DEER PARK RD/PARSONS DR	S	1269	.	.	10	34	348	10					.
19	DEER PARK AVE/BIRCHFIELD A	S	1119	.	.	1	5	34	15					.
19	DEER PARK RD/LANDVIEW DR	S	1270	3	2	10	35	348	10					.
20	DEER PARK AVE/WASHINGTON	S	1120	.	.	1	5	34	15					.
20	DEER PARK AVE/SOUTH SERVI	S	1271	1	.	10	36	348	10					.
21	DEER PARK AVE/MASON AVE	S	1121	.	.	1	5	34	15					.
21	DEER PARK AVE/HALF HOLLO	S	1272	1	1	10	36	348	10					.
22	DEER PARK AVE/PARK AVE	S	1122	.	.	1	5	34	15					.
22	DEER PARK AVE/STRAIGHT PA	S	1273	.	.	10	36	348	10					.
23	DEER PARK AVE/NEW JERSEY	S	1274	1	.	10	37	348	11					.
23	DEER PARK AVE/RAILROAD AV	S	1283	.	.	1	5	34	15					.
24	BABYLON RAILROAD STATION	W	1074	.	5	1	0	34	.		1		0.0	.
24	DEER PARK AVE/KENMORE ST	S	1275	1	3	10	35	348	10	8	2		80.0	.
25	DEER PARK AVE/MONTAUK H	W	1216	.	.	1	0	34	.					.
25	2122 DEER PARK AVE	S	1276	.	.	10	35	348	10					.
26	DEER PARK AVE/LIBERTY ST	S	1277	.	2	10	33	348	9					.
26	MONTAUK HWY/CARLL AVE	S	1284	.	.	1	0	34	.					.

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S29 Babylon - Walt Whitman Mall - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	DEER PARK AVE/NICOLLS AVE	S	1278	1	.	10	34	348	10					.
27	MONTAUK HWY/ARGYLE AVE	S	1285	.	.	1	0	34	.					.
28	MONTAUK HWY/LITTLE EAST N	S	1066	.	.	1	0	34	.					.
28	1948 DEER PARK AVE	S	1279	1	.	10	35	348	10					.
29	DEER PARK AVE/LONG ISLAND	S	1280	.	.	10	35	348	10					.
29	W MONTAUK HWY/FLEETS POI	S	1286	.	.	1	0	34	.					.
30	DEER PARK AVE/LAKE AVE	S	243	.	.	10	35	348	10					.
30	W MONTAUK HWY/GREAT EAS	S	1287	.	.	1	0	34	.					.
31	DEER PARK AVE/GRAND BLVD	S	1281	3	3	10	35	348	10	8	2		80.0	.
31	W MONTAUK HWY/BROOKVAL	S	1288	.	.	1	0	34	.					.
32	SOUTH BAY SHOPPING CENTE	BL	1068	.	.	1	0	34	.	1			100.0	.
32	DEER PARK AVE/WESTON AVE	S	1113	.	.	10	35	348	10					.
33	DEER PARK AVE/OAKLAND AV	S	1114	1	3	10	33	348	9					.
34	DEER PARK AVE/PRAIRIE DR	S	305	.	1	10	32	348	9					.
35	DEER PARK AVE/GARNET ST	S	306	1	.	10	33	348	9					.
36	DEER PARK AVE/RYDER AVE	S	307	1	.	10	34	348	10					.
37	SUNSET PLAZA	S	270	8	12	10	30	348	9	7	3		70.0	.
38	DEER PARK AVE/STRATHMOR	S	1115	.	.	10	30	348	9					.
39	DEER PARK AVE/PHELP'S LA	S	1116	1	.	10	31	348	9					.
40	DEER PARK AVE/STONE LA	S	1282	1	2	10	30	348	9					.
41	DEER PARK AVE/EDMUNTON D	S	1118	.	.	10	30	348	9					.
42	DEER PARK AVE/BIRCHFIELD A	S	1119	4	.	10	34	348	10					.
43	DEER PARK AVE/WASHINGTON	S	1120	.	.	10	34	348	10					.
44	DEER PARK AVE/MASON AVE	S	1121	.	1	10	33	348	9					.
45	DEER PARK AVE/PARK AVE	S	1122	.	1	10	32	348	9					.
46	DEER PARK AVE/RAILROAD AV	S	1283	.	.	10	32	348	9					.

This data is property of Suffolk County Transit

S29 Babylon - Walt Whitman Mall - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
47	BABYLON RAILROAD STATION	W	1074	3	21	10	14	348	4	8	2		80.0	.
48	DEER PARK AVE/MONTAUK H	W	1216	.	.	8	14	280	5					.
49	MONTAUK HWY/CARLL AVE	S	1284	.	.	8	14	280	5					.
50	MONTAUK HWY/ARGYLE AVE	S	1285	2	1	8	15	280	5					.
51	MONTAUK HWY/LITTLE EAST N	S	1066	.	.	8	15	280	5					.
52	W MONTAUK HWY/FLEETS POI	S	1286	.	4	8	11	280	4					.
53	W MONTAUK HWY/GREAT EAS	S	1287	1	.	8	12	280	4					.
54	W MONTAUK HWY/BROOKVAL	S	1288	.	.	8	12	280	4					.
55	SOUTH BAY SHOPPING CENTE	BL	1068	.	12	8	0	280	.	7	1		87.5	.
	All 87 Stops	Total		80	80					71	20	2	76.3	
		Average		2	4									.

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S29 Babylon - Walt Whitman Mall - Southbound

All Valid Saturday Trips

Vehicle Trips	11	Boardings Per Mile	0.51	TP Ontime	71
Boardings	80	Boardings Per Hour	8.6	TP Early	20
Revenue Miles	155.6	Schedule Speed (MPH)	16.7	TP Late	2
Revenue Hours	9.3	Actual Speed (MPH)	17.6	Ontime (%)	76.3

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1679	7:30 am	11/17/07 Sat	1	5	5	5	7.3	0.4	0.69	12.0	17.4	17.4	60.0
1680	9:00 am	11/17/07 Sat	3	15	15	10	15.2	0.9	0.99	16.4	20.7	16.6	77.8
1681	10:00 am	11/24/07 Sat	5	6	6	5	15.2	0.9	0.39	6.5	20.3	16.6	88.9
1682	11:00 am	11/17/07 Sat	7	12	12	7	15.2	0.9	0.79	13.1	16.6	16.6	88.9
1683	12:00 pm	11/24/07 Sat	9	4	4	3	15.2	0.9	0.26	4.4	16.6	16.6	100.0
1684	1:00 pm	11/17/07 Sat	11	11	11	6	15.2	0.9	0.72	12.0	16.6	16.6	22.2
1685	2:00 pm	11/24/07 Sat	13	8	8	4	15.2	0.9	0.53	8.7	16.6	16.6	100.0
1686	3:00 pm	11/17/07 Sat	15	7	7	4	15.2	0.9	0.46	7.6	17.5	16.6	11.1
1687	4:00 pm	11/24/07 Sat	17	7	7	5	15.2	0.9	0.46	7.6	16.6	16.6	100.0
1688	5:00 pm	11/17/07 Sat	19	5	5	4	13.3	0.8	0.37	6.0	16.3	16.0	87.5
1689	6:05 pm	11/17/07 Sat	21	0	0	0	13.3	0.8	0.00	0.0	17.8	17.8	100.0
	All 11 Trips		Total	80	80		155.6	9.3					
			Average	7	7	5	14.1	0.8	0.52	8.6			
			Minimum	0	0	0			0.00	0.0			
			Maximum	15	15	10			0.99	16.4			
			Standard Deviation	4	4	2			0.27	4.6			

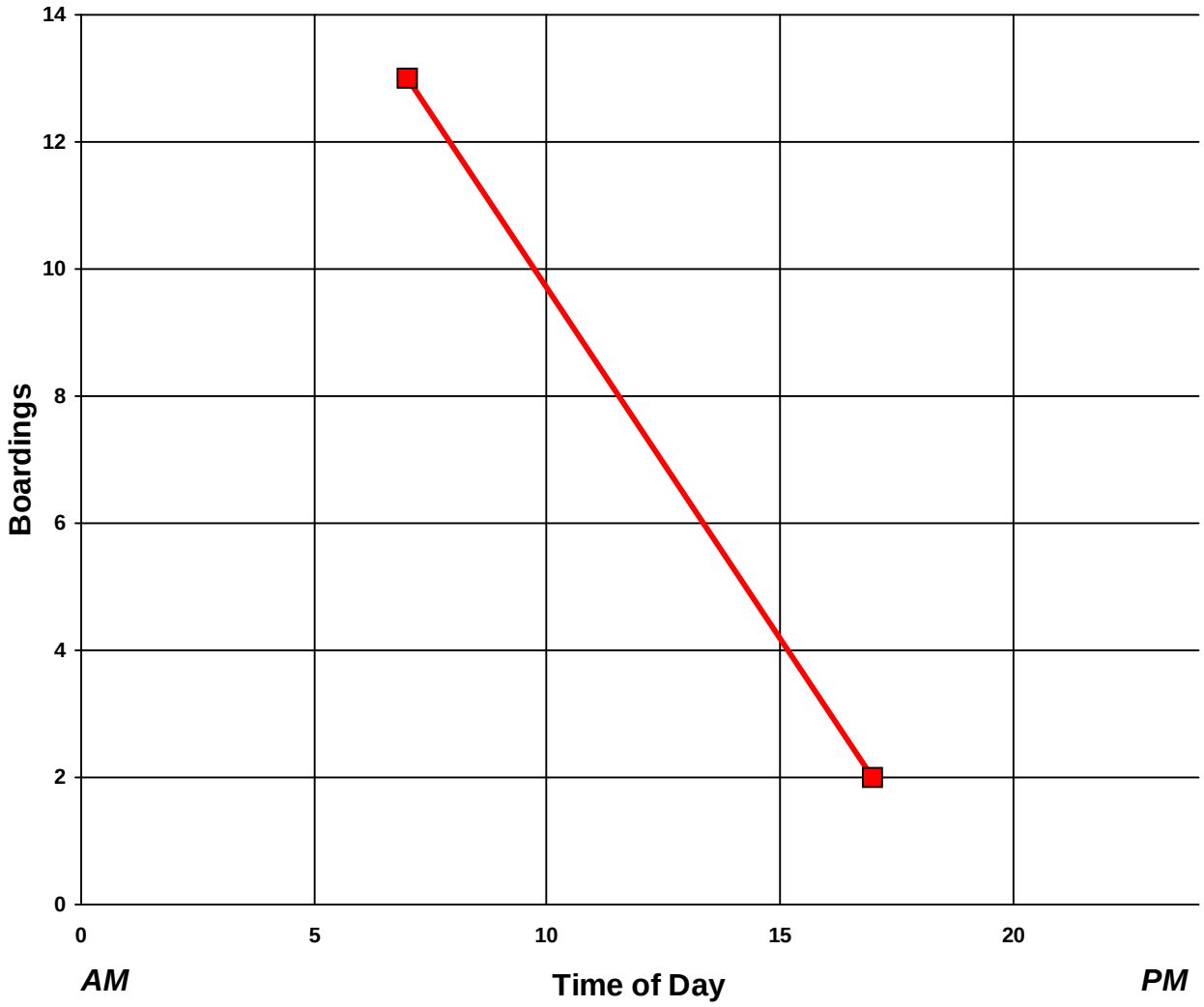
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S31 Copiague - Northwest Babylon - Northbound

All Valid Weekday Trips

Vehicle Trips	2	Boardings Per Mile	0.60	TP Ontime	12
Boardings	15	Boardings Per Hour	11.3	TP Early	10
Revenue Miles	24.8	Schedule Speed (MPH)	18.6	TP Late	0
Revenue Hours	1.3	Actual Speed (MPH)	18.2	Ontime (%)	54.5

Boardings



This data is property of Suffolk County Transit

S31 Copiague - Northwest Babylon - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	GREAT NECK RD/MERRICK RD	N	153	3	.	2	3	70	4	1	1		50.0	.
2	GREAT NECK RD/GREEN LAWN	N	152	2	.	2	5	70	7					.
3	GREAT NECK RD/SCUDDER AV	N	150	.	.	2	5	70	7					.
4	GREAT NECK RD/OAK STREET	N	149	3	.	2	8	70	11					.
5	GREAT NECK RD/MARCONI BL	N	156	2	.	2	10	70	14					.
6	GREAT NECK RD/DIXON AVE	N	157	.	.	2	10	70	14		2		0.0	.
7	GREAT NECK RD/DALY PL	N	1323	.	.	2	10	70	14					.
8	GREAT NECK RD (CR 47)/SOME	N	91	.	.	2	10	70	14					.
9	GREAT NECK RD/ALBANY AVE	N	92	.	.	2	10	70	14					.
10	GREAT NECK RD (CR 47)/BENJ	N	93	1	.	2	11	70	16					.
11	GREAT NECK RD (CR 47)/JOHN	N	94	1	.	2	12	70	17					.
12	GREAT NECK RD (CR 47)/JEFF	N	1324	.	.	2	12	70	17					.
13	BAITING PLACE RD/GREAT NE	N	1320	.	.	2	12	70	17	1	1		50.0	.
14	BAITING PLACE RD/TOLEDO S	N	1325	.	.	2	12	70	17	1	1		50.0	.
15	TOLEDO ST/GRAND AVE	N	1318	.	.	2	12	70	17	1	1		50.0	.
16	BROAD HOLLOW RD/ALLEN BL	N	1317	.	1	2	11	70	16	1	1		50.0	.
17	BROAD HOLLOW RD/DELL DR	N	1326	1	.	2	12	70	17					.
18	901 BROAD HOLLOW RD	N	1028	.	.	2	12	70	17					.
19	815 BROAD HOLLOW RD	N	1027	.	.	2	12	70	17					.
20	BROAD HOLLOW RD/CONKLIN	N	1026	.	1	2	11	70	16	1	1		50.0	.
21	BROAD HOLLOW RD/SHERWO	N	1025	.	.	2	11	70	16					.
22	BROAD HOLLOW RD/GAZZA BL	N	1024	.	4	2	7	70	10					.
23	BROAD HOLLOW RD/MILBAR B	N	1023	.	.	2	7	70	10					.
24	SMITH ST/BROAD HOLLOW RD	N	252	.	.	2	7	70	10	1	1		50.0	.
25	SMITH ST/NEW HGWY	N	253	.	.	2	7	70	10					.
26	380 SMITH STREET	N	254	.	1	2	6	70	9					.

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S31 Copiague - Northwest Babylon - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	570 SMITH ST	N	255	.	.	2	6	70	9					.
28	NEWSDAY	N	311	.	2	2	4	70	6	2			100.0	.
29	WELLWOOD AVE/SMITH ST	N	1328	2	.	2	6	70	9					.
30	WELLWOOD AVE/LONG ISLAND	N	1310	.	1	2	5	70	7	1	1		50.0	.
31	EDISON AVE/BELL ST	BL	1309	.	.	2	5	70	7					.
32	EDISON AVE/DALE ST	BL	1308	.	1	2	4	70	6					.
33	EDISON AVE/LAMAR ST	BL	1307	.	.	2	4	70	6					.
34	EDISON AVE/OTIS ST	BL	1306	.	.	2	4	70	6					.
35	EDISON AVE/STRAIGHT PATH	N	1305	.	4	2	0	70	.	2			100.0	.
	All 35 Stops	Total		15	15					12	10		54.5	
		Average		2	2									.

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S31 Copiague - Northwest Babylon - Northbound

All Valid Weekday Trips

Vehicle Trips	2	Boardings Per Mile	0.60	TP Ontime	12
Boardings	15	Boardings Per Hour	11.3	TP Early	10
Revenue Miles	24.8	Schedule Speed (MPH)	18.6	TP Late	0
Revenue Hours	1.3	Actual Speed (MPH)	18.2	Ontime (%)	54.5

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
286	7:10 am	10/8/07 Mon	2	13	13	11	12.4	0.7	1.05	19.5	17.7	18.6	81.8
287	5:00 pm	10/9/07 Tue	4	2	2	2	12.4	0.7	0.16	3.0	18.6	18.6	27.3
	All 2 Trips		Total	15	15		24.8	1.3					
			Average	8	8	7	12.4	0.7	0.60	11.3			
			Minimum	2	2	2			0.16	3.0			
			Maximum	13	13	11			1.05	19.5			
			Standard Deviation	8	8	6			0.63	11.7			

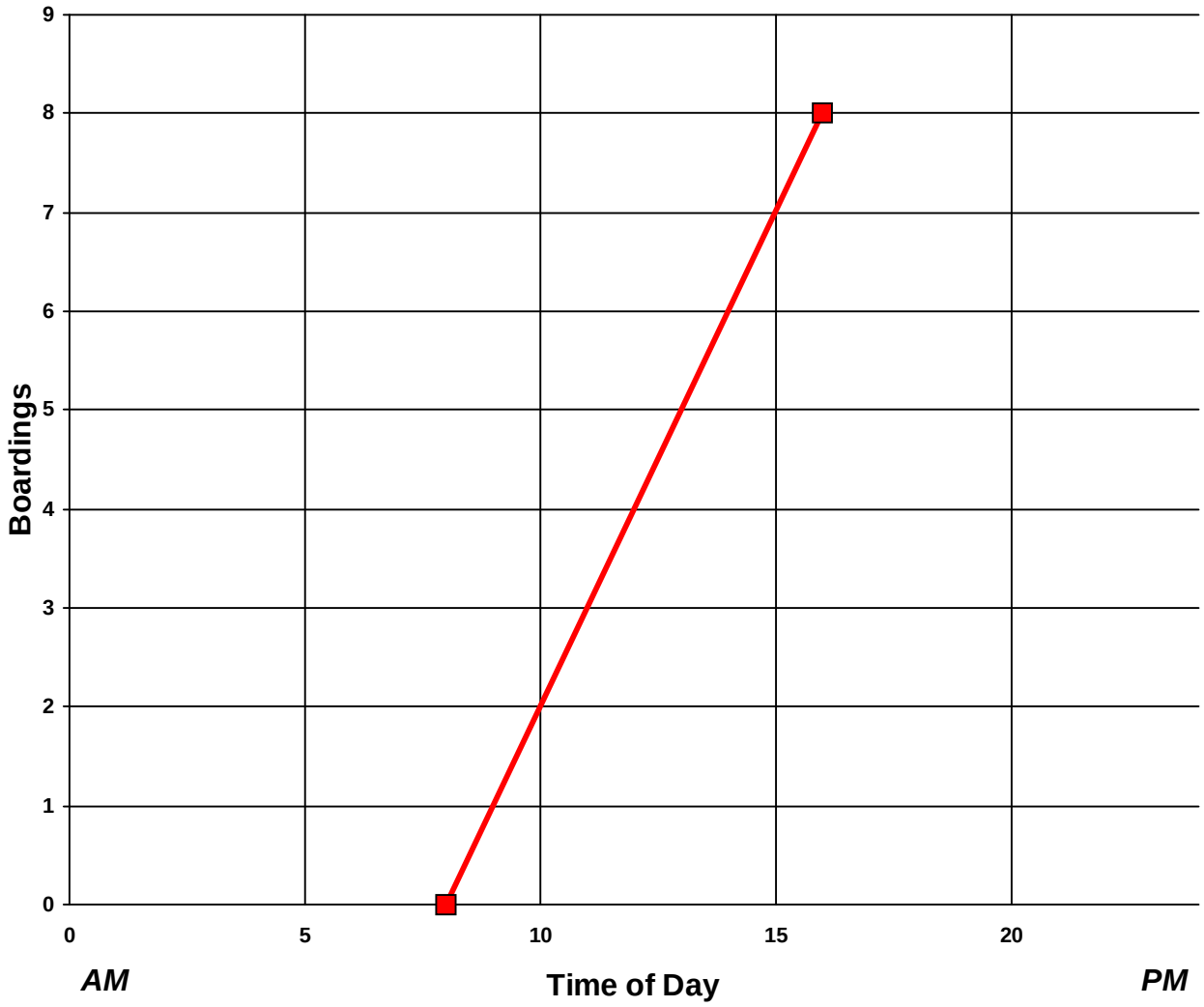
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S31 Copiague - Northwest Babylon - Southbound

All Valid Weekday Trips

Vehicle Trips	2	Boardings Per Mile	0.32	TP Ontime	16
Boardings	8	Boardings Per Hour	5.3	TP Early	6
Revenue Miles	24.9	Schedule Speed (MPH)	16.8	TP Late	0
Revenue Hours	1.5	Actual Speed (MPH)	17.2	Ontime (%)	72.7

Boardings



This data is property of Suffolk County Transit

S31 Copiague - Northwest Babylon - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	EDISON AVE/STRAIGHT PATH	N	1305	.	.	2	0	70	.	2			100.0	.
2	EDISON AVE/OTIS ST	BL	1306	.	.	2	0	70	.					.
3	EDISON AVE/LAMAR ST	BL	1307	.	.	2	0	70	.					.
4	EDISON AVE/DALE ST	BL	1308	.	.	2	0	70	.					.
5	EDISON AVE/BELL ST	BL	1309	.	.	2	0	70	.					.
6	WELLWOOD AVE/LONG ISLAND	N	1310	.	.	2	0	70	.	1	1		50.0	.
7	NEWSDAY	N	311	.	.	2	0	70	.	2			100.0	.
8	SMITH ST/WELLWOOD AVE	S	312	2	.	2	2	70	3					.
9	380 SMITH STREET	N	254	.	.	2	2	70	3					.
10	SMITH ST/NEW HGWY	N	253	.	.	2	2	70	3					.
11	SMITH ST/BROAD HOLLOW RD	N	252	.	.	2	2	70	3	2			100.0	.
12	BROAD HOLLOW RD/DANIEL S	S	1311	3	.	2	5	70	7					.
13	BROAD HOLLOW RD/SHERWO	N	1025	.	.	2	5	70	7					.
14	1600 BROAD HOLLOW RD	S	1312	.	.	2	5	70	7					.
15	BROAD HOLLOW RD/CONKLIN	S	1313	.	.	2	5	70	7	2			100.0	.
16	1080 BROAD HOLLOW RD	S	1314	.	.	2	5	70	7					.
17	BROAD HOLLOW RD/MICHAEL	S	1315	1	.	2	6	70	9					.
18	BROAD HOLLOW RD/EXECUTIV	S	1316	.	.	2	6	70	9					.
19	BROAD HOLLOW RD/ALLEN BL	N	1317	.	.	2	6	70	9	1	1		50.0	.
20	TOLEDO ST/GRAND AVE	N	1318	2	.	2	8	70	11	1	1		50.0	.
21	BAITING PLACE RD/TOLEDO S	S	1319	.	.	2	8	70	11	1	1		50.0	.
22	BAITING PLACE RD/GREAT NE	N	1320	.	.	2	8	70	11	1	1		50.0	.
23	GREAT NECK RD (CR47)/BREFI	S	1321	.	.	2	8	70	11					.
24	GREAT NECK RD (CR 47)/JOHN	N	94	.	.	2	8	70	11					.
25	GREAT NECK RD (CR47)/CARR	S	127	.	.	2	8	70	11					.
26	GREAT NECK RD/ALBANY AVE	N	92	.	.	2	8	70	11					.

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S31 Copiague - Northwest Babylon - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	GREAT NECK RD (CR 47)/SOME	N	91	.	.	2	8	70	11					.
28	GREAT NECK RD/VERDI AVE	S	1322	.	.	2	8	70	11					.
29	GREAT NECK RD/DIXON AVE	N	157	.	.	2	8	70	11	1	1		50.0	.
30	GREAT NECK RD/DANTE AVE	S	147	.	1	2	7	70	10					.
31	GREAT NECK RD/RAILROAD AV	S	148	.	3	2	4	70	6					.
32	GREAT NECK RD/OAK STREET	N	149	.	.	2	4	70	6					.
33	GREAT NECK RD/SCUDDER AV	N	150	.	.	2	4	70	6					.
34	GREAT NECK RD/COPAIGUE R	S	151	.	.	2	4	70	6					.
35	GREAT NECK RD/GREEN LAWN	N	152	.	.	2	4	70	6					.
36	GREAT NECK RD/MERRICK RD	N	153	.	4	2	0	70	.	2			100.0	.
	All 36 Stops	Total		8	8					16	6		72.7	
		Average		2	3									.

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S31 Copiague - Northwest Babylon - Southbound

All Valid Weekday Trips

Vehicle Trips	2	Boardings Per Mile	0.32	TP Ontime	16
Boardings	8	Boardings Per Hour	5.3	TP Early	6
Revenue Miles	24.9	Schedule Speed (MPH)	16.8	TP Late	0
Revenue Hours	1.5	Actual Speed (MPH)	17.2	Ontime (%)	72.7

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
288	8:00 am	10/8/07 Mon	1	0	0	0	12.5	0.8	0.00	0.0	14.7	14.9	100.0
289	4:15 pm	10/9/07 Tue	3	8	8	8	12.5	0.7	0.64	12.0	19.7	18.7	45.5
	All 2 Trips		Total	8	8		24.9	1.5					
			Average	4	4	4	12.5	0.8	0.32	6.0			
			Minimum	0	0	0			0.00	0.0			
			Maximum	8	8	8			0.64	12.0			
			Standard Deviation	6	6	6			0.45	8.5			

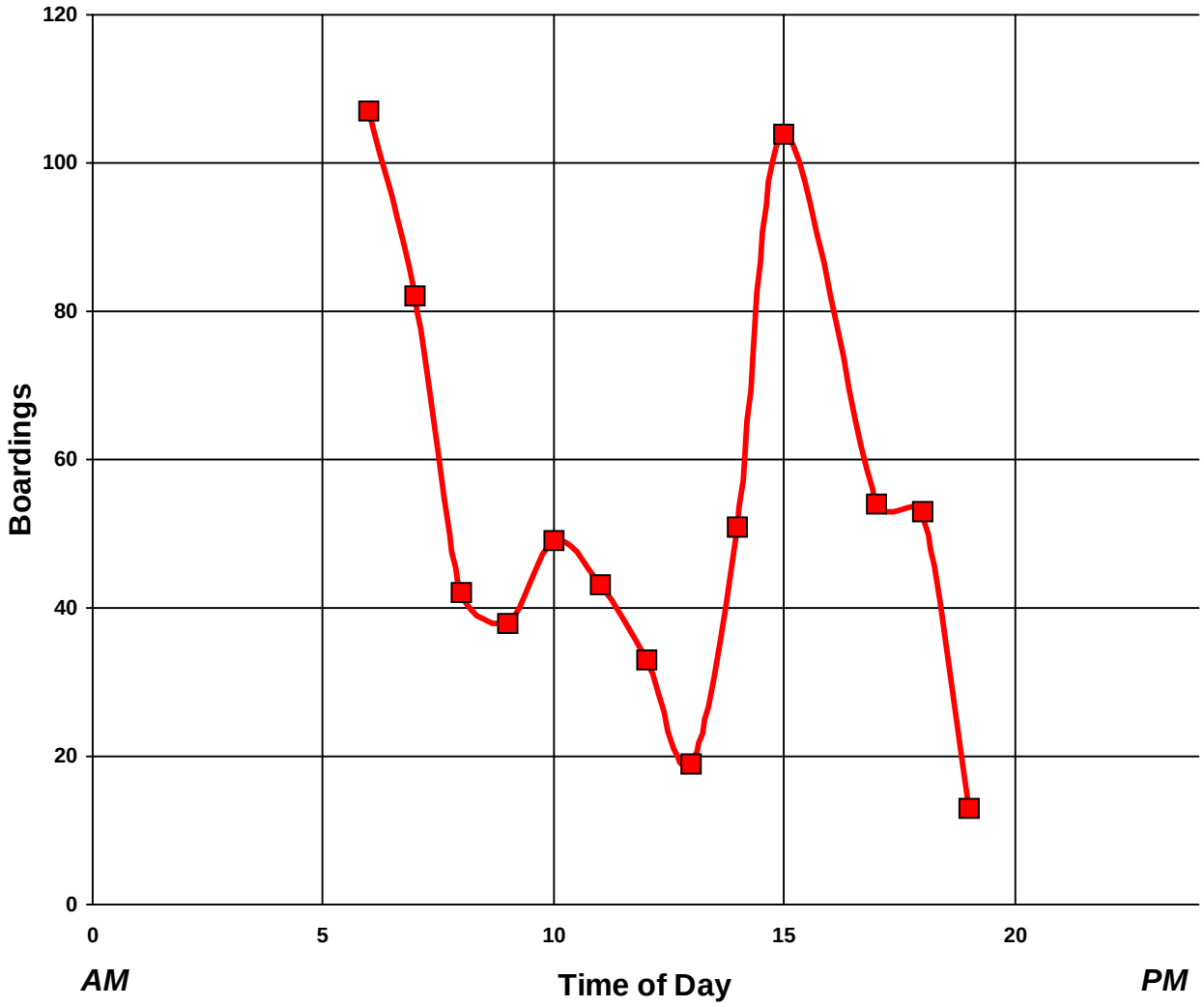
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S33 Sunrise Mall - Hauppauge - Northbound

All Valid Weekday Trips

Vehicle Trips	17	Boardings Per Mile	1.12	TP Ontime	92
Boardings	688	Boardings Per Hour	36.4	TP Early	24
Revenue Miles	616.1	Schedule Speed (MPH)	33.3	TP Late	66
Revenue Hours	18.9	Actual Speed (MPH)	33.8	Ontime (%)	50.5

Boardings



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S33 Sunrise Mall - Hauppauge - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	AMITYVILLE RAILROAD STATIO	N	76	4	.	1	4	34	12	1			100.0	.
1	SUNRISE MALL	N	1042	114	.	16	114	544	21	9	3	4	56.3	.
2	OAK ST/BROADWAY AVE	N	77	2	.	1	6	34	18					.
2	OAK ST/COUNTY LINE RD	N	1329	4	2	16	116	544	21					.
3	OAK ST/KETCHAM RD	N	1330	4	.	16	120	544	22					.
3	BROADWAY AVE/RAIL ROAD A	N	1331	.	.	1	6	34	18					.
4	AMITYVILLE RAILROAD STATIO	N	76	48	7	16	161	544	30	7	3	6	43.8	.
4	BROADWAY AVE/MILL ST	N	79	.	.	1	6	34	18					.
5	OAK ST/BROADWAY AVE	N	77	28	9	16	180	544	33					.
5	BROADWAY AVE/DIXON AVE	N	80	1	.	1	7	34	21					.
6	DIXON AVE/W RANICK DR	N	81	.	.	1	7	34	21					.
6	BROADWAY AVE/RAIL ROAD A	N	1331	7	2	16	185	544	34					.
7	BROADWAY AVE/MILL ST	N	79	18	.	16	203	544	37					.
7	DIXON AVE/BAY VIEW AVE	N	82	2	.	1	9	34	26					.
8	BROADWAY AVE/DIXON AVE	N	80	39	8	16	234	544	43					.
8	DIXON AVE/DEFOREST ST	N	83	.	.	1	9	34	26					.
9	DIXON AVE/W RANICK DR	N	81	12	2	16	244	544	45					.
9	DIXON AVE/GREAT NECK RD	N	84	1	.	1	10	34	29					.
10	DIXON AVE/BAY VIEW AVE	N	82	5	1	16	248	544	46					.
10	DIXON AVE/VESPUCCI ST	N	85	1	.	1	11	34	32					.
11	DIXON AVE/DEFOREST ST	N	83	.	.	16	248	544	46					.
11	DIXON AVE/31ST ST	N	86	1	.	1	12	34	35					.
12	DIXON AVE/GREAT NECK RD	N	84	9	6	16	251	544	46					.
12	STRAIGHT PATH/SUNRISE HW	N	1332	3	.	1	15	34	44					.
13	DIXON AVE/VESPUCCI ST	N	85	5	7	16	249	544	46					.
13	STRAIGHT PATH/41ST ST	N	1333	.	.	1	15	34	44					.

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S33 Sunrise Mall - Hauppauge - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
14	DIXON AVE/31ST ST	N	86	6	5	16	250	544	46					.
14	STRAIGHT PATH/45TH ST	N	1334	.	.	1	15	34	44					.
15	STRAIGHT PATH/SUNRISE HW	N	1332	16	3	16	263	544	48					.
15	STRAIGHT PATH/52ND ST	N	1335	.	.	1	15	34	44					.
16	STRAIGHT PATH/41ST ST	N	1333	6	3	16	266	544	49					.
16	STRAIGHT PATH/COLONIAL RD	BL	1336	.	.	1	15	34	44					.
17	STRAIGHT PATH/45TH ST	N	1334	1	5	16	262	544	48					.
17	STRAIGHT PATH/BEDELL ST	BL	1337	.	.	1	15	34	44					.
18	STRAIGHT PATH/52ND ST	N	1335	20	4	16	278	544	51					.
18	STRAIGHT PATH/BABYLON-FA	BL	1338	1	.	1	16	34	47	1			100.0	.
19	STRAIGHT PATH/COLONIAL RD	BL	1336	12	6	16	284	544	52					.
19	STRAIGHT PATH/BABYLON-FA	BL	1339	.	.	1	16	34	47					.
20	STRAIGHT PATH/BEDELL ST	BL	1337	.	2	16	282	544	52					.
20	STRAIGHT PATH/11TH ST.	BL	1340	.	.	1	16	34	47					.
21	STRAIGHT PATH/BABYLON-FA	BL	1338	19	21	16	280	544	51	7		9	43.8	.
21	STRAIGHT PATH/15TH ST	BL	1341	2	.	1	18	34	53					.
22	STRAIGHT PATH/BABYLON-FA	BL	1339	9	14	16	275	544	51					.
22	STRAIGHT PATH/GORDON AVE	BL	1342	1	.	1	19	34	56					.
23	STRAIGHT PATH/11TH ST.	BL	1340	8	5	16	278	544	51					.
23	STRAIGHT PATH/MATTHEWS A	BL	1343	.	1	1	18	34	53					.
24	STRAIGHT PATH/15TH ST	BL	1341	2	6	16	274	544	50					.
24	STRAIGHT PATH/LITTLE EAST	N	1344	1	.	1	19	34	56					.
25	STRAIGHT PATH/GORDON AVE	BL	1342	6	10	16	270	544	50					.
25	STRAIGHT PATH/WYANDANCH	N	1345	5	.	1	24	34	71					.
26	STRAIGHT PATH/MATTHEWS A	BL	1343	8	7	16	271	544	50					.
26	STRAIGHT PATH/MOUNT AVE	N	1346	2	.	1	26	34	76					.

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S33 Sunrise Mall - Hauppauge - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	STRAIGHT PATH/LITTLE EAST	N	1344	13	24	16	260	544	48					.
27	STRAIGHT PATH/LAKE DR	N	1347	5	4	1	27	34	79					.
28	STRAIGHT PATH/WYANDANCH	N	1345	42	17	16	285	544	52					.
28	STRAIGHT PATH/COMMON WE	N	1348	.	.	1	27	34	79					.
29	GRAND BLVD/STRAIGHT PATH	N	170	7	6	1	28	34	82	1			100.0	.
29	STRAIGHT PATH/MOUNT AVE	N	1346	11	25	16	271	544	50					.
30	GRAND BLVD/LAKE DR	N	261	2	.	1	30	34	88					.
30	STRAIGHT PATH/LAKE DR	N	1347	8	11	16	268	544	49					.
31	GRAND BLVD/W 23RD ST	N	262	1	.	1	31	34	91					.
31	STRAIGHT PATH/COMMON WE	N	1348	10	45	16	233	544	43					.
32	GRAND BLVD/STRAIGHT PATH	N	170	29	30	16	232	544	43	5		11	31.3	.
32	GRAND BLVD/W 18TH ST	N	263	.	.	1	31	34	91					.
33	GRAND BLVD/LAKE DR	N	261	5	20	16	217	544	40					.
33	GRAND BLVD/W 16TH ST	N	264	.	.	1	31	34	91					.
34	GRAND BLVD/W 23RD ST	N	262	10	9	16	218	544	40					.
34	GRAND BLVD/W 13TH ST	N	1109	.	.	1	31	34	91					.
35	GRAND BLVD/W 18TH ST	N	263	2	.	16	220	544	40					.
35	GRAND BLVD/W 8TH ST	N	1132	.	.	1	31	34	91					.
36	GRAND BLVD/W 16TH ST	N	264	1	3	16	218	544	40					.
36	GRAND BLVD/W 4TH ST	N	1111	.	.	1	31	34	91					.
37	GRAND BLVD/W 13TH ST	N	1109	3	1	16	220	544	40					.
37	GRAND BLVD/DEER PARK AVE	N	1131	.	1	1	30	34	88	1			100.0	.
38	GRAND BLVD/CARL'S PATH	N	241	1	.	1	31	34	91					.
38	GRAND BLVD/W 8TH ST	N	1132	.	1	16	219	544	40					.
39	COMMACK RD/GRAND BLVD	N	237	1	2	1	30	34	88					.
39	GRAND BLVD/W 4TH ST	N	1111	.	4	16	215	544	40					.

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S33 Sunrise Mall - Hauppauge - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
40	COMMACK RD/NICOLLS RD	N	218	2	.	1	32	34	94					.
40	GRAND BLVD/DEER PARK AVE	N	1131	9	22	16	202	544	37	6		10	37.5	.
41	GRAND BLVD/CARL'S PATH	N	241	9	3	14	208	476	44					.
41	COMMACK RD/BURLINGTON A	N	1349	.	.	1	32	34	94					.
42	COMMACK RD/GRAND BLVD	N	237	4	14	14	198	476	42					.
42	PILGRIM PSYCHIATRIC CENTE	S	1350	.	6	1	26	34	76	1			100.0	.
43	COMMACK RD/NICOLLS RD	N	218	6	1	14	203	476	43					.
43	H RD/B RD	S	1351	.	1	1	25	34	74					.
44	COMMACK RD/BURLINGTON A	N	1349	3	4	14	202	476	42					.
44	F RD/H RD	S	1352	.	.	1	25	34	74					.
45	PILGRIM PSYCHIATRIC CENTE	S	1350	9	20	14	191	476	40	6	4	3	46.2	.
45	G RD/CROOKED HILL RD	S	1353	.	.	1	25	34	74					.
46	SUFFOLK COMMUNITY COLLE	S	369	1	4	1	22	34	65		1		0.0	.
46	H RD/B RD	S	1351	2	8	14	185	476	39					.
47	F RD/H RD	S	1352	1	10	14	176	476	37					.
47	WICKS RD/FAIRDALE DR	N	1354	.	.	1	22	34	65					.
48	WICKS RD/LIE SOUTH SERVICE	N	318	1	.	1	23	34	68					.
48	G RD/CROOKED HILL RD	S	1353	1	1	14	176	476	37					.
49	SUFFOLK COMMUNITY COLLE	S	369	2	55	14	123	476	26	8	1	4	61.5	.
49	MORELAND RD/MOTOR PKWY	N	370	.	1	1	22	34	65					.
50	MORELAND RD/COMMERCE D	N	371	.	1	1	21	34	62					.
50	WICKS RD/FAIRDALE DR	N	1354	1	2	14	122	476	26					.
51	WICKS RD/LIE SOUTH SERVICE	N	318	.	1	14	121	476	25					.
51	MORELAND RD/WIRELESS BLV	E	372	1	.	1	22	34	65					.
52	MORELAND RD/MOTOR PKWY	N	370	1	6	14	116	476	24					.
52	400 OSER AVE	E	373	.	1	1	21	34	62					.

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S33 Sunrise Mall - Hauppauge - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
53	MORELAND RD/COMMERCE D	N	371	1	6	14	111	476	23					.
53	305 OSER AVE	E	374	.	1	1	20	34	59					.
54	MORELAND RD/WIRELESS BLV	E	372	17	2	14	126	476	26					.
54	OSER AVE/ADAMS AVE	E	375	.	3	1	17	34	50					.
55	400 OSER AVE	E	373	4	12	14	118	476	25					.
55	OSER AVE/MARCUS BLVD	E	376	.	2	1	15	34	44		1		0.0	.
56	305 OSER AVE	E	374	16	12	14	122	476	26					.
56	OSER AVE/PLANT AVE	E	377	2	.	1	17	34	50					.
57	OSER AVE/ADAMS AVE	E	375	2	3	14	121	476	25					.
57	45 OSER AVE	E	378	.	2	1	15	34	44					.
58	OSER AVE/MARCUS BLVD	E	376	1	10	14	112	476	24	8	1	4	61.5	.
58	OSER AVE/OLD WILLETS PATH	E	379	.	3	1	12	34	35					.
59	OSER AVE/PLANT AVE	E	377	.	1	14	111	476	23					.
59	OLD WILLETS PATH/SOUTH V	S	1248	.	.	1	12	34	35					.
60	45 OSER AVE	E	378	.	.	14	111	476	23					.
60	OLD WILLETS PATH/NORTH VE	N	1356	.	2	1	10	34	29					.
61	OSER AVE/OLD WILLETS PATH	E	379	.	5	14	106	476	22					.
61	50 NORTH DR	E	1250	.	.	1	10	34	29					.
62	OLD WILLETS PATH/SOUTH V	S	1248	.	.	14	106	476	22					.
62	804 NORTH DR	E	1357	.	.	1	10	34	29					.
63	OLD WILLETS PATH/NORTH VE	N	1356	.	10	14	96	476	20					.
63	SUFFOLK COUNTY NORTH CO	E	1358	2	.	1	12	34	35		1		0.0	.
64	DENNISON BUILDING	E	1173	.	.	1	12	34	35		1		0.0	.
64	50 NORTH DR	E	1250	.	3	14	93	476	20					.
65	804 NORTH DR	E	1357	1	3	14	91	476	19					.
65	NYS OFFICE BLDG - HAUPPAU	E	1359	1	9	1	4	34	12		1		0.0	.

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S33 Sunrise Mall - Hauppauge - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
66	SUFFOLK COUNTY NORTH CO	E	1358	1	4	14	88	476	18	7		6	53.8	.
66	RABRO DR/NYS 111	N	1360	.	4	1	0	34	.		1		0.0	.
67	DENNISON BUILDING	E	1173	3	3	14	88	476	18	7	2	4	53.8	.
68	NYS OFFICE BLDG - HAUPPAU	E	1359	.	82	14	6	476	1	7	3	3	53.8	.
69	RABRO DR/NYS 111	N	1360	.	6	14	0	476	.	10	1	2	76.9	.
	All 135 Stops	Total		688	688					92	24	66	50.5	
		Average		8	8									.

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S33 Sunrise Mall - Hauppauge - Northbound

All Valid Weekday Trips

Vehicle Trips	17	Boardings Per Mile	1.12	TP Ontime	92
Boardings	688	Boardings Per Hour	36.4	TP Early	24
Revenue Miles	616.1	Schedule Speed (MPH)	33.3	TP Late	66
Revenue Hours	18.9	Actual Speed (MPH)	33.8	Ontime (%)	50.5

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
290	6:30 am	10/16/07 Tue	2	54	54	32	38.9	1.2	1.39	46.3	38.9	33.4	45.5
291	6:55 am	10/16/07 Tue	4	53	53	32	39.9	1.3	1.33	42.4	29.9	31.9	66.7
292	7:25 am	10/17/07 Wed	6	29	29	18	39.9	1.3	0.73	23.2	33.2	31.9	33.3
293	7:55 am	10/23/07 Tue	8	53	53	32	39.9	1.3	1.33	42.4	31.9	31.9	83.3
768	8:55 am	10/16/07 Tue	10	42	42	24	39.9	1.3	1.05	33.6	36.3	31.9	58.3
295	9:55 am	10/16/07 Tue	12	38	38	19	39.9	1.3	0.95	30.4	29.9	31.9	83.3
296	10:55 am	10/11/07 Thu	14	49	49	30	39.9	1.3	1.23	39.2	30.3	31.9	66.7
297	11:55 am	10/16/07 Tue	16	43	43	20	39.9	1.3	1.08	34.4	28.5	31.9	16.7
772	12:55 pm	10/16/07 Tue	18	33	33	16	39.9	1.3	0.83	26.4	32.8	31.9	41.7
299	1:25 pm	10/11/07 Thu	20	19	19	10	39.9	1.3	0.48	15.2	34.2	31.9	66.7
300	2:25 pm	10/16/07 Tue	22	51	51	22	39.9	1.3	1.28	40.8	39.9	31.9	8.3
775	3:25 pm	10/16/07 Tue	24	43	43	22	39.9	1.3	1.08	34.4	31.5	31.9	0.0
776	3:55 pm	10/16/07 Tue	26	61	61	22	39.9	1.3	1.53	48.8	29.9	31.9	50.0
2548	5:10 pm	10/18/07 Thu	28	54	54	40	39.9	1.3	1.35	43.2	NA	31.9	75.0
778	6:10 pm	10/16/07 Tue	30	34	34	26	9.5	0.5	3.59	68.0	14.9	18.9	0.0
305	6:40 pm	10/16/07 Tue	32	19	19	16	9.5	0.5	2.01	38.0	18.9	18.9	80.0
2598	7:40 pm	10/16/07 Tue	34	13	13	11	39.9	0.5	0.33	26.0	79.8	79.8	100.0
All 17 Trips			Total	688	688		616.1	18.9					
			Average	40	40	23	36.2	1.1	1.27	37.2			
			Minimum	13	13	10			0.33	15.2			
			Maximum	61	61	40			3.59	68.0			
			Standard Deviation	14	14	8			0.72	11.9			

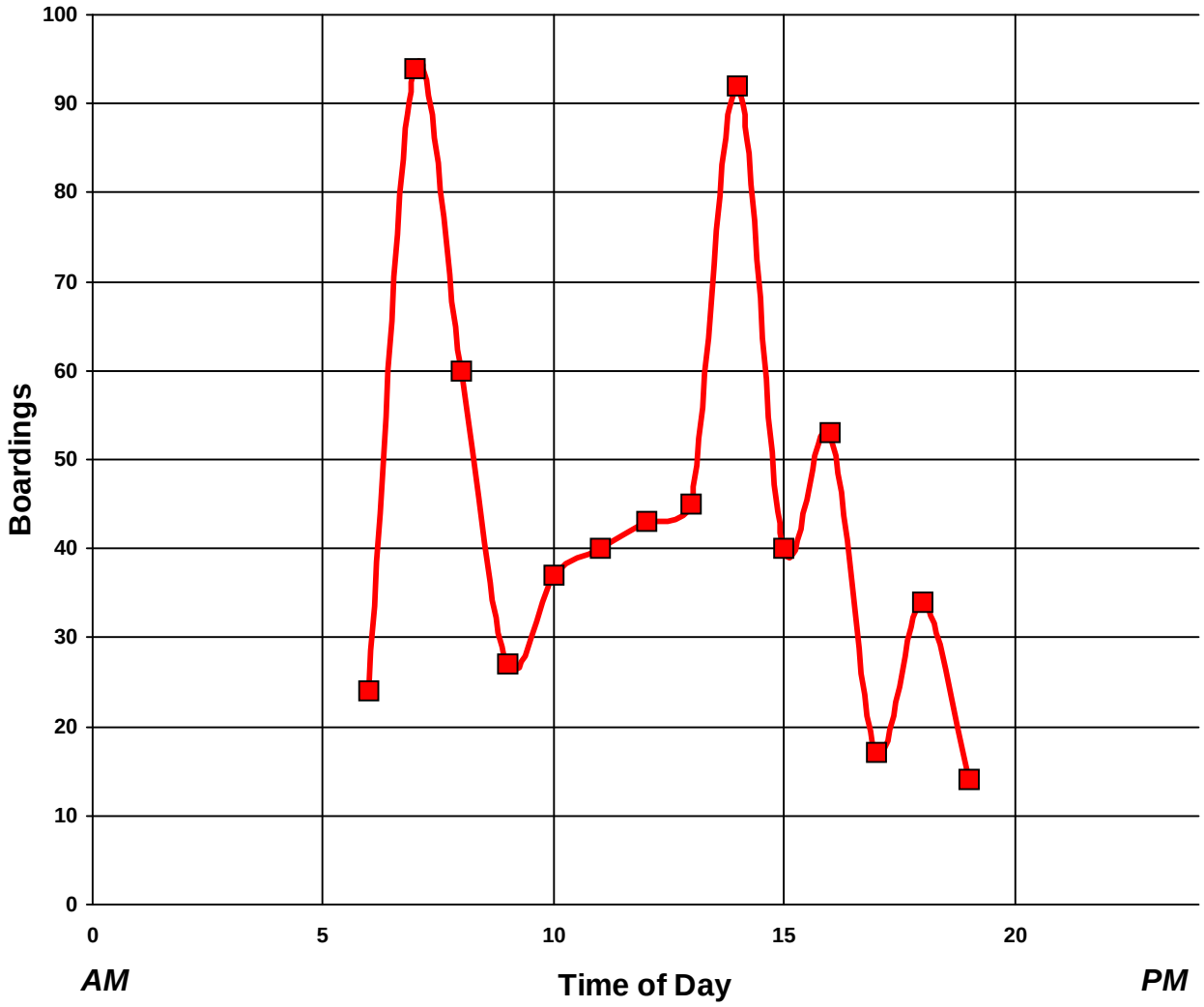
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S33 Sunrise Mall - Hauppauge - Southbound

All Valid Weekday Trips

Vehicle Trips	18	Boardings Per Mile	1.49	TP Ontime	128
Boardings	620	Boardings Per Hour	32.3	TP Early	15
Revenue Miles	416.5	Schedule Speed (MPH)	22.0	TP Late	58
Revenue Hours	19.2	Actual Speed (MPH)	21.6	Ontime (%)	63.7

Boardings



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S33 Sunrise Mall - Hauppauge - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	GRAND BLVD/DEER PARK AVE	N	1131	.	.	2	0	68	.	1	1		50.0	.
1	RABRO DR/NYS 111	N	1360	17	.	16	17	544	3	11	1	4	68.8	.
2	GRAND BLVD/W 4TH ST	N	1111	1	.	2	1	68	1					.
2	100 VETERANS MEMORIAL HW	S	1361	1	.	16	18	544	3	12	1	3	75.0	.
3	GRAND BLVD/W 8TH ST	N	1132	.	.	2	1	68	1					.
3	NYS OFFICE BLDG - HAUPPAU	E	1359	58	.	16	76	544	14	10	2	4	62.5	.
4	GRAND BLVD/W 13TH ST	N	1109	.	.	2	1	68	1					.
4	SUFFOLK COUNTY NORTH CO	E	1358	22	.	16	98	544	18	10	2	4	62.5	.
5	GRAND BLVD/W 18TH ST	N	263	.	.	2	1	68	1					.
5	158 NORTH DR	S	1362	2	.	16	100	544	18					.
6	GRAND BLVD/W 23RD ST	N	262	.	.	2	1	68	1					.
6	340 NORTH DR	W	1363	5	.	16	105	544	19					.
7	GRAND BLVD/LAKE DR	N	261	3	.	2	4	68	6					.
7	OLD WILLETS PATH/VETERAN	E	1249	2	.	16	107	544	20					.
8	GRAND BLVD/DOE ST	S	260	3	.	2	7	68	10					.
8	OSER AVE/OLD WILLETS PATH	E	379	10	.	16	117	544	22					.
9	WYANDANCH RAILROAD STATI	S	248	4	1	2	10	68	15	1	1		50.0	.
9	40 OSER AVE	S	1179	2	.	16	119	544	22					.
10	80 OSER AVE	S	1364	3	4	16	118	544	22					.
10	STRAIGHT PATH/S 16TH ST	S	1372	11	.	2	21	68	31					.
11	OSER AVE/MARCUS BLVD	S	1355	13	11	16	120	544	22	9		7	56.3	.
11	STRAIGHT PATH/18TH ST	S	1373	2	.	2	23	68	34					.
12	OSER AVE/ADAMS AVE	E	375	3	1	16	122	544	22					.
12	STRAIGHT PATH/20TH ST	S	1374	3	.	2	26	68	38					.
13	310 OSER AVE	E	1365	7	5	16	124	544	23					.
13	STRAIGHT PATH/21ST ST	S	1375	7	.	2	33	68	49					.

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S33 Sunrise Mall - Hauppauge - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
14	390 OSER AVE	S	1366	14	15	16	123	544	23					.
14	STRAIGHT PATH/LINCOLN AVE	S	1376	8	1	2	40	68	59					.
15	MORELAND RD/MALL DR	E	1367	2	3	16	122	544	22					.
15	STRAIGHT PATH/EDISON AVE	S	1377	4	.	2	44	68	65					.
16	STRAIGHT PATH/GORDON AVE	BL	1342	6	3	2	47	68	69					.
16	MORELAND RD/AUSTIN BLVD	S	1368	7	4	16	125	544	23					.
17	MORELAND RD/MOTOR PKWY	N	370	.	1	16	124	544	23					.
17	STRAIGHT PATH/14TH ST	S	1378	.	.	2	47	68	69					.
18	WICKS RD/LIE SOUTH SERVICE	N	318	2	2	16	124	544	23					.
18	STRAIGHT PATH/HERZEL BLVD	S	1379	.	.	2	47	68	69					.
19	WICKS RD/FAIRDALE DR	N	1354	.	1	16	123	544	23					.
19	STRAIGHT PATH/5TH ST	S	1380	.	.	2	47	68	69					.
20	WICKS RD/COMMUNITY COLLE	S	1369	5	.	16	128	544	24					.
20	STRAIGHT PATH/BABYLON-FA	S	1381	.	14	2	33	68	49	1	1		50.0	.
21	SUFFOLK COMMUNITY COLLE	S	369	68	1	16	195	544	36	12		4	75.0	.
21	STRAIGHT PATH/4TH ST	S	1382	.	1	2	32	68	47					.
22	G RD/CROOKED HILL RD	S	1353	.	.	16	195	544	36					.
22	STRAIGHT PATH/MAPLE DR	S	1383	.	.	2	32	68	47					.
23	F RD/H RD	S	1352	3	.	16	198	544	36					.
23	STRAIGHT PATH/53RD ST	S	1384	.	1	2	31	68	46					.
24	STRAIGHT PATH/45TH ST	N	1334	.	.	2	31	68	46					.
24	B RD/H RD	S	1370	1	2	16	197	544	36					.
25	STRAIGHT PATH/41ST ST	N	1333	1	1	2	31	68	46					.
25	PILGRIM PSYCHIATRIC CENTE	S	1350	21	10	16	208	544	38	11		5	68.8	.
26	STRAIGHT PATH/SUNRISE HW	N	1332	.	4	2	27	68	40					.
26	COMMACK RD/BURLINGTON A	N	1349	5	1	16	212	544	39					.

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S33 Sunrise Mall - Hauppauge - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	DIXON AVE/31ST ST	N	86	1	4	2	24	68	35					.
27	518 COMMACK RD	S	186	6	5	16	213	544	39					.
28	DIXON AVE/VESPUCCI ST	N	85	2	.	2	26	68	38					.
28	GRAND BLVD/COMMACK RD	S	187	10	10	16	213	544	39					.
29	DIXON AVE/FERRARIS ST	S	128	.	.	2	26	68	38					.
29	GRAND BLVD/CARL'S PATH	S	1371	10	2	16	221	544	41					.
30	DIXON AVE/GALVANI ST	S	129	.	1	2	25	68	37					.
30	GRAND BLVD/E 1ST ST	S	180	6	5	16	222	544	41					.
31	DIXON AVE/BAY VIEW AVE	N	82	.	1	2	24	68	35					.
31	GRAND BLVD/DEER PARK AVE	N	1131	16	7	16	231	544	42	13	1	2	81.3	.
32	DIXON AVE/OVERLAND AVE	S	130	.	.	2	24	68	35					.
32	GRAND BLVD/W 4TH ST	N	1111	1	5	16	227	544	42					.
33	DIXON AVE/ALBANY AVE	S	115	.	.	2	24	68	35					.
33	GRAND BLVD/W 8TH ST	N	1132	1	2	16	226	544	42					.
34	DIXON AVE/BROADWAY AVE	S	116	.	3	2	21	68	31					.
34	GRAND BLVD/W 13TH ST	N	1109	.	2	16	224	544	41					.
35	GRAND BLVD/W 18TH ST	N	263	1	4	16	221	544	41					.
35	BROADWAY AVE/LOUDEN AVE	S	1385	.	2	2	19	68	28					.
36	BROADWAY AVE/MILL ST	S	118	.	.	2	19	68	28					.
36	GRAND BLVD/W 23RD ST	N	262	1	3	16	219	544	40					.
37	GRAND BLVD/LAKE DR	N	261	3	6	16	216	544	40					.
37	BROADWAY AVE/STERLING PL	S	1386	.	.	2	19	68	28					.
38	OAK ST/BROADWAY AVE	N	77	.	2	2	17	68	25					.
38	GRAND BLVD/DOE ST	S	260	1	8	16	209	544	38					.
39	AMITYVILLE RAILROAD STATIO	N	76	.	8	2	9	68	13	1	1		50.0	.
39	WYANDANCH RAILROAD STATI	S	248	18	38	16	189	544	35	12		4	75.0	.

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S33 Sunrise Mall - Hauppauge - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
40	OAK ST/KETCHAM AVE	S	1089	.	.	2	9	68	13					.
40	STRAIGHT PATH/S 16TH ST	S	1372	43	13	16	219	544	40					.
41	OAK ST/COUNTY LINE RD	N	1329	.	.	2	9	68	13					.
41	STRAIGHT PATH/18TH ST	S	1373	8	5	16	222	544	41					.
42	SUNRISE MALL	N	1042	.	9	2	0	68	.	1	1		50.0	.
42	STRAIGHT PATH/20TH ST	S	1374	17	10	16	229	544	42					.
43	STRAIGHT PATH/21ST ST	S	1375	18	9	16	238	544	44					.
44	STRAIGHT PATH/LINCOLN AVE	S	1376	32	20	16	250	544	46					.
45	STRAIGHT PATH/EDISON AVE	S	1377	20	10	16	260	544	48					.
46	STRAIGHT PATH/GORDON AVE	BL	1342	8	9	16	259	544	48					.
47	STRAIGHT PATH/14TH ST	S	1378	4	6	16	257	544	47					.
48	STRAIGHT PATH/HERZEL BLVD	S	1379	3	9	16	251	544	46					.
49	STRAIGHT PATH/5TH ST	S	1380	6	8	16	249	544	46					.
50	STRAIGHT PATH/BABYLON-FA	S	1381	9	11	16	247	544	45	10	1	5	62.5	.
51	STRAIGHT PATH/4TH ST	S	1382	3	4	16	246	544	45					.
52	STRAIGHT PATH/MAPLE DR	S	1383	1	5	16	242	544	44					.
53	STRAIGHT PATH/53RD ST	S	1384	4	3	16	243	544	45					.
54	STRAIGHT PATH/45TH ST	N	1334	9	9	16	243	544	45					.
55	STRAIGHT PATH/41ST ST	N	1333	.	7	16	236	544	43					.
56	STRAIGHT PATH/SUNRISE HW	N	1332	3	14	16	225	544	41					.
57	DIXON AVE/31ST ST	N	86	5	5	16	225	544	41					.
58	DIXON AVE/VESPUCCI ST	N	85	2	8	16	219	544	40					.
59	DIXON AVE/FERRARIS ST	S	128	1	10	16	210	544	39					.
60	DIXON AVE/GALVANI ST	S	129	2	7	16	205	544	38					.
61	DIXON AVE/BAY VIEW AVE	N	82	5	11	16	199	544	37					.
62	DIXON AVE/OVERLAND AVE	S	130	.	6	16	193	544	35					.

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S33 Sunrise Mall - Hauppauge - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
63	DIXON AVE/ALBANY AVE	S	115	.	6	16	187	544	34					.
64	DIXON AVE/BROADWAY AVE	S	116	2	25	16	164	544	30					.
65	BROADWAY AVE/LOUDEN AVE	S	1385	.	15	16	149	544	27					.
66	BROADWAY AVE/MILL ST	S	118	.	1	16	148	544	27					.
67	BROADWAY AVE/STERLING PL	S	1386	3	13	16	138	544	25					.
68	OAK ST/BROADWAY AVE	N	77	4	17	16	125	544	23					.
69	AMITYVILLE RAILROAD STATIO	N	76	2	24	16	103	544	19	7	1	8	43.8	.
70	OAK ST/KETCHAM AVE	S	1089	3	2	16	104	544	19					.
71	OAK ST/COUNTY LINE RD	N	1329	.	.	16	104	544	19					.
72	SUNRISE MALL	N	1042	.	104	16	0	544	.	6	1	8	40.0	.
	All 114 Stops	Total		620	620					128	15	58	63.7	
		Average		8	8									.

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S33 Sunrise Mall - Hauppauge - Southbound

All Valid Weekday Trips

Vehicle Trips	18	Boardings Per Mile	1.49	TP Ontime	128
Boardings	620	Boardings Per Hour	32.3	TP Early	15
Revenue Miles	416.5	Schedule Speed (MPH)	22.0	TP Late	58
Revenue Hours	19.2	Actual Speed (MPH)	21.6	Ontime (%)	63.7

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
780	6:45 am	10/17/07 Wed	1	24	24	20	13.2	0.6	1.82	41.1	23.9	22.5	0.0
781	7:20 am	10/23/07 Tue	3	32	32	27	13.2	0.5	2.43	64.0	26.3	26.3	100.0
782	7:45 am	10/16/07 Tue	5	62	62	41	24.4	1.1	2.54	57.2	18.8	22.5	41.7
783	8:15 am	10/17/07 Wed	7	30	30	18	24.4	1.2	1.23	25.7	20.3	20.9	91.7
784	8:45 am	10/17/07 Wed	9	30	30	16	24.4	1.1	1.23	27.7	21.8	22.5	100.0
311	9:15 am	10/11/07 Thu	11	27	27	12	24.4	1.1	1.11	24.9	20.9	22.5	75.0
786	10:15 am	10/16/07 Tue	13	37	37	15	24.4	1.1	1.52	34.2	22.2	22.5	66.7
787	11:15 am	10/16/07 Tue	15	40	40	20	24.4	1.1	1.64	36.9	19.0	22.5	75.0
788	12:15 pm	10/11/07 Thu	17	43	43	23	24.4	1.1	1.76	39.7	20.0	22.5	91.7
789	1:15 pm	10/16/07 Tue	19	45	45	24	24.4	1.1	1.85	41.5	19.0	22.5	33.3
790	2:15 pm	10/16/07 Tue	21	49	49	24	24.4	1.1	2.01	45.2	19.0	22.5	75.0
791	2:45 pm	10/16/07 Tue	23	43	43	25	24.4	1.1	1.76	39.7	22.5	22.5	66.7
318	3:45 pm	10/18/07 Thu	25	40	40	25	24.4	1.3	1.64	32.0	18.3	19.5	66.7
319	4:45 pm	10/16/07 Tue	27	53	53	30	24.4	1.3	2.17	42.4	18.8	19.5	0.0
794	5:15 pm	10/16/07 Tue	29	17	17	14	24.4	1.2	0.70	14.6	32.5	20.9	58.3
2549	6:25 pm	10/18/07 Thu	31	34	34	24	24.4	1.2	1.39	29.1	NA	20.9	66.7
2490	7:25 pm	10/16/07 Tue	33	7	7	5	24.4	1.3	0.29	5.6	22.9	19.5	25.0
2599	7:55 pm	10/16/07 Tue	35	7	7	4	24.4	1.1	0.29	6.5	21.8	22.5	100.0
All 18 Trips			Total	620	620		416.5	19.2					
			Average	34	34	20	23.1	1.1	1.52	33.8			
			Minimum	7	7	4			0.29	5.6			
			Maximum	62	62	41			2.54	64.0			
			Standard Deviation	15	15	9			0.64	15.3			

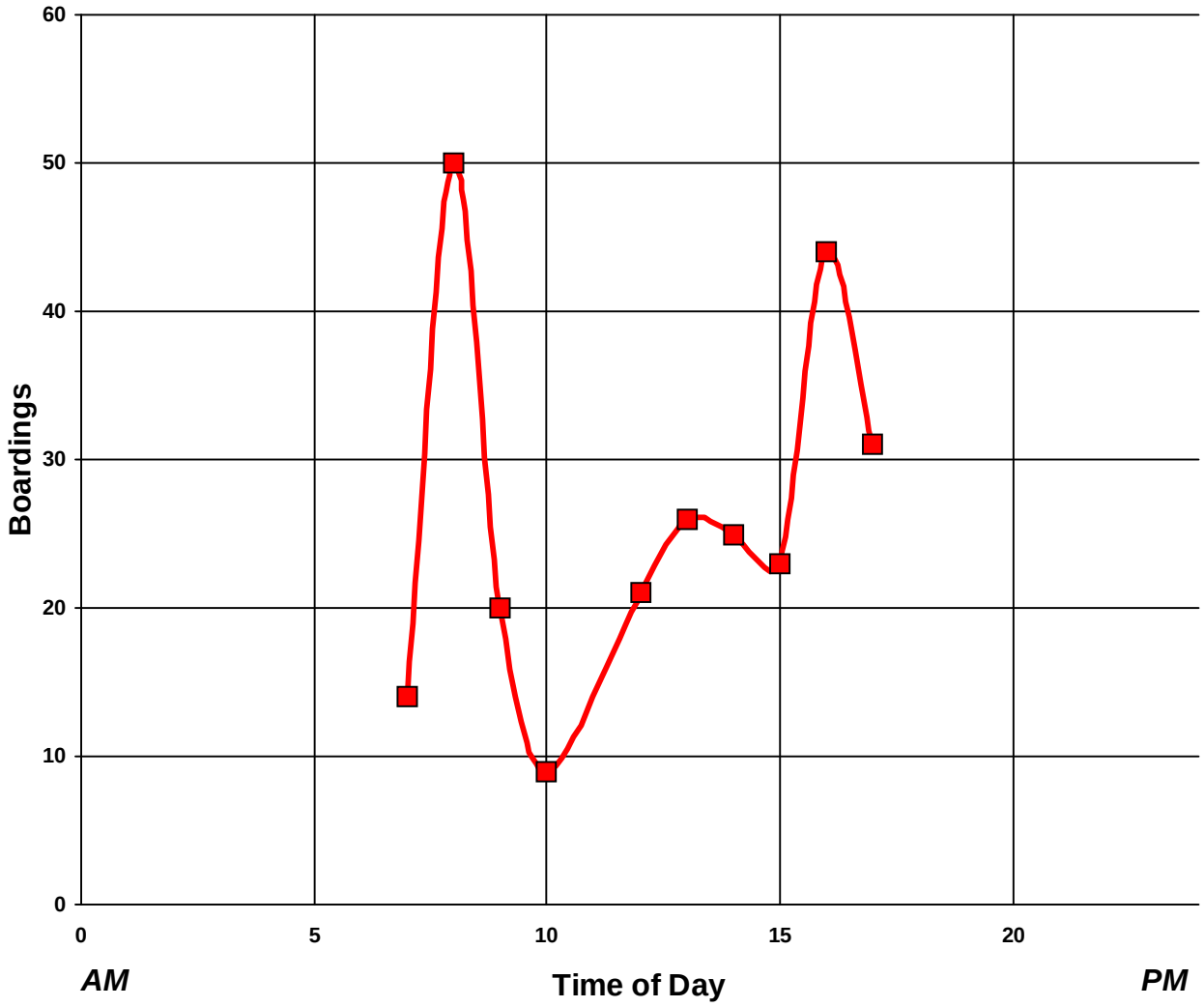
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S33 Sunrise Mall - Hauppauge - Northbound

All Valid Saturday Trips

Vehicle Trips	10	Boardings Per Mile	1.71	TP Ontime	55
Boardings	263	Boardings Per Hour	30.9	TP Early	6
Revenue Miles	154.1	Schedule Speed (MPH)	18.0	TP Late	11
Revenue Hours	8.5	Actual Speed (MPH)	18.4	Ontime (%)	76.4

Boardings



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S33 Sunrise Mall - Hauppauge - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	AMITYVILLE RAILROAD STATIO	N	76	1	.	2	1	68	1	2			100.0	.
1	SUNRISE MALL	N	1042	114	.	8	114	274	42	7		1	87.5	.
2	OAK ST/BROADWAY AVE	N	77	2	.	2	3	68	4					.
2	OAK ST/COUNTY LINE RD	N	1329	.	.	8	114	274	42					.
3	OAK ST/KETCHAM RD	N	1330	.	.	8	114	274	42					.
3	BROADWAY AVE/RAIL ROAD A	N	1331	.	.	2	3	68	4					.
4	AMITYVILLE RAILROAD STATIO	N	76	7	2	8	119	274	43	5	1	2	62.5	.
4	BROADWAY AVE/MILL ST	N	79	.	.	2	3	68	4					.
5	OAK ST/BROADWAY AVE	N	77	5	1	8	123	274	45					.
5	BROADWAY AVE/DIXON AVE	N	80	1	.	2	4	68	6					.
6	DIXON AVE/W RANICK DR	N	81	.	.	2	4	68	6					.
6	BROADWAY AVE/RAIL ROAD A	N	1331	3	.	8	126	274	46					.
7	BROADWAY AVE/MILL ST	N	79	.	1	8	125	274	46					.
7	DIXON AVE/BAY VIEW AVE	N	82	2	.	2	6	68	9					.
8	BROADWAY AVE/DIXON AVE	N	80	7	1	8	131	274	48					.
8	DIXON AVE/DEFOREST ST	N	83	.	.	2	6	68	9					.
9	DIXON AVE/W RANICK DR	N	81	3	.	8	134	274	49					.
9	DIXON AVE/GREAT NECK RD	N	84	2	.	2	8	68	12					.
10	DIXON AVE/BAY VIEW AVE	N	82	1	1	8	134	274	49					.
10	DIXON AVE/VESPUCCI ST	N	85	2	.	2	10	68	15					.
11	DIXON AVE/DEFOREST ST	N	83	.	.	8	134	274	49					.
11	DIXON AVE/31ST ST	N	86	1	.	2	11	68	16					.
12	DIXON AVE/GREAT NECK RD	N	84	3	1	8	136	274	50					.
12	STRAIGHT PATH/SUNRISE HW	N	1332	3	.	2	14	68	21					.
13	DIXON AVE/VESPUCCI ST	N	85	.	1	8	135	274	49					.
13	STRAIGHT PATH/41ST ST	N	1333	2	.	2	16	68	24					.

This data is property of Suffolk County Transit

S33 Sunrise Mall - Hauppauge - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
14	DIXON AVE/31ST ST	N	86	.	5	8	130	274	47					.
14	STRAIGHT PATH/45TH ST	N	1334	.	.	2	16	68	24					.
15	STRAIGHT PATH/SUNRISE HW	N	1332	10	1	8	139	274	51					.
15	STRAIGHT PATH/52ND ST	N	1335	1	.	2	17	68	25					.
16	STRAIGHT PATH/41ST ST	N	1333	7	5	8	141	274	51					.
16	STRAIGHT PATH/COLONIAL RD	BL	1336	.	.	2	17	68	25					.
17	STRAIGHT PATH/45TH ST	N	1334	.	1	8	140	274	51					.
17	STRAIGHT PATH/BEDELL ST	BL	1337	.	.	2	17	68	25					.
18	STRAIGHT PATH/52ND ST	N	1335	3	4	8	139	274	51					.
18	STRAIGHT PATH/BABYLON-FA	BL	1338	11	.	2	28	68	41	2			100.0	.
19	STRAIGHT PATH/COLONIAL RD	BL	1336	1	3	8	137	274	50					.
19	STRAIGHT PATH/BABYLON-FA	BL	1339	.	.	2	28	68	41					.
20	STRAIGHT PATH/BEDELL ST	BL	1337	.	.	8	137	274	50					.
20	STRAIGHT PATH/11TH ST.	BL	1340	1	.	2	29	68	43					.
21	STRAIGHT PATH/BABYLON-FA	BL	1338	4	5	8	136	274	50	6		2	75.0	.
21	STRAIGHT PATH/15TH ST	BL	1341	1	.	2	30	68	44					.
22	STRAIGHT PATH/BABYLON-FA	BL	1339	3	.	8	139	274	51					.
22	STRAIGHT PATH/GORDON AVE	BL	1342	1	.	2	31	68	46					.
23	STRAIGHT PATH/11TH ST.	BL	1340	.	1	8	138	274	50					.
23	STRAIGHT PATH/MATTHEWS A	BL	1343	1	.	2	32	68	47					.
24	STRAIGHT PATH/15TH ST	BL	1341	1	.	8	139	274	51					.
24	STRAIGHT PATH/LITTLE EAST	N	1344	1	2	2	31	68	46					.
25	STRAIGHT PATH/GORDON AVE	BL	1342	.	1	8	138	274	50					.
25	STRAIGHT PATH/WYANDANCH	N	1345	1	2	2	30	68	44					.
26	STRAIGHT PATH/MATTHEWS A	BL	1343	.	11	8	127	274	46					.
26	STRAIGHT PATH/MOUNT AVE	N	1346	1	1	2	30	68	44					.

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S33 Sunrise Mall - Hauppauge - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	STRAIGHT PATH/LITTLE EAST	N	1344	2	16	8	113	274	41					.
27	STRAIGHT PATH/LAKE DR	N	1347	2	.	2	32	68	47					.
28	STRAIGHT PATH/WYANDANCH	N	1345	7	16	8	104	274	38					.
28	STRAIGHT PATH/COMMON WE	N	1348	2	6	2	28	68	41					.
29	GRAND BLVD/STRAIGHT PATH	N	170	4	5	2	27	68	40	2			100.0	.
29	STRAIGHT PATH/MOUNT AVE	N	1346	1	10	8	95	274	35					.
30	GRAND BLVD/LAKE DR	N	261	1	.	2	28	68	41					.
30	STRAIGHT PATH/LAKE DR	N	1347	2	17	8	80	274	29					.
31	GRAND BLVD/W 23RD ST	N	262	.	.	2	28	68	41					.
31	STRAIGHT PATH/COMMON WE	N	1348	2	16	8	66	274	24					.
32	GRAND BLVD/STRAIGHT PATH	N	170	2	28	8	40	274	15	4	1	3	50.0	.
32	GRAND BLVD/W 18TH ST	N	263	5	.	2	33	68	49					.
33	GRAND BLVD/LAKE DR	N	261	.	1	8	39	274	14					.
33	GRAND BLVD/W 16TH ST	N	264	.	6	2	27	68	40					.
34	GRAND BLVD/W 23RD ST	N	262	.	6	8	33	274	12					.
34	GRAND BLVD/W 13TH ST	N	1109	.	.	2	27	68	40					.
35	GRAND BLVD/W 18TH ST	N	263	.	1	8	32	274	12					.
35	GRAND BLVD/W 8TH ST	N	1132	.	.	2	27	68	40					.
36	GRAND BLVD/W 16TH ST	N	264	.	6	8	26	274	9					.
36	GRAND BLVD/W 4TH ST	N	1111	.	.	2	27	68	40					.
37	GRAND BLVD/W 13TH ST	N	1109	.	2	8	24	274	9					.
37	GRAND BLVD/DEER PARK AVE	N	1131	3	8	2	22	68	32	2			100.0	.
38	GRAND BLVD/CARL'S PATH	N	241	1	.	2	23	68	34					.
38	GRAND BLVD/W 8TH ST	N	1132	.	2	8	22	274	8					.
39	COMMACK RD/GRAND BLVD	N	237	.	4	2	19	68	28					.
39	GRAND BLVD/W 4TH ST	N	1111	.	2	8	20	274	7					.

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S33 Sunrise Mall - Hauppauge - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
40	COMMACK RD/NICOLLS RD	N	218	.	.	2	19	68	28					.
40	GRAND BLVD/DEER PARK AVE	N	1131	2	4	8	18	274	7	5	1	2	62.5	.
41	GRAND BLVD/CARL'S PATH	N	241	1	1	6	18	204	9					.
41	COMMACK RD/BURLINGTON A	N	1349	.	.	2	19	68	28					.
42	COMMACK RD/GRAND BLVD	N	237	2	4	6	16	204	8					.
42	PILGRIM PSYCHIATRIC CENTE	S	1350	1	.	2	20	68	29	2			100.0	.
43	COMMACK RD/NICOLLS RD	N	218	.	.	6	16	204	8					.
43	H RD/B RD	S	1351	.	.	2	20	68	29					.
44	COMMACK RD/BURLINGTON A	N	1349	.	.	6	16	204	8					.
44	F RD/H RD	S	1352	.	.	2	20	68	29					.
45	PILGRIM PSYCHIATRIC CENTE	S	1350	.	5	6	11	204	5	4	1	1	66.7	.
45	G RD/CROOKED HILL RD	S	1353	.	1	2	19	68	28					.
46	SUFFOLK COMMUNITY COLLE	S	369	9	16	2	12	68	18	2			100.0	.
46	H RD/B RD	S	1351	1	.	6	12	204	6					.
47	F RD/H RD	S	1352	.	.	6	12	204	6					.
47	WICKS RD/FAIRDALE DR	N	1354	.	.	2	12	68	18					.
48	WICKS RD/LIE SOUTH SERVICE	N	318	.	.	2	12	68	18					.
48	G RD/CROOKED HILL RD	S	1353	.	1	6	11	204	5					.
49	SUFFOLK COMMUNITY COLLE	S	369	4	5	6	10	204	5	5	1		83.3	.
49	MORELAND RD/MOTOR PKWY	N	370	.	.	2	12	68	18					.
50	MORELAND RD/COMMERCE D	N	371	.	1	2	11	68	16					.
50	WICKS RD/FAIRDALE DR	N	1354	.	.	6	10	204	5					.
51	WICKS RD/LIE SOUTH SERVICE	N	318	.	.	6	10	204	5					.
51	MORELAND RD/WIRELESS BLV	E	372	1	.	2	12	68	18					.
52	MORELAND RD/MOTOR PKWY	N	370	1	.	6	11	204	5					.
52	400 OSER AVE	E	373	.	.	2	12	68	18					.

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S33 Sunrise Mall - Hauppauge - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
53	MORELAND RD/COMMERCE D	N	371	.	.	6	11	204	5					.
53	305 OSER AVE	E	374	.	.	2	12	68	18					.
54	MORELAND RD/WIRELESS BLV	E	372	.	.	6	11	204	5					.
54	OSER AVE/ADAMS AVE	E	375	.	.	2	12	68	18					.
55	400 OSER AVE	E	373	.	.	6	11	204	5					.
55	OSER AVE/MARCUS BLVD	E	376	.	12	2	0	68	.	1	1		50.0	.
56	305 OSER AVE	E	374	.	1	6	10	204	5					.
57	OSER AVE/ADAMS AVE	E	375	.	1	6	9	204	4					.
58	OSER AVE/MARCUS BLVD	E	376	.	9	6	0	204	.	6			100.0	.
	All 113 Stops	Total		263	263					55	6	11	76.4	
		Average		5	5									.

This data is property of Suffolk County Transit

S33 Sunrise Mall - Hauppauge - Northbound

All Valid Saturday Trips

Vehicle Trips	10	Boardings Per Mile	1.71	TP Ontime	55
Boardings	263	Boardings Per Hour	30.9	TP Early	6
Revenue Miles	154.1	Schedule Speed (MPH)	18.0	TP Late	11
Revenue Hours	8.5	Actual Speed (MPH)	18.4	Ontime (%)	76.4

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1690	7:00 am	11/17/07 Sat	2	14	14	11	16.2	0.8	0.87	16.8	21.6	19.4	85.7
1691	8:00 am	11/17/07 Sat	4	50	50	28	16.2	0.8	3.09	60.0	19.4	19.4	100.0
1692	9:05 am	11/17/07 Sat	6	20	20	12	17.1	0.9	1.17	21.8	21.9	18.7	37.5
1693	10:00 am	11/17/07 Sat	8	9	9	7	17.1	0.9	0.53	9.8	18.7	18.7	100.0
1694	12:00 pm	11/17/07 Sat	10	21	21	13	17.1	0.9	1.23	22.9	18.4	18.7	50.0
1695	1:00 pm	11/17/07 Sat	12	26	26	21	17.1	0.9	1.52	28.4	18.7	18.7	100.0
1696	2:15 pm	11/17/07 Sat	14	25	25	16	17.1	1.0	1.46	25.0	17.1	17.1	50.0
1697	3:15 pm	11/17/07 Sat	16	23	23	20	17.1	1.0	1.34	23.0	17.1	17.1	100.0
1698	4:40 pm	11/17/07 Sat	18	44	44	38	9.5	0.6	4.65	75.4	14.9	16.2	60.0
1699	5:40 pm	11/17/07 Sat	20	31	31	26	9.5	0.6	3.28	53.1	16.2	16.2	80.0
	All 10 Trips		Total	263	263		154.1	8.5					
			Average	26	26	19	15.4	0.9	1.91	33.6			
			Minimum	9	9	7			0.53	9.8			
			Maximum	50	50	38			4.65	75.4			
			Standard Deviation	13	13	9			1.31	21.5			

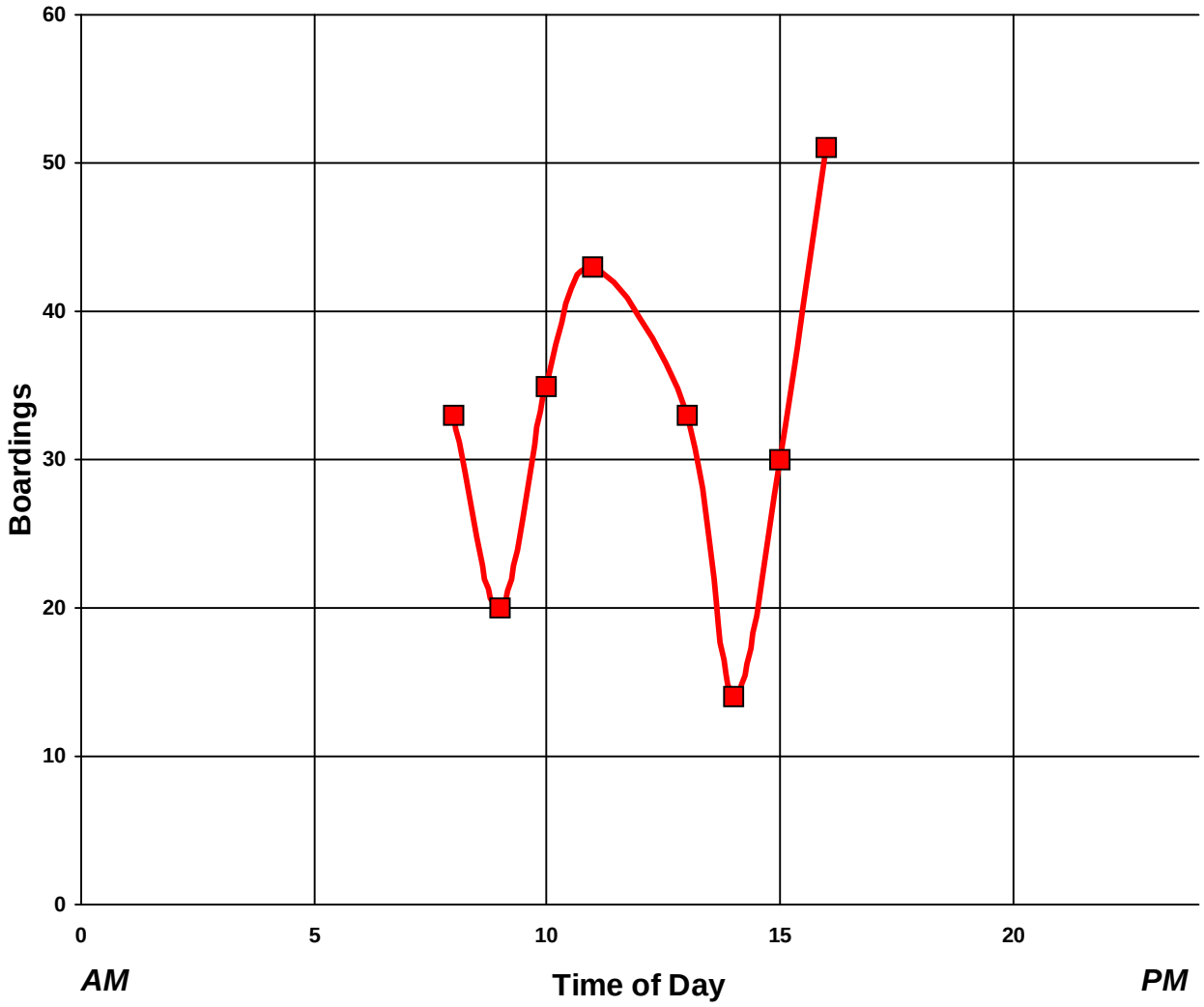
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S33 Sunrise Mall - Hauppauge - Southbound

All Valid Saturday Trips

Vehicle Trips	8	Boardings Per Mile	1.54	TP Ontime	43
Boardings	259	Boardings Per Hour	33.8	TP Early	19
Revenue Miles	168.3	Schedule Speed (MPH)	22.1	TP Late	2
Revenue Hours	7.7	Actual Speed (MPH)	22.4	Ontime (%)	67.2

Boardings



This data is property of Suffolk County Transit

S33 Sunrise Mall - Hauppauge - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	OSER AVE/MARCUS BLVD	S	1355	4	.	8	4	274	1	7	1		87.5	.
2	OSER AVE/ADAMS AVE	E	375	1	.	8	5	274	2					.
3	310 OSER AVE	E	1365	.	.	8	5	274	2					.
4	390 OSER AVE	S	1366	.	.	8	5	274	2					.
5	MORELAND RD/MALL DR	E	1367	.	.	8	5	274	2					.
6	MORELAND RD/AUSTIN BLVD	S	1368	1	.	8	6	274	2					.
7	MORELAND RD/MOTOR PKWY	N	370	2	.	8	8	274	3					.
8	WICKS RD/LIE SOUTH SERVICE	N	318	1	.	8	9	274	3					.
9	WICKS RD/FAIRDALE DR	N	1354	.	.	8	9	274	3					.
10	WICKS RD/COMMUNITY COLLE	S	1369	3	.	8	12	274	4					.
11	SUFFOLK COMMUNITY COLLE	S	369	20	1	8	31	274	11	4	4		50.0	.
12	G RD/CROOKED HILL RD	S	1353	.	.	8	31	274	11					.
13	F RD/H RD	S	1352	.	.	8	31	274	11					.
14	B RD/H RD	S	1370	5	.	8	36	274	13					.
15	PILGRIM PSYCHIATRIC CENTE	S	1350	4	1	8	39	274	14	6	2		75.0	.
16	COMMACK RD/BURLINGTON A	N	1349	.	.	8	39	274	14					.
17	518 COMMACK RD	S	186	.	.	8	39	274	14					.
18	GRAND BLVD/COMMACK RD	S	187	5	.	8	44	274	16					.
19	GRAND BLVD/CARL'S PATH	S	1371	1	2	8	43	274	16					.
20	GRAND BLVD/E 1ST ST	S	180	2	1	8	44	274	16					.
21	GRAND BLVD/DEER PARK AVE	N	1131	1	2	8	43	274	16	5	3		62.5	.
22	GRAND BLVD/W 4TH ST	N	1111	.	1	8	42	274	15					.
23	GRAND BLVD/W 8TH ST	N	1132	.	.	8	42	274	15					.
24	GRAND BLVD/W 13TH ST	N	1109	.	.	8	42	274	15					.
25	GRAND BLVD/W 18TH ST	N	263	1	3	8	40	274	15					.
26	GRAND BLVD/W 23RD ST	N	262	3	.	8	43	274	16					.

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S33 Sunrise Mall - Hauppauge - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	GRAND BLVD/LAKE DR	N	261	5	.	8	48	274	18					.
28	GRAND BLVD/DOE ST	S	260	3	1	8	50	274	18					.
29	WYANDANCH RAILROAD STATI	S	248	83	5	8	128	274	47	5	3		62.5	.
30	STRAIGHT PATH/S 16TH ST	S	1372	17	.	8	145	274	53					.
31	STRAIGHT PATH/18TH ST	S	1373	5	.	8	150	274	55					.
32	STRAIGHT PATH/20TH ST	S	1374	8	1	8	157	274	57					.
33	STRAIGHT PATH/21ST ST	S	1375	11	4	8	164	274	60					.
34	STRAIGHT PATH/LINCOLN AVE	S	1376	13	5	8	172	274	63					.
35	STRAIGHT PATH/EDISON AVE	S	1377	18	6	8	184	274	67					.
36	STRAIGHT PATH/GORDON AVE	BL	1342	7	.	8	191	274	70					.
37	STRAIGHT PATH/14TH ST	S	1378	1	2	8	190	274	69					.
38	STRAIGHT PATH/HERZEL BLVD	S	1379	.	.	8	190	274	69					.
39	STRAIGHT PATH/5TH ST	S	1380	.	40	8	150	274	55					.
40	STRAIGHT PATH/BABYLON-FA	S	1381	5	7	8	148	274	54	6	2		75.0	.
41	STRAIGHT PATH/4TH ST	S	1382	.	4	8	144	274	53					.
42	STRAIGHT PATH/MAPLE DR	S	1383	1	1	8	144	274	53					.
43	STRAIGHT PATH/53RD ST	S	1384	4	3	8	145	274	53					.
44	STRAIGHT PATH/45TH ST	N	1334	2	4	8	143	274	52					.
45	STRAIGHT PATH/41ST ST	N	1333	.	1	8	142	274	52					.
46	STRAIGHT PATH/SUNRISE HW	N	1332	4	12	8	134	274	49					.
47	DIXON AVE/31ST ST	N	86	2	4	8	132	274	48					.
48	DIXON AVE/VESPUCCI ST	N	85	2	3	8	131	274	48					.
49	DIXON AVE/FERRARIS ST	S	128	2	2	8	131	274	48					.
50	DIXON AVE/GALVANI ST	S	129	.	1	8	130	274	47					.
51	DIXON AVE/BAY VIEW AVE	N	82	1	4	8	127	274	46					.
52	DIXON AVE/OVERLAND AVE	S	130	.	3	8	124	274	45					.

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S33 Sunrise Mall - Hauppauge - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
53	DIXON AVE/ALBANY AVE	S	115	.	5	8	119	274	43					.
54	DIXON AVE/BROADWAY AVE	S	116	.	4	8	115	274	42					.
55	BROADWAY AVE/LOUDEN AVE	S	1385	.	4	8	111	274	41					.
56	BROADWAY AVE/MILL ST	S	118	1	1	8	111	274	41					.
57	BROADWAY AVE/STERLING PL	S	1386	1	2	8	110	274	40					.
58	OAK ST/BROADWAY AVE	N	77	1	6	8	105	274	38					.
59	AMITYVILLE RAILROAD STATIO	N	76	8	7	8	106	274	39	6	1	1	75.0	.
60	OAK ST/KETCHAM AVE	S	1089	.	.	8	106	274	39					.
61	OAK ST/COUNTY LINE RD	N	1329	.	.	8	106	274	39					.
62	SUNRISE MALL	N	1042	.	106	8	0	274	.	4	3	1	50.0	.
All 62 Stops		Total		259	259					43	19	2	67.2	
		Average		7	7									.

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S33 Sunrise Mall - Hauppauge - Southbound

All Valid Saturday Trips

Vehicle Trips	8	Boardings Per Mile	1.54	TP Ontime	43
Boardings	259	Boardings Per Hour	33.8	TP Early	19
Revenue Miles	168.3	Schedule Speed (MPH)	22.1	TP Late	2
Revenue Hours	7.7	Actual Speed (MPH)	22.4	Ontime (%)	67.2

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
2588	8:00 am	11/17/07 Sat	1	33	33	28	21.0	0.8	1.57	39.6	22.2	25.3	37.5
2527	9:00 am	11/17/07 Sat	3	20	20	13	21.0	0.8	0.95	24.0	25.3	25.3	100.0
1702	10:10 am	11/17/07 Sat	5	35	35	22	21.0	1.0	1.66	35.0	24.3	21.0	12.5
1703	11:10 am	11/17/07 Sat	7	43	43	35	21.0	1.0	2.04	43.0	21.0	21.0	100.0
1704	1:00 pm	11/17/07 Sat	9	33	33	26	21.0	1.0	1.57	33.0	22.2	21.0	50.0
1705	2:00 pm	11/17/07 Sat	11	14	14	14	21.0	1.0	0.67	14.0	21.0	21.0	100.0
1706	3:25 pm	11/17/07 Sat	13	30	30	19	21.0	1.0	1.43	30.0	22.2	21.0	37.5
1707	4:30 pm	11/17/07 Sat	15	51	51	46	21.0	1.0	2.42	51.0	21.0	21.0	100.0
	All 8 Trips		Total	259	259		168.3	7.7					
			Average	32	32	25	21.0	1.0	1.54	33.7			
			Minimum	14	14	13			0.67	14.0			
			Maximum	51	51	46			2.42	51.0			
			Standard Deviation	12	12	11			0.56	11.5			

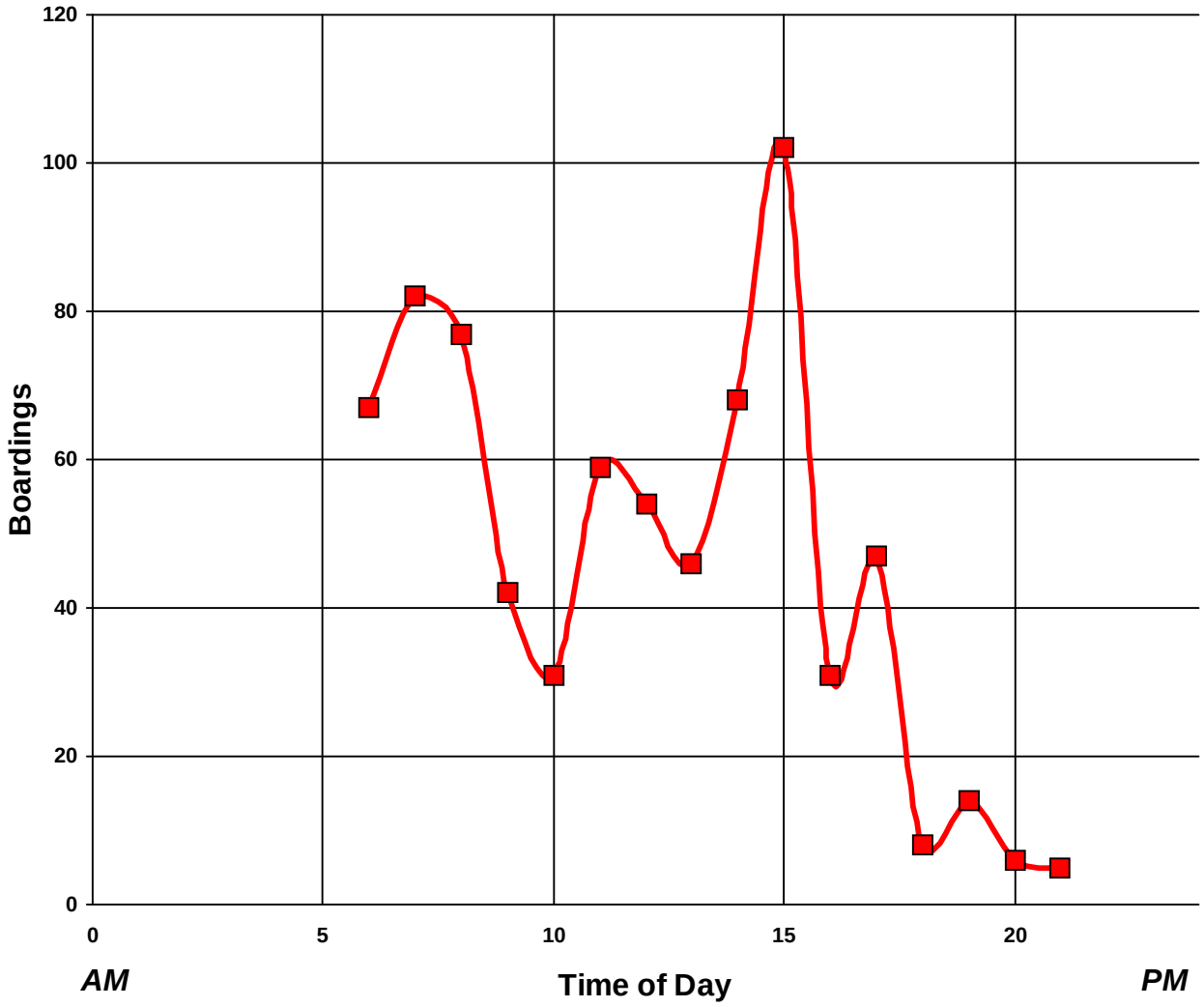
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S54 Patchogue RR - Walt Whitman Mall - Eastboun

All Valid Weekday Trips

Vehicle Trips	24	Boardings Per Mile	0.66	TP Ontime	288
Boardings	739	Boardings Per Hour	23.1	TP Early	88
Revenue Miles	1,123.1	Schedule Speed (MPH)	35.1	TP Late	56
Revenue Hours	32.0	Actual Speed (MPH)	35.2	Ontime (%)	66.7

Boardings



This data is property of Suffolk County Transit

S54 Patchogue RR - Walt Whitman Mall - Eastbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	WALT WHITMAN MALL	W	1004	172	.	24	172	818	21	19	1	4	79.2	.
2	WALT WHITMAN RD/DETROIT P	E	1003	12	1	24	183	818	22					.
3	JERICHO TPKE/NEW YORK AV	E	1254	18	7	24	194	818	24					.
4	JERICHO TPKE/MELVILLE RD	E	1256	6	6	24	194	818	24					.
5	JERICHO TPKE/PIDGEON HILL	E	1257	12	1	24	205	818	25					.
6	JERICHO TPKE/BEVERLY RD	E	1258	6	3	24	208	818	25					.
7	888 JERICHO TPKE	E	1259	8	9	24	207	818	25					.
8	JERICHO TPKE/DIX HILLS RD	E	1260	11	16	24	202	818	25					.
9	JERICHO TPKE/DEER PARK RD	E	1299	10	9	24	203	818	25	18	2	4	75.0	.
10	JERICHO TPKE/OLD COUNTRY	E	1674	1	8	24	196	818	24					.
11	1444 JERICHO TPKE	E	1675	1	8	24	189	818	23					.
12	JERICHO TPKE/WARNER RD	E	1676	3	10	24	182	818	22					.
13	JERICHO TPKE/ELWOOD RD	E	1677	2	10	24	174	818	21	19	4	1	79.2	.
14	JERICHO TPKE/DALY RD	E	1678	5	7	24	172	818	21					.
15	JERICHO TPKE/LARKFIELD RD	E	1679	5	24	24	153	818	19	13	10	1	54.2	.
16	JERICHO TPKE/CALVERT AVE	E	1520	2	5	24	150	818	18					.
17	JERICHO TPKE/RURAL PL	E	1521	3	6	24	147	818	18					.
18	JERICHO TPKE/WILTSHIRE DR	E	1522	.	4	24	143	818	17					.
19	Macys SHOPPING CENTER - C	E	1680	20	56	24	107	818	13	10	13	1	41.7	.
20	VETERANS MEMORIAL HWY/H	E	1681	.	4	24	103	818	13					.
21	150 VETERANS MEMORIAL HW	E	1682	.	5	24	98	818	12					.
22	VETERANS MEMORIAL HWY/S	E	1683	1	2	24	97	818	12					.
23	VETERANS MEMORIAL HWY/W	E	1684	4	4	24	97	818	12	14	8	2	58.3	.
24	OLD WILLETS PATH/VETERAN	E	1249	.	1	24	96	818	12					.
25	50 NORTH DR	E	1250	2	2	24	96	818	12					.
26	SUFFOLK COUNTY NORTH CO	E	1358	23	6	24	113	818	14	14	9	1	58.3	.

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S54 Patchogue RR - Walt Whitman Mall - Eastbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	DENNISON BUILDING	E	1173	15	4	24	124	818	15	18	5	1	75.0	.
28	NYS OFFICE BLDG - HAUPPAU	E	1359	40	8	24	156	818	19	17	5	2	70.8	.
29	WHEELER RD/RABRO DR	E	1175	9	11	24	154	818	19	16	6	2	66.7	.
30	MOTOR PKWY/WHEELER RD	E	521	54	26	24	182	818	22	16	7	1	66.7	.
31	MOTOR PKWY/JETSON LA	E	470	30	5	24	207	818	25					.
32	MOTOR PKWY/HAWTHORNE A	E	1685	18	10	24	215	818	26					.
33	MOTOR PKWY/LIE SOUTH SER	E	1671	1	3	24	213	818	26					.
34	MOTOR PKWY/LIE NORTH SER	E	1686	3	2	24	214	818	26					.
35	MOTOR PKWY/VETERANS MEM	E	1687	.	12	24	202	818	25					.
36	VETERANS MEMORIAL HWY/SY	E	1688	4	8	24	198	818	24					.
37	VETERANS MEMORIAL HWY/S	E	1689	17	11	24	204	818	25	19	2	3	79.2	.
38	VETERANS MEMORIAL HWY/C	E	1690	15	11	24	208	818	25					.
39	VETERANS MEMORIAL HWY/C	E	1691	6	6	24	208	818	25					.
40	3100 VETERANS MEMORIAL H	E	1692	15	7	24	216	818	26					.
41	VETERANS MEMORIAL HWY/W	S	1693	2	11	24	207	818	25					.
42	VETERANS MEMORIAL HGWY/	S	1694	16	15	24	208	818	25	16	3	5	66.7	.
43	VETERANS MEMORIAL HWY/O	E	1695	14	7	24	215	818	26					.
44	VETERANS MEMORIAL HWY/LO	E	1696	16	6	24	225	818	28					.
45	VETERANS MEMORIAL HGWY/	S	1697	6	3	24	228	818	28					.
46	VETERANS MEMORIAL HGWY/	S	1698	8	3	24	233	818	28					.
47	VETERANS MEMORIAL HGWY/J	N	1699	14	18	24	229	818	28	18	3	3	75.0	.
48	JOHNSON AVE/CORPORATE D	E	1700	17	15	24	231	818	28					.
49	JOHNSON AVE/KEYSTONE CT	E	1701	5	6	24	230	818	28					.
50	CHURCH ST/CENTRAL AVE	E	1702	3	5	24	228	818	28					.
51	CHURCH ST/LINCOLN AVE	E	1703	17	18	24	227	818	28					.
52	CHURCH ST/RAFT AVE	E	1704	18	10	24	235	818	29					.

This data is property of Suffolk County Transit

S54 Patchogue RR - Walt Whitman Mall - Eastbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
53	SUN VET MALL	N	1705	21	6	24	250	818	31	15	3	6	62.5	.
54	BROADWAY AVE/NYS27	E	1706	6	4	24	252	818	31					.
55	BROADWAY AVE/LOOP DR	E	1707	1	5	24	248	818	30					.
56	BROADWAY AVE/VERSA PL	E	1708	2	3	24	247	818	30					.
57	BROADWAY AVE/MONTAUK H	E	1709	3	3	24	247	818	30	14	3	7	58.3	.
58	MONTAUK HWY/BROADWAY A	E	1710	2	4	24	245	818	30					.
59	MONTAUK HWY/OAKWOOD AV	E	1478	1	4	24	242	818	30					.
60	MONTAUK HWY/BERNICE DR	E	1477	2	5	24	239	818	29					.
61	MONTAUK HWY/BAYPORT AVE	E	1476	3	6	24	236	818	29					.
62	MONTAUK HWY/GILLETTE AVE	E	1475	.	12	24	224	818	27					.
63	MONTAUK HWY/BLUE POINT A	E	1711	.	6	24	218	818	27					.
64	MONTAUK/BLUE POINT AVE	E	1474	5	10	24	213	818	26	14	2	8	58.3	.
65	MONTAUK HWY/ATLANTIC AVE	E	1505	2	4	24	211	818	26					.
66	MONTAUK HWY/SOUTH PROSP	E	1712	1	13	24	199	818	24					.
67	MONTAUK HWY/WAVERLY AVE	E	1713	.	15	24	184	818	22					.
68	SOUTH ST/WEST AVE	E	1472	.	102	24	82	818	10					.
69	PATCHOGUE RAILROAD STATI	E	759	.	82	24	0	818	.	18	2	4	75.0	.
All 69 Stops		Total		739	739					288	88	56	66.7	
		Average		13	11									.

This data is property of Suffolk County Transit

S54 Patchogue RR - Walt Whitman Mall - Eastbound

All Valid Weekday Trips

Vehicle Trips	24	Boardings Per Mile	0.66	TP Ontime	288
Boardings	739	Boardings Per Hour	23.1	TP Early	88
Revenue Miles	1,123.1	Schedule Speed (MPH)	35.1	TP Late	56
Revenue Hours	32.0	Actual Speed (MPH)	35.2	Ontime (%)	66.7

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
939	6:30 am	10/11/07 Thu	2	67	67	24	46.8	1.3	1.43	50.3	35.1	35.1	88.9
337	7:00 am	10/18/07 Thu	4	55	55	26	46.8	1.3	1.18	41.3	30.5	35.1	61.1
338	7:30 am	10/18/07 Thu	6	27	27	17	46.8	1.3	0.58	20.3	30.2	35.1	27.8
942	8:00 am	10/16/07 Tue	8	54	54	26	46.8	1.3	1.15	40.5	35.1	35.1	100.0
943	8:30 am	10/18/07 Thu	10	23	23	13	46.8	1.3	0.49	17.3	35.1	35.1	72.2
341	9:00 am	10/18/07 Thu	12	22	22	13	46.8	1.3	0.47	16.5	35.1	35.1	94.4
342	9:30 am	10/11/07 Thu	14	20	20	11	46.8	1.3	0.43	15.0	35.1	35.1	88.9
2496	10:00 am	10/18/07 Thu	16	31	31	17	46.8	1.3	0.66	23.3	32.6	35.1	72.2
344	11:00 am	10/16/07 Tue	18	59	59	14	46.8	1.3	1.26	44.3	35.1	35.1	94.4
345	12:00 pm	10/18/07 Thu	20	41	41	24	46.8	1.3	0.88	30.8	39.0	35.1	55.6
949	12:30 pm	10/18/07 Thu	22	13	13	8	46.8	1.3	0.28	9.8	37.9	35.1	77.8
2556	1:30 pm	10/19/07 Fri	24	46	46	29	46.8	1.3	0.98	34.5	35.1	35.1	100.0
951	2:00 pm	10/18/07 Thu	26	28	28	19	46.8	1.3	0.60	21.0	34.2	35.1	66.7
952	2:30 pm	10/18/07 Thu	28	40	40	16	46.8	1.3	0.85	30.0	33.8	35.1	61.1
953	3:00 pm	10/18/07 Thu	30	32	32	17	46.8	1.3	0.68	24.0	36.0	35.1	61.1
2493	3:30 pm	10/18/07 Thu	32	39	39	27	46.8	1.3	0.83	29.3	30.5	35.1	38.9
2494	3:55 pm	10/18/07 Thu	34	31	31	15	46.8	1.3	0.66	23.3	35.1	35.1	83.3
2495	4:30 pm	10/19/07 Fri	36	31	31	20	46.8	1.3	0.66	23.3	32.6	35.1	0.0
2512	5:05 pm	10/18/07 Thu	38	23	23	11	46.8	1.3	0.49	17.3	35.1	35.1	83.3
2497	5:30 pm	10/18/07 Thu	40	24	24	12	46.8	1.3	0.51	18.0	33.8	35.1	66.7
2498	6:05 pm	10/18/07 Thu	42	8	8	4	46.8	1.3	0.17	6.0	36.5	35.1	94.4
2499	7:00 pm	10/18/07 Thu	44	14	14	6	46.8	1.3	0.30	10.5	35.1	35.1	83.3
2500	8:00 pm	10/19/07 Fri	46	6	6	4	46.8	1.3	0.13	4.5	43.9	35.1	11.1
2501	9:00 pm	10/18/07 Thu	48	5	5	3	46.8	1.3	0.11	3.8	42.5	35.1	16.7
All 24 Trips			Total	739	739		1,123.1	32.0					
			Average	31	31	16	46.8	1.3	0.66	23.1			
			Minimum	5	5	3			0.11	3.8			
			Maximum	67	67	29			1.43	50.3			
			Standard Deviation	17	17	8			0.36	12.6			

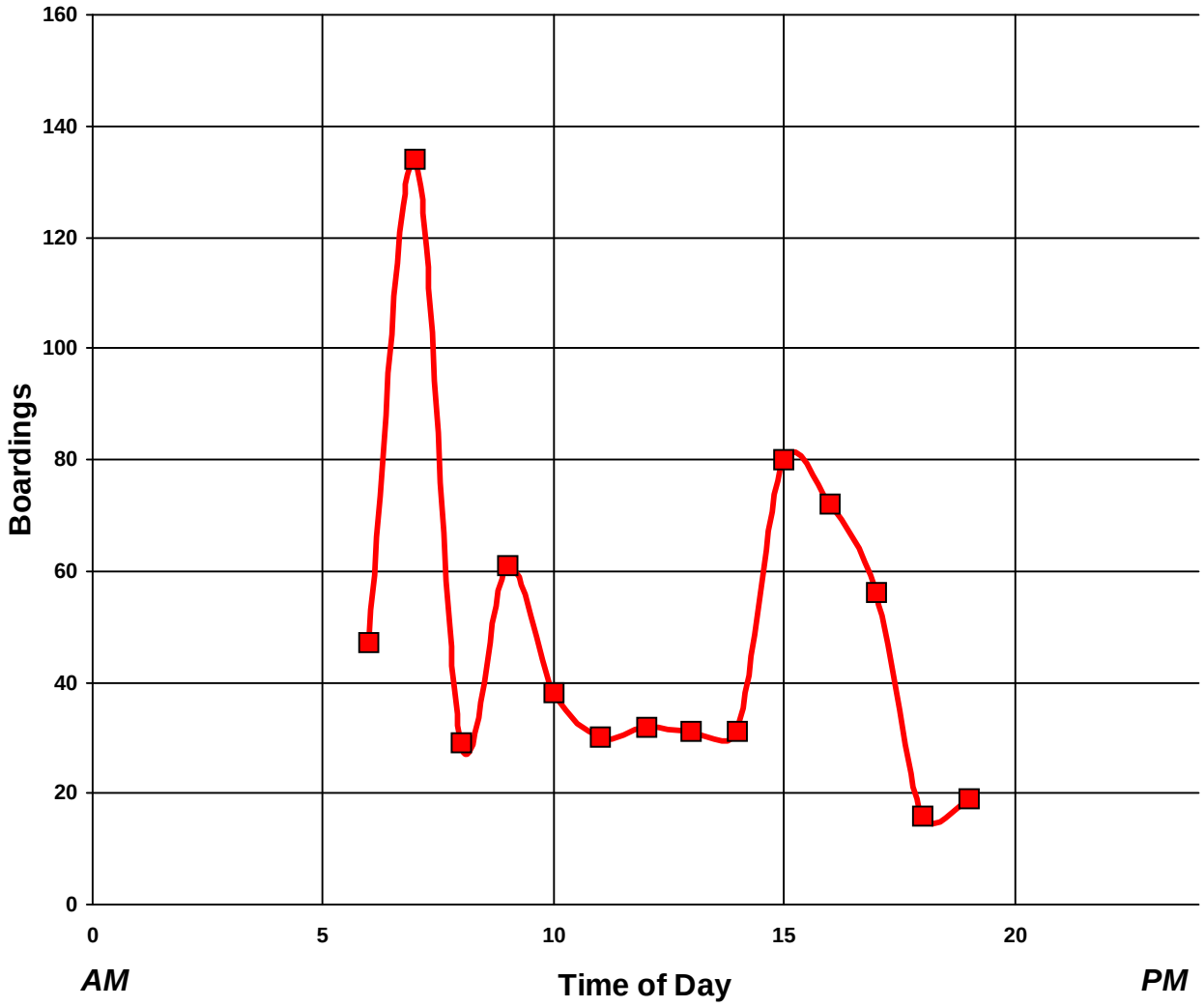
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S54 Patchogue RR - Walt Whitman Mall - Westbou

All Valid Weekday Trips

Vehicle Trips	20	Boardings Per Mile	1.12	TP Ontime	217
Boardings	676	Boardings Per Hour	25.1	TP Early	19
Revenue Miles	605.4	Schedule Speed (MPH)	22.5	TP Late	124
Revenue Hours	26.9	Actual Speed (MPH)	21.4	Ontime (%)	60.3

Boardings



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S54 Patchogue RR - Walt Whitman Mall - Westbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced
							Load	Capacity	%	On	Early	Late	OT%	%
1	PATCHOGUE RAILROAD STATI	E	759	82	.	20	82	648	13	18	2		90.0	.
2	SOUTH ST/WEST AVE	E	1472	133	2	20	213	648	33					.
3	MONTAUK HWY/LETTMAN CT	W	1716	5	1	20	217	648	33					.
4	MONTAUK HWY/SOUTH PROSP	E	1712	3	5	20	215	648	33					.
5	MONTAUK HWY/ATLANTIC AVE	E	1505	5	2	20	218	648	34					.
6	MONTAUK/BLUE POINT AVE	E	1474	19	4	20	233	648	36	18	2		90.0	.
7	MONTAUK HWY/GILLETTE AVE	E	1475	8	3	20	238	648	37					.
8	MONTAUK HWY/BAYPORT AVE	E	1476	2	9	20	231	648	36					.
9	MONTAUK HWY/BERNICE DR	E	1477	4	2	20	233	648	36					.
10	MONTAUK HWY/BROADWAY A	E	1710	5	2	20	236	648	36	16	3	1	80.0	.
11	BROADWAY AVE/VERSA PL	E	1708	3	7	20	232	648	36					.
12	BROADWAY AVE/LOOP DR	E	1707	1	3	20	230	648	35					.
13	BROADWAY AVE/SUNRISE HW	S	1717	4	10	20	224	648	35					.
14	SUN VET MALL	S	1718	6	34	20	196	648	30	16	4		80.0	.
15	CHURCH ST/RAFT AVE	E	1704	1	6	20	191	648	29					.
16	CHURCH ST/LINCOLN AVE	E	1703	5	5	20	191	648	29					.
17	CHURCH ST/KNICKERBOCKER	W	1719	4	5	20	190	648	29					.
18	JOHNSON AVE/AIMEE LA	W	1720	.	4	20	186	648	29					.
19	JOHNSON AVE/CARLOUGH RD	W	1721	4	13	20	177	648	27					.
20	JOHNSON AVE/AERO RD	W	1722	10	7	20	180	648	28					.
21	VETERANS MEMORIAL HGWY/J	N	1699	21	10	20	191	648	29	19		1	95.0	.
22	VETERANS MEMORIAL HGWY/	S	1698	7	7	20	191	648	29					.
23	3845 VETERANS MEMORIAL H	W	1723	7	8	20	190	648	29					.
24	VETERANS MEMORIAL HGWY/L	S	1724	8	4	20	194	648	30					.
25	VETERANS MEMORIAL HWY/LO	E	1696	8	3	20	199	648	31					.
26	VETERANS MEMORIAL HWY/SY	W	1725	17	7	20	209	648	32	16		4	80.0	.

This data is property of Suffolk County Transit

S54 Patchogue RR - Walt Whitman Mall - Westbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	VETERANS MEMORIAL HWY/LO	S	1726	3	6	20	206	648	32					.
28	VETERANS MEMORIAL HWY/5T	W	1727	7	7	20	206	648	32					.
29	VETERANS MEMORIAL HWY/13	W	1728	8	10	20	204	648	31					.
30	VETERANS MEMORIAL HWY/C	E	1690	5	4	20	205	648	32					.
31	VETERANS MEMORIAL HWY/NI	W	1729	7	19	20	193	648	30	14	2	4	70.0	.
32	1797 VETERANS MEMORIAL H	W	1730	6	5	20	194	648	30					.
33	VETERANS MEMORIAL HWY/S	W	1731	4	6	20	192	648	30					.
34	VETERANS MEMORIAL HWY/N	W	1732	11	2	20	201	648	31					.
35	MOTOR PKWY/VETERANS MEM	E	1687	2	2	20	201	648	31					.
36	MOTOR PKWY/LIE NORTH SER	W	1733	6	3	20	204	648	31					.
37	MOTOR PKWY/LIE SOUTH SER	W	1734	3	3	20	204	648	31					.
38	MOTOR PKWY/HAWTHORNE A	E	1685	7	21	20	190	648	29					.
39	MOTOR PKWY/JETSON LA	E	470	3	3	20	190	648	29					.
40	WHEELER RD/MOTOR PKWY	W	1735	24	38	20	176	648	27	11		9	55.0	.
41	WHEELER RD/RABRO DR	E	1175	9	10	20	175	648	27	11		9	55.0	.
42	WHEELER RD/VETERANS MEM	W	1626	2	10	20	167	648	26					.
43	DENNISON BUILDING	E	1173	2	3	20	166	648	26	8	1	11	40.0	.
44	NYS OFFICE BLDG - HAUPPAU	W	1174	13	31	20	148	648	23	9		11	45.0	.
45	SUFFOLK COUNTY NORTH CO	W	1172	7	11	20	144	648	22	8	1	11	40.0	.
46	340 NORTH DR	W	1363	6	1	20	149	648	23					.
47	VETERANS MEMORIAL HWY/N	W	1736	2	1	20	150	648	23					.
48	VETERANS MEMORIAL HWY/W	E	1684	3	2	20	151	648	23	8		12	40.0	.
49	VETERANS MEMORIAL HWY/D	W	1737	3	3	20	151	648	23					.
50	VETERANS MEMORIAL HWY/IN	W	1738	.	5	20	146	648	23					.
51	JERICHO TPKE/VETERANS ME	W	1739	2	2	20	146	648	23					.
52	Macys SHOPPING CENTER - C	E	1680	38	14	20	170	648	26	7	1	12	35.0	.

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S54 Patchogue RR - Walt Whitman Mall - Westbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
53	JERICHO TPKE/COMMACK RD	W	1523	7	4	20	173	648	27					.
54	JERICHO TPKE/WILTSHIRE DR	E	1522	6	2	20	177	648	27					.
55	JERICHO TPKE/RURAL PL	E	1521	6	6	20	177	648	27					.
56	5025 JERICHO TPKE	W	1570	5	1	20	181	648	28					.
57	JERICHO TPKE/LARKFIELD RD	E	1679	26	9	20	198	648	31	5	1	14	25.0	.
58	JERICHO TPKE/EL DORADO DR	W	1740	10	3	20	205	648	32					.
59	JERICHO TPKE/ELWOOD RD	E	1677	10	6	20	209	648	32	9		11	45.0	.
60	JERICHO TPKE/WARNER RD	E	1676	3	1	20	211	648	33					.
61	1444 JERICHO TPKE	E	1675	9	2	20	218	648	34					.
62	JERICHO TPKE/MANOR RD	W	1741	8	10	20	216	648	33					.
63	JERICHO TPKE/DEER PARK RD	E	1299	9	17	20	208	648	32	10	2	8	50.0	.
64	JERICHO TPKE/DIX HILLS RD	E	1260	8	5	20	211	648	33					.
65	JERICHO TPKE/COOPER AVE	W	1300	8	5	20	214	648	33					.
66	JERICHO TPKE/LONGFELLOW	W	1301	2	4	20	212	648	33					.
67	JERICHO TPKE/DEPOT RD	W	1302	3	3	20	212	648	33					.
68	JERICHO TPKE/MELVILLE RD	E	1256	.	5	20	207	648	32					.
69	JERICHO TPKE/POPLAR AVE	W	1303	.	7	20	200	648	31					.
70	NEW YORK AVE/ALBANY ST	W	1304	1	18	20	183	648	28					.
71	WALT WHITMAN MALL	W	1004	.	183	20	0	648	.	14		6	70.0	.
All 71 Stops		Total		676	676					217	19	124	60.3	
		Average		10	10									.

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S54 Patchogue RR - Walt Whitman Mall - Westbound

All Valid Weekday Trips

Vehicle Trips	20	Boardings Per Mile	1.12	TP Ontime	217
Boardings	676	Boardings Per Hour	25.1	TP Early	19
Revenue Miles	605.4	Schedule Speed (MPH)	22.5	TP Late	124
Revenue Hours	26.9	Actual Speed (MPH)	21.4	Ontime (%)	60.3

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
351	6:30 am	10/16/07 Tue	1	47	47	37	30.3	1.4	1.55	33.2	21.4	21.4	77.8
955	7:00 am	10/18/07 Thu	3	45	45	30	30.3	1.4	1.49	31.8	20.9	21.4	50.0
956	7:30 am	10/18/07 Thu	5	53	53	35	30.3	1.3	1.75	39.8	24.2	22.7	72.2
957	7:55 am	10/11/07 Thu	7	36	36	22	30.3	1.4	1.19	25.4	21.4	21.4	77.8
958	8:30 am	10/18/07 Thu	9	29	29	24	30.3	1.3	0.96	21.8	22.4	22.7	33.3
959	9:00 am	10/18/07 Thu	11	20	20	13	30.3	1.3	0.66	15.0	20.0	22.7	22.2
960	9:30 am	10/16/07 Tue	13	41	41	23	30.3	1.3	1.35	30.8	22.7	22.7	100.0
358	10:30 am	10/18/07 Thu	15	38	38	18	30.3	1.3	1.26	28.5	18.9	22.7	33.3
359	11:00 am	10/18/07 Thu	17	30	30	16	30.3	1.3	0.99	22.5	22.7	22.7	100.0
963	12:00 pm	10/11/07 Thu	19	32	32	9	30.3	1.3	1.06	24.0	20.9	22.7	44.4
2558	1:00 pm	10/18/07 Thu	21	31	31	11	30.3	1.3	1.02	23.3	20.9	22.7	77.8
362	2:00 pm	10/16/07 Tue	23	31	31	16	30.3	1.3	1.02	23.3	22.7	22.7	100.0
966	3:00 pm	10/19/07 Fri	25	46	46	28	30.3	1.3	1.52	34.5	20.2	22.7	33.3
967	3:30 pm	10/18/07 Thu	27	34	34	18	30.3	1.3	1.12	25.5	19.1	22.7	38.9
968	4:00 pm	10/18/07 Thu	29	28	28	19	30.3	1.3	0.93	21.0	21.6	22.7	72.2
2506	4:30 pm	10/18/07 Thu	31	44	44	26	30.3	1.3	1.45	33.0	22.7	22.7	38.9
2507	5:00 pm	10/18/07 Thu	33	38	38	19	30.3	1.3	1.26	28.5	18.5	22.7	27.8
2508	5:30 pm	10/18/07 Thu	35	18	18	9	30.3	1.3	0.59	13.5	22.7	22.7	72.2
2509	6:30 pm	10/19/07 Fri	37	16	16	8	30.3	1.3	0.53	12.0	22.7	22.7	77.8
2511	7:30 pm	10/18/07 Thu	39	19	19	10	30.3	1.3	0.63	14.3	21.9	22.7	55.6
All 20 Trips		Total		676	676		605.4	26.9					
		Average		34	34	20	30.3	1.3	1.12	25.1			
		Minimum		16	16	8			0.53	12.0			
		Maximum		53	53	37			1.75	39.8			
		Standard Deviation		10	10	9			0.35	7.6			

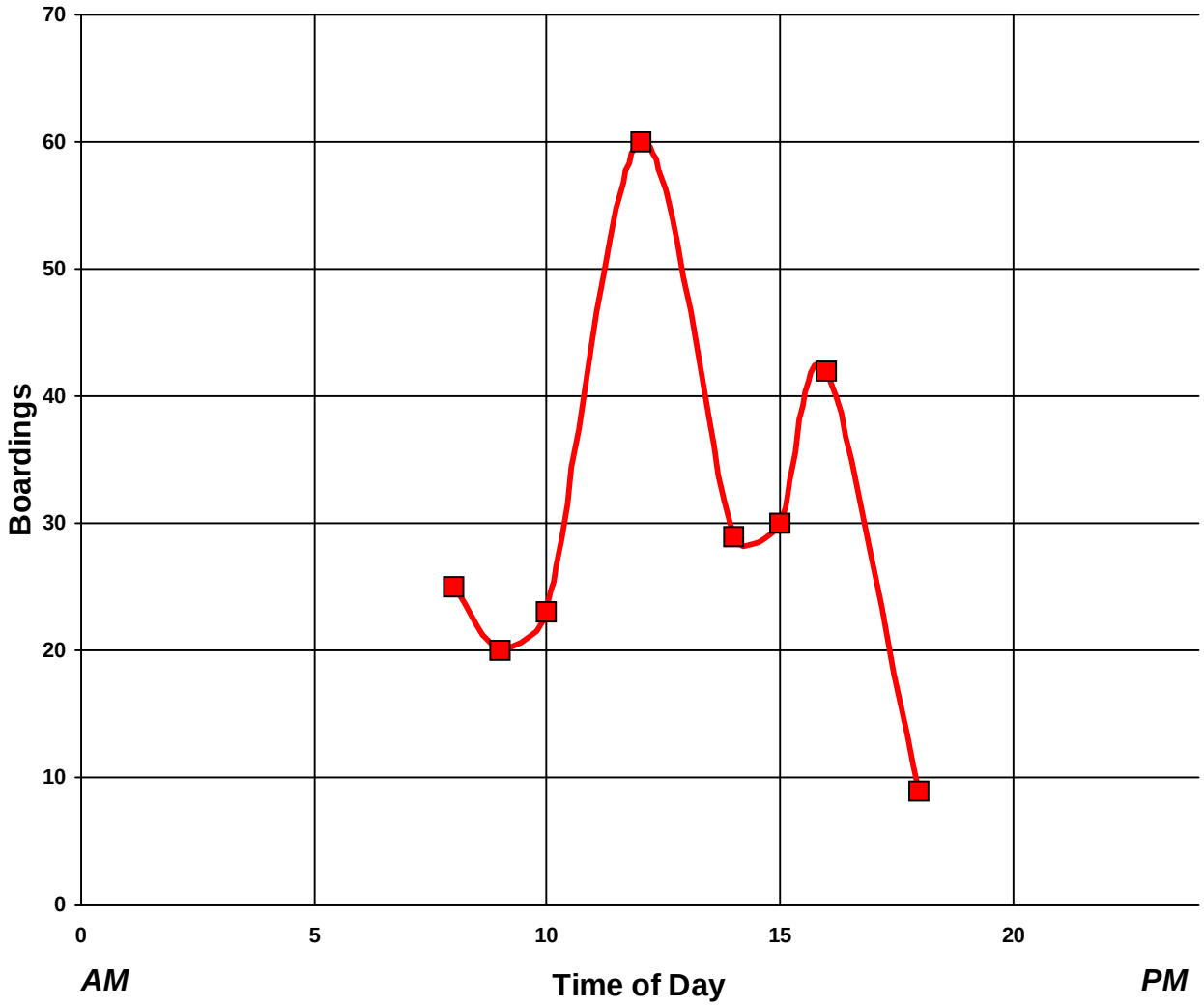
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S54 Patchogue RR - Walt Whitman Mall - Eastboun

All Valid Saturday Trips

Vehicle Trips	11	Boardings Per Mile	0.80	TP Ontime	126
Boardings	238	Boardings Per Hour	18.5	TP Early	24
Revenue Miles	296.2	Schedule Speed (MPH)	23.1	TP Late	4
Revenue Hours	12.8	Actual Speed (MPH)	22.7	Ontime (%)	81.8

Boardings



This data is property of Suffolk County Transit

S54 Patchogue RR - Walt Whitman Mall - Eastbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	WALT WHITMAN MALL	W	1004	63	.	11	63	374	17	11			100.0	.
2	WALT WHITMAN RD/DETROIT P	E	1003	4	1	11	66	374	18					.
3	JERICHO TPKE/NEW YORK AV	E	1254	5	2	11	69	374	18					.
4	JERICHO TPKE/MELVILLE RD	E	1256	1	1	11	69	374	18					.
5	JERICHO TPKE/PIDGEON HILL	E	1257	2	3	11	68	374	18					.
6	JERICHO TPKE/BEVERLY RD	E	1258	1	1	11	68	374	18					.
7	888 JERICHO TPKE	E	1259	2	1	11	69	374	18					.
8	JERICHO TPKE/DIX HILLS RD	E	1260	.	3	11	66	374	18					.
9	JERICHO TPKE/DEER PARK RD	E	1299	8	3	11	71	374	19	10	1		90.9	.
10	JERICHO TPKE/OLD COUNTRY	E	1674	4	4	11	71	374	19					.
11	1444 JERICHO TPKE	E	1675	2	2	11	71	374	19					.
12	JERICHO TPKE/WARNER RD	E	1676	.	.	11	71	374	19					.
13	JERICHO TPKE/ELWOOD RD	E	1677	1	7	11	65	374	17	9	2		81.8	.
14	JERICHO TPKE/DALY RD	E	1678	5	2	11	68	374	18					.
15	JERICHO TPKE/LARKFIELD RD	E	1679	2	10	11	60	374	16	7	4		63.6	.
16	JERICHO TPKE/CALVERT AVE	E	1520	1	1	11	60	374	16					.
17	JERICHO TPKE/RURAL PL	E	1521	5	1	11	64	374	17					.
18	JERICHO TPKE/WILTSHIRE DR	E	1522	1	1	11	64	374	17					.
19	Macys SHOPPING CENTER - C	E	1680	12	21	11	55	374	15	6	5		54.5	.
20	VETERANS MEMORIAL HWY/H	E	1681	2	1	11	56	374	15					.
21	150 VETERANS MEMORIAL HW	E	1682	2	1	11	57	374	15					.
22	VETERANS MEMORIAL HWY/S	E	1683	.	3	11	54	374	14					.
23	VETERANS MEMORIAL HWY/W	E	1684	1	.	11	55	374	15	9	2		81.8	.
24	OLD WILLETS PATH/VETERAN	E	1249	3	1	11	57	374	15					.
25	MOTOR PKWY/WHEELER RD	E	521	22	7	11	72	374	19	8	3		72.7	.
26	MOTOR PKWY/JETSON LA	E	470	4	4	11	72	374	19					.

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S54 Patchogue RR - Walt Whitman Mall - Eastbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	MOTOR PKWY/HAWTHORNE A	E	1685	11	.	11	83	374	22					.
28	MOTOR PKWY/LIE SOUTH SER	E	1671	2	3	11	82	374	22					.
29	MOTOR PKWY/LIE NORTH SER	E	1686	1	.	11	83	374	22					.
30	MOTOR PKWY/VETERANS MEM	E	1687	1	3	11	81	374	22					.
31	VETERANS MEMORIAL HWY/SY	E	1688	3	2	11	82	374	22					.
32	VETERANS MEMORIAL HWY/S	E	1689	5	.	11	87	374	23	10	1		90.9	.
33	VETERANS MEMORIAL HWY/C	E	1690	.	2	11	85	374	23					.
34	VETERANS MEMORIAL HWY/C	E	1691	3	3	11	85	374	23					.
35	3100 VETERANS MEMORIAL H	E	1692	.	3	11	82	374	22					.
36	VETERANS MEMORIAL HWY/W	S	1693	.	.	11	82	374	22					.
37	VETERANS MEMORIAL HGWY/	S	1694	4	1	11	85	374	23	9	2		81.8	.
38	VETERANS MEMORIAL HWY/O	E	1695	3	.	11	88	374	24					.
39	VETERANS MEMORIAL HWY/LO	E	1696	2	.	11	90	374	24					.
40	VETERANS MEMORIAL HGWY/	S	1697	4	3	11	91	374	24					.
41	VETERANS MEMORIAL HGWY/	S	1698	1	1	11	91	374	24					.
42	VETERANS MEMORIAL HGWY/J	N	1699	7	1	11	97	374	26	9	1	1	81.8	.
43	JOHNSON AVE/CORPORATE D	E	1700	7	1	11	103	374	28					.
44	JOHNSON AVE/KEYSTONE CT	E	1701	1	.	11	104	374	28					.
45	CHURCH ST/CENTRAL AVE	E	1702	5	.	11	109	374	29					.
46	CHURCH ST/LINCOLN AVE	E	1703	4	.	11	113	374	30					.
47	CHURCH ST/RAFT AVE	E	1704	4	2	11	115	374	31					.
48	SUN VET MALL	N	1705	7	4	11	118	374	32	9	1	1	81.8	.
49	BROADWAY AVE/NYS27	E	1706	4	3	11	119	374	32					.
50	BROADWAY AVE/LOOP DR	E	1707	.	.	11	119	374	32					.
51	BROADWAY AVE/VERSA PL	E	1708	1	1	11	119	374	32					.
52	BROADWAY AVE/MONTAUK H	E	1709	4	3	11	120	374	32	9	1	1	81.8	.

This data is property of Suffolk County Transit

S54 Patchogue RR - Walt Whitman Mall - Eastbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
53	MONTAUK HWY/BROADWAY A	E	1710	.	3	11	117	374	31					.
54	MONTAUK HWY/OAKWOOD AV	E	1478	.	1	11	116	374	31					.
55	MONTAUK HWY/BERNICE DR	E	1477	.	1	11	115	374	31					.
56	MONTAUK HWY/BAYPORT AVE	E	1476	.	.	11	115	374	31					.
57	MONTAUK HWY/GILLETTE AVE	E	1475	.	5	11	110	374	29					.
58	MONTAUK HWY/BLUE POINT A	E	1711	.	7	11	103	374	28					.
59	MONTAUK/BLUE POINT AVE	E	1474	1	9	11	95	374	25	10	1		90.9	.
60	MONTAUK HWY/ATLANTIC AVE	E	1505	.	1	11	94	374	25					.
61	MONTAUK HWY/SOUTH PROSP	E	1712	.	.	11	94	374	25					.
62	MONTAUK HWY/WAVERLY AVE	E	1713	.	.	11	94	374	25					.
63	SOUTH ST/WEST AVE	E	1472	.	39	11	55	374	15					.
64	PATCHOGUE RAILROAD STATI	E	759	.	55	11	0	374	.	10		1	90.9	.
All 64 Stops		Total		238	238					126	24	4	81.8	
		Average		5	5									.

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S54 Patchogue RR - Walt Whitman Mall - Eastbound

All Valid Saturday Trips

Vehicle Trips	11	Boardings Per Mile	0.80	TP Ontime	126
Boardings	238	Boardings Per Hour	18.5	TP Early	24
Revenue Miles	296.2	Schedule Speed (MPH)	23.1	TP Late	4
Revenue Hours	12.8	Actual Speed (MPH)	22.7	Ontime (%)	81.8

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
13	8:00 am	11/10/07 Sat	2	25	25	18	26.9	1.2	0.93	21.4	23.1	23.1	100.0
2541	9:10 am	11/17/07 Sat	4	20	20	12	26.9	1.2	0.74	17.1	22.8	23.1	64.3
1810	10:00 am	11/17/07 Sat	6	11	11	7	26.9	1.2	0.41	9.4	23.1	23.1	100.0
444	10:40 am	11/10/07 Sat	8	12	12	8	26.9	1.2	0.45	10.3	23.1	23.1	100.0
2542	12:00 pm	11/10/07 Sat	10	41	41	18	26.9	1.2	1.52	35.1	19.7	23.1	50.0
2534	12:40 pm	11/17/07 Sat	12	19	19	9	26.9	1.2	0.71	16.3	23.1	23.1	100.0
2528	2:00 pm	11/10/07 Sat	14	29	29	18	26.9	1.2	1.08	24.9	23.1	23.1	92.9
2562	3:10 pm	11/10/07 Sat	16	30	30	14	26.9	1.2	1.11	25.7	22.8	23.1	85.7
2536	4:00 pm	11/17/07 Sat	18	31	31	21	26.9	1.2	1.15	26.6	23.1	23.1	100.0
2539	4:55 pm	11/17/07 Sat	20	11	11	7	26.9	1.2	0.41	9.4	23.1	23.1	21.4
1818	6:05 pm	11/10/07 Sat	22	9	9	7	26.9	1.2	0.33	7.7	23.1	23.1	85.7
All 11 Trips			Total	238	238		296.2	12.8					
			Average	22	22	13	26.9	1.2	0.80	18.5			
			Minimum	9	9	7			0.33	7.7			
			Maximum	41	41	21			1.52	35.1			
			Standard Deviation	10	10	5			0.39	8.9			

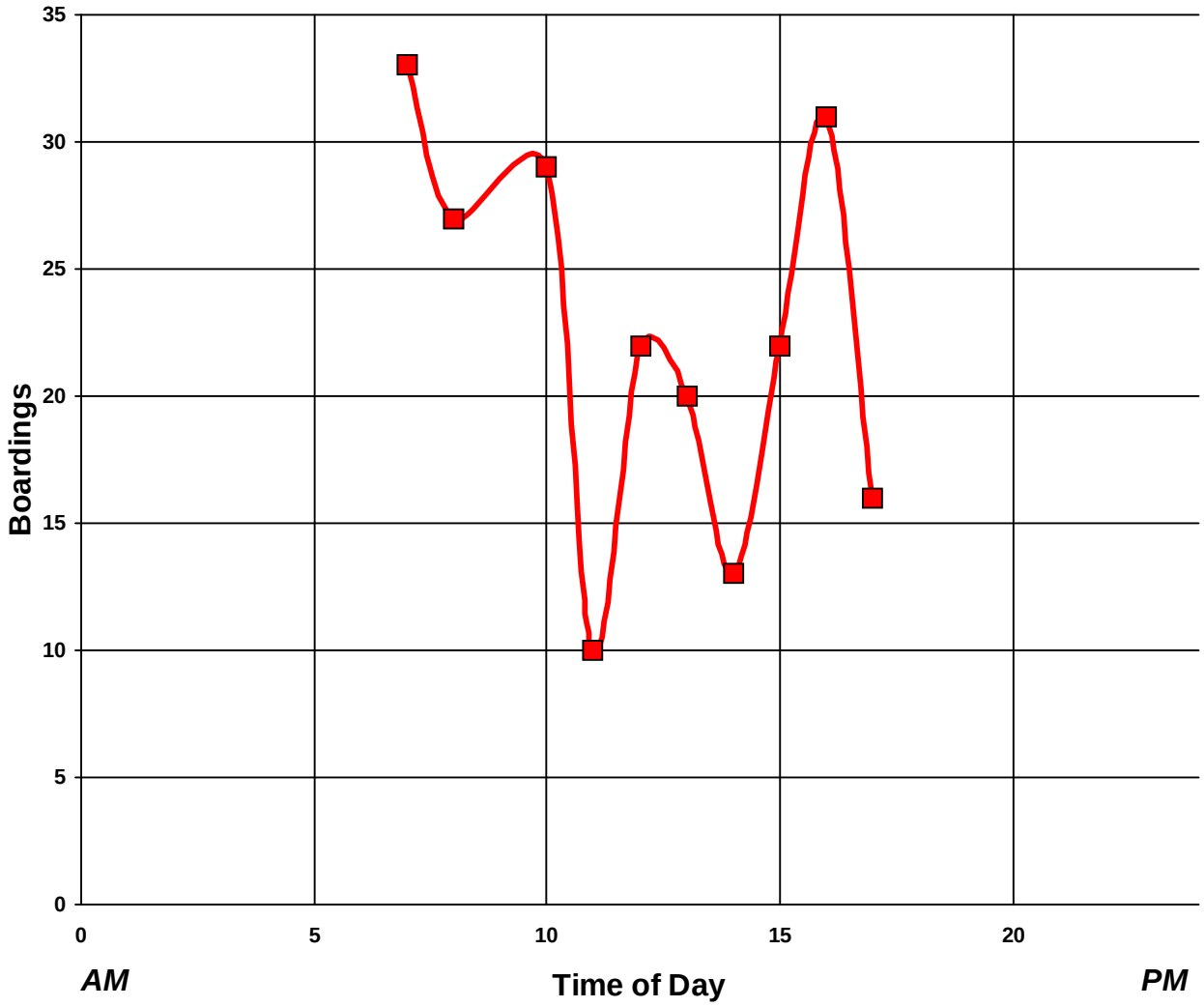
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S54 Patchogue RR - Walt Whitman Mall - Westbou

All Valid Saturday Trips

Vehicle Trips	10	Boardings Per Mile	0.82	TP Ontime	119
Boardings	223	Boardings Per Hour	19.1	TP Early	10
Revenue Miles	271.5	Schedule Speed (MPH)	23.3	TP Late	11
Revenue Hours	11.7	Actual Speed (MPH)	23.2	Ontime (%)	85.0

Boardings



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S54 Patchogue RR - Walt Whitman Mall - Westbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced
							Load	Capacity	%	On	Early	Late	OT%	%
1	PATCHOGUE RAILROAD STATI	E	759	27	.	10	27	340	8	8	1	1	80.0	.
2	SOUTH ST/WEST AVE	E	1472	45	1	10	71	340	21					.
3	MONTAUK HWY/LETTMAN CT	W	1716	6	.	10	77	340	23					.
4	MONTAUK HWY/SOUTH PROSP	E	1712	4	4	10	77	340	23					.
5	MONTAUK HWY/ATLANTIC AVE	E	1505	3	2	10	78	340	23					.
6	MONTAUK/BLUE POINT AVE	E	1474	9	2	10	85	340	25	10			100.0	.
7	MONTAUK HWY/GILLETTE AVE	E	1475	1	.	10	86	340	25					.
8	MONTAUK HWY/BAYPORT AVE	E	1476	4	2	10	88	340	26					.
9	MONTAUK HWY/BERNICE DR	E	1477	2	.	10	90	340	26					.
10	MONTAUK HWY/BROADWAY A	E	1710	.	1	10	89	340	26	9	1		90.0	.
11	BROADWAY AVE/VERSA PL	E	1708	.	.	10	89	340	26					.
12	BROADWAY AVE/LOOP DR	E	1707	1	1	10	89	340	26					.
13	BROADWAY AVE/SUNRISE HW	S	1717	3	5	10	87	340	26					.
14	SUN VET MALL	S	1718	1	15	10	73	340	21	7	2	1	70.0	.
15	CHURCH ST/RAFT AVE	E	1704	1	2	10	72	340	21					.
16	CHURCH ST/LINCOLN AVE	E	1703	.	1	10	71	340	21					.
17	CHURCH ST/KNICKERBOCKER	W	1719	2	.	10	73	340	21					.
18	JOHNSON AVE/AIMEE LA	W	1720	.	.	10	73	340	21					.
19	JOHNSON AVE/CARLOUGH RD	W	1721	.	1	10	72	340	21					.
20	JOHNSON AVE/AERO RD	W	1722	.	2	10	70	340	21					.
21	VETERANS MEMORIAL HGWY/J	N	1699	3	2	10	71	340	21	8	1	1	80.0	.
22	VETERANS MEMORIAL HGWY/	S	1698	3	3	10	71	340	21					.
23	3845 VETERANS MEMORIAL H	W	1723	.	3	10	68	340	20					.
24	VETERANS MEMORIAL HGWY/L	S	1724	3	3	10	68	340	20					.
25	VETERANS MEMORIAL HWY/LO	E	1696	.	1	10	67	340	20					.
26	VETERANS MEMORIAL HWY/SY	W	1725	3	14	10	56	340	16	8		2	80.0	.

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S54 Patchogue RR - Walt Whitman Mall - Westbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	VETERANS MEMORIAL HWY/LO	S	1726	.	.	10	56	340	16					.
28	VETERANS MEMORIAL HWY/5T	W	1727	2	.	10	58	340	17					.
29	VETERANS MEMORIAL HWY/13	W	1728	.	1	10	57	340	17					.
30	VETERANS MEMORIAL HWY/C	E	1690	.	1	10	56	340	16					.
31	VETERANS MEMORIAL HWY/NI	W	1729	.	6	10	50	340	15	8	1	1	80.0	.
32	1797 VETERANS MEMORIAL H	W	1730	.	.	10	50	340	15					.
33	VETERANS MEMORIAL HWY/S	W	1731	.	.	10	50	340	15					.
34	VETERANS MEMORIAL HWY/N	W	1732	.	1	10	49	340	14					.
35	MOTOR PKWY/VETERANS MEM	E	1687	1	2	10	48	340	14					.
36	MOTOR PKWY/LIE NORTH SER	W	1733	.	.	10	48	340	14					.
37	MOTOR PKWY/LIE SOUTH SER	W	1734	.	.	10	48	340	14					.
38	MOTOR PKWY/HAWTHORNE A	E	1685	.	.	10	48	340	14					.
39	MOTOR PKWY/JETSON LA	E	470	.	4	10	44	340	13					.
40	WHEELER RD/MOTOR PKWY	W	1735	14	7	10	51	340	15	8		2	80.0	.
41	VETERANS MEMORIAL HWY/N	W	1736	.	2	10	49	340	14					.
42	VETERANS MEMORIAL HWY/W	E	1684	2	2	10	49	340	14	9	1		90.0	.
43	VETERANS MEMORIAL HWY/D	W	1737	3	.	10	52	340	15					.
44	VETERANS MEMORIAL HWY/IN	W	1738	.	.	10	52	340	15					.
45	JERICHO TPKE/VETERANS ME	W	1739	.	.	10	52	340	15					.
46	Macys SHOPPING CENTER - C	E	1680	20	10	10	62	340	18	9		1	90.0	.
47	JERICHO TPKE/COMMACK RD	W	1523	1	.	10	63	340	19					.
48	JERICHO TPKE/WILTSHIRE DR	E	1522	1	.	10	64	340	19					.
49	JERICHO TPKE/RURAL PL	E	1521	4	.	10	68	340	20					.
50	5025 JERICHO TPKE	W	1570	.	.	10	68	340	20					.
51	JERICHO TPKE/LARKFIELD RD	E	1679	5	6	10	67	340	20	10			100.0	.
52	JERICHO TPKE/EL DORADO DR	W	1740	3	.	10	70	340	21					.

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S54 Patchogue RR - Walt Whitman Mall - Westbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
53	JERICHO TPKE/ELWOOD RD	E	1677	11	6	10	75	340	22	9	1		90.0	.
54	JERICHO TPKE/WARNER RD	E	1676	1	1	10	75	340	22					.
55	1444 JERICHO TPKE	E	1675	6	1	10	80	340	24					.
56	JERICHO TPKE/MANOR RD	W	1741	6	2	10	84	340	25					.
57	JERICHO TPKE/DEER PARK RD	E	1299	8	2	10	90	340	26	8	1	1	80.0	.
58	JERICHO TPKE/DIX HILLS RD	E	1260	7	.	10	97	340	29					.
59	JERICHO TPKE/COOPER AVE	W	1300	3	7	10	93	340	27					.
60	JERICHO TPKE/LONGFELLOW	W	1301	3	2	10	94	340	28					.
61	JERICHO TPKE/DEPOT RD	W	1302	1	14	10	81	340	24					.
62	JERICHO TPKE/MELVILLE RD	E	1256	.	1	10	80	340	24					.
63	JERICHO TPKE/POPLAR AVE	W	1303	.	.	10	80	340	24					.
64	NEW YORK AVE/ALBANY ST	W	1304	.	6	10	74	340	22					.
65	WALT WHITMAN MALL	W	1004	.	74	10	0	340	.	8	1	1	80.0	.
	All 65 Stops	Total		223	223					119	10	11	85.0	
		Average		6	5									.

This data is property of Suffolk County Transit

S54 Patchogue RR - Walt Whitman Mall - Westbound

All Valid Saturday Trips

Vehicle Trips	10	Boardings Per Mile	0.82	TP Ontime	119
Boardings	223	Boardings Per Hour	19.1	TP Early	10
Revenue Miles	271.5	Schedule Speed (MPH)	23.3	TP Late	11
Revenue Hours	11.7	Actual Speed (MPH)	23.2	Ontime (%)	85.0

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1819	7:50 am	11/10/07 Sat	1	33	33	13	27.2	1.2	1.22	28.3	25.1	23.3	57.1
2532	8:40 am	11/17/07 Sat	3	27	27	19	27.2	1.2	0.99	23.1	23.3	23.3	100.0
2529	10:35 am	11/10/07 Sat	7	29	29	11	27.2	1.2	1.07	24.9	21.2	23.3	78.6
2533	11:20 am	11/17/07 Sat	9	10	10	4	27.2	1.2	0.37	8.6	23.3	23.3	100.0
2576	12:35 pm	11/10/07 Sat	11	22	22	12	27.2	1.2	0.81	18.9	23.3	23.3	100.0
2530	1:15 pm	11/10/07 Sat	13	20	20	12	27.2	1.2	0.74	17.1	22.3	23.3	35.7
2535	2:40 pm	11/17/07 Sat	15	13	13	8	27.2	1.2	0.48	11.1	23.3	23.3	100.0
2538	3:30 pm	11/17/07 Sat	17	22	22	12	27.2	1.2	0.81	18.9	23.3	23.3	100.0
2531	4:35 pm	11/10/07 Sat	19	31	31	23	27.2	1.2	1.14	26.6	24.0	23.3	78.6
2537	5:25 pm	11/17/07 Sat	21	16	16	10	27.2	1.2	0.59	13.7	23.3	23.3	100.0
	All 10 Trips		Total	223	223		271.5	11.7					
			Average	22	22	12	27.2	1.2	0.82	19.1			
			Minimum	10	10	4			0.37	8.6			
			Maximum	33	33	23			1.22	28.3			
			Standard Deviation	8	8	5			0.29	6.6			

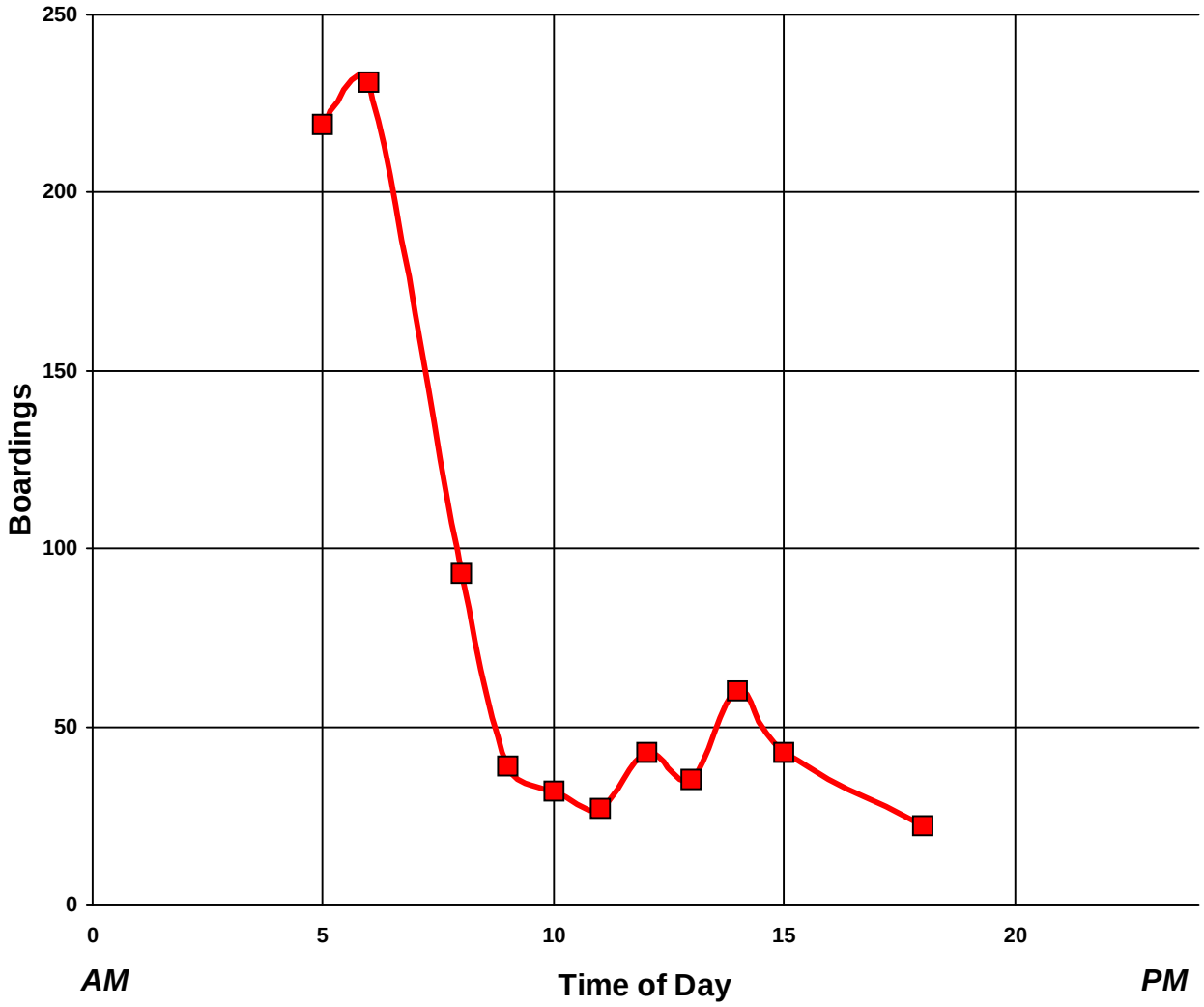
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1A Amityville - Loop - Loop

All Valid Weekday Trips

Vehicle Trips	27	Boardings Per Mile	1.01	TP Ontime	171
Boardings	204	Boardings Per Hour	19.0	TP Early	2
Revenue Miles	202.6	Schedule Speed (MPH)	18.8	TP Late	0
Revenue Hours	10.8	Actual Speed (MPH)	18.3	Ontime (%)	98.8

Boardings



This data is property of Suffolk County Transit

1A Amityville - Loop - Loop

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	AMITYVILLE RAILROAD STATIO	N	76	.	.	2	0	68	.	2			100.0	.
2	OAK ST/BROADWAY AVE	N	77	.	.	2	0	68	.					.
3	275 BROADWAY	W	78	.	.	2	0	68	.					.
4	BROADWAY AVE/MILL ST	S	118	.	.	2	0	68	.					.
5	BROADWAY AVE/DIXON AVE	N	80	1	.	2	1	68	1					.
6	ALBANY AVE/REED PL	W	119	.	.	2	1	68	1					.
7	ALBANY AVE/SUNRISE HGWY	W	113	.	.	2	1	68	1					.
8	300 ALBANY AVE	W	120	.	.	2	1	68	1					.
9	ALBANY AVE/BAY VIEW AVE	W	121	.	.	2	1	68	1					.
10	ALBANY AVE/SOMERSET RD N	W	122	.	.	2	1	68	1					.
11	ALBANY AVE/GREAT NECK RD	W	109	1	.	2	2	68	3	2			100.0	.
12	ALBANY AVE/RAINBOW LA	W	108	2	.	2	4	68	6					.
13	ALBANY AVE/SCHLEIGEL BLVD	W	107	.	1	2	3	68	4					.
14	605 ALBANY AVE	W	123	1	.	2	4	68	6					.
15	NEW HGWY/ALBANY AVE	W	105	1	.	2	5	68	7					.
16	NEW HGWY/WATKINS TERRAC	W	124	.	.	2	5	68	7					.
17	OAK ST/NEW HGWY	W	102	1	.	2	6	68	9	2			100.0	.
18	EAST ST/SPRUCE RD	W	101	1	.	2	7	68	10					.
19	EAST ST/POPLAR RD	W	100	.	.	2	7	68	10					.
20	BIRCH RD/EAST ST	W	125	4	.	2	11	68	16					.
21	CENTER ST/CEDAR RD	W	98	2	.	2	13	68	19					.
22	PARKWAY AVE/SCHLEIGEL BL	W	126	.	.	2	13	68	19					.
23	MONROE ST/PARKWAY AVE	W	96	.	.	2	13	68	19					.
24	MONROE ST/GREAT NECK RD	W	95	.	.	2	13	68	19	2			100.0	.
25	GREAT NECK RD (CR 47)/JOHN	N	94	.	.	2	13	68	19					.
26	GREAT NECK RD (CR 47)/BENJ	N	93	1	.	2	14	68	21					.

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1A Amityville - Loop - Loop

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	GREAT NECK RD/ALBANY AVE	N	92	3	1	2	16	68	24	2			100.0	.
28	GREAT NECK RD (CR 47)/SOME	N	91	.	.	2	16	68	24					.
29	35TH ST/ILES PL	W	90	.	.	2	16	68	24					.
30	35TH ST/RALPH AVE	W	89	.	.	2	16	68	24					.
31	35TH ST/OAK ST	W	88	.	.	2	16	68	24					.
32	BIG LOTS SHOPPING CENTER	W	87	.	1	2	15	68	22	2			100.0	.
33	DIXON AVE/31ST ST	N	86	.	.	2	15	68	22					.
34	DIXON AVE/VESPUCCI ST	N	85	1	3	2	13	68	19					.
35	DIXON AVE/FERRARIS ST	S	128	.	.	2	13	68	19					.
36	DIXON AVE/GALVANI ST	S	129	2	.	2	15	68	22					.
37	DIXON AVE/BAY VIEW AVE	N	82	.	1	2	14	68	21					.
38	DIXON AVE/OVERLAND AVE	S	130	.	2	2	12	68	18					.
39	DIXON AVE/ALBANY AVE	S	115	.	.	2	12	68	18					.
40	DIXON AVE/BROADWAY AVE	S	116	.	4	2	8	68	12					.
41	BROADWAY AVE/MILL ST	S	118	.	.	2	8	68	12					.
42	275 BROADWAY	W	78	.	3	2	5	68	7					.
43	OAK ST/BROADWAY AVE	N	77	.	.	2	5	68	7					.
44	AMITYVILLE RAILROAD STATIO	N	76	.	5	2	0	68	.	2			100.0	.
53	AMITYVILLE RAILROAD STATIO	N	76	2	.	1	2	34	6	1			100.0	.
54	OAK ST/BROADWAY AVE	N	77	.	.	1	2	34	6					.
55	275 BROADWAY	W	78	.	.	1	2	34	6					.
56	BROADWAY AVE/MILL ST	S	118	.	.	1	2	34	6					.
57	BROADWAY AVE/DIXON AVE	N	80	.	.	1	2	34	6					.
58	ALBANY AVE/REED PL	W	119	.	.	1	2	34	6					.
59	ALBANY AVE/SUNRISE HGWY	W	113	.	.	1	2	34	6					.
60	300 ALBANY AVE	W	120	.	.	1	2	34	6					.

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1A Amityville - Loop - Loop

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
61	ALBANY AVE/BAY VIEW AVE	W	121	.	.	1	2	34	6					.
62	ALBANY AVE/SOMERSET RD N	W	122	.	.	1	2	34	6					.
63	ALBANY AVE/GREAT NECK RD	W	109	.	.	1	2	34	6	1			100.0	.
64	ALBANY AVE/RAINBOW LA	W	108	.	.	1	2	34	6					.
65	ALBANY AVE/SCHLEIGEL BLVD	W	107	.	.	1	2	34	6					.
66	605 ALBANY AVE	W	123	.	.	1	2	34	6					.
67	NEW HGWY/ALBANY AVE	W	105	.	.	1	2	34	6					.
68	NEW HGWY/WATKINS TERRAC	W	124	.	.	1	2	34	6					.
69	OAK ST/NEW HGWY	W	102	.	.	1	2	34	6	1			100.0	.
70	EAST ST/SPRUCE RD	W	101	.	.	1	2	34	6					.
71	EAST ST/POPLAR RD	W	100	.	.	1	2	34	6					.
72	BIRCH RD/EAST ST	W	125	.	.	1	2	34	6					.
73	CENTER ST/CEDAR RD	W	98	.	.	1	2	34	6					.
74	PARKWAY AVE/SCHLEIGEL BL	W	126	.	.	1	2	34	6					.
75	MONROE ST/PARKWAY AVE	W	96	.	.	1	2	34	6					.
76	MONROE ST/GREAT NECK RD	W	95	.	.	1	2	34	6	1			100.0	.
77	GREAT NECK RD (CR 47)/JOHN	N	94	.	.	1	2	34	6					.
78	GREAT NECK RD (CR 47)/BENJ	N	93	.	.	1	2	34	6					.
79	GREAT NECK RD/ALBANY AVE	N	92	.	1	1	1	34	3	1			100.0	.
80	GREAT NECK RD (CR 47)/SOME	N	91	.	.	1	1	34	3					.
81	35TH ST/ILES PL	W	90	.	.	1	1	34	3					.
82	35TH ST/RALPH AVE	W	89	.	.	1	1	34	3					.
83	35TH ST/OAK ST	W	88	.	.	1	1	34	3					.
84	BIG LOTS SHOPPING CENTER	W	87	.	1	1	0	34	.	1			100.0	.
171	AMITYVILLE RAILROAD STATIO	N	76	13	.	10	13	340	4	10			100.0	.
172	OAK ST/BROADWAY AVE	N	77	5	.	10	18	340	5					.

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1A Amityville - Loop - Loop

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
173	275 BROADWAY	W	78	2	.	10	20	340	6					.
174	BROADWAY AVE/MILL ST	S	118	.	.	10	20	340	6					.
175	BROADWAY AVE/DIXON AVE	N	80	2	.	10	22	340	6					.
176	ALBANY AVE/REED PL	W	119	.	1	10	21	340	6					.
177	ALBANY AVE/SUNRISE HGWY	W	113	.	.	10	21	340	6					.
178	300 ALBANY AVE	W	120	.	.	10	21	340	6					.
179	ALBANY AVE/BAY VIEW AVE	W	121	.	1	10	20	340	6					.
180	ALBANY AVE/SOMERSET RD N	W	122	.	.	10	20	340	6					.
181	ALBANY AVE/GREAT NECK RD	W	109	.	.	10	20	340	6	10			100.0	.
182	ALBANY AVE/RAINBOW LA	W	108	.	.	10	20	340	6					.
183	ALBANY AVE/SCHLEIGEL BLVD	W	107	1	.	10	21	340	6					.
184	605 ALBANY AVE	W	123	.	1	10	20	340	6					.
185	NEW HGWY/ALBANY AVE	W	105	.	.	10	20	340	6					.
186	NEW HGWY/WATKINS TERRAC	W	124	.	.	10	20	340	6					.
187	OAK ST/NEW HGWY	W	102	.	3	10	17	340	5	10			100.0	.
188	EAST ST/SPRUCE RD	W	101	2	.	10	19	340	6					.
189	EAST ST/POPLAR RD	W	100	2	2	10	19	340	6					.
190	BIRCH RD/EAST ST	W	125	2	.	10	21	340	6					.
191	CENTER ST/CEDAR RD	W	98	.	3	10	18	340	5					.
192	PARKWAY AVE/SCHLEIGEL BL	W	126	.	3	10	15	340	4					.
193	MONROE ST/PARKWAY AVE	W	96	3	3	10	15	340	4					.
194	MONROE ST/GREAT NECK RD	W	95	1	1	10	15	340	4					.
195	GREAT NECK RD (CR 47)/JOHN	N	94	.	.	10	15	340	4					.
196	GREAT NECK RD (CR 47)/BENJ	N	93	4	1	10	18	340	5					.
197	GREAT NECK RD/ALBANY AVE	N	92	.	5	10	13	340	4	10			100.0	.
198	GREAT NECK RD (CR 47)/SOME	N	91	.	.	10	13	340	4					.

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1A Amityville - Loop - Loop

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
199	35TH ST/ILES PL	W	90	.	.	10	13	340	4					.
200	35TH ST/RALPH AVE	W	89	.	.	10	13	340	4					.
201	35TH ST/OAK ST	W	88	.	.	10	13	340	4					.
202	BIG LOTS SHOPPING CENTER	W	87	3	1	10	15	340	4	10			100.0	.
203	DIXON AVE/31ST ST	N	86	.	.	10	15	340	4					.
204	DIXON AVE/VESPUCCI ST	N	85	.	.	10	15	340	4					.
205	DIXON AVE/FERRARIS ST	S	128	.	1	10	14	340	4					.
206	DIXON AVE/GALVANI ST	S	129	.	.	10	14	340	4					.
207	DIXON AVE/BAY VIEW AVE	N	82	.	.	10	14	340	4					.
208	DIXON AVE/OVERLAND AVE	S	130	.	.	10	14	340	4					.
209	DIXON AVE/ALBANY AVE	S	115	.	.	10	14	340	4					.
210	DIXON AVE/BROADWAY AVE	S	116	.	.	10	14	340	4					.
211	BROADWAY AVE/MILL ST	S	118	.	.	10	14	340	4					.
212	275 BROADWAY	W	78	.	1	10	13	340	4					.
213	OAK ST/BROADWAY AVE	N	77	.	2	10	11	340	3					.
214	AMITYVILLE RAILROAD STATIO	N	76	.	11	10	0	340	.	10			100.0	.
226	AMITYVILLE RAILROAD STATIO	N	76	34	.	11	34	306	11	10	1		90.9	.
227	OAK ST/BROADWAY AVE	N	77	16	.	11	50	306	16					.
228	275 BROADWAY	W	78	7	.	11	57	306	19					.
229	BROADWAY AVE/MILL ST	N	79	2	.	11	59	306	19					.
230	BROADWAY AVE/DIXON AVE	N	80	6	.	11	65	306	21					.
231	DIXON AVE/W RANICK DR	N	81	1	.	11	66	306	22					.
232	DIXON AVE/BAY VIEW AVE	N	82	.	1	11	65	306	21					.
233	DIXON AVE/DEFOREST ST	N	83	.	1	11	64	306	21					.
234	DIXON AVE/GREAT NECK RD	N	84	1	.	11	65	306	21					.
235	DIXON AVE/VESPUCCI ST	N	85	.	1	11	64	306	21					.

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1A Amityville - Loop - Loop

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
236	DIXON AVE/31ST ST	N	86	.	.	11	64	306	21					.
237	BIG LOTS SHOPPING CENTER	W	87	7	3	12	68	340	20	12			100.0	.
238	35TH ST/OAK ST	W	88	3	.	12	71	340	21					.
239	35TH ST/RALPH AVE	W	89	1	.	12	72	340	21					.
240	35TH ST/ILES PL	W	90	.	.	12	72	340	21					.
241	GREAT NECK RD (CR 47)/SOME	N	91	1	2	12	71	340	21					.
242	GREAT NECK RD/ALBANY AVE	N	92	8	9	14	70	408	17	14			100.0	.
243	GREAT NECK RD (CR 47)/BENJ	N	93	1	2	14	69	408	17					.
244	GREAT NECK RD (CR 47)/JOHN	N	94	1	1	14	69	408	17					.
245	MONROE ST/GREAT NECK RD	W	95	5	7	14	67	408	16	14			100.0	.
246	MONROE ST/PARKWAY AVE	W	96	1	.	14	68	408	17					.
247	PARKWAY AVE/COLUMBUS BL	E	97	5	3	14	70	408	17					.
248	CENTER ST/CEDAR RD	W	98	9	7	14	72	408	18					.
249	EAST ST/WALNUT RD	E	99	3	5	14	70	408	17					.
250	EAST ST/POPLAR RD	W	100	3	4	14	69	408	17					.
251	EAST ST/SPRUCE RD	W	101	3	7	14	65	408	16					.
252	OAK ST/NEW HGWY	W	102	5	4	14	66	408	16	14			100.0	.
253	NEW HGWY/MAPLE RD	E	103	2	1	14	67	408	16					.
254	NEW HGWY/WALNUT RD	E	104	1	.	14	68	408	17					.
255	NEW HGWY/ALBANY AVE	W	105	.	.	14	68	408	17					.
256	607 ALBANY AVE	E	106	.	3	14	65	408	16					.
257	ALBANY AVE/SCHLEIGEL BLVD	W	107	5	11	14	59	408	14					.
258	ALBANY AVE/RAINBOW LA	W	108	1	4	14	56	408	14					.
259	ALBANY AVE/GREAT NECK RD	W	109	3	2	14	57	408	14	14			100.0	.
260	ALBANY AVE/DELAWARE AVE	E	110	.	2	14	55	408	13					.
261	ALBANY AVE/HARRISON AVE	E	111	4	.	14	59	408	14					.

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1A Amityville - Loop - Loop

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
262	ALBANY AVE/SMITH ST	E	112	.	1	14	58	408	14					.
263	ALBANY AVE/SUNRISE HGWY	W	113	2	3	14	57	408	14					.
264	ALBANY AVE/SPRAGUE AVE	E	114	.	.	14	57	408	14					.
265	DIXON AVE/ALBANY AVE	S	115	.	.	14	57	408	14					.
266	DIXON AVE/BROADWAY AVE	S	116	.	2	14	55	408	13					.
267	BROADWAY/ALBANY AVE	E	117	.	4	14	51	408	13					.
268	275 BROADWAY	W	78	.	10	14	41	408	10					.
269	OAK ST/BROADWAY AVE	N	77	.	7	14	34	408	8					.
270	AMITYVILLE RAILROAD STATIO	N	76	.	34	14	0	408	.	13	1		92.9	.
	All 165 Stops	Total		204	204					171	2		98.8	
		Average		4	4									.

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1A Amityville - Loop - Loop

All Valid Weekday Trips

Vehicle Trips	27	Boardings Per Mile	1.01	TP Ontime	171
Boardings	204	Boardings Per Hour	19.0	TP Early	2
Revenue Miles	202.6	Schedule Speed (MPH)	18.8	TP Late	0
Revenue Hours	10.8	Actual Speed (MPH)	18.3	Ontime (%)	98.8

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
3	5:45 am	10/10/07 Wed	2	11	11	11	4.9	0.3	2.26	44.0	19.5	19.5	100.0
18	7:05 am	10/10/07 Wed	2	20	20	16	7.9	0.4	2.54	48.0	16.8	18.9	100.0
4	6:05 am	10/10/07 Wed	4	3	3	3	4.9	0.3	0.62	12.0	19.5	19.5	100.0
20	8:05 am	10/10/07 Wed	4	0	0	0	7.9	0.4	0.00	0.0	18.9	18.9	100.0
5	6:30 am	10/10/07 Wed	6	10	10	8	5.8	0.3	1.72	30.0	18.4	17.5	83.3
21	9:10 am	10/10/07 Wed	6	9	9	8	7.9	0.4	1.15	21.6	18.9	18.9	100.0
6	7:35 am	10/10/07 Wed	8	15	15	13	7.9	0.4	1.90	36.0	19.0	19.0	100.0
22	10:10 am	10/10/07 Wed	8	0	0	0	7.9	0.4	0.00	0.0	18.1	18.9	100.0
7	8:40 am	10/10/07 Wed	10	12	12	10	7.9	0.4	1.52	28.8	19.0	19.0	100.0
23	11:10 am	10/10/07 Wed	10	7	7	3	7.9	0.4	0.89	16.8	18.9	18.9	100.0
8	9:40 am	10/10/07 Wed	12	5	5	5	7.9	0.4	0.63	12.0	19.0	19.0	100.0
24	12:10 pm	10/10/07 Wed	12	5	5	3	7.9	0.4	0.64	12.0	18.9	18.9	100.0
9	10:40 am	10/10/07 Wed	14	9	9	7	7.9	0.4	1.14	21.6	19.0	19.0	100.0
25	1:10 pm	10/10/07 Wed	15	4	4	3	7.9	0.4	0.51	9.6	18.9	18.9	100.0
10	11:40 am	10/10/07 Wed	16	7	7	6	7.9	0.4	0.89	16.8	19.0	19.0	100.0
26	2:10 pm	10/10/07 Wed	16	0	0	0	7.9	0.4	0.00	0.0	18.9	18.9	100.0
27	3:10 pm	10/10/07 Wed	18	0	0	0	7.9	0.4	0.00	0.0	17.5	18.9	100.0
12	1:40 pm	10/10/07 Wed	20	4	4	3	7.9	0.4	0.51	9.6	18.2	19.0	100.0
28	4:15 pm	10/10/07 Wed	20	9	9	7	7.9	0.4	1.15	21.6	18.9	18.9	100.0
11	2:40 pm	10/10/07 Wed	22	12	12	8	7.9	0.4	1.52	28.8	19.0	19.0	100.0
29	5:20 pm	10/10/07 Wed	22	6	6	6	7.9	0.4	0.76	14.4	18.9	18.9	100.0
14	3:40 pm	10/10/07 Wed	24	13	13	8	7.9	0.4	1.64	31.2	19.0	19.0	100.0
15	4:50 pm	10/10/07 Wed	26	15	15	11	7.9	0.4	1.90	36.0	12.2	19.0	85.7
31	7:20 pm	10/10/07 Wed	26	1	1	1	7.9	0.4	0.13	2.4	18.9	18.9	100.0
16	5:50 pm	10/10/07 Wed	28	17	17	15	7.9	0.4	2.15	40.8	16.9	19.0	100.0
19	7:50 pm	10/10/07 Wed	28	2	2	2	5.8	0.3	0.35	6.0	17.3	17.3	100.0
17	6:50 pm	10/10/07 Wed	30	8	8	7	7.9	0.4	1.01	19.2	17.6	19.0	100.0
All 27 Trips			Total	204	204		202.6	10.8					
			Average	8	8	6	7.5	0.4	1.02	19.2			
			Minimum	0	0	0			0.00	0.0			
			Maximum	20	20	16			2.54	48.0			
			Standard Deviation	6	6	5			0.75	14.2			

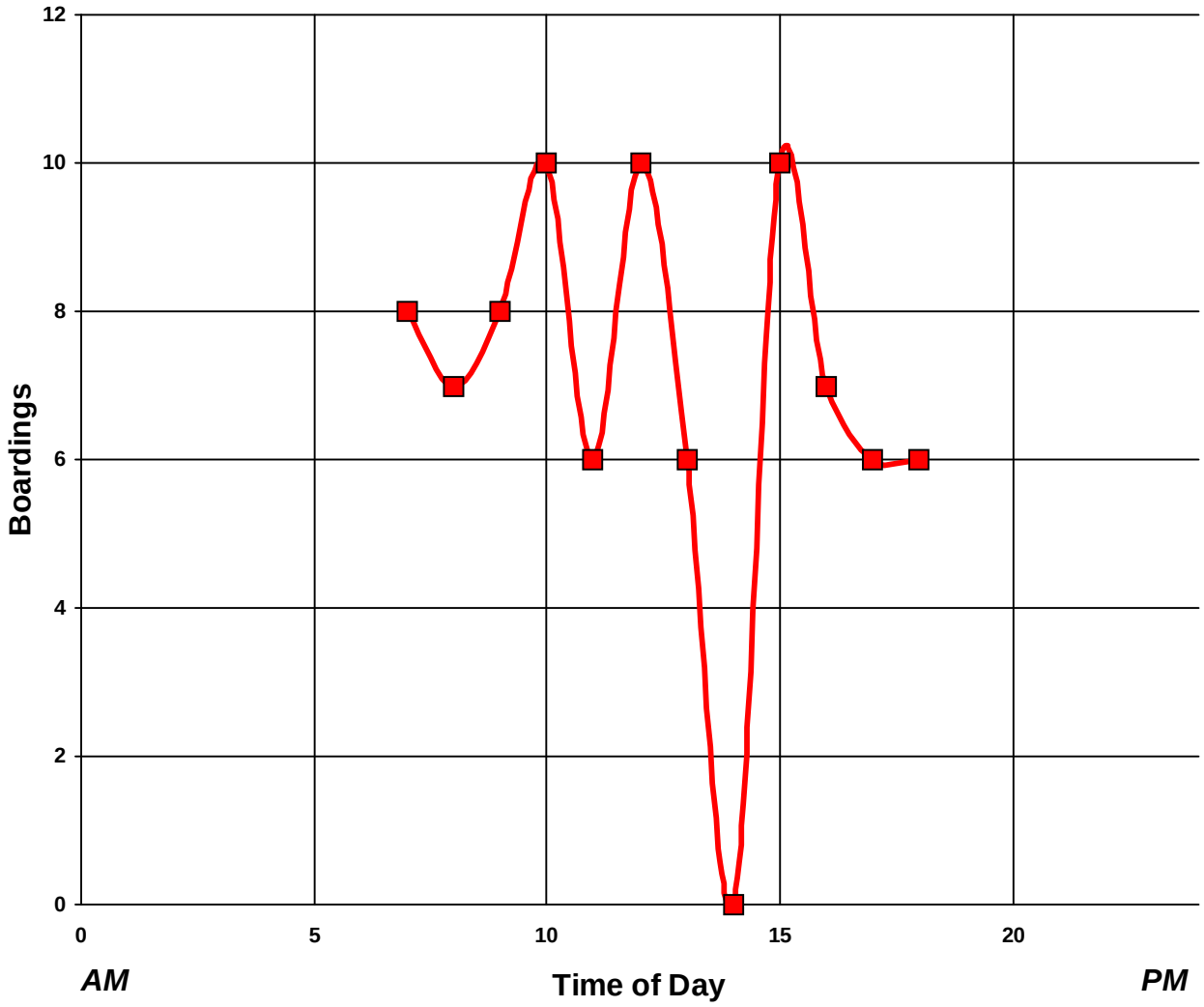
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1A Amityville - Loop - Loop

All Valid Saturday Trips

Vehicle Trips	22	Boardings Per Mile	0.48	TP Ontime	143
Boardings	84	Boardings Per Hour	9.2	TP Early	1
Revenue Miles	173.4	Schedule Speed (MPH)	18.9	TP Late	0
Revenue Hours	9.2	Actual Speed (MPH)	18.9	Ontime (%)	99.3

Boardings



This data is property of Suffolk County Transit

1A Amityville - Loop - Loop

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced
							Load	Capacity	%	On	Early	Late	OT%	%
223	AMITYVILLE RAILROAD STATIO	N	76	10	.	10	10		.	9	1		90.0	.
224	OAK ST/BROADWAY AVE	N	77	8	.	10	18		.					.
225	275 BROADWAY	W	78	4	.	10	22		.					.
226	AMITYVILLE RAILROAD STATIO	N	76	3	.	12	3		.	12			100.0	.
226	BROADWAY AVE/MILL ST	S	118	1	.	10	23		.					.
227	OAK ST/BROADWAY AVE	N	77	8	.	12	11		.					.
227	BROADWAY AVE/DIXON AVE	N	80	1	.	10	24		.					.
228	275 BROADWAY	W	78	1	.	12	12		.					.
228	ALBANY AVE/REED PL	W	119	.	.	10	24		.					.
229	BROADWAY AVE/MILL ST	N	79	1	.	12	13		.					.
229	ALBANY AVE/SUNRISE HGWY	W	113	.	.	10	24		.					.
230	BROADWAY AVE/DIXON AVE	N	80	2	.	12	15		.					.
230	300 ALBANY AVE	W	120	1	.	10	25		.					.
231	DIXON AVE/W RANICK DR	N	81	.	.	12	15		.					.
231	ALBANY AVE/BAY VIEW AVE	W	121	.	1	10	24		.					.
232	DIXON AVE/BAY VIEW AVE	N	82	.	.	12	15		.					.
232	ALBANY AVE/SOMERSET RD N	W	122	2	2	10	24		.					.
233	DIXON AVE/DEFOREST ST	N	83	.	.	12	15		.					.
233	ALBANY AVE/GREAT NECK RD	W	109	3	6	10	21		.	10			100.0	.
234	DIXON AVE/GREAT NECK RD	N	84	.	.	12	15		.					.
234	ALBANY AVE/RAINBOW LA	W	108	1	.	10	22		.					.
235	DIXON AVE/VESPUCCI ST	N	85	.	.	12	15		.					.
235	ALBANY AVE/SCHLEIGEL BLVD	W	107	.	2	10	20		.					.
236	DIXON AVE/31ST ST	N	86	.	.	12	15		.					.
236	605 ALBANY AVE	W	123	.	1	10	19		.					.
237	BIG LOTS SHOPPING CENTER	W	87	1	.	12	16		.	12			100.0	.

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1A Amityville - Loop - Loop

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
237	NEW HGWY/ALBANY AVE	W	105	2	1	10	20		.					.
238	35TH ST/OAK ST	W	88	.	.	12	16		.					.
238	NEW HGWY/WATKINS TERRAC	W	124	.	.	10	20		.					.
239	35TH ST/RALPH AVE	W	89	.	.	12	16		.					.
239	OAK ST/NEW HGWY	W	102	.	.	10	20		.	10			100.0	.
240	35TH ST/ILES PL	W	90	.	.	12	16		.					.
240	EAST ST/SPRUCE RD	W	101	3	2	10	21		.					.
241	GREAT NECK RD (CR 47)/SOME	N	91	4	1	12	19		.					.
241	EAST ST/POPLAR RD	W	100	.	.	10	21		.					.
242	GREAT NECK RD/ALBANY AVE	N	92	2	.	12	21		.	12			100.0	.
242	BIRCH RD/EAST ST	W	125	.	.	10	21		.					.
243	GREAT NECK RD (CR 47)/BENJ	N	93	.	.	12	21		.					.
243	CENTER ST/CEDAR RD	W	98	1	1	10	21		.					.
244	GREAT NECK RD (CR 47)/JOHN	N	94	.	1	12	20		.					.
244	PARKWAY AVE/SCHLEIGEL BL	W	126	.	2	10	19		.					.
245	MONROE ST/GREAT NECK RD	W	95	.	1	12	19		.	12			100.0	.
245	MONROE ST/PARKWAY AVE	W	96	.	.	10	19		.					.
246	MONROE ST/GREAT NECK RD	W	95	.	2	10	17		.					.
246	MONROE ST/PARKWAY AVE	W	96	.	.	12	19		.					.
247	GREAT NECK RD (CR 47)/JOHN	N	94	.	.	10	17		.					.
247	PARKWAY AVE/COLUMBUS BL	E	97	1	.	12	20		.					.
248	GREAT NECK RD (CR 47)/BENJ	N	93	.	.	10	17		.					.
248	CENTER ST/CEDAR RD	W	98	1	2	12	19		.					.
249	GREAT NECK RD/ALBANY AVE	N	92	1	.	10	18		.	10			100.0	.
249	EAST ST/WALNUT RD	E	99	3	4	12	18		.					.
250	GREAT NECK RD (CR 47)/SOME	N	91	.	1	10	17		.					.

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1A Amityville - Loop - Loop

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
250	EAST ST/POPLAR RD	W	100	.	.	12	18		.					.
251	35TH ST/ILES PL	W	90	.	1	10	16		.					.
251	EAST ST/SPRUCE RD	W	101	4	.	12	22		.					.
252	35TH ST/RALPH AVE	W	89	2	.	10	18		.					.
252	OAK ST/NEW HGWY	W	102	2	1	12	23		.	12			100.0	.
253	35TH ST/OAK ST	W	88	.	.	10	18		.					.
253	NEW HGWY/MAPLE RD	E	103	.	4	12	19		.					.
254	BIG LOTS SHOPPING CENTER	W	87	.	1	10	17		.	10			100.0	.
254	NEW HGWY/WALNUT RD	E	104	.	1	12	18		.					.
255	DIXON AVE/31ST ST	N	86	1	1	10	17		.					.
255	NEW HGWY/ALBANY AVE	W	105	.	.	12	18		.					.
256	DIXON AVE/VESPUCCI ST	N	85	.	2	10	15		.					.
256	607 ALBANY AVE	E	106	.	.	12	18		.					.
257	ALBANY AVE/SCHLEIGEL BLVD	W	107	3	.	12	21		.					.
257	DIXON AVE/FERRARIS ST	S	128	.	2	10	13		.					.
258	ALBANY AVE/RAINBOW LA	W	108	.	.	12	21		.					.
258	DIXON AVE/GALVANI ST	S	129	1	.	10	14		.					.
259	DIXON AVE/BAY VIEW AVE	N	82	.	.	10	14		.					.
259	ALBANY AVE/GREAT NECK RD	W	109	4	.	12	25		.	12			100.0	.
260	ALBANY AVE/DELAWARE AVE	E	110	.	.	12	25		.					.
260	DIXON AVE/OVERLAND AVE	S	130	.	.	10	14		.					.
261	ALBANY AVE/HARRISON AVE	E	111	.	.	12	25		.					.
261	DIXON AVE/ALBANY AVE	S	115	.	2	10	12		.					.
262	ALBANY AVE/SMITH ST	E	112	.	.	12	25		.					.
262	DIXON AVE/BROADWAY AVE	S	116	.	.	10	12		.					.
263	ALBANY AVE/SUNRISE HGWY	W	113	.	.	12	25		.					.

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1A Amityville - Loop - Loop

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
263	BROADWAY AVE/MILL ST	S	118	.	.	10	12		.					.
264	275 BROADWAY	W	78	.	.	10	12		.					.
264	ALBANY AVE/SPRAGUE AVE	E	114	.	1	12	24		.					.
265	OAK ST/BROADWAY AVE	N	77	1	8	10	5		.					.
265	DIXON AVE/ALBANY AVE	S	115	.	.	12	24		.					.
266	AMITYVILLE RAILROAD STATIO	N	76	.	5	10	0		.	10			100.0	.
266	DIXON AVE/BROADWAY AVE	S	116	1	1	12	24		.					.
267	BROADWAY/ALBANY AVE	E	117	.	1	12	23		.					.
268	275 BROADWAY	W	78	.	3	12	20		.					.
269	OAK ST/BROADWAY AVE	N	77	.	6	12	14		.					.
270	AMITYVILLE RAILROAD STATIO	N	76	.	14	12	0		.	12			100.0	.
All 89 Stops		Total		84	84					143	1		99.3	
		Average		3	3									.

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1A Amityville - Loop - Loop

All Valid Saturday Trips

Vehicle Trips	22	Boardings Per Mile	0.48	TP Ontime	143
Boardings	84	Boardings Per Hour	9.2	TP Early	1
Revenue Miles	173.4	Schedule Speed (MPH)	18.9	TP Late	0
Revenue Hours	9.2	Actual Speed (MPH)	18.9	Ontime (%)	99.3

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1309	8:05 am	11/3/07 Sat	1	4	4	2	7.9	0.4	0.51	9.6	17.5	18.9	83.3
1297	7:35 am	11/3/07 Sat	2	8	8	5	7.9	0.4	1.01	19.2	19.0	19.0	100.0
1310	9:10 am	11/3/07 Sat	3	5	5	4	7.9	0.4	0.64	12.0	18.9	18.9	100.0
1298	8:40 am	11/3/07 Sat	4	3	3	3	7.9	0.4	0.38	7.2	19.0	19.0	100.0
1311	10:10 am	11/3/07 Sat	5	5	5	5	7.9	0.4	0.64	12.0	18.9	18.9	100.0
1299	9:40 am	11/3/07 Sat	6	3	3	2	7.9	0.4	0.38	7.2	19.0	19.0	100.0
1312	11:10 am	11/3/07 Sat	7	3	3	3	7.9	0.4	0.38	7.2	18.9	18.9	100.0
1300	10:40 am	11/3/07 Sat	8	5	5	4	7.9	0.4	0.63	12.0	19.0	19.0	100.0
1313	12:10 pm	11/3/07 Sat	9	7	7	6	7.9	0.4	0.89	16.8	18.9	18.9	100.0
1301	11:40 am	11/3/07 Sat	10	3	3	2	7.9	0.4	0.38	7.2	19.0	19.0	100.0
1302	12:40 pm	11/3/07 Sat	12	3	3	2	7.9	0.4	0.38	7.2	19.0	19.0	100.0
1303	1:40 pm	11/3/07 Sat	12	6	6	6	7.9	0.4	0.76	14.4	19.0	19.0	100.0
1315	2:10 pm	11/3/07 Sat	13	0	0	0	7.9	0.4	0.00	0.0	18.9	18.9	100.0
1304	2:40 pm	11/3/07 Sat	14	0	0	0	7.9	0.4	0.00	0.0	19.0	19.0	100.0
1316	3:10 pm	11/3/07 Sat	15	6	6	4	7.9	0.4	0.76	14.4	18.9	18.9	100.0
1305	3:40 pm	11/3/07 Sat	16	4	4	3	7.9	0.4	0.51	9.6	19.0	19.0	100.0
1317	4:15 pm	11/3/07 Sat	17	7	7	5	7.9	0.4	0.89	16.8	18.9	18.9	100.0
1306	4:50 pm	11/3/07 Sat	18	0	0	0	7.9	0.4	0.00	0.0	19.0	19.0	100.0
1318	5:20 pm	11/3/07 Sat	19	2	2	2	7.9	0.4	0.25	4.8	18.9	18.9	100.0
1307	5:50 pm	11/3/07 Sat	20	4	4	3	7.9	0.4	0.51	9.6	19.0	19.0	100.0
1319	6:20 pm	11/3/07 Sat	21	4	4	3	7.9	0.4	0.51	9.6	18.9	18.9	100.0
1308	6:50 pm	11/3/07 Sat	22	2	2	2	7.9	0.4	0.25	4.8	19.0	19.0	100.0
	All 22 Trips		Total	84	84		173.4	9.2					
			Average	4	4	3	7.9	0.4	0.48	9.2			
			Minimum	0	0	0			0.00	0.0			
			Maximum	8	8	6			1.01	19.2			
			Standard Deviation	2	2	2			0.28	5.4			

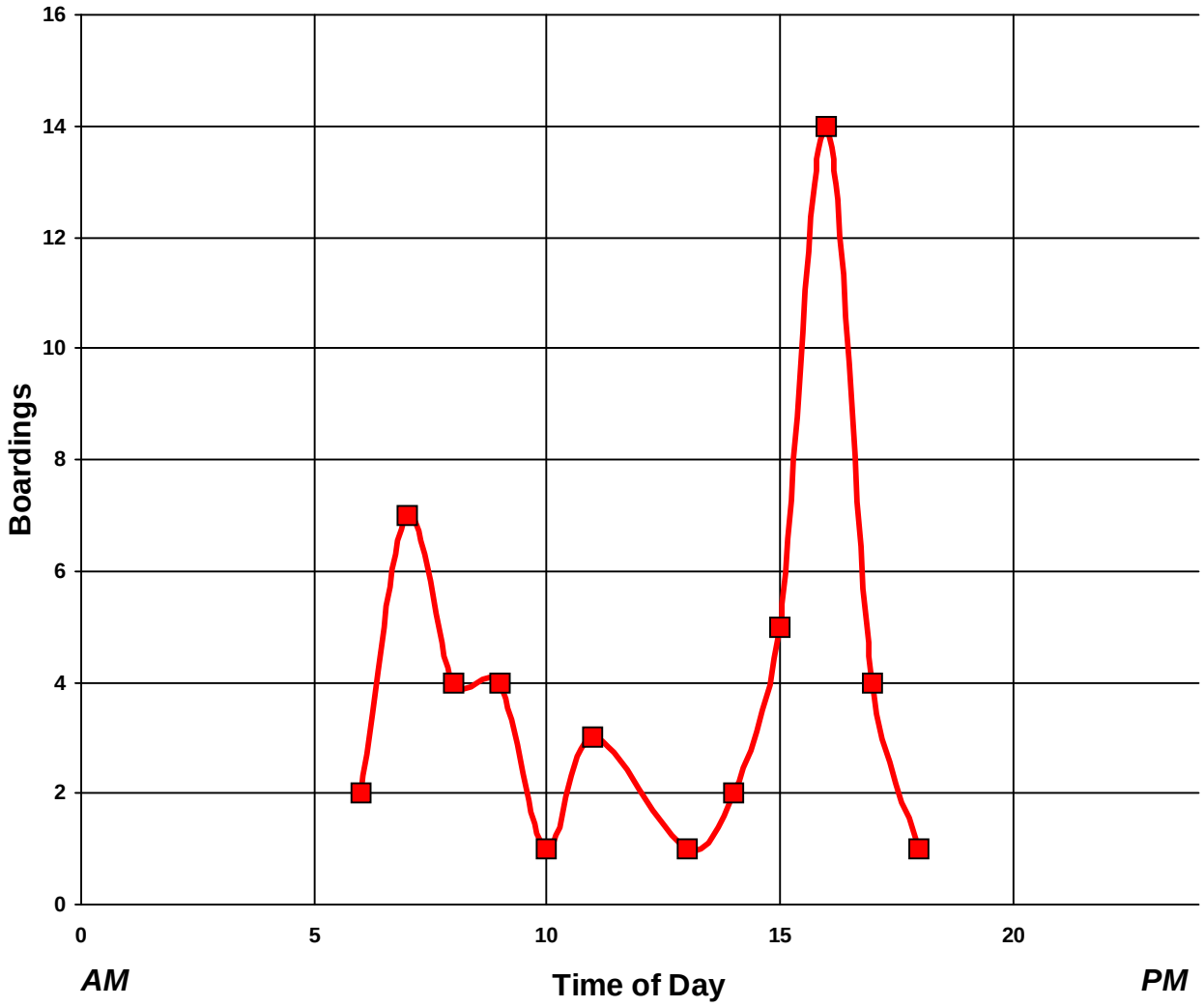
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1B Copiague - Lindenhurst - Eastbound

All Valid Weekday Trips

Vehicle Trips	12	Boardings Per Mile	0.31	TP Ontime	49
Boardings	48	Boardings Per Hour	11.3	TP Early	12
Revenue Miles	156.6	Schedule Speed (MPH)	37.3	TP Late	8
Revenue Hours	4.3	Actual Speed (MPH)	38.2	Ontime (%)	71.0

Boardings



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1B Copiague - Lindenhurst - Eastbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	BIG LOTS SHOPPING CENTER	W	87	.	.	1	0	34	.	1			100.0	.
1	GREAT NECK RD/MERRICK RD	N	153	10	.	7	10	238	4	5	1	1	71.4	.
1	TANNER PARK SR. CITIZEN CE	E	154	4	.	4	4	136	3	4			100.0	.
2	GREAT NECK RD/GREEN LAWN	N	152	4	.	7	14	238	6					.
2	GREAT NECK RD/MERRICK RD	N	153	.	.	4	4	136	3	2	2		50.0	.
2	STRONG AVE/CATSKILL AVE	E	166	1	.	1	1	34	3					.
3	STRONG AVE/BANGOR ST	W	144	.	.	1	1	34	3					.
3	GREAT NECK RD/SCUDDER AV	N	150	.	2	7	12	238	5					.
3	GREAT NECK RD/GREEN LAWN	N	152	.	.	4	4	136	3					.
4	GREAT NECK RD/OAK STREET	N	149	1	2	7	11	238	5					.
4	GREAT NECK RD/SCUDDER AV	N	150	.	.	4	4	136	3					.
4	STRONG AVE/MARCONI AVE	E	158	1	.	1	2	34	6					.
5	GREAT NECK RD/OAK STREET	N	149	1	1	4	4	136	3					.
5	GREAT NECK RD/MARCONI BL	N	156	2	.	7	13	238	5					.
5	STRONG AVE/SCUDDER AVE	E	159	.	.	1	2	34	6					.
6	S STRONG AVE/W GATES AVE	W	142	.	.	1	2	34	6	1			100.0	.
6	GREAT NECK RD/MARCONI BL	N	156	1	.	4	5	136	4					.
6	GREAT NECK RD/DIXON AVE	N	157	3	1	7	15	238	6					.
7	DIXON AVE/VESPUCCI ST	N	85	.	.	7	15	238	6					.
7	GREAT NECK RD/DIXON AVE	N	157	2	.	4	7	136	5					.
7	W GATES AVE/S 14TH ST	E	160	.	.	1	2	34	6					.
8	DIXON AVE/VESPUCCI ST	N	85	.	.	4	7	136	5					.
8	DIXON AVE/31ST ST	N	86	1	.	7	16	238	7					.
8	WEST GATES AVE/SOUTH 11T	W	141	.	.	1	2	34	6					.
9	DIXON AVE/31ST ST	N	86	.	.	4	7	136	5					.
9	BIG LOTS SHOPPING CENTER	W	87	1	2	7	15	238	6	6	1		85.7	.

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1B Copiague - Lindenhurst - Eastbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
9	W GATES AVE/S 7TH ST	E	161	.	.	1	2	34	6					.
10	BIG LOTS SHOPPING CENTER	W	87	.	.	4	7	136	5	3	1		75.0	.
10	W GATES AVE/S BROADWAY	W	139	.	.	1	2	34	6					.
10	RAINBOW CENTER	E	146	.	.	2	2	68	3	1	1		50.0	.
10	STRONG AVE/CATSKILL AVE	E	166	.	3	5	10	170	6					.
11	BROADWAY/READE AVE	W	138	.	.	1	2	34	6					.
11	STRONG AVE/BANGOR ST	W	144	.	1	5	9	170	5					.
11	RAINBOW CENTER	E	146	.	.	4	7	136	5	2	1	1	50.0	.
11	STRONG AVE/CATSKILL AVE	E	166	1	.	2	3	68	4					.
12	BROADWAY/LIBERTY AVE	W	137	.	.	1	2	34	6					.
12	STRONG AVE/BANGOR ST	W	144	.	4	6	6	204	3					.
12	STRONG AVE/MARCONI AVE	E	158	1	1	5	9	170	5					.
13	STRONG AVE/MARCONI AVE	E	158	.	1	6	5	204	2					.
13	STRONG AVE/SCUDDER AVE	E	159	1	.	5	10	170	6					.
13	MONTAUK HWY/BROADWAY	E	162	.	.	1	2	34	6					.
14	S STRONG AVE/W GATES AVE	W	142	.	1	5	9	170	5	4	1		80.0	.
14	STRONG AVE/SCUDDER AVE	E	159	.	.	6	5	204	2					.
14	MONTAUK HGWY/SHORE RD	E	163	.	.	1	2	34	6					.
15	S WELLWOOD AVE/NYS 27A	W	134	.	.	1	2	34	6	1			100.0	.
15	S STRONG AVE/W GATES AVE	W	142	1	.	6	6	204	3	3	1	2	50.0	.
15	W GATES AVE/S 14TH ST	E	160	1	.	5	10	170	6					.
16	S WELLWOOD AVE/HERBERT A	W	133	.	.	1	2	34	6					.
16	WEST GATES AVE/SOUTH 11T	W	141	.	.	5	10	170	6					.
16	W GATES AVE/S 14TH ST	E	160	.	.	6	6	204	3					.
17	WEST GATES AVE/SOUTH 11T	W	141	.	.	6	6	204	3					.
17	W GATES AVE/S 7TH ST	E	161	1	.	5	11	170	6					.

This data is property of Suffolk County Transit

1B Copiague - Lindenhurst - Eastbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
17	S WELLWOOD AVE/E GATES A	E	164	.	1	1	1	34	3					.
18	W GATES AVE/S BROADWAY	W	139	1	1	5	11	170	6					.
18	W GATES AVE/S 7TH ST	E	161	.	.	6	6	204	3					.
18	N WELLWOOD AVE/HOFFMAN	BL	165	.	.	1	1	34	3					.
19	LINDENHURST RAILROAD STA	BL	131	.	1	1	0	34	.	1			100.0	.
19	BROADWAY/READE AVE	W	138	2	.	5	13	170	8					.
19	W GATES AVE/S BROADWAY	W	139	1	.	6	7	204	3					.
20	BROADWAY/LIBERTY AVE	W	137	.	.	5	13	170	8					.
20	BROADWAY/READE AVE	W	138	.	.	6	7	204	3					.
21	BROADWAY/LIBERTY AVE	W	137	.	.	6	7	204	3					.
21	MONTAUK HWY/BROADWAY	E	162	.	.	5	13	170	8					.
22	MONTAUK HWY/BROADWAY	E	162	.	.	6	7	204	3					.
22	MONTAUK HGWY/SHORE RD	E	163	1	1	5	13	170	8					.
23	S WELLWOOD AVE/NYS 27A	W	134	3	.	5	16	170	9	5			100.0	.
23	MONTAUK HGWY/SHORE RD	E	163	.	1	6	6	204	3					.
24	S WELLWOOD AVE/HERBERT A	W	133	.	1	5	15	170	9					.
24	S WELLWOOD AVE/NYS 27A	W	134	.	2	6	4	204	2	4		2	66.7	.
25	S WELLWOOD AVE/HERBERT A	W	133	.	.	6	4	204	2					.
25	S WELLWOOD AVE/E GATES A	E	164	.	1	5	14	170	8					.
26	S WELLWOOD AVE/E GATES A	E	164	.	.	6	4	204	2					.
26	N WELLWOOD AVE/HOFFMAN	BL	165	.	.	5	14	170	8					.
27	LINDENHURST RAILROAD STA	BL	131	.	14	5	0	170	.	3	2		60.0	.
27	N WELLWOOD AVE/HOFFMAN	BL	165	2	.	6	6	204	3					.
28	LINDENHURST RAILROAD STA	BL	131	.	6	6	0	204	.	3	1	2	50.0	.

This data is property of Suffolk County Transit

1B Copiague - Lindenhurst - Eastbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
	All 76 Stops	Total		48	48					49	12	8	71.0	
		Average		2	2									.

This data is property of Suffolk County Transit

1B Copiague - Lindenhurst - Eastbound

All Valid Weekday Trips

Vehicle Trips	12	Boardings Per Mile	0.31	TP Ontime	49
Boardings	48	Boardings Per Hour	11.3	TP Early	12
Revenue Miles	156.6	Schedule Speed (MPH)	37.3	TP Late	8
Revenue Hours	4.3	Actual Speed (MPH)	38.2	Ontime (%)	71.0

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
32	6:25 am	10/9/07 Tue	2	2	2	2	11.0	0.3	0.18	8.0	36.8	44.1	100.0
33	7:20 am	10/9/07 Tue	4	7	7	6	12.9	0.3	0.54	21.0	40.7	38.7	40.0
34	8:15 am	10/9/07 Tue	6	4	4	4	12.9	0.3	0.31	12.0	45.5	38.7	80.0
35	9:15 am	10/9/07 Tue	8	4	4	2	13.2	0.3	0.30	12.0	31.6	39.5	33.3
36	10:10 am	10/9/07 Tue	10	1	1	1	13.7	0.4	0.07	2.4	22.8	32.9	28.6
37	11:10 am	10/9/07 Tue	12	3	3	3	13.7	0.4	0.22	7.2	37.3	32.9	28.6
38	1:15 pm	10/9/07 Tue	14	1	1	1	13.2	0.3	0.08	3.0	79.1	39.5	83.3
39	2:10 pm	10/9/07 Tue	16	2	2	2	13.7	0.4	0.15	4.8	31.6	32.9	100.0
40	3:10 pm	10/9/07 Tue	18	5	5	4	13.7	0.4	0.37	12.0	18.3	32.9	85.7
41	4:15 pm	10/9/07 Tue	20	14	14	9	12.9	0.3	1.09	42.0	38.7	38.7	100.0
42	5:15 pm	10/9/07 Tue	22	4	4	4	12.9	0.3	0.31	12.0	35.1	38.7	100.0
43	6:15 pm	10/9/07 Tue	24	1	1	1	12.9	0.3	0.08	3.0	40.7	38.7	100.0
	All 12 Trips		Total	48	48		156.6	4.3					
			Average	4	4	3	13.1	0.4	0.31	11.6			
			Minimum	1	1	1			0.07	2.4			
			Maximum	14	14	9			1.09	42.0			
			Standard Deviation	4	4	2			0.28	11.0			

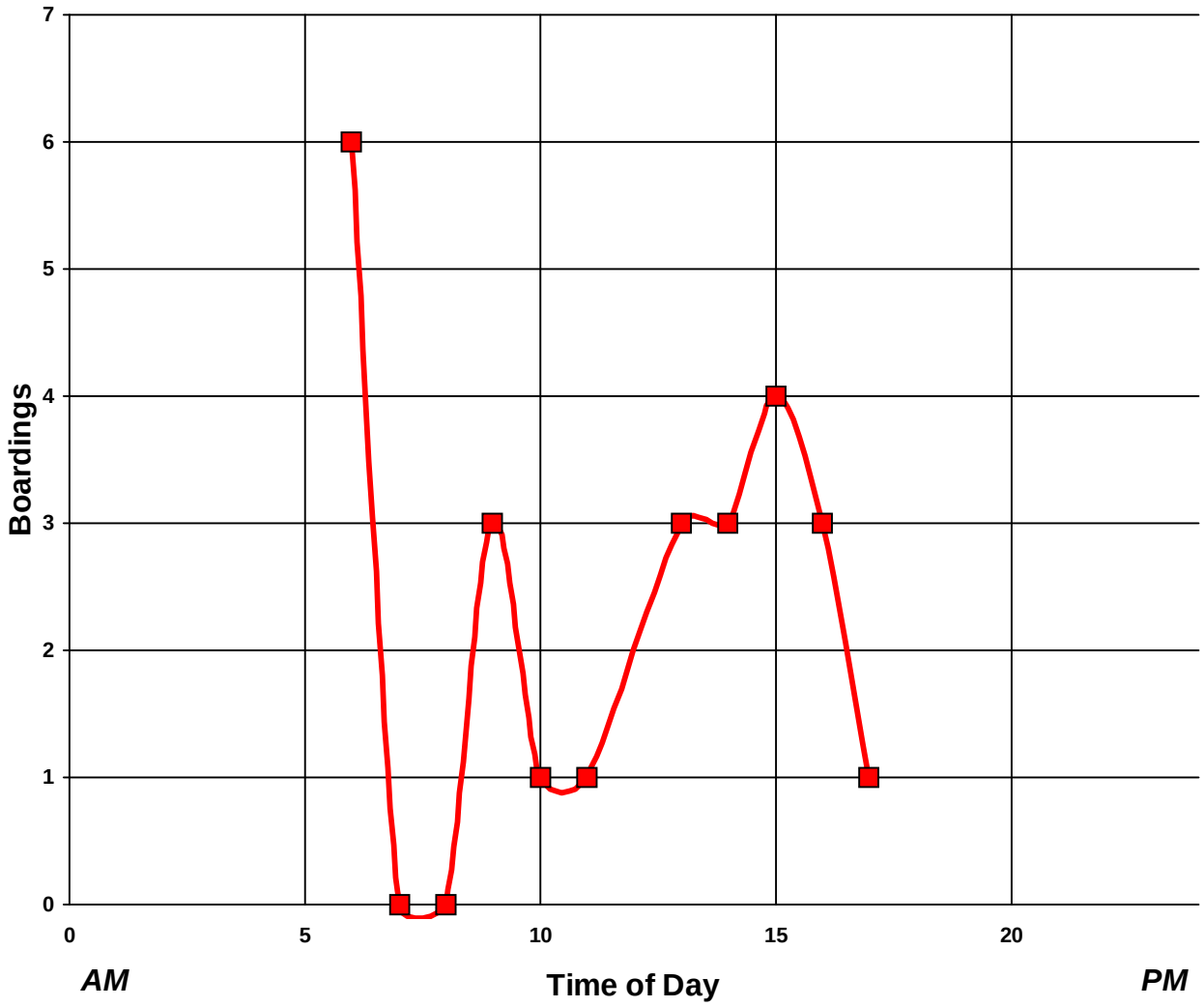
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1B Copiague - Lindenhurst - Westbound

All Valid Weekday Trips

Vehicle Trips	11	Boardings Per Mile	0.28	TP Ontime	51
Boardings	25	Boardings Per Hour	6.3	TP Early	3
Revenue Miles	88.1	Schedule Speed (MPH)	22.2	TP Late	11
Revenue Hours	4.0	Actual Speed (MPH)	30.8	Ontime (%)	78.5

Boardings



This data is property of Suffolk County Transit

1B Copiague - Lindenhurst - Westbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	LINDENHURST RAILROAD STA	BL	131	9	.	11	9	374	2	8	1	2	72.7	.
2	S WELLWOOD AVE/W GATES A	W	132	.	.	11	9	374	2					.
3	S WELLWOOD AVE/HERBERT A	W	133	.	.	11	9	374	2					.
4	S WELLWOOD AVE/NYS 27A	W	134	.	3	11	6	374	2	3	2		60.0	.
5	MONTAUK HGWY/CHESTNUT S	W	135	1	.	11	7	374	2					.
6	BROADWAY/MONTAUK HGWY	W	136	2	.	11	9	374	2	5		1	83.3	.
7	BROADWAY/LIBERTY AVE	W	137	1	.	11	10	374	3					.
8	BROADWAY/READE AVE	W	138	.	.	11	10	374	3					.
9	W GATES AVE/S BROADWAY	W	139	.	1	11	9	374	2					.
10	W GATES AVE/S 8TH ST	W	140	.	.	11	9	374	2					.
11	WEST GATES AVE/SOUTH 11T	W	141	.	1	11	8	374	2					.
12	S STRONG AVE/W GATES AVE	W	142	6	1	11	13	374	3	9		2	81.8	.
13	STRONG AVE/WEST HOFFMAN	W	143	.	1	11	12	374	3					.
14	STRONG AVE/BANGOR ST	W	144	1	.	11	13	374	3					.
15	STRONG AVE/31ST ST	W	145	.	1	11	12	374	3					.
16	BIG LOTS SHOPPING CENTER	W	87	.	.	5	7	170	4	5			100.0	.
16	RAINBOW CENTER	E	146	1	.	6	6	204	3	4		2	66.7	.
17	DIXON AVE/31ST ST	N	86	.	.	5	7	170	4					.
17	BIG LOTS SHOPPING CENTER	W	87	.	1	6	5	204	2	4		2	66.7	.
18	DIXON AVE/VESPUCCI ST	N	85	.	.	5	7	170	4					.
18	DIXON AVE/31ST ST	N	86	.	.	6	5	204	2					.
19	DIXON AVE/VESPUCCI ST	N	85	.	.	6	5	204	2					.
19	GREAT NECK RD/DANTE AVE	S	147	.	.	5	7	170	4					.
20	GREAT NECK RD/DANTE AVE	S	147	2	.	6	7	204	3					.
20	GREAT NECK RD/RAILROAD AV	S	148	.	.	5	7	170	4					.
21	GREAT NECK RD/RAILROAD AV	S	148	.	1	6	6	204	3					.

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1B Copiague - Lindenhurst - Westbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
21	GREAT NECK RD/OAK STREET	N	149	.	.	5	7	170	4					.
22	GREAT NECK RD/OAK STREET	N	149	.	.	6	6	204	3					.
22	GREAT NECK RD/SCUDDER AV	N	150	.	.	5	7	170	4					.
23	GREAT NECK RD/SCUDDER AV	N	150	.	.	6	6	204	3					.
23	GREAT NECK RD/COPAIGUE R	S	151	.	.	5	7	170	4					.
24	GREAT NECK RD/COPAIGUE R	S	151	.	2	6	4	204	2					.
24	GREAT NECK RD/GREEN LAWN	N	152	2	1	5	8	170	5					.
25	GREAT NECK RD/GREEN LAWN	N	152	.	1	6	3	204	1					.
25	GREAT NECK RD/MERRICK RD	N	153	.	8	5	0	170	.	5			100.0	.
26	GREAT NECK RD/MERRICK RD	N	153	.	3	6	0	204	.	4		2	66.7	.
27	TANNER PARK SR. CITIZEN CE	E	154	.	.	4	0	136	.	4			100.0	.
All 37 Stops		Total		25	25					51	3	11	78.5	
		Average		3	2									.

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1B Copiague - Lindenhurst - Westbound

All Valid Weekday Trips

Vehicle Trips	11	Boardings Per Mile	0.28	TP Ontime	51
Boardings	25	Boardings Per Hour	6.3	TP Early	3
Revenue Miles	88.1	Schedule Speed (MPH)	22.2	TP Late	11
Revenue Hours	4.0	Actual Speed (MPH)	30.8	Ontime (%)	78.5

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
44	6:40 am	10/9/07 Tue	1	6	6	5	7.7	0.3	0.78	18.0	23.1	23.1	100.0
45	7:40 am	10/9/07 Tue	3	0	0	0	7.7	0.3	0.00	0.0	22.0	23.1	80.0
46	8:40 am	10/9/07 Tue	5	0	0	0	7.7	0.3	0.00	0.0	19.3	23.1	60.0
47	9:40 am	10/9/07 Tue	7	3	3	3	8.5	0.4	0.35	7.2	22.1	20.3	100.0
50	10:40 am	10/9/07 Tue	13	1	1	1	8.5	0.4	0.12	2.4	29.9	20.3	14.3
53	11:40 am	10/9/07 Tue	19	1	1	1	7.8	0.3	0.13	3.0	22.4	23.5	100.0
54	1:40 pm	10/9/07 Tue	21	3	3	2	8.5	0.4	0.35	7.2	18.8	20.3	100.0
57	2:40 pm	10/9/07 Tue	27	3	3	1	8.5	0.4	0.35	7.2	18.8	20.3	42.9
60	3:40 pm	10/9/07 Tue	33	4	4	2	7.8	0.3	0.51	12.0	117.5	23.5	83.3
61	4:40 pm	10/9/07 Tue	35	3	3	3	7.7	0.3	0.39	9.0	23.1	23.1	100.0
62	5:40 pm	10/9/07 Tue	37	1	1	1	7.7	0.3	0.13	3.0	22.0	23.1	100.0
All 11 Trips			Total	25	25		88.1	4.0					
			Average	2	2	2	8.0	0.4	0.28	6.3			
			Minimum	0	0	0			0.00	0.0			
			Maximum	6	6	5			0.78	18.0			
			Standard Deviation	2	2	1			0.24	5.4			

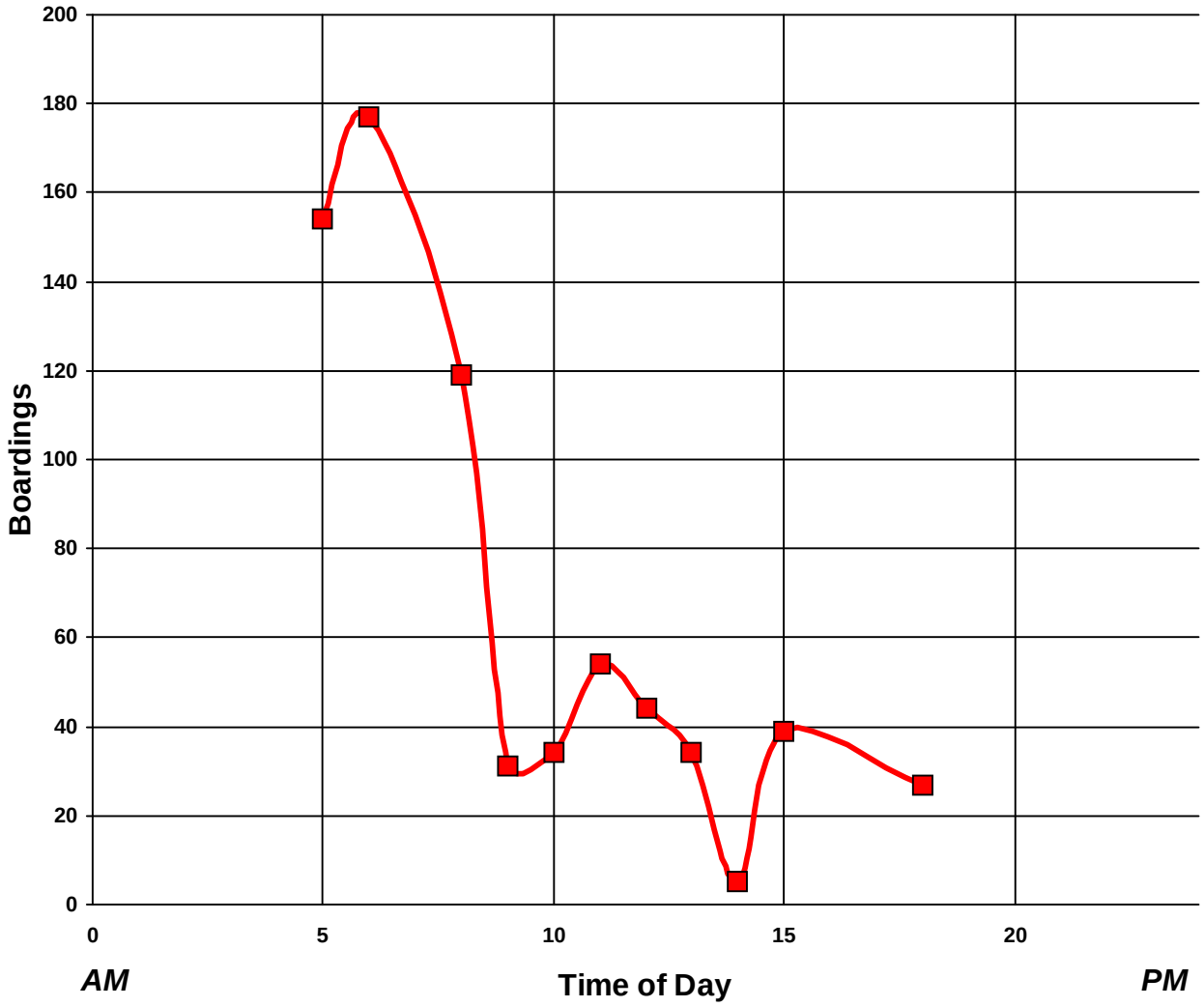
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1B Copiague - Lindenhurst - Eastbound

All Valid Saturday Trips

Vehicle Trips	11	Boardings Per Mile	0.06	TP Ontime	50
Boardings	9	Boardings Per Hour	2.3	TP Early	2
Revenue Miles	145.6	Schedule Speed (MPH)	36.7	TP Late	13
Revenue Hours	4.0	Actual Speed (MPH)	34.8	Ontime (%)	76.9

Boardings



This data is property of Suffolk County Transit

1B Copiague - Lindenhurst - Eastbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	GREAT NECK RD/MERRICK RD	N	153	1	.	7	1	238	.	7			100.0	.
1	TANNER PARK SR. CITIZEN CE	E	154	.	.	4	0	136	.	4			100.0	.
2	GREAT NECK RD/GREEN LAWN	N	152	.	.	7	1	238	.					.
2	GREAT NECK RD/MERRICK RD	N	153	1	.	4	1	136	1	4			100.0	.
3	GREAT NECK RD/SCUDDER AV	N	150	.	.	7	1	238	.					.
3	GREAT NECK RD/GREEN LAWN	N	152	1	.	4	2	136	1					.
4	GREAT NECK RD/OAK STREET	N	149	.	.	7	1	238	.					.
4	GREAT NECK RD/SCUDDER AV	N	150	.	.	4	2	136	1					.
5	GREAT NECK RD/OAK STREET	N	149	.	.	4	2	136	1					.
5	GREAT NECK RD/MARCONI BL	N	156	.	.	7	1	238	.					.
6	GREAT NECK RD/MARCONI BL	N	156	.	.	4	2	136	1					.
6	GREAT NECK RD/DIXON AVE	N	157	1	.	7	2	238	1					.
7	DIXON AVE/VESPUCCI ST	N	85	.	.	7	2	238	1					.
7	GREAT NECK RD/DIXON AVE	N	157	.	.	4	2	136	1					.
8	DIXON AVE/VESPUCCI ST	N	85	.	.	4	2	136	1					.
8	DIXON AVE/31ST ST	N	86	.	.	7	2	238	1					.
9	DIXON AVE/31ST ST	N	86	.	.	4	2	136	1					.
9	BIG LOTS SHOPPING CENTER	W	87	4	1	7	5	238	2	5		2	71.4	.
10	BIG LOTS SHOPPING CENTER	W	87	.	1	4	1	136	1	3	1		75.0	.
10	RAINBOW CENTER	E	146	.	.	2	2	68	3	1		1	50.0	.
10	STRONG AVE/CATSKILL AVE	E	166	.	.	5	3	170	2					.
11	STRONG AVE/BANGOR ST	W	144	.	.	5	3	170	2					.
11	RAINBOW CENTER	E	146	.	.	4	1	136	1	1	1	2	25.0	.
11	STRONG AVE/CATSKILL AVE	E	166	.	.	2	2	68	3					.
12	STRONG AVE/BANGOR ST	W	144	.	.	6	3	204	1					.
12	STRONG AVE/MARCONI AVE	E	158	.	.	5	3	170	2					.

This data is property of Suffolk County Transit

1B Copiague - Lindenhurst - Eastbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
13	STRONG AVE/MARCONI AVE	E	158	.	.	6	3	204	1					.
13	STRONG AVE/SCUDDER AVE	E	159	.	.	5	3	170	2					.
14	S STRONG AVE/W GATES AVE	W	142	.	.	5	3	170	2	3		2	60.0	.
14	STRONG AVE/SCUDDER AVE	E	159	.	.	6	3	204	1					.
15	S STRONG AVE/W GATES AVE	W	142	.	1	6	2	204	1	3		3	50.0	.
15	W GATES AVE/S 14TH ST	E	160	.	.	5	3	170	2					.
16	WEST GATES AVE/SOUTH 11T	W	141	.	.	5	3	170	2					.
16	W GATES AVE/S 14TH ST	E	160	.	.	6	2	204	1					.
17	WEST GATES AVE/SOUTH 11T	W	141	.	.	6	2	204	1					.
17	W GATES AVE/S 7TH ST	E	161	.	.	5	3	170	2					.
18	W GATES AVE/S BROADWAY	W	139	.	.	5	3	170	2					.
18	W GATES AVE/S 7TH ST	E	161	.	.	6	2	204	1					.
19	BROADWAY/READE AVE	W	138	.	.	5	3	170	2					.
19	W GATES AVE/S BROADWAY	W	139	.	.	6	2	204	1					.
20	BROADWAY/LIBERTY AVE	W	137	.	.	5	3	170	2					.
20	BROADWAY/READE AVE	W	138	.	.	6	2	204	1					.
21	BROADWAY/LIBERTY AVE	W	137	.	1	6	1	204	.					.
21	MONTAUK HWY/BROADWAY	E	162	.	.	5	3	170	2					.
22	MONTAUK HWY/BROADWAY	E	162	.	.	6	1	204	.					.
22	MONTAUK HGWY/SHORE RD	E	163	.	.	5	3	170	2					.
23	S WELLWOOD AVE/NYS 27A	W	134	.	2	5	1	170	1	4		1	80.0	.
23	MONTAUK HGWY/SHORE RD	E	163	.	.	6	1	204	.					.
24	S WELLWOOD AVE/HERBERT A	W	133	.	.	5	1	170	1					.
24	S WELLWOOD AVE/NYS 27A	W	134	.	.	6	1	204	.	6			100.0	.
25	S WELLWOOD AVE/HERBERT A	W	133	1	.	6	2	204	1					.
25	S WELLWOOD AVE/E GATES A	E	164	.	.	5	1	170	1					.

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1B Copiague - Lindenhurst - Eastbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
26	S WELLWOOD AVE/E GATES A	E	164	.	.	6	2	204	1					.
26	N WELLWOOD AVE/HOFFMAN	BL	165	.	.	5	1	170	1					.
27	LINDENHURST RAILROAD STA	BL	131	.	1	5	0	170	.	4		1	80.0	.
27	N WELLWOOD AVE/HOFFMAN	BL	165	.	.	6	2	204	1					.
28	LINDENHURST RAILROAD STA	BL	131	.	2	6	0	204	.	5		1	83.3	.
	All 57 Stops	Total		9	9					50	2	13	76.9	
		Average		2	1									.

This data is property of Suffolk County Transit

1B Copiague - Lindenhurst - Eastbound

All Valid Saturday Trips

Vehicle Trips	11	Boardings Per Mile	0.06	TP Ontime	50
Boardings	9	Boardings Per Hour	2.3	TP Early	2
Revenue Miles	145.6	Schedule Speed (MPH)	36.7	TP Late	13
Revenue Hours	4.0	Actual Speed (MPH)	34.8	Ontime (%)	76.9

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1320	7:20 am	11/3/07 Sat	2	1	1	1	12.9	0.3	0.08	3.0	38.7	38.7	100.0
1321	8:15 am	11/3/07 Sat	4	0	0	0	12.9	0.3	0.00	0.0	36.8	38.7	20.0
1322	9:15 am	11/3/07 Sat	6	1	1	1	13.2	0.3	0.08	3.0	35.9	39.5	100.0
1323	10:10 am	11/3/07 Sat	8	0	0	0	13.7	0.4	0.00	0.0	30.4	32.9	71.4
1324	11:10 am	11/3/07 Sat	10	1	1	1	13.7	0.4	0.07	2.4	31.6	32.9	71.4
1325	1:15 pm	11/3/07 Sat	12	1	1	1	13.2	0.3	0.08	3.0	31.6	39.5	50.0
1326	2:10 pm	11/3/07 Sat	14	2	2	1	13.7	0.4	0.15	4.8	31.6	32.9	100.0
1327	3:10 pm	11/3/07 Sat	16	0	0	0	13.7	0.4	0.00	0.0	30.4	32.9	57.1
1328	4:15 pm	11/3/07 Sat	18	0	0	0	12.9	0.3	0.00	0.0	38.7	38.7	80.0
1329	5:15 pm	11/3/07 Sat	20	2	2	1	12.9	0.3	0.16	6.0	38.7	38.7	100.0
1330	6:15 pm	11/3/07 Sat	22	1	1	1	12.9	0.3	0.08	3.0	38.7	38.7	100.0
	All 11 Trips		Total	9	9		145.6	4.0					
			Average	1	1	1	13.2	0.4	0.06	2.3			
			Minimum	0	0	0			0.00	0.0			
			Maximum	2	2	1			0.16	6.0			
			Standard Deviation	1	1	1			0.06	2.1			

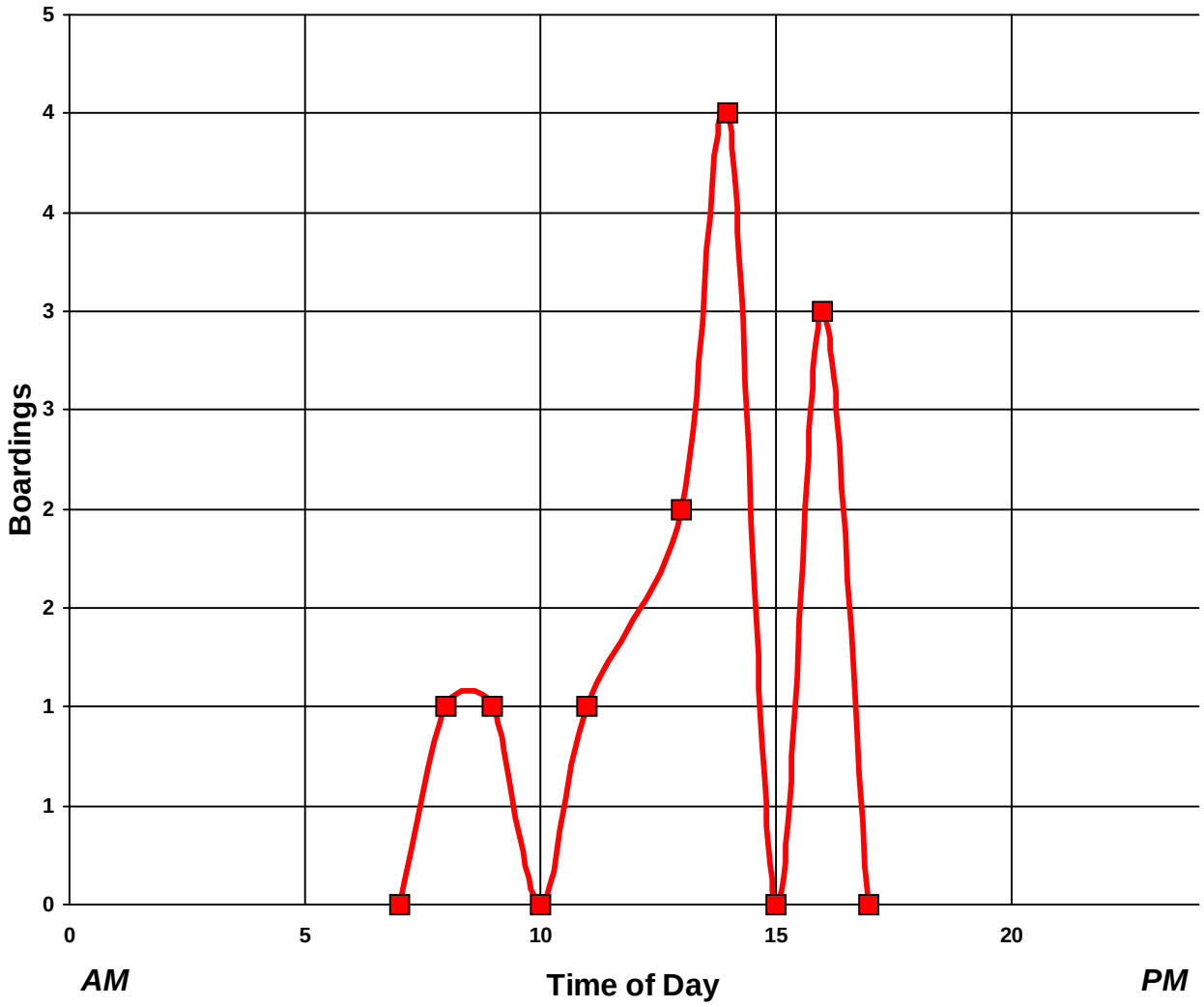
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1B Copiague - Lindenhurst - Westbound

All Valid Saturday Trips

Vehicle Trips	10	Boardings Per Mile	0.15	TP Ontime	52
Boardings	12	Boardings Per Hour	3.3	TP Early	2
Revenue Miles	80.4	Schedule Speed (MPH)	22.1	TP Late	6
Revenue Hours	3.7	Actual Speed (MPH)	18.0	Ontime (%)	86.7

Boardings



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1B Copiague - Lindenhurst - Westbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	LINDENHURST RAILROAD STA	BL	131	7	.	10	7	340	2	10			100.0	.
2	S WELLWOOD AVE/W GATES A	W	132	.	.	10	7	340	2					.
3	S WELLWOOD AVE/HERBERT A	W	133	.	1	10	6	340	2					.
4	S WELLWOOD AVE/NYS 27A	W	134	.	.	10	6	340	2	4			100.0	.
5	MONTAUK HGWY/CHESTNUT S	W	135	.	.	10	6	340	2					.
6	BROADWAY/MONTAUK HGWY	W	136	1	2	10	5	340	1	6			100.0	.
7	BROADWAY/LIBERTY AVE	W	137	.	.	10	5	340	1					.
8	BROADWAY/READE AVE	W	138	.	.	10	5	340	1					.
9	W GATES AVE/S BROADWAY	W	139	.	.	10	5	340	1					.
10	W GATES AVE/S 8TH ST	W	140	.	.	10	5	340	1					.
11	WEST GATES AVE/SOUTH 11T	W	141	.	.	10	5	340	1					.
12	S STRONG AVE/W GATES AVE	W	142	1	1	10	5	340	1	10			100.0	.
13	STRONG AVE/WEST HOFFMAN	W	143	.	.	10	5	340	1					.
14	STRONG AVE/BANGOR ST	W	144	.	.	10	5	340	1					.
15	STRONG AVE/31ST ST	W	145	.	.	10	5	340	1					.
16	BIG LOTS SHOPPING CENTER	W	87	.	1	4	1	136	1	4			100.0	.
16	RAINBOW CENTER	E	146	.	.	6	3	204	1	4	2		66.7	.
17	DIXON AVE/31ST ST	N	86	.	.	4	1	136	1					.
17	BIG LOTS SHOPPING CENTER	W	87	1	.	6	4	204	2	6			100.0	.
18	DIXON AVE/VESPUCCI ST	N	85	.	.	4	1	136	1					.
18	DIXON AVE/31ST ST	N	86	.	.	6	4	204	2					.
19	DIXON AVE/VESPUCCI ST	N	85	.	1	6	3	204	1					.
19	GREAT NECK RD/DANTE AVE	S	147	.	.	4	1	136	1					.
20	GREAT NECK RD/DANTE AVE	S	147	2	.	6	5	204	2					.
20	GREAT NECK RD/RAILROAD AV	S	148	.	.	4	1	136	1					.
21	GREAT NECK RD/RAILROAD AV	S	148	.	.	6	5	204	2					.

This data is property of Suffolk County Transit

1B Copiague - Lindenhurst - Westbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
21	GREAT NECK RD/OAK STREET	N	149	.	.	4	1	136	1					.
22	GREAT NECK RD/OAK STREET	N	149	.	.	6	5	204	2					.
22	GREAT NECK RD/SCUDDER AV	N	150	.	.	4	1	136	1					.
23	GREAT NECK RD/SCUDDER AV	N	150	.	.	6	5	204	2					.
23	GREAT NECK RD/COPAIGUE R	S	151	.	.	4	1	136	1					.
24	GREAT NECK RD/COPAIGUE R	S	151	.	.	6	5	204	2					.
24	GREAT NECK RD/GREEN LAWN	N	152	.	.	4	1	136	1					.
25	GREAT NECK RD/GREEN LAWN	N	152	.	2	6	3	204	1					.
25	GREAT NECK RD/MERRICK RD	N	153	.	1	4	0	136	.	2		2	50.0	.
26	GREAT NECK RD/MERRICK RD	N	153	.	2	6	1	204	.	3		3	50.0	.
27	TANNER PARK SR. CITIZEN CE	E	154	.	1	4	0	136	.	3		1	75.0	.
	All 37 Stops	Total		12	12					52	2	6	86.7	
		Average		2	1									.

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1B Copiague - Lindenhurst - Westbound

All Valid Saturday Trips

Vehicle Trips	10	Boardings Per Mile	0.15	TP Ontime	52
Boardings	12	Boardings Per Hour	3.3	TP Early	2
Revenue Miles	80.4	Schedule Speed (MPH)	22.1	TP Late	6
Revenue Hours	3.7	Actual Speed (MPH)	18.0	Ontime (%)	86.7

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1331	7:40 am	11/3/07 Sat	1	0	0	0	7.7	0.3	0.00	0.0	13.2	23.1	80.0
1332	8:40 am	11/3/07 Sat	3	1	1	1	7.7	0.3	0.13	3.0	16.5	23.1	80.0
1333	9:40 am	11/3/07 Sat	5	1	1	1	8.5	0.4	0.12	2.4	19.5	20.3	85.7
1336	10:40 am	11/3/07 Sat	11	0	0	0	8.5	0.4	0.00	0.0	19.5	20.3	100.0
1339	11:40 am	11/3/07 Sat	17	1	1	1	7.8	0.3	0.13	3.0	15.7	23.5	83.3
1340	1:40 pm	11/3/07 Sat	19	2	2	2	8.5	0.4	0.24	4.8	20.3	20.3	100.0
1343	2:40 pm	11/3/07 Sat	25	4	4	3	8.5	0.4	0.47	9.6	14.9	20.3	71.4
1346	3:40 pm	11/3/07 Sat	31	0	0	0	7.8	0.3	0.00	0.0	15.7	23.5	66.7
1347	4:40 pm	11/3/07 Sat	33	3	3	3	7.7	0.3	0.39	9.0	21.0	23.1	100.0
1348	5:40 pm	11/3/07 Sat	35	0	0	0	7.7	0.3	0.00	0.0	23.1	23.1	100.0
	All 10 Trips		Total	12	12		80.4	3.7					
			Average	1	1	1	8.0	0.4	0.15	3.2			
			Minimum	0	0	0			0.00	0.0			
			Maximum	4	4	3			0.47	9.6			
			Standard Deviation	1	1	1			0.17	3.6			

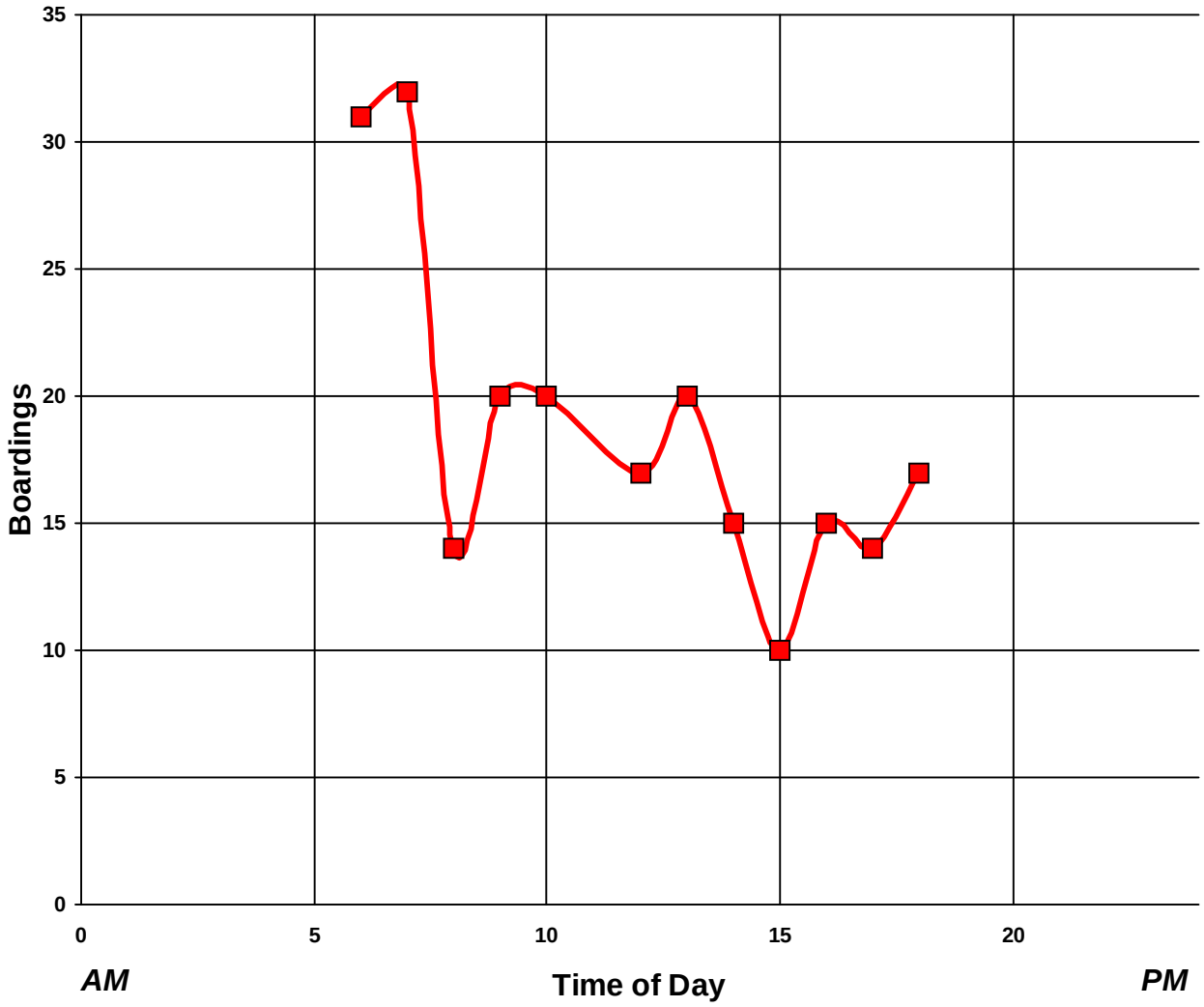
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2B SUNY Farmingdale - Bay Shore - Northbound

All Valid Weekday Trips

Vehicle Trips	12	Boardings Per Mile	1.25	TP Ontime	107
Boardings	225	Boardings Per Hour	20.8	TP Early	3
Revenue Miles	180.1	Schedule Speed (MPH)	16.7	TP Late	21
Revenue Hours	10.8	Actual Speed (MPH)	15.9	Ontime (%)	81.7

Boardings



This data is property of Suffolk County Transit

2B SUNY Farmingdale - Bay Shore - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	MECHANICVILLE SERVICE RD/	S	210	26	.	12	26	408	6	12			100.0	.
2	FOURTH AV/UNION BLVD	W	211	5	.	12	31	408	8					.
3	UNION BLVD/4TH AVE	N	212	7	.	12	38	408	9					.
4	BROOK AVE/SECOND AVE	S	213	1	.	12	39	408	10					.
5	BROOK AVE/MACKAY RD	S	214	6	.	12	45	408	11					.
6	BROOK AVE/TILLIE ST	N	215	1	.	12	46	408	11					.
7	ABREW ST/EAST FORKS RD	S	216	.	.	12	46	408	11					.
8	SOUTH SHORE MALL	S	217	58	13	12	91	408	22	12			100.0	.
9	SUNRISE HWY/MOBILE DR	N	314	.	.	12	91	408	22					.
10	SUNRISE HGWY/MANATUCK BL	N	294	1	3	12	89	408	22					.
11	SUNRISE HGWY/HOWELLS RD	N	295	.	2	12	87	408	21					.
12	GARDINER MANOR PLAZA	S	201	10	8	12	89	408	22	11	1		91.7	.
13	MANOR LA/HOWELLS RD	N	287	.	.	12	89	408	22					.
14	BAY SHORE ROAD/THOMPSON	N	296	2	2	12	89	408	22					.
15	BAY SHORE RD/BAY SHORE A	N	286	1	.	12	90	408	22					.
16	BAY SHORE RD/UDALL RD	N	285	7	4	12	93	408	23	12			100.0	.
17	BAY SHORE ROAD/CALLAHAN	N	297	1	.	12	94	408	23					.
18	BAY SHORE RD/BROOKDALE A	N	298	1	.	12	95	408	23					.
19	BAY SHORE RD/WEEKS RD	N	282	1	3	12	93	408	23	12			100.0	.
20	BROOK AVE/BAY SHORE RD	N	299	.	.	12	93	408	23					.
21	BROOK AVE/CONNOR LA	N	280	3	3	12	93	408	23					.
22	SKIDMORE ROAD/DEKAY PLAC	N	300	2	2	12	93	408	23					.
23	TELL AVE/SKIDMORE RD	N	301	3	2	12	94	408	23					.
24	TELL AVE/WASHINGTON AVE	N	277	10	2	12	102	408	25					.
25	COMMACK RD/TELL AVE	N	302	.	3	12	99	408	24					.
26	COMMACK ROAD/PRINCE AVE	N	303	.	1	12	98	408	24					.

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2B SUNY Farmingdale - Bay Shore - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	BAY SHORE RD/COUNTY PL	N	304	1	1	12	98	408	24					.
28	BAY SHORE RD/DEER PARK AV	N	274	3	2	12	99	408	24					.
29	DEER PARK AVE/PRAIRIE DR	S	305	2	1	12	100	408	25					.
30	DEER PARK AVE/GARNET ST	S	306	1	1	12	100	408	25					.
31	DEER PARK AVE/RYDER AVE	S	307	1	6	12	95	408	23					.
32	SUNSET PLAZA	S	270	15	10	12	100	408	25	9	1	2	75.0	.
33	WOODS RD/FRENCH AVE	N	269	1	.	12	101	408	25					.
34	WOODS ROAD/NOLTING AVE	N	268	1	2	12	100	408	25					.
35	WOODS RD/PRAIRIE DR	N	267	.	1	12	99	408	24	9		3	75.0	.
36	W 16TH ST/WESTVIEW AVE	N	266	1	2	12	98	408	24					.
37	W 16TH ST/CENTRAL AVE	N	265	.	.	12	98	408	24					.
38	GRAND BLVD/W 16TH ST	N	264	5	13	12	90	408	22	8		4	66.7	.
39	GRAND BLVD/W 18TH ST	N	263	2	.	12	92	408	23					.
40	GRAND BLVD/W 23RD ST	N	262	.	3	12	89	408	22					.
41	GRAND BLVD/LAKE DR	N	261	1	2	12	88	408	22					.
42	GRAND BLVD/DOE ST	S	260	2	1	12	89	408	22					.
43	WYANDANCH RAILROAD STATI	S	248	5	23	12	71	408	17	7		5	58.3	.
44	LONG ISLAND AVE/STRAIGHT	N	259	12	7	12	76	408	19					.
45	18TH ST/LONG ISLAND AVE	N	258	9	2	12	83	408	20					.
46	NICOLLS ROAD/18TH ST	N	308	1	4	12	80	408	20					.
47	NICOLLS ROAD/NORTH 24TH S	N	309	4	6	12	78	408	19					.
48	WHEATLEY HEIGHTS SHOPPIN	S	167	7	8	12	77	408	19	7	1	4	58.3	.
49	COLONIAL SPRINGS RD/NORT	N	310	4	1	11	80	374	21					.
50	NEWSDAY	N	311	.	4	11	76	374	20					.
51	570 SMITH ST	N	255	.	4	11	72	374	19					.
52	380 SMITH STREET	N	254	.	4	11	68	374	18					.

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2B SUNY Farmingdale - Bay Shore - Northbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
53	SMITH ST/NEW HGWY	N	253	.	17	11	51	374	14					.
54	SMITH ST/BROAD HOLLOW RD	N	252	1	15	11	37	374	10					.
55	SUNY FARMINGDALE (HOTON	N	251	.	37	11	0	374	.	8		3	72.7	.
All 55 Stops		Total		225	225					107	3	21	81.7	
		Average		6	6									.

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2B SUNY Farmingdale - Bay Shore - Northbound

All Valid Weekday Trips

Vehicle Trips	12	Boardings Per Mile	1.25	TP Ontime	107
Boardings	225	Boardings Per Hour	20.8	TP Early	3
Revenue Miles	180.1	Schedule Speed (MPH)	16.7	TP Late	21
Revenue Hours	10.8	Actual Speed (MPH)	15.9	Ontime (%)	81.7

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
87	6:40 am	10/16/07 Tue	2	31	31	22	15.3	0.9	2.03	33.8	16.7	16.7	90.9
88	7:40 am	10/11/07 Thu	4	32	32	19	15.3	0.9	2.10	34.9	14.1	16.7	54.5
89	8:40 am	10/16/07 Tue	6	14	14	10	15.3	0.9	0.92	15.3	16.1	16.7	90.9
90	9:40 am	10/11/07 Thu	8	20	20	9	15.3	0.9	1.31	21.8	16.7	16.7	54.5
571	10:40 am	10/11/07 Thu	10	20	20	10	15.3	0.9	1.31	21.8	16.7	16.7	90.9
92	12:10 pm	10/11/07 Thu	12	17	17	10	15.3	0.9	1.11	18.5	13.7	16.7	45.5
573	1:10 pm	10/11/07 Thu	14	20	20	10	15.3	0.9	1.31	21.8	16.7	16.7	100.0
94	2:10 pm	10/11/07 Thu	16	15	15	10	15.3	0.9	0.98	16.4	17.6	16.7	81.8
575	3:10 pm	10/11/07 Thu	18	10	10	6	15.3	0.9	0.66	10.9	16.7	16.7	100.0
96	4:10 pm	10/17/07 Wed	20	15	15	9	15.3	0.9	0.98	16.4	14.5	16.7	90.9
577	5:10 pm	10/11/07 Thu	22	14	14	13	15.3	0.9	0.92	15.3	16.7	16.7	100.0
578	6:10 pm	10/19/07 Fri	24	17	17	14	12.2	0.7	1.39	23.7	14.7	17.0	80.0
	All 12 Trips		Total	225	225		180.1	10.8					
			Average	19	19	12	15.0	0.9	1.25	20.9			
			Minimum	10	10	6			0.66	10.9			
			Maximum	32	32	22			2.10	34.9			
			Standard Deviation	7	7	5			0.44	7.3			

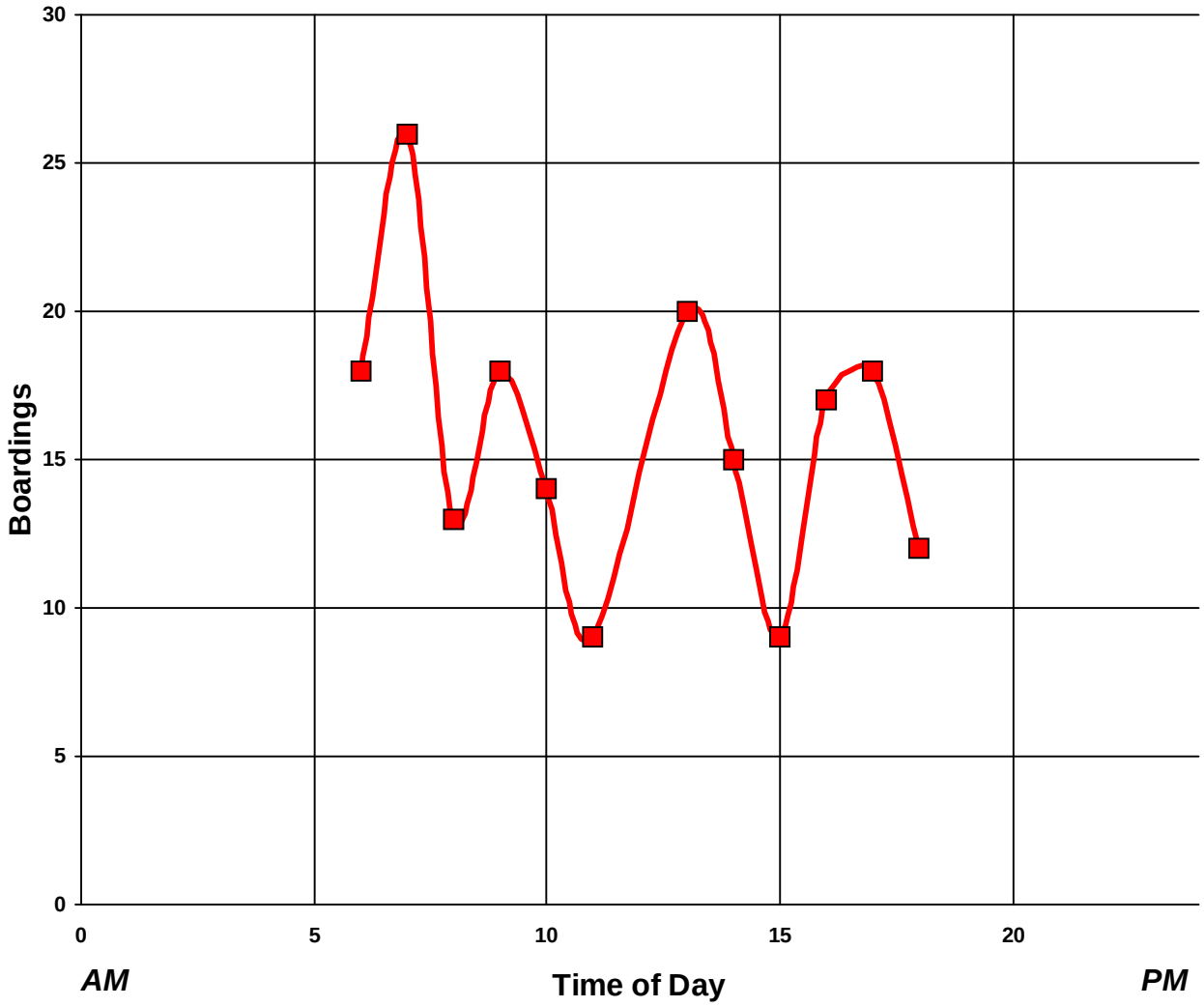
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2B SUNY Farmingdale - Bay Shore - Southbound

All Valid Weekday Trips

Vehicle Trips	12	Boardings Per Mile	1.09	TP Ontime	107
Boardings	189	Boardings Per Hour	17.6	TP Early	4
Revenue Miles	173.5	Schedule Speed (MPH)	16.1	TP Late	19
Revenue Hours	10.8	Actual Speed (MPH)	16.2	Ontime (%)	82.3

Boardings



This data is property of Suffolk County Transit

2B SUNY Farmingdale - Bay Shore - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	WYANDANCH RAILROAD STATI	S	248	8	.	1	8	34	24	1			100.0	.
1	SUNY FARMINGDALE (HOTON	N	251	34	.	11	34	374	9	9	1	1	81.8	.
2	SMITH ST/BROAD HOLLOW RD	N	252	3	.	11	37	374	10					.
2	GRAND BLVD/DOE ST	S	260	.	.	1	8	34	24					.
3	SMITH ST/NEW HGWY	N	253	12	.	11	49	374	13					.
3	GRAND BLVD/LAKE DR	N	261	.	.	1	8	34	24					.
4	380 SMITH STREET	N	254	3	.	11	52	374	14					.
4	GRAND BLVD/W 23RD ST	N	262	.	.	1	8	34	24					.
5	570 SMITH ST	N	255	10	1	11	61	374	16					.
5	GRAND BLVD/W 18TH ST	N	263	.	.	1	8	34	24					.
6	COLONIAL SPRINGS RD/LITTLE	S	256	5	2	11	64	374	17					.
6	GRAND BLVD/W 16TH ST	N	264	.	.	1	8	34	24	1			100.0	.
7	WHEATLEY HEIGHTS SHOPPIN	S	167	8	1	11	71	374	19	9	1	1	81.8	.
7	W 16TH ST/CENTRAL AVE	N	265	.	.	1	8	34	24					.
8	W 16TH ST/WESTVIEW AVE	N	266	.	.	1	8	34	24					.
8	NICOLLS ROAD/NORTH 24TH S	N	309	1	.	11	72	374	19					.
9	WOODS RD/PRAIRIE DR	N	267	1	.	1	9	34	26	1			100.0	.
9	NICOLLS ROAD/18TH ST	N	308	6	2	11	76	374	20					.
10	18TH ST/LONG ISLAND AVE	N	258	2	3	11	75	374	20					.
10	WOODS ROAD/NOLTING AVE	N	268	.	.	1	9	34	26					.
11	LONG ISLAND AVE/STRAIGHT	N	259	1	.	11	76	374	20					.
11	WOODS RD/FRENCH AVE	N	269	.	.	1	9	34	26					.
12	WYANDANCH RAILROAD STATI	S	248	15	21	11	70	374	19	10		1	90.9	.
12	SUNSET PLAZA	S	270	.	.	1	9	34	26	1			100.0	.
13	GRAND BLVD/DOE ST	S	260	13	.	11	83	374	22					.
13	DEER PARK AVE/WEEKS RD	S	271	.	2	1	7	34	21					.

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2B SUNY Farmingdale - Bay Shore - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
14	GRAND BLVD/LAKE DR	N	261	3	.	11	86	374	23					.
14	1255 DEER PARK AVE	N	272	.	.	1	7	34	21					.
15	GRAND BLVD/W 23RD ST	N	262	3	1	11	88	374	24					.
15	1473 DEER PARK AVE	N	273	.	.	1	7	34	21					.
16	GRAND BLVD/W 18TH ST	N	263	1	1	11	88	374	24					.
16	BAY SHORE RD/DEER PARK AV	N	274	.	.	1	7	34	21					.
17	GRAND BLVD/W 16TH ST	N	264	3	3	11	88	374	24	6	1	4	54.5	.
17	COMMACK RD/PRINCE AVE	S	275	.	.	1	7	34	21					.
18	W 16TH ST/CENTRAL AVE	N	265	2	.	11	90	374	24					.
18	TELL AVE/CROWN ST	S	276	.	.	1	7	34	21					.
19	W 16TH ST/WESTVIEW AVE	N	266	2	.	11	92	374	25					.
19	TELL AVE/WASHINGTON AVE	N	277	.	1	1	6	34	18					.
20	WOODS RD/PRAIRIE DR	N	267	1	1	11	92	374	25	9		2	81.8	.
20	TELL AVE/FILLMORE AVE	S	278	.	.	1	6	34	18					.
21	WOODS ROAD/NOLTING AVE	N	268	.	.	11	92	374	25					.
21	SKIDMORE RD/DE KAY PL	S	279	2	1	1	7	34	21					.
22	WOODS RD/FRENCH AVE	N	269	2	.	11	94	374	25					.
22	BROOK AVE/CONNOR LA	N	280	.	.	1	7	34	21					.
23	SUNSET PLAZA	S	270	3	14	11	83	374	22	8		3	72.7	.
23	BAY SHORE RD/BROOK AVE	S	281	2	1	1	8	34	24					.
24	DEER PARK AVE/WEEKS RD	S	271	2	1	11	84	374	22					.
24	BAY SHORE RD/WEEKS RD	N	282	1	.	1	9	34	26	1			100.0	.
25	1255 DEER PARK AVE	N	272	.	.	11	84	374	22					.
25	BAY SHORE RD/ARBOUR ST	S	283	.	.	1	9	34	26					.
26	1473 DEER PARK AVE	N	273	6	2	11	88	374	24					.
26	BAY SHORE RD/PENNEY ST	S	284	.	.	1	9	34	26					.

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2B SUNY Farmingdale - Bay Shore - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	BAY SHORE RD/DEER PARK AV	N	274	2	1	11	89	374	24					.
27	BAY SHORE RD/UDALL RD	N	285	.	.	1	9	34	26	1			100.0	.
28	COMMACK RD/PRINCE AVE	S	275	5	1	11	93	374	25					.
28	BAY SHORE RD/BAY SHORE A	N	286	.	.	1	9	34	26					.
29	TELL AVE/CROWN ST	S	276	1	3	11	91	374	24					.
29	MANOR LA/HOWELLS RD	N	287	.	1	1	8	34	24					.
30	GARDINER MANOR PLAZA	S	201	2	.	1	10	34	29	1			100.0	.
30	TELL AVE/WASHINGTON AVE	N	277	1	1	11	91	374	24					.
31	TELL AVE/FILLMORE AVE	S	278	1	2	11	90	374	24					.
31	SUNRISE HGWY/HOWELLS RD	S	288	.	1	1	9	34	26					.
32	SKIDMORE RD/DE KAY PL	S	279	2	5	11	87	374	23					.
32	SUNRISE HGWY/THIRD AVE	S	289	.	.	1	9	34	26					.
33	BROOK AVE/CONNOR LA	N	280	.	4	11	83	374	22					.
33	SUNRISE HGWY/ROSS AVE	S	290	.	.	1	9	34	26					.
34	ABREW ST/EAST FORKS RD	S	216	.	.	1	9	34	26					.
34	BAY SHORE RD/BROOK AVE	S	281	.	1	11	82	374	22					.
35	SOUTH SHORE MALL	S	217	1	8	1	2	34	6	1			100.0	.
35	BAY SHORE RD/WEEKS RD	N	282	6	9	11	79	374	21	9		2	81.8	.
36	ABREW ST/EAST FORKS RD	S	216	1	.	1	3	34	9					.
36	BAY SHORE RD/ARBOUR ST	S	283	2	1	11	80	374	21					.
37	BAY SHORE RD/PENNEY ST	S	284	1	.	11	81	374	22					.
37	BROOK AVE/W. WILLIAM ST	S	291	.	.	1	3	34	9					.
38	BROOK AVE/PALM RD	S	222	.	.	1	3	34	9					.
38	BAY SHORE RD/UDALL RD	N	285	.	3	11	78	374	21	9		2	81.8	.
39	BAY SHORE RD/BAY SHORE A	N	286	.	.	11	78	374	21					.
39	BROOK ST/N. FIRST AVE	S	292	.	.	1	3	34	9					.

This data is property of Suffolk County Transit

2B SUNY Farmingdale - Bay Shore - Southbound

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
40	UNION BLVD/THIRD AVE	S	224	.	.	1	3	34	9					.
40	MANOR LA/HOWELLS RD	N	287	.	1	11	77	374	21					.
41	GARDINER MANOR PLAZA	S	201	7	8	11	76	374	20	9		2	81.8	.
41	FOURTH AV/UNION BLVD	W	211	.	.	1	3	34	9					.
42	MECHANICVILLE SERVICE RD/	S	210	.	3	1	0	34	.		1		0.0	.
42	SUNRISE HGWY/HOWELLS RD	S	288	.	.	11	76	374	20					.
43	SUNRISE HGWY/THIRD AVE	S	289	.	3	11	73	374	20					.
44	SUNRISE HGWY/ROSS AVE	S	290	1	2	11	72	374	19					.
45	ABREW ST/EAST FORKS RD	S	216	.	1	11	71	374	19					.
46	SOUTH SHORE MALL	S	217	.	35	11	36	374	10	10		1	90.9	.
47	ABREW ST/EAST FORKS RD	S	216	.	.	11	36	374	10					.
48	BROOK AVE/W. WILLIAM ST	S	291	.	2	11	34	374	9					.
49	BROOK AVE/PALM RD	S	222	1	1	11	34	374	9					.
50	BROOK ST/N. FIRST AVE	S	292	.	2	11	32	374	9					.
51	UNION BLVD/THIRD AVE	S	224	.	4	11	28	374	7					.
52	FOURTH AV/UNION BLVD	W	211	.	5	11	23	374	6					.
53	MECHANICVILLE SERVICE RD/	S	210	.	23	11	0	374	.	11			100.0	.
	All 95 Stops	Total		189	189					107	4	19	82.3	
		Average		4	4									.

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2B SUNY Farmingdale - Bay Shore - Southbound

All Valid Weekday Trips

Vehicle Trips	12	Boardings Per Mile	1.09	TP Ontime	107
Boardings	189	Boardings Per Hour	17.6	TP Early	4
Revenue Miles	173.5	Schedule Speed (MPH)	16.1	TP Late	19
Revenue Hours	10.8	Actual Speed (MPH)	16.2	Ontime (%)	82.3

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
579	6:55 am	10/11/07 Thu	1	18	18	10	10.7	0.7	1.68	27.0	16.5	16.1	88.9
100	7:40 am	10/16/07 Tue	3	26	26	19	14.8	0.9	1.76	28.4	16.1	16.1	54.5
581	8:40 am	10/11/07 Thu	5	13	13	10	14.8	0.9	0.88	14.2	17.4	16.1	100.0
582	9:40 am	10/16/07 Tue	7	18	18	12	14.8	0.9	1.22	19.6	15.3	16.1	100.0
583	10:40 am	10/11/07 Thu	9	14	14	10	14.8	0.9	0.95	15.3	16.4	16.1	90.9
584	11:40 am	10/11/07 Thu	11	9	9	6	14.8	0.9	0.61	9.8	16.1	16.1	100.0
105	1:10 pm	10/11/07 Thu	13	20	20	15	14.8	0.9	1.35	21.8	16.8	16.1	9.1
586	2:10 pm	10/11/07 Thu	15	15	15	11	14.8	0.9	1.01	16.4	16.1	16.1	100.0
107	3:10 pm	10/11/07 Thu	17	9	9	7	14.8	0.9	0.61	9.8	16.8	16.1	90.9
108	4:10 pm	10/11/07 Thu	19	17	17	15	14.8	0.9	1.15	18.5	16.1	16.1	90.9
589	5:10 pm	10/19/07 Fri	21	18	18	11	14.8	0.9	1.22	19.6	17.1	16.1	72.7
110	6:10 pm	10/11/07 Thu	23	12	12	10	14.8	0.9	0.81	13.1	13.9	16.1	90.9
All 12 Trips			Total	189	189		173.5	10.8					
			Average	16	16	11	14.5	0.9	1.10	17.8			
			Minimum	9	9	6			0.61	9.8			
			Maximum	26	26	19			1.76	28.4			
			Standard Deviation	5	5	4			0.37	6.0			

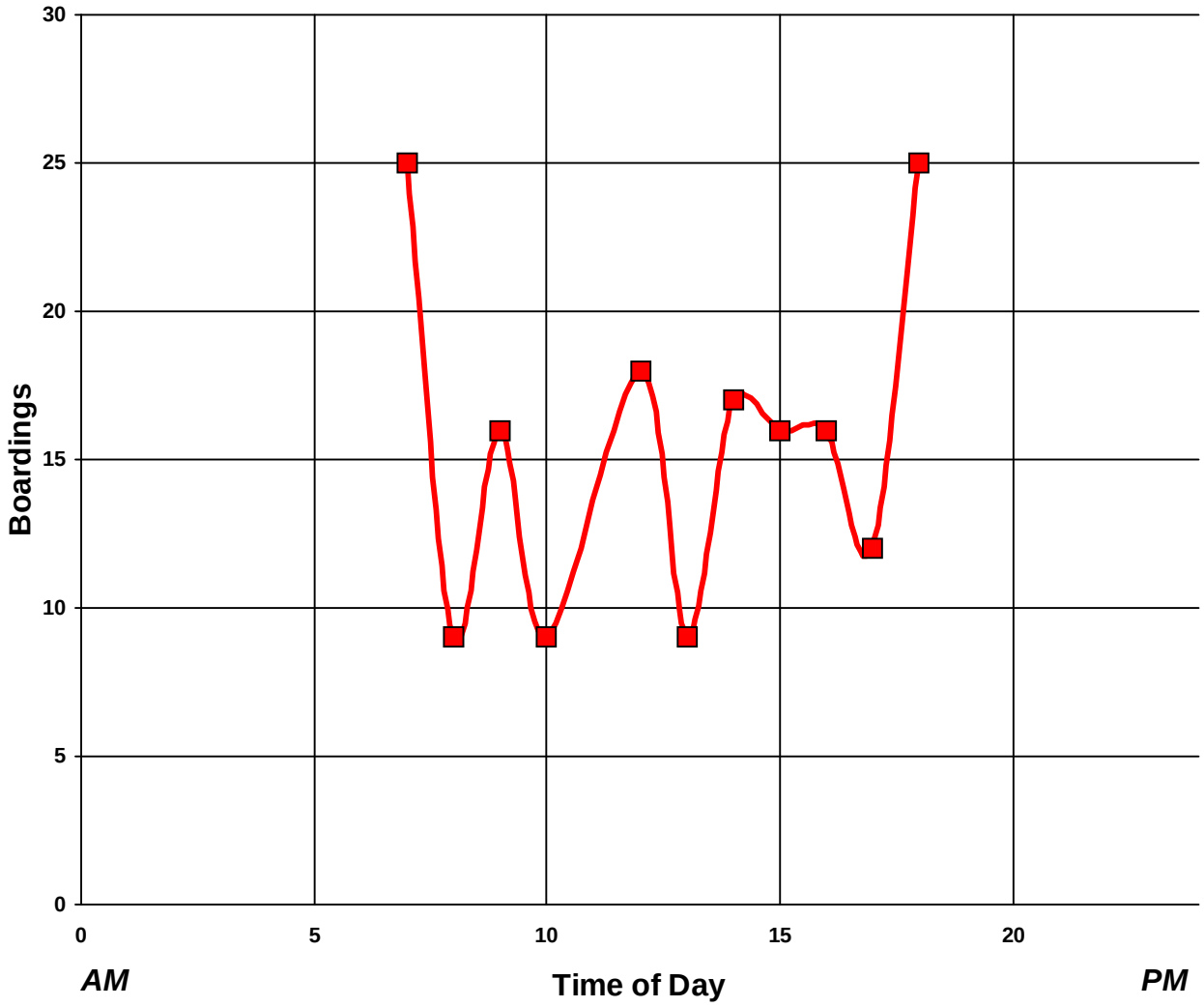
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2B SUNY Farmingdale - Bay Shore - Northbound

All Valid Saturday Trips

Vehicle Trips	11	Boardings Per Mile	1.04	TP Ontime	83
Boardings	172	Boardings Per Hour	17.4	TP Early	33
Revenue Miles	164.9	Schedule Speed (MPH)	16.7	TP Late	4
Revenue Hours	9.9	Actual Speed (MPH)	16.2	Ontime (%)	69.2

Boardings



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2B SUNY Farmingdale - Bay Shore - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	MECHANICVILLE SERVICE RD/	S	210	19	.	11	19	378	5	9	2		81.8	.
2	FOURTH AV/UNION BLVD	W	211	7	.	11	26	378	7					.
3	UNION BLVD/4TH AVE	N	212	2	.	11	28	378	7					.
4	BROOK AVE/SECOND AVE	S	213	4	.	11	32	378	8					.
5	BROOK AVE/MACKAY RD	S	214	2	.	11	34	378	9					.
6	BROOK AVE/TILLIE ST	N	215	.	2	11	32	378	8					.
7	ABREW ST/EAST FORKS RD	S	216	.	.	11	32	378	8					.
8	SOUTH SHORE MALL	S	217	47	4	11	75	378	20	8	3		72.7	.
9	SUNRISE HWY/MOBILE DR	N	314	.	3	11	72	378	19					.
10	SUNRISE HGWY/MANATUCK BL	N	294	2	1	11	73	378	19					.
11	SUNRISE HGWY/HOWELLS RD	N	295	.	.	11	73	378	19					.
12	GARDINER MANOR PLAZA	S	201	12	9	11	76	378	20	7	4		63.6	.
13	MANOR LA/HOWELLS RD	N	287	.	2	11	74	378	20					.
14	BAY SHORE ROAD/THOMPSON	N	296	1	4	11	71	378	19					.
15	BAY SHORE RD/BAY SHORE A	N	286	1	1	11	71	378	19					.
16	BAY SHORE RD/UDALL RD	N	285	2	2	11	71	378	19	7	4		63.6	.
17	BAY SHORE ROAD/CALLAHAN	N	297	1	3	11	69	378	18					.
18	BAY SHORE RD/BROOKDALE A	N	298	1	1	11	69	378	18					.
19	BAY SHORE RD/WEEKS RD	N	282	.	3	11	66	378	17	7	4		63.6	.
20	BROOK AVE/BAY SHORE RD	N	299	.	.	11	66	378	17					.
21	BROOK AVE/CONNOR LA	N	280	.	.	11	66	378	17					.
22	SKIDMORE ROAD/DEKAY PLAC	N	300	1	1	11	66	378	17					.
23	TELL AVE/SKIDMORE RD	N	301	2	4	11	64	378	17					.
24	TELL AVE/WASHINGTON AVE	N	277	1	8	11	57	378	15					.
25	COMMACK RD/TELL AVE	N	302	19	1	11	75	378	20					.
26	COMMACK ROAD/PRINCE AVE	N	303	1	1	11	75	378	20					.

This data is property of Suffolk County Transit

2B SUNY Farmingdale - Bay Shore - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	BAY SHORE RD/COUNTY PL	N	304	.	1	11	74	378	20					.
28	BAY SHORE RD/DEER PARK AV	N	274	.	3	11	71	378	19					.
29	DEER PARK AVE/PRAIRIE DR	S	305	1	3	11	69	378	18					.
30	DEER PARK AVE/GARNET ST	S	306	.	.	11	69	378	18					.
31	DEER PARK AVE/RYDER AVE	S	307	1	1	11	69	378	18					.
32	SUNSET PLAZA	S	270	21	15	11	75	378	20	8	3		72.7	.
33	WOODS RD/FRENCH AVE	N	269	.	1	11	74	378	20					.
34	WOODS ROAD/NOLTING AVE	N	268	.	1	11	73	378	19					.
35	WOODS RD/PRAIRIE DR	N	267	2	1	11	74	378	20	8	3		72.7	.
36	W 16TH ST/WESTVIEW AVE	N	266	.	1	11	73	378	19					.
37	W 16TH ST/CENTRAL AVE	N	265	.	1	11	72	378	19					.
38	GRAND BLVD/W 16TH ST	N	264	.	2	11	70	378	19	8	3		72.7	.
39	GRAND BLVD/W 18TH ST	N	263	.	.	11	70	378	19					.
40	GRAND BLVD/W 23RD ST	N	262	.	4	11	66	378	17					.
41	GRAND BLVD/LAKE DR	N	261	.	5	11	61	378	16					.
42	GRAND BLVD/DOE ST	S	260	.	3	11	58	378	15					.
43	WYANDANCH RAILROAD STATI	S	248	8	23	11	43	378	11	7	3	1	63.6	.
44	LONG ISLAND AVE/STRAIGHT	N	259	5	3	10	43	342	13					.
44	2 VETERANS MEMORIAL HGWY	N	99999	.	.	1	2	36	6					.
45	18TH ST/LONG ISLAND AVE	N	258	.	1	11	44	378	12					.
46	NICOLLS ROAD/18TH ST	N	308	3	2	11	45	378	12					.
47	NICOLLS ROAD/NORTH 24TH S	N	309	.	3	11	42	378	11					.
48	WHEATLEY HEIGHTS SHOPPIN	S	167	1	6	11	37	378	10	7	2	2	63.6	.
49	COLONIAL SPRINGS RD/NORT	N	310	.	2	10	35	342	10					.
50	NEWSDAY	N	311	2	6	10	31	342	9					.
51	570 SMITH ST	N	255	3	3	10	31	342	9					.

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2B SUNY Farmingdale - Bay Shore - Northbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
52	380 SMITH STREET	N	254	.	1	10	30	342	9					.
53	SMITH ST/NEW HGWY	N	253	.	.	10	30	342	9					.
54	SMITH ST/BROAD HOLLOW RD	N	252	.	16	10	14	342	4					.
55	SUNY FARMINGDALE (HOTON	N	251	.	14	10	0	342	.	7	2	1	70.0	.
All 56 Stops		Total		172	172					83	33	4	69.2	
		Average		6	4									.

This data is property of Suffolk County Transit

2B SUNY Farmingdale - Bay Shore - Northbound

All Valid Saturday Trips

Vehicle Trips	11	Boardings Per Mile	1.04	TP Ontime	83
Boardings	172	Boardings Per Hour	17.4	TP Early	33
Revenue Miles	164.9	Schedule Speed (MPH)	16.7	TP Late	4
Revenue Hours	9.9	Actual Speed (MPH)	16.2	Ontime (%)	69.2

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1369	7:40 am	11/10/07 Sat	2	25	25	20	15.3	0.9	1.64	27.3	16.7	16.7	100.0
1370	8:40 am	11/10/07 Sat	4	9	9	6	15.3	0.9	0.59	9.8	16.7	16.7	100.0
1371	9:40 am	11/10/07 Sat	6	16	16	8	15.3	0.9	1.05	17.5	16.7	16.7	100.0
1372	10:40 am	11/10/07 Sat	8	9	9	5	15.3	0.9	0.59	9.8	16.4	16.7	18.2
1373	12:10 pm	11/10/07 Sat	10	18	18	10	15.3	0.9	1.18	19.6	15.3	16.7	81.8
1374	1:10 pm	11/10/07 Sat	12	9	9	5	15.3	0.9	0.59	9.8	18.0	16.7	18.2
1375	2:10 pm	11/10/07 Sat	14	17	17	11	15.3	0.9	1.11	18.5	11.6	16.7	90.9
1376	3:10 pm	11/10/07 Sat	16	16	16	8	15.3	0.9	1.05	17.5	17.6	16.7	0.0
1377	4:10 pm	11/17/07 Sat	18	16	16	10	15.3	0.9	1.05	17.5	15.3	16.7	90.9
1378	5:10 pm	11/10/07 Sat	20	12	12	6	15.3	0.9	0.79	13.1	16.7	16.7	63.6
1379	6:10 pm	11/17/07 Sat	22	25	25	17	12.2	0.7	2.05	34.9	17.0	17.0	100.0
	All 11 Trips		Total	172	172		164.9	9.9					
			Average	16	16	10	15.0	0.9	1.06	17.7			
			Minimum	9	9	5			0.59	9.8			
			Maximum	25	25	20			2.05	34.9			
			Standard Deviation	6	6	5			0.45	7.7			

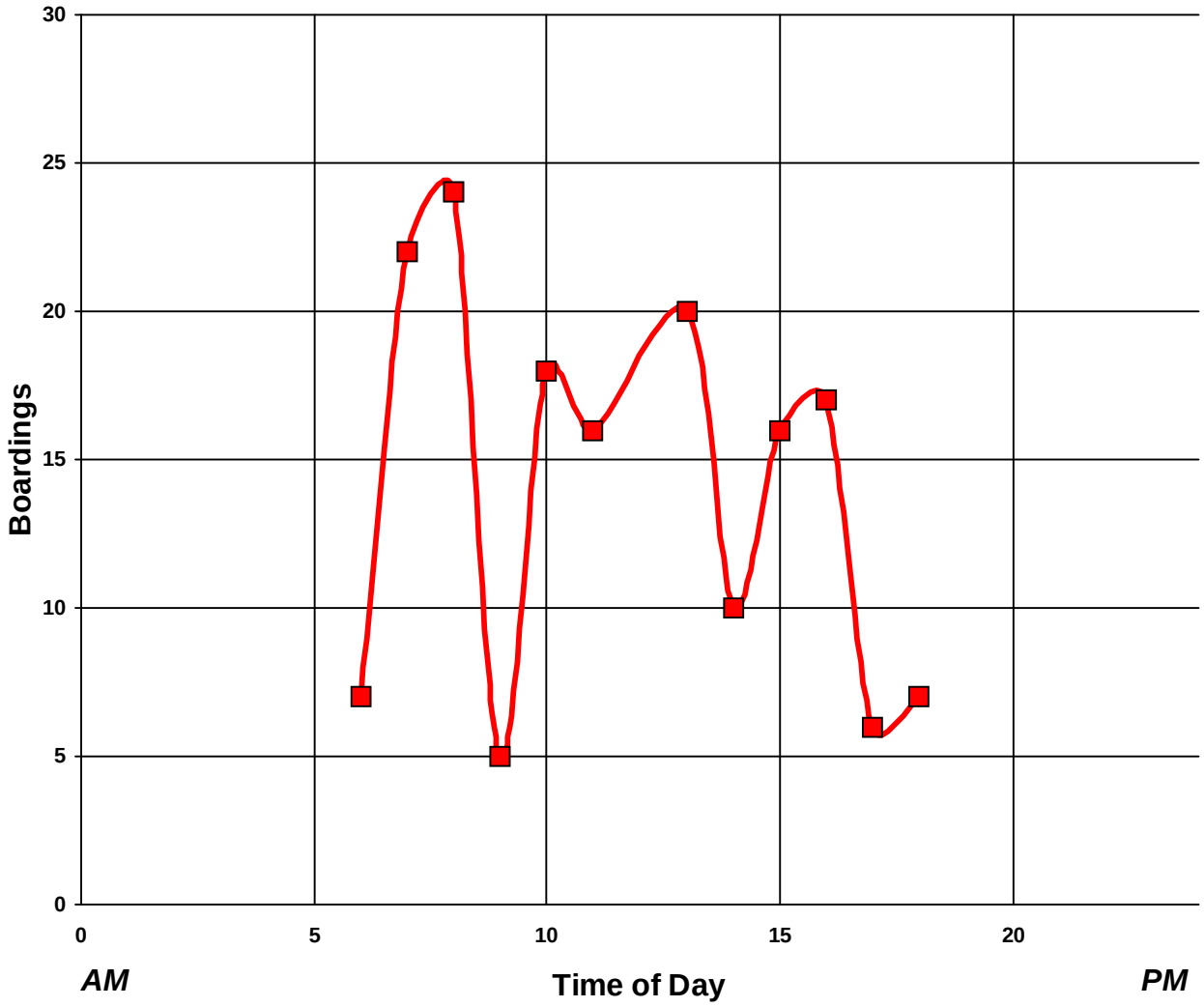
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2B SUNY Farmingdale - Bay Shore - Southbound

All Valid Saturday Trips

Vehicle Trips	12	Boardings Per Mile	0.97	TP Ontime	94
Boardings	168	Boardings Per Hour	15.6	TP Early	35
Revenue Miles	173.5	Schedule Speed (MPH)	16.1	TP Late	1
Revenue Hours	10.8	Actual Speed (MPH)	16.3	Ontime (%)	72.3

Boardings



This data is property of Suffolk County Transit

2B SUNY Farmingdale - Bay Shore - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	WYANDANCH RAILROAD STATI	S	248	2	.	1	2	34	6	1			100.0	.
1	SUNY FARMINGDALE (HOTON	N	251	7	.	11	7	376	2	10	1		90.9	.
2	SMITH ST/BROAD HOLLOW RD	N	252	7	.	11	14	376	4					.
2	GRAND BLVD/DOE ST	S	260	1	.	1	3	34	9					.
3	SMITH ST/NEW HGWY	N	253	2	.	11	16	376	4					.
3	GRAND BLVD/LAKE DR	N	261	2	.	1	5	34	15					.
4	380 SMITH STREET	N	254	1	.	11	17	376	5					.
4	GRAND BLVD/W 23RD ST	N	262	1	.	1	6	34	18					.
5	570 SMITH ST	N	255	.	.	11	17	376	5					.
5	GRAND BLVD/W 18TH ST	N	263	1	.	1	7	34	21					.
6	COLONIAL SPRINGS RD/LITTLE	S	256	1	.	11	18	376	5					.
6	GRAND BLVD/W 16TH ST	N	264	.	.	1	7	34	21	1			100.0	.
7	WHEATLEY HEIGHTS SHOPPIN	S	167	3	1	11	20	376	5	6	5		54.5	.
7	W 16TH ST/CENTRAL AVE	N	265	.	.	1	7	34	21					.
8	W 16TH ST/WESTVIEW AVE	N	266	.	.	1	7	34	21					.
8	NICOLLS ROAD/NORTH 24TH S	N	309	4	.	11	24	376	6					.
9	WOODS RD/PRAIRIE DR	N	267	.	.	1	7	34	21	1			100.0	.
9	NICOLLS ROAD/18TH ST	N	308	3	.	11	27	376	7					.
10	18TH ST/LONG ISLAND AVE	N	258	.	2	11	25	376	7					.
10	WOODS ROAD/NOLTING AVE	N	268	.	.	1	7	34	21					.
11	LONG ISLAND AVE/STRAIGHT	N	259	6	5	11	26	376	7					.
11	WOODS RD/FRENCH AVE	N	269	.	.	1	7	34	21					.
12	WYANDANCH RAILROAD STATI	S	248	27	2	11	51	376	14	8	3		72.7	.
12	SUNSET PLAZA	S	270	.	.	1	7	34	21	1			100.0	.
13	GRAND BLVD/DOE ST	S	260	.	2	11	49	376	13					.
13	DEER PARK AVE/WEEKS RD	S	271	.	.	1	7	34	21					.

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2B SUNY Farmingdale - Bay Shore - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
14	GRAND BLVD/LAKE DR	N	261	4	.	11	53	376	14					.
14	1255 DEER PARK AVE	N	272	.	.	1	7	34	21					.
15	GRAND BLVD/W 23RD ST	N	262	1	.	11	54	376	14					.
15	1473 DEER PARK AVE	N	273	.	.	1	7	34	21					.
16	GRAND BLVD/W 18TH ST	N	263	.	.	11	54	376	14					.
16	BAY SHORE RD/DEER PARK AV	N	274	.	.	1	7	34	21					.
17	GRAND BLVD/W 16TH ST	N	264	2	1	11	55	376	15	7	4		63.6	.
17	COMMACK RD/PRINCE AVE	S	275	.	.	1	7	34	21					.
18	W 16TH ST/CENTRAL AVE	N	265	1	.	11	56	376	15					.
18	TELL AVE/CROWN ST	S	276	.	.	1	7	34	21					.
19	W 16TH ST/WESTVIEW AVE	N	266	2	.	11	58	376	15					.
19	TELL AVE/WASHINGTON AVE	N	277	.	.	1	7	34	21					.
20	WOODS RD/PRAIRIE DR	N	267	1	.	11	59	376	16	7	4		63.6	.
20	TELL AVE/FILLMORE AVE	S	278	.	.	1	7	34	21					.
21	WOODS ROAD/NOLTING AVE	N	268	2	.	11	61	376	16					.
21	SKIDMORE RD/DE KAY PL	S	279	.	.	1	7	34	21					.
22	WOODS RD/FRENCH AVE	N	269	.	.	11	61	376	16					.
22	BROOK AVE/CONNOR LA	N	280	.	.	1	7	34	21					.
23	SUNSET PLAZA	S	270	8	9	11	60	376	16	8	3		72.7	.
23	BAY SHORE RD/BROOK AVE	S	281	.	.	1	7	34	21					.
24	DEER PARK AVE/WEEKS RD	S	271	5	5	11	60	376	16					.
24	BAY SHORE RD/WEEKS RD	N	282	.	.	1	7	34	21	1			100.0	.
25	1255 DEER PARK AVE	N	272	11	1	11	70	376	19					.
25	BAY SHORE RD/ARBOUR ST	S	283	.	.	1	7	34	21					.
26	1473 DEER PARK AVE	N	273	4	1	11	73	376	19					.
26	BAY SHORE RD/PENNEY ST	S	284	.	.	1	7	34	21					.

This data is property of Suffolk County Transit

2B SUNY Farmingdale - Bay Shore - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
27	BAY SHORE RD/DEER PARK AV	N	274	5	1	11	77	376	20					.
27	BAY SHORE RD/UDALL RD	N	285	.	.	1	7	34	21	1			100.0	.
28	COMMACK RD/PRINCE AVE	S	275	1	.	11	78	376	21					.
28	BAY SHORE RD/BAY SHORE A	N	286	.	.	1	7	34	21					.
29	TELL AVE/CROWN ST	S	276	.	3	11	75	376	20					.
29	MANOR LA/HOWELLS RD	N	287	.	.	1	7	34	21					.
30	GARDINER MANOR PLAZA	S	201	.	1	1	6	34	18	1			100.0	.
30	TELL AVE/WASHINGTON AVE	N	277	5	1	11	79	376	21					.
31	TELL AVE/FILLMORE AVE	S	278	3	1	11	81	376	22					.
31	SUNRISE HGWY/HOWELLS RD	S	288	.	1	1	5	34	15					.
32	SKIDMORE RD/DE KAY PL	S	279	.	3	11	78	376	21					.
32	SUNRISE HGWY/THIRD AVE	S	289	.	2	1	3	34	9					.
33	BROOK AVE/CONNOR LA	N	280	1	1	11	78	376	21					.
33	SUNRISE HGWY/ROSS AVE	S	290	.	.	1	3	34	9					.
34	ABREW ST/EAST FORKS RD	S	216	.	.	1	3	34	9					.
34	BAY SHORE RD/BROOK AVE	S	281	4	.	11	82	376	22					.
35	SOUTH SHORE MALL	S	217	.	.	1	3	34	9	1			100.0	.
35	BAY SHORE RD/WEEKS RD	N	282	6	2	11	86	376	23	9	2		81.8	.
36	ABREW ST/EAST FORKS RD	S	216	.	.	1	3	34	9					.
36	BAY SHORE RD/ARBOUR ST	S	283	1	1	11	86	376	23					.
37	BAY SHORE RD/PENNEY ST	S	284	.	.	11	86	376	23					.
37	BROOK AVE/W. WILLIAM ST	S	291	.	.	1	3	34	9					.
38	BROOK AVE/PALM RD	S	222	.	.	1	3	34	9					.
38	BAY SHORE RD/UDALL RD	N	285	3	.	11	89	376	24	9	2		81.8	.
39	BAY SHORE RD/BAY SHORE A	N	286	.	.	11	89	376	24					.
39	BROOK ST/N. FIRST AVE	S	292	.	.	1	3	34	9					.

This data is property of Suffolk County Transit

2B SUNY Farmingdale - Bay Shore - Southbound

All Valid Saturday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
40	UNION BLVD/THIRD AVE	S	224	.	1	1	2	34	6					.
40	MANOR LA/HOWELLS RD	N	287	.	1	11	88	376	23					.
41	GARDINER MANOR PLAZA	S	201	12	7	11	93	376	25	6	4	1	54.5	.
41	FOURTH AV/UNION BLVD	W	211	.	.	1	2	34	6					.
42	MECHANICVILLE SERVICE RD/	S	210	.	2	1	0	34	.	1			100.0	.
42	SUNRISE HGWY/HOWELLS RD	S	288	.	2	11	91	376	24					.
43	SUNRISE HGWY/THIRD AVE	S	289	.	.	11	91	376	24					.
44	SUNRISE HGWY/ROSS AVE	S	290	.	.	11	91	376	24					.
45	ABREW ST/EAST FORKS RD	S	216	3	4	11	90	376	24					.
46	SOUTH SHORE MALL	S	217	6	38	10	44	342	13	7	3		70.0	.
46	:	S	99999	.	10	1	4	34	12		1		0.0	.
47	ABREW ST/EAST FORKS RD	S	216	.	.	11	48	376	13					.
48	BROOK AVE/W. WILLIAM ST	S	291	.	3	11	45	376	12					.
49	BROOK AVE/PALM RD	S	222	1	1	11	45	376	12					.
50	BROOK ST/N. FIRST AVE	S	292	.	13	11	32	376	9					.
51	UNION BLVD/THIRD AVE	S	224	7	5	11	34	376	9					.
52	FOURTH AV/UNION BLVD	W	211	1	4	11	31	376	8					.
53	MECHANICVILLE SERVICE RD/	S	210	.	31	11	0	376	.	8	3		72.7	.
	All 96 Stops	Total		168	168					94	35	1	72.3	
		Average		4	5									.

This data is property of Suffolk County Transit

2B SUNY Farmingdale - Bay Shore - Southbound

All Valid Saturday Trips

Vehicle Trips	12	Boardings Per Mile	0.97	TP Ontime	94
Boardings	168	Boardings Per Hour	15.6	TP Early	35
Revenue Miles	173.5	Schedule Speed (MPH)	16.1	TP Late	1
Revenue Hours	10.8	Actual Speed (MPH)	16.3	Ontime (%)	72.3

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
1380	6:55 am	11/10/07 Sat	1	7	7	7	10.7	0.7	0.65	10.5	15.7	16.1	100.0
1381	7:40 am	11/10/07 Sat	3	22	22	18	14.8	0.9	1.49	24.0	16.1	16.1	100.0
1382	8:40 am	11/10/07 Sat	5	24	24	17	14.8	0.9	1.62	26.2	16.1	16.1	100.0
1383	9:40 am	11/10/07 Sat	7	5	5	5	14.8	0.9	0.34	5.5	16.8	16.1	90.9
1384	10:40 am	11/10/07 Sat	9	18	18	13	14.8	0.9	1.22	19.6	16.1	16.1	100.0
1385	11:40 am	11/10/07 Sat	11	16	16	9	14.8	0.9	1.08	17.5	16.1	16.1	45.5
1386	1:10 pm	11/10/07 Sat	13	20	20	14	14.8	0.9	1.35	21.8	16.1	16.1	90.9
1387	2:10 pm	11/10/07 Sat	15	10	10	8	14.8	0.9	0.68	10.9	15.3	16.1	18.2
1388	3:10 pm	11/10/07 Sat	17	16	16	6	14.8	0.9	1.08	17.5	14.8	16.1	90.9
1389	4:10 pm	11/10/07 Sat	19	17	17	14	14.8	0.9	1.15	18.5	17.8	16.1	18.2
1390	5:10 pm	11/17/07 Sat	21	6	6	3	14.8	0.9	0.41	6.5	17.1	16.1	100.0
1391	6:10 pm	11/10/07 Sat	23	7	7	3	14.8	0.9	0.47	7.6	17.8	16.1	18.2
All 12 Trips			Total	168	168		173.5	10.8					
			Average	14	14	10	14.5	0.9	0.96	15.5			
			Minimum	5	5	3			0.34	5.5			
			Maximum	24	24	18			1.62	26.2			
			Standard Deviation	7	7	5			0.44	7.1			

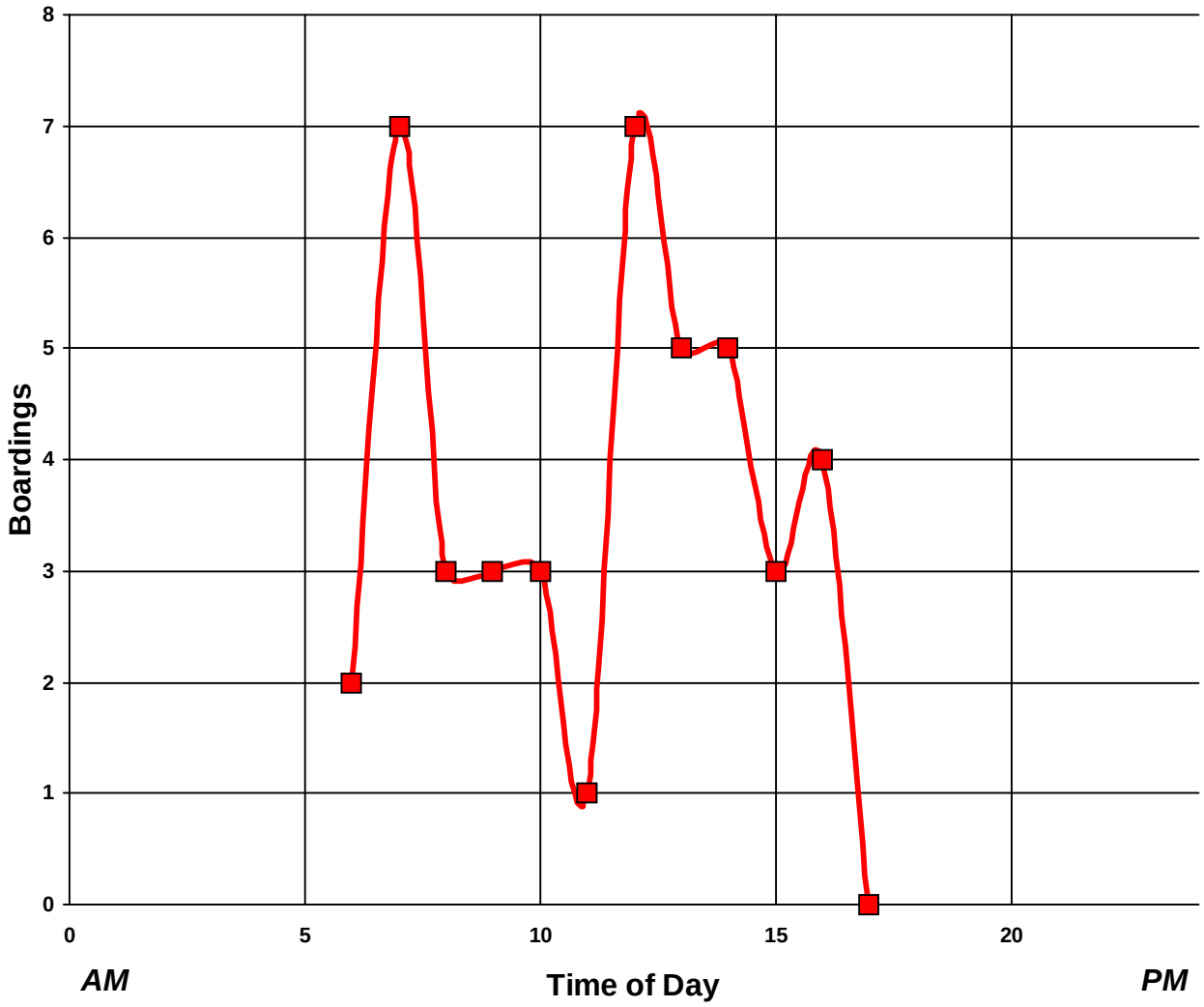
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S35 W Babylon - N. Lindenhurst - Loop

All Valid Weekday Trips

Vehicle Trips	14	Boardings Per Mile	0.26	TP Ontime	60
Boardings	43	Boardings Per Hour	4.1	TP Early	12
Revenue Miles	167.5	Schedule Speed (MPH)	16.6	TP Late	11
Revenue Hours	10.6	Actual Speed (MPH)	20.2	Ontime (%)	72.3

Boardings



This data is property of Suffolk County Transit

S35 W Babylon - N. Lindenhurst - Loop

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
1	LINDENHURST RAILROAD STA	BL	131	2	.	4	2	144	1	2		2	50.0	.
1	SOUTH BAY SHOPPING CENTE	BL	1068	7	.	9	7	324	2	8		1	88.9	.
1	FIVE CORNERS (WEST BABYL	BL	1156	.	.	1	0	36	.	1			100.0	.
2	N WELLWOOD AVE/HOFFMAN	BL	165	2	.	4	4	144	3					.
2	EDISON AVE/OTIS ST	BL	1306	.	.	1	0	36	.					.
2	PARK AVE/WEST MONTAUK H	BL	1387	.	.	9	7	324	2					.
3	PARK AVE/KANSAS ST	BL	1070	.	.	9	7	324	2					.
3	EDISON AVE/LAMAR ST	BL	1307	.	.	1	0	36	.					.
3	N WELLWOOD AVE/E JOHN ST	BL	1391	.	.	4	4	144	3					.
4	EDISON AVE/DALE ST	BL	1308	.	.	1	0	36	.					.
4	HOFFMAN AVE/PARK AVE	BL	1388	.	.	9	7	324	2					.
4	N WELLWOOD AVE/ITHACA ST	BL	1392	.	.	4	4	144	3					.
5	EDISON AVE/BELL ST	BL	1309	.	.	1	0	36	.					.
5	301 HOFFMAN AVE	BL	1389	.	.	9	7	324	2					.
5	WELLWOOD AVE/SPIEGELHAG	BL	1401	1	.	4	5	144	3					.
6	HOFFMAN AVE/N DELAWARE A	BL	1390	1	1	9	7	324	2					.
6	WELLWOOD AVE/FARMERS AV	BL	1402	.	.	4	5	144	3					.
6	WELLWOOD AVE/17TH ST	BL	1404	.	.	1	0	36	.					.
7	LINDENHURST RAILROAD STA	BL	131	4	2	9	9	324	3	8		1	88.9	.
7	STRAIGHT PATH/COLONIAL RD	BL	1336	5	.	4	10	144	7					.
7	WELLWOOD AVE/BABYLON-FA	BL	1405	.	.	1	0	36	.					.
8	N WELLWOOD AVE/HOFFMAN	BL	165	3	1	9	11	324	3					.
8	STRAIGHT PATH/BEDELL ST	BL	1337	.	.	4	10	144	7					.
8	WELLWOOD AVE/NEW HORIZO	BL	1406	.	.	1	0	36	.					.
9	STRAIGHT PATH/BABYLON-FA	BL	1338	.	1	4	9	144	6					.
9	N WELLWOOD AVE/E JOHN ST	BL	1391	.	.	9	11	324	3					.

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S35 W Babylon - N. Lindenhurst - Loop

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
9	WELLWOOD AVE/MERRITT ST	BL	1407	.	.	1	0	36	.					.
10	STRAIGHT PATH/BABYLON-FA	BL	1339	.	.	4	9	144	6					.
10	N WELLWOOD AVE/ITHACA ST	BL	1392	.	.	9	11	324	3					.
10	WELLWOOD AVE/GLADYS ST	BL	1408	.	.	1	0	36	.					.
11	STRAIGHT PATH/11TH ST.	BL	1340	.	.	4	9	144	6					.
11	NEWARK ST/WELLWOOD AVE	BL	1393	.	.	9	11	324	3					.
11	WELLWOOD AVE/STRAIGHT PA	BL	1409	.	.	1	0	36	.					.
12	STRAIGHT PATH/15TH ST	BL	1341	.	.	4	9	144	6					.
12	NEWARK ST/N DELAWARE AVE	BL	1394	.	.	9	11	324	3					.
12	WELLWOOD AVE/53RD ST	BL	1410	.	.	1	0	36	.					.
13	STRAIGHT PATH/GORDON AVE	BL	1342	.	.	4	9	144	6					.
13	NEWARK ST/INDIANA AVE	BL	1395	1	.	9	12	324	4					.
13	WELLWOOD AVE/50TH ST	BL	1411	.	.	1	0	36	.					.
14	STRAIGHT PATH/MATTHEWS A	BL	1343	.	1	4	8	144	6					.
14	JEFFERSON AVE/NEWARK ST	BL	1396	1	.	9	13	324	4					.
14	SUNRISE HWY/N ERIE AVE	BL	1412	.	.	1	0	36	.					.
15	FIVE CORNERS (WEST BABYL	BL	1156	.	.	4	8	144	6	2	1	1	50.0	.
15	SUNRISE HWY/INDIANA AVE	BL	1397	.	.	9	13	324	4	8	1		88.9	.
15	INDIANA AVE/SUNRISE HWY	BL	1413	.	.	1	0	36	.	1			100.0	.
16	EDISON AVE/OTIS ST	BL	1306	.	.	4	8	144	6					.
16	SUNRISE HWY/N GREENE ST	BL	1398	.	.	9	13	324	4					.
16	INDIANA AVE/NEWARK ST	BL	1414	.	.	1	0	36	.					.
17	EDISON AVE/LAMAR ST	BL	1307	.	1	4	7	144	5					.
17	SUNRISE HWY/N DELAWARE S	BL	1399	.	2	9	11	324	3					.
17	NEWARK ST/DELAWARE AVE	BL	1415	.	.	1	0	36	.					.
18	EDISON AVE/DALE ST	BL	1308	.	4	4	3	144	2					.

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S35 W Babylon - N. Lindenhurst - Loop

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
18	NEWARK ST/WELLWOOD AVE	BL	1393	.	.	1	0	36	.					.
18	SUNRISE HWY/N ALLEGHANY	BL	1400	.	.	9	11	324	3					.
19	EDISON AVE/BELL ST	BL	1309	.	.	4	3	144	2					.
19	WELLWOOD AVE/SPIEGELHAG	BL	1401	.	1	9	10	324	3					.
19	WELLWOOD AVE/DEKALB AVE	BL	1416	.	.	1	0	36	.					.
20	WELLWOOD AVE/FARMERS AV	BL	1402	.	.	9	10	324	3					.
20	WELLWOOD AVE/17TH ST	BL	1404	.	1	4	2	144	1					.
20	WELLWOOD AVE/W JOHN ST	BL	1417	.	.	1	0	36	.					.
21	WELLWOOD AVE/HOFFMAN AV	BL	1054	.	.	1	0	36	.					.
21	STRAIGHT PATH/COLONIAL RD	BL	1336	2	.	9	12	324	4					.
21	WELLWOOD AVE/BABYLON-FA	BL	1405	.	.	4	2	144	1					.
22	LINDENHURST RAILROAD STA	BL	131	.	.	1	0	36	.		1		0.0	.
22	STRAIGHT PATH/BEDELL ST	BL	1337	.	1	9	11	324	3					.
22	WELLWOOD AVE/NEW HORIZO	BL	1406	1	.	4	3	144	2					.
23	STRAIGHT PATH/BABYLON-FA	BL	1338	.	2	9	9	324	3					.
23	WELLWOOD AVE/MERRITT ST	BL	1407	1	.	4	4	144	3					.
24	STRAIGHT PATH/BABYLON-FA	BL	1339	.	.	9	9	324	3					.
24	WELLWOOD AVE/GLADYS ST	BL	1408	.	.	4	4	144	3					.
25	STRAIGHT PATH/11TH ST.	BL	1340	1	1	9	9	324	3					.
25	WELLWOOD AVE/STRAIGHT PA	BL	1409	.	1	4	3	144	2					.
26	STRAIGHT PATH/15TH ST	BL	1341	2	.	9	11	324	3					.
26	WELLWOOD AVE/53RD ST	BL	1410	.	.	4	3	144	2					.
27	STRAIGHT PATH/GORDON AVE	BL	1342	.	.	9	11	324	3					.
27	WELLWOOD AVE/50TH ST	BL	1411	.	.	4	3	144	2					.
28	STRAIGHT PATH/MATTHEWS A	BL	1343	.	1	9	10	324	3					.
28	SUNRISE HWY/N ERIE AVE	BL	1412	.	.	4	3	144	2					.

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S35 W Babylon - N. Lindenhurst - Loop

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
29	FIVE CORNERS (WEST BABYL	BL	1156	3	4	9	9	324	3	5	3	1	55.6	.
29	INDIANA AVE/SUNRISE HWY	BL	1413	.	.	4	3	144	2	1		3	25.0	.
30	EDISON AVE/OTIS ST	BL	1306	1	1	9	9	324	3					.
30	INDIANA AVE/NEWARK ST	BL	1414	.	.	4	3	144	2					.
31	EDISON AVE/LAMAR ST	BL	1307	.	1	9	8	324	2					.
31	NEWARK ST/DELAWARE AVE	BL	1415	.	.	4	3	144	2					.
32	EDISON AVE/DALE ST	BL	1308	2	.	9	10	324	3					.
32	NEWARK ST/WELLWOOD AVE	BL	1393	.	.	4	3	144	2					.
33	EDISON AVE/BELL ST	BL	1309	1	.	9	11	324	3					.
33	WELLWOOD AVE/DEKALB AVE	BL	1416	.	.	4	3	144	2					.
34	WELLWOOD AVE/17TH ST	BL	1404	.	.	9	11	324	3					.
34	WELLWOOD AVE/W JOHN ST	BL	1417	.	.	4	3	144	2					.
35	WELLWOOD AVE/HOFFMAN AV	BL	1054	.	2	4	1	144	1					.
35	WELLWOOD AVE/BABYLON-FA	BL	1405	.	1	9	10	324	3					.
36	LINDENHURST RAILROAD STA	BL	131	.	.	4	1	144	1	2		2	50.0	.
36	WELLWOOD AVE/NEW HORIZO	BL	1406	.	2	9	8	324	2					.
37	WELLWOOD AVE/MERRITT ST	BL	1407	.	.	9	8	324	2					.
37	HOFFMAN AVE/DELAWARE AV	BL	1418	.	.	1	1	36	3					.
38	301 HOFFMAN AVE	BL	1389	.	.	1	1	36	3					.
38	WELLWOOD AVE/GLADYS ST	BL	1408	.	.	9	8	324	2					.
39	PARK AVE/KANSAS ST	BL	1070	.	1	1	0	36	.					.
39	WELLWOOD AVE/STRAIGHT PA	BL	1409	.	1	9	7	324	2					.
40	WELLWOOD AVE/53RD ST	BL	1410	.	.	9	7	324	2					.
40	SOUTH BAY SHOPPING CENTE	BL	1419	.	.	1	0	36	.	1			100.0	.
41	WELLWOOD AVE/50TH ST	BL	1411	.	.	9	7	324	2					.
42	SUNRISE HWY/N ERIE AVE	BL	1412	.	.	9	7	324	2					.

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S35 W Babylon - N. Lindenhurst - Loop

All Valid Weekday Trips

Sort	Stop	Dir	ID	Board	Alight	Trips	Loading			Timepoint Observations				Serviced %
							Load	Capacity	%	On	Early	Late	OT%	
43	INDIANA AVE/SUNRISE HWY	BL	1413	.	.	9	7	324	2	8	1		88.9	.
44	INDIANA AVE/NEWARK ST	BL	1414	.	.	9	7	324	2					.
45	NEWARK ST/DELAWARE AVE	BL	1415	.	1	9	6	324	2					.
46	NEWARK ST/WELLWOOD AVE	BL	1393	1	.	9	7	324	2					.
47	WELLWOOD AVE/DEKALB AVE	BL	1416	.	.	9	7	324	2					.
48	WELLWOOD AVE/W JOHN ST	BL	1417	1	2	9	6	324	2					.
49	WELLWOOD AVE/HOFFMAN AV	BL	1054	.	1	9	5	324	2					.
50	LINDENHURST RAILROAD STA	BL	131	.	1	9	4	324	1	5	4		55.6	.
51	HOFFMAN AVE/DELAWARE AV	BL	1418	.	.	9	4	324	1					.
52	301 HOFFMAN AVE	BL	1389	.	1	9	3	324	1					.
53	PARK AVE/KANSAS ST	BL	1070	.	.	9	3	324	1					.
54	SOUTH BAY SHOPPING CENTE	BL	1419	.	3	9	0	324	.	8	1		88.9	.
	All 116 Stops	Total		43	43					60	12	11	72.3	
		Average		2	1									.

This data is property of Suffolk County Transit

S35 W Babylon - N. Lindenhurst - Loop

All Valid Weekday Trips

Vehicle Trips	14	Boardings Per Mile	0.26	TP Ontime	60
Boardings	43	Boardings Per Hour	4.1	TP Early	12
Revenue Miles	167.5	Schedule Speed (MPH)	16.6	TP Late	11
Revenue Hours	10.6	Actual Speed (MPH)	20.2	Ontime (%)	72.3

Serial #	Time	Date	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Actual Speed (MPH)	Sch Speed (MPH)	OT%
322	6:27 am	10/11/07 Thu	2	0	0	0	5.7	0.3	0.00	0.0	26.5	19.1	66.7
797	6:45 am	10/11/07 Thu	4	2	2	2	9.7	0.5	0.21	4.0	19.3	19.3	75.0
798	7:15 am	10/11/07 Thu	6	5	5	5	9.7	0.5	0.52	10.0	16.6	19.3	75.0
325	7:45 am	10/11/07 Thu	8	2	2	1	9.7	0.5	0.21	4.0	17.1	19.3	25.0
326	8:15 am	10/11/07 Thu	10	3	3	2	10.8	0.5	0.28	6.0	64.8	21.6	20.0
801	9:00 am	10/11/07 Thu	12	3	3	2	13.5	0.9	0.22	3.3	20.3	14.8	42.9
802	10:00 am	10/11/07 Thu	14	3	3	3	13.5	0.9	0.22	3.3	13.5	14.8	71.4
803	11:00 am	10/11/07 Thu	16	1	1	1	13.5	0.9	0.07	1.1	16.3	14.8	71.4
804	12:00 pm	10/11/07 Thu	18	7	7	4	13.5	0.9	0.52	7.6	14.8	14.8	100.0
805	1:30 pm	10/11/07 Thu	20	5	5	3	13.5	0.9	0.37	5.5	14.8	14.8	42.9
806	2:30 pm	10/11/07 Thu	22	5	5	3	13.5	0.9	0.37	5.5	14.3	14.8	100.0
807	3:30 pm	10/11/07 Thu	24	3	3	2	13.5	0.9	0.22	3.3	14.8	14.8	100.0
808	4:30 pm	10/11/07 Thu	26	4	4	2	13.5	0.9	0.30	4.4	14.8	14.8	85.7
809	5:30 pm	10/11/07 Thu	28	0	0	0	13.5	0.9	0.00	0.0	14.5	14.8	100.0
All 14 Trips			Total	43	43		167.5	10.6					
			Average	3	3	2	12.0	0.8	0.25	4.1			
			Minimum	0	0	0			0.00	0.0			
			Maximum	7	7	5			0.52	10.0			
			Standard Deviation	2	2	1			0.16	2.8			

This data is property of Suffolk County Transit

Appendix E: HART Data for Select Routes (2013)

	1	2	3	4	5	6	7	8	9	10					
2013	Para STOA	Para Non	H10	H20	H30	H40	Oth MB STOA	Oth MB Non	Oth DR STOA	Oth DR Non	TOTAL	DR STOA	DR Non	MB STOA	MB Non
SVC DAYS															
Weekdays	250	250	250	250	250	250	0	0	0	0	250	250	250	250	0
Saturdays	51	51	51	51	51	51	4	0	0	0	51	51	51	51	0
Sundays	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0
	301	301	301	301	301	301	5	0	0	0	302	301	301	302	0
PAX TRIPS															
Mon	5,140	544	6,040	4,769	6,022	5,998	0	0	0	0	28,513	5,140	544	22,829	0
Tue	6,414	721	6,367	4,926	6,300	7,417	0	0	0	0	32,145	6,414	721	25,010	0
Wed	7,048	700	6,588	5,747	6,923	7,237	0	0	0	0	34,243	7,048	700	26,495	0
Thu	6,497	767	6,477	5,098	6,461	7,307	0	0	0	0	32,607	6,497	767	25,343	0
Fri	6,935	709	6,700	5,194	6,748	7,158	0	0	0	0	33,444	6,935	709	25,800	0
Sat	2,143	348	3,086	1,686	2,536	2,876	3,703	0	0	0	16,378	2,143	348	13,887	0
Sun	0	0	0	0	0	0	1,079	0	0	0	1,079	0	0	1,079	0
Weekdays	32,034	3,441	32,172	25,734	32,454	35,117	0	0	0	0	160,952	32,034	3,441	125,477	0
Saturdays	2,143	348	3,086	1,686	2,536	2,876	3,703	0	0	0	16,378	2,143	348	13,887	0
Sundays	0	0	0	0	0	0	1,079	0	0	0	1,079	0	0	1,079	0
	34,177	3,789	35,258	27,420	34,990	37,993	4,782	0	0	0	178,409	34,177	3,789	140,443	0
TOT VEH MLG															
Mon	36,281.0	0.00	19,831.0	14,496.0	17,328.0	17,399.0	0.0	0.0	0.0	0.0	105,335.0	36,281	0	69,054	0
Tue	41,748.0	0.00	21,452.0	15,714.0	18,869.0	18,815.0	0.0	0.0	0.0	0.0	116,598.0	41,748	0	74,850	0
Wed	49,380.0	0.00	21,935.0	16,084.0	19,203.0	19,271.0	0.0	0.0	0.0	0.0	125,873.0	49,380	0	76,493	0
Thu	41,847.0	0.00	21,531.0	15,749.0	18,842.0	18,863.0	0.0	0.0	0.0	0.0	116,832.0	41,847	0	74,985	0
Fri	46,561.0	0.00	21,933.0	16,114.0	19,273.0	19,322.0	0.0	0.0	0.0	0.0	123,203.0	46,561	0	76,642	0
Sat	16,585.0	0.00	9,724.0	7,046.0	8,516.0	8,385.0	683.0	0.0	0.0	0.0	50,939.0	16,585	0	34,354	0
Sun	0.0	0.00	0.0	0.0	0.0	0.0	251.0	0.0	0.0	0.0	251.0	0	0	251	0
Weekdays	215,817.0	0.00	106,682.0	78,157.0	93,515.0	93,670.0	0.0	0.0	0.0	0.0	587,841.0	215,817.0	0.0	372,024.0	0.0
Saturdays	16,585.0	0.00	9,724.0	7,046.0	8,516.0	8,385.0	683.0	0.0	0.0	0.0	50,939.0	16,585.0	0.0	34,354.0	0.0
Sundays	0.0	0.00	0.0	0.0	0.0	0.0	251.0	0.0	0.0	0.0	251.0	0.0	0.0	251.0	0.0
	232,402.0	0.00	116,406.0	85,203.0	102,031.0	102,055.0	934.0	0.0	0.0	0.0	639,031.0	232,402.0	0.0	406,629.0	0.0
TOT VEH HRS															
Mon	2,768.86	0.00	1,110.85	1,105.94	1,094.57	1,120.03	0.00	0.00	0.00	0.00	7,200.25	2,769	0	4,431	0
Tue	3,210.74	0.00	1,203.05	1,200.31	1,188.55	1,216.99	0.00	0.00	0.00	0.00	8,019.64	3,211	0	4,809	0
Wed	3,692.79	0.00	1,233.06	1,229.75	1,217.89	1,243.50	0.00	0.00	0.00	0.00	8,616.99	3,693	0	4,924	0
Thu	3,286.14	0.00	1,208.73	1,206.22	1,192.18	1,218.16	0.00	0.00	0.00	0.00	8,111.43	3,286	0	4,825	0
Fri	3,513.49	0.00	1,235.54	1,232.85	1,222.90	1,248.29	0.00	0.00	0.00	0.00	8,453.07	3,513	0	4,940	0
Sat	1,311.76	0.00	526.78	522.30	519.99	537.40	90.55	0.00	0.00	0.00	3,508.78	1,312	0	2,197	0
Sun	0.00	0.00	0.00	0.00	0.00	0.00	44.28	0.00	0.00	0.00	44.28	0	0	44	0
Weekdays	16,472.02	0.00	5,991.23	5,975.07	5,916.09	6,046.97	0.00	0.00	0.00	0.00	40,401.38	16,472.02	0.00	23,929.36	0.00
Saturdays	1,311.76	0.00	526.78	522.30	519.99	537.40	90.55	0.00	0.00	0.00	3,508.78	1,311.76	0.00	2,197.02	0.00
Sundays	0.00	0.00	0.00	0.00	0.00	0.00	44.28	0.00	0.00	0.00	44.28	0.00	0.00	44.28	0.00
	17,783.78	0.00	6,518.01	6,497.37	6,436.08	6,584.37	134.83	0.00	0.00	0.00	43,954.44	17,783.78	0.00	26,170.66	0.00
REV VEH MLG															
Mon	33,536.0	0.00	17,916.0	13,368.0	16,179.0	16,372.0	0.0	0.0	0.0	0.0	97,371.0	33,536	0	63,835	0
Tue	38,487.0	0.00	19,475.0	14,475.0	17,561.0	17,714.0	0.0	0.0	0.0	0.0	107,712.0	38,487	0	69,225	0
Wed	45,629.0	0.00	19,872.0	14,831.0	17,907.0	18,104.0	0.0	0.0	0.0	0.0	116,343.0	45,629	0	70,714	0
Thu	38,565.0	0.00	19,537.0	14,489.0	17,547.0	17,744.0	0.0	0.0	0.0	0.0	107,882.0	38,565	0	69,317	0
Fri	43,173.0	0.00	19,853.0	14,834.0	17,960.0	18,155.0	0.0	0.0	0.0	0.0	113,975.0	43,173	0	70,802	0
Sat	15,423.0	0.00	9,149.0	6,750.0	8,174.0	7,609.0	629.0	0.0	0.0	0.0	47,734.0	15,423	0	32,311	0
Sun	0.0	0.00	0.0	0.0	0.0	0.0	239.0	0.0	0.0	0.0	239.0	0	0	239	0
Weekdays	199,390.0	0.00	96,653.0	71,997.0	87,154.0	88,089.0	0.0	0.0	0.0	0.0	543,283.0	199,390.0	0.0	343,893.0	0.0
Saturdays	15,423.0	0.00	9,149.0	6,750.0	8,174.0	7,609.0	629.0	0.0	0.0	0.0	47,734.0	15,423.0	0.0	32,311.0	0.0
Sundays	0.0	0.00	0.0	0.0	0.0	0.0	239.0	0.0	0.0	0.0	239.0	0.0	0.0	239.0	0.0
	214,813.0	0.0	105,802.0	78,747.0	95,328.0	95,698.0	868.0	0.0	0.0	0.0	591,256.0	214,813.0	0.0	376,443.0	0.0
REV VEH HRS															
Mon	2588.38	0.00	998.08	998.77	997.88	1062.56	0.00	0.00	0.00	0.00	6,645.67	2,588	0	4,057	0
Tue	2999.75	0.00	1086.19	1087.98	1084.23	1153.32	0.00	0.00	0.00	0.00	7,411.47	3,000	0	4,412	0
Wed	3461.50	0.00	1109.42	1111.80	1110.13	1180.86	0.00	0.00	0.00	0.00	7,973.71	3,462	0	4,512	0
Thu	3075.09	0.00	1087.99	1088.53	1087.07	1157.78	0.00	0.00	0.00	0.00	7,496.46	3,075	0	4,421	0
Fri	3329.60	0.00	1113.17	1112.18	1113.69	1182.99	0.00	0.00	0.00	0.00	7,851.63	3,330	0	4,522	0
Sat	1237.77	0.00	496.16	495.26	493.22	498.53	83.98	0.00	0.00	0.00	3,304.92	1,238	0	2,067	0
Sun	0.00	0.00	0.00	0.00	0.00	0.00	42.92	0.00	0.00	0.00	42.92	0	0	43	0
Weekdays	15,454.32	0.00	5,394.85	5,399.26	5,393.00	5,737.51	0.00	0.00	0.00	0.00	37,378.94	15,454.32	0.00	21,924.62	0.00
Saturdays	1,237.77	0.00	496.16	495.26	493.22	498.53	83.98	0.00	0.00	0.00	3,304.92	1,237.77	0.00	2,067.15	0.00
Sundays	0.00	0.00	0.00	0.00	0.00	0.00	42.92	0.00	0.00	0.00	42.92	0.00	0.00	42.92	0.00
	16,692.09	0.00	5,891.01	5,894.52	5,886.22	6,236.04	126.90	0.00	0.00	0.00	40,726.78	16,692.09	0.00	24,034.69	0.00

Jul-05	Para STOA	Para Non	H10	H20	H30	H40	Oth MB STOA	Oth MB Non	Oth DR STOA	Oth DR Non	TOTAL	DR STOA	DR Non	MB STOA	MB Non
FAREBOX REVENUES															
Mon	12,685.41	0.00	5,223.13	4,287.25	5,343.30	5,208.08	0.00	0.00	0.00	0.00	32,747.17	12,685	0	20,062	0
Tue	16,872.47	0.00	5,678.16	4,600.34	5,567.85	6,774.92	0.00	0.00	0.00	0.00	39,493.74	16,872	0	22,621	0
Wed	17,819.08	0.00	5,779.61	5,173.98	6,120.40	6,567.35	0.00	0.00	0.00	0.00	41,460.42	17,819	0	23,641	0
Thu	16,571.51	0.00	5,787.35	4,749.98	5,847.22	6,889.28	0.00	0.00	0.00	0.00	39,845.34	16,572	0	23,274	0
Fri	17,460.91	0.00	6,148.55	4,670.22	6,245.51	6,853.19	0.00	0.00	0.00	0.00	41,378.38	17,461	0	23,917	0
Sat	6,150.68	0.00	2,760.07	1,796.76	2,785.70	3,031.55	558.85	0.00	0.00	0.00	17,083.61	6,151	0	10,933	0
Sun	0.00	0.00	0.00	0.00	0.00	0.00	465.29	0.00	0.00	0.00	465.29	0	0	465	0
Weekdays	81,409.38	0.00	28,616.80	23,481.77	29,124.28	32,292.82	0.00	0.00	0.00	0.00	194,925.05	81,409.38	0.00	113,515.67	0.00
Saturdays	6,150.68	0.00	2,760.07	1,796.76	2,785.70	3,031.55	558.85	0.00	0.00	0.00	17,083.61	6,150.68	0.00	10,932.93	0.00
Sundays	0.00	0.00	0.00	0.00	0.00	0.00	465.29	0.00	0.00	0.00	465.29	0.00	0.00	465.29	0.00
	87,560.06	0.00	31,376.87	25,278.53	31,909.98	35,324.37	1,024.14	0.00	0.00	0.00	212,473.95	87,560.06	0.00	124,913.89	0.00
TOTAL FARES COLLECTED															
Farebox	87,560.06	0.00	31,376.87	25,278.53	31,909.98	35,324.37	1,024.14	0.00	0.00	0.00	212,473.95	87,560.06	0.00	124,913.89	0.00
HART Tixx	0.00	0.00	8,845.17	5,284.41	7,573.48	6,532.57	1.37	0.00	0.00	0.00	28,237.00	0.00	0.00	28,237.00	0.00
	87,560.06	0.00	40,222.04	30,562.94	39,483.46	41,856.94	1,025.51	0.00	0.00	0.00	240,710.95	87,560.06	0.00	153,150.89	0.00
Avg Pax/Day															
Weekdays	128.1		128.7	102.9	129.8	140.5	0.0	0.0	0.0	0.0	630.04	128.14	0.00	501.91	0.00
Saturdays	42.0		60.5	33.1	49.7	56.4	925.8	0.0	0.0	0.0	1167.46	42.02	0.00	1,125.44	0.00
Sundays	0.0		0.0	0.0	0.0	0.0	1079.0	0.0	0.0	0.0	1079.00	0.00	0.00	1,079.00	0.00
Avg Tot Veh Mlg															
Weekdays	863.3		426.7	312.6	374.1	374.7	0.0	0.0	0.0	0.0	2351.36	863.27	0.00	1,488.10	0.00
Saturdays	325.2		190.7	138.2	167.0	164.4	170.8	0.0	0.0	0.0	1156.16	325.20	0.00	830.97	0.00
Sundays	0.0		0.0	0.0	0.0	0.0	251.0	0.0	0.0	0.0	251.00	0.00	0.00	251.00	0.00
Avg Tot Veh Hrs															
Weekdays	65.89		23.96	23.90	23.66	24.19	0.00	0.00	0.00	0.00	161.61	65.89	0.00	95.72	0.00
Saturdays	25.72		10.33	10.24	10.20	10.54	22.64	0.00	0.00	0.00	89.66	25.72	0.00	63.94	0.00
Sundays	0.00		0.00	0.00	0.00	0.00	44.28	0.00	0.00	0.00	44.28	0.00	0.00	44.28	0.00
Avg Rev Veh Mlg															
Weekdays	797.6		386.6	288.0	348.6	352.4	0.0	0.0	0.0	0.0	2173.13	797.56	0.00	1,375.57	0.00
Saturdays	302.4		179.4	132.4	160.3	149.2	157.3	0.0	0.0	0.0	1080.88	302.41	0.00	778.47	0.00
Sundays	0.0		0.0	0.0	0.0	0.0	239.0	0.0	0.0	0.0	239.00	0.00	0.00	239.00	0.00
Avg Rev Veh Hrs															
Weekdays	61.82		21.58	21.60	21.57	22.95	0.00	0.00	0.00	0.00	149.52	61.82	0.00	87.70	0.00
Saturdays	24.27		9.73	9.71	9.67	9.78	21.00	0.00	0.00	0.00	84.15	24.27	0.00	59.88	0.00
Sundays	0.00		0.00	0.00	0.00	0.00	42.92	0.00	0.00	0.00	42.92	0.00	0.00	42.92	0.00
Avg Rev MPH															
Weekdays	12.90		17.92	13.33	16.16	15.35	0.00	0.00	0.00	0.00	14.53	12.90	0.00	15.69	0.00
Saturdays	12.46		18.44	13.63	16.57	15.26	7.49	0.00	0.00	0.00	12.84	12.46	0.00	13.00	0.00
Sundays	0.00		0.00	0.00	0.00	0.00	5.57	0.00	0.00	0.00	5.57	0.00	0.00	5.57	0.00
Avg Non MPH															
Weekdays	16.14		16.82	10.70	12.16	18.03	0.00	0.00	0.00	0.00	14.74	16.14	0.00	14.03	0.00
Saturdays	15.70		18.78	10.95	12.78	19.96	8.22	0.00	0.00	0.00	13.66	15.70	0.00	12.93	0.00
Sundays	0.00		0.00	0.00	0.00	0.00	8.82	0.00	0.00	0.00	8.82	0.00	0.00	8.82	0.00
PAX TRIPS/REV VEH HR															
Weekdays	2.07	0.22	5.96	4.77	6.02	6.12	0.00	0.00	0.00	0.00	4.31	2.07	0.22	5.72	0.00
Saturdays	1.73	0.28	6.22	3.40	5.14	5.77	44.09	0.00	0.00	0.00	4.96	1.73	0.28	6.72	0.00
Sundays	0.00	0.00	0.00	0.00	0.00	0.00	25.14	0.00	0.00	0.00	25.14	0.00	0.00	25.14	0.00
Sat Prod.	84%	126%	104%	71%	85%	94%	0%	0%	0%	0%	115%	84%	126%	117%	0%

Appendix F: LIRR Passenger Count Data for Select Stations (2006 Origin and Destination Study)

WESTBOUND BABYLON BRANCH												
	AM Peak		Midday Off Peak		PM Reverse Peak		Weekday Total		Saturday		Sunday	
Station	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off
Amityville	797	53	289	50	124	63	1,210	166	146	24	331	56
Babylon	2,312	36	817	34	273	0	3,402	70	1,318	12	1,464	50

EASTBOUND BABYLON BRANCH												
	AM Reverse Peak		Midday Off Peak		PM Peak		Weekday Total		Saturday		Sunday	
Station	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off
Amityville	39	224	170	328	211	737	420	1,289	42	406	56	260
Babylon	0	433	0	1,057	8	1,616	8	3,106	13	1,403	10	1,554

WESTBOUND RONKONKOMA BRANCH												
	AM Peak		Midday Off Peak		PM Reverse Peak		Weekday Total		Saturday		Sunday	
Station	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off
Farmingdale	1,477	215	519	59	436	46	2,432	320	638	107	397	48
Pinelawn	N/A	N/A	8	8	N/A	N/A	8	8	24	2	54	1

EASTBOUND RONKONKOMA BRANCH												
	AM Reverse Peak		Midday Off Peak		PM Peak		Weekday Total		Saturday		Sunday	
Station	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off
Farmingdale	319	314	158	224	212	646	689	1,184	70	677	160	659
Pinelawn	0	12	10	12	N/A	N/A	10	24	5	13	3	43

WESTBOUND HUNTINGTON BRANCH												
	AM Peak		Midday Off Peak		PM Reverse Peak		Weekday Total		Saturday		Sunday	
Station	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off
Huntington	4,935	292	1,854	198	697	478	7,486	968	1,592	516	1,859	273

EASTBOUND HUNTINGTON BRANCH												
	AM Reverse Peak		Midday Off Peak		PM Peak		Weekday Total		Saturday		Sunday	
Station	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off
Huntington	67	76	64	603	82	1,767	213	2,446	21	2,645	633	1,189

Appendix G: Route 110 24-Hour/7-Day Directional Traffic Count Hourly Reports

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME: **RT 110**
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 10
DATE OF COUNT: 03/06/2006
NOTES LANE 1: NORTH

FROM: **RT 27A MONTAUK HGWY** TO: **ALBANY AVE**
REC. SERIAL #: 1598 FUNC. CLASS: 14
PLACEMENT: BET RT 27A & ALBANY AVE NHS: no
@ REF MARKER: 110 07011006 JURIS: State
ADDL DATA: CC Stn:
COUNT TYPE: AXLE PAIRS BATCH ID: DOT-DOTr10cw10

COUNTY: **Suffolk**
VILLAGE: **AMITYVILLE**
BIN:
RR CROSSING:
HPMS SAMPLE:

COUNT TAKEN BY: ORG CODE: TTG INITIALS: DM
PROCESSED BY: ORG CODE: R10 INITIALS: afa

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M								**608**	**587**	**461**	**375**	**406**	**422**	**426**	**512**	**466**	**394**	**382**	**325**	**268**	**210**	**138**	**106**	**61**			
7	T	**24**	**21**	**15**	**16**	**60**	**166**	**388**	**577**	**608**	**431**	**402**	**459**	**474**	**445**	**475**	**451**	**390**	**415**	**367**	**323**	**224**	**148**	**140**	**66**	7085	608	8
8	W	**35**	**27**	**20**	**20**	**65**	**174**	**394**	**604**	**605**	**449**	**407**	**464**	**445**	**464**	**482**	**467**	**436**	**399**	**390**	**385**	**244**	**174**	**125**	**83**	7358	605	8
9	T	**32**	**19**	**19**	**14**	**66**																						
10	F																											
11	S																											
12	S																											
13	M																											
14	T																											
15	W																											
16	T																											
17	F																											
18	S																											
19	S																											
20	M																											
21	T																											
22	W																											
23	T																											
24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											
31	F																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
29	**21**	**17**	**16**	**62**	**165**	**378**	**577**	**581**	**433**	**382**	**429**	**433**	**431**	**474**	**446**	**394**	**386**	**349**	**315**	**219**	**148**	**120**	**68**	**6873**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	70	4	70	581	8%	0.968	0.999

ESTIMATED (one way)

AADT
6880

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME: **RT 110**
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 10
DATE OF COUNT: 03/06/2006
NOTES LANE 1:

COUNT TAKEN BY: ORG CODE: TTG INITIALS: DM

FROM: **RT 27A MONTAUK HGWY**
REC. SERIAL #: 1598
PLACEMENT: BET RT 27A & ALBANY AVE
@ REF MARKER: 110 07011006
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: R10 INITIALS: afa

TO: **ALBANY AVE**
FUNC. CLASS: 14
NHS: no
JURIS: State
CC Stn:
BATCH ID: DOT-DOTr10cw10

COUNTY: **Suffolk**
VILLAGE: **AMITYVILLE**
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M								**274**	**263**	**272**	**279**	**361**	**397**	**359**	**446**	**475**	**464**	**464**	**427**	**330**	**236**	**207**	**156**	**91**			
7	T	**41**	**29**	**16**	**14**	**9**	**24**	**65**	**223**	**274**	**282**	**319**	**386**	**406**	**394**	**400**	**458**	**465**	**533**	**427**	**354**	**292**	**226**	**152**	**103**	5892	533	17
8	W	**62**	**40**	**31**	**14**	**15**	**37**	**59**	**238**	**256**	**291**	**288**	**335**	**357**	**361**	**427**	**435**	**449**	**517**	**466**	**355**	**249**	**244**	**138**	**110**	5774	517	17
9	T	**65**	**32**	**22**	**19**	**16**																						
10	F																											
11	S																											
12	S																											
13	M																											
14	T																											
15	W																											
16	T																											
17	F																											
18	S																											
19	S																											
20	M																											
21	T																											
22	W																											
23	T																											
24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											
31	F																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
54	**33**	**22**	**15**	**13**	**29**	**60**	**237**	**256**	**273**	**286**	**349**	**375**	**359**	**410**	**441**	**444**	**489**	**426**	**335**	**251**	**219**	**144**	**98**	**5618**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	70	4	70	489	9%	0.968	0.999

ESTIMATED (one way)

AADT
5624

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME: **RT 110**
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 10
DATE OF COUNT: 03/06/2006
NOTES LANE 0: NORTH

COUNT TAKEN BY: ORG CODE: TTG INITIALS: DM

FROM: **ALBANY AVE**
REC. SERIAL #: 1646
PLACEMENT: BET ALBANY AVE & ACC RT 27
@ REF MARKER: 110 07011009
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: R10 INITIALS: afa

TO: **ACC RT 27 SUNRISE HGWY**
FUNC. CLASS: 14
NHS: no
JURIS: State
CC Stn:
BATCH ID: DOT-DOTr10cw10

COUNTY: **Suffolk**
VILLAGE: **AMITYVILLE**
BIN: 1019119
RR CROSSING:
HPMS SAMPLE:

		AM												PM													
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
DATE	DAY																										
1	W																										
2	T																										
3	F																										
4	S																										
5	S																										
6	M							**744**	**1264**	**1081**	**902**	**810**	**891**	**1010**	**941**	**1068**	**1069**	**1052**	**997**	**854**	**617**	**484**	**366**	**274**	**172**			
7	T	**90**	**49**	**46**	**49**	**145**	**373**	**786**	**1236**	**1055**	**869**	**868**	**995**	**1057**	**935**	**1025**	**1070**	**1099**	**954**	**871**	**662**	**474**	**409**	**317**	**178**	15612	1236	7
8	W	**124**	**61**	**47**	**56**	**147**	**377**	**758**	**1282**	**1043**	**904**	**805**	**889**	**967**	**942**	**976**	**1105**	**1072**	**984**	**877**	**721**	**531**	**432**	**310**	**200**	15610	1282	7
9	T	**133**	**57**	**44**	**51**	**141**	**382**																				
10	F																										
11	S																										
12	S																										
13	M																										
14	T																										
15	W																										
16	T																										
17	F																										
18	S																										
19	S																										
20	M																										
21	T																										
22	W																										
23	T																										
24	F																										
25	S																										
26	S																										
27	M																										
28	T																										
29	W																										
30	T																										
31	F																										

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
112	**54**	**45**	**50**	**139**	**365**	**739**	**1221**	**1026**	**863**	**802**	**895**	**979**	**909**	**990**	**1046**	**1040**	**947**	**839**	**646**	**480**	**389**	**290**	**177**	**15043**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	72	4	72	1221	8%	0.968	0.999

ESTIMATED (one way)

AADT
15058

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME: **RT 110**
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 10
DATE OF COUNT: 03/06/2006
NOTES LANE 0: SOUTH

COUNT TAKEN BY: ORG CODE: TTG INITIALS: DM

FROM: **ALBANY AVE**
REC. SERIAL #: 1737
PLACEMENT: BET ALBANY AVE & ACC RT 27
@ REF MARKER: 110 07011009
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: R10 INITIALS: afa

TO: **ACC RT 27 SUNRISE HGWY**
FUNC. CLASS: 14
NHS: no
JURIS: State
CC Stn:
BATCH ID: DOT-DOTr10cw10

COUNTY: **Suffolk**
VILLAGE: **AMITYVILLE**
BIN: 1019119
RR CROSSING:
HPMS SAMPLE:

		AM												PM													
DATE	DAY	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W																										
2	T																										
3	F																										
4	S																										
5	S																										
6	M							**468**	**1052**	**1000**	**1009**	**864**	**894**	**1038**	**1077**	**1174**	**1270**	**1342**	**1478**	**1283**	**886**	**731**	**613**	**484**	**318**			
7	T	**157**	**88**	**58**	**52**	**62**	**156**	**475**	**943**	**990**	**1008**	**897**	**982**	**1088**	**1100**	**1084**	**1242**	**1339**	**1476**	**1285**	**951**	**814**	**705**	**545**	**339**	17836	1476	17
8	W	**219**	**123**	**66**	**51**	**61**	**178**	**432**	**989**	**968**	**975**	**836**	**977**	**1075**	**1013**	**1168**	**1390**	**1342**	**1602**	**1470**	**1084**	**736**	**693**	**541**	**350**	18339	1602	17
9	T	**219**	**114**	**74**	**59**	**86**	**191**																				
10	F																										
11	S																										
12	S																										
13	M																										
14	T																										
15	W																										
16	T																										
17	F																										
18	S																										
19	S																										
20	M																										
21	T																										
22	W																										
23	T																										
24	F																										
25	S																										
26	S																										
27	M																										
28	T																										
29	W																										
30	T																										
31	F																										

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																								ADT
192	**105**	**64**	**52**	**68**	**169**	**443**	**963**	**954**	**965**	**838**	**921**	**1033**	**1029**	**1105**	**1259**	**1298**	**1470**	**1303**	**943**	**736**	**649**	**506**	**325**	**17390**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	72	4	72	1470	8%	0.968	0.999

ESTIMATED (one way)

AADT
17407

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME:
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 20
DATE OF COUNT: 05/15/2007
NOTES LANE 0: NORTH 2 LANES

COUNT TAKEN BY: ORG CODE: DOT INITIALS: TS

FROM: **ACC RT 27 SUNRISE HGWY**
REC. SERIAL #: 0707
PLACEMENT: BET RT 27 & SS PKWY
@ REF MARKER: 110 07011018
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: DOT INITIALS:

TO: **ACC SOUTHERN STATE PKY**
FUNC. CLASS: 14
NHS: yes
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-DOTr10cw20

COUNTY: **Suffolk**
TOWN: **BABYLON**
BIN: 1019119
RR CROSSING:
HPMS SAMPLE:

		AM												PM													
DATE	DAY	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																										
2	W																										
3	T																										
4	F																										
5	S																										
6	S																										
7	M																										
8	T																										
9	W																										
10	T																										
11	F																										
12	S																										
13	S																										
14	M																										
15	T	**183**	**98**	**88**	**99**	**207**	**527**	**1072**	**1694**	**1675**	**1229**	**1164**	**1301**	**1328**	**1290**	**1342**	**1475**	**1397**	**1328**	**1174**	**1064**	**904**	**766**	**555**	**383**	22343	1694	7
16	W	**166**	**117**	**71**	**118**	**194**	**517**	**1109**	**1715**	**1628**	**1350**	**1167**	**1282**	**1279**	**1264**	**1349**	**1311**	**1433**	**1369**	**1209**	**897**	**784**	**670**	**518**	**337**	21854	1715	7
17	T	**193**	**116**	**82**	**112**	**220**	**536**	**1097**	**1659**	**1703**	**1321**	**1199**	**1251**	**1403**	**1261**	**1421**	**1393**	**1541**	**1313**	**1298**	**1140**	**963**	**849**	**643**	**435**	23149	1703	8
18	F	**223**	**134**	**83**	**130**	**213**	**494**	**1004**	**1600**	**1609**	**1319**	**1260**	**1286**	**1453**	**1351**	**1481**	**1556**	**1495**	**1342**	**1242**	**1092**	**851**	**848**	**708**	**546**	23320	1609	8
19	S	**369**	**223**	**180**	**138**	**186**	**261**	**497**	**785**	**928**	**1111**	**1215**	**1346**	**1600**	**1594**	**1485**	**1419**	**1456**	**1307**	**1198**	**1071**	**822**	**781**	**720**	**590**	21282	1600	12
20	S	**339**	**246**	**160**	**144**	**123**	**161**	**302**	**454**	**602**	**810**	**1076**	**1067**	**1254**	**1418**	**1356**	**1294**	**1159**	**1060**	**1027**	**758**	**733**	**573**	**510**	**325**	16951	1418	13
21	M	**207**	**117**	**64**	**91**	**213**	**530**	**1070**	**1592**	**1700**	**1335**	**1189**	**1258**	**1414**	**1309**	**1378**	**1403**	**1428**	**1292**	**1215**	**979**	**933**	**690**	**619**	**354**	22380	1700	8
22	T	**228**	**106**																								
23	W																										
24	T																										
25	F																										
26	S																										
27	S																										
28	M																										
29	T																										
30	W																										
31	T																										

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
194	**111**	**79**	**112**	**202**	**504**	**1041**	**1607**	**1618**	**1276**	**1164**	**1242**	**1319**	**1246**	**1335**	**1358**	**1411**	**1290**	**1191**	**992**	**872**	**724**	**568**	**367**	**21823**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
8	170	5	104	1618	7%	0.973	1.080

ESTIMATED (one way)

AADT
20206

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME:
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 20
DATE OF COUNT: 05/15/2007
NOTES LANE 0: SOUTH 2 LANES

COUNT TAKEN BY: ORG CODE: DOT INITIALS: TS

FROM: **ACC RT 27 SUNRISE HGWY**
REC. SERIAL #: 0707
PLACEMENT: BET RT 27 & SS PKWY
@ REF MARKER: 110 07011018
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: DOT INITIALS:

TO: **ACC SOUTHERN STATE PKY**
FUNC. CLASS: 14
NHS: yes
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-DOTr10cw20

COUNTY: **Suffolk**
TOWN: **BABYLON**
BIN: 1019119
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	W																											
3	T																											
4	F																											
5	S																											
6	S																											
7	M																											
8	T																											
9	W																											
10	T																											
11	F																											
12	S																											
13	S																											
14	M																											
15	T	**393**	**166**	**105**	**110**	**125**	**245**	**689**	**1047**	**1164**	**1237**	**1191**	**1305**	**1393**	**1450**	**1505**	**1629**	**1766**	**1886**	**1673**	**1375**	**1090**	**957**	**758**	**753**	24012	1886	17
16	W	**361**	**181**	**108**	**88**	**125**	**257**	**714**	**1119**	**1074**	**1176**	**1163**	**1255**	**1421**	**1422**	**1477**	**1666**	**1805**	**1935**	**1657**	**1238**	**953**	**826**	**674**	**646**	23341	1935	17
17	T	**367**	**214**	**123**	**88**	**123**	**245**	**663**	**1053**	**1083**	**1182**	**1188**	**1276**	**1451**	**1420**	**1541**	**1599**	**1855**	**2070**	**1791**	**1418**	**1246**	**984**	**700**	**748**	24428	2070	17
18	F	**406**	**239**	**143**	**119**	**140**	**250**	**621**	**986**	**1048**	**1206**	**1214**	**1256**	**1492**	**1539**	**1605**	**1790**	**1901**	**1987**	**1666**	**1373**	**1053**	**929**	**850**	**754**	24567	1987	17
19	S	**532**	**325**	**211**	**179**	**168**	**187**	**373**	**640**	**858**	**999**	**1229**	**1320**	**1675**	**1597**	**1600**	**1678**	**1604**	**1514**	**1394**	**1231**	**1026**	**917**	**770**	**690**	22717	1678	15
20	S	**513**	**325**	**234**	**176**	**155**	**131**	**232**	**389**	**594**	**716**	**984**	**1175**	**1340**	**1474**	**1413**	**1512**	**1438**	**1298**	**1192**	**953**	**898**	**763**	**646**	**474**	19025	1512	15
21	M	**320**	**142**	**101**	**79**	**129**	**231**	**707**	**1058**	**1073**	**1237**	**1263**	**1340**	**1479**	**1442**	**1515**	**1658**	**1808**	**2073**	**1710**	**1269**	**1087**	**889**	**666**	**716**	23992	2073	17
22	T	**419**	**178**																									
23	W																											
24	T																											
25	F																											
26	S																											
27	S																											
28	M																											
29	T																											
30	W																											
31	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																								ADT
378	**191**	**117**	**98**	**125**	**242**	**661**	**1025**	**1059**	**1175**	**1171**	**1251**	**1397**	**1395**	**1469**	**1594**	**1759**	**1937**	**1662**	**1289**	**1064**	**889**	**681**	**697**	**23326**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
8	170	5	104	1937	8%	0.973	1.080

ESTIMATED (one way)

AADT
21598

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME: **RT 110**
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 10
DATE OF COUNT: 03/06/2006
NOTES LANE 0: NORTH

COUNT TAKEN BY: ORG CODE: TTG INITIALS: DM

FROM: **ACC SOUTHERN STATE PKY** TO: **ACC RT 109**
REC. SERIAL #: 1652 FUNC. CLASS: 14
PLACEMENT: JUST N OF RAMP FOR RT 27 NHS: yes
@ REF MARKER: 110 07011027 JURIS: State
ADDL DATA: CC Stn:
COUNT TYPE: AXLE PAIRS BATCH ID: DOT-DOTr10cw10
PROCESSED BY: ORG CODE: R10 INITIALS: afa

COUNTY: **Suffolk**
TOWN: **BABYLON**
BIN: 1036949
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M							**1571**	**2532**	**2641**	**1758**	**1391**	**1514**	**1712**	**1621**	**1580**	**1716**	**1553**	**1559**	**1278**	**1009**	**707**	**596**	**456**	**312**			
7	T	**159**	**90**	**83**	**107**	**248**	**639**	**1576**	**2502**	**2737**	**1928**	**1518**	**1637**	**1785**	**1799**	**1562**	**1633**	**1567**	**1525**	**1302**	**1052**	**752**	**667**	**538**	**358**	27764	2737	8
8	W	**165**	**98**	**96**	**118**	**225**	**639**	**1751**	**2548**	**2741**	**1901**	**1477**	**1596**	**1719**	**1735**	**1596**	**1654**	**1574**	**1596**	**1390**	**1089**	**767**	**709**	**488**	**377**	28049	2741	8
9	T	**193**	**101**	**86**	**129**	**248**	**675**																					
10	F																											
11	S																											
12	S																											
13	M																											
14	T																											
15	W																											
16	T																											
17	F																											
18	S																											
19	S																											
20	M																											
21	T																											
22	W																											
23	T																											
24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											
31	F																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
166	**93**	**85**	**114**	**232**	**630**	**1581**	**2446**	**2619**	**1802**	**1415**	**1531**	**1683**	**1663**	**1528**	**1615**	**1515**	**1510**	**1281**	**1016**	**718**	**636**	**478**	**338**	**26695**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	72	4	72	2619	10%	0.968	0.999

ESTIMATED (one way)

AADT
26722

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME: **RT 110**
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 10
DATE OF COUNT: 03/06/2006
NOTES LANE 0: 070201500000

COUNT TAKEN BY: ORG CODE: TTG INITIALS: DM

FROM: **ACC SOUTHERN STATE PKY** TO: **ACC RT 109**
REC. SERIAL #: 1629 FUNC. CLASS: 14
PLACEMENT: JUST N OF RAMP FOR RT 27 NHS: yes
@ REF MARKER: 110 07011027 JURIS: State
ADDL DATA: CC Stn:
COUNT TYPE: AXLE PAIRS BATCH ID: DOT-DOTr10cw10
PROCESSED BY: ORG CODE: R10 INITIALS: afa

COUNTY: **Suffolk**
TOWN: **BABYLON**
BIN: 1036949
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M							**334**	**674**	**1075**	**1183**	**1222**	**1263**	**1381**	**1669**	**1667**	**1885**	**2060**	**2399**	**2716**	**2024**	**1394**	**1152**	**923**	**617**			
7	T	**422**	**290**	**149**	**110**	**106**	**145**	**315**	**728**	**1097**	**1131**	**1229**	**1368**	**1461**	**1721**	**1793**	**1865**	**2067**	**2506**	**2720**	**2130**	**1474**	**1217**	**985**	**696**	27725	2720	18
8	W	**477**	**331**	**169**	**128**	**107**	**126**	**329**	**759**	**1051**	**1155**	**1246**	**1338**	**1520**	**1660**	**1765**	**1877**	**2010**	**2495**	**2718**	**2148**	**1480**	**1206**	**1029**	**684**	27808	2718	18
9	T	**455**	**331**	**169**	**106**	**116**	**124**																					
10	F																											
11	S																											
12	S																											
13	M																											
14	T																											
15	W																											
16	T																											
17	F																											
18	S																											
19	S																											
20	M																											
21	T																											
22	W																											
23	T																											
24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											
31	F																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																								ADT
437	**307**	**157**	**111**	**106**	**128**	**316**	**697**	**1040**	**1119**	**1193**	**1281**	**1407**	**1629**	**1686**	**1816**	**1981**	**2388**	**2631**	**2034**	**1403**	**1154**	**948**	**645**	**26614**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	72	4	72	2631	10%	0.968	0.999

ESTIMATED (one way)

AADT
26641

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME:
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 32
DATE OF COUNT: 08/07/2004
NOTES LANE 0: NB 3 LANES

FROM: **ACC RT 109**
REC. SERIAL #: 4050
PLACEMENT:
@ REF MARKER:
ADDL DATA:
COUNT TYPE: AXLE PAIRS
PROCESSED BY: ORG CODE: DOT INITIALS:

TO: **RT 24**
FUNC. CLASS: 14
NHS: yes
JURIS: State
CC Stn:
BATCH ID: DOT-DOTr10cw33

COUNTY: **Suffolk**
TOWN: **BABYLON**
BIN: 1036959
RR CROSSING:
HPMS SAMPLE:

COUNT TAKEN BY: ORG CODE: R10 INITIALS: EEM

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	S																											
2	M																											
3	T																											
4	W																											
5	T																											
6	F																											
7	S											**1321**	**1543**	**1725**	**1743**	**1704**	**1678**	**1585**	**1341**	**1255**	**1064**	**945**	**991**	**727**	**666**			
8	S	**445**	**320**	**254**	**162**	**131**	**105**	**228**	**303**	**455**	**647**	**1001**	**1414**	**1508**	**1606**	**1593**	**1514**	**1315**	**1084**	**937**	**778**	**743**	**746**	**474**	**441**	18204	1606	13
9	M	**217**	**107**	**71**	**111**	**191**	**381**	**1057**	**1863**	**2451**	**1816**	**1486**	**1603**	**1912**	**1824**	**1768**	**1674**	**1565**	**1579**	**1309**	**1177**	**974**	**765**	**576**	**502**	26979	2451	8
10	T	**249**	**160**	**109**	**118**	**189**	**457**	**1061**	**1985**	**2561**	**1934**	**1561**	**1629**	**1941**	**1898**	**1843**	**1644**	**1637**	**1684**	**1390**	**1174**	**944**	**784**	**616**	**499**	28067	2561	8
11	W	**307**	**121**	**84**	**132**	**185**	**397**	**1095**	**1705**	**2534**	**1929**	**1590**	**1675**	**1934**	**1912**	**1841**	**1672**	**1537**	**1558**	**1356**	**1113**	**844**	**721**	**468**	**461**	27171	2534	8
12	T	**266**	**130**	**113**	**132**	**171**	**403**	**1093**	**1909**	**2395**	**1910**	**1482**	**1690**	**2003**	**1894**	**1922**	**1702**	**1723**	**1704**	**1489**	**1258**	**927**	**851**	**651**	**548**	28366	2395	8
13	F	**293**	**152**	**131**	**164**	**153**	**408**	**1045**	**1879**	**2316**	**1714**	**1696**	**1745**	**2090**	**2062**	**1956**	**1862**	**1626**	**1553**	**1415**	**1360**	**1067**	**1047**	**760**	**715**	29209	2316	8
14	S	**592**	**312**	**294**	**208**	**194**	**239**	**488**	**676**	**755**	**1037**	**1215**	**1586**	**1776**	**1658**	**1765**	**1651**	**1546**	**1319**	**1282**	**1039**	**950**	**954**	**728**	**629**	22893	1776	12
15	S	**445**	**248**	**188**	**152**	**105**	**96**	**209**	**253**	**366**	**560**	**929**	**1271**	**1620**	**1787**	**1745**	**1720**	**1410**	**1017**	**929**	**759**	**595**	**656**	**456**	**352**	17868	1787	13
16	M	**248**																										
17	T																											
18	W																											
19	T																											
20	F																											
21	S																											
22	S																											
23	M																											
24	T																											
25	W																											
26	T																											
27	F																											
28	S																											
29	S																											
30	M																											
31	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																								ADT
269	**136**	**105**	**131**	**168**	**401**	**1033**	**1803**	**2365**	**1796**	**1508**	**1610**	**1880**	**1816**	**1779**	**1614**	**1559**	**1574**	**1337**	**1139**	**890**	**753**	**558**	**484**	**26708**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
10	207	4	102	2451	9%	0.965	1.064

ESTIMATED (one way)

AADT

25102

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME:
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 32
DATE OF COUNT: 08/07/2004
NOTES LANE 0: SB 3 LANES

FROM: **ACC RT 109**
REC. SERIAL #: 4050
PLACEMENT:
@ REF MARKER:
ADDL DATA:
COUNT TYPE: AXLE PAIRS

TO: **RT 24**
FUNC. CLASS: 14
NHS: yes
JURIS: State
CC Stn:
BATCH ID: DOT-DOTr10cw33

COUNTY: **Suffolk**
TOWN: **BABYLON**
BIN: 1036959
RR CROSSING:
HPMS SAMPLE:

COUNT TAKEN BY: ORG CODE: R10 INITIALS: EEM
PROCESSED BY: ORG CODE: DOT INITIALS:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	S																											
2	M																											
3	T																											
4	W																											
5	T																											
6	F																											
7	S											**1049**	**1373**	**1619**	**1650**	**1706**	**1844**	**1781**	**1584**	**1566**	**1276**	**1176**	**1172**	**921**	**978**			
8	S	**713**	**392**	**256**	**173**	**116**	**115**	**124**	**272**	**290**	**448**	**731**	**1086**	**1285**	**1528**	**1609**	**1593**	**1471**	**1334**	**1180**	**973**	**857**	**818**	**541**	**521**	18426	1609	14
9	M	**317**	**167**	**104**	**95**	**145**	**239**	**400**	**971**	**1071**	**1268**	**1272**	**1474**	**1868**	**1941**	**1887**	**2052**	**2427**	**2450**	**1943**	**1417**	**1254**	**1212**	**727**	**643**	27344	2450	17
10	T	**398**	**176**	**177**	**109**	**151**	**264**	**439**	**958**	**1187**	**1264**	**1364**	**1531**	**1868**	**1962**	**1918**	**2021**	**2370**	**2524**	**2031**	**1503**	**1336**	**1183**	**809**	**673**	28216	2524	17
11	W	**455**	**207**	**167**	**128**	**138**	**235**	**427**	**1005**	**1154**	**1259**	**1272**	**1466**	**1847**	**1970**	**2003**	**2146**	**2383**	**2455**	**2098**	**1391**	**1180**	**1125**	**738**	**546**	27795	2455	17
12	T	**392**	**165**	**181**	**142**	**110**	**245**	**424**	**950**	**1051**	**1243**	**1239**	**1496**	**1833**	**2009**	**1986**	**2184**	**2500**	**2564**	**2107**	**1545**	**1342**	**1178**	**835**	**626**	28347	2564	17
13	F	**435**	**191**	**204**	**188**	**176**	**230**	**411**	**896**	**1085**	**1203**	**1357**	**1622**	**2008**	**2056**	**2033**	**2294**	**2326**	**2446**	**2058**	**1649**	**1269**	**1272**	**1007**	**928**	29344	2446	17
14	S	**720**	**385**	**401**	**169**	**166**	**158**	**226**	**473**	**600**	**722**	**1052**	**1279**	**1579**	**1596**	**1743**	**1836**	**1780**	**1492**	**1503**	**1317**	**1005**	**1047**	**800**	**829**	22878	1836	15
15	S	**632**	**214**	**131**	**77**	**80**	**52**	**84**	**140**	**137**	**233**	**421**	**641**	**826**	**1021**	**1243**	**1405**	**1311**	**1055**	**955**	**712**	**587**	**579**	**379**	**375**	13290	1405	15
16	M	**269**																										
17	T																											
18	W																											
19	T																											
20	F																											
21	S																											
22	S																											
23	M																											
24	T																											
25	W																											
26	T																											
27	F																											
28	S																											
29	S																											
30	M																											
31	T																											
		405	**179**	**176**	**137**	**139**	**235**	**405**	**923**	**1071**	**1203**	**1255**	**1465**	**1789**	**1901**	**1880**	**2027**	**2335**	**2411**	**1973**	**1413**	**1233**	**1133**	**750**	**600**	**ADT 27038**		

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
10	207	4	102	2498	9%	0.965	1.064

ESTIMATED (one way)

AADT

25412

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME: **RT 110**
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 10
DATE OF COUNT: 03/06/2006
NOTES LANE 0: NORTH

COUNT TAKEN BY: ORG CODE: TTG INITIALS: DM

FROM: **RT 24**
REC. SERIAL #: 1516
PLACEMENT: BET RT 24 & ROLAND RD
@ REF MARKER: 110 07011058
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: R10 INITIALS: afa

TO: **RULAND RD**
FUNC. CLASS: 14
NHS: yes
JURIS: State
CC Stn:
BATCH ID: DOT-DOTr10cw10

COUNTY: **Suffolk**
TOWN: **BABYLON**
BIN: 1036939
RR CROSSING:
HPMS SAMPLE:

		AM												PM														
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
DATE	DAY																											
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M							**1321**	**2487**	**3049**	**1839**	**1634**	**1812**	**2104**	**2200**	**2010**	**1827**	**1846**	**1834**	**1452**	**1145**	**800**	**687**	**443**	**313**			
7	T	**191**	**106**	**111**	**147**	**215**	**582**	**1371**	**2669**	**3126**	**2026**	**1653**	**1880**	**2140**	**2411**	**1966**	**1889**	**1861**	**1864**	**1570**	**1236**	**855**	**694**	**540**	**369**	31472	3126	8
8	W	**226**	**128**	**120**	**137**	**227**	**546**	**1502**	**2500**	**3263**	**1948**	**1691**	**1883**	**2248**	**2410**	**2142**	**1901**	**1868**	**1928**	**1572**	**1243**	**930**	**695**	**538**	**390**	32036	3263	8
9	T	**211**	**126**	**124**	**155**	**231**	**547**																					
10	F																											
11	S																											
12	S																											
13	M																											
14	T																											
15	W																											
16	T																											
17	F																											
18	S																											
19	S																											
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21	T																											
22	W																											
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24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											
31	F																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																							ADT
202	**116**	**114**	**141**	**217**	**540**	**1353**	**2470**	**3045**	**1876**	**1606**	**1799**	**2095**	**2265**	**1974**	**1812**	**1799**	**1815**	**1482**	**1169**	**834**	**670**	**491**	**346**	**30231**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	72	4	72	3045	10%	0.968	0.999

ESTIMATED (one way)

AADT
30261

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME: **RT 110**
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 10
DATE OF COUNT: 03/06/2006
NOTES LANE 0:

COUNT TAKEN BY: ORG CODE: TTG INITIALS: DM

FROM: **RT 24**
REC. SERIAL #: 1516
PLACEMENT: BET RT 24 & ROLAND RD
@ REF MARKER: 110 07011058
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: R10 INITIALS: afa

TO: **RULAND RD**
FUNC. CLASS: 14
NHS: yes
JURIS: State
CC Stn:
BATCH ID: DOT-DOTr10cw10

COUNTY: **Suffolk**
TOWN: **BABYLON**
BIN: 1036939
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M							**1099**	**1621**	**1785**	**1814**	**2072**	**2547**	**3042**	**2931**	**2772**	**2761**	**3643**	**4254**	**2301**	**1579**	**1267**	**873**	**612**	**425**			
7	T	**273**	**193**	**129**	**194**	**261**	**450**	**1044**	**1636**	**1662**	**2086**	**2177**	**2427**	**3157**	**2832**	**2759**	**3047**	**3610**	**4139**	**2788**	**1705**	**1318**	**891**	**752**	**506**	40036	4139	17
8	W	**303**	**183**	**177**	**165**	**283**	**466**	**1037**	**1700**	**1796**	**2134**	**2204**	**2571**	**3462**	**2960**	**2798**	**3063**	**3456**	**4191**	**2481**	**1568**	**1306**	**987**	**711**	**525**	40527	4191	17
9	T	**293**	**193**	**131**	**173**	**253**	**472**																					
10	F																											
11	S																											
12	S																											
13	M																											
14	T																											
15	W																											
16	T																											
17	F																											
18	S																											
19	S																											
20	M																											
21	T																											
22	W																											
23	T																											
24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											
31	F																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
281	**184**	**141**	**171**	**257**	**448**	**1026**	**1599**	**1692**	**1947**	**2082**	**2435**	**3117**	**2815**	**2687**	**2862**	**3456**	**4061**	**2442**	**1565**	**1255**	**888**	**670**	**469**	**38550**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	72	4	72	4061	11%	0.968	0.999

ESTIMATED (one way)

AADT
38589

New York State Department of Transportation

PGM. VERSION 3.5 / 4.0

RC/STATION **070203**

COVERAGE AND SPECIAL COUNT HOURLY REPORT

ST. TOURING RTE : **110** ROAD NAME : **BROAD HOLLOW R** MILEPOINT **0110780** NHS **5** COUNTY : **SUFFOLK**

SECTION FROM : **RULAND RD** TO : **ACC RT 495 L.I.E.** TOWN : **HUNTINGTON**

FEDERAL DIR. **1** FACTOR GRP **30** FUNCTIONAL CLASS **14** HPMS NUMBER: BIN NUMBER:

COUNT DATE : **11/04/02** WEEK OF YR **45** RECORDER PLACEMENT: **1000ft.N.of Baylis Road** REFERENCE MKR: **110 07011070**

RECORDER SERIAL #: **9509**

NOTES: **Northbound** **TUBE COUNT** ADDITIONAL DATA:

DY MO	D W	D R	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAY TOTAL	HI COUNT	HI HOUR
4	1	1		271	192	293	290	575	1027	1872	2277	1708	1614	1714	1876	2254	2039	2073	1972	1862	1542	1133	1149	842	567	429			
5	2	1	343	247	192	228	324	562	1002	1693	2239	1653	1727	1725	1906	2101	1991	1916	1964	1970	1508	1239	1131	925	649	522	29757	2239	9
6	3	1	362	278	176	277	346	559	1012	1872	2412	1941	1741	1902	1974	2247	2043	1982	1434	558	1195	1415	1064	986	716	620	29112	2412	9
7	4	1	424	354	232	301	340	588	985	1920	2502	1701	1632	1869	2081	2204	2081	1948	1950	2012	1668	1322	1178	1001	928	842	32063	2502	9
8	5	1	644	490	383	399	264	309	482	750	791	944	1124	1340	1611	1685	1656	1699	1607	1415	1303	938	840	800	675	735	22884	1699	16
9	6	1	597	438	344	222	161	152	230	313	372	554	839	1165	1466	1601	1662	1706	1424	1085	812	605	568	473	409	391	17589	1706	16
10	7	1	272	174	145	151	232	452	865	1570	1979	1509	1486	1539	1883	2038	1989	2037	2035	1972	1448	1189	984	684	560	406	27599	2038	14
11	1	1	324	246	154	248	300	526	1090	1797	2302	1772	1522	1682	1811	1914	1965	1832	1876	1893	1405	1161	1053	887	635	418	28813	2302	9
12	2	1	365	237	180	260	360	542	988	1731	2213	1744	1679	1956	1991	2151	2064	2013	1970	1892	1568	1225	1078	892	721	546	30366	2213	9
13	3	1	410	282	161	247	314	567	1073	1836	2289	1732	1671	1845	2133														
14	4	1																											
15	5	1																											
16	6	1																											
17	7	1																											
18	1	1																											
19	2	1																											

AVERAGE WEEKDAY HOUR (MON 6AM THRU FRI 12 NOON)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAY TOTAL
425	315	221	285	325	521	957	1684	2128	1649	1589	1754	1967	2145	2031	1961	1861	1698	1481	1249	1109	922	703	563	29543

AXLE - FACTORED (VEHICLES) AVG WEEKDAY HOUR (FACTOR USED = **0.993**)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
422	313	219	283	323	517	950	1672	2113	1637	1578	1742	1953	2130	2017	1947	1848	1686	1471	1240	1101	916	698	559	29335

HRS COUNTED	DAYS COUNTED	AVG HI HR	% AVG DAY	FACTORED HI HOUR	% FACTORED DAY	SEASONAL FACTOR
228	16	2145	7.3%	2130	7.3%	**1.051**

SEASONALLY FACTORED

ESTIMATED AADT 1-WAY COUNT

27912

ST. TOURING RTE **110** ON **BROAD HOLLOW RD** FROM **RULAND RD** TO **ACC RT 495 L.I.E.**

STATION: **070203** COUNT DATE: **11/04/02** ST. DIR: **1** RECORDER PLACEMENT: **1000ft.N.of Baylis Road**

New York State Department of Transportation

PGM. VERSION 3.5 / 4.0

RC/STATION **070203**

COVERAGE AND SPECIAL COUNT HOURLY REPORT

ST. TOURING RTE : **110** ROAD NAME : **BROAD HOLLOW R** MILEPOINT **0110780** NHS **5** COUNTY : **SUFFOLK**

SECTION FROM : **RULAND RD** TO : **ACC RT 495 L.I.E.** TOWN : **HUNTINGTON**

FEDERAL DIR. **5** FACTOR GRP **30** FUNCTIONAL CLASS **14** HPMS NUMBER: BIN NUMBER:

COUNT DATE : **11/04/02** WEEK OF YR **45** RECORDER PLACEMENT: **1000ft.N.of Duryea Road** REFERENCE MKR: **110 07011070**

RECORDER SERIAL #: **9908**

NOTES: **Southbound** **TUBE COUNT** ADDITIONAL DATA:

DY MO	D W	D R	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAY TOTAL	HI COUNT	HI HOUR
4	1	2		**194**	**169**	**190**	**259**	**440**	**876**	**1445**	**1724**	**1765**	**1559**	**1565**	**1992**	**1911**	**1803**	**1892**	**1877**	**2314**	**1488**	**1123**	**723**	**615**	**514**	**379**			
5	2	2	**301**	**183**	**200**	**196**	**243**	**505**	**855**	**1469**	**1702**	**1771**	**1537**	**1550**	**1990**	**1780**	**1728**	**1752**	**1935**	**2340**	**1551**	**1168**	**741**	**684**	**514**	**368**	27063	2340	18
6	3	2	**305**	**183**	**188**	**204**	**266**	**505**	**953**	**1555**	**1770**	**1654**	**1468**	**1560**	**2097**	**1916**	**1728**	**1786**	**2052**	**2328**	**1582**	**1154**	**869**	**791**	**607**	**441**	27962	2328	18
7	4	2	**338**	**230**	**214**	**229**	**290**	**495**	**897**	**1444**	**1731**	**1686**	**1494**	**1584**	**2068**	**1873**	**1861**	**1915**	**2148**	**2368**	**1603**	**1300**	**1028**	**927**	**862**	**722**	29307	2368	18
8	5	2	**552**	**307**	**263**	**185**	**163**	**231**	**384**	**527**	**674**	**889**	**1048**	**1253**	**1483**	**1523**	**1547**	**1571**	**1530**	**1358**	**1160**	**1005**	**861**	**841**	**782**	**669**	20806	1571	16
9	6	2	**448**	**300**	**217**	**114**	**109**	**100**	**194**	**260**	**349**	**601**	**953**	**1181**	**1531**	**1555**	**1476**	**1358**	**1149**	**904**	**816**	**643**	**539**	**449**	**395**	**319**	15960	1555	14
10	7	2	**251**	**145**	**125**	**152**	**194**	**443**	**768**	**1460**	**1608**	**1377**	**1367**	**1456**	**1928**	**1902**	**1791**	**1883**	**2016**	**2364**	**1305**	**955**	**709**	**589**	**454**	**332**	25574	2364	18
11	1	2	**277**	**165**	**199**	**166**	**244**	**524**	**907**	**1478**	**1625**	**1603**	**1445**	**1579**	**2007**	**1782**	**1605**	**1747**	**1895**	**2284**	**1504**	**1072**	**752**	**617**	**499**	**356**	26332	2284	18
12	2	2	**326**	**181**	**201**	**193**	**247**	**485**	**905**	**1491**	**1750**	**1793**	**1572**	**1720**	**1964**	**1911**	**1695**	**1857**	**1991**	**2412**	**1629**	**1116**	**795**	**668**	**552**	**409**	27863	2412	18
13	3	2	**293**	**196**	**216**	**183**	**264**	**464**	**959**	**1570**	**1811**	**1775**	**1532**	**1665**	**2013**														
14	4	2																											
15	5	2																											
16	6	2																											
17	7	2																											
18	1	2																											
19	2	2																											

AVERAGE WEEKDAY HOUR (MON 6AM THRU FRI 12 NOON)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAY TOTAL
353	**213**	**214**	**198**	**246**	**448**	**842**	**1372**	**1598**	**1617**	**1457**	**1560**	**2019**	**1862**	**1737**	**1825**	**1983**	**2341**	**1560**	**1156**	**818**	**717**	**591**	**446**	**27173**

AXLE - FACTORED (VEHICLES) AVG WEEKDAY HOUR (FACTOR USED = **0.993**)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
351	**212**	**213**	**197**	**244**	**445**	**836**	**1362**	**1587**	**1606**	**1447**	**1549**	**2005**	**1849**	**1725**	**1812**	**1969**	**2325**	**1549**	**1148**	**812**	**712**	**587**	**443**	**26985**

HRS COUNTED	DAYS COUNTED	AVG HI HR	% AVG DAY	FACTORED HI HOUR	% FACTORED DAY	SEASONAL FACTOR
228	16	2341	8.6%	2325	8.6%	**1.051**

SEASONALLY FACTORED

ESTIMATED AADT 1-WAY COUNT

25676

ST. TOURING RTE **110** ON **BROAD HOLLOW RD** FROM **RULAND RD** TO **ACC RT 495 L.I.E.**

STATION: **070203** COUNT DATE: **11/04/02** ST. DIR: **2** RECORDER PLACEMENT: **1000ft.N.of Duryea Road**

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME:
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 20
DATE OF COUNT: 05/15/2007
NOTES LANE 0: NORTH

COUNT TAKEN BY: ORG CODE: DOT INITIALS: TS

FROM: **ACC RT 495 L.I.E.**
REC. SERIAL #: 0897
PLACEMENT: BET RT 495 & PINELAWN
@ REF MARKER: 110 07011080
ADDL DATA:
COUNT TYPE: AXLE PAIRS
PROCESSED BY: ORG CODE: DOT INITIALS:

TO: **PINELAWN RD**
FUNC. CLASS: 14
NHS: yes
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-DOTr10cw20

COUNTY: **Suffolk**
TOWN: **HUNTINGTON**
BIN: 1036981
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	W																											
3	T																											
4	F																											
5	S																											
6	S																											
7	M																											
8	T																											
9	W																											
10	T																											
11	F																											
12	S																											
13	S																											
14	M																											
15	T	**186**	**117**	**69**	**73**	**81**	**185**	**435**	**889**	**1110**	**1034**	**914**	**1064**	**1222**	**1135**	**1089**	**1092**	**1219**	**1249**	**1083**	**789**	**783**	**1076**	**992**	**1126**	19012	1249	17
16	W	**218**	**108**	**72**	**112**	**104**	**162**	**388**	**703**	**1123**	**1052**	**952**	**1085**	**1327**	**1181**	**1186**	**1104**	**1210**	**1327**	**1221**	**869**	**763**	**587**	**352**	**351**	17557	1327	12
17	T											**785**	**1118**	**1309**	**1171**	**1151**	**1075**	**1226**	**1333**	**1159**	**835**	**780**	**569**	**369**	**336**			
18	F	**226**	**115**	**83**	**104**	**99**	**170**	**407**	**718**	**1121**	**1063**	**913**	**1119**	**1251**	**1144**	**1123**	**1184**	**1287**	**1234**	**1128**	**831**	**729**	**594**	**490**	**493**	17626	1287	16
19	S	**314**	**188**	**145**	**130**	**102**	**111**	**228**	**403**	**512**	**657**	**838**	**991**	**1129**	**1205**	**1163**	**1124**	**1024**	**915**	**948**	**739**	**670**	**541**	**429**	**413**	14919	1205	13
20	S	**268**	**206**	**118**	**84**	**91**	**105**	**123**	**168**	**241**	**413**	**660**	**945**	**1146**	**1143**	**1124**	**1061**	**930**	**888**	**665**	**516**	**441**	**336**	**276**	**240**	12188	1146	12
21	M	**155**	**92**	**49**	**82**	**91**	**169**	**443**	**823**	**1135**																		
22	T																											
23	W																											
24	T																											
25	F																											
26	S																											
27	S																											
28	M																											
29	T																											
30	W																											
31	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
204	**110**	**73**	**93**	**92**	**167**	**407**	**762**	**1092**	**1022**	**867**	**1066**	**1251**	**1131**	**1111**	**1061**	**1185**	**1268**	**1123**	**809**	**754**	**724**	**556**	**588**	**17516**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
6	143	3	77	1268	7%	0.973	1.080

ESTIMATED (one way)

AADT
16219

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME:
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 20
DATE OF COUNT: 05/15/2007
NOTES LANE 0: SOUTH

COUNT TAKEN BY: ORG CODE: DOT INITIALS: TS

FROM: **ACC RT 495 L.I.E.**
REC. SERIAL #: 0897
PLACEMENT: BET RT 495 & PINELAWN
@ REF MARKER: 110 07011080
ADDL DATA:
COUNT TYPE: AXLE PAIRS
PROCESSED BY: ORG CODE: DOT INITIALS:

TO: **PINELAWN RD**
FUNC. CLASS: 14
NHS: yes
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-DOTr10cw20

COUNTY: **Suffolk**
TOWN: **HUNTINGTON**
BIN: 1036981
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	W																											
3	T																											
4	F																											
5	S																											
6	S																											
7	M																											
8	T																											
9	W																											
10	T																											
11	F																											
12	S																											
13	S																											
14	M																											
15	T	**111**	**69**	**66**	**53**	**110**	**291**	**622**	**1090**	**1371**	**1196**	**1031**	**1118**	**1295**	**1403**	**1209**	**1152**	**1211**	**1259**	**1023**	**812**	**647**	**610**	**375**	**212**	18336	1403	13
16	W	**145**	**69**	**69**	**58**	**108**	**286**	**681**	**1127**	**1343**	**1180**	**1010**	**1152**	**1267**	**1409**	**1272**	**1196**	**1271**	**1267**	**1069**	**933**	**595**	**513**	**309**	**221**	18550	1409	13
17	T											**993**	**1159**	**1392**	**1423**	**1263**	**1202**	**1245**	**1337**	**1036**	**877**	**765**	**638**	**457**	**277**			
18	F	**163**	**92**	**72**	**69**	**117**	**210**	**622**	**1084**	**1204**	**1157**	**1004**	**1063**	**1298**	**1386**	**1301**	**1232**	**1319**	**1295**	**1071**	**882**	**760**	**663**	**537**	**389**	18990	1386	13
19	S	**234**	**158**	**115**	**81**	**90**	**121**	**289**	**388**	**516**	**731**	**851**	**1075**	**1126**	**1218**	**1153**	**1198**	**1089**	**937**	**885**	**773**	**680**	**600**	**494**	**407**	15209	1218	13
20	S	**308**	**174**	**125**	**96**	**92**	**88**	**168**	**248**	**343**	**516**	**650**	**835**	**994**	**1034**	**1098**	**1102**	**919**	**869**	**679**	**582**	**484**	**365**	**262**	**170**	12201	1102	15
21	M	**112**	**69**	**38**	**71**	**110**	**273**	**705**	**1160**	**1358**																		
22	T																											
23	W																											
24	T																											
25	F																											
26	S																											
27	S																											
28	M																											
29	T																											
30	W																											
31	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																								ADT
136	**75**	**67**	**58**	**109**	**255**	**640**	**1085**	**1283**	**1146**	**983**	**1093**	**1282**	**1374**	**1214**	**1151**	**1208**	**1253**	**1015**	**850**	**651**	**571**	**370**	**231**	**18100**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
6	143	3	77	1374	8%	0.973	1.080

ESTIMATED (one way)

AADT
16759

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 1 North FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 1 WEEK OF YEAR: 53 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 01/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		AM												PM														
1	F	311	329	215	148	93	94	97	114	137	260	350	584	735	853	955	1065	890	758	692	517	438	384	358	317	10694	1065	15:00
2	S	148	144	117	60	80	86	184	289	477	654	909	1121	1370	1385	1453	1431	1298	1123	1050	839	630	512	481	341	16182	1453	14:00
3	S	272	196	130	85	81	57	121	159	236	366	615	938	1117	1162	1288	1249	943	723	657	477	332	251	227	156	11838	1288	14:00
4	M	125	82	56	72	83	151	465	874	884	996	978	1192	1486	1446	1354	1414	1690	2047	1468	996	703	486	363	228	19639	2047	17:00
5	T	183	109	71	69	83	170	474	916	950	980	981	1272	1517	1435	1393	1378	1711	2067	1537	953	699	556	361	224	20089	2067	17:00
6	W	183	82	48	70	89	150	473	895	973	1060	934	1220	1611	1398	1268	1380	1679	2052	1552	949	717	571	438	279	20071	2052	17:00
7	T	176	85	57	78	86	162	482	889	1052	1036	989	1298	1636	1480	1369	1443	1804	2095	1570	1078	813	568	450	287	20983	2095	17:00
8	F	193	106	72	86	93	217	492	877	961	967	958	1146	1562	1397	1282	1432	1733	2100	1494	1101	777	642	555	422	20665	2100	17:00
9	S	294	200	139	122	81	110	206	385	634	813	1072	1259	1446	1547	1622	1457	1422	1128	1078	859	723	533	544	483	18157	1622	14:00
10	S	307	206	168	99	105	92	112	195	265	500	785	1129	1321	1330	1391	1347	1186	960	769	574	395	341	252	177	14006	1391	14:00
11	M	101	81	45	56	96	183	454	865	966	977	993	1294	1534	1419	1318	1353	1674	1982	1418	930	639	525	381	230	19514	1982	17:00
12	T	170	96	66	79	91	212	464	917	981	1026	948	1167	1558	1432	1344	1367	1736	2064	1571	1038	751	557	442	270	20347	2064	17:00
13	W	178	84	53	80	85	148	467	885	988	1087	1009	1258	1574	1399	1338	1365	1689	2126	1583	1037	753	629	490	260	20565	2126	17:00
14	T	157	102	61	89	93	164	450	908	1033	1016	1044	1300	1607	1488	1346	1344	1738	2159	1440	1117	789	550	419	294	20708	2159	17:00
15	F	203	84	97	77	86	179	476	962	992	1009	1046	1291	1659	1546	1489	1493	1868	2093	1476	1083	867	670	536	470	21752	2093	17:00
16	S	324	185	146	125	61	94	222	425	613	835	1075	1274	1426	1485	1465	1479	1429	1226	1078	891	627	621	513	467	18086	1485	13:00
17	S	317	215	136	110	91	64	124	177	254	424	747	1002	1237	1276	1216	1172	995	765	681	452	495	358	304	239	12851	1276	13:00
18	M	134	102	49	82	69	134	329	701	757	810	1006	1269	1598	1550	1432	1405	1547	1729	1252	934	598	470	314	209	18480	1729	17:00
19	T	157	101	76	84	87	180	496	905	1016	1032	1032	1229	1562	1375	1343	1403	1684	2042	1467	927	663	537	356	237	19991	2042	17:00
20	W	163	87	63	81	91	171	455	928	991	1036	1020	1174	1540	1228	1224	1501	1626	2003	1466	1040	734	584	428	273	19907	2003	17:00
21	T	168	86	50	71	65	176	479	933	947	1070	1065	1335	1641	1456	1304	1427	1693	2041	1510	1053	744	610	459	288	20671	2041	17:00
22	F	198	114	62	79	91	181	489	936	982	997	1030	1234	1659	1542	1371	1479	1814	2104	1497	1025	776	658	548	492	21358	2104	17:00
23	S	314	198	127	97	89	110	226	393	1027	1403	1427	1701	1676	1754	1676	1633	1634	1685	1434	886	659	586	500	475	21710	1754	13:00
24	S	287	209	130	108	109	64	137	193	318	544	834	1022	1266	1298	1350	1115	894	645	700	501	385	284	259	182	12834	1350	14:00
25	M	107	71	48	81	100	162	433	866	907	924	820	934	1168	1073	1114	1240	1699	1834	1287	960	688	514	370	251	17651	1834	17:00
26	T	179	103	76	67	89	191	481	958	1015	1072	1000	1213	1627	1533	1408	1444	1729	2013	1566	1020	821	579	380	237	20801	2013	17:00
27	W	171	82	50	84	72	177	462	879	1020	1093	1021	1318	1619	1454	1337	1417	1830	2097	1550	1051	820	618	435	294	20951	2097	17:00
28	T	157	88	63	74	85	161	460	973	1002	1071	1032	1166	1409	1343	1340	1369	1791	2078	1420	1062	846	613	434	293	20330	2078	17:00
29	F	213	93	63	72	94	175	486	946	966	1068	1045	1281	1652	1543	1417	1461	1818	2082	1567	1028	807	631	571	402	21481	2082	17:00
30	S	285	184	131	94	88	99	214	415	604	843	985	1318	1511	1482	1464	1439	1332	1212	1067	892	687	621	483	435	17885	1511	12:00
31	S	292	183	134	99	95	69	141	198	293	440	775	1030	1296	1396	1504	1447	1240	931	792	573	435	331	245	175	14114	1504	14:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

186 108 73 82 87 171 446 863 930 980 967 1199 1543 1407 1327 1391 1708 2027 1479 1009 736 560 408 260

ADT 19947
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
31	744	21	420	2027	10	1.000

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 5 South FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 2 WEEK OF YEAR: 53 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 01/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	PM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	F	377	373	248	146	110	78	96	127	146	247	363	542	710	816	961	1021	940	801	788	630	491	487	350	281	11129	1021	15:00
2	S	176	92	79	84	73	116	191	310	418	640	815	1135	1239	1348	1374	1452	1328	1163	1077	866	705	719	550	406	16356	1452	15:00
3	S	233	180	123	88	71	77	136	197	304	398	589	773	969	1219	1203	1162	1046	806	648	415	388	336	234	180	11775	1219	13:00
4	M	105	65	65	61	109	321	688	1482	2034	1326	1035	1124	1340	1682	1487	1396	1340	1308	1029	892	677	567	370	238	20741	2034	08:00
5	T	112	77	59	62	115	315	758	1482	1994	1381	1132	1134	1441	1591	1552	1557	1341	1301	1058	848	681	604	380	236	21211	1994	08:00
6	W	125	76	70	71	107	290	738	1553	2009	1389	1123	1084	1462	1643	1552	1385	1474	1336	1138	928	726	628	411	263	21581	2009	08:00
7	T	129	97	60	72	123	302	737	1606	1997	1444	1070	1195	1598	1731	1685	1501	1401	1417	1112	965	847	690	417	278	22474	1997	08:00
8	F	125	97	76	63	137	311	723	1484	1969	1389	1069	1125	1435	1734	1479	1434	1353	1331	1155	1018	788	895	576	363	22129	1969	08:00
9	S	301	178	136	128	102	149	263	440	606	855	951	1254	1427	1498	1596	1541	1428	1152	1004	887	749	677	584	492	18398	1596	14:00
10	S	287	220	153	87	72	95	155	240	336	527	728	964	1237	1299	1489	1330	1213	1005	870	651	507	385	277	210	14337	1489	14:00
11	M	89	78	64	65	115	311	706	1453	2063	1384	1144	1139	1459	1732	1569	1406	1340	1350	1020	831	686	602	356	245	21207	2063	08:00
12	T	109	63	83	69	116	316	752	1497	2024	1382	1151	1140	1444	1704	1485	1384	1421	1384	1105	898	711	625	359	243	21465	2024	08:00
13	W	128	73	61	75	106	315	738	1552	2007	1363	1109	1180	1457	1605	1570	1435	1349	1407	1091	894	781	640	406	269	21611	2007	08:00
14	T	133	76	71	81	129	309	720	1522	2003	1458	1101	1189	1588	1708	1553	1387	1377	1373	1180	933	816	590	406	257	21960	2003	08:00
15	F	150	84	77	79	113	302	708	1544	1994	1405	1110	1199	1596	1860	1693	1437	1474	1392	1238	943	870	738	603	464	23073	1994	08:00
16	S	261	168	129	95	94	130	298	504	598	879	978	1230	1418	1512	1495	1539	1422	1288	1011	916	749	742	567	503	18526	1539	15:00
17	S	324	182	129	77	84	76	155	200	344	555	739	902	1180	1225	1195	1164	965	792	673	548	536	410	313	249	13017	1225	13:00
18	M	155	87	61	88	110	200	522	983	1363	1012	1037	1180	1492	1656	1569	1625	1376	1268	1021	859	613	564	379	224	19444	1656	13:00
19	T	131	81	66	74	123	305	779	1520	2024	1379	1134	1174	1466	1640	1439	1351	1355	1323	1105	895	691	596	343	223	21217	2024	08:00
20	W	111	81	63	82	107	294	758	1489	2036	1439	1083	1255	1558	1633	1482	1452	1355	1345	1181	925	730	629	389	213	21690	2036	08:00
21	T	120	87	59	94	117	314	778	1582	1932	1363	1144	1211	1449	1745	1555	1465	1289	1335	1240	914	743	705	433	268	21942	1932	08:00
22	F	122	83	54	80	130	308	773	1540	1961	1367	1122	1297	1593	1775	1622	1462	1361	1352	1152	1028	814	741	566	443	22746	1961	08:00
23	S	257	178	152	98	103	144	286	455	893	1578	1699	1802	1904	1957	1974	1874	1864	1874	1673	1262	1062	1043	867	788	25787	1974	14:00
24	S	501	300	208	157	113	77	166	243	390	597	772	1001	1187	1350	1308	1137	820	715	710	640	430	291	275	167	13555	1350	13:00
25	M	97	65	50	78	127	288	750	1481	1802	1396	1041	942	1160	1217	1141	1209	1159	1334	982	788	665	520	363	222	18877	1802	08:00
26	T	122	87	73	60	124	308	756	1652	2000	1364	1210	1221	1549	1743	1520	1454	1320	1402	1157	843	739	575	395	212	21886	2000	08:00
27	W	102	68	46	80	126	302	743	1612	1939	1408	1143	1197	1576	1641	1520	1368	1331	1393	1112	956	749	650	414	229	21705	1939	08:00
28	T	128	81	56	68	121	334	741	1627	1893	1428	1083	1125	1403	1512	1508	1414	1329	1383	1161	1073	858	756	458	228	21768	1893	08:00
29	F	126	79	77	68	126	311	729	1501	1949	1407	1154	1255	1569	1741	1660	1415	1439	1362	1194	1005	790	714	625	396	22692	1949	08:00
30	S	221	163	125	99	100	141	280	479	579	855	1053	1223	1433	1495	1496	1503	1350	1204	1140	920	730	681	522	488	18280	1503	15:00
31	S	264	214	146	77	90	73	160	256	366	539	722	996	1179	1348	1544	1287	1226	1013	759	711	465	346	232	198	14211	1544	14:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

138 98 76 78 119 295 700 1442 1864 1321 1074 1138 1465 1636 1512 1424 1347 1354 1106 903 732 621 392 241

ADT 21076
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
31	744	21	420	1864	9	1.000

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 1 North FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 1 WEEK OF YEAR: 05 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 02/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
1	M	96	60	48	61	82	178	481	903	974	937	981	1165	1555	1465	1288	1398	1761	1919	1403	973	771	604	359	229	19691	1919	17:00
2	T	161	96	62	69	78	181	460	960	970	1066	1039	1228	1575	1396	1353	1362	1763	2009	1420	1033	847	549	409	237	20323	2009	17:00
3	W	155	83	58	71	86	182	481	933	1018	1016	947	1196	1476	1343	1253	1387	1744	2035	1557	1047	730	613	426	220	20057	2035	17:00
4	T	161	83	62	75	78	176	476	992	934	1037	1143	1337	1593	1470	1436	1441	1795	2147	1577	1042	868	654	478	295	21350	2147	17:00
5	F	176	118	66	86	88	189	479	934	1003	1113	1105	1371	1719	1587	1449	1577	1886	2060	1474	1122	868	710	511	460	22151	2060	17:00
6	S	281	180	137	98	98	95	181	315	565	672	804	1020	1225	1262	1270	1244	1188	1050	953	773	597	512	433	398	15351	1270	14:00
7	S	293	185	134	112	91	74	104	191	271	456	883	1007	1245	1341	1366	1274	1047	980	645	332	270	268	421	193	13183	1366	14:00
8	M	110	59	48	67	84	160	454	823	957	937	1024	1197	1520	1409	1292	1326	1756	2094	1409	957	704	573	344	243	19547	2094	17:00
9	T	159	108	55	73	93	178	526	914	1009	1111	1114	1374	1666	1492	1486	1525	1923	2149	1571	1113	1067	690	428	269	22093	2149	17:00
10	W	183	90	62	91	77	148	288	383	402	391	328	453	579	535	528	460	304	221	148	158	110	85	103	62	6189	579	12:00
11	T	64	57	41	51	99	138	244	566	664	777	796	895	1218	1148	1107	1284	1560	1841	1263	950	734	506	376	276	16655	1841	17:00
12	F	166	79	58	74	115	188	520	919	978	1135	1157	1441	1717	1644	1448	1580	1885	2098	1653	1168	815	676	492	434	22440	2098	17:00
13	S	354	206	132	101	85	102	269	389	642	857	1103	1347	1542	1613	1551	1643	1484	1297	1210	971	714	578	431	418	19039	1643	15:00
14	S	287	205	157	113	100	85	132	248	280	482	826	1094	1213	1362	1453	1348	1215	1106	973	726	546	435	332	300	15018	1453	14:00
15	M	165	126	69	75	80	111	287	614	699	904	1012	1353	1607	1552	1554	1513	1583	1569	1268	879	635	551	342	222	18770	1607	12:00
16	T	153	104	77	60	104	168	443	819	915	934	882	1011	1389	1260	1138	1201	1653	1796	1329	865	629	459	357	219	17965	1796	17:00
17	W	181	82	62	84	83	158	409	845	961	999	1040	1271	1670	1548	1377	1439	1682	2089	1440	1014	779	569	452	278	20512	2089	17:00
18	T	173	91	58	75	83	153	410	848	913	1004	1078	1259	1609	1476	1417	1421	1894	2021	1597	1032	814	650	485	324	20885	2021	17:00
19	F	186	107	78	77	102	183	423	833	931	1005	1052	1316	1703	1681	1543	1558	1874	2086	1453	1072	779	625	556	448	21671	2086	17:00
20	S	333	186	125	130	100	115	214	374	570	804	1021	1190	1521	1508	1433	1415	1389	1209	1145	981	689	604	485	394	17935	1521	12:00
21	S	367	216	140	122	80	79	122	192	290	448	778	1018	1276	1396	1371	1376	1101	977	784	556	417	343	225	174	13848	1396	13:00
22	M	106	59	65	67	88	180	501	949	1021	948	1037	1237	1556	1397	1333	1381	1713	1990	1376	981	672	544	333	195	19729	1990	17:00
23	T	165	103	73	75	72	189	515	915	965	1081	1028	1164	1363	1332	1250	1330	1715	1944	1500	969	714	559	341	261	19623	1944	17:00
24	W	144	62	45	70	74	181	450	877	974	1097	1022	1233	1526	1383	1344	1377	1808	2037	1621	1062	824	610	441	245	20507	2037	17:00
25	T	153	79	58	70	95	174	489	894	984	1033	944	1102	1319	1208	1210	1298	1657	1944	1393	829	699	457	346	201	18636	1944	17:00
26	F	113	69	64	72	77	119	197	286	364	464	547	612	668	768	816	948	1017	1011	763	587	482	393	276	261	10974	1017	16:00
27	S	223	110	100	102	85	113	248	404	664	863	1106	1348	1464	1522	1544	1486	1347	1252	1137	934	658	555	496	420	18181	1544	14:00
28	S	342	200	146	114	95	62	125	228	301	523	885	1151	1322	1474	1412	1298	1268	973	825	581	472	457	258	170	14682	1474	13:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

156 88 61 73 88 169 427 810 882 949 964 1161 1451 1338 1273 1321 1644 1863 1367 932 725 542 376 236

ADT 18896
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
28	672	20	408	1863	10	1.000

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 5 South FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 2 WEEK OF YEAR: 05 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 02/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
1	M	86	60	56	64	125	295	765	1552	1932	1447	1224	1161	1427	1593	1476	1391	1313	1401	1047	846	691	574	306	233	21065	1932	08:00
2	T	105	66	63	71	124	308	751	1639	2127	1445	1145	1226	1494	1741	1440	1400	1316	1418	1134	919	685	565	325	221	21728	2127	08:00
3	W	94	80	58	100	112	315	776	1628	2011	1447	1128	1107	1440	1599	1466	1407	1381	1382	1162	892	669	607	391	232	21484	2011	08:00
4	T	99	74	69	78	130	328	785	1635	1993	1537	1132	1260	1568	1789	1548	1429	1401	1462	1186	963	725	715	412	246	22564	1993	08:00
5	F	135	70	71	74	129	313	734	1592	2034	1456	1162	1244	1571	1807	1659	1514	1404	1468	1210	996	874	776	580	372	23245	2034	08:00
6	S	238	171	129	86	125	118	236	383	541	699	828	1057	1122	1204	1274	1224	1189	1017	1002	754	634	640	448	411	15530	1274	14:00
7	S	275	178	105	99	96	74	165	241	357	576	704	995	1212	1243	1301	1259	1063	917	595	446	316	312	481	191	13201	1301	14:00
8	M	100	70	51	84	121	284	721	1536	1950	1394	1113	1202	1440	1645	1441	1432	1319	1330	1009	889	669	567	324	179	20870	1950	08:00
9	T	102	74	71	59	131	342	801	1661	1982	1556	1170	1284	1590	1798	1580	1519	1470	1517	1232	981	814	678	441	258	23111	1982	08:00
10	W	136	86	64	89	120	228	478	725	722	447	378	381	492	508	395	302	277	187	145	133	120	109	110	99	6731	725	07:00
11	T	64	61	45	72	114	238	493	941	1426	1301	1055	1061	1231	1310	1232	1230	1176	1315	1079	757	664	509	359	229	17962	1426	08:00
12	F	128	103	64	72	131	297	780	1523	1987	1458	1216	1273	1519	1744	1660	1524	1454	1415	1288	1028	901	779	512	388	23244	1987	08:00
13	S	224	191	142	92	97	163	303	458	634	859	1092	1290	1481	1476	1597	1539	1459	1358	1168	878	844	750	518	468	19081	1597	14:00
14	S	301	211	136	92	91	88	159	243	348	569	724	931	1196	1312	1316	1359	1197	1072	971	767	610	550	407	328	14978	1359	15:00
15	M	158	87	64	75	105	170	421	970	1174	1008	1062	1221	1519	1655	1528	1459	1437	1402	1070	831	631	525	369	209	19150	1655	13:00
16	T	117	75	67	105	157	314	689	1473	1889	1373	1031	1074	1257	1386	1233	1190	1197	1102	904	694	614	528	320	221	19010	1889	08:00
17	W	138	83	61	76	120	280	738	1568	2017	1318	1141	1186	1551	1794	1517	1429	1291	1438	1104	879	724	576	372	235	21636	2017	08:00
18	T	150	67	66	70	129	301	723	1490	1961	1272	1135	1218	1625	1753	1497	1564	1349	1372	1152	936	731	641	455	291	21948	1961	08:00
19	F	162	92	87	98	131	300	667	1462	1824	1234	1138	1204	1668	1802	1655	1560	1381	1421	1172	910	831	697	588	441	22525	1824	08:00
20	S	273	198	146	85	119	157	307	484	614	830	1012	1256	1406	1452	1484	1509	1378	1139	1143	883	766	698	591	510	18440	1509	15:00
21	S	290	210	126	101	80	88	176	224	344	548	695	1043	1136	1265	1346	1345	1195	949	826	687	453	342	277	223	13969	1346	14:00
22	M	98	68	63	84	138	326	775	1645	2059	1373	1141	1246	1448	1622	1519	1403	1330	1345	1025	849	667	497	314	223	21258	2059	08:00
23	T	100	73	62	66	125	331	791	1597	1956	1436	1094	1184	1460	1490	1399	1291	1286	1403	1010	817	661	539	345	210	20726	1956	08:00
24	W	82	68	47	85	132	344	785	1521	1961	1475	1201	1157	1462	1605	1518	1415	1369	1424	1160	960	786	617	443	230	21847	1961	08:00
25	T	136	84	63	64	145	319	777	1538	1877	1421	1088	1082	1349	1430	1248	1218	1228	1269	1073	780	575	561	289	190	19804	1877	08:00
26	F	116	86	69	83	136	229	413	621	891	766	638	642	692	726	835	817	848	721	704	577	473	459	372	266	12180	891	08:00
27	S	212	123	84	90	107	140	296	430	658	812	1102	1252	1413	1481	1495	1505	1344	1236	1221	962	758	717	539	487	18464	1505	15:00
28	S	325	207	152	112	98	73	156	282	417	551	783	1071	1253	1381	1584	1307	1136	920	857	758	466	391	268	200	14748	1584	14:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

117 78 64 79 129 299 693 1416 1789 1308 1070 1121 1397 1545 1377 1317 1259 1298 1031 820 652 551 348 219

ADT 19977
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
28	672	20	408	1789	9	1.000

ROUTE/RD #: NY110 ROAD NAME: FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
STATION: 070165 STATE DIR CODE: 2 PLACEMENT: DATE OF COUNT: 02/01/2010

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 1 North FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 1 WEEK OF YEAR: 09 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 03/02/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
2	T	174	84	67	66	93	182	514	983	989	1136	1107	1341	1642	1463	1376	1398	1862	2013	1576	1032	740	590	404	249	21081	2013	17:00
3	W	168	69	56	87	77	168	479	913	990	1129	1002	1171	1543	1402	1313	1359	1830	2058	1515	1106	816	689	529	289	20758	2058	17:00
4	T	184	67	58	74	95	190	514	997	1052	1088	1064	1388	1639	1531	1289	1543	1868	2117	1552	1097	881	650	420	309	21667	2117	17:00
5	F	172	95	91	97	102	185	475	962	1000	1089	1112	1376	1689	1553	1435	1527	1903	2139	1534	1186	820	699	596	429	22266	2139	17:00
6	S	327	197	131	120	103	111	246	448	609	924	1117	1382	1587	1678	1601	1531	1460	1542	1276	1086	722	694	566	485	19943	1678	13:00
7	S	363	216	146	143	105	69	165	246	342	609	937	1170	1321	1407	1440	1422	1209	993	890	605	444	374	262	165	15043	1440	14:00
8	M	139	68	40	81	89	205	492	951	993	960	1044	1251	1673	1531	1317	1480	1740	2100	1411	972	728	551	406	244	20466	2100	17:00
9	T	175	106	72	73	78	208	531	953	1001	1114	1135	1345	1627	1530	1452	1466	1844	2096	1479	1119	853	593	385	251	21486	2096	17:00
10	W	182	87	52	81	84	194	529	964	1043	1114	1100	1489	1699	1471	1420	1426	1880	2083	1512	1156	779	582	474	253	21654	2083	17:00
11	T	151	105	70	81	85	183	518	969	1046	1092	1134	1027	1512	1479	1457	1506	1885	2126	1504	1046	876	764	559	407	21582	2126	17:00
12	F	233	118	92	90	103	198	540	928	1020	1091	1155	1387	1629	1527	1402	1486	1827	2087	1521	1089	803	691	527	430	21974	2087	17:00
13	S	322	188	128	93	84	114	250	367	554	852	1023	1125	1357	1387	1299	1232	1161	1055	976	759	527	553	434	340	16180	1387	13:00
14	S	251	164	123	86	97	147	202	297	444	670	1058	1274	1250	1360	1440	1280	1006	840	642	455	361	268	209	132	14056	1440	14:00
15	M	67	49	68	103	169	472	892	1028	959	967	1174	1613	1450	1444	1494	1772	2211	1586	1067	834	785	621	368	182	21375	2211	16:00
16	T	115	79	91	105	183	498	956	1056	1017	1118	1286	1637	1503	1434	1449	1782	1979	1731	1217	960	930	564	345	193	22228	1979	16:00
17	W	108	65	90	112	228	526	958	1038	1105	1030	1239	1623	1472	1439	1410	1707	2050	1496	1079	882	830	549	307	232	21575	2050	16:00
18	T	95	89	75	112	199	457	956	1033	974	1125	1311	1632	1540	1463	1413	1780	2095	1551	1120	1032	898	616	389				
19	F	247	126	95	79	115	185	492	933	1007	1114	1157	1379	1679	1609	1503	1579	1720	2066	1552	1220	910	887	693	421	22768	2066	17:00
20	S	300	189	111	114	91	97	250	451	724	986	1196	1422	1448	1491	1442	1454	1409	1288	1247	1057	844	630	579	477	19297	1491	13:00
21	S	340	207	152	119	94	72	137	243	338	540	977	1274	1396	1517	1524	1366	1222	1030	881	662	495	348	240	209	15383	1524	14:00
22	M	101	49	41	61	95	185	453	946	1040	1019	963	1219	1571	1396	1175	1427	1687	2090	1492	957	691	492	374	224	19748	2090	17:00
23	T	151	89	51	78	79	186	521	955	1076	1117	1065	1352	1655	1467	1334	1433	1701	2089	1484	1084	821	727	403	215	21133	2089	17:00
24	W	152	76	38	73	95	192	501	1004	1024	1125	1167	1351	1729	1537	1446	1491	1782	2202	1662	1213	976	819	561	300	22516	2202	17:00
25	T	141	99	57	83	110	192	510	988	1024	1110	1135	1421	1687	1555	1361	1445	1803	2115	1516	1074	812	678	524	323	21763	2115	17:00
26	F	203	94	75	85	93	188	494	932	1002	1106	1148	1455	1689	1633	1394	1571	1822	2065	1537	1172	956	823	615	391	22543	2065	17:00
27	S	271	168	103	103	106	114	273	438	711	965	1152	1350	1573	1657	1647	1565	1379	1258	1263	1039	755	694	546	429	19559	1657	13:00
28	S	387	216	159	109	105	62	143	209	335	533	875	1206	1283	1540	1539	1369	1210	946	758	579	472	394	280	223	14932	1540	13:00
29	M	114	63	51	62	82	158	426	804	867	901	916	1173	1413	1330	1245	1310	1667	1888	1302	834	616	515	379	280	18396	1888	17:00
30	T	200	98	72	84	94	154	386	783	879	978	911	1138	1476	1306	1374	1412	1615	1999	1352	907	668	509	423	242	19060	1999	17:00
31	W	211	93	70	76	98	136	431	792	913	1057	1101	1471	1603	1573	1592	1500	1743	2159	1476	1153	887	664	521	339	21659	2159	17:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

170 91 71 85 112 235 571 951 1001 1072 1110 1375 1580 1464 1384 1513 1847 1972 1406 1025 810 621 432 267

ADT 21165
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
30	719	21	455	1972	9	1.000

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 5 South FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 2 WEEK OF YEAR: 09 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 03/02/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
2	T	127	73	69	71	142	324	829	1720	1997	1463	1104	1170	1579	1769	1570	1460	1397	1407	1137	948	692	591	388	213	22240	1997	08:00
3	W	109	78	60	83	118	293	796	1517	1926	1505	1120	1202	1462	1649	1428	1368	1403	1474	1234	938	768	595	391	234	21751	1926	08:00
4	T	106	79	64	69	123	322	839	1701	2153	1538	1136	1287	1596	1842	1569	1422	1431	1455	1262	956	776	629	434	257	23046	2153	08:00
5	F	138	104	76	88	137	315	776	1546	1972	1404	1160	1296	1546	1785	1616	1474	1433	1407	1292	1052	890	809	570	398	23284	1972	08:00
6	S	288	182	126	106	98	160	339	526	780	960	1153	1413	1555	1535	1640	1618	1541	1321	1377	1062	824	827	599	552	20582	1640	14:00
7	S	370	224	167	138	93	93	197	308	474	642	897	1154	1288	1404	1394	1296	1241	1063	893	694	492	376	250	208	15356	1404	13:00
8	M	148	46	65	69	134	325	789	1638	1921	1517	1152	1267	1590	1735	1587	1395	1338	1413	1058	863	694	532	329	228	21833	1921	08:00
9	T	103	86	68	80	125	336	789	1680	2030	1427	1174	1296	1596	1848	1584	1482	1313	1550	1199	943	710	601	373	226	22619	2030	08:00
10	W	99	68	56	83	134	333	897	1629	2067	1467	1163	1228	1639	1885	1652	1427	1371	1494	1202	945	749	597	403	205	22793	2067	08:00
11	T	105	86	71	81	142	338	859	1728	2057	1419	1276	1387	1411	1573	1619	1507	1350	1399	1205	957	738	630	519	274	22731	2057	08:00
12	F	166	103	81	103	158	331	835	1525	1939	1424	1166	1247	1555	1774	1599	1558	1449	1370	1213	912	854	738	605	445	23150	1939	08:00
13	S	286	154	124	87	90	141	308	481	619	789	1002	1193	1288	1256	1292	1305	1106	1030	888	729	613	645	544	420	16390	1305	15:00
14	S	271	189	135	82	101	168	215	334	451	677	931	1038	1166	1238	1371	1237	1041	865	854	514	402	299	216	105	13900	1371	14:00
15	M	73	59	72	124	299	768	1532	1951	1378	1175	1171	1292	1566	1475	1410	1371	1386	1078	988	766	592	370	256	122	21274	1951	07:00
16	T	104	53	73	148	365	755	1589	2059	1433	1235	1282	1680	1815	1585	1505	1392	1360	1225	1083	834	724	477	273	113	23162	2059	07:00
17	W	72	59	83	141	348	790	1599	2106	1483	1296	1294	1514	1698	1507	1440	1328	1371	1157	960	784	663	464	271	148	22576	2106	07:00
18	T	103	85	82	143	351	803	1603	1981	1480	1160	1234	1583	1882	1551	1444	1358	1408	1265	1035	844	785	507	294				
19	F	160	98	63	93	158	332	794	1515	1987	1512	1188	1288	1694	1485	1754	1541	1439	1432	1281	1108	899	819	631	486	23757	1987	08:00
20	S	324	156	138	106	125	136	332	542	742	987	1078	1248	1440	1548	1447	1405	1398	1351	1204	1053	883	777	616	570	19606	1548	13:00
21	S	337	226	138	99	95	95	172	331	469	710	879	1166	1293	1448	1377	1403	1301	1104	918	777	472	383	273	187	15653	1448	13:00
22	M	100	54	50	63	144	330	789	1541	1959	1391	1320	1196	1457	1649	1473	1458	1339	1306	1042	839	701	527	337	209	21274	1959	08:00
23	T	94	78	58	84	134	329	805	1597	2039	1488	1155	1333	1543	1445	1562	1423	1348	1438	1095	875	732	615	383	250	21903	2039	08:00
24	W	100	85	58	83	157	322	886	1668	2042	1422	1210	1210	1601	1798	1649	1514	1429	1433	1184	1104	835	726	495	283	23294	2042	08:00
25	T	141	103	65	73	163	289	830	1617	2054	1432	1182	1377	1685	1717	1557	1528	1504	1467	1238	1028	848	687	459	256	23300	2054	08:00
26	F	125	90	73	94	164	318	756	1592	1990	1348	1224	1280	1703	1791	1654	1502	1415	1476	1258	1158	888	770	623	475	23767	1990	08:00
27	S	345	225	143	114	121	154	330	569	747	982	1090	1382	1475	1545	1555	1505	1529	1343	1235	1071	879	770	633	507	20249	1555	14:00
28	S	367	243	127	99	78	78	163	278	396	611	835	1074	1299	1428	1356	1345	1139	952	780	728	522	416	320	235	14869	1428	13:00
29	M	106	70	65	64	125	275	703	1416	1788	1122	1043	1129	1378	1461	1341	1252	1277	1226	933	719	579	586	401	257	19316	1788	08:00
30	T	132	74	65	76	133	283	681	1368	1811	1236	1063	1061	1418	1606	1443	1422	1342	1241	1006	826	672	618	417	241	20235	1811	08:00
31	W	125	77	65	74	126	307	725	1434	1906	1263	1152	1314	1730	1782	1604	1489	1506	1513	1344	1060	896	674	456	299	22921	1906	08:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

117 82 68 93 177 396 941 1660 1882 1375 1180 1302 1591 1660 1524 1422 1382 1363 1123 902 731 579 382 224

ADT 22156
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
30	719	21	455	1882	8	1.000

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 1 North FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 1 WEEK OF YEAR: 13 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 04/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	PM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T	206	108	68	98	115	164	443	839	917	1094	1228	1446	1707	1680	1522	1504	1748	2113	1541	1117	821	624	484	376	21963	2113	17:00
2	F	239	127	98	77	118	133	411	707	856	1092	1412	1551	1401	1677	1650	1701	1753	1507	1234	1034	808	646	544	408	21184	1753	16:00
3	S	289	172	155	100	100	98	244	418	641	944	1172	1356	1462	1529	1424	1439	1417	1262	1169	1000	710	581	484	430	18596	1529	13:00
4	S	267	198	165	108	78	78	105	221	261	448	634	875	857	1048	1113	853	715	583	583	605	597	473	275	214	11354	1113	14:00
5	M	130	69	52	63	101	158	483	866	995	934	1038	1329	1705	1528	1444	1432	1785	2045	1448	1052	752	514	445	287	20655	2045	17:00
6	T	152	88	69	83	107	157	536	962	1073	1082	1111	1339	1616	1476	1445	1507	1857	2039	1528	1047	868	563	391	217	21313	2039	17:00
7	W	125	56	46	68	85	183	546	938	1004	1185	1111	1393	1692	1518	1404	1460	1892	2108	1497	1024	845	480	375	206	21241	2108	17:00
8	T	117	79	57	73	86	174	532	942	1050	1181	1198	1450	1643	1582	1388	1425	1908	2099	1523	1124	848	621	507	301	21908	2099	17:00
9	F	226	89	78	103	98	183	480	825	965	1116	1171	1376	1635	1568	1586	1655	1940	2146	1466	1124	858	672	544	431	22335	2146	17:00
10	S	297	200	127	92	105	126	282	507	719	979	1126	1350	1508	1548	1606	1580	1338	1379	1182	1087	857	686	484	516	19681	1606	14:00
11	S	335	221	141	104	89	88	160	263	329	624	974	1287	1425	1504	1384	1386	1195	982	881	607	512	367	261	202	15321	1504	13:00
12	M	92	54	42	71	102	178	544	935	973	1058	1104	1416	1654	1549	1355	1549	1903	2038	1425	1040	797	570	354	245	21048	2038	17:00
13	T	152	108	55	85	99	188	566	1021	1033	1048	1109	1320	1628	1421	1395	1487	1797	2103	1498	1098	946	755	485	254	21651	2103	17:00
14	W	163	77	72	75	103	181	502	1011	1027	1113	1185	1369	1644	1533	1386	1523	1847	2148	1558	1124	846	633	472	295	21887	2148	17:00
15	T	179	82	65	76	92	199	521	1018	1052	1183	1185	1408	1678	1508	1468	1543	1886	2090	1620	1166	918	761	400	266	22364	2090	17:00
16	F	148	99	57	84	104	210	525	1025	1051	1034	1174	1389	1690	1565	1494	1632	1950	2083	1509	1116	840	619	530	422	22350	2083	17:00
17	S	262	179	116	101	89	99	262	452	702	932	1228	1448	1575	1378	1472	1518	1526	1346	1244	1019	741	653	553	523	19418	1575	12:00
18	S	334	194	161	129	89	66	118	230	396	626	1047	1285	1374	1483	1501	1423	1274	1038	821	668	497	401	253	203	15611	1501	14:00
19	M	116	52	44	63	92	182	507	959	1024	1009	1170	1490	1612	1409	1407	1490	1833	2064	1454	1087	787	603	376	251	21081	2064	17:00
20	T	145	94	82	75	91	196	542	1040	1014	1231	1197	1447	1724	1603	1412	1366	2004	2158	1458	1117	948	661	387	210	22202	2158	17:00
21	W	155	56	50	72	77	203	532	1013	1057	1181	1139	1435	1734	1502	1437	1478	1847	2150	1433	1065	880	592	428	273	21789	2150	17:00
22	T	156	71	41	71	93	192	543	1033	1113	1202	1170	1442	1734	1595	1486	1627	1965	2164	1434	1030	834	595	496	313	22400	2164	17:00
23	F	200	79	55	83	107	204	537	903	1056	1147	1159	1465	1684	1555	1464	1564	1901	2053	1448	1196	881	771	578	453	22543	2053	17:00
24	S	295	190	123	81	97	121	287	476	705	984	1207	1346	1534	1565	1508	1483	1330	1329	1148	1077	747	645	546	428	19252	1565	13:00
25	S	325	203	152	112	92	66	119	216	321	496	775	1160	1340	1502	1493	1401	1272	1048	792	586	463	345	230	187	14696	1502	13:00
26	M	98	74	44	68	78	189	519	938	1012	1020	1084	1273	1610	1402	1368	1439	1807	1987	1344	979	717	477	335	245	20107	1987	17:00
27	T	163	71	67	79	97	183	515	1010	1030	1120	1120	1335	1693	1473	1401	1530	1881	2083	1506	1129	857	557	387	286	21573	2083	17:00
28	W	164	88	63	71	95	179	580	1025	1045	1156	1095	1443	1679	1477	1531	1448	1929	2185	1465	1200	890	653	416	312	22189	2185	17:00
29	T	178	72	55	75	87	217	563	1020	1063	1320	1391	1393	1698	1616	1452	1603	1943	2204	1537	1142	910	677	452	357	23025	2204	17:00
30	F	191	129	74	77	96	199	554	1034	1045	1147	1229	1443	1714	1610	1557	1587	1965	2077	1452	1178	929	771	657	438	23153	2077	17:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

170 87 64 79 97 186 522 957 1021 1121 1172 1407 1674 1522 1429 1495 1872 2105 1486 1091 851 608 423 276

ADT 21715
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
30	720	22	444	2105	10	1.000

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 5 South FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 2 WEEK OF YEAR: 13 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 04/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	PM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T	160	99	85	88	126	315	775	1529	1876	1291	1230	1297	1734	1869	1683	1579	1524	1483	1177	1064	845	772	461	311	23373	1876	08:00
2	F	156	117	87	71	122	245	621	1239	1584	1244	1172	1331	1591	1889	1646	1563	1448	1349	1145	1033	824	791	560	393	22221	1889	13:00
3	S	263	153	151	87	94	137	293	508	649	895	1051	1340	1422	1425	1443	1571	1453	1227	1138	981	825	757	556	479	18898	1571	15:00
4	S	233	167	171	78	62	77	129	244	320	466	616	831	896	987	965	828	708	609	618	722	632	481	272	181	11293	987	13:00
5	M	101	69	60	76	135	311	782	1514	1830	1222	1192	1315	1627	1851	1533	1436	1400	1315	1111	918	832	614	427	225	21896	1851	13:00
6	T	110	90	70	76	129	317	829	1676	2108	1438	1156	1294	1637	1858	1568	1540	1420	1480	1180	977	809	639	431	233	23065	2108	08:00
7	W	141	86	59	68	130	342	831	1634	2014	1488	1370	1349	1651	1774	1533	1783	1381	1340	1261	975	791	676	416	251	23344	2014	08:00
8	T	122	86	69	83	133	317	852	1666	2017	1423	1217	1243	1690	1808	1591	1465	1447	1359	1258	1059	887	720	427	303	23242	2017	08:00
9	F	142	110	68	91	139	307	784	1416	1842	1423	1213	1302	1688	1801	1620	1498	1455	1371	1179	1111	849	818	557	464	23248	1842	08:00
10	S	280	171	116	84	110	165	356	596	770	940	1162	1300	1519	1501	1571	1482	1405	1363	1213	1091	950	745	679	493	20062	1571	14:00
11	S	327	220	143	111	92	89	182	358	494	675	887	1115	1281	1409	1345	1332	1234	985	839	733	526	426	276	181	15260	1409	13:00
12	M	96	66	57	81	137	320	842	1565	1969	1467	1203	1325	1718	1746	1585	1416	1317	1367	1126	1025	806	600	368	204	22406	1969	08:00
13	T	107	78	68	73	134	327	847	1648	2119	1517	1160	1254	1645	1745	1555	1468	1326	1532	1173	982	788	652	380	213	22791	2119	08:00
14	W	120	66	61	96	137	320	814	1639	2029	1437	1268	1234	1668	1822	1619	1504	1394	1449	1191	977	826	667	442	253	23033	2029	08:00
15	T	136	78	64	81	131	349	845	1691	2059	1465	1254	1334	1660	1885	1677	1498	1417	1384	1312	999	877	759	442	310	23707	2059	08:00
16	F	142	111	69	70	153	304	844	1647	2028	1391	1274	1311	1654	1811	1618	1595	1540	1402	1233	1078	836	750	603	451	23915	2028	08:00
17	S	262	157	121	88	87	159	321	554	709	922	1153	1326	1473	1459	1556	1494	1476	1404	1257	1025	833	777	605	531	19749	1556	14:00
18	S	367	198	161	109	86	90	192	318	545	667	894	1166	1347	1445	1415	1435	1238	1019	885	763	496	389	266	173	15664	1445	13:00
19	M	72	60	57	75	150	310	861	1579	2004	1452	1188	1229	1532	1790	1485	1439	1355	1402	1139	988	765	626	373	208	22139	2004	08:00
20	T	118	76	63	66	142	325	886	1748	2285	1585	1284	1339	1759	1893	1701	1457	1413	1469	1182	1021	762	644	411	237	23866	2285	08:00
21	W	123	50	63	88	130	321	885	1789	2264	1452	1222	1326	1708	1895	1573	1493	1447	1458	1219	977	796	628	444	226	23577	2264	08:00
22	T	136	63	69	63	136	338	895	1790	2200	1573	1170	1348	1748	1920	1756	1612	1423	1461	1164	971	850	677	470	296	24129	2200	08:00
23	F	152	92	65	83	137	326	845	1612	1967	1454	1281	1339	1742	1813	1656	1494	1426	1375	1296	1176	1016	864	596	457	24264	1967	08:00
24	S	250	182	111	87	115	160	372	558	691	959	1123	1289	1376	1397	1429	1558	1448	1274	1207	1011	874	765	626	543	19405	1558	15:00
25	S	325	193	161	95	80	85	164	251	388	703	750	1039	1350	1335	1387	1362	1225	1071	831	738	554	377	243	183	14890	1387	14:00
26	M	79	65	56	68	124	303	800	1642	2120	1424	1188	1219	1608	1725	1462	1374	1322	1340	977	847	642	547	340	215	21487	2120	08:00
27	T	98	76	66	74	118	346	860	1664	2116	1509	1154	1280	1621	1800	1566	1499	1353	1479	1271	1026	795	623	395	212	23001	2116	08:00
28	W	111	71	66	70	152	351	1020	1715	2144	1485	1209	1277	1668	1778	1619	1392	1414	1532	1262	1061	907	726	389	214	23633	2144	08:00
29	T	125	67	75	67	129	355	999	1887	2137	1465	1428	1388	1793	1992	1551	1534	1466	1527	1308	1082	852	730	457	283	24697	2137	08:00
30	F	136	100	83	82	152	313	904	1655	2035	1468	1246	1350	1714	1839	1600	1542	1500	1596	1385	1212	1052	852	647	472	24935	2035	08:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

130	84	69	77	135	323	846	1634	2034	1440	1231	1304	1675	1832	1592	1499	1401	1434	1195	997	814	665	416	247

ADT 23074
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
30	720	22	444	2034	9	1.000

ROUTE/RD #: NY110 ROAD NAME: FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
STATION: 070165 STATE DIR CODE: 2 PLACEMENT: DATE OF COUNT: 04/01/2010

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 1 North FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 1 WEEK OF YEAR: 17 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 05/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		AM												PM														
1	S	309	211	148	111	90	128	283	499	783	1072	1216	1366	1452	1360	1347	1362	1272	1247	1175	1014	803	646	573	452	18919	1452	12:00
2	S	383	195	144	114	109	68	155	252	393	675	1015	1331	1499	1539	1469	1357	1222	959	851	645	496	414	293	216	15794	1539	13:00
3	M	111	55	46	79	102	183	499	917	959	1090	996	1201	1659	1428	1435	1464	1868	2067	1573	1049	856	562	349	244	20792	2067	17:00
4	T	173	97	62	89	107	212	568	959	1008	1120	1174	1372	1648	1514	1470	1504	1872	2064	1550	1075	906	564	411	256	21775	2064	17:00
5	W	129	88	63	75	90	202	542	1065	1027	1151	1201	1400	1682	1479	1466	1602	1964	2145	1560	1213	899	692	440	306	22481	2145	17:00
6	T	195	90	60	80	104	217	559	1047	1042	1128	1184	1476	1677	1571	1493	1521	1947	2155	1535	1189	897	669	420	307	22563	2155	17:00
7	F	199	116	130	81	104	235	555	1018	1020	1244	1232	1497	1641	1643	1636	1631	2056	2072	1622	1198	962	741	709	458	23800	2072	17:00
8	S	321	188	134	119	88	113	299	460	759	989	1261	1472	1595	1651	1522	1577	1529	1303	1349	1126	946	699	560	484	20544	1651	13:00
9	S	302	207	164	97	106	72	164	243	415	735	1134	1227	1328	1426	1385	1344	1113	974	787	646	550	426	259	226	15330	1426	13:00
10	M	105	50	53	73	90	198	524	954	1020	1057	1117	1498	1636	1449	1408	1525	1867	2047	1453	1017	826	549	362	249	21127	2047	17:00
11	T	194	98	85	75	98	200	554	996	1145	1142	1183	1343	1630	1504	1432	1502	1967	2049	1484	1097	760	587	382	252	21759	2049	17:00
12	W	156	81	52	85	98	181	504	945	1033	1064	1070	1289	1542	1398	1236	1429	1823	2072	1494	1055	824	624	419	282	20756	2072	17:00
13	T	173	86	56	83	102	192	573	986	1052	1134	1132	1405	1672	1521	1469	1438	1812	2091	1540	1259	866	759	452	328	22181	2091	17:00
14	F	198	124	59	85	105	212	524	939	1052	1158	1095	1455	1662	1585	1512	1700	1974	2054	1470	1177	972	750	579	467	22908	2054	17:00
15	S	362	212	149	122	98	131	308	507	721	934	1145	1332	1446	1430	1403	1384	1310	1208	1128	1005	842	684	604	440	18905	1446	12:00
16	S	324	216	162	121	86	79	156	258	433	633	1002	1131	1384	1457	1369	1354	1196	1082	859	666	534	457	281	204	15444	1457	13:00
17	M	133	87	70	76	101	197	523	935	1039	1052	1113	1294	1627	1506	1347	1483	1826	1826	1521	1000	669	567	399	279	20670	1826	16:00
18	T	195	99	82	99	80	224	522	976	1008	1117	1083	1260	1523	1376	1446	1409	1702	1752	1406	912	656	545	374	244	20090	1752	17:00
19	W	176	78	56	66	99	191	517	963	1059	1039	1174	1468	1677	1439	1491	1443	1786	1857	1593	1100	843	577	461	307	21460	1857	17:00
20	T	183	100	62	81	86	206	542	989	1068	1101	1188	1513	1665	1404	1424	1485	1830	1983	1565	1156	889	665	486	310	21981	1983	17:00
21	F	192	122	74	99	118	198	550	980	1017	1107	1174	1451	1707	1426	1486	1559	1832	1849	1474	1184	903	727	610	511	22350	1849	17:00
22	S	337	205	141	94	100	137	287	540	777	1032	1169	1409	1579	1485	1407	1573	1216	1238	1154	991	771	655	554	436	19287	1579	12:00
23	S	344	206	169	130	88	79	163	263	409	650	939	1179	1281	1426	1432	1356	1173	1103	902	621	477	357	287	237	15271	1432	14:00
24	M	135	80	48	81	106	199	499	911	965	1082	1132	1467	1639	1477	1458	1430	1829	1938	1432	1045	768	576	400	270	20967	1938	17:00
25	T	185	92	89	91	88	197	576	981	1038	1151	1159	1338	1662	1474	1372	1408	1805	1932	1470	1011	867	623	483	320	21412	1932	17:00
26	W	217	90	65	83	94	199	551	972	1072	1206	1173	1436	1714	1376	1361	1441	1793	2067	1513	1098	874	711	488	306	21900	2067	17:00
27	T	206	105	81	69	108	205	556	997	1020	1159	1172	1439	1480	1492	1575	1570	2001	2043	1545	1259	994	950	658	419	23103	2043	17:00
28	F	299	175	122	111	112	212	569	953	1034	1257	1265	1506	1695	1630	1719	1773	1834	1574	1246	1101	913	676	597	518	22891	1834	16:00
29	S	338	210	136	118	102	127	251	496	668	895	1062	1280	1321	1326	1396	1434	1245	1147	1053	947	775	639	509	416	17891	1434	15:00
30	S	291	195	141	107	99	67	143	248	354	563	947	1025	1182	1240	1309	1272	1079	957	754	673	552	545	444	362	14549	1309	14:00
31	M	211	148	105	78	86	77	173	241	420	592	876	1015	1162	1080	1144	1008	882	758	733	632	528	397	273	205	12824	1162	12:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

192 103 75 85 100 205 523 939 1005 1102 1138 1387 1606 1440 1413 1451 1798 1932 1469 1069 819 625 427 287

ADT 21190
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
31	744	21	426	1932	9	1.000

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 5 South FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 2 WEEK OF YEAR: 17 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 05/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
1	S	250	190	132	92	93	162	373	578	788	978	1138	1363	1428	1379	1390	1450	1342	1267	1257	1067	915	819	655	450	19556	1450	15:00
2	S	343	207	143	101	103	105	179	382	514	708	907	1140	1306	1366	1325	1395	1220	1016	830	774	547	428	305	190	15534	1395	15:00
3	M	103	66	59	65	133	338	830	1544	1854	1607	1189	1251	1457	1785	1554	1435	1371	1401	1148	927	817	645	414	248	22241	1854	08:00
4	T	134	76	74	78	126	360	937	1732	2145	1587	1175	1309	1708	1866	1651	1443	1456	1469	1124	1017	856	678	407	241	23649	2145	08:00
5	W	133	76	58	86	129	370	928	1669	2066	1498	1307	1328	1676	1882	1596	1399	1462	1451	1158	1057	893	774	484	291	23771	2066	08:00
6	T	174	130	84	81	124	373	923	1689	2131	1490	1254	1333	1715	1868	1689	1473	1485	1501	1279	1118	916	769	485	276	24360	2131	08:00
7	F	152	85	98	83	147	340	886	1663	2101	1478	1327	1358	1708	1928	1743	1642	1505	1403	1388	1168	1039	887	723	509	25361	2101	08:00
8	S	301	204	128	100	132	163	372	553	706	966	1156	1376	1523	1532	1553	1564	1447	1384	1341	1009	1080	902	671	586	20749	1564	15:00
9	S	305	191	148	99	88	80	193	341	512	722	944	1211	1238	1350	1378	1275	1076	909	834	840	655	455	280	184	15308	1378	14:00
10	M	98	60	57	66	143	337	840	1570	1918	1444	1230	1263	1611	1708	1627	1414	1417	1372	1104	943	815	596	371	231	22235	1918	08:00
11	T	109	75	85	71	140	349	932	1591	2027	1497	1211	1240	1648	1747	1623	1494	1441	1411	1173	946	755	595	402	252	22814	2027	08:00
12	W	101	73	58	72	150	343	892	1670	1970	1406	1188	1214	1565	1705	1411	1460	1423	1375	1126	980	838	634	438	256	22348	1970	08:00
13	T	113	95	64	71	139	352	919	1617	1992	1323	1220	1401	1687	1817	1623	1511	1425	1461	1327	1018	951	799	449	311	23685	1992	08:00
14	F	158	117	60	81	126	338	844	1643	1997	1472	1208	1261	1726	1917	1558	1609	1552	1497	1192	1098	990	901	650	465	24460	1997	08:00
15	S	301	170	137	106	124	151	383	572	710	925	1135	1317	1374	1389	1356	1445	1326	1216	1151	977	891	808	603	532	19099	1445	15:00
16	S	359	226	157	123	110	91	222	376	546	686	920	1111	1245	1325	1383	1364	1265	1047	901	771	641	507	320	240	15936	1383	14:00
17	M	106	74	59	81	145	347	861	1633	1973	1437	1156	1230	1613	1735	1630	1488	1405	1280	1155	931	840	659	389	265	22492	1973	08:00
18	T	115	83	64	79	136	305	853	1516	2017	1459	1181	1256	1563	1620	1453	1406	1296	1224	1014	859	773	583	319	240	21414	2017	08:00
19	W	111	78	54	78	135	326	905	1619	2059	1421	1150	1333	1673	1790	1681	1541	1477	1390	1186	1003	893	684	450	257	23294	2059	08:00
20	T	140	86	68	72	145	358	883	1655	2010	1404	1212	1313	1606	1843	1533	1456	1454	1317	1157	1049	909	750	512	310	23242	2010	08:00
21	F	140	114	83	77	141	328	882	1601	1980	1394	1251	1340	1659	1772	1574	1533	1481	1386	1272	1113	995	816	699	549	24180	1980	08:00
22	S	328	187	145	101	118	155	352	558	759	967	1126	1455	1386	1488	1477	1408	1360	1274	1087	995	866	773	632	502	19499	1488	13:00
23	S	351	212	141	117	112	91	188	352	494	722	905	1118	1310	1328	1358	1329	1254	1018	825	807	593	420	314	243	15602	1358	14:00
24	M	121	91	69	77	143	328	870	1534	1943	1465	1209	1216	1561	1654	1602	1446	1293	1351	1147	1015	825	675	405	264	22304	1943	08:00
25	T	130	77	74	98	151	359	927	1657	2060	1413	1232	1350	1687	1781	1558	1419	1387	1401	1249	1010	829	673	410	289	23221	2060	08:00
26	W	133	104	66	76	155	372	905	1703	2004	1615	1231	1374	1641	1772	1591	1491	1388	1425	1169	1051	867	733	441	292	23599	2004	08:00
27	T	160	104	86	86	155	347	901	1746	2124	1484	1249	1330	1618	1779	1598	1552	1543	1482	1351	1118	886	787	497	333	24316	2124	08:00
28	F	194	122	84	97	167	352	839	1702	2027	1420	1311	1469	1721	1827	1668	1634	1533	1406	1216	1144	960	828	601	433	24755	2027	08:00
29	S	317	194	138	102	116	150	443	503	625	897	1048	1247	1381	1398	1379	1360	1277	1121	1052	947	863	816	601	461	18436	1398	13:00
30	S	268	200	135	88	100	95	212	350	515	681	965	1117	1208	1318	1149	1048	1010	894	752	800	678	641	430	391	15045	1318	13:00
31	M	213	126	79	92	90	112	164	325	486	671	540	1039	1087	1153	1026	1026	869	766	686	654	580	485	299	183	12751	1153	13:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12
137	93	73	80	142	348	853	1575	1947	1428	1192	1296	1595	1736	1556	1438	1388	1357	1150	982	838	678	422	267

ADT 22571 ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
31	744	21	426	1947	9	1.000

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 1 North FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 1 WEEK OF YEAR: 22 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 06/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	PM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T	122	107	61	67	113	213	556	965	1061	1152	1083	1383	1607	1243	1258	1323	1856	2057	1496	1003	763	550	412	295	20746	2057	17:00
2	W	181	78	57	103	109	217	552	994	1080	1175	1145	1442	1638	1490	1330	1485	1796	2056	1529	1083	871	699	480	247	21837	2056	17:00
3	T	180	101	70	72	97	213	544	1047	1029	1119	1201	1459	1551	1514	1407	1477	1858	2184	1553	1158	1041	699	462	315	22351	2184	17:00
4	F	213	130	78	87	121	209	568	1001	1133	1230	1209	1463	1656	1462	1439	1509	1970	1972	1500	1105	916	734	620	501	22826	1972	17:00
5	S	357	204	151	111	83	139	340	598	845	963	1186	1358	1426	1414	1381	1322	1225	1221	1103	1009	792	745	629	499	19101	1426	12:00
6	S	363	219	152	125	101	97	162	261	442	649	1050	1185	1356	1383	1336	1387	1285	994	857	633	502	487	351	214	15591	1387	15:00
7	M	141	82	60	78	114	193	552	964	1058	1013	1096	1352	1626	1566	1324	1480	1960	2061	1680	1161	968	1044	787	402	22762	2061	17:00
8	T	233	138	79	101	109	224	599	999	1071	1193	1241	1430	1636	1497	1408	1452	1807	1945	1580	1081	967	1024	735	358	22907	1945	17:00
9	W	202	84	64	91	109	206	597	946	1047	1090	1183	1462	1635	1497	1353	1399	1893	2022	1482	1016	810	650	472	306	21616	2022	17:00
10	T	204	87	65	71	121	200	576	972	1059	1114	1204	1451	1669	1525	1467	1531	1909	2169	1500	1171	924	677	538	422	22626	2169	17:00
11	F	250	148	95	83	111	231	545	997	1013	1152	1136	1444	1638	1564	1488	1661	2013	2049	1493	1200	956	755	627	521	23170	2049	17:00
12	S	355	206	129	116	91	126	312	503	713	1034	1278	1439	1553	1429	1410	1344	1279	1272	1136	1033	826	676	605	480	19345	1553	12:00
13	S	317	211	158	110	115	99	153	265	397	717	1092	1325	1456	1426	1474	1382	1279	1083	919	681	532	405	268	238	16102	1474	14:00
14	M	116	77	40	67	117	195	544	976	975	1043	1096	1420	1701	1521	1410	1503	1829	2081	1420	1004	783	598	423	324	21263	2081	17:00
15	T	182	95	71	105	109	210	612	1011	1040	1156	1171	1539	1696	1556	1483	1545	1859	2122	1594	1116	893	719	466	308	22658	2122	17:00
16	W	202	95	58	78	106	223	560	972	951	1124	1187	1539	1667	1557	1532	1495	1854	2065	1665	1118	858	678	486	320	22390	2065	17:00
17	T	188	83	50	81	115	206	580	955	1052	1100	1239	1513	1714	1633	1421	1527	1880	1948	1609	1220	862	682	445	339	22442	1948	17:00
18	F	273	146	95	100	110	182	561	957	920	1085	1172	1481	1658	1562	1427	1654	1941	1936	1458	1257	970	779	670	507	22901	1941	16:00
19	S	362	210	147	112	94	121	307	542	806	985	1225	1373	1406	1381	1359	1361	1346	1201	1157	1032	834	705	643	494	19203	1406	12:00
20	S	398	235	161	128	117	85	155	229	391	667	946	1064	1320	1324	1239	1147	1063	841	803	660	686	566	373	239	14837	1324	13:00
21	M	139	69	53	77	109	213	550	878	1035	1042	1021	1428	1687	1488	1408	1472	1876	2167	1448	1071	947	1004	583	379	22144	2167	17:00
22	T	257	116	136	101	103	207	574	1007	1042	1137	1128	1468	1654	1613	1548	1464	1863	2136	1604	1143	867	629	468	380	22645	2136	17:00
23	W	215	78	52	77	105	280	582	940	1010	1133	1150	1455	1705	1525	1402	1507	1827	2098	1558	1241	1106	983	695	416	23140	2098	17:00
24	T	240	120	97	85	125	258	610	1028	1048	1175	1187	1503	1652	1558	1455	1550	1961	2116	1578	1227	937	713	493	433	23149	2116	17:00
25	F	254	139	89	95	115	204	565	970	1037	1114	1132	1495	1666	1593	1471	1565	1892	1900	1445	1106	904	783	581	512	22627	1900	17:00
26	S	310	190	125	132	96	118	298	502	661	960	1108	1266	1413	1427	1345	1226	1241	1199	1159	932	788	739	574	512	18321	1427	13:00
27	S	302	203	146	108	92	95	186	246	404	629	939	1217	1329	1329	1327	1222	1067	980	801	706	583	508	311	242	14972	1329	12:00
28	M	161	90	65	92	94	196	538	856	1020	1034	1128	1351	1587	1546	1463	1517	1875	2034	1484	983	841	605	408	311	21279	2034	17:00
29	T	211	118	95	90	96	203	528	954	1029	1178	1174	1503	1658	1446	1460	1494	1898	2020	1398	1095	873	667	445	326	21959	2020	17:00
30	W	200	93	109	94	110	195	536	895	1030	1173	1208	1537	1665	1501	1508	1568	1872	2127	1677	1278	724	559	394	267	22320	2127	17:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

212 109 79 88 110 216 565 967 1034 1124 1159 1460 1653 1515 1424 1488 1871 2078 1548 1121 891 732 511 342

ADT 22297
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
30	720	22	456	2078	9	1.000

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 5 South FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 2 WEEK OF YEAR: 22 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 06/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
1	T	103	90	56	94	142	363	901	1650	2087	1439	1257	1184	1604	1664	1567	1403	1318	1440	1146	906	764	637	361	265	22441	2087	08:00
2	W	107	89	70	85	147	371	964	1691	2061	1596	1232	1303	1672	1536	1569	1446	1415	1407	1177	996	882	761	444	233	23254	2061	08:00
3	T	154	90	67	78	162	381	931	1715	2144	1486	1246	1260	1762	1826	1624	1447	1637	1455	1261	1095	974	825	470	318	24408	2144	08:00
4	F	160	111	92	73	167	352	915	1718	2026	1418	1265	1390	1649	1779	1600	1485	1556	1419	1186	1107	985	905	664	476	24498	2026	08:00
5	S	334	204	168	118	112	187	380	639	704	953	1130	1355	1474	1460	1361	1373	1314	1265	1110	984	913	855	560	545	19498	1474	12:00
6	S	375	216	149	88	103	105	246	392	529	633	915	1213	1343	1371	1376	1282	1154	1023	819	741	564	470	318	231	15656	1376	14:00
7	M	115	69	68	97	138	341	909	1729	2086	1464	1242	1252	1721	1769	1642	1660	1683	1699	1405	1041	871	745	429	278	24453	2086	08:00
8	T	141	92	80	100	144	401	944	1698	2134	1536	1258	1302	1616	1851	1567	1443	1472	1393	1125	1002	836	823	402	268	23628	2134	08:00
9	W	145	103	69	77	157	398	960	1737	2165	1468	1224	1382	1669	1748	1485	1501	1361	1355	1128	1023	788	687	404	290	23324	2165	08:00
10	T	133	85	69	76	138	358	911	1714	2089	1408	1229	1306	1729	1801	1626	1540	1519	1475	1253	1096	960	807	487	341	24150	2089	08:00
11	F	209	112	90	96	124	406	886	1650	1992	1347	1222	1398	1642	1831	1647	1548	1517	1397	1311	1134	1042	967	645	466	24679	1992	08:00
12	S	304	190	128	110	120	174	367	668	738	1079	1151	1348	1547	1481	1357	1383	1322	1283	1104	1023	888	839	636	496	19736	1547	12:00
13	S	311	207	148	97	104	100	207	369	576	736	913	1211	1376	1305	1461	1472	1263	1064	872	758	570	452	298	198	16068	1472	15:00
14	M	116	83	65	69	151	355	868	1666	2034	1422	1216	1305	1571	1754	1588	1466	1428	1371	1144	893	805	656	413	267	22706	2034	08:00
15	T	132	102	72	87	147	374	932	1652	2041	1510	1256	1411	1729	1866	1638	1476	1404	1512	1152	1104	922	750	451	249	23969	2041	08:00
16	W	163	104	71	93	141	395	941	1734	2033	1539	1290	1391	1690	1909	1582	1544	1581	1461	1285	1065	930	779	483	279	24483	2033	08:00
17	T	153	98	72	75	136	383	937	1635	2051	1499	1258	1385	1703	1896	1625	1526	1518	1527	1279	1055	929	763	513	281	24297	2051	08:00
18	F	205	113	100	84	143	349	887	1687	1930	1343	1252	1393	1680	1762	1631	1569	1480	1422	1366	1158	1083	924	656	520	24737	1930	08:00
19	S	304	215	145	120	122	185	344	545	748	928	1130	1380	1406	1299	1403	1411	1302	1174	1188	1002	1002	864	686	508	19411	1411	15:00
20	S	321	198	168	149	118	120	205	308	482	656	941	1147	1208	1223	1158	1065	900	808	749	796	665	584	330	203	14502	1223	13:00
21	M	140	71	73	84	145	366	881	1641	2019	1455	1147	1313	1649	1797	1577	1367	1435	1359	1130	1009	897	736	488	320	23099	2019	08:00
22	T	169	108	84	96	164	403	911	1694	2013	1467	1181	1313	1589	1894	1642	1533	1460	1492	1114	1036	859	787	452	330	23791	2013	08:00
23	W	147	93	73	91	147	370	912	1613	1999	1521	1205	1324	1690	1808	1659	1504	1524	1508	1246	1068	1046	854	516	335	24253	1999	08:00
24	T	169	129	72	82	161	382	954	1695	2137	1450	1246	1341	1662	1989	1615	1367	1541	1436	1284	1134	982	886	570	375	24659	2137	08:00
25	F	209	146	85	78	167	362	848	1550	1959	1400	1154	1231	1524	1535	1364	1506	1488	1321	1188	1118	975	847	668	545	23268	1959	08:00
26	S	291	193	139	119	133	160	396	663	769	927	1136	1296	1403	1355	1183	1278	1170	1128	1085	936	881	838	584	518	18581	1403	12:00
27	S	299	205	167	123	121	107	236	415	575	726	875	1129	1205	1173	1251	1179	1106	954	854	795	625	528	396	254	15298	1251	14:00
28	M	117	80	46	88	144	363	829	1564	1947	1484	1231	1320	1491	1718	1542	1454	1401	1291	1118	946	924	721	456	269	22544	1947	08:00
29	T	158	90	78	76	144	351	851	1672	2120	1426	1281	1277	1642	1852	1553	1433	1473	1376	1154	1012	881	770	445	297	23412	2120	08:00
30	W	171	87	81	82	149	368	879	1658	2047	1513	1279	1354	1665	1879	1604	1520	1501	1457	1209	1098	955	772	512	291	24131	2047	08:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12
157	102	77	85	149	376	907	1671	2051	1463	1235	1324	1659	1809	1595	1479	1482	1445	1201	1032	900	764	461	294

ADT 23718
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
30	720	22	456	2051	9	1.000

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 1 North FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 1 WEEK OF YEAR: 26 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 07/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
1	T	217	112	68	104	96	189	562	950	1075	1133	1217	1565	1626	1604	1529	1583	1918	2040	1575	1264	883	678	521	386	22895	2040	17:00
2	F	245	163	95	100	104	179	530	918	934	1114	1223	1491	1666	1667	1701	1790	1762	1558	1243	1083	883	719	548	476	22192	1790	15:00
3	S	320	218	129	101	106	130	248	442	600	853	996	1181	1227	1267	1291	1090	1087	1058	918	868	752	629	560	472	16543	1291	14:00
4	S	341	225	148	102	90	85	130	190	294	468	736	852	905	983	910	863	659	634	570	445	463	426	448	373	11340	983	13:00
5	M	253	143	95	78	78	97	205	321	422	622	782	1063	1171	1230	1120	1452	1663	920	787	705	642	519	378	247	14993	1663	16:00
6	T	136	98	84	83	105	205	543	912	1011	1169	1082	1327	1556	1333	1390	1405	1770	1942	1398	1067	788	912	674	404	21394	1942	17:00
7	W	219	119	55	92	113	209	534	919	1037	1109	1100	1379	1616	1465	1353	1413	1733	1986	1400	1046	864	723	449	344	21277	1986	17:00
8	T	221	118	81	83	114	194	519	910	1001	1191	1190	1483	1660	1578	1461	1601	1876	1993	1493	1194	1003	673	473	369	22479	1993	17:00
9	F	275	147	109	96	113	225	528	884	1018	1066	1165	1486	1679	1566	1580	1631	1869	1952	1390	1070	899	706	523	568	22545	1952	17:00
10	S	333	235	137	119	94	140	293	537	699	898	1038	1357	1382	1281	1291	1295	1221	1175	1028	914	766	714	469	463	17879	1382	12:00
11	S	340	202	169	129	84	104	192	246	368	591	885	1032	1204	1198	1187	1097	944	1191	890	575	607	477	350	274	14336	1204	12:00
12	M	163	78	74	80	109	193	525	946	1003	1048	1031	1336	1506	1359	1391	1465	1761	2023	1426	1060	844	909	568	384	21282	2023	17:00
13	T	225	128	89	101	106	190	559	924	1100	1100	1089	1443	1535	1356	1407	1437	1759	2063	1491	1052	782	878	466	323	21603	2063	17:00
14	W	195	99	64	84	104	177	516	888	1027	1086	1083	1421	1628	1576	1402	1537	1929	2041	1496	1103	888	937	552	431	22264	2041	17:00
15	T	212	113	70	97	115	181	587	988	1072	1083	1160	1331	1670	1390	1416	1615	1869	2104	1599	1269	958	658	527	377	22461	2104	17:00
16	F	234	138	111	96	119	185	539	919	1048	1165	1070	1343	1610	1516	1463	1563	1968	1916	1354	1136	935	745	609	477	22259	1968	16:00
17	S	304	238	156	113	102	122	319	518	710	908	1072	1200	1303	1278	1250	1229	1164	1049	1065	903	753	666	576	474	17472	1303	12:00
18	S	300	224	155	138	118	77	167	253	333	598	809	1095	1175	1217	1146	1110	1037	830	784	686	596	500	372	269	13989	1217	13:00
19	M	172	98	68	86	137	201	577	932	1019	1014	1064	1405	1596	1481	1438	1602	1882	1793	1432	1075	783	616	481	319	21271	1882	16:00
20	T	219	169	122	101	122	244	552	978	1001	1119	1103	1434	1625	1553	1426	1526	1898	2034	1364	1039	820	668	499	379	21995	2034	17:00
21	W	205	111	87	95	137	204	545	1015	987	1153	1118	1409	1626	1514	1418	1498	1887	2018	1484	1083	840	757	523	371	22085	2018	17:00
22	T	235	121	83	99	119	217	571	1044	1080	1148	1202	1403	1699	1549	1434	1494	1919	2051	1574	1181	958	734	601	438	22954	2051	17:00
23	F	228	146	102	92	144	190	551	968	1004	1154	1135	1449	1567	1581	1451	1621	1950	1924	1394	1107	934	614	506	426	22238	1950	16:00
24	S	291	209	139	128	107	143	284	481	631	903	1110	1218	1351	1269	1225	1176	1084	1025	1044	915	759	706	606	478	17282	1351	12:00
25	S	307	247	161	116	100	89	138	265	361	600	880	1094	1243	1225	1175	1072	1082	917	847	689	596	510	366	294	14374	1243	12:00
26	M	157	124	83	81	146	190	533	900	990	1087	1059	1449	1541	1363	1479	1472	1905	2008	1437	1003	824	685	509	334	21359	2008	17:00
27	T	220	158	106	107	128	229	579	961	1053	1172	1124	1445	1635	1476	1400	1427	1840	2011	1470	1062	832	736	573	400	22144	2011	17:00
28	W	195	109	83	86	106	216	542	947	1032	1148	1087	1362	1553	1387	1312	1357	1712	1804	1534	1116	881	708	569	387	21233	1804	17:00
29	T	201	104	86	79	127	226	541	955	971	1118	1139	1402	1613	1431	1354	1085	1926	1862	1451	1135	958	711	540	388	21403	1926	16:00
30	F	226	167	103	118	145	224	560	980	993	1100	1175	1471	1667	1519	1459	1542	1774	1770	1408	1058	936	684	603	507	22189	1774	16:00
31	S	342	240	150	118	92	130	287	470	686	914	1036	1225	1336	1353	1242	1178	1128	1009	998	839	782	746	553	475	17329	1353	13:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

217 129 89 95 118 205 532 916 994 1095 1109 1404 1580 1450 1396 1469 1838 1923 1436 1086 856 735 524 369

ADT 21565
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
31	744	22	444	1923	9	1.000

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 5 South FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 2 WEEK OF YEAR: 26 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 07/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
1	T	180	101	74	88	154	391	866	1605	2110	1450	1392	1546	1776	1983	1802	1587	1500	1477	1281	1092	926	844	556	362	25143	2110	08:00
2	F	216	122	89	89	151	320	777	1514	1912	1313	1273	1353	1669	1802	1553	1554	1480	1360	1205	1056	925	778	621	468	23600	1912	08:00
3	S	284	178	112	101	109	163	318	445	603	792	951	1113	1285	1236	1258	1130	1040	1004	980	889	809	793	574	466	16633	1285	12:00
4	S	317	190	114	131	82	90	178	233	368	558	691	829	924	911	895	820	675	594	583	481	535	492	490	352	11533	924	12:00
5	M	206	132	86	76	88	125	229	397	503	649	868	1033	1040	1171	1103	1108	961	886	803	703	715	595	406	267	14150	1171	13:00
6	T	149	80	65	87	145	373	835	1640	2030	1379	1261	1227	1505	1581	1426	1358	1383	1294	1078	1031	804	716	479	344	22270	2030	08:00
7	W	348	167	102	115	200	433	833	1700	1879	1430	1203	1293	1624	1715	1518	1357	1355	1372	1134	1003	851	745	594	619	23590	1879	08:00
8	T	336	199	122	125	188	435	829	1592	1887	1440	1250	1311	1637	1824	1552	1519	1451	1445	1302	1044	895	840	641	733	24597	1887	08:00
9	F	334	201	136	122	187	423	893	1541	1825	1348	1218	1342	1639	1828	1686	1521	1468	1333	1232	1013	922	792	686	739	24429	1828	13:00
10	S	427	315	195	151	143	219	363	520	650	818	1088	1254	1389	1368	1272	1254	1230	1167	1097	958	831	831	637	490	18667	1389	12:00
11	S	342	227	158	101	95	119	209	357	493	606	890	1097	1101	1089	1096	1072	887	959	835	793	613	511	433	341	14424	1101	12:00
12	M	221	105	76	101	173	407	866	1592	1935	1454	1164	1278	1572	1669	1413	1356	1366	1324	1122	996	831	667	491	445	22624	1935	08:00
13	T	193	118	96	92	177	389	880	1620	1914	1494	1227	1231	1590	1639	1421	1423	1404	1295	1108	980	814	721	471	369	22666	1914	08:00
14	W	191	136	83	97	170	392	869	1581	1954	1570	1239	1233	1661	1817	1603	1571	1412	1386	1180	1000	844	799	595	428	23811	1954	08:00
15	T	208	131	88	82	187	424	899	1676	2089	1476	1199	1326	1649	1758	1654	1580	1567	1520	1222	1081	944	775	690	464	24689	2089	08:00
16	F	196	176	108	98	194	397	844	1648	1821	1376	1252	1340	1680	1745	1518	1502	1532	1357	1179	1123	917	894	676	498	24071	1821	08:00
17	S	334	214	146	110	139	185	402	619	645	823	1050	1241	1339	1309	1217	1211	1150	1097	1056	959	861	798	642	517	18064	1339	12:00
18	S	352	236	127	101	86	110	225	383	418	637	868	1052	1055	1180	1116	1043	918	833	818	757	556	524	581	461	14437	1180	13:00
19	M	199	145	105	133	202	386	865	1601	2020	1396	1207	1233	1581	1770	1553	1477	1446	1437	1083	939	792	657	497	329	23053	2020	08:00
20	T	188	143	110	106	165	431	920	1610	1943	1474	1256	1363	1659	1790	1579	1457	1398	1383	1119	1107	854	774	650	493	23972	1943	08:00
21	W	256	156	108	99	227	399	900	1626	2033	1553	1237	1303	1656	1718	1585	1478	1411	1387	1263	1097	927	858	716	514	24507	2033	08:00
22	T	266	157	105	95	186	385	878	1586	1967	1430	1223	1243	1686	1825	1576	1536	1368	1473	1297	1099	966	934	811	565	24657	1967	08:00
23	F	298	161	135	94	195	357	815	1568	1866	1364	1196	1386	1692	1754	1573	1515	1445	1367	1317	1099	965	758	566	408	23894	1866	08:00
24	S	299	208	141	107	133	179	402	508	696	878	1041	1262	1251	1217	1158	1204	1162	1018	1045	892	884	812	626	517	17640	1262	11:00
25	S	396	193	137	107	100	117	205	352	430	676	845	1009	1110	1172	1270	1139	1013	887	792	767	662	651	569	399	14998	1270	14:00
26	M	220	143	131	114	182	409	871	1622	1910	1437	1144	1306	1584	1666	1457	1434	1469	1283	1055	985	847	829	620	449	23167	1910	08:00
27	T	244	171	114	119	183	395	905	1744	2028	1469	1205	1244	1621	1772	1450	1440	1438	1374	1152	1015	874	870	709	471	24007	2028	08:00
28	W	261	141	114	102	237	405	919	1685	1993	1514	1150	1358	1616	1689	1511	1466	1462	1410	1138	1117	898	831	691	463	24171	1993	08:00
29	T	261	146	86	109	196	359	1027	1678	1933	1422	1190	1322	1722	1793	1611	1186	1589	1447	1200	1075	893	865	650	534	24294	1933	08:00
30	F	266	169	129	121	233	383	829	1609	1871	1365	1193	1421	1604	1814	1633	1510	1500	1399	1204	1095	929	795	680	441	24193	1871	08:00
31	S	312	223	139	115	134	166	389	533	675	830	1030	1226	1306	1283	1306	1304	1209	1088	1020	972	789	806	649	513	18017	1306	12:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

244 149 104 102 188 394 843 1565 1883 1400 1207 1304 1599 1716 1518 1431 1411 1364 1149 1021 863 784 604 462

ADT 23305
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
31	744	22	444	1883	8	1.000

ROUTE/RD #: NY110 ROAD NAME: FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
STATION: 070165 STATE DIR CODE: 2 PLACEMENT: DATE OF COUNT: 07/01/2010

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 1 North FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 1 WEEK OF YEAR: 30 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 08/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
1	S	334	204	182	136	103	88	162	256	357	594	931	1178	1262	1353	1259	1229	1067	983	821	588	571	453	377	268	14756	1353	13:00
2	M	149	92	71	86	120	183	521	936	1040	1036	1089	1446	1594	1501	1370	1423	1860	1971	1396	982	789	631	407	316	21009	1971	17:00
3	T	192	114	105	112	106	202	583	971	1019	1107	1095	1441	1670	1467	1472	1619	2037	1939	1484	1084	819	686	505	329	22158	2037	16:00
4	W	186	89	87	90	113	198	607	936	1010	1139	1098	1432	1410	1493	1404	1488	1818	1964	1492	1138	892	678	489	365	21616	1964	17:00
5	T	208	128	89	92	122	196	587	1025	1093	1147	1184	1386	1533	1419	1432	1495	1823	2022	1489	1158	939	648	516	342	22073	2022	17:00
6	F	239	133	114	106	115	229	562	987	979	1084	1173	1475	1678	1557	1453	1633	1890	1832	1343	1052	841	711	594	465	22245	1890	16:00
7	S	289	226	126	110	115	134	303	528	677	909	1048	1245	1267	1225	1227	1226	1063	1071	970	895	743	667	555	454	17073	1267	12:00
8	S	357	212	176	152	109	86	178	236	313	565	810	1078	1179	1201	1208	1156	1012	953	763	635	589	465	375	275	14083	1208	14:00
9	M	186	96	73	75	119	185	541	906	1009	1083	1045	1415	1584	1448	1378	1504	1913	1980	1428	1024	766	706	488	351	21303	1980	17:00
10	T	177	116	100	99	118	216	598	924	1015	1058	1008	1318	1521	1522	1350	1434	1906	2035	1460	1082	842	632	519	345	21395	2035	17:00
11	W	180	108	80	77	109	223	597	898	1022	1168	1074	1443	1645	1454	1347	1421	1826	1988	1391	1069	810	703	560	381	21574	1988	17:00
12	T	189	108	87	88	109	233	542	932	1069	1113	1124	1433	1625	1390	1437	1512	1916	2016	1459	1103	821	627	493	387	21813	2016	17:00
13	F	205	106	113	101	103	211	533	936	1017	1130	1158	1604	1692	1599	1518	1594	1970	1839	1277	1060	868	711	614	506	22465	1970	16:00
14	S	331	193	127	108	104	149	287	460	625	895	1016	1275	1362	1313	1287	1349	1130	1100	1019	907	709	632	556	479	17413	1362	12:00
15	S	331	197	172	125	84	87	161	246	338	575	893	1130	1197	1329	1301	1195	1070	963	741	623	486	460	306	236	14246	1329	13:00
16	M	151	74	59	91	88	180	506	936	996	938	1078	1375	1632	1497	1433	1523	1947	2021	1362	954	671	575	337	250	20674	2021	17:00
17	T	162	99	105	105	110	202	603	941	1015	1043	1124	1412	1686	1482	1419	1452	1876	1913	1445	1056	755	638	522	300	21465	1913	17:00
18	W	198	85	70	89	114	208	563	958	943	982	1111	1477	1704	1468	1428	1520	1865	2021	1447	1118	822	639	477	330	21637	2021	17:00
19	T	214	101	80	96	104	223	529	951	1009	1088	1120	1458	1700	1535	1395	1519	1852	1992	1434	1115	909	641	524	405	21994	1992	17:00
20	F	250	142	113	110	113	210	571	984	964	1094	1072	1421	1676	1584	1499	1599	1847	1780	1328	1072	868	686	566	542	22091	1847	16:00
21	S	317	193	120	127	113	126	318	495	683	902	1103	1266	1397	1361	1370	1142	1146	1046	1035	852	702	639	494	455	17402	1397	12:00
22	S	304	177	149	124	103	70	133	235	303	540	836	1058	1261	1371	1358	1249	1077	972	746	522	433	376	241	233	13871	1371	13:00
23	M	102	70	78	77	126	157	488	860	936	977	983	1321	1629	1424	1445	1496	1864	2001	1393	950	831	687	536	471	20902	2001	17:00
24	T	236	154	118	127	159	210	542	895	964	1037	1063	1408	1604	1547	1404	1500	1876	1953	1448	990	766	739	512	426	21678	1953	17:00
25	W	236	131	84	85	132	199	540	901	930	1021	1055	1404	1675	1467	1442	1592	1904	2031	1378	1042	832	878	690	515	22164	2031	17:00
26	T	229	141	102	98	160	252	561	862	1048	1098	1305	1599	1715	1547	1441	1543	1904	2035	1449	1185	884	947	760	639	23504	2035	17:00
27	F	294	190	135	145	152	228	506	925	968	1129	1197	1468	1693	1567	1409	1643	1848	1761	1327	1109	896	911	812	571	22884	1848	16:00
28	S	321	212	135	108	104	145	304	497	638	891	1048	1288	1341	1221	1312	1258	1254	1065	1007	904	724	608	540	428	17353	1341	12:00
29	S	326	182	136	116	92	91	184	244	327	567	925	1102	1190	1302	1203	1103	1018	878	790	701	591	438	343	291	14140	1302	13:00
30	M	191	109	64	82	158	215	570	922	972	973	1089	1339	1604	1477	1412	1544	1817	1933	1436	1118	934	975	732	483	22149	1933	17:00
31	T	251	133	128	118	145	207	606	905	962	1094	1152	1518	1683	1504	1388	1469	1916	1932	1416	1185	962	935	747	477	22833	1932	17:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

214 122 101 102 123 215 557 931 999 1070 1109 1436 1623 1480 1411 1503 1884 1986 1434 1075 836 720 545 395

ADT 21871
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
31	744	22	450	1986	9	1.000

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 5 South FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 2 WEEK OF YEAR: 30 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 08/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	PM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	S	342	229	155	103	113	115	189	336	446	676	881	1044	1175	1297	1279	1158	1071	904	831	732	621	609	569	378	15253	1297	13:00
2	M	194	146	99	111	178	359	837	1599	1901	1456	1177	1239	1661	1758	1526	1481	1347	1276	1070	981	893	770	511	410	22980	1901	08:00
3	T	214	124	121	136	199	395	893	1700	2016	1481	1173	1282	1608	1761	1627	1370	1446	1376	1106	1032	844	832	654	419	23809	2016	08:00
4	W	235	143	103	123	207	427	1037	1655	2061	1443	1180	1347	1457	1679	1568	1465	1483	1287	1175	1054	982	861	610	379	23961	2061	08:00
5	T	185	159	82	96	202	365	890	1716	2005	1529	1205	1374	1413	1734	1528	1586	1440	1487	1202	1050	891	844	634	406	24023	2005	08:00
6	F	248	131	106	118	184	372	836	1645	1943	1354	1215	1415	1726	1762	1647	1482	1526	1330	1230	996	866	850	677	489	24148	1943	08:00
7	S	348	214	127	130	149	175	337	546	644	914	1046	1240	1331	1248	1221	1216	1188	1108	1014	876	845	810	592	477	17796	1331	12:00
8	S	309	216	153	117	113	118	198	309	434	655	832	1027	1029	1218	1182	1211	1079	908	815	649	588	574	457	354	14545	1218	13:00
9	M	164	92	71	111	203	341	842	1558	1972	1439	1119	1235	1673	1728	1550	1438	1358	1282	1099	1001	882	785	620	321	22884	1972	08:00
10	T	217	134	93	86	170	363	869	1656	2010	1360	1182	1287	1608	1746	1580	1442	1378	1369	1177	1039	890	775	565	347	23343	2010	08:00
11	W	174	135	79	103	171	369	919	1770	1994	1374	1216	1342	1623	1813	1519	1460	1410	1369	1165	1070	837	782	574	410	23678	1994	08:00
12	T	193	113	87	113	199	369	886	1694	2015	1365	1200	1268	1627	1696	1591	1539	1396	1431	1193	1040	845	782	605	443	23690	2015	08:00
13	F	218	157	99	110	188	357	850	1656	1877	1392	1192	1370	1762	1833	1718	1485	1488	1399	1239	1063	945	817	581	478	24274	1877	08:00
14	S	314	204	130	167	138	195	362	514	632	849	1002	1211	1318	1450	1261	1255	1248	1161	1006	863	847	714	623	492	17956	1450	13:00
15	S	316	207	134	85	83	114	195	350	463	610	858	1054	1125	1229	1220	1137	1135	941	813	709	551	440	307	221	14297	1229	13:00
16	M	123	73	66	87	158	330	884	1692	1895	1304	1153	1229	1614	1777	1597	1473	1381	1229	1181	982	772	741	559	348	22648	1895	08:00
17	T	211	112	107	110	187	334	948	1668	2042	1439	1183	1316	1648	1854	1580	1464	1431	1269	1157	979	836	833	632	325	23665	2042	08:00
18	W	193	121	77	109	199	344	894	1680	2003	1319	1178	1301	1646	1690	1633	1457	1460	1367	1177	1002	867	832	606	381	23536	2003	08:00
19	T	199	120	86	121	175	373	893	1647	1925	1393	1196	1347	1701	1749	1592	1529	1437	1327	1310	1044	914	801	663	449	23991	1925	08:00
20	F	258	161	97	124	163	320	841	1565	1818	1314	1210	1451	1644	1846	1537	1503	1538	1299	1237	1078	875	778	635	527	23819	1846	13:00
21	S	327	207	118	134	162	167	336	521	666	807	1092	1184	1342	1364	1358	1265	1251	1097	1070	894	789	697	562	396	17806	1364	13:00
22	S	281	183	148	115	88	104	193	290	388	597	759	937	1183	1241	1311	1197	1061	882	761	634	487	437	281	202	13760	1311	14:00
23	M	97	85	72	81	153	307	817	1542	1939	1259	1121	1262	1547	1674	1572	1432	1426	1295	1187	918	716	571	350	226	21649	1939	08:00
24	T	134	101	78	85	160	309	851	1581	1914	1263	1150	1298	1627	1756	1594	1453	1317	1316	1098	975	794	661	409	209	22133	1914	08:00
25	W	125	99	52	88	156	301	857	1648	1892	1302	1147	1277	1664	1752	1586	1482	1421	1308	1171	1010	851	667	394	238	22488	1892	08:00
26	T	140	102	70	75	150	329	873	1629	1870	1275	1202	1329	1693	1739	1626	1575	1507	1325	1229	1015	897	713	495	347	23205	1870	08:00
27	F	181	108	80	86	148	311	847	1545	1751	1271	1209	1319	1662	1786	1624	1517	1487	1331	1129	990	918	845	570	512	23227	1786	13:00
28	S	268	191	141	112	108	156	395	532	641	833	1083	1204	1219	1330	1351	1207	1170	1162	1033	892	825	736	559	443	17591	1351	14:00
29	S	295	206	155	79	94	99	207	306	435	606	808	1030	1084	1206	1143	1189	1053	936	790	737	582	456	310	183	13989	1206	13:00
30	M	101	73	74	68	153	304	832	1608	1999	1279	1175	1288	1542	1763	1462	1442	1409	1303	1131	993	734	622	370	243	21968	1999	08:00
31	T	127	89	75	84	171	321	871	1675	2026	1420	1236	1403	1743	1822	1552	1378	1419	1273	1178	1085	822	708	348	234	23060	2026	08:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

191 124 88 104 178 351 876 1642 1949 1365 1183 1317 1616 1750 1571 1470 1415 1327 1167 1015 848 754 533 341

ADT 23175
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
31	744	22	450	1949	8	1.000

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 1 North FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 1 WEEK OF YEAR: 35 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 09/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	PM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W	228	154	98	116	144	224	534	988	973	1154	1168	1494	1632	1540	1481	1526	1875	2116	1455	1188	1008	913	806	478	23293	2116	17:00
2	T	241	131	86	114	143	260	569	1016	1013	1089	1225	1491	1679	1568	1364	1578	1832	2047	1428	1194	1041	825	764	458	23156	2047	17:00
3	F	231	101	121	112	143	225	552	928	961	1043	1187	1457	1681	1587	1645	1712	1625	1493	1140	902	657	554	441	367	20865	1712	15:00
4	S	255	144	120	107	97	117	311	509	689	860	1083	1324	1447	1516	1356	1370	1292	1201	1051	899	772	657	509	407	18093	1516	13:00
5	S	302	201	146	94	80	87	154	276	365	661	1000	1181	1361	1407	1329	1292	1117	971	804	725	617	488	415	313	15386	1407	13:00
6	M	237	129	95	79	73	70	167	241	366	600	739	1043	1229	1218	1276	1139	1024	866	778	634	507	336	254	189	13289	1276	14:00
7	T	110	82	57	76	93	245	591	946	1043	1199	1127	1383	1621	1440	1402	1460	1818	1870	1347	1040	838	823	628	406	21645	1870	17:00
8	W	188	102	83	102	124	287	604	947	1080	1083	1111	1429	1563	1430	1364	1388	1890	1903	1324	948	655	741	724	335	21405	1903	17:00
9	T	188	93	57	77	113	213	527	911	1056	997	1150	1420	1710	1541	1481	1477	1883	2059	1369	969	792	865	766	521	22235	2059	17:00
10	F	271	177	115	111	137	217	551	950	1036	1120	1248	1510	1684	1662	1487	1602	1948	1872	1379	1131	816	611	552	418	22605	1948	16:00
11	S	284	180	141	102	95	141	281	546	720	981	1155	1377	1460	1382	1283	1367	1238	1189	1100	965	726	584	490	461	18248	1460	12:00
12	S	272	185	140	122	85	91	154	234	363	653	1021	1239	1414	1409	1405	1287	1149	929	761	559	415	320	236	252	14695	1414	12:00
13	M	164	86	78	100	130	207	610	960	1062	1184	1074	1267	1447	1293	1286	1339	1912	1987	1303	884	698	532	393	338	20334	1987	17:00
14	T	208	130	65	75	153	237	635	971	1121	1087	1187	1334	1576	1472	1345	1443	1915	1966	1380	1061	796	582	409	327	21475	1966	17:00
15	W	173	108	72	97	135	248	611	971	1047	1137	1080	1394	1639	1361	1369	1479	1922	1967	1445	1050	813	690	429	334	21571	1967	17:00
16	T	184	97	71	84	158	309	699	1009	1092	1165	1131	1489	1664	1519	1433	1557	1947	2037	1310	894	698	542	428	286	21803	2037	17:00
17	F	216	127	79	90	178	669	1425	1487	1466	1222	1112	1433	1655	1560	1424	1531	2013	1978	1370	1031	775	602	626	489	24558	2013	16:00
18	S	311	246	126	119	95	146	277	462	736	937	1116	1245	1454	1447	1366	1177	1211	1211	1107	926	666	626	451	391	17849	1454	12:00
19	S	267	190	135	118	87	89	144	263	393	655	1070	1310	1426	1287	1326	1251	1089	956	747	599	446	360	295	271	14774	1426	12:00
20	M	157	79	95	86	166	244	649	995	1097	1057	1109	1356	1636	1444	1383	1538	1865	2017	1529	1121	726	454	320	334	21457	2017	17:00
21	T	198	90	91	89	127	250	661	999	1023	1087	1197	1452	1591	1436	1342	1558	1980	2091	1389	1020	767	443	396	305	21582	2091	17:00
22	W	156	94	61	106	117	239	624	1056	1055	1124	1074	1352	1628	1477	1348	1460	1809	1992	1426	1042	780	557	331	271	21179	1992	17:00
23	T	137	79	78	92	134	248	631	1057	1118	1066	1115	1455	1647	1466	1416	1500	1928	2039	1383	1020	754	593	447	388	21791	2039	17:00
24	F	273	135	84	90	114	246	617	1111	1074	1101	1177	1497	1653	1542	1510	1521	1962	2021	1367	1133	702	577	521	451	22479	2021	17:00
25	S	249	188	104	118	100	137	359	560	772	1061	1202	1380	1512	1454	1432	1410	1263	1188	1088	987	763	589	497	470	18883	1512	12:00
26	S	284	218	115	137	93	84	153	261	441	669	1050	1318	1417	1333	1397	1303	1182	1007	846	576	407	324	207	171	14993	1417	12:00
27	M	97	68	48	80	136	215	559	976	1057	1013	1058	1336	1515	1320	1232	1418	1838	1965	1286	924	628	527	300	220	19816	1965	17:00
28	T	126	66	63	71	102	220	614	1047	1068	1128	1174	1386	1607	1394	1321	1410	1933	1949	1319	902	674	485	364	246	20669	1949	17:00
29	W	126	57	64	80	115	245	616	1096	1059	1135	1169	1480	1715	1471	1407	1523	1953	2022	1495	1033	803	606	409	238	21917	2022	17:00
30	T	123	60	65	63	128	239	590	1029	1021	1051	1086	1382	1541	1372	1378	1447	1903	2027	1278	953	747	511	340	248	20582	2027	17:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

188 105 78 91 131 268 620 986 1040 1084 1123 1402 1591 1431 1368 1458 1846 1940 1347 993 763 613 473 329

ADT 21268
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
30	720	22	456	1940	9	1.000

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 5 South FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 2 WEEK OF YEAR: 35 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 09/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
1	W	119	80	56	61	146	342	885	1821	2043	1379	1340	1427	1684	1863	1577	1513	1421	1392	1267	1038	883	687	397	254	23675	2043	08:00
2	T	129	83	60	76	142	333	915	1801	1993	1396	1285	1415	1760	1840	1562	1503	1482	1422	1215	1028	866	671	424	271	23672	1993	08:00
3	F	129	107	64	85	142	357	824	1638	1896	1230	1292	1439	1677	1784	1553	1395	1424	1176	1056	865	716	658	485	364	22356	1896	08:00
4	S	238	137	124	103	126	157	312	496	637	813	1080	1336	1470	1342	1461	1449	1274	1202	1043	884	780	736	582	421	18203	1470	12:00
5	S	293	197	146	98	81	79	209	310	459	655	880	1092	1223	1319	1281	1294	1102	1034	862	822	691	518	419	324	15388	1319	13:00
6	M	212	140	97	66	86	214	354	498	783	1033	1263	1596	1605	1618	1421	1185	1076	891	786	656	556	447	255	191	17029	1618	13:00
7	T	107	41	66	65	130	350	964	1646	2057	1439	1226	1258	1680	1754	1538	1380	1257	1274	1048	913	700	567	278	189	21927	2057	08:00
8	W	121	92	70	78	168	355	1001	1719	1988	1391	1175	1248	1669	1790	1493	1384	1493	1273	1086	1080	757	622	371	251	22675	1988	08:00
9	T	146	107	62	76	141	351	904	1692	1950	1236	1216	1330	1655	1767	1645	1548	1405	1380	1060	995	771	662	389	254	22742	1950	08:00
10	F	156	76	77	84	151	339	898	1683	1929	1237	1296	1414	1704	1895	1626	1632	1582	1384	1267	1071	917	726	533	433	24110	1929	08:00
11	S	280	152	104	91	115	171	385	564	719	889	1105	1338	1445	1395	1480	1363	1248	1198	1062	959	778	712	562	493	18608	1480	14:00
12	S	288	197	143	106	87	93	221	389	551	678	852	1181	1334	1335	1304	1225	1104	908	769	652	470	301	244	166	14598	1335	13:00
13	M	117	63	67	91	164	353	915	1593	2135	1550	1183	1161	1489	1624	1447	1374	1296	1360	1131	827	686	501	318	215	21660	2135	08:00
14	T	118	95	65	71	162	339	1009	1835	2136	1347	1156	1290	1621	1741	1565	1405	1333	1377	1187	984	753	593	341	193	22716	2136	08:00
15	W	116	75	56	59	160	370	1032	1768	1597	1372	1215	1207	1664	1753	1498	1360	1385	1375	1229	983	834	599	358	216	22281	1768	07:00
16	T	126	72	51	82	145	388	1018	1768	1972	1352	1120	1356	1686	1862	1659	1514	1411	1440	1132	808	731	641	367	243	22944	1972	08:00
17	F	156	103	64	71	148	371	918	1732	2124	1670	1243	1286	1436	1705	1676	1419	1424	1329	1187	1048	827	817	553	411	23718	2124	08:00
18	S	291	161	112	93	110	164	376	523	620	800	1012	1254	1355	1422	1426	1442	1316	1150	1092	988	803	754	516	385	18165	1442	15:00
19	S	274	179	136	104	82	94	201	366	545	687	911	1081	1231	1337	1298	1228	1091	963	847	772	517	382	252	169	14747	1337	13:00
20	M	88	59	77	83	160	339	976	1819	1946	1331	1182	1139	1480	1701	1531	1430	1440	1438	1200	971	710	536	272	215	22123	1946	08:00
21	T	107	80	63	70	142	381	962	1832	2175	1405	1217	1311	1665	1684	1530	1417	1387	1458	1211	1054	827	585	395	189	23147	2175	08:00
22	W	107	77	61	62	155	344	961	1863	2149	1401	1170	1252	1632	1785	1497	1392	1365	1346	1092	974	857	575	349	185	22651	2149	08:00
23	T	103	73	50	64	160	365	983	1853	2082	1373	1157	1331	1672	1801	1498	1381	1380	1396	1125	1047	867	656	466	273	23156	2082	08:00
24	F	147	83	68	83	140	382	970	1817	1940	1320	1207	1336	1705	1777	1632	1448	1346	1345	1233	1133	884	788	620	433	23837	1940	08:00
25	S	256	172	114	82	111	177	424	619	769	924	1028	1357	1414	1558	1473	1428	1398	1207	1177	1026	746	692	541	445	19138	1558	13:00
26	S	293	188	133	90	95	80	197	397	534	766	930	1137	1333	1252	1326	1215	1253	959	867	773	445	336	253	145	14997	1333	12:00
27	M	84	57	38	69	135	343	921	1684	1985	1363	1176	1233	1425	1581	1337	1321	1265	1307	1019	828	685	469	295	168	20788	1985	08:00
28	T	91	60	53	73	149	344	954	1720	2123	1362	1138	1262	1555	1733	1518	1351	1294	1324	1020	918	710	522	314	177	21765	2123	08:00
29	W	97	58	46	90	149	372	993	1880	2013	1380	1202	1264	1613	1830	1499	1394	1364	1380	1134	1020	851	634	320	187	22770	2013	08:00
30	T	100	74	57	69	152	367	920	1712	2067	1290	1046	1207	1600	1686	1390	1457	1407	1345	1068	879	701	586	360	212	21752	2067	08:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

121 80 61 73 149 358 922 1699 1958 1357 1205 1307 1620 1745 1511 1406 1359 1343 1112 945 764 586 348 216

ADT 22245
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
30	720	22	456	1958	9	1.000

ROUTE/RD #: NY110 ROAD NAME: FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
STATION: 070165 STATE DIR CODE: 2 PLACEMENT: DATE OF COUNT: 09/01/2010

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 1 North FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 1 WEEK OF YEAR: 39 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 10/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	PM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	F	145	106	73	97	125	206	583	1098	1177	1151	1143	1458	1597	1455	1452	1547	1835	1907	1377	1045	742	629	513	473	21934	1907	17:00
2	S	282	158	133	98	103	144	325	538	756	1063	1378	1642	1630	1721	1522	1520	1511	1371	1230	1006	718	590	533	515	20487	1721	13:00
3	S	311	212	152	112	78	85	153	275	436	699	1161	1292	1503	1593	1520	1414	1188	1076	789	561	415	364	230	198	15817	1593	13:00
4	M	114	65	60	82	109	227	581	1009	1049	1015	1203	1588	1686	1576	1517	1592	1794	1936	1342	902	715	557	296	238	21253	1936	17:00
5	T	117	84	56	74	112	245	604	984	1033	1177	1184	1405	1544	1414	1383	1528	2009	1969	1413	947	721	522	348	232	21105	2009	16:00
6	W	114	76	61	78	108	243	623	1074	1064	1166	1228	1468	1659	1568	1446	1574	1925	2017	1449	982	578	448	280	217	21446	2017	17:00
7	T	113	49	45	78	114	267	645	1094	1110	1149	1182	1455	1734	1559	1628	1585	1914	2032	1317	1019	622	451	415	257	21834	2032	17:00
8	F	146	98	77	87	125	261	654	1098	1170	1263	1263	1545	1705	1637	1612	1594	1999	2030	1413	1099	809	638	605	476	23404	2030	17:00
9	S	316	206	132	109	104	144	341	581	793	1055	1361	1576	1641	1588	1738	1576	1499	1326	1241	943	735	589	520	397	20511	1738	14:00
10	S	322	199	135	114	79	77	177	315	450	830	1333	1644	1478	1204	1535	1446	1389	1155	877	657	458	434	327	293	16928	1644	11:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

127 83 62 83 117 244 615 1060 1101 1154 1201 1487 1656 1529 1494 1570 1911 1989 1380 963 659 495 335 236

ADT 21551
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
10	240	6	114	1989	9	1.000

ROUTE/RD #: NY110 ROAD NAME: FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
STATION: 070165 STATE DIR CODE: 1 PLACEMENT: DATE OF COUNT: 10/01/2010

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 5 South FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 2 WEEK OF YEAR: 39 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 10/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	PM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	F	128	102	66	77	151	336	866	1498	2027	1461	1167	1183	1498	1654	1601	1406	1447	1322	1189	1071	863	779	595	411	22898	2027	08:00
2	S	236	192	118	102	142	173	391	587	745	858	1061	1350	1494	1550	1563	1644	1543	1364	1380	1022	883	793	530	438	20159	1644	15:00
3	S	305	191	125	93	96	90	188	402	527	696	889	1174	1322	1375	1471	1491	1247	1096	911	691	471	336	218	161	15566	1491	15:00
4	M	84	66	55	75	154	343	965	1811	2046	1321	1263	1401	1702	1913	1536	1504	1388	1301	1066	799	679	495	260	172	22399	2046	08:00
5	T	89	63	55	59	160	329	962	1774	2003	1395	1128	1298	1601	1697	1454	1365	1361	1411	1204	911	646	541	309	196	22011	2003	08:00
6	W	102	70	48	73	152	354	1031	1896	1814	1348	1299	1366	1473	1737	1527	1435	1470	1382	1191	901	779	509	359	216	22532	1896	07:00
7	T	130	56	60	76	161	352	1045	1841	1972	1381	1126	1377	1652	1794	1579	1454	1401	1365	1185	911	719	600	383	260	22880	1972	08:00
8	F	160	86	74	65	174	363	990	1861	2021	1372	1251	1524	1888	1841	1584	1536	1456	1381	1322	1074	875	811	628	474	24811	2021	08:00
9	S	264	160	118	90	112	194	396	632	728	996	1173	1388	1653	1574	1625	1638	1616	1454	1463	1033	819	750	592	454	20922	1653	12:00
10	S	296	205	107	84	85	95	209	398	529	691	971	1313	1469	1535	1634	1525	1550	1332	1190	801	600	493	354	222	17688	1634	14:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

122 75 61 70 160 347 977 1780 1981 1380 1206 1358 1607 1785 1524 1440 1405 1365 1162 881 706 536 328 211

ADT 22467
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
10	240	6	114	1981	9	1.000

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 1 North FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 1 WEEK OF YEAR: 44 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 11/02/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
2	T													1628	1548	1419	1742	1904	1519	1002	697	503	413	233				
3	W	180	79	66	69	104	206	505	976	1110	1085	1052	1337	1636	1525	1444	1470	1714	1879	1718	1024	794	623	386	268	21250	1879	17:00
4	T	186	75	56	69	101	187	459	901	1028	1092	1050	1235	1504	1348	1249	1407	1706	1896	1574	958	823	566	374	281	20125	1896	17:00
5	F	185	91	97	73	105	173	452	922	1085	1088	1064	1330	1708	1636	1632	1525	1803	1908	1622	1070	801	688	682	477	22217	1908	17:00
6	S	353	231	141	114	101	151	258	478	647	911	1054	1352	1544	1596	1484	1499	1470	1298	1240	1031	724	596	532	470	19275	1596	13:00
7	S	344	210	159	90	78	92	86	157	232	367	655	952	1211	1325	1383	1419	1289	1255	910	761	600	441	340	275	14631	1419	15:00
8	M	171	103	56	55	66	116	180	529	877	991	1025	991	1195	1502	1336	1327	1344	1628	2104	1462	957	723	464	343	19545	2104	18:00
9	T	243	184	86	52	81	94	211	549	1004	1102	1057	1099	1415	1678	1358	1368	1517	1787	2208	1620	993	732	598	412	21448	2208	18:00
10	W	236	192	87	50	87	103	203	529	991	1075	1149	1127	1488	1750	1630	1425	1475	1684	2211	1899	1071	828	657	521	22468	2211	18:00
11	T	317	237	113	77	82	105	160	464	879	946	1049	1194	1598	1653	1663	1550	1579	1721	2155	1476	1033	787	627	389	21854	2155	18:00
12	F	293	198	108	85	87	136	185	637	1325	1551	1495	1516	1626	1711	1755	1594	1517	1780	1976	1644	1187	817	726	572	24521	1976	18:00
13	S	449	320	210	126	100	115	135	295	612	928	1242	1447	1666	1777	1713	1666	1420	1379	1239	1145	996	684	614	481	20759	1777	13:00
14	S	417	289	209	158	117	102	73	157	244	389	557	912	1165	1299	1414	1410	1252	1143	988	726	543	434	360	239	14597	1414	14:00
15	M	205	107	56	48	65	113	180	519	963	1093	1061	1044	1258	1653	1437	1432	1431	1767	2091	1537	963	740	563	403	20729	2091	18:00
16	T	227	199	95	66	70	106	188	500	960	1019	1148	1126	1384	1675	1469	1419	1373	1756	2172	1538	967	721	514	332	21024	2172	18:00
17	W	171	73	49	68	112	176	523	1028	1110	1171	1103	1368	1715	1541	1417	1426	1727	2150	1645	1074	862	578	506	307	21900	2150	17:00
18	T	177	80	74	70	108	184	575	1040	1165	1138	1303	1475	1749	1606	1433	1479	1727	2175	1591	1077	879	659	459	325	22548	2175	17:00
19	F	205	126	108	96	132	194	573	1040	1060	1099	1067	1460	1727	1659	1514	1606	1776	2134	1601	1106	877	700	506	466	22832	2134	17:00
20	S	337	206	135	102	98	138	304	483	731	969	1251	1377	1487	1506	1441	1492	1418	1292	1106	962	684	584	510	431	19044	1506	13:00
21	S	319	219	144	109	119	102	146	212	411	592	893	1187	1306	1439	1365	1258	1162	1070	810	569	423	322	254	198	14629	1439	13:00
22	M	126	66	52	65	103	185	499	998	1108	1061	1157	1265	1688	1581	1454	1444	1744	2005	1586	1094	823	646	412	256	21418	2005	17:00
23	T	188	96	71	78	103	211	532	1022	1117	1151	1251	1431	1687	1622	1541	1453	1718	2057	1755	1102	898	689	505	316	22594	2057	17:00
24	W	230	94	70	75	117	188	492	982	1114	1112	1203	1405	1661	1672	1678	1706	1793	1582	1190	1006	819	612	525	400	21726	1793	16:00
25	T	302	160	128	125	104	80	128	210	269	357	456	567	710	727	825	681	424	358	372	405	486	460	447	311	9092	825	14:00
26	F	218	195	143	198	276	380	526	827	915	937	1188	1285	1448	1526	1521	1524	1486	1306	1034	870	777	616	488	451	20135	1526	13:00
27	S	266	190	144	99	106	121	241	416	625	785	1104	1339	1367	1473	1412	1374	1372	1149	975	883	730	599	488	472	17730	1473	13:00
28	S	277	195	167	111	99	76	129	228	355	640	875	1075	1244	1380	1292	1302	1120	992	697	608	445	349	220	193	14069	1380	13:00
29	M	105	48	42	66	120	163	510	929	1010	1050	1026	1257	1625	1525	1408	1354	1668	2100	1406	944	741	541	308	247	20193	2100	17:00
30	T	169	97	62	74	117	203	547	1043	1092	1127	1166	1442	1659	1530	1491	1346	1681	2089	1567	1099	763	545	368	235	21512	2089	17:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12
220	136	88	83	112	170	381	782	1009	1062	1104	1248	1498	1542	1434	1394	1551	1796	1698	1195	857	644	478	328

ADT 20810
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
29	683	20	419	1796	9	1.000

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 5 South FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 2 WEEK OF YEAR: 44 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 11/02/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
2	T													1818	1678	1444	1385	1338	1131	895	680	539	393	195				
3	W	126	57	54	68	106	314	769	1583	2099	1610	1202	1211	1520	1798	1617	1402	1298	1393	1168	948	714	622	358	235	22272	2099	08:00
4	T	131	84	59	53	113	284	745	1491	1998	1503	1117	1155	1473	1555	1458	1363	1316	1413	1096	858	722	600	417	249	21253	1998	08:00
5	F	125	81	82	82	140	263	731	1551	2061	1522	1238	1238	1629	1778	1672	1505	1484	1385	1261	1042	876	759	573	406	23484	2061	08:00
6	S	288	211	111	100	108	151	329	498	668	807	1006	1247	1453	1404	1501	1583	1411	1357	1172	1007	826	882	588	557	19265	1583	15:00
7	S	325	223	144	100	85	99	89	183	313	488	696	890	1116	1224	1321	1326	1231	1173	928	761	612	488	335	258	14408	1326	15:00
8	M	148	86	50	42	64	124	297	818	1532	1996	1448	1081	1087	1344	1605	1432	1296	1305	1417	1139	835	657	459	310	20572	1996	09:00
9	T	194	114	67	65	63	112	323	858	1665	2261	1502	1130	1173	1581	1812	1564	1436	1397	1407	1036	875	713	597	406	22351	2261	09:00
10	W	204	87	71	48	69	136	315	819	1648	2134	1500	1274	1301	1596	1816	1617	1517	1416	1678	1164	1010	791	625	486	23322	2134	09:00
11	T	252	148	90	53	73	123	251	743	1501	1932	1333	1289	1365	1732	1923	1702	1578	1503	1535	1218	987	739	661	411	23142	1932	09:00
12	F	236	137	97	68	89	134	293	843	1724	2220	1680	1349	1524	1693	1924	1726	1522	1556	1424	1301	980	824	827	681	24852	2220	09:00
13	S	437	248	198	118	122	130	164	341	606	839	969	1258	1457	1654	1573	1586	1512	1449	1291	1116	972	811	781	605	20237	1654	13:00
14	S	453	343	214	161	89	112	92	172	274	417	597	846	1120	1258	1295	1255	1294	1172	914	759	712	491	369	274	14683	1295	14:00
15	M	175	111	81	46	64	141	318	775	1583	2062	1464	1199	1245	1488	1773	1617	1455	1334	1500	1052	847	663	564	362	21919	2062	09:00
16	T	184	125	70	62	59	127	304	769	1564	2069	1549	1196	1205	1475	1730	1538	1520	1394	1410	1107	849	700	546	374	21926	2069	09:00
17	W	121	71	52	47	125	301	794	1569	2212	1549	1285	1263	1494	1883	1625	1430	1379	1419	1230	946	806	641	423	233	22898	2212	08:00
18	T	128	89	58	71	129	292	863	1590	2150	1544	1279	1341	1611	1750	1707	1479	1403	1456	1173	1013	834	697	470	260	23387	2150	08:00
19	F	146	109	79	83	120	308	797	1575	2105	1561	1239	1318	1583	1822	1732	1551	1483	1466	1248	1082	847	780	645	454	24133	2105	08:00
20	S	265	179	126	119	100	157	331	517	733	848	1056	1233	1387	1404	1541	1490	1368	1270	1182	946	857	771	624	481	18985	1541	14:00
21	S	304	197	114	123	112	101	191	281	412	657	825	1017	1206	1292	1271	1363	1172	1095	790	637	527	358	227	165	14437	1363	15:00
22	M	109	67	48	80	122	280	756	1460	2079	1542	1207	1235	1528	1769	1526	1463	1475	1483	1184	1001	754	558	325	220	22271	2079	08:00
23	T	98	75	47	76	121	286	790	1575	2139	1517	1237	1362	1642	1832	1640	1496	1407	1461	1186	1039	804	697	443	233	23203	2139	08:00
24	W	130	83	70	86	116	310	754	1476	1897	1344	1262	1355	1590	1755	1624	1481	1378	1359	1148	927	829	722	515	362	22573	1897	08:00
25	T	242	196	164	119	87	88	153	231	300	398	491	611	637	774	743	499	368	381	440	516	650	559	466	334	9447	774	13:00
26	F	244	140	134	186	251	340	521	737	906	961	1186	1269	1434	1558	1513	1384	1467	1316	1153	954	797	723	643	400	20217	1558	13:00
27	S	266	224	126	91	114	149	262	424	570	729	964	1220	1278	1312	1476	1418	1317	1243	1094	972	830	715	665	439	17898	1476	14:00
28	S	269	194	132	111	104	82	165	301	378	600	777	1000	1105	1237	1258	1245	1118	955	800	668	511	361	213	143	13727	1258	14:00
29	M	99	57	34	64	132	306	802	1533	1994	1477	1148	1208	1527	1659	1587	1384	1406	1385	996	883	662	537	346	212	21438	1994	08:00
30	T	103	65	58	66	115	301	756	1583	2081	1559	1148	1231	1568	1802	1563	1459	1303	1303	1084	869	709	583	364	201	21874	2081	08:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

167 104 78 77 111 232 567 1179 1762 1638 1276 1216 1373 1624 1613 1434 1348 1338 1223 977 798 648 469 299

ADT 21551
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
29	683	20	419	1762	8	1.000

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 1 North FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 1 WEEK OF YEAR: 48 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 12/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
1	W	190	89	63	68	91	175	481	947	1069	1094	1085	1261	1473	1347	1316	1356	1599	1864	1464	922	697	615	412	246	19924	1864	17:00
2	T	185	87	59	79	119	200	533	1020	1190	1185	1166	1434	1754	1673	1555	1508	1801	2180	1696	1063	857	613	446	283	22686	2180	17:00
3	F	231	111	81	86	116	188	512	997	1110	1186	1294	1469	1676	1711	1571	1601	1826	2166	1493	1185	888	661	543	418	23120	2166	17:00
4	S	319	164	104	101	104	133	282	534	734	994	1199	1444	1595	1503	1562	1501	1405	1247	1201	922	712	586	516	453	19315	1595	12:00
5	S	301	208	120	92	88	79	143	199	380	682	898	1240	1365	1404	1492	1320	1148	936	771	592	443	327	243	175	14646	1492	14:00
6	M	111	71	42	66	118	178	502	948	1051	1092	1112	1458	1740	1553	1544	1449	1784	2121	1443	1055	784	534	388	285	21429	2121	17:00
7	T	189	101	59	74	97	186	533	999	1109	1159	1211	1433	1744	1484	1522	1522	1748	2147	1660	1166	830	625	379	283	22260	2147	17:00
8	W	187	67	64	69	101	185	485	971	1106	1167	1233	1517	1770	1646	1520	1551	1749	2246	1588	1157	841	652	445	269	22586	2246	17:00
9	T	186	91	62	75	118	196	516	1020	1102	1132	1241	1542	1563	1629	1552	1550	1786	2224	1613	1116	959	707	536	392	22908	2224	17:00
10	F	244	96	81	90	133	186	509	1028	1086	1161	1242	1552	1736	1721	1625	1607	1828	2147	1678	1240	833	738	561	452	23574	2147	17:00
11	S	313	202	120	86	99	136	252	541	763	996	1298	1380	1573	1565	1498	1536	1463	1231	1229	1040	772	644	491	443	19671	1573	12:00
12	S	379	199	157	106	90	82	145	232	335	532	824	1093	1147	1191	1311	1270	1131	913	757	552	445	354	226	157	13628	1311	14:00
13	M	138	56	42	83	105	194	450	924	1051	1059	1123	1457	1686	1622	1542	1578	1797	2058	1641	1080	759	566	438	246	21695	2058	17:00
14	T	174	87	84	83	109	200	527	915	960	1050	1201	1322	1610	1532	1456	1564	1780	2035	1864	1123	760	582	421	280	21719	2035	17:00
15	W	160	89	61	74	87	194	489	972	1085	1241	1233	1564	1744	1640	1518	1612	1759	2178	1698	1142	912	686	533	371	23042	2178	17:00
16	T	207	101	71	78	120	207	484	1004	1032	1208	1283	1479	1678	1666	1574	1583	1810	2168	1685	1257	934	684	603	415	23331	2168	17:00
17	F	272	141	105	90	117	209	472	965	1081	1195	1354	1619	1708	1649	1547	1755	1800	2149	1652	1285	1030	714	626	541	24076	2149	17:00
18	S	351	197	124	110	111	146	286	537	770	1047	1357	1506	1600	1580	1587	1569	1459	1279	1168	1057	862	682	509	530	20424	1600	12:00
19	S	350	209	136	118	104	75	156	249	415	727	1008	1318	1437	1437	1423	1417	1318	1042	848	692	553	418	287	215	15952	1437	13:00
20	M	121	64	43	76	113	202	497	934	1053	1297	1324	1606	1677	1665	1629	1597	1789	2167	1704	1175	977	676	437	305	23128	2167	17:00
21	T	228	105	82	92	101	222	495	1029	1071	1257	1324	1582	1682	1688	1654	1675	1713	2106	1781	1277	1024	753	555	313	23809	2106	17:00
22	W	231	93	68	88	107	192	507	958	1094	1302	1391	1642	1658	1639	1686	1734	1756	2115	1762	1407	1060	785	645	413	24333	2115	17:00
23	T	235	98	95	97	104	207	480	907	1103	1271	1408	1704	1644	1677	1634	1638	1699	1815	1460	1219	1063	807	543	426	23334	1815	17:00
24	F	302	170	142	104	135	148	316	540	792	1127	1226	1570	1502	1484	1430	1338	1171	979	784	504	452	448	449	335	17448	1570	11:00
25	S	238	175	86	56	59	52	64	85	139	206	282	397	447	600	713	669	510	428	434	397	475	442	367	278	7599	713	14:00
26	S	168	109	69	82	76	98	147	318	484	778	1037	1175	864	713	536	419	322	233	208	119	91	96	84	68	8294	1175	11:00
27	M	47	40	57	36	61	92	105	193	187	255	314	384	449	590	687	844	997	847	724	469	356	303	258	168	8463	997	16:00
28	T	128	79	67	49	89	155	368	670	844	910	983	1224	1534	1540	1437	1395	1706	1853	1328	921	645	515	354	260	19054	1853	17:00
29	W	207	114	78	79	94	161	384	738	874	919	1048	1369	1600	1553	1561	1478	1702	1918	1367	937	766	593	473	298	20311	1918	17:00
30	T	237	131	91	104	91	157	344	743	887	1087	1091	1456	1646	1637	1609	1701	1729	1637	1353	1063	814	616	465	318	21007	1729	16:00
31	F	297	149	122	98	81	129	265	472	613	867	1052	1432	1537	1604	1516	1444	1280	1001	812	663	596	478	318	230	17056	1604	13:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

215 105 81 83 106 184 446 865 980 1097 1171 1438 1592 1543 1500 1519 1706 1982 1546 1086 835 628 463 310

ADT 21481
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
31	744	23	468	1982	9	1.000

ROUTE/RD #: NY110 ROAD NAME: FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
STATION: 070165 STATE DIR CODE: 1 PLACEMENT: DATE OF COUNT: 12/01/2010

New York State Department of Transportation
Traffic Count Hourly Report

STATION: 070165

ROUTE/RD #: NY110 **ROAD NAME:** FROM: PINELAWN RD TO: ACC NORTHERN STATE PKY COUNTY: SUFFOLK
DIRECTION: 5 South FACTOR GROUP: 30 TRAFFIC RECORDER SERIAL #: 0000 FUNCTIONAL CLASS: 14 TOWN: Huntington
STATE DIR CODE: 2 WEEK OF YEAR: 48 PLACEMENT: NHS: Yes BIN: 1058329-2
DATE OF COUNT: 12/01/2010 @ REF MARKER: 110 07011085 JURISDICTION: NYS DOT RR CROSSING#:
NOTES: COUNT TYPE: Vehicle Count COUNT TAKEN BY: DGV HPMS Sample ID: 39665500

DATE	DAY	AM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	PM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W	119	65	53	63	117	303	748	1491	1951	1600	1153	1101	1342	1533	1372	1153	1230	1269	1015	849	735	609	386	213	20470	1951	08:00
2	T	126	70	78	60	136	296	775	1569	2093	1568	1261	1317	1637	1934	1683	1506	1446	1502	1242	1001	787	730	516	297	23630	2093	08:00
3	F	144	81	62	72	127	283	777	1492	2099	1464	1160	1293	1579	1868	1740	1572	1435	1446	1244	1025	903	776	665	468	23775	2099	08:00
4	S	300	173	113	106	99	132	330	526	710	875	1033	1315	1454	1485	1561	1474	1436	1264	1177	955	854	748	668	500	19288	1561	14:00
5	S	319	193	132	91	91	82	173	246	394	686	824	1091	1173	1278	1296	1287	1179	1002	841	676	543	467	266	179	14509	1296	14:00
6	M	105	58	47	61	124	281	752	1490	2075	1376	1205	1272	1444	1765	1638	1416	1419	1423	1113	1006	762	564	393	231	22020	2075	08:00
7	T	141	90	58	60	126	305	786	1612	2082	1463	1177	1251	1600	1864	1647	1456	1519	1515	1195	950	779	629	444	232	22981	2082	08:00
8	W	128	83	51	55	120	285	774	1595	2122	1467	1268	1322	1618	1824	1747	1460	1524	1425	1142	1012	824	662	498	230	23236	2122	08:00
9	T	130	82	46	71	98	295	770	1602	2067	1630	1210	1332	1587	1835	1735	1539	1439	1453	1251	1060	845	739	527	343	23686	2067	08:00
10	F	182	79	79	81	104	288	718	1504	1986	1507	1297	1293	1573	1767	1674	1679	1502	1475	1246	1117	937	830	713	530	24161	1986	08:00
11	S	285	182	113	90	96	149	332	539	742	887	1070	1302	1433	1459	1401	1428	1452	1308	1354	1044	947	741	733	564	19651	1459	13:00
12	S	328	187	140	91	84	73	161	252	353	513	742	869	1037	1132	1149	1209	1154	943	795	600	512	414	286	207	13231	1209	15:00
13	M	104	61	54	64	124	268	734	1485	1942	1489	1188	1277	1611	1834	1605	1516	1447	1496	1178	962	751	592	418	334	22534	1942	08:00
14	T	200	133	79	76	132	292	743	1372	1925	1768	1254	1171	1498	1605	1496	1478	1454	1437	1195	1003	783	661	497	265	22517	1925	08:00
15	W	142	89	46	72	116	288	781	1581	2088	1544	1269	1295	1563	1762	1730	1610	1491	1551	1263	1038	924	733	555	288	23819	2088	08:00
16	T	167	87	63	71	110	296	769	1576	2109	1569	1298	1337	1574	1805	1806	1672	1513	1531	1252	1064	938	840	635	360	24442	2109	08:00
17	F	179	107	87	73	117	284	682	1464	2003	1508	1298	1349	1575	1740	1659	1564	1548	1549	1379	1198	1058	947	668	579	24615	2003	08:00
18	S	377	185	124	118	117	145	306	472	671	926	1179	1372	1486	1468	1429	1486	1328	1386	1152	979	894	809	719	639	19767	1486	15:00
19	S	342	208	153	93	97	100	171	228	403	651	908	1124	1278	1377	1301	1341	1274	1052	903	756	652	523	360	256	15551	1377	13:00
20	M	145	95	59	63	113	277	718	1477	1950	1533	1326	1405	1679	1706	1694	1593	1546	1555	1285	1127	899	761	515	356	23877	1950	08:00
21	T	179	109	82	87	109	285	764	1461	2043	1510	1351	1463	1669	1830	1751	1577	1513	1516	1367	1139	1111	844	646	390	24796	2043	08:00
22	W	170	116	64	66	130	290	701	1489	1943	1505	1415	1504	1621	1738	1698	1713	1572	1573	1387	1237	1095	922	718	478	25145	1943	08:00
23	T	221	119	80	92	109	267	674	1302	1775	1486	1412	1534	1559	1665	1638	1517	1504	1380	1348	1208	1040	845	751	550	24076	1775	08:00
24	F	310	178	101	99	117	183	317	473	759	943	1225	1371	1269	1364	1494	1313	1216	1072	942	518	431	461	584	471	17211	1494	14:00
25	S	297	188	74	62	60	39	57	100	157	238	301	391	498	594	604	549	403	365	423	490	580	534	432	305	7741	604	14:00
26	S	179	102	67	57	65	73	186	304	420	737	1018	1020	897	768	582	468	438	327	268	137	138	103	78	87	8519	1020	11:00
27	M	56	42	44	53	65	107	174	271	276	306	330	368	430	515	646	709	859	778	678	539	404	389	273	197	8509	859	16:00
28	T	113	57	60	64	98	221	537	1098	1559	1103	1010	1092	1356	1510	1488	1384	1340	1272	1020	899	708	626	410	253	19278	1559	08:00
29	W	153	90	75	82	110	223	558	1170	1588	1166	1072	1187	1416	1473	1552	1472	1519	1437	1182	1006	806	726	433	291	20787	1588	08:00
30	T	192	105	74	76	125	201	501	1063	1472	1184	1157	1262	1480	1562	1508	1535	1410	1422	1215	1019	818	737	522	343	20983	1562	13:00
31	F	209	127	107	86	81	157	314	529	766	902	985	1232	1438	1468	1387	1436	1259	1051	951	700	566	473	339	222	16785	1468	13:00

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

169 98 71 74 115 265 655 1312 1768 1374 1188 1262 1482 1653 1580 1461 1430 1419 1185 1007 834 701 508 314

ADT 21925
ESTIMATED (one way)

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of Day	Axle Adj. Factor
31	744	23	468	1768	8	1.000

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME:
DIRECTION: Eastbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 30
DATE OF COUNT: 07/23/2008
NOTES LANE 1: NORTH
NOTES LANE 2: NORTH
COUNT TAKEN BY: ORG CODE: TTG INITIALS: TS

FROM: **ACC NORTHERN STATE PKY** TO: **SCHWAB RD**
REC. SERIAL #: 0641
PLACEMENT: BET N ST. PKWY & SCHWAB RD
@ REF MARKER:
ADDL DATA:
COUNT TYPE: VEHICLES
PROCESSED BY: ORG CODE: DOT INITIALS: TGB

FUNC. CLASS: 14
NHS: yes
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-r10contractorww30

COUNTY: **Suffolk**
TOWN: **HUNTINGTON**
BIN:
RR CROSSING:
HPMS SAMPLE: 39770000

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	W																											
3	T																											
4	F																											
5	S																											
6	S																											
7	M																											
8	T																											
9	W																											
10	T																											
11	F																											
12	S																											
13	S																											
14	M																											
15	T																											
16	W																											
17	T																											
18	F																											
19	S																											
20	S																											
21	M																											
22	T																											
23	W	**153**	**128**	**75**	**67**	**143**	**357**	**735**	**1252**	**1563**	**1269**	**1319**	**1271**	**1726**	**1903**	**2025**	**1831**	**1766**	**1766**	**1593**	**1293**	**1102**	**949**	**589**	**332**	25207	2025	14
24	T	**197**	**124**	**86**	**65**	**148**	**353**	**736**	**1226**	**1496**					**1251**	**1324**	**1267**	**1162**	**1255**	**1173**	**1043**	**982**	**920**	**564**	**360**			
25	F	**183**	**117**	**92**	**67**	**121**	**333**	**617**	**1038**	**1252**	**1075**	**1147**	**1330**	**1483**	**1461**	**1361**	**1345**	**1420**	**1521**	**1425**	**1262**	**1226**	**1068**	**783**	**548**	22275	1521	17
26	S	**419**	**258**	**186**	**126**	**121**	**172**	**408**	**572**	**756**	**1092**	**1349**	**1550**	**1603**	**1606**	**1591**	**1568**	**1531**	**1466**	**1406**	**1177**	**1088**	**1054**	**757**	**646**	22502	1606	13
27	S	**458**	**339**	**216**	**176**	**146**	**152**	**178**	**285**	**448**	**684**	**841**	**1094**	**1182**	**1462**	**1548**	**1187**	**825**	**732**	**756**	**758**	**404**	**328**	**221**	**141**	14561	1548	14
28	M	**102**	**62**	**58**	**72**	**169**	**380**	**750**	**1175**	**1493**	**1200**	**1295**	**1504**	**1790**	**2005**	**1809**	**1766**	**1764**	**1734**	**1556**	**1265**	**1247**	**1023**	**597**	**351**	25167	2005	13
29	T	**176**	**132**	**113**	**93**	**176**	**366**	**765**	**1273**	**1538**	**1327**	**1347**	**1411**	**1766**	**1966**	**1833**	**1747**	**1655**	**1765**	**1565**	**1351**	**1109**	**1023**	**589**	**322**	25408	1966	13
30	W	**159**	**100**	**77**	**75**	**138**	**383**	**737**	**1288**	**1534**	**1226**	**1259**	**1515**	**1734**	**1892**	**1825**	**1708**	**1796**	**1810**	**1591**	**1333**	**1167**	**1024**	**636**	**383**	25390	1892	13
31	T	**204**	**106**	**87**	**84**	**140**																						
AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)		**179**	**118**	**88**	**75**	**144**	**358**	**723**	**1209**	**1479**	**1219**	**1273**	**1406**	**1754**	**1803**	**1763**	**1664**	**1629**	**1666**	**1496**	**1257**	**1121**	**988**	**595**	**350**	**ADT 24357**		

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
9	193	6	127	1803	7%	1.000	1.105

ESTIMATED

AADT
22043

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME:
DIRECTION: Westbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 30
DATE OF COUNT: 07/23/2008
NOTES LANE 1: SOUTH
NOTES LANE 2: SOUTH
COUNT TAKEN BY: ORG CODE: TTG INITIALS: TS

FROM: **ACC NORTHERN STATE PKY** TO: **SCHWAB RD**
REC. SERIAL #: 0551 FUNC. CLASS: 14
PLACEMENT: BET N. ST. PKWY & SCHWAB RD NHS: yes
@ REF MARKER: JURIS: NYSDOT
ADDL DATA: CC Stn:
COUNT TYPE: VEHICLES BATCH ID: DOT-r10contractorww30
PROCESSED BY: ORG CODE: DOT INITIALS: TGB

COUNTY: **Suffolk**
TOWN: **HUNTINGTON**
BIN:
RR CROSSING:
HPMS SAMPLE: 39770000

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	W																											
3	T																											
4	F																											
5	S																											
6	S																											
7	M																											
8	T																											
9	W																											
10	T																											
11	F																											
12	S																											
13	S																											
14	M																											
15	T																											
16	W																											
17	T																											
18	F																											
19	S																											
20	S																											
21	M																											
22	T																											
23	W	**212**	**117**	**83**	**96**	**81**	**200**	**566**	**888**	**1108**	**1322**	**1331**	**1433**	**1872**	**1788**	**1725**	**1660**	**1821**	**1793**	**1617**	**1423**	**1023**	**723**	**545**	**350**	23777	1872	12
24	T	**236**	**146**	**89**	**88**	**81**	**210**	**499**	**842**	**984**	**1361**	**1316**	**1611**	**1908**	**1795**	**1767**	**1685**	**1576**	**1750**	**1660**	**1479**	**1247**	**858**	**596**	**421**	24205	1908	12
25	F	**257**	**174**	**105**	**126**	**93**	**243**	**546**	**885**	**1087**	**1385**	**1464**	**1623**	**1866**	**1820**	**1744**	**1672**	**1758**	**1803**	**1704**	**1492**	**1186**	**888**	**683**	**601**	25205	1866	12
26	S	**386**	**258**	**142**	**118**	**118**	**143**	**318**	**582**	**800**	**1217**	**1506**	**1601**	**1792**	**1722**	**1648**	**1565**	**1477**	**1432**	**1380**	**1239**	**1052**	**786**	**670**	**582**	22534	1792	12
27	S	**375**	**279**	**215**	**162**	**120**	**88**	**163**	**251**	**406**	**623**	**1057**	**1266**	**1403**	**1572**	**1472**	**1271**	**1423**	**1184**	**886**	**727**	**605**	**285**	**186**	**147**	16166	1572	13
28	M	**83**	**57**	**40**	**44**	**48**	**98**	**279**	**418**						**927**	**902**	**963**	**867**	**915**	**790**	**677**	**561**	**390**	**253**	**203**			
29	T	**155**	**75**	**45**	**54**	**68**	**209**	**539**	**933**	**1131**	**1344**	**1400**	**1477**	**1856**	**1718**	**1670**	**1538**	**1676**	**1753**	**1612**	**1332**	**1107**	**804**	**558**	**345**	23399	1856	12
30	W	**236**	**122**	**83**	**87**	**84**	**192**	**531**	**924**	**1049**	**1347**	**1374**	**1567**	**1896**	**1659**	**1611**	**1581**	**1674**	**1779**	**1645**	**1445**	**1098**	**782**	**562**	**381**	23709	1896	12
31	T	**208**	**123**	**100**	**94**	**96**																						

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

217	**126**	**84**	**91**	**84**	**211**	**493**	**815**	**1072**	**1352**	**1377**	**1542**	**1883**	**1577**	**1535**	**1485**	**1523**	**1598**	**1465**	**1271**	**1007**	**711**	**503**	**340**	**ADT 22362**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
9	192	6	126	1883	8%	1.000	1.105

ESTIMATED

AADT
20237

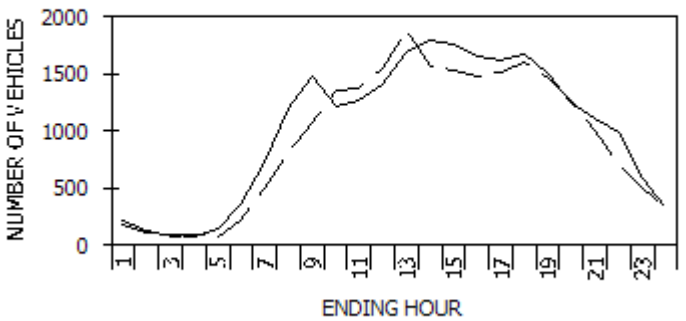
New York State Department of Transportation
Classification Count Average Weekday Data Report

ROUTE #: NY 110 ROAD NAME: YEAR: 2008 STATION: 070122
COUNTY NAME: Suffolk MONTH: July
REGION CODE: 0
FROM: ACC NORTHERN STATE PKY
TO: SCHWAB RD
REF-MARKER:
END MILEPOINT: 0111013 NO. OF LANES: 4
FUNC-CLASS: 14 HPMS NO: 39770000
STATION NO: 0122
COUNT TAKEN BY: ORG CODE: TTG INITIALS: TS
PROCESSED BY: ORG CODE: DOT INITIALS: TGB BATCH ID: DOT-r10contractorww30

DIRECTION	East	West	TOTAL
NUMBER OF VEHICLES	**24299**	**22341**	**46640**
NUMBER OF AXLES	**49240**	**45399**	**94639**
% HEAVY VEHICLES (F4-F13)	**3.72%**	**4.10%**	**3.90%**
% TRUCKS AND BUSES (F3-F13)	**12.44%**	**12.86%**	**12.65%**
AXLE CORRECTION FACTOR	**0.99**	**0.98**	**0.99**

VEHICLE CLASS		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	TOTAL
NO. OF AXLES		2	2	2	2.5	2	3	4	3.5	5	6	5	6	8.75	
ENDING HOUR	1:00	0	164	11	0	2	0	0	0	0	0	0	0	0	**177**
	2:00	1	102	8	2	2	0	0	2	2	0	0	0	0	**119**
	3:00	0	77	6	1	1	2	0	0	1	0	0	0	0	**88**
	4:00	0	61	8	0	2	2	0	0	1	0	0	0	0	**74**
	5:00	0	108	22	2	6	2	0	3	1	0	0	0	0	**144**
	6:00	2	286	47	2	12	4	0	3	2	0	0	0	0	**358**
	7:00	1	599	84	6	17	7	0	4	5	1	0	0	0	**724**
	8:00	3	1042	108	9	25	8	0	6	6	1	0	0	0	**1208**
	9:00	3	1282	125	10	29	13	0	7	8	2	0	0	0	**1479**
	10:00	3	1027	119	11	31	11	1	6	11	0	0	0	0	**1220**
DIRECTION	11:00	4	1048	136	15	38	12	1	8	10	2	0	0	0	**1274**
East	12:00	2	1179	153	15	37	6	1	6	8	1	0	0	0	**1408**
	13:00	3	1460	162	10	41	6	0	7	10	1	0	0	0	**1700**
	14:00	4	1560	169	11	38	7	0	4	10	1	0	0	0	**1804**
	15:00	2	1506	189	11	37	5	0	5	6	1	0	0	0	**1762**
	16:00	5	1446	151	11	35	4	0	6	4	1	0	0	0	**1663**
	17:00	4	1433	144	10	28	2	0	4	2	1	0	0	0	**1628**
	18:00	5	1504	117	4	27	2	0	3	3	1	0	0	0	**1666**
	19:00	4	1366	95	2	21	2	0	4	1	0	0	0	0	**1495**
	20:00	4	1150	82	2	13	2	0	2	2	0	0	0	0	**1257**
	21:00	6	1023	73	1	14	1	0	1	2	0	0	0	0	**1121**
	22:00	2	919	53	1	8	1	0	1	2	0	0	0	0	**987**
	23:00	3	549	36	0	5	0	0	0	1	0	0	0	0	**594**
	24:00	2	321	23	0	3	0	0	0	0	0	0	0	0	**349**
TOTAL VEHICLES		**63**	**21212**	**2121**	**136**	**472**	**99**	**3**	**82**	**98**	**13**	**0**	**0**	**0**	**24299**
TOTAL AXLES		126	42424	4242	340	944	297	12	287	490	78	0	0	0	49240
	1:00	0	193	14	2	4	0	0	1	2	0	0	0	0	**216**
ENDING HOUR	2:00	0	106	12	2	4	0	0	0	1	0	0	0	0	**125**
	3:00	1	67	10	1	3	1	0	0	1	0	0	0	0	**84**
	4:00	0	66	11	2	5	1	0	3	3	0	0	0	0	**91**
	5:00	0	57	12	1	6	1	0	3	2	0	0	0	0	**82**
	6:00	0	157	24	5	9	7	0	3	6	0	0	0	0	**211**
	7:00	0	381	62	6	22	7	0	6	8	1	0	0	0	**493**
	8:00	2	639	108	14	32	4	1	7	7	1	0	0	0	**815**
	9:00	3	846	143	16	39	6	1	7	8	2	0	0	0	**1071**
	10:00	3	1091	155	14	60	11	1	7	9	1	0	0	0	**1352**
	11:00	1	1147	151	15	42	7	1	6	7	1	0	0	0	**1378**
DIRECTION	12:00	4	1307	162	13	32	8	0	8	8	1	0	0	0	**1543**
West	13:00	2	1663	152	10	29	6	1	7	7	1	0	0	0	**1878**
	14:00	4	1402	115	7	30	5	1	4	7	1	0	0	0	**1576**
	15:00	2	1354	125	10	30	3	1	4	3	1	0	0	0	**1533**
	16:00	3	1305	135	7	24	3	1	3	2	2	0	0	0	**1485**
	17:00	26	1309	121	9	26	4	1	5	5	4	0	0	4	**1514**
	18:00	6	1449	110	5	16	2	1	4	2	3	0	0	0	**1598**
	19:00	4	1356	85	2	11	2	1	2	1	1	0	0	0	**1465**
	20:00	3	1176	74	1	10	2	1	2	2	0	0	0	0	**1271**
	21:00	2	919	69	1	9	2	0	1	2	1	0	0	0	**1006**
	22:00	2	647	47	1	9	2	0	1	1	1	0	0	0	**711**
	23:00	3	451	37	2	6	1	0	1	1	1	0	0	0	**503**
	24:00	1	307	23	1	6	1	0	1	0	0	0	0	0	**340**
TOTAL VEHICLES		**72**	**19395**	**1957**	**147**	**464**	**86**	**12**	**86**	**95**	**23**	**0**	**0**	**4**	**22341**
TOTAL AXLES		144	38790	3914	368	928	258	48	301	475	138	0	0	35	45399
GRAND TOTAL VEHICLES		**135**	**40607**	**4078**	**283**	**936**	**185**	**15**	**168**	**193**	**36**	**0**	**0**	**4**	**46640**
GRAND TOTAL AXLES		270	81214	8156	708	1872	555	60	588	965	216	0	0	35	94639

TRAFFIC FLOW BY DIRECTION



--- East - -West

PEAK HOUR DATA

DIRECTION	HOUR	COUNT	2-WAY	HOUR	COUNT
East	**14**	**1804**	**A.M.**	**12**	**2951**
West	**13**	**1878**	**P.M.**	**13**	**3578**

VEHICLE CLASSIFICATION CODES:

F1. Motorcycles
F2. Autos*
F3. 2 Axle, 4-Tire Pickups, Vans, Motorhomes*
F4. Buses
F5. 2 Axle, 6-Tire Single Unit Trucks
F6. 3 Axle Single Unit Trucks
F7. 4 or More Axle Single Unit Trucks
F8. 4 or Less Axle Vehicles, One Unit is a Truck
F9. 5 Axle Double Unit Vehicles, One Unit is a Truck
F10. 6 or More Double Unit Vehicles, One Unit is a Truck
F11. 5 or Less Axle Multi-Unit Trucks
F12. 6 Axle Multi-Unit Trucks
F13. 7 or More Axle Multi-Unit Trucks

* INCLUDING THOSE HAULING TRAILERS

FUNCTIONAL CLASS CODES:

RURAL	URBAN	SYSTEM
01	11	PRINCIPAL ARTERIAL-INTERSTATE
02	12	PRINCIPAL ARTERIAL-EXPRESSWAY
02	14	PRINCIPAL ARTERIAL-OTHER
06	16	MINOR ARTERIAL
07	17	MAJOR COLLECTOR
08	17	MINOR COLLECTOR
09	19	LOCAL SYSTEM

SOURCE: NYSDOT DATA SERVICES BUREAU

New York State Department of Transportation
Speed Count Average Weekday Report

Station:	070122	Start date:	Wed 07/23/2008 00:00	Count duration:	198 hours
Route #: NY 110	Road name:	End date:	Thu 07/31/2008 05:45	Functional class:	14
From:	ACC NORTHERN STATE PKY	County:	Suffolk	Factor group:	30
To:	SCHWAB RD	Town:	HUNTINGTON	Batch ID:	DOT-r10contractorww30
Direction:	North	Speed limit:	45	Count taken by:	Org: TTG Init: TS
Lanes: 1, 2				Processed by:	Org: DOT Init: TGB

Speeds, mph

Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	65.1-70.0	70.1-75.0	75.1-95.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	0	1	1	5	15	35	54	42	17	6	2	0	0	68.0	37.6	14.0	4.5	1.1	46.6	48.0	54.8	178
2:00	0	0	0	3	11	26	32	26	12	5	1	1	0	65.8	38.5	16.2	6.0	1.7	47.1	47.9	55.7	117
3:00	0	0	0	3	10	20	21	19	10	3	1	1	0	62.5	38.6	17.0	5.7	2.3	46.7	47.7	56.0	88
4:00	0	0	0	1	4	14	19	19	9	7	2	0	0	74.7	49.3	24.0	12.0	2.7	49.1	49.9	58.8	75
5:00	0	0	1	2	7	16	36	40	26	10	2	2	0	81.7	56.3	28.2	9.9	2.8	49.8	51.2	58.6	142
6:00	0	0	1	3	12	41	88	100	74	31	7	2	0	84.1	59.6	31.8	11.1	2.5	50.7	51.8	59.1	359
7:00	0	0	0	4	24	101	180	242	116	41	11	3	2	82.2	57.3	23.9	7.9	2.2	50.1	51.1	57.8	724
8:00	0	0	0	12	72	227	351	388	123	28	6	1	0	74.3	45.2	13.1	2.9	0.6	48.1	49.2	54.8	1208
9:00	0	0	2	19	112	317	438	443	121	21	4	1	0	69.6	39.9	9.9	1.8	0.3	47.3	48.3	54.2	1478
10:00	0	0	1	14	96	276	455	262	91	19	4	1	0	68.3	30.9	9.4	2.0	0.4	46.8	47.5	53.8	1219
11:00	0	1	4	29	137	339	454	223	71	14	2	0	0	60.0	24.3	6.8	1.3	0.2	45.5	46.4	52.7	1274
12:00	0	1	7	54	232	431	424	189	59	7	1	0	0	48.4	18.2	4.8	0.6	0.1	44.0	44.8	51.2	1405
13:00	1	0	7	64	310	622	484	167	39	5	0	0	0	40.9	12.4	2.6	0.3	0.0	43.2	43.8	49.6	1699
14:00	0	1	10	80	408	677	434	158	31	3	1	1	0	34.8	10.8	2.0	0.3	0.1	42.5	43.0	49.2	1804
15:00	0	0	3	56	355	672	481	155	33	5	1	0	0	38.3	11.0	2.2	0.3	0.1	43.1	43.5	49.3	1761
16:00	1	0	6	46	277	590	509	186	43	4	2	0	0	44.7	14.1	2.9	0.4	0.1	43.7	44.3	49.9	1664
17:00	1	1	6	58	308	620	434	156	36	6	2	0	0	38.9	12.3	2.7	0.5	0.1	43.1	43.6	49.5	1628
18:00	1	0	4	51	282	607	473	193	46	8	1	0	0	43.3	14.9	3.3	0.5	0.1	43.6	44.1	50.0	1666
19:00	0	0	1	19	207	518	473	201	62	11	3	1	0	50.2	18.6	5.1	1.0	0.3	44.8	45.1	51.4	1496
20:00	0	0	2	15	138	411	416	204	57	10	3	0	0	54.9	21.8	5.6	1.0	0.2	45.3	45.8	52.1	1256
21:00	0	0	3	20	123	346	379	180	55	12	3	0	0	56.1	22.3	6.2	1.3	0.3	45.3	46.0	52.3	1121
22:00	1	0	3	16	90	274	343	187	58	13	1	0	0	61.1	26.3	7.3	1.4	0.1	45.8	46.6	53.0	986
23:00	0	0	2	8	39	133	194	146	56	13	3	0	1	69.4	36.8	12.3	2.9	0.7	47.3	48.0	54.5	595
24:00	0	1	1	4	24	77	100	96	33	10	4	0	0	69.4	40.9	13.4	4.0	1.1	47.4	48.4	54.8	350
Avg. Daily Total	5	6	65	586	3293	7390	7272	4022	1278	292	67	14	3	53.3	23.4	6.8	1.5	0.3	44.9	45.6	52.6	24293
Percent	0.0%	0.0%	0.3%	2.4%	13.6%	30.4%	29.9%	16.6%	5.3%	1.2%	0.3%	0.1%	0.0%									
Cum. Percent	0.0%	0.0%	0.3%	2.7%	16.3%	46.7%	76.6%	93.2%	98.5%	99.7%	99.9%	100.0%	100.0%									
Average hour	0	0	3	24	137	308	303	168	53	12	3	1	0									1012

	Avg. Speed	50th% Speed	85th% Speed
North	44.9	45.6	52.6
South	43.1	45.3	52.6

Peak Hour Data

Direction	Hour	Count	2-way	Hour	Count
North	14	1804	A.M.	12	2948
South	13	1879	P.M.	13	3578

TRAFFIC FLOW BY DIRECTION



Station: 070122
Route #: NY 110 Road name:
From: ACC NORTHERN STATE PKY
To: SCHWAB RD
Direction: South
Lanes: 1, 2

Start date: Wed 07/23/2008 00:00
End date: Thu 07/31/2008 05:45
County: Suffolk
Town: HUNTINGTON
Speed limit: 45

Count duration: 198 hours
Functional class: 14
Factor group: 30
Batch ID: DOT-r10contractorww30
Count taken by: Org: TTG Init: TS
Processed by: Org: DOT Init: TGB

Speeds, mph

Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	65.1-70.0	70.1-75.0	75.1-95.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	2	4	3	3	8	30	62	68	29	6	2	1	0	77.1	48.6	17.4	4.1	1.4	46.5	49.8	56.0	218
2:00	2	6	2	1	6	15	30	36	18	7	0	0	1	74.2	50.0	21.0	6.5	0.8	44.5	50.0	57.1	124
3:00	2	3	1	2	2	11	22	24	11	5	1	1	0	75.3	49.4	21.2	8.2	2.4	44.4	49.9	57.4	85
4:00	1	2	2	2	4	12	25	24	12	4	1	0	0	74.2	46.1	19.1	5.6	1.1	45.5	49.4	56.6	89
5:00	1	1	1	1	2	10	19	23	15	8	2	1	0	81.0	58.3	31.0	13.1	3.6	48.1	51.6	59.5	84
6:00	0	1	0	1	5	23	47	55	47	20	8	2	1	85.7	63.3	37.1	14.8	5.2	51.4	52.6	60.0	210
7:00	1	1	1	4	16	51	108	136	112	42	16	3	2	85.0	63.1	35.5	12.8	4.3	50.9	52.4	59.6	493
8:00	2	1	2	14	45	134	236	234	116	24	6	1	0	75.7	46.7	18.0	3.8	0.9	48.0	49.5	56.1	815
9:00	3	3	6	20	83	220	345	260	100	26	5	0	0	68.7	36.5	12.2	2.9	0.5	46.5	48.0	54.5	1071
10:00	3	6	14	44	140	349	438	249	86	18	3	0	0	58.8	26.4	7.9	1.6	0.2	44.9	46.4	53.1	1350
11:00	5	10	19	50	166	404	427	211	72	10	1	0	0	52.4	21.4	6.0	0.8	0.1	43.8	45.4	52.1	1375
12:00	5	16	37	94	294	478	404	164	45	5	1	0	0	40.1	13.9	3.3	0.4	0.1	41.8	43.5	49.8	1543
13:00	8	32	69	175	416	575	410	157	32	4	1	0	0	32.1	10.3	2.0	0.3	0.1	40.2	42.1	49.0	1879
14:00	6	19	49	122	328	510	364	146	31	4	0	0	0	34.5	11.5	2.2	0.3	0.0	40.9	42.7	49.3	1579
15:00	5	18	43	97	280	493	390	165	39	5	0	0	0	39.0	13.6	2.9	0.3	0.0	41.6	43.3	49.8	1535
16:00	5	15	30	82	217	453	415	207	50	9	1	0	0	46.0	18.0	4.0	0.7	0.1	42.6	44.4	51.1	1484
17:00	82	35	39	100	244	432	371	169	44	5	2	0	0	38.8	14.4	3.3	0.5	0.1	37.3	43.1	49.9	1523
18:00	7	12	24	70	228	479	479	227	59	9	2	0	0	48.6	18.6	4.4	0.7	0.1	43.1	44.8	51.3	1596
19:00	3	14	22	60	202	428	438	225	62	9	2	0	0	50.2	20.3	5.0	0.8	0.1	43.5	45.1	51.8	1465
20:00	2	10	18	47	148	350	403	210	68	13	1	0	0	54.7	23.0	6.5	1.1	0.1	44.1	45.8	52.5	1270
21:00	2	8	13	31	113	285	326	164	50	11	3	0	0	55.1	22.7	6.4	1.4	0.3	44.3	45.8	52.4	1006
22:00	2	6	7	21	51	158	227	169	53	13	2	1	0	65.5	33.5	9.7	2.3	0.4	45.6	47.5	53.9	710
23:00	2	6	6	8	21	71	153	149	61	16	5	1	1	77.2	46.6	16.8	4.6	1.4	47.2	49.5	55.8	500
24:00	1	4	6	3	14	46	91	111	47	11	4	1	0	78.2	51.3	18.6	4.7	1.5	47.6	50.3	56.3	339
Avg. Daily Total	152	233	414	1052	3033	6017	6230	3583	1259	284	69	12	5	51.2	23.3	7.3	1.7	0.4	43.1	45.3	52.6	22343
Percent	0.7%	1.0%	1.9%	4.7%	13.6%	26.9%	27.9%	16.0%	5.6%	1.3%	0.3%	0.1%	0.0%									
Cum. Percent	0.7%	1.7%	3.6%	8.3%	21.9%	48.8%	76.7%	92.7%	98.3%	99.6%	99.9%	100.0%	100.0%									
Average hour	6	10	17	44	126	251	260	149	52	12	3	0	0									931

	Avg. Speed	50th% Speed	85th% Speed
North	44.9	45.6	52.6
South	43.1	45.3	52.6

Peak Hour Data

Direction	Hour	Count	2-way	Hour	Count
North	14	1804	A.M.	12	2948
South	13	1879	P.M.	13	3578

TRAFFIC FLOW BY DIRECTION



New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME:
FROM: **SCHWAB RD** TO: **RT 25**
COUNTY: **Suffolk**
DIRECTION: Northbound FACTOR GROUP: 30
REC. SERIAL #: 0000 FUNC. CLASS: 14
TOWN: **HUNTINGTON**
STATE DIR CODE: 1 WK OF YR: 37
PLACEMENT: JUST NORTH OF BOSTON NHS: yes
LION#:
DATE OF COUNT: 09/09/2009
@ REF MARKER: JURIS: NYSDOT
BIN:
NOTES LANE 1: NORTH
ADDL DATA: Class Speed CC Stn:
RR CROSSING:
NOTES LANE 2: NORTH
COUNT TYPE: AXLE PAIRS BATCH ID: DOT-WW35w_class
HPMS SAMPLE: 39770000
COUNT TAKEN BY: ORG CODE: DOT INITIALS: DB
PROCESSED BY: ORG CODE: DOT INITIALS: jl

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	W																											
3	T																											
4	F																											
5	S																											
6	S																											
7	M																											
8	T																											
9	W																		**1273**	**1340**	**1196**	**1018**	**755**	**477**	**313**			
10	T	**174**	**108**	**52**	**69**	**91**	**189**	**519**	**854**	**904**	**984**	**1047**	**1180**	**1302**	**1400**	**1362**	**1420**	**1414**	**1375**	**1388**	**1223**	**929**	**671**	**512**	**312**	19479	1420	15
11	F	**161**	**104**	**69**	**82**	**79**	**183**	**489**	**803**	**843**	**948**	**978**	**909**	**810**	**785**													
12	S																											
13	S																											
14	M	**141**	**72**	**52**	**68**	**90**	**188**	**494**	**839**	**881**	**980**	**939**	**1040**	**1150**	**1412**	**1352**	**1352**	**1380**	**1383**	**1317**	**1156**	**942**	**722**	**459**	**262**	18671	1412	13
15	T	**183**	**79**	**63**	**64**	**85**	**196**	**531**	**817**	**904**	**1022**	**1112**	**1161**	**1317**	**1343**	**1407**	**1374**	**1309**	**1410**	**1271**	**1206**	**964**	**758**	**459**	**294**	19329	1410	17
16	W	**182**	**95**	**44**	**60**	**89**	**184**	**493**	**837**	**861**	**985**	**1007**	**1213**	**1262**	**1371**	**1395**	**1380**	**1406**	**1358**	**1377**	**1176**	**942**	**728**	**516**	**289**	19250	1406	16
17	T	**168**	**96**	**57**	**65**	**86**	**185**	**544**	**876**	**923**	**1057**	**1048**	**1216**	**1323**	**1331**	**1381**	**1344**	**1472**	**1476**	**1336**	**1217**	**1009**	**841**	**484**	**323**	19858	1476	17
18	F	**216**	**113**	**67**	**90**	**88**	**211**	**512**	**882**	**917**	**957**	**1146**	**1277**	**1396**	**1444**	**1479**	**1465**	**1490**	**1532**	**1393**	**1318**	**1083**	**876**	**728**	**537**	21217	1532	17
19	S	**335**	**212**	**141**	**109**	**102**	**129**	**250**	**510**	**676**	**918**	**1155**	**1267**	**1430**	**1476**	**1481**	**1539**	**1413**	**1319**	**1245**	**1149**	**963**	**809**	**631**	**491**	19750	1539	15
20	S	**350**	**271**	**168**	**123**	**104**	**100**	**160**	**227**	**377**	**552**	**731**	**1054**	**1239**	**1288**	**1408**	**1314**	**1243**	**1125**	**1055**	**901**	**613**	**436**	**370**	**224**	15433	1408	14
21	M	**152**	**78**	**51**	**75**	**90**	**185**	**497**	**816**	**882**	**929**	**1010**	**1111**	**1262**	**1369**	**1400**	**1371**	**1365**	**1417**	**1350**	**1107**	**824**	**630**	**420**	**236**	18627	1417	17
22	T	**185**	**102**	**74**	**70**	**88**	**200**	**476**	**898**	**929**	**995**	**1105**	**1222**															
23	W																											
24	T																											
25	F																											
26	S																											
27	S																											
28	M																											
29	T																											
30	W																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
181	**100**	**61**	**71**	**87**	**193**	**506**	**847**	**894**	**984**	**1044**	**1148**	**1269**	**1371**	**1383**	**1374**	**1391**	**1385**	**1340**	**1183**	**947**	**729**	**475**	**290**	**19253**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
12	249	8	175	1391	7%	1.000	1.073

ESTIMATED

AADT

17943

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 110** ROAD NAME:
FROM: **SCHWAB RD** TO: **RT 25**
COUNTY: **Suffolk**
DIRECTION: Southbound FACTOR GROUP: 30
REC. SERIAL #: FUNC. CLASS: 14
TOWN: **HUNTINGTON**
STATE DIR CODE: 2 WK OF YR: 37
PLACEMENT: JUST SOUTH OF DETROIT RD NHS: yes
LION#:
DATE OF COUNT: 09/09/2009
@ REF MARKER: JURIS: NYSDOT
BIN:
NOTES LANE 1: SOUTH
ADDL DATA: Class Speed CC Stn:
RR CROSSING:
NOTES LANE 2: SOUTH
COUNT TYPE: AXLE PAIRS BATCH ID: DOT-WW35w_class
HPMS SAMPLE: 39770000
COUNT TAKEN BY: ORG CODE: DOT INITIALS: DB
PROCESSED BY: ORG CODE: DOT INITIALS: jl

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	W																											
3	T																											
4	F																											
5	S																											
6	S																											
7	M																											
8	T																											
9	W													**1324**	**1259**	**1110**	**791**	**470**	**359**	**236**								
10	T	**112**	**72**	**44**	**61**	**102**	**312**	**698**	**1090**	**1268**	**1148**	**1223**	**1272**	**1443**	**1346**	**1361**	**1361**	**1384**	**1394**	**1245**	**1078**	**761**	**561**	**373**	**280**	19989	1443	12
11	F	**120**	**96**	**64**	**54**	**105**	**310**	**629**	**1009**	**1197**	**1071**	**1162**	**1344**	**1446**	**1407**	**1425**	**1318**	**1365**	**1318**	**1363**	**1129**	**825**	**622**	**519**	**384**	20282	1446	12
12	S	**243**	**174**	**145**	**116**	**113**	**140**	**282**	**477**	**667**	**1046**	**1373**	**1632**	**1665**	**1766**	**1607**	**1621**	**1566**	**1326**	**1237**	**1028**	**821**	**645**	**551**	**478**	20719	1766	13
13	S	**328**	**226**	**148**	**122**	**108**	**110**	**173**	**319**	**410**	**643**	**913**	**1332**	**1394**	**1404**	**1397**	**1317**	**1166**	**1043**	**879**	**769**	**592**	**525**	**333**	**229**	15880	1404	13
14	M	**120**	**67**	**44**	**57**	**131**	**324**	**641**	**1020**	**1229**	**940**	**1041**	**1065**	**1311**	**1338**	**1383**	**1297**	**1386**	**1342**	**1178**	**1077**	**790**	**556**	**362**	**211**	18910	1386	16
15	T	**106**	**69**	**60**	**62**	**129**	**310**	**652**	**1041**	**1197**	**1150**	**1235**	**1289**	**1334**	**1333**	**1337**	**1364**	**1375**	**1379**	**1259**	**1022**	**805**	**577**	**382**	**203**	19670	1379	17
16	W	**125**	**79**	**45**	**50**	**110**	**317**	**652**	**1061**	**1255**	**1113**	**1141**	**1256**	**1420**	**1426**	**1293**	**1374**	**1386**	**1304**	**1157**	**1073**	**723**	**612**	**386**	**229**	19587	1426	13
17	T	**126**	**73**	**45**	**71**	**120**	**327**	**672**	**1039**	**1264**	**1123**	**1157**	**1341**	**1462**	**1387**	**1356**	**1347**	**1454**	**1422**	**1241**	**1122**	**828**	**620**	**443**	**293**	20333	1462	12
18	F	**147**	**101**	**67**	**69**	**106**	**293**	**639**	**1050**	**1186**	**1115**	**1260**	**1423**	**1569**	**1539**	**1394**	**1473**	**1527**	**1503**	**1352**	**1217**	**858**	**642**	**563**	**480**	21573	1569	12
19	S	**298**	**240**	**157**	**140**	**118**	**149**	**286**	**495**	**665**	**1052**	**1271**	**1478**	**1569**	**1567**	**1611**	**1483**	**1391**	**1260**	**1202**	**1028**	**801**	**700**	**596**	**512**	20069	1611	14
20	S	**357**	**258**	**210**	**180**	**114**	**118**	**158**	**316**	**472**	**645**	**979**	**1285**	**1415**	**1399**	**1345**	**1319**	**1209**	**1021**	**859**	**745**	**539**	**413**	**309**	**215**	15880	1415	12
21	M	**108**	**80**	**55**	**55**	**135**	**314**	**633**	**1061**	**1159**	**1091**	**1199**	**1201**	**1279**	**1377**	**1343**	**1390**	**1300**	**1445**	**1211**	**1013**	**672**	**587**	**352**	**221**	19281	1445	17
22	T	**106**	**65**	**61**	**59**	**121**	**272**	**659**	**1074**	**1248**	**1091**	**1243**	**1276**															
23	W																											
24	T																											
25	F																											
26	S																											
27	S																											
28	M																											
29	T																											
30	W																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																								ADT
120	**79**	**55**	**61**	**113**	**306**	**653**	**1049**	**1223**	**1094**	**1185**	**1274**	**1375**	**1368**	**1346**	**1356**	**1381**	**1373**	**1221**	**1071**	**767**	**569**	**380**	**239**	**19658**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
14	307	8	175	1381	7%	1.000	1.073

ESTIMATED

AADT

18321

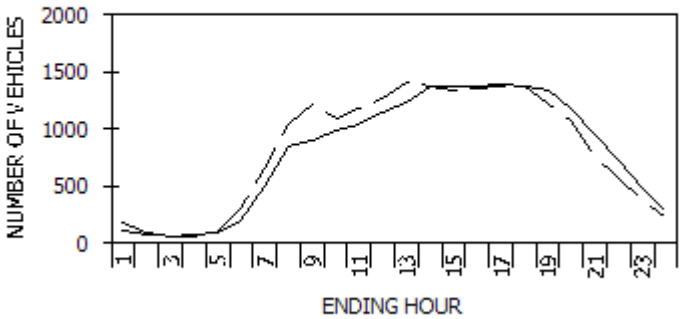
New York State Department of Transportation
Classification Count Average Weekday Data Report

ROUTE #: NY 110 ROAD NAME: YEAR: 2009 STATION: 070205
COUNTY NAME: Suffolk MONTH: September
REGION CODE: 0
FROM: SCHWAB RD
TO: RT 25
REF-MARKER:
END MILEPOINT: 0111109 NO. OF LANES: 4
FUNC-CLASS: 14 HPMS NO: 39770000
STATION NO: 0205 LION#:
COUNT TAKEN BY: ORG CODE: DOT INITIALS: DB
PROCESSED BY: ORG CODE: DOT INITIALS: jl BATCH ID: DOT-WW35w_class

DIRECTION	North	South	TOTAL
NUMBER OF VEHICLES	**19196**	**19677**	**38873**
NUMBER OF AXLES	**38942**	**39914**	**78855**
% HEAVY VEHICLES (F4-F13)	**5.15%**	**4.25%**	**4.70%**
% TRUCKS AND BUSES (F3-F13)	**20.89%**	**13.16%**	**16.98%**
AXLE CORRECTION FACTOR	**0.99**	**0.99**	**0.99**

VEHICLE CLASS		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	TOTAL
NO. OF AXLES		2	2	2	2.5	2	3	4	3.5	5	6	5	6	8.75	
ENDING HOUR	1:00	2	151	22	1	4	0	0	0	1	0	0	0	0	**181**
	2:00	0	86	9	0	2	0	0	0	1	0	0	0	0	**98**
	3:00	0	47	9	0	3	1	0	0	1	0	0	0	0	**61**
	4:00	0	51	12	1	5	1	0	1	1	0	0	0	0	**72**
	5:00	0	56	14	2	6	1	0	3	4	0	0	0	0	**86**
	6:00	0	125	38	8	9	4	0	3	4	1	0	0	0	**192**
	7:00	0	369	92	11	21	4	0	2	7	0	0	0	0	**506**
	8:00	2	614	152	15	45	4	1	7	6	0	0	0	0	**846**
	9:00	2	643	162	15	54	4	1	6	6	1	0	0	0	**894**
	10:00	4	684	193	17	65	4	1	7	8	1	0	0	0	**984**
DIRECTION	11:00	2	761	198	15	47	5	1	7	5	2	0	0	0	**1043**
North	12:00	5	853	209	16	45	5	1	5	7	1	0	0	0	**1147**
	13:00	5	942	213	12	39	5	1	4	5	1	0	0	0	**1227**
	14:00	6	1056	242	12	40	4	0	6	4	0	0	0	0	**1370**
	15:00	6	1062	242	13	42	4	1	5	4	2	0	0	1	**1382**
	16:00	4	1089	218	13	38	3	0	4	3	1	0	0	0	**1373**
	17:00	3	1123	211	8	33	3	0	5	4	0	0	0	0	**1390**
	18:00	3	1161	185	5	24	1	0	2	1	0	0	0	0	**1382**
	19:00	3	1138	167	5	21	0	0	3	2	0	0	0	0	**1339**
	20:00	3	1002	157	4	15	0	0	1	1	0	0	0	0	**1183**
	21:00	4	808	119	3	10	0	0	1	1	0	0	0	0	**946**
	22:00	3	635	80	3	7	0	0	1	1	0	0	0	0	**730**
	23:00	1	417	49	2	4	0	0	1	1	0	0	0	0	**475**
	24:00	2	253	28	1	5	0	0	0	0	0	0	0	0	**289**
TOTAL VEHICLES		**60**	**15126**	**3021**	**182**	**584**	**53**	**7**	**74**	**78**	**10**	**0**	**0**	**1**	**19196**
TOTAL AXLES		120	30252	6042	455	1168	159	28	259	390	60	0	0	9	38942
ENDING HOUR	1:00	0	109	7	2	1	0	0	0	1	0	0	0	0	**120**
	2:00	0	70	4	2	2	0	0	1	1	0	0	0	0	**80**
	3:00	0	48	5	0	1	0	0	0	0	0	0	0	0	**54**
	4:00	0	44	7	1	4	3	0	2	0	0	0	0	0	**61**
	5:00	1	87	16	2	3	2	0	1	1	0	0	0	0	**113**
	6:00	1	243	43	3	5	3	0	5	2	0	0	0	0	**305**
	7:00	1	548	72	7	12	4	0	3	3	1	0	0	0	**651**
	8:00	5	877	115	10	24	7	0	6	4	0	0	0	0	**1048**
	9:00	2	1043	113	10	32	8	0	6	8	0	0	0	0	**1222**
	10:00	4	911	120	9	29	6	0	5	8	1	0	0	0	**1093**
	11:00	4	990	120	13	33	7	0	8	8	1	0	0	0	**1184**
DIRECTION	12:00	6	1070	130	12	36	6	0	5	8	1	0	0	0	**1274**
South	13:00	7	1205	129	12	35	5	0	6	7	1	0	0	0	**1407**
	14:00	6	1167	127	13	36	6	0	5	6	1	0	0	0	**1367**
	15:00	5	1144	129	12	37	5	0	5	6	1	0	0	0	**1344**
	16:00	9	1157	130	10	33	4	0	5	4	1	0	0	0	**1353**
	17:00	7	1196	126	10	29	1	0	6	4	0	0	0	0	**1379**
	18:00	9	1223	98	6	29	2	0	4	2	0	0	0	0	**1373**
	19:00	8	1097	82	7	19	1	0	5	2	1	0	0	0	**1222**
	20:00	6	969	66	5	19	1	0	2	2	0	0	0	0	**1070**
	21:00	5	701	47	3	6	1	0	2	2	0	0	0	0	**767**
	22:00	3	524	34	2	4	0	0	1	1	0	0	0	0	**569**
	23:00	3	350	20	2	3	0	0	1	1	0	0	0	0	**380**
	24:00	1	222	12	2	2	0	0	1	1	0	0	0	0	**241**
TOTAL VEHICLES		**93**	**16995**	**1752**	**155**	**434**	**72**	**0**	**85**	**82**	**9**	**0**	**0**	**0**	**19677**
TOTAL AXLES		186	33990	3504	388	868	216	0	298	410	54	0	0	0	39914
GRAND TOTAL VEHICLES		**153**	**32121**	**4773**	**337**	**1018**	**125**	**7**	**159**	**160**	**19**	**0**	**0**	**1**	**38873**
GRAND TOTAL AXLES		306	64242	9546	842	2036	375	28	556	800	114	0	0	9	78856

TRAFFIC FLOW BY DIRECTION



--- North - -South

PEAK HOUR DATA

DIRECTION	HOUR	COUNT	2-WAY	HOUR	COUNT
North	**17**	**1390**	**A.M.**	**12**	**2421**
South	**13**	**1407**	**P.M.**	**17**	**2769**

VEHICLE CLASSIFICATION CODES:

F1. Motorcycles
F2. Autos*
F3. 2 Axle, 4-Tire Pickups, Vans, Motorhomes*
F4. Buses
F5. 2 Axle, 6-Tire Single Unit Trucks
F6. 3 Axle Single Unit Trucks
F7. 4 or More Axle Single Unit Trucks
F8. 4 or Less Axle Vehicles, One Unit is a Truck
F9. 5 Axle Double Unit Vehicles, One Unit is a Truck
F10. 6 or More Double Unit Vehicles, One Unit is a Truck
F11. 5 or Less Axle Multi-Unit Trucks
F12. 6 Axle Multi-Unit Trucks
F13. 7 or More Axle Multi-Unit Trucks

* INCLUDING THOSE HAULING TRAILERS

FUNCTIONAL CLASS CODES:

RURAL	URBAN	SYSTEM
01	11	PRINCIPAL ARTERIAL-INTERSTATE
02	12	PRINCIPAL ARTERIAL-EXPRESSWAY
02	14	PRINCIPAL ARTERIAL-OTHER
06	16	MINOR ARTERIAL
07	17	MAJOR COLLECTOR
08	17	MINOR COLLECTOR
09	19	LOCAL SYSTEM

SOURCE: NYSDOT DATA SERVICES BUREAU

New York State Department of Transportation
Speed Count Average Weekday Report

Date: 04/14/2010

Station: 070205
Route #: NY 110 Road name:
From: SCHWAB RD
To: RT 25
Direction: North
Lanes: 1, 2
NYSDOT EI standard bin range violation

Start date: Wed 09/09/2009 17:00
End date: Tue 09/22/2009 12:45
County: Suffolk
Town: HUNTINGTON
Speed limit: 40
LION#:

Count duration: 308 hours
Functional class: 14
Factor group: 30
Batch ID: DOT-WW35w_class
Count taken by: Org: DOT Init: DS
Processed by: Org: DOT Init: jl

Speeds, mph

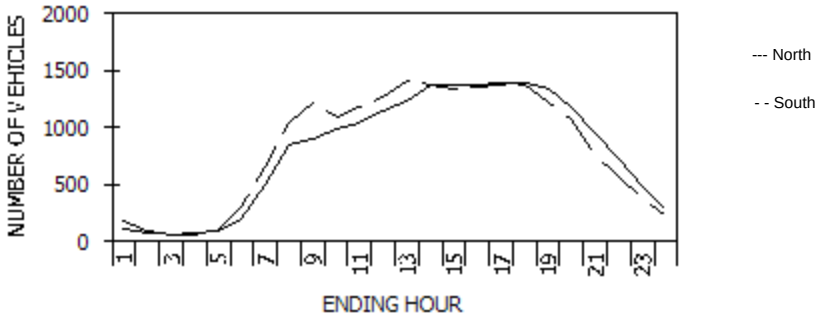
Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	65.1-85.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	10	6	20	45	46	32	16	4	1	1	1	12.6	3.8	1.6	1.1	0.5	32.7	36.1	44.4	182
2:00	5	2	10	23	28	20	8	2	1	0	0	11.1	3.0	1.0	0.0	0.0	33.3	36.7	44.1	99
3:00	3	2	7	14	16	11	5	1	1	0	0	11.7	3.3	1.7	0.0	0.0	32.9	36.3	44.1	60
4:00	1	3	9	21	19	12	5	1	0	0	0	8.5	1.4	0.0	0.0	0.0	33.9	35.4	43.1	71
5:00	3	5	11	16	19	16	11	4	1	0	0	18.6	5.8	1.2	0.0	0.0	33.8	37.2	46.5	86
6:00	10	7	26	43	43	38	15	7	3	1	0	13.5	5.7	2.1	0.5	0.0	32.8	36.3	44.7	193
7:00	17	27	63	120	126	87	46	14	5	1	0	13.0	4.0	1.2	0.2	0.0	33.3	36.1	44.5	506
8:00	57	94	176	219	166	92	33	8	2	1	0	5.2	1.3	0.4	0.1	0.0	29.2	32.3	40.5	848
9:00	77	115	201	231	153	78	27	9	2	0	1	4.4	1.3	0.3	0.1	0.1	27.9	31.2	39.5	894
10:00	120	153	245	231	149	59	21	5	1	0	0	2.7	0.6	0.1	0.0	0.0	26.1	29.5	38.0	984
11:00	107	160	278	278	147	55	16	2	0	0	0	1.7	0.2	0.0	0.0	0.0	26.5	29.6	37.2	1043
12:00	141	189	310	293	149	49	14	2	1	0	0	1.5	0.3	0.1	0.0	0.0	25.7	29.0	36.5	1148
13:00	216	254	347	255	117	30	7	2	0	0	0	0.7	0.2	0.0	0.0	0.0	23.6	27.1	34.5	1228
14:00	282	314	347	272	117	30	7	2	0	0	0	0.7	0.1	0.0	0.0	0.0	22.8	26.3	34.1	1371
15:00	365	294	356	233	97	30	5	1	0	0	0	0.4	0.1	0.0	0.0	0.0	21.6	25.5	33.5	1381
16:00	206	251	373	317	154	57	14	1	0	0	0	1.1	0.1	0.0	0.0	0.0	24.7	28.1	35.7	1373
17:00	179	260	378	345	162	52	11	3	1	0	0	1.1	0.3	0.1	0.0	0.0	25.2	28.4	35.7	1391
18:00	168	272	416	331	144	40	11	3	1	0	0	1.1	0.3	0.1	0.0	0.0	25.2	28.1	34.9	1386
19:00	167	265	404	317	134	38	10	2	1	0	0	1.0	0.2	0.1	0.0	0.0	25.0	28.0	34.8	1338
20:00	159	258	351	263	109	31	11	2	0	0	0	1.1	0.2	0.0	0.0	0.0	24.6	27.5	34.6	1184
21:00	95	140	263	244	131	55	15	3	1	0	0	2.0	0.4	0.1	0.0	0.0	26.6	29.6	37.5	947
22:00	63	71	169	210	135	59	19	3	2	0	0	3.3	0.7	0.3	0.0	0.0	28.2	31.5	39.1	731
23:00	32	30	82	131	111	61	21	5	2	0	0	5.9	1.5	0.4	0.0	0.0	30.2	33.6	41.5	475
24:00	18	13	40	76	72	44	18	6	3	0	0	9.3	3.1	1.0	0.0	0.0	31.4	34.9	43.2	290
Avg. Daily Total	2501	3185	4882	4528	2544	1076	366	92	29	4	2	2.6	0.7	0.2	0.0	0.0	25.6	29.1	37.5	19209
Percent	13.0%	16.6%	25.4%	23.6%	13.2%	5.6%	1.9%	0.5%	0.2%	0.0%	0.0%									
Cum. Percent	13.0%	29.6%	55.0%	78.6%	91.8%	97.4%	99.3%	99.8%	100.0%	100.0%	100.0%									
Average hour	104	133	203	189	106	45	15	4	1	0	0									800

	Avg. Speed	50th% Speed	85th% Speed
North	25.6	29.1	37.5
South	29.6	31.6	38.4

Peak Hour Data

Direction	Hour	Count	2-way	Hour	Count
North	17	1391	A.M.	12	2422
South	13	1408	P.M.	17	2772

TRAFFIC FLOW BY DIRECTION



Station: 070205
Route #: NY 110 Road name:
From: SCHWAB RD
To: RT 25
Direction: South
Lanes: 1, 2
NYSDOT EI standard bin range violation

Start date: Wed 09/09/2009 17:00
End date: Tue 09/22/2009 12:45
County: Suffolk
Town: HUNTINGTON
Speed limit: 40
LION#:

Count duration: 308 hours
Functional class: 14
Factor group: 30
Batch ID: DOT-WW35w_class
Count taken by: Org: DOT Init: DS
Processed by: Org: DOT Init: jl

Speeds, mph

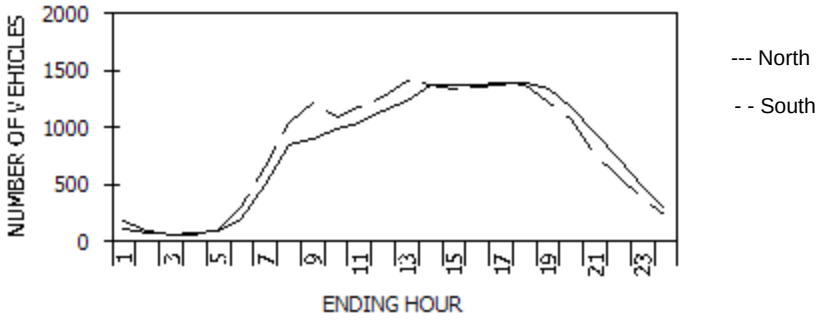
Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	65.1-85.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	1	3	17	33	39	19	6	1	0	0	0	5.9	0.8	0.0	0.0	0.0	34.3	35.8	42.2	119
2:00	1	3	10	21	25	14	4	1	0	0	0	6.3	1.3	0.0	0.0	0.0	34.1	36.0	42.6	79
3:00	1	1	8	18	16	7	3	1	0	0	0	7.3	1.8	0.0	0.0	0.0	33.6	34.9	42.0	55
4:00	1	1	9	22	17	8	2	0	0	0	0	3.3	0.0	0.0	0.0	0.0	33.2	34.4	40.7	60
5:00	2	5	11	27	36	22	8	2	0	0	0	8.8	1.8	0.0	0.0	0.0	34.4	36.6	43.5	113
6:00	3	6	32	76	104	63	18	3	1	0	0	7.2	1.3	0.3	0.0	0.0	35.2	36.8	43.2	306
7:00	5	11	67	187	230	117	30	4	1	0	0	5.4	0.8	0.2	0.0	0.0	34.9	36.3	42.4	652
8:00	12	35	126	322	363	151	35	4	1	1	0	3.9	0.6	0.2	0.1	0.0	33.8	35.5	41.2	1050
9:00	19	48	203	407	367	145	28	4	1	0	0	2.7	0.4	0.1	0.0	0.0	32.7	34.2	40.0	1222
10:00	30	95	261	374	231	83	17	3	0	0	0	1.8	0.3	0.0	0.0	0.0	30.4	32.2	38.7	1094
11:00	44	141	353	392	195	48	10	1	0	0	0	0.9	0.1	0.0	0.0	0.0	28.9	30.7	37.0	1184
12:00	48	167	399	408	189	52	10	1	0	0	0	0.9	0.1	0.0	0.0	0.0	28.6	30.3	36.7	1274
13:00	67	242	469	411	167	42	8	2	0	0	0	0.7	0.1	0.0	0.0	0.0	27.5	29.3	35.3	1408
14:00	66	198	453	429	168	44	10	0	0	0	0	0.7	0.0	0.0	0.0	0.0	27.8	29.7	35.6	1368
15:00	78	172	422	404	202	55	10	1	0	0	0	0.8	0.1	0.0	0.0	0.0	27.9	30.0	36.7	1344
16:00	62	173	418	439	200	53	9	1	0	0	0	0.7	0.1	0.0	0.0	0.0	28.3	30.3	36.5	1355
17:00	69	183	419	444	194	58	12	2	0	0	0	1.0	0.1	0.0	0.0	0.0	28.2	30.3	36.6	1381
18:00	74	165	412	438	207	64	10	2	0	0	0	0.9	0.1	0.0	0.0	0.0	28.2	30.4	36.9	1372
19:00	63	150	360	395	184	55	13	1	0	0	0	1.1	0.1	0.0	0.0	0.0	28.3	30.5	36.9	1221
20:00	46	139	328	357	148	42	9	2	0	0	0	1.0	0.2	0.0	0.0	0.0	28.4	30.4	36.4	1071
21:00	17	50	182	277	172	52	13	2	1	0	0	2.1	0.4	0.1	0.0	0.0	30.9	32.5	38.7	766
22:00	5	25	96	208	158	60	15	2	0	0	0	3.0	0.4	0.0	0.0	0.0	32.8	33.9	39.8	569
23:00	4	11	44	132	121	51	14	2	0	0	0	4.2	0.5	0.0	0.0	0.0	33.8	35.0	41.0	379
24:00	2	5	28	77	78	36	10	2	1	0	0	5.4	1.3	0.4	0.0	0.0	34.4	35.5	41.9	239
Avg. Daily Total	720	2029	5127	6298	3811	1341	304	44	6	1	0	1.8	0.3	0.0	0.0	0.0	29.6	31.6	38.4	19681
Percent	3.7%	10.3%	26.1%	32.0%	19.4%	6.8%	1.5%	0.2%	0.0%	0.0%	0.0%									
Cum. Percent	3.7%	14.0%	40.0%	72.0%	91.4%	98.2%	99.7%	100.0%	100.0%	100.0%	100.0%									
Average hour	30	85	214	262	159	56	13	2	0	0	0									820

	Avg. Speed	50th% Speed	85th% Speed
North	25.6	29.1	37.5
South	29.6	31.6	38.4

Peak Hour Data

Direction	Hour	Count	2-way	Hour	Count
North	17	1391	A.M.	12	2422
South	13	1408	P.M.	17	2772

TRAFFIC FLOW BY DIRECTION





ROUTE 110 ALTERNATIVES ANALYSIS

Appendix C:
Task 3 Technical Memorandum

TOWN OF BABYLON
SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

Task 3: Analyze Travel Markets

September 15, 2014

Submitted by:

PARSONS BRINCKERHOFF

Version Final

QUALITY ASSURANCE/QUALITY CONTROL

Created by:		September 15, 2014
	Maxwell Sokol / Parsons Brinckerhoff	**Date**
Reviewed by:		September 15, 2014
	Nicole Bucich / Parsons Brinckerhoff	**Date**
Approved by:		August 26, 2014
	Daniel Baer / Parsons Brinckerhoff	**Date**

REVISIONS

Date	Version Number	Revision
August 27, 2014	1.0	Draft document for review
September 12, 2014	2.0	Addressing Town of Babylon comments, received September 8, 2014
September 15, 2014	Final	Addressing Town of Babylon comments, received September 15, 2014

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1. Introduction

The purpose of the Route 110 Alternatives Analysis is to facilitate the evaluation of alternatives to address the transportation demand in the corridor, manage congestion, maximize environmental benefits, and enhance economic competitiveness. The Alternatives Analysis will build upon previous and ongoing studies to select a Locally Preferred Alternative (LPA) to advance to Project Development with the Federal Transit Administration (FTA). While the Moving Ahead for Progress in the 21st Century Act (MAP-21)—enacted by Congress in 2012—eliminated the requirement for an Alternatives Analysis, good planning practice dictates the importance of looking at reasonable options in a transportation corridor to ensure that the public and decision-makers do not rush to judgment on a solution in search of a problem.

As such, a focused Route 110 Alternatives Analysis will be conducted, based upon the following:

- A firm understanding of transportation needs, problems, and opportunities in the corridor
- The establishment of clear goals and objectives for the transportation improvements in the corridor
- The definition of various technologies and operating plans designed to address corridor problems, goals, and objectives
- The evaluation of alternatives against multiple measures—including financial feasibility of the grantee/operator/sponsor (in this case the Town of Babylon)

This will collectively result in a local decision that is well informed, demonstrates strong consensus, and is less vulnerable to delays in the planning and implementation process.

2. Overview

This technical memorandum presents an analysis of Route 110 travel characteristics, including existing and projected future travel markets. Consistent with the socioeconomic and demographic profile presented in the Task 2 technical memorandum, the analysis of Route 110 travel characteristics is based on travel within, to, and from a two-mile area around Route 110 (hereafter, "the Route 110 area"), and specifically, around the portion of Route 110 within the study area. Origin and destination data is summarized for the 28-county region as modeled by the New York Metropolitan Transportation Council (NYMTC). An assessment of the travel market within the Route 110 area is supplemented with the identification of travel trends to and from the area for origins and destinations throughout the metropolitan area. This technical memorandum summarizes existing conditions, based on the results of the 2010/2011 NYMTC Regional Household Travel Survey (RHTS), and projected future conditions in 2040. Additional considerations for future travel trends are also summarized, including Long Island Rail Road (LIRR) Double Track travel demand projections and other indicators that identify travel trends which are supportive of long-term transit use in the Route 110 area.

The travel market analysis in this technical memorandum sets the framework for the ridership forecasting effort, which will be undertaken in Task 10 as part of the evaluation of the remaining alternatives following the initial and second screening of alternatives. Ridership forecasting is a critical component of the Alternatives Analysis process, and will be used as a key metric in comparing different transit alternatives for Route 110. Furthermore, ridership forecasts are included in the FTA New/Small Starts Evaluation and Rating Process as a measure of mobility improvements. The ridership forecasting effort will be conducted using the FTA's Simplified Trips-on-Project Software (STOPS) model, which is explicitly referenced in the FTA New/Small Starts Evaluation and Rating Process Final Policy Guidance as a tool that can significantly streamline generation of ridership estimates and vehicle-miles traveled data for use in the evaluation. Once calibrated, STOPS will utilize demographic forecasts from NYMTC to represent expected changes in population and employment and generate ridership estimates for transit use in the future with and without the transit alternatives for Route 110.

3. Travel Market Analysis

3.1 EXISTING TRAVEL MARKET: 2010/2011 NYMTC REGIONAL HOUSEHOLD TRAVEL SURVEY (RHTS)

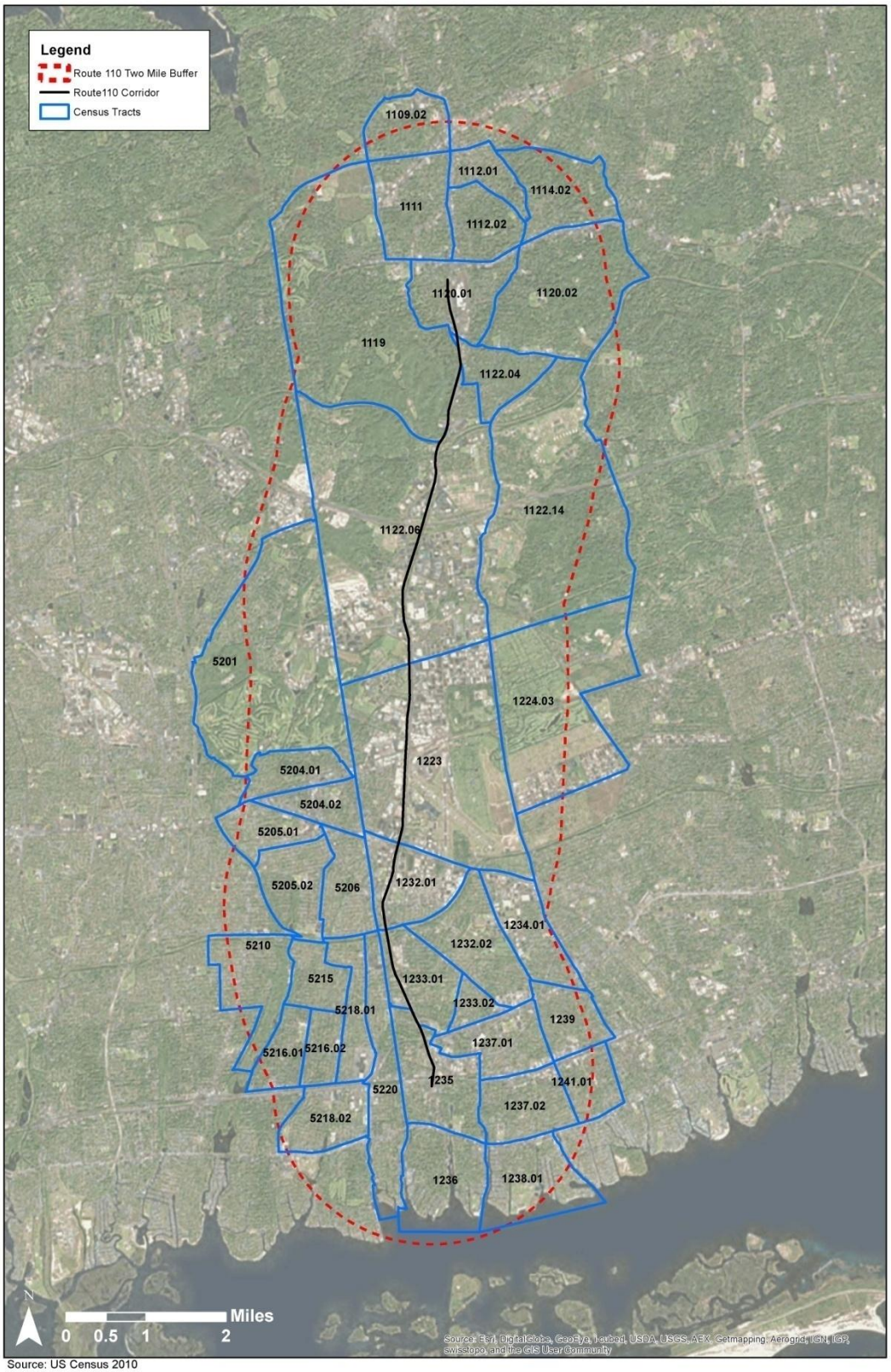
To summarize the existing travel market, tabulations of trips were compiled from NYMTC's RHTS, a study conducted from Fall 2010 through Fall 2011, that collected daily travel data from households across 28 counties in New York, New Jersey and Connecticut. According to NYMTC, the RHTS (sponsored by NYMTC and the North Jersey Transportation Planning Authority (NJTPA)) "provides key travel statistics for the region to help in the planning of future transportation investments" (http://www.nymtc.org/project/surveys/survey.html). Data was aggregated for the census tracts within the Route 110 area, and all census tracts with 50 percent or more of their area within the Route 110 area were included, consistent with the socioeconomic and demographic profile in the Task 2 technical memorandum. The area encompasses a total of 38 census tracts, located in both Suffolk and Nassau Counties. Figure 1 shows the Route 110 area for the travel market analysis.

For the 28 counties in the modeled region, the RHTS data was aggregated at a scale that supports a simplified yet comprehensive assessment of existing travel trends. County-specific data for Manhattan and Queens Counties are presented as detailed indicators of the commuting market to the Route 110 area from points west. Data for Brooklyn (Kings County), Staten Island (Richmond County), and the Bronx (Bronx County) were combined into a single "Other NYC" category to simplify the tabulations. Similarly, all New Jersey counties were combined into a single "New Jersey" category, and the following counties were combined as "Hudson Valley/Connecticut": Westchester, Rockland, Putnam, Orange, Dutchess, Fairfield, and New Haven. For Nassau and Suffolk Counties, data is presented at the town level to provide a detailed representation of origin and destination data on Long Island. The result is a matrix (see Appendix A) of origins and destinations that summarizes travel within, to, and from the Route 110 area.

One of the main benefits of using the RHTS for the travel market analysis is its inclusion of non-work trips in addition to journey-to-work data. The Task 2 technical memorandum summarized journey-to-work data for the Route 110 area—in comparison to Nassau and Suffolk Counties—based on 2008-2012 American Community Survey (ACS) 5-Year Estimates. Whereas the US Census/ACS only compiles journey-to-work data, the NYMTC RHTS also summarizes non-work trips, broken down by the following purpose categories:

- Maintenance, defined generally as picking up/dropping off and shopping;
- Discretionary, defined generally as travel for meals and visits; and
- Other, defined generally as getting gas and other trip purposes.

Figure 1: The Route 110 Area for the Travel Market Analysis



Source: US Census 2010

In the summary that follows, the data for maintenance, discretionary, and other purpose trips have been aggregated to represent total non-work trips. For each trip purpose, the RHTS also specifies the travel mode:

- Single-occupancy vehicle (SOV);
- High-occupancy vehicle (HOV), defined as a vehicle with two or more persons;
- Bus;
- Subway, which includes Port Authority Trans-Hudson (PATH), light rail, and ferry;
- Commuter rail; or
- Other, which includes non-motorized transportation (e.g., bicycle, pedestrian), school bus, and taxi.

Data in the following tables were expanded from the sample number of survey daily trips compiled in the RHTS using a complex weighting/expansion procedure. Overall, there were a total of 2,201 survey daily trips within, to, and from the Route 110 area in the 2010/2011 RHTS, which equates to a total of 1,079,593 daily trips after the weighting/expansion procedure was applied.

Table 1 through Table 4 presents combined data for daily work and non-work trips. Table 1 shows the breakdown of combined daily work and non-work trips by trip direction. The distribution of daily trips was relatively evenly split between those trips within, to, and from the Route 110 area, with each trip direction constituting approximately one third of the total daily trips. This demonstrates that the Route 110 area includes multiple travel markets to be served by the regional transportation network, as the number of intra-area trips is closely matched by trips into and out of the area. Appendix A includes the detailed origin and destination data for all daily trips (by mode), and Table 2 through Table 4 summarizes this data.[1]

TABLE 1: EXISTING TRAVEL MARKET – SUMMARY OF TOTAL DAILY TRIPS WITHIN, TO, AND FROM THE ROUTE 110 AREA

Trip Direction*	Number of Daily Trips	Percentage of Total
Trips within the Route 110 Area	354,837	32.9%
Trips to the Route 110 Area	362,666	33.6%
Trips from the Route 110 Area	362,090	33.6%
Total, All Trips	1,079,593	100.0%

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored
* Trips to and from the Route 110 area are exclusive of trips within the Route 110 area.

[1] The subway mode is omitted from the summary tables presented in this document (but is included in the Appendix), as no trips within, to, or from two-mile radius of Route 110 realistically use subway as the primary mode. The sample of 2,201 reported trips does include one subway trip (weighted to represent 59 trips), but this is most likely a coding error in the way a survey respondent reported the trip.

As shown in Table 2, approximately half (50.4%) of the daily trips within the Route 110 area were made using an SOV, and most of the other daily trips were made using an HOV (38.9%). Taken together, approximately 89.3% of daily trips were via an automobile. Approximately one in every 10 daily trips was made using either non-motorized transportation, school bus, or taxi (10.6%), and only 0.2% of daily trips were made using a public bus, although it is possible that the bus mode split is under-represented due to the small sample size. No trips within the Route 110 area were made using commuter rail.

TABLE 2: EXISTING TRAVEL MARKET – MODAL SPLIT FOR DAILY TRIPS WITHIN THE ROUTE 110 AREA

Mode	Number of Daily Trips	Percentage of Total
SOV	178,808	50.4%
HOV	137,856	38.9%
Bus	670	0.2%
Commuter Rail	0	0.0%
Other (Non-motorized, School Bus, Taxi)	37,503	10.6%
Total, All Modes	354,837	100.0%

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored

Table 3 shows the modal split for daily trips to the Route 110 area from elsewhere in the 28-county region. Similar to the modal split for daily trips within the Route 110 area, SOV and HOV together account for the vast majority of the daily trips to the Route 110 area (56.2% and 33.2%, respectively, for a total of 89.4%, which mirrors trips within the Route 110 area). Trips made by commuter rail constitute approximately 2.0% of the total daily trips, with an additional 0.1% percent of daily trips made by bus, although these numbers might under-represent the actual proportion of such trips. Daily trips by other modes (non-motorized, school bus, and taxi) constitute 8.5% of the total.

TABLE 3: EXISTING TRAVEL MARKET – MODAL SPLIT FOR DAILY TRIPS TO THE ROUTE 110 AREA

Mode	Number of Daily Trips	Percentage of Total
SOV	203,846	56.2%
HOV	120,304	33.2%
Bus	272	0.1%
Commuter Rail	7,361	2.0%
Other (Non-motorized, School Bus, Taxi)	30,824	8.5%
Total, All Modes	362,666	100.0%

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored

As shown in Table 4, the modal split for daily trips from the Route 110 area to elsewhere in the 28-county region is comparable to that for daily trips in the reverse direction. Most daily trips are made either by SOV or HOV (59.6% and 29.3%, respectively, for a total of 88.9%), with an additional 9.2% of daily trips made by non-motorized transportation, school bus, or taxi. Approximately 1.8% of daily trips are made by commuter rail, and 0.1% of daily trips are made by bus, although these numbers might under-represent the actual proportion of such trips.

TABLE 4: EXISTING TRAVEL MARKET – MODAL SPLIT FOR DAILY TRIPS FROM THE ROUTE 110 AREA

Mode	Number of Daily Trips	Percentage of Total
SOV	215,683	59.6%
HOV	106,214	29.3%
Bus	187	0.1%
Commuter Rail	6,463	1.8%
Other (Non-motorized, School Bus, Taxi)	33,484	9.2%
Total, All Modes	362,090	100.0%

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored

Table 5 presents a summary of daily work trips for all modes, and the compiled origin-destination data offers a comprehensive profile of journey-to-work trips to and from the Route 110 area. Of the approximately 336,630 daily work trips that originated in the Route 110 area, approximately 149,040 trips (44.3%) had destinations within the Route 110 area, and approximately 187,590 trips (55.7%) had destinations elsewhere in the region. For the approximately 187,590 daily work trips that started from points within the Route 110 area and ended elsewhere in the region, the vast majority of such trips were destined for locations within Long Island, as only approximately 17,730 trips combined were destined for New York City (approximately 8,310 trips to Queens, 5,950 trips to Manhattan, and 2,490 trips to other boroughs) or New Jersey (approximately 980 trips), and no trips were destined for Hudson Valley/Connecticut.

Table 5 also provides insight into the existing commuting patterns to destinations in the Route 110 area. Approximately 327,980 daily work trips were destined for the Route 110 area, with origins summarized as follows and as shown in Figure 2:

- Approximately 149,040 daily work trips (45.4%) originated in the Route 110 area;
- Approximately 72,510 daily work trips (22.1%) originated in other parts of Suffolk County (outside of the Route 110 area), with most trips originating in either Huntington (approximately 26,390 trips), Babylon (approximately 17,920 trips), or Islip (approximately 15,250 trips);
- Approximately 83,220 daily work trips (25.4%) originated in other parts of Nassau County (outside of the Route 110 area), with Oyster Bay contributing the largest share of approximately 41,410 trips;
- Approximately 19,640 daily work trips (6.0%) originated in New York City, with approximately 10,525 trips originating in Queens, 7,700 trips originating in Manhattan, and 1,415 trips originating in other parts of New York City;
- Approximately 3,180 daily work trips (1.0%) originated in New Jersey; and
- Approximately 390 daily work trips (0.1%) originated in Hudson Valley/Connecticut.

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TABLE 5: EXISTING TRAVEL MARKET – DAILY WORK TRIPS (ORIGIN-DESTINATION) IN THE 28-COUNTY REGION (ALL MODES)

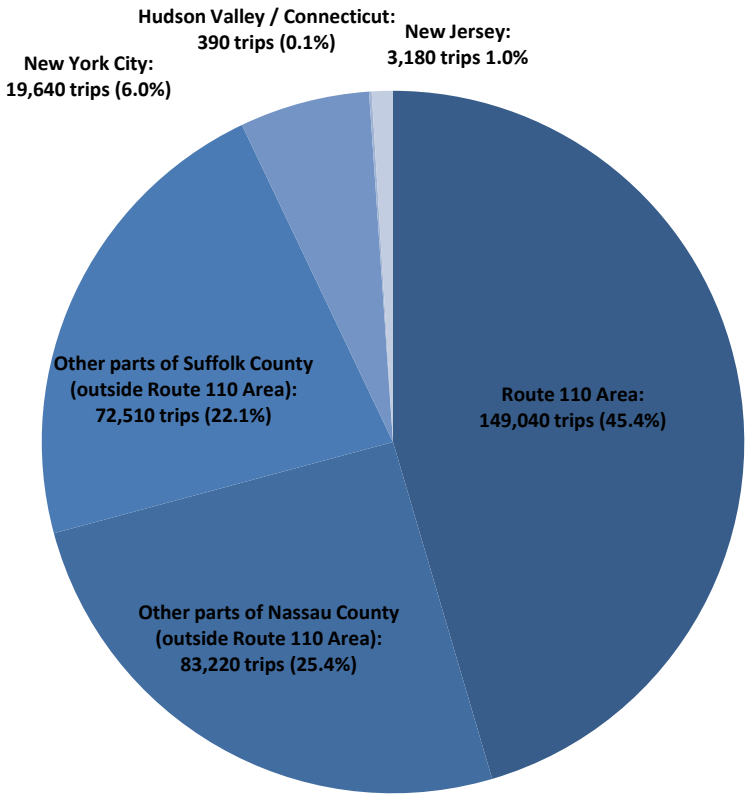
ORIGINS	DESTINATIONS																		
	Route 110 Area	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	Manhattan	Queens	Other NYC	Hudson Valley / Connecticut	New Jersey	Total, All Destinations
Route 110 Area	**149,041**	**15,780**	**9,382**	**0**	**0**	**6,177**	**0**	**39,035**	**28,661**	**22,023**	**6,351**	**42,384**	**64**	**5,950**	**8,310**	**2,488**	**0**	**983**	**336,629**
Babylon	**17,916**	99,614	3,600	415	0	5,371	61	10,998	2,389	27,224	1,690	4,978	0	11,042	5,592	1,772	0	0	192,662
Smithtown	**6,734**	3,968	139,734	0	0	29,511	0	1,896	20,547	25,514	3,523	4,206	503	6,794	1,979	1,902	0	0	246,811
Southampton	**0**	415	0	35,256	3,637	8,553	7,732	523	284	244	0	736	6,188	0	0	0	0	0	63,568
Southold	**0**	0	0	3,637	39,307	1,265	0	0	0	0	0	0	139	0	0	0	0	0	44,348
Brookhaven	**6,156**	4,152	34,018	9,902	1,265	558,072	2,275	11,721	8,729	76,583	3,493	8,813	10,313	9,687	3,116	2,836	2,584	518	754,233
East Hampton	**0**	61	0	10,041	0	2,190	6,153	0	0	0	0	0	0	0	0	0	0	0	18,445
Hempstead	**37,177**	7,190	3,830	523	0	8,020	0	669,879	4,134	15,999	53,523	42,833	0	55,393	94,427	20,591	2,388	5,463	1,021,370
Huntington	**26,387**	879	18,139	284	0	8,914	0	3,308	111,768	8,324	2,314	13,209	0	5,039	2,811	2,588	0	2,514	206,478
Islip	**15,251**	30,959	26,499	159	0	73,178	0	15,625	10,059	309,013	1,765	10,791	417	6,528	14,028	1,356	393	4,544	520,565
North Hempstead	**4,631**	1,626	3,017	0	0	3,317	0	57,037	2,654	2,144	206,652	23,335	0	22,963	50,629	15,884	5,366	2,081	401,336
Oyster Bay	**41,407**	9,138	3,107	0	0	9,600	0	45,468	8,887	10,110	24,593	248,853	0	19,825	11,290	4,215	1,770	48	438,311
Riverhead	**64**	0	503	3,950	301	12,261	0	0	0	333	0	0	19,708	0	0	0	0	53	37,173
Manhattan	**7,700**	11,116	2,111	0	0	10,772	5,238	47,848	3,937	6,069	23,052	17,507	0	3,046,922	345,753	608,997	134,429	276,901	4,548,352
Queens	**10,524**	3,490	1,317	0	0	3,266	0	88,210	1,279	15,956	56,021	17,588	0	388,873	1,837,629	204,157	39,547	24,919	2,692,776
Other NYC	**1,414**	1,772	1,902	0	0	3,194	0	19,128	2,373	887	21,105	9,016	0	681,205	201,184	3,855,345	94,061	95,164	4,987,750
Hudson Valley / Connecticut	**390**	0	462	0	0	2,626	0	2,004	0	0	5,532	1,920	0	151,710	36,894	105,017	5,016,067	89,415	5,412,037
New Jersey	**3,184**	442	147	0	0	231	0	5,343	1,172	1,363	1,082	0	53	296,964	18,831	97,352	86,387	9,075,588	9,588,139
Total, All Origins	**327,976**	190,602	247,768	64,167	44,510	746,518	21,459	1,018,023	206,873	521,786	410,696	446,169	37,385	4,708,895	2,632,473	4,924,500	5,382,992	9,578,191	31,510,983

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored

Notes: Refer to discussion in narrative about data aggregation for "Other NYC," "Hudson Valley/Connecticut," and "New Jersey." Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively). Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

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Figure 2: Daily Work Trips Destined for the Route 110 Area, by Origin (Total ≈ 327,980 Daily Trips)



Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored

This data demonstrates that the vast majority of daily work trips destined for the Route 110 area originated on Long Island (approximately 304,770 trips or 92.9%), with nearly half of such trips (approximately 149,040 trips) originating in the Route 110 area and the balance originating in other parts of Nassau or Suffolk Counties. The approximately 23,210 daily work trips destined for the Route 110 area with origins located off Long Island constituted only approximately 7.1% of the total daily work trips destined for the Route 110 area; most of these trips (approximately 19,640 trips) originated in New York City, and nearly half (approximately 10,520 trips) originated in Queens. Daily work trips destined for the Route 110 area with origins in New Jersey or Hudson Valley/Connecticut collectively constituted only approximately 2.0% of total daily work trips destined for the Route 110 area.

Appendix B includes mode-specific origin-destination tables for daily work trips, complementing the summary information for all modes in Table 5.

Similar to Table 5 for work trips, Table 6 includes a summary of daily non-work trips in the 28-county region for all modes. Of the approximately 380,300 daily non-work trips with origins in the Route 110 area, approximately 205,800 trips (54.1%) had destinations also within the Route 110 area, and approximately 174,500 trips (45.9%) had destinations elsewhere in the region. For the approximately 174,500 daily non-work trips that started from points within the Route 110 area and ended elsewhere in the region, the destinations were primarily other locations on Long Island, as only approximately 8,140 trips combined were destined for New York City (approximately 4,790 trips to Queens and 2,710 trips to Manhattan, with no trips destined for other boroughs) or Hudson Valley/Connecticut (approximately 640 trips), and no trips were destined for New Jersey.

Figure 3 summarizes the distribution of trip origins for daily non-work trips destined for the Route 110 area. Approximately 389,520 daily non-work trips were destined for the Route 110 area, with origins summarized as follows:

- Approximately 205,800 daily non-work trips (52.8%) originated in the Route 110 area;
- Approximately 96,790 daily non-work trips (24.8%) originated in other parts of Suffolk County (outside of Route 110 area), with most trips originating in either Huntington (approximately 36,200 trips) or Babylon (approximately 35,000 trips);
- Approximately 77,920 daily non-work trips (20.0%) originated in other parts of Nassau County (outside of Route 110 area), with Oyster Bay contributing the largest share of approximately 61,600 trips;
- Approximately 8,370 daily non-work trips (2.1%) originated in New York City, with approximately 4,465 trips originating in Queens, 2,925 trips originating in Manhattan, and 980 trips originating in other parts of New York City;
- Approximately 640 daily non-work trips (0.2%) originated in Hudson Valley/Connecticut; and
- No daily non-work trips originated in New Jersey.

TABLE 6: EXISTING TRAVEL MARKET – DAILY NON-WORK TRIPS (ORIGIN-DESTINATION) IN THE 28-COUNTY REGION (ALL MODES)

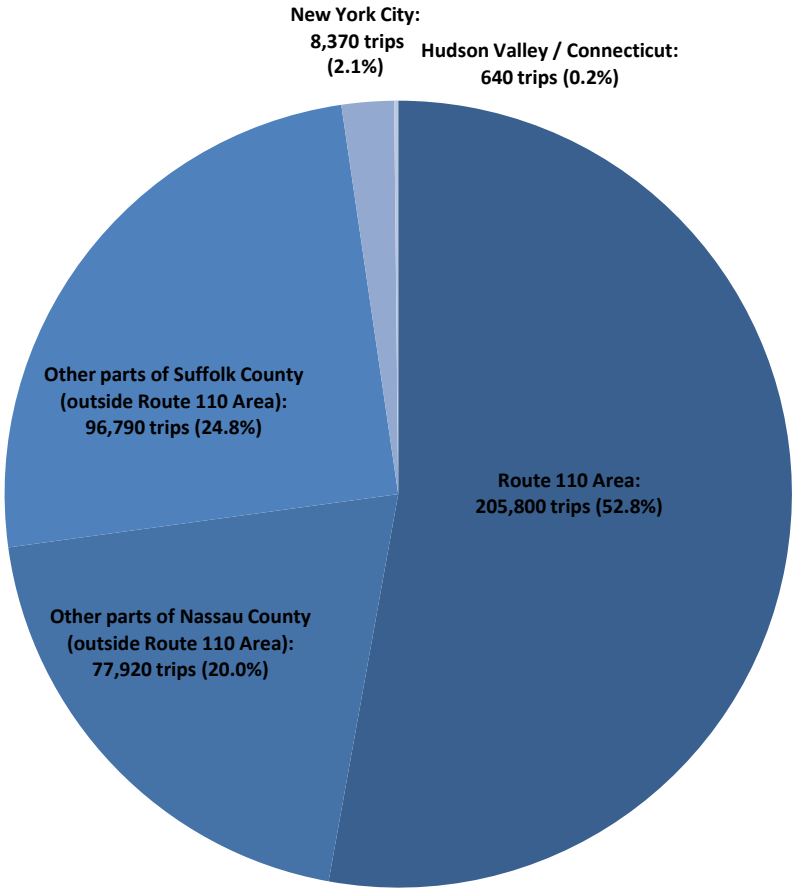
ORIGINS	DESTINATIONS																	
	Route 110 Area	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	Manhattan	Queens	Other NYC	Hudson Valley / Connecticut	New Jersey	Total, All Destinations
Route 110 Area	**205,795**	**38,109**	**4,180**	**317**	**0**	**4,660**	**0**	**17,967**	**35,833**	**8,328**	**347**	**56,622**	**0**	**2,707**	**4,790**	**0**	**641**	**0**	**380,296**
Babylon	**35,001**	244,972	962	0	0	5,686	56	17,266	1,379	60,319	56	7,910	500	99	0	2,723	0	0	376,929
Smithtown	**10,699**	720	225,680	0	0	40,459	0	5,134	25,529	28,929	7,351	2,732	0	185	1,038	14,786	62	285	363,589
Southampton	**64**	0	567	101,848	14,087	9,468	8,261	129	0	775	0	0	5,010	2,022	1,617	0	0	0	143,848
Southold	**0**	0	0	14,643	108,648	0	0	0	0	0	0	0	371	0	0	0	0	0	123,662
Brookhaven	**3,876**	3,490	53,148	9,689	0	1,531,878	0	4,242	6,038	77,562	385	1,523	18,665	10,564	891	95	151	0	1,722,197
East Hampton	**0**	56	0	5,941	0	0	93,618	0	0	0	0	0	3,082	0	0	0	0	0	102,697
Hempstead	**15,834**	18,322	3,516	129	0	5,376	0	1,415,048	2,191	1,928	48,325	74,433	1,342	9,353	119,904	11,210	839	2,849	1,730,599
Huntington	**36,200**	1,507	27,089	0	0	4,985	0	2,231	354,341	1,755	6,365	16,663	0	3,599	2,435	0	1,209	0	458,379
Islip	**10,636**	56,812	29,594	1,827	0	76,757	0	697	2,286	640,775	2,704	8,300	115	1,207	4,057	10,339	60	0	846,166
North Hempstead	**480**	257	7,351	0	0	311	0	60,535	6,154	3,192	530,440	28,828	0	4,598	40,536	9,052	523	103	692,360
Oyster Bay	**61,603**	4,525	2,766	736	0	426	0	69,107	17,967	9,684	31,520	461,902	0	4,864	19,074	5,182	4,211	220	693,787
Riverhead	**317**	500	0	4,136	765	20,265	3,082	0	0	115	0	0	68,653	0	0	0	0	0	97,833
Manhattan	**2,926**	99	243	50	0	14,114	2,402	13,212	3,044	4,436	7,824	4,615	0	3,384,161	168,880	418,537	57,743	108,617	4,190,903
Queens	**4,466**	1,763	1,929	1,617	0	3,170	0	109,168	2,900	3,336	41,685	15,737	0	135,057	3,437,266	166,326	10,177	10,981	3,945,578
Other NYC	**978**	13,215	1,737	0	0	13,144	0	7,131	0	1,381	4,688	1,459	0	348,177	170,412	6,399,229	79,091	51,906	7,092,548
Hudson Valley / Connecticut	**641**	0	62	0	0	60	404	1,666	0	82	189	5,486	0	43,430	12,504	74,878	8,483,991	73,593	8,696,986
New Jersey	**0**	118	57	0	0	61	0	2,411	70	0	103	220	0	88,717	11,168	48,406	83,986	15,176,387	15,411,704
Total, All Origins	**389,516**	384,465	358,881	140,933	123,500	1,730,820	107,823	1,725,944	457,732	842,597	681,982	686,430	97,738	4,038,740	3,994,572	7,160,763	8,722,684	15,424,941	47,070,061

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored

Notes: Refer to discussion in narrative about data aggregation for "Other NYC," "Hudson Valley/Connecticut," and "New Jersey." Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively). Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

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Figure 3: Daily Non-Work Trips Destined for the Route 110 Area, by Origin (Total ≈ 389,520 Daily Trips)



Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored
Note: No daily non-work trips destined for the Route 110 area originated in New Jersey.

This data indicates that daily non-work trips destined for the Route 110 area were primarily local, as more than half (approximately 205,800 trips or 52.8%) originated in the Route 110 area and an additional 44.8% of such trips (approximately 174,710 trips) originated in other parts of either Nassau or Suffolk County (outside of the Route 110 area). The approximately 9,010 daily non-work trips destined for Route 110 with origins located off Long Island constituted only approximately 2.3% of the total daily non-work trips destined for the Route 110 area, with most of these trips (approximately 8,370 trips) originating in New York City.

Comparing daily work and non-work trips destined for the Route 110 area, both trip purposes demonstrated a pattern of having primarily local origins on Long Island, and the pattern was even more pronounced for daily non-work trips. Whereas approximately 92.9% of daily work trips destined for the Route 110 area originated on Long Island, the comparable figure for daily non-work trips was 97.7%, combined for origins in the Route 110 area and other parts of Nassau and Suffolk Counties. Nevertheless, for both daily work and non-work trips, the data demonstrates significant intra-Island transportation demand, specifically in the context of trips destined for the Route 110 area. Overall, in comparing Table 5 and Table 6, there were more daily non-work trips destined for the Route 110 area (approximately 389,520 trips) than daily work trips destined for the Route 110 area (approximately 327,980 trips). This highlights the role of the Route 110 corridor as not just a place of employment, but as a place of shopping and leisure as well.

As a complement to Table 6, Appendix C includes mode-specific origin-destination tables for these daily non-work trips, and Appendix D presents details for each of the non-work trip purposes (i.e., maintenance, discretionary, and other trips).

3.2 FUTURE TRAVEL MARKET: 2040 GROWTH RATES

To produce 2040 forecast trips, the 2010 RHTS trip tables were scaled using growth factors taken from the New York Best Practice Model (BPM) 2010 – 2040 socioeconomic and demographic (SED) data, based on NYMTC's forecasts, which were discussed in the Task 2 technical memorandum. The growth factors do not account for any future changes in the transportation system, nor do they reflect proposed or planned projects (e.g., East Farmingdale redevelopment; LIRR Republic Station), but they provide a forecast of gross expected growth in the area, based on projected socioeconomic and demographic data. Additionally, the origin-destination forecasts are not official model-produced projections, but rather were generated using the 2010 expanded/weighted survey tabulation and a simplified forecasting procedure. For this reason, the tables and discussion that follow summarize the percent growth rates, which are more reliable than the specific origin-destination forecasts.

Table 7 through Table 9 summarizes percent growth rates (by mode, combined for work and non-work trips) from 2010 to 2040 for daily trips within, to, and from the Route 110 area, respectively, and Appendices E and F include the growth rates and projected number of trips, respectively, by origin-destination pairing for all daily trips (by mode). As shown in Table 7, a 22% increase in daily trips within the Route 110 area is forecast between 2010 and 2040. By mode, the projected percentage increase ranges from 20% for bus to 23% for SOV, with HOV and other modes (non-

motorized, school bus, taxi) each forecast to have 22% growth. Similar to the 2010 data, no daily trips within the Route 110 area are projected to be made using commuter rail in 2040.

TABLE 7: FUTURE TRAVEL MARKET – 2010-2040 PERCENT GROWTH RATES (BY MODE) FOR DAILY TRIPS WITHIN THE ROUTE 110 AREA

Mode	2010-2040 Growth Rate
SOV	23%
HOV	22%
Bus	20%
Commuter Rail	—
Other (Non-motorized, School Bus, Taxi)	22%
Total, All Modes	22%

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored; New York BPM 2010 SED forecast data

Table 8 shows that, between 2010 and 2040, there is a projected 19% increase in daily trips to the Route 110 area from elsewhere in the region. SOV and commuter rail have the largest projected percentage increases, of 21% and 20%, respectively. All of the travel modes are forecast to have an increase of 16% or more from 2010 to 2040. Overall, the modal split for daily trips destined for the Route 110 area in 2040 is projected to stay consistent with that in 2010, as SOV and HOV together are forecast to continue accounting for the vast majority (approximately nine out of every 10) of the daily trips to the Route 110 area. As in 2010, trips made by commuter rail are projected to constitute approximately 2.0% of the total daily trips to the Route 110 area in 2040, and an additional 0.1% percent of daily trips are projected to be made by bus, with the balance of trips being made by other modes (non-motorized, school bus, taxi).

TABLE 8: FUTURE TRAVEL MARKET – 2010-2040 PERCENT GROWTH RATES (BY MODE) FOR DAILY TRIPS TO THE ROUTE 110 AREA

Mode	2010-2040 Growth Rate
SOV	21%
HOV	17%
Bus	16%
Commuter Rail	20%
Other (Non-motorized, School Bus, Taxi)	18%
Total, All Modes	19%

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored; New York BPM 2010 SED forecast data

As shown in Table 9, daily trips from the Route 110 area to elsewhere in the region are forecast to increase by 17% from 2010 to 2040. The largest percentage increases by mode are forecast for commuter rail and bus (20% each), while SOV has the smallest projected percentage increase (16%). Daily trips by HOV and other modes are both forecast to increase by 17% between 2010 and 2040.

TABLE 9: FUTURE TRAVEL MARKET – 2010-2040 PERCENT GROWTH RATES (BY MODE) FOR DAILY TRIPS FROM THE ROUTE 110 AREA

Mode	2010-2040 Growth Rate
SOV	16%
HOV	17%
Bus	20%
Commuter Rail	20%
Other (Non-motorized, School Bus, Taxi)	17%
Total, All Modes	17%

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored; New York BPM 2010 SED forecast data

Table 10 shows growth rates by origin-destination for daily work trips in the region for all modes. The tables offer a profile of projected growth in journey-to-work trips within, to, and from the Route 110 area, in addition to data for the rest of the region. As shown in Table 10, daily work trips with the origin and destination both within the Route 110 area are forecast to increase by 23% between 2010 and 2040. For daily work trips that start from points within the Route 110 area and end elsewhere in the region, much of the growth between 2010 and 2040 is projected for trips ending elsewhere on Long Island, with Riverhead experiencing the highest percentage increase (41%). Daily work trips from the Route 110 area to points off Long Island are also forecast to increase, with a 29% increase to boroughs of New York City other than Manhattan and Queens, a 22% increase to New Jersey, and a 15% projected increase to both Manhattan and Queens.

Table 10 also provides insight into the projected growth in commuting to the Route 110 area. The forecast shows an increasing number of daily work trips to the Route 110 area from elsewhere in the region between 2010 and 2040, including not only from other parts of Suffolk County, but also other parts of Nassau County and the surrounding region. From points on Long Island, the largest percentage growth in daily work trips to the Route 110 area is projected to come from North Hempstead (33%), followed by Hempstead (30%). From points elsewhere in the region, the largest percentage increase in daily work trips to the Route 110 area is projected from Queens (25%), followed by Hudson Valley/Connecticut (23%), Manhattan (22%), New Jersey (22%), and the other boroughs in New York City (9%). Other areas not listed above are not anticipated to see any growth. Appendices G and H include mode-specific growth rate tables and projected origin-destination data, respectively, for daily work trips, complementing the summary table presented below for all modes.

TABLE 10: FUTURE TRAVEL MARKET – 2010-2040 PERCENT GROWTH RATES FOR DAILY WORK TRIPS IN THE 28-COUNTY REGION (ALL MODES)

ORIGINS	DESTINATIONS																	
	Route 110 Area	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	Manhattan	Queens	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 Area	**23%**	**7%**	**16%**	**--**	**--**	**27%**	**--**	**3%**	**30%**	**22%**	**0%**	**22%**	**41%**	**15%**	**15%**	**29%**	**--**	**22%**
Babylon	**22%**	6%	15%	8%	--	26%	18%	2%	29%	21%	0%	20%	--	14%	13%	27%	--	--
Smithtown	**19%**	3%	12%	--	--	22%	--	0%	26%	18%	0%	17%	36%	11%	11%	24%	--	--
Southampton	**--**	8%	--	11%	51%	29%	21%	5%	32%	24%	--	23%	43%	--	--	--	--	--
Southold	**--**	--	--	0%	22%	4%	--	--	--	--	--	--	16%	--	--	--	--	--
Brookhaven	**20%**	4%	13%	7%	45%	24%	17%	1%	27%	19%	0%	19%	38%	13%	12%	26%	22%	20%
East Hampton	**--**	15%	--	18%	--	37%	29%	--	--	--	--	--	--	--	--	--	--	--
Hempstead	**30%**	13%	23%	16%	--	34%	--	9%	38%	29%	6%	29%	--	22%	21%	36%	32%	29%
Huntington	**10%**	0%	3%	0%	--	13%	--	0%	16%	9%	0%	8%	--	3%	2%	15%	--	9%
Islip	**22%**	6%	15%	9%	--	26%	--	3%	30%	21%	0%	21%	40%	15%	14%	28%	24%	22%
North Hempstead	**33%**	15%	25%	--	--	37%	--	11%	41%	32%	8%	31%	--	24%	24%	39%	34%	32%
Oyster Bay	**17%**	2%	11%	--	--	21%	--	0%	24%	17%	0%	16%	--	10%	10%	23%	19%	17%
Riverhead	**27%**	--	20%	13%	54%	31%	--	--	--	26%	--	--	46%	--	--	--	--	26%
Manhattan	**22%**	6%	15%	--	--	26%	19%	2%	29%	21%	0%	21%	--	14%	14%	28%	23%	21%
Queens	**25%**	9%	18%	--	--	29%	--	5%	33%	24%	2%	24%	--	17%	17%	31%	27%	24%
Other NYC	**9%**	0%	3%	--	--	13%	--	0%	15%	8%	0%	8%	--	2%	2%	14%	10%	8%
Hudson Valley / Connecticut	**23%**	--	16%	--	--	27%	--	3%	--	--	0%	21%	--	15%	15%	28%	24%	22%
New Jersey	**22%**	6%	15%	--	--	26%	--	2%	29%	21%	0%	--	39%	14%	13%	27%	23%	21%

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored; New York BPM 2010 SED forecast data
Notes: Refer to discussion in narrative about data aggregation for "Other NYC," "Hudson Valley/Connecticut," and "New Jersey." Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively). Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.
"—" = No growth anticipated

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Similar to Table 10 for work trips, Table 11 includes a summary of 2010-2040 growth rates for daily non-work trips in the region for all modes. Daily non-work trips that start and end in the Route 110 area are forecast to increase by 22% between 2010 and 2040, and daily non-work trips to and from the Route 110 area are similarly projected to increase in the future. Specifically, daily non-work trips are forecast to increase from the Route 110 area to other points on Long Island (with Brookhaven having the largest percentage increase of 25%), as well as to Hudson Valley/Connecticut (27%) and New York City (20% increase to Queens and 19% increase to Manhattan). Similarly, daily non-work trips to the Route 110 area are forecast to increase from other points on Long Island (with Riverhead having the largest percentage increase of 24%), Hudson Valley/Connecticut (20%), and New York City (20% increase to both Queens and Manhattan, and 19% increase to other boroughs). As a complement to Table 11, Appendices I and J include mode-specific growth rate tables and projected origin-destination data, respectively, for daily non-work trips.

3.3 ADDITIONAL FUTURE TRAVEL TREND CONSIDERATIONS

There are indications that future travel trends will support long-term transit use in the vicinity of the Route 110 corridor.

LIRR

Completion of the LIRR Double Track project, which would allow LIRR to increase off-peak train frequency from hourly service to half-hourly service, is expected to increase LIRR ridership as well as trip generation to LIRR stations on the Ronkonkoma Branch, including a possibly re-opened Republic LIRR station. The following excerpt from the Environmental Assessment for the Double Track project summarizes the travel demand projections (http://web.mta.info/lirr/doubletrack/environmentalassessment.htm):

- Ridership on the LIRR's Ronkonkoma Branch has doubled over the last 25 years, growing in popularity since the line was electrified in 1988. Ridership demand that materialized with electric service has been beyond forecasts or expectations and LIRR has increased scheduled trains substantially since opening day. Completing a continuous second track between Ronkonkoma and Farmingdale would allow for greater service reliability and scheduling flexibility, as originally envisioned for the ROW, and supported by current ridership and demand along the branch.
- LIRR expects that without the proposed action, consistent with the forecasted increase in population and employment, there will be an increase in ridership. As a result of the projected population and employment growth, LIRR ridership forecasts indicate an average annual growth factor of 1.69% through 2018. Compounded over six years, ridership between Ronkonkoma and Farmingdale is expected to increase by 10.6% between 2012 and 2018.
- Based on historical data, future No-Build midday trip generation to all Ronkonkoma Branch stations was increased by 17% in defining the Build condition.

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TABLE 11: FUTURE TRAVEL MARKET – 2010-2040 PERCENT GROWTH RATES FOR DAILY NON-WORK TRIPS IN THE 28-COUNTY REGION (ALL MODES)

ORIGINS	DESTINATIONS																	
	Route 110 Area	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	Manhattan	Queens	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 Area	**22%**	**14%**	**18%**	**23%**	**--**	**25%**	**--**	**17%**	**15%**	**23%**	**18%**	**16%**	**--**	**19%**	**20%**	**--**	**27%**	**--**
Babylon	**17%**	9%	12%	--	--	20%	21%	11%	9%	18%	13%	10%	34%	14%	--	9%	--	--
Smithtown	**18%**	10%	14%	--	--	21%	--	13%	11%	19%	15%	12%	--	15%	16%	10%	23%	20%
Southampton	**19%**	--	14%	20%	19%	22%	23%	13%	--	20%	--	--	36%	16%	17%	--	--	--
Southold	**--**	--	--	20%	19%	--	--	--	--	--	--	--	37%	--	--	--	--	--
Brookhaven	**20%**	12%	15%	21%	--	23%	--	14%	12%	21%	16%	13%	37%	17%	18%	12%	24%	--
East Hampton	**--**	11%	--	20%	--	--	23%	--	--	--	--	--	37%	--	--	--	--	--
Hempstead	**19%**	11%	14%	20%	--	22%	--	14%	11%	20%	15%	13%	36%	16%	17%	11%	24%	20%
Huntington	**18%**	10%	14%	--	--	21%	--	13%	11%	19%	14%	12%	--	15%	16%	--	23%	--
Islip	**20%**	12%	16%	21%	--	23%	--	15%	13%	21%	16%	14%	38%	17%	18%	12%	25%	--
North Hempstead	**20%**	11%	15%	--	--	22%	--	14%	12%	20%	16%	13%	--	17%	18%	12%	24%	21%
Oyster Bay	**18%**	10%	14%	19%	--	21%	--	13%	11%	19%	14%	12%	--	15%	16%	10%	23%	20%
Riverhead	**24%**	15%	--	24%	23%	26%	28%	--	--	24%	--	--	41%	--	--	--	--	--
Manhattan	**20%**	12%	15%	20%	--	23%	24%	14%	12%	20%	16%	13%	--	17%	18%	12%	24%	21%
Queens	**20%**	12%	15%	21%	--	23%	--	14%	12%	21%	16%	13%	--	17%	18%	12%	24%	21%
Other NYC	**19%**	11%	14%	--	--	22%	--	13%	--	20%	15%	12%	--	16%	17%	11%	23%	20%
Hudson Valley / Connecticut	**20%**	--	15%	--	--	22%	24%	14%	--	20%	16%	13%	--	17%	18%	12%	24%	21%
New Jersey	**--**	11%	15%	--	--	22%	--	14%	12%	--	16%	13%	--	17%	18%	12%	24%	21%

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored; New York BPM 2010 SED forecast data

Notes: Refer to discussion in narrative about data aggregation for "Other NYC," "Hudson Valley/Connecticut," and "New Jersey." Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively). Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

"—" = No growth anticipated

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Planned, Proposed, and On-Going Development Projects

The increased service and reliability of the LIRR Double Track project will support enhanced connectivity and intra-Island travel, and in addition to projected LIRR ridership increases, planned, proposed, and ongoing development projects in the vicinity of Route 110 can provide sources for additional transit ridership, especially those with a residential component. These projects include—but are not limited to—the East Farmingdale redevelopment (and the potential re-opening of LIRR Republic Station, associated with the broader *Connect Long Island Plan*) at the intersection of Route 110 and Conklin Street, the Wyandanch Rising revitalization, and the Jefferson Plaza project in the Village of Farmingdale. Moreover, in the long-term, a shift in development patterns within the Route 110 corridor to encourage walkability and reduce automobile dependence can further promote transit use. With existing traffic congestion as a major issue on Route 110, transit-supportive developments—as a complement to transit investments that can attract "choice" riders—can help to shape the future travel market.

Suffolk County Transit

In assessing the future travel market, it is also important to consider Suffolk County Transit ridership trends. Available Suffolk County Transit ridership data was presented in the Task 2 technical memorandum, and the data will be used in the development, screening, and evaluation of alternatives in subsequent tasks. Additionally, the New York Public Research Interest Group (NYPIRG) has expressed interest in potentially assisting the Town of Babylon in conducting a survey of current bus riders on Route 110 to inform the Alternatives Analysis as the project moves forward. The qualitative survey can provide information about rider preferences and also offer additional insight regarding origins and destinations of current bus riders on Route 110, focused on the S1 route.

Summary

Overall, the future travel market for the Route 110 corridor will be informed by population and employment growth, planned and programmed transportation investments, changing development patterns, and the availability and convenience of transit services. Additionally, future travel patterns will also be affected by a number of other factors, including socioeconomic and demographic characteristics (e.g., automobile ownership and transportation mode choice), the distribution of population and employment, and congestion levels. Furthermore, as detailed in the Task 1 technical memorandum, a number of regional plans point to the need for transit improvements on Long Island, including—but not limited to—the New York Metropolitan Transportation Council's (NYMTC) Regional Transportation Plan, the Long Island Regional Planning Council's (LIRPC) Sustainable Strategies for Long Island 2035, and the Long Island Regional Economic Development Council's Strategic Plan, in addition to reports issued by the Long Island Index. All of these indicators feed into the identification of problems and opportunities along the Route 110 corridor, which will be discussed in the Task 4 technical memorandum.

Appendix A:
2010/2011 Origin-Destination Data for All Trips by Mode

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Daily Trips

SOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	178,808	22,594	12,047	0	0	5,894	0	45,425	34,608	19,157	5,848	55,418	64	2,581	8,447	1,976	641	983
Babylon	22,379	113,751	4,267	415	0	10,341	0	14,572	2,829	40,983	1,031	6,734	500	2,425	1,147	3,699	0	0
Smithtown	9,612	4,392	144,341	0	0	46,488	0	4,909	25,971	28,436	3,523	6,513	503	4,676	1,936	3,639	62	285
South Hampton	64	415	0	41,326	3,637	8,603	7,927	523	284	244	0	736	8,866	0	0	0	0	0
Southold	0	0	0	4,193	32,883	1,265	0	0	0	0	0	0	509	0	0	0	0	0
Brookhaven	4,816	6,953	50,796	10,250	1,265	928,077	2,275	10,925	13,339	96,762	3,670	8,754	19,298	0	2,237	2,836	2,644	518
East Hampton	0	0	0	8,160	0	2,190	42,633	0	0	0	0	0	0	0	0	0	0	0
Hempstead	43,876	10,230	5,488	523	0	7,953	0	988,681	4,841	14,709	59,823	62,444	1,342	12,839	116,221	18,869	2,979	2,979
Huntington	32,428	1,447	24,087	284	0	12,205	0	4,056	214,613	8,957	3,457	16,977	0	215	2,273	1,319	0	2,514
Islip	14,976	40,631	29,071	159	0	92,637	0	12,819	11,086	405,253	972	11,679	532	80	13,939	9,517	453	299
North Hempstead	4,342	1,169	3,017	0	0	3,317	0	78,631	3,532	2,184	285,715	36,746	0	5,209	58,335	15,411	5,221	1,569
Oyster Bay	51,953	9,452	5,269	736	0	9,967	0	65,411	12,750	12,259	38,048	355,048	0	3,738	10,838	1,793	1,770	48
Riverhead	64	500	503	6,072	1,065	22,845	0	0	0	448	0	0	42,431	0	0	0	0	0
MANHATTAN	2,581	2,499	52	50	0	4,624	0	10,623	0	80	7,237	3,651	0	149,038	50,985	76,687	32,988	58,492
QUEENS NY	10,660	924	2,003	0	0	2,748	0	107,290	651	13,301	64,912	15,640	0	48,465	1,226,534	104,100	22,160	14,187
Other NYC	1,880	12,264	3,639	0	0	3,194	0	12,680	1,104	315	18,694	8,209	0	71,214	105,060	1,743,143	79,355	73,893
Hudson Valley / Connecticut	1,031	0	462	0	0	2,686	0	2,631	0	82	4,946	1,986	0	34,245	25,738	78,946	6,418,711	93,540
New Jersey	3,184	560	57	0	0	178	0	1,857	1,172	347	570	0	0	50,720	10,805	69,152	97,971	11,095,959

HOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	137,856	14,763	1,516	317	0	1,151	0	11,578	28,092	10,648	199	32,887	0	410	4,653	0	0	0
Babylon	14,074	117,364	243	0	0	715	117	13,692	939	43,392	0	4,349	0	0	0	796	0	0
Smithtown	7,821	243	166,273	0	0	21,742	0	2,012	17,524	24,600	7,351	425	0	133	1,038	13,049	0	0
South Hampton	0	0	567	91,736	14,087	7,152	7,881	129	0	775	0	0	2,333	2,022	1,617	0	0	0
Southold	0	0	0	14,087	109,300	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	1,423	689	34,630	7,076	0	955,426	0	5,038	1,262	53,166	208	1,583	8,968	6,641	1,305	0	91	0
East Hampton	0	117	0	7,823	0	0	33,815	0	0	0	0	0	3,082	0	0	0	0	0
Hempstead	8,953	15,283	1,748	129	0	5,442	0	814,833	1,085	2,445	38,293	48,352	0	2,166	77,476	7,691	128	1,949
Huntington	28,887	939	18,891	0	0	1,262	0	1,085	213,435	930	5,223	12,370	0	0	2,236	237	1,209	0
Islip	10,367	43,973	26,068	1,827	0	53,007	0	2,730	1,067	426,610	3,498	7,413	0	0	3,892	1,551	0	0
North Hempstead	119	0	7,351	0	0	311	0	34,738	5,276	3,152	328,039	13,235	0	2,692	21,719	7,608	668	615
Oyster Bay	43,576	4,170	604	0	0	59	0	43,915	13,579	7,536	16,313	264,236	0	671	13,425	5,809	4,211	220
Riverhead	317	0	0	2,015	0	8,968	3,082	0	0	0	0	0	35,349	0	0	0	0	0
MANHATTAN	501	0	133	0	0	6,710	2,402	3,352	0	0	2,886	533	0	213,737	55,310	93,572	32,841	27,281
QUEENS NY	4,266	0	1,201	1,617	0	1,862	0	70,668	2,236	3,858	25,813	12,543	0	52,776	1,508,545	108,616	20,853	3,663
Other NYC	0	2,723	0	0	0	13,049	0	7,700	237	1,326	6,700	727	0	105,392	112,516	2,122,906	62,606	40,849
Hudson Valley / Connecticut	0	0	62	0	0	0	404	1,039	0	0	775	5,420	0	21,583	14,587	73,009	5,282,858	57,867
New Jersey	0	0	147	0	0	0	0	2,289	0	0	615	220	0	24,338	3,959	45,660	61,181	9,452,111

Bus

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	670	0	0	0	0	0	0	0	187	0	0	0	0	0	0	0	0	0
Babylon	0	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	52	107	0	0	1,564	0	0	126	51	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	1,564	0	0	6,127	0	0	0	413	0	0	511	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	85	0	0	0	0	0	0	14,926	0	0	675	1,628	0	0	5,241	0	0	0
Huntington	187	0	126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	51	0	0	413	0	0	0	2,910	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	675	0	0	3,674	413	0	0	5,102	0	0	0
Oyster Bay	0	0	0	0	0	0	0	1,450	0	0	413	173	0	959	212	0	0	0
Riverhead	0	0	0	0	0	511	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	287	0	0	0	959	0	474,874	28,726	92,117	7,277	119,863
QUEENS NY	0	0	0	0	0	0	0	5,357	0	0	2,178	92	0	28,424	356,782	15,644	682	3,207
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	92,855	22,307	985,601	8,991	15,235
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	6,043	0	7,601	145,575	182
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	120,494	3,903	13,698	740	454,865

Subway

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	1,393	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	4,352	1,056	119	0	0
Huntington	0	0	0	0	0	264	0	0	0	0	0	0	0	119	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	0	0	0	0	523	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	1,766	133	152	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	1,084	372	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	1,456	0	4,498	119	108	3,333	1,084	0	1,289,017	316,812	716,355	5,655	80,606
QUEENS NY	0	0	0	0	0	0	0	512	0	0	133	0	0	335,747	275,965	105,978	464	6,028
Other NYC	0	0	0	0	0	0	0	119	0	0	0	0	0	725,154	107,828	710,361	1,687	5,603
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	7,705	464	1,340	2,055	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	92,264	5,483	7,829	0	67,037

Commuter Rail

	T1	T11	T12	T13	T2	T3	T4	T5	T6	T7	T8	T9	C_01	C_02

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	67	0	0	0	0	0	0	0	0	282	0	0	5,602	0	512	0	0
Babylon	0	0	0	0	0	0	0	0	0	686	0	1,763	0	4,327	4,445	0	0	0
Smithtown	0	0	0	0	0	0	0	0	295	0	0	0	0	2,170	43	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	167	0	0	0	0	10,016	384	95	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	1,408	0	772	0	932	0	45,390	5,378	2,994	120	3,384
Huntington	0	0	295	0	0	167	0	0	1,522	0	0	0	0	7,325	737	1,032	0	0
Islip	0	686	0	0	0	0	0	772	0	0	0	0	0	7,132	254	627	0	4,245
North Hempstead	282	0	0	0	0	0	0	0	0	0	3,041	0	0	17,739	691	1,764	0	0
Oyster Bay	0	0	0	0	0	0	0	932	0	0	0	0	0	17,933	1,938	1,795	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
MANHATTAN	6,567	4,327	2,170	0	0	9,895	5,238	37,827	6,520	8,867	17,257	15,894	0	2,130	38,246	2,885	96,910	87,451
QUEENS NY	0	4,329	43	0	0	697	0	4,873	1,291	2,133	2,439	1,472	0	34,929	3,299	3,904	5,470	4,525
Other NYC	512	0	0	0	0	95	0	5,672	1,032	627	399	1,539	0	3,432	2,236	6,586	16,307	10,306
Hudson Valley / Connecticut	0	0	0	0	0	0	0	120	0	0	0	0	0	111,958	7,552	13,864	43,787	5,599
New Jersey	0	0	0	0	0	114	0	3,608	70	1,016	0	0	53	87,030	4,482	7,087	4,598	86,291

Other

(Non-motorized, School Bus, Taxi)

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	37,503	16,406	0	0	0	3,793	0	0	1,608	546	369	10,698	0	64	0	0	0	0
Babylon	16,406	113,469	0	0	0	0	0	0	0	2,482	715	41	0	4,389	0	0	0	0
Smithtown	0	0	54,691	0	0	175	0	110	2,161	1,357	0	0	0	0	0	0	0	0
South Hampton	0	0	0	4,042	0	2,265	184	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	5,771	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	3,793	0	175	2,265	0	200,322	0	0	0	3,803	0	0	201	2,201	82	0	0	0
East Hampton	0	0	0	0	0	0	23,324	0	0	0	0	0	0	0	0	0	0	0
Hempstead	99	0	110	0	0	0	0	265,080	398	0	3,056	3,911	0	0	8,958	2,126	0	0
Huntington	1,086	0	1,830	0	0	0	0	398	36,540	192	0	525	0	979	0	0	0	0
Islip	546	2,482	901	0	0	3,879	0	0	192	115,014	0	0	0	0	0	0	0	0
North Hempstead	369	715	0	0	0	0	0	3,527	0	0	116,624	1,770	0	156	5,184	0	0	0
Oyster Bay	7,482	41	0	0	0	0	0	2,866	525	0	1,337	91,298	0	304	3,578	0	0	0
Riverhead	0	0	0	0	0	201	0	0	0	0	0	0	10,581	0	0	0	0	0
MANHATTAN	979	4,389	0	0	0	2,201	0	4,472	342	1,449	162	0	0	4,302,288	24,556	45,914	16,498	11,827
QUEENS NY	64	0	0	0	0	1,129	0	8,675	0	0	2,232	3,578	0	23,590	1,903,769	32,240	95	4,290
Other NYC	0	0	0	0	0	0	0	87	0	0	0	0	0	31,331	21,646	4,685,977	4,209	1,184
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	8,270	978	5,136	1,607,064	5,822
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	10,833	1,367	2,333	5,885	3,095,703

All Modes

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	354,837	53,889	13,563	317	0	10,838	0	57,003	64,495	30,351	6,698	99,003	64	8,657	13,100	2,488	641	983
Babylon	52,918	344,584	4,562	415	0	11,056	117	28,264	3,768	87,543	1,746	12,887	500	11,141	5,592	4,495	0	0
Smithtown	17,433	4,687	365,412	0	0	69,969	0	7,031	46,077	54,444	10,874	6,938	503	6,979	3,017	16,688	62	285
South Hampton	64	415	567	137,104	17,724	18,020	15,992	652	284	1,019	0	736	11,199	2,022	1,617	0	0	0
Southold	0	0	0	18,280	147,954	1,265	0	0	0	0	0	0	509	0	0	0	0	0
Brookhaven	10,032	7,642	87,165	19,591	1,265	2,089,952	2,275	15,963	14,768	154,144	3,878	10,337	28,978	20,251	4,008	2,931	2,735	518
East Hampton	0	117	0	15,983	0	2,190	99,772	0	0	0	0	0	3,082	0	0	0	0	0
Hempstead	53,013	25,513	7,346	652	0	13,395	0	2,084,928	6,324	17,926	101,847	117,267	1,342	64,747	214,330	31,799	3,227	8,312
Huntington	62,588	2,386	45,229	284	0	13,898	0	5,539	466,110	10,079	8,680	29,872	0	8,638	5,246	2,588	1,209	2,514
Islip	25,889	87,772	56,091	1,986	0	149,936	0	16,321	12,345	949,787	4,470	19,092	532	7,735	18,085	11,695	453	4,544
North Hempstead	5,112	1,884	10,368	0	0	3,628	0	117,571	8,808	5,336	737,093	52,164	0	27,562	91,164	24,935	5,889	2,184
Oyster Bay	103,011	13,663	5,873	736	0	10,026	0	114,574	26,854	19,795	56,111	710,755	0	24,689	30,363	9,397	5,981	268
Riverhead	381	500	503	8,087	1,065	32,525	3,082	0	0	448	0	0	88,361	0	0	0	0	53
MANHATTAN	10,628	11,215	2,355	50	0	24,886	7,640	61,059	6,981	10,504	30,875	22,121	0	6,431,084	514,635	1,027,530	192,169	385,520
QUEENS NY	14,990	5,253	3,247	1,617	0	6,436	0	197,375	4,178	19,292	97,707	33,325	0	523,931	5,274,894	370,482	49,724	35,900
Other NYC	2,392	14,987	3,639	0	0	16,338	0	26,258	2,373	2,268	25,793	10,475	0	1,029,378	371,593	10,254,574	173,155	147,070
Hudson Valley / Connecticut	1,031	0	524	0	0	2,686	404	3,790	0	82	5,721	7,406	0	189,804	49,319	179,896	13,500,050	163,010
New Jersey	3,184	560	204	0	0	292	0	7,754	1,242	1,363	1,185	220	53	385,679	29,999	145,759	170,375	24,251,966

Source: NYMTC 2010 RHTS, GPS weighted and factored

Notes: Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively).
Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

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Appendix B:
2010/2011 Origin-Destination Data for Work Trips by Mode

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Daily Work Trips

SOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	88,020	12,412	9,139	0	0	4,777	0	37,219	16,055	14,034	5,620	28,781	64	571	7,923	1,976	0	983
Babylon	14,584	41,135	3,600	415	0	5,103	0	8,073	2,389	19,159	975	4,937	0	2,425	1,147	976	0	0
Smithtown	6,579	3,968	63,071	0	0	27,649	0	1,786	16,679	15,796	3,523	4,206	503	4,624	1,936	1,902	0	0
South Hampton	0	415	0	16,256	3,637	6,288	7,732	523	284	244	0	736	6,188	0	0	0	0	0
Southold	0	0	0	3,637	22,123	1,265	0	0	0	0	0	0	139	0	0	0	0	0
Brookhaven	4,484	3,911	32,718	7,637	1,265	262,443	2,275	10,425	8,186	61,095	3,493	8,754	8,827	0	2,237	2,836	2,584	518
East Hampton	0	0	0	7,732	0	2,190	915	0	0	0	0	0	0	0	0	0	0	0
Hempstead	35,716	4,265	3,720	523	0	7,842	0	359,629	3,736	13,597	37,128	30,006	0	10,380	59,190	15,868	2,260	2,079
Huntington	13,269	879	14,554	284	0	8,107	0	2,910	59,286	7,202	1,804	12,684	0	215	2,074	1,319	0	2,514
Islip	12,541	21,093	16,498	159	0	54,392	0	12,123	8,937	166,965	840	9,452	417	80	10,293	559	393	299
North Hempstead	3,980	911	3,017	0	0	3,317	0	39,211	2,091	1,219	71,992	18,332	0	3,598	32,406	13,534	5,032	1,569
Oyster Bay	28,014	9,097	3,107	0	0	9,541	0	31,665	8,362	9,753	19,819	102,866	0	1,827	6,600	1,451	1,770	48
Riverhead	64	0	503	3,950	301	12,261	0	0	0	333	0	0	12,571	0	0	0	0	0
MANHATTAN	571	2,499	0	0	0	1,137	0	6,256	0	80	5,889	1,827	0	74,459	40,655	46,845	20,538	36,435
QUEENS NY	10,460	924	1,274	0	0	2,748	0	65,084	542	12,255	40,803	11,201	0	31,520	456,943	76,174	20,747	12,210
Other NYC	902	1,772	1,902	0	0	3,194	0	11,506	1,104	315	18,356	6,750	0	45,149	73,652	701,323	50,426	59,282
Hudson Valley / Connecticut	390	0	462	0	0	2,626	0	2,004	0	0	4,757	1,920	0	23,094	24,356	52,964	2,852,747	66,912
New Jersey	3,184	442	0	0	0	178	0	957	1,172	347	570	0	0	36,034	9,547	52,082	65,620	4,894,560

HOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	39,070	625	243	0	0	1,041	0	1,816	10,977	7,443	80	3,131	0	99	387	0	0	0
Babylon	656	18,515	0	0	0	268	61	2,925	0	5,666	0	0	0	0	0	796	0	0
Smithtown	155	0	35,894	0	0	626	0	0	2,596	8,361	0	0	0	0	0	0	0	0
South Hampton	0	0	0	17,567	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	12,961	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	1,313	241	64	0	0	157,127	0	1,296	376	11,564	0	59	1,486	1,984	592	0	0	0
East Hampton	0	61	0	2,309	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	1,376	2,925	0	0	0	178	0	177,379	0	1,630	12,814	6,515	0	185	20,450	1,610	128	0
Huntington	11,845	0	2,644	0	0	376	0	0	31,353	930	510	0	0	0	0	237	0	0
Islip	2,164	7,467	9,100	0	0	14,786	0	2,730	930	94,056	925	1,339	0	0	3,481	225	0	0
North Hempstead	0	0	0	0	0	0	0	13,774	563	925	69,353	3,282	0	1,470	10,662	2,350	334	512
Oyster Bay	6,138	0	0	0	0	59	0	8,714	0	357	3,486	93,030	0	671	353	969	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	3,383	0	0	0	0	0
MANHATTAN	99	0	0	0	0	2,053	0	185	0	0	390	383	0	79,718	20,727	33,425	9,064	13,999
QUEENS NY	0	0	0	0	0	0	0	9,690	0	3,447	10,763	1,245	0	35,239	541,129	19,561	13,011	533
Other NYC	0	0	0	0	0	0	0	1,744	237	0	2,350	727	0	38,399	27,663	775,923	26,675	12,275
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	775	0	0	6,015	3,849	31,703	1,160,119	15,434
New Jersey	0	0	147	0	0	0	0	778	0	0	512	0	0	11,234	533	21,031	14,118	2,468,171

Bus

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	187	0	0	0	0	0	0	0	0	0
Babylon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	0	0	0	1,061	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	1,061	0	0	222	0	0	0	413	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	85	0	0	0	0	0	0	2,611	0	0	675	1,628	0	0	4,298	0	0	0
Huntington	187	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	413	0	0	0	1,392	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	675	0	0	1,322	413	0	0	2,388	0	0	0
Oyster Bay	0	0	0	0	0	0	0	1,450	0	0	413	173	0	959	212	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	287	0	0	0	959	0	252,939	21,091	58,130	6,324	91,325
QUEENS NY	0	0	0	0	0	0	0	3,870	0	0	1,399	92	0	23,430	167,768	6,217	0	2,393
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	60,341	14,065	456,423	3,395	12,369
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	5,687	0	2,866	67,160	100
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	94,293	2,526	12,703	100	194,939

Subway

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	1,393	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	4,352	512	119	0	0
Huntington	0	0	0	0	0	264	0	0	0	0	0	0	0	119	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	0	0	0	0	523	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	1,355	133	0	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	1,084	372	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	1,393	0	4,498	119	108	1,654	1,084	0	902,314	217,084	445,189	4,869	54,855
QUEENS NY	0	0	0	0	0	0	0	512	0	0	133	0	0	258,642	129,423	82,582	464	4,766
Other NYC	0	0	0	0	0	0	0	119	0	0	0	0	0	520,117	74,867	437,480	144	5,408
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	6,134	464	677	1,197	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	73,203	4,174	5,956	0	44,116

Commuter Rail

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	67	0	0	0	0	0	0	0	0	282	0	0	5,216	0	512	0	0
Babylon	0	0	0	0	0	0	0	0	0	0	0	0	0	4,228	4,445	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	2,170	43	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	167	0	0	0	0	4,109	205	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	772	0	932	0	40,476	5,095	2,994	0	3,384
Huntington	0	0	0	0	0	167	0	0	0	0	0	0	0	3,726	737	1,032	0	0
Islip	0	0	0	0	0	0	0	772	0	0	0	0	0	5,925	254	572	0	4,245
North Hempstead	282	0	0	0	0	0	0	0	0	0	1,506	0	0	16,540	691	0	0	0
Oyster Bay	0	0	0	0	0	0	0	932	0	0	0	0	0	15,194	175	1,795	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
MANHATTAN	6,051	4,228	2,111	0	0	3,988	5,238	33,934	3,818	5,638	15,119	13,254	0	2,130	33,558	2,584	86,380	76,118
QUEENS NY	0	2,566	43	0	0	518	0	4,590	737	254	691	1,472	0	28,644	2,368	3,904	5,325	855
Other NYC	512	0	0	0	0	0	0	5,672	1,032	572	399	1,539	0	2,910	2,236	1,042	9,814	4,931
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	103,011	7,552	12,769	26,358	5,018
New Jersey	0	0	0	0	0	53	0	3,608	0	1,016	0	0	53	74,039	812	4,384	4,598	69,201

Other

(Non-motorized, School Bus, Taxi)

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	21,951	2,676	0	0	0	359	0	0	1,442	546	369	10,472	0	64	0	0	0	0
Babylon	2,676	39,964	0	0	0	0	0	0	0	2,399	715	41	0	4,389	0	0	0	0
Smithtown	0	0	40,769	0	0	175	0	110	1,272	1,357	0	0	0	0	0	0	0	0
South Hampton	0	0	0	1,433	0	2,265	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	4,223	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	359	0	175	2,265	0	138,280	0	0	0	3,511	0	0	0	2,201	82	0	0	0
East Hampton	0	0	0	0	0	0	5,238	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	110	0	0	0	0	130,260	398	0	2,906	3,752	0	0	4,882	0	0	0
Huntington	1,086	0	941	0	0	0	0	398	21,129	192	0	525	0	979	0	0	0	0
Islip	546	2,399	901	0	0	3,587	0	0	192	46,600	0	0	0	0	0	0	0	0
North Hempstead	369	715	0	0	0	0	0	3,377	0	0	62,479	1,308	0	0	4,349	0	0	0
Oyster Bay	7,255	41	0	0	0	0	0	2,707	525	0	875	52,784	0	90	3,578	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	3,754	0	0	0	0	0
MANHATTAN	979	4,389	0	0	0	2,201	0	2,688	0	243	0	0	0	1,735,362	12,638	22,824	7,254	4,169
QUEENS NY	64	0	0	0	0	0	0	4,464	0	0	2,232	3,578	0	11,398	539,998	15,719	0	4,162
Other NYC	0	0	0	0	0	0	0	87	0	0	0	0	0	14,289	8,701	1,483,154	3,607	899
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	3,520	673	4,038	908,486	1,951
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	8,161	1,239	1,196	1,951	1,404,601

All Modes

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	149,041	15,780	9,382	0	0	6,177	0	39,035	28,661	22,023	6,351	42,384	64	5,950	8,310	2,488	0	983
Babylon	17,916	99,614	3,600	415	0	5,371	61	10,998	2,389	27,224	1,690	4,978	0	11,042	5,592	1,772	0	0
Smithtown	6,734	3,968	139,734	0	0	29,511	0	1,896	20,547	25,514	3,523	4,206	503	6,794	1,979	1,902	0	0
South Hampton	0	415	0	35,256	3,637	8,553	7,732	523	284	244	0	736	6,188	0	0	0	0	0
Southold	0	0	0	3,637	39,307	1,265	0	0	0	0	0	0	139	0	0	0	0	0
Brookhaven	6,156	4,152	34,018	9,902	1,265	558,072	2,275	11,721	8,729	76,583	3,493	8,813	10,313	9,687	3,116	2,836	2,584	518
East Hampton	0	61	0	10,041	0	2,190	6,153	0	0	0	0	0	0	0	0	0	0	0
Hempstead	37,177	7,190	3,830	523	0	8,020	0	669,879	4,134	15,999	53,523	42,833	0	55,393	94,427	20,591	2,388	5,463
Huntington	26,387	879	18,139	284	0	8,914	0	3,308	111,768	8,324	2,314	13,209	0	5,039	2,811	2,588	0	2,514
Islip	15,251	30,959	26,499	159	0	73,178	0	15,625	10,059	309,013	1,765	10,791	417	6,528	14,028	1,356	393	4,544
North Hempstead	4,631	1,626	3,017	0	0	3,317	0	57,037	2,654	2,144	206,652	23,335	0	22,963	50,629	15,884	5,366	2,081
Oyster Bay	41,407	9,138	3,107	0	0	9,600	0	45,468	8,887	10,110	24,593	248,853	0	19,825	11,290	4,215	1,770	48
Riverhead	64	0	503	3,950	301	12,261	0	0	0	333	0	0	19,708	0	0	0	0	53
MANHATTAN	7,700	11,116	2,111	0	0	10,772	5,238	47,848	3,937	6,069	23,052	17,507	0	3,046,922	345,753	608,997	134,429	276,901
QUEENS NY	10,524	3,490	1,317	0	0	3,266	0	88,210	1,279	15,956	56,021	17,588	0	388,873	1,837,629	204,157	39,547	24,919
Other NYC	1,414	1,772	1,902	0	0	3,194	0	19,128	2,373	887	21,105	9,016	0	681,205	201,184	3,855,345	94,061	95,164
Hudson Valley / Connecticut	390	0	462	0	0	2,626	0	2,004	0	0	5,532	1,920	0	147,461	36,894	105,017	5,016,067	89,415
New Jersey	3,184	442	147	0	0	231	0	5,343	1,172	1,363	1,082	0	53	296,964	18,831	97,352	86,387	9,075,588

Source: NYMTC 2010 RHTS, GPS weighted and factored

Notes: Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively).
Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

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Appendix C:
2010/2011 Origin-Destination Data for Non-Work Trips by Mode (Combined for All Non-Work Trip Purposes)

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Daily NonWork Trips

SOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	90,788	10,182	2,908	0	0	1,117	0	8,207	18,553	5,123	228	26,637	0	2,010	524	0	641	0
Babylon	7,794	72,617	667	0	0	5,238	0	6,499	440	21,824	56	1,797	500	0	0	2,723	0	0
Smithtown	3,033	425	81,270	0	0	18,839	0	3,122	9,292	12,640	0	2,307	0	52	0	1,737	62	285
South Hampton	64	0	0	25,070	0	2,316	196	0	0	0	0	0	2,677	0	0	0	0	0
Southold	0	0	0	556	10,760	0	0	0	0	0	0	0	371	0	0	0	0	0
Brookhaven	333	3,042	18,079	2,613	0	665,633	0	500	5,152	35,667	177	0	10,471	0	0	0	60	0
East Hampton	0	0	0	428	0	0	41,718	0	0	0	0	0	0	0	0	0	0	0
Hempstead	8,160	5,965	1,768	0	0	111	0	629,052	1,106	1,113	22,696	32,438	1,342	2,459	57,032	3,002	719	900
Huntington	19,158	568	9,532	0	0	4,099	0	1,146	155,327	1,755	1,652	4,293	0	0	199	0	0	0
Islip	2,433	19,538	12,574	0	0	38,245	0	697	2,149	238,289	131	2,227	115	0	3,646	8,958	60	0
North Hempstead	361	257	0	0	0	0	0	39,420	1,441	965	213,722	18,414	0	1,610	25,929	1,876	189	0
Oyster Bay	23,938	355	2,162	736	0	426	0	33,747	4,388	2,505	18,230	252,182	0	1,911	4,238	342	0	0
Riverhead	0	500	0	2,121	765	10,585	0	0	0	115	0	0	29,860	0	0	0	0	0
MANHATTAN	2,010	0	52	50	0	3,487	0	4,367	0	0	1,348	1,824	0	74,578	10,331	29,842	12,450	22,056
QUEENS NY	200	0	728	0	0	0	0	42,207	109	1,046	24,108	4,440	0	16,945	769,592	27,927	1,413	1,977
Other NYC	978	10,492	1,737	0	0	0	0	1,175	0	0	338	1,459	0	26,065	31,408	1,041,820	28,930	14,613
Hudson Valley / Connecticut	641	0	0	0	0	60	0	627	0	82	189	66	0	11,150	1,382	25,981	3,565,968	26,628
New Jersey	0	118	57	0	0	0	0	900	0	0	0	0	0	14,685	1,258	17,070	32,350	6,201,409

HOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	98,785	14,138	1,272	317	0	109	0	9,760	17,114	3,205	119	29,758	0	311	4,266	0	0	0
Babylon	13,418	98,849	243	0	0	448	56	10,767	939	37,726	0	4,350	0	0	0	0	0	0
Smithtown	7,666	243	130,381	0	0	21,117	0	2,012	14,927	16,238	7,351	425	0	133	1,038	13,049	0	0
South Hampton	0	0	567	74,169	14,087	7,152	7,881	129	0	775	0	0	2,333	2,022	1,617	0	0	0
Southold	0	0	0	14,087	96,339	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	109	448	34,566	7,076	0	798,299	0	3,742	886	41,603	208	1,523	7,482	4,657	712	0	91	0
East Hampton	0	56	0	5,513	0	0	33,814	0	0	0	0	0	3,082	0	0	0	0	0
Hempstead	7,575	12,357	1,748	129	0	5,265	0	637,455	1,085	815	25,479	41,836	0	1,981	57,026	6,082	0	1,949
Huntington	17,042	939	16,247	0	0	886	0	1,085	182,081	0	4,713	12,370	0	0	2,236	0	1,209	0
Islip	8,203	36,505	16,969	1,827	0	38,220	0	0	137	332,554	2,573	6,073	0	0	411	1,326	0	0
North Hempstead	119	0	7,351	0	0	311	0	20,965	4,713	2,227	258,685	9,952	0	1,221	11,057	5,259	334	103
Oyster Bay	37,438	4,170	604	0	0	0	0	35,201	13,579	7,179	12,828	171,207	0	0	13,073	4,840	4,211	220
Riverhead	317	0	0	2,015	0	8,968	3,082	0	0	0	0	0	31,967	0	0	0	0	0
MANHATTAN	401	0	133	0	0	4,657	2,402	3,167	0	0	2,497	150	0	134,019	34,582	60,148	23,779	13,283
QUEENS NY	4,266	0	1,201	1,617	0	1,862	0	60,979	2,236	411	15,050	11,297	0	17,537	967,417	89,055	7,842	3,130
Other NYC	0	2,723	0	0	0	13,049	0	5,956	0	1,326	4,350	0	0	66,993	84,854	1,346,982	35,930	28,573
Hudson Valley / Connecticut	0	0	62	0	0	0	404	1,039	0	0	0	5,420	0	15,568	10,739	41,307	4,122,742	42,430
New Jersey	0	0	0	0	0	0	0	1,511	0	0	103	220	0	13,102	3,426	24,629	47,061	6,983,936

Bus

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	670	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	0	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	52	107	0	0	503	0	0	126	51	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	503	0	0	5,904	0	0	0	0	0	0	511	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	12,314	0	0	0	0	0	0	943	0	0	0
Huntington	0	0	126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	51	0	0	0	0	0	0	1,518	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	2,352	0	0	0	2,715	0	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riverhead	0	0	0	0	0	511	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	0	0	0	0	0	0	221,936	7,635	33,987	953	28,539
QUEENS NY	0	0	0	0	0	0	0	1,487	0	0	779	0	0	4,995	189,013	9,427	682	813
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	32,515	8,243	529,180	5,595	2,866
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	356	0	4,735	78,415	82
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	26,203	1,378	994	640	259,928

Subway

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	544	0	0	0
Huntington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	411	0	152	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	205,038	32,962	272,883	1,543	194
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	1,572	0	662	858	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	19,062	1,308	1,873	0	22,919

Commuter Rail

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	0	0	0	0	0	386	0	0	0	0
Babylon	0	0	0	0	0	0	0	0	0	686	0	1,763	0	99	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	295	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	5,907	179	95	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	1,408	0	0	0	0	0	4,913	283	0	120	0
Huntington	0	0	295	0	0	0	0	0	1,522	0	0	0	0	3,599	0	0	0	0
Islip	0	686	0	0	0	0	0	0	0	0	0	0	0	1,207	0	55	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	1,536	0	0	1,200	0	1,765	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	2,739	1,763	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	515	99	58	0	0	5,907	0	3,894	2,702	3,229	2,138	2,641	0	0	4,687	302	10,531	11,329
QUEENS NY	0	1,763	0	0	0	179	0	283	555	1,879	1,748	0	0	6,285	931	0	145	3,670
Other NYC	0	0	0	0	0	95	0	0	0	55	0	0	0	522	0	5,543	6,492	5,375
Hudson Valley / Connecticut	0	0	0	0	0	0	0	120	0	0	0	0	0	8,945	0	1,095	17,429	581
New Jersey	0	0	0	0	0	61	0	0	70	0	0	0	0	12,991	3,670	2,703	0	17,093

Other

(Non-motorized, School Bus, Taxi)

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	15,552	13,730	0	0	0	3,434	0	0	166	0	0	227	0	0	0	0	0	0
Babylon	13,730	73,506	0	0	0	0	0	0	0	83	0	0	0	0	0	0	0	0
Smithtown	0	0	13,922	0	0	0	0	0	889	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	2,609	0	0	184	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	1,549	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	3,434	0	0	0	0	62,042	0	0	0	292	0	0	201	0	0	0	0	0
East Hampton	0	0	0	0	0	0	18,086	0	0	0	0	0	0	0	0	0	0	0
Hempstead	99	0	0	0	0	0	0	134,819	0	0	150	159	0	0	4,076	2,126	0	0
Huntington	0	0	889	0	0	0	0	0	15,411	0	0	0	0	0	0	0	0	0
Islip	0	83	0	0	0	292	0	0	0	68,414	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	150	0	0	54,145	462	0	156	835	0	0	0
Oyster Bay	227	0	0	0	0	0	0	159	0	0	462	38,513	0	214	0	0	0	0
Riverhead	0	0	0	0	0	201	0	0	0	0	0	0	6,826	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	1,784	342	1,207	162	0	0	2,566,925	11,917	23,091	9,244	7,657
QUEENS NY	0	0	0	0	0	1,129	0	4,212	0	0	0	0	0	12,191	1,363,771	16,522	95	128
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	17,044	12,945	3,202,821	601	285
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	4,750	304	1,098	698,579	3,872
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	2,674	128	1,137	3,935	1,691,102

All Modes

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	205,795	38,109	4,180	317	0	4,660	0	17,967	35,833	8,328	347	56,622	0	2,707	4,790	0	641	0
Babylon	35,001	244,972	962	0	0	5,686	56	17,266	1,379	60,319	56	7,910	500	99	0	2,723	0	0
Smithtown	10,699	720	225,680	0	0	40,459	0	5,134	25,529	28,929	7,351	2,732	0	185	1,038	14,786	62	285
South Hampton	64	0	567	101,848	14,087	9,468	8,261	129	0	775	0	0	5,010	2,022	1,617	0	0	0
Southold	0	0	0	14,643	108,648	0	0	0	0	0	0	0	371	0	0	0	0	0
Brookhaven	3,876	3,490	53,148	9,689	0	1,531,878	0	4,242	6,038	77,562	385	1,523	18,665	10,564	891	95	151	0
East Hampton	0	56	0	5,941	0	0	93,618	0	0	0	0	0	3,082	0	0	0	0	0
Hempstead	15,834	18,322	3,516	129	0	5,376	0	1,415,048	2,191	1,928	48,325	74,433	1,342	9,353	119,904	11,210	839	2,849
Huntington	36,200	1,507	27,089	0	0	4,985	0	2,231	354,341	1,755	6,365	16,663	0	3,599	2,435	0	1,209	0
Islip	10,636	56,812	29,594	1,827	0	76,757	0	697	2,286	640,775	2,704	8,300	115	1,207	4,057	10,339	60	0
North Hempstead	480	257	7,351	0	0	311	0	60,535	6,154	3,192	530,440	28,828	0	4,598	40,536	9,052	523	103
Oyster Bay	61,603	4,525	2,766	736	0	426	0	69,107	17,967	9,684	31,520	461,902	0	4,864	19,074	5,182	4,211	220
Riverhead	317	500	0	4,136	765	20,265	3,082	0	0	115	0	0	68,653	0	0	0	0	0
MANHATTAN	2,926	99	243	50	0	14,114	2,402	13,212	3,044	4,436	7,824	4,615	0	3,384,161	168,880	418,537	57,743	108,617
QUEENS NY	4,466	1,763	1,929	1,617	0	3,170	0	109,168	2,900	3,336	41,685	15,737	0	135,057	3,437,266	166,326	10,177	10,981
Other NYC	978	13,215	1,737	0	0	13,144	0	7,131	0	1,381	4,688	1,459	0	348,177	170,412	6,399,229	79,091	51,906
Hudson Valley / Connecticut	641	0	62	0	0	60	404	1,786	0	82	189	5,486	0	42,341	12,425	74,878	8,483,991	73,593
New Jersey	0	118	57	0	0	61	0	2,411	70	0	103	220	0	88,717	11,168	48,406	83,986	15,176,387

Source: NYMTC 2010 RHTS, GPS weighted and factored

Notes: Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively).

Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

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Appendix D:
2010/2011 Origin-Destination Data for Non-Work Trips By Trip Purpose and Mode: Maintenance, Discretionary, and Other trips

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Daily MaintenanceTrips

SOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	32,771	2,423	411	0	0	0	0	4,051	5,541	2,751	0	14,925	0	0	0	0	428	0
Babylon	1,033	35,206	548	0	0	0	0	0	145	7,461	56	1,109	0	0	0	0	0	0
Smithtown	2,791	274	27,429	0	0	6,175	0	1,768	2,852	8,081	0	0	0	52	0	1,737	62	57
South Hampton	0	0	0	15,727	0	433	0	0	0	0	0	0	827	0	0	0	0	0
Southold	0	0	0	0	9,393	0	0	0	0	0	0	0	162	0	0	0	0	0
Brookhaven	0	0	7,271	116	0	254,315	0	0	871	18,735	51	0	6,349	0	0	0	60	0
East Hampton	0	0	0	98	0	0	14,599	0	0	0	0	0	0	0	0	0	0	0
Hempstead	3,199	1,641	1,768	0	0	0	0	201,558	196	124	9,058	9,442	0	824	25,253	0	172	552
Huntington	4,048	145	2,752	0	0	359	0	49	60,763	730	773	416	0	0	0	0	0	0
Islip	1,514	6,625	8,037	0	0	22,856	0	124	134	107,638	131	1,588	0	0	3,646	0	0	0
North Hempstead	0	201	0	0	0	0	0	11,652	823	965	102,981	5,642	0	0	16,007	0	0	0
Oyster Bay	12,079	66	0	0	0	0	0	9,010	366	1,273	5,986	98,248	0	0	3,287	0	0	0
Riverhead	0	0	0	827	162	6,084	0	0	0	0	0	0	6,468	0	0	0	0	0
MANHATTAN	0	0	52	0	0	0	0	2,511	0	0	0	0	0	34,788	5,963	22,273	6,445	11,259
QUEENS NY	0	0	0	0	0	0	0	7,918	0	1,046	10,891	3,963	0	8,227	328,511	14,989	413	511
Other NYC	675	0	1,737	0	0	0	0	573	0	0	338	1,117	0	13,404	12,247	461,048	11,274	5,474
Hudson Valley / Connecticut	428	0	0	0	0	0	0	172	0	82	0	0	0	7,712	339	8,045	1,341,552	6,347
New Jersey	0	0	57	0	0	0	0	900	0	0	0	0	0	5,666	698	5,156	13,901	2,191,479

HOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	36,060	5,743	0	0	0	0	0	899	4,786	199	119	9,015	0	311	0	0	0	0
Babylon	6,405	43,994	243	0	0	0	56	1,658	94	8,555	0	3,545	0	0	0	0	0	0
Smithtown	0	243	40,404	0	0	2,539	0	0	2,489	2,906	7,351	343	0	133	0	13,049	0	0
South Hampton	0	0	0	62,351	14,087	7,152	0	0	0	775	0	0	0	0	1,617	0	0	0
Southold	0	0	0	14,087	76,899	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	16,185	6,731	0	331,101	0	0	422	21,743	158	1,344	1,784	0	0	0	0	0
East Hampton	0	56	0	0	0	0	7,225	0	0	0	0	0	3,082	0	0	0	0	0
Hempstead	1,327	3,248	0	0	0	1,407	0	232,032	0	815	12,080	9,813	0	1,205	13,083	2,243	0	1,060
Huntington	6,431	94	2,786	0	0	422	0	0	77,064	0	263	0	0	0	2,236	0	0	0
Islip	4,006	7,229	2,852	1,208	0	20,640	0	0	137	112,802	965	833	0	0	0	0	0	0
North Hempstead	119	0	7,351	0	0	261	0	10,194	263	0	128,322	3,571	0	166	5,293	959	334	0
Oyster Bay	14,184	3,489	343	0	0	0	0	12,241	0	1,939	5,468	77,714	0	0	1,484	0	0	220
Riverhead	0	0	0	0	0	1,784	3,082	0	0	0	0	0	14,351	0	0	0	0	0
MANHATTAN	311	0	133	0	0	0	0	1,650	0	0	823	0	0	64,863	23,856	25,796	2,377	4,616
QUEENS NY	0	0	0	1,617	0	0	0	19,919	2,236	0	9,910	1,044	0	8,634	406,336	31,609	5,086	0
Other NYC	0	0	0	0	0	13,049	0	2,167	0	0	0	0	0	31,197	27,432	608,506	10,422	11,596
Hudson Valley / Connecticut	0	0	62	0	0	0	0	128	0	0	0	0	0	3,015	1,751	11,690	1,666,408	8,299
New Jersey	0	0	0	0	0	0	0	1,131	0	0	0	220	0	6,729	461	8,089	16,188	2,752,881

Bus

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	0	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	52	52	0	0	503	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	503	0	0	201	0	0	0	0	0	0	511	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	12,185	0	0	0	0	0	0	749	0	0	0
Huntington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	316	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	826	0	0	0	2,233	0	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riverhead	0	0	0	0	0	511	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	0	0	0	0	0	0	78,637	2,002	12,407	390	10,303
QUEENS NY	0	0	0	0	0	0	0	749	0	0	297	0	0	0	61,733	4,499	0	337
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	11,609	4,391	177,081	2,351	0
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,578	44,017	82
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	9,611	79	0	82	100,093

Subway

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Huntington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	0	0	0	0	0	0	110,141	21,968	91,863	51	6,368
QUEENS NY	0	0	0	0	0	0	0	0	0	0	0	0	0	26,278	52,615	6,267	0	1,220
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	81,888	13,104	133,932	0	0
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	51	0	0	858	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	4,501	1,220	0	0	7,305

Commuter Rail

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	0	0	0	0	0	0	0	0	0	0	0	1,763	0	0	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	936	0	0	0	0
Huntington	0	0	0	0	0	0	0	0	0	0	0	0	0	555	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	0	0	0	0	1,207	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	580	0	0	385	0	399	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	2,247	1,763	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	1,408	0	0	0	2,247	0	0	610	0	2,051	370
QUEENS NY	0	1,763	0	0	0	0	0	283	0	0	1,748	0	0	5,270	602	0	145	0
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	220	0	1,954	4,507	1,227
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	1,258	0	0	14,291	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	4,916	0	1,227	0	7,809

Other

(Non-motorized, School Bus, Taxi)

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	7,501	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	0	7,081	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	2,637	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	777	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	9,370	0	0	0	0	0	0	201	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	99	0	0	0	0	0	0	39,209	0	0	0	0	0	0	360	2,126	0	0
Huntington	0	0	0	0	0	0	0	0	1,471	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	3,255	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	9,092	0	0	0	0	0	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	5,506	0	0	0	0	0	0
Riverhead	0	0	0	0	0	201	0	0	0	0	0	0	6,826	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	0	0	1,207	0	0	0	514,008	5,321	4,702	3,162	2,413
QUEENS NY	0	0	0	0	0	0	0	0	0	0	0	0	0	7,272	348,342	4,455	0	0
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	6,315	4,201	812,581	410	0
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	3,162	0	410	204,007	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	1,318	0	852	0	484,132

All Modes

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	76,332	8,166	411	0	0	0	0	4,950	10,327	2,950	119	23,940	0	311	0	0	428	0
Babylon	7,438	86,281	843	0	0	0	56	1,658	239	16,016	56	6,417	0	0	0	0	0	0
Smithtown	2,791	569	70,522	0	0	9,217	0	1,768	5,341	10,987	7,351	343	0	185	0	14,786	62	57
South Hampton	0	0	0	78,855	14,087	7,585	0	0	0	775	0	0	827	0	1,617	0	0	0
Southold	0	0	0	14,087	86,292	0	0	0	0	0	0	0	162	0	0	0	0	0
Brookhaven	0	0	23,959	6,847	0	594,987	0	0	1,293	40,478	209	1,344	8,845	0	0	0	60	0
East Hampton	0	56	0	98	0	0	21,824	0	0	0	0	0	3,082	0	0	0	0	0
Hempstead	4,625	4,889	1,768	0	0	1,407	0	484,984	196	939	21,138	19,255	0	2,965	39,445	4,369	172	1,612
Huntington	10,479	239	5,538	0	0	781	0	49	139,298	730	1,036	416	0	555	2,236	0	0	0
Islip	5,520	13,854	10,889	1,208	0	43,496	0	124	271	224,011	1,096	2,421	0	1,207	3,646	0	0	0
North Hempstead	119	201	7,351	0	0	261	0	21,846	1,086	965	241,801	9,213	0	551	23,533	1,358	334	0
Oyster Bay	26,263	3,555	343	0	0	0	0	21,251	366	3,212	11,454	181,468	0	2,247	6,534	0	0	220
Riverhead	0	0	0	827	162	8,580	3,082	0	0	0	0	0	27,645	0	0	0	0	0
MANHATTAN	311	0	185	0	0	0	0	5,569	0	1,207	823	2,247	0	802,437	59,720	157,041	14,476	35,329
QUEENS NY	0	1,763	0	1,617	0	0	0	28,869	2,236	1,046	22,846	5,007	0	55,681	1,198,139	61,819	5,644	2,068
Other NYC	675	0	1,737	0	0	13,049	0	2,740	0	0	338	1,117	0	144,633	61,375	2,195,102	28,964	18,297
Hudson Valley / Connecticut	428	0	62	0	0	0	0	300	0	82	0	0	0	15,198	2,090	21,723	3,271,133	14,728
New Jersey	0	0	57	0	0	0	0	2,031	0	0	0	220	0	32,741	2,458	15,324	30,171	5,543,699

Source: NYMTC 2010 RHTS, GPS weighted and factored
Notes: Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively).
Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

Daily Discretionary Trips

SOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	52,198	6,422	2,497	0	0	1,117	0	4,156	13,012	2,372	228	11,712	0	2,010	524	0	213	0
Babylon	5,424	37,271	69	0	0	5,238	0	6,499	295	14,363	0	688	500	0	0	2,723	0	0
Smithtown	242	151	52,542	0	0	12,664	0	1,354	6,440	4,559	0	2,307	0	0	0	0	0	228
South Hampton	64	0	0	9,343	0	1,883	196	0	0	0	0	0	1,850	0	0	0	0	0
Southold	0	0	0	556	1,367	0	0	0	0	0	0	0	209	0	0	0	0	0
Brookhaven	333	3,042	10,459	2,497	0	405,126	0	500	4,281	16,932	126	0	4,122	0	0	0	0	0
East Hampton	0	0	0	330	0	0	27,119	0	0	0	0	0	0	0	0	0	0	0
Hempstead	4,509	4,324	0	0	0	111	0	414,366	910	989	11,739	22,740	1,342	1,635	31,003	3,002	547	348
Huntington	12,444	423	6,780	0	0	3,740	0	1,097	93,167	1,025	879	3,877	0	0	199	0	0	0
Islip	919	12,913	4,537	0	0	15,389	0	573	2,015	124,224	0	542	115	0	0	8,958	60	0
North Hempstead	361	56	0	0	0	0	0	25,296	618	0	110,363	12,772	0	750	9,157	1,876	189	0
Oyster Bay	11,167	289	2,162	736	0	426	0	24,669	4,022	1,135	12,244	151,424	0	1,911	951	342	0	0
Riverhead	0	500	0	1,294	603	4,501	0	0	0	115	0	0	23,238	0	0	0	0	0
MANHATTAN	2,010	0	0	50	0	3,487	0	1,856	0	0	488	1,824	0	36,982	4,303	6,763	5,594	9,176
QUEENS NY	200	0	728	0	0	0	0	33,184	109	0	12,452	477	0	8,718	412,614	12,938	1,000	1,216
Other NYC	303	10,492	0	0	0	0	0	602	0	0	0	342	0	12,146	16,680	568,341	17,349	8,986
Hudson Valley / Connecticut	213	0	0	0	0	60	0	455	0	0	189	66	0	3,159	1,043	17,936	2,164,534	19,800
New Jersey	0	118	0	0	0	0	0	0	0	0	0	0	0	7,398	560	11,761	16,402	3,902,933

HOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	62,725	8,395	1,272	317	0	109	0	8,861	9,662	3,006	0	20,743	0	0	4,266	0	0	0
Babylon	7,013	54,496	0	0	0	448	0	9,109	845	24,298	0	805	0	0	0	0	0	0
Smithtown	7,666	0	88,892	0	0	17,701	0	2,012	11,695	13,332	0	82	0	0	1,038	0	0	0
South Hampton	0	0	567	11,818	0	0	7,881	129	0	0	0	0	2,333	0	0	0	0	0
Southold	0	0	0	0	19,440	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	109	448	17,853	345	0	461,662	0	3,742	464	19,860	50	179	5,698	4,657	712	0	91	0
East Hampton	0	0	0	5,513	0	0	24,181	0	0	0	0	0	0	0	0	0	0	0
Hempstead	6,248	9,109	1,748	129	0	3,858	0	393,624	1,085	0	12,602	31,312	0	776	42,728	3,839	0	889
Huntington	10,496	845	13,461	0	0	464	0	1,085	104,517	0	4,450	12,370	0	0	0	0	1,209	0
Islip	4,197	29,276	14,117	619	0	17,580	0	0	0	209,229	1,608	3,931	0	0	411	1,326	0	0
North Hempstead	0	0	0	0	0	50	0	9,496	4,450	2,227	130,363	6,381	0	1,055	5,764	4,300	0	103
Oyster Bay	23,254	681	261	0	0	0	0	22,060	13,579	3,931	7,360	88,996	0	0	11,589	4,840	4,211	0
Riverhead	317	0	0	2,015	0	7,184	0	0	0	0	0	0	17,616	0	0	0	0	0
MANHATTAN	90	0	0	0	0	4,657	0	1,517	0	0	1,674	150	0	67,931	10,726	32,568	21,402	8,667
QUEENS NY	4,266	0	1,201	0	0	712	0	40,835	0	411	5,140	10,253	0	8,903	539,546	50,163	2,756	2,294
Other NYC	0	2,723	0	0	0	0	0	3,789	0	1,326	4,350	0	0	35,500	54,158	719,910	25,179	16,762
Hudson Valley / Connecticut	0	0	0	0	0	0	404	911	0	0	0	5,420	0	12,422	8,627	29,617	2,400,910	31,013
New Jersey	0	0	0	0	0	0	0	380	0	0	103	0	0	5,970	1,714	16,325	26,595	4,058,389

Bus

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	670	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	55	0	0	0	0	0	126	51	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	5,703	0	0	0	0	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	129	0	0	0	0	0	0	194	0	0	0
Huntington	0	0	126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	51	0	0	0	0	0	0	1,202	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	1,526	0	0	0	482	0	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	0	0	0	0	0	0	123,441	5,419	20,927	563	18,236
QUEENS NY	0	0	0	0	0	0	0	738	0	0	482	0	0	4,995	126,053	4,928	0	0
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	20,906	3,852	323,546	3,244	2,866
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	356	0	3,157	34,138	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	16,592	0	994	0	150,039

Subway

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	544	0	0	0
Huntington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	411	0	152	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	63	0	0	0	0	1,679	0	0	261,012	76,067	174,534	735	18,728
QUEENS NY	0	0	0	0	0	0	0	0	0	0	0	0	0	49,052	83,715	16,996	0	43
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	117,424	13,878	120,792	1,543	194
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	1,521	0	662	0	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	14,496	0	1,873	0	11,195

Commuter Rail

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	0	0	0	0	0	386	0	0	0	0
Babylon	0	0	0	0	0	0	0	0	0	686	0	0	0	99	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	295	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	5,907	179	95	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	1,408	0	0	0	0	0	3,977	283	0	120	0
Huntington	0	0	295	0	0	0	0	0	0	0	0	0	0	3,044	0	0	0	0
Islip	0	686	0	0	0	0	0	0	0	0	0	0	0	0	0	55	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	815	0	1,366	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	492	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	515	99	58	0	0	5,907	0	2,246	2,702	3,229	2,138	394	0	0	4,077	302	8,027	10,557
QUEENS NY	0	0	0	0	0	179	0	0	555	1,879	0	0	0	1,015	329	0	0	3,670
Other NYC	0	0	0	0	0	95	0	0	0	55	0	0	0	302	0	3,589	1,985	4,148
Hudson Valley / Connecticut	0	0	0	0	0	0	0	120	0	0	0	0	0	7,587	0	1,095	1,793	581
New Jersey	0	0	0	0	0	61	0	0	70	0	0	0	0	7,749	3,670	1,476	0	5,820

Other

(Non-motorized, School Bus, Taxi)

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	5,937	13,730	0	0	0	0	0	0	166	0	0	227	0	0	0	0	0	0
Babylon	13,730	66,373	0	0	0	0	0	0	0	83	0	0	0	0	0	0	0	0
Smithtown	0	0	6,159	0	0	0	0	0	889	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	313	0	0	184	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	33,885	0	0	0	292	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	9,633	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	61,345	0	0	150	159	0	0	3,716	0	0	0
Huntington	0	0	889	0	0	0	0	0	13,492	0	0	0	0	0	0	0	0	0
Islip	0	83	0	0	0	292	0	0	0	36,507	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	150	0	0	12,850	0	0	156	835	0	0	0
Oyster Bay	227	0	0	0	0	0	0	159	0	0	0	25,486	0	0	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	1,784	342	0	162	0	0	1,888,329	6,596	18,389	6,082	4,135
QUEENS NY	0	0	0	0	0	0	0	4,212	0	0	0	0	0	2,901	910,176	8,965	0	0
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	10,438	8,744	2,110,352	191	285
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	1,588	0	688	356,798	3,872
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	1,356	0	285	3,872	962,331

All Modes

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	121,530	28,606	3,769	317	0	1,226	0	13,017	22,840	5,378	228	32,682	0	2,396	4,790	0	213	0
Babylon	26,226	158,140	69	0	0	5,686	0	15,608	1,140	39,430	0	1,493	500	99	0	2,723	0	0
Smithtown	7,908	151	147,648	0	0	30,365	0	3,366	19,445	17,942	0	2,389	0	0	1,038	0	0	228
South Hampton	64	0	567	21,474	0	1,883	8,261	129	0	0	0	0	4,183	0	0	0	0	0
Southold	0	0	0	556	20,807	0	0	0	0	0	0	0	209	0	0	0	0	0
Brookhaven	442	3,490	28,312	2,842	0	906,376	0	4,242	4,745	37,084	176	179	9,820	10,564	891	95	91	0
East Hampton	0	0	0	5,843	0	0	60,933	0	0	0	0	0	0	0	0	0	0	0
Hempstead	10,757	13,433	1,748	129	0	3,969	0	870,872	1,995	989	24,491	54,211	1,342	6,388	78,468	6,841	667	1,237
Huntington	22,940	1,268	21,551	0	0	4,204	0	2,182	211,176	1,025	5,329	16,247	0	3,044	199	0	1,209	0
Islip	5,116	42,958	18,705	619	0	33,261	0	573	2,015	371,162	1,608	4,473	115	0	411	10,339	60	0
North Hempstead	361	56	0	0	0	50	0	34,942	5,068	2,227	255,102	19,153	0	3,187	16,238	7,694	189	103
Oyster Bay	34,648	970	2,423	736	0	426	0	46,888	17,601	5,066	19,604	265,906	0	2,403	12,540	5,182	4,211	0
Riverhead	317	500	0	3,309	603	11,685	0	0	0	115	0	0	40,854	0	0	0	0	0
MANHATTAN	2,615	99	58	50	0	14,114	0	7,403	3,044	3,229	6,141	2,368	0	2,377,695	107,188	253,483	42,403	69,499
QUEENS NY	4,466	0	1,929	0	0	891	0	78,969	664	2,290	18,074	10,730	0	75,584	2,072,433	93,990	3,756	7,223
Other NYC	303	13,215	0	0	0	95	0	4,391	0	1,381	4,350	342	0	196,716	97,312	3,846,530	49,491	33,241
Hudson Valley / Connecticut	213	0	0	0	0	60	404	1,486	0	0	189	5,486	0	26,633	9,670	53,155	4,958,173	55,266
New Jersey	0	118	0	0	0	61	0	380	70	0	103	0	0	53,561	5,944	32,714	46,869	9,090,707

Source: NYMTC 2010 RHTS, GPS weighted and factored

Notes: Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively).

Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

Daily Other Purpose Trips

SOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	5,819	1,337	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	1,337	140	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	1,299	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	349	0	0	6,192	0	0	0	0	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	452	0	0	0	0	0	0	13,128	0	0	1,899	256	0	0	776	0	0	0
Huntington	2,666	0	0	0	0	0	0	0	1,397	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	6,427	0	97	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	2,472	0	0	378	0	0	860	765	0	0	0
Oyster Bay	692	0	0	0	0	0	0	68	0	97	0	2,510	0	0	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	154	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	0	0	0	860	0	0	2,808	65	806	411	1,621
QUEENS NY	0	0	0	0	0	0	0	1,105	0	0	765	0	0	0	28,467	0	0	250
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	515	2,481	12,431	307	153
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	279	0	0	59,882	481
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	1,621	0	153	2,047	106,997

HOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	2,666	0	0	0	0	0	0	0	0	0
Babylon	0	359	0	0	0	0	0	0	0	4,873	0	0	0	0	0	0	0	0
Smithtown	0	0	1,085	0	0	877	0	0	743	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	2,022	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	528	0	0	5,536	0	0	0	0	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	2,408	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	11,799	0	0	797	711	0	0	1,215	0	0	0
Huntington	115	0	0	0	0	0	0	0	500	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	10,523	0	1,309	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	1,275	0	0	0	0	0	0	0	0	0	0
Oyster Bay	0	0	0	0	0	0	0	900	0	1,309	0	4,497	0	0	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	2,402	0	0	0	0	0	0	1,225	0	1,784	0	0
QUEENS NY	0	0	0	0	0	1,150	0	225	0	0	0	0	0	0	21,535	7,283	0	836
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	296	3,264	18,566	329	215
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	131	361	0	55,424	3,118
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	403	1,251	215	4,278	172,666

Bus

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Huntington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	0	0	0	0	0	0	19,858	214	653	0	0
QUEENS NY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,227	0	682	476
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28,553	0	0
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	260	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,299	0	558	9,796

Subway

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Huntington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	0	0	0	0	0	0	15,550	1,693	4,770	0	657
QUEENS NY	0	0	0	0	0	0	0	0	0	0	0	0	0	1,774	10,212	132	0	0
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	5,726	5,980	18,159	0	0
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	65	88	0	0	4,419

Commuter Rail

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Huntington	0	0	0	0	0	0	0	0	1,522	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	956	0	0	0	0	0	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	240	0	0	0	0	0	0	0	0	453	402
QUEENS NY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	1,345	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	326	0	0	0	3,464

Other

(Non-motorized, School Bus, Taxi)

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	2,114	0	0	0	0	3,434	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	5,126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	1,519	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	1,549	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	3,434	0	0	0	0	18,787	0	0	0	0	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	8,453	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	34,265	0	0	0	0	0	0	0	0	0	0
Huntington	0	0	0	0	0	0	0	0	448	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	28,652	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	32,203	462	0	0	0	0	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	462	7,521	0	214	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	0	0	0	0	0	0	164,588	0	0	0	1,109
QUEENS NY	0	0	0	0	0	1,129	0	0	0	0	0	0	0	2,018	105,253	3,102	95	128
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	291	0	279,888	0	0
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	0	304	0	137,774	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	128	0	63	244,639

All Modes

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	7,933	1,337	0	0	0	3,434	0	0	2,666	0	0	0	0	0	0	0	0	0
Babylon	1,337	551	50	0	0	0	0	0	0	4,873	0	0	0	0	0	0	0	0
Smithtown	0	0	7,510	0	0	877	0	0	743	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	1,519	0	0	0	0	0	0	0	0	0	2,022	0	0	0	0
Southold	0	0	0	0	1,549	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	3,434	0	877	0	0	30,515	0	0	0	0	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	10,861	0	0	0	0	0	0	0	0	0	0	0
Hempstead	452	0	0	0	0	0	0	59,192	0	0	2,696	967	0	0	1,991	0	0	0
Huntington	2,781	0	0	0	0	0	0	0	3,867	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	45,602	0	1,406	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	3,747	0	0	33,537	462	0	860	765	0	0	0
Oyster Bay	692	0	0	0	0	0	0	968	0	1,406	462	14,528	0	214	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	154	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	2,402	240	0	0	860	0	0	204,029	1,972	8,013	864	3,789
QUEENS NY	0	0	0	0	0	2,279	0	1,330	0	0	765	0	0	3,792	166,694	10,517	777	1,690
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	6,828	11,725	357,597	636	368
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	510	665	0	254,685	3,599
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	2,415	2,766	368	6,946	541,981

Source: NYMTC 2010 RHTS, GPS weighted and factored

Notes: Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively).

Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

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Appendix E:
2010-2040 Growth Rates for All Trips by Mode

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Daily Trips

SOV

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.23	1.11	1.17	--	--	1.28	--	1.07	1.23	1.23	1.02	1.19	1.43	1.19	1.16	1.30	1.27	1.24
Babylon	1.18	1.07	1.13	1.06	--	1.21	--	1.05	1.24	1.18	1.01	1.16	1.33	1.12	1.11	1.13	--	--
Smithtown	1.18	1.03	1.12	--	--	1.21	--	1.08	1.20	1.18	1.00	1.15	1.35	1.10	1.10	1.17	1.23	1.19
South Hampton	1.18	1.05	--	1.14	1.46	1.24	1.18	1.01	1.28	1.20	--	1.20	1.37	--	--	--	--	--
Southold	--	--	--	1.03	1.23	1.06	--	--	--	--	--	--	1.31	--	--	--	--	--
Brookhaven	1.21	1.08	1.14	1.11	1.46	1.23	1.18	1.02	1.22	1.20	1.01	1.20	1.38	--	1.13	1.27	1.23	1.20
East Hampton	--	--	--	1.19	--	1.38	1.24	--	--	--	--	--	--	--	--	--	--	--
Hempstead	1.27	1.11	1.19	1.15	--	1.33	--	1.12	1.31	1.27	1.09	1.20	1.36	1.20	1.19	1.31	1.29	1.26
Huntington	1.15	1.04	1.08	1.00	--	1.16	--	1.04	1.12	1.11	1.07	1.10	--	1.03	1.04	1.15	--	1.10
Islip	1.22	1.09	1.15	1.09	--	1.25	--	1.03	1.26	1.21	1.02	1.20	1.40	1.15	1.15	1.13	1.24	1.22
North Hempstead	1.29	1.12	1.22	--	--	1.34	--	1.11	1.27	1.25	1.13	1.21	--	1.20	1.19	1.33	1.31	1.29
Oyster Bay	1.19	1.03	1.13	1.19	--	1.22	--	1.07	1.21	1.18	1.07	1.14	--	1.13	1.13	1.21	1.20	1.18
Riverhead	1.29	1.15	1.22	1.18	1.33	1.30	--	--	--	1.27	--	--	1.44	--	--	--	--	--
MANHATTAN	1.19	1.05	1.14	1.20	--	1.23	--	1.06	--	1.19	1.03	1.16	--	1.14	1.13	1.20	1.23	1.20
QUEENS NY	1.25	1.09	1.17	--	--	1.30	--	1.09	1.30	1.24	1.07	1.21	--	1.17	1.18	1.26	1.27	1.24
Other NYC	1.14	1.09	1.08	--	--	1.13	--	1.01	1.16	1.08	1.00	1.09	--	1.07	1.06	1.12	1.15	1.11
Hudson Valley / Connecticut	1.21	--	1.16	--	--	1.27	--	1.06	--	1.20	1.01	1.21	--	1.15	1.15	1.23	1.24	1.22
New Jersey	1.21	1.07	1.15	--	--	1.25	--	1.08	1.29	1.20	1.00	--	--	1.15	1.14	1.23	1.23	1.21

HOV

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.22	1.14	1.17	1.23	--	1.23	--	1.14	1.19	1.20	1.11	1.16	--	1.18	1.20	--	--	--
Babylon	1.17	1.08	1.12	--	--	1.22	1.21	1.09	1.09	1.18	--	1.10	--	--	--	1.30	--	--
Smithtown	1.19	1.10	1.14	--	--	1.21	--	1.13	1.13	1.19	1.15	1.12	--	1.16	1.17	1.11	--	--
South Hampton	--	--	1.14	1.20	1.19	1.22	1.23	1.13	--	1.20	--	--	1.36	1.16	1.17	--	--	--
Southold	--	--	--	1.20	1.19	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	1.19	1.09	1.15	1.21	--	1.23	--	1.11	1.16	1.20	1.16	1.13	1.37	1.15	1.15	--	1.24	--
East Hampton	--	1.16	--	1.21	--	--	1.23	--	--	--	--	--	1.36	--	--	--	--	--
Hempstead	1.21	1.12	1.14	1.20	--	1.22	--	1.13	1.11	1.28	1.13	1.15	--	1.17	1.19	1.17	1.35	1.20
Huntington	1.14	1.10	1.12	--	--	1.18	--	1.13	1.11	1.07	1.13	1.12	--	--	1.16	1.13	1.23	--
Islip	1.21	1.11	1.16	1.21	--	1.24	--	1.03	1.28	1.21	1.12	1.15	--	--	1.15	1.15	--	--
North Hempstead	1.20	--	1.15	--	--	1.22	--	1.14	1.15	1.25	1.15	1.19	--	1.23	1.22	1.21	1.31	1.33
Oyster Bay	1.18	1.10	1.13	--	--	1.20	--	1.10	1.10	1.18	1.11	1.13	--	1.09	1.16	1.12	1.22	1.19
Riverhead	1.24	--	--	1.24	--	1.26	1.28	--	--	--	--	--	1.41	--	--	--	--	--
MANHATTAN	1.20	--	1.15	--	--	1.23	1.24	1.13	--	--	1.13	1.17	--	1.15	1.15	1.17	1.23	1.20
QUEENS NY	1.20	--	1.15	1.21	--	1.23	--	1.13	1.12	1.24	1.10	1.15	--	1.18	1.18	1.16	1.26	1.22
Other NYC	--	1.10	--	--	--	1.21	--	1.10	1.14	1.19	1.09	1.07	--	1.10	1.12	1.11	1.17	1.16
Hudson Valley / Connecticut	--	--	1.15	--	--	--	1.24	1.14	--	--	1.00	1.13	--	1.16	1.17	1.19	1.24	1.21
New Jersey	--	--	1.14	--	--	--	--	1.10	--	--	1.03	1.13	--	1.15	1.17	1.19	1.24	1.21

Bus

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.20	--	--	--	--	--	--	--	1.20	--	--	--	--	--	--	--	--	--
Babylon	--	--	1.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Smithtown	--	1.07	1.11	--	--	1.16	--	--	1.08	1.16	--	--	--	--	--	--	--	--
South Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southold	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	--	--	1.18	--	--	1.22	--	--	--	1.25	--	--	1.36	--	--	--	--	--
East Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hempstead	1.25	--	--	--	--	--	--	1.12	--	--	1.02	1.24	--	--	1.17	--	--	--
Huntington	1.12	--	1.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Islip	--	--	1.15	--	--	1.24	--	--	--	1.20	--	--	--	--	--	--	--	--
North Hempstead	--	--	--	--	--	--	--	1.09	--	--	1.11	1.28	--	--	1.19	--	--	--
Oyster Bay	--	--	--	--	--	--	--	1.08	--	--	1.05	1.27	--	1.20	1.20	--	--	--
Riverhead	--	--	--	--	--	1.37	--	--	--	--	--	--	--	--	--	--	--	--
MANHATTAN	--	--	--	--	--	--	--	1.01	--	--	--	1.19	--	1.15	1.14	1.21	1.23	1.20
QUEENS NY	--	--	--	--	--	--	--	1.08	--	--	1.07	1.24	--	1.18	1.18	1.20	1.24	1.24
Other NYC	--	--	--	--	--	--	--	--	--	--	--	--	--	1.07	1.07	1.12	1.18	1.10
Hudson Valley / Connecticut	--	--	--	--	--	--	--	--	--	--	--	--	--	1.15	--	1.18	1.25	1.22
New Jersey	--	--	--	--	--	--	--	--	--	--	--	--	--	1.16	1.16	1.28	1.25	1.22

Subway

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	--	1.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Babylon	1.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Smithtown	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
South Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southold	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	--	--	--	--	--	--	--	--	--	--	--	--	1.22	--	--	--	--	--
East Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hempstead	--	--	--	--	--	--	--	--	--	--	--	--	1.14	1.13	1.27	--	--	--
Huntington	--	--	--	--	--	1.15	--	--	--	--	--	--	1.04	--	--	--	--	--
Islip	--	--	--	--	--	--	--	--	--	--	--	--	1.20	--	--	--	--	--
North Hempstead	--	--	--	--	--	--	--	--	--	--	--	--	1.16	1.15	1.12	--	--	--
Oyster Bay	--	--	--	--	--	--	--	--	--	--	--	--	1.13	1.13	--	--	--	--
Riverhead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANHATTAN	--	--	--	--	--	1.24	--	1.01	1.28	1.19	1.09	1.19	--	1.14	1.14	1.21	1.22	1.21
QUEENS NY	--	--	--	--	--	--	--	1.03	--	--	1.00	--	--	1.16	1.17	1.25	1.25	1.22
Other NYC	--	--	--	--	--	--	--	1.00	--	--	--	--	--	1.08	1.09	1.15	1.21	1.13
Hudson Valley / Connecticut	--	--	--	--	--	--	--	--	--	--	--	--	--	1.22	1.21	1.27	1.31	--
New Jersey	--	--	--	--	--	--	--	--	--	--	--	--	--	1.18	1.18	1.27	--	1.24

Commuter Rail

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	--	1.10	--	--	--	--	--	--	--	1.04	--	--	1.19	--	1.33	--	--	--
Babylon	--	--	--	--	--	--	--	--	1.16	--	1.09	--	1.12	1.11	--	--	--	--
Smithtown	--	--	--	--	--	--	--	1.15	--	--	--	--	1.15	1.14	--	--	--	--
South Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southold	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	--	--	--	--	--	--	--	1.38	--	--	--	--	1.22	1.22	1.17	--	--	--
East Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hempstead	--	--	--	--	--	--	--	1.12	--	1.19	--	1.19	--	1.13	1.12	1.26	1.22	1.19
Huntington	--	--	1.11	--	--	1.20	--	--	1.09	--	--	--	--	1.11	1.09	1.22	--	--
Islip	--	1.17	--	--	--	--	--	1.05	--	--	--	--	--	1.19	1.17	1.30	--	1.25
North Hempstead	1.25	--	--	--	--	--	--	--	--	--	1.09	--	--	1.17	1.16	1.13	--	--
Oyster Bay	--	--	--	--	--	--	--	1.01	--	--	--	--	--	1.12	1.13	1.25	--	--
Riverhead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.37
MANHATTAN	1.20	1.05	1.14	--	--	1.21	1.18	1.02	1.20	1.19	1.02	1.18	--	1.13	1.13	1.25	1.22	1.20
QUEENS NY	--	1.09	1.17	--	--	1.27	--	1.05	1.23	1.21	1.12	1.23	--	1.17	1.17	1.30	1.26	1.22
Other NYC	1.16	--	--	--	--	1.15	--	1.00	1.23	1.15	1.00	1.15	--	1.09	1.08	1.07	1.17	1.14
Hudson Valley / Connecticut	--	--	--	--	--	--	--	1.17	--	--	--	--	--	1.21	1.20	1.33	1.29	1.28
New Jersey	--	--	--	--	--	1.27	--	1.05	1.14	1.24	--	--	1.43	1.17	1.19	1.24	1.27	1.24

Other
(Non-motorized, School Bus, Taxi)

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.22	1.13	--	--	--	1.26	--	--	1.27	1.20	1.00	1.20	--	1.13	--	--	--	--
Babylon	1.19	1.10	--	--	--	--	--	--	--	1.24	1.02	1.24	--	1.18	--	--	--	--
Smithtown	--	--	1.14	--	--	1.25	--	1.02	1.22	1.20	--	--	--	--	--	--	--	--
South Hampton	--	--	--	1.16	--	1.27	1.23	--	--	--	--	--	--	--	--	--	--	--
Southold	--	--	--	--	1.19	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	1.20	--	1.12	1.06	--	1.23	--	--	--	1.18	--	--	1.37	1.11	1.11	--	--	--
East Hampton	--	--	--	--	--	--	1.24	--	--	--	--	--	--	--	--	--	--	--
Hempstead	1.19	--	1.27	--	--	--	--	1.13	1.43	--	1.10	1.32	--	--	1.22	1.11	--	--
Huntington	1.07	--	1.08	--	--	--	--	1.00	1.13	1.06	--	1.06	--	1.00	--	--	--	--
Islip	1.22	1.06	1.15	--	--	1.25	--	--	1.29	1.20	--	--	--	--	--	--	--	--
North Hempstead	1.40	1.21	--	--	--	--	--	1.17	--	--	1.15	1.32	--	1.17	1.28	--	--	--
Oyster Bay	1.15	1.00	--	--	--	--	--	1.01	1.22	--	1.05	1.14	--	1.14	1.07	--	--	--
Riverhead	--	--	--	--	--	1.23	--	--	--	--	--	--	1.37	--	--	--	--	--
MANHATTAN	1.24	1.08	--	--	--	1.28	--	1.08	1.12	1.21	1.16	--	--	1.16	1.17	1.21	1.25	1.22
QUEENS NY	1.26	--	--	--	--	1.22	--	1.10	--	--	1.02	1.24	--	1.17	1.17	1.21	1.24	1.25
Other NYC	--	--	--	--	--	--	--	1.00	--	--	--	--	--	1.09	1.10	1.12	1.10	1.10
Hudson Valley / Connecticut	--	--	--	--	--	--	--	--	--	--	--	--	--	1.16	1.15	1.25	1.24	1.21
New Jersey	--	--	--	--	--	--	--	--	--	--	--	--	--	1.14	1.14	1.20	1.24	1.21

All Modes

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.23	1.12	1.16	1.23	--	1.26	--	1.07	1.22	1.22	1.01	1.18	1.41	1.17	1.17	1.29	1.27	1.22
Babylon	1.18	1.08	1.14	1.08	--	1.22	1.20	1.08	1.22	1.19	1.00	1.14	1.34	1.14	1.13	1.16	--	--
Smithtown	1.18	1.04	1.13	--	--	1.22	--	1.09	1.17	1.18	1.10	1.15	1.36	1.11	1.13	1.12	1.23	1.20
South Hampton	1.19	1.08	1.14	1.17	1.25	1.25	1.22	1.06	1.32	1.21	--	1.23	1.40	1.16	1.17	--	--	--
Southold	--	--	--	1.16	1.20	1.04	--	--	--	--	--	--	1.31	--	--	--	--	--
Brookhaven	1.20	1.08	1.14	1.14	1.45	1.23	1.17	1.04	1.21	1.20	1.02	1.18	1.37	1.15	1.13	1.25	1.22	1.20
East Hampton	--	1.13	--	1.19	--	1.37	1.24	--	--	--	--	--	1.37	--	--	--	--	--
Hempstead	1.27	1.12	1.19	1.17	--	1.29	--	1.12	1.29	1.28	1.10	1.18	1.36	1.21	1.19	1.27	1.30	1.26
Huntington	1.15	1.06	1.09	1.00	--	1.16	--	1.05	1.12	1.10	1.11	1.10	--	1.08	1.09	1.15	1.23	1.09
Islip	1.22	1.10	1.16	1.20	--	1.25	--	1.03	1.27	1.21	1.10	1.18	1.40	1.15	1.15	1.14	1.24	1.22
North Hempstead	1.31	1.15	1.18	--	--	1.36	--	1.13	1.21	1.25	1.14	1.21	--	1.23	1.21	1.29	1.34	1.31
Oyster Bay	1.18	1.05	1.12	1.19	--	1.21	--	1.08	1.15	1.18	1.08	1.13	--	1.11	1.14	1.16	1.22	1.19
Riverhead	1.24	1.15	1.20	1.19	1.32	1.28	1.28	--	--	1.26	--	--	1.42	--	--	--	--	1.26
MANHATTAN	1.21	1.06	1.15	1.20	--	1.24	1.20	1.05	1.22	1.21	1.04	1.19	--	1.16	1.15	1.21	1.24	1.21
QUEENS NY	1.24	1.10	1.16	1.21	--	1.26	--	1.10	1.18	1.24	1.08	1.19	--	1.17	1.17	1.22	1.26	1.23
Other NYC	1.13	1.09	1.08	--	--	1.20	--	1.04	1.15	1.15	1.03	1.08	--	1.07	1.09	1.12	1.16	1.13
Hudson Valley / Connecticut	1.21	--	1.16	--	--	1.27	1.24	1.08	--	1.20	1.01	1.15	--	1.15	1.15	1.21	1.24	1.22
New Jersey	1.22	1.07	1.15	--	--	1.25	--	1.06	1.28	1.21	1.01	1.13	1.39	1.15	1.15	1.22	1.24	1.21

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored; New York BPM 2010 SED forecast data

Notes: Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively).
Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

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Appendix F:
2040 Projected Origin-Destination Data for All Trips by Mode

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Daily Trips

SOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	220,566	25,007	14,138	0	0	7,535	0	48,429	42,402	23,628	5,969	66,206	91	3,063	9,824	2,573	814	1,216
Babylon	26,507	121,440	4,804	442	0	12,539	0	15,309	3,506	48,287	1,038	7,815	667	2,716	1,279	4,179	0	0
Smithtown	11,315	4,517	162,088	0	0	56,324	0	5,298	31,047	33,439	3,523	7,465	678	5,153	2,123	4,254	76	340
South Hampton	75	436	0	47,229	5,323	10,646	9,345	531	364	293	0	880	12,188	0	0	0	0	0
Southold	0	0	0	4,302	40,319	1,344	0	0	0	0	0	0	669	0	0	0	0	0
Brookhaven	5,823	7,500	58,112	11,371	1,852	1,143,099	2,681	11,156	16,267	116,292	3,698	10,477	26,589	0	2,524	3,591	3,241	623
East Hampton	0	0	0	9,703	0	3,019	52,780	0	0	0	0	0	0	0	0	0	0	0
Hempstead	55,835	11,398	6,552	601	0	10,593	0	1,103,555	6,346	18,755	65,222	74,828	1,830	15,414	138,079	24,781	3,845	3,754
Huntington	37,269	1,504	25,950	284	0	14,186	0	4,200	240,968	9,965	3,692	18,627	0	222	2,364	1,522	0	2,757
Islip	18,274	44,316	33,576	173	0	115,841	0	13,251	14,013	491,315	993	13,975	743	92	16,064	10,778	562	364
North Hempstead	5,588	1,311	3,685	0	0	4,438	0	87,609	4,485	2,729	323,535	44,325	0	6,247	69,687	20,445	6,838	2,022
Oyster Bay	61,576	9,748	5,934	878	0	12,188	0	69,803	15,368	14,452	40,732	403,134	0	4,238	12,235	2,177	2,124	57
Riverhead	83	577	612	7,180	1,416	29,756	0	0	0	570	0	0	60,970	0	0	0	0	0
MANHATTAN	3,083	2,612	60	60	0	5,665	0	11,279	0	96	7,443	4,229	0	170,644	57,752	92,197	40,442	70,195
QUEENS NY	13,366	1,007	2,346	0	0	3,562	0	116,793	843	16,523	69,709	18,938	0	56,884	1,442,616	131,306	28,132	17,640
Other NYC	2,147	13,374	3,941	0	0	3,605	0	12,835	1,279	342	18,744	8,934	0	76,409	111,743	1,956,228	91,472	81,982
Hudson Valley / Connecticut	1,245	0	534	0	0	3,400	0	2,778	0	99	4,976	2,404	0	39,547	29,487	96,985	7,972,317	113,834
New Jersey	3,865	597	65	0	0	223	0	2,000	1,508	418	570	0	0	58,105	12,289	85,212	120,828	13,403,036

HOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	167,533	16,769	1,769	390	0	1,418	0	13,203	33,471	12,752	221	38,115	0	482	5,567	0	0	0
Babylon	16,437	127,094	272	0	0	876	141	14,983	1,023	51,150	0	4,785	0	0	0	1,031	0	0
Smithtown	9,274	268	188,953	0	0	26,384	0	2,272	19,843	29,290	8,427	476	0	154	1,210	14,432	0	0
South Hampton	0	0	648	109,945	16,734	8,711	9,706	146	0	928	0	0	3,180	2,347	1,893	0	0	0
Southold	0	0	0	16,918	130,217	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	1,693	749	39,872	8,533	0	1,172,073	0	5,570	1,468	63,819	241	1,794	12,296	7,655	1,496	0	113	0
East Hampton	0	136	0	9,457	0	0	41,635	0	0	0	0	0	4,200	0	0	0	0	0
Hempstead	10,858	17,093	2,000	155	0	6,662	0	921,825	1,209	3,130	43,266	55,671	0	2,532	92,207	9,004	173	2,347
Huntington	32,973	1,035	21,169	0	0	1,493	0	1,224	237,525	997	5,906	13,835	0	0	2,603	268	1,486	0
Islip	12,531	48,889	30,141	2,214	0	65,798	0	2,807	1,362	517,234	3,922	8,533	0	0	4,464	1,778	0	0
North Hempstead	142	0	8,454	0	0	381	0	39,680	6,091	3,934	376,618	15,684	0	3,304	26,578	9,228	876	819
Oyster Bay	51,286	4,581	684	0	0	71	0	48,275	14,982	8,930	18,120	297,577	0	729	15,546	6,503	5,156	262
Riverhead	392	0	0	2,506	0	11,341	3,941	0	0	0	0	0	49,873	0	0	0	0	0
MANHATTAN	598	0	153	0	0	8,242	2,970	3,793	0	0	3,276	625	0	245,943	63,872	109,104	40,531	32,780
QUEENS NY	5,127	0	1,386	1,955	0	2,289	0	80,045	2,513	4,795	28,518	14,375	0	62,043	1,777,551	125,583	26,343	4,469
Other NYC	0	3,001	0	0	0	15,798	0	8,459	271	1,579	7,328	774	0	116,045	126,522	2,361,516	73,226	47,324
Hudson Valley / Connecticut	0	0	71	0	0	0	500	1,185	0	0	775	6,130	0	25,076	17,039	86,774	6,562,191	70,145
New Jersey	0	0	168	0	0	0	0	2,513	0	0	631	248	0	28,050	4,630	54,188	75,749	11,418,323

Bus

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	801	0	0	0	0	0	0	0	223	0	0	0	0	0	0	0	0	0
Babylon	0	0	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	56	119	0	0	1,811	0	0	136	59	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	1,840	0	0	7,477	0	0	0	518	0	0	696	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	107	0	0	0	0	0	0	16,735	0	0	690	2,018	0	0	6,130	0	0	0
Huntington	209	0	141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	59	0	0	512	0	0	0	3,486	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	734	0	0	4,090	529	0	0	6,048	0	0	0
Oyster Bay	0	0	0	0	0	0	0	1,562	0	0	432	220	0	1,153	254	0	0	0
Riverhead	0	0	0	0	0	699	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	291	0	0	0	1,146	0	545,098	32,738	111,404	8,919	144,216
QUEENS NY	0	0	0	0	0	0	0	5,781	0	0	2,336	114	0	33,432	419,378	18,716	848	3,977
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	98,897	23,838	1,104,165	10,629	16,761
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	6,972	0	9,001	181,534	222
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	139,705	4,533	17,524	922	554,458

Subway

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	1,703	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	4,944	1,198	151	0	0
Huntington	0	0	0	0	0	304	0	0	0	0	0	0	0	124	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	0	0	0	0	629	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	2,047	153	170	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	1,225	419	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	1,810	0	4,544	152	129	3,619	1,291	0	1,473,957	362,388	866,994	6,923	97,181
QUEENS NY	0	0	0	0	0	0	0	529	0	0	133	0	0	388,608	321,956	132,592	578	7,369
Other NYC	0	0	0	0	0	0	0	119	0	0	0	0	0	786,459	117,091	816,956	2,038	6,330
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	9,389	561	1,698	2,696	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	108,767	6,455	9,956	0	83,321

Commuter Rail

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	74	0	0	0	0	0	0	0	0	292	0	0	6,676	0	681	0	0
Babylon	0	0	0	0	0	0	0	0	0	798	0	1,926	0	4,828	4,936	0	0	0
Smithtown	0	0	0	0	0	0	0	0	339	0	0	0	0	2,491	49	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	230	0	0	0	0	12,225	469	111	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	1,571	0	920	0	1,107	0	51,159	6,033	3,763	146	4,043
Huntington	0	0	329	0	0	201	0	0	1,652	0	0	0	0	8,141	801	1,259	0	0
Islip	0	801	0	0	0	0	0	814	0	0	0	0	0	8,453	298	817	0	5,306
North Hempstead	351	0	0	0	0	0	0	0	0	0	3,325	0	0	20,713	803	1,991	0	0
Oyster Bay	0	0	0	0	0	0	0	937	0	0	0	0	0	20,130	2,196	2,250	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73
MANHATTAN	7,911	4,543	2,470	0	0	12,019	6,164	38,737	7,836	10,545	17,529	18,750	0	2,411	43,188	3,596	118,450	104,829
QUEENS NY	0	4,739	50	0	0	885	0	5,116	1,594	2,579	2,727	1,812	0	40,735	3,845	5,083	6,891	5,504
Other NYC	593	0	0	0	0	109	0	5,672	1,266	719	399	1,762	0	3,726	2,414	7,053	19,052	11,761
Hudson Valley / Connecticut	0	0	0	0	0	0	0	140	0	0	0	0	0	135,315	9,096	18,508	56,627	7,165
New Jersey	0	0	0	0	0	145	0	3,788	80	1,261	0	0	76	102,229	5,353	8,817	5,825	107,187

Other

(Non-motorized, School Bus, Taxi)

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	45,642	18,512	0	0	0	4,762	0	0	2,039	655	369	12,791	0	73	0	0	0	0
Babylon	19,579	124,427	0	0	0	0	0	0	0	3,087	732	51	0	5,163	0	0	0	0
Smithtown	0	0	62,554	0	0	219	0	112	2,628	1,630	0	0	0	0	0	0	0	0
South Hampton	0	0	0	4,699	0	2,877	227	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	6,883	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	4,535	0	196	2,398	0	245,780	0	0	0	4,495	0	0	275	2,453	91	0	0	0
East Hampton	0	0	0	0	0	0	28,835	0	0	0	0	0	0	0	0	0	0	0
Hempstead	118	0	139	0	0	0	0	300,419	567	0	3,359	5,171	0	0	10,910	2,369	0	0
Huntington	1,164	0	1,970	0	0	0	0	398	41,205	204	0	557	0	983	0	0	0	0
Islip	664	2,624	1,033	0	0	4,860	0	0	247	138,456	0	0	0	0	0	0	0	0
North Hempstead	515	867	0	0	0	0	0	4,128	0	0	133,670	2,328	0	182	6,644	0	0	0
Oyster Bay	8,632	41	0	0	0	0	0	2,888	641	0	1,409	103,626	0	346	3,846	0	0	0
Riverhead	0	0	0	0	0	246	0	0	0	0	0	0	14,506	0	0	0	0	0
MANHATTAN	1,215	4,731	0	0	0	2,822	0	4,832	382	1,750	187	0	0	5,010,015	28,639	55,402	20,589	14,398
QUEENS NY	80	0	0	0	0	1,381	0	9,506	0	0	2,286	4,446	0	27,632	2,236,455	39,100	118	5,355
Other NYC	0	0	0	0	0	0	0	87	0	0	0	0	0	34,141	23,906	5,225,699	4,644	1,298
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	9,579	1,126	6,402	1,994,382	7,058
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	12,404	1,554	2,788	7,282	3,739,975

All Modes

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	435,282	60,304	15,798	390	0	13,684	0	61,260	78,405	37,138	6,779	117,065	90	10,089	15,301	3,203	815	1,203
Babylon	62,685	371,742	5,209	449	0	13,543	140	30,447	4,588	103,748	1,753	14,721	669	12,699	6,345	5,224	0	0
Smithtown	20,655	4,879	412,932	0	0	85,154	0	7,688	54,103	64,481	11,941	7,990	683	7,762	3,397	18,696	76	341
South Hampton	76	449	647	160,845	22,188	22,518	19,540	693	375	1,228	0	908	15,654	2,343	1,889	0	0	0
Southold	0	0	0	21,216	177,502	1,322	0	0	0	0	0	0	668	0	0	0	0	0
Brookhaven	12,042	8,227	99,713	22,270	1,840	2,570,304	2,663	16,666	17,887	184,806	3,939	12,202	39,808	23,250	4,543	3,673	3,333	619
East Hampton	0	132	0	18,950	0	2,991	123,483	0	0	0	0	0	4,211	0	0	0	0	0
Hempstead	67,238	28,452	8,723	760	0	17,330	0	2,337,809	8,144	22,968	112,453	138,914	1,831	78,402	255,073	40,503	4,185	10,502
Huntington	71,722	2,539	49,512	284	0	16,115	0	5,823	521,815	11,134	9,596	32,933	0	9,322	5,704	2,966	1,485	2,739
Islip	31,465	96,576	64,792	2,385	0	187,000	0	16,849	15,624	1,151,054	4,912	22,502	743	8,902	20,814	13,346	562	5,532
North Hempstead	6,720	2,160	12,228	0	0	4,927	0	132,574	10,624	6,667	837,676	63,238	0	33,919	110,383	32,171	7,862	2,872
Oyster Bay	121,535	14,305	6,585	876	0	12,158	0	123,392	30,952	23,310	60,670	805,556	0	27,427	34,564	10,902	7,279	319
Riverhead	473	575	602	9,607	1,406	41,699	3,939	0	0	563	0	0	125,809	0	0	0	0	67
MANHATTAN	12,889	11,874	2,706	60	0	30,851	9,194	64,026	8,497	12,684	32,113	26,332	0	7,431,528	591,941	1,244,503	237,742	467,211
QUEENS NY	18,521	5,760	3,775	1,951	0	8,109	0	217,348	4,949	23,832	105,474	39,596	0	613,769	6,197,341	453,397	62,781	44,321
Other NYC	2,703	16,398	3,937	0	0	19,573	0	27,202	2,741	2,610	26,493	11,355	0	1,098,814	403,560	11,490,604	201,352	165,476
Hudson Valley / Connecticut	1,246	0	606	0	0	3,403	500	4,102	0	99	5,755	8,535	0	219,050	56,872	218,556	16,778,005	198,233
New Jersey	3,871	598	234	0	0	365	0	8,199	1,589	1,644	1,201	248	74	441,741	34,484	177,876	210,607	29,314,892

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored; New York BPM 2010 SED forecast data

Notes: Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively).
Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

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Appendix G:
2010-2040 Growth Rates for Work Trips by Mode

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Daily Work Trips

SOV

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.24	1.08	1.17	--	--	1.28	--	1.04	1.32	1.23	1.01	1.23	1.43	1.17	1.16	1.30	--	1.24
Babylon	1.20	1.04	1.13	1.06	--	1.23	--	1.00	1.27	1.19	1.00	1.18	--	1.12	1.11	1.25	--	--
Smithtown	1.18	1.02	1.11	--	--	1.21	--	1.00	1.25	1.17	1.00	1.16	1.35	1.10	1.10	1.23	--	--
South Hampton	--	1.05	--	1.08	1.46	1.25	1.18	1.01	1.28	1.20	--	1.20	1.39	--	--	--	--	--
Southold	--	--	--	1.00	1.25	1.06	--	--	--	--	--	--	1.18	--	--	--	--	--
Brookhaven	1.21	1.05	1.14	1.08	1.46	1.25	1.18	1.02	1.28	1.20	1.00	1.20	1.39	--	1.13	1.27	1.23	1.20
East Hampton	--	--	--	1.19	--	1.38	1.30	--	--	--	--	--	--	--	--	--	--	--
Hempstead	1.29	1.12	1.22	1.15	--	1.33	--	1.08	1.37	1.28	1.05	1.28	--	1.21	1.20	1.35	1.31	1.28
Huntington	1.10	1.00	1.04	1.00	--	1.14	--	1.00	1.17	1.09	1.00	1.09	--	1.03	1.03	1.15	--	1.10
Islip	1.22	1.06	1.15	1.09	--	1.26	--	1.03	1.30	1.21	1.00	1.21	1.40	1.15	1.14	1.28	1.24	1.22
North Hempstead	1.30	1.12	1.22	--	--	1.34	--	1.09	1.37	1.29	1.06	1.28	--	1.21	1.21	1.36	1.31	1.29
Oyster Bay	1.18	1.03	1.12	--	--	1.22	--	1.00	1.26	1.18	1.00	1.17	--	1.11	1.10	1.24	1.20	1.18
Riverhead	1.29	--	1.22	1.15	1.56	1.33	--	--	--	1.28	--	--	1.48	--	--	--	--	--
MANHATTAN	1.20	1.05	--	--	--	1.24	--	1.01	--	1.19	1.00	1.19	--	1.13	1.12	1.26	1.22	1.20
QUEENS NY	1.25	1.09	1.18	--	--	1.30	--	1.05	1.33	1.25	1.02	1.24	--	1.18	1.17	1.31	1.27	1.25
Other NYC	1.09	1.00	1.03	--	--	1.13	--	1.00	1.16	1.08	1.00	1.08	--	1.02	1.02	1.14	1.11	1.09
Hudson Valley / Connecticut	1.23	--	1.16	--	--	1.27	--	1.03	--	--	1.00	1.21	--	1.15	1.14	1.28	1.24	1.22
New Jersey	1.21	1.05	--	--	--	1.25	--	1.02	1.29	1.20	1.00	--	--	1.14	1.13	1.27	1.23	1.21

HOV

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.19	1.03	1.12	--	--	1.23	--	1.00	1.26	1.18	1.00	1.18	--	1.12	1.11	--	--	--
Babylon	1.24	1.07	--	--	--	1.28	1.21	1.04	--	1.23	--	--	--	--	--	1.30	--	--
Smithtown	1.20	--	1.13	--	--	1.24	--	--	1.27	1.19	--	--	--	--	--	--	--	--
South Hampton	--	--	--	1.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southold	--	--	--	--	1.19	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	1.19	1.03	1.12	--	--	1.23	--	1.00	1.26	1.18	--	1.18	1.36	1.11	1.11	--	--	--
East Hampton	--	1.21	--	1.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hempstead	1.33	1.16	--	--	--	1.38	--	1.12	--	1.32	1.09	1.32	--	1.25	1.24	1.39	1.35	--
Huntington	1.08	--	1.02	--	--	1.12	--	--	1.15	1.07	1.00	--	--	--	--	1.13	--	--
Islip	1.22	1.06	1.15	--	--	1.26	--	1.03	1.30	1.22	1.00	1.21	--	--	1.14	1.28	--	--
North Hempstead	--	--	--	--	--	--	--	1.14	1.45	1.35	1.11	1.35	--	1.28	1.27	1.43	1.38	1.36
Oyster Bay	1.16	--	--	--	--	1.20	--	1.00	--	1.15	1.00	1.15	--	1.09	1.08	1.21	--	--
Riverhead	--	--	--	--	--	--	--	--	--	--	--	--	1.37	--	--	--	--	--
MANHATTAN	1.20	--	--	--	--	1.24	--	1.01	--	--	1.00	1.19	--	1.13	1.12	1.26	1.22	1.20
QUEENS NY	--	--	--	--	--	--	--	1.05	--	1.25	1.02	1.24	--	1.18	1.17	1.32	1.27	1.25
Other NYC	--	--	--	--	--	--	--	1.00	1.14	--	1.00	1.07	--	1.01	1.00	1.13	1.09	1.07
Hudson Valley / Connecticut	--	--	--	--	--	--	--	--	--	--	1.00	--	--	1.15	1.14	1.28	1.24	1.22
New Jersey	--	--	1.14	--	--	--	--	1.02	--	--	1.00	--	--	1.14	1.13	1.27	1.23	1.21

Bus

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	--	--	--	--	--	--	--	1.20	--	--	--	--	--	--	--	--	--	--
Babylon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Smithtown	--	--	--	--	--	1.15	--	--	--	--	--	--	--	--	--	--	--	--
South Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southold	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	--	--	1.19	--	--	1.31	--	--	--	1.25	--	--	--	--	--	--	--	--
East Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hempstead	1.25	--	--	--	--	--	--	1.05	--	--	1.02	1.24	--	--	1.17	--	--	--
Huntington	1.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Islip	--	--	--	--	--	1.24	--	--	--	1.19	--	--	--	--	--	--	--	--
North Hempstead	--	--	--	--	--	--	--	1.09	--	--	1.06	1.28	--	--	1.21	--	--	--
Oyster Bay	--	--	--	--	--	--	--	1.08	--	--	1.05	1.27	--	1.20	1.20	--	--	--
Riverhead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANHATTAN	--	--	--	--	--	--	--	1.01	--	--	--	1.19	--	1.13	1.13	1.26	1.22	1.20
QUEENS NY	--	--	--	--	--	--	--	1.06	--	--	1.02	1.24	--	1.18	1.17	1.32	--	1.25
Other NYC	--	--	--	--	--	--	--	--	--	--	--	--	--	1.01	1.01	1.13	1.10	1.08
Hudson Valley / Connecticut	--	--	--	--	--	--	--	--	--	--	--	--	--	1.15	--	1.29	1.25	1.22
New Jersey	--	--	--	--	--	--	--	--	--	--	--	--	--	1.16	1.15	1.29	1.25	1.23

Subway

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Babylon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Smithtown	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
South Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southold	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	--	--	--	--	--	--	--	--	--	--	--	--	1.22	--	--	--	--	--
East Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hempstead	--	--	--	--	--	--	--	--	--	--	--	--	1.14	1.13	1.27	--	--	--
Huntington	--	--	--	--	--	1.15	--	--	--	--	--	--	1.04	--	--	--	--	--
Islip	--	--	--	--	--	--	--	--	--	--	--	--	1.20	--	--	--	--	--
North Hempstead	--	--	--	--	--	--	--	--	--	--	--	--	1.16	1.15	--	--	--	--
Oyster Bay	--	--	--	--	--	--	--	--	--	--	--	--	1.13	1.13	--	--	--	--
Riverhead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANHATTAN	--	--	--	--	--	1.24	--	1.01	1.28	1.19	1.00	1.19	--	1.13	1.12	1.26	1.22	1.20
QUEENS NY	--	--	--	--	--	--	--	1.03	--	--	1.00	--	--	1.15	1.15	1.29	1.25	1.22
Other NYC	--	--	--	--	--	--	--	1.00	--	--	--	--	--	1.06	1.06	1.19	1.15	1.13
Hudson Valley / Connecticut	--	--	--	--	--	--	--	--	--	--	--	--	--	1.22	1.21	1.36	1.31	--
New Jersey	--	--	--	--	--	--	--	--	--	--	--	--	--	1.18	1.17	1.31	--	1.25

Commuter Rail

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	--	1.10	--	--	--	--	--	--	--	1.04	--	--	1.19	--	1.33	--	--	--
Babylon	--	--	--	--	--	--	--	--	--	--	--	--	1.12	1.11	--	--	--	--
Smithtown	--	--	--	--	--	--	--	--	--	--	--	--	1.15	1.14	--	--	--	--
South Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southold	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	--	--	--	--	--	--	--	--	1.38	--	--	--	1.22	1.21	--	--	--	--
East Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hempstead	--	--	--	--	--	--	--	--	--	1.19	--	1.19	--	1.13	1.12	1.26	--	1.19
Huntington	--	--	--	--	--	1.20	--	--	--	--	--	--	1.09	1.09	1.22	--	--	--
Islip	--	--	--	--	--	--	--	1.05	--	--	--	--	1.18	1.17	1.32	--	1.25	
North Hempstead	1.25	--	--	--	--	--	--	--	--	--	1.02	--	--	1.17	1.16	--	--	--
Oyster Bay	--	--	--	--	--	--	--	1.01	--	--	--	--	--	1.12	1.12	1.25	--	--
Riverhead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.37
MANHATTAN	1.21	1.05	1.14	--	--	1.25	1.18	1.01	1.28	1.20	1.00	1.20	--	1.13	1.13	1.26	1.22	1.20
QUEENS NY	--	1.08	1.17	--	--	1.28	--	1.04	1.32	1.23	1.01	1.23	--	1.17	1.16	1.30	1.26	1.24
Other NYC	1.16	--	--	--	--	--	--	1.00	1.23	1.15	1.00	1.15	--	1.08	1.08	1.21	1.17	1.15
Hudson Valley / Connecticut	--	--	--	--	--	--	--	--	--	--	--	--	--	1.21	1.20	1.35	1.31	1.28
New Jersey	--	--	--	--	--	1.29	--	1.05	--	1.24	--	--	1.43	1.17	1.17	1.31	1.27	1.24

Other
(Non-motorized, School Bus, Taxi)

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.21	1.05	--	--	--	1.25	--	--	1.28	1.20	1.00	1.20	--	1.13	--	--	--	--
Babylon	1.26	1.09	--	--	--	--	--	--	--	1.25	1.02	1.24	--	1.18	--	--	--	--
Smithtown	--	--	1.14	--	--	1.25	--	1.02	1.28	1.20	--	--	--	--	--	--	--	--
South Hampton	--	--	--	1.09	--	1.27	--	--	--	--	--	--	--	--	--	--	--	--
Southold	--	--	--	--	1.19	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	1.19	--	1.12	1.06	--	1.23	--	--	--	1.18	--	--	--	1.11	1.11	--	--	--
East Hampton	--	--	--	--	--	--	1.24	--	--	--	--	--	--	--	--	--	--	--
Hempstead	--	--	1.27	--	--	--	--	1.13	1.43	--	1.10	1.33	--	--	1.25	--	--	--
Huntington	1.07	--	1.01	--	--	--	--	1.00	1.14	1.06	--	1.06	--	1.00	--	--	--	--
Islip	1.22	1.06	1.15	--	--	1.26	--	--	1.29	1.21	--	--	--	--	--	--	--	--
North Hempstead	1.40	1.21	--	--	--	--	--	1.17	--	--	1.14	1.38	--	--	1.30	--	--	--
Oyster Bay	1.15	1.00	--	--	--	--	--	1.00	1.22	--	1.00	1.14	--	1.08	1.07	--	--	--
Riverhead	--	--	--	--	--	--	--	--	--	--	--	--	1.37	--	--	--	--	--
MANHATTAN	1.24	1.08	--	--	--	1.28	--	1.04	--	1.23	--	--	--	1.16	1.16	1.30	1.26	1.23
QUEENS NY	1.26	--	--	--	--	--	--	1.05	--	--	1.02	1.24	--	1.18	1.17	1.31	--	1.25
Other NYC	--	--	--	--	--	--	--	1.00	--	--	--	--	--	1.00	1.00	1.12	1.08	1.06
Hudson Valley / Connecticut	--	--	--	--	--	--	--	--	--	--	--	--	--	1.15	1.14	1.28	1.24	1.22
New Jersey	--	--	--	--	--	--	--	--	--	--	--	--	--	1.14	1.13	1.27	1.23	1.21

All Modes

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.23	1.07	1.16	--	--	1.27	--	1.03	1.30	1.22	1.00	1.22	1.41	1.15	1.15	1.29	--	1.22
Babylon	1.22	1.06	1.15	1.08	--	1.26	1.18	1.02	1.29	1.21	1.00	1.20	--	1.14	1.13	1.27	--	--
Smithtown	1.19	1.03	1.12	--	--	1.22	--	1.00	1.26	1.18	1.00	1.17	1.36	1.11	1.11	1.24	--	--
South Hampton	--	1.08	--	1.11	1.51	1.29	1.21	1.05	1.32	1.24	--	1.23	1.43	--	--	--	--	--
Southold	--	--	--	1.00	1.22	1.04	--	--	--	--	--	--	1.16	--	--	--	--	--
Brookhaven	1.20	1.04	1.13	1.07	1.45	1.24	1.17	1.01	1.27	1.19	1.00	1.19	1.38	1.13	1.12	1.26	1.22	1.20
East Hampton	--	1.15	--	1.18	--	1.37	1.29	--	--	--	--	--	--	--	--	--	--	--
Hempstead	1.30	1.13	1.23	1.16	--	1.34	--	1.09	1.38	1.29	1.06	1.29	--	1.22	1.21	1.36	1.32	1.29
Huntington	1.10	1.00	1.03	1.00	--	1.13	--	1.00	1.16	1.09	1.00	1.08	--	1.03	1.02	1.15	--	1.09
Islip	1.22	1.06	1.15	1.09	--	1.26	--	1.03	1.30	1.21	1.00	1.21	1.40	1.15	1.14	1.28	1.24	1.22
North Hempstead	1.33	1.15	1.25	--	--	1.37	--	1.11	1.41	1.32	1.08	1.31	--	1.24	1.24	1.39	1.34	1.32
Oyster Bay	1.17	1.02	1.11	--	--	1.21	--	1.00	1.24	1.17	1.00	1.16	--	1.10	1.10	1.23	1.19	1.17
Riverhead	1.27	--	1.20	1.13	1.54	1.31	--	--	--	1.26	--	--	1.46	--	--	--	--	1.26
MANHATTAN	1.22	1.06	1.15	--	--	1.26	1.19	1.02	1.29	1.21	1.00	1.21	--	1.14	1.14	1.28	1.23	1.21
QUEENS NY	1.25	1.09	1.18	--	--	1.29	--	1.05	1.33	1.24	1.02	1.24	--	1.17	1.17	1.31	1.27	1.24
Other NYC	1.09	1.00	1.03	--	--	1.13	--	1.00	1.15	1.08	1.00	1.08	--	1.02	1.02	1.14	1.10	1.08
Hudson Valley / Connecticut	1.23	--	1.16	--	--	1.27	--	1.03	--	--	1.00	1.21	--	1.15	1.15	1.28	1.24	1.22
New Jersey	1.22	1.06	1.15	--	--	1.26	--	1.02	1.29	1.21	1.00	--	1.39	1.14	1.13	1.27	1.23	1.21

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored; New York BPM 2010 SED forecast data
Notes: Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively).
Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

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Appendix H:
2040 Projected Origin-Destination Data for Work Trips by Mode

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Daily Work Trips

SOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	109,493	13,406	10,721	0	0	6,137	0	38,863	21,174	17,324	5,699	35,421	91	666	9,193	2,573	0	1,216
Babylon	17,431	42,689	4,058	442	0	6,299	0	8,099	3,027	22,723	975	5,838	0	2,716	1,279	1,221	0	0
Smithtown	7,733	4,050	69,910	0	0	33,565	0	1,786	20,785	18,424	3,523	4,891	678	5,093	2,123	2,340	0	0
South Hampton	0	436	0	17,497	5,323	7,852	9,106	531	364	293	0	880	8,574	0	0	0	0	0
Southold	0	0	0	3,637	27,553	1,344	0	0	0	0	0	0	164	0	0	0	0	0
Brookhaven	5,424	4,108	37,325	8,224	1,852	327,901	2,681	10,586	10,499	73,341	3,493	10,477	12,237	0	2,524	3,591	3,166	623
East Hampton	0	0	0	9,188	0	3,019	1,190	0	0	0	0	0	0	0	0	0	0	0
Hempstead	46,116	4,782	4,530	601	0	10,458	0	389,778	5,114	17,421	39,081	38,330	0	12,559	71,287	21,445	2,956	2,670
Huntington	14,628	879	15,131	284	0	9,231	0	2,910	69,292	7,879	1,804	13,834	0	222	2,133	1,522	0	2,757
Islip	15,345	22,409	19,036	173	0	68,735	0	12,451	11,593	202,723	840	11,442	585	92	11,747	716	487	364
North Hempstead	5,155	1,025	3,685	0	0	4,438	0	42,635	2,872	1,567	76,023	23,493	0	4,367	39,155	18,349	6,603	2,022
Oyster Bay	33,180	9,355	3,470	0	0	11,671	0	31,665	10,500	11,463	19,819	120,538	0	2,028	7,292	1,799	2,124	57
Riverhead	83	0	612	4,534	470	16,329	0	0	0	426	0	0	18,575	0	0	0	0	0
MANHATTAN	687	2,612	0	0	0	1,413	0	6,321	0	96	5,889	2,176	0	83,983	45,646	59,019	25,042	43,629
QUEENS NY	13,126	1,007	1,508	0	0	3,562	0	68,558	721	15,261	41,742	13,906	0	37,064	534,864	100,052	26,373	15,243
Other NYC	986	1,772	1,960	0	0	3,605	0	11,506	1,279	342	18,356	7,297	0	46,230	75,072	802,145	55,817	64,444
Hudson Valley / Connecticut	478	0	534	0	0	3,326	0	2,063	0	0	4,757	2,330	0	26,538	27,861	67,985	3,543,827	81,633
New Jersey	3,865	466	0	0	0	223	0	975	1,508	418	570	0	0	40,990	10,811	66,177	80,693	5,911,014

HOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	46,572	647	273	0	0	1,282	0	1,817	13,872	8,804	80	3,692	0	111	430	0	0	0
Babylon	812	19,895	0	0	0	343	74	3,039	0	6,958	0	0	0	0	0	1,031	0	0
Smithtown	185	0	40,497	0	0	774	0	0	3,293	9,926	0	0	0	0	0	0	0	0
South Hampton	0	0	0	21,119	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	15,455	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	1,562	249	72	0	0	193,040	0	1,296	474	13,650	0	69	2,026	2,211	657	0	0	0
East Hampton	0	74	0	2,856	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	1,832	3,382	0	0	0	245	0	198,245	0	2,154	13,909	8,582	0	231	25,398	2,244	173	0
Huntington	12,796	0	2,694	0	0	420	0	0	35,909	997	510	0	0	0	0	268	0	0
Islip	2,650	7,941	10,510	0	0	18,703	0	2,807	1,208	114,312	925	1,622	0	0	3,977	288	0	0
North Hempstead	0	0	0	0	0	0	0	15,765	814	1,252	77,093	4,428	0	1,878	13,561	3,354	461	695
Oyster Bay	7,121	0	0	0	0	71	0	8,714	0	411	3,486	106,779	0	729	382	1,177	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	4,629	0	0	0	0	0
MANHATTAN	119	0	0	0	0	2,548	0	187	0	0	390	455	0	89,766	23,233	42,042	11,033	16,735
QUEENS NY	0	0	0	0	0	0	0	10,220	0	4,298	11,025	1,548	0	41,490	634,224	25,726	16,560	666
Other NYC	0	0	0	0	0	0	0	1,744	271	0	2,350	774	0	38,739	27,781	874,381	29,091	13,147
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	775	0	0	6,903	4,397	40,639	1,439,220	18,804
New Jersey	0	0	168	0	0	0	0	793	0	0	512	0	0	12,779	604	26,723	17,361	2,980,805

Bus

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	223	0	0	0	0	0	0	0	0	0
Babylon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	0	0	0	1,218	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	1,265	0	0	290	0	0	0	518	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	107	0	0	0	0	0	0	2,747	0	0	690	2,018	0	0	5,024	0	0	0
Huntington	209	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	512	0	0	0	1,658	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	734	0	0	1,396	529	0	0	2,886	0	0	0
Oyster Bay	0	0	0	0	0	0	0	1,562	0	0	432	220	0	1,153	254	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	291	0	0	0	1,146	0	286,207	23,756	73,472	7,736	109,708
QUEENS NY	0	0	0	0	0	0	0	4,083	0	0	1,434	114	0	27,596	196,701	8,179	0	2,992
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	61,189	14,198	516,990	3,722	13,316
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	6,554	0	3,690	83,676	122
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	109,062	2,908	16,412	125	239,375

Subway

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	1,703	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	4,944	579	151	0	0
Huntington	0	0	0	0	0	304	0	0	0	0	0	0	0	124	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	0	0	0	0	629	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	1,567	153	0	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	1,225	419	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	1,731	0	4,544	152	129	1,654	1,291	0	1,017,574	243,699	560,802	5,936	65,676
QUEENS NY	0	0	0	0	0	0	0	529	0	0	133	0	0	298,099	148,487	106,317	578	5,832
Other NYC	0	0	0	0	0	0	0	119	0	0	0	0	0	552,649	79,187	519,235	165	6,101
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	7,456	561	919	1,573	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	86,126	4,889	7,827	0	55,105

Commuter Rail

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	74	0	0	0	0	0	0	0	0	292	0	0	6,215	0	681	0	0
Babylon	0	0	0	0	0	0	0	0	0	0	0	0	0	4,717	4,936	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	2,491	49	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	230	0	0	0	0	5,000	248	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	920	0	1,107	0	45,547	5,707	3,763	0	4,043
Huntington	0	0	0	0	0	201	0	0	0	0	0	0	0	4,068	801	1,259	0	0
Islip	0	0	0	0	0	0	0	814	0	0	0	0	0	6,976	298	752	0	5,306
North Hempstead	351	0	0	0	0	0	0	0	0	0	1,529	0	0	19,298	803	0	0	0
Oyster Bay	0	0	0	0	0	0	0	937	0	0	0	0	0	17,048	195	2,250	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73
MANHATTAN	7,310	4,435	2,405	0	0	4,976	6,164	34,413	4,890	6,759	15,119	15,842	0	2,411	37,817	3,268	105,711	91,484
QUEENS NY	0	2,772	50	0	0	666	0	4,793	972	314	701	1,812	0	33,390	2,748	5,083	6,710	1,058
Other NYC	593	0	0	0	0	0	0	5,672	1,266	657	399	1,762	0	3,156	2,414	1,262	11,507	5,678
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	124,634	9,096	17,257	34,475	6,446
New Jersey	0	0	0	0	0	68	0	3,788	0	1,261	0	0	76	86,765	947	5,739	5,825	86,096

Other

(Non-motorized, School Bus, Taxi)

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	26,544	2,810	0	0	0	448	0	0	1,849	655	369	12,528	0	73	0	0	0	0
Babylon	3,359	43,561	0	0	0	0	0	0	0	2,988	732	51	0	5,163	0	0	0	0
Smithtown	0	0	46,548	0	0	219	0	112	1,633	1,630	0	0	0	0	0	0	0	0
South Hampton	0	0	0	1,569	0	2,877	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	5,036	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	427	0	196	2,398	0	169,860	0	0	0	4,144	0	0	0	2,453	91	0	0	0
East Hampton	0	0	0	0	0	0	6,476	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	139	0	0	0	0	147,020	567	0	3,185	4,991	0	0	6,123	0	0	0
Huntington	1,164	0	951	0	0	0	0	398	24,006	204	0	557	0	983	0	0	0	0
Islip	664	2,532	1,033	0	0	4,503	0	0	247	56,209	0	0	0	0	0	0	0	0
North Hempstead	515	867	0	0	0	0	0	3,957	0	0	71,096	1,806	0	0	5,662	0	0	0
Oyster Bay	8,361	41	0	0	0	0	0	2,707	641	0	875	60,181	0	97	3,846	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	5,137	0	0	0	0	0
MANHATTAN	1,215	4,731	0	0	0	2,822	0	2,801	0	299	0	0	0	2,018,688	14,634	29,657	9,122	5,149
QUEENS NY	80	0	0	0	0	0	0	4,707	0	0	2,286	4,446	0	13,415	632,672	20,666	0	5,201
Other NYC	0	0	0	0	0	0	0	87	0	0	0	0	0	14,289	8,701	1,656,492	3,899	954
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	4,040	769	5,177	1,127,198	2,377
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	9,288	1,404	1,520	2,400	1,697,178

All Modes

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	183,329	16,854	10,883	0	0	7,847	0	40,304	37,376	26,881	6,369	51,579	90	6,858	9,534	3,203	0	1,203
Babylon	21,793	105,212	4,130	449	0	6,748	72	11,230	3,081	32,861	1,690	5,991	0	12,586	6,345	2,256	0	0
Smithtown	7,984	4,085	156,241	0	0	36,139	0	1,896	25,829	30,019	3,523	4,934	683	7,548	2,189	2,360	0	0
South Hampton	0	449	0	39,117	5,487	11,010	9,387	547	375	302	0	908	8,838	0	0	0	0	0
Southold	0	0	0	3,637	48,126	1,322	0	0	0	0	0	0	161	0	0	0	0	0
Brookhaven	7,398	4,332	38,551	10,593	1,840	692,652	2,663	11,823	11,121	91,325	3,493	10,478	14,202	10,908	3,493	3,567	3,145	619
East Hampton	0	70	0	11,818	0	2,991	7,924	0	0	0	0	0	0	0	0	0	0	0
Hempstead	48,373	8,123	4,699	606	0	10,778	0	731,641	5,703	20,657	56,774	55,138	0	67,537	114,603	28,043	3,147	7,071
Huntington	28,895	879	18,731	284	0	10,081	0	3,308	129,756	9,045	2,314	14,310	0	5,170	2,871	2,966	0	2,739
Islip	18,663	32,896	30,580	173	0	92,488	0	16,050	13,050	375,247	1,765	13,065	585	7,486	16,012	1,737	487	5,532
North Hempstead	6,145	1,873	3,775	0	0	4,546	0	63,529	3,734	2,823	223,543	30,634	0	28,551	62,664	22,061	7,212	2,747
Oyster Bay	48,622	9,317	3,441	0	0	11,643	0	45,468	11,064	11,780	24,593	289,102	0	21,814	12,366	5,180	2,105	56
Riverhead	81	0	602	4,466	463	16,084	0	0	0	420	0	0	28,684	0	0	0	0	67
MANHATTAN	9,385	11,764	2,426	0	0	13,560	6,218	48,953	5,087	7,340	23,052	21,111	0	3,479,828	393,079	776,906	165,968	335,742
QUEENS NY	13,166	3,791	1,554	0	0	4,220	0	92,629	1,696	19,808	57,133	21,768	0	455,847	2,144,303	267,321	50,114	31,012
Other NYC	1,540	1,772	1,954	0	0	3,594	0	19,128	2,741	959	21,105	9,717	0	695,352	204,427	4,395,890	103,794	103,130
Hudson Valley / Connecticut	479	0	535	0	0	3,330	0	2,065	0	0	5,537	2,332	0	169,633	42,248	134,943	6,237,787	109,201
New Jersey	3,871	467	169	0	0	290	0	5,453	1,511	1,644	1,082	0	74	338,324	21,356	123,888	106,393	10,977,118

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored; New York BPM 2010 SED forecast data

Notes: Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively).

Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

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Appendix I:
2010-2040 Growth Rates for Non-Work Trips by Mode (Combined for All Non-Work Trip Purposes)

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Daily NonWork Trips

SOV

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.22	1.14	1.18	--	--	1.25	--	1.17	1.14	1.23	1.18	1.16	--	1.19	1.20	--	1.27	--
Babylon	1.16	1.08	1.12	--	--	1.19	--	1.11	1.09	1.17	1.13	1.10	1.33	--	--	1.09	--	--
Smithtown	1.18	1.10	1.13	--	--	1.21	--	1.13	1.10	1.19	--	1.12	--	1.15	--	1.10	1.23	1.19
South Hampton	1.18	--	--	1.19	--	1.21	1.22	--	--	--	--	--	1.35	--	--	--	--	--
Southold	--	--	--	1.20	1.19	--	--	--	--	--	--	--	1.36	--	--	--	--	--
Brookhaven	1.20	1.11	1.15	1.20	--	1.22	--	1.14	1.12	1.20	1.16	--	1.37	--	--	--	1.24	--
East Hampton	--	--	--	1.20	--	--	1.24	--	--	--	--	--	--	--	--	--	--	--
Hempstead	1.19	1.11	1.14	--	--	1.22	--	1.13	1.11	1.20	1.15	1.13	1.36	1.16	1.17	1.11	1.24	1.20
Huntington	1.18	1.10	1.14	--	--	1.21	--	1.13	1.11	1.19	1.14	1.12	--	--	1.16	--	--	--
Islip	1.20	1.12	1.16	--	--	1.23	--	1.15	1.13	1.21	1.16	1.14	1.38	--	1.18	1.12	1.25	--
North Hempstead	1.20	1.12	--	--	--	--	--	1.14	1.12	1.20	1.16	1.13	--	1.17	1.18	1.12	1.24	--
Oyster Bay	1.19	1.10	1.14	1.19	--	1.21	--	1.13	1.11	1.19	1.15	1.12	--	1.16	1.17	1.11	--	--
Riverhead	--	1.15	--	1.25	1.24	1.27	--	--	--	1.25	--	--	1.42	--	--	--	--	--
MANHATTAN	1.19	--	1.14	1.20	--	1.22	--	1.14	--	--	1.15	1.13	--	1.16	1.17	1.11	1.24	1.20
QUEENS NY	1.20	--	1.15	--	--	--	--	1.14	1.12	1.21	1.16	1.13	--	1.17	1.18	1.12	1.25	1.21
Other NYC	1.19	1.11	1.14	--	--	--	--	1.13	--	--	1.15	1.12	--	1.16	1.17	1.11	1.23	1.20
Hudson Valley / Connecticut	1.20	--	--	--	--	1.22	--	1.14	--	1.20	1.16	1.13	--	1.17	1.18	1.12	1.24	1.21
New Jersey	--	1.11	1.15	--	--	--	--	1.14	--	--	--	--	--	1.17	1.18	1.12	1.24	1.21

HOV

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.22	1.14	1.18	1.23	--	1.25	--	1.17	1.15	1.23	1.18	1.16	--	1.19	1.20	--	--	--
Babylon	1.16	1.08	1.12	--	--	1.19	1.20	1.11	1.09	1.17	--	1.10	--	--	--	--	--	--
Smithtown	1.19	1.10	1.14	--	--	1.21	--	1.13	1.11	1.19	1.15	1.12	--	1.16	1.17	1.11	--	--
South Hampton	--	--	1.14	1.20	1.19	1.22	1.23	1.13	--	1.20	--	--	1.36	1.16	1.17	--	--	--
Southold	--	--	--	1.20	1.19	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	1.20	1.12	1.15	1.21	--	1.23	--	1.14	1.12	1.21	1.16	1.13	1.37	1.17	1.18	--	1.24	--
East Hampton	--	1.11	--	1.20	--	--	1.23	--	--	--	--	--	1.36	--	--	--	--	--
Hempstead	1.19	1.11	1.14	1.20	--	1.22	--	1.14	1.11	1.20	1.15	1.13	--	1.16	1.17	1.11	--	1.20
Huntington	1.18	1.10	1.14	--	--	1.21	--	1.13	1.11	--	1.14	1.12	--	--	1.16	--	1.23	--
Islip	1.20	1.12	1.16	1.21	--	1.23	--	--	1.13	1.21	1.16	1.14	--	--	1.18	1.12	--	--
North Hempstead	1.20	--	1.15	--	--	1.22	--	1.14	1.12	1.20	1.16	1.13	--	1.17	1.18	1.12	1.24	1.21
Oyster Bay	1.18	1.10	1.13	--	--	--	--	1.12	1.10	1.19	1.14	1.11	--	--	1.16	1.10	1.22	1.19
Riverhead	1.24	--	--	1.24	--	1.26	1.28	--	--	--	--	--	1.42	--	--	--	--	--
MANHATTAN	1.20	--	1.15	--	--	1.22	1.24	1.14	--	--	1.16	1.13	--	1.17	1.18	1.11	1.24	1.21
QUEENS NY	1.20	--	1.15	1.21	--	1.23	--	1.15	1.12	1.21	1.16	1.14	--	1.17	1.18	1.12	1.25	1.21
Other NYC	--	1.10	--	--	--	1.21	--	1.13	--	1.19	1.14	--	--	1.15	1.16	1.10	1.23	1.20
Hudson Valley / Connecticut	--	--	1.15	--	--	--	1.24	1.14	--	--	--	1.13	--	1.17	1.18	1.12	1.24	1.21
New Jersey	--	--	--	--	--	--	--	1.14	--	--	1.16	1.13	--	1.17	1.18	1.12	1.24	1.21

Bus

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Babylon	--	--	1.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Smithtown	--	1.07	1.11	--	--	1.18	--	--	1.08	1.16	--	--	--	--	--	--	--	--
South Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southold	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	--	--	1.14	--	--	1.22	--	--	--	--	--	--	1.36	--	--	--	--	--
East Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hempstead	--	--	--	--	--	--	--	1.14	--	--	--	--	--	1.17	--	--	--	--
Huntington	--	--	1.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Islip	--	--	1.15	--	--	--	--	--	--	1.20	--	--	--	--	--	--	--	--
North Hempstead	--	--	--	--	--	--	--	--	--	--	1.15	--	--	1.16	--	--	--	--
Oyster Bay	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Riverhead	--	--	--	--	--	1.37	--	--	--	--	--	--	--	--	--	--	--	--
MANHATTAN	--	--	--	--	--	--	--	--	--	--	--	--	1.17	1.18	1.12	1.24	1.21
QUEENS NY	--	--	--	--	--	--	--	1.14	--	--	1.16	--	--	1.17	1.18	1.12	1.24	1.21
Other NYC	--	--	--	--	--	--	--	--	--	--	--	--	--	1.16	1.17	1.11	1.23	1.20
Hudson Valley / Connecticut	--	--	--	--	--	--	--	--	--	--	--	--	--	1.17	--	1.12	1.25	1.22
New Jersey	--	--	--	--	--	--	--	--	--	--	--	--	--	1.17	1.18	1.12	1.24	1.21

Subway

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	--	1.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Babylon	1.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Smithtown	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
South Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southold	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
East Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hempstead	--	--	--	--	--	--	--	--	--	--	--	--	--	1.14	--	--	--	--
Huntington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Islip	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
North Hempstead	--	--	--	--	--	--	--	--	--	--	--	--	1.17	--	1.12	--	--	--
Oyster Bay	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Riverhead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANHATTAN	--	--	--	--	--	1.24	--	--	--	--	1.17	--	--	1.18	1.19	1.13	1.26	1.22
QUEENS NY	--	--	--	--	--	--	--	--	--	--	--	--	--	1.17	1.18	1.12	--	1.22
Other NYC	--	--	--	--	--	--	--	--	--	--	--	--	--	1.14	1.15	1.09	1.21	1.18
Hudson Valley / Connecticut	--	--	--	--	--	--	--	--	--	--	--	--	--	1.23	--	1.18	1.31	--
New Jersey	--	--	--	--	--	--	--	--	--	--	--	--	--	1.19	1.20	1.14	--	1.23

Commuter Rail

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	--	--	--	--	--	--	--	--	--	--	--	--	1.20	--	--	--	--	--
Babylon	--	--	--	--	--	--	--	--	1.16	--	1.09	--	1.13	--	--	--	--	--
Smithtown	--	--	--	--	--	--	--	1.15	--	--	--	--	--	--	--	--	--	--
South Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southold	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	--	--	--	--	--	--	--	--	--	--	--	--	1.22	1.23	1.17	--	--	--
East Hampton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hempstead	--	--	--	--	--	--	1.12	--	--	--	--	--	1.14	1.15	--	1.22	--	--
Huntington	--	--	1.11	--	--	--	--	1.09	--	--	--	--	1.13	--	--	--	--	--
Islip	--	1.17	--	--	--	--	--	--	--	--	--	--	1.22	--	1.17	--	--	--
North Hempstead	--	--	--	--	--	--	--	--	--	1.17	--	--	1.18	--	1.13	--	--	--
Oyster Bay	--	--	--	--	--	--	--	--	--	--	--	--	1.13	1.13	--	--	--	--
Riverhead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANHATTAN	1.17	1.09	1.12	--	--	1.19	--	1.11	1.09	1.17	1.13	1.10	--	1.15	1.09	1.21	1.18	--
QUEENS NY	--	1.12	--	--	--	1.23	--	1.14	1.12	1.21	1.16	--	--	1.17	1.18	--	1.24	1.21
Other NYC	--	--	--	--	--	1.15	--	--	--	1.13	--	--	--	1.09	--	1.04	1.16	1.13
Hudson Valley / Connecticut	--	--	--	--	--	--	--	1.17	--	--	--	--	--	1.19	--	1.14	1.27	1.24
New Jersey	--	--	--	--	--	1.25	--	--	1.14	--	--	--	--	1.19	1.20	1.14	--	1.23

Other
(Non-motorized, School Bus, Taxi)

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.23	1.14	--	--	--	1.26	--	--	1.15	--	1.16	--	--	--	--	--	--	--
Babylon	1.18	1.10	--	--	--	--	--	--	--	1.19	--	--	--	--	--	--	--	--
Smithtown	--	--	1.15	--	--	--	--	--	1.12	--	--	--	--	--	--	--	--	--
South Hampton	--	--	--	1.20	--	--	1.23	--	--	--	--	--	--	--	--	--	--	--
Southold	--	--	--	--	1.19	--	--	--	--	--	--	--	--	--	--	--	--	--
Brookhaven	1.20	--	--	--	--	1.22	--	--	--	1.20	--	--	1.37	--	--	--	--	--
East Hampton	--	--	--	--	--	--	1.24	--	--	--	--	--	--	--	--	--	--	--
Hempstead	1.19	--	--	--	--	--	--	1.14	--	--	1.15	1.13	--	--	1.17	1.11	--	--
Huntington	--	--	1.15	--	--	--	--	--	1.12	--	--	--	--	--	--	--	--	--
Islip	--	1.11	--	--	--	1.22	--	--	--	1.20	--	--	--	--	--	--	--	--
North Hempstead	--	--	--	--	--	--	--	1.14	--	--	1.16	1.13	--	1.17	1.18	--	--	--
Oyster Bay	1.19	--	--	--	--	--	--	1.14	--	--	1.15	1.13	--	1.16	--	--	--	--
Riverhead	--	--	--	--	--	1.23	--	--	--	--	--	--	1.37	--	--	--	--	--
MANHATTAN	--	--	--	--	--	--	--	1.14	1.12	1.20	1.16	--	--	1.17	1.18	1.11	1.24	1.21
QUEENS NY	--	--	--	--	--	1.22	--	1.14	--	--	--	--	--	1.17	1.18	1.12	1.24	1.21
Other NYC	--	--	--	--	--	--	--	--	--	--	--	--	--	1.16	1.17	1.11	1.24	1.21
Hudson Valley / Connecticut	--	--	--	--	--	--	--	--	--	--	--	--	--	1.17	1.18	1.12	1.24	1.21
New Jersey	--	--	--	--	--	--	--	--	--	--	--	--	--	1.17	1.18	1.11	1.24	1.21

All Modes

Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	1.22	1.14	1.18	1.23	--	1.25	--	1.17	1.15	1.23	1.18	1.16	--	1.19	1.20	--	1.27	--
Babylon	1.17	1.09	1.12	--	--	1.20	1.21	1.11	1.09	1.18	1.13	1.10	1.34	1.14	--	1.09	--	--
Smithtown	1.18	1.10	1.14	--	--	1.21	--	1.13	1.11	1.19	1.15	1.12	--	1.15	1.16	1.10	1.23	1.20
South Hampton	1.19	--	1.14	1.20	1.19	1.22	1.23	1.13	--	1.20	--	--	1.36	1.16	1.17	--	--	--
Southold	--	--	--	1.20	1.19	--	--	--	--	--	--	--	1.37	--	--	--	--	--
Brookhaven	1.20	1.12	1.15	1.21	--	1.23	--	1.14	1.12	1.21	1.16	1.13	1.37	1.17	1.18	1.12	1.24	--
East Hampton	--	1.11	--	1.20	--	--	1.23	--	--	--	--	--	1.37	--	--	--	--	--
Hempstead	1.19	1.11	1.14	1.20	--	1.22	--	1.14	1.11	1.20	1.15	1.13	1.36	1.16	1.17	1.11	1.24	1.20
Huntington	1.18	1.10	1.14	--	--	1.21	--	1.13	1.11	1.19	1.14	1.12	--	1.15	1.16	--	1.23	--
Islip	1.20	1.12	1.16	1.21	--	1.23	--	1.15	1.13	1.21	1.16	1.14	1.38	1.17	1.18	1.12	1.25	--
North Hempstead	1.20	1.11	1.15	--	--	1.22	--	1.14	1.12	1.20	1.16	1.13	--	1.17	1.18	1.12	1.24	1.21
Oyster Bay	1.18	1.10	1.14	1.19	--	1.21	--	1.13	1.11	1.19	1.14	1.12	--	1.15	1.16	1.10	1.23	1.20
Riverhead	1.24	1.15	--	1.24	1.23	1.26	1.28	--	--	1.24	--	--	1.41	--	--	--	--	--
MANHATTAN	1.20	1.12	1.15	1.20	--	1.23	1.24	1.14	1.12	1.20	1.16	1.13	--	1.17	1.18	1.12	1.24	1.21
QUEENS NY	1.20	1.12	1.15	1.21	--	1.23	--	1.14	1.12	1.21	1.16	1.13	--	1.17	1.18	1.12	1.24	1.21
Other NYC	1.19	1.11	1.14	--	--	1.22	--	1.13	--	1.20	1.15	1.12	--	1.16	1.17	1.11	1.23	1.20
Hudson Valley / Connecticut	1.20	--	1.15	--	--	1.22	1.24	1.14	--	1.20	1.16	1.13	--	1.17	1.18	1.12	1.24	1.21
New Jersey	--	1.11	1.15	--	--	1.22	--	1.14	1.12	--	1.16	1.13	--	1.17	1.18	1.12	1.24	1.21

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored; New York BPM 2010 SED forecast data
Notes: Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively).
Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.

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Appendix J:
2040 Projected Origin-Destination Data for Non-Work Trips by Mode (Combined for all Non-Work Trip Purposes)

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Daily NonWork Trips

SOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	111,073	11,601	3,417	0	0	1,398	0	9,566	21,228	6,305	270	30,786	0	2,398	630	0	814	0
Babylon	9,076	78,751	746	0	0	6,240	0	7,210	479	25,564	63	1,977	667	0	0	2,958	0	0
Smithtown	3,582	467	92,178	0	0	22,759	0	3,512	10,262	15,015	0	2,574	0	60	0	1,914	76	340
South Hampton	75	0	0	29,732	0	2,793	239	0	0	0	0	0	3,614	0	0	0	0	0
Southold	0	0	0	665	12,766	0	0	0	0	0	0	0	505	0	0	0	0	0
Brookhaven	399	3,391	20,788	3,147	0	815,198	0	570	5,768	42,951	205	0	14,353	0	0	0	75	0
East Hampton	0	0	0	515	0	0	51,590	0	0	0	0	0	0	0	0	0	0	0
Hempstead	9,719	6,616	2,023	0	0	135	0	713,777	1,232	1,333	26,141	36,498	1,830	2,856	66,792	3,336	889	1,083
Huntington	22,641	625	10,819	0	0	4,956	0	1,290	171,676	2,086	1,888	4,793	0	0	231	0	0	0
Islip	2,929	21,907	14,540	0	0	47,106	0	799	2,420	288,593	153	2,533	159	0	4,316	10,062	75	0
North Hempstead	432	287	0	0	0	0	0	44,974	1,614	1,162	247,511	20,832	0	1,880	30,532	2,096	235	0
Oyster Bay	28,396	392	2,463	878	0	517	0	38,138	4,868	2,989	20,913	282,597	0	2,210	4,943	378	0	0
Riverhead	0	577	0	2,646	946	13,427	0	0	0	143	0	0	42,395	0	0	0	0	0
MANHATTAN	2,395	0	60	60	0	4,251	0	4,958	0	0	1,554	2,053	0	86,661	12,106	33,178	15,400	26,566
QUEENS NY	240	0	839	0	0	0	0	48,235	122	1,262	27,967	5,031	0	19,820	907,752	31,253	1,759	2,397
Other NYC	1,161	11,602	1,981	0	0	0	0	1,329	0	0	388	1,637	0	30,178	36,671	1,154,083	35,655	17,538
Hudson Valley / Connecticut	767	0	0	0	0	73	0	715	0	99	219	75	0	13,008	1,626	29,000	4,428,490	32,201
New Jersey	0	131	65	0	0	0	0	1,025	0	0	0	0	0	17,116	1,479	19,035	40,135	7,492,022

HOV

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	120,961	16,122	1,496	390	0	137	0	11,386	19,599	3,948	141	34,422	0	371	5,136	0	0	0
Babylon	15,625	107,199	272	0	0	534	67	11,945	1,023	44,192	0	4,785	0	0	0	0	0	0
Smithtown	9,088	268	148,456	0	0	25,610	0	2,272	16,550	19,364	8,427	476	0	154	1,210	14,432	0	0
South Hampton	0	0	648	88,826	16,734	8,711	9,706	146	0	928	0	0	3,180	2,347	1,893	0	0	0
Southold	0	0	0	16,918	114,761	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	131	500	39,800	8,533	0	979,033	0	4,274	993	50,169	241	1,725	10,270	5,444	839	0	113	0
East Hampton	0	62	0	6,601	0	0	41,635	0	0	0	0	0	4,200	0	0	0	0	0
Hempstead	9,026	13,711	2,000	155	0	6,418	0	723,579	1,209	977	29,358	47,089	0	2,301	66,810	6,760	0	2,347
Huntington	20,177	1,035	18,475	0	0	1,073	0	1,224	201,615	0	5,396	13,835	0	0	2,603	0	1,486	0
Islip	9,880	40,948	19,631	2,214	0	47,094	0	0	154	402,922	2,997	6,910	0	0	487	1,490	0	0
North Hempstead	142	0	8,454	0	0	381	0	23,914	5,278	2,682	299,525	11,257	0	1,425	13,017	5,874	415	125
Oyster Bay	44,165	4,581	684	0	0	0	0	39,561	14,982	8,519	14,634	190,797	0	0	15,164	5,327	5,156	262
Riverhead	392	0	0	2,506	0	11,341	3,941	0	0	0	0	0	45,244	0	0	0	0	0
MANHATTAN	479	0	153	0	0	5,694	2,970	3,606	0	0	2,886	169	0	156,178	40,639	67,062	29,497	16,045
QUEENS NY	5,127	0	1,386	1,955	0	2,289	0	69,825	2,513	497	17,493	12,827	0	20,553	1,143,327	99,857	9,783	3,802
Other NYC	0	3,001	0	0	0	15,798	0	6,715	0	1,579	4,978	0	0	77,306	98,741	1,487,134	44,134	34,177
Hudson Valley / Connecticut	0	0	71	0	0	0	500	1,185	0	0	0	6,130	0	18,173	12,642	46,135	5,122,971	51,341
New Jersey	0	0	0	0	0	0	0	1,721	0	0	119	248	0	15,271	4,027	27,465	58,387	8,437,518

Bus

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	801	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	0	0	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	56	119	0	0	594	0	0	136	59	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	575	0	0	7,187	0	0	0	0	0	0	696	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	13,988	0	0	0	0	0	0	1,106	0	0	0
Huntington	0	0	141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	59	0	0	0	0	0	0	1,828	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	2,694	0	0	0	3,162	0	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riverhead	0	0	0	0	0	699	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	0	0	0	0	0	0	258,891	8,981	37,932	1,183	34,508
QUEENS NY	0	0	0	0	0	0	0	1,697	0	0	903	0	0	5,835	222,677	10,537	848	985
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	37,709	9,640	587,175	6,907	3,445
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	417	0	5,311	97,859	100
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	30,643	1,625	1,112	797	315,082

Subway

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Babylon	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	619	0	0	0
Huntington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Islip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	0	0	0	481	0	170	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	0	0	0	0	0	78	0	0	0	0	1,965	0	0	456,383	118,689	306,191	987	31,504
QUEENS NY	0	0	0	0	0	0	0	0	0	0	0	0	0	90,509	173,468	26,275	0	1,537
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	233,810	37,904	297,721	1,873	229
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	1,933	0	779	1,123	0
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	22,640	1,567	2,128	0	28,216

Commuter Rail

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	0	0	0	0	0	0	0	0	0	0	0	0	0	461	0	0	0	0
Babylon	0	0	0	0	0	0	0	0	0	798	0	1,926	0	112	0	0	0	0
Smithtown	0	0	0	0	0	0	0	0	339	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	0	0	0	0	0	0	0	0	0	0	0	0	0	7,225	221	111	0	0
East Hampton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead	0	0	0	0	0	0	0	1,571	0	0	0	0	0	5,612	326	0	146	0
Huntington	0	0	329	0	0	0	0	0	1,652	0	0	0	0	4,073	0	0	0	0
Islip	0	801	0	0	0	0	0	0	0	0	0	0	0	1,476	0	64	0	0
North Hempstead	0	0	0	0	0	0	0	0	0	0	1,796	0	0	1,415	0	1,991	0	0
Oyster Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	3,082	2,001	0	0	0
Riverhead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANHATTAN	600	107	65	0	0	7,043	0	4,324	2,945	3,786	2,410	2,908	0	0	5,371	328	12,740	13,345
QUEENS NY	0	1,968	0	0	0	219	0	323	622	2,265	2,026	0	0	7,345	1,097	0	180	4,446
Other NYC	0	0	0	0	0	109	0	0	0	62	0	0	0	570	0	5,791	7,545	6,083
Hudson Valley / Connecticut	0	0	0	0	0	0	0	140	0	0	0	0	0	10,681	0	1,251	22,153	719
New Jersey	0	0	0	0	0	76	0	0	80	0	0	0	0	15,464	4,405	3,078	0	21,091

Other

(Non-motorized, School Bus, Taxi)

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	19,099	15,702	0	0	0	4,314	0	0	191	0	0	263	0	0	0	0	0	0
Babylon	16,219	80,867	0	0	0	0	0	0	0	99	0	0	0	0	0	0	0	0
Smithtown	0	0	16,006	0	0	0	0	0	995	0	0	0	0	0	0	0	0	0
South Hampton	0	0	0	3,131	0	0	227	0	0	0	0	0	0	0	0	0	0	0
Southold	0	0	0	0	1,847	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookhaven	4,108	0	0	0	0	75,920	0	0	0	351	0	0	275	0	0	0	0	0
East Hampton	0	0	0	0	0	0	22,359	0	0	0	0	0	0	0	0	0	0	0
Hempstead	118	0	0	0	0	0	0	153,399	0	0	173	179	0	0	4,787	2,369	0	0
Huntington	0	0	1,019	0	0	0	0	0	17,200	0	0	0	0	0	0	0	0	0
Islip	0	92	0	0	0	357	0	0	0	82,247	0	0	0	0	0	0	0	0
North Hempstead	0	0	0	0	0	0	0	171	0	0	62,575	522	0	182	981	0	0	0
Oyster Bay	271	0	0	0	0	0	0	181	0	0	534	43,445	0	249	0	0	0	0
Riverhead	0	0	0	0	0	246	0	0	0	0	0	0	9,369	0	0	0	0	0
MANHATTAN	0	0	0	0	0	0	0	2,031	382	1,451	187	0	0	2,991,327	14,004	25,745	11,467	9,249
QUEENS NY	0	0	0	0	0	1,381	0	4,799	0	0	0	0	0	14,217	1,603,783	18,434	118	155
Other NYC	0	0	0	0	0	0	0	0	0	0	0	0	0	19,852	15,205	3,569,208	745	344
Hudson Valley / Connecticut	0	0	0	0	0	0	0	0	0	0	0	0	0	5,539	357	1,225	867,184	4,680
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0	0	3,116	150	1,268	4,881	2,042,798

All Modes

	Route 110 - 2 mile radius	Babylon	Smithtown	South Hampton	Southold	Brookhaven	East Hampton	Hempstead	Huntington	Islip	North Hempstead	Oyster Bay	Riverhead	MANHATTAN	QUEENS NY	Other NYC	Hudson Valley / Connecticut	New Jersey
Route 110 - 2 mile radius	251,953	43,450	4,915	390	0	5,836	0	20,956	41,029	10,256	411	65,487	0	3,232	5,766	0	815	0
Babylon	40,891	266,530	1,079	0	0	6,796	68	19,217	1,507	70,886	63	8,730	669	113	0	2,968	0	0
Smithtown	12,670	794	256,692	0	0	49,015	0	5,792	28,275	34,461	8,418	3,056	0	214	1,209	16,335	76	341
South Hampton	76	0	647	121,728	16,700	11,508	10,153	146	0	926	0	0	6,816	2,343	1,889	0	0	0
Southold	0	0	0	17,579	129,376	0	0	0	0	0	0	0	507	0	0	0	0	0
Brookhaven	4,644	3,894	61,161	11,678	0	1,877,652	0	4,842	6,766	93,480	446	1,724	25,606	12,342	1,050	106	188	0
East Hampton	0	62	0	7,131	0	0	115,559	0	0	0	0	0	4,211	0	0	0	0	0
Hempstead	18,865	20,329	4,023	155	0	6,553	0	1,606,168	2,441	2,311	55,679	83,776	1,831	10,866	140,470	12,460	1,038	3,431
Huntington	42,827	1,660	30,781	0	0	6,033	0	2,515	392,060	2,089	7,282	18,623	0	4,152	2,833	0	1,485	0
Islip	12,802	63,681	34,211	2,212	0	94,512	0	799	2,573	775,807	3,147	9,437	158	1,417	4,801	11,609	75	0
North Hempstead	575	287	8,453	0	0	381	0	69,045	6,891	3,844	614,133	32,604	0	5,368	47,719	10,110	650	125
Oyster Bay	72,913	4,988	3,144	876	0	516	0	77,924	19,888	11,530	36,077	516,454	0	5,613	22,198	5,722	5,173	263
Riverhead	392	575	0	5,141	943	25,615	3,939	0	0	143	0	0	97,125	0	0	0	0	0
MANHATTAN	3,504	110	280	60	0	17,291	2,976	15,073	3,409	5,344	9,061	5,221	0	3,951,699	198,862	467,597	71,774	131,469
QUEENS NY	5,356	1,969	2,222	1,951	0	3,889	0	124,719	3,252	4,024	48,341	17,828	0	157,922	4,053,038	186,076	12,667	13,309
Other NYC	1,162	14,626	1,983	0	0	15,980	0	8,074	0	1,651	5,388	1,638	0	403,462	199,133	7,094,713	97,558	62,346
Hudson Valley / Connecticut	767	0	71	0	0	73	500	2,037	0	99	219	6,203	0	49,417	14,624	83,613	10,540,219	89,031
New Jersey	0	131	65	0	0	75	0	2,746	78	0	119	248	0	103,417	13,128	53,987	104,215	18,337,774

Source: 2010/2011 NYMTC RHTS, GPS Weighted and Factored; New York BPM 2010 SED forecast data

Notes: Data for Long Beach and Glen Cove, which are not part of any town, are aggregated with the geographically closest town (i.e., Hempstead and Oyster Bay, respectively).

Shelter Island is omitted because the RHTS has no trips originating in or destined to this town.



ROUTE 110 ALTERNATIVES ANALYSIS

Appendix D:
Task 4 Technical Memorandum

TOWN OF BABYLON
SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

Task 4: Identify Problems and Opportunities; Develop Purpose and Need Statement

October 14, 2014

Submitted by:

PARSONS BRINCKERHOFF

Version Final

QUALITY ASSURANCE/QUALITY CONTROL

Created by:	**Maxwell Sokol / Parsons Brinckerhoff**	October 14, 2014 **Date**
Reviewed by:	**Nicole Bucich / Parsons Brinckerhoff**	October 14, 2014 **Date**
Approved by:	**Daniel Baer / Parsons Brinckerhoff**	September 10, 2014 **Date**

REVISIONS

Date	Version Number	Revision
September 10, 2014	1.0	Draft document for review
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1. Introduction

The purpose of the Route 110 Alternatives Analysis is to evaluate alternatives that address the transportation demand in the corridor, manage congestion, maximize environmental benefits, and enhance economic competitiveness. The Alternatives Analysis is building upon previous and ongoing studies to select a Locally Preferred Alternative (LPA) to advance to Project Development and National Environmental Policy Act (NEPA) review with the Federal Transit Administration (FTA). While the Moving Ahead for Progress in the 21st Century Act (MAP-21)—enacted by Congress in 2012—eliminated the requirement for an Alternatives Analysis, good planning practice dictates the importance of looking at reasonable alternatives in a transportation corridor to ensure that the public and decision-makers do not rush to judgment on a solution to address a problem.

As such, a focused Route 110 Alternatives Analysis is being conducted, based upon the following:

- A firm understanding of transportation needs, problems, and opportunities in the corridor
- The establishment of clear goals and objectives to be achieved by the transportation improvements in the corridor
- The definition of various technologies and operating plans designed to address corridor problems, goals, and objectives
- The evaluation of alternatives against multiple measures—including financial feasibility of the grantee/operator/sponsor (in this case the Town of Babylon)

This work that is currently being completed will collectively result in a local decision that is well informed, demonstrates strong consensus, and is less vulnerable to delays in the planning and implementation process.

2. Overview

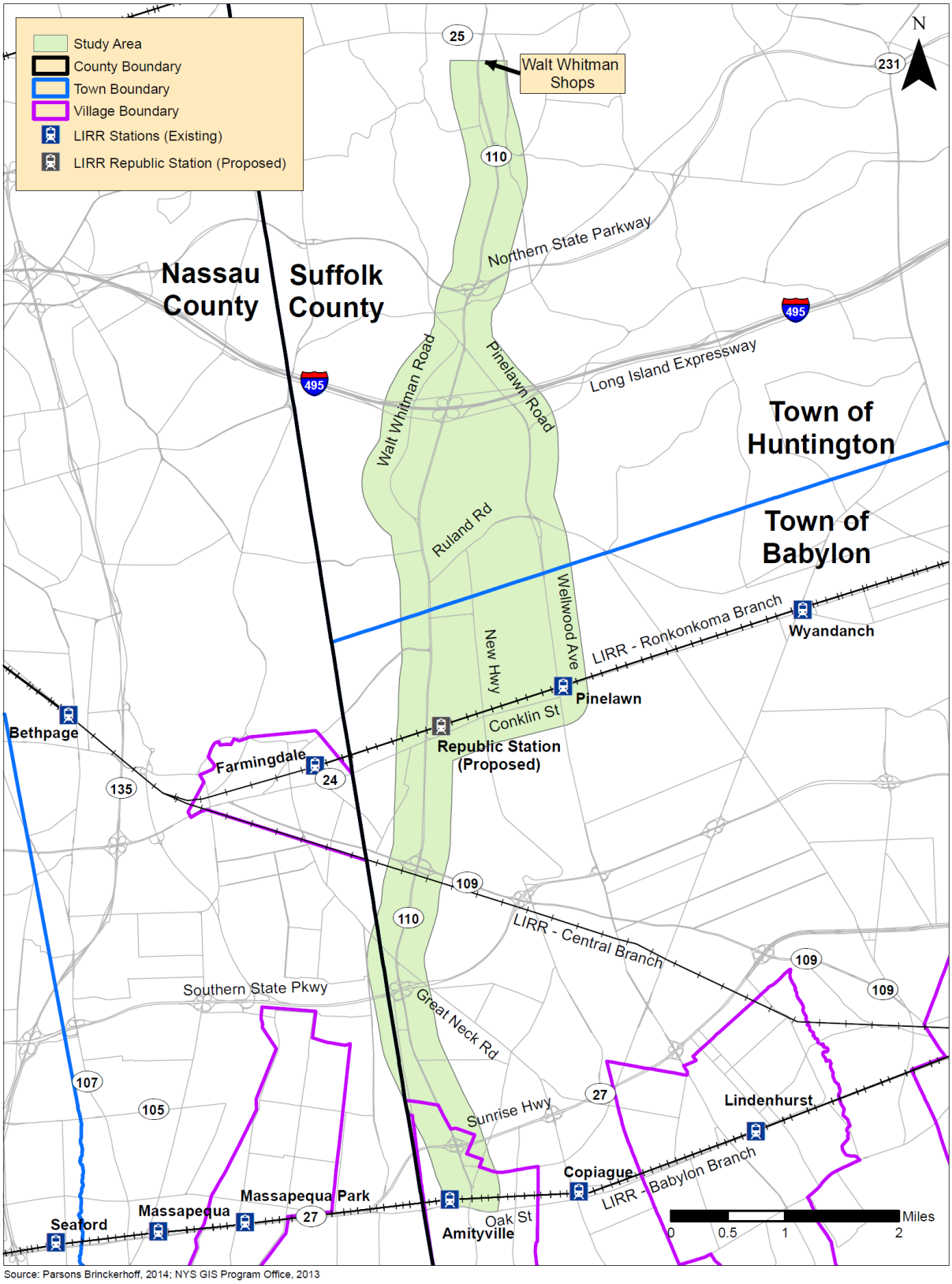
This technical memorandum builds off of the work completed in previous tasks—as well as the 2010 *Route 110 BRT Study*—by identifying problems and opportunities facing the Route 110 study area, resulting in the development of a Purpose and Need Statement. The Purpose and Need Statement is the roadmap for the project and focuses on the problem and need for a solution. It also provides a foundation for the development of project goals and objectives—also included in this technical memorandum—as well as the subsequent identification of evaluation criteria and performance measures that will be used to screen alternatives (to be provided in Task 5). The Purpose and Need Statement plays a crucial role in setting the context for the Alternatives Analysis, and will be further informed by input from stakeholders and the general public.

3. Study Area

The study area for the Route 110 Alternatives Analysis (Figure 1) includes the areas directly affected by the potential construction and operation of transit improvements. The approximately 10.3-mile stretch of the Route 110 corridor in the study area is located between Oak Street in the Village of Amityville at the southern end and the Walt Whitman Shops in the Town of Huntington at the northern end. The study area extends east as far as Wellwood Avenue in the East Farmingdale portion of the Town of Babylon (at Conklin Street), and continues north to the intersection of Pinelawn Road and Route 110 in the Melville portion of the Town of Huntington. The study area extends west as far Walt Whitman Road in Melville.

As the alternatives are refined in the screening process, potential connections to serve additional destinations, including the Westfield Sunrise Mall in East Massapequa and the Huntington LIRR station, may be considered. Additionally, it is assumed that the proposed LIRR Republic station will be operational in the future Build year (2040). Interim service to the Farmingdale LIRR station will be treated as a phasing option for implementation of the alternatives until the LIRR Republic station is operational.

Figure 1: Route 110 Alternatives Analysis Study Area Boundaries



Source: Parsons Brinckerhoff, 2014; NYS GIS Program Office, 2013

4. Problem Statement

Key problems and opportunities facing the Route 110 corridor and study area are outlined below.

4.1 PROBLEMS

The commercial success and quality of life of the study area is at risk due to a number of problems:

- **Travel choices are constrained** because major trip generators located off the main spine of Route 110 lack direct, convenient transit access.
- **Multi-modal connectivity is lacking** because existing bus routes offer limited service between the LIRR and destinations in the study area, and where there are multi-modal connections, they are neither timed nor guaranteed.
- **Existing traffic congestion** on Route 110 contributes to travel delays and travel time unreliability.
- **Future traffic congestion** will likely be exacerbated by projected increases in population and employment, in addition to planned and proposed developments along Route 110, thereby putting a strain on the transportation network.
- **Existing bus travel times are not competitive** with automobile travel times in the study area, especially during peak periods, which is a disincentive for automobile owners to use transit.
- **Transit-oriented development (TOD) opportunities are lacking** in the study area due to the inadequacy of the existing north-south transit system, an automobile-oriented culture, and the suburban zoning and land use patterns in the corridor.
- **Walkability and bicycling are limited** in the study area due to safety issues, inconsistent availability and width of sidewalks, lack of bicycle lanes, and existing auto-centric development patterns.
- **The limited number of park-and-ride lots** in the study area results in poor access from the automobile mode to the transit system.

4.2 OPPORTUNITIES

There are a number of factors that are supportive of improved transit service in the study area, including:

- Multiple studies have been completed that document the **feasibility and potential benefits of transit improvements on Route 110** (i.e., the 2010 *Route 110 BRT Study* and the 2014 *Suffolk County BRT Feasibility Study*).
- Route 110 is **one of the key employment hubs on Long Island**, and the area within a two-mile radius of the corridor accounts for approximately 10% of the Island's workforce (2006-2010 Census Transportation Planning Package American Community Survey 5-Year Estimates).
- Several **large employers** are located either directly along or just off Route 110, and therefore serve as a major source of existing and potential future transit ridership.

- There is **relatively high existing bus ridership** on Route 110 on various service providers, including boardings and alightings within the study area, and the study area is crossed by **multiple branches of the LIRR**, which offers opportunities to create multi-modal connectivity.
- There are **multiple travel markets** that can be served in the study area, including work trips during the morning and evening peak periods, non-work trips by employees during the lunch hour, and non-work trips made by shoppers, visitors, university students, and other non-workers during both peak and off-peak periods. Additionally, there are projected increases in daily work and non-work trips within, to, and from the Route 110 area. One particular travel market of interest is the reverse commute market, and specifically those traveling east to the Route 110 area from eastern Queens and Nassau County.
- The **potential reopening of LIRR Republic Station** could create a new multi-modal transit center along Route 110 and serve as an anchor for the planned East Farmingdale redevelopment at the intersection of Route 110 and Conklin Street, consistent with the vision of the ***Connect Long Island Plan***.
- The **planned East Farmingdale redevelopment** will include a public-private partnership to revitalize the center of Route 110. A master developer will work with the Town of Babylon and its selected consultants to study, plan, and redevelop East Farmingdale, through, among other things, a new form-based code for the area.
- The **LIRR Double Track project**, with a scheduled completion date of 2018, will allow the LIRR to increase off-peak train frequency from hourly to half-hourly service, and the improved service and reliability along the Ronkonkoma Branch will support enhanced connectivity and intra-Island travel, which can benefit Route 110 as a regional employment hub. The Double Track project will enable more reverse peak trains to operate east to Route 110 during the morning peak, which cannot be supported by the existing single track.
- The **LIRR East Side Access project**, with a scheduled completion date of 2022, will connect the LIRR to Grand Central Terminal. This will increase capacity and provide faster access for many LIRR passengers to their destinations, thereby promoting economic development across the region and supporting existing employment centers, including along Route 110.
- **Planned, proposed, and ongoing development projects** in the vicinity of Route 110 can provide sources for additional transit ridership, especially those with residential components, and the ability to evolve the corridor through transit-oriented design principles. These projects include—but are not limited to—the East Farmingdale redevelopment and the Jefferson Plaza project in the Village of Farmingdale.
- There could be **opportunities to partner with developers, property owners, and major employers** to provide enhanced and more direct transit service in the study area.
- The Town of Huntington will soon begin to prepare a **Melville Employment Center Area Plan**, one element of which is to provide enhanced transit service, which can strengthen Melville's position as an employment hub. Other pertinent objectives of this forthcoming effort—which will result in an integrated land use, circulation, and infrastructure plan—are to enable new mixed-use hamlet centers, address traffic congestion, improve pedestrian/bicycle connectivity, and design a transportation management program for major employers to reduce the number of single-occupancy vehicles.
- An **ongoing NYSDOT project** on Route 110 between the Long Island Expressway (LIE) and Arrowwood Lane—complementing the Northern State Parkway and LIE Interchange

improvements project—is improving pedestrian infrastructure along this portion of the corridor in Melville by completing gaps where there were no sidewalks, in addition to adding a third travel lane in each direction where there were previously two lanes. Additionally, a future project, which was awarded funding through the federal Highway Safety Improvement Program in June 2014, will result in further operational and pedestrian safety improvements on Route 110, including widening existing crosswalks and installing new ADA-compliant crosswalks with pedestrian countdown timers, new traffic signals, and pedestrian refuges. The project will also result in operational improvements through the use of Intelligent Transportation Systems (ITS).

- **Other ongoing local and regional initiatives** seek to broadly improve the character of Route 110. For instance, the Town of Babylon is working with the Regional Plan Association (RPA) to create design guidelines for future developments along Route 110 to improve walkability. Additionally, the ongoing Village of Amityville Downtown Revitalization effort will strive to make the portion of the Route 110 corridor within the Village more pedestrian-friendly. Furthermore, the New York Metropolitan Transportation Council (NYMTC) is currently planning parking management workshops for East Farmingdale and Amityville, which will likely take place in Spring 2015.

5. Purpose and Need Statement

The purpose of the Route 110 Alternatives Analysis is to:

- **Improve north-south mobility** because travel time on Route 110 suffers due to existing traffic congestion, which is projected to increase in the future.
- **Increase transit access to and from employment and other activity centers** because the existing bus and rail network offers inadequate service to major trip generators.
- **Enhance multi-modal connectivity with the LIRR and existing bus service** because direct connections are currently limited and lack coordination.
- **Promote increased transit use** and access to transit use by attracting "choice riders" (i.e., those who own an automobile) because automobile dependence contributes to traffic congestion, harms the local and global environment, and reinforces unsustainable land use patterns.
- **Support TOD along Route 110 and in the study area** because existing automobile-centric development patterns are not easily served by public transit.

The Route 110 Alternatives Analysis is proposed to address the following needs:

- **Provide direct, convenient transit access.** Major trip generators within the study area are not limited to destinations along the main spine of the corridor. Improved transit service is needed to effectively provide the last-mile connection for workers, residents, and visitors to destinations located off Route 110, in addition to enhancing transit access along the corridor.
- **Enhance connectivity with the LIRR.** Improved north-south transit service is needed to complement the east-west network of the LIRR. Transit improvements along Route 110—in coordination with existing bus service—can leverage the corridor's strategic location as a major north-south artery on Long Island by linking multiple branches of the LIRR and providing enhanced transit service between LIRR stations and employment and other activity centers.
- **Increase transportation system capacity.** Additional transportation system capacity is needed to address existing and projected future congestion that will likely result from regional population and employment growth as well as future development along and near Route 110.
- **Serve multiple travel markets**. In addition to the morning and evening peak periods, Route 110 experiences a midday peak during the lunch hour for employees along the corridor. Additionally, non-work trips made by shoppers and visitors to the area during both peak and off-peak periods, as well as trips made by university students and other non-workers, also contribute to the travel market. There is a need for transit improvements to address these multiple travel markets.
- **Serve the transit-dependent population**. By definition, transit-dependent persons do not own a car. Transit improvements within the study area are needed to equitably address the existing and future travel needs of this population.
- **Provide the transportation framework to enable TOD.** Improved transit service on Route 110, when coordinated with effective land use planning and zoning, can provide a transportation spine to anchor development around a series of transit nodes, consistent with the *Connect Long Island Plan* and other local and regional planning efforts.

- **Promote economic growth and vitality**. There is a need to enhance the long-term economic competitiveness of Route 110 to retain and attract employers and employees as well as support future development projects. Transit improvements in the study area can contribute to job creation and retention and also create opportunities for TOD.
- **Reduce travel time for transit users.** Mobility for transit users within the study area is limited by existing traffic congestion, which contributes to travel delays especially during peak periods. Enhanced transit service in the study area, possibly including priority treatment and limited stop service, can improve mobility, reduce overall travel time, and increase travel time reliability for transit users.
- **Maximize cost effectiveness and efficiency of transit investments and operations.** The need for transit improvements must be balanced with a careful consideration of costs for implementation, including both capital and operating costs.
- **Expand travel options to attract choice riders and improve quality of life and environmental conditions.** There is a need to create additional travel choices to supplement local bus service and provide a transportation alternative to the automobile. Transit improvements within the study area can serve as an incentive for automobile owners to use transit for their travel needs, which can result in increased overall transit ridership and reduced automobile usage. In conjunction with a shift in development patterns to encourage TOD, transit improvements are necessary to improve quality of life and reduce harm to the local and global environment, thereby promoting sustainability and smart growth.
- **Improve safety**. Route 110 is a dangerous roadway both for vehicles and pedestrians/bicyclists, and according to the Town of Babylon Sustainable Complete Streets Policy (adopted in 2010), the Town shall view all transportation improvements as opportunities to improve safety—in addition to access and mobility—for all users of the roadway, independent of mode. Transit improvements can help to address safety concerns along the corridor.
- **Improve the image of transit**. In order to attract choice riders, transit improvements must be branded in such a way to raise the profile of transit service. An effective branding strategy is needed to make transit more visible in the study area and to highlight the benefits of new, high-quality service to existing and potential customers.

6. Goals and Objectives

The following four draft goals and objectives for the project are tied directly to the Purpose and Need Statement. The goals are broad and the objectives are specific, which collectively inform the development of the evaluation criteria and performance measures to be used in the screening process in subsequent tasks.

GOAL 1: Improve Mobility and Connectivity

OBJECTIVES:

- Provide frequent, high-quality transit service to employment and other activity centers on Route 110
- Establish last-mile connectivity to destinations located off the main spine of Route 110
- Provide more transportation choices for workers, residents, shoppers, and visitors
- Increase transit ridership
- Enhance the customer experience and improve the image of transit
- Provide enhanced transit service for workers, residents, visitors, and shoppers who do not own an automobile (i.e., transit-dependent persons)
- Improve travel time for transit users within the study area
- Improve safety for all roadway users
- Increase transportation system capacity to accommodate future growth and assist in mitigating future increases in traffic congestion
- Increase regional public transit access to the study area from surrounding municipalities and counties
- Provide seamless multi-modal connections
- Establish convenient pedestrian access to employment and other activity centers

GOAL 2: Enhance Economic Competitiveness and Promote Economic Growth

OBJECTIVES:

- Encourage a shift in land use patterns to promote transit-oriented development, sustainability, and smart growth
- Support ongoing and planned development projects
- Create multi-modal transit hubs as anchors for future development
- Retain and attract employers and employees
- Advance the goals of local and regional plans, including *Connect Long Island*

GOAL 3: Maximize Cost and Operational Effectiveness

OBJECTIVES:

- Implement cost-effective transit improvements within a reasonable construction timeframe and with capital and operations/maintenance costs that are consistent with realistically anticipated available funding
- Make use of existing and planned transportation system services and capacity
- Be compatible with existing and planned transit operations and infrastructure in the study area
- Avoid conflicts with existing and planned infrastructure during construction and operation
- Enable opportunities to pursue phased implementation to align with available funding
- Enable the use of innovative sources of project financing and alternative project delivery approaches

GOAL 4: Minimize Adverse Environmental Impacts

OBJECTIVES:

- Reduce automobile usage and air emissions
- Implement transit improvements that are constructible and operable without adversely affecting the natural and built environment
- Implement sustainable transit technologies

7. Next Steps

As noted above, the project goals and objectives, stemming from the Purpose and Need and addressing the identified problems along Route 110, serve as the basis for developing evaluation criteria and performance measures that will be used to screen the transit alternatives. The next step in the Alternatives Analysis is to define the initial list of alternatives as well as multiple tiers of evaluation criteria and performance measures to first screen out alternatives for fatal flaws and subsequently conduct a more detailed and quantitative screening of the remaining short list of alternatives. It will be important to reach consensus on the purpose, need, goals, and objectives early on in the stakeholder and public outreach process.



ROUTE 110 ALTERNATIVES ANALYSIS

Appendix E:
Task 5 Technical Memorandum

TOWN OF BABYLON
SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

Task 5: Screening Methodology and Definition of Alternatives

November 20, 2014

Submitted by:

PARSONS BRINCKERHOFF

Version Final

QUALITY ASSURANCE/QUALITY CONTROL

Created by:	**Maxwell Sokol / Parsons Brinckerhoff**	November 19, 2014 **Date**
Reviewed by:	**Nicole Bucich / Parsons Brinckerhoff**	November 20, 2014 **Date**
Approved by:	**Daniel Baer / Parsons Brinckerhoff**	October 13, 2014 **Date**

REVISIONS

Date	Version Number	Revision
October 14, 2014	1.0	Draft document for review
November 20, 2014	Final	Addressing Town of Babylon comments, received November 6, 2014

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APPENDIX A: LIST OF TRANSPORTATION PROJECTS FOR THE NO-BUILD ALTERNATIVE

1. Introduction

The purpose of the Route 110 Alternatives Analysis is to evaluate alternatives that address the transportation demand in the corridor, manage congestion, maximize environmental benefits, and enhance the study area's economic competitiveness by increasing mobility options. The Alternatives Analysis is building upon previous and ongoing studies to select a Locally Preferred Alternative (LPA) to advance to Project Development and National Environmental Policy Act (NEPA) review with the Federal Transit Administration (FTA). While the Moving Ahead for Progress in the 21st Century Act (MAP-21)—enacted by Congress in 2012—eliminated the requirement for an Alternatives Analysis, good planning practice dictates the importance of looking at reasonable modal and alignment alternatives in a transportation corridor to ensure that the public and decision-makers do not rush to judgment on a solution to address a problem.

As such, a focused Route 110 Alternatives Analysis is being conducted, based upon the following:

- A firm understanding of transportation needs, problems, and opportunities in the corridor
- The establishment of clear goals and objectives to be achieved by the transportation improvements in the corridor
- The definition of various technologies and operating plans designed to address corridor problems, goals, and objectives
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This work that is currently being completed will result in a local decision that is well informed, demonstrates strong consensus, and is less vulnerable to delays in the planning and implementation process.

2. Overview

This technical memorandum builds off of the work completed in previous tasks—notably the development of the Purpose and Need Statement and associated goals and objectives in Task 4—as well as the 2010 *Route 110 Bus Rapid Transit (BRT) Study*. While the Town has studied the feasibility and potential benefits of a specific mode (i.e., BRT) in the 2010 *Route 110 BRT Study*, it is important to take a step back and assess a broad range of alternative solutions to address the identified problems in the study area. As such, this technical memorandum defines the Preliminary Long List Alternatives and outlines the multi-tiered screening methodology (Tasks 8-10) that will be used to narrow the alternatives toward selection of an LPA (Task 15). The Preliminary Long List Alternatives include a range of alignment concepts that will subsequently be paired with transit modes. The alternatives under consideration will be narrowed down in multiple tiers of screening to identify the most feasible and promising alternatives that meet the project goals and objectives. The project goals and objectives, which stem from the Purpose and Need and address the identified problems in the study area, serve as the basis for developing evaluation criteria that will be used to screen the alternatives. The screening methodology defines the evaluation criteria and approach for each tier of the screening process.

MAP-21 no longer requires that an Alternatives Analysis be completed, and the FTA's *Capital Investment Program Frequently Asked Questions* (FAQ) webpage offers insight into the FTA's stance regarding the development and evaluation of alternatives in the transportation planning process. As stated in the FAQs:

> "SAFETEA-LU required that an alternatives analysis (AA) be completed before a project sponsor could apply to the FTA Capital Investment Grant program. MAP-21 eliminates this stand alone AA requirement under Section 5309 and instead relies on the evaluation of options that may occur during the metropolitan planning process and the review of alternatives that occurs to meet the requirements of the National Environmental Policy Act (NEPA).
>
> Project sponsors may still conduct a stand-alone AA separate from the NEPA review if they wish. This may ultimately streamline the environmental review process because the results of prior planning work evaluating alternatives may be incorporated into the NEPA review. If a sponsor chooses to do a separate AA to help inform the NEPA process, FTA's involvement would be minimal compared to what it had been under SAFETEA-LU. FTA would not comment on the adequacy of the AA or the alternatives covered in it, other than identifying its sufficiency for incorporation into the NEPA process. As general good planning practice, FTA would suggest sponsors look at a range of alternatives and consider carefully the evaluation criteria that will be used to choose among alternatives." (http://www.fta.dot.gov/12304_15522.html)

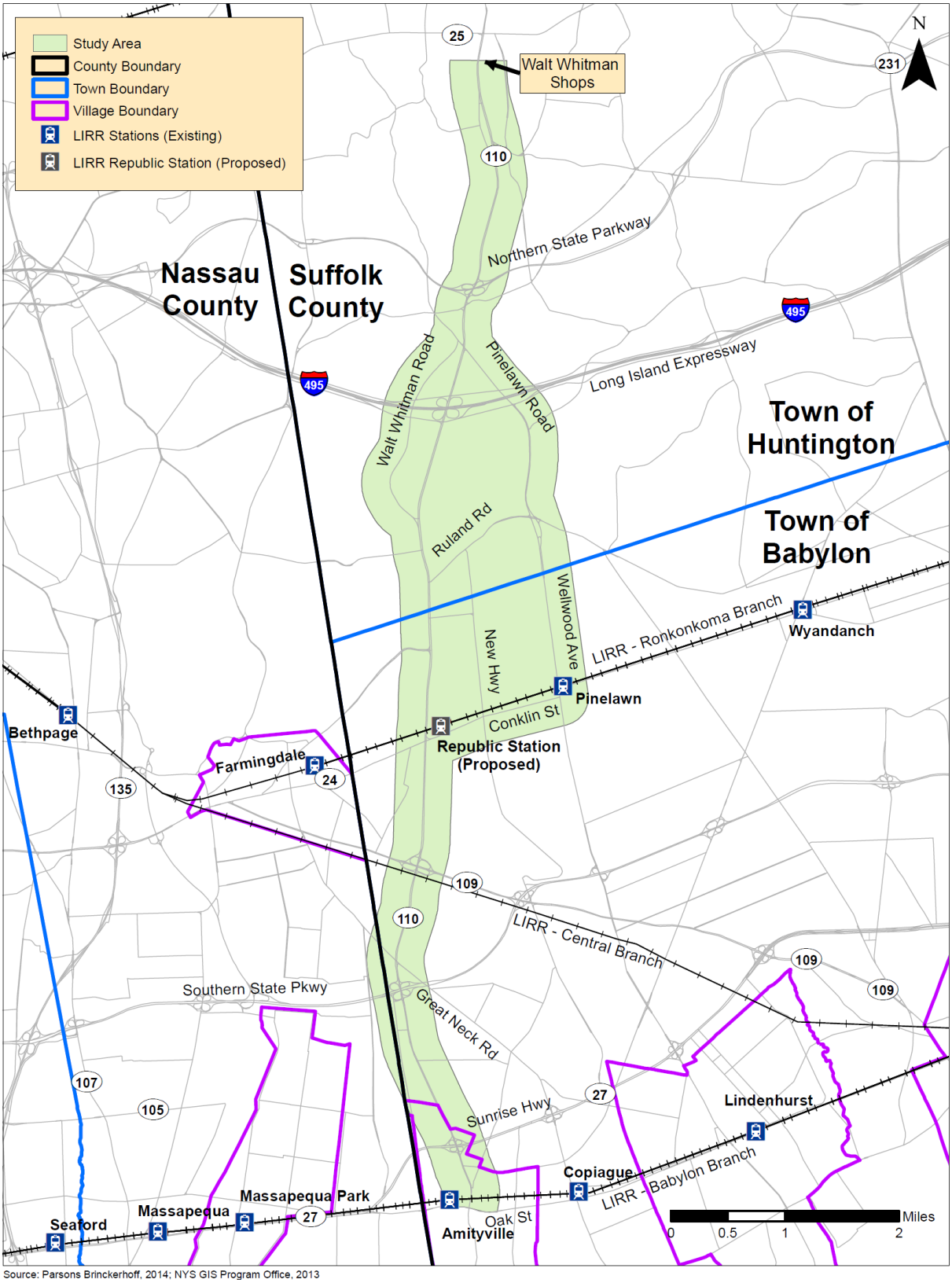
Therefore, the ongoing Route 110 Alternatives Analysis is setting the stage for a more efficient and possibly streamlined environmental review process. The work that is currently being completed will document a clear path for selection of an LPA by developing, screening, and evaluating a wide range of alternatives. The process, the alternatives, and the results of the Alternatives Analysis will be informed by coordination with the Technical Advisory Committee as well as other key stakeholders and the general public.

3. Study Area

The study area for the Route 110 Alternatives Analysis (Figure 1) includes the areas directly affected by the potential construction and operation of transit improvements. The approximately 10.3-mile stretch of the Route 110 corridor in the study area starts on the southern end at the Long Island Rail Road (LIRR) Amityville station on Oak Street in the Village of Amityville. The northern end is defined by the Walt Whitman Shops in the Town of Huntington. The study area extends east as far as Wellwood Avenue in the East Farmingdale portion of the Town of Babylon (at Conklin Street), and continues north to the intersection of Pinelawn Road and Route 110 in the Melville portion of the Town of Huntington. The study area extends west as far Walt Whitman Road in Melville.

As the alternatives are refined in the screening process, potential connections to serve additional destinations, including the Westfield Sunrise Mall in East Massapequa and the Huntington LIRR station, may be considered.

Figure 1: Route 110 Alternatives Analysis Study Area Boundaries



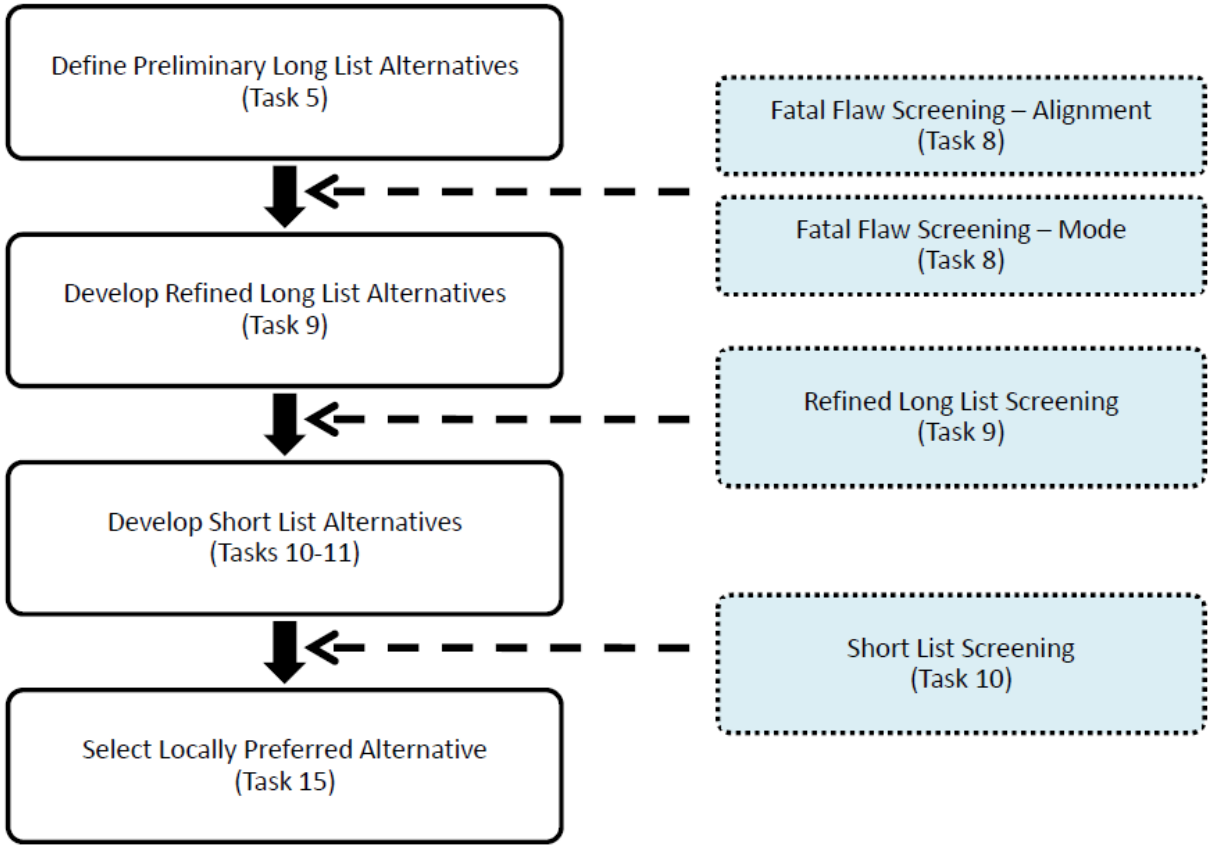
Source: Parsons Brinckerhoff, 2014; NYS GIS Program Office, 2013

4. Screening Methodology and Evaluation Criteria

The Route 110 Alternatives Analysis consists of a multi-tiered screening process to reduce the number alternatives under consideration, ultimately leading to selection of an LPA (Figure 2).

- The Fatal Flaw Screening (Task 8) will eliminate alternatives early in the process that are infeasible and/or clearly do not meet the project goals and objectives. The screening of the Preliminary Long List Alternatives will be completed in two steps: an evaluation of alignments, followed by transit modes.
- The Refined Long List Screening (Task 9) will use a sketch-level analysis to broadly evaluate the remaining feasible alternatives for their ability to meet the project goals and objectives.
- The Short List Screening (Task 10) will provide a detailed analysis to evaluate the strengths, weaknesses, and trade-offs (which is a comparison of strengths against weaknesses) of the remaining Short List Alternatives. This screening, in conjunction with the conceptual engineering (Task 11), will inform selection of an LPA (Task 15).

Figure 2: Alternative Evaluation Process



The project goals and objectives provide the foundation for the evaluation process. The four goals of the Alternatives Analysis, as defined in Task 4, are as follows:

- Goal 1: Improve Mobility and Connectivity
- Goal 2: Enhance Economic Competitiveness and Promote Economic Growth
- Goal 3: Maximize Cost and Operational Effectiveness
- Goal 4: Minimize Adverse Environmental Impacts

As shown in Table 1, the evaluation criteria that will be used in the multi-tiered screening process are directly linked to the project goals and objectives.

Evaluation

In each tier of the screening process, evaluation measures will be developed for the respective criteria. Several criteria will be carried over and applied in multiple tiers of the screening process; the evaluation measures for these criteria will be defined at a greater level of detail in each tier, as necessary, to reflect the additional information known about the remaining alternatives.

Each successive screening will include an increasingly quantitative evaluation as additional details are defined for the remaining alternatives. Whereas the Fatal Flaw Screening will primarily be a qualitative evaluation based on the basic attributes of the respective alternatives, the Refined Long List Screening will combine qualitative and quantitative evaluation measures, and the Short List Screening will include additional quantitative measures to enable a more detailed comparison of the remaining alternatives.

Scoring

In each tier of the screening process, each alternative will be assigned a score for its relative performance against each criterion (5 is best, 1 is worst). The results of the screening will be tabulated, and an overall evaluation score will be computed for each alternative. Alternatives with the lowest overall evaluation scores that fail to adequately meet the project goals and objectives will be eliminated from further advancement in the screening process.

Weighted scoring can be considered as an optional technique in each tier of the screening process to prioritize criteria that are deemed most important in the evaluation, which would be informed by stakeholder and public input. If weighted scoring is used in the screening, the overall evaluation score would be calculated as the product of the unweighted criteria score and the weight factor.

The screening methodology for each tier of the screening process is described in Sections 4.1 - 4.3 that follow.

TABLE 1: GOALS, OBJECTIVES, AND EVALUATION CRITERIA

Objective	Evaluation Criterion	Fatal Flaw Screening		Refined Long List Screening	Short List Screening
		Alignment	Mode		
Goal 1: Improve Mobility and Connectivity					
a. Provide frequent, high-quality transit service to employment and other activity centers on Route 110	Increases transit service frequency (reduces headways) along Route 110	X		X	X
b. Establish last-mile connectivity to destinations located off the main spine of Route 110	Increases transit service to employment and other activity centers located off the main spine of Route 110	X		X	X
c. Provide more transportation choices for workers, residents, shoppers, and visitors	Increases transit service frequency and access to major destinations throughout the study area			X	X
d. Increase transit ridership	Optimizes station spacing to maximize ridership potential			X	X
	Maximizes number of automobile trips diverted to transit (net new transit riders)				X
	Increases overall transit ridership in the study area				X
e. Enhance the customer experience and improve the image of transit	Provides passenger amenities such as modern station stops, passenger information, and enhanced, comfortable vehicles			X	X
f. Provide enhanced transit service for workers, residents, visitors, and shoppers who do not own an automobile (i.e., transit-dependent persons)	Increases transit service to the transit-dependent population				X
g. Improve travel time for transit users within the study area	Reduces travel time for transit users within the study area			X	X
h. Improve safety for all roadway users	Reduces fatalities/injuries)				X
i. Increase transportation system capacity to accommodate future growth and assist in mitigating future increases in traffic congestion	Increases transportation system capacity				X
j. Increase regional public transit access to the study area from surrounding municipalities and counties	Increases connectivity to the existing and planned LIRR network		X		
	Increases transit market share of trips into and out of the study area				X
k. Provide seamless multi-modal connections	Increases connectivity between LIRR stations and major destinations in the study area without requiring intermediate transfers	X		X	X
l. Establish convenient pedestrian access to employment and other activity centers	Improves pedestrian access to employment and other activity centers by providing sidewalks, walkways, and/or other pedestrian infrastructure to connect stations with nearby destinations				X

Table 1: Goals, Objectives, and Evaluation Criteria (Continued)

Objective	Evaluation Criterion	Fatal Flaw Screening		Refined Long List Screening	Short List Screening
		Alignment	Mode		
Goal 2: Enhance Economic Competitiveness and Promote Economic Growth					
a. Encourage a shift in land use patterns to promote transit-oriented development, sustainability, and smart growth	Supports a shift to mixed-use and transit-supportive development			X	X
	Maximizes size of the residential population within ½-mile of proposed station locations				X
	Maximizes acreage of land available for new development or redevelopment at transit-supportive densities within ½-mile of proposed station locations				X
b. Support ongoing and planned development projects	Provides enhanced transit service to the sites of ongoing and planned development projects			X	X
c. Create multi-modal transit hubs as anchors for future development	Creates opportunities to establish multi-modal transit centers as anchors for transit-oriented development	X		X	X
d. Retain and attract employers and employees	Maximizes number of jobs within ½-mile of proposed station locations				X
e. Advance the goals of local and regional plans, including *Connect Long Island*	Maximizes consistency with local and regional plans		X	X	X

Table 1: Goals, Objectives, and Evaluation Criteria (Continued)

Objective	Evaluation Criterion	Fatal Flaw Screening		Refined Long List Screening	Short List Screening
		Alignment	Mode		
Goal 3: Maximize Cost and Operational Effectiveness					
a. Implement cost-effective transit improvements within a reasonable construction timeframe and with capital and operations/maintenance costs that are consistent with realistically anticipated available funding	Tailors transit service frequency to meet demand	X		X	X
	Offers physical and service attributes that are appropriate for study area land use and density		X		
	Minimizes level of construction complexity		X		
	Minimizes construction timeframe		X	X	X
	Minimizes estimated capital cost			X	X
	Minimizes estimated net annual operating and maintenance costs			X	X
	Maximizes projected farebox recovery ratio				X
	Minimizes cost per trip				X
b. Make use of existing and planned transportation system services and capacity	Maximizes use of existing transportation right-of-way (ROW)		X		
	Minimizes number of property takings required		X	X	X
	Minimizes physical and/or operational constraints for implementation in the study area		X	X	X
c. Be compatible with existing and planned transit operations and infrastructure in the study area	Maximizes compatibility and minimizes conflicts with existing and planned transit operations and infrastructure in the study area		X		
d. Avoid conflicts with existing and planned infrastructure during construction and operation					
e. Enable opportunities to pursue phased implementation to align with available funding	Maximizes potential for phased implementation		X	X	X
f. Enable the use of innovative sources of project financing and alternative project delivery approaches	Maximizes potential for using innovative project financing sources and project delivery approaches				X

Table 1: Goals, Objectives, and Evaluation Criteria (Continued)

Objective	Evaluation Criterion	Fatal Flaw Screening		Refined Long List Screening	Short List Screening
		Alignment	Mode		
Goal 4: Minimize Adverse Environmental Impacts					
a. Reduce automobile usage and air emissions	Reduces vehicle miles traveled (VMT)				X
	Reduces air quality emissions				X
	Reduces Greenhouse Gas emissions				X
	Reduces energy use				X
b. Implement transit improvements that are constructible and operable without adversely affecting the natural and built environment	Minimizes potential adverse impacts to the natural and built environment		X	X	X
	Minimizes potential for displacement of residents and businesses		X	X	X
c. Implement sustainable transit technologies	Uses sustainable transit technologies		X		

4.1 FATAL FLAW SCREENING

The Fatal Flaw Screening (Task 8) will evaluate the Preliminary Long List Alternatives based on qualitative evaluation criteria that best utilize the data available at this early stage of the Alternatives Analysis. Rather than limit this initial screening to identification of fatal flaws, each Preliminary Long List Alternative will be evaluated against all of the pertinent evaluation criteria at this stage of analysis to enable a comprehensive comparison of the relative strengths and weaknesses of the respective alternatives, consistent with the approach used in the subsequent screenings.

The Fatal Flaw Screening will reduce the number of alternatives under consideration using a two-step process that first assesses at a high level the ability of each Preliminary Long List Alternative alignment to meet the project goals and objectives, and subsequently evaluates the reasonableness of different transit modes, with operational and fiscal viability as a primary consideration. Any Preliminary Long List Alternative alignments that fail to adequately meet the project goals and objectives, based on an evaluation using the screening criteria in Table 1, will be eliminated from consideration. When an alternative is eliminated, the intention is that it will not resurface during a subsequent stage of the planning process. As discussed in Section 5, the remaining alternative alignments will be paired with each of the transit modes under consideration—BRT, streetcar, light rail transit (LRT), personal rapid transit (PRT), commuter rail, and subway—as appropriate, and a second Fatal Flaw Screening will be conducted to evaluate these mode-specific alternatives.

4.2 REFINED LONG LIST SCREENING

The Refined Long List Screening (Task 9) will evaluate the alternatives that are advanced from the Fatal Flaw Screening. This screening will eliminate additional alternatives from consideration to reduce the number of alternatives from the Refined Long List to the Short List.

The alternatives that are advanced from the Fatal Flaw Screening will be developed in greater detail during the Refined Long List Screening through the preparation of operating plans for the main trunk route as well as feeder routes, if applicable. The operating plans will specify route alignments, station locations, span of service (weekday, Saturday, Sunday and holiday), and service frequency (peak and off-peak). The resulting operating requirements will identify peak and off-peak vehicles, fleet requirements, daily and annual vehicle-hours and vehicle-miles, travel time, and line-haul capacity for each alternative. These additional details will enable an increasingly quantitative evaluation of alternatives in the Refined Long List Screening.

Therefore, the Refined Long List Screening will include a combination of qualitative and quantitative evaluation criteria, reflecting the available data at this interim stage of the Alternatives Analysis. The Refined Long List Screening will consider additional evaluation criteria based on the greater level of definition for the remaining alternatives, such as order-of-magnitude estimates of capital and operating and maintenance costs. Table 1 shows the proposed criteria for the Refined Long List Screening, which may be revisited as the study progresses. Several criteria that will be used to differentiate the Refined Long List Alternatives are carried over from the Fatal Flaw Screening and will be defined at a greater level of detail as necessary to reflect the additional information known about the remaining alternatives.

4.3 SHORT LIST SCREENING

The Short List Screening (Task 10) will evaluate the Short List Alternatives to inform selection of an LPA (Task 15). The alternatives that are advanced from the Refined Long List Screening will be developed in greater detail during the Short List Screening through the preparation of updated operating plans for the main trunk route as well as feeder routes, if applicable. The development of operating plans will be coordinated with the travel demand forecasting modeling effort to determine the extent to which each alternative serves identified travel markets, maximizes accessibility, and optimizes ridership relative to modal capacity and system productivity.

The Short List Screening will include additional quantitative measures to enable a detailed analysis of the remaining alternatives to compare their strengths, weaknesses, and trade-offs in achieving the project goals and objectives. For instance, the ridership forecasting effort will facilitate a more quantitative comparison of the mobility and connectivity benefits, as well as the environmental impacts/benefits, of the respective alternatives, compared to the earlier screenings. Key metrics such as overall transit ridership within the study area, transit market share of trips into and out of the study area, and change of VMT will be determined as a means of quantifying the benefits of the Short List Alternatives. Additionally, the conceptual engineering (Task 11) that will be underway during this final tier of screening will guide a more detailed comparison of differences between the respective alternatives, including capital costs.

Table 1 shows the proposed criteria for the Short List Screening, which may be revisited as the study progresses. Several criteria from the Refined Long List Screening will be carried over for the Short List Screening and defined at a greater level of detail as necessary to reflect the information known about the remaining alternatives at this stage of the analysis.

4.4 LPA SELECTION

In conjunction with the conceptual engineering (Task 11) and the stakeholder and public outreach process (Tasks 12 and 13), the results of the Short List Screening will be used to guide selection of an LPA (Task 15) that best achieves the project goals related to mobility and connectivity, economic competitiveness and growth, cost and operational effectiveness, and environmental impacts/benefits.

The end result of the screening process will be selection of an LPA to advance to Project Development and NEPA review with the FTA. The screening process provides the framework for a comprehensive evaluation of alternatives to address the identified problems in the study area. The selection of the LPA will be informed by applying the evaluation criteria in the multi-tiered screening process, which will demonstrate the ways in which the LPA is superior to the other alternatives under consideration. The LPA will be documented in a narrative with supporting graphics to demonstrate the route alignment and associated transit elements, developed to a 10% level of engineering. Overall, the process of developing, refining, and evaluating the alternatives will be informed through coordination with the Technical Advisory Committee as well as other key stakeholders and the general public.

5. Definition of Preliminary Long List Alternatives

The first step in the alternatives development process is to identify an initial, preliminary set of broad alternatives. The process for defining these Preliminary Long List Alternatives included the following steps: review of prior planning efforts (Task 1); data collection to document existing and projected future conditions and travel markets in the study area (Tasks 2 and 3); and identification of problems and opportunities facing the study area, followed by development of the Purpose and Need Statement and associated goals and objectives to be achieved by transportation improvements in the study area (Task 4). The Preliminary Long List Alternatives encompass a range of potentially feasible conceptual transit alternatives that address the Purpose and Need, and goals and objectives, of this Alternatives Analysis.

As discussed below and shown in Table 2, the initial definition of the Preliminary Long List Alternatives includes a No-Build alternative, an enhanced bus alternative, and several alignment alternatives, which will subsequently be paired with modes following the first step of the Fatal Flaw Screening.

No-Build Alternative

A No-Build alternative will be defined to include the existing and committed transportation facilities and services expected to exist in the future Build year (2040), including LIRR Double Track and Republic Station.[1] It is anticipated that the LPA would be operational before 2040—and the specific timeframe for implementation would depend on the specific mode and alignment—but 2040 is used as the Build year in this study as it corresponds to the horizon year for the New York Metropolitan Transportation Council's (NYMTC) *Plan 2040* Regional Transportation Plan (RTP) and the adopted population and employment forecasts. The No-Build alternative will serve as a baseline for comparing the anticipated environmental, transportation, social, and economic benefits and impacts of the project alternatives.

Enhanced Bus Alternative (Preliminary Long List Alternative A)

An enhanced bus alternative will be defined to comprise a lower-cost alternative that is more limited in scope than the other Build alternatives. Whereas the other Build alternatives would add a new transit service to supplement existing bus service, the enhanced bus alternative would be limited to targeted improvements to the existing bus network through implementation of transit priority treatments at select locations. The treatments could include traffic signal priority and intersection-specific queue jumps to improve existing bus service. The enhanced bus alternative will be advanced in the multi-tiered screening process to demonstrate the extent to which the project goals and objectives could be achieved through implementation of a comparatively low-cost alternative.

[1] Although LIRR Republic Station is not currently included in the fiscally-constrained portion of the New York Metropolitan Transportation Council's (NYMTC) *Plan 2040* Regional Transportation Plan (RTP), it is anticipated that this project will be included in a future update of the RTP. Additionally, the environmental review and design of Republic Station is included in the Metropolitan Transportation Authority's (MTA) proposed 2015-2019 Capital Program, with construction anticipated to be included in a future capital program. For these reasons, Republic Station is included in the No-Build alternative.

Table 2: Preliminary Long List Alternatives

Alternative Number	Alternative Name	Description
	No-Build alternative	• The existing and committed transportation facilities and services expected to exist in the future Build year (2040)
A	Enhanced bus service along Route 110[i]	• Existing bus service along Route 110 between Amityville LIRR station and Walt Whitman Shops, with transit priority treatments at select locations • Treatments may include traffic signal prioritization and intersection-specific queue jumps to improve existing bus service
B	Trunk route service along Route 110 only	• Trunk route service along Route 110 between Amityville LIRR station and Walt Whitman Shops • Serves destinations along Route 110 but does not provide a connection to destinations located off Route 110 • Comparable to Concept 1 from the 2010 *Route 110 BRT Study*
C	Trunk route service along Route 110 with service diversions off Route 110	• Trunk route service along Route 110 between Amityville LIRR station and Walt Whitman Shops, with three route variations to serve destinations located off Route 110 • One route remains entirely on Route 110, and three routes split off the central portion of Route 110 to serve employment and other activity centers to the east and west • Comparable to Concept 2 from the 2010 *Route 110 BRT Study*
D	Trunk route service along Route 110 with circular feeder loops	• Trunk route service along Route 110 between Amityville LIRR station and Walt Whitman Shops, with four timed, coordinated feeder loops circulating from transfer stations on Route 110 to serve destinations located off Route 110 • Comparable to Concept 3 from the 2010 *Route 110 BRT Study*
E	Trunk route service along Route 110 with transit center nodes and connecting feeder routes	• Trunk route service along Route 110 between Amityville LIRR station and Walt Whitman Shops, with three timed, coordinated feeder routes circulating from two new transit centers on Route 110 to serve destinations located off Route 110 • Passengers can transfer at one of two transit centers (LIRR Republic station and the intersection of Route 110 and Pinelawn Road) to access connecting feeder routes, or they can transfer at select stations on Route 110 that are jointly served by both trunk route and feeder route services • Comparable to Concept 4 from the 2010 *Route 110 BRT Study*

[i] Alternative A is the only mode-specific alternative (i.e., bus) in this initial definition of the Preliminary Long List Alternatives. All other alternatives specify an alignment concept, independent of mode, which will subsequently be paired with modes after the first step in the Fatal Flaw Screening.

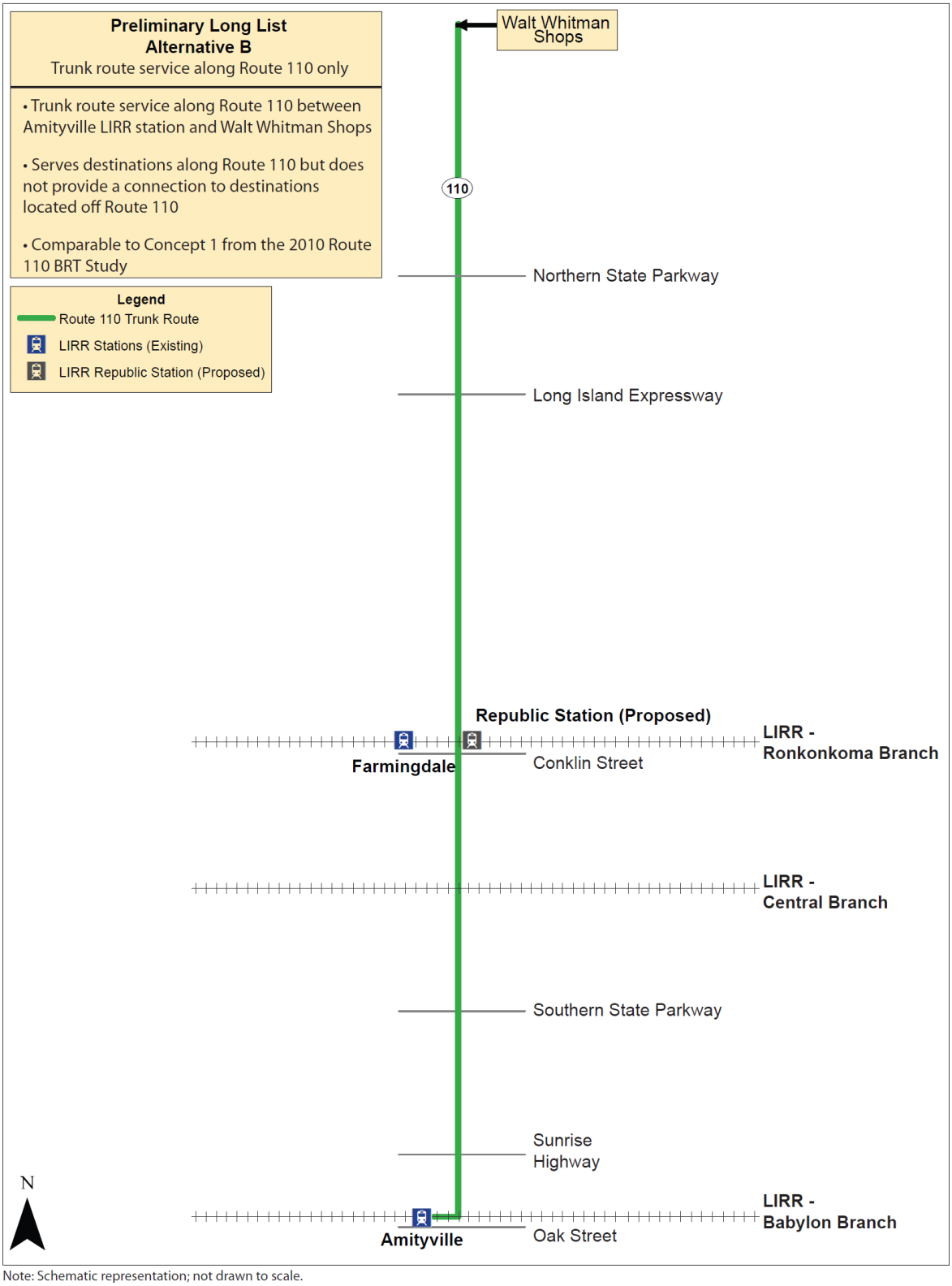
Alignment Alternatives (Preliminary Long List Alternatives B – E)

The initial definition of the Preliminary Long List Alternatives identifies potential service alignments, independent of mode, which are shown schematically in Figure 3 through Figure 6 and generally correspond to those identified in the 2010 *Route 110 BRT Study*. As part of the multi-tiered screening process that will be conducted to narrow the alternatives toward selection of an LPA (see Section 4), the alternatives that remain under consideration in each successive tier of screening will be developed to a greater level of detail—including definition of the specific alignment—to support the evaluation of the strengths, weaknesses, and trade-offs of the respective alternatives.

It is assumed that the proposed LIRR Republic station will be operational in the future Build year (2040). Interim service to the Farmingdale LIRR station will be treated as a phasing option for implementation of the alternatives until the LIRR Republic station is built and operational.

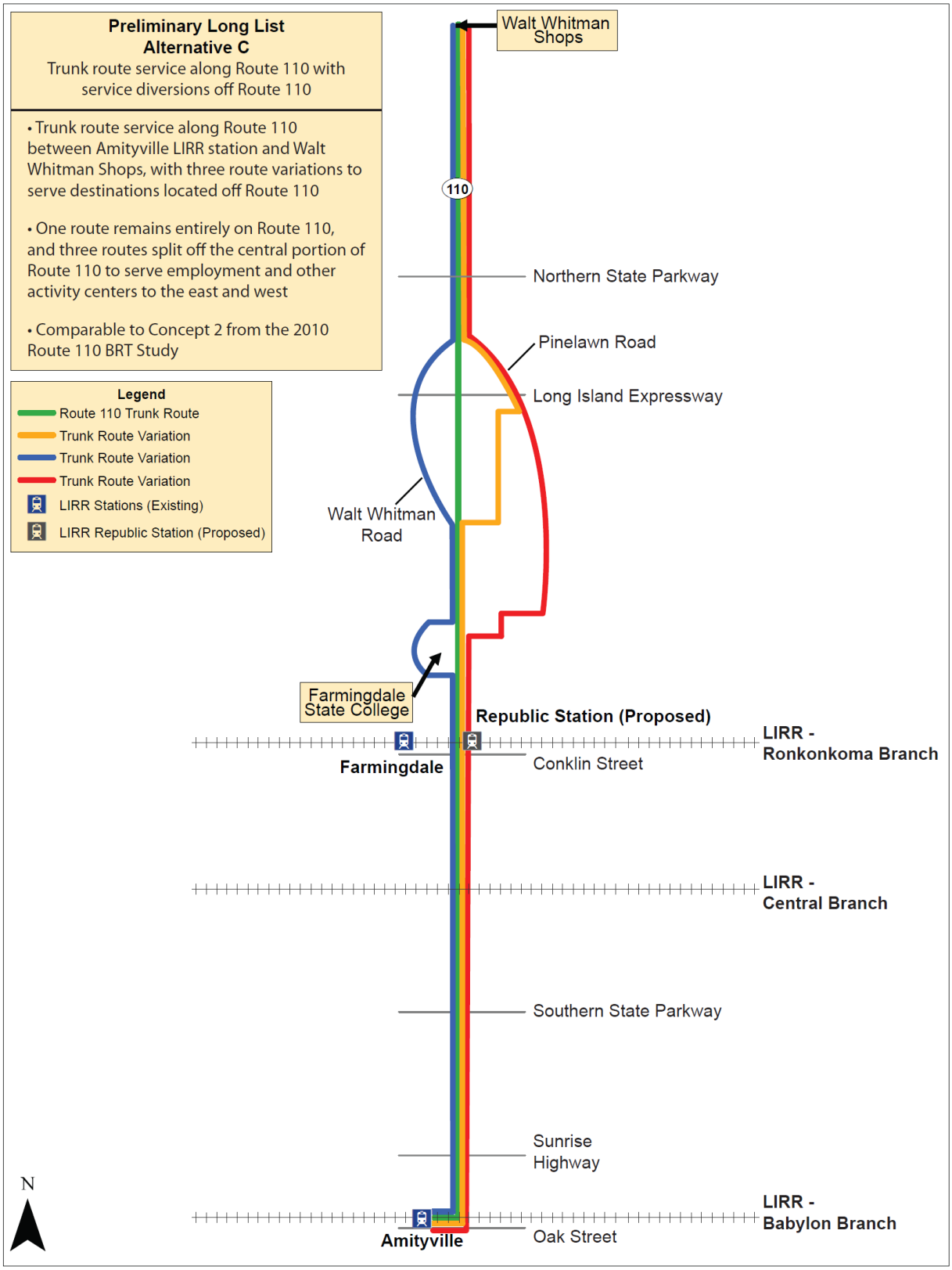
The service concepts for the Preliminary Long List Alternatives cover the area between the Amityville LIRR station and the Walt Whitman Shops in Huntington. The potential inclusion of connections to serve additional destinations—including the Westfield Sunrise Mall in East Massapequa and the Huntington LIRR station—as optional extensions of the alternatives will be assessed for their ridership benefits as part of the ridership forecasting effort in the Short List Screening (Task 10). The work in Task 10 will also consider different minimum operable segments from a ridership perspective, such as between the LIRR Amityville station and Republic station, or between Republic station and the Walt Whitman Shops. It will be important that the LPA reflect a complete alternative, and phasing options can be specified, as appropriate. Additionally, as the alternatives are refined during the screening process, potential locations for park-and-ride facilities and transit-oriented development locations will be identified, as appropriate.

Figure 3: Preliminary Long List Alternative B



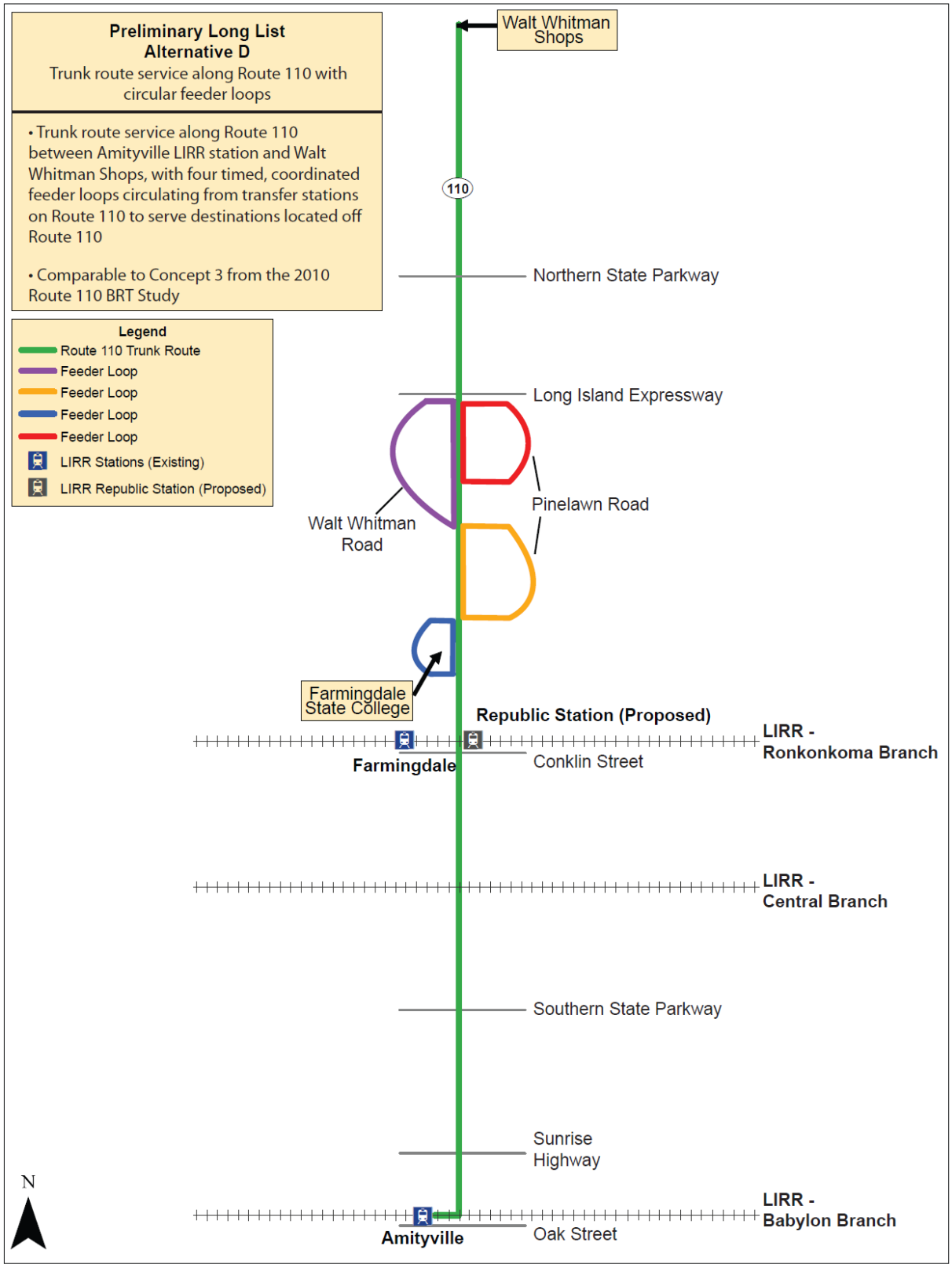
Note: Schematic representation; not drawn to scale.

Figure 4: Preliminary Long List Alternative C



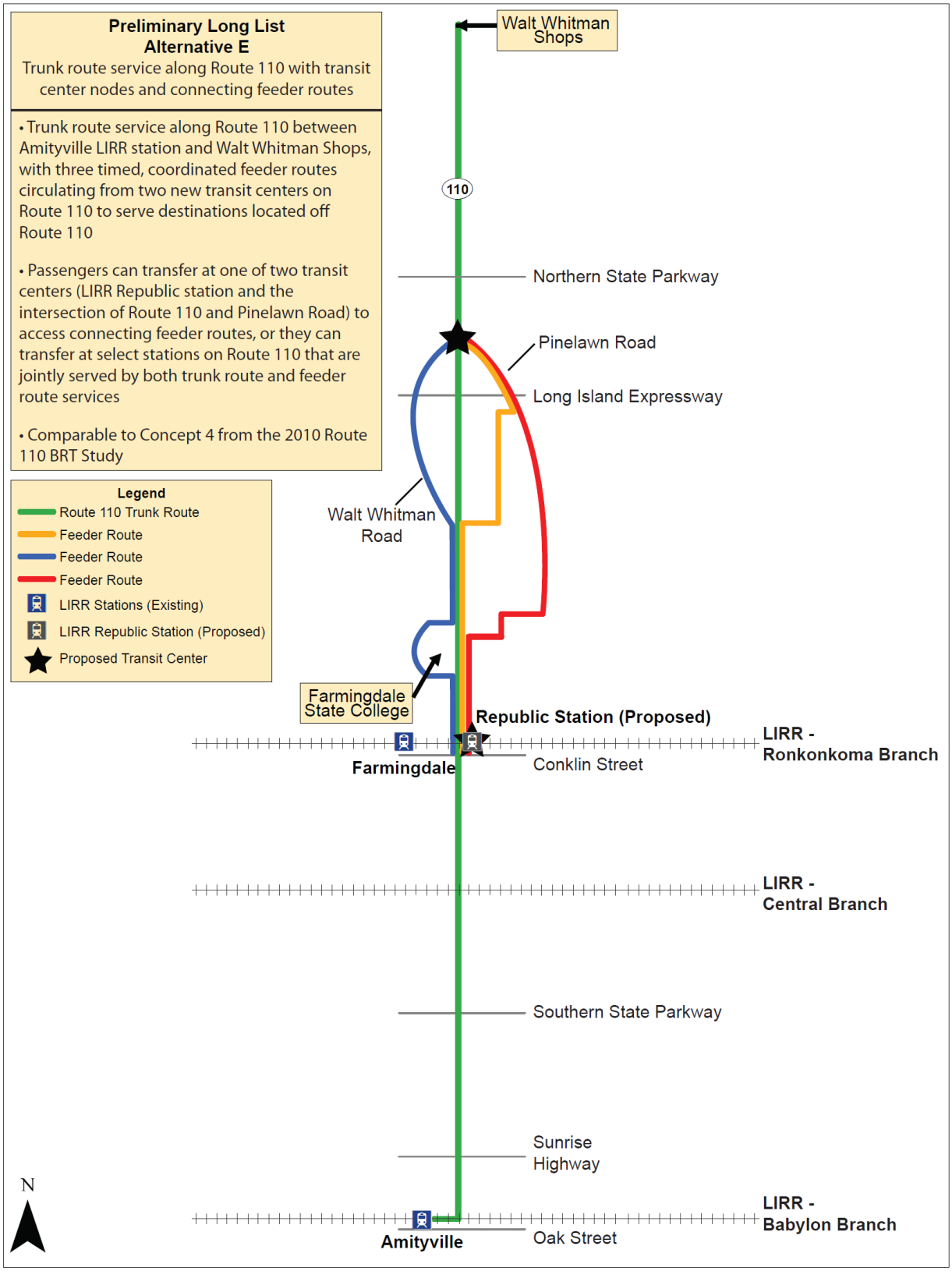
Note: Schematic representation; not drawn to scale.

Figure 5: Preliminary Long List Alternative D



Note: Schematic representation; not drawn to scale.

Figure 6: Preliminary Long List Alternative E



Note: Schematic representation; not drawn to scale.

5.1 POTENTIAL TRANSIT MODES FOR ALIGNMENT ALTERNATIVES

Following the initial Fatal Flaw Screening of the alignment alternatives, the remaining alternatives will be paired with each of the following transit modes, and a second Fatal Flaw Screening will be conducted to evaluate these mode-specific alternatives:

BRT





Source: New York City Department of Transportation (NYCDOT); Metropolitan Transportation Authority (MTA) New York City Transit; Metro-Magazine; Capital District Transportation Authority (CDTA)

As discussed in the 2010 *Route 110 BRT Study*, BRT is a term applied to public transportation systems using a series of systematic, integrated improvements to provide faster, more efficient service than an ordinary bus line. Elements of BRT that distinguish the premium service from ordinary bus service can include—but are not limited to—specialized vehicles and stations, limited-stop service, traffic priority (e.g., exclusive bus lanes, queue jumps, and/or traffic signal priority), enhanced customer information, branding, and alternative methods for fare collection. Different BRT systems offer different combinations of these elements. Two examples in New York include Select Bus Service in New York City and BusPlus in Albany.

BRT can operate either entirely or partially along a dedicated running way, meaning that a BRT system offers the flexibility for transit vehicles to operate on the existing roadway in mixed traffic. Similar to the conventional bus, BRT vehicles do not operate on tracks and do not require electrical infrastructure to be powered, thereby offering flexibility from a routing perspective as well. It is anticipated that the BRT alternative(s) for Route 110 would provide limited-stop service as an overlay to the existing bus network.[2]

[2] The work in Task 10 can include identification of potential changes to the underlying Suffolk County Transit S1 service that would be further fleshed out in subsequent work after the Alternatives Analysis.

Streetcar





Source: Portland Streetcar; Seattle Streetcar

Streetcars are transit vehicles that operate on tracks (i.e., a fixed guideway), often along existing streets. Streetcars can operate in either a dedicated running way or in mixed traffic, but the routing is fixed because the vehicles must remain on the tracks and within reach of the electrical infrastructure—typically an overhead catenary system—that powers the vehicles. Examples of streetcar systems in the United States include those in Portland, Oregon and Seattle, Washington.

LRT





Source: Flickr; NJ Transit; Maryland Transit Administration

Similar to the streetcar, LRT comprises a fixed-guideway transit system that operates on tracks. LRT vehicles are typically designed to enable travel in existing standard roadway lanes, and therefore can operate either in a dedicated running way or in mixed traffic. The streetcar and LRT modes are comparable, although LRT vehicles generally have larger capacity, operate at higher speeds, and make fewer stops at greater distances. Most LRT systems—including the Hudson-Bergen Light Rail in New Jersey and the Hunt Valley and BWI Marshall Airport Light Rail in Maryland—include overhead catenary lines to provide power to the vehicles, although some systems (e.g., the River Line in New Jersey) use diesel-powered vehicles.

PRT





Source: Ultra Global PRT; Londonist

PRT comprises a fixed-guideway transit system that operates with small multi-passenger vehicles, often referred to as people movers or pods. The electric-powered vehicles are driverless, and trips can be individually programmed by passengers between defined origins and destinations. An example of a PRT system is the Ultra PRT in London's Heathrow Airport, which connects passengers between the business car park and the terminal.

Commuter Rail




Source: Newsday; NYCSubway.org; MTA LIRR

Commuter rail comprises a fixed-guideway transit system that operates on tracks with a grade-separated alignment, using high-capacity trains of multiple cars. A unique aspect of the commuter rail alternative(s) would be a physical connection to the existing and planned LIRR network, powered by an electric third rail. Specifically, the commuter rail alternative(s) would make a physical connection to the LIRR network at the existing Amityville station and the proposed Republic station, thereby enabling passengers to continue traveling along the Babylon Branch or Ronkonkoma Branch of the LIRR, respectively, without transferring between modes.

Subway





Source: NYCSubway.org; Scientific American; MTA NYC Transit

Similar to commuter rail, the subway comprises a fixed-guideway transit system that operates on tracks with a grade-separated alignment, using high-capacity trains of multiple cars. Whereas commuter rail would operate above-grade and would provide a physical connection to the LIRR, the subway alternative(s) would be located below ground level, under the existing roadway. Additionally, the subway mode is generally characterized by a higher frequency of service, with shorter distances between stations, than commuter rail. A local example of this mode is the subway in New York City, although large stretches of the transit system outside Manhattan are elevated.

6. Next Steps

Following the definition of the Preliminary Long List Alternatives, the next step in the Alternatives Analysis is to conduct the two-step Fatal Flaw Screening (Task 8) by applying the methodology and evaluation criteria outlined in this technical memorandum. The Fatal Flaw Screening will evaluate the Preliminary Long List Alternatives in two stages—an evaluation of alignments, followed by transit modes—to eliminate alternatives that are infeasible and/or clearly do not meet the project goals and objectives. This will set the stage for the further development of the remaining alternatives in the Refined Long List Screening.

APPENDIX A:

LIST OF TRANSPORTATION PROJECTS FOR THE NO-BUILD ALTERNATIVE

LIST OF TRANSPORTATION PROJECTS FOR THE NO-BUILD ALTERNATIVE

Relevant study area and Countywide transportation projects in the adopted Suffolk County Capital Program 2015-2017[3]:

- CP 1755: Infrastructure Improvements for Traffic and Public Safety and Public Health
- CP 3301: Safety Improvements at Various Intersections
- CP 3308: Countywide Intelligent Transportation System (ITS) Infrastructure
- CP 3309: County Share for Closed Loop Traffic Signal System
- CP 3313: Complete Streets Fund
- CP 5001: Median Improvements on Various County Roads
- CP 5014: Strengthening and Improving County Roads
- CP 5024: Reconstruction of Drainage Systems on Various County Roads
- CP 5037: Application and Removal of Lane Markings
- CP 5054: Traffic Signal Improvements
- CP 5116: Safety and Drainage Improvements to the Center Medians on Various County Roads
- CP 5180: Installation of Guide Rail and Safety Upgrades at Various Locations
- CP 5411: Safety Improvements at Unsignalized Crosswalks
- CP 5497: Construction of Sidewalks on Various County Roads
- CP 5502: Countywide Highway Capacity Study
- CP 5510: County Share for Reconstruction of CR 3, Pinelawn Road, Towns of Huntington and Babylon
- CP 5575: Improvements to CR 12, Oak Street/Hoffman Avenue/Railroad Avenue
- CP 5648: Equipment for Public Transit Vehicles
- CP 5651: Purchase of Signs and Street Furniture
- CP 5658: Purchase of Public Transit Vehicles
- CP 5850: Rehabilitation of Various Bridges and Embankments

[3] At the time this list was prepared during the AA, the Suffolk County Capital Program 2016-2018 was proposed. It was subsequently adopted on July 13, 2015.

Projects in the New York Metropolitan Transportation Council (NYMTC) Transportation Improvement Program (TIP), Federal Fiscal Years 2014-2018[4]:

- 005912: Pavement Rehabilitation on NY 27 between Nassau/Suffolk Line and North Monroe Avenue
- 011257: NY110/NY27 Bridge Replacement
- 022947: I495 Bridge Rehabilitation Suffolk
- 075656: CR3 Intersection Realignment
- 075987: Intersection Reconstruction at CR3, Pinelawn Road/Ruland Road/Colonial Springs Road
- 076011: Closed Loop Signal System PH 8 Update
- 076024: Closed Loop Signal System PHY 9 Update
- 076086: Suffolk County Bridge Preventive Maintenance Program
- 076087: Suffolk County Wide ADA Inventory & Compliance Study
- 080556: Incident Management
- 080659: Suffolk Express Commuter Bus Service
- 080769: Signal Timing Upgrade and Arterial Optimization
- 080838: Correct Priority Highway Flooding Locations
- 080903: Rehabilitate and Restore Sidewalk & Curb Ramps
- 080914: Rout & Seal Asphalt Pavement Cracks and Joint Overlay Repair on NY110 between Southern State Parkway and NY 24
- 080924: Preventative Maintenance of Drainage: Clean/Repair/Replace
- 080935: Pavement Rehabilitation & Traffic Calming Demonstration
- 082600: Purchase of an Electronic Fare Collection System
- 082602: Purchase of Dual-Mode Hybrid-Electric/Diesel Transit Buses
- 082603: Purchase Paratransit Vehicles
- 082604: Preventive Maintenance for Suffolk County Transit Buses and Paratransit Vans
- 082606: Purchase and Install Bus Shelters
- 082621: Complementary Service – ADA in Conjunction with Fixed Bus Route Operations
- 082639 – 082656: Fleet Replacement projects as part of the Green Vehicle Initiative
- 082659: Operating Assistance to Begin a Targeted Sunday Service Program for Suffolk County Transit
- 082662: Upgrade Paratransit Reservation System

[4] TIP project listings are updated quarterly to reflect amendments and modifications made since the FFY 2014-2018 TIP was adopted on September 4, 2013. The projects listed herein were compiled using the TIP Google Earth visualization tool, supplemented with identification of relevant Suffolk County projects in the updated project listings as of April 2, 2015. The project listings include additional multi-County listings for the Nassau/Suffolk Transportation Coordinating Committee.

- 082663: Conduct On Board Origin/Destination Demographic Survey for Suffolk County Transit
- 082664: Purchase Service Vehicles for Suffolk County Transit
- 082822 – 082835: Huntington Area Rapid Transit (HART) projects, including vehicle replacement, preventive maintenance, bus storage facility rehabilitation, communication system purchase, computer/video/miscellaneous equipment purchase, etc.
- G609/01/AA: East Side Access Construction
- L60304TX: Second Track Farmingdale to Ronkonkoma – Phase 1
- 0T1469: Bridge Repairs in Nassau and Suffolk County
- 0T1537: Pavement Rehabilitation on Various State Highways, Parkways
- 0T1779: Bridge Painting Contract
- 0T1869: Crack Sealing Contract
- 0T2034: Guiderail Rehabilitation
- 0T2503: Suffolk County 2017 Pavement Maintenance Program
- 0T2508: Suffolk County 2018 Pavement Maintenance Program
- 0T2533: NY 110 Pedestrian Safety & Operational Improvements between Young Hill Road & NY 27A
- SC5014: Rehabilitation of Various County Roads on Federal Aid Highway System
- SC5015: Resurfacing and Rehabilitation of Service Roads of the LIE I-495
- SC5024: Countywide Reconstruction of Drainage Systems on Various County Roads
- SC5196: Suffolk County Sign Management Program
- SC5815: Cleaning and Repainting Various Steel Bridges in Suffolk County
- SC5850: Rehabilitation of Various County Bridges

Constrained Projects in the NYMTC *Plan 2040* Regional Transportation Plan (RTP)[5]:

- NSSC651C: NY 454 and NY 27 Intelligent Transportation Systems

Additional Projects

- LIRR Republic Station[6]

[5] As defined in Appendix 1 of the NYMTC *Plan 2040* RTP, "Constrained projects are those projects that are fully defined, although not in the same detail as Transportation Improvements Program (TIP) projects, and funded by a combination of currently available and reasonably expected new revenue sources that are identified in *Plan 2040's* financial analysis… All constrained projects in the TIP and RTP are evaluated in the regional emissions analysis which forms the basis for the transportation conformity determination under the Clean Air Act Amendments of 1990 and the Metropolitan planning Regulations."

[6] Although LIRR Republic Station is not currently included in the fiscally-constrained portion of the New York Metropolitan Transportation Council's (NYMTC) *Plan 2040* Regional Transportation Plan (RTP), it is anticipated that this project will be included in a future update of the RTP. Additionally, the environmental review and design of Republic Station is included in the Metropolitan Transportation Authority's (MTA) proposed 2015-2019 Capital Program, with construction anticipated to be included in a future capital program. For these reasons, Republic Station is included in the No-Build alternative.



ROUTE 110 ALTERNATIVES ANALYSIS

Appendix F:
Task 8 Technical Memorandum

TOWN OF BABYLON
SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

Task 8: Initial Screening of Alternatives

December 23, 2014

Submitted by:

PARSONS BRINCKERHOFF

Version Final

QUALITY ASSURANCE/QUALITY CONTROL

Created by:		December 22, 2014
	Maxwell Sokol / Parsons Brinckerhoff	**Date**
Reviewed by:		December 23, 2014
	Nicole Bucich / Parsons Brinckerhoff	**Date**
Approved by:		November 26, 2014
	Daniel Baer / Parsons Brinckerhoff	**Date**

REVISIONS

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1. Introduction

The purpose of the Route 110 Alternatives Analysis is to evaluate alternatives that address the existing and future transportation demand in the corridor, manage congestion, maximize environmental benefits, and enhance the study area's economic competitiveness by increasing mobility options. The Alternatives Analysis is building upon previous and ongoing studies to select a Locally Preferred Alternative (LPA) to advance to Project Development and National Environmental Policy Act (NEPA) review with the Federal Transit Administration (FTA). While the Moving Ahead for Progress in the 21st Century Act (MAP-21)—enacted by Congress in 2012—eliminated the requirement for an Alternatives Analysis, good planning practice dictates the importance of looking at reasonable modal and alignment alternatives in a transportation corridor to ensure that the public and decision-makers have an appropriate level of information necessary to identify and select a solution to address the aforementioned problems and opportunities.

As such, a focused Route 110 Alternatives Analysis is being conducted, based upon the following:

- A firm understanding of transportation needs, problems, and opportunities in the corridor
- The establishment of clear goals and objectives to be achieved by the transportation improvements in the corridor
- The definition of various technologies and operating plans designed to address corridor problems, goals, and objectives
- The evaluation of alternatives against multiple measures—including financial feasibility of the grantee/operator/sponsor (in this case the grantee is the Town of Babylon)

This work that is currently being completed will result in a local decision that is well informed, demonstrates strong consensus, and is less vulnerable to delays or public scrutiny in the planning and implementation process.

2. Overview

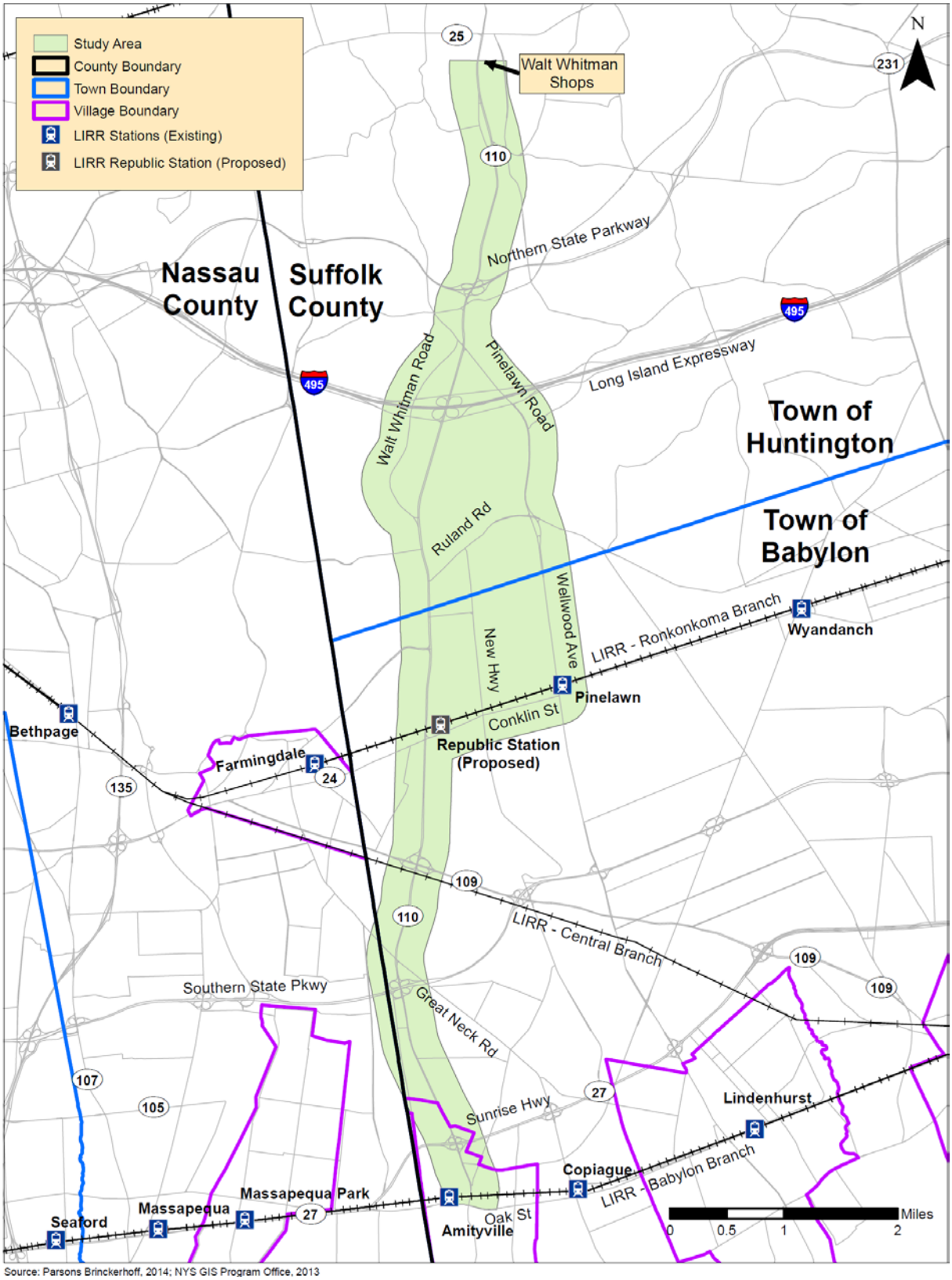
This technical memorandum summarizes the methodology and results of the Initial Screening of the Preliminary Long List Alternatives. As described in the Task 5 Technical Memorandum, the Initial Screening is the first step in a multi-tiered screening process that is used to narrow the list of alternatives toward selection of an LPA (Task 15). The Initial Screening is not a fatal flaw screening, but rather considers a broad range of criteria to evaluate the strengths and weaknesses of the Preliminary Long List Alternatives. These alternatives generally correspond to the alignments that emerged as candidates from the *Route 110 Bus Rapid Transit (BRT) Study*, which were deemed reasonable and not fatally flawed.

The Initial Screening evaluates the Preliminary Long List Alternatives in two stages—an evaluation of alignments, followed by transit modes—to eliminate alternatives that are infeasible and/or clearly do not meet the project goals and objectives. The remaining alternatives are advanced to the Refined Long List Screening (Task 9), which will use a sketch-level analysis to broadly evaluate the remaining feasible alternatives with respect to their ability to meet the project goals and objectives.

3. Study Area

The study area for the Route 110 Alternatives Analysis (Figure 1) includes the areas directly affected by the potential construction and operation of transit improvements. The approximately 10.3-mile stretch of the Route 110 corridor in the study area starts on the southern end at the Long Island Rail Road (LIRR) Amityville station on Oak Street in the Village of Amityville. The northern end is defined by the Walt Whitman Shops in the Town of Huntington. The study area extends east as far as Wellwood Avenue in the East Farmingdale portion of the Town of Babylon (at Conklin Street), and continues north to the intersection of Pinelawn Road and Route 110 in the Melville portion of the Town of Huntington. The study area extends west as far Walt Whitman Road in Melville.

Figure 1: Route 110 Alternatives Analysis Study Area Boundaries

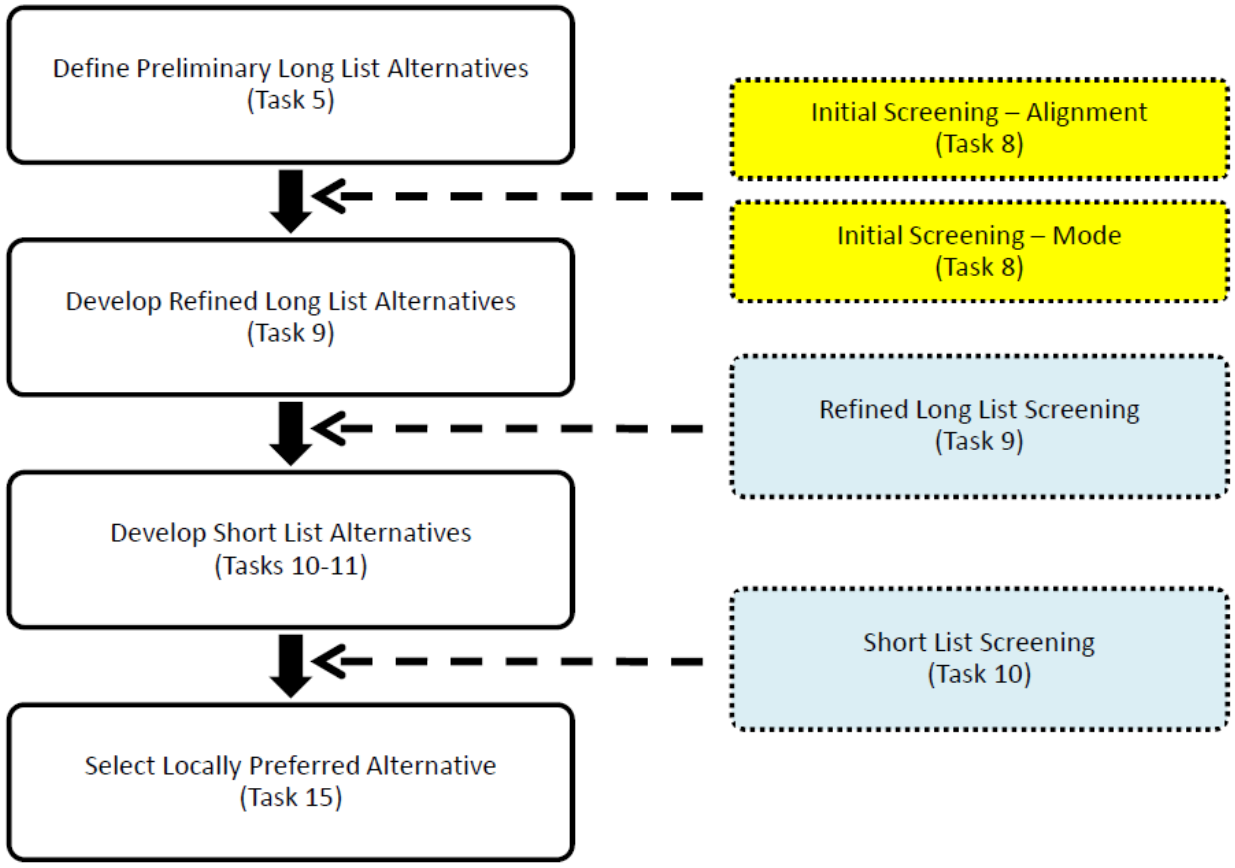


4. Summary of Multi-Tiered Screening Process

As described in the Task 5 Technical Memorandum, the Route 110 Alternatives Analysis consists of a multi-tiered screening process to reduce the number alternatives under consideration, ultimately leading to selection of an LPA (Figure 2).

- The Initial Screening—documented in this technical memorandum—eliminates alternatives early in the process that are infeasible and/or clearly do not meet the project goals and objectives. The initial screening of the Preliminary Long List Alternatives is completed in two steps: an evaluation of alignments, followed by transit modes.
- The Refined Long List Screening (Task 9) will use a sketch-level analysis to broadly evaluate the remaining feasible alternatives for their ability to meet the project goals and objectives.
- The Short List Screening (Task 10) will provide a detailed analysis to evaluate the strengths, weaknesses, and trade-offs (which is a comparison of strengths against weaknesses) of the remaining Short List Alternatives. This screening, in conjunction with the conceptual engineering (Task 11), will inform selection of an LPA (Task 15).

Figure 2: Alternative Evaluation Process



The project goals and objectives provide the foundation for the evaluation process. The four goals of the Alternatives Analysis, as defined in Task 4, are as follows:

- Goal 1: Improve Mobility and Connectivity
- Goal 2: Enhance Economic Competitiveness and Promote Economic Growth
- Goal 3: Maximize Cost and Operational Effectiveness
- Goal 4: Minimize Adverse Environmental Impacts

The evaluation criteria that will be used in the multi-tiered screening process are directly linked to the project goals and objectives.

Evaluation

In each tier of the screening process, evaluation measures will be developed for the respective criteria. Several criteria will be carried over and applied in multiple tiers of the screening process; the evaluation measures for these criteria will be defined at a greater level of detail in each tier, as necessary, to reflect the additional information known about the remaining alternatives.

Each successive screening will include an increasingly quantitative evaluation as additional details are defined for the remaining alternatives. Whereas the Initial Screening will primarily be a qualitative evaluation based on the basic attributes of the respective alternatives, the Refined Long List Screening will combine qualitative and quantitative evaluation measures, and the Short List Screening will include additional quantitative measures to enable a more detailed comparison of the remaining alternatives.

Scoring

In each tier of the screening process, each alternative will be assigned a score for its relative performance against each criterion (5 is best, 1 is worst). The results of the screening will be tabulated, and an overall evaluation score will be computed for each alternative. Alternatives with the lowest overall evaluation scores that fail to adequately meet the project goals and objectives will be eliminated from further advancement in the screening process.

5. Initial Screening Methodology

The Initial Screening evaluates the Preliminary Long List Alternatives based on qualitative evaluation criteria that best utilize the data available at this early stage of the Alternatives Analysis. Rather than limit this initial screening to identification of fatal flaws, each Preliminary Long List Alternative will be evaluated against all of the pertinent evaluation criteria at this stage of analysis to enable a comprehensive comparison of the relative strengths and weaknesses of the respective alternatives, consistent with the approach used in the subsequent screenings.

As introduced previously, the Initial Screening will result in the reduction of the number of alternatives under consideration using a two-step process that first assesses at a high level the ability of each Preliminary Long List Alternative alignment to meet the project goals and objectives, and subsequently evaluates the reasonableness of different transit modes, with operational and fiscal viability as a primary consideration. Any Preliminary Long List Alternative alignments that fail to adequately meet the project goals and objectives, based on an evaluation using the screening criteria and measures in Table 1, will be eliminated from consideration. When an alternative is eliminated, the intention is that it will not resurface during a subsequent stage of the planning process.

The remaining alternative alignments will then be paired with each of the transit modes under consideration—BRT, streetcar, light rail transit (LRT), automated guideway transit (AGT), commuter rail, and subway—as appropriate, and another Initial Screening will be conducted to evaluate these mode-specific alternatives, using the criteria and measures in Table 2.

In Table 1 and Table 2, evaluation measures are defined for each criterion, which facilitates the scoring of each alternative relative to each criterion (5 is best, 1 is worst). Some of the criteria are conducive to a yes/no answer, in which only scores of 5 and 1 are used, whereas other criteria include an intermediate scoring option (3). Although some of the criteria are applied using similar considerations (e.g., construction timeframe and construction complexity), it is appropriate to evaluate the alternatives against each of the defined criteria to ensure a comprehensive assessment in the Initial Screening.

Table 1: Initial Screening Criteria – Alignment

Objective	Evaluation Criterion and Measure
Goal 1: Improve Mobility and Connectivity	
Provide frequent, high-quality transit service to employment and other activity centers on Route 110	Increases transit service frequency (reduces headways) along Route 110 *(5=yes; 1=no/minimal increase)*
Establish last-mile connectivity to destinations located off the main spine of Route 110	Increases transit service to employment and other activity centers located off the main spine of Route 110 *(5=yes; 1=no)*
Provide seamless multi-modal connections	Increases connectivity between LIRR stations and major destinations in the study area without requiring intermediate transfers *(5=yes for all major destinations;* *3=yes for some major destinations;* *1=little to none for major destinations)*
Goal 2: Enhance Economic Competitiveness and Promote Economic Growth	
Create multi-modal transit hubs as anchors for future development	Creates opportunities to establish multi-modal transit centers as anchors for transit-oriented development *(5=many opportunities; 3=few opportunities;* *1=no opportunities)*
Goal 3: Maximize Cost and Operational Effectiveness	
Implement cost-effective transit improvements within a reasonable construction timeframe and with capital and operations/maintenance costs that are consistent with realistically anticipated available funding	Tailors transit service frequency to meet demand *(5=yes; 1=no)*

Table 2: Initial Screening Criteria – Mode

Objective	Evaluation Criterion and Measure
Goal 1: Improve Mobility and Connectivity	
Increase regional public transit access to the study area from surrounding municipalities and counties	Increases connectivity to the existing and planned LIRR network *(5=direct connection; 3=connection via transfer; 1=no connection)*
Goal 2: Enhance Economic Competitiveness and Promote Economic Growth	
Advance the goals of local and regional plans, including *Connect Long Island*	Maximizes consistency with local and regional plans *(5=very consistent; 3=moderately consistent; 1=inconsistent)*
Goal 3: Maximize Cost and Operational Effectiveness	
Implement cost-effective transit improvements within a reasonable construction timeframe and with capital and operations/maintenance costs that are consistent with realistically anticipated available funding	Offers physical and service attributes that are appropriate for study area land use and density *(5=yes; 1=no)*
	Minimizes level of construction complexity *(5=not complex; 3=moderately complex; 1=very complex)*
	Minimizes construction timeframe *(5=less than 5 years; 3=5-10 years; 1=greater than 10 years)*
Make use of existing and planned transportation system services and capacity	Maximizes use of existing transportation right-of-way (ROW) *(5=uses all existing ROW; 3=uses some existing ROW; 1=uses no/minimal existing ROW)*
	Minimizes number of property takings required *(5=low potential for property takings; 3=moderate potential for property takings; 1=high potential for property takings)*
	Minimizes physical and/or operational constraints for implementation in the study area *(5=no/few constraints; 3=moderate constraints; 1=significant constraints)*
Be compatible with existing and planned transit operations and infrastructure in the study area	Maximizes compatibility and minimizes conflicts with existing and planned transit operations and infrastructure in the study area *(5=very compatible, with no/few conflicts; 3=moderately compatible, with moderate conflicts; 1=incompatible, with significant conflicts)*
Avoid conflicts with existing and planned infrastructure during construction and operation	
Enable opportunities to pursue phased implementation to align with available funding	Maximizes potential for phased implementation *(5=very conducive to phased implementation; 3=moderately conducive to phased implementation; 1=not conducive to phased implementation)*
Goal 4: Minimize Adverse Environmental Impacts	
Implement transit improvements that are constructible and operable without adversely affecting the natural and built environment	Minimizes potential adverse impacts to the natural and built environment *(5=low potential for adverse impacts; 3=moderate potential for adverse impacts; 1=high potential for adverse impacts)*
	Minimizes potential for displacement of residents and businesses *(5=low potential for displacement; 3=moderate potential for displacement; 1=high potential for displacement)*
Implement sustainable transit technologies	Uses sustainable transit technologies *(5=significant air quality benefits; 3=moderate air quality benefits; 1=minimal/no air quality benefits)*

6. Preliminary Long List Alternatives

The first step in the alternatives development process is to identify an initial, preliminary set of broad alternatives. The process for defining these Preliminary Long List Alternatives included the following steps: review of prior planning efforts (Task 1); data collection to document existing and projected future conditions and travel markets in the study area (Tasks 2 and 3); and identification of problems and opportunities facing the study area, followed by development of the Purpose and Need Statement and associated goals and objectives to be achieved by transportation improvements in the study area (Task 4). As discussed in the Task 5 Technical Memorandum, the Preliminary Long List Alternatives encompass a range of potentially feasible conceptual transit alternatives that address the Purpose and Need, and goals and objectives, of this Alternatives Analysis.

As discussed below and shown in Table 3, the initial definition of the Preliminary Long List Alternatives includes a No-Build alternative, an enhanced bus alternative, and several alignment alternatives, which will subsequently be paired with modes following the first step of the Initial Screening.

No-Build Alternative

A No-Build alternative has been defined to include the existing and committed transportation facilities and services expected to exist in the future Build year (2040), including LIRR Double Track and Republic Station.[1] *It is anticipated that the LPA would be operational well before 2040—and the specific timeframe for implementation would depend on the specific mode and alignment*—but 2040 is used as the Build year in this study as it corresponds to the horizon year for the New York Metropolitan Transportation Council's (NYMTC) *Plan 2040* Regional Transportation Plan (RTP) and the adopted population and employment forecasts. The No-Build alternative will serve as a baseline for comparing the anticipated environmental, transportation, social, and economic benefits and impacts of the project alternatives.

Enhanced Bus Alternative (Preliminary Long List Alternative A)

An enhanced bus alternative has been defined as a lower-cost alternative that is more limited in scope than any feasible Build alternatives. Whereas other Build alternatives would add a new transit service to supplement existing bus service (i.e., the Suffolk County Transit S1 route), the enhanced bus alternative would be limited to targeted improvements to the existing bus network through implementation of transit priority treatments at select locations. The treatments could include traffic signal priority and intersection-specific queue jumps to improve existing bus service. The enhanced bus alternative will be advanced in the multi-tiered screening process to demonstrate the extent to which the project goals and objectives could be achieved through implementation of a comparatively low-cost alternative. This is the only alternative that is mode-specific in the initial definition of the Preliminary Long List Alternatives, since it is an improvement to existing bus service.

[1] Although LIRR Republic Station is not currently included in the fiscally-constrained portion of the New York Metropolitan Transportation Council's (NYMTC) *Plan 2040* Regional Transportation Plan (RTP), it is anticipated that this project will be included in a future update of the RTP. Additionally, the environmental review and design of Republic Station is included in the Metropolitan Transportation Authority's (MTA) proposed 2015-2019 Capital Program, with construction anticipated to be included in a future capital program. For these reasons, Republic Station is included in the No-Build alternative.

Table 3: Preliminary Long List Alternatives

Alternative Number	Alternative Name	Description
	No-Build alternative	• The existing and committed transportation facilities and services expected to exist in the future Build year (2040)
A	Enhanced bus service along Route 110[i]	• Existing bus service along Route 110 between Amityville LIRR station and Walt Whitman Shops, with transit priority treatments at select locations • Treatments may include traffic signal prioritization and intersection-specific queue jumps to improve existing bus service
B	Trunk route along Route 110 only	• Trunk route along Route 110 between Amityville LIRR station and Walt Whitman Shops • Serves destinations along Route 110, but does not provide a connection to destinations located off Route 110 • Comparable to Concept 1 from the 2010 *Route 110 BRT Study*
C	Trunk route along Route 110 with additional routes that divert off Route 110	• Trunk route along Route 110 between Amityville LIRR station and Walt Whitman Shops, with up to three additional routes to serve destinations located off Route 110 • One route remains entirely on Route 110, and up to three routes split off the central portion of Route 110 (near the intersection of Route 110 and Conklin Street) to serve employment and other activity centers to the east and west • Comparable to Concept 2 from the 2010 *Route 110 BRT Study*
D	Trunk route along Route 110 with circular feeder routes	• Trunk route along Route 110 between Amityville LIRR station and Walt Whitman Shops, with up to four timed, coordinated feeder routes circulating from transfer stations on Route 110 to serve destinations located off Route 110 • Comparable to Concept 3 from the 2010 *Route 110 BRT Study*
E	Trunk route along Route 110 with transit center nodes and connecting feeder routes	• Trunk route along Route 110 between Amityville LIRR station and Walt Whitman Shops, with up to three timed, coordinated feeder routes circulating from two new transit centers on Route 110 to serve destinations located off Route 110 • Passengers can transfer at one of two transit centers (LIRR Republic station and the intersection of Route 110 and Pinelawn Road) to access connecting feeder routes, or they can transfer at select stations on Route 110 that are jointly served by both the trunk route and feeder routes • Comparable to Concept 4 from the 2010 *Route 110 BRT Study*

[i] Alternative A is the only mode-specific alternative (i.e., bus) in this initial definition of the Preliminary Long List Alternatives. All other alternatives specify an alignment concept, independent of mode, which will subsequently be paired with modes after the first step in the Initial Screening.

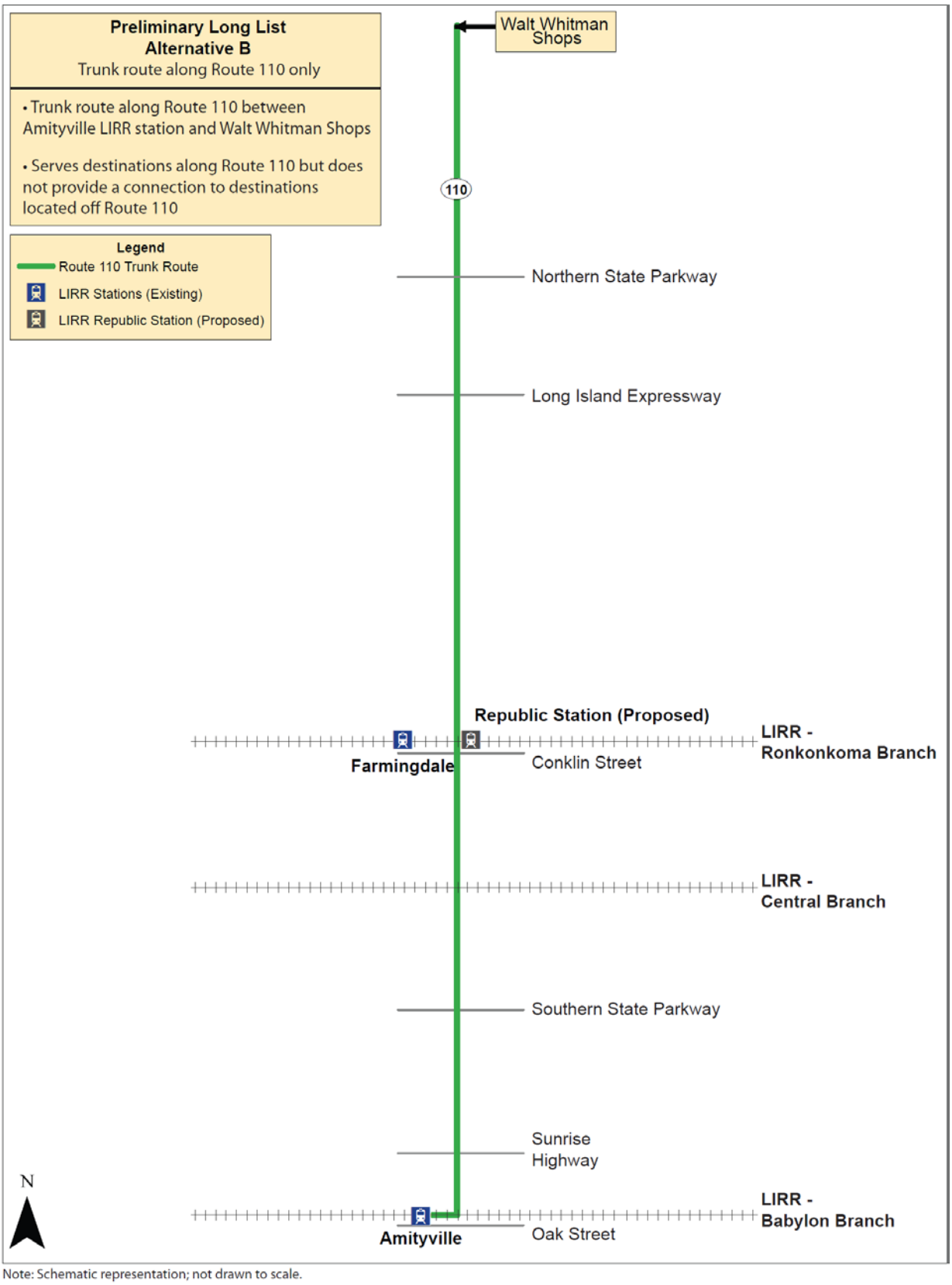
Alignment Alternatives (Preliminary Long List Alternatives B – E)

The initial definition of the Preliminary Long List Alternatives identifies potential service alignments, independent of mode, which are shown schematically in Figure 3 through Figure 6 and generally correspond to those identified in the 2010 *Route 110 BRT Study*. As part of the multi-tiered screening process that will be conducted to narrow the alternatives toward selection of an LPA (see Section 4), the alternatives that remain under consideration in each successive tier of screening will be developed to a greater level of detail—including definition of the specific alignment—to support the evaluation of the strengths, weaknesses, and trade-offs of the respective alternatives.

It is assumed that the proposed LIRR Republic station will be operational in the future Build year (2040). As part of this Alternatives Analysis, interim service to the Farmingdale LIRR station will be treated as a phasing option for implementation of the alternatives until the LIRR Republic station is built and operational (phasing options will be explored in Tasks 10 and 11).

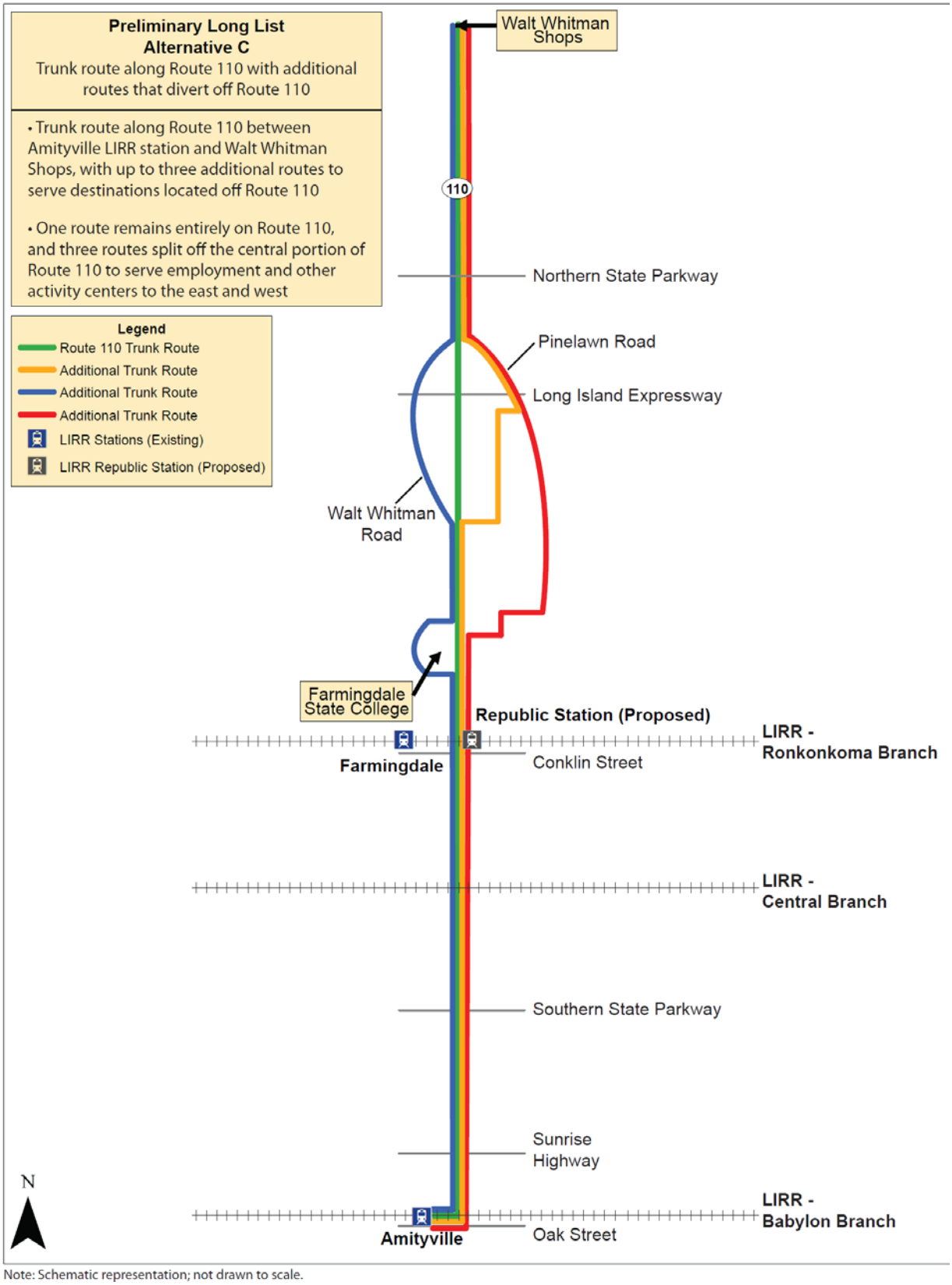
The service concepts for the Preliminary Long List Alternatives would add a new transit service to supplement existing bus service between the Amityville LIRR station and the Walt Whitman Shops in Huntington, and would offer passengers the opportunity to transfer to local service at different points along the corridor. The work in Task 10 (Short List Screening) will consider different minimum operable segments from a ridership perspective, such as between the LIRR Amityville station and the LIRR Republic station, or between the LIRR Republic station and the Walt Whitman Shops. It will be important that the LPA reflect a complete alternative, and phasing options can be specified, as appropriate. Additionally, as the alternatives are refined during the screening process, potential locations for park-and-ride facilities and transit-oriented development locations will be identified, as appropriate.

Figure 3: Preliminary Long List Alternative B



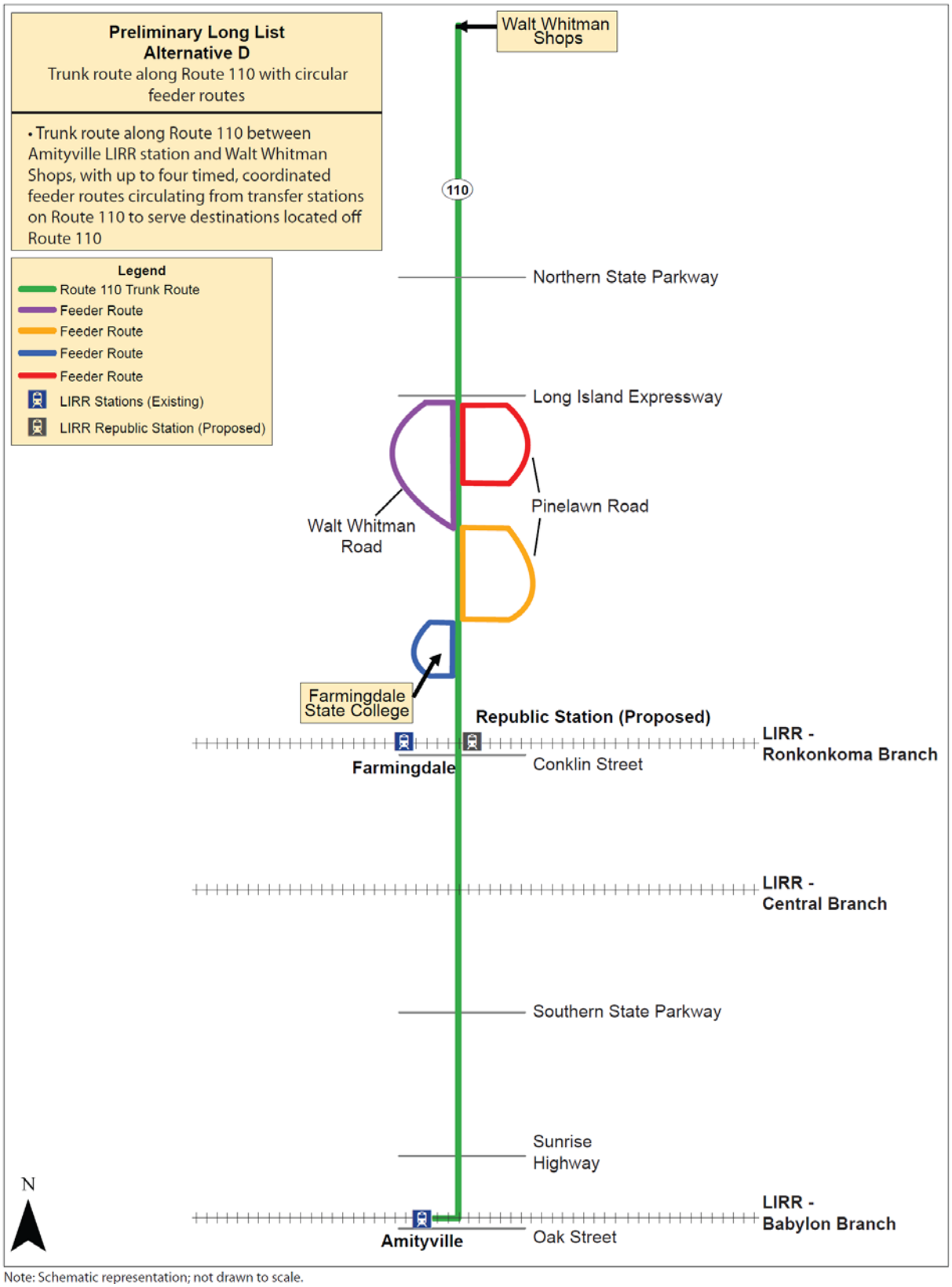
Note: Schematic representation; not drawn to scale.

Figure 4: Preliminary Long List Alternative C



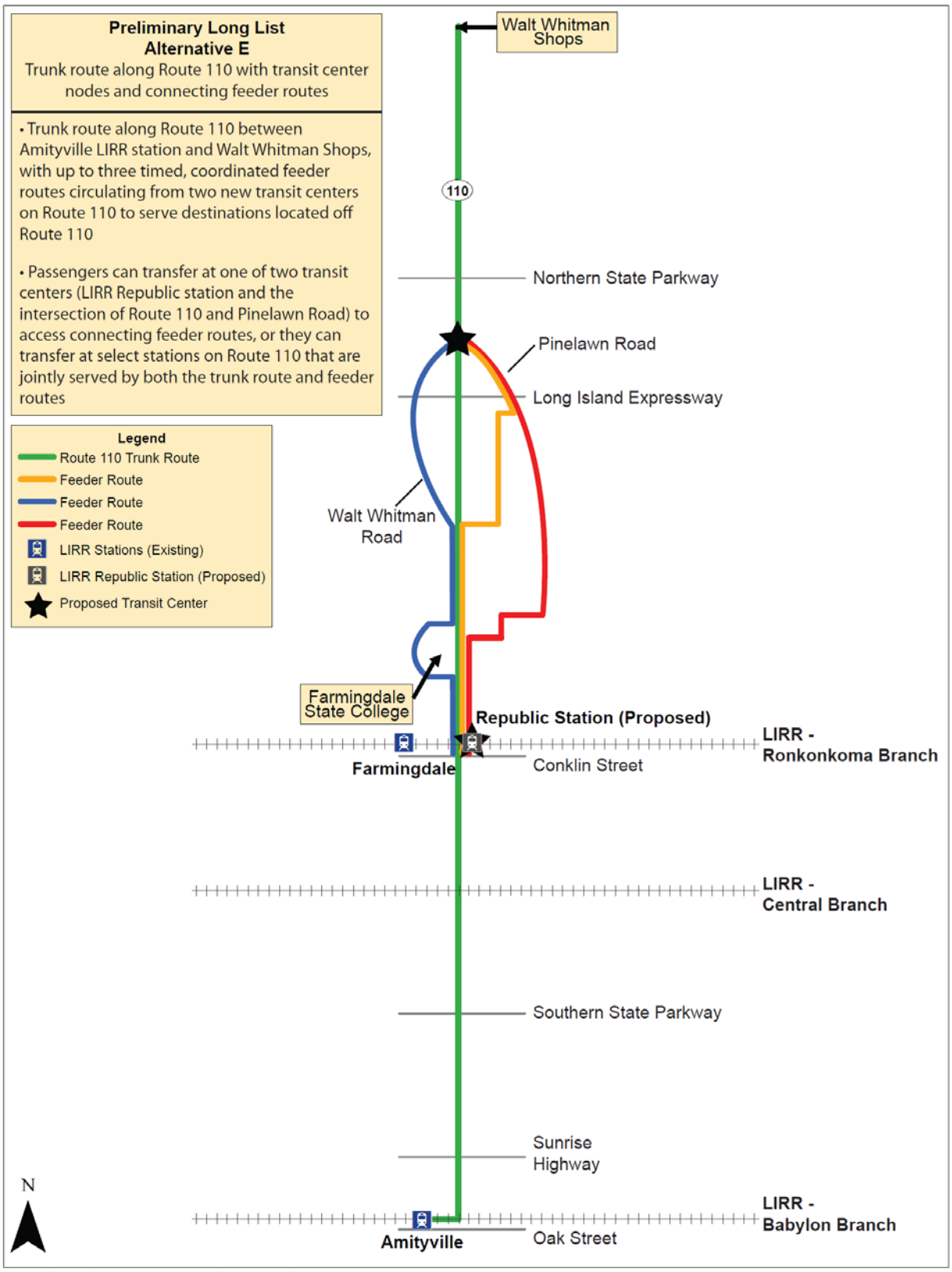
Note: Schematic representation; not drawn to scale.

Figure 5: Preliminary Long List Alternative D



Note: Schematic representation; not drawn to scale.

Figure 6: Preliminary Long List Alternative E



Note: Schematic representation; not drawn to scale.

6.1 POTENTIAL TRANSIT MODES FOR ALIGNMENT ALTERNATIVES

Following the Initial Screening of the alignment alternatives, the remaining alternatives will be paired with each of the following transit modes, and another Initial Screening will be conducted to evaluate these mode-specific alternatives[2]:

Bus Rapid Transit (BRT)





Source: New York City Department of Transportation (NYCDOT); Metropolitan Transportation Authority (MTA) New York City Transit; Metro-Magazine; Capital District Transportation Authority (CDTA)

As discussed in the 2010 *Route 110 BRT Study*, BRT is a term applied to public transportation systems using a series of systematic, integrated improvements to provide faster, more efficient service than an ordinary bus line. Elements of BRT that distinguish the premium service from ordinary bus service can include—but are not limited to—specialized vehicles (e.g., low-floor vehicles) and stations, limited-stop service, traffic priority (e.g., exclusive bus lanes, queue jumps, and/or traffic signal priority), enhanced customer information, branding, and alternative methods for fare collection. Different BRT systems offer different combinations of these elements. Two examples in New York include Select Bus Service in New York City and BusPlus in Albany.

BRT can operate either entirely or partially along a dedicated running way, meaning that a BRT system offers the flexibility for transit vehicles to operate on the existing roadway in mixed traffic. Similar to the conventional bus, BRT vehicles do not operate on tracks and do not require electrical infrastructure to be powered, thereby offering flexibility from a routing perspective as well.

Note that it is anticipated that BRT alternative(s) for Route 110 would provide limited-stop service as an *overlay* to the existing bus network. The transit operations planning in this Alternatives Analysis can identify potential future modifications to the underlying bus network based on ridership forecasts (Task 10), but it is not anticipated at this time that the Suffolk County Transit S1 service would be replaced or service reduced. Whereas the Suffolk County Transit S1 service would continue to provide local service, BRT alternative(s) would provide more frequent service with fewer stops.

[2] Other modes, such as High Speed Rail (HSR) and Maglev, were not considered in this Alternatives Analysis because they were deemed infeasible and/or inappropriate for a relatively short, suburban corridor such as Route 110.

Streetcar



City of Portland, Oregon: Portland Streetcar



City of Seattle, Washington: Seattle Streetcar

Source: Portland Streetcar; Seattle Streetcar

Streetcars are transit vehicles that operate on tracks (i.e., a fixed guideway), often along existing streets, at-grade. Streetcars can operate in either a dedicated running way or in mixed traffic, but the routing is fixed because the vehicles must remain on the tracks and within reach of the electrical infrastructure—typically an overhead catenary system—that powers the vehicles. Examples of streetcar systems in the United States include those in Portland, Oregon and Seattle, Washington.

Light Rail Transit (LRT)



New Jersey: Hudson-Bergen Light Rail

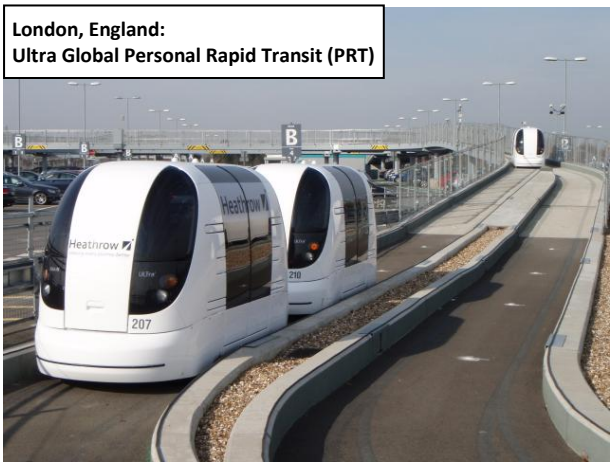


Maryland: BWI Marshall Airport Light Rail

Source: Flickr; NJ Transit; Maryland Transit Administration

Similar to the streetcar, LRT comprises a fixed-guideway transit system that operates on tracks. LRT vehicles are typically designed to enable travel in existing standard roadway lanes, and therefore can operate either in a dedicated running way or in mixed traffic, at-grade. The streetcar and LRT modes are comparable, although LRT vehicles generally have larger capacity, operate at higher speeds, and make fewer stops at greater distances. Most LRT systems—including the Hudson-Bergen Light Rail in New Jersey and the Hunt Valley and BWI Marshall Airport Light Rail in Maryland—include overhead catenary lines to provide power to the vehicles, although some systems (e.g., the River Line in New Jersey) use diesel-powered vehicles.

Automated Guideway Transit (AGT)





Source: Ultra Global PRT; Londonist; NY Times; AirTrain

AGT comprises a fixed-guideway transit system that operates with automated (driverless) vehicles. One form of AGT is personal rapid transit (PRT), which features small multi-passenger electric vehicles, often referred to as people movers or pods. Trips on PRT can be individually programmed by passengers between defined origins and destinations. Examples of PRT systems include the Ultra PRT in London's Heathrow Airport, which connects passengers between the business car park and the terminal, and the Morgantown PRT system, which serves multiple campuses of West Virginia University. Other forms of AGT include larger vehicles that operate on rail, such as the AirTrain JFK that provides service to, from, and around Kennedy International Airport.

Heavy Rail: Commuter Rail





Source: Newsday; NYCSubway.org; MTA LIRR

Commuter rail comprises a fixed-guideway transit system that operates on tracks with a grade-separated alignment, using high-capacity trains of multiple cars. A unique aspect of the commuter rail alternative(s) would be a physical connection to the existing and planned LIRR network, powered by an electric third rail. Specifically, commuter rail alternative(s) would make a physical connection to the LIRR network at the existing Amityville station and the proposed LIRR Republic station, thereby enabling passengers to continue traveling along the Babylon Branch or Ronkonkoma Branch of the LIRR, respectively, without transferring between modes.

Heavy Rail: Subway





Source: NYCSubway.org; Scientific American; MTA NYC Transit

Similar to commuter rail, the subway comprises a fixed-guideway transit system that operates on tracks with a grade-separated alignment, using high-capacity trains of multiple cars. Whereas commuter rail would operate above-grade and would provide a physical connection to the LIRR, the subway alternative(s) would be located below ground level, under the existing roadway. Additionally, the subway mode is generally characterized by a higher frequency of service, with shorter distances between stations, than commuter rail. A local example of this mode is the subway in New York City, although large stretches of the transit system outside Manhattan are elevated.

7. Initial Screening Results

7.1 ALIGNMENTS

The Initial Screening includes a rating assigned to each Preliminary Long List Alternative alignment for its relative performance against each criterion (Table 4). An overall evaluation score is computed for each alternative. Based on the tabulated results, Preliminary Long List Alternatives B (trunk route along Route 110 only) and C (trunk route along Route 110 with additional routes that divert off Route 110) are eliminated from consideration, and Preliminary Long List Alternatives D (trunk route along Route 110 with circular feeder routes) and E (trunk route along Route 110 with transit center nodes and connecting feeder routes) are advanced to the second step of the Initial Screening, in which the remaining alignments are paired with transit modes for another round of evaluation.

As described in additional detail below, Preliminary Long List Alternative B (trunk route along Route 110 only) is eliminated from consideration because this concept would not provide any service off Route 110, thereby failing to achieve the primary objective to establish last-mile connectivity to employment, residential, and other destinations located off the main spine of Route 110 that are beyond reasonable walking distance. Furthermore, Preliminary Long List Alternative C (trunk route along Route 110 with additional routes that divert off Route 110) is eliminated from consideration because it would fail to maximize cost and operational effectiveness. Specifically, the need to provide trunk route service off Route 110 with this concept would result in a dilution of transit frequency in the central portion of Route 110 (compared to the other alternatives) as well as operational inefficiencies because off-corridor destinations would more appropriately be served by smaller sized feeder vehicles and services.

The rationale for the ratings assigned to the alternatives for each criterion is as follows:

Increases transit service frequency (reduces headways) along Route 110
(5=yes; 1=no/minimal increase)

Preliminary Long List Alternative C (trunk route along Route 110 with additional routes that divert off Route 110) is assigned a score of 1 because this concept would result in a comparatively low frequency of service to destinations in the central portion of Route 110, specifically where the trunk route would offer service diversions off the main spine of the corridor. Along a core section of Route 110 in Melville, this concept would only marginally increase transit service over existing conditions because only one of the four trunk routes would remain on Route 110. Although the trunk route service along Route 110 could theoretically operate at a higher frequency, the need to operate three trunk route variations to serve off-corridor destinations would dictate only minimal increases to service frequency along Route 110 in order to maximize cost effectiveness.

The other alternatives are assigned a score of 5 because trunk route service would be limited to Route 110 with all of these concepts (with variations in the extent and alignment of potential feeder routes to serve off-corridor destinations), thereby maximizing service frequency along the entire corridor.

Table 4: Initial Screening Results – Alignment[3]

Screening Criteria	B Trunk route along Route 110 only	C Trunk route along Route 110 with additional routes that divert off Route 110	D Trunk route along Route 110 with circular feeder routes	E Trunk route along Route 110 with transit center nodes and connecting feeder routes
Goal 1: Improve Mobility and Connectivity				
Increases transit service frequency (reduces headways) along Route 110 *(5=yes; 1=no/minimal increase)*	5	1	5	5
Increases transit service to employment and other activity centers located off the main spine of Route 110 *(5=yes; 1=no)*	1	5	5	5
Increases connectivity between LIRR stations and major destinations in the study area without requiring intermediate transfers *(5=yes for all major destinations; 3=yes for some major destinations; 1=little to none for major destinations)*	1	5	3	5
Goal 2: Enhance Economic Competitiveness and Promote Economic Growth				
Creates opportunities to establish multi-modal transit centers as anchors for transit-oriented development *(5=many opportunities; 3=few opportunities; 1= no opportunities)*	3	5	3	5
Goal 3: Maximize Cost and Operational Effectiveness				
Tailors transit service frequency to meet demand *(5=yes; 1=no)*	1	1	5	5
TOTAL SCORE (out of a possible 25)	**11**	**17**	**21**	**25**

= Highest scoring alternatives advancing to next round of screening

= Lowest scoring alternatives eliminated from consideration

[3] The No-Build and Enhanced Bus Alternatives are automatically advanced in the evaluation process. The work in Task 10 (Evaluation of Remaining Alternatives) will include consideration of the No-Build Alternative as the baseline against which the benefits and impacts of the Build alternatives are evaluated, and will also include an assessment of the extent to which the project goals and objectives can be achieved through the Enhanced Bus Alternative as a lower-cost option to the Build alternatives.

Increases transit service to employment and other activity centers located off the main spine of Route 110

(5=yes; 1=no)

Preliminary Long List Alternative B (trunk route along Route 110 only) is assigned a score of 1 because this concept would serve destinations along Route 110 but would not provide a connection to destinations located off Route 110. This concept would offer trunk route service along Route 110 only and would not offer either trunk route service diversions off Route 110 (Preliminary Long List Alternative C) or feeder routes to serve off-corridor destinations (Preliminary Long List Alternatives D and E). Preliminary Long List Alternative B would fail to serve employment, residential, and other destinations that are located off Route 110 and beyond reasonable walking distances.

The other alternatives are assigned a score of 5 because the concepts would all provide the last-mile connection for workers, residents, and visitors to destinations located off Route 110.

Increases connectivity between LIRR stations and major destinations in the study area without requiring intermediate transfers

(5=yes for all major destinations; 3=yes for some major destinations; 1=little to none for major destinations)

Preliminary Long List Alternatives B (trunk route along Route 110 only) is assigned a score of 1 because this concept would not provide service to off-corridor destinations, thereby only increasing connectivity between the LIRR and destinations located directly along Route 110. This alternative would fail to provide connectivity for transit users between the LIRR and any destinations located beyond reasonable walking distance from Route 110.

Preliminary Long List Alternative D (trunk route along Route 110 with circular feeder routes) is assigned a score of 3 because this concept would provide service to connect LIRR stations and some—but not all—major destinations in the study area. This concept would offer a one-seat ride between existing/proposed LIRR stations in the study area (i.e., Amityville and Republic) and only those destinations located on Route 110. However, in order to access off-corridor destinations, passengers would need to transfer from the trunk route to one of the feeder routes.

Preliminary Long List Alternatives C (trunk route along Route 110 with additional routes that divert off Route 110) and E (trunk route along Route 110 with transit center nodes and connecting feeder routes) are assigned a score of 5 because these concepts would provide one-seat rides between existing/proposed LIRR stations and all major destinations in the study area, including those located on and off Route 110. Preliminary Long List Alternative C would provide for increased connectivity through the trunk route service diversions off Route 110, and Preliminary Long List Alternative E would achieve this through connecting feeder routes that terminate at the proposed LIRR Republic station. With Preliminary Long List Alternative E, transit users would be able to directly access destinations along Route 110 by using the trunk route from either Amityville or Republic Station, and they would be able to directly access off-corridor destinations by using one of the feeder routes that would terminate/originate at Republic Station. Additionally, the fact that the feeder routes would terminate/originate at the proposed Republic station would make it easier for such transit vehicles to wait for late running LIRR trains.

Creates opportunities to establish multi-modal transit centers as anchors for TOD
(5=many opportunities; 3=few opportunities; 1= no opportunities)

All of the alternatives would broadly create opportunities for new transit-oriented development (TOD) on Route 110 in the vicinity of trunk route stations. Preliminary Long List Alternatives B (trunk route along Route 110 only) and D (trunk route along Route 110 with circular feeder routes) are assigned a score of 3 because these concepts would support the development of a limited number of transit centers and nearby TOD at transfer points between different services. Specifically, the two LIRR stations along Route 110 in the area—the existing Amityville station and the proposed Republic station—could serve as multi-modal transit centers where passengers transfer between the LIRR, the existing local bus service, and the new transit service, which could provide an attractive hub to encourage private development in the surrounding area in the form of TOD.

Preliminary Long List Alternatives C (trunk route along Route 110 with additional routes that divert off Route 110) and E (trunk route along Route 110 with transit center nodes and connecting feeder routes) are assigned a score of 5 because these concepts would enable the development of an additional transit center and supportive TOD—supplementing those at LIRR Amityville and Republic stations—at the intersection of Route 110 and Pinelawn Road. With Preliminary Long List Alternative C, this intersection would serve as the location where the various trunk route diversions converge on Route 110. The opportunities with Preliminary Long List Alternative E are potentially the most promising, as the concept explicitly calls for the development of new transit centers on Route 110 to serve as termination points for coordinated feeder routes to serve off-corridor destinations.

Tailors transit service frequency to meet demand
(5=yes; 1=no)

Preliminary Long List Alternative C (trunk route along Route 110 with additional routes that divert off Route 110) is assigned a score of 1 because the concept would be inefficient from an operational standpoint. This is the only concept in which trunk route service would be provided to destinations off the main spine of Route 110. Although there are major employers and other activity centers located off Route 110, the frequency of trunk route service would only be warranted along Route 110, where transit demand is most concentrated. Additionally, the overlapping portions of the trunk route variations at the southern and northern ends of the corridor would result in a high level of frequency beyond what may be justified by demand, thereby increasing operations and maintenance costs.

Preliminary Long List Alternative B (trunk route along Route 110 only) is also assigned a score of 1. This concept would not provide any service to off-corridor destinations, thereby failing to meet the demand at key destinations to the east and west of Route 110. Unlike Preliminary Long List Alternative C, which would be operationally inefficient by providing trunk route service off Route 110, Preliminary Long List Alternative B would simply miss the opportunity to provide any service off Route 110.

Preliminary Long List Alternatives D (trunk route along Route 110 with circular feeder routes) and E (trunk route along Route 110 with transit center nodes and connecting feeder routes) are assigned a score of 5 because they would provide trunk route service on Route 110, while also providing feeder route service off Route 110 and would effectively tailor the service frequency to meet demand. Trunk route service would be limited to Route 110, where demand is most concentrated, and less frequent feeder route service would provide needed connections to off-corridor destinations at appropriately-timed intervals.

In sum, the first round of evaluation resulted in Alternatives D and E scoring the highest and being advanced to the second round of evaluation, while Alternatives B and C were eliminated from consideration.

7.2 MODES

Preliminary Long List Alternatives D and E were paired with the transit modes under consideration—BRT, streetcar, LRT, AGT, commuter rail, and subway—for this second round of evaluation. Due to the nature of the alignments, the evaluation of mode was focused on the trunk line – Route 110 only. It is anticipated that the mode for the feeder routes would be a shuttle bus because of the nature and anticipated demand for such off-corridor service, although this will be revisited during the refinement of alternatives in subsequent tasks. The Preliminary Long List Alternatives for this second step of the Initial Screening were as follows:

- D1: BRT trunk route along Route 110 with circular feeder routes
- D2: Streetcar trunk route along Route 110 with circular feeder routes
- D3: LRT trunk route along Route 110 with circular feeder routes
- D4: AGT trunk route along Route 110 with circular feeder routes
- D5: LIRR trunk route along Route 110 with circular feeder routes
- D6: Subway trunk route under Route 110 with circular feeder routes
- E1: BRT trunk route along Route 110 with transit center nodes and connecting feeder routes
- E2: Streetcar trunk route along Route 110 with transit center nodes and connecting feeder routes
- E3: LRT trunk route along Route 110 with transit center nodes and connecting feeder routes
- E4: AGT trunk route along Route 110 with transit center nodes and connecting feeder routes
- E5: LIRR trunk route along Route 110 with transit center nodes and connecting feeder routes
- E6: Subway trunk route under Route 110 with transit center nodes and connecting feeder routes

Table 5 presents the results of the second step in the Initial Screening, including a rating assigned to each mode-specific alternative for its relative performance against each criterion. An overall evaluation score is computed for each alternative.

Based on the tabulated results, the streetcar, LRT, AGT, commuter rail, and subway alternatives (Preliminary Long List Alternatives D2 and E2, D3 and E3, D4, and E4, D5 and E5, and D6 and E6, respectively) are eliminated from consideration because these alternatives fail to achieve the goal to maximize cost and operational effectiveness. As a result, only the BRT alternatives (Preliminary Long List Alternatives D1 and E1) are advanced to the next tier of the screening process (i.e., the Refined Long List Screening). Fact sheets for the remaining alternatives are included in Appendix A.

The rationale for the ratings assigned to the alternatives for each criterion is as follows:

Table 5: Initial Screening Results – Mode

Screening Criteria	D1 BRT trunk route along Route 110 with circular feeder routes	D2 Streetcar trunk route along Route 110 with circular feeder routes	D3 LRT trunk route along Route 110 with circular feeder routes	D4 AGT trunk route along Route 110 with circular feeder routes	D5 LIRR trunk route along Route 110 with circular feeder routes	D6 Subway trunk route under Route 110 with circular feeder routes	E1 BRT trunk route along Route 110 with transit center nodes and connecting feeder routes	E2 Streetcar trunk route along Route 110 with transit center nodes and connecting feeder routes	E3 LRT trunk route along Route 110 with transit center nodes and connecting feeder routes	E4 AGT trunk route along Route 110 with transit center nodes and connecting feeder routes	E5 LIRR trunk route along Route 110 with transit center nodes and connecting feeder routes	E6 Subway trunk route under Route 110 with transit center nodes and connecting feeder routes
Goal 1: Improve Mobility and Connectivity												
Increases connectivity to the existing and planned LIRR network *(5=direct connection; 3=connection via transfer; 1=no connection)*	3	3	3	3	5	3	3	3	3	3	5	3
Goal 2: Enhance Economic Competitiveness and Promote Economic Growth												
Maximizes consistency with local and regional plans *(5=very consistent; 3=moderately consistent; 1=inconsistent)*	5	3	3	3	3	3	5	3	3	3	3	3
Goal 3: Maximize Cost and Operational Effectiveness												
Offers physical and service attributes that appropriate for study area land use and density *(5=yes; 1=no)*	5	1	1	1	1	1	5	1	1	1	1	1
Minimizes level of construction complexity *(5=not complex; 3=moderately complex; 1=very complex)*	5	3	3	3	1	1	5	3	3	3	1	1
Minimizes construction timeframe *(5=less than 5 years; 3=5-10 years; 1=greater than 10 years)*	5	3	3	3	1	1	5	3	3	3	1	1
Maximizes use of existing transportation right-of-way (ROW) *(5=uses all existing ROW; 3=uses some existing ROW; 1=uses no/minimal existing ROW)*	5	3	3	1	1	1	5	3	3	1	1	1
Minimizes number of property takings required *(5=low potential for property takings; 3=moderate potential for property takings; 1=high potential for property takings)*	5	1	1	1	1	1	3	1	1	1	1	1
Minimizes physical and/or operational constraints for implementation in the study area *(5=no/few constraints; 3=moderate constraints; 1=significant constraints)*	5	3	3	3	1	1	5	3	3	3	1	1
Maximizes compatibility and minimizes conflicts with existing and planned transit operations and infrastructure in the study area *(5=very compatible, with no/few conflicts; 3=moderately compatible, with moderate conflicts; 1=incompatible, with significant conflicts)*	5	3	3	3	1	1	5	3	3	3	1	1
Maximizes potential for phased implementation *(5=very conducive to phased implementation; 3=moderately conducive to phased implementation; 1=not conducive to phased implementation)*	5	3	3	3	1	3	5	3	3	3	1	3

TABLE 5: INITIAL SCREENING RESULTS – MODE (CONTINUED)

Screening Criteria	D1 BRT trunk route along Route 110 with circular feeder routes	D2 Streetcar trunk route along Route 110 with circular feeder routes	D3 LRT trunk route along Route 110 with circular feeder routes	D4 AGT trunk route along Route 110 with circular feeder routes	D5 LIRR trunk route along Route 110 with circular feeder routes	D6 Subway trunk route under Route 110 with circular feeder routes	E1 BRT trunk route along Route 110 with transit center nodes and connecting feeder routes	E2 Streetcar trunk route along Route 110 with transit center nodes and connecting feeder routes	E3 LRT trunk route along Route 110 with transit center nodes and connecting feeder routes	E4 AGT trunk route along Route 110 with transit center nodes and connecting feeder routes	E5 LIRR trunk route along Route 110 with transit center nodes and connecting feeder routes	E6 Subway trunk route under Route 110 with transit center nodes and connecting feeder routes
Goal 4: Minimize Adverse Environmental Impacts												
Minimizes potential adverse impacts to the natural and built environment *(5=low potential for adverse impacts;* *3=moderate potential for adverse impacts;* *1=high potential for adverse impacts)*	5	3	3	3	1	1	5	3	3	3	1	1
Minimizes potential for displacement of residents and businesses *(5=low potential for displacement;* *3=moderate potential for displacement;* *1=high potential for displacement)*	5	3	3	3	1	3	3	3	3	3	1	3
Uses sustainable transit technologies *(5=significant air quality benefits;* *3=moderate air quality benefits;* *1=minimal/no air quality benefits)*	3	3	3	3	3	3	3	3	3	3	3	3
TOTAL SCORE (out of a possible 65)	**61**	**35**	**35**	**33**	**21**	**23**	**57**	**35**	**35**	**33**	**21**	**23**

= Highest scoring alternatives advancing to next round of screening
= Lowest scoring alternatives eliminated from consideration

Increases connectivity to the existing and planned LIRR network
(5=direct connection; 3=connection via transfer; 1=no connection)

With the exception of the commuter rail alternatives (Preliminary Long List Alternatives D5 and E5), all of the other alternatives are assigned a score of 3 because the concepts would provide a connection to the LIRR network via transfer at either the existing Amityville station or the proposed Republic station. The alternatives that involve a transit mode other than commuter rail would require passengers to transfer between modes from the trunk route service on Route 110 (whether from BRT, streetcar, LRT, AGT, or subway) to the LIRR.

The commuter rail alternatives (Preliminary Long List Alternatives D5 and E5) are assigned a score of 5 because the concepts would provide a direct connection to the LIRR without need for a transfer. Specifically, the commuter rail alternatives would make a physical connection to the LIRR network at the existing Amityville station and the proposed Republic station, thereby enabling passengers to continue traveling along the Babylon Branch or Ronkonkoma Branch of the LIRR, respectively, without transferring between modes.

Maximizes consistency with local and regional plans
(5=very consistent; 3=moderately consistent; 1=inconsistent)

With the exception of the BRT alternatives (Preliminary Long List Alternatives D1 and E1), all of the alternatives are assigned a score of 3 because the introduction of a new transit service on Route 110 that is not BRT would only be moderately consistent with local and regional plans, which generally call for improved north-south transit connectivity along corridors such as Route 110.

The BRT alternatives (Preliminary Long List Alternatives D1 and E1) are assigned a score of 5 because several local and regional plans, in addition to identifying the need for transit improvements, explicitly call for BRT as a feasible and/or desirable modal option on Route 110. As discussed in the Task 1 Technical Memorandum, the list of local and regional plans that cite the potential introduction of BRT on Route 110 include: the Route 110 BRT Study (2010); the Suffolk County BRT Feasibility Study (2014); the Connect Long Island Plan (2011 original and 2013 update); the East Farmingdale Center Transit-Oriented Redevelopment Plan (2011) and Vision Plan (2010); and the MTA Twenty-Year Capital Needs Assessment 2015-2034 (2013).

Offers physical and service attributes that are appropriate for study area land use and density
(5=yes; 1=no)

With the exception of the BRT alternatives (Preliminary Long List Alternatives D1 and E1), all of the other alternatives are assigned a score of 1 because the infrastructure and operational attributes of the respective transit modes are not conducive to providing a flexible distribution service to meet demand along and near Route 110. The non-BRT alternatives would all operate on a fixed guideway, lacking the flexibility to modify service based on changes in the corridor. Furthermore, although the Route 110 corridor is a major commercial hub, and the corridor and surrounding area collectively comprise approximately 10 percent of Long Island's workforce, the area does not offer the potential to capture sufficient ridership to justify the needed capital investment and ongoing operations and maintenance costs of the other transit modes under consideration. It is fair to consider these factors in the evaluation of mode-specific alternatives because of the project goal to maximize cost and operational effectiveness. The streetcar, LRT, AGT, commuter rail, and subway alternatives would be appropriate in a more urban environment where compact, high-density land uses could provide consistently high levels of ridership and there is less need for

flexibility. The BRT alternatives, on the other hand, are more compatible with the land use composition, development density, and character of the Route 110 study area, and offer the needed flexibility to easily accommodate route and service modifications over time. Therefore, the BRT alternatives are assigned a score of 5.

Minimizes level of construction complexity
(5=not complex; 3=moderately complex; 1=very complex)

The commuter rail and subway alternatives (Preliminary Long List Alternatives D5 and E5, and D6 and E6, respectively) are assigned a score of 1 because of the very complex nature of construction for these two transit modes. Commuter rail is very complex because of the need for grade separation of the fixed guideway and the challenges associated with making a physical connection to the LIRR network, as well as the construction requirements for stations, storage yards, and shops. The subway alternatives are also assigned a score of 1 because implementation would require construction under the existing roadway, which could potentially be complicated by the presence of existing utilities in addition to the need to create a tunnel.

The streetcar, LRT, and AGT alternatives (Preliminary Long List Alternatives D2 and E2, D3 and E3, and D4 and E4, respectively) are assigned a score of 3 because these modes would similarly require a fixed guideway (as well as the other associated infrastructure), although construction would be less complex than for either commuter rail or subway.

The BRT alternatives (Preliminary Long List Alternatives D1 and E1) are assigned a score of 5 because this mode would not require construction of a fixed guideway, and existing bus facilities and shops could potentially be used for storage and maintenance of the vehicles.

Minimizes construction timeframe
(5=less than 5 years; 3=5-10 years; 1=greater than 10 years)

The commuter rail and subway alternatives (Preliminary Long List Alternatives D5 and E5, and D6 and E6, respectively) have the longest construction timeframe and are assigned a score of 1. The streetcar, LRT, and AGT alternatives (Preliminary Long List Alternatives D2 and E2, D3 and E3, and D4 and E4, respectively), due to the moderate level of construction complexity, are assigned a score of 3. The BRT alternatives (Preliminary Long List Alternatives D1 and E1) are assigned a score of 5 because of the comparatively low level of construction complexity, which is also a reflection of the compatibility of this mode with existing transit operations in the study area.

Maximizes use of existing transportation right-of-way (ROW)
(5=uses all existing ROW; 3=uses some existing ROW; 1=uses no/minimal existing ROW)

The AGT and commuter rail alternatives (Preliminary Long List Alternatives D4 and E4, and D5 and E5, respectively) are assigned a score of 1 because these modes would require new ROW to accommodate construction of a grade-separated fixed guideway to supplement the existing roadway. Even if the AGT and commuter rail alternatives would operate on an elevated guideway with a column in the Route 110 median (akin to the JFK AirTrain over the Van Wyck Expressway), additional ROW would likely be needed for the stations, storage yards, and shops. Furthermore, even if existing travel lane(s) would be taken to accommodate the guideway and associated infrastructure, additional ROW would still be needed to ensure sufficient roadway capacity.

The subway alternatives (Preliminary Long List Alternatives D6 and E6, respectively) are similarly assigned a score of 1. This mode would require construction of new transportation ROW underground below Route 110. The existing ROW along Route 110 would not be used by the subway.

The streetcar and LRT alternatives (Preliminary Long List Alternatives D2 and E2, and D3 and E3, respectively) are assigned a score of 3 because it would be possible to use some but not all existing ROW to accommodate the necessary infrastructure. For instance, the tracks for streetcar and LRT could be constructed at grade on the existing shoulder or using existing travel lanes (for those locations in which the modes would operate in mixed traffic, to avoid taking a lane), but additional ROW would be needed to accommodate the stations, yards, and shops.

The BRT alternatives (Preliminary Long List Alternatives D1 and E1) are assigned a score of 5 because the operational requirements of this mode could be met using existing ROW. BRT could operate along a dedicated running way using the existing shoulder, or could operate in mixed traffic using existing travel lanes, which is similar to the streetcar and LRT alternatives, except BRT would not require a fixed guideway. Furthermore, existing bus facilities and shops could potentially be used for storage and maintenance of the vehicles, so the operational and maintenance needs of BRT would not require additional ROW.

Minimizes number of property takings required
(5=low potential for property takings; 3=moderate potential for property takings; 1=high potential for property takings)

As a reflection of the previous criterion regarding the use of existing transportation ROW, all of the alternatives—with the exception of the BRT alternatives—are assigned a score of 1. The streetcar, LRT, AGT, and commuter rail alternatives would all likely require the taking of property to expand the existing ROW and accommodate the operational and/or maintenance needs of the respective modes. Furthermore, even though the subway alternatives would operate underground, the need for shops and yards would likely necessitate the taking of property to accommodate the maintenance needs of this mode.

Preliminary Long List Alternative E1 (BRT trunk route along Route 110 with transit center nodes and connecting feeder routes) is assigned a score of 3. Although this alternative would likely require fewer potential property takings than the other modal alternatives because of the ability to implement BRT using existing ROW, there would be moderate potential for property takings needed to accommodate construction of a transit center at the intersection of Route 110 and Pinelawn Road. (It is anticipated that the other transit center identified as part of this alternative would not require additional property because it would be associated with the proposed LIRR Republic station.)

Preliminary Long List Alternative D1 (BRT trunk route along Route 110 with circular feeder routes) is assigned a score of 5. Unlike Preliminary Long List Alternative E1, this alternative would not include a transit center at the intersection of Route 110 and Pinelawn Road, and it is anticipated that other BRT stations/stops would likely not require property takings.

Minimizes physical and/or operational constraints for implementation in the study area
(5=no/few constraints; 3=moderate constraints; 1=significant constraints)

The commuter rail alternatives (Preliminary Long List Alternatives D5 and E5) are assigned a score of 1 because of the extent of the physical and operational challenges for implementation. In addition to the likely need for property takings to expand the transportation ROW along the main spine of Route 110, the

commuter rail alternatives would also require extensive turning radii to make a physical connection to the existing LIRR network. These physical requirements would also impose operational constraints that would complicate implementation of the commuter rail alternatives. Given the limited available LIRR track slots, the need to accommodate this new service would likely impact the frequency of existing service offerings. Additionally, the capacity of the overall network could potentially suffer because the speed of any trains branching off the Babylon or Ronkonkoma Branches to provide service on Route 110 would need to be greatly reduced to safely make the turn, which would have a ripple effect on the speed of the following trains.

The subway alternatives (Preliminary Long List Alternatives D6 and E6) are similarly assigned a score of 1 because of the extent of constraints for implementation. The physical challenges for implementation are significant, particularly due to the need to construct new transportation ROW under the existing roadway. The potential location of underground utilities, as well as the need to create a tunnel, highlights the complex physical constraints that would need to be overcome for implementation.

The streetcar, LRT, and AGT alternatives (Preliminary Long List Alternatives D2 and E2, D3 and E3, and D4 and E4, respectively) are assigned a score of 3 because although the challenges are less significant, there are still noteworthy constraints for implementation. All of these modes would likely require property takings to expand the transportation ROW and accommodate the necessary infrastructure for operations and/or maintenance. Therefore, the inadequacy of existing infrastructure, as well as the inability to use only existing transportation ROW, would impose physical constraints that would complicate implementation of these modal alternatives. These modes would also lack inter-operability with the existing transit system in the study area.

The BRT alternatives (Preliminary Long List Alternatives D1 and E1) are assigned a score of 5 because there would be comparatively few constraints for implementation. These alternatives would likely not require property takings (with the possible exception of limited easements for access), and the existing transportation ROW would likely suffice for implementation, thereby minimizing any physical constraints. Additionally, BRT would be compatible with the existing bus transit network in the study area, which would facilitate integration with existing transit operations.

Maximizes compatibility and minimizes conflicts with existing and planned transit operations and infrastructure in the study area

(5=very compatible, with no/few conflicts; 3=moderately compatible, with moderate conflicts; 1=incompatible, with significant conflicts)

As a reflection of the significant physical and operational constraints for implementation, the commuter rail and subway alternatives (Preliminary Long list Alternatives D5 and E5, and D6 and E6, respectively) are assigned a score of 1. Although commuter rail currently exists with the east-west LIRR network, it would be incompatible with the existing roadway and transit infrastructure along the north-south Route 110 corridor, and could also result in operational impacts to LIRR service. Furthermore, although the subway alternatives would operate underground, thereby limiting any conflicts with above-ground transportation operations and infrastructure, this mode would require the most extensive construction through the addition of an underground transportation ROW, potentially resulting in impacts to underground utility infrastructure.

The streetcar, LRT, and AGT alternatives (Preliminary Long List Alternatives D2 and E2, D3 and E3, and D4 and E4, respectively) are assigned a score of 3 because of the moderate physical constraints for

implementation of these modes. Streetcar, LRT, and AGT would all require construction of a fixed guideway that does not currently exist in the study area. Therefore, while less complex from a construction standpoint than either commuter rail or subway, implementation of these modes would still pose challenges with respect to compatibility with existing infrastructure and transit operations.

The BRT alternatives (Preliminary Long List Alternatives D1 and E1), on the other hand, are assigned a score of 5 because of the compatibility of BRT with the existing bus network and the lack of major constraints for implementation. Although the BRT alternatives would operate either entirely or partially along a dedicated running way, this mode would not require construction of a fixed guideway, and thus the alternatives are compatible with bus service from an infrastructure standpoint. Additionally, it is anticipated that BRT service would be provide limited-stop service as an overlay to the existing bus network, and thus the BRT alternatives are also compatible with existing transit service from an operational standpoint.

Maximizes potential for phased implementation

(5=very conducive to phased implementation; 3=moderately conducive to phased implementation; 1=not conducive to phased implementation)

The commuter rail alternatives (Preliminary Long List Alternatives D5 and E5) are assigned a score of 1 because of the inability to implement the service in distinct phases over time. Specifically, the commuter rail alternatives would not be operable until the time that construction of the entire alignment is complete, including the physical connection to the existing LIRR.

The streetcar, LRT, AGT, and subway alternatives (Preliminary Long List Alternatives D2 and E2, D3 and E3, and D4 and E4, and D6 and E6, respectively) are assigned a score of 3 because it could be possible to phase implementation of these modes. For instance, minimum operable segments could be identified for an initial phase of implementation, and construction of the fixed guideway would only commence for those segments, with other segments identified for a subsequent phase of implementation.

The BRT alternatives (Preliminary Long List Alternatives D1 and E1) are assigned a score of 5 because of the inherent flexibility of this mode and the relative ease of implementing this mode in phases as demand warrants and as funding becomes available. A fixed guideway is not needed for BRT, and thus service modifications and route extensions could be rolled out without significant capital investment. Therefore, BRT is very conducive to phased implementation.

Minimizes potential adverse impacts to the natural and built environment

(5=low potential for adverse impacts; 3=moderate potential for adverse impacts; 1=high potential for adverse impacts)

The commuter rail and subway alternatives (Preliminary Long List Alternatives D5 and E5, and D6 and E6, respectively) are assigned a score of 1 for this criterion, which broadly considers environmental constraints and potential impacts. At this early stage of the alternatives development process, the high-level assessment of potential adverse environmental impacts is based on the extent of the likely physical constraints for implementation in the study area; specifically, the more ROW that would be required, and the greater the potential need for property takings, the higher the potential for adverse impacts. Construction and operation of the commuter rail alternatives would likely result in adverse impacts not only to existing LIRR operations, but also to the commercial and residential areas around the LIRR Amityville station and proposed Republic station, where a physical connection would be made to the LIRR network. The subway alternatives, although underground, would likely result in adverse impacts to existing utilities

(if there are any underground utilities), as well as potential noise and air quality impacts associated with construction of an underground tunnel.

The streetcar, LRT, and AGT alternatives (Preliminary Long List Alternatives D2 and E2, D3 and E3, and D4 and E4, respectively) are assigned a score of 3 because although the potential for adverse impacts is less considerable, it is still more likely than the BRT alternatives because of the constraints for implementation. Specifically, potential adverse impacts are possible because of the likelihood that property takings will be required to expand the transportation ROW and accommodate the necessary infrastructure for operations and/or maintenance.

The BRT alternatives (Preliminary Long List Alternatives D1 and E1) are assigned a score of 5 because it is unlikely that implementation of these alternatives would result in adverse impacts to the natural and/or built environment. There would be comparatively few constraints for implementation, and since the existing transportation ROW would likely suffice for implementation, there is low potential for any adverse impacts associated with these alternatives.

Minimizes potential for displacement of residents and businesses
(5=low potential for displacement; 3=moderate potential for displacement; 1=high potential for displacement)

The commuter rail alternatives (Preliminary Long List Alternatives D5 and E5) are assigned a score of 1 because of the likelihood that residents and/or businesses would be displaced due to the probable extent of required property takings for implementation. In addition to the need to acquire land for additional ROW to accommodate the operational and maintenance needs of commuter rail, this mode would also require extensive turning radii to make a physical connection to the existing LIRR network. Therefore, in the vicinity of the existing LIRR Amityville station and proposed Republic station, it is likely that necessary property takings would result in displacement of residents and/or businesses to make the physical connection to the LIRR.

The streetcar, LRT, AGT, and subway alternatives (Preliminary Long List Alternatives D2 and E2, D3 and E3, D4 and E4, and D6 and E6, respectively) are assigned a score of 3 for this criterion. Since the streetcar, LRT, and AGT alternatives would all likely require the taking of property to expand the existing ROW to accommodate the operational and/or maintenance needs of the respective modes, it is possible that residents and/or businesses would be displaced. Similarly, although the subway alternatives would operate underground, aboveground property takings would likely be required—and thus residential and/or business displacement is possible—to accommodate the need for shops and yards. However, as the extent and location of the potential property takings required for each alternative is unknown, it is assumed that these alternatives would have moderate potential for business and/or residential displacement.

Preliminary Long List Alternative E1 (BRT trunk route along Route 110 with transit center nodes and connecting feeder routes) is assigned a score of 3 because of the possibility that businesses would be displaced due to the potential need for property takings. Although this alternative would likely require fewer potential property takings than the other modal alternatives, there would be moderate potential for property takings needed to accommodate construction of a transit center at the intersection of Route 110 and Pinelawn Road, which could result in displacement of businesses in the immediate vicinity. (It is anticipated that the other transit center identified as part of this alternative would not require additional property because it would be associated with the proposed LIRR Republic station.)

Preliminary Long List Alternative D1 (BRT trunk route along Route 110 with circular feeder routes) is assigned a score of 5. This alternative is not anticipated to require property takings. Unlike Preliminary Long List Alternative E1, this alternative would not include a transit center at the intersection of Route 110 and Pinelawn Road, and it is anticipated that other BRT stations/stops would likely not require property takings.

Uses sustainable transit technologies
(5=significant air quality benefits; 3=moderate air quality benefits; 1=minimal/no air quality benefits)

All of the alternatives are assigned a score of 3 because all of the modes under consideration can potentially operate without the use of fossil fuels and can also result in air quality benefits by reducing dependence on automobile use, although the specific benefits cannot be determined without ridership forecasts and estimates of change in vehicle miles traveled (VMT). At this early stage of the Alternatives Analysis, it is assumed that all of the alternatives would use sustainable transit technologies and result in moderate air quality benefits, as automobile trips diverted to transit can generally result in reduced emissions. However, ridership forecasts are needed to determine the likely emissions reductions. A quantitative assessment of air quality benefits will be conducted for the Short List Alternatives (Task 10), using the results of the ridership forecasting effort.

In sum, the second step of the Initial Screening resulted in the two BRT alternatives (D1 and E1) scoring the highest and being advanced to the Refined Long List Screening, while the other modal alternatives were eliminated from consideration because of their failure to achieve the goal of maximizing cost and operational effectiveness.

8. Next Steps

Based on the first step of the Initial Screening, Preliminary Long List Alternatives B (trunk route along Route 110 only) and C (trunk route along Route 110 with additional routes that divert off Route 110) were eliminated from consideration. The mode-specific second step of the Initial Screening subsequently eliminated the streetcar, LRT, AGT, commuter rail, and subway alternatives (Preliminary Long List Alternatives D2 and E2, D3 and E3, D4 and E4, D5 and E5, D6 and E6, respectively) from consideration.

Therefore, only Preliminary Long List Alternatives D1 (BRT trunk route along Route 110 with circular feeder routes) and E1 (BRT trunk route along Route 110 with transit center nodes and connecting feeder routes) are advanced to the next tier of the screening process. In Task 9, the Refined Long List Screening will be completed using a sketch-level analysis to broadly evaluate the remaining feasible alternatives for their ability to meet the project goals and objectives. Additionally, the No-Build and Enhanced Bus Alternatives will be carried through the screening process.

In the Refined Long List Screening, Preliminary Long List Alternatives D1 and E1 will be developed in greater detail through the preparation of operating plans for the main trunk route as well as feeder routes. The operating plans will specify route alignments, station locations, span of service (weekday, Saturday, Sunday and holiday), and service frequency (peak and off-peak). The resulting operating requirements will identify peak and off-peak vehicles, fleet requirements, daily and annual vehicle-hours and vehicle-miles, travel time, and line-haul capacity for each alternative. These additional details will enable an increasingly quantitative evaluation of alternatives in the Refined Long List Screening.

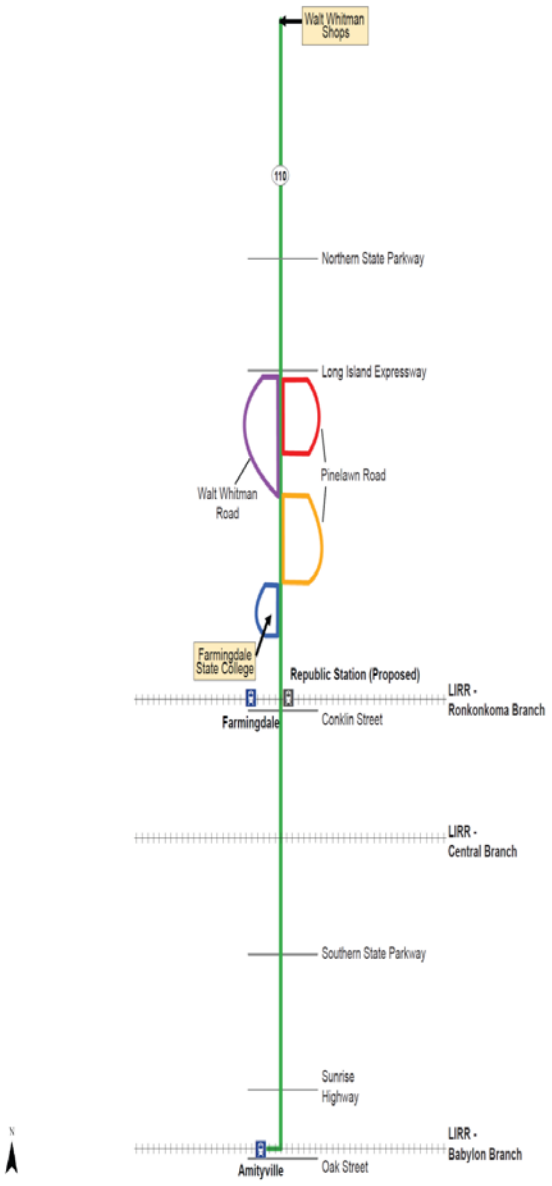
Appendix A

Fact Sheets for Preliminary Long List Alternatives D1 & E1

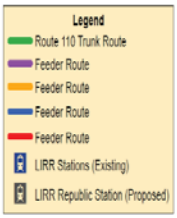
Route 110 Alternatives Analysis
Fact Sheet | Preliminary Long List Alternative D1

ALTERNATIVE NAME Bus Rapid Transit (BRT) trunk route along Route 110 with circular feeder routes

ALTERNATIVE DESCRIPTION Trunk route along Route 110 between Amityville LIRR station and Walt Whitman Shops, with up to four timed, coordinated feeder routes circulating from select trunk route stations to serve destinations located off Route 110



MODE	BRT
IMPLEMENTATION TIMEFRAME	Short-Term (<5 years)
CONSTRUCTION COMPLEXITY	Low
CONNECTIVITY WITH LIRR	Moderate
COMPATIBILITY WITH EXISTING TRANSIT OPERATIONS / INFRASTRUCTURE	High
CONDUCIVENESS TO PHASED IMPLEMENTATION	High
NUMBER OF STATIONS	TBD
OPERATIONS	TBD • Service Plan • Travel Time • Fleet Requirements
COST	TBD • Capital Cost • Operations & Maintenance Cost
RIDERSHIP	TBD



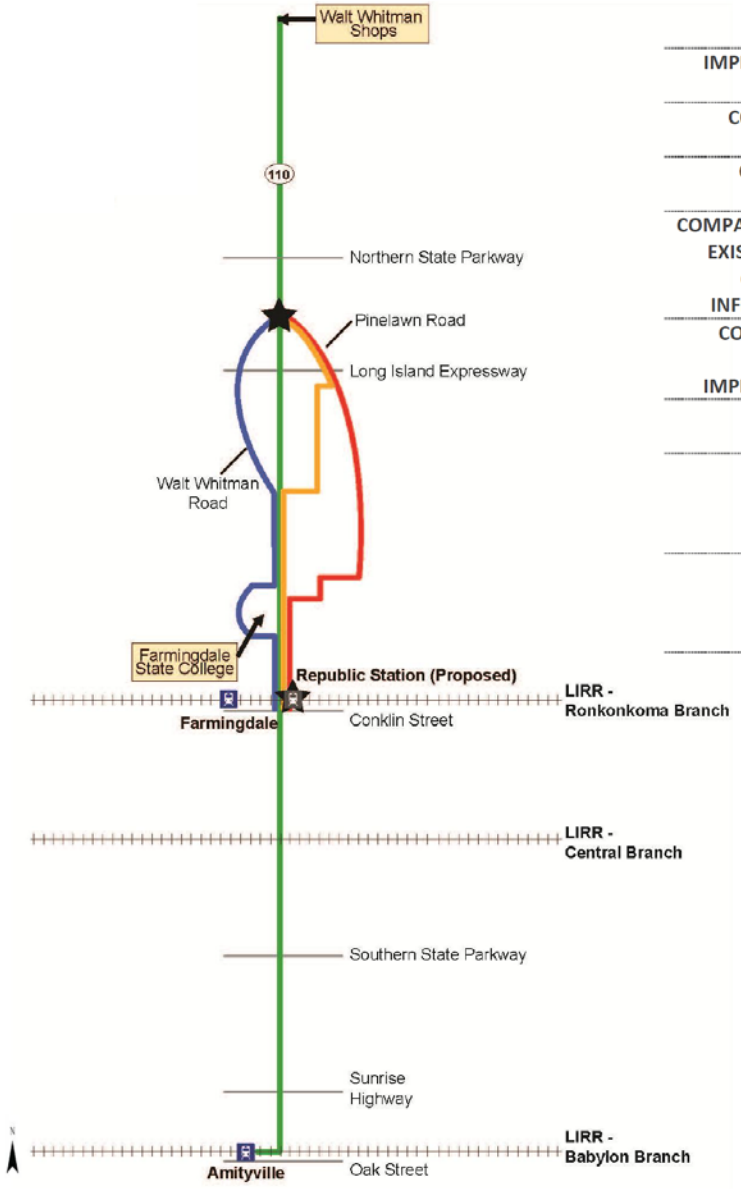
Route 110 Alternatives Analysis
Fact Sheet | Preliminary Long List Alternative E1

ALTERNATIVE NAME

Bus Rapid Transit (BRT) trunk route along Route 110 with transit center nodes and connecting feeder routes

ALTERNATIVE DESCRIPTION

- Trunk route along Route 110 between Amityville LIRR station and Walt Whitman Shops, with up to three timed, coordinated feeder loops circulating from two new transit centers on Route 110 to serve destinations located off Route 110
- Passengers can transfer at one of two transit centers (LIRR Republic station and the intersection of Route 10 and Pinelawn Road) to access connecting feeder routes, or they can transfer at select stations on Route 110 that are jointly served by both the trunk route and feeder routes



MODE	BRT
IMPLEMENTATION TIMEFRAME	Short-Term (<5 years)
CONSTRUCTION COMPLEXITY	Low
CONNECTIVITY WITH LIRR	High
COMPATIBILITY WITH EXISTING TRANSIT OPERATIONS / INFRASTRUCTURE	High
CONDUCIVENESS TO PHASED IMPLEMENTATION	High
NUMBER OF STATIONS	TBD
OPERATIONS	TBD • Service Plan • Travel Time • Fleet Requirements
COST	TBD • Capital Cost • Operations & Maintenance Cost
RIDERSHIP	TBD



ROUTE 110 ALTERNATIVES ANALYSIS

Appendix G:
Task 11 Technical Memorandum

TOWN OF BABYLON
SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

Task 11: Conceptual Engineering and Capital Cost Estimates

October 6, 2015

Submitted by:

CAMERON ENGINEERING & ASSOCIATES, LLP

Submitted by:

PARSONS BRINCKERHOFF

Version Final

QUALITY ASSURANCE/QUALITY CONTROL

Created by:	CAMERON ENGINEERING & ASSOCIATES, LLP	April 29, 2015
	Cameron Engineering & Associates	**Date**
Reviewed by:		May 6, 2015
	Thomas Velleca / Parsons Brinckerhoff	**Date**
Reviewed by:		May 15, 2015
	Kenneth Lin / Parsons Brinckerhoff	**Date**
Updated by:	CAMERON ENGINEERING & ASSOCIATES, LLP	May 29, 2015
	Cameron Engineering & Associates	**Date**
Updated by:		October 6, 2015
	Maxwell Sokol / Parsons Brinckerhoff	**Date**
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	Nicole Bucich / Parsons Brinckerhoff	**Date**

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1. Introduction

The purpose of the Route 110 Alternatives Analysis is to evaluate alternatives that address the existing and future transportation demand in the Corridor, manage congestion, maximize environmental benefits, and enhance the study area's economic competitiveness by increasing mobility options. The Alternatives Analysis is building upon previous and ongoing studies to select a Locally Preferred Alternative (LPA) to advance to Project Development and National Environmental Policy Act (NEPA) review with the Federal Transit Administration (FTA). While the Moving Ahead for Progress in the 21st Century Act (MAP-21)—enacted by Congress in 2012—eliminated the requirement for an Alternatives Analysis, good planning practice dictates the importance of looking at reasonable modal and alignment alternatives in a transportation corridor to ensure that the public and decision-makers have an appropriate level of information necessary to identify and select a solution to address the aforementioned problems and opportunities.

As such, a focused Route 110 Alternatives Analysis is being conducted, based upon the following:

- A firm understanding of transportation needs, problems, and opportunities in the Corridor
- The establishment of clear goals and objectives to be achieved by the transportation improvements in the Corridor
- The definition of various technologies and operating plans designed to address Corridor problems, goals, and objectives
- The evaluation of alternatives against multiple measures—including financial feasibility of the grantee/operator/sponsor (in this case the grantee is the Town of Babylon)

This work that is currently being completed will result in a local decision that is well informed, demonstrates strong consensus, and is less vulnerable to delays or public scrutiny in the planning and implementation process.

2. Overview

This technical memorandum summarizes the methodology and results of the conceptual engineering for the Route 110 bus rapid transit (BRT) trunk route, which is the same for both Short List Alternatives in the Alternatives Analysis.

The conceptual engineering task defined the physical infrastructure components and the requirements for the proposed BRT trunk route to a 10% level of engineering, sufficient for:

- Identifying the lengths of the BRT alignment, differentiating between segments with dedicated use of the existing shoulder/right turn lane (hereafter, "dedicated") and segments running in traffic (hereafter, "mixed traffic"), for use in travel time forecasting/operations planning and ridership modeling
- Identifying and minimizing potential right-of-way or utility conflicts
- Projecting potential impacts to on-street parking
- Identifying sources of uncertainty regarding the design and cost
- Estimating order-of-magnitude capital costs

This technical memorandum includes:

- Representative BRT station plans, typical sections (lane configuration and width), and alignment plans that depict the proposed routing and physical attributes of the trunk route
- A discussion of the design approach for the BRT alignment that informed the identification of dedicated and mixed traffic segments
- A preliminary assessment of potential impacts to on-street parking that could result from BRT shoulder-running along Route 110
- A constructability review for the proposed BRT trunk route
- An order-of-magnitude capital cost estimate for the two Short List Alternatives

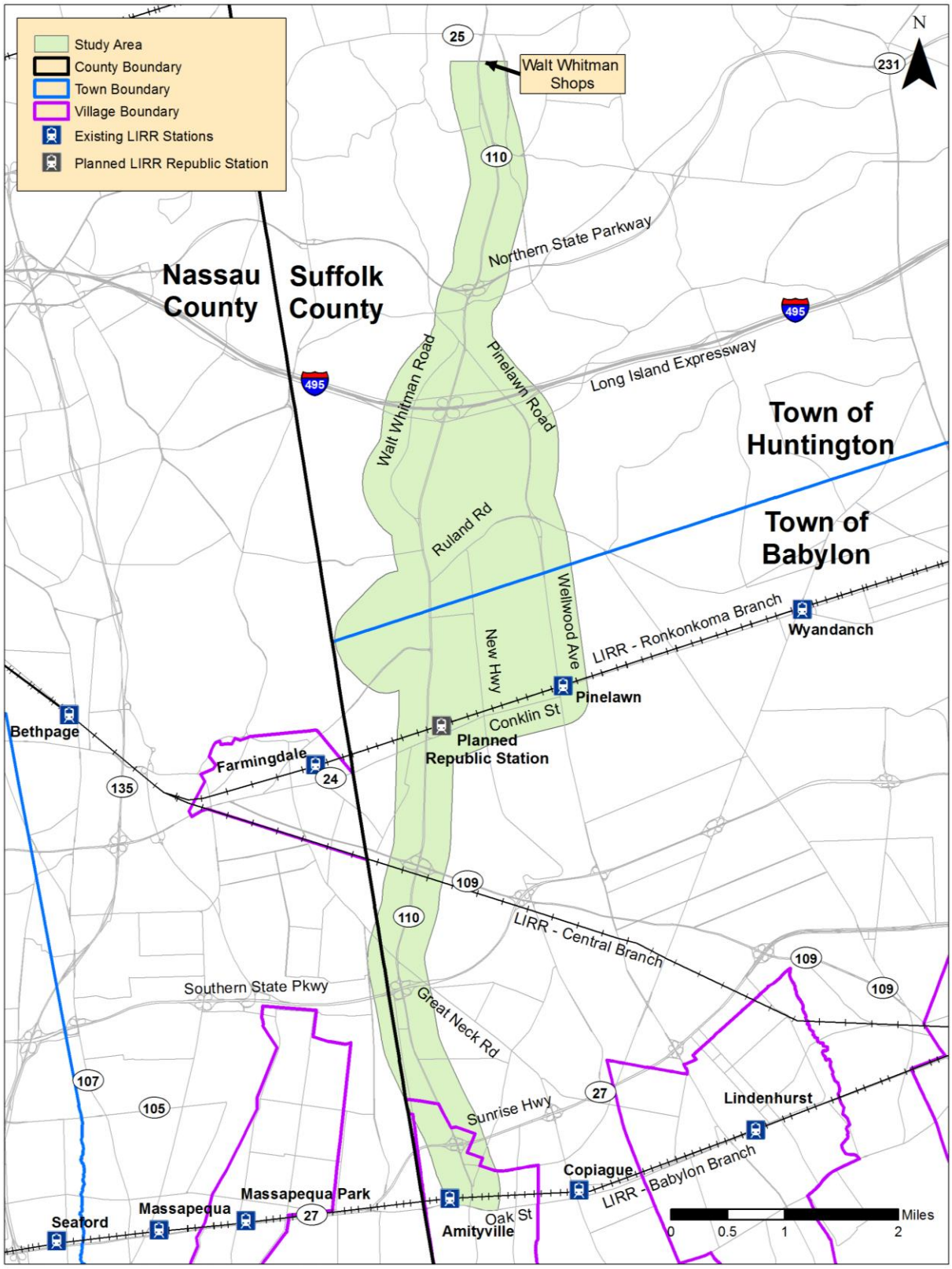
Subsequent work in Project Development that will follow this Alternatives Analysis will include topographic survey and more detailed Preliminary Engineering and Final Design for the proposed project, which will inform the refinement of the capital cost estimates. During the Alternatives Analysis, the project team met with the New York State Department of Transportation (NYSDOT) to get initial feedback on the proposed BRT trunk route, and significant coordination will occur with NYSDOT for many of the proposed engineering elements during Project Development.

3. Study Area

The study area for the Route 110 Alternatives Analysis (Figure 1) includes the areas directly affected by the potential construction and operation of transit improvements. The study area is defined to encompass the portion of the Corridor where trip generators and attractors are most concentrated and where the existing right-of-way could best accommodate the introduction of a new premium transit service. Specifically, the approximately 10.5-mile stretch of the Corridor in the study area is located between Oak Street in the Village of Amityville at the southern end and the Walt Whitman Shops in the Town of Huntington at the northern end.

The study area also includes areas to the east and west of Route 110 to capture major activity centers that are beyond a reasonable walking distance from the Corridor. The study area extends east as far as Wellwood Avenue in the East Farmingdale portion of the Town of Babylon (at Conklin Street), and continues north to the intersection of Pinelawn Road and Route 110 in the Melville portion of the Town of Huntington. The study area extends west as far Walt Whitman Road in Melville and also includes the Farmingdale State College campus.

Figure 1: Route 110 Alternatives Analysis Study Area Boundaries



Source: NYS GIS Program Office, Parsons Brinckerhoff (2015)

4. 10% Conceptual Engineering

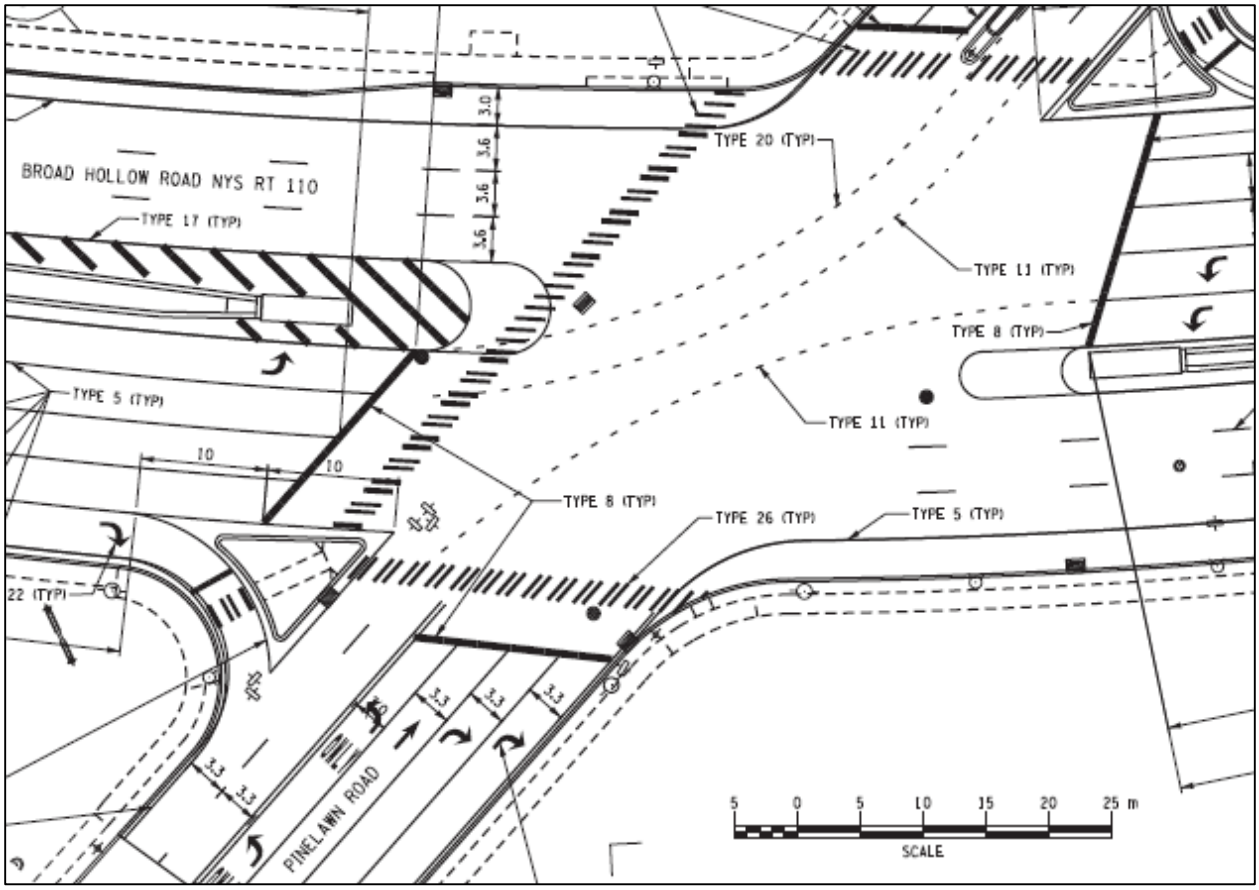
4.1 DRAWINGS FORMAT AND METHODOLOGY

The concept for the Route 110 BRT trunk route was developed on a set of 500-scale plans (i.e., 1 inch equals 500 feet). These plans (Appendix A) depict the planned routing of the trunk route, with color-coded alignments to designate each section's physical and operational attributes: dedicated alignments, mixed traffic alignments, station areas, traffic signals identified for priority treatment, and standard signage and pavement markings.

The concept plans were laid out in AutoCAD software on an aerial photograph; the aerial imagery was sourced from the New York Statewide Digital Orthoimagery Program (NYSDOP), accessed online at http://www.orthos.dhses.ny.gov/?id=974128. As of the date of this Alternatives Analysis, the most current imagery available for Suffolk County was from the 2013 Annual Lot.

The exception to the aerial basemapping was the approximately 1.7-mile segment of Route 110 between the Long Island Expressway (LIE) South Service Road and Arrowwood Lane, north of the Northern State Parkway. Along this roadway segment, NYSDOT was in the process of reconstructing the roadway during the time when this Alternatives Analysis was being prepared. The project (PIN 0112.56, NY Route 110 Safety and Mobility Improvements) was providing three full travel lanes and shoulders along Route 110 in each direction in the project area, and was one of three projects that collectively comprised the NY Route 110 Bridge and Reconstruction and Mobility Improvement Projects. Therefore, the concept plans for this section incorporate scaled copies of the NYSDOT design plans (Figure 2) instead of aerial imagery that depicts existing conditions. The design plans included curbs, signs, and pavement markings, and this Alternatives Analysis assumed that the entire section would be constructed per the approved design plans.

Figure 2: NYSDOT Pavement Marking Plan Excerpt



Source: NYSDOT (2014)

In addition to this ongoing project, NYSDOT is also initiating another roadway improvement project along Route 110 (PIN 0112.58). The project will result in pedestrian safety & operational improvements between Youngs Hill Road and Route 27A (Montauk Highway) including crosswalks, signal work, fencing, and intelligent transportation systems (ITS) equipment for pedestrian crossings. At the time when this technical memorandum was completed, the design was in the initial stages, so for the purposes of this Alternatives Analysis, there were no specific features to consider for alignment layout.

Furthermore, another NYSDOT project that is underway is the reconstruction of the existing aluminum bridge along Route 110 over Sunrise Highway (D900027 / PIN 0112.57). This project is not anticipated to affect the BRT trunk route alignment.

4.2 BRT STATIONS

In coordination with the operations planning effort (documented in the Task 9 Technical Memorandum), the first step in the conceptual engineering effort was to identify BRT station locations. Several factors informed the selection of BRT station locations:

- Serve existing and future activity centers to maximize ridership potential
- Promote economic development along Route 110
- Optimize distance between stations
- Maximize transfer opportunities
- Minimize physical constraints for implementation

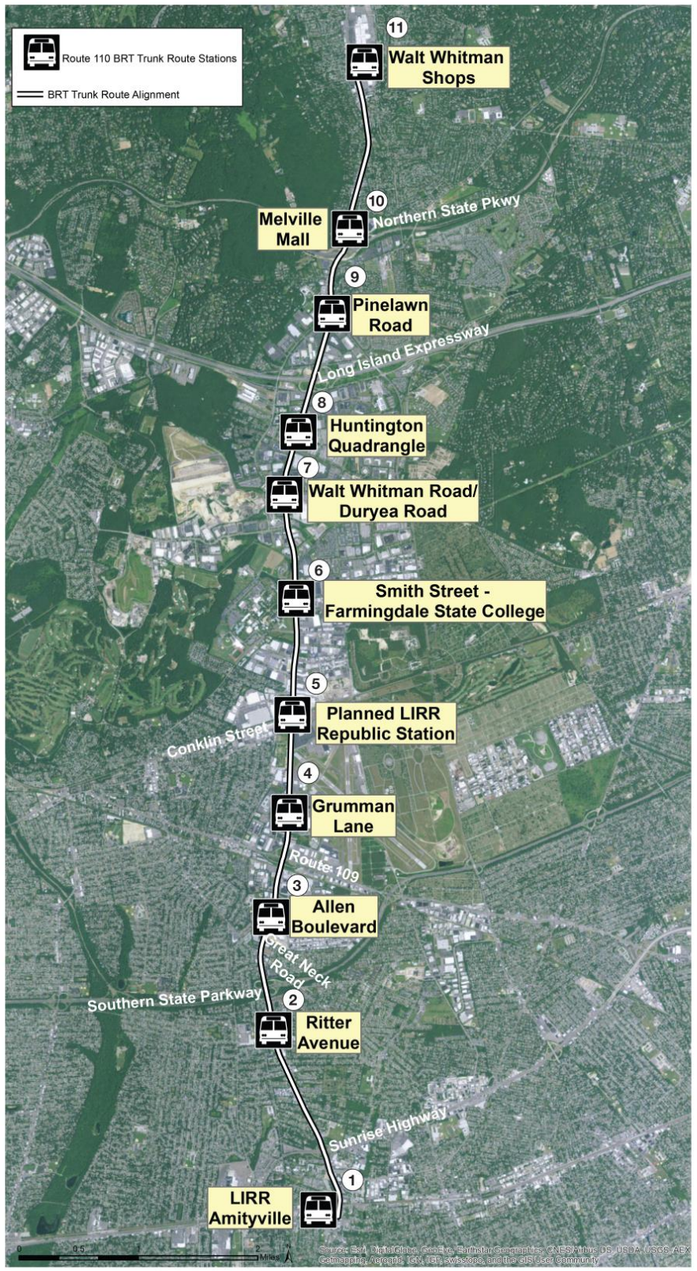
This last factor was guided by the conceptual engineering effort. If the existing transportation right-of-way (ROW) is insufficient to accommodate a BRT station at a particular location, an easement or property taking could be required to address this physical constraint, which would add to the overall capital cost, have potential greater impact on the environment, and potentially complicate the implementation process. Therefore, it is proposed that, in most cases, the BRT stations would be located at the sites of the existing Suffolk County Transit bus stops, thereby eliminating the need for easements or property takings and maximizing cost effectiveness. The co-location of BRT stations and Suffolk County Transit bus stops would also effectively maximize connectivity of the BRT and local bus services. However, as will be discussed below, there are a few locations where BRT stations are proposed that do not coincide with existing Suffolk County Transit bus stops.

As shown in Figure 3, the proposed BRT service includes the following 11 station locations (from south to north) within the study area and primarily along Route 110:

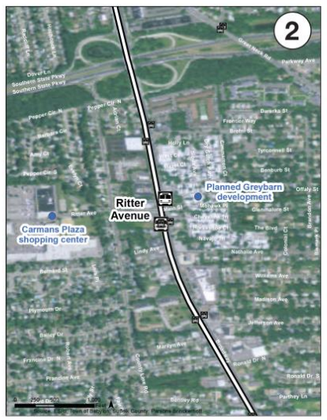
1. LIRR Amityville Station
2. Route 110 at Ritter Avenue
3. Route 110 at Allen Boulevard
4. Route 110 at Grumman Lane
5. Route 110 at the planned LIRR Republic Station
6. Route 110 at Smith Street – Farmingdale State College
7. Route 110 at Walt Whitman Road/Duryea Road
8. Route 110 at Huntington Quadrangle
9. Route 110 at Pinelawn Road
10. Route 110 at Melville Mall
11. Walt Whitman Shops

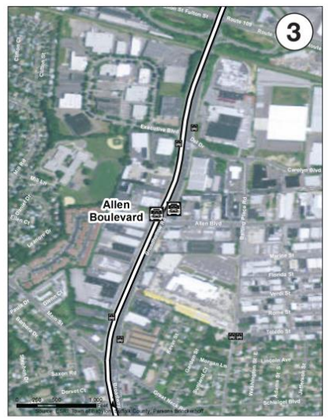
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Figure 3: Proposed Route 110 BRT Trunk Route Stations



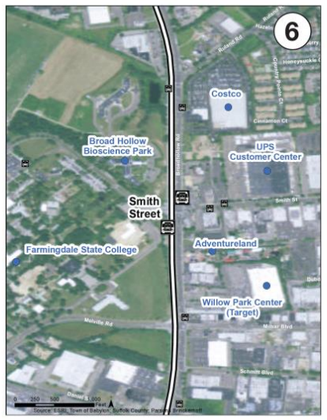






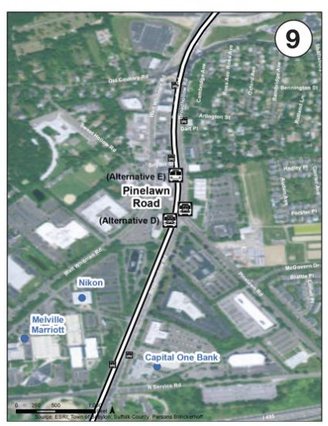
















Legend

- Existing Suffolk County Transit Bus Stops
- BRT Trunk Route Stations
- BRT Trunk Route Alignment
- Existing and Future Major Activity Centers

Source: ESRI basemaps, Suffolk County Transit, Parsons Brinckerhoff, Cameron Engineering, Nelson\Nygaard (2015)

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With the exception of the southern and northern termini (i.e., LIRR Amityville Station and Walt Whitman Shops, respectively), which would each have one proposed station located slightly off-Route 110, the remaining nine stations would all include one northbound and one southbound station along the east and west sides of Route 110, respectively.

There are eight instances in which the BRT stations are proposed at locations that differ from existing Suffolk County Transit local S1 bus stops, and it is proposed that the existing local bus stops would be relocated to the sites of the BRT stations (Table 1). The rationale is specific to each station location and is informed by engineering considerations. For example, the location of the proposed northbound Huntington Quadrangle BRT station is approximately 100 feet north of the existing Suffolk County Transit local bus stop to prevent obstructing site lines for existing right turns from the office buildings, and it is proposed that the existing local bus stop be moved to this location to similarly improve safety.

Table 1: Locations of Proposed Northbound and Southbound BRT Stations

Station # (Figure 3)	Station Name	Northbound Location	Southbound Location
1	LIRR Amityville Station	Southern terminus (i.e., combined northbound/southbound station): parking lot on the south side of the LIRR tracks in front of the station building*	
2	Ritter Avenue	East side of Route 110, north of Ritter Avenue*	West side of Route 110, south of Ritter Avenue at location of existing southbound Suffolk County Transit stop
3	Allen Boulevard	East side of Route 110, north of Allen Boulevard at location of existing northbound Suffolk County Transit stop	West side of Route 110, north of Allen Boulevard at location of existing northbound Suffolk County Transit stop
4	Grumman Lane	East side of Route 110, north of Grumman Lane*	West side of Route 110, south of Grumman Lane*
5	Planned LIRR Republic Station	East side of Route 110, south of LIRR trestle at location of existing northbound Suffolk County Transit stop	West side of Route 110, north of LIRR trestle at location of existing southbound Suffolk County Transit stop
6	Smith Street – Farmingdale State College	East side of Route 110, north of Smith Street at location of existing northbound Suffolk County Transit stop	West side of Route 110, south of Dr. Frank A Cipriani Drive at location of existing southbound Suffolk County Transit stop
7	Walt Whitman Road/Duryea Road	East side of Route 110, north of Duryea Road at location of existing northbound Suffolk County Transit stop	West side of Route 110, south of Walt Whitman Road within grass triangle*
8	Huntington Quadrangle	East side of Route 110, north of Huntington Quadrangle*	West side of Route 110, south of Huntington Quadrangle at location of existing southbound Suffolk County Transit stop
9	Pinelawn Road	East side of Route 110, north of Pinelawn Road at location of existing northbound Suffolk County Transit stop	• Alternative D: West side of Route 110, south of Sweet Hollow Road at location of existing southbound Suffolk County Transit stop • Alternative E: West side of Route 110, north of Sweet Hollow Road to facilitate transfers to/from feeder routes*
10	Melville Mall	East side of Route 110, north of Melville Mall main entrance at location of existing Suffolk County Transit stop	West side of Route 110, south of Melville Mall main entrance*
11	Walt Whitman Shops	Northern terminus (i.e., combined northbound/southbound station): parking lot on the south side of the Walt Whitman Shops at the location of the existing Suffolk County Transit/Huntington Area Rapid Transit (HART)/Nassau Inter-County Express (NICE) stop	

Source: Cameron Engineering, Parsons Brinckerhoff (2015)
* Proposed relocation of existing Suffolk County Transit stop

Other instances in which the locations of the proposed BRT stations would differ from existing Suffolk County Transit local bus stops are justified from an operational perspective. Where feasible, to maximize the effectiveness of traffic signal priority (see Section 4.7), BRT trunk route stations are proposed to be located on the far side of signalized intersections (i.e., north of the intersection for northbound service, and south of the intersection for southbound service). Therefore, in most instances in which the existing Suffolk County Transit local bus stops are located on the near side of signalized intersections (e.g., the northbound stop at Grumman Lane, the southbound stop at Walt Whitman Road/Duryea Road, and the southbound stop at Melville Mall), the BRT stations are proposed on the far side of the intersection to maximize the effectiveness of Traffic Signal Priority (TSP). In these cases, it is also proposed that the existing local bus stops would be relocated to the sites of the BRT stations.

There are two proposed exceptions to the general rule of locating BRT stations on the far side of signalized intersections: (1) at the southbound Allen Boulevard station, in order to avoid encroachment into private parking lots on the far side of the intersection associated with multiple retail uses that have frequent curb cuts; and (2) at the southbound Pinelawn Road station (Alternative E only), in order to provide a seamless transfer between the BRT trunk route and feeder routes at the proposed transit center.

4.2.1 Proposed BRT Station Elements

Stations function as the gateway for service and play a critical role in branding BRT as a premium transit option that can attract choice riders in addition to serving the needs of passengers without access to an automobile. The station planning effort in this Alternatives Analysis proposed a number of passenger amenities that could effectively distinguish BRT from local bus service without significantly adding to the estimated costs for implementation, as discussed below. However, regardless of this assumption for the Alternatives Analysis, it is important to note that the longer-term vision for BRT along Route 110 includes significant station-area passenger amenities and enhancements to the pedestrian experience to reinforce the image of BRT as a premium transit service. (Refer to sidebar.)

Each BRT station is proposed to include the following elements:

- **Shelter** – Each shelter would consist of glass panels along the back and illuminated side advertisement panels along the sides, with a decorative roof and interior seating. Art could also be integrated into the shelters. A front, centrally located glass panel would create two entrances/exits, and the rest of the shelter would be covered to provide shade and protection from the elements. Two different shelter sizes are proposed for the BRT trunk route: (1) a typical shelter measuring 5 feet by 12 feet with one interior bench, which would match the size of existing Suffolk County Transit shelters along Route 110; and (2) a large shelter measuring 10 feet by 24 feet with four interior benches. The typical shelter is proposed at all station locations with the exception of the LIRR Amityville Station, the planned LIRR Republic Station, and Walt Whitman Shops, which would each include large shelters to accommodate the higher ridership projected at these stations.
- **Seating** – Each shelter would include interior seating as an amenity for passengers waiting to board BRT. The typical shelters would include one interior bench, and the large shelters would include four interior benches, with each bench accommodating three people.

SIDEBAR: LONGER-TERM ELEMENTS FOR ROUTE 110 BRT

The *Connect Long Island* plan envisions the introduction of a premium transit service that transforms the way residents, workers, and visitors think about traveling to, from, and along Route 110. As noted in the 2009 FTA report, *Characteristics of Bus Rapid Transit for Decision-Making*, "BRT shows great promise for replicating many of the image attributes that attract choice riders to rail."

Therefore, the longer-term vision for BRT on Route 110 includes, among other things, significant station-area enhancements to further bolster the image of BRT and attract more choice riders. These enhancements include off-board fare collection, level boarding, and pedestrian improvements at station-area intersections. The cost estimates for the proposed project include these additional enhancements as options that could be pursued in the future to fulfill this vision (see Section 7).

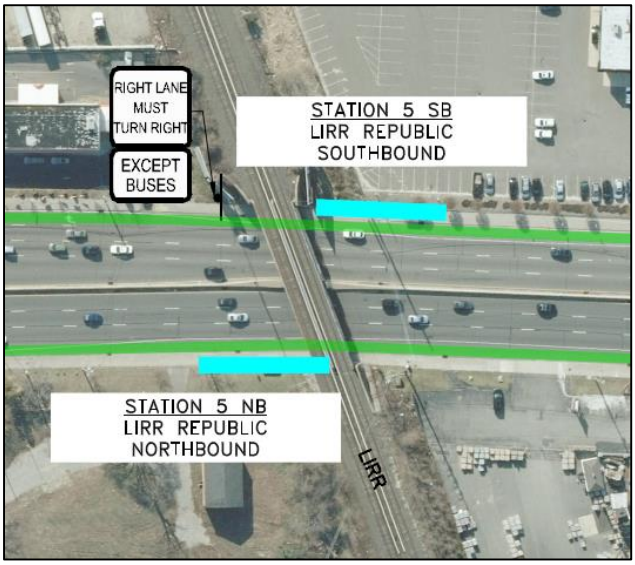
- **Off-Board Fare Collection** – As ridership demand grows, and as dwell times at the BRT stations increase due to greater numbers of boarding passengers, off-board fare collection could help improve travel time for riders. Off-board fare collection would reduce dwell times by enabling boarding at both the front and rear doors, accomplished through a proof-of-payment system whereby riders purchase tickets before boarding, and personnel would randomly inspect passengers' tickets to enforce the system. Implementation of off-board fare collection would require the provision of ticket vending machines at each BRT station and the necessary hardware and software, and there are high labor requirements associated with ticket inspection and maintenance.
- **Level Boarding** – Implementation of level boarding could result in travel time savings by reducing the time for passenger boarding and alighting at BRT stations. Specifically, level boarding would eliminate the gaps between the station-area sidewalk and the vehicle floor, which enables faster boarding and alighting for all passengers, including the disabled and elderly because ramps would no longer need to be deployed. Level boarding could require a combination of low-floor BRT vehicles, raised curb, and precision vehicle docking to eliminate the horizontal gap between the station and vehicle. As an alternative to level boarding, near-level boarding could be implemented without precision docking, which could still reduce the time required for boarding and alighting (thus reducing dwell time and overall travel time) by decreasing the gaps between the station and vehicle.
- **Pedestrian Improvements at Station-Area Intersections** – An attractive and safe pedestrian environment is a key element of a multi-modal transportation network. As such, targeted pedestrian improvements could further enhance the image of BRT, increase pedestrian safety, and help transform Route 110 into a pedestrian-friendly corridor as a model for Complete Streets. These improvements could include: enhanced crosswalks (e.g., bricks with white lines on the border to increase visibility); Accessible Pedestrian Signals (APS) with audible walk indications/chirping for the visually impaired; pedestrian push buttons; sidewalk improvements as necessary to ensure that ramps adhere to ADA guidelines with tactile warning strips; and mid-block pedestrian refuge islands to improve safety (if feasible given the roadway geometry). As noted previously, NYSDOT is beginning work on a pedestrian safety project along Route 110 that will involve a range of intersection-specific improvements, and ongoing coordination with NYSDOT will be an important next step to promote integration of BRT with targeted pedestrian improvements.

- **Variable Message Signage (VMS)** – Each shelter would include VMS, consisting of an electronic message board offering real-time information to alert riders of arriving BRT vehicles and potential delays. The proposed unit measures 5 feet by 1 ½ feet and would accommodate two lines of movable text, programmed via computers in a remote location and powered through electric utility lines within or adjacent to the shelter. The VMS is proposed to be located on the back interior wall of each shelter, which would enable people both inside and outside the shelter to view the messages.
- **Way Finding Signage** – Each shelter would include way finding signage to orient passengers to the surrounding area and display BRT route maps, schedules, and fare information. The way finding panel would be located in the station area outside the shelter.
- **Bicycle Racks** – Bicycle racks are proposed at each BRT station to facilitate and encourage multi-modal trips, both to and from the station area. Each BRT station would include six bicycle racks (three on each side of the shelter), and each bicycle rack would accommodate two bicycles. Station design in Project Development can also consider the use of enclosed bicycle racks ("bikelids"), which provide additional protection and security for bicycle storage.
- **Trash Receptacles** – Each station area is proposed to include at least one trash receptacle, and the design would be coordinated with the shelter and other station amenities.
- **Trees and Landscaping** – Where possible, trees and other landscaping are proposed at BRT stations. The intent is for trees to grow and provide additional shade in the future to complement the shelter. Planting beds are proposed to promote stormwater mitigation and enhance the aesthetics of the station areas.
- **Tinted Concrete** – The sidewalk in front of each shelter is proposed to include tinted concrete to highlight the waiting area and further brand the BRT system.

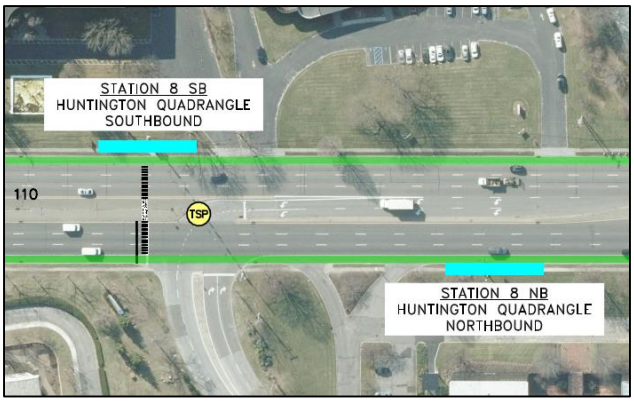
All BRT passengers begin and end their trips as pedestrians, and thus it is important for adequate pedestrian accommodations to be in place to facilitate crossing Route 110. To maximize cost effectiveness, pedestrian improvements are only currently proposed at those station-specific intersections along Route 110 where sufficient pedestrian infrastructure does not currently exist and is not anticipated without this project. However, as noted earlier, the longer-term vision for BRT along Route 110 includes additional improvements to pedestrian and bicycle infrastructure.

The conceptual engineering effort identified three station locations that would require upgrades to pedestrian infrastructure to ensure that BRT riders would be able to safely cross Route 110, as shown in Figure 4 and discussed below.

Figure 4: Locations of Proposed BRT Station-Specific Upgrades to Pedestrian Infrastructure







Source: Cameron Engineering (2015)

- **Planned LIRR Republic Station** (Station 5) – The northbound and southbound BRT stations are proposed to be located at the sites of the existing Suffolk County Transit bus stops on both sides of the train trestle that spans Route 110, half a block north of Conklin Street. To create a seamless transfer from BRT to LIRR (and vice versa) at the planned Republic Station, it should be possible to cross Route 110 midblock at this station location. It is anticipated that the design of LIRR Republic Station—coordinated with the East Farmingdale Master Development—will include elevated platforms that extend over Route 110, thereby connecting the LIRR station to both the northbound and southbound BRT stations and facilitating multi-modal connectivity and pedestrian safety. (The capital cost estimate for the proposed project does not include the cost of these elevated platforms, as it is assumed that this cost will be included in the design of LIRR Republic Station.)
- **Walt Whitman/Duryea Road** (Station 7) – The southbound BRT station is proposed to be located on the west side of Route 110 within the grass triangle just south of Walt Whitman Road. The station as proposed would include sidewalk and crosswalk connections to ensure pedestrian safety for crossing Walt Whitman Road and Route 110 at this location.
- **Huntington Quadrangle** (Station 8) – There is a paved, raised median separating northbound and southbound traffic on Route 110 in the vicinity of Huntington Quadrangle. The southbound BRT station as proposed would include crosswalks and curb ramps connecting this station on the west side of Route 110 with the Huntington Quadrangle complex on the east side of Route 110.

Overall, each BRT station would include the elements listed above, provide accommodations for pedestrians to safely cross Route 110, and adhere to Americans with Disabilities Act (ADA) guidelines.

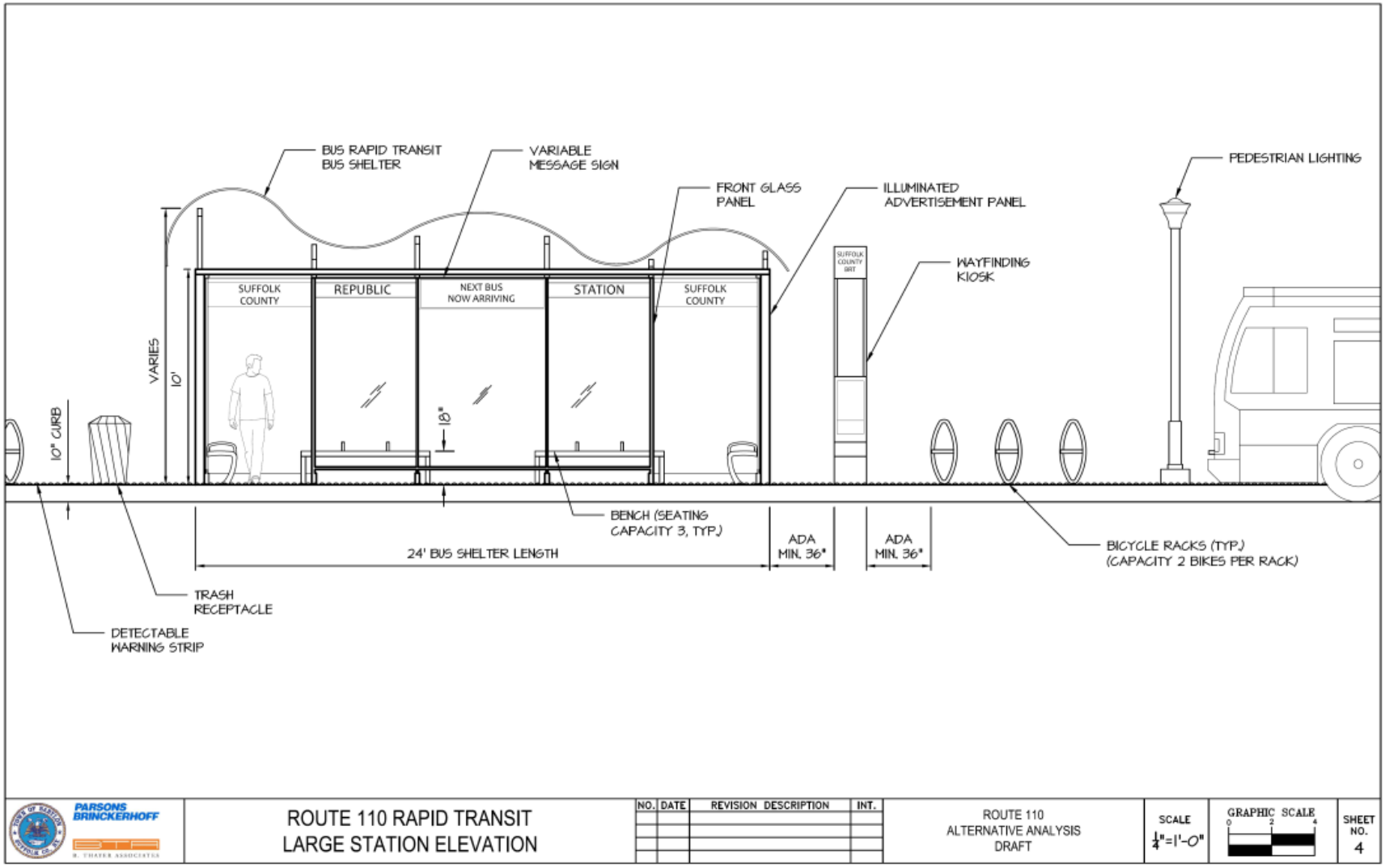
Figure 5 and Figure 6 include a sample perspective and elevation, respectively, of a large proposed BRT station. (Appendix B includes sample plan views of a large proposed BRT station, a typical BRT station, and a feeder route station.) The specific design, materials, and color scheme of the proposed stations will be refined in Project Development. Note that at the time of the completion of this Alternatives Analysis, Suffolk County was reviewing proposals for branding and a strategic marketing campaign for the overall Suffolk County BRT system, aligned with the objectives of the *Connect Long Island* plan. It is anticipated that the Route 110 BRT station design will be a component of this forthcoming campaign to promote BRT as a new premium County-wide transit service.

Figure 5: Sample Perspective of Large Proposed BRT Station



Source: B Thayer Associates (2015)

Figure 6: Sample Elevation of Large Proposed BRT Station



Source: B Thayer Associates (2015)

4.3 BRT ALIGNMENT

After identifying the locations for the proposed BRT stations, the next step of the conceptual engineering effort was to determine locations where it is feasible to implement a dedicated lane for BRT vehicles. The use of a dedicated BRT lane to improve travel time is one of the elements of BRT that can distinguish the premium service from traditional bus service. Several segments of Route 110 with a wide existing shoulder can accommodate a dedicated BRT lane, which would enable BRT vehicles to bypass traffic congestion on the adjacent general purpose lanes.

Given the broader, longer-term vision for the BRT service, and as discussed in Appendix C, the conceptual engineering effort also evaluated the feasibility of a center median-running (as opposed to shoulder-running) BRT alignment on Route 110. Due to a combination of physical constraints, cost, and traffic operations considerations, it was determined that center median-running is not practical along Route 110, and that shoulder-running would be proposed where feasible.

The following guidelines informed the process of identifying the locations along the trunk route that potentially can accommodate conversion of the existing shoulder into a dedicated BRT lane:

- A dedicated BRT lane would have 11-foot minimum lane widths, based on industry standards in conjunction with input from Suffolk County Transit regarding BRT vehicle size and side-view mirror placement.
- A general purpose lane would not be taken to accommodate a dedicated BRT lane.
- A dedicated BRT lane would only be proposed in areas with either a wide enough shoulder that could be repurposed into a travel lane, or an exclusive right turn lane that could reasonably be shared with through-moving BRT vehicles.
    - One exception to the above guideline is that a dedicated BRT lane would not be proposed at this time within the approximately 1.7-mile segment of Route 110 between the LIE South Service Road and Arrowwood Lane, where the NYSDOT Route 110 Reconstruction and Bridge Projects are ongoing. This assumption is applied during the Alternatives Analysis, but shoulder-running may be considered along this segment in coordination with NYSDOT during Project Development.
- In locations where existing shoulders are less than 11 feet wide, the shoulders would be widened to 11 feet, where feasible, via the following changes to the adjacent travel way (such as at Ritter Avenue and between Baylis Road and the LIE):
    - Narrow the adjacent travel lane(s) from 12 feet to 11 feet, via restriping;
    - Narrow the adjacent approach's left turn storage lane to 10 feet, via restriping; and/or
    - Reduce the width of the Route 110 median, via physical construction.
- The potential loss of on-street parking informed the process of identifying BRT shoulder-running alignment segments.
    - For instance, local businesses in downtown Amityville rely on the availability of on-street parking to attract patrons, which is vital to the vibrancy of the downtown. Therefore, the loss of highly utilized on-street parking would be significant in

downtown Amityville, and thus the taking of on-street parking to accommodate shoulder-running is not proposed near the southern terminus of the trunk route.

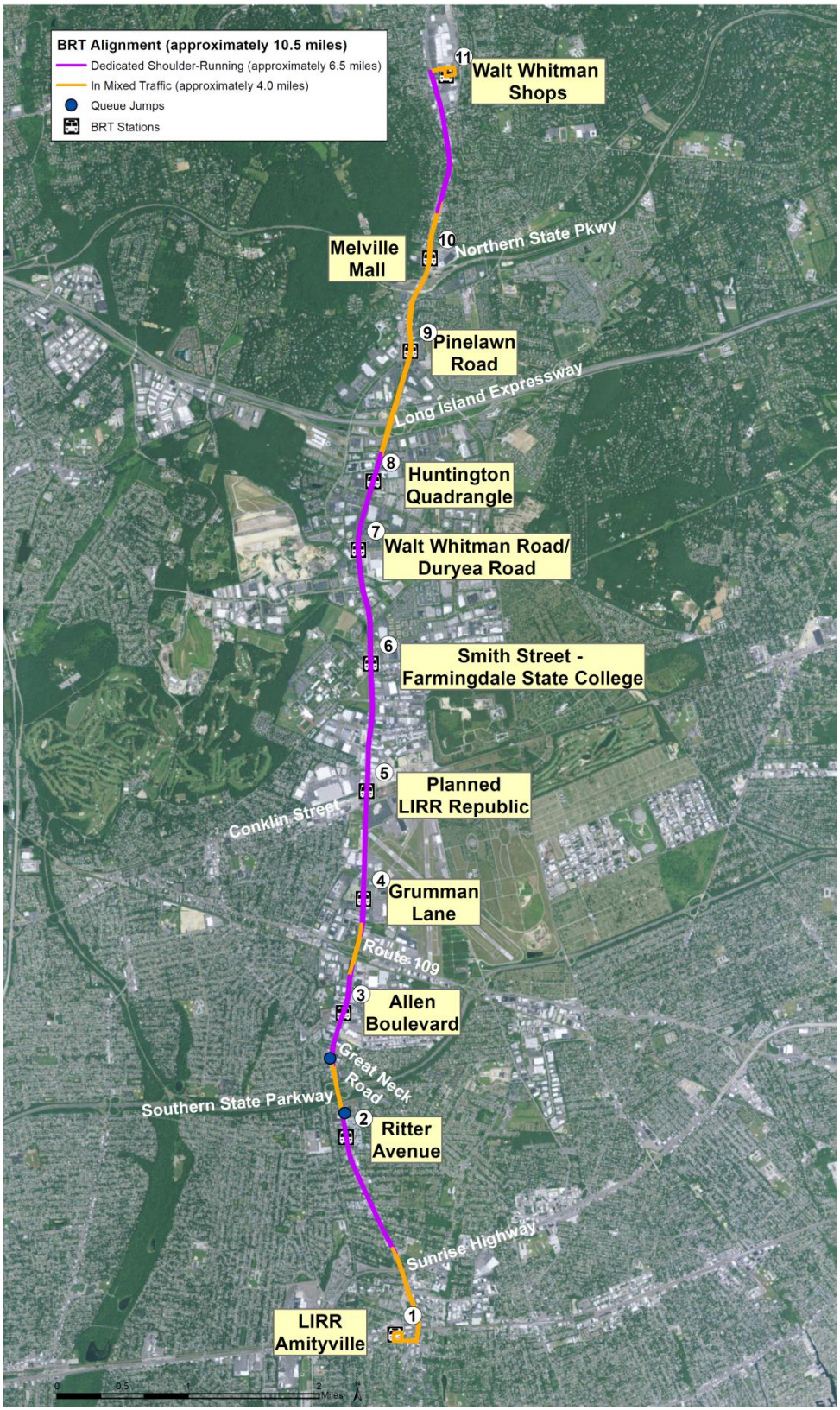
- Overall, the conceptual engineering effort sought to maximize the shoulder-running segments of the BRT trunk route to achieve the objective of reducing travel time for transit users along Route 110. Section 5 includes a preliminary parking assessment that was performed during the Alternatives Analysis to examine the potential adverse impacts that could result from restricting on-street parking through the proposed repurposing of the shoulder into a dedicated BRT lane along segments of Route 110.

The goal in defining and applying these guidelines was to maximize the overall length of the BRT shoulder-running alignment segments while avoiding closely-spaced transitions between shoulder-running and mixed traffic operations. Another determining factor for identifying proposed dedicated and mixed traffic BRT segments was the goal of minimizing the need for property acquisitions and easements. Based on the preliminary conceptual engineering plans prepared during this Alternatives Analysis, there do not appear to be significant property impacts along the BRT trunk route. Future engineering designs will require site-specific topographic and right-of-way survey to determine localized property needs for construction easements and/or for BRT operations. Additionally, the guidelines can be revisited and modified as necessary during Project Development that will follow this Alternatives Analysis.

Based on these guidelines, the conceptual engineering work demonstrated that on the approximately 10.5-mile trunk route (including short segments off Route 110 near the northern and southern termini of the route), approximately 6.7 miles northbound and 6.5 miles southbound can accommodate BRT shoulder-running. Along other roadway segments, BRT would operate in mixed traffic with other vehicles.

The proposed alignment segments for dedicated BRT shoulder-running and mixed traffic operation are shown in Figure 7 and listed in Table 2 and Table 3 for the northbound and southbound directions, respectively. All segments listed in Table 2 and Table 3 run entirely on Route 110, with the exception of the southernmost and northernmost segments, which include the LIRR Amityville Station parking lot and Oak Street, and the Walt Whitman Shops parking lot, respectively.

Figure 7: Proposed BRT Shoulder-Running and Mixed Traffic Alignment Segments



Source: ESRI Basemaps, Parsons Brinckerhoff, Cameron Engineering (2015)

Table 2: Proposed Northbound BRT Shoulder-Running and Mixed Traffic Alignment Segments

Segment (south to north)	Distance (nearest 0.1 miles)	Dedicated BRT Shoulder-Running	Mixed Traffic
BRT station at LIRR Amityville Station (south side of the station building) to 100 feet south of Division Street	1.0 miles	--	✓
100 feet south of Division Street to Brefni Street	1.2 miles	✓	--
Brefni Street to 200 feet south of Great Neck Road/Main Street	0.4 miles	--	✓
200 feet south of Great Neck Road/Main Street to 200 feet south of Route 109 eastbound entrance ramp	0.8 miles	✓	--
200 feet south of Route 109 eastbound entrance ramp to 100 feet north of Route 109 westbound exit ramp	0.2 miles	--	✓
100 feet north of Route 109 westbound exit ramp to 400 feet north of Melville Park Road	3.7 miles	✓	--
400 feet north of Melville Park Road to 100 feet south of Croton Street	2.0 miles	--	✓
100 feet south of Croton Street to Norwich Street entrance of Walt Whitman Shops	1.0 miles	✓	--
Norwich Street entrance of Walt Whitman Shops to BRT station at Walt Whitman Shops	0.2 miles	--	✓
Total mileage	**10.5 miles**	**6.7 miles**	**3.8 miles**

Source: Cameron Engineering, Parsons Brinckerhoff (2015)

Table 3: Proposed Southbound BRT Shoulder-Running and Mixed Traffic Alignment Segments

Segment (north to south)	Distance (nearest 0.1 miles)	Dedicated BRT Shoulder-Running	Mixed Traffic
BRT station at Walt Whitman Shops to Norwich Street entrance of Walt Whitman Shops	0.3 miles	--	✓
Norwich Street entrance of Walt Whitman Shops to 100 feet north of Yarmouth Street	1.1 miles	✓	--
100 feet north of Yarmouth Street to 400 feet north of Melville Park Road	1.9 miles	--	✓
400 feet north of Melville Park Road to 300 feet north of Route 109 westbound entrance ramp	3.6 miles	✓	--
300 feet north of Route 109 westbound entrance ramp to 300 feet north of Executive Boulevard	0.4 miles	--	✓
300 feet north of Executive Boulevard to Great Neck Road/Main Street	0.7 miles	✓	--
Great Neck Road/Main Street to Brefni Street	0.4 miles	--	✓
Brefni Street to 300 feet north of Washington Avenue	1.1 miles	✓	--
300 feet north of Washington Avenue to BRT station at LIRR Amityville Station (south side of the station building)	1.0 miles	--	✓
Total mileage	**10.5 miles**	**6.5 miles**	**4.0 miles**

Source: Cameron Engineering, Parsons Brinckerhoff (2015)

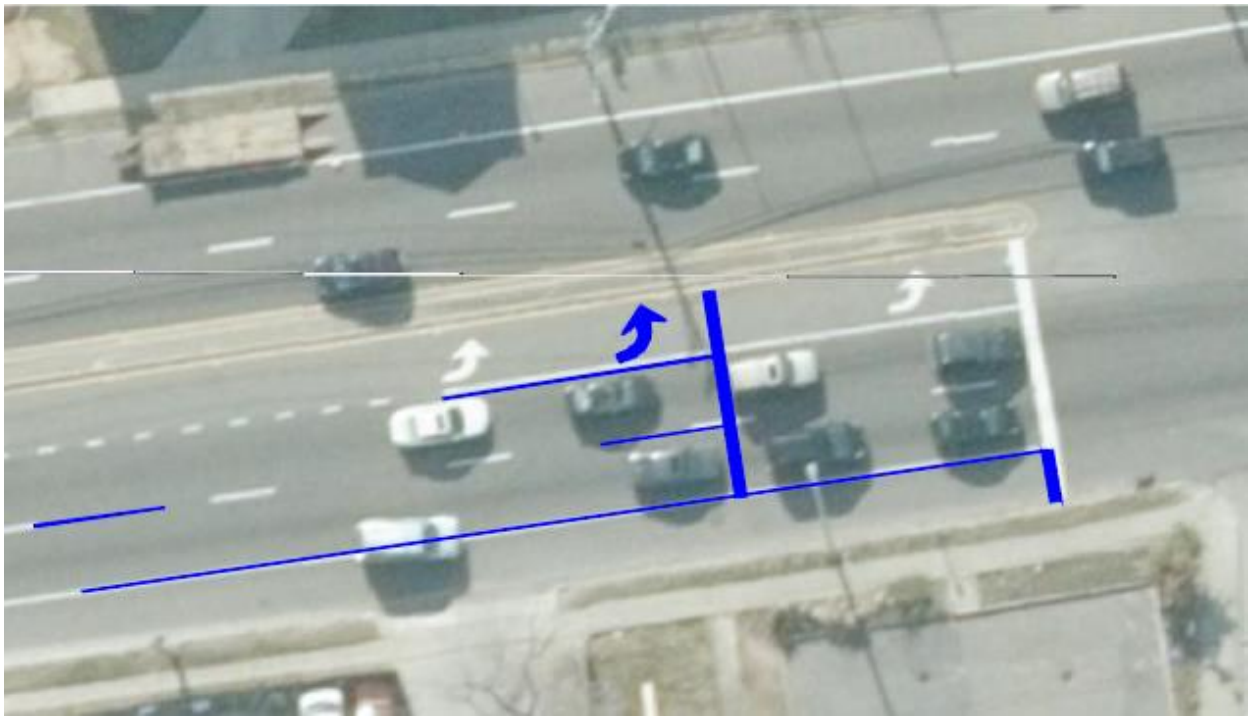
In addition to the approximately 1.7-mile segment of Route 110 between the LIE South Service Road and Arrowwood Lane (where the NYSDOT Route 110 Reconstruction and Bridge Projects are ongoing), other proposed mixed traffic segments typically correspond to segments where the roadway geometry is constrained, such as along overpasses over Route 109, the Southern State Parkway, and Sunrise Highway. Along such segments:

- There is no shoulder, or the shoulder is narrow, and there is not enough excess width in the remaining travel lanes to narrow those other lanes and provide sufficient extra room in the shoulder.
- The traffic volume is too high to repurpose the right-most travel lane into a dedicated BRT lane, as this would impact thousands of vehicles and outweigh the benefits to the relatively small number of BRT vehicles.
- The right-most travel lane functions as an acceleration lane (merging lane) for traffic entering Route 110 from the exit ramps of other major roadways (such as the Southern State Parkway), and a dedicated BRT lane has the potential to disrupt the flow of traffic onto Route 110 from these ramps.

At two locations along the Route 110 BRT trunk route where the proposed transition from shoulder-running to mixed traffic occurs at signalized intersections (i.e., northbound at Brefni Street and southbound at Main Street/Great Neck Road), queue jumps are proposed to enable BRT vehicles to get a head start and merge into the general purpose lane. Queue jumps are intersection modifications to provide preferential treatment for BRT vehicles to move before the other vehicles on the same approach.

As shown in Figure 8, which depicts the northbound intersection of Route 110 and Brefni Street, one low-cost option to achieve a queue jump is to shift back the stop lines for the other through lanes. This intersection modification would allow BRT vehicles that arrive at a red light to get ahead of the other vehicles once the light turns green, without requiring signal modifications. However, at major intersections that experience regular congestion on each approach, such as the intersection of Route 110 and Main Street/Great Neck Road, this option may not be feasible from a traffic operational standpoint. In such cases, queue jump implementation would require an additional signal face to provide an early green light for BRT vehicles to get ahead of other traffic.

Figure 8: Sample Queue Jump Intersection Modification



Source: Cameron Engineering (2015)

At the locations where the BRT alignment transitions between dedicated and mixed traffic, it was necessary to taper the alignment over a long enough path to avoid sudden shifts and minimize potential friction between BRT vehicles and through-moving traffic. The American Association of State Highway and Transportation Officials ("AASHTO") publication, *A Policy on Geometric Design of Highways and Streets,* known anecdotally as "the Green Book," provides guidance on appropriate taper lengths, and recommends a minimum of 200 feet for dense, suburban locations.

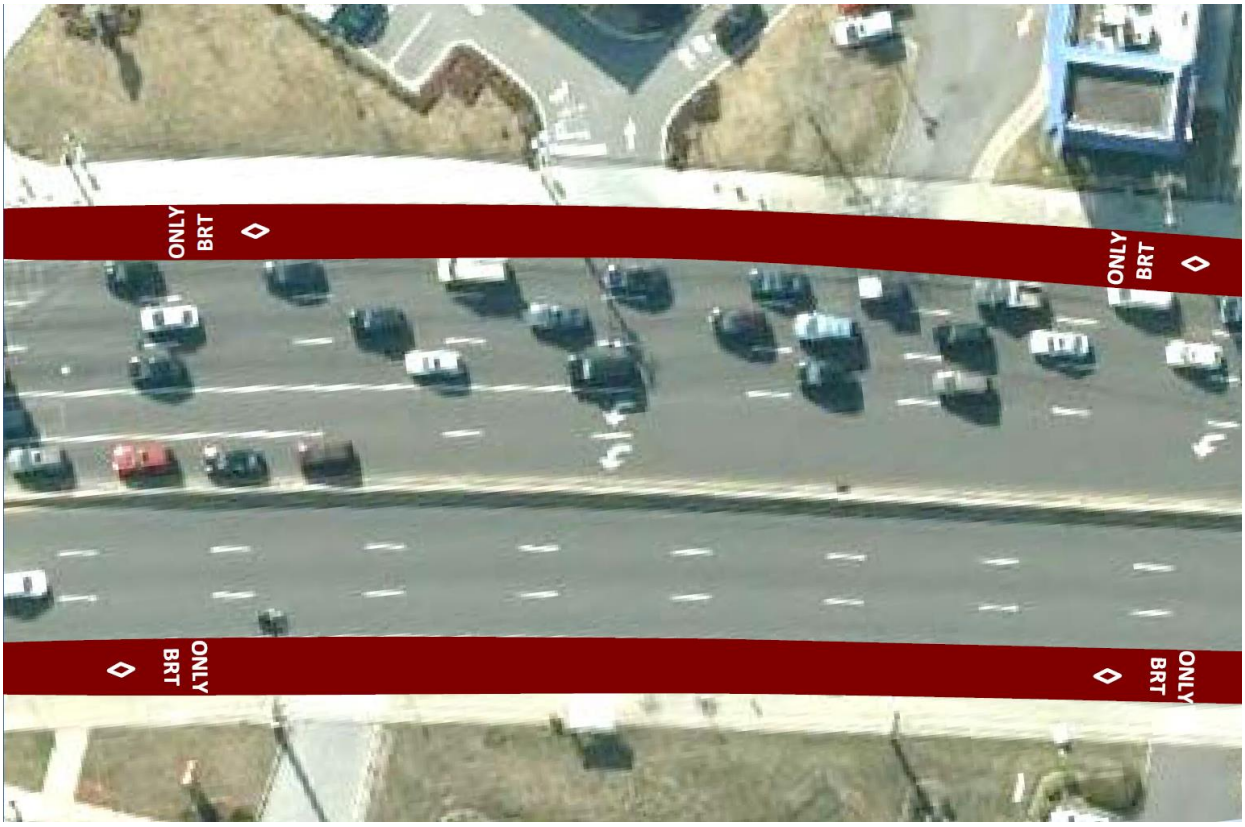
Appendix A includes the conceptual engineering plans that show the alignment segments in greater detail. Additionally, Appendix D includes typical sections of the right-of-way for the two segment types (i.e., dedicated and mixed traffic). The sections show typical roadway lane widths, re-assigned lane configurations as applicable, and designation of shared (mixed traffic) and dedicated BRT lanes.

4.4 SHOULDER-RUNNING DESIGN ELEMENTS

The dedicated BRT shoulder-running segments are proposed to include the following design features:

- Colored pavement, "BRT Only," and symbolic pavement markings to visually distinguish the BRT lane from the remaining general purpose lanes (Figure 9). The intent would be to raise visibility of BRT and help brand the new system as a rapid transit service, as well as discourage other drivers from inadvertently crossing into the dedicated BRT lane.

Figure 9: Sample BRT Lane Colored Pavement Treatment



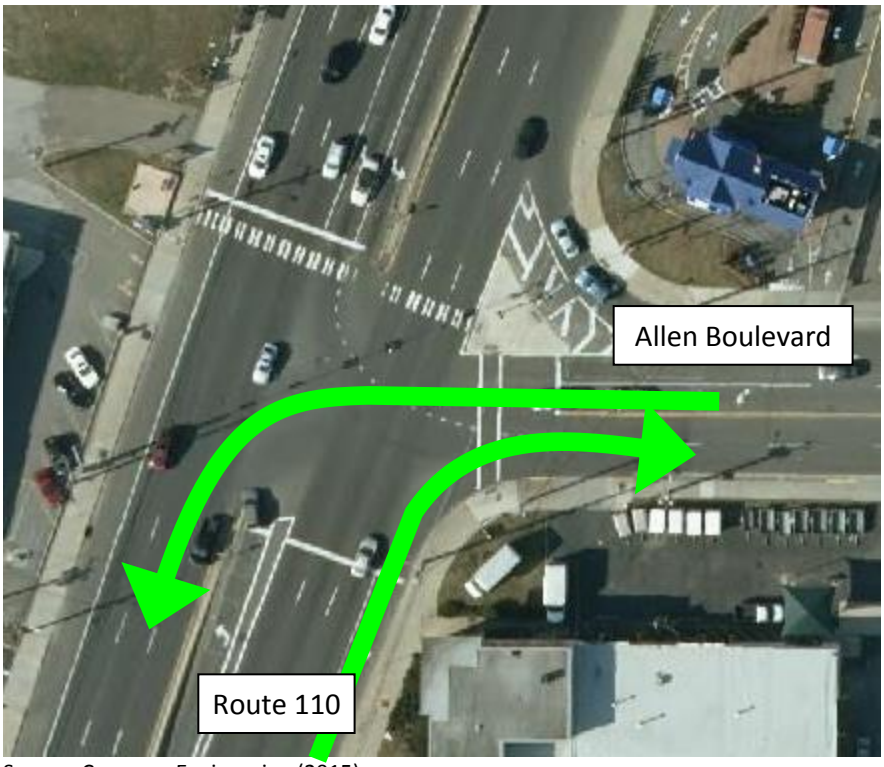
Source: Cameron Engineering (2015)

- Signage to restrict on-street parking where it is not currently restricted.
- Signage to indicate "Right Lane BRT Only and Right Turns" at those intersections where the proposed BRT lane would share the exclusive right turn lane.
- Other signage to reinforce the dedicated use of the shoulder as a BRT lane, including "No Stopping Any Time" at regular intervals along the trunk route. However, the shoulder would continue to serve as an emergency access and breakdown lane for other traffic.

4.5 BRT RUNNING IN EXCLUSIVE RIGHT TURN LANES

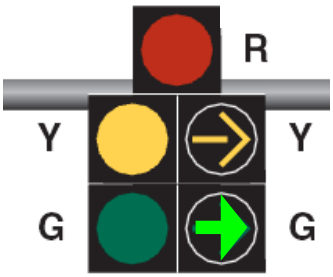
Exclusive right turn lanes can sometimes be given their own "right turn overlap" arrow simultaneously with movements from the cross street (typically left turns), such as at northbound Route 110 at Allen Boulevard (Figure 10). This technology is not unique to Route 110, and it is used elsewhere in Suffolk County and New York State.

Figure 10: Westbound Allen Boulevard at Northbound Route 110 – Right Turn Overlap Phasing



Source: Cameron Engineering (2015)

Signal display for the northbound Route 110 exclusive right turn lane:



An analysis was performed to determine if conflicts exist at intersections where the proposed BRT would utilize exclusive right turn lanes. Conflicts could arise if there is a BRT vehicle in the right turn lane when Route 110 displays a green right-turn arrow because the BRT vehicle must stop until a green light for through traffic is displayed in order to continue straight through the intersection. If a BRT vehicle is stopped in the exclusive right turn lane during the right turn overlap period, any subsequent right turning vehicles will need to stop behind the BRT vehicle instead of being able to utilize the green arrow time for their right turn. This situation may occur up to six times an hour based on the anticipated peak-hour BRT schedule (i.e., 10-minute headways). However, the number of such occurrences will likely be fewer than six per hour because of signal phasing.

Sixteen intersections were identified where BRT vehicles will travel in exclusive right turn lanes on Route 110. After a thorough review of the signal phasing diagrams and signal timing sheets for each of these intersections, it was determined that only three intersections currently utilize right turn overlaps. These intersections are Route 110 and Allen Boulevard (northbound Route 110 only), Route 110 and Michael Avenue (southbound Route 110 only), and Route 110 and Spagnoli Road (southbound Route 110 only). At this 10% design phase, the limited frequency and the small number of intersections do not appear significant enough to impact traffic operations along the Corridor. Further analyses will be conducted during the environmental review as part of Project Development that will follow this Alternatives Analysis.

Potential right turn conflicts can also arise at intersections without a dedicated right turn lane. Specifically, vehicles going straight ahead in the right lane can obstruct other vehicles that are behind seeking to make a right turn. Those cars seeking to make a right turn would simply wait for the green signal and for traffic ahead to clear.

4.6 UTILITY CONFLICT AVOIDANCE

One of the drivers of the BRT alignment was to minimize (and preferably avoid) conflicts with utilities. At this preliminary stage of analysis, a number of potential utility conflicts were identified and addressed through the 10% conceptual engineering of the trunk route.

Specifically, implementation of shoulder-running along the proposed segments would require the redesign of several raised channelized islands at signalized intersections along the trunk route. Existing channelized islands at the following five intersections along Route 110 would need to be redesigned and reduced in size to accommodate BRT shoulder-running:

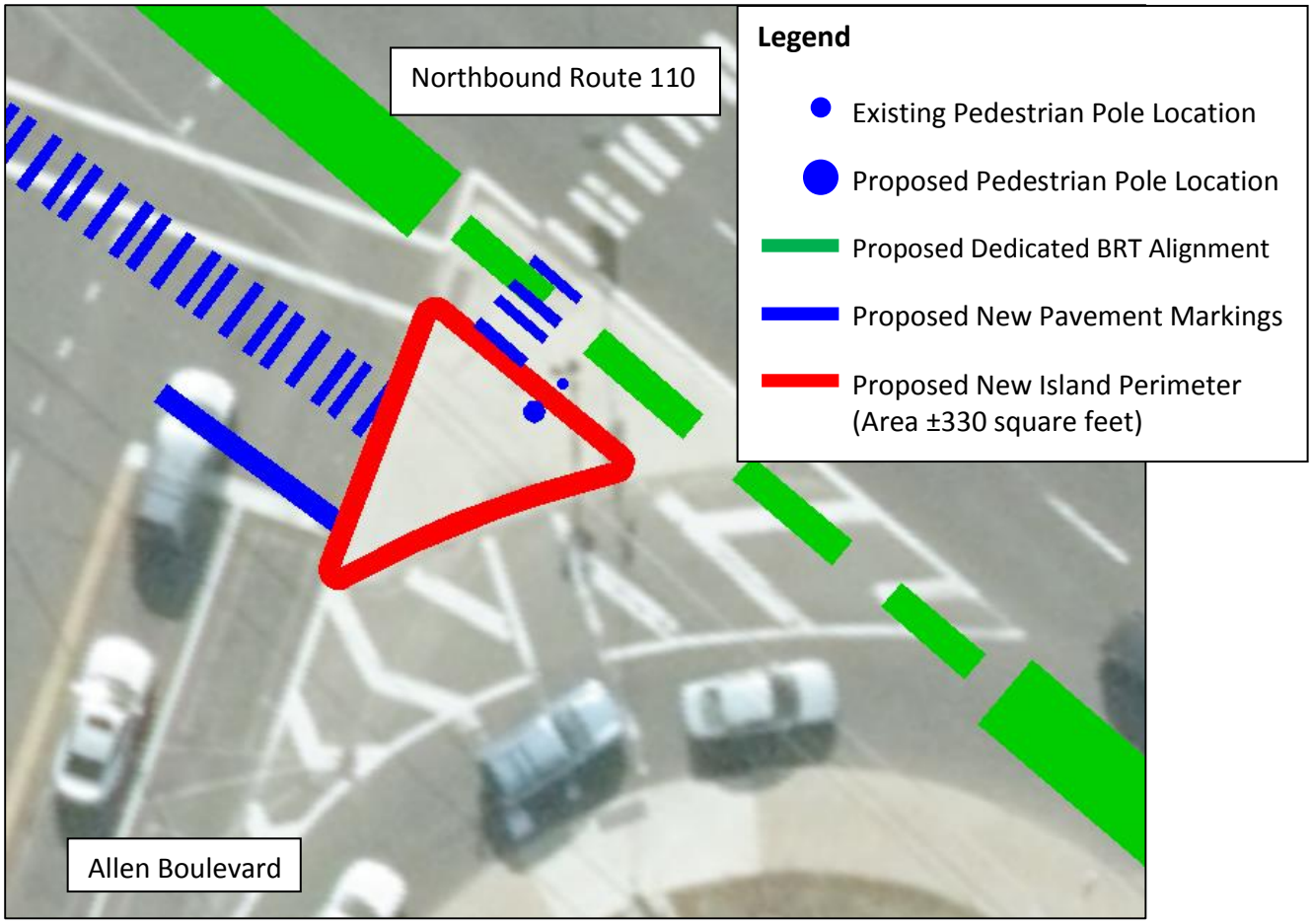
- Northbound Route 110 at Allen Boulevard
- Northbound Route 110 at Del Drive
- Southbound Route 110 at Milbar Boulevard/Melville Road
- Southbound Route 110 at Smith Street/Farmingdale State College
- Southbound Route 110 at Schwab Road

All five of these islands have pedestrian signal equipment in the middle, including a pedestrian signal pole with pushbuttons and/or hand/man signal faces. The existing channelized islands will need to be redesigned and reduced in size to allow for the construction of the dedicated BRT lane at these locations. The 2010 ADA standards require a three-foot clear width around all vertical obstructions such as signal poles. Therefore, if an existing pedestrian signal pole is located within three feet of the new curb line, the pole would need to be relocated. The possibility of shifting the BRT alignments around the existing poles was examined, but this was not achievable.

Figure 11 through Figure 15 illustrate the five raised islands, the existing pedestrian signal pole locations, the proposed pedestrian signal pole locations, and the extent of associated new curb and pavement markings. The BRT trunk route alignment lines are shown thinner and dashed in the immediate area around the signal poles. The proposed island and traffic signal modifications are illustrated schematically herein; this information will need to be engineered during Project Development that will succeed the Alternatives Analysis. The schematic layouts that follow demonstrate that, based on this preliminary analysis, the reduced-size islands would be at least 100 square feet in area, as required to satisfy New York State highway design standards (per the *NYSDOT Highway Design Manual*).

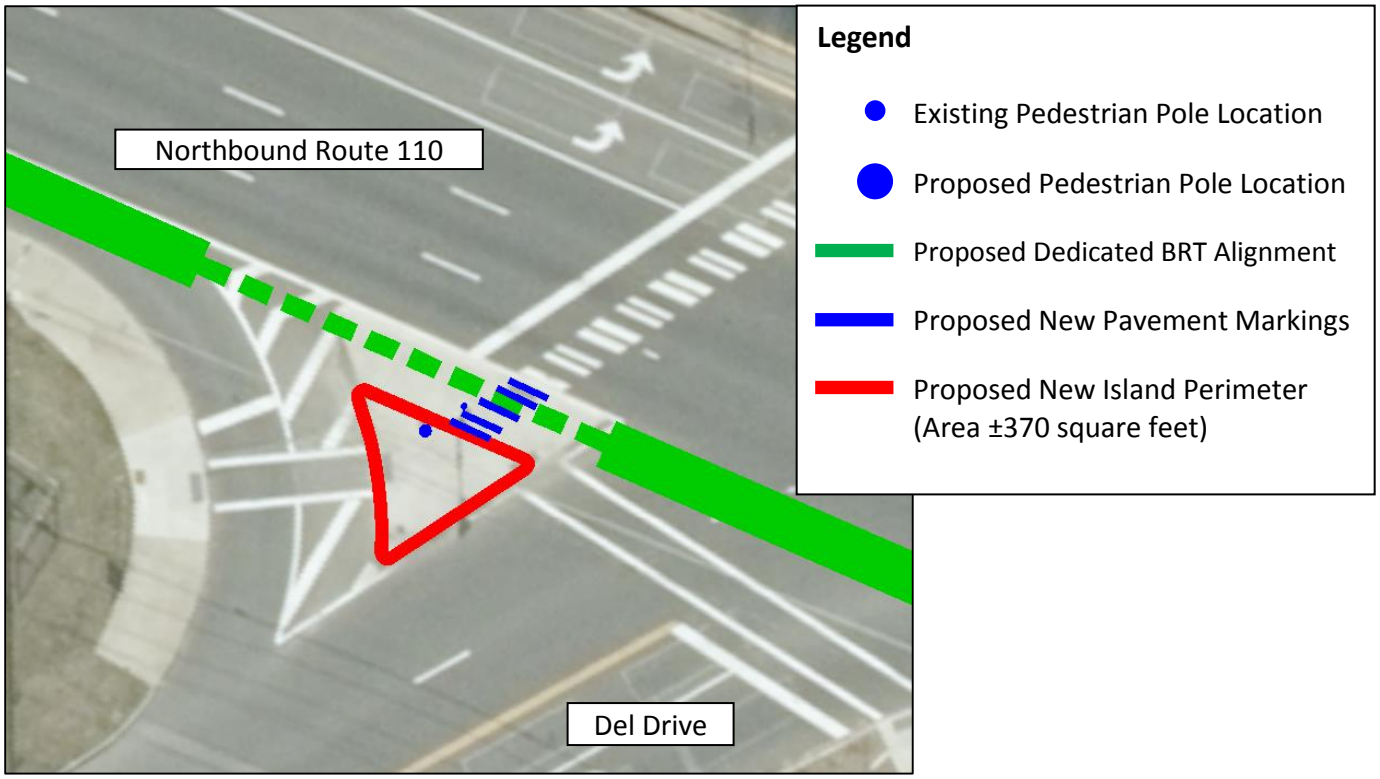
Project Development will include more detailed engineering and design that will further consider potential utility conflicts. This will include an assessment of whether the proposed BRT trunk route would alter roadway drainage, and whether any gutters or drains would require relocation.

Figure 11: Route 110 Northbound Island at Allen Boulevard



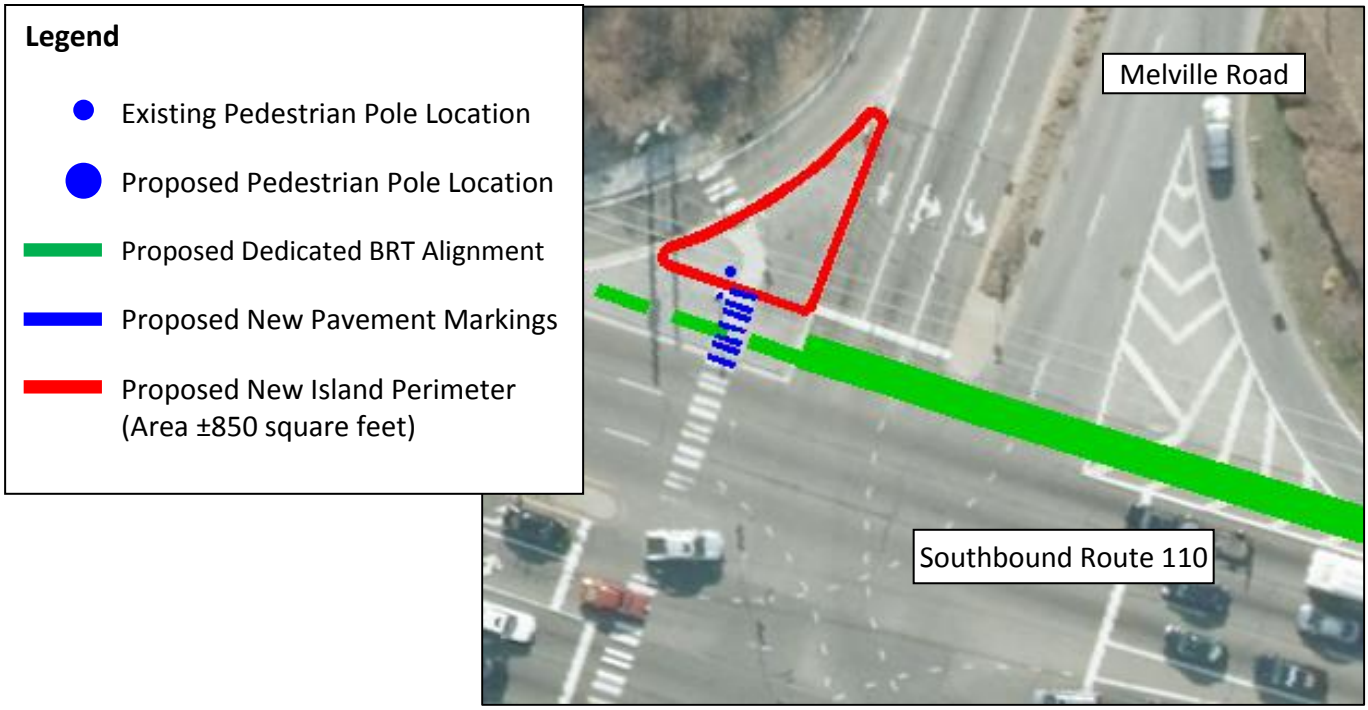
Source: Cameron Engineering (2015)

Figure 12: Route 110 Northbound Island at Del Drive



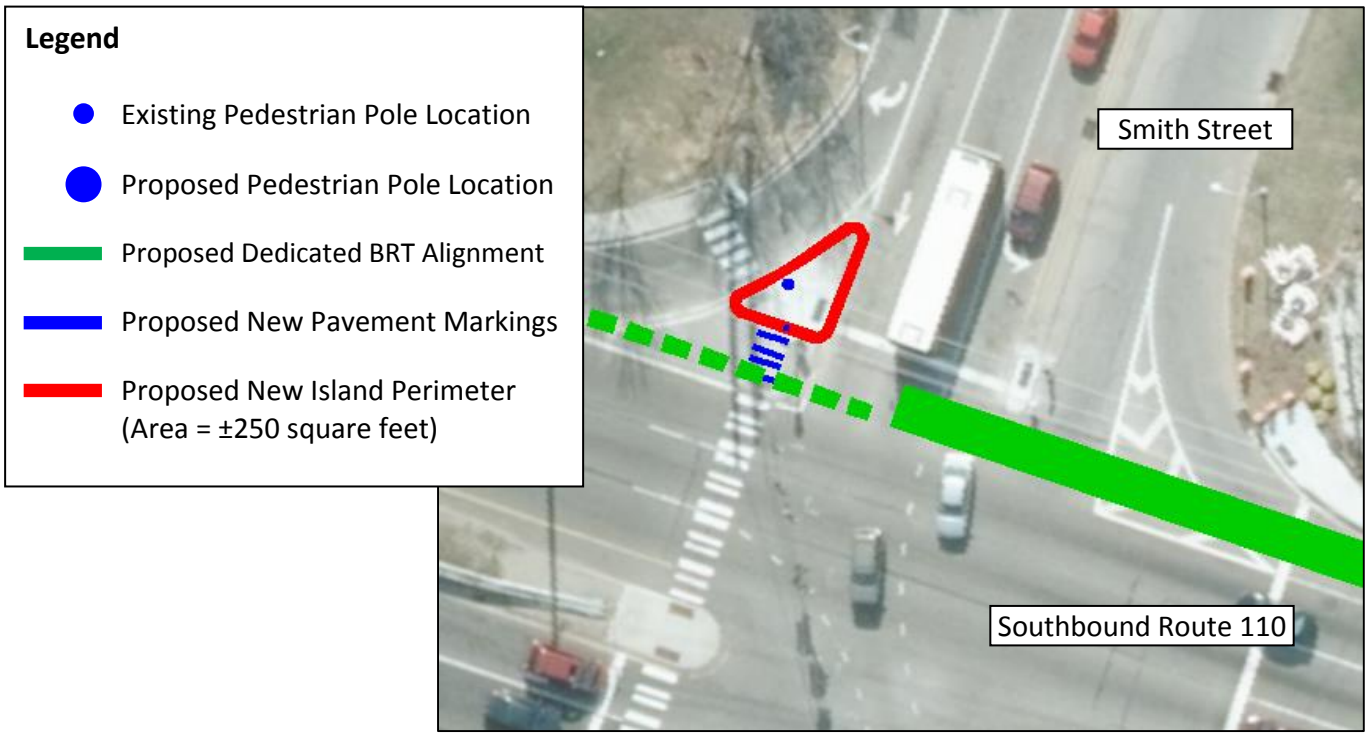
Source: Cameron Engineering (2015)

Figure 13: Route 110 Southbound Island at Milbar Boulevard/Melville Road



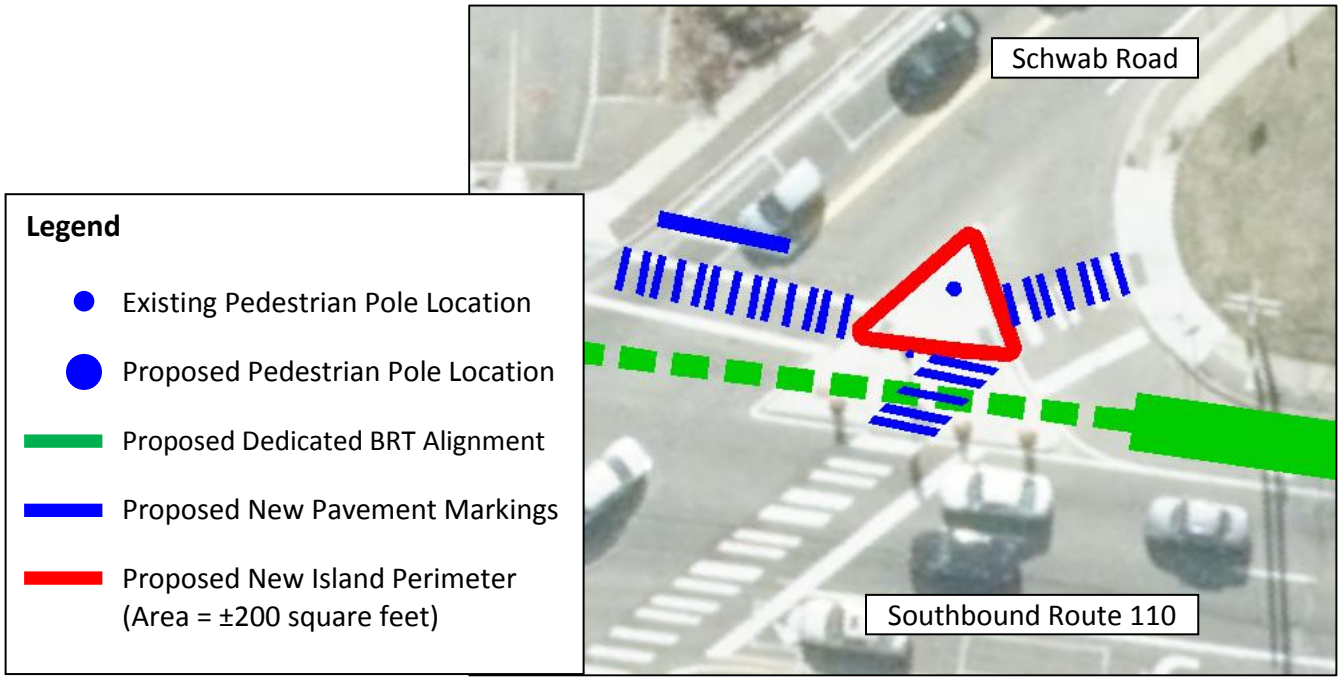
Source: Cameron Engineering (2015)

Figure 14: Route 110 Southbound Island at Smith Street



Source: Cameron Engineering (2015)

Figure 15: Route 110 Southbound Island at Schwab Road

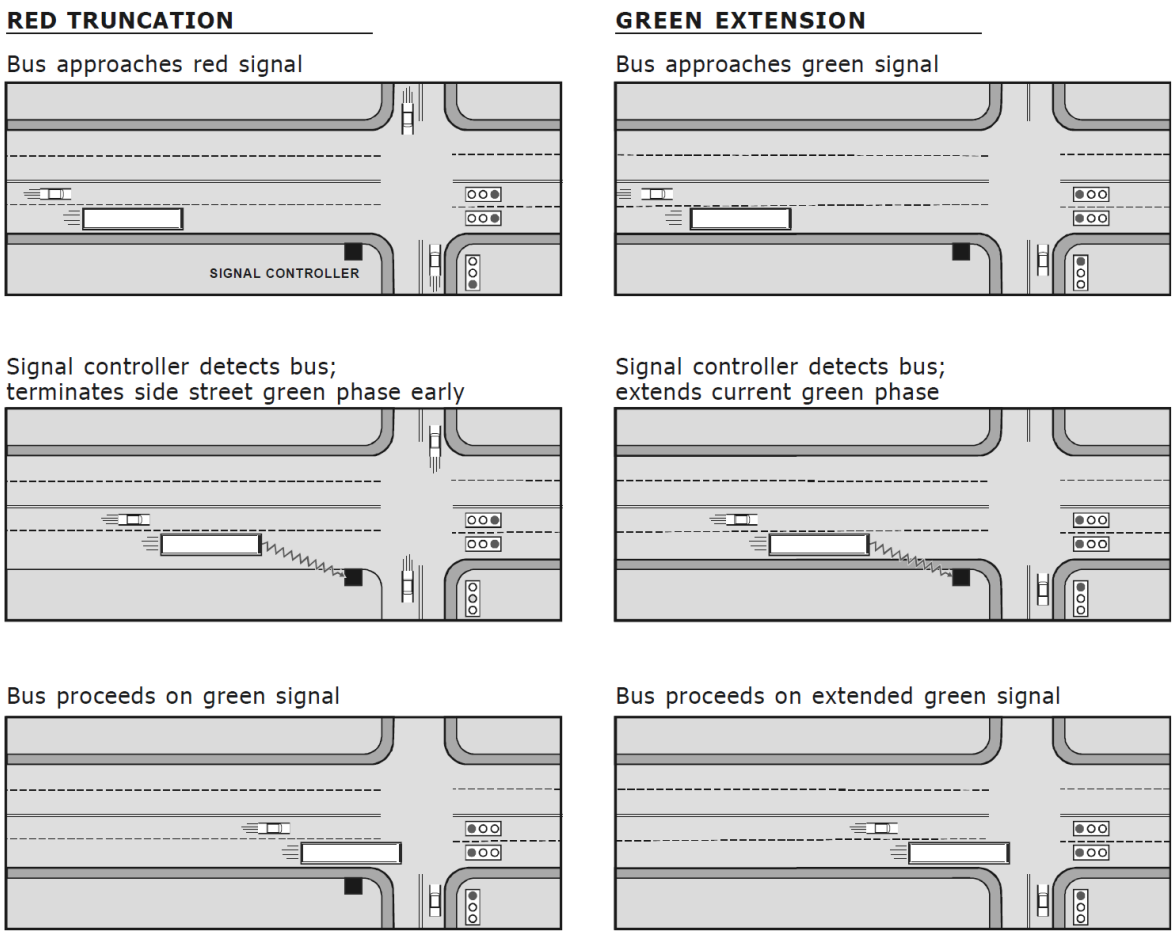


Source: Cameron Engineering (2015)

4.7 TRAFFIC SIGNAL PRIORITY (TSP)

In addition to shoulder-running, another way in which BRT results in travel time savings and faster service is through the use of TSP, which limits the waiting time at red lights. TSP can be achieved at signalized intersections through an extension of green time to allow the BRT vehicles to pass the intersection before the signal turns red, or through an earlier start of green time to allow the BRT vehicles to avoid the red light (Figure 16).

Figure 16: Schematic Representation of TSP



Source: TCRP Report 118 (2007)

Many existing traffic signals on Route 110 already have emergency pre-emption known as "Opticom" detection, which changes an approach to a green light or maintains the green light for longer periods of time to accommodate an approaching emergency vehicle. To facilitate TSP, it is proposed that mobile transmitters would be provided on each BRT vehicle, which would communicate directly with individual traffic signal controllers as the vehicle approaches each signalized intersection.

Alternative, enhanced means of communication (e.g. hard-wired communication between traffic signals and a remotely located "Priority Request Server") would require significantly more time and infrastructure for implementation, with corresponding increases in required funding. Based on preliminary discussions with NYSDOT during the Alternatives Analysis, it is unlikely that there is sufficient excess capacity in the existing fiber optic cable near Route 110. Thus, hard-wired communications capability would require new cable and associated poles or underground conduit. Enhanced communications may be revisited in the future.

Based on preliminary input from NYSDOT, all existing signal controllers along the BRT trunk route are late-model 2070 controllers that utilize up-to-date software, and it would not be necessary to replace the controllers to accept communication/pre-emption equipment. According to NYSDOT during a preliminary coordination meeting on March 11, 2015 as part of this Alternatives Analysis, certain intersections along Route 110 in the study area may not be appropriate for TSP during peak periods (in the absence of shoulder-running or queue jumps) due to high through- and cross-street traffic volumes and/or complex signal phasing. These intersections (north to south) include: Route 110 at Old Country Road; Route 110 at the LIE North Service Road; Route 110 at the LIE South Service Road; Route 110 at Conklin Street; and Route 110 at Great Neck Road. At such locations, providing an extended or early green light for a BRT vehicle well behind the stop line would potentially disrupt the signal operation by a significant amount of time for opposing/side street users, thus potentially increasing delay and congestion to unacceptable levels. However, if integrated with shoulder running or queue jumps, TSP could be feasible at these intersections. TSP could also potentially be considered at off-peak times at these intersections.

Overall, the BRT trunk route currently includes 44 signalized intersections. At this preliminary stage of analysis, TSP is proposed at each intersection, as shown on the alignment plans in Appendix A. Additional traffic analysis and coordination with NYSDOT would be required to confirm the feasibility of TSP at individual signalized intersections from an operational efficiency perspective.

Additionally, as part of the NYSDOT Route 110 Pedestrian Safety and Operational Improvements project, the following three additional intersections along Route 110 that are currently unsignalized will be converted to signalized intersections: Railroad Avenue in the Village of Amityville; Lindy Avenue/Nathalie Avenue in North Amityville; and Amityville Road North in South Huntington. TSP can be considered at these intersections during Project Development that will follow this Alternatives Analysis.

5. Preliminary Assessment of Potential Parking Impacts

The proposed dedicated BRT segments would rely heavily on utilizing roadside shoulders. A portion of these shoulder alignments currently have permitted on-street parking that would not be able to remain with a dedicated BRT lane. Therefore, a preliminary parking assessment was performed during the Alternatives Analysis to examine the potential for direct impacts to on-street parking in the segments proposed for dedicated BRT shoulder-running.

The first step in the parking assessment was an extensive data collection effort by the project team to inventory and identify all parking-related street signs along Route 110 in the segments proposed for dedicated BRT shoulder-running. On-street parking is not identified via individually marked stalls along these segments of Route 110, and thus the project team identified on-street parking through the presence of signage or the lack of restrictive signage along shoulders that are at least nine feet wide. These signs include, for example:

- No Parking Any Time / No Stopping Any Time / No Standing Any Time
- No Stopping Here to Corner
- No Parking during certain time periods (e.g., No Parking 7:00am – 10:00am)
- 1 Hour Parking, or a similar time limit

Figure 17 includes an illustrated key of each location within the dedicated alignment where parking is permitted, prohibited, or restricted.

The next step of the parking assessment was to conduct parking counts along the dedicated BRT segments of Route 110 during peak commuter periods and off-peak midday periods to gauge in-the-field parking demand. The parking observations were conducted on Wednesday, March 18, 2015 from 4:00pm – 6:00pm (the weekday evening rush hour period), and on Thursday, March 19, 2015 from 7:00am – 9:00am (the weekday morning rush hour period) and from 11:00am to 1:00pm (the midday off-peak period coinciding with “lunch hour”).

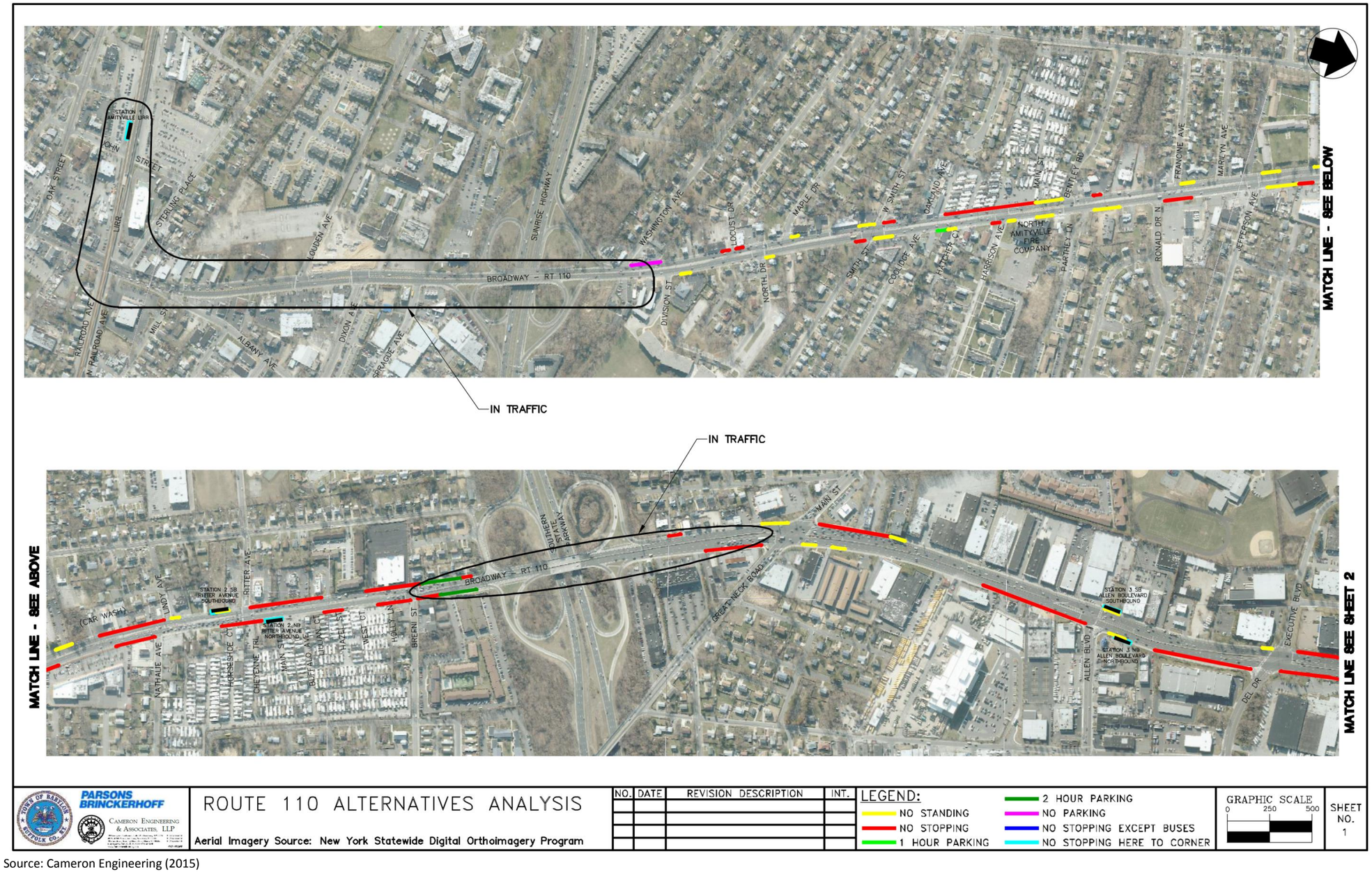
The parking counts were conducted on days with no inclement weather and minimal snow cover. Thus, the observed on-street parking logically represented typical parking demand during the recorded times of day.

The data collection included:

- Counting the number of parked vehicles within each roadway segment on both sides of the street
- Distinguishing between cars/sports utility vehicles (SUVs)/small trucks (which fit a standard 18-foot parking stall) and larger trucks/buses/tractor trailers (which would require multiple standard parking stalls)

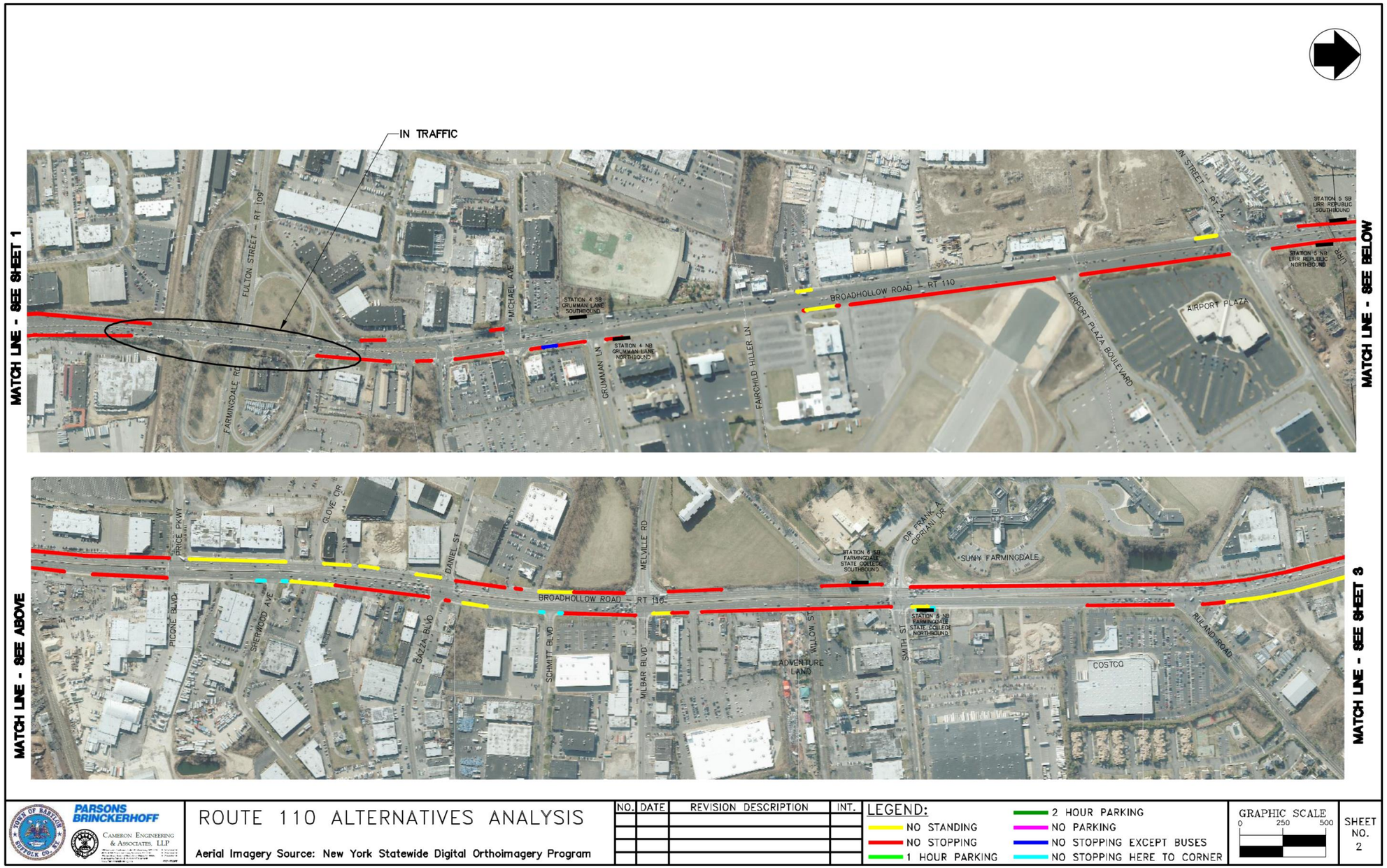
The results of the observations are tabulated in Table 4.

Figure 17: Permitted, Prohibited, and Restricted Parking



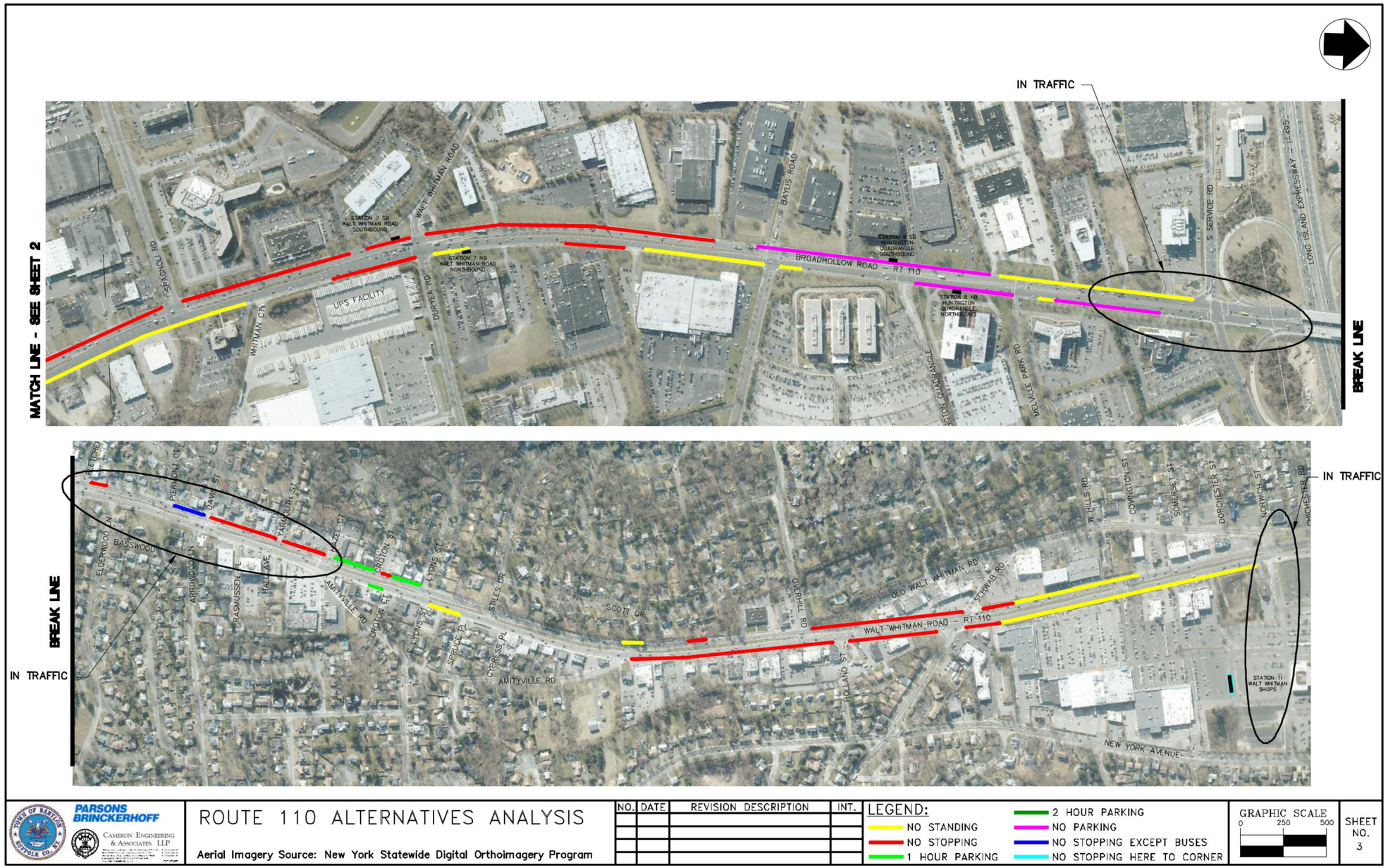
Source: Cameron Engineering (2015)
Note: Segments with no line along the shoulder correspond to segments with no identified restrictions for on-street parking.

Figure 17: Permitted, Prohibited, and Restricted Parking (Continued)



Source: Cameron Engineering (2015)
Note: Segments with no line along the shoulder correspond to segments with no identified restrictions for on-street parking.

Figure 17: Permitted, Prohibited, and Restricted Parking (Continued)



Source: Cameron Engineering (2015)
Note: Segments with no line along the shoulder correspond to segments with no identified restrictions for on-street parking.

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Table 4: Peak Parking Observations

Dedicated BRT Segments:	West Side of Route 110 (adjacent to southbound)	East Side of Route 110 (adjacent to northbound)
Division Street to North Drive	-	3 cars
Washington Avenue to Locust Drive	9 cars	-
Locust Drive to Maple Drive	5 cars and 1 large truck	-
North Drive to Smith Street	-	2 cars OR 1 large truck
Maple Drive to W Smith Street	1 car	-
W Smith Street to Coolidge Avenue/Oakland Avenue	4 cars and 1 large truck	1 large truck
Hatcher Court to Harrison Avenue	-	2 cars
Ronald Drive N. to Jefferson Avenue	-	1 car
Marilyn Avenue to Lindy Avenue	3 cars and 1 large truck	-
Lindy Avenue to Ritter Avenue	2 cars	-
Ritter Avenue to Brefni Street	1 large truck	4 cars and 2 large trucks
Brefni Street to Route 109	6 cars	-
Southern State to Great Neck Road	4 cars	-
Great Neck Road to Allen Boulevard	1 car	4 cars
Allen Boulevard to Del Drive	1 car	-
Route 109 to Michael Avenue	1 car	1 large truck
Michael Avenue to Conklin Street	1 car	-
Picone Boulevard to Sherwood Avenue	-	2 cars
Sherwood Avenue to Gazza Boulevard	-	1 large truck
Melville Road/Milbar Boulevard to Willow Street	*16 cars (summer projection)*	-
Willow Street to Smith Street	-	1 large truck
Cipriani Drive to Spagnoli Road	1 large truck	-
Ruland Road to Whitman Court	-	3 cars and 2 large trucks
Whitman Court to Duryea Road	-	1 large truck
Snyder Street to Arlington Street	9 cars	-
Fletcher Place to Piermont Court	1 car	-
Hazel Court to Croton Street	3 cars	-
Amityville Road to Croton Court	-	6 cars and 1 large truck OR 8 cars
Stiles Drive to Overhill Road	5 cars	-
Cypress Place to Amityville Road	-	9 cars
Amityville Road to Schwab Road	-	2 cars
Old Walt Whitman Road to Schwab Road	1 large truck	-
Schwab Road to Walt Whitman Mall Entrance	1 large truck	-
Total Potential Yield Loss	79 vehicles	49 vehicles
	128 vehicles	
Utilizing 2 spaces per large truck:	86 spaces	58 spaces
	144 spaces	

Source: Cameron Engineering & Associates, conducted Wednesday, March 18, 2015 from 4:00pm – 6:00pm (the weekday evening rush hour period), and on Thursday, March 19, 2015 from 7:00am – 9:00am (the weekday morning rush hour period) and from 11:00am – 1:00pm (the midday off-peak period coinciding with "lunch hour")

Anecdotally, there was one known difference between the observed parking demand and summertime parking demand, specifically along the east side of Route 110 (northbound) between Melville Road/Milbar Boulevard and Smith Street. This segment is fronted by Adventureland, a local amusement park whose visitors are known to utilize on-street parking during the summer months. The segment is signed further south as "No Stopping" but is known to be utilized for overflow parking for Adventureland. Therefore, to be conservative, the entire fronting segment (220 feet and 125 feet on either side of the Adventureland driveways) was considered to be fully occupied (16 cars) for the purposes of the parking assessment.

It should be noted that the presence of parked vehicles would not necessarily indicate that removing the on-street parking would result in an impact to the fronting uses. Many buildings along the relevant segments of Route 110 have off-street parking lots, and therefore the availability of on-street parking could provide additional capacity. However, some observed parked vehicles were tractor trailers, or vehicles with relatively large turning radii that cannot necessarily maneuver into off-street parking lots.

Based on the availability of off-street parking, side street parking, and/or residential driveways, it was determined during this preliminary parking assessment that the removal of on-street parking at the following locations could potentially result in impacts to the fronting uses:

- 707 Walt Whitman Road, Melville: west (southbound) side of Route 110, three cars observed between Hazel Court and Croton Street
- 7-11 at 7 Ruland Road (northeast corner of Route 110): east (northbound) side of Route 110, two to three large trucks observed.
- Adventureland: the fronting shoulder can be utilized for up to 16 cars

The total potential parking impact is summarized in Table 5. Overall, the potential loss of 22 parking spaces is relatively small considering the full BRT trunk route exceeds 10 miles in length.

Table 5: Calculated Potential Parking Impact

Locations without off-street parking:[1]	Observed/Projected Parking
707 Walt Whitman Road, Melville	3 cars
7-11 at 7 Ruland Road	3 trucks
Adventureland	16 cars (projected)
Total Potential Yield Loss	**22 vehicles**

[1] The segment between Brefni Street and Ritter Avenue was excluded from the "potential parking impact" analysis because the planned Greybarn development will include off-street parking.

It is recommended that a detailed parking study be completed following this Alternatives Analysis to conclusively determine whether the proposed project would result in any adverse impacts to on-street parking, including consideration of the availability (and excess capacity based on existing occupancy/utilization) of off-street parking to mitigate the loss of on-street parking. Such a parking study could build upon the recent New York Metropolitan Transportation Council (NYMTC)-sponsored parking management workshop (May 2015) in the East Farmingdale community.

6. Constructability Review

The pre-construction phase will likely begin with value planning and a review of field conditions to make sure that standard construction methods and practices can be utilized.

At this preliminary stage, based on local knowledge and on the scope of anticipated construction, the project team is not aware of any areas that will require special techniques or mitigation measures. One notable item at the 10% level relates to construction and preparation of the Route 110 shoulders, as described below.

6.1 USE OF ROUTE 110 SHOULDERS FOR EXCLUSIVE BRT USE

An important design element for the Route 110 BRT trunk route alignment is proposed colored pavement treatment for the dedicated BRT lanes. The color would distinguish these lanes from the rest of the travel way, which assists system branding and discourages unauthorized use of the dedicated lanes.

The approach to determine how to apply the colored pavement treatment was based on a 2012 research study (*Red Bus Lane Treatment Evaluation*) prepared by the New York City Department of Transportation (NYCDOT). The NYCDOT had installed colored bus lanes at a number of locations starting in 2008, and conducted the study to evaluate its colored pavement installations with respect to ease of maintenance, cost-effectiveness, skid resistance, and useful life (termed in the study as “visual durability”). Based on field observations as well as laboratory tests, the NYCDOT study identified preferred products and installation procedures for different types of pavement surface conditions (e.g., new as opposed to in-place asphalt and/or concrete pavement). While New York City bus lanes may be subject to heavier traffic than the proposed Route 110 BRT lanes, the NYCDOT research nonetheless provided a solid basis for the dedicated lane design approach.

The NYCDOT found that a cost-effective method for existing asphalt pavement is a colored epoxy-based street paint; the same product type was considered for the Route 110 dedicated BRT lanes. A critical point in the City’s research is that the paint’s useful life depends greatly on the condition of the underlying pavement. Older pavement surfaces are typically worn (less skid resistant), rutted, uneven, cracked, and/or have potholes, which significantly reduce surface paint’s useful life. In the NYCDOT research, new pavement typically yielded a 3-5 year useful paint life (with a 2-3 year lifespan at bus stops) while the useful life was less than 1 year for existing asphalt surfaces. Notwithstanding the ease of application and corresponding “short down time” for applying surface paint, it was preferable to extend the paint’s useful life in a cost-effective manner, considering the replacement of the top pavement layer(s) throughout the dedicated BRT section prior to applying the surface paint.

The means of pavement replacement depend on the material and pavement thickness of the shoulders. Based on the shoulders and right turn lanes being constructed with full-depth pavement (see below), the recommendation for Route 110 is to consider a typical two-inch “mill-and-fill” project prior to surface painting. Mill-and-fill entails removal of the top layer of asphalt, followed by repaving with a matching asphalt thickness. The end result maintains existing grades and spot

elevations. An alternative and longer-lasting approach to surface painting that could be considered in Project Development is to use colorized asphalt when milling and resurfacing the pavement, as in London and Tokyo. Additionally, during Project Development, there can be consideration for installing concrete roadway pads at BRT stations to accommodate the increased wear at these areas, especially if the BRT vehicles must merge back into a general use lane.

6.1.1 Route 110 Shoulder Construction

The 2012 NYSDOT *Pavement Data Report* indicates that Route 110 is constructed as asphalt overlay on top of concrete pavement, and the most recent reconstruction entailed mill and fill.

Along the same lines, the NYSDOT *Pavement Design Manual* (Table 6) identifies features which require full-depth shoulders, and the Route 110 shoulders satisfy these conditions:

- The shoulders are wider than 4 feet and have a concrete base.
- Per the NYSDOT 2011 Traffic Data Report (the latest available as the time of completion of this technical memorandum), principal artery roads like Route 110 typically have a 5.7% truck component, and the minimum 24-hour average daily traffic volume is 35,000 vehicles per day. The product of these numbers (i.e., 35,000 x 5.7% = 1,995) exceeds the Pavement Design Report threshold of 600.

To summarize, the anticipated dedicated BRT lane construction considers mill and fill pavement restoration, based on the existing shoulders being comprised of full-depth pavement. Based on local knowledge and NYSDOT documentation, it is anticipated that the shoulders along Route 110 can physically accommodate daily BRT traffic without the need for full-depth repairs or pavement replacement, but pavement cores would inherently be taken during formal design to confirm this. In the event that the existing shoulders are partial-depth asphalt (not anticipated), more material would need to be replaced for the shoulders to accommodate frequent BRT traffic.

Table 6: Excerpts of NYSDOT *Pavement Design Manual*

CRITERIA	SHOULDER DESIGN
PCC mainline - shoulder widths greater than 1.2 m	Full-depth PCC shoulder - longitudinally tied joints, transverse load transfer dowels in 600 mm extension section of shoulder only, refer to Fig.7-1 or Full-depth HMA shoulder when the HMA portion is wider than 1.2 m *(see Section 7.2 for when to use PCC or HMA Shoulders)*, refer to Fig. 7-2 or Full-depth PCC shoulder when the combined lane and shoulder width is 5.5 m or less - no longitudinal joint between mainline and shoulder, cross-slope break at edge of traveled way, refer to Fig.7-3
HMA mainline - having an (AADT x % trucks)* greater than 600	Full-depth HMA shoulder, refer to Fig.7-4

Source: NYSDOT Pavement Design Manual, Table 7--1

7. Capital Cost Estimate

Order-of-magnitude capital cost estimates were prepared for the two Short List Alternatives using current available unit prices (in 2015 dollars) that are typical for the Suffolk County/Long Island area, sourced from recent documents including the *Route 110 BRT Study*, the *Suffolk County BRT Feasibility Study*, the Suffolk County application for BRT funding from the Transportation Alternatives Program (TAP), and the NYSDOT Weighted Average Bid Prices for Region 10 (which covers Nassau and Suffolk Counties).

The total order-of-magnitude capital cost for each of the Short List Alternatives was calculated as the sum of associated costs for the BRT trunk route and the respective feeder routes. The order-of-magnitude capital cost estimate for the BRT trunk route was based on the 10% conceptual engineering completed in this Alternatives Analysis and documented in this technical memorandum. The order-of-magnitude capital cost estimates for the feeder routes were based on station and vehicle requirements summarized below, as well as assumptions regarding necessary easements for feeder route station infrastructure.

The capital costs were estimated according to the FTA's Standard Cost Categories (SCC), which offer a consistent format for the reporting of capital costs. The SCCs include several items related to construction (i.e., guideway, stations, support facilities, sitework and special conditions, and systems), as well as right-of-way costs, vehicle costs, soft costs/professional services, and contingency. Consistent with *FTA Project and Construction Management Guidelines* (2003), contingency is highest at this conceptual level of design because of the high degree of uncertainty in order-of-magnitude capital cost estimates.

7.1 GENERAL METHODOLOGY AND CONSIDERATIONS

Capital cost projections reflect the sum of two different overall components:

- "Hard costs" reflect physical construction (utility installation/modifications, signal equipment, roadway modifications, signs, striping, etc.), BRT vehicle and communication equipment purchases.
- "Soft costs" reflect the engineering design and review, the survey effort to obtain basemap data, insurance, financing, legal fees, and mobilization costs for the future contractor(s).

In this capital cost estimate, hard costs for the BRT trunk route are calculated based on the 10% conceptual engineering plans, plus percentages applied to the subtotal to reflect soft costs and various contingencies. Specifically, hard costs were calculated based on the following steps:

- Determine raw quantity take-offs based on the 10% conceptual engineering plans, and apply 10% contingency quantity to reflect the preliminary nature of the basemapping to date
- Calculate line item costs as unit prices multiplied by the 10% expanded quantities
- Round to the next $1,000 or the next appropriate factor

A sample calculation is as follows:

- If asphalt pavement has a unit cost of $30 per square yard and the raw quantity is 500 square yards, the 10% surplus quantity would be (500 x 1.1) 550 square yards
- 550 square yards, multiplied by $30 per square yard, equals $16,500
- Rounding to the next $1,000 yields a cost of $17,000

Soft costs/professional costs were set at 35% of the subtotal of direct capital costs. This includes professional services (survey, engineering design, and plan production). Based on localized adjustments to the information in the guidebook, *TCRP Report 138: Estimating Soft Costs for Major Public Transportation Fixed Guideway Projects*, the 35% contingency is currently broken down as follows (but is subject to subsequent revision):

- 17% Project Development
- 8% Project management for design and construction
- 6% Construction administration and management
- 2.5% Professional liability and other non-construction insurance
- 0.5% Legal; permits; review fees by other agencies, cities, etc.
- 0.5% Surveys, testing, investigation, inspection
- 0.5% Start Up

At this high level of planning, it was necessary to allocate large contingencies to the final projected costs. Specifically, the contingency was set as 40% of the subtotal of direct and soft costs. This is a reasonable contingency level given the preliminary nature of the plans to date, which are based on 10% level conceptual engineering on aerial photographs and partial NYSDOT plan data. As the underlying survey data and engineered plans are fully developed in Project Development, the contingency naturally decreases to signify higher confidence in the projected quantities.

7.2 CAPITAL COST ESTIMATES

As shown in Table 7, the total order-of-magnitude capital costs for Alternatives D and E are approximately $34.9 million and $35.8 million, respectively. This includes a combination of the BRT trunk route and the associated feeder routes for each alternative.

Table 7: Summary of Order-of-Magnitude Capital Cost Estimates for Short List Alternatives (Million 2015$)

Route	Alternative D	Alternative E
Subtotal, Feeder Routes	$6.92	$7.81
Subtotal, BRT Trunk Route	$27.97	$27.97
Total, BRT and Feeder Routes	**$34.89**	**$35.78**

Source: Suffolk County, Parsons Brinckerhoff, Cameron Engineering (2015)

The order-of-magnitude capital cost estimate for the BRT trunk route—which is the same for the two Short List Alternatives—is approximately $28.0 million. As summarized in Table 8, this total cost includes approximately $9.8 million in construction costs and $6.8 million in vehicle costs, with the balance covering soft costs/professional services and contingencies. (A detailed line item and FTA format capital cost estimate based on the 10% conceptual engineering is provided in Appendix E.) As a supplement to Table 8, an order-of-magnitude capital cost estimate was also prepared for the longer-term BRT elements of off-board fare collection, level boarding, and pedestrian improvements at station-area intersections (Table 9).

Table 8: Order-of-Magnitude Capital Cost Estimate for BRT Trunk Route

FTA SCC Item	Total Cost (2015$)
Guideway [Roadway improvements including pavement replacement/painting, signage and striping and work zone traffic control]	$6,110,000
Stations [Shelters, lighting, communications, sidewalk improvements, bike racks, landscaping, signage]	$2,800,000
Support Facilities[1] [Maintenance and Storage Yard]	$0
Sitework and Special Conditions [Median island improvements and pavement replacement]	$280,000
Systems [Signals improvements and TSP]	$610,000
Construction Subtotal	**$9,800,000**
Right-of Way (ROW)[2] [Property Acquisition/Easements]	$0
Vehicles[1] 9 BRT vehicles	$6,750,000
Subtotal (Construction + ROW + Vehicles)	**$16,550,000**
Soft Costs/Professional Services (35% of construction subtotal)	$3,430,000
Contingency (40%)	$7,990,000
Total (2015$)	**$27,970,000**

Source: Suffolk County, Cameron Engineering, Parsons Brinckerhoff (2015)

[1] Support facilities have an estimated capital cost of $0 because based on preliminary discussions with Suffolk County Transit, it is assumed that existing maintenance and storage facilities can accommodate the required BRT vehicles.

[2] ROW has an estimated capital cost of $0 because it is assumed that the BRT trunk route would not require any property acquisition or easements.

Table 9: Order-of-Magnitude Capital Cost Estimate for Longer-Term BRT Elements

Element	Unit	Quantity	Unit Cost (2015$)	Total (2015$)
Level boarding and pedestrian improvements at station-area intersections[1]	Intersections	11	$170,000	$1,870,000
Off-board fare collection[2]				
Ticket vending machines	2 per station	40	$65,000	$2,600,000
Station hardware / software	Stations	11	$25,000	$275,000
Garage hardware / software	N/A	1	$50,000	$50,000
Central hardware / software	N/A	1	$300,000	$300,000
			Subtotal (2015$)	**$5,095,000**
Soft Costs/Professional Services (35% of Subtotal)				**$1,780,000**
Contingency (40%)				**$2,750,000**
			Total (2015$)	**$9,625,000**

[1] Source: Parsons Brinckerhoff (2015); unit cost for level boarding excludes precision docking
[2] Source: *Characteristics of Bus Rapid Transit for Decision-Making* (FTA, 2009)

As shown in Table 9, the order-of-magnitude capital cost estimate for the longer-term BRT elements—which are the same for the two Short List Alternatives—is approximately $9.6 million. This total cost includes approximately $5.1 million for off-board fare collection, level boarding, and pedestrian improvements at station-area intersections, with the balance covering soft costs/professional services and contingencies. The approximately $9.6 million capital cost for these longer-term BRT elements would be on top of the approximately $28.0 million capital cost for the other elements of the BRT trunk route.

The capital cost estimates for the two Short List Alternatives are presented in Table 10. The overall cost includes the approximately $28.0 million capital cost of the BRT trunk route, as well as the capital costs of the feeder routes. The capital cost of Alternative E (approximately $35.8 million) is approximately $0.9 million higher than the capital cost of Alternative D (approximately $34.9 million). This is due to differences in the vehicle requirements and number of stations for the two Short List Alternatives, which are discussed in the Task 9 Technical Memorandum. Unlike the BRT trunk route stations, which will primarily be co-located with existing Suffolk County Transit stops, most of the feeder route stations will be located where there is currently no bus stop. Therefore, to be conservative, it is assumed that the feeder route stations would require easements to accommodate the shelters. Based on preliminary discussions with Suffolk County Transit, it is assumed that existing maintenance and storage facilities can accommodate the required feeder buses for either alternative.

Table 10: Order-of-Magnitude Capital Cost Estimate for Short List Alternatives

FTA Standard Cost Category (SCC) Item	Total Cost (2015$)	
	Alternative D	Alternative E
Stations [Shelters, lighting, communications, sidewalk improvements, bike racks, landscaping, signage]	$2,530,000	$2,630,000
Construction Subtotal	**$2,530,000**	**$2,630,000**
ROW [Property Acquisition/Easements]	$270,000	$280,000
Vehicles[1]	$1,250,000	$1,750,000
Subtotal (Construction + ROW + Vehicles)	**$4,050,000**	**$4,660,000**
Soft Costs/Professional Services (35% of construction subtotal)	$890,000	$920,000
Contingency (40%)	$1,980,000	$2,230,000
Subtotal, Feeder Routes (2015$)	**$6,920,000**	**$7,810,000**
Subtotal, BRT Trunk Route (2015$)	**$27,970,000**	**$27,970,000**
Total (2015$)	**$34,890,000**	**$35,780,000**

Source: Suffolk County, Cameron Engineering, Parsons Brinckerhoff (2015)
[1] Alternative D requires 10 feeder buses, and Alternative E requires 14 feeder buses.

For both the BRT trunk route and the feeder routes, the fleet requirement was calculated as cycle time divided by headway during the peak period, rounded up, with 20% spares. Based on this calculation, nine BRT vehicles are required for the trunk route, and either 10 shuttle buses (Alternative D) or 14 shuttle buses (Alternative E) are required for the feeder routes, which differ for the two alternatives.

For both alternatives, it is currently assumed that half of the feeder route station locations would include a shelter because the feeder routes would not warrant a shelter at every stop based on projected ridership (Task 10). During Project Development, this assumption can be revisited, and the specific station locations that would include a shelter can be identified.

Overall, the estimated order-of-magnitude capital costs for the two alternatives are comparable, and thus capital cost is not a differentiating factor between the two alternatives.

8. Conclusion

This technical memorandum presented the methodology and results of the conceptual engineering for the Route 110 BRT trunk route. This effort included the preparation of alignment plans and station plans at a 10% level of engineering, which generally depicted the elements of the proposed project in enough detail to estimate order-of-magnitude capital costs and identify potential geometric design constraints.

Following completion of the Alternatives Analysis, the Preliminary Engineering in Project Development will entail site-specific topographic and right-of-way survey and basemapping as necessary to complete approximately 30% engineering for all capital components of the proposed project, including—but not limited to—roadway improvements (such as pavement replacement/painting, signage, striping), stations and the associated passenger amenities, pedestrian infrastructure, and utility relocation.

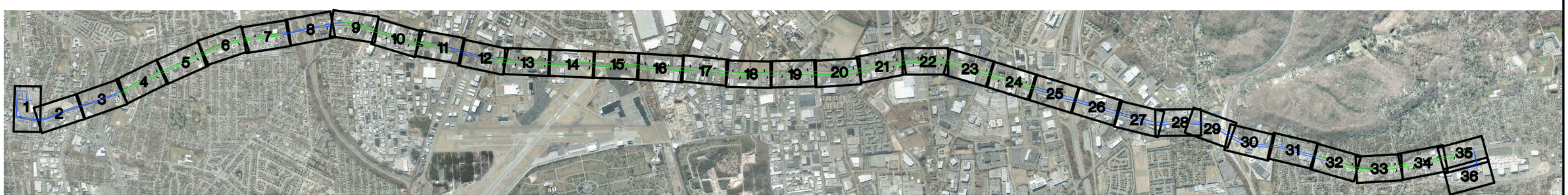
Following completion of Preliminary Engineering, the Final Design in Project Development will entail the production of all plans and specifications necessary for construction, showing dimensions, elevations, sections, and other details as applicable (e.g., construction phasing and sequencing). This will include coordination across a range of disciplines, potentially including planning, traffic/civil/structural/mechanical/electrical engineering, and architecture for all applicable capital components of the proposed project.

The estimated capital cost for the proposed project will be refined as necessary during Preliminary Engineering and Final Design.

Appendix A:
10% Conceptual Engineering Alignment Plans

ROUTE 110 ALTERNATIVES ANALYSIS
BUS RAPID TRANSIT (BRT)
PROPOSED ALIGNMENTS & STATIONS

LIST OF STATIONS		
STATION NO	NAME	SHEET NO
1	LIRR AMITYVILLE	1
2 SB	RITTER AVENUE SOUTHBOUND	7
2 NB	RITTER AVENUE NORTHBOUND	7
3 SB	ALLEN BOULEVARD SOUTHBOUND	10
3 NB	ALLEN BOULEVARD NORTHBOUND	10
4 SB	GRUMMAN LANE SOUTHBOUND	13
4 NB	GRUMMAN LANE NORTHBOUND	13
5 SB	LIRR REPUBLIC (FUTURE) SOUTHBOUND	16
5 NB	LIRR REPUBLIC (FUTURE) NORTHBOUND	16
6 SB	SMITH STREET - FARMINGDALE STATE COLLEGE SOUTHBOUND	19
6 NB	SMITH STREET - FARMINGDALE STATE COLLEGE NORTHBOUND	19
7 SB	WALT WHITMAN ROAD/DURYEA ROAD SOUTHBOUND	22
7 NB	WALT WHITMAN ROAD/DURYEA ROAD NORTHBOUND	22
8 SB	HUNTINGTON QUADRANGLE SOUTHBOUND	24
8 NB	HUNTINGTON QUADRANGLE NORTHBOUND	24
9 SB (ALT D)	PINELAWN ROAD SOUTHBOUND (ALT D)	27
9 NB	PINELAWN ROAD NORTHBOUND	27
9 SB (ALT E)	PINELAWN ROAD/TRANSIT CENTER SOUTHBOUND (ALT E)	28
10 SB	MELVILLE MALL SOUTHBOUND	30
10 NB	MELVILLE MALL NORTHBOUND	30
11	WALT WHITMAN SHOPS	36



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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

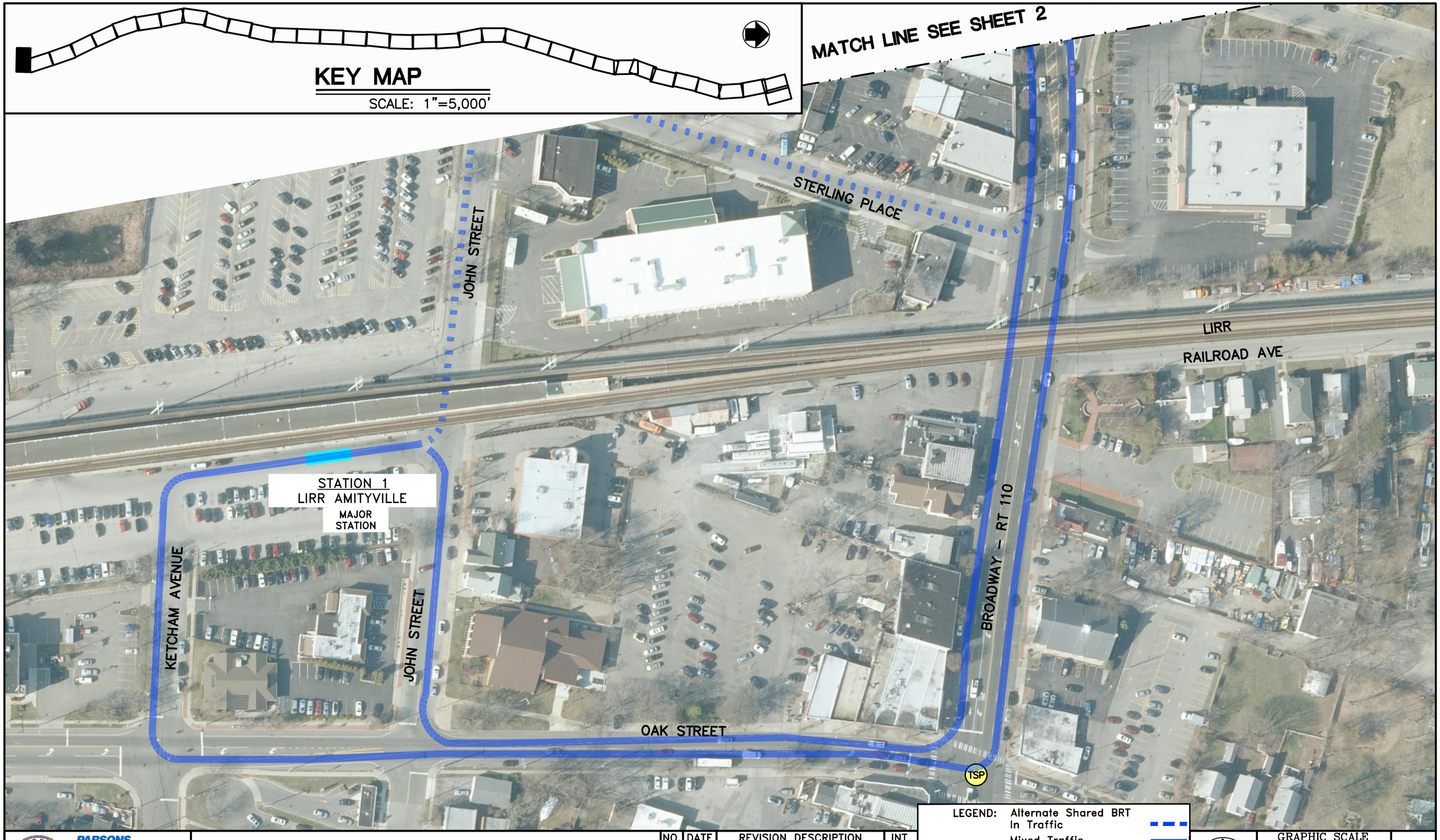
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND: Mixed Traffic
Dedicated BRT Lane

GRAPHIC SCALE
0 1750 3500

MAY 2015

SHEET NO. COVER



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ROUTE 110 ALTERNATIVES ANALYSIS

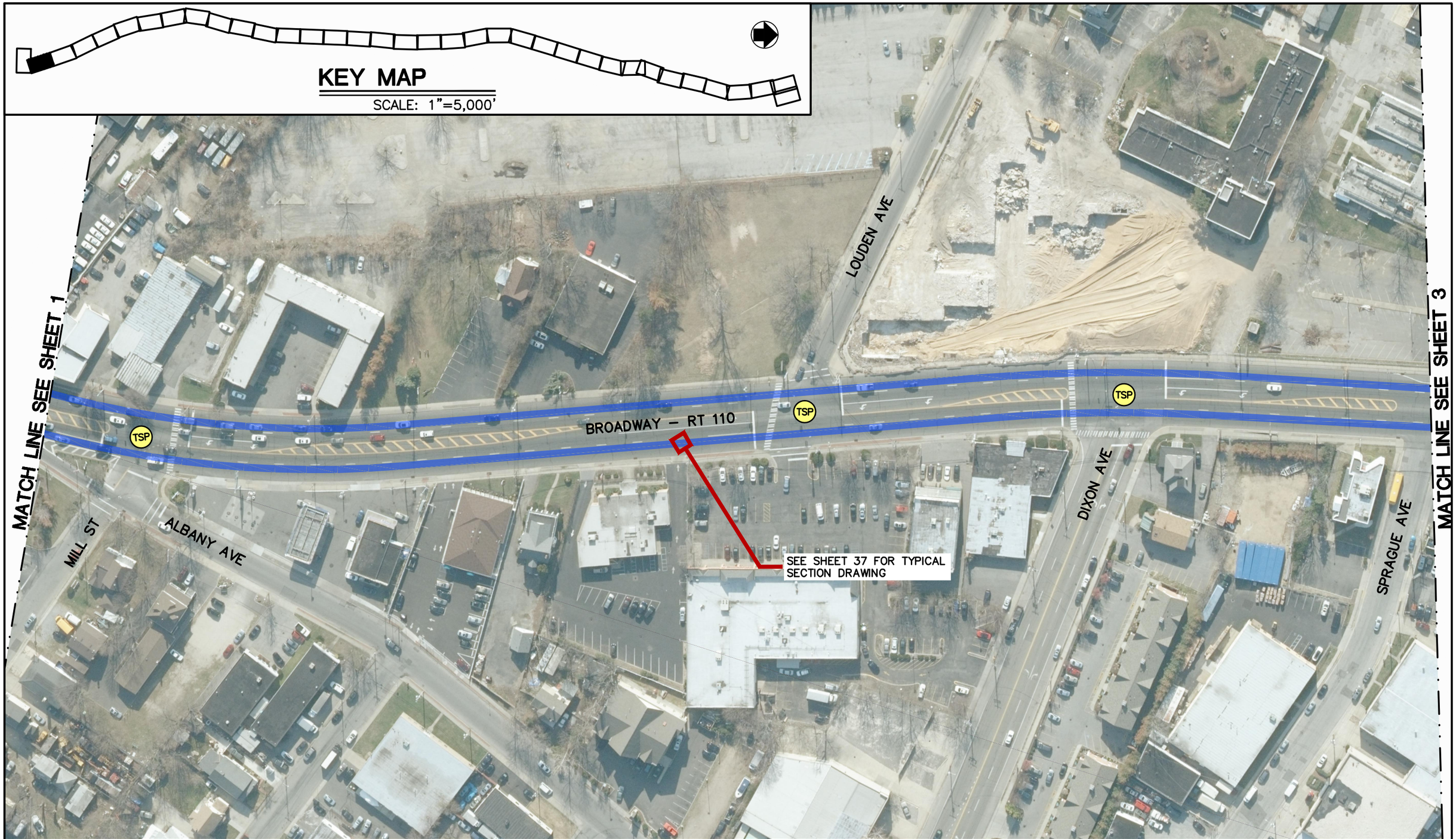
Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

NO.	DATE	REVISION DESCRIPTION	INT.

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 1



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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

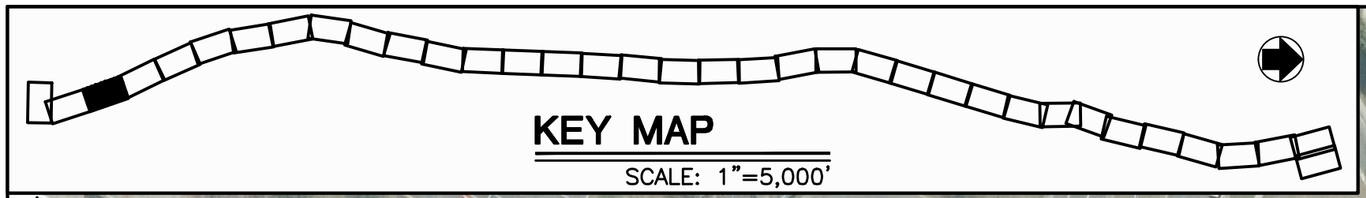
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 2



KEY MAP

SCALE: 1"=5,000'

MATCH LINE SEE SHEET 2

SUNRISE HIGHWAY

BROADWAY – RT 110

WASHINGTON AVE

MATCH LINE SEE SHEET 4

DIVISION ST

RIGHT LANE

BRT ONLY

ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

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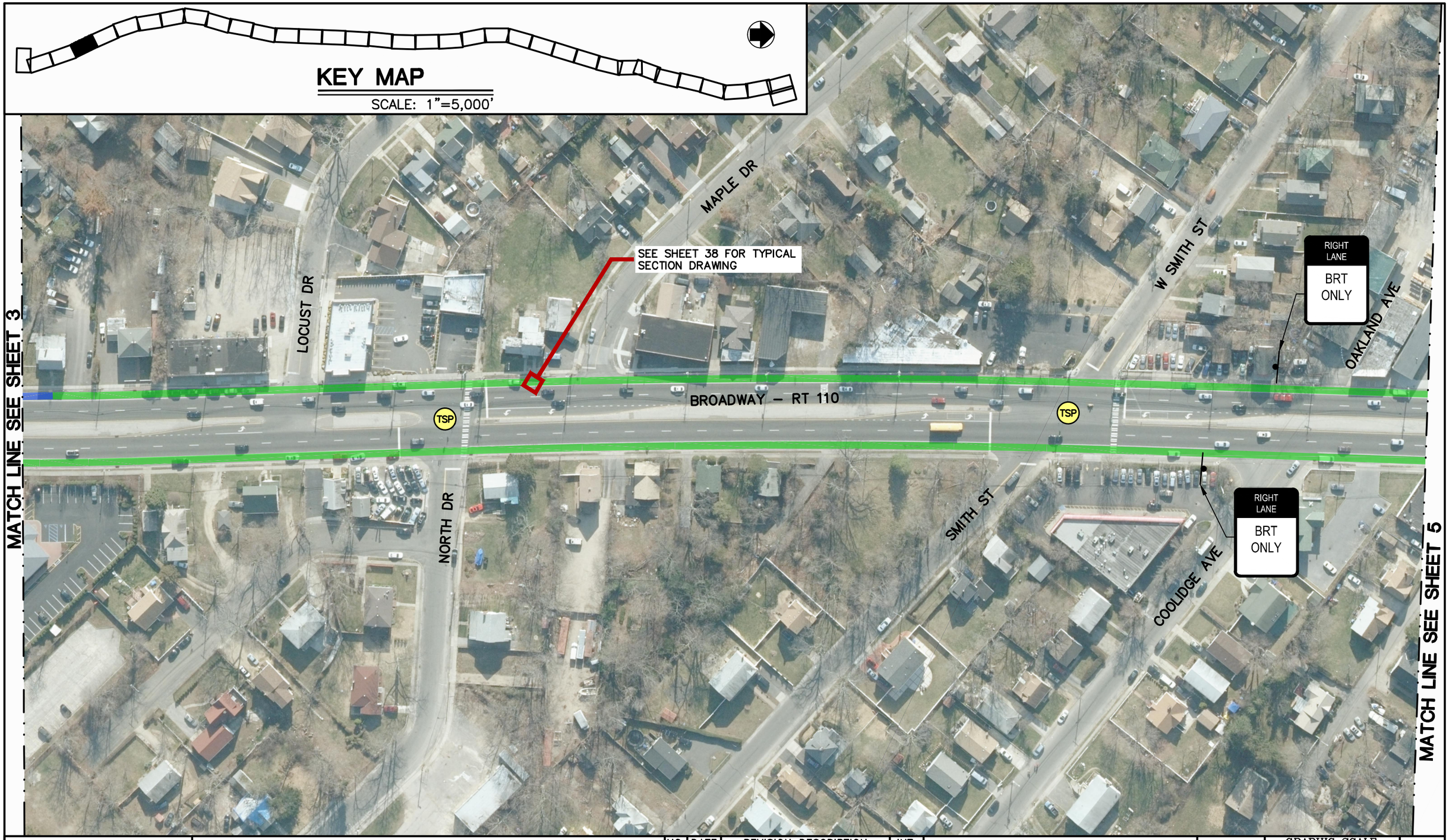
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 3



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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

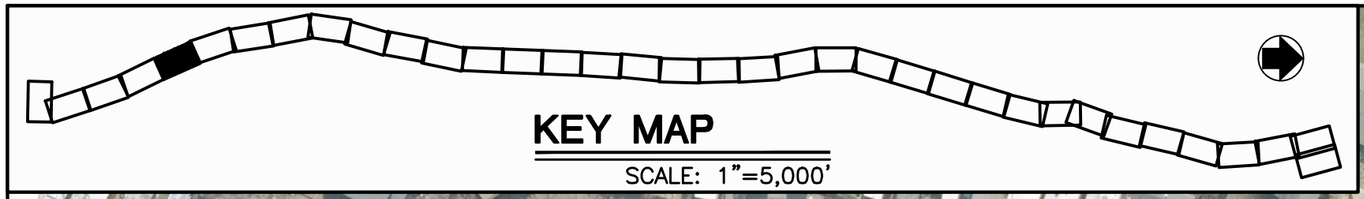
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 4



KEY MAP

SCALE: 1"=5,000'

MATCH LINE SEE SHEET 4

MATCH LINE SEE SHEET 6

MAIN ST

BENTLEY RD

FRANCINE AVE

BROADWAY – RT 110

TSP

TSP

RIGHT LANE
BRT ONLY

RIGHT LANE
BRT ONLY

HATCHER CT

HARRISON AVE

NORTH AMITYVILLE FIRE COMPANY

PARTHEY LN

RONALD DR N

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ROUTE 110 ALTERNATIVES ANALYSIS

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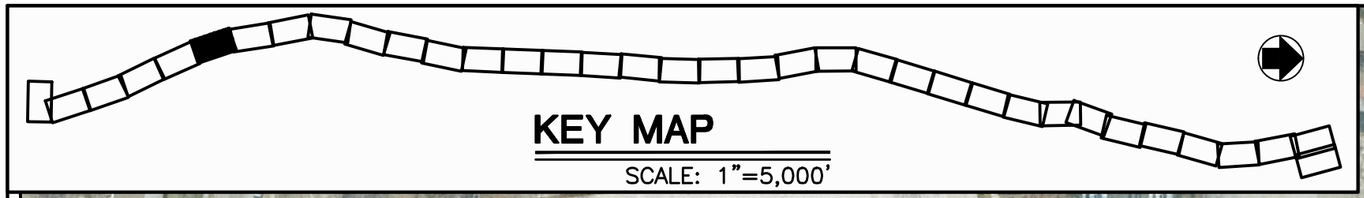
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 5



KEY MAP

SCALE: 1"=5,000'



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ROUTE 110 ALTERNATIVES ANALYSIS

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NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 6

KEY MAP

SCALE: 1"=5,000'

MATCH LINE SEE SHEET 6

MATCH LINE SEE SHEET 8

SEE SHEET 40 FOR TYPICAL SECTION DRAWING

STANDARD STATION

STATION 2 SB
RITTER AVENUE
SOUTHBOUND

RITTER AVE

RIGHT LANE MUST TURN RIGHT

EXCEPT BUSES

TSP

BROADWAY – RT 110

RIGHT LANE

BRT ONLY

TSP

HORSESHOE CT

CHEYENNE TRL

STATION 2 NB
RITTER AVENUE
NORTHBOUND

STANDARD STATION

MAIN ST

BUFFALO AVE

LILLIAN CT

HAZEL ST

WEST CT

HOLLY LN

SHIFT NON–BRT STOP LINE ±50'

BREFNI ST

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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

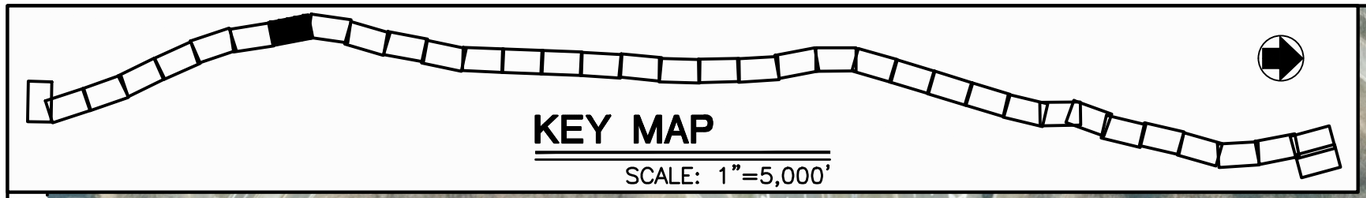
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 7



KEY MAP

SCALE: 1"=5,000'

MATCH LINE SEE SHEET 7

SOUTHERN STATE PARKWAY

BROADWAY – RT 110

BROADHOLLOW ROAD – RT 110

SOUTHERN STATE PARKWAY

MATCH LINE SEE SHEET 9

TOWN OF BABYLON SUFFOLK CO., NY.

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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

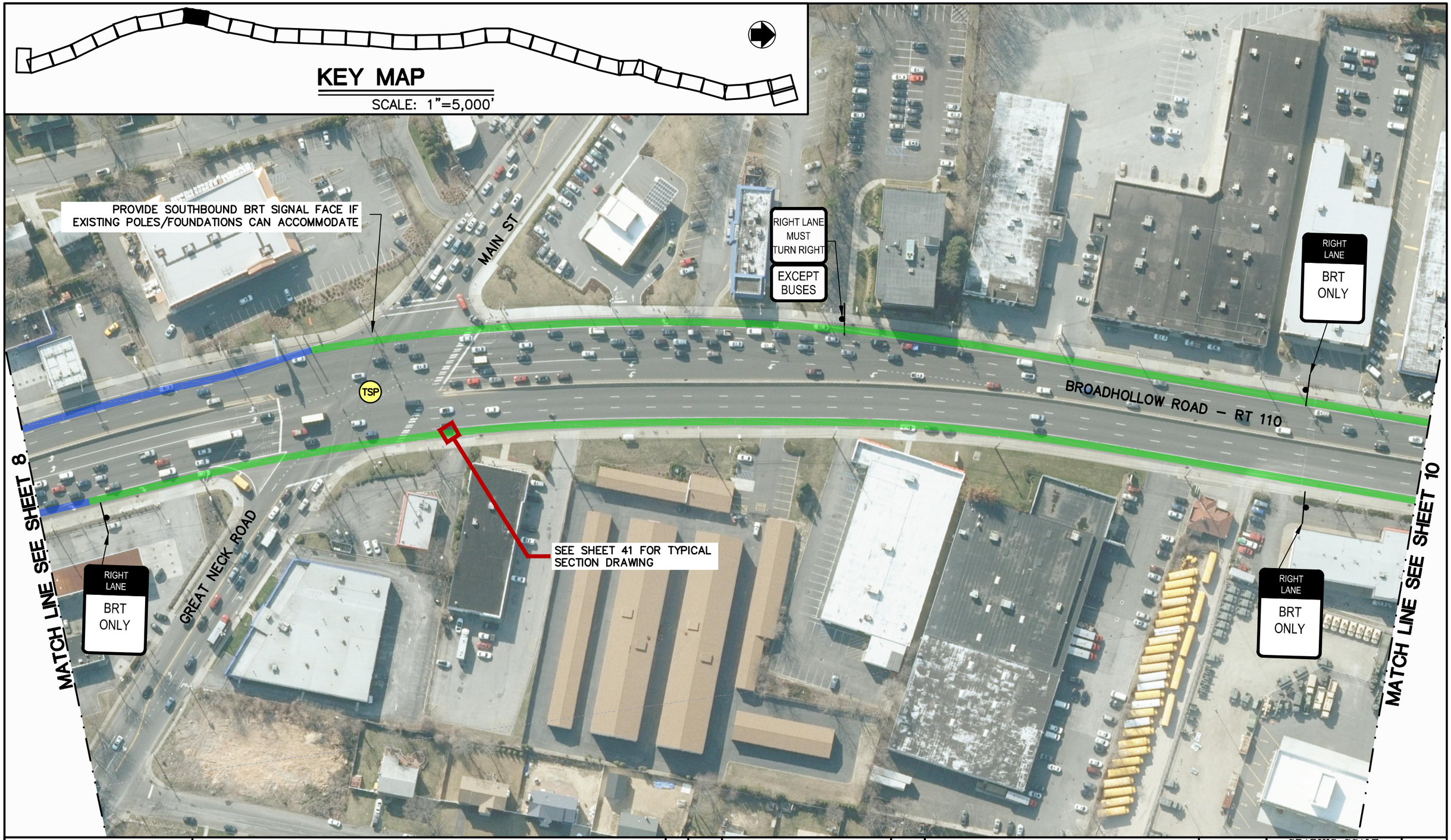
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 8



TOWN OF BABYLON SUFFOLK CO., N.Y.

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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

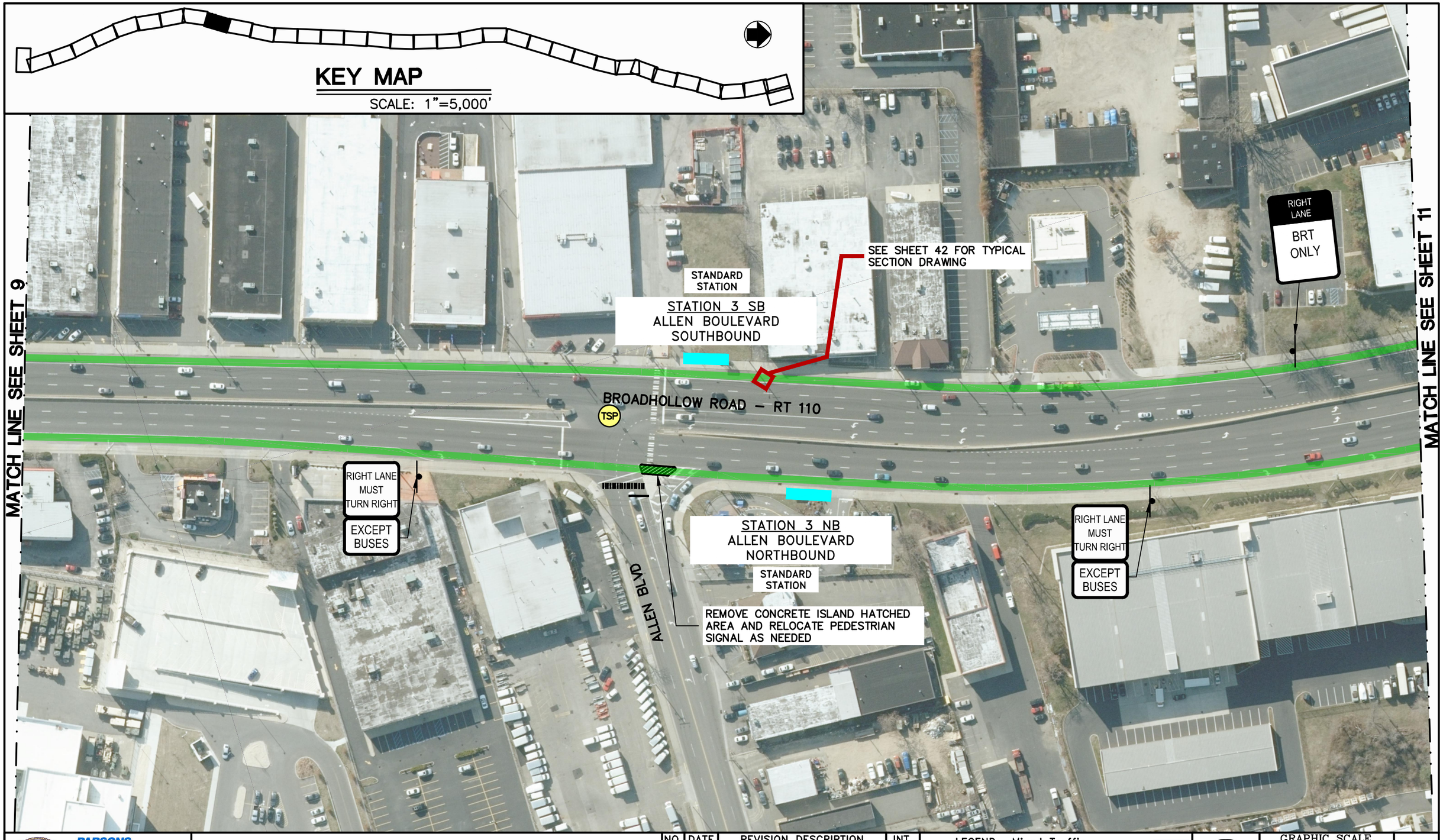
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 9



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ROUTE 110 ALTERNATIVES ANALYSIS

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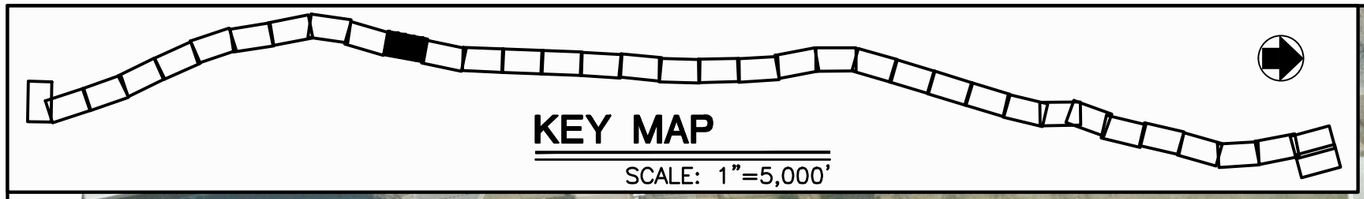
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 10



KEY MAP

SCALE: 1"=5,000'



TOWN OF BABYLON SUFFOLK CO., NY

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ROUTE 110 ALTERNATIVES ANALYSIS

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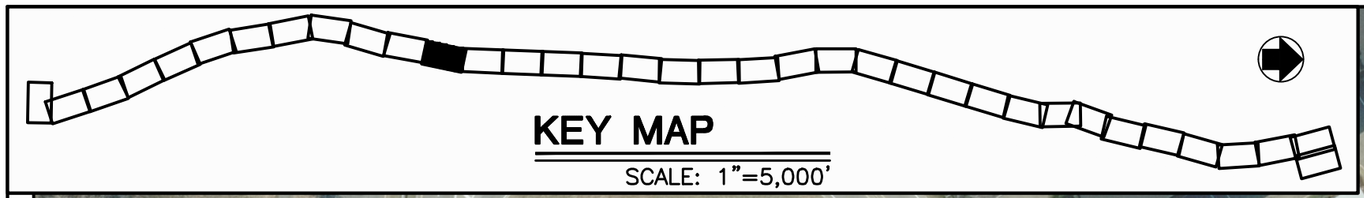
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 11



KEY MAP

SCALE: 1"=5,000'

MATCH LINE SEE SHEET 11

MATCH LINE SEE SHEET 13

FULTON STREET – RT 109

BROADHOLLOW ROAD – RT 110

FARMINGDALE RD

SEE SHEET 44 FOR TYPICAL SECTION DRAWING

TSP

RIGHT LANE MUST TURN RIGHT

EXCEPT BUSES

RIGHT LANE MUST TURN RIGHT

EXCEPT BUSES

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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

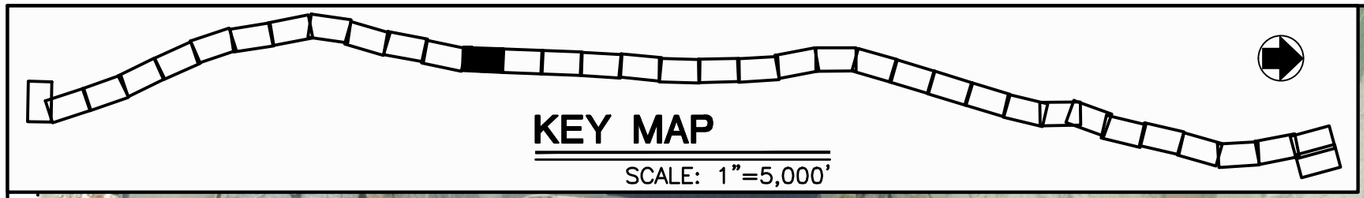
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 12



KEY MAP

SCALE: 1"=5,000'

MATCH LINE SEE SHEET 12

MICHAEL AVE

RIGHT LANE MUST TURN RIGHT

EXCEPT BUSES

STANDARD STATION

STATION 4 SB
GRUMMAN LANE
SOUTHBOUND

SEE SHEET 45 FOR TYPICAL SECTION DRAWING

RIGHT LANE
BRT ONLY

BROADHOLLOW ROAD – RT 110

TSP

TSP

RIGHT LANE MUST TURN RIGHT

EXCEPT BUSES

GRUMMAN LN

STATION 4 NB
GRUMMAN LANE
NORTHBOUND

STANDARD STATION

RIGHT LANE
BRT ONLY

MATCH LINE SEE SHEET 14

TOWN OF BABYLON SUFFOLK CO., N.Y.

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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

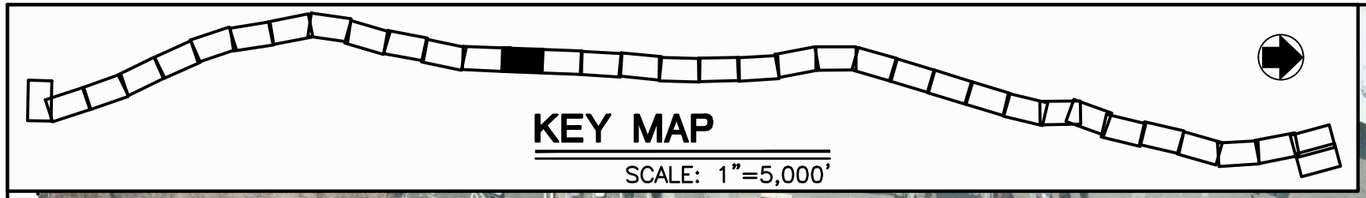
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 13



KEY MAP

SCALE: 1"=5,000'

MATCH LINE SEE SHEET 13

MATCH LINE SEE SHEET 15

FAIRCHILD HILLER LN

TSP

BROADHOLLOW ROAD – RT 110

RIGHT LANE
BRT ONLY

RIGHT LANE MUST TURN RIGHT
EXCEPT BUSES

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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

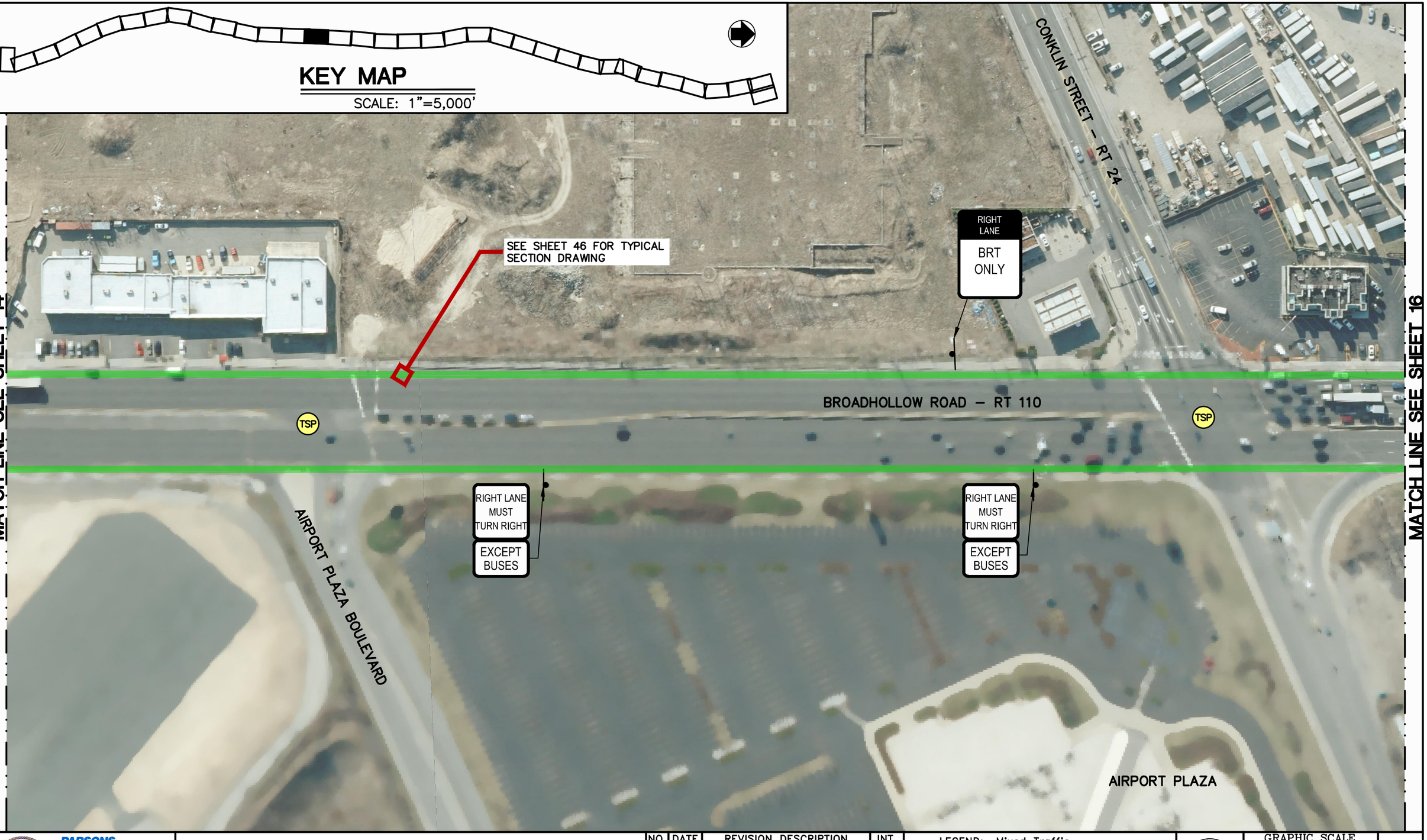
GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 14

KEY MAP

SCALE: 1"=5,000'



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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

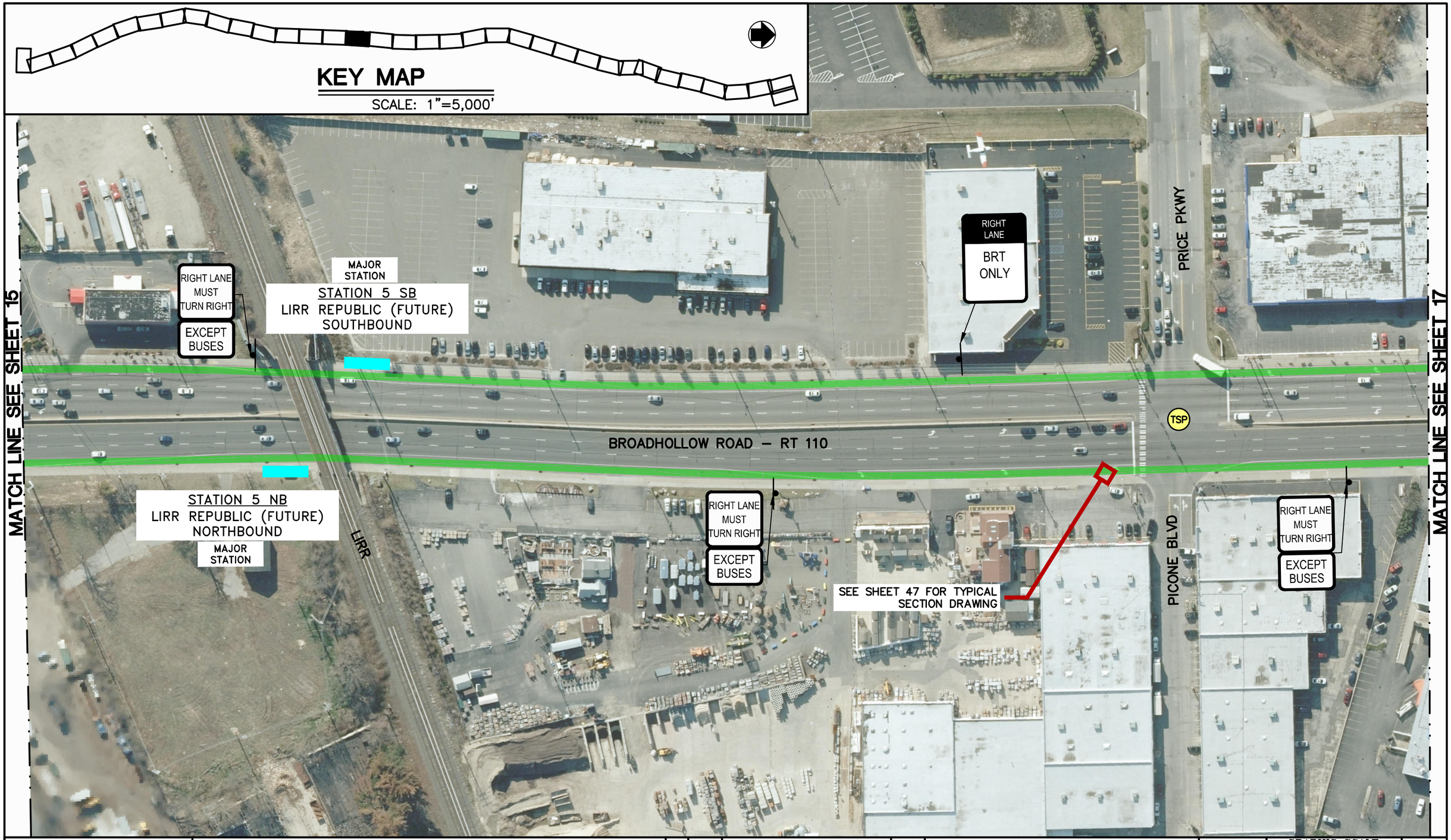
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 15



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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

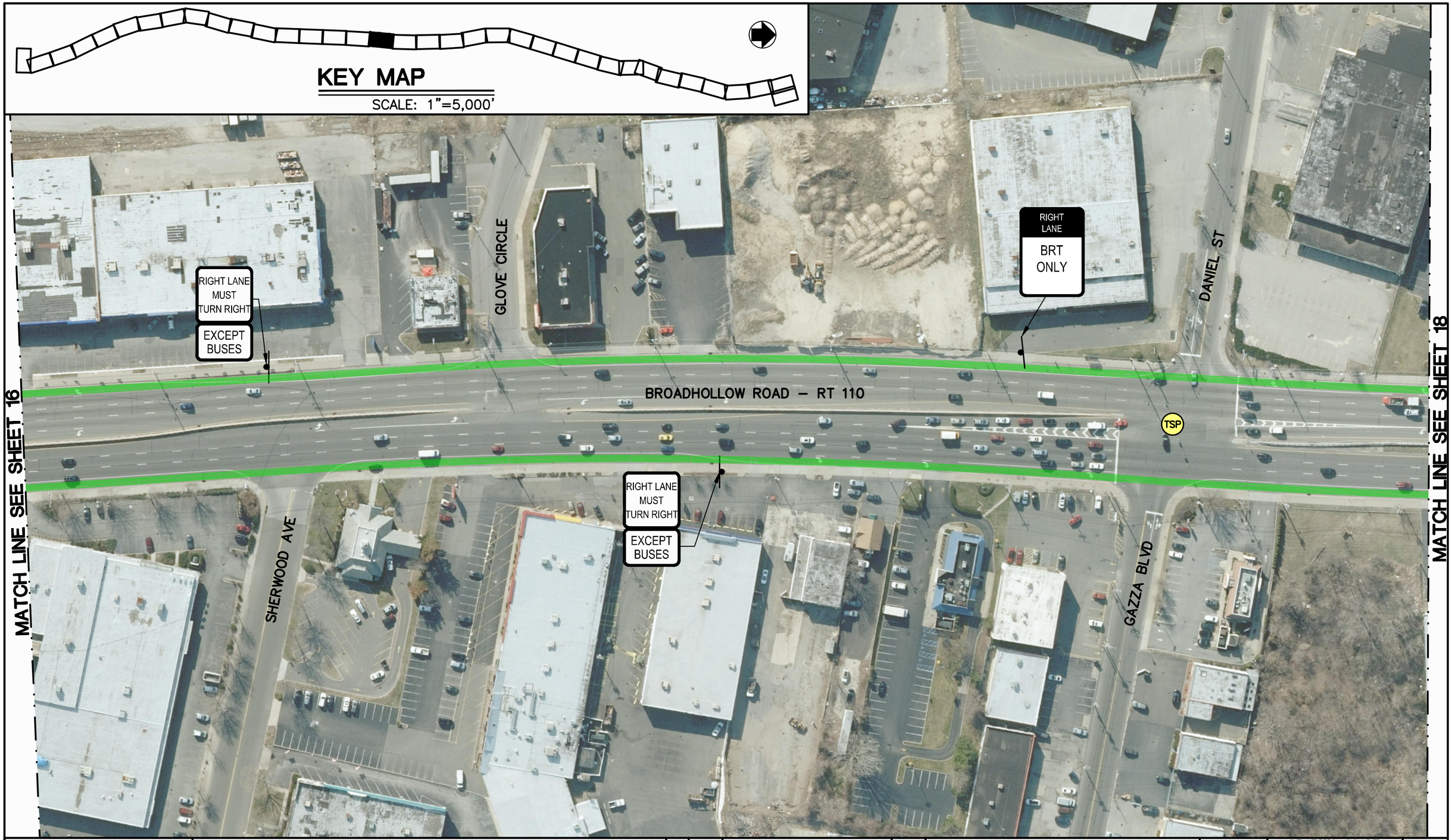
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND: Mixed Traffic
Dedicated BRT Lane
Station
Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 16



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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

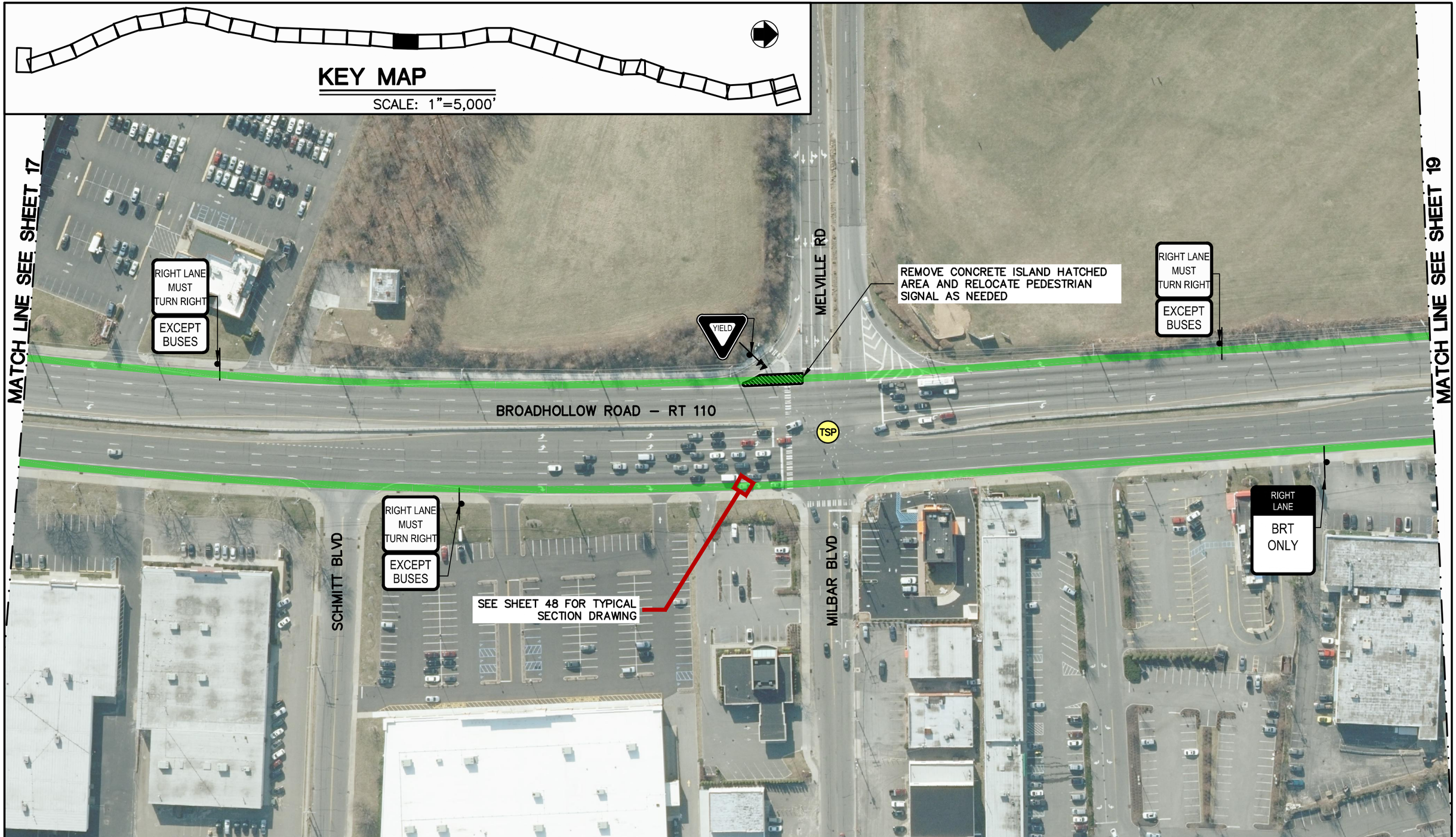
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 17



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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 18

KEY MAP

SCALE: 1"=5,000'

MATCH LINE SEE SHEET 18

MATCH LINE SEE SHEET 20

STANDARD STATION

STATION 6 SB
SMITH STREET – FARMINGDALE STATE COLLEGE SOUTHBOUND

YIELD

DR FRANK A CIPRIANI DRIVE

REMOVE CONCRETE ISLAND HATCHED AREA AND RELOCATE PEDESTRIAN SIGNAL AS NEEDED

SUNY FARMINGDALE

RIGHT LANE MUST TURN RIGHT

EXCEPT BUSES

BROADHOLLOW ROAD – RT 110

TSP

RIGHT LANE MUST TURN RIGHT

EXCEPT BUSES

WILLOW ST

SEE SHEET 49 FOR TYPICAL SECTION DRAWING

SMITH ST

STATION 6 NB
SMITH STREET – FARMINGDALE STATE COLLEGE NORTHBOUND

STANDARD STATION

RIGHT LANE

BRT ONLY

ADVENTURE LAND

TOWN OF BABYLON SUFFOLK CO., NY

PARSONS BRINCKERHOFF

CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

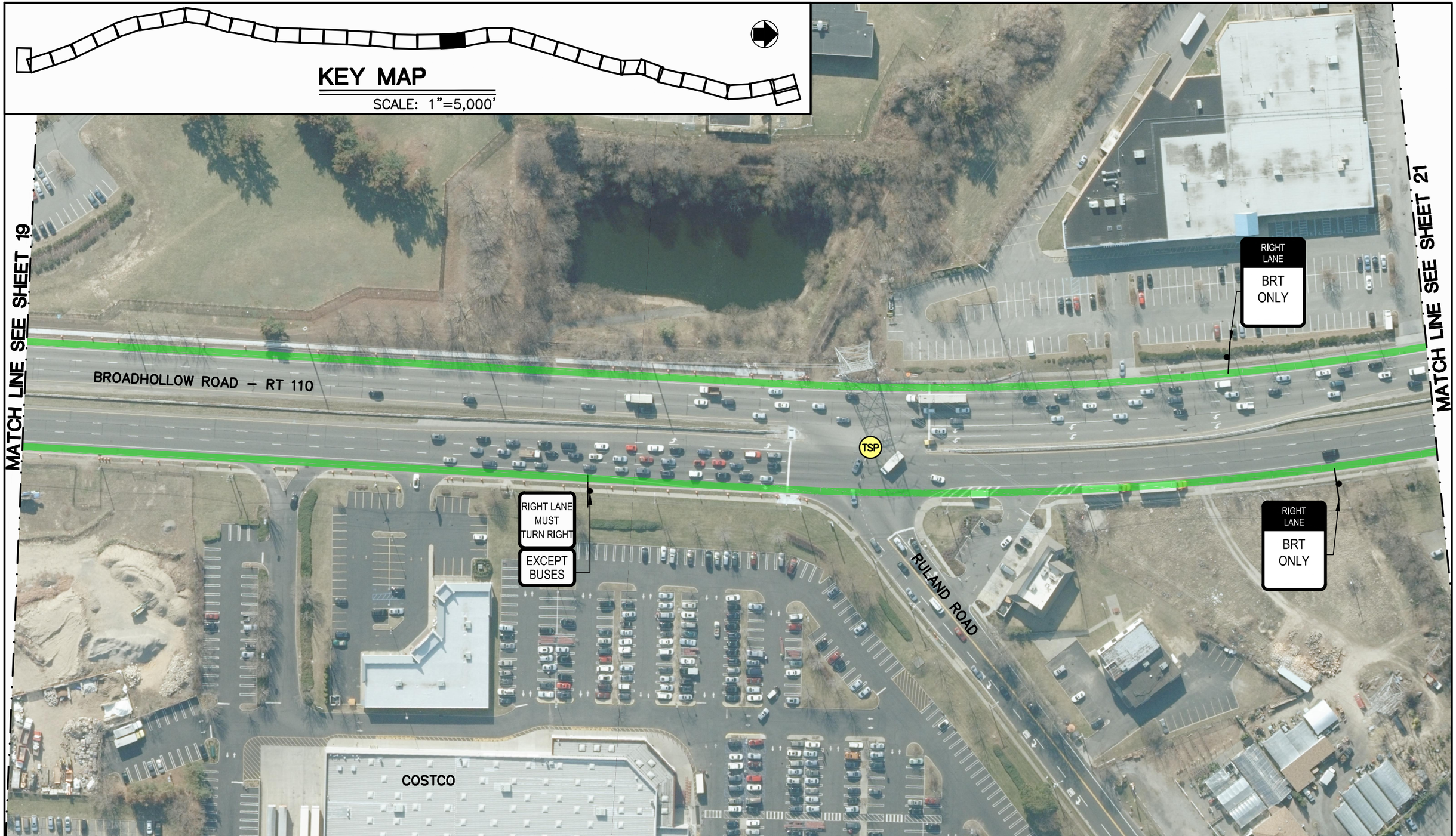
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 19



TOWN OF BABYLON SUFFOLK CO., NY

PARSONS BRINCKERHOFF

CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

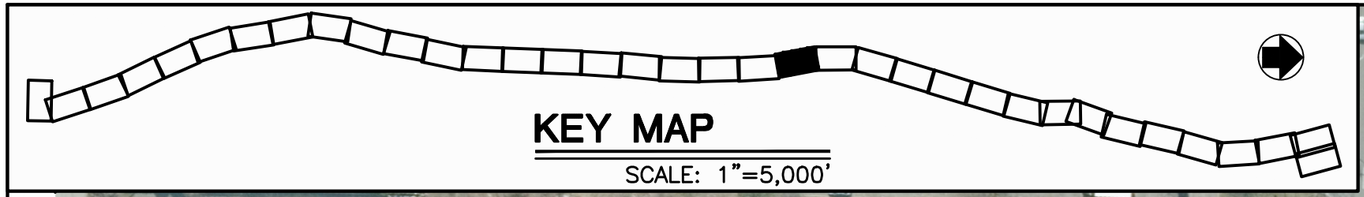
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

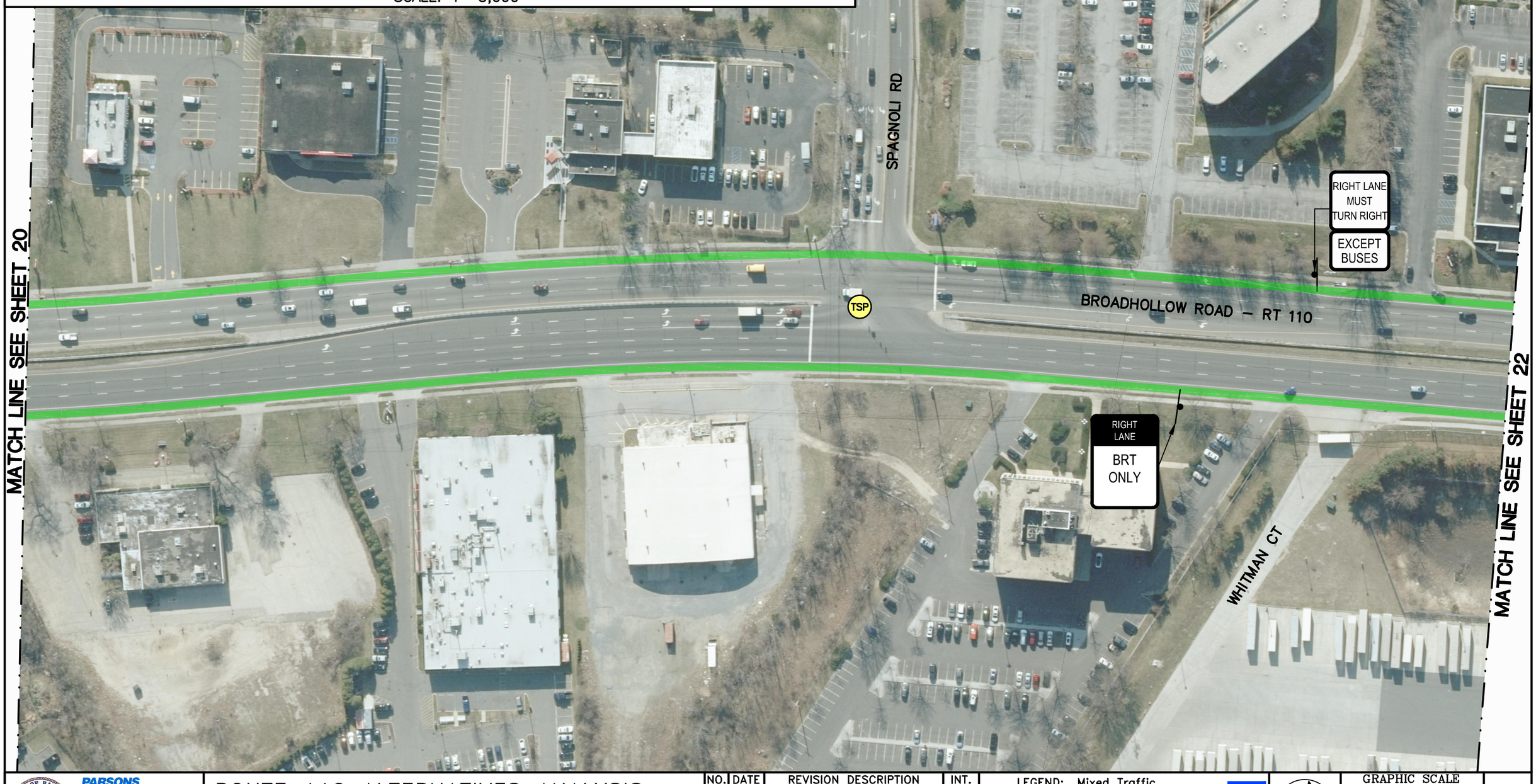
MAY 2015

SHEET NO. 20



KEY MAP

SCALE: 1"=5,000'



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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

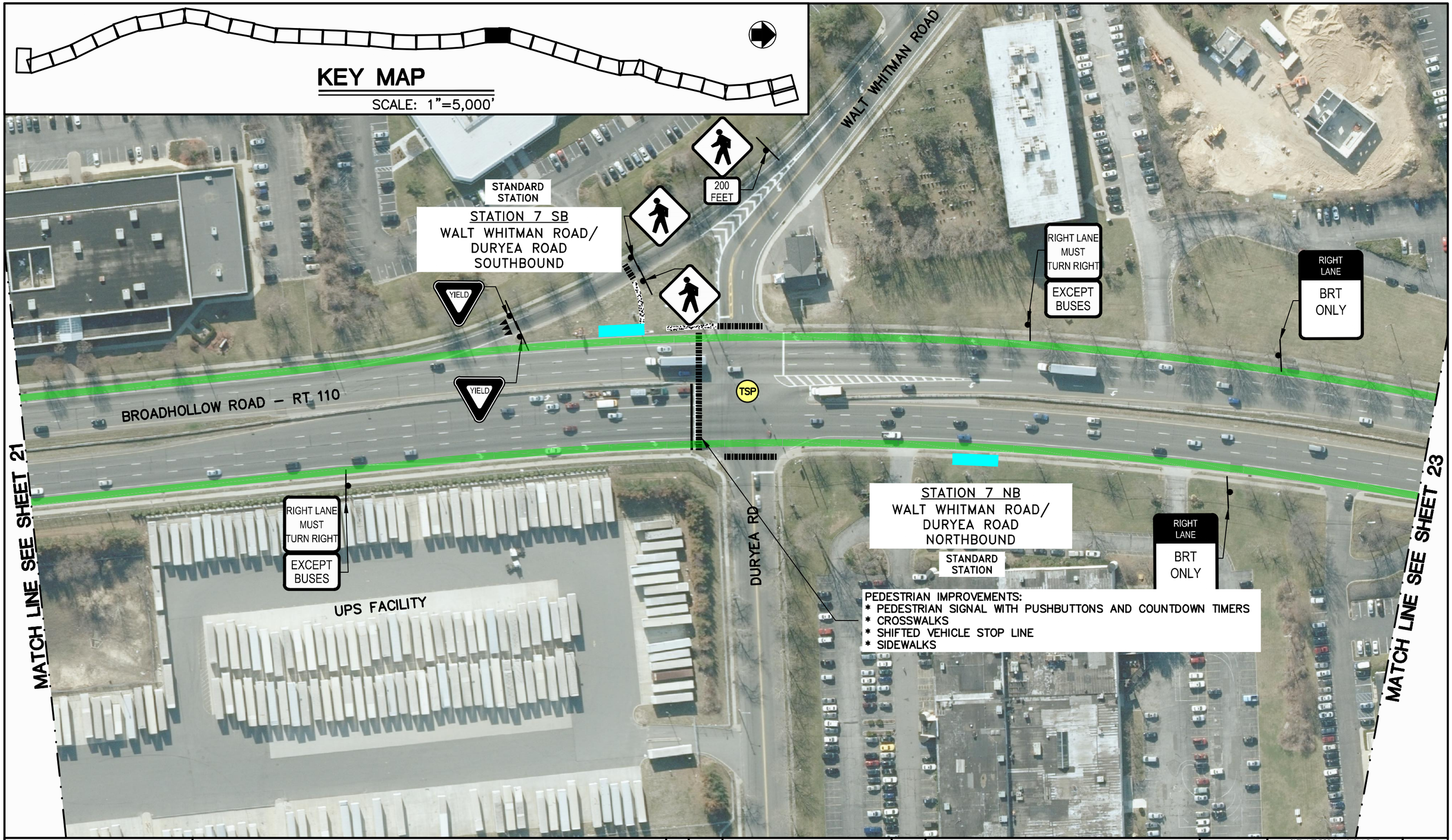
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 21



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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

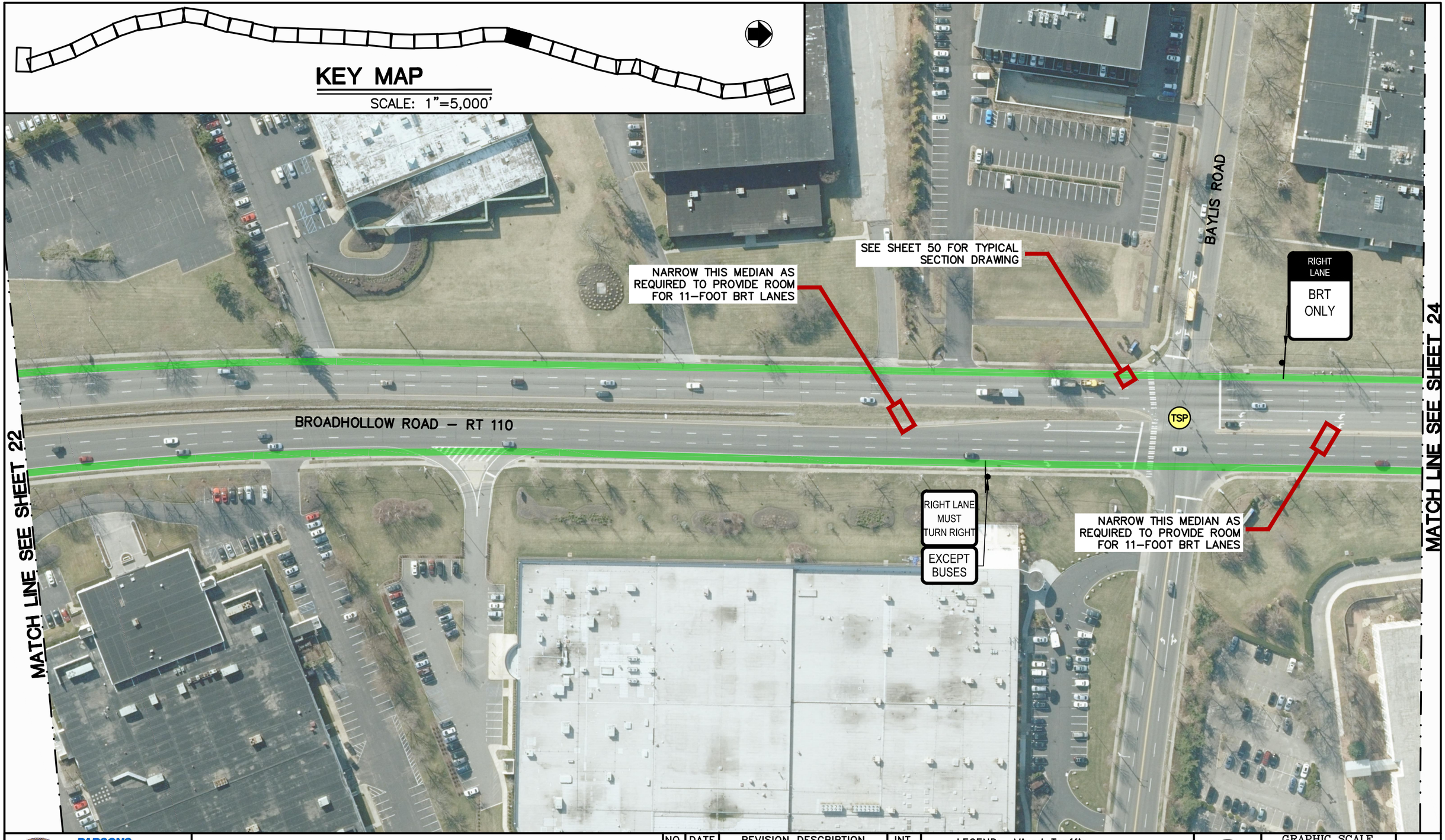
GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 22

KEY MAP

SCALE: 1"=5,000'



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CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

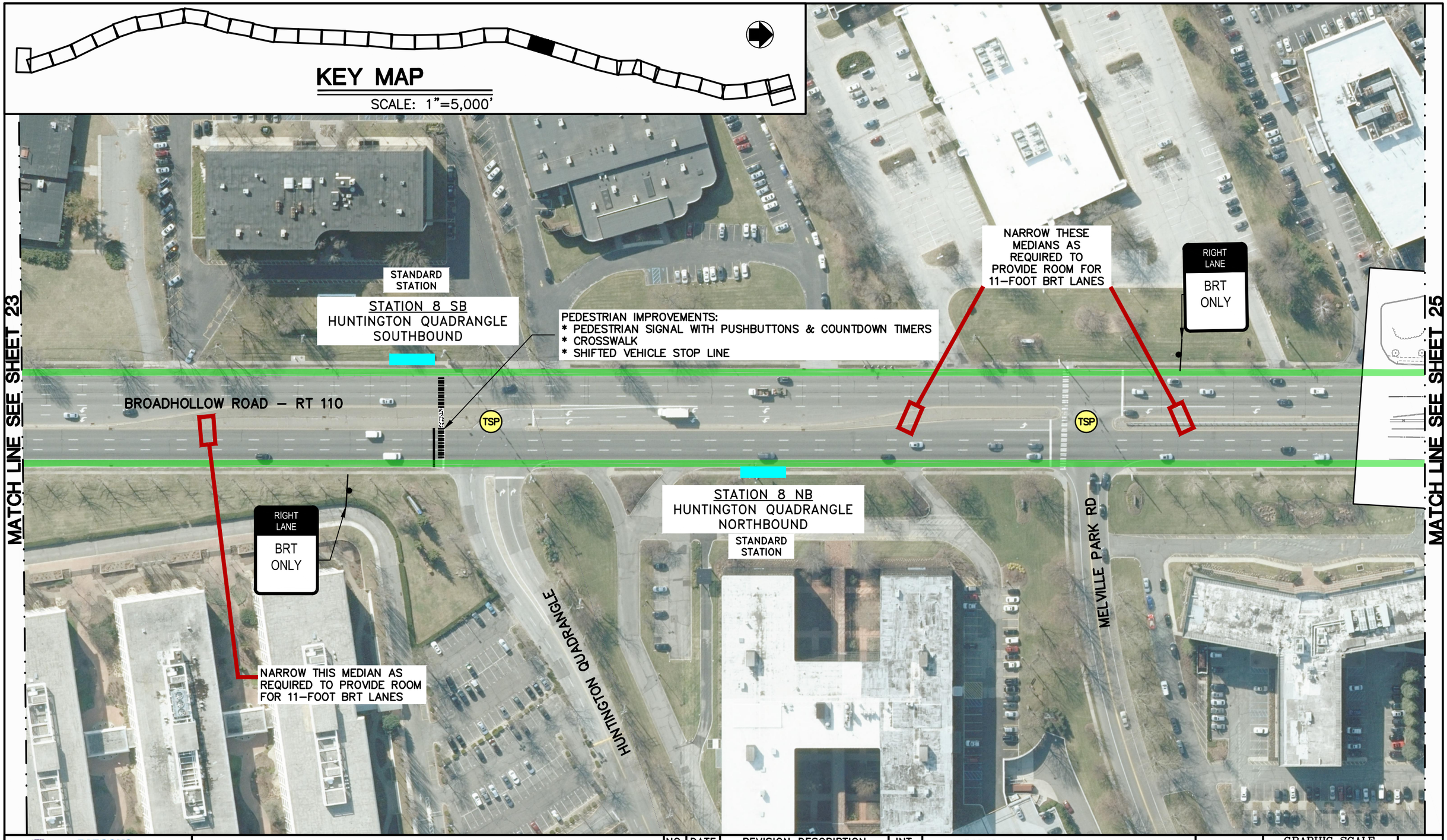
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 23



PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

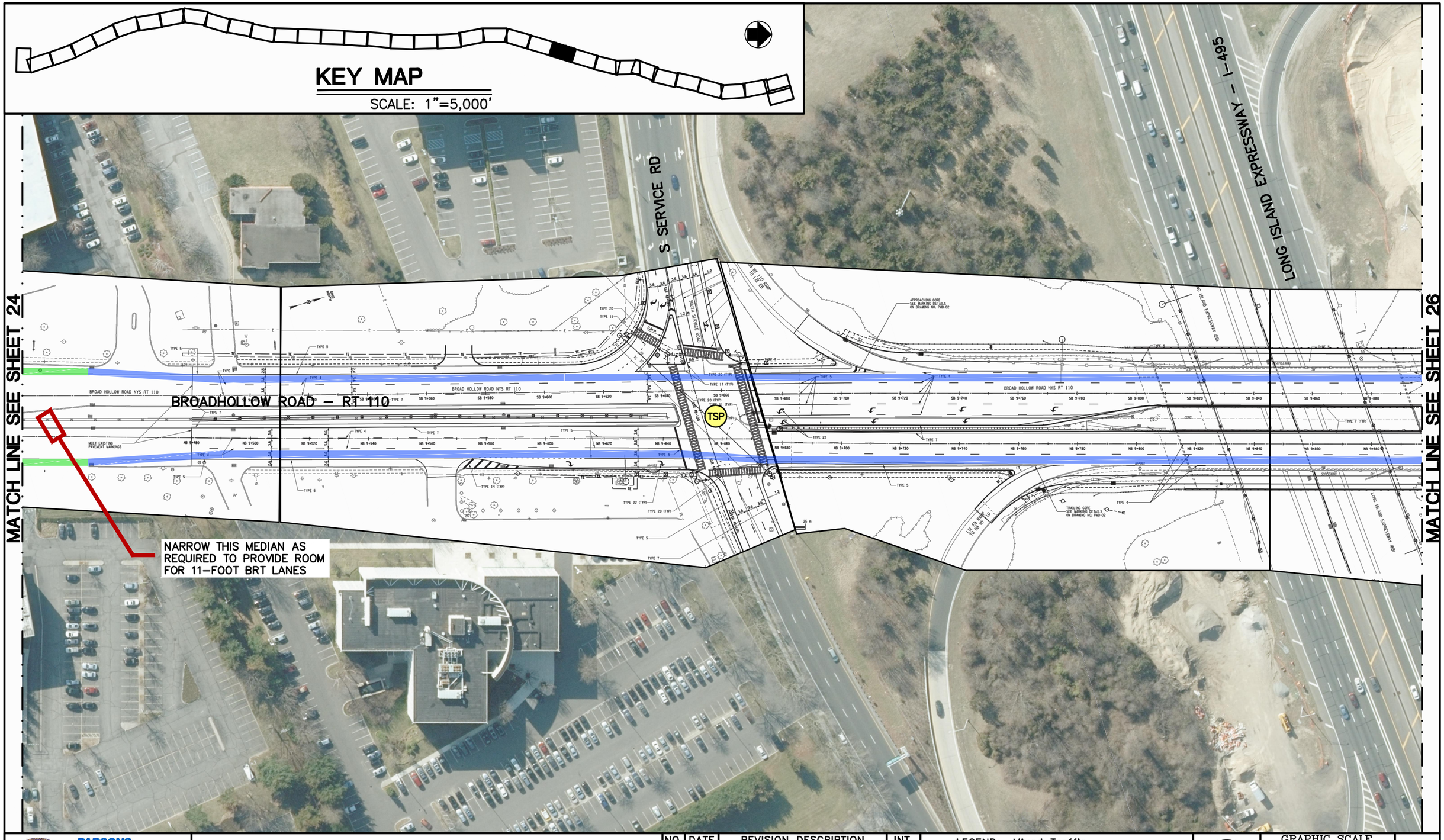
GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 24

KEY MAP

SCALE: 1"=5,000'



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ROUTE 110 ALTERNATIVES ANALYSIS

NYS Dept. of Transportation Plans Source: Contracts D260974 and D262126

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

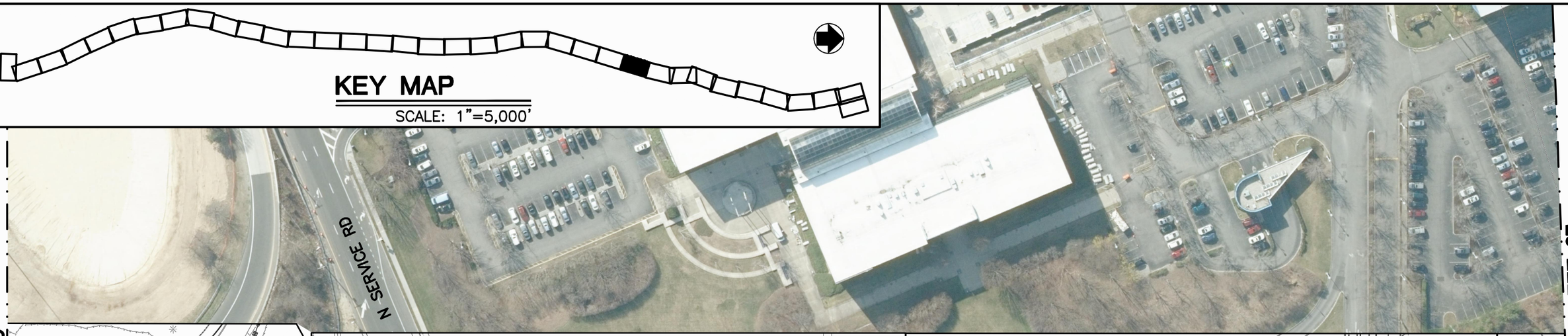
GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 25

KEY MAP

SCALE: 1"=5,000'



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ROUTE 110 ALTERNATIVES ANALYSIS

NYS Dept. of Transportation Plans Source: Contracts D260974 and D262126

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

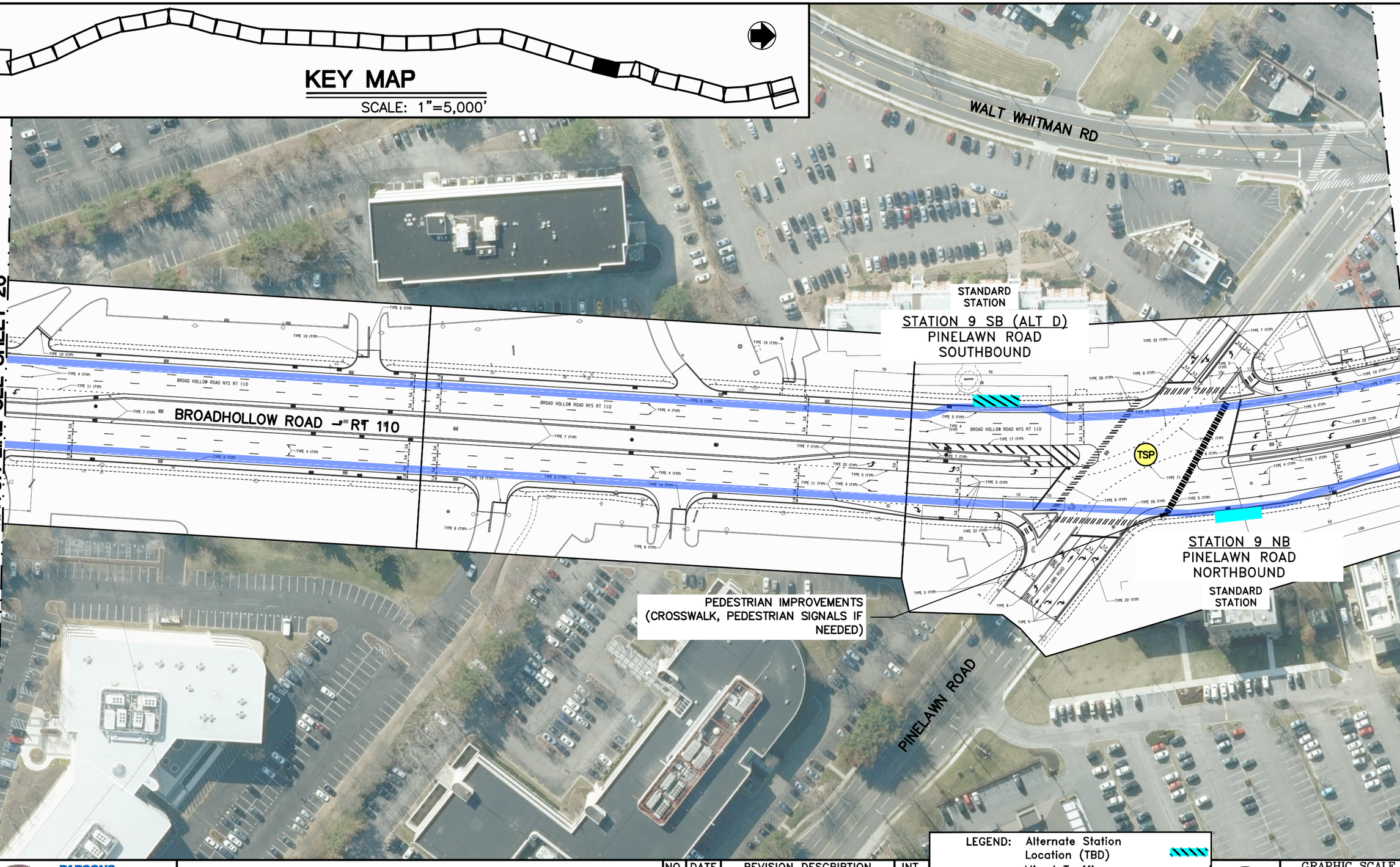
GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 26

KEY MAP

SCALE: 1"=5,000'



LEGEND:
- Alternate Station Location (TBD)
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

TOWN OF BABYLON SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

NYS Dept. of Transportation Plans Source: Contracts D260974 and D262126

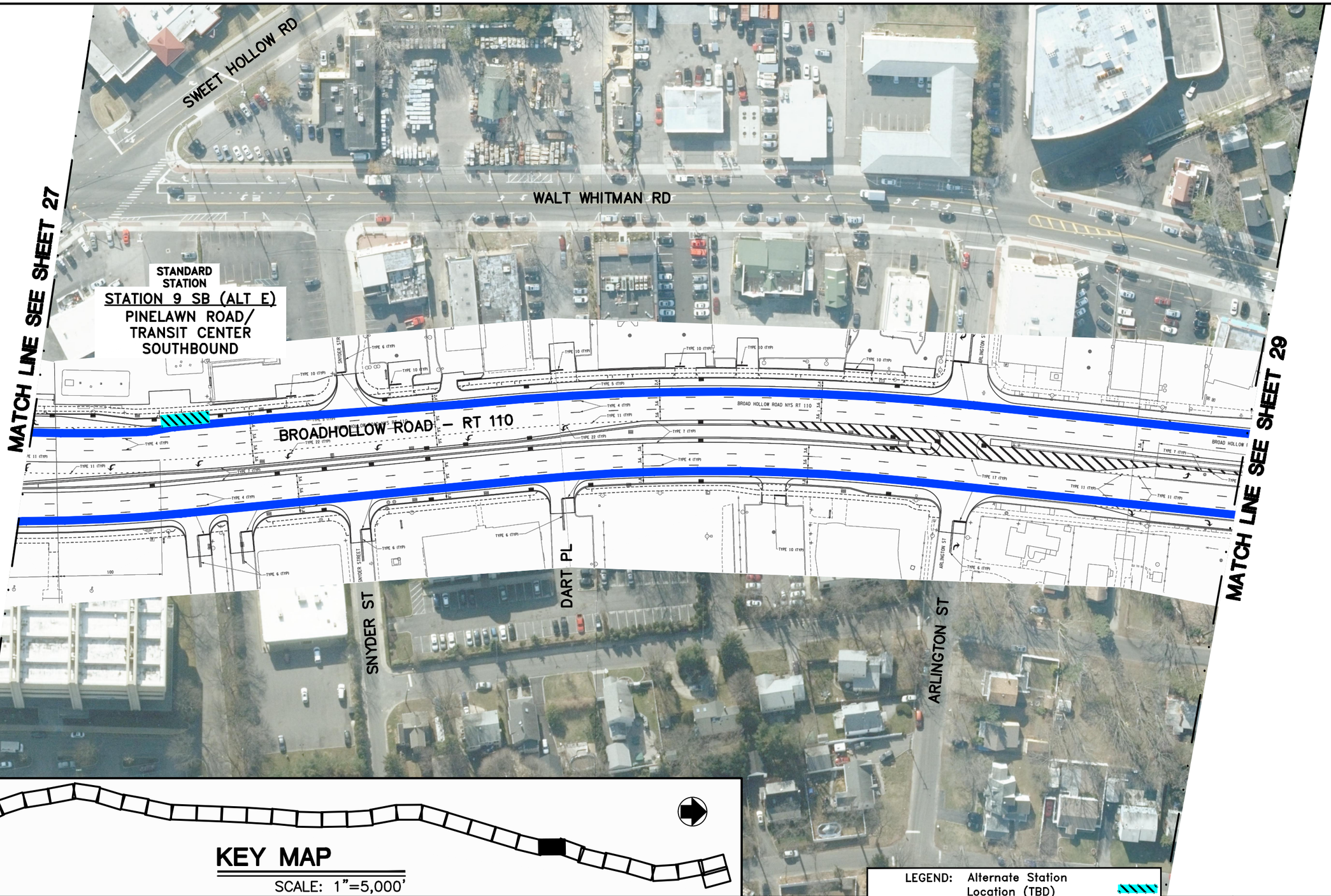
Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

NO.	DATE	REVISION DESCRIPTION	INT.

GRAPHIC SCALE 0 50 100

MAY 2015

SHEET NO. 27



KEY MAP

SCALE: 1"=5,000'

LEGEND:
- Alternate Station Location (TBD)
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

TOWN OF BABYLON SUFFOLK CO., NY.

PARSONS BRINCKERHOFF

CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

NYS Dept. of Transportation Plans Source: Contracts D260974 and D262126

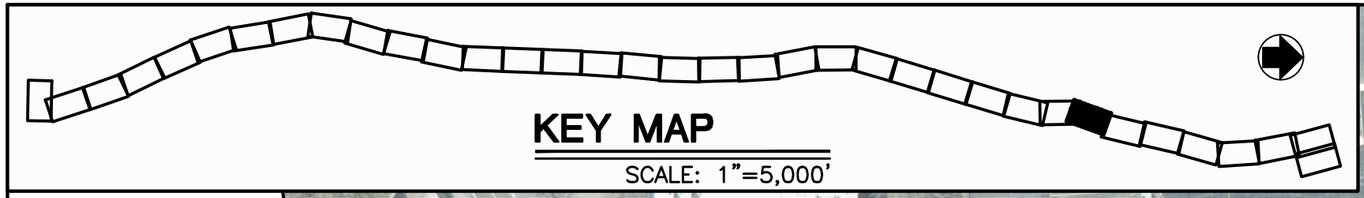
Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

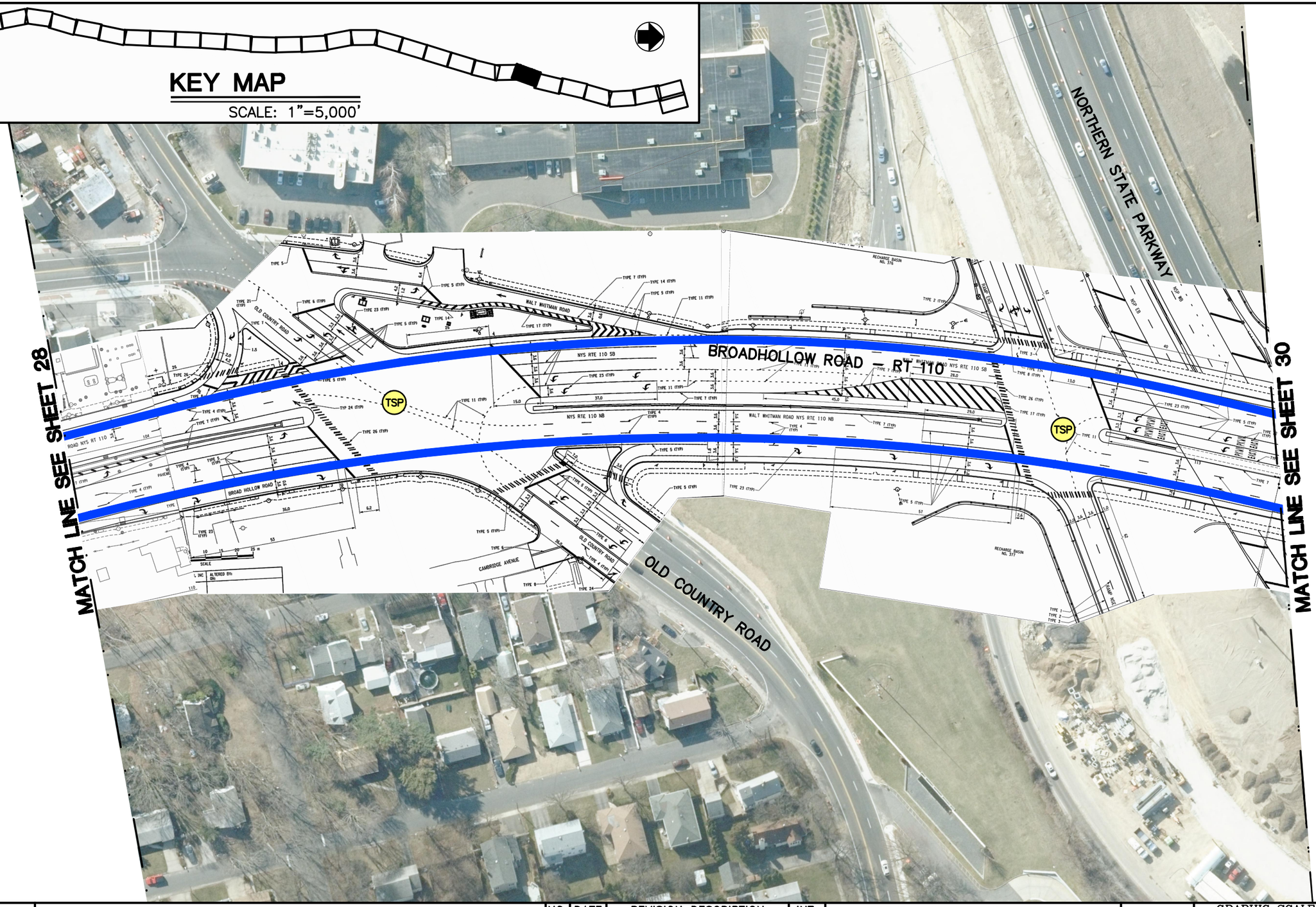
NO.	DATE	REVISION DESCRIPTION	INT.

GRAPHIC SCALE 0 50 100

MAY 2015

SHEET NO. 28





PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

NYS Dept. of Transportation Plans Source: Contracts D260974 and D262126

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 29

KEY MAP

SCALE: 1"=5,000'

MATCH LINE SEE SHEET 29

MATCH LINE SEE SHEET 31

STANDARD STATION

STATION 10 SB
MELVILLE MALL
SOUTHBOUND

STATION 10 NB
MELVILLE MALL
NORTHBOUND

STANDARD STATION

WALT WHITMAN ROAD – RT 110

NORTHERN STATE PARKWAY

GWYNNE ROAD

RECHARGE BASIN NO. 315

RECHARGE BASIN NO. 316

RAMP SW

RAMP NW

NYS RTE 110 SB

WALT WHITMAN ROAD NYS RTE 110 SB

WALT WHITMAN ROAD NYS RTE 110 NB

WALT WHITMAN ROAD NYS RT 110

MELVILLE MALL SOUTH DRIVEWAY

MELVILLE MALL NORTH DRIVEWAY

MEET EXISTING PAVEMENT MARKINGS

TSP

TOWN OF BABYLON
SUFFOLK CO., NY

PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

NYS Dept. of Transportation Plans Source: Contracts D260974 and D262126

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

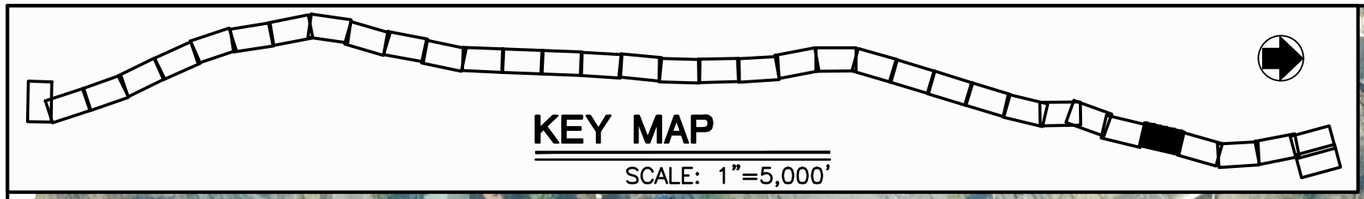
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

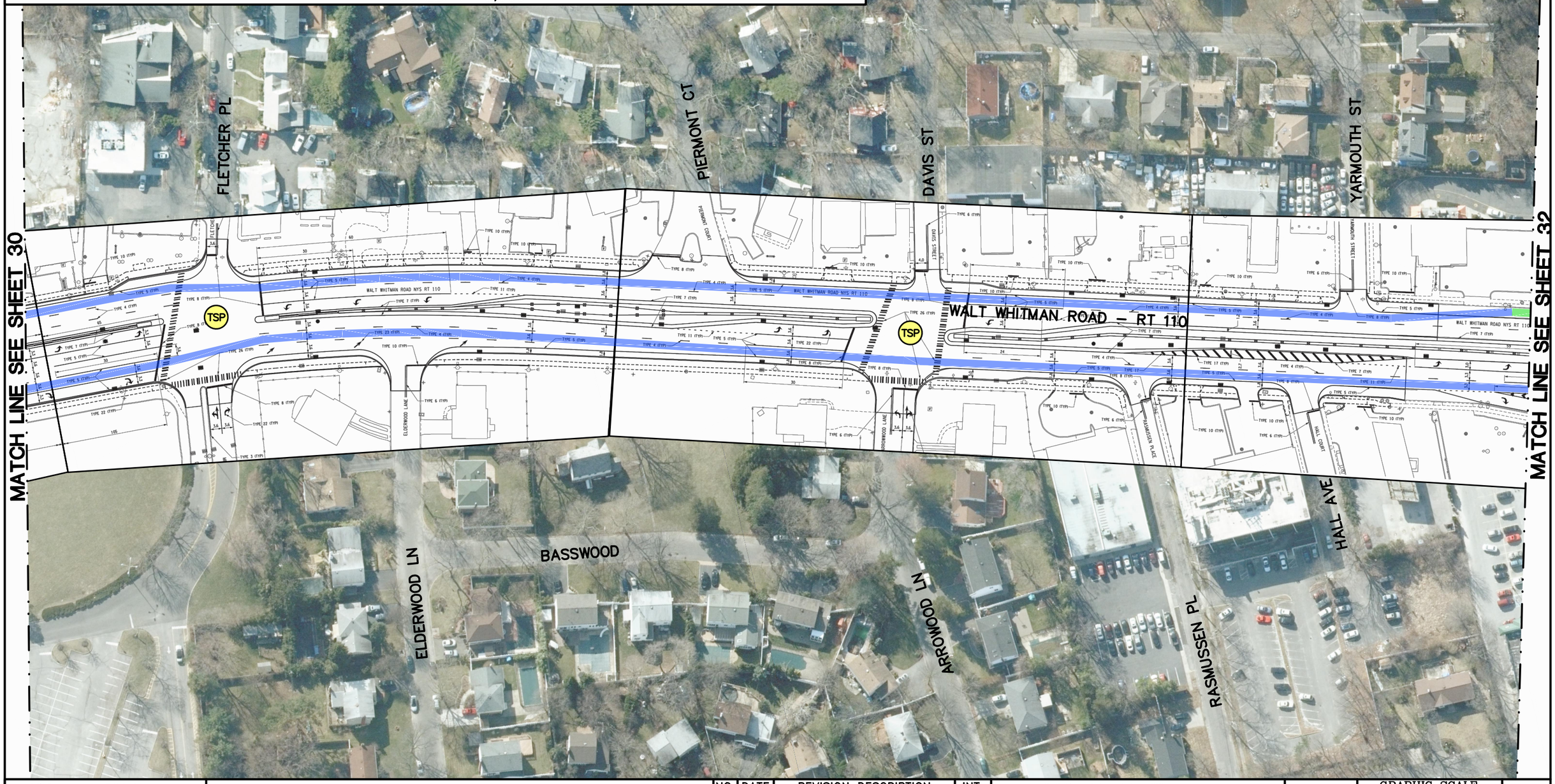
MAY 2015

SHEET NO. 30



KEY MAP

SCALE: 1"=5,000'



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ROUTE 110 ALTERNATIVES ANALYSIS

NYS Dept. of Transportation Plans Source: Contracts D260974 and D262126

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

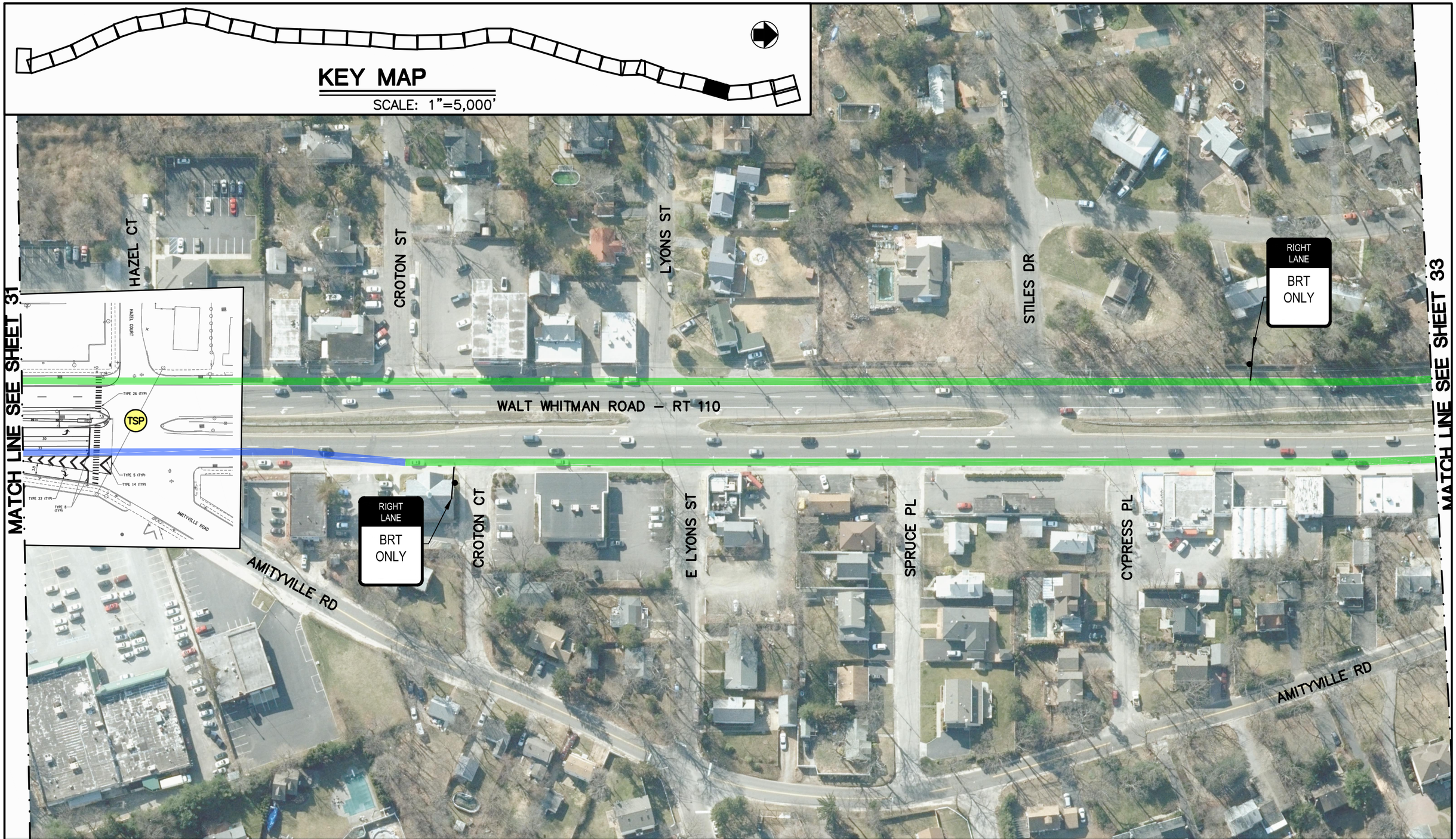
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 31



PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

NYS Dept. of Transportation Plans Source: Contracts D260974 and D262126

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND: Mixed Traffic
Dedicated BRT Lane
Station
Traffic Signal Priority (TSP)

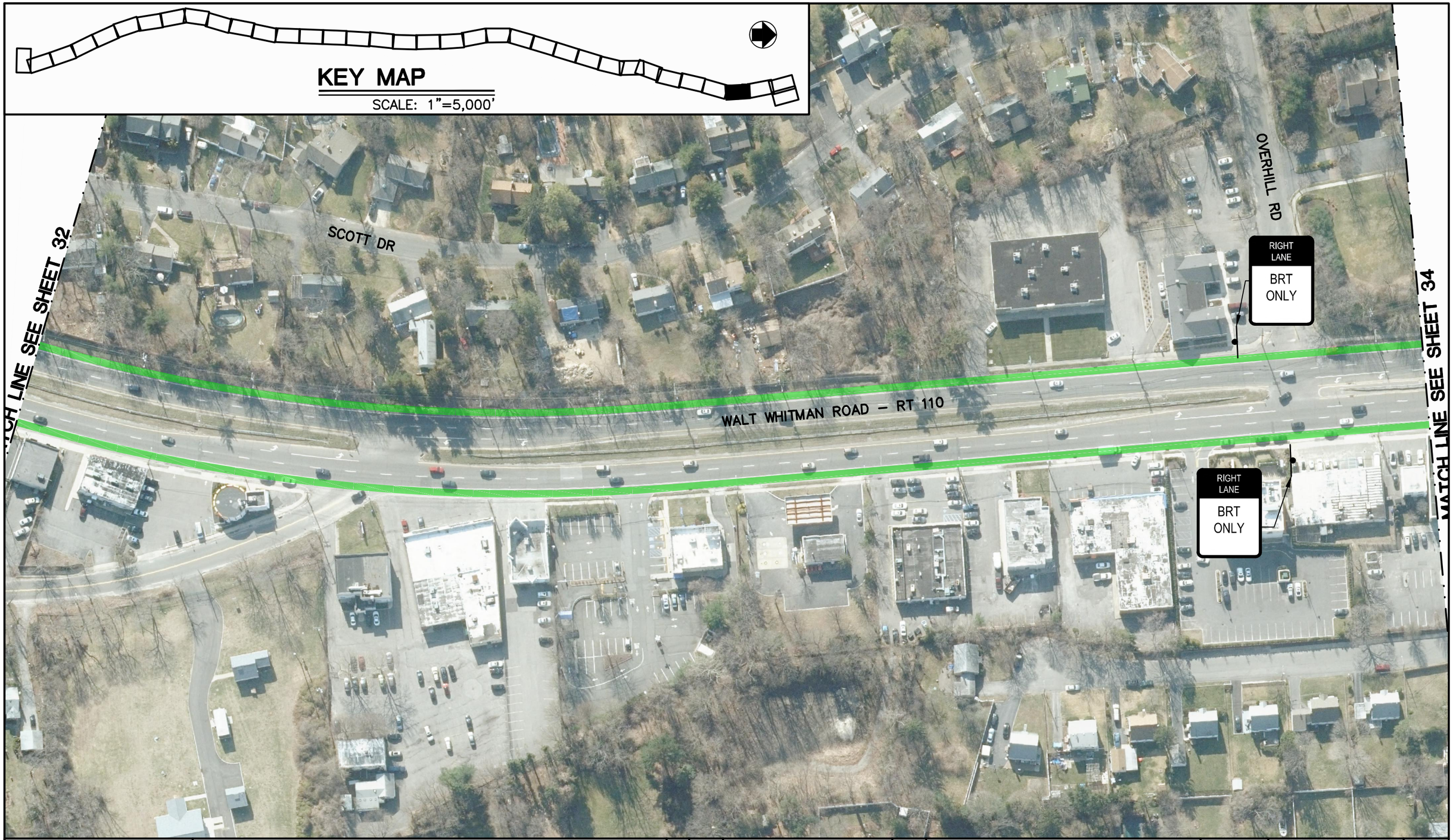
GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 32

KEY MAP

SCALE: 1"=5,000'



ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

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NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

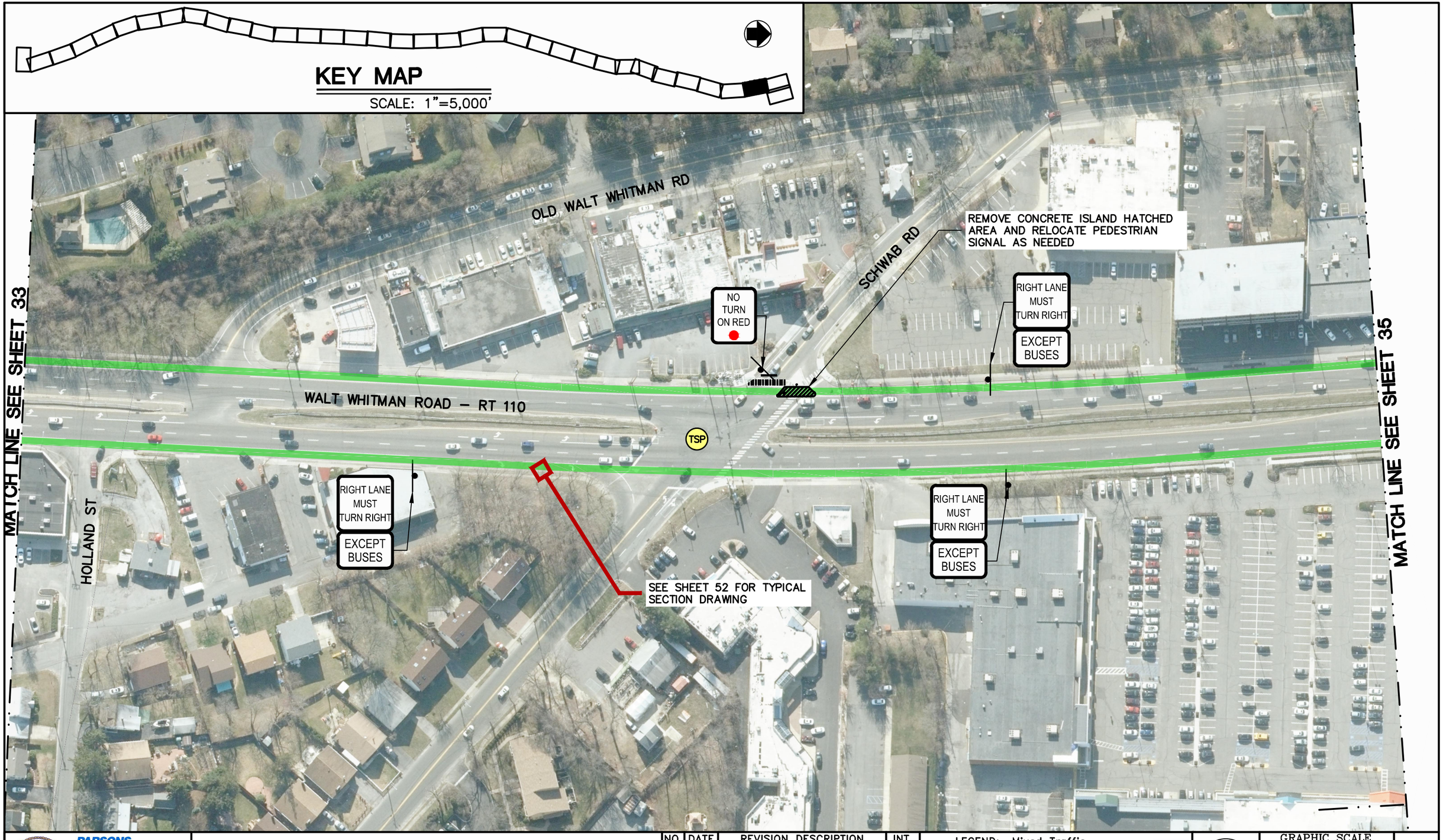
GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 33

KEY MAP

SCALE: 1"=5,000'



TOWN OF BABYLON SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

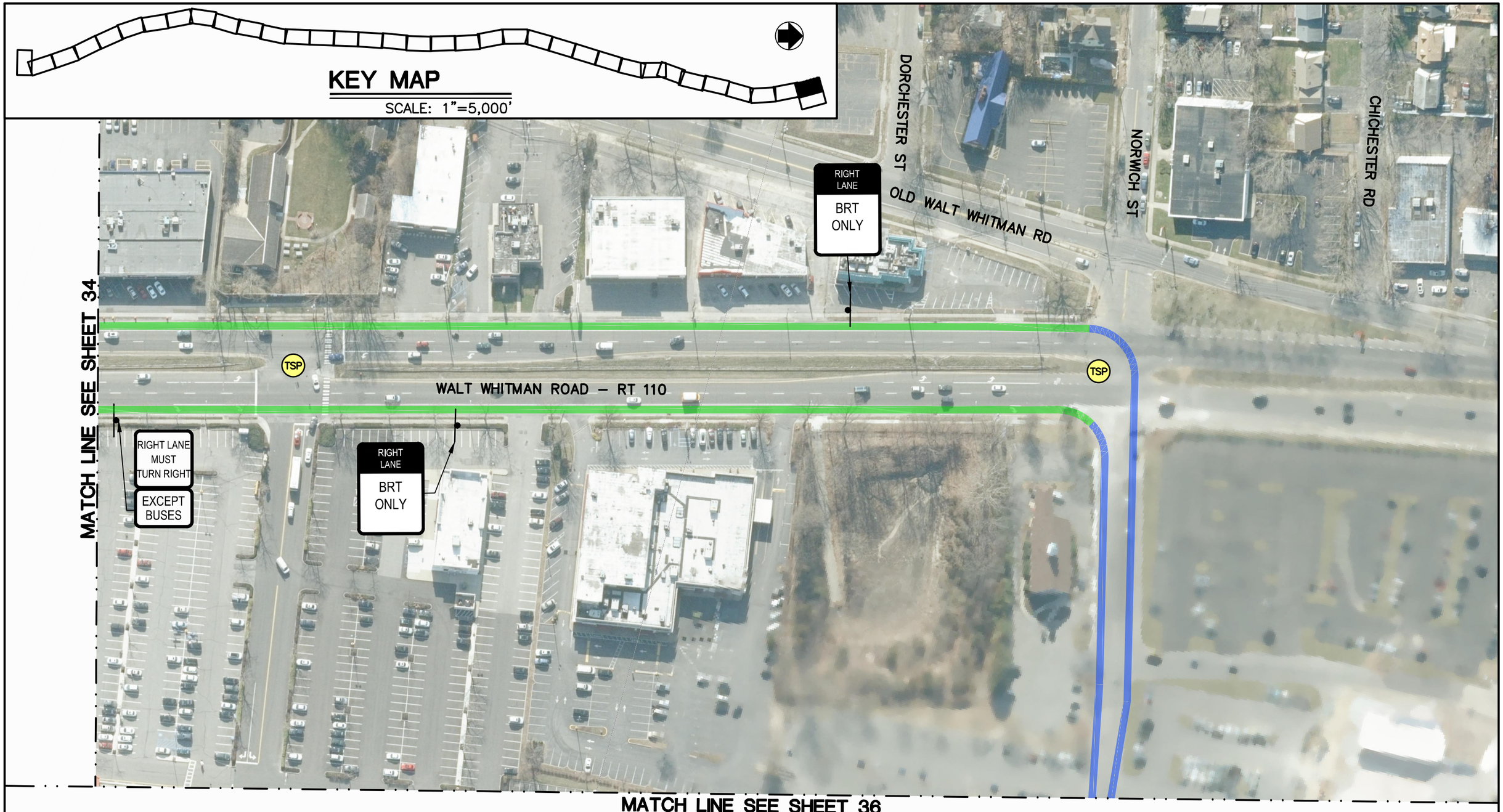
NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 34



TOWN OF BABYLON SUFFOLK CO., NY

PARSONS BRINCKERHOFF

CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

NO.	DATE	REVISION DESCRIPTION	INT.

LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

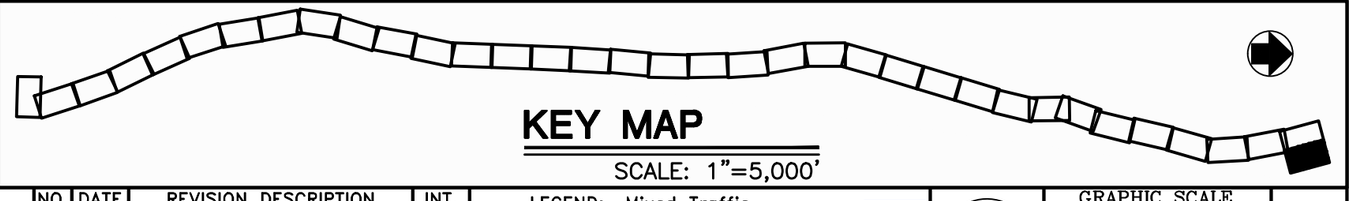
MAY 2015

SHEET NO. 35

MATCH LINE SEE SHEET 35

STATION II
WALT WHITMAN SHOPS
MAJOR STATION

NEW YORK AVEUNE



KEY MAP
SCALE: 1"=5,000'

TOWN OF BABYLON SUFFOLK CO., NY

PARSONS BRINCKERHOFF

CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

Aerial Imagery Source: New York Statewide Digital Orthoimagery Program/NYSDOP

NO.	DATE	REVISION DESCRIPTION	INT.

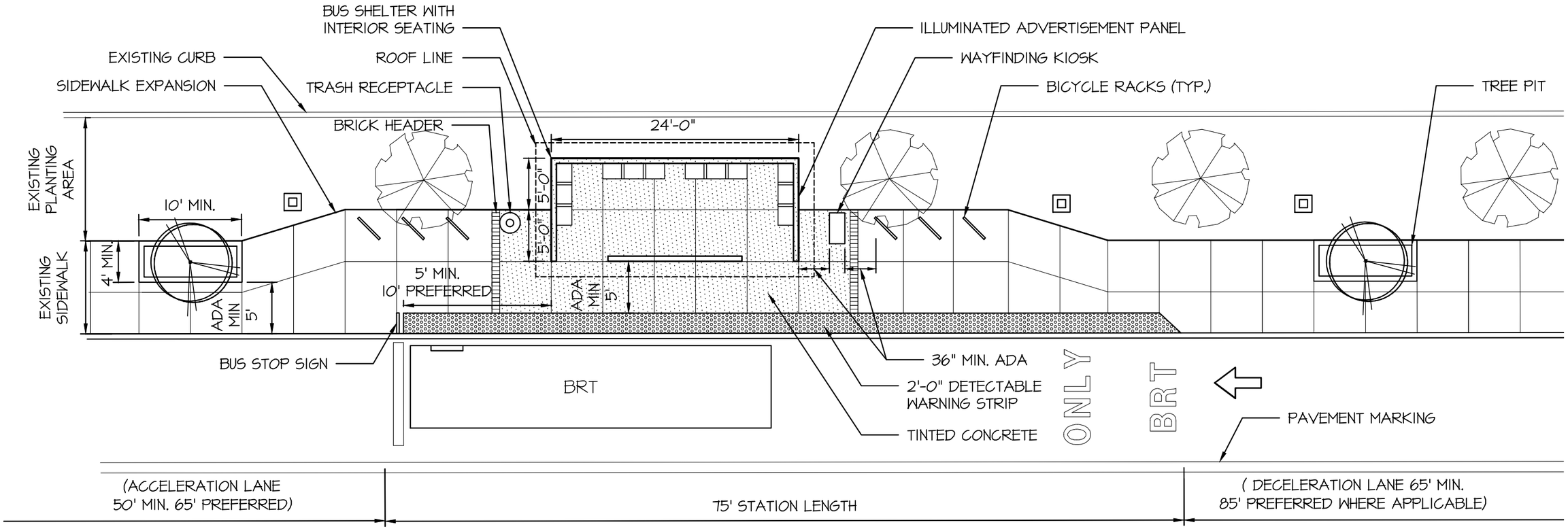
LEGEND:
- Mixed Traffic
- Dedicated BRT Lane
- Station
- Traffic Signal Priority (TSP)

GRAPHIC SCALE
0 50 100

MAY 2015

SHEET NO. 36

Appendix B:
Sample Plan Views of Proposed BRT and Feeder Route Stations



LEGEND

- PROPOSED TREE
- EXISTING TREE
- SEATING (MAX CAPACITY 3 PEOPLE PER BENCH)
- DETECTABLE WARNING STRIP
- BICYCLE RACK (MAX CAPACITY 2 BIKES PER RACK)
- PEDESTRIAN LIGHTING

⇦ BROAD HOLLOW ROAD
ROUTE 110 SB

PARSONS BRINCKERHOFF
B. THAYER ASSOCIATES

ROUTE 110 RAPID TRANSIT
LARGE STATION PLAN

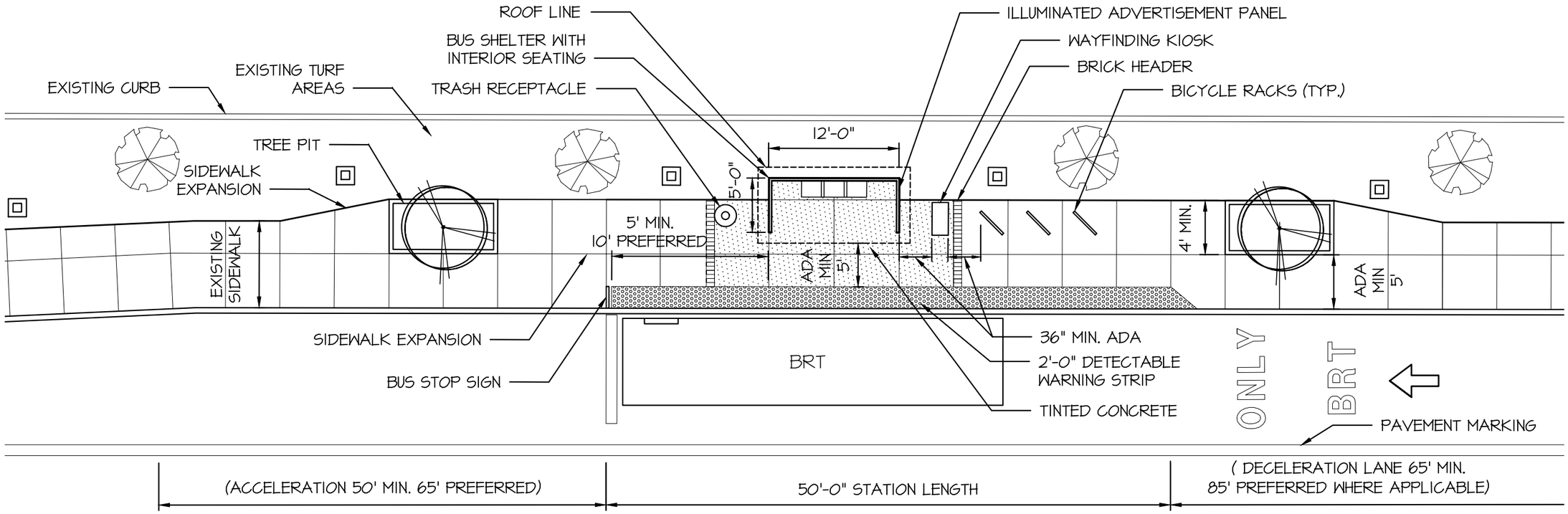
NO.	DATE	REVISION DESCRIPTION	INT.

ROUTE 110
ALTERNATIVE ANALYSIS
DRAFT

SCALE
1"=10'

GRAPHIC SCALE
0 5 10

SHEET NO.
1



BROAD HOLLOW ROAD
ROUTE 110 SB

LEGEND

- PROPOSED TREE
- EXISTING TREE
- SEATING (MAX CAPACITY 3 PEOPLE PER BENCH)
- DETECTABLE WARNING STRIP
- BICYCLE RACK (MAX CAPACITY 2 BIKES PER RACK)
- PEDESTRIAN LIGHTING

PARSONS BRINCKERHOFF
B. THAYER ASSOCIATES

ROUTE 110 RAPID TRANSIT
TYPICAL STATION PLAN

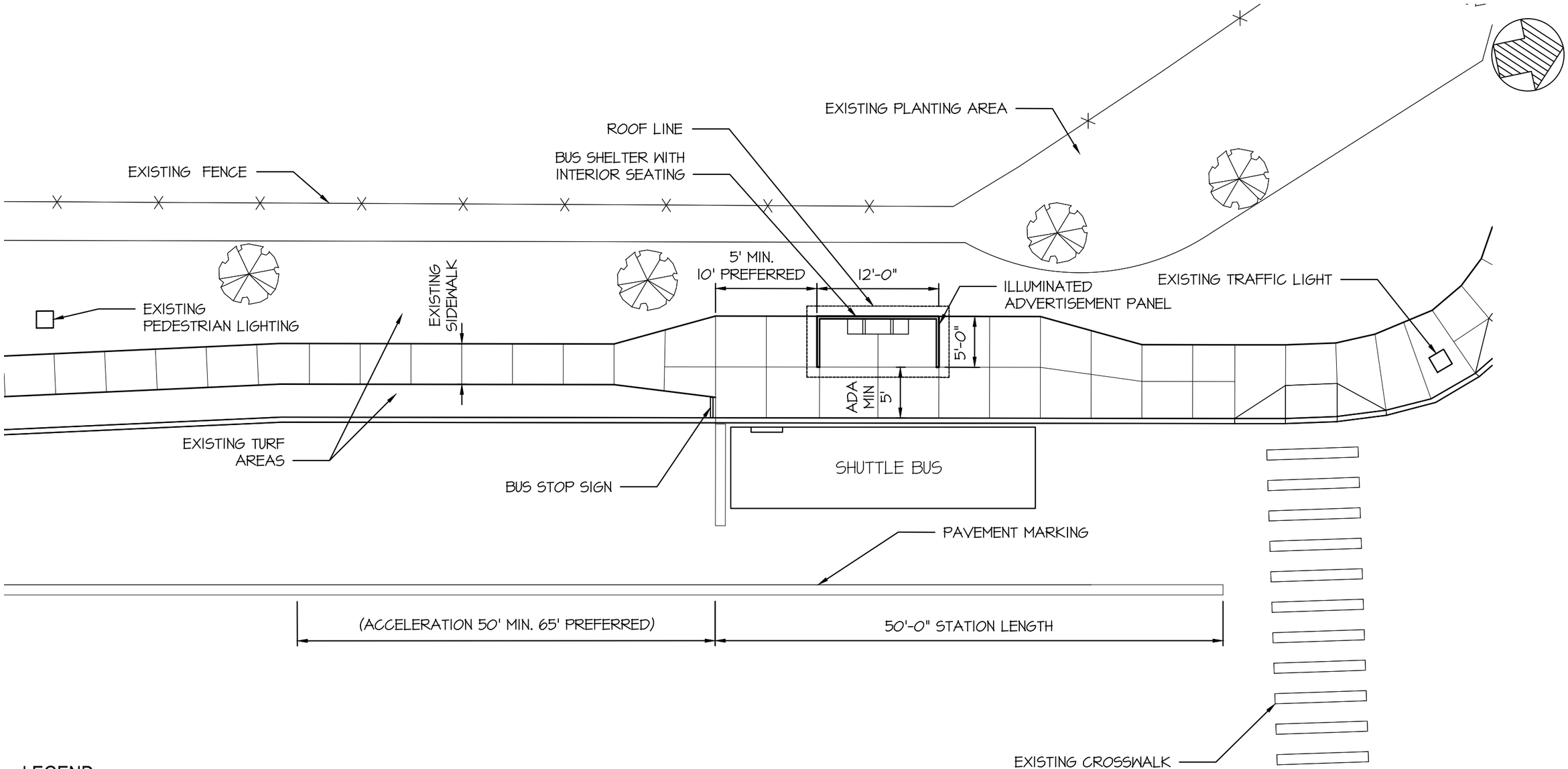
NO.	DATE	REVISION DESCRIPTION	INT.

ROUTE 110
ALTERNATIVE ANALYSIS
DRAFT

SCALE
1"=10'

GRAPHIC SCALE
0 5 10

SHEET NO.
2



LEGEND

PROPOSED TREE

EXISTING TREE

SEATING (MAX CAPACITY 3 PEOPLE PER BENCH)

PARSONS BRINCKERHOFF

B. THAYER ASSOCIATES

FEEDER ROUTE STATION TYPICAL PLAN

NO.	DATE	REVISION DESCRIPTION	INT.

ROUTE 110
ALTERNATIVE ANALYSIS
DRAFT

SCALE
1"=10'

GRAPHIC SCALE
0 5 10

SHEET NO.
2

Appendix C:
Preliminary Feasibility Assessment of a Median-Running BRT Alignment along Route 110

Preliminary Feasibility Assessment of a Median-Running BRT Alignment along Route 110

There are several existing BRT facilities elsewhere in the United States and around the world that utilize a median-running alignment. This configuration can achieve benefits such as enhanced visibility of stations, increased visibility of crossing pedestrians, and the provision of one combined station per stop for BRT vehicles in both directions. There are also disadvantages of median-running (compared to shoulder-running), which include the potential for higher capital costs and/or the potential need to take away an existing general purpose lane to accommodate larger right-of-way requirements for implementation.

The entire length of Route 110 within the study area was examined to consider where implementation of BRT could potentially be feasible in the median, without taking any travel lanes.

The successful Cleveland Healthline BRT system was first examined as a potential precedent for Route 110. The Healthline runs along Euclid Avenue/State Route 20 in Cleveland, with median-running BRT lanes and stations along the western portion of the route. (Along the eastern portion of the route, the BRT alignment uses shoulder-running.) The dedicated lanes are 12 feet wide, though the system utilizes a 24-foot wide swath where there is no station, and it utilizes a minimum 36-foot width at centralized/combined stations. Moreover, many Healthline BRT stops have a separate station in each direction. For example, there are separate stations for the eastbound and westbound routes at the East 19th Street stop (Figure 1).

Figure 1: Cleveland Healthline East 36th Street (Aerial View)



Source: Google

Historically, before the Healthline system came online, Euclid Avenue had two lanes in each direction for traffic, with separate left turn lanes at some intersections and on-street parking along most of its length. Implementation of median-running BRT required the removal of on-street parking and one travel lane in each direction. Today, there is one lane for through traffic in each direction, plus a right-turn-only lane at some intersections. Right turns are made from a shared right-through lane.

It was determined that median running along a ±1.1-mile section of Route 110 (from Spagnoli Road south to Gazza Boulevard/Daniel Street) could be feasible. Under this scenario, separate northbound and southbound stations within this segment could be combined at a median location instead of providing two separate stations on either side of Route 110.

Implementation of median-running BRT along this segment would require some shoulder taking, median taking, exclusive right-lane or left-lane taking, some removal of on-street parking, and changing some existing through-lane configurations. The entire section would need to be restriped and reconstructed, including new drainage where landscaped (and possibly depressed) medians would need to be removed.

In addition, if the BRT system would require re-purposing a shoulder lane into a through lane, all of the traffic associated with the through lane would be relocated immediately adjacent to the fronting land uses and their curb cuts, which could significantly increase potential conflicts. A designated BRT lane would only generate up to six BRT vehicles per hour (based on the proposed 10-minute peak period headways), while a through lane would accommodate significantly more traffic in close proximity to the curb cuts.

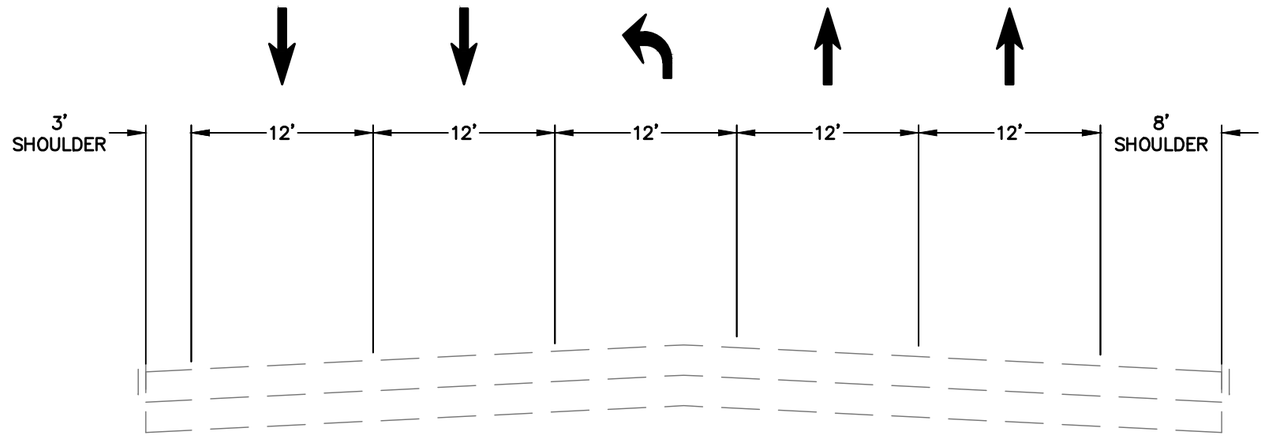
Furthermore, due to high existing and projected future traffic volumes, it was determined that Route 110 is not conducive to removing a travel lane to facilitate implementation of median-running BRT, as was done on Euclid Avenue in Cleveland for the Healthline. Indeed, the traffic volumes on Euclid Avenue are not at all comparable to Route 110. The 24-hour average annual daily traffic (AADT) on Euclid Avenue volume is approximately 7,000 vehicles per day, which can be accommodated in one travel lane in each direction (source: Ohio DOT Cuyahoga County Flow Map). Route 110, on the other hand, ranges from ±28,000 vehicles per day in Amityville, up to ±68,000 vehicles per day in the area where center median usage could be feasible (source: NYSDOT Traffic Data Viewer). Due to capacity limitations on Route 110, it would not be conceivable to remove a travel lane to enable median-running BRT.

Another reason why median-running may not be preferred is that if center platform stations are used, then the BRT vehicles would need left hand doors (in addition to right hand doors), which means that only specialized vehicles could serve those stations. BRT vehicles with left hand doors are more costly to procure and have less seating capacity. While it is possible to avoid the need for left hand doors by crossing over and driving on the left side to platform at stations, this approach is not recommended due to potential for conflicts approaching platforms and departing each center platform. There is also the “human factor” issue should a driver forget to execute the crossover maneuver.

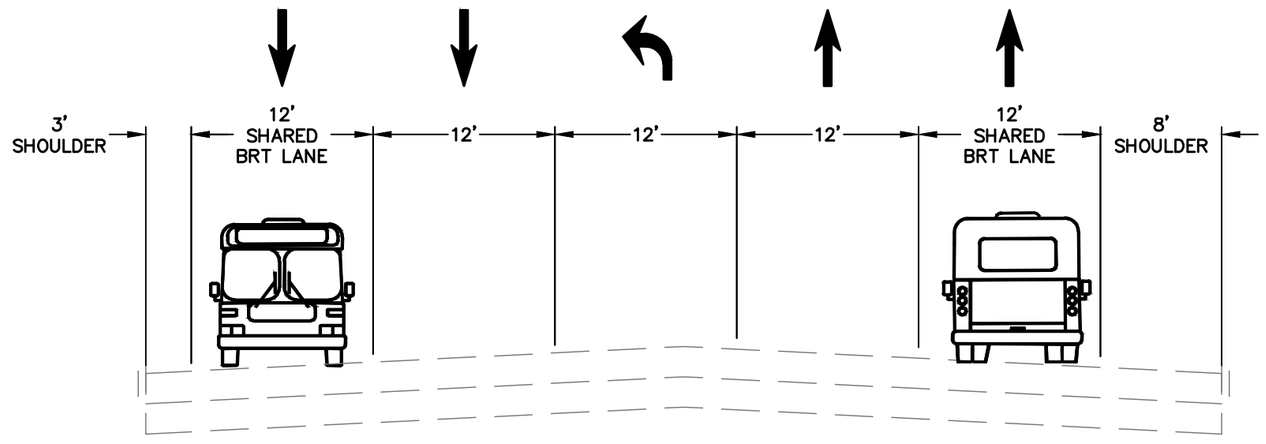
Based on all of the above factors, it was determined that it would not be practical to implement median-running BRT on Route 110 from both a cost and operational perspective, and that it would be preferable to advance shoulder-running concepts for further development and evaluation.

Appendix D:
10% Conceptual Engineering Typical Sections

SHEET 2
ROUTE 110 AT LOUDEN AVENUE (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF
CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

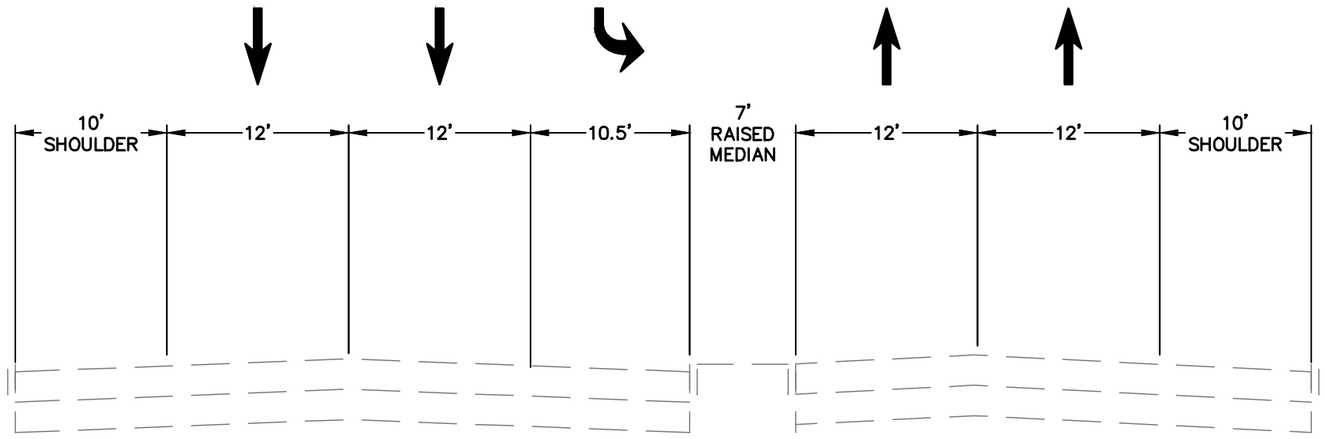
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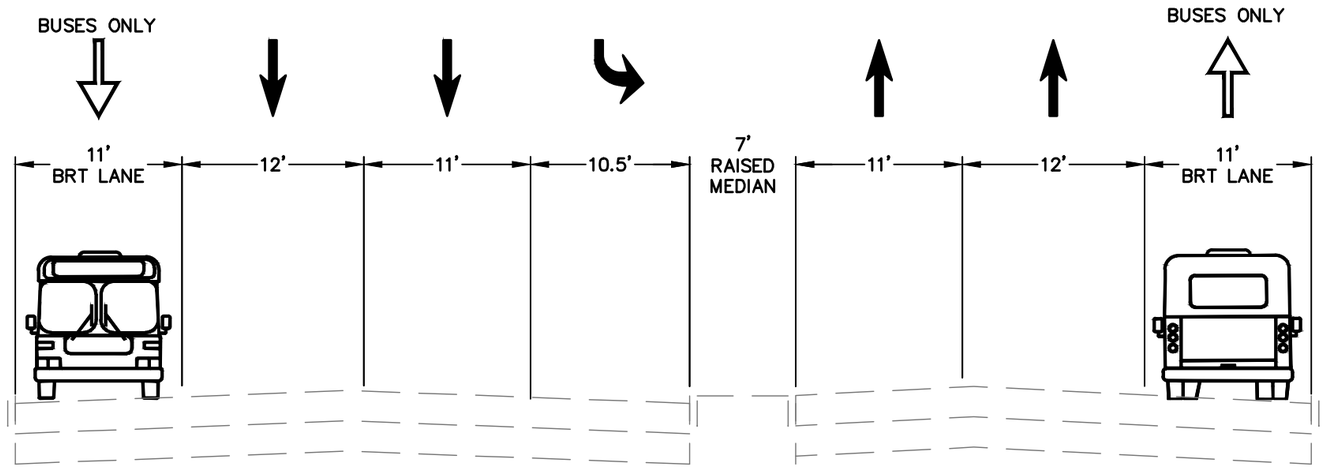
MAY 2015

SHEET NO. 37

SHEET 4
ROUTE 110 JUST NORTH OF NORTH DRIVE (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF
CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

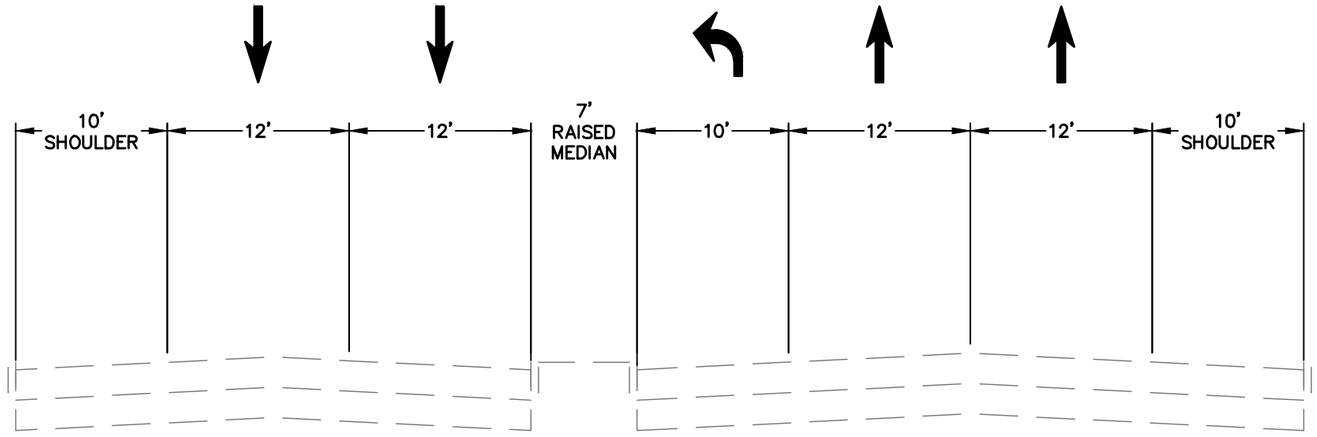
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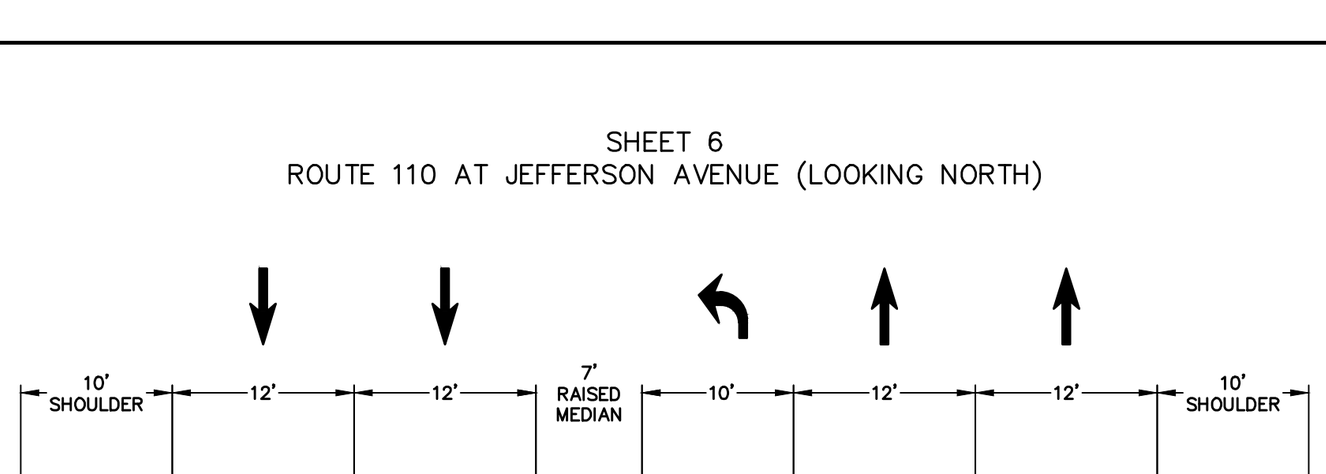
MAY 2015

SHEET NO. 38

SHEET 6
ROUTE 110 AT JEFFERSON AVENUE (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF
CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

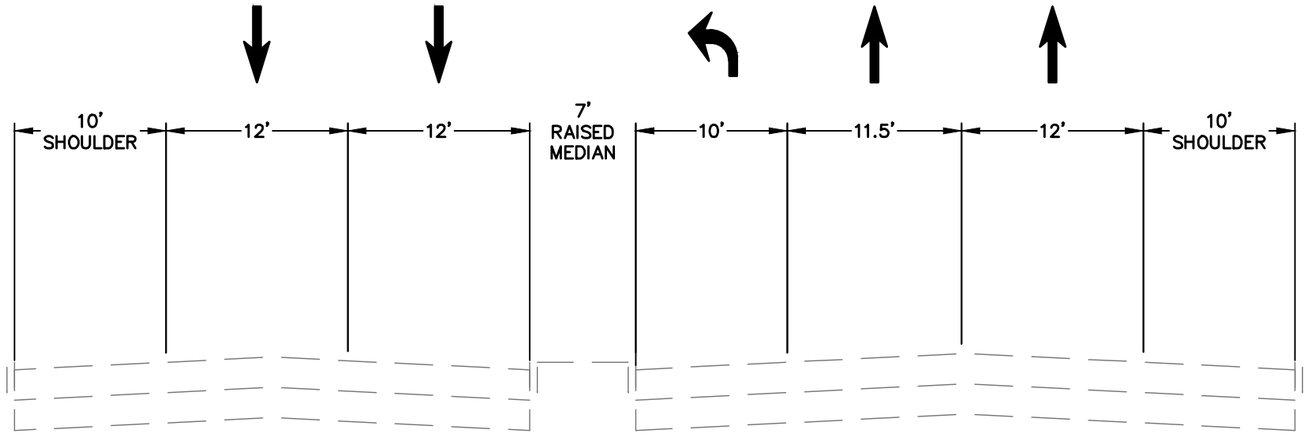
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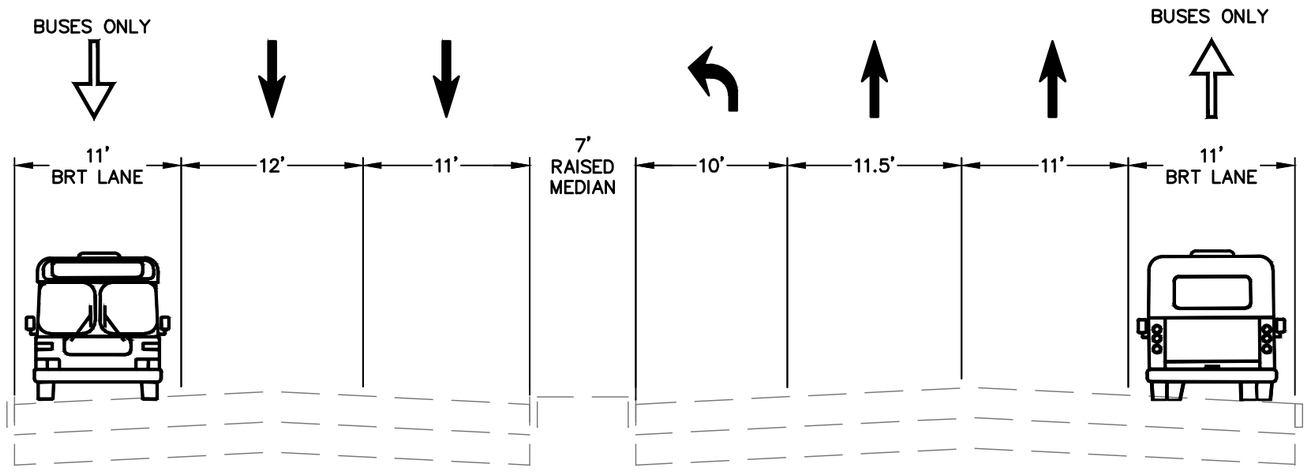
MAY 2015

SHEET NO. 39

SHEET 7
ROUTE 110 AT RITTER AVENUE (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF
CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

NO.	DATE	REVISION DESCRIPTION	INT.

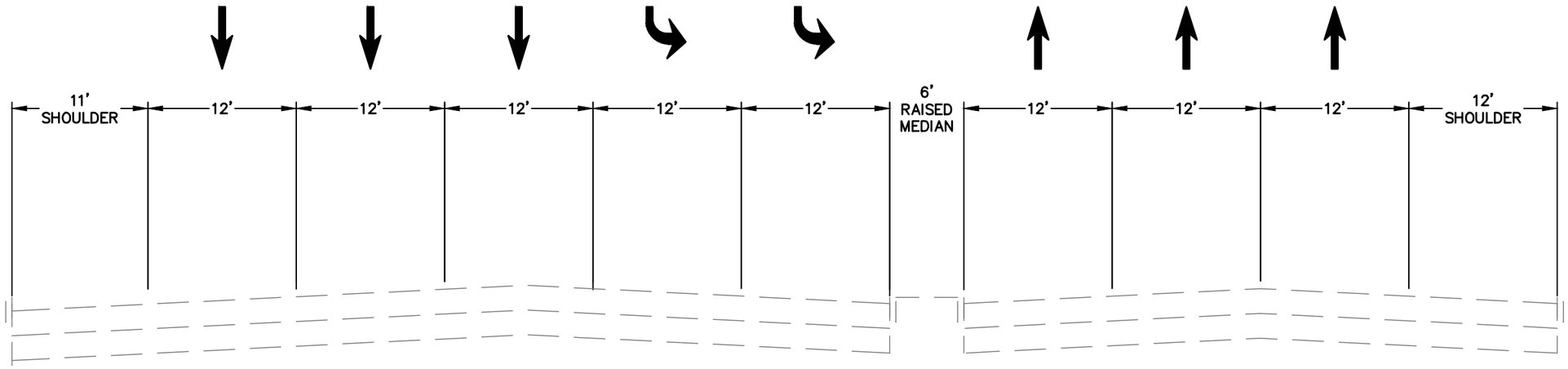
GRAPHIC SCALE
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MAY 2015

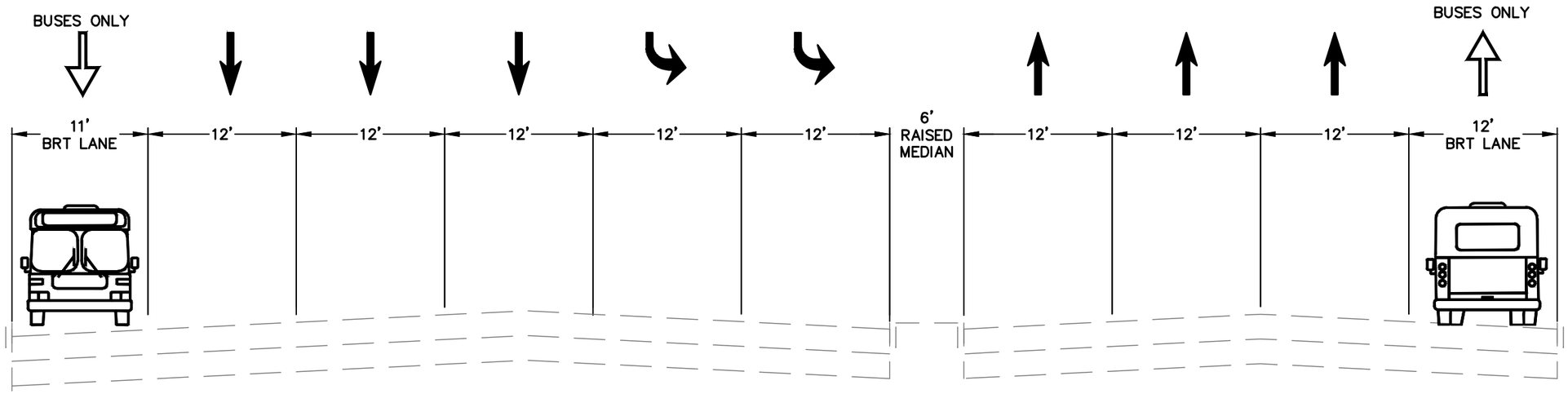
SHEET NO. 40

SHEET 9

ROUTE 110 AT GREAT NECK ROAD/MAIN STREET (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF

CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

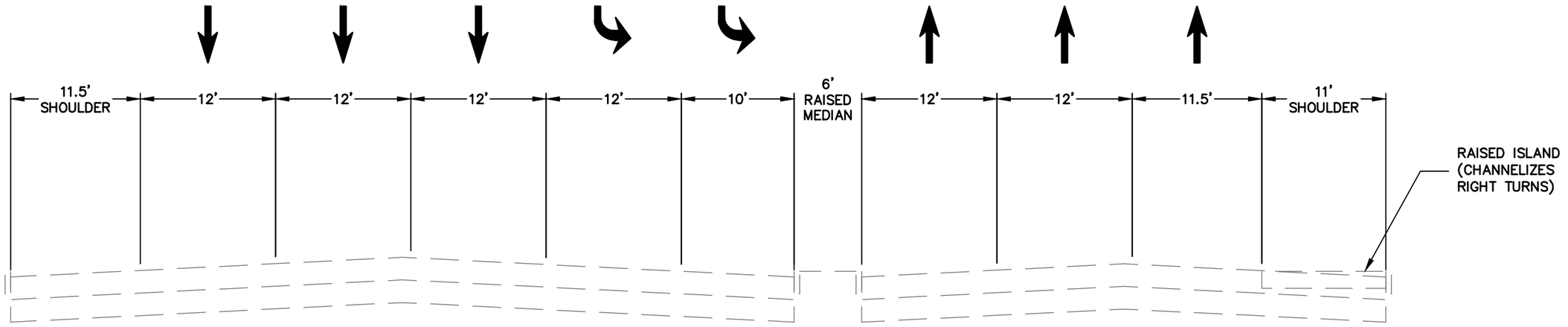
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GRAPHIC SCALE
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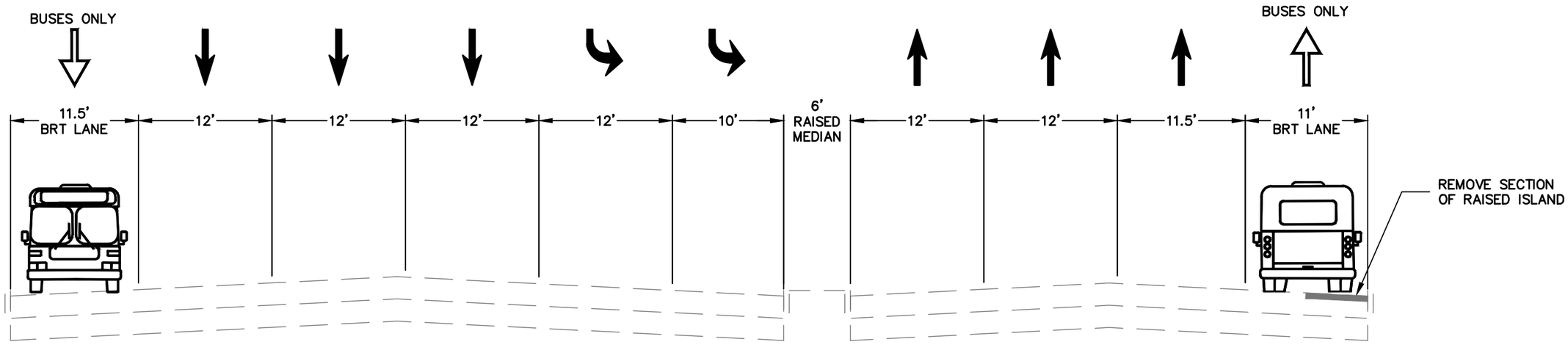
MAY 2015

SHEET NO. 41

SHEET 10
ROUTE 110 AT ALLEN BOULEVARD (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF
CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

NO.	DATE	REVISION DESCRIPTION	INT.

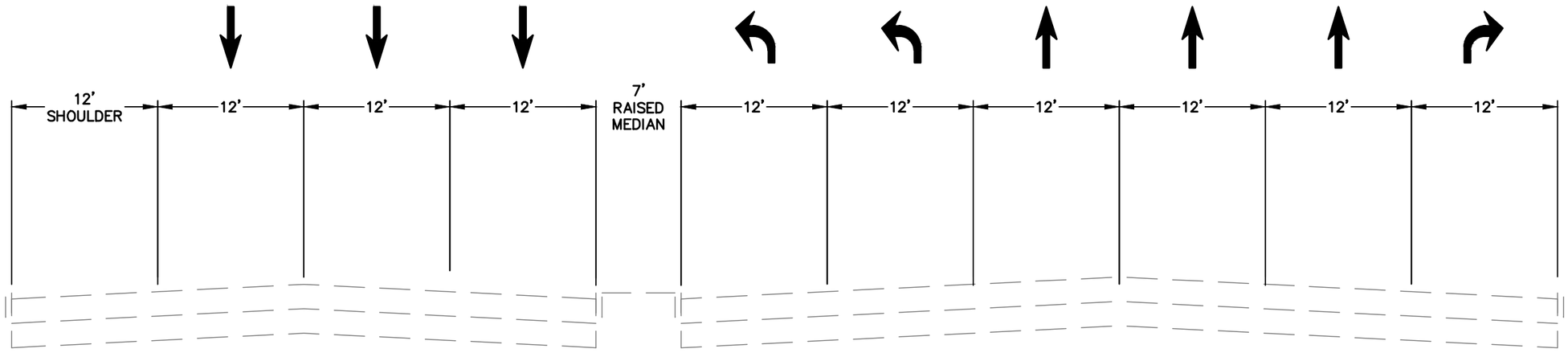
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MAY 2015

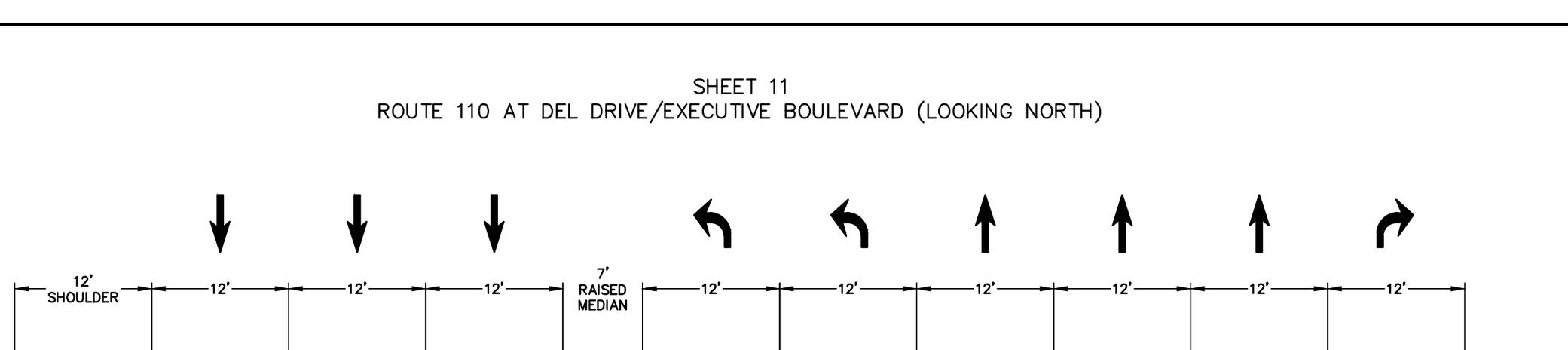
SHEET NO. 42

SHEET 11

ROUTE 110 AT DEL DRIVE/EXECUTIVE BOULEVARD (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF

CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

NO.	DATE	REVISION DESCRIPTION	INT.

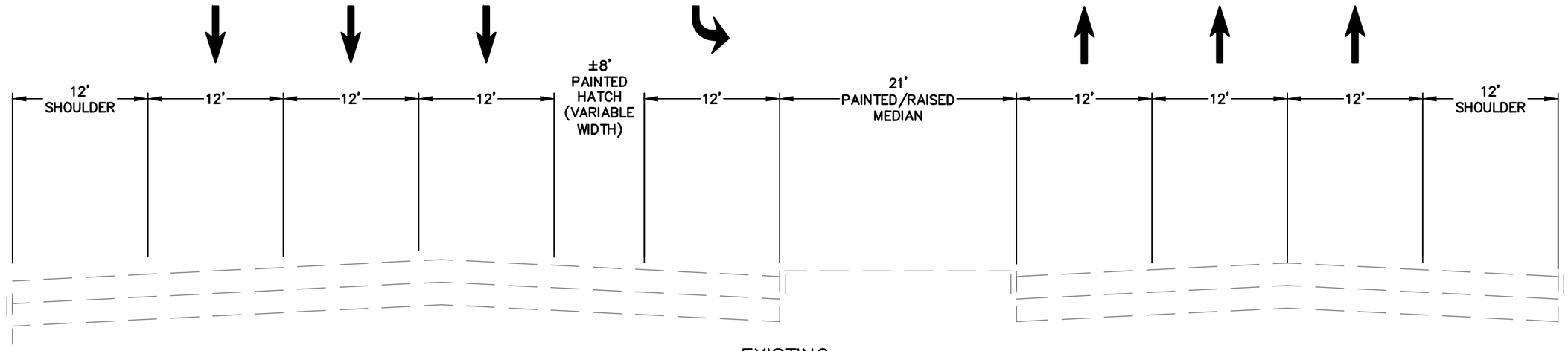
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MAY 2015

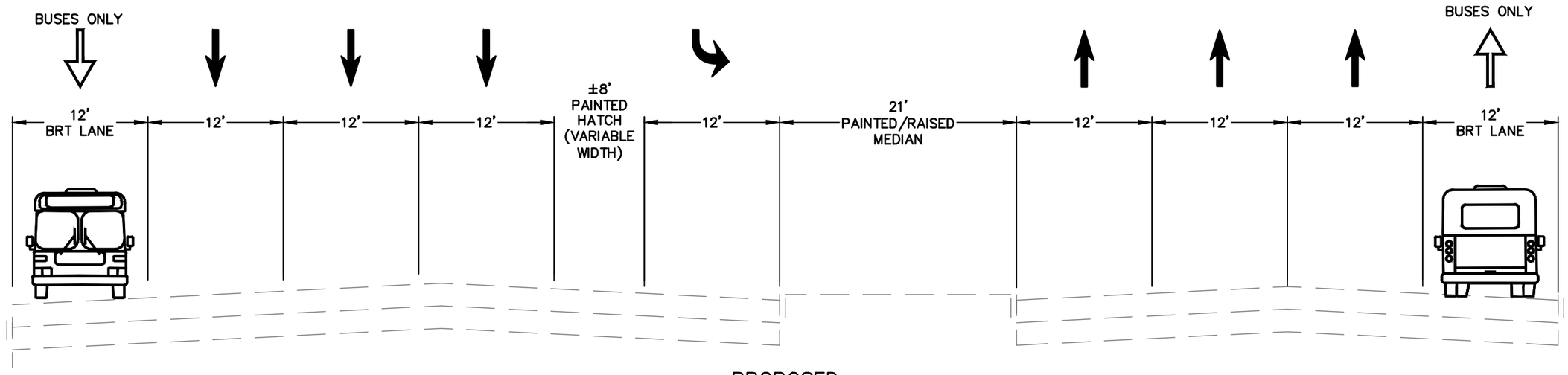
SHEET NO. 43

SHEET 12

ROUTE 110 NORTH OF ROUTE 109 (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF

CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

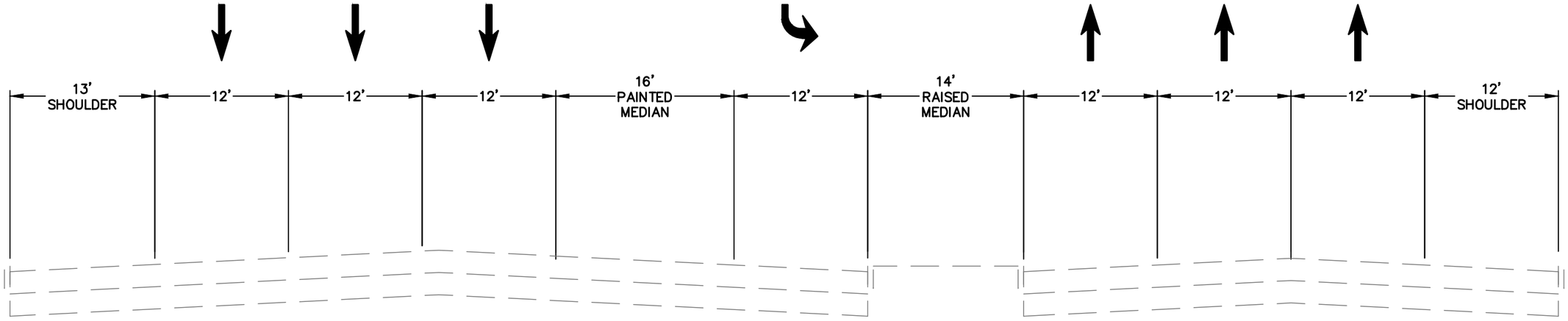
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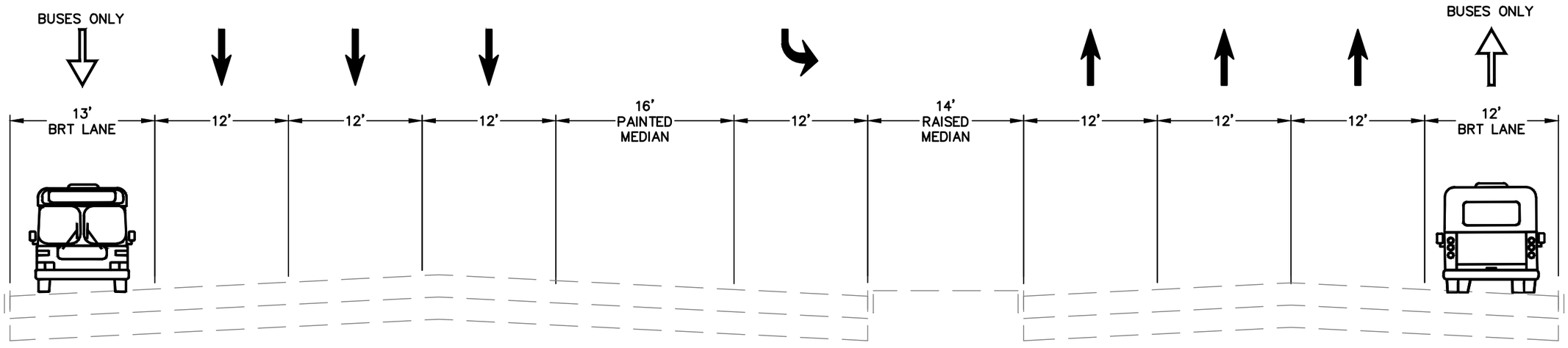
MAY 2015

SHEET NO. 44

SHEET 13
ROUTE 110 AT GRUMMAN LANE (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF
CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

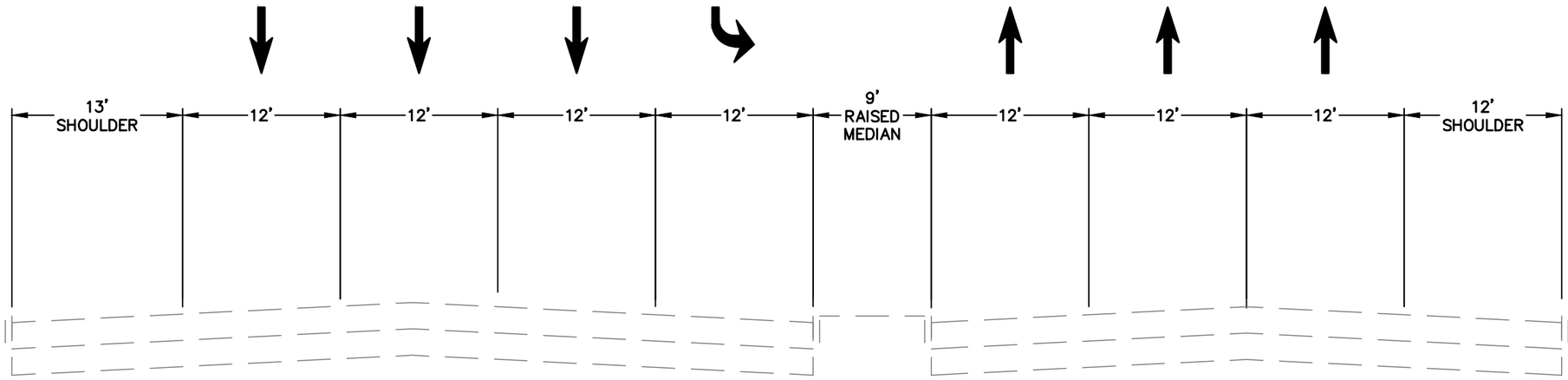
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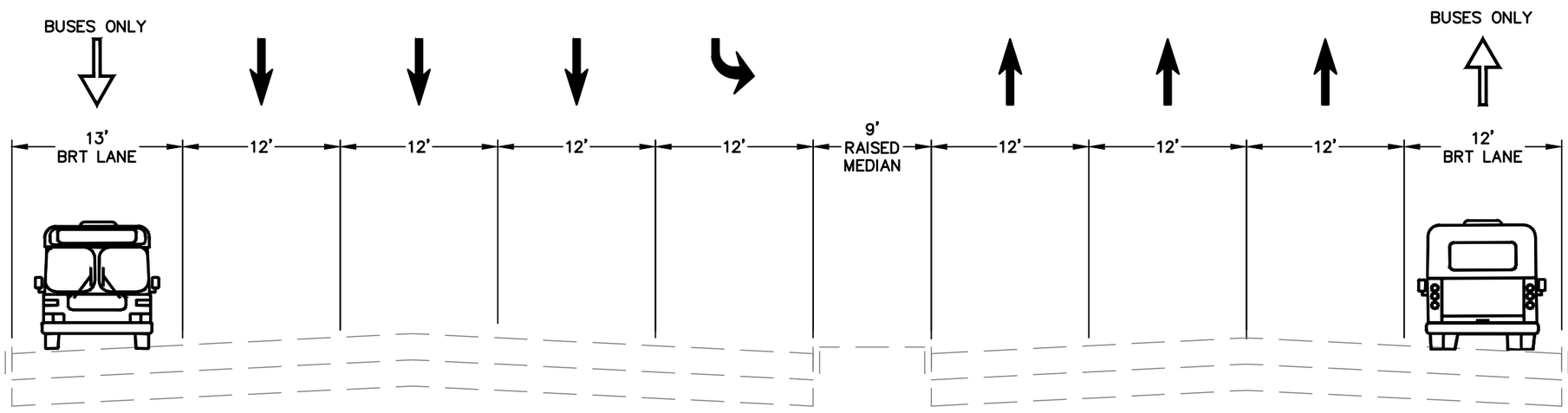
MAY 2015

SHEET NO. 45

SHEET 15
ROUTE 110 AT AIRPORT PLAZA BOULEVARD (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF
CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

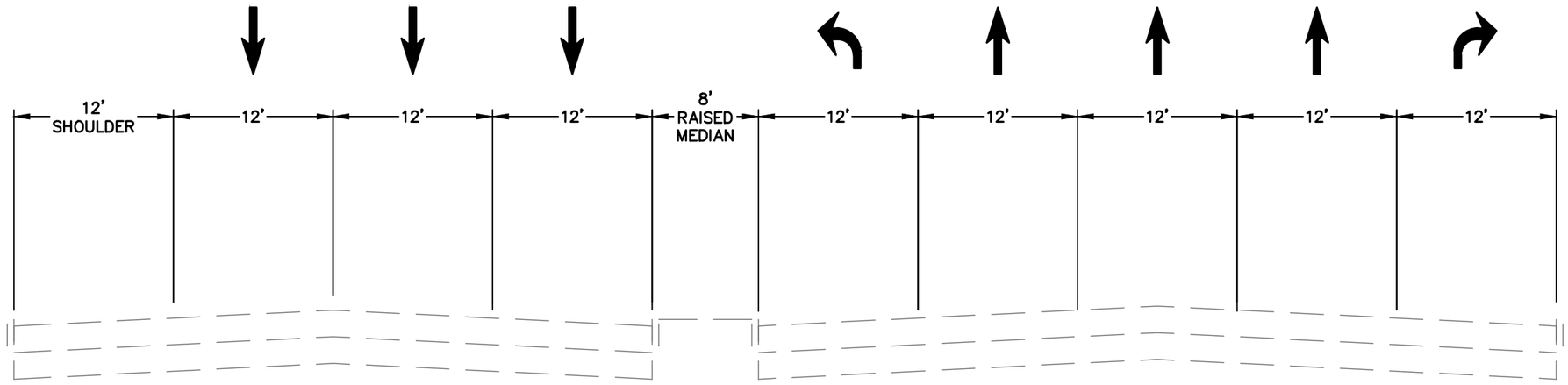
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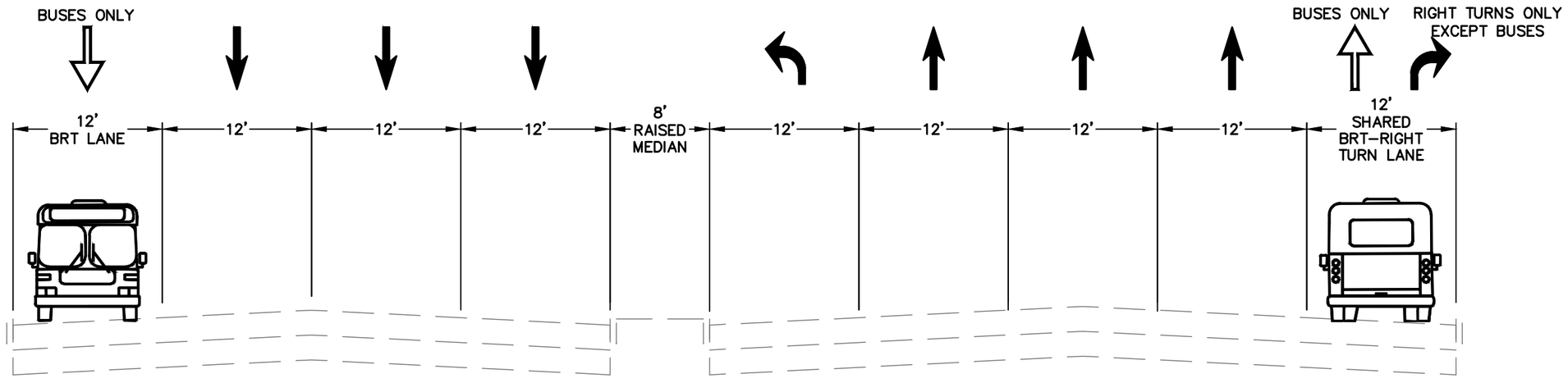
MAY 2015

SHEET NO. 46

SHEET 16
ROUTE 110 AT PRICE PARKWAY/PICONE BOULEVARD (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF
CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

NO.	DATE	REVISION DESCRIPTION	INT.

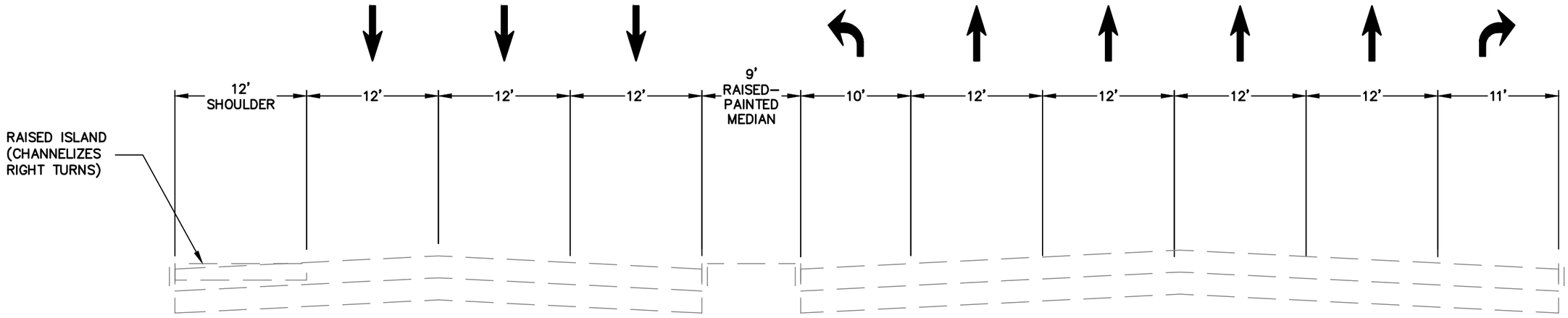
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MAY 2015

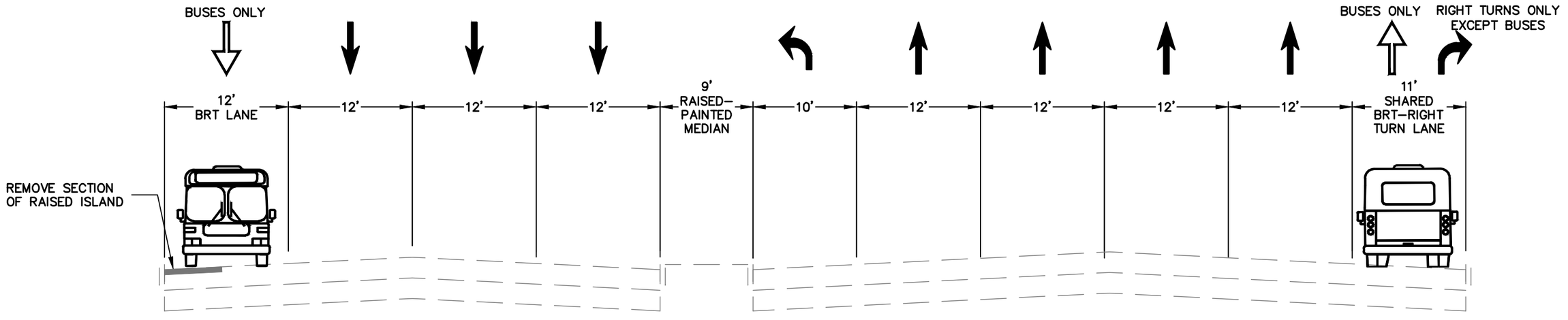
SHEET NO. 47

SHEET 18

ROUTE 110 AT MILBAR BOULEVARD/MELVILLE ROAD (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF

CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

NO.	DATE	REVISION DESCRIPTION	INT.

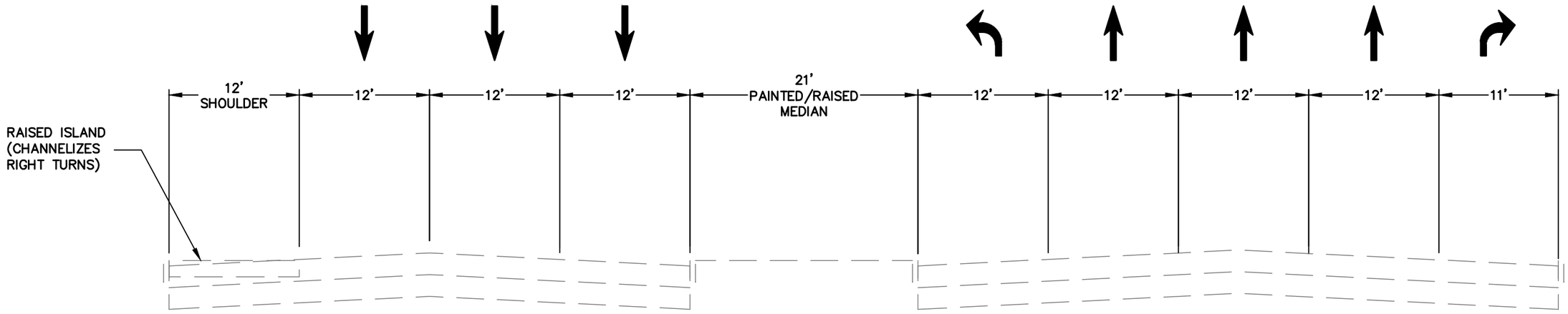
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MAY 2015

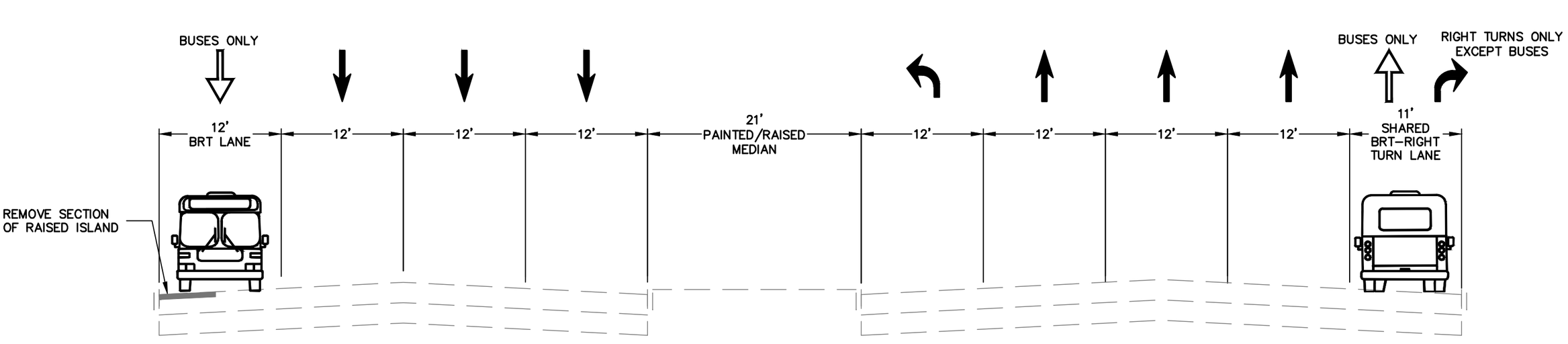
SHEET NO. 48

SHEET 19

ROUTE 110 AT SMITH STREET/FARMINGDALE STATE COLLEGE (LOOKING NORTH)



EXISTING



PROPOSED

TOWN OF BABYLON SUFFOLK CO., NY

PARSONS BRINCKERHOFF

CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

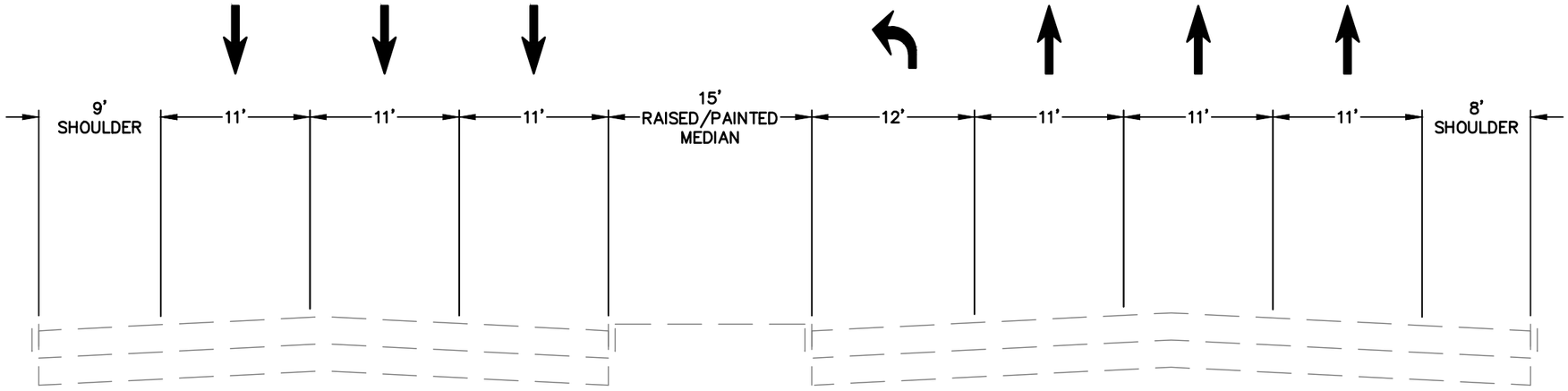
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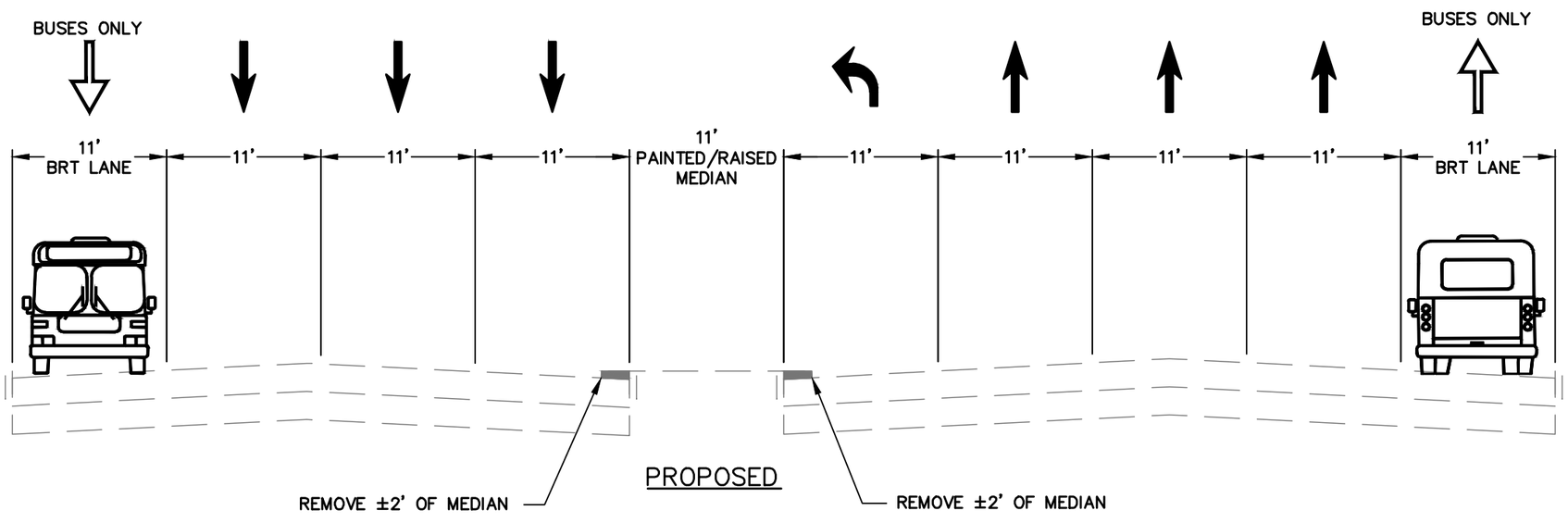
MAY 2015

SHEET NO. 49

SHEET 23
ROUTE 110 AT BAYLIS ROAD (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF
CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

NO.	DATE	REVISION DESCRIPTION	INT.

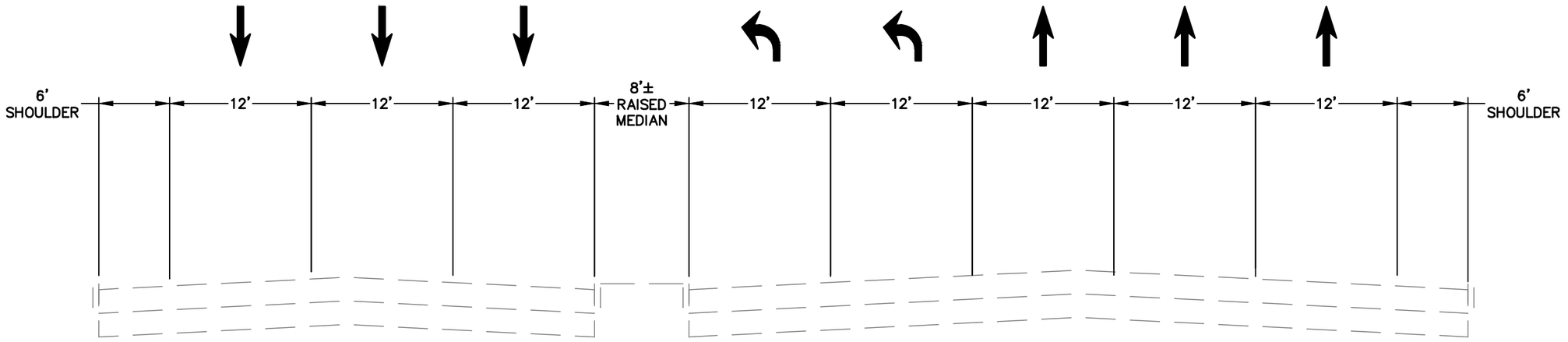
GRAPHIC SCALE
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MAY 2015

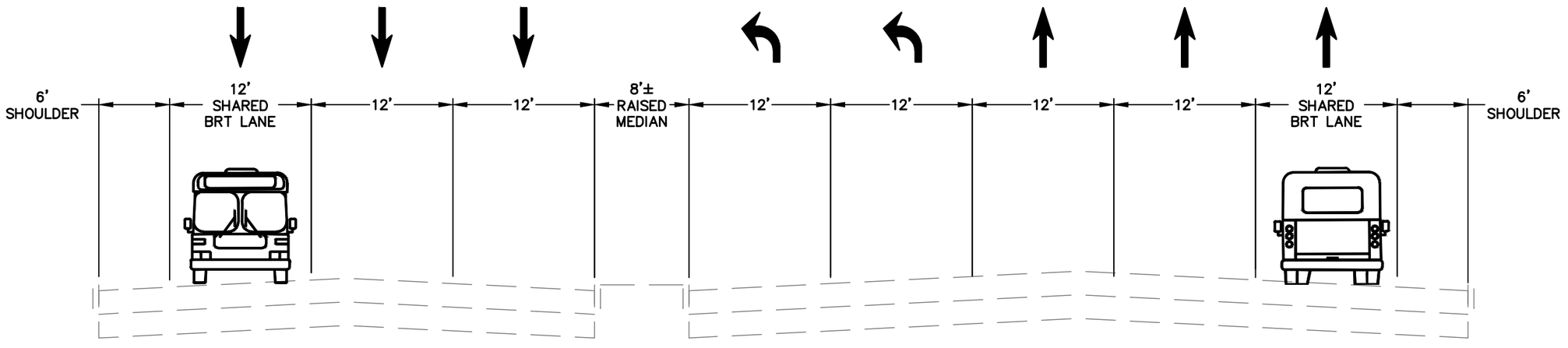
SHEET NO. 50

SHEET 26

ROUTE 110 AT NIKON DRIVEWAY NORTH OF LIE NORTH SERVICE ROAD (LOOKING NORTH)



EXISTING, WITH NYSDOT PAVEMENT MARKING IMPROVEMENTS (UNDERWAY IN 2015)



PROPOSED

PARSONS BRINCKERHOFF

CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

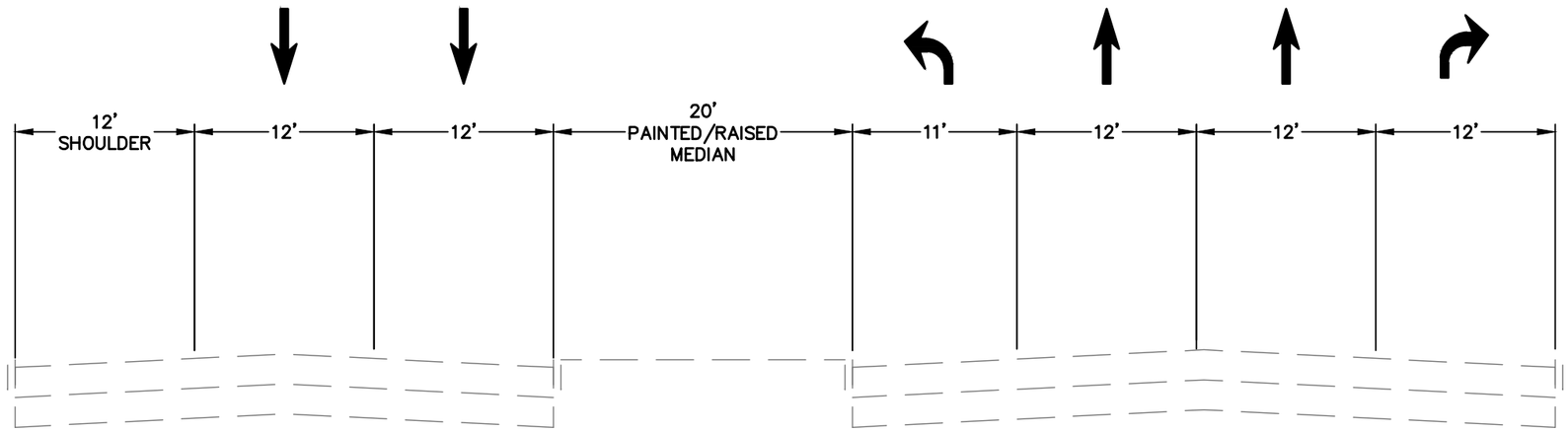
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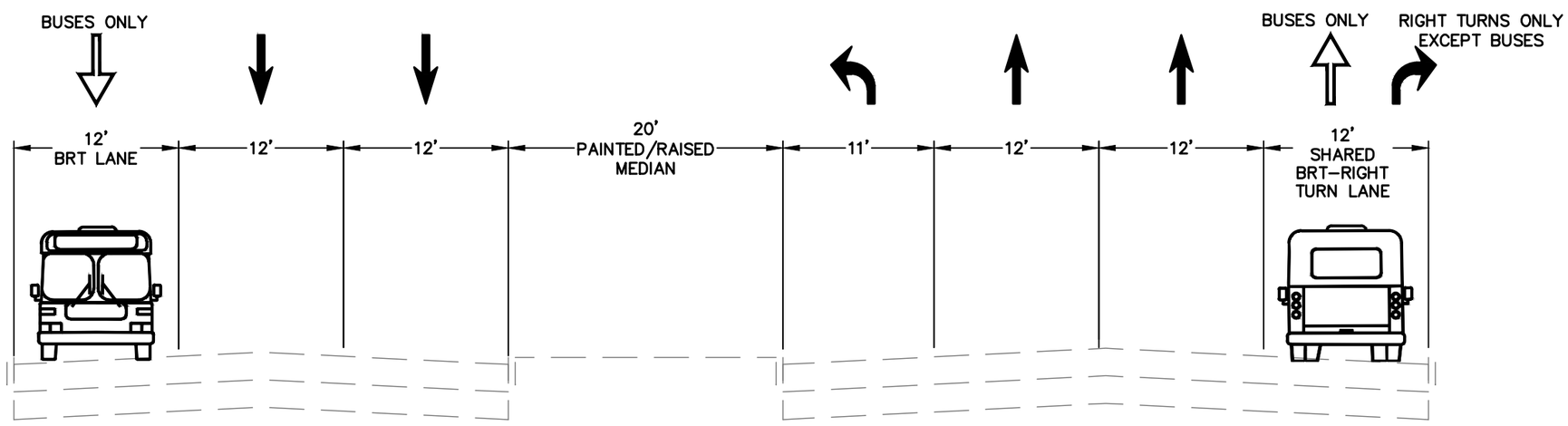
MAY 2015

SHEET NO. 51

SHEET 34
ROUTE 110 AT SCHWAB ROAD (LOOKING NORTH)



EXISTING



PROPOSED

PARSONS BRINCKERHOFF
CAMERON ENGINEERING & ASSOCIATES, LLP

ROUTE 110 ALTERNATIVES ANALYSIS

NO.	DATE	REVISION DESCRIPTION	INT.

GRAPHIC SCALE
0 5 10

MAY 2015

SHEET NO. 52

Appendix E:
Line Item & FTA Format Order-of-Magnitude Capital Cost Estimate for BRT Trunk Route

Line Item Order-of-Magnitude Capital Cost Estimate for BRT Trunk Route

Item	Unit	Unit Cost (2015$)	Raw Quantity	Quantity + 10%	Total (2015$)
Basic Work Zone Traffic Control (Budget)	LS	$500,000	1	1	$500,000
Signal Work for Transit Signal Priority:					
TSP equipment at individual intersections[1]	EA	$10,000	44	44	$440,000
BRT Vehicles:					
Base price per bus	EA	$600,000	9	9	$5,400,000
Unit bus price add-ons for on-board GPS, TSP equipment, etc.[2]	EA	$150,000	9	9	$1,350,000
Stations:					
Large station size (includes streetscaping/amenity budget)	EA	$200,000	4	4	$800,000
Typical station size (includes streetscaping/amenity budget)	EA	$125,000	16	16	$2,000,000
Traffic Signage and Striping:					
Ground-Mounted Sign Panels ≤30 SF with Z-bars, High Visibility Sheeting	SF	$75	742	820	$61,500
Type A Sign Posts	EA	$230	72	80	$18,400
Remove Ground Mounted Type A Sign Supports & Foundations (Budget)	EA	$110	20	25	$2,750
Remove Pavement Stripes	LF	$2	10,695	11,765	$23,530
Thermoplastic Reflectorized Pavement Stripes	LF	$2	80,373	88,410	$176,820
White Preformed Reflectorized Pavement Symbols	EA	$175	495	545	$95,375
Pavement Replacement and Colored Paint Treatment for Exclusive Bus Lanes:					
Asphalt Wearing Course 2"	TONS	$120	13,509	14,860	$1,783,200
Tack Coat	GAL	$7	5,775	6,355	$44,485
Milling	SY	$7	115,500	127,050	$889,350
Paint Bus Lane	SF	$2.75	831,600	914,760	$2,515,590
Reduce Median Islands and Pavement Replacement:					
Unclassified Excavation and Disposal	CY	$45	350	385	$17,325
Topsoil - Roadside	CY	$65	250	275	$17,875
Sodding	SY	$20	749	825	$16,500
Install New Curbed Island	CY	$550	50	55	$30,250
Pedestrian Ramp	EA	$3,600	19	25	$90,000
Embedded Detectable Warning Units	SY	$400	21	25	$10,000
Asphalt Binder Course 2 1/2"	TONS	$120	45	50	$6,000
Asphalt Wearing Course 2"	TONS	$120	332	370	$44,400
6" 37.5 F9 Base Course HMA, 80 Series Compaction	TONS	$120	161	180	$21,600
Tack Coat	GAL	$7	142	160	$1,120
Milling	SY	$7	2,839	3,125	$21,875
Pedestrian Signals at 3 proposed stations:					
Signal Pole Excavation and Foundation (J2)	CY	$1,600	7	10	$16,000
Conduit Excavation And Backfill (not including Surface Restoration)	LF	$22	1,500	1,650	$36,300
Conduit Metal Steel, Zinc Coated, 2" Diameter	LF	$16	1,500	1,650	$26,400
Traffic Signal Pole Post Top Mount, 8 feet mounting height	EA	$1,200	6	6	$7,200
Signal Cable, 2 Conductor, 14 AWG	LF	$3	1,500	1,650	$4,950
Signal Cable, 5 Conductor, 14 AWG	LF	$2	1,500	1,650	$3,713
Pedestrian Signal Module - 12" Bi-Modal Hand/Man LED	EA	$250	6	6	$1,500
Pedestrian Signal Post Top Mount Assembly	EA	$185	6	6	$1,110
Pedestrian Pushbutton and Sign - Without Post	EA	$250	6	6	$1,500
Signal Head at Great Neck Road (if span wire analysis confirms ex. pole strengths):					
Budget for minor signal/controller upgrades as needed	LS	$8,000	1	1	$8,000
Traffic Signal Faces (Red, Yellow, Green) 12" LED	EA	$150	3	3	$450
Traffic Signal Section, 12 inch	EA	$250	3	3	$750
Signal Cable, 5 Conductor, 14 AWG	LF	$2	500	550	$1,238

Line Item Order-of-Magnitude Capital Cost Estimate for BRT Trunk Route

Item	Unit	Unit Cost (2015$)	Raw Quantity	Quantity + 10%	Total (2015$)
Signal Work at New Median Islands:					
Signal Pole Excavation and Foundation (J2)	CY	$1,600	6	10	$16,000
Conduit Excavation And Backfill (not including Surface Restoration)	LF	$22	500	550	$12,100
Conduit Metal Steel, Zinc Coated, 2" Diameter	LF	$16	500	550	$8,800
Traffic Signal Pole Post Top Mount, 8 feet mounting height	EA	$1,200	4	4	$4,800
Signal Cable, 2 Conductor, 14 AWG	LF	$3	*525*	580	$1,740
Signal Cable, 5 Conductor, 14 AWG	LF	$2	*525*	580	$1,305
Remove Auxiliary Pole and Pedestrian Post	EA	$1,000	5	5	$5,000
Remove Pedestrian Signal, Button, and Sign	EA	$150	5	5	$750
Remove Signal Cable	LF	$3	1,500	1,650	$4,125
Pedestrian Signal Module - 12" Bi-Modal Hand/Man LED	EA	$250	10	10	$2,500
Pedestrian Signal Post Top Mount Assembly	EA	$185	10	10	$1,850
Pedestrian Pushbutton and Sign - Without Post	EA	$250	10	10	$2,500
				SUBTOTAL	**$16,548,525**
				SOFT COSTS: SURVEY, DESIGN, MOBILIZATION, INSURANCE (35%)	**$3,429,484**
				DESIGN CONTINGENCY (40%)	**$7,991,204**
				TOTAL	**$27,969,212**

Source: Cameron Engineering

Notes:

[1] Includes the cost of controller modifications to add additional module for TSP; excludes the system-wide cost for system integration (i.e., interface to AVL, software, interface to traffic management center, which would cost more than an additional $500,000). Also includes the following considerations: existing signals have TSP-compatible controller technology (as confirmed by NYSDOT); wireless (GPS) detection systems as opposed to hard-wired fiber optic communications cable.

[2] Includes the cost of emitters for TSP ($3,000 per vehicle)

FTA Format Order-of-Magnitude Capital Cost Estimate for BRT Trunk Route

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars TOTAL (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	**10.3**	6,111		**6,111**
10.02 Guideway: At-grade semi-exclusive (allows cross-traffic)	6.6	3,903		3,903
10.03 Guideway: At-grade in mixed traffic	3.7	2,208		2,208
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	**20**	2,800		**2,800**
20.01 At-grade station, stop, shelter, mall, terminal, platform	16	2,000		2,000
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.	4	800		800
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS		0		**0**
40 SITEWORK & SPECIAL CONDITIONS		277		**277**
40.01 Demolition, Clearing, Earthwork		277		277
40.02 Site Utilities, Utility Relocation		0		0
50 SYSTEMS		611		**611**
50.02 Traffic signals and crossing protection		171		171
50.05 Communications		440		440
Construction Subtotal (10 - 50)		9,799		**9,799**
60 ROW, LAND, EXISTING IMPROVEMENTS		0		**0**
70 VEHICLES (number)	**9**	6,750		**6,750**
70.04 Bus	9	6,750		6,750
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)		3,429		**3,429**
80.01 Project Development		1,666		1,666
80.02 Engineering (not applicable to Small Starts)				
80.03 Project Management for Design and Construction		784		784
80.04 Construction Administration & Management		588		588
80.05 Professional Liability and other Non-Construction Insurance		245		245
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		49		49
80.07 Surveys, Testing, Investigation, Inspection		49		49
80.08 Start up		49		49
Subtotal (10 - 80)		19,978	0	**19,978**
90 UNALLOCATED CONTINGENCY				**7,991**
Subtotal (10 - 90)				**27,969**
100 FINANCE CHARGES				**0**
Total Project Cost (10 - 100)				**27,969**
Allocated Contingency as % of Base Yr Dollars w/o Contingency				3.70%
Unallocated Contingency as % of Base Yr Dollars w/o Contingency				36.30%
Total Contingency as % of Base Yr Dollars w/o Contingency				40.00%
Unallocated Contingency as % of Subtotal (10 - 80)				35.00%
2015 Construction Cost per Mile (X000)				$944,953.64
2015 Total Project Cost per Mile Not Including Vehicles (X000)				$2,046,345.95
2015 Total Project Cost per Mile (X000)				$2,722,164.81

Source: Cameron Engineering



ROUTE 110 ALTERNATIVES ANALYSIS

Appendix H:
Task 9 Technical Memorandum

TOWN OF BABYLON
SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

Task 9: Operations Analysis, Operating and Maintenance (O&M) Cost Estimates

September 21, 2015

Submitted by:

NELSON NYGAARD

Submitted by:

PARSONS BRINCKERHOFF

Version Final

QUALITY ASSURANCE/QUALITY CONTROL

Created by:	NELSON NYGAARD	April 26, 2015
	Nelson Nygaard	**Date**
Operations Analysis Reviewed by:		May 19, 2015
	Kenneth Lin / Parsons Brinckerhoff	**Date**
Updated by:		September 21, 2015
	Maxwell Sokol / Parsons Brinckerhoff	**Date**
Approved by:		September 21, 2015
	Nicole Bucich / Parsons Brinckerhoff	**Date**

REVISIONS

Date	Version Number	Revision
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September 21, 2015	Final	Addressing Town of Babylon comments, received September 3, 2015

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1. Introduction

The purpose of the Route 110 Alternatives Analysis is to evaluate alternatives that address the existing and future transportation demand in the Route 110 Corridor, manage congestion, maximize environmental benefits, and enhance the study area's economic competitiveness by increasing mobility options. The Alternatives Analysis is building upon previous and ongoing studies to select a Locally Preferred Alternative (LPA) to advance to Project Development and National Environmental Policy Act (NEPA) review with the Federal Transit Administration (FTA). While the Moving Ahead for Progress in the 21st Century Act (MAP-21)—enacted by Congress in 2012—eliminated the requirement for an Alternatives Analysis, good planning practice dictates the importance of looking at reasonable modal and alignment alternatives in a transportation corridor to ensure that the public and decision-makers have an appropriate level of information necessary to identify and select a solution to address the aforementioned problems and opportunities.

As such, a focused Route 110 Alternatives Analysis is being conducted, based upon the following:

- A firm understanding of transportation needs, problems, and opportunities in the Route 110 Corridor
- The establishment of clear goals and objectives to be achieved by the transportation improvements in the Corridor
- The definition of various technologies and operating plans designed to address Corridor problems, goals, and objectives
- The evaluation of alternatives against multiple measures—including financial feasibility of the grantee/operator/sponsor (in this case the grantee is the Town of Babylon)

This work that is currently being completed will result in a local decision that is well informed, demonstrates strong consensus, and is less vulnerable to delays or public scrutiny in the planning and implementation process.

2. Overview

This technical memorandum serves as the deliverable for Task 9. The document summarizes the methodology and results of the operations planning for the Short List Alternatives in the Route 110 Alternatives Analysis, including the bus rapid transit (BRT) trunk route and associated feeder routes. The Short List Alternatives comprise the following:

- **Alternative D**: BRT trunk route along Route 110 with circular feeder routes
- **Alternative E**: BRT trunk route along Route 110 with transit center nodes and connecting feeder routes

Alternatives D and E share the same BRT trunk route alignment and service characteristics, differing only with respect to the feeder routes that would provide service off Route 110. The Short List Alternatives development process started with detailed planning of the BRT trunk route, followed by the feeder routes for the two alternatives.

The operations planning effort was informed by the 10% conceptual engineering (documented in the Task 11 Technical Memorandum). Specifically, the determination of proposed shoulder-running and mixed traffic alignment segments along the BRT trunk route, as well as intersections that are proposed to be equipped with traffic signal priority (TSP), guided the process of estimating travel time savings for the proposed BRT service.

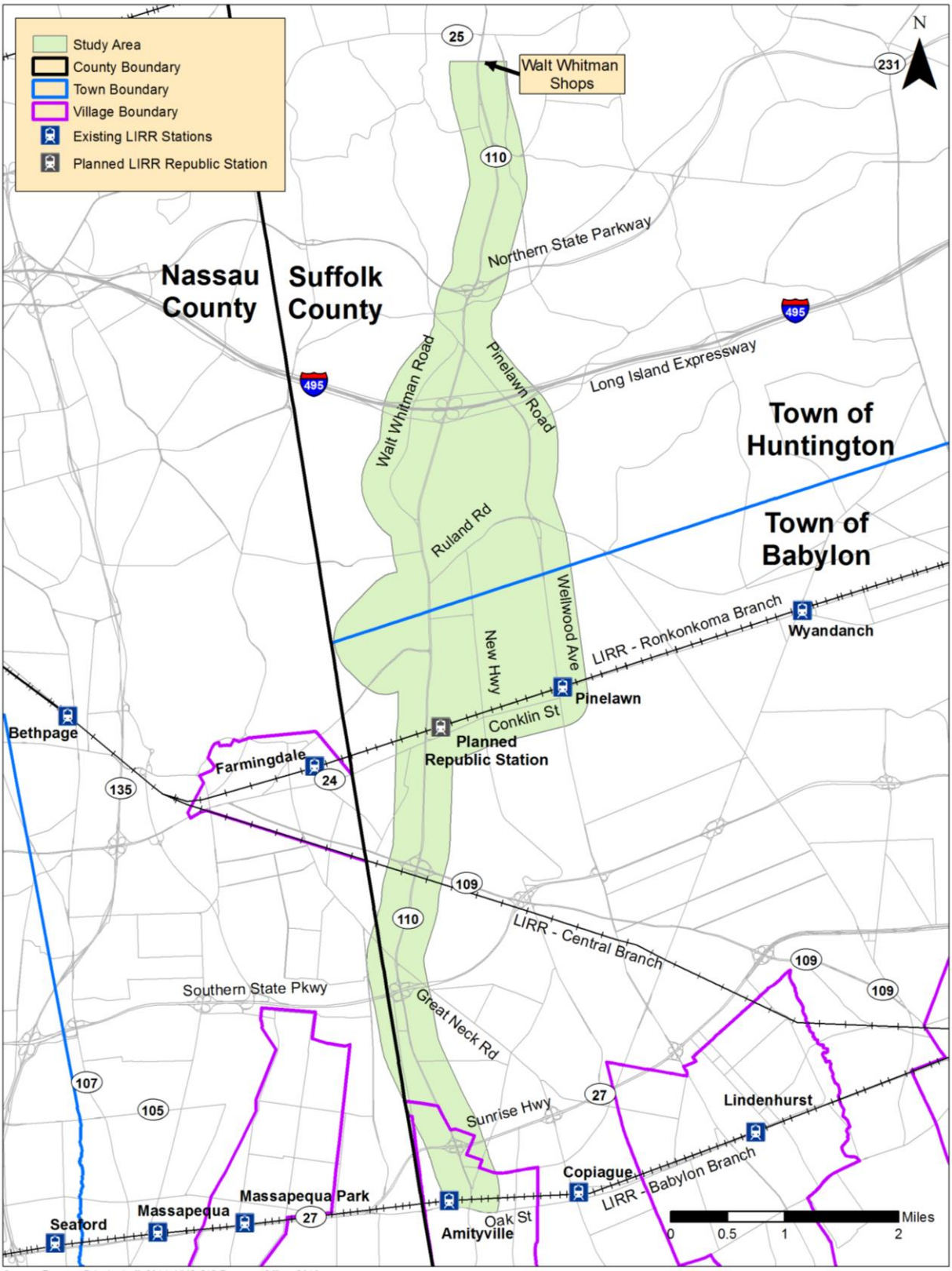
After presenting the operating plans for the BRT trunk route and shuttle bus feeder route services for the Short List Alternatives, this technical memorandum documents the order-of-magnitude operating and maintenance (O&M) cost estimates for the two alternatives.

3. Study Area

The study area for the Route 110 Alternatives Analysis (Figure 1) includes the areas directly affected by the potential construction and operation of transit improvements. The study area is defined to encompass the portion of the Route 110 Corridor where trip generators and attractors are most concentrated and where the existing right-of-way could best accommodate the introduction of a new premium transit service. Specifically, the approximately 10.5-mile stretch of the Route 110 Corridor in the study area is located between Oak Street in the Village of Amityville at the southern end and the Walt Whitman Shops in the Town of Huntington at the northern end.

The study area also includes areas to the east and west of Route 110 to capture major activity centers that are beyond a reasonable walking distance from the Corridor. The study area extends east as far as Wellwood Avenue in the East Farmingdale portion of the Town of Babylon (at Conklin Street), and continues north to the intersection of Pinelawn Road and Route 110 in the Melville portion of the Town of Huntington. The study area extends west as far Walt Whitman Road in Melville and also includes the Farmingdale State College campus.

Figure 1: Route 110 Alternatives Analysis Study Area Boundaries



Source: NYS GIS Program Office, Parsons Brinckerhoff (2015)

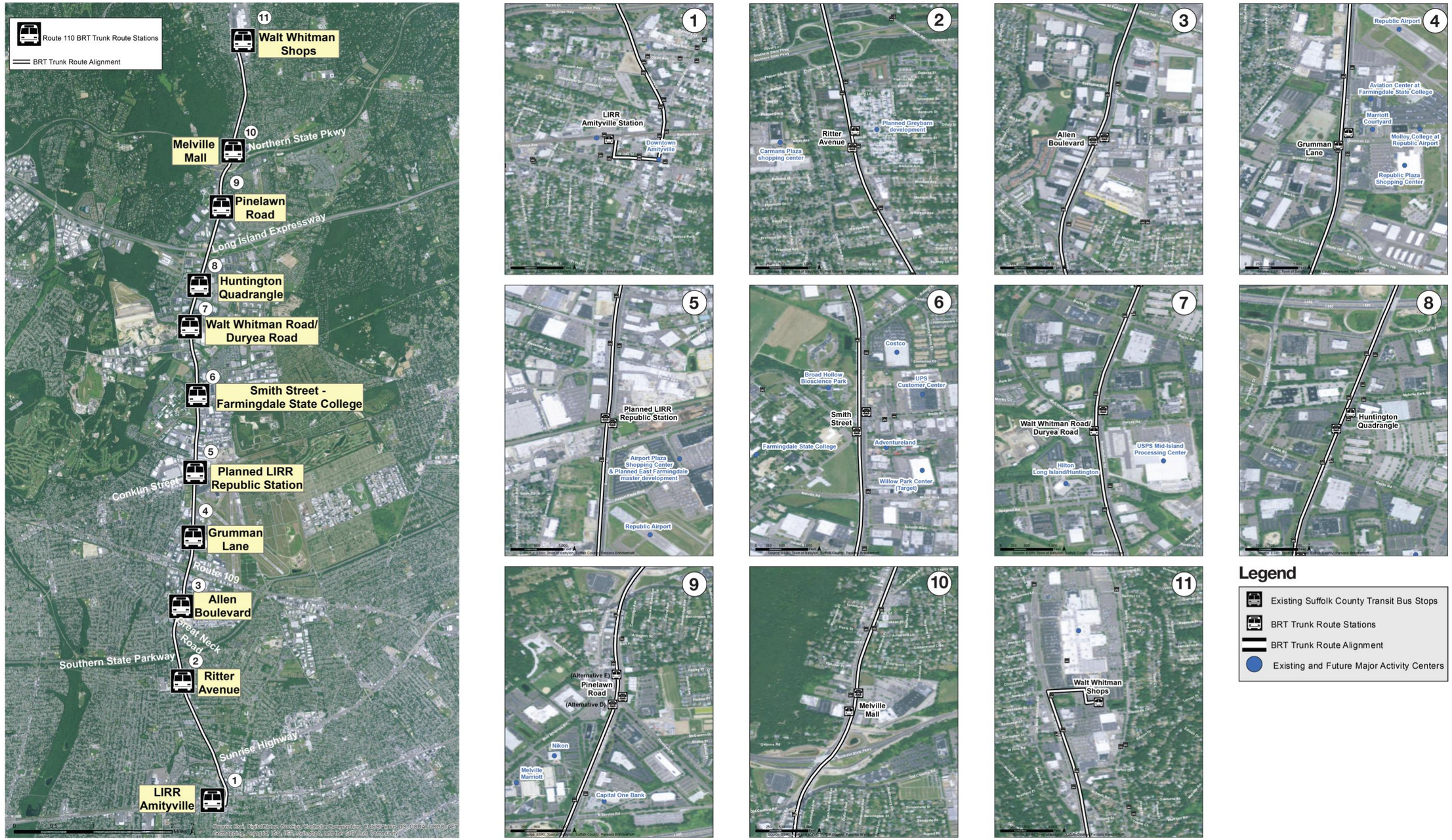
4. BRT Trunk Route

4.1 IDENTIFICATION OF BRT TRUNK ROUTE STATION LOCATIONS

The first step in defining the BRT trunk route service was to select station locations. As shown in Figure 2, the proposed BRT service includes the following 11 station locations (from south to north) within the study area and primarily along Route 110:

1. LIRR Amityville Station
2. Route 110 at Ritter Avenue
3. Route 110 at Allen Boulevard
4. Route 110 at Grumman Lane
5. Route 110 at the planned LIRR Republic Station
6. Route 110 at Smith Street – Farmingdale State College
7. Route 110 at Walt Whitman Road/Duryea Road
8. Route 110 at Huntington Quadrangle
9. Route 110 at Pinelawn Road
10. Route 110 at Melville Mall
11. Walt Whitman Shops

Figure 2: Proposed Route 110 BRT Trunk Route Stations



Source: ESRI basemaps, Suffolk County Transit, Parsons Brinckerhoff, Cameron Engineering, Nelson\Nygaard (2015)

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With the exception of the southern and northern termini (i.e., LIRR Amityville Station and Walt Whitman Shops, respectively), which would each have one proposed station located slightly off-Route 110, the remaining nine stations would all include one northbound and one southbound station along the east and west sides of Route 110, respectively. Figure 2 shows the specific location of each proposed BRT station.

Several factors informed the selection of BRT station locations:

- **Serve existing and future activity centers to maximize ridership potential**

  One of the fundamental objectives of this Alternatives Analysis is to provide frequent, high-quality transit service to employment and other activity centers on Route 110. As such, the process of selecting BRT station locations on Route 110 was guided by an assessment of existing and future activity centers along the Corridor that could provide a source of potential BRT ridership.

  The ridership and economic development potential of ongoing and planned development projects can best be realized by co-locating and integrating BRT stations with development sites. The proposed BRT stations at Ritter Avenue and the planned LIRR Republic Station are notable examples of this integrated transportation and development strategy, as the BRT stations would support the ongoing Greybarn mixed-use development and the future East Farmingdale Downtown Center master development, respectively.

  To maximize ridership potential, it is ideal to serve a combination of origins and destinations. Although Route 110 is primarily an employment Corridor with significant regional destinations, there are also a number of trip origins along and near the Corridor, including residential developments in Amityville, North Amityville, East Farmingdale, Melville, and Huntington. Therefore, the process of selecting BRT station locations sought to find a balance of serving both origins and destinations.

- **Promote economic development along Route 110**

  The process of identifying BRT station locations was informed by not only an assessment of existing activity centers and planned development projects, but also a consideration of future development potential. The Route 110 Corridor is facing interrelated transportation, land use, and economic development challenges due to sixty years of development built around the automobile, and a major cornerstone of the *Connect Long Island* plan is the principle that the economy cannot grow by adding more cars to the roadway. The proposed BRT stations could serve as anchors for mixed-use and transit-supportive development, thereby leading a shift away from auto-centric development patterns.

  The ongoing planning efforts that complement the Route 110 Alternatives Analysis—including, but not limited to, the East Farmingdale Downtown Center planning, the Village of Amityville Downtown Revitalization process, the Suffolk County/RPA design guidelines for Route 110, and the Town of Huntington *Melville Employment Center Plan*—could all lead to new development or redevelopment at transit-supportive densities within walking distance of the proposed BRT stations.

Additionally, one of the fundamental indicators of economic competitiveness is the ability to retain and attract employers and employees. Therefore, BRT stations are proposed at locations of concentrated employment to maximize the number of jobs within walking distance. For instance, the proposed Huntington Quadrangle and Pinelawn Road BRT stations are located in close proximity to large employers. The introduction of BRT as a new premium transit service could be actively promoted by major employers as an employee benefit, and could also be promoted by property owners as a sales marketing tool to attract tenants. Additionally, effective marketing of a BRT service can be a win-win for the transit agency and the activity centers along the Corridor.

- **Optimize distance between stations**

  Another principal objective is to improve travel time for transit users within the study area. One of the ways to achieve this is to limit the number of stops. Therefore, BRT along Route 110 is proposed to offer limited-stop service to supplement the local service provided by the existing Suffolk County Transit S1 route.

  Whereas the Suffolk County Transit S1 route makes 40 stops between the LIRR Amityville Station and the Walt Whitman Shops, with an average distance of approximately 0.25 miles between each stop, the proposed BRT would make fewer stops spaced farther apart to improve travel time and enhance the customer experience for this premium service. The distance between proposed BRT stations ranges from 0.5 miles (between Walt Whitman Road/Duryea Road and Huntington Quadrangle) to 1.9 miles (between LIRR Amityville Station and Ritter Avenue), with an average distance of 0.9 miles.

- **Maximize transfer opportunities**

  There are multiple bus transit service providers along Route 110 (i.e., Suffolk County Transit, Nassau Inter-County Express (NICE), and Huntington Area Rapid Transit (HART)), and the selection process for BRT station locations sought to maximize transfer opportunities between the different services. Another type of multi-modal connection is between the proposed BRT service and the LIRR. BRT stations are proposed at both the LIRR Amityville Station and the planned LIRR Republic Station, which would not only increase multi-modal connectivity, but also increase regional public transit access to the study area from surrounding municipalities and counties.

  The selection of the BRT station locations was also informed by feeder route connections. An iterative process ensured seamless connections between the BRT and feeder route services, which was an important consideration in establishing last-mile connectivity to destinations located off the main spine of Route 110.

- **Minimize physical constraints for implementation**

  In most cases, the proposed BRT stations would be located at the sites of the existing Suffolk County Transit bus stops, thereby eliminating the need for easements or property takings and maximizing cost effectiveness, to the extent possible (Table 1). The co-location

of BRT stations and Suffolk County Transit bus stops would also effectively maximize connectivity of the BRT and local bus services.

There are eight instances in which BRT stations are proposed at locations that differ from the locations of existing Suffolk County Transit local S1 bus stops. Therefore, it is proposed that the existing local bus stops at these locations be relocated to the sites of the BRT stations (see locations noted with asterisks in Table 1). The rationale is specific to each station location and was informed by the conceptual engineering effort.

Table 1: Locations of Proposed Northbound and Southbound BRT Stations

Station Number (Figure 2)	Station Name	Northbound Location	Southbound Location
1	LIRR Amityville Station	Southern terminus (i.e., combined northbound/southbound station): parking lot on the south side of the LIRR tracks in front of the station building*	
2	Ritter Avenue	East side of Route 110, north of Ritter Avenue and consistent with Greybarn site plan*	West side of Route 110, south of Ritter Avenue at location of existing southbound Suffolk County Transit stop
3	Allen Boulevard	East side of Route 110, north of Allen Boulevard at location of existing northbound Suffolk County Transit stop	West side of Route 110, north of Allen Boulevard at location of existing northbound Suffolk County Transit stop
4	Grumman Lane	East side of Route 110, north of Grumman Lane*	West side of Route 110, south of Grumman Lane*
5	Planned LIRR Republic Station	East side of Route 110, south of LIRR trestle at location of existing northbound Suffolk County Transit stop	West side of Route 110, north of LIRR trestle at location of existing southbound Suffolk County Transit stop
6	Smith Street – Farmingdale State College	East side of Route 110, north of Smith Street at location of existing northbound Suffolk County Transit stop	West side of Route 110, south of Dr. Frank A Cipriani Drive at location of existing southbound Suffolk County Transit stop
7	Walt Whitman Road/Duryea Road	East side of Route 110, north of Duryea Road at location of existing northbound Suffolk County Transit stop	West side of Route 110, south of Walt Whitman Road within grass triangle*
8	Huntington Quadrangle	East side of Route 110, north of Huntington Quadrangle*	West side of Route 110, south of Huntington Quadrangle at location of existing southbound Suffolk County Transit stop
9	Pinelawn Road	East side of Route 110, north of Pinelawn Road at location of existing northbound Suffolk County Transit stop	• Alternative D: West side of Route 110, south of Sweet Hollow Road at location of existing southbound Suffolk County Transit stop • Alternative E: West side of Route 110, north of Sweet Hollow Road to facilitate transfers to/from feeder routes*
10	Melville Mall	East side of Route 110, north of Melville Mall main entrance at location of existing Suffolk County Transit stop	West side of Route 110, south of Melville Mall main entrance*
11	Walt Whitman Shops	Northern terminus (i.e., combined northbound/southbound station): parking lot on the south side of the Walt Whitman Shops at the location of the existing Suffolk County Transit/HART/NICE stop	

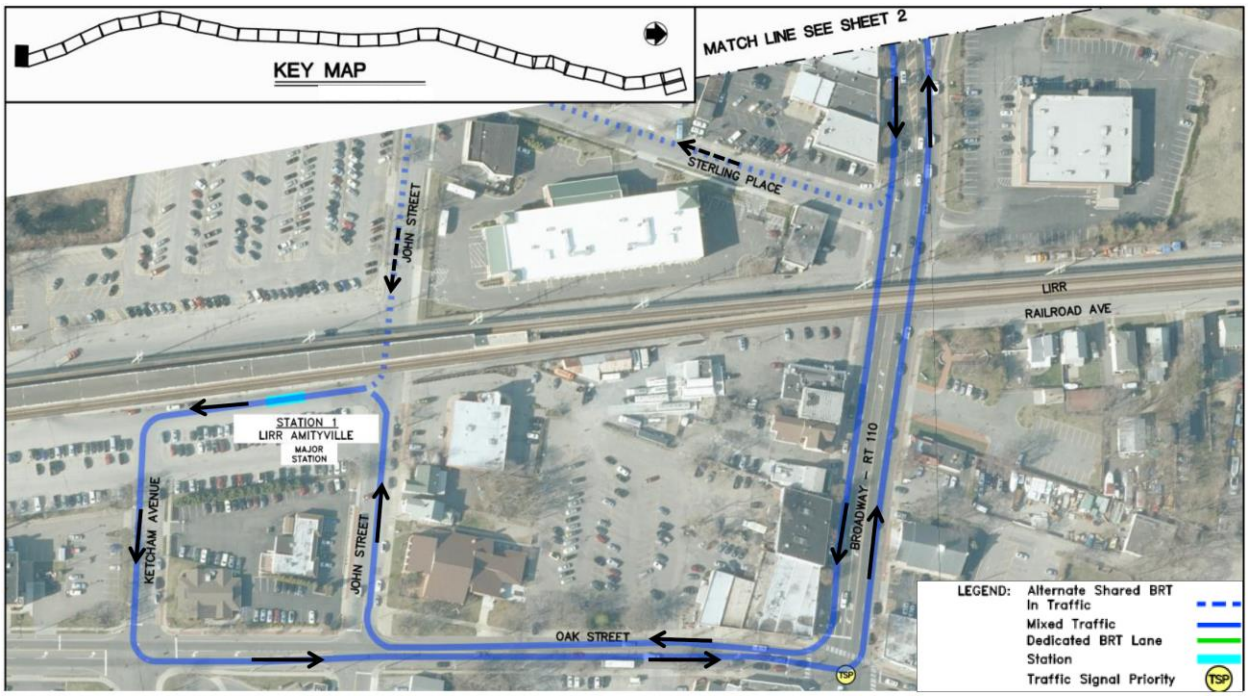
Source: Parsons Brinckerhoff, Nelson\Nygaard, Cameron Engineering (2015)
* Proposed relocation of existing Suffolk County Transit stop

4.2 PROPOSED BRT TRUNK ROUTE ROUTING

The proposed BRT trunk route service would operate between the LIRR Amityville Station at the southern end and the Walt Whitman Shops at the northern end. The vast majority of the approximately 10.5-mile trunk route is located along the Route 110 Corridor between Oak Street in the Village of Amityville at the southern end and Norwich Street in the Town of Huntington at the northern end. At the southern and northern termini of the trunk route, the BRT service would be routed off Route 110 to serve the LIRR Amityville Station and the Walt Whitman Shops, respectively.

For purposes of this Alternatives Analysis, it was assumed that southbound BRT service would follow the route of the existing Suffolk County Transit S1 service by using Oak Street to access the LIRR Amityville Station from Route 110 (Figure 3). The BRT service would enter the parking lot of the LIRR Amityville Station at John Street, stop at the BRT station in front of the LIRR station building on the south side of the tracks, and then begin northbound service by exiting the parking lot at Ketcham Avenue. However, the tight turning radius from southbound Route 110 to westbound Oak Street often results in buses running over the curb. An option that can be considered in Project Development, which will follow the Alternatives Analysis, is to use Sterling Place to access the LIRR Amityville Station from Route 110 in the southbound direction for the BRT service (see Figure 3). This would require coordination with Suffolk County Transit and the Village of Amityville.

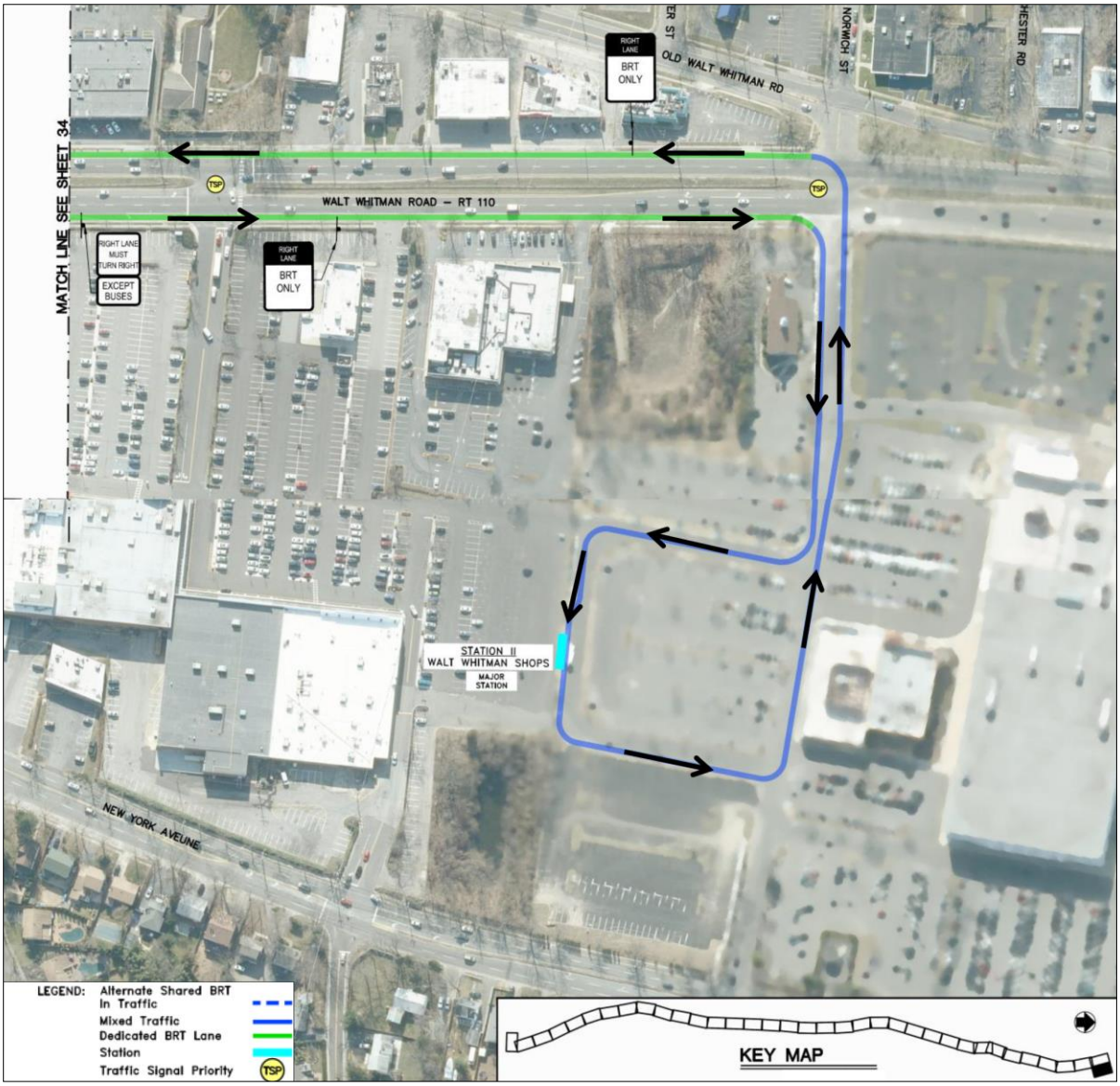
Figure 3: BRT Trunk Route Routing Options at the LIRR Amityville Station



Source: Cameron Engineering, Parsons Brinckerhoff (2015)

At the northern terminus of the trunk route, the BRT service would be routed off Route 110 at Norwich Street to serve the proposed BRT station within the parking lot on the south side of the Walt Whitman Shops (Figure 4). The BRT vehicles would circulate within the parking lot to make the last stop in the northbound direction and then begin southbound service by exiting the parking lot and heading south along Route 110 at Norwich Street.

Figure 4: Proposed BRT Trunk Route Routing at the Walt Whitman Shops



Source: Cameron Engineering, Parsons Brinckerhoff (2015)

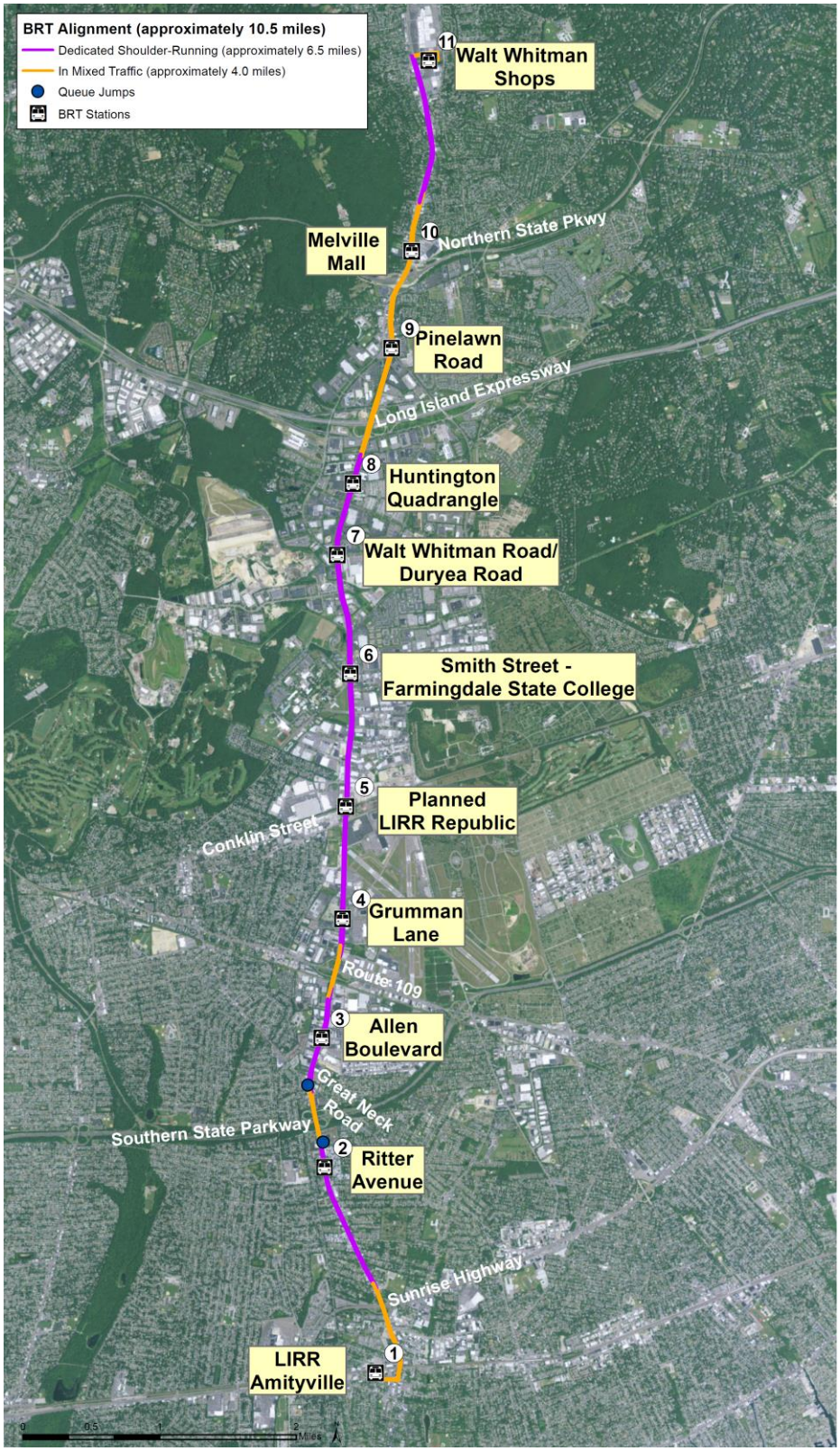
4.3 SUMMARY OF PROPOSED BRT TRUNK ROUTE ALIGNMENT

One of the elements of BRT that can distinguish this premium service from traditional bus service is the use of a dedicated BRT lane to improve travel time. Several segments of Route 110 with a wide existing shoulder can accommodate a dedicated BRT lane, which would enable BRT vehicles to bypass traffic congestion on the adjacent general purpose lanes.

The 10% conceptual engineering completed for this Alternatives Analysis demonstrated that on the approximately 10.5-mile trunk route (including short segments off Route 110 near the northern and southern termini of the route), approximately 6.7 miles northbound and 6.5 miles southbound can accommodate BRT shoulder-running. Along other roadway segments, BRT would operate in mixed traffic with other vehicles. At two locations along the Route 110 BRT trunk route where the proposed transition from shoulder-running to mixed traffic occurs at signalized intersections (i.e., northbound at Brefni Street and southbound at Main Street/Great Neck Road), queue jumps are proposed to enable BRT vehicles to get a head start and merge into the general purpose lane. Queue jumps are intersection modifications to provide preferential treatment for BRT vehicles to move before the other vehicles on the same approach.

The proposed alignment segments for dedicated BRT shoulder-running and mixed traffic operation are shown in Figure 5 and listed in Table 2 and Table 3 for the northbound and southbound directions, respectively. All segments listed in Table 2 and Table 3 run entirely on Route 110, with the exception of the southernmost and northernmost segments, which include the LIRR Amityville Station parking lot and Oak Street, and the Walt Whitman Shops parking lot, respectively.

Figure 5: Proposed BRT Shoulder-Running and Mixed Traffic Alignment Segments



Source: ESRI Basemaps, Parsons Brinckerhoff, Cameron Engineering (2015)

Table 2: Proposed Northbound BRT Shoulder-Running and Mixed Traffic Alignment Segments

Segment (south to north)	Distance (nearest 0.1 miles)	Dedicated BRT Shoulder-Running	Mixed Traffic
BRT station at LIRR Amityville Station (south side of the station building) to 100 feet south of Division Street	1.0 miles	--	✓
100 feet south of Division Street to Brefni Street	1.2 miles	✓	--
Brefni Street to 200 feet south of Great Neck Road/Main Street	0.4 miles	--	✓
200 feet south of Great Neck Road/Main Street to 200 feet south of Route 109 eastbound entrance ramp	0.8 miles	✓	--
200 feet south of Route 109 eastbound entrance ramp to 100 feet north of Route 109 westbound exit ramp	0.2 miles	--	✓
100 feet north of Route 109 westbound exit ramp to 400 feet north of Melville Park Road	3.7 miles	✓	--
400 feet north of Melville Park Road to 100 feet south of Croton Street	2.0 miles	--	✓
100 feet south of Croton Street to Norwich Street entrance of Walt Whitman Shops	1.0 miles	✓	--
Norwich Street entrance of Walt Whitman Shops to BRT station at Walt Whitman Shops	0.2 miles	--	✓
Total mileage	**10.5 miles**	**6.7 miles**	**3.8 miles**

Source: Cameron Engineering; Parsons Brinckerhoff (2015)

Table 3: Proposed Southbound BRT Shoulder-Running and Mixed Traffic Alignment Segments

Segment (north to south)	Distance (nearest 0.1 miles)	Dedicated BRT Shoulder-Running	Mixed Traffic
BRT station at Walt Whitman Shops to Norwich Street entrance of Walt Whitman Shops	0.3 miles	--	✓
Norwich Street entrance of Walt Whitman Shops to 100 feet north of Yarmouth Street	1.1 miles	✓	--
100 feet north of Yarmouth Street to 400 feet north of Melville Park Road	1.9 miles	--	✓
400 feet north of Melville Park Road to 300 feet north of Route 109 westbound entrance ramp	3.6 miles	✓	--
300 feet north of Route 109 westbound entrance ramp to 300 feet north of Executive Boulevard	0.4 miles	--	✓
300 feet north of Executive Boulevard to Great Neck Road/Main Street	0.7 miles	✓	--
Great Neck Road/Main Street to Brefni Street	0.4 miles	--	✓
Brefni Street to 300 feet north of Washington Avenue	1.1 miles	✓	--
300 feet north of Washington Avenue to BRT station at LIRR Amityville Station (south side of the station building)	1.0 miles	--	✓
Total mileage	**10.5 miles**	**6.5 miles**	**4.0 miles**

Source: Cameron Engineering; Parsons Brinckerhoff (2015)

4.4 OPERATIONS ANALYSIS FOR BRT TRUNK ROUTE

After selecting the BRT station locations and determining the shoulder-running and mixed traffic alignment segments along the trunk route, the next step was to conduct an operations analysis for the BRT trunk route service.

4.4.1 Service Policy Assumptions

The operating plan was guided by the following service policy assumptions:

- **Span of service**: what hours will the service run?
  - Monday – Thursday: 5:30am – 10:00pm
  - Friday & Saturday: 5:30am – 12:00am
  - Sunday & Holiday: 6:00am – 10:00pm
- **Service frequency**: how often will the service run?
  - Weekdays: every 10 minutes during peak periods, and every 15 minutes during off-peak periods
    - Morning peak: 6:00am – 9:00am
    - Evening peak: 3:30pm – 6:30pm
  - Weekends & Holidays: every 20 minutes

As shown in Table 4 and Table 5, the BRT trunk route is proposed to offer longer hours of service and more frequent service than the existing Suffolk County Transit S1 route. This service policy would help to brand BRT as a distinct, premium transit service compared to the existing bus service.

Table 4: Span of Service Comparison between Existing Suffolk County Transit S1 Route and Proposed Route 110 BRT Trunk Route

Route	Span of Service (Number of hours/day, rounded to the nearest whole number)			
	Monday – Thursday	Friday	Saturday	Sunday & Holiday
Existing Suffolk County Transit S1 Route	16 hours	16 hours	12 hours	12 hours[1]
Proposed Route 110 BRT Trunk Route	17 hours	19 hours	19 hours	16 hours

[1] No service during observed holidays.

Table 5: Service Frequency Comparison between Existing Suffolk County Transit S1 Route and Proposed Route 110 BRT Trunk Route

Route	Service Frequency		
	Weekday Peak	Weekday Off-Peak	Weekends
Existing Suffolk County Transit S1 Route	Every 15 minutes	Every 30 minutes	Every 60 minutes
Proposed Route 110 BRT Trunk Route	Every 10 minutes	Every 15 minutes	Every 20 minutes

4.4.2 Vehicle Assumptions

The 35-foot-long, hybrid diesel-electric BRT vehicles that are proposed to serve the trunk route are consistent with the size of the typical existing Suffolk County Transit fixed-route bus fleet. At this time, it is assumed that the vehicles would include standard fare collection equipment that would integrate with existing Suffolk County Transit operations, and it is assumed that the BRT fare would be equivalent to the Suffolk County Transit fare. Aesthetic enhancements to the vehicles, potentially including paint schemes, styling options, and interior amenities, would help to brand and differentiate BRT as a premium service. The vehicles would be equipped with emitters that communicate directly with individual traffic signal controllers to activate TSP at signalized intersections (see below). Additionally, the use of low-floor vehicles would enable future implementation of level boarding to reduce the time for passenger boarding and alighting at BRT stations. Specifically, if combined with a raised curb, the use of low-floor vehicles would decrease the gap between the station-area sidewalk and the vehicle floor, thereby enabling faster boarding and alighting for all passengers, including the disabled and elderly.

The fleet requirement for the BRT trunk route was calculated as the cycle time divided by headway during the peak period, rounded up, with 20% spares. The 20% spare factor was applied based on discussions with Suffolk County Transit. Based on this calculation, nine BRT vehicles are required for the trunk route.

4.4.3 Operating Speed Assumptions and Travel Time Estimates

The base operating speed of the proposed BRT service was estimated for the morning and evening peak periods, as well as off-peak periods, based on travel time runs conducted on a typical Tuesday, Wednesday, or Thursday (Appendix A). Midday (11:30am – 1:30pm) was used as a proxy for off-peak periods. When extrapolating from this data to plan the proposed BRT service, a dwell time of 30 seconds per BRT station was assumed, which is consistent with typical industry standards.

After calculating the base operating speed of the proposed BRT service, the following assumptions regarding time savings were applied based on guidance from the Transit Cooperative Research Program (TCRP) Report 118, *Bus Rapid Transit Practitioner's Guide* (Exhibits 5-5 and 5-8):

- TSP, which limits the waiting time at red lights, would result in travel time savings of five seconds per intersection for each signalized intersection in which TSP is activated. TSP can be achieved at signalized intersections through an extension of green time to allow the BRT vehicles to pass the intersection before the signal turns red, or through an earlier start of green time to allow the BRT vehicles to avoid the red light. The BRT trunk route currently includes 44 signalized intersections, and at this preliminary stage of analysis, TSP is proposed at each intersection. To be conservative, it was assumed that TSP would be activated at 50% of intersections during any given run. At the other 50% of intersections during any given run, it was assumed that the light would already be green, and thus the BRT vehicles would not need to activate TSP.
- Shoulder-running would result in travel time savings of 36 seconds per mile. This time savings would only be applied along those portions of the BRT trunk route that are proposed for shoulder-running.

In addition to TSP and shoulder-running, another element of the proposed BRT trunk route that would result in travel time savings is limited-stop service. Whereas the existing Suffolk County Transit S1 route makes 40 stops from the LIRR Amityville Station to the Walt Whitman Shops, the proposed BRT service would only make 11 stops. To make each stop, the transit vehicle must decelerate and subsequently wait for passengers to board and alight. Therefore, passengers on the BRT service would benefit from time savings due to fewer overall stops.

The combination of TSP, shoulder-running, and limited-stop service is projected to result in significant time savings and faster operating speeds for BRT as compared to the existing local bus service, thereby making travel by BRT competitive with travel by automobile. Travel time and average speed by mode between the LIRR Amityville Station and Walt Whitman Shops in both directions during the morning peak period is summarized in Table 6. BRT is projected to save 15-20 minutes compared to the existing Suffolk County Transit S1 service, as well as one minute compared to travel by automobile.

Table 6: Travel Time and Average Speed between LIRR Amityville Station and Walt Whitman Shops – Comparison by Mode during the Morning Peak Period

	Northbound		Southbound	
Mode	**Travel Time**	**Average Speed**	**Travel Time**	**Average Speed**
Existing Suffolk County Transit S1 Service[1]	45 minutes	14.0 mph	35 minutes	18.0 mph
Automobile (Field-Verified)[2]	27 minutes	23.3 mph	21 minutes	30.0 mph
BRT (Projected)[3]	**26 minutes**	**24.2 mph**	**20 minutes**	**31.5 mph**

Sources: [1] Suffolk County Transit; [2] Traffic Databank; [3] Parsons Brinckerhoff and Nelson\Nygaard (2015)

Appendix B presents a proposed weekday (Monday – Thursday) timetable for the BRT service that reflects the service policy assumptions and travel time estimates. Additionally, the proposed timetable accounts for layover/recovery time (defined as the time scheduled at the end of the route before the departure time of the next trip), calculated as 10% of the round-trip running time, rounded to clock-face time units.

This information was used an input in estimating the order-of-magnitude annual O&M cost for the BRT trunk route, which is discussed in Section 6.

5. Feeder Routes

The principal objective of the feeder routes is to provide the last-mile connection between Route 110 and activity centers located beyond a reasonable walking distance from the Corridor. After defining the BRT trunk route, the next step in developing the Short List Alternatives was to specify the feeder route and station locations for the two Short List Alternatives. Whereas the proposed BRT trunk route is the same for the two Short List Alternatives, the feeder routes that would complement the BRT service differ among the two alternatives.

As originally defined for the Long List Alternatives, Alternative D would feature the BRT trunk route along Route 110 with circular feeder routes, and Alternative E would feature the BRT trunk route along Route 110 with transit center nodes and connecting feeder routes.

5.1 METHODOLOGY FOR DETERMINING FEEDER ROUTE ALIGNMENTS AND STATION LOCATIONS

The proposed feeder route alignments and station locations were defined for each of the alternatives based on the following process:

- **Define the feeder route service area**

  The proposed feeder routes for the two Short List Alternatives cover a service area that includes portions of East Farmingdale in the Town of Babylon and Melville in the Town of Huntington, and specifically from Conklin Street in the south to Pinelawn Road/Route 110 in the north within the project study area. Consistent with the study area boundaries, the feeder route service area extends east as far as Wellwood Avenue in East Farmingdale, and west as far Walt Whitman Road in Melville, also including the Farmingdale State College campus.

  This service area was defined to comprise the area with the largest concentration of activity centers off the main spine of the Route 110 Corridor that would likely derive the greatest benefit from improved transit service. The existing bus and rail network offers inadequate service to major trip generators and attractors in this area. Therefore, feeder route service to complement the proposed BRT trunk route service could effectively fill a gap in existing transit service and provide more transportation choices for workers, residents, and visitors in this area.

- **Identify major origins and destinations beyond a reasonable walking distance from Route 110**

  After defining the feeder route service area, the next step was to identify key activity centers in this area that warrant improved transit service given their distance to Route 110. A number of significant employers are located along the outer edges of this service area, including the Nikon and Canon USA headquarters along Walt Whitman Road to the west of Route 110, as well as Newsday and Estee Lauder along Pinelawn Road to the east of Route

110. Feeder route service could provide the last-mile connection for workers to access these major destinations.

Furthermore, feeder service to the back of Huntington Quadrangle on Maxess Road could complement the BRT trunk route service to the front of the office complexes along Route 110. The provision of direct, convenient transit access to the Huntington Quadrangle, as well as other employment and activity centers, could help to attract choice riders who would otherwise drive.

Additionally, the feeder route service area also includes a number of residential communities that could benefit from improved transit service. As noted in the discussion of the BRT trunk route, it is ideal to serve a combination of origins and destinations to achieve the objective of maximizing ridership potential. Therefore, feeder route service to such residential communities as the Coves at Melville, the Villas, and Northgate off Walt Whitman Road to the west of Route 110, as well as Country Pointe in Melville and Avalon Court off Ruland Road to the east of Route 110, could effectively complement the service to major employers and other destinations.

- **Determine potential transfer points**

  One fundamental purpose of this Alternatives Analysis is to enhance multi-modal connectivity because direct connections between different transit services are currently limited and lack coordination. As such, the process of determining the feeder route alignments and station locations was informed by the objective to provide seamless multi-modal connections, thereby improving the customer experience and helping to attract choice riders.

  After the proposed BRT stations were finalized, the feeder route alignments were determined in part through identifying logical transfer points. For both Alternatives D and E, convenient transfers between the proposed BRT trunk and feeder routes—in addition to the existing local bus service—would be offered at the following locations along Route 110:

  - Planned LIRR Republic Station
  - Smith Street – Farmingdale State College
  - Walt Whitman/Duryea Road
  - Pinelawn Road

  All of these locations would facilitate seamless transfers between BRT trunk service along Route 110 and feeder route service to the east and west of Route 110. Additionally, the planned LIRR Republic Station would offer the unique opportunity to increase regional public transit access to the study area from surrounding municipalities and counties, with convenient connections to both BRT trunk and feeder route service.

- **Minimize duplicative service**

  The process of determining the feeder route alignments sought to minimize overlaps between different feeder routes, while maximizing coverage of the overall network. The feeder routes were not planned in isolation, and instead were viewed as components of the regional transit system that could effectively fill gaps in existing service offerings.

  Therefore, to the extent practical, the objective was to minimize multiple feeder routes that would provide duplicative service. However, several proposed feeder routes would overlap for minimal distances along Route 110 to create transfer opportunities with the BRT trunk route, and also to benefit from the travel time savings made possible through TSP and shoulder-running along Route 110.

  It was also important to propose feeder routes for Alternatives D and E that would be different enough to facilitate a comparison and evaluation of the two Short List Alternatives. As such, with the exception of the Farmingdale State College feeder route, which is the same for the two alternatives, the other feeder routes that comprise Alternatives D and E have different alignments and combinations of station locations.

- **Simplify and optimize transit operations**

  Operational considerations guided the upfront process of determining the alignments of the feeder routes. The operational effectiveness of a transit service is informed in part by the simplicity and directness of the routing, which depends in part on traffic operations and roadway geometry. For instance, to simplify operations for the proposed feeder route services, one-way roads in the study area were avoided when planning two-way feeder routes. Therefore, the LIE North and South Service Roads—which are one-way running westbound and eastbound, respectively—were not considered as options for two-way feeder route service, but this can be further explored during Project Development.

  Additionally, the decision to propose one-way service for some feeder routes, and two-way service for others, was guided by operational considerations. As discussed in the following section, two of the three feeder routes for Alternative E are proposed to offer two-way service, while one of the three feeder routes for Alternative D is proposed to offer two-way service, with the other routes proposed to offer one-way service. Travel time between the proposed feeder route stations and the proposed BRT stations, reflecting both the distance from Route 110 and also the direction of service, was a key determinant in the process of deciding whether feeder routes would offer one-way or two-way service.

  Another guideline that informed the process of determining the feeder route alignments was to avoid using private roads or public roads that cut through private properties. However, the 2010 *Route 110 BRT Study* suggested that it could be possible to create “transit shortcuts” by establishing agreements with adjacent property owners to link their parking lots. The Alternatives Analysis process identified the potential application of the transit shortcuts concept to the two Short List Alternatives (Appendix C), which can be revisited during Project Development.

5.2 SUMMARY OF PROPOSED FEEDER ROUTES

Alternatives D and E are proposed to include the following feeder routes (Figure 6 and Figure 7):

- **Alternative D Feeder Routes**
  - **D1 – Farmingdale State College**

    This circular feeder route would serve Farmingdale State College and Broad Hollow Bioscience Park with one-way service that runs clockwise through the college campus, entering at Melville Road and exiting at Smith Street. There are seven total proposed station locations, two of which would be co-located with BRT stations along Route 110 (i.e., the planned LIRR Republic Station and Smith Street).

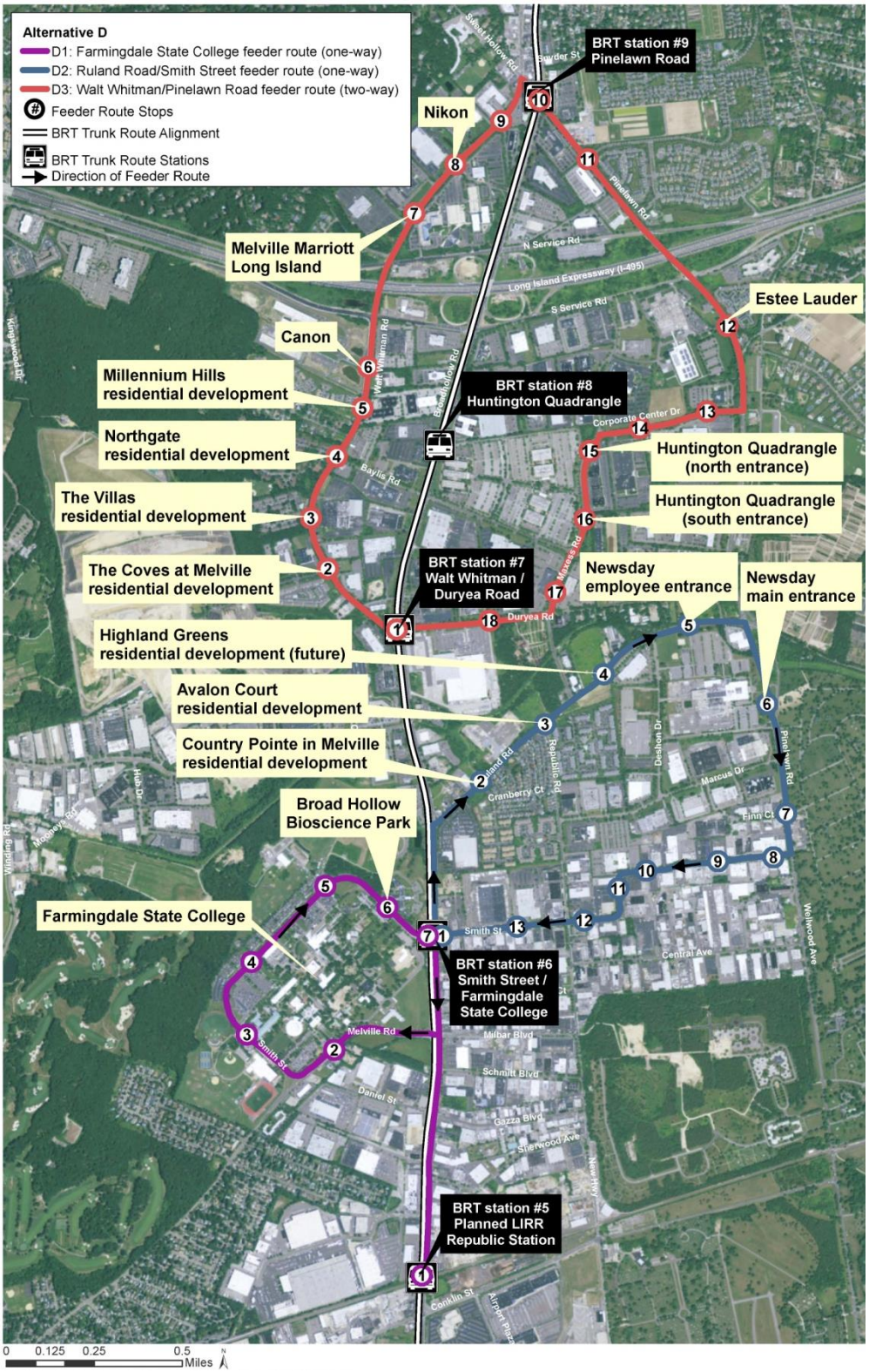
  - **D2 – Ruland Road/Smith Street**

    This circular feeder route would serve residential communities within walking distance of Ruland Road (i.e., Country Pointe in Melville and Avalon Court), as well as multiple entrances to Newsday and various employers along Pinelawn Road and Smith Street to the east of Route 110. The one-way (clockwise) route would include 13 stations, one of which would be co-located with a BRT station along Route 110 (i.e., Smith Street).

  - **D3 – Walt Whitman/Pinelawn Road**

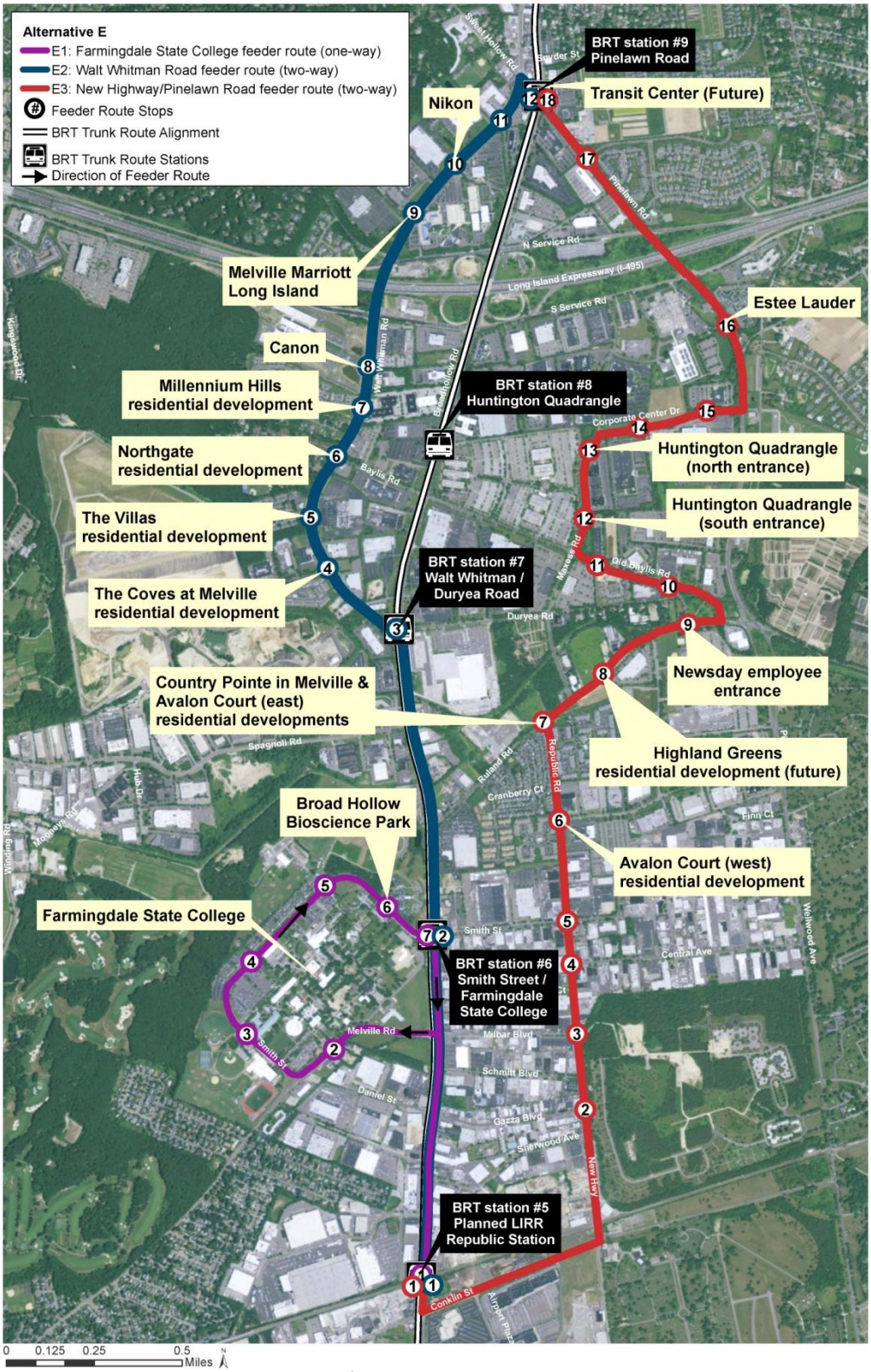
    This circular feeder route would serve a variety of origins and destinations to the west and east of Route 110. Specifically, the route would serve a combination of residential communities within walking distance of Walt Whitman Road (i.e., The Coves at Melville, The Villas, Northgate, and Millennium Hills), several large employers (e.g., Canon, Nikon, and Estee Lauder), the back side of the Huntington Quadrangle office complex on Maxess Road, and other activity centers (e.g., Melville Marriott on Walt Whitman Road and employers on Corporate Center Drive). The proposed route would provide two-way service (both clockwise and counter-clockwise), with 18 station locations in each direction. Transfers between the feeder route and the BRT trunk route would be available at Walt Whitman/Duryea Road and Pinelawn Road.

Figure 6: Proposed Feeder Routes for Alternative D



Source: ESRI Basemaps, Parsons Brinckerhoff, Nelson\Nygaard (2015)

Figure 7: Proposed Feeder Routes for Alternative E



Source: ESRI Basemaps, Parsons Brinckerhoff, Nelson\Nygaard (2015)

- **Alternative E Feeder Routes**
  - **E1 – Farmingdale State College**

    This circular feeder route would be the same as Alternative D1.
  - **E2 – Walt Whitman Road**

    This feeder route—anchored by transit center nodes at the planned LIRR Republic Station and Pinelawn Road—would serve the residential communities, major employers, and other activity centers within walking distance of Walt Whitman Road to the west of Route 110, similar to the western portion of Alternative D3. The proposed route would provide two-way service (northbound and southbound), with 12 station locations in each direction. Three of the station locations would be co-located with BRT stations along Route 110 (i.e., the planned LIRR Republic Station, Smith Street, and Pinelawn Road), and an additional transfer would be available at Walt Whitman/Duryea Road.
  - **E3 – New Highway/Pinelawn Road**

    Similar to Alternative E2, this feeder route would be anchored by transit center nodes at the planned LIRR Republic Station and Pinelawn Road. The route would serve a combination of residential communities, major employers, and other activity centers to the east of Route 110, including along New Highway/Republic Road, Ruland Road, Old Baylis Road, Maxess Road, Corporate Center Drive, and Pinelawn Road. The proposed route would provide two-way service (northbound and southbound), with 18 station locations in each direction. Two of the station locations would be co-located with BRT stations along Route 110 (i.e., the planned LIRR Republic Station and Pinelawn Road).

The proposed routing for each feeder route is summarized in Table 7 for Alternative D and Table 8 for Alternative E, and the station locations are specified in the proposed timetables included as Appendix D. For those feeder routes that terminate at the planned LIRR Republic Station (i.e., D1/E1, E2, and E3), the routing may be modified in the future to be integrated with the design of Republic Station, which could shorten travel time (due to less circuitous routing for turnarounds) and also promote enhanced multi-modal connectivity with the LIRR.

One aspect of Table 8 warrants clarification. Specifically, to ensure safe operations, it is currently proposed that northbound feeder route E3 would turn east on Conklin Street after circulating within Airport Plaza, as opposed to turning east on Conklin Street directly from Route 110. This would avoid the need to merge over multiple travel lanes in a short distance (with potentially reduced sight lines due to the LIRR trestle) between the southbound BRT station and Conklin Street. However, this routing will be revisited in conjunction with the design of the planned LIRR Republic Station.

Table 7: Proposed Routing for Alternative D Feeder Routes

	Routing	
Feeder Route	**Direction 1**	**Direction 2**

D1 – Farmingdale State College	Clockwise
	(through Farmingdale State College campus)
	• Depart from proposed northbound BRT station at the planned LIRR Republic Station, heading north on Route 110
	• Turn left (west) on Melville Road, and circulate clockwise through Farmingdale State College campus
	• Turn right (south) on Route 110
	• Turnaround to arrive at proposed northbound BRT station at the planned LIRR Republic Station (facing north to begin next trip), including the following steps:
	  ○ Heading south on Route 110, turn left (east) at the entrance to Airport Plaza
	  ○ Drive east then north within Airport Plaza, heading to the Conklin Street exit
	  ○ Turn left (west) on Conklin Street
	  ○ Turn right (north) on Route 110
		N/A (one-way)

D2 – Ruland Road/Smith Street	Clockwise • Depart from proposed northbound BRT station at Smith Street, heading north on Route 110 • Turn right (east) on Ruland Road • Turn right (south) on Pinelawn Road/Wellwood Avenue • Turn right (west) on Smith Street • Turn right (north) on Route 110 to arrive at proposed northbound BRT station at Smith Street (facing north to begin next trip)	N/A (one-way)
D3 – Walt Whitman Road/ Pinelawn Road	Clockwise • Depart from the intersection of Walt Whitman Road/Duryea Road and Route 110, heading west on Walt Whitman Road • Turn right (southeast) on Sweet Hollow Road • Cross Route 110 and continue on Pinelawn Road, heading southeast • Turn right (west) on Corporate Center Drive • Turn left (south) on Maxess Road • Turn right (west) on Duryea Road • Cross Route 110 and continue on Walt Whitman Road to begin next trip	Counterclockwise • Depart from the intersection of Walt Whitman Road/Duryea Road and Route 110, heading east on Duryea Road • Turn left (north) on Maxess Road • Turn right (east) on Corporate Center Drive • Turn left (north) on Pinelawn Road • Cross Route 110 and continue on Sweet Hollow Road, heading northwest • Turn left (south) on Walt Whitman Road • Cross Route 110 and continue on Duryea Road to begin next trip

Source: Nelson/Nygaard, Parsons Brinckerhoff (2015)

Table 8: Proposed Routing for Alternative E Feeder Routes

	Routing	
Feeder Route	**Direction 1**	**Direction 2**
E1 – Farmingdale State College	Clockwise (through Farmingdale State College campus) • *[Same as Feeder Route D1. Refer to Table 7.]*	N/A

E2 – Walt Whitman Road	Northbound
	• Depart from proposed northbound BRT station at the planned LIRR Republic Station, heading north on Route 110
	• Turn left (northwest) on Walt Whitman Road
	• Turn right (east) on Snyder Street
	• Turn right (south) on Route 110 to arrive at the proposed southbound BRT station just north of Sweet Hollow Road/Pinelawn Road (facing south to begin southbound service)
		Southbound
		• Depart from proposed southbound BRT station on Route 110 just north of Sweet Hollow Road/Pinelawn Road
		• Turn right (northwest) on Sweet Hollow Road
		• Turn left (south) on Walt Whitman Road
		• Turn right (south) on Route 110
		• Turnaround to arrive at planned LIRR Republic Station (facing north to begin northbound service), including the following steps:
		  ○ Heading south on Route 110, turn left (east) at the entrance to Airport Plaza
		  ○ Drive east then north within Airport Plaza, heading to the Conklin Street exit
		  ○ Turn left (west) on Conklin Street
		  ○ Turn right (north) on Route 110

E3 – New Highway/ Pinelawn Road	Northbound
	• Depart from proposed southbound BRT station at the planned LIRR Republic Station, heading south on Route 110
	• Turn left (east) at the entrance to Airport Plaza
	• Drive east then north within Airport Plaza, heading to the Conklin Street exit
	• Turn right (east) on Conklin Street
	• Turn left (north) on New Highway/Republic Road
	• Turn right (east) on Ruland Road
	• Turn left (west) on Baylis Road
	• Turn right (north) on Maxess Road
	• Turn right (east) on Corporate Center Drive
	• Turn left (northwest) on Pinelawn Road
	• Cross Route 110 and continue on Sweet Hollow Road, heading northwest
	• Turn right (north) on Walt Whitman Road
	• Turn right (east) on Snyder Street
	• Turn right (south) on Route 110 to arrive at the proposed southbound BRT station just north of Sweet Hollow Road/Pinelawn Road (facing south to begin southbound service)
		Northbound
		• Depart from proposed southbound BRT station on Route 110 just north of Sweet Hollow Road/Pinelawn Road
		• Turn left (southeast) on Pinelawn Road
		• Turn right (west) on Corporate Center Drive
		• Turn left (south) on Maxess Road
		• Turn left (east) on Baylis Road
		• Turn right (west) on Ruland Road
		• Turn left (south) on Republic Road/New Highway
		• Turn right (west) on Conklin Street
		• Turn right (north) on Route 110
		• Turnaround to arrive at proposed southbound BRT station at the planned LIRR Republic station (facing south to begin northbound service), including the follow steps:
		  ○ Heading north on Route 110, make a U-Turn at Price Parkway/Picone Boulevard
		  ○ Drive south on Route 110

Source: Nelson/Nygaard, Parsons Brinckerhoff (2015)

5.3 OPERATIONS ANALYSIS FOR FEEDER ROUTES

To maximize connectivity between the BRT and feeder route services, operating plans for the feeder routes were developed that were guided by the same service policy assumptions that were applied for the BRT trunk route. In this early stage of service planning, the frequency and span of service were assumed to be the same for the feeder routes and the BRT trunk route in order to maximize ridership potential by providing timed connections for all trips. During subsequent stages of service planning, different service policy assumptions for the feeder routes could be explored to reduce projected operating expenses.

The approximately 24-foot-long shuttle bus vehicles that are proposed to serve the feeder routes are comparable in size to the existing Suffolk County Transit paratransit bus fleet. The vehicles would include standard fare collection equipment to integrate with existing Suffolk County Transit operations, and, at this point in the process, it is assumed that the feeder route fare would be equivalent to the Suffolk County Transit fare, although other fare options could be explored in Project Development. Aesthetic enhancements to the shuttle bus vehicles would help to brand the feeder routes as complementary to the BRT trunk route service. The fleet requirement was calculated as the cycle time divided by headway during the peak period, rounded up, with 20% spares. Based on this calculation, 10 shuttle buses are required for the feeder routes in Alternative D, and 14 shuttle buses are required for the feeder routes in Alternative E.

The operating speeds of the proposed feeder route services were estimated based on travel time runs that simulated the proposed service, which included making stops at 50% of the proposed station locations and dwelling for 20 seconds at each station stop to simulate passenger boarding and alighting. The 20-second dwell time at each stop was based on the premise that boarding and alighting at each stop would require less time than for the stations along the trunk route because of lower projected ridership demand for the feeder routes. Proposed timetables for the feeder routes (weekday, Monday – Thursday) are included in Appendix D.

The distance, projected travel time, and associated average speed from the first stop to the last stop during the morning peak period is summarized in Table 6 for each of the feeder routes in each direction (if applicable). Feeder routes D1 and E1 (Farmingdale State College), as well as feeder route D2 (Ruland Road/Smith Street), have the shortest distance and projected travel time (3.2 miles and 11 minutes, respectively), as well as the highest average speed (17.5 mph). Feeder route E3 (New Highway/Pinelawn Road) has the greatest distance between the first and last stops (5.1 miles), and the northbound direction has the highest projected travel time and lowest average speed (21 minutes and 14.6 mph, respectively).

Table 9: Feeder Route Distances, Travel Times, and Average Speeds during the Morning Peak Period

Alternative	Feeder Route	Distance	Direction	Travel Time (Projected)	Average Speed
Alternative D	D1: Farmingdale State College	3.2 miles	One-way (clockwise)	11 minutes	17.5 mph
	D2: Ruland Road/Smith Street	3.2 miles	One-way (clockwise)	11 minutes	17.5 mph
	D3: Walt Whitman/Pinelawn Road	4.4 miles	Clockwise	17 minutes	15.5 mph
			Counter-clockwise	18 minutes	14.7 mph
Alternative E	E1: Farmingdale State College	3.2 miles	One-way (clockwise)	11 minutes	17.5 mph
	E2: Walt Whitman Road	3.8 miles	Northbound	15 minutes	15.2 mph
			Southbound	13 minutes	17.5 mph
	E3: New Highway/Pinelawn Road	5.1 miles	Northbound	21 minutes	14.6 mph
			Southbound	20 minutes	15.3 mph

Sources: Parsons Brinckerhoff, Nelson\Nygaard (2015)

6. Operating and Maintenance (O&M) Cost Estimates

Based on the results of the BRT and feeder route operations planning efforts, order-of-magnitude O&M cost estimates were prepared for the two Short List Alternatives.

As shown in Table 10, the annual O&M costs for the two alternatives are approximately $5.4 million and $5.9 million, respectively. The following sections include a detailed discussion of the methodology and results of the O&M cost estimates.

Table 10: Summary of Order-of-Magnitude Capital and O&M Cost Estimates for Short List Alternatives

Route	Annual O&M Cost Estimate (Million 2015$)	
	Alternative D	Alternative E
Subtotal, Feeder Routes	$1.90	$2.45
Subtotal, BRT Trunk Route	$3.46	$3.46
Total, BRT and Feeder Routes	**$5.36**	**$5.91**

Source: Suffolk County, Parsons Brinckerhoff, Nelson\Nygaard (2015)

6.1 METHODOLOGY

Order-of-magnitude O&M cost estimates were prepared for the two Short List Alternatives, including the BRT trunk route and the respective feeder routes. There are different approaches to calculating O&M costs, including based on daily or annual vehicle revenue hours, as well as daily or annual vehicle revenue miles. Consistent with existing Suffolk County Transit operating contracts, the O&M cost estimates for the Short List Alternatives were prepared based on annual vehicle revenue miles.

Specifically, the O&M cost calculation included the following steps for each route:

- Operating statistics were generated based on the following approach:
  - For peak and off-peak periods, and for each day of the week:
    - The vehicle requirement was calculated as the cycle time divided by the service frequency, rounded up to the nearest one vehicle.
      - Cycle time was calculated as the round-trip running time plus layover. Layover was calculated as 10% of the round-trip running time, rounded to clock-face time units.
    - The number of vehicle trips per hour was calculated as the vehicle requirement multiplied by the number of trips per hour per vehicle.
      - The number of trips per hour per vehicle was calculated as 60 (minutes per hour) divided by the cycle time in minutes.
    - The total number of vehicle trips was calculated as the number of vehicle trips per hour multiplied by the number of hours in operation.
    - The number of vehicle revenue miles was calculated as the total number of vehicle trips multiplied by the round-trip route miles.
  - The number of annual vehicle revenue miles was calculated as the number of vehicle revenue miles for each day of the week (including peak and off-peak periods) multiplied by the number of such days in a year.
- O&M cost estimates were generated by using the operating statistics (specifically, the number of annual vehicle revenue miles) and applying the following costs per revenue mile, as advised by Suffolk County Transit:
  - $5.97363 per revenue mile for the BRT trunk route, consistent with the rate for the Suffolk County Transit fixed-route bus operation on Route 110.
  - $3.73929 per revenue mile for the feeder routes, consistent with the rate for the Suffolk County Transit paratransit operation, as the shuttle buses proposed for the feeder routes would be comparable in size to paratransit vehicles.

6.2 RESULTS

The annual vehicle revenue miles and associated order-of-magnitude annual O&M cost estimates for the Short List Alternatives are presented in Table 11. The overall cost includes the approximately $3.5 million annual O&M cost of the BRT trunk route, as well as the annual O&M costs of the feeder routes. The annual O&M cost of Alternative E (approximately $5.9 million) is approximately $500,000 higher than the annual O&M cost of Alternative D (approximately $5.4 million), due to

differences in the annual vehicle revenue miles associated with the respective feeder routes. The least costly feeder route to operate and maintain is D2 (Ruland Road/Smith Street), at less than $400,000 per year, while the most costly feeder route to operate and maintain is E3 (New Highway/Pinelawn Road), at nearly $1.1 million per year.

Table 11: Order-of-Magnitude Annual O&M Cost Estimates for the Short List Alternatives

Route	Annual Vehicle Revenue Miles		Total Annual O&M Cost (2015$)	
	Alternative D	Alternative E	Alternative D	Alternative E
D1 Feeder Route: Farmingdale State College	129,730	--	$485,000	--
D2 Feeder Route: Ruland Road/Smith Street	99,750	--	$373,000	--
D3 Feeder Route: Walt Whitman/Pinelawn Road	279,070	--	$1,044,000	--
E1 Feeder Route: Farmingdale State College	--	129,730	--	$485,000
E2 Feeder Route: Walt Whitman Road	--	233,220	--	$872,000
E3 Feeder Route: New Highway / Pinelawn Road	--	293,190	--	$1,096,000
Subtotal, Feeder Routes	**508,550**	**656,140**	**$1,902,000**	**$2,453,000**
Subtotal, BRT Trunk Route	**578,660**	**578,660**	**$3,457,000**	**$3,457,000**
Total, All Routes	**1,087,210**	**1,234,800**	**$5,359,000**	**$5,910,000**
Annual Revenue (2015$)			**$627,000**	**$634,000**
Farebox Recovery Ratio			**11.7%**	**10.7%**

Source: Suffolk County, Nelson\Nygaard, Parsons Brinckerhoff (2015)

For both alternatives, Table 11 also shows annual revenue and the associated farebox recovery ratio, which is defined as the proportion of O&M costs covered by fare revenue. Based on the results of the ridership forecast (documented in the Task 10 Technical Memorandum) and the assumption that the fare and transfer fee for the BRT trunk route and feeder routes would be consistent with existing Suffolk County Transit policy, both Alternatives D and E would generate approximately $630,000 per year, which translates to an approximately 11–12% farebox recovery ratio. The BRT trunk route alone, without any feeder routes, would have an approximately 14% farebox recovery ratio.

Farebox recovery ratio is an important financial indicator as it offers insight into the subsidy required to fund the annual O&M cost of the proposed project. Other potential funding sources that can supplement fare revenue are discussed in the Task 7 Technical Memorandum.

7. Conclusion

This technical memorandum presented the methodology and results of the operations planning efforts and O&M cost estimates for the BRT and feeder routes of the two Short List Alternatives. The service plans will be used as inputs to the ridership forecasting effort, which will inform the evaluation of the Short List Alternatives and the selection of the LPA.

Following completion of the Alternatives Analysis, the final planning in Project Development may include modifications to the service plans to optimize the BRT and/or feeder routes from an operational and cost perspective. Potential concepts to be explored in Project Development will be summarized in the Final Report of the Alternatives Analysis.

Appendix A:
Travel Time Runs along Route 110

Summary of Route 110 Travel Time Runs

Travel Time Run	Travel Time (minutes)	
	Southbound (Livington Street to Oak Street)	Northbound (Oak Street to Livingston Street)
Run 1 AM	20.4	26.4
Run 2 AM	21.5	30.3
Run 3 AM	22.1	22.8
AM Average	**21.3**	**26.5**
Run 1 Midday	23.9	27.3
Run 2 Midday	22.9	27.5
Run 3 Midday	25.1	28.2
Midday Average	**23.9**	**27.7**
Run 1 PM	33.8	31.9
Run 2 PM	41.6	34.0
Run 3 PM	36.3	26.5
Run 4 PM	34.9	22.1
Run 5 PM	22.5	20.4
PM Average	**33.8**	**27.0**
Overall Average, AM, Midday, and PM	**27.7**	**27.0**

Source: Traffic Databank, Parsons Brinckerhoff (2014-2015)

Travel Time Runs along Route 110

Date: 12/2/14

Start Time: 7:00am

Run #: 1, AM

SOUTHBOUND					NORTHBOUND				
	Intersection to Intersection Travel Time		Delay Time			Intersection to Intersection Travel Time		Delay Time	
Signalized Intersection	Min	Sec	Min	Sec	Signalized Intersection	Min	Sec	Min	Sec
Livingston St	0	0			Oak Street	0	0		29
Norwich St		9			Mill St	1	3		
Entrance to Huntington Shopping Center		14			Louden Ave		5		
Schwab Rd		14		10	Dixon Ave		14		40
Amityville Rd	1	17			North Dr		54		
Davis St		14			Smith St		14		
Fletcher Pl		11			Harrison Ave		54		
Entrance to Melville Mall		9			Bentley Rd		12		
Northern State Parkway Westbound Exit Ramp		9			Jefferson Ave		17		
Northern State Parkway Eastbound Entrance/Exit Ramp		13		43	Ritter Ave		39		56
Old Country Rd	1	2			Brefni St	1	22	1	52
Sweet Hollow Rd		39		7	Great Neck Rd	2	47		
North Service Rd		53			Allen Blvd		34		
South Service Rd		20			Del Dr		17		
Melville Park Rd		15			Entrance to Chili's		43		
Huntington Quadrangle		9		10	Michael Ave		5		
Baylis Rd		26		55	Grumman Ln		7		8
Duryea Rd	1	35			Entrance to Telephonics Corporation		37		
Spagnoli Rd		23			Entrance to Airport Plaza		23		11
Ruland Rd		20		32	Conklin St		40		
Smith St	1	5			Picone Blvd		25		32
Melville Rd		25			Gazza Blvd	1	6		
Gazza Blvd		16			Melville Rd		21		10
Picone Blvd		21		14	Smith St		57		46
Conklin St		46			Ruland Rd	1	18		
Entrance to Airport Plaza		17			Spagnoli Rd		20		
Entrance to Telephonics Corporation		18			Duryea Rd		19		18
Grumman Ln		18			Baylis Rd	1	1		
Michael Ave		7			Huntington Quadrangle		16		
Entrance to Chili's		5			Melville Park Rd		11		17
Del Dr		38			South Service Rd		47		
Allen Blvd		18		30	North Service Rd		29		
Great Neck Rd	1	5		32	Sweet Hollow Rd		40		38
Brefni St	1	14			Old Country Rd	1	15		
Ritter Ave		21			Northern State Parkway Eastbound Entrance/Exit Ramp		13		
Jefferson Ave		24			Northern State Parkway Westbound Exit Ramp		14		
Bentley Rd		19		16	Entrance to Melville Mall		21		15
Harrison Ave		32			Fletcher Pl		33		
Smith St		14			Davis St		27		
North Dr		19			Amityville Rd		17		52
Dixon Ave		44			Schwab Rd	1	58		
Louden Ave		7			Entrance to Huntington Shopping Center		17		
Mill St		11		40	Norwich St		20		
Oak St	1	7			Livingston St		11		
Total Travel Time (Southbound)	**20.4 minutes**				**Total Travel Time (Northbound)**	**26.4 minutes**			

Source: Traffic Databank, Parsons Brinckerhoff (2014-2015)

[1] Delay time recorded on a given row is included in the intersection-to-intersection travel time on the following (below) row.
The principal sources of delay were stopping at red lights and congestion.

Travel Time Runs along Route 110

Date: 12/2/14

Start Time: 7:55am

Run #: 2, AM

SOUTHBOUND					NORTHBOUND				
	Intersection to Intersection Travel Time		Delay Time			Intersection to Intersection Travel Time		Delay Time	
Signalized Intersection	Min	Sec	Min	Sec	Signalized Intersection	Min	Sec	Min	Sec
Livingston St	0	0			Oak Street	0	0		18
Norwich St		5			Mill St		53		
Entrance to Huntington Shopping Center		5		9	Louden Ave		19		
Schwab Rd		32		7	Dixon Ave		8		
Amityville Rd	1	19			North Dr		42		
Davis St		16			Smith St		11		29
Fletcher Pl		13			Harrison Ave		51		
Entrance to Melville Mall		12			Bentley Rd		8		
Northern State Parkway Westbound Exit Ramp		10		29	Jefferson Ave		20		
Northern State Parkway Eastbound Entrance/Exit Ramp		45			Ritter Ave		35		40
Old Country Rd		13		13	Brefni St	1	10	1	18
Sweet Hollow Rd		51	1	4	Great Neck Rd	2	35		
North Service Rd	1	50			Allen Blvd		39		
South Service Rd		24		11	Del Dr		34		
Melville Park Rd		34			Entrance to Chili's		42		
Huntington Quadrangle		13			Michael Ave		7		
Baylis Rd		26			Grumman Ln		7		
Duryea Rd		31			Entrance to Telephonics Corporation		21		
Spagnoli Rd		29			Entrance to Airport Plaza		43	1	12
Ruland Rd		24			Conklin St	1	55		9
Smith St		24		24	Picone Blvd		58		
Melville Rd		56			Gazza Blvd		29		38
Gazza Blvd		19			Melville Rd	1	18		51
Picone Blvd		25			Smith St	1	24		46
Conklin St		33		6	Ruland Rd	1	23		
Entrance to Airport Plaza		35			Spagnoli Rd		27		
Entrance to Telephonics Corporation		25		8	Duryea Rd		21		
Grumman Ln		43			Baylis Rd		30		
Michael Ave		12			Huntington Quadrangle		12		
Entrance to Chili's		7			Melville Park Rd		10		
Del Dr		39			South Service Rd		16		
Allen Blvd		16			North Service Rd	1	10		45
Great Neck Rd		25		13	Sweet Hollow Rd	2	3	1	17
Brefni St	1	1			Old Country Rd	1	25		
Ritter Ave		19			Northern State Parkway Eastbound Entrance/Exit Ramp		20		
Jefferson Ave		26		23	Northern State Parkway Westbound Exit Ramp		18		8
Bentley Rd		47			Entrance to Melville Mall		27		14
Harrison Ave		10			Fletcher Pl		54		
Smith St		13			Davis St		16		
North Dr		12			Amityville Rd		13		52
Dixon Ave		43			Schwab Rd	1	56		
Louden Ave		8		24	Entrance to Huntington Shopping Center		20		
Mill St		48		38	Norwich St		19		
Oak St	1	11			Livingston St		7		
Total Travel Time (Southbound)	**21.5 minutes**				**Total Travel Time (Northbound)**	**30.3 minutes**			

Source: Traffic Databank, Parsons Brinckerhoff (2014-2015)

[1] Delay time recorded on a given row is included in the intersection-to-intersection travel time on the following (below) row.
The principal sources of delay were stopping at red lights and congestion.

Travel Time Runs along Route 110

Date: 12/2/14

Start Time: 8:53AM

Run #: 3, AM

SOUTHBOUND					NORTHBOUND				
	Intersection to Intersection Travel Time		Delay Time			Intersection to Intersection Travel Time		Delay Time	
Signalized Intersection	Min	Sec	Min	Sec	Signalized Intersection	Min	Sec	Min	Sec
Livingston St	0	0			Oak Street	0	0		
Norwich St		11			Mill St		18		
Entrance to Huntington Shopping Center		15		40	Louden Ave		12		
Schwab Rd	1	0			Dixon Ave		17		
Amityville Rd		59			North Dr		39		
Davis St		14			Smith St		11		
Fletcher Pl		12			Harrison Ave		14		
Entrance to Melville Mall		10			Bentley Rd		7		
Northern State Parkway Westbound Exit Ramp		10		23	Jefferson Ave		18		43
Northern State Parkway Eastbound Entrance/Exit Ramp		45			Ritter Ave	1	13		
Old Country Rd		13		11	Brefni St		18		
Sweet Hollow Rd		49			Great Neck Rd		31		17
North Service Rd		39			Allen Blvd	1	2		17
South Service Rd		19		20	Del Dr		44		
Melville Park Rd		47			Entrance to Chili's		42		
Huntington Quadrangle		13			Michael Ave		5		
Baylis Rd		11		20	Grumman Ln		7		
Duryea Rd	1	7			Entrance to Telephonics Corporation		18		
Spagnoli Rd		23		15	Entrance to Airport Plaza		22	1	5
Ruland Rd		49			Conklin St	1	33		
Smith St		27	1	4	Picone Blvd		25		35
Melville Rd	1	33			Gazza Blvd	1	9		24
Gazza Blvd		20			Melville Rd		24		
Picone Blvd		35			Smith St		28		
Conklin St		25			Ruland Rd		31		29
Entrance to Airport Plaza		13			Spagnoli Rd	1	4		37
Entrance to Telephonics Corporation		17			Duryea Rd	1	11		
Grumman Ln		18			Baylis Rd		37		
Michael Ave		6			Huntington Quadrangle		13		
Entrance to Chili's		5			Melville Park Rd		10		
Del Dr		34		21	South Service Rd		17		
Allen Blvd		42	1	45	North Service Rd		16	1	13
Great Neck Rd	1	57		33	Sweet Hollow Rd	1	56		
Brefni St	1	19			Old Country Rd		37		
Ritter Ave		21			Northern State Parkway Eastbound Entrance/Exit Ramp		13		11
Jefferson Ave		25			Northern State Parkway Westbound Exit Ramp		32		
Bentley Rd		17			Entrance to Melville Mall		11		
Harrison Ave		6		10	Fletcher Pl		13		
Smith St		26			Davis St		20		10
North Dr		13			Amityville Rd		32		
Dixon Ave		34			Schwab Rd	1	38		
Louden Ave		5		22	Entrance to Huntington Shopping Center		19		
Mill St		42			Norwich St		14		
Oak St		37			Livingston St		8		
Total Travel Time (Southbound)	**22.1 minutes**				**Total Travel Time (Northbound)**	**22.8 minutes**			

Source: Traffic Databank, Parsons Brinckerhoff (2014-2015)

[1] Delay time recorded on a given row is included in the intersection-to-intersection travel time on the following (below) row.
The principal sources of delay were stopping at red lights and congestion.

Travel Time Runs along Route 110

Date: 12/2/14

Start Time: 11:30AM

Run #: 1, Midday

SOUTHBOUND					NORTHBOUND				
	Intersection to Intersection Travel Time		Delay Time			Intersection to Intersection Travel Time		Delay Time	
Signalized Intersection	Min	Sec	Min	Sec	Signalized Intersection	Min	Sec	Min	Sec
Livingston St	0	0			Oak Street	0	0		
Norwich St		16			Mill St		27		19
Entrance to Huntington Shopping Center		15			Louden Ave		26		
Schwab Rd		14		42	Dixon Ave		10		
Amityville Rd	1	51		21	North Dr		44		
Davis St		37			Smith St		11		
Fletcher Pl		15		18	Harrison Ave		14		
Entrance to Melville Mall		33			Bentley Rd		7		
Northern State Parkway Westbound Exit Ramp		13			Jefferson Ave		18		30
Northern State Parkway Eastbound Entrance/Exit Ramp		13			Ritter Ave		57		
Old Country Rd		11		27	Brefni St		19		57
Sweet Hollow Rd	1	10	1	6	Great Neck Rd	1	53		
North Service Rd	1	54		37	Allen Blvd		33		
South Service Rd	1	6			Del Dr		25		
Melville Park Rd		21			Entrance to Chili's		46		
Huntington Quadrangle		10		34	Michael Ave		6		
Baylis Rd		52			Grumman Ln		9		20
Duryea Rd		34			Entrance to Telephonics Corporation		40		35
Spagnoli Rd		22			Entrance to Airport Plaza		57		45
Ruland Rd		22		17	Conklin St	1	17		24
Smith St	1	0	1	10	Picone Blvd	1	2		
Melville Rd	1	46			Gazza Blvd		30		
Gazza Blvd		21			Melville Rd		30		
Picone Blvd		25			Smith St		28		
Conklin St		34			Ruland Rd		32		32
Entrance to Airport Plaza		15			Spagnoli Rd	1	9		
Entrance to Telephonics Corporation		22			Duryea Rd		27		15
Grumman Ln		21			Baylis Rd		57		
Michael Ave		7			Huntington Quadrangle		15		
Entrance to Chili's		5			Melville Park Rd		11		53
Del Dr		39			South Service Rd	1	20		13
Allen Blvd		18		11	North Service Rd		40		27
Great Neck Rd		55		20	Sweet Hollow Rd	1	9		4
Brefni St	1	9			Old Country Rd		45		
Ritter Ave		20		21	Northern State Parkway Eastbound Entrance/Exit Ramp		11		
Jefferson Ave		29			Northern State Parkway Westbound Exit Ramp		23		38
Bentley Rd		41			Entrance to Melville Mall	1	2		
Harrison Ave		24			Fletcher Pl		30		56
Smith St		25			Davis St	1	24		13
North Dr		13			Amityville Rd		40		38
Dixon Ave		21		24	Schwab Rd	1	52		
Louden Ave		35		9	Entrance to Huntington Shopping Center		19		
Mill St		25			Norwich St		15		
Oak St		15			Livingston St		9		
Total Travel Time (Southbound)	**23.9 minutes**				**Total Travel Time (Northbound)**	**27.3 minutes**			

Source: Traffic Databank, Parsons Brinckerhoff (2014-2015)

[1] Delay time recorded on a given row is included in the intersection-to-intersection travel time on the following (below) row.
The principal sources of delay were stopping at red lights and congestion.

Travel Time Runs along Route 110

Date: 12/2/14

Start Time: 12:42PM

Run #: 2, Midday

SOUTHBOUND					NORTHBOUND				
	Intersection to Intersection Travel Time		Delay Time			Intersection to Intersection Travel Time		Delay Time	
Signalized Intersection	Min	Sec	Min	Sec	Signalized Intersection	Min	Sec	Min	Sec
Livingston St	0	0			Oak Street	0	0		
Norwich St		15			Mill St		23		13
Entrance to Huntington Shopping Center		14			Louden Ave		34		
Schwab Rd		15			Dixon Ave		13		22
Amityville Rd	1	3		28	North Dr	1	13		
Davis St		48			Smith St		14		
Fletcher Pl		15			Harrison Ave		15		
Entrance to Melville Mall		13			Bentley Rd		7		
Northern State Parkway Westbound Exit Ramp		9		10	Jefferson Ave		19		
Northern State Parkway Eastbound Entrance/Exit Ramp		34		19	Ritter Ave		27		24
Old Country Rd		44		15	Brefni St		51		12
Sweet Hollow Rd		59		58	Great Neck Rd	1	4		32
North Service Rd	1	50		12	Allen Blvd	1	9		
South Service Rd		41			Del Dr		23		15
Melville Park Rd		20			Entrance to Chili's	1	12		3
Huntington Quadrangle		10		36	Michael Ave		23		
Baylis Rd		57		25	Grumman Ln		10		
Duryea Rd	1	7			Entrance to Telephonics Corporation		25		
Spagnoli Rd		27			Entrance to Airport Plaza		36		11
Ruland Rd		28		19	Conklin St		37		38
Smith St	1	4	1	6	Picone Blvd	1	17		
Melville Rd	1	45			Gazza Blvd		27	1	16
Gazza Blvd		24			Melville Rd	1	40		13
Picone Blvd		22			Smith St		46		8
Conklin St		30			Ruland Rd		46		40
Entrance to Airport Plaza		17			Spagnoli Rd	1	18		
Entrance to Telephonics Corporation		21			Duryea Rd		27		8
Grumman Ln		26			Baylis Rd		45		
Michael Ave		9			Huntington Quadrangle		14		
Entrance to Chili's		7			Melville Park Rd		10		
Del Dr		41			South Service Rd		15		7
Allen Blvd		16			North Service Rd		27		55
Great Neck Rd		30			Sweet Hollow Rd	1	40		11
Brefni St		59			Old Country Rd		48		
Ritter Ave		27			Northern State Parkway Eastbound Entrance/Exit Ramp		13		
Jefferson Ave		23		6	Northern State Parkway Westbound Exit Ramp		17	1	6
Bentley Rd		38			Entrance to Melville Mall	1	22		21
Harrison Ave		6			Fletcher Pl		45		
Smith St		13			Davis St		20		23
North Dr		11		21	Amityville Rd		47		17
Dixon Ave		56			Schwab Rd	1	28		
Louden Ave		8			Entrance to Huntington Shopping Center		18		
Mill St		12			Norwich St		14		
Oak St		19			Livingston St		8		
Total Travel Time (Southbound)	**22.9 minutes**				**Total Travel Time (Northbound)**	**27.5 minutes**			

Source: Traffic Databank, Parsons Brinckerhoff (2014-2015)

[1] Delay time recorded on a given row is included in the intersection-to-intersection travel time on the following (below) row.

The principal sources of delay were stopping at red lights and congestion.

Travel Time Runs along Route 110

Date: 12/2/14

Start Time: 1:38PM

Run #: 3, Midday

SOUTHBOUND					NORTHBOUND				
	Intersection to Intersection Travel Time		Delay Time			Intersection to Intersection Travel Time		Delay Time	
Signalized Intersection	Min	Sec	Min	Sec	Signalized Intersection	Min	Sec	Min	Sec
Livingston St	0	0			Oak Street	0	0		17
Norwich St		12			Mill St		55		
Entrance to Huntington Shopping Center		20			Louden Ave		16		
Schwab Rd		18	2	4	Dixon Ave		7		41
Amityville Rd	3	23		15	North Dr	1	45		
Davis St		43		18	Smith St		14		
Fletcher Pl		18		8	Harrison Ave		15		
Entrance to Melville Mall		35		6	Bentley Rd		7		9
Northern State Parkway Westbound Exit Ramp		30			Jefferson Ave		42		
Northern State Parkway Eastbound Entrance/Exit Ramp		17			Ritter Ave		31		
Old Country Rd		18			Brefni St		19		10
Sweet Hollow Rd		40	1	12	Great Neck Rd		58		38
North Service Rd	1	50		15	Allen Blvd	1	15		
South Service Rd		47			Del Dr		21		17
Melville Park Rd		20			Entrance to Chili's	1	20		
Huntington Quadrangle		11		19	Michael Ave		8		
Baylis Rd		37		27	Grumman Ln		8		
Duryea Rd	1	7			Entrance to Telephonics Corporation		26		
Spagnoli Rd		26			Entrance to Airport Plaza		23		20
Ruland Rd		26			Conklin St		42		38
Smith St		44		10	Picone Blvd	1	11		
Melville Rd		30			Gazza Blvd		30	1	20
Gazza Blvd		18	1	10	Melville Rd	1	48		
Picone Blvd	1	47			Smith St		37		10
Conklin St		29			Ruland Rd		54		
Entrance to Airport Plaza		17			Spagnoli Rd		28		13
Entrance to Telephonics Corporation		19			Duryea Rd		41		17
Grumman Ln		21			Baylis Rd	1	13		
Michael Ave		8			Huntington Quadrangle		15		28
Entrance to Chili's		6			Melville Park Rd	1	7		8
Del Dr		37			South Service Rd		34		25
Allen Blvd		21		8	North Service Rd		53		50
Great Neck Rd		48		17	Sweet Hollow Rd	1	44		
Brefni St	1	0			Old Country Rd		42		
Ritter Ave		19			Northern State Parkway Eastbound Entrance/Exit Ramp		19		
Jefferson Ave		25		12	Northern State Parkway Westbound Exit Ramp		15		12
Bentley Rd		36			Entrance to Melville Mall		31		
Harrison Ave		9			Fletcher Pl		14		34
Smith St		13			Davis St		55		19
North Dr		11			Amityville Rd		40		
Dixon Ave		34			Schwab Rd	1	11		
Louden Ave		5			Entrance to Huntington Shopping Center		18		
Mill St		10		51	Norwich St		14		
Oak St	1	18			Livingston St		8		
Total Travel Time (Southbound)	**25.1 minutes**				**Total Travel Time (Northbound)**	**28.2 minutes**			

Source: Traffic Databank, Parsons Brinckerhoff (2014-2015)

[1] Delay time recorded on a given row is included in the intersection-to-intersection travel time on the following (below) row.

The principal sources of delay were stopping at red lights and congestion.

Travel Time Runs along Route 110

Date: 11/24/14

Start Time: 4:00PM

Run #: 1, PM

SOUTHBOUND					NORTHBOUND				
	Intersection to Intersection Travel Time		Delay Time			Intersection to Intersection Travel Time		Delay Time	
Signalized Intersection	Min	Sec	Min	Sec	Signalized Intersection	Min	Sec	Min	Sec
Livingston St	0	0			Oak Street	0	0		30
Norwich St		4			Mill St		56		
Entrance to Huntington Shopping Center		22			Louden Ave		21		
Schwab Rd		14		20	Dixon Ave		6		
Amityville Rd	1	18			North Dr		49		34
Davis St		15			Smith St		50		
Fletcher Pl		12			Harrison Ave		16		
Entrance to Melville Mall		44			Bentley Rd		8		30
Northern State Parkway Westbound Exit Ramp		31			Jefferson Ave		47		
Northern State Parkway Eastbound Entrance/Exit Ramp		16			Ritter Ave		43		
Old Country Rd		10	3	26	Brefni St		19		
Sweet Hollow Rd	4	3	5		Great Neck Rd		38		54
North Service Rd	6	32			Allen Blvd	1	36		10
South Service Rd		24		25	Del Dr		44		19
Melville Park Rd	1				Entrance to Chili's	1	19		
Huntington Quadrangle		12			Michael Ave		18		
Baylis Rd		13			Grumman Ln		19		
Duryea Rd		32			Entrance to Telephonics Corporation		27		
Spagnoli Rd		30			Entrance to Airport Plaza		20		
Ruland Rd		29		32	Conklin St		50		49
Smith St	1	6			Picone Blvd	1	6		26
Melville Rd		45			Gazza Blvd		29		33
Gazza Blvd		26		8	Melville Rd	1	5		
Picone Blvd		59			Smith St		29		46
Conklin St		46			Ruland Rd	1	32		18
Entrance to Airport Plaza		18			Spagnoli Rd		55		
Entrance to Telephonics Corporation		24			Duryea Rd		27		23
Grumman Ln		31			Baylis Rd	1	22		
Michael Ave		10		14	Huntington Quadrangle		20		43
Entrance to Chili's	1	7			Melville Park Rd	1	10		24
Del Dr		3			South Service Rd	1	14		29
Allen Blvd		19	1	32	North Service Rd		55		59
Great Neck Rd	2	6		26	Sweet Hollow Rd	2	15		13
Brefni St	1	10			Old Country Rd	1	14		
Ritter Ave		31			Northern State Parkway Eastbound Entrance/Exit Ramp		26		
Jefferson Ave		38			Northern State Parkway Westbound Exit Ramp		19		
Bentley Rd		13			Entrance to Melville Mall		20		
Harrison Ave		9			Fletcher Pl		25		37
Smith St		58			Davis St		44		
North Dr		14			Amityville Rd		25		
Dixon Ave		49			Schwab Rd	1	35		
Louden Ave		8		11	Entrance to Huntington Shopping Center		22		
Mill St		34		40	Norwich St		40		
Oak St	1	22			Livingston St		17		
Total Travel Time (Southbound)	**33.8 minutes**				**Total Travel Time (Northbound)**	**31.9 minutes**			

Source: Traffic Databank, Parsons Brinckerhoff (2014-2015)

[1] Delay time recorded on a given row is included in the intersection-to-intersection travel time on the following (below) row.

The principal sources of delay were stopping at red lights and congestion.

Travel Time Runs along Route 110

Date: 11/24/14

Start Time: 4:18PM

Run #: 2, PM

SOUTHBOUND					NORTHBOUND				
	Intersection to Intersection Travel Time		Delay Time			Intersection to Intersection Travel Time		Delay Time	
Signalized Intersection	Min	Sec	Min	Sec	Signalized Intersection	Min	Sec	Min	Sec
Livingston St	0	0			Oak Street	0	0		41
Norwich St		10			Mill St	1	11		26
Entrance to Huntington Shopping Center		16		54	Louden Ave		48		
Schwab Rd	1	9			Dixon Ave		14		
Amityville Rd	1	58			North Dr		47		
Davis St		14			Smith St		11		12
Fletcher Pl		25		11	Harrison Ave		28		
Entrance to Melville Mall		14			Bentley Rd		11		
Northern State Parkway Westbound Exit Ramp		12			Jefferson Ave		25		
Northern State Parkway Eastbound Entrance/Exit Ramp		12		40	Ritter Ave		34		
Old Country Rd	1	26	4	6	Brefni St		20		
Sweet Hollow Rd	4	40	4	24	Great Neck Rd		47		
North Service Rd	5	34		11	Allen Blvd		34		
South Service Rd		24			Del Dr		19		10
Melville Park Rd		41			Entrance to Chili's	1	7		
Huntington Quadrangle		20			Michael Ave		8		
Baylis Rd		19		18	Grumman Ln		10		
Duryea Rd	1	1			Entrance to Telephonics Corporation		23		
Spagnoli Rd		48		6	Entrance to Airport Plaza		36		
Ruland Rd		46			Conklin St		27		23
Smith St		53	1	9	Picone Blvd	1	6		47
Melville Rd	3	10	1	56	Gazza Blvd	1	25		
Gazza Blvd	2	35		16	Melville Rd		25	1	2
Picone Blvd	1	3		9	Smith St	1	34		
Conklin St		58			Ruland Rd		31		27
Entrance to Airport Plaza		21			Spagnoli Rd	1	34		
Entrance to Telephonics Corporation		33			Duryea Rd		28	2	0
Grumman Ln		31			Baylis Rd	3	19		40
Michael Ave		9			Huntington Quadrangle	1	13	1	7
Entrance to Chili's		8		9	Melville Park Rd	1	43		
Del Dr	1	2			South Service Rd	1	5		30
Allen Blvd		50		42	North Service Rd		29		
Great Neck Rd	1	40			Sweet Hollow Rd	1	50		
Brefni St		59		20	Old Country Rd	1	20		
Ritter Ave	1	27			Northern State Parkway Eastbound Entrance/Exit Ramp		26		
Jefferson Ave		36			Northern State Parkway Westbound Exit Ramp		16		30
Bentley Rd		18		13	Entrance to Melville Mall		51		24
Harrison Ave		19			Fletcher Pl		47		
Smith St		21			Davis St		24		
North Dr		14			Amityville Rd		27		34
Dixon Ave		48			Schwab Rd	2	9		
Louden Ave		58			Entrance to Huntington Shopping Center		24		
Mill St		14			Norwich St		21		
Oak St		39			Livingston St		13		
Total Travel Time (Southbound)	**41.6 minutes**				**Total Travel Time (Northbound)**	**34.0 minutes**			

Source: Traffic Databank, Parsons Brinckerhoff (2014-2015)

[1] Delay time recorded on a given row is included in the intersection-to-intersection travel time on the following (below) row.

The principal sources of delay were stopping at red lights and congestion.

Travel Time Runs along Route 110

Date: 11/24/14

Start Time: 5:18PM

Run #: 3, PM

SOUTHBOUND					NORTHBOUND				
	Intersection to Intersection Travel Time		Delay Time			Intersection to Intersection Travel Time		Delay Time	
Signalized Intersection	Min	Sec	Min	Sec	Signalized Intersection	Min	Sec	Min	Sec
Livingston St	0	0		29	Oak Street	0	0		
Norwich St		58			Mill St		22		
Entrance to Huntington Shopping Center		17		48	Louden Ave		27		
Schwab Rd	1	12			Dixon Ave		9		
Amityville Rd	1	27			North Dr		45		
Davis St		21			Smith St		11		10
Fletcher Pl		15			Harrison Ave		37		
Entrance to Melville Mall		15		27	Bentley Rd		15		
Northern State Parkway Westbound Exit Ramp		35			Jefferson Ave		18		
Northern State Parkway Eastbound Entrance/Exit Ramp		21			Ritter Ave		29		
Old Country Rd		14	1	38	Brefni St		19	1	19
Sweet Hollow Rd	2	41	5	5	Great Neck Rd	2	2		28
North Service Rd	5	38			Allen Blvd	1	1		
South Service Rd		29			Del Dr		16		
Melville Park Rd		42			Entrance to Chili's		41		
Huntington Quadrangle		13			Michael Ave		9		
Baylis Rd		25			Grumman Ln		8		
Duryea Rd		35			Entrance to Telephonics Corporation		21		
Spagnoli Rd	1	1			Entrance to Airport Plaza		17		
Ruland Rd		35	2	15	Conklin St		19		
Smith St	3	26			Picone Blvd		26		
Melville Rd		36			Gazza Blvd		27		32
Gazza Blvd		31		31	Melville Rd		56	1	0
Picone Blvd	1	5		30	Smith St	1	33		30
Conklin St	1	14		17	Ruland Rd	1	17		
Entrance to Airport Plaza		50			Spagnoli Rd		29		29
Entrance to Telephonics Corporation		21			Duryea Rd	1	7		
Grumman Ln		22		25	Baylis Rd		52		
Michael Ave		46			Huntington Quadrangle		15		
Entrance to Chili's		15		15	Melville Park Rd		11		51
Del Dr	1	19			South Service Rd	1	28		13
Allen Blvd		16			North Service Rd		45		
Great Neck Rd		41		30	Sweet Hollow Rd	1	0		32
Brefni St	1	37		45	Old Country Rd	1	25		
Ritter Ave	1	19			Northern State Parkway Eastbound Entrance/Exit Ramp		26		
Jefferson Ave		26			Northern State Parkway Westbound Exit Ramp		16		20
Bentley Rd		18			Entrance to Melville Mall		51		
Harrison Ave		8			Fletcher Pl		33		
Smith St		13			Davis St		15		
North Dr		11			Amityville Rd		18		4
Dixon Ave		44			Schwab Rd	1	31		
Louden Ave		8			Entrance to Huntington Shopping Center		17		6
Mill St		21		16	Norwich St		34		
Oak St		56			Livingston St		10		
Total Travel Time (Southbound)	**36.3 minutes**				**Total Travel Time (Northbound)**	**26.5 minutes**			

Source: Traffic Databank, Parsons Brinckerhoff (2014-2015)

[1] Delay time recorded on a given row is included in the intersection-to-intersection travel time on the following (below) row.

The principal sources of delay were stopping at red lights and congestion.

Travel Time Runs along Route 110

Date: 11/24/14

Start Time: 5:40PM

Run #: 4, PM

SOUTHBOUND					NORTHBOUND				
	Intersection to Intersection Travel Time		Delay Time			Intersection to Intersection Travel Time		Delay Time	
Signalized Intersection	Min	Sec	Min	Sec	Signalized Intersection	Min	Sec	Min	Sec
Livingston St	0	0			Oak Street	0	0		45
Norwich St		16			Mill St		53		
Entrance to Huntington Shopping Center		15			Louden Ave		20		
Schwab Rd	1	7			Dixon Ave		27		
Amityville Rd	1	34			North Dr		45		
Davis St		49			Smith St		12		
Fletcher Pl		17			Harrison Ave		5		
Entrance to Melville Mall		18			Bentley Rd		18		
Northern State Parkway Westbound Exit Ramp		26			Jefferson Ave		20		
Northern State Parkway Eastbound Entrance/Exit Ramp		23			Ritter Ave		32		
Old Country Rd		13			Brefni St		18		8
Sweet Hollow Rd	1	12	2	34	Great Neck Rd		48		
North Service Rd	5	47			Allen Blvd		38		
South Service Rd		18			Del Dr		19		
Melville Park Rd		33			Entrance to Chili's		41		
Huntington Quadrangle		17			Michael Ave		6		
Baylis Rd		47	1	43	Grumman Ln		8		
Duryea Rd	2	39		12	Entrance to Telephonics Corporation		21		
Spagnoli Rd		56		5	Entrance to Airport Plaza		19		9
Ruland Rd		34		51	Conklin St		33		41
Smith St	1	27	1	25	Picone Blvd	1	14		
Melville Rd	1	57			Gazza Blvd		29		14
Gazza Blvd		29		33	Melville Rd		42		35
Picone Blvd	1	8			Smith St	1	13		10
Conklin St		45			Ruland Rd		51		
Entrance to Airport Plaza		19			Spagnoli Rd		26		
Entrance to Telephonics Corporation		38			Duryea Rd		23		
Grumman Ln		24			Baylis Rd		35		
Michael Ave		7			Huntington Quadrangle	1	13		
Entrance to Chili's		5		17	Melville Park Rd		13		
Del Dr	1	8		32	South Service Rd		22		
Allen Blvd		58	1	2	North Service Rd		22		
Great Neck Rd	1	55			Sweet Hollow Rd	1	16		
Brefni St		43			Old Country Rd	1	4		8
Ritter Ave		21			Northern State Parkway Eastbound Entrance/Exit Ramp		29		
Jefferson Ave		31		8	Northern State Parkway Westbound Exit Ramp		27		20
Bentley Rd		38			Entrance to Melville Mall		42		
Harrison Ave		9			Fletcher Pl		28		
Smith St		14			Davis St		19		
North Dr		12		21	Amityville Rd		19		
Dixon Ave	1	11			Schwab Rd		2		
Louden Ave		10			Entrance to Huntington Shopping Center		20		
Mill St		15			Norwich St		17		
Oak St		27			Livingston St		18		
Total Travel Time (Southbound)	**34.9 minutes**				**Total Travel Time (Northbound)**	**22.1 minutes**			

Source: Traffic Databank, Parsons Brinckerhoff (2014-2015)

[1] Delay time recorded on a given row is included in the intersection-to-intersection travel time on the following (below) row.

The principal sources of delay were stopping at red lights and congestion.

Travel Time Runs along Route 110

Date: 11/24/14

Start Time: 6:30PM

Run #: 5, PM

SOUTHBOUND					NORTHBOUND				
	Intersection to Intersection Travel Time		Delay Time[1]			Intersection to Intersection Travel Time		Delay Time[1]	
Signalized Intersection	Min	Sec	Min	Sec	Signalized Intersection	Min	Sec	Min	Sec
Livingston St	0	0		13	Oak Street	0	0		
Norwich St		32			Mill St		27		12
Entrance to Huntington Shopping Center		13			Louden Ave		31		
Schwab Rd		16		7	Dixon Ave		10		
Amityville Rd	1	14			North Dr		44		7
Davis St		15			Smith St		23		
Fletcher Pl		12			Harrison Ave		16		
Entrance to Melville Mall		10		18	Bentley Rd		5		
Northern State Parkway Westbound Exit Ramp		25			Jefferson Ave		16		
Northern State Parkway Eastbound Entrance/Exit Ramp		11			Ritter Ave		24		
Old Country Rd		10			Brefni St		16		18
Sweet Hollow Rd		46	1	11	Great Neck Rd	1	2		51
North Service Rd	2	36		10	Allen Blvd	1	34		
South Service Rd		50			Del Dr		20		
Melville Park Rd		20			Entrance to Chili's		39		
Huntington Quadrangle		10		28	Michael Ave		5		
Baylis Rd		50			Grumman Ln		8		
Duryea Rd		28			Entrance to Telephonics Corporation		24		
Spagnoli Rd		19			Entrance to Airport Plaza		19		
Ruland Rd		24		30	Conklin St		15		41
Smith St	1	6			Picone Blvd	1	10		
Melville Rd		28			Gazza Blvd		26		
Gazza Blvd		23			Melville Rd		19		
Picone Blvd		33		28	Smith St		22		
Conklin St	1	5			Ruland Rd		25		
Entrance to Airport Plaza		18			Spagnoli Rd		23		
Entrance to Telephonics Corporation		24			Duryea Rd		23		20
Grumman Ln		24			Baylis Rd	1	11		
Michael Ave		9			Huntington Quadrangle		16		
Entrance to Chili's		6		7	Melville Park Rd		9		
Del Dr		56			South Service Rd		17		
Allen Blvd		19			North Service Rd		22		28
Great Neck Rd		27			Sweet Hollow Rd	1	30		
Brefni St		36		40	Old Country Rd	1	11		8
Ritter Ave	1	7			Northern State Parkway Eastbound Entrance/Exit Ramp		33		
Jefferson Ave		29			Northern State Parkway Westbound Exit Ramp		20		
Bentley Rd		15			Entrance to Melville Mall		9		
Harrison Ave		6		18	Fletcher Pl		13		
Smith St		36			Davis St		16		
North Dr		15			Amityville Rd		15		
Dixon Ave		34			Schwab Rd		58		
Louden Ave		5			Entrance to Huntington Shopping Center		17		
Mill St		21		16	Norwich St		17		
Oak St	1	9			Livingston St		26		
Total Travel Time (Southbound)	**22.5 minutes**				**Total Travel Time (Northbound)**	**20.4 minutes**			

Source: Traffic Databank, Parsons Brinckerhoff (2014-2015)

[1] Delay time recorded on a given row is included in the intersection-to-intersection travel time on the following (below) row.
The principal sources of delay were stopping at red lights and congestion.

Appendix B:
Proposed BRT Timetable
(Weekday, Monday – Thursday)

Proposed BRT Timetable (Weekday, Monday - Thursday)

Station 11	Station 10	Station 9	Station 8	Station 7	Station 6	Station 5	Station 4	Station 3	Station 2	Station 1
SOUTHBOUND										
5:30	5:33	5:36	5:39	5:41	5:43	5:45	5:46	5:48	5:50	5:53
5:45	5:48	5:51	5:54	5:56	5:58	6:00	6:01	6:03	6:05	6:08
6:00	6:02	6:04	6:07	6:08	6:09	6:12	6:13	6:14	6:17	6:20
6:10	6:12	6:14	6:17	6:18	6:19	6:22	6:23	6:24	6:27	6:30
6:20	6:22	6:24	6:27	6:28	6:29	6:32	6:33	6:34	6:37	6:40
6:30	6:32	6:34	6:37	6:38	6:39	6:42	6:43	6:44	6:47	6:50
6:40	6:42	6:44	6:47	6:48	6:49	6:52	6:53	6:54	6:57	7:00
6:50	6:52	6:54	6:57	6:58	6:59	7:02	7:03	7:04	7:07	7:10
7:00	7:02	7:04	7:07	7:08	7:09	7:12	7:13	7:14	7:17	7:20
7:10	7:12	7:14	7:17	7:18	7:19	7:22	7:23	7:24	7:27	7:30
7:20	7:22	7:24	7:27	7:28	7:29	7:32	7:33	7:34	7:37	7:40
7:30	7:32	7:34	7:37	7:38	7:39	7:42	7:43	7:44	7:47	7:50
7:40	7:42	7:44	7:47	7:48	7:49	7:52	7:53	7:54	7:57	8:00
7:50	7:52	7:54	7:57	7:58	7:59	8:02	8:03	8:04	8:07	8:10
8:00	8:02	8:04	8:07	8:08	8:09	8:12	8:13	8:14	8:17	8:20
8:10	8:12	8:14	8:17	8:18	8:19	8:22	8:23	8:24	8:27	8:30
8:20	8:22	8:24	8:27	8:28	8:29	8:32	8:33	8:34	8:37	8:40
8:30	8:32	8:34	8:37	8:38	8:39	8:42	8:43	8:44	8:47	8:50
8:40	8:42	8:44	8:47	8:48	8:49	8:52	8:53	8:54	8:57	9:00
8:50	8:52	8:54	8:57	8:58	8:59	9:02	9:03	9:04	9:07	9:10
9:00	9:03	9:06	9:09	9:11	9:13	9:15	9:16	9:18	9:20	9:23
9:15	9:18	9:21	9:24	9:26	9:28	9:30	9:31	9:33	9:35	9:38
9:30	9:33	9:36	9:39	9:41	9:43	9:45	9:46	9:48	9:50	9:53
9:45	9:48	9:51	9:54	9:56	9:58	10:00	10:01	10:03	10:05	10:08
10:00	10:03	10:06	10:09	10:11	10:13	10:15	10:16	10:18	10:20	10:23
10:15	10:18	10:21	10:24	10:26	10:28	10:30	10:31	10:33	10:35	10:38
10:30	10:33	10:36	10:39	10:41	10:43	10:45	10:46	10:48	10:50	10:53
10:45	10:48	10:51	10:54	10:56	10:58	11:00	11:01	11:03	11:05	11:08
11:00	11:03	11:06	11:09	11:11	11:13	11:15	11:16	11:18	11:20	11:23
11:15	11:18	11:21	11:24	11:26	11:28	11:30	11:31	11:33	11:35	11:38
11:30	11:33	11:36	11:39	11:41	11:43	11:45	11:46	11:48	11:50	11:53
11:45	11:48	11:51	11:54	11:56	11:58	12:00	12:01	12:03	12:05	12:08
12:00	12:03	12:06	12:09	12:11	12:13	12:15	12:16	12:18	12:20	12:23
12:15	12:18	12:21	12:24	12:26	12:28	12:30	12:31	12:33	12:35	12:38
12:30	12:33	12:36	12:39	12:41	12:43	12:45	12:46	12:48	12:50	12:53
12:45	12:48	12:51	12:54	12:56	12:58	13:00	13:01	13:03	13:05	13:08
13:00	13:03	13:06	13:09	13:11	13:13	13:15	13:16	13:18	13:20	13:23
13:15	13:18	13:21	13:24	13:26	13:28	13:30	13:31	13:33	13:35	13:38
13:30	13:33	13:36	13:39	13:41	13:43	13:45	13:46	13:48	13:50	13:53
13:45	13:48	13:51	13:54	13:56	13:58	14:00	14:01	14:03	14:05	14:08
14:00	14:03	14:06	14:09	14:11	14:13	14:15	14:16	14:18	14:20	14:23
14:15	14:18	14:21	14:24	14:26	14:28	14:30	14:31	14:33	14:35	14:38
14:30	14:33	14:36	14:39	14:41	14:43	14:45	14:46	14:48	14:50	14:53
14:45	14:48	14:51	14:54	14:56	14:58	15:00	15:01	15:03	15:05	15:08
15:00	15:03	15:06	15:09	15:11	15:13	15:15	15:16	15:18	15:20	15:23
15:15	15:18	15:21	15:24	15:26	15:28	15:30	15:31	15:33	15:35	15:38
15:30	15:33	15:37	15:44	15:46	15:48	15:52	15:54	15:56	15:59	16:03
15:40	15:43	15:47	15:54	15:56	15:58	16:02	16:04	16:06	16:09	16:13
15:50	15:53	15:57	16:04	16:06	16:08	16:12	16:14	16:16	16:19	16:23
16:00	16:03	16:07	16:14	16:16	16:18	16:22	16:24	16:26	16:29	16:33
16:10	16:13	16:17	16:24	16:26	16:28	16:32	16:34	16:36	16:39	16:43
16:20	16:23	16:27	16:34	16:36	16:38	16:42	16:44	16:46	16:49	16:53
16:30	16:33	16:37	16:44	16:46	16:48	16:52	16:54	16:56	16:59	17:03
16:40	16:43	16:47	16:54	16:56	16:58	17:02	17:04	17:06	17:09	17:13
16:50	16:53	16:57	17:04	17:06	17:08	17:12	17:14	17:16	17:19	17:23
17:00	17:03	17:07	17:14	17:16	17:18	17:22	17:24	17:26	17:29	17:33
17:10	17:13	17:17	17:24	17:26	17:28	17:32	17:34	17:36	17:39	17:43
17:20	17:23	17:27	17:34	17:36	17:38	17:42	17:44	17:46	17:49	17:53
17:30	17:33	17:37	17:44	17:46	17:48	17:52	17:54	17:56	17:59	18:03
17:40	17:43	17:47	17:54	17:56	17:58	18:02	18:04	18:06	18:09	18:13
17:50	17:53	17:57	18:04	18:06	18:08	18:12	18:14	18:16	18:19	18:23
18:00	18:03	18:07	18:14	18:16	18:18	18:22	18:24	18:26	18:29	18:33
18:10	18:13	18:17	18:24	18:26	18:28	18:32	18:34	18:36	18:39	18:43
18:20	18:23	18:27	18:34	18:36	18:38	18:42	18:44	18:46	18:49	18:53
18:30	18:33	18:36	18:39	18:41	18:43	18:45	18:46	18:48	18:50	18:53
18:45	18:48	18:51	18:54	18:56	18:58	19:00	19:01	19:03	19:05	19:08
19:00	19:03	19:06	19:09	19:11	19:13	19:15	19:16	19:18	19:20	19:23
19:15	19:18	19:21	19:24	19:26	19:28	19:30	19:31	19:33	19:35	19:38
19:30	19:33	19:36	19:39	19:41	19:43	19:45	19:46	19:48	19:50	19:53
19:45	19:48	19:51	19:54	19:56	19:58	20:00	20:01	20:03	20:05	20:08
20:00	20:03	20:06	20:09	20:11	20:13	20:15	20:16	20:18	20:20	20:23
20:15	20:18	20:21	20:24	20:26	20:28	20:30	20:31	20:33	20:35	20:38
20:30	20:33	20:36	20:39	20:41	20:43	20:45	20:46	20:48	20:50	20:53
20:45	20:48	20:51	20:54	20:56	20:58	21:00	21:01	21:03	21:05	21:08
21:00	21:03	21:06	21:09	21:11	21:13	21:15	21:16	21:18	21:20	21:23
21:15	21:18	21:21	21:24	21:26	21:28	21:30	21:31	21:33	21:35	21:38
21:30	21:33	21:36	21:39	21:41	21:43	21:45	21:46	21:48	21:50	21:53
21:45	21:48	21:51	21:54	21:56	21:58	22:00	22:01	22:03	22:05	22:08

Station 1	Station 2	Station 3	Station 4	Station 5	Station 6	Station 7	Station 8	Station 9	Station 10	Station 11
NORTHBOUND										
5:58	6:01	6:04	6:06	6:08	6:11	6:13	6:15	6:18	6:21	6:25
6:13	6:16	6:19	6:21	6:23	6:26	6:28	6:30	6:33	6:36	6:40
6:24	6:28	6:31	6:33	6:35	6:38	6:40	6:41	6:44	6:47	6:50
6:34	6:38	6:41	6:43	6:45	6:48	6:50	6:51	6:54	6:57	7:00
6:44	6:48	6:51	6:53	6:55	6:58	7:00	7:01	7:04	7:07	7:10
6:54	6:58	7:01	7:03	7:05	7:08	7:10	7:11	7:14	7:17	7:20
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7:44	7:48	7:51	7:53	7:55	7:58	8:00	8:01	8:04	8:07	8:10
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9:58	10:01	10:04	10:06	10:08	10:11	10:13	10:15	10:18	10:21	10:25
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10:43	10:46	10:49	10:51	10:53	10:56	10:58	11:00	11:03	11:06	11:10
10:58	11:01	11:04	11:06	11:08	11:11	11:13	11:15	11:18	11:21	11:25
11:13	11:16	11:19	11:21	11:23	11:26	11:28	11:30	11:33	11:36	11:40
11:28	11:31	11:34	11:36	11:38	11:41	11:43	11:45	11:48	11:51	11:55
11:43	11:46	11:49	11:51	11:53	11:56	11:58	12:00	12:03	12:06	12:10
11:58	12:01	12:04	12:06	12:08	12:11	12:13	12:15	12:18	12:21	12:25
12:13	12:16	12:19	12:21	12:23	12:26	12:28	12:30	12:33	12:36	12:40
12:28	12:31	12:34	12:36	12:38	12:41	12:43	12:45	12:48	12:51	12:55
12:43	12:46	12:49	12:51	12:53	12:56	12:58	13:00	13:03	13:06	13:10
12:58	13:01	13:04	13:06	13:08	13:11	13:13	13:15	13:18	13:21	13:25
13:13	13:16	13:19	13:21	13:23	13:26	13:28	13:30	13:33	13:36	13:40
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14:43	14:46	14:49	14:51	14:53	14:56	14:58	15:00	15:03	15:06	15:10
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18:27	18:30	18:33	18:34	18:36	18:39	18:41	18:43	18:47	18:50	18:53
18:37	18:40	18:43	18:44	18:46	18:49	18:51	18:53	18:57	19:00	19:03
18:47	18:50	18:53	18:54	18:56	18:59	19:01	19:03	19:07	19:10	19:13
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19:13	19:16	19:19	19:21	19:23	19:26	19:28	19:30	19:33	19:36	19:40
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21:43	21:46	21:49	21:51	21:53	21:56	21:58	22:00	22:03	22:06	22:10
21:58	22:01	22:04	22:06	22:08	22:11	22:13	22:15	22:18	22:21	22:25

Source: Nelson\Nygaard, Parsons Brinckerhoff (2015)

Peak

Off-Peak

Station Legend:

Station 1: LIRR Amityville Station
Station 2: Route 110 at Ritter Avenue
Station 3: Route 110 at Allen Boulevard
Station 4: Route 110 at Grumman Lane
Station 5: Route 110 at the Planned LIRR Republic Station
Station 6: Route 110 at Smith Street - Farmingdale State College
Station 7: Route 110 at Walt Whitman Road/Duryea Road
Station 8: Route 110 at Huntington Quadrangle
Station 9: Route 110 at Pinelawn Road
Station 10: Route 110 at Melville Mall
Station 11: Walt Whitman Shops

Appendix C:
Potential Feeder Route "Transit Shortcuts"

Potential Feeder Route "Transit Shortcuts"

The Short List Alternatives in the Route 110 Alternatives Analysis comprise the following:

1. **Alternative D**: BRT trunk route along Route 110 with circular feeder routes
2. **Alternative E**: BRT trunk route along Route 110 with transit center nodes and connecting feeder routes

These alternatives avoid using private roads as well as public roads that cut through private properties. However, the 2010 *Route 110 BRT Study* suggested that it could be possible to create "transit shortcuts" by establishing agreements with adjacent property owners to link their parking lots, which could be explored during Project Development following completion of the Alternatives Analysis.

There are a number of potential benefits associated with the transit shortcuts routing concept. For instance, it could facilitate locating feeder route stations behind office buildings, thereby offering additional convenience for employees who often enter through the back door closest to the parking lot. Moreover, the transit shortcuts could create opportunities for potential funding and financing partnerships with property owners and major employers, such as through branding and sponsorship. In some instances, the transit shortcuts could also enable the feeder route vehicles to travel in a more direct path between major employment centers than if the vehicles had to remain on public roads, potentially resulting in travel time savings. Additionally, routing the feeder routes through parking lots that often bisect adjacent buildings could potentially expand the catchment area for the feeder route service.

There is potential application of the transit shortcuts concept to the two Short List Alternatives that can be further investigated during Project Development. This memo identifies and discusses the following four potential transit shortcuts (Figure 1 – Figure 4) with relevance to the feeder routes east of Route 110:

1. Between the Long Island Expressway and the Route 110/Pinelawn Road Intersection
2. Between Maxess Road and Pinelawn Road
3. Within the Huntington Quadrangle
4. Between Baylis Road and Corporate Center Drive

Figure 1: Potential Transit Shortcut between the Long Island Expressway and the Route 110/Pinelawn Road Intersection

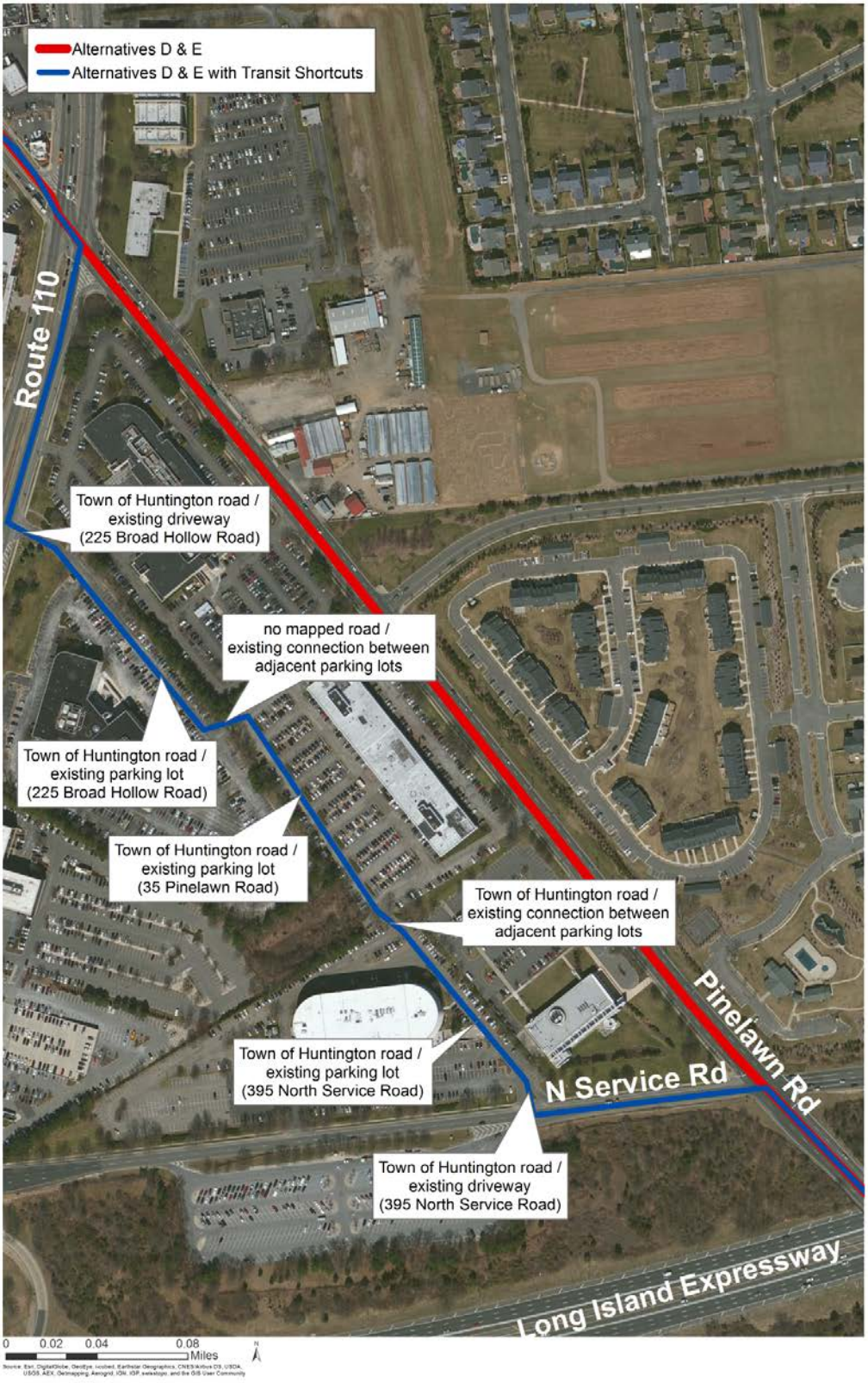


Figure 2: Potential Transit Shortcut between Maxess Road and Pinelawn Road

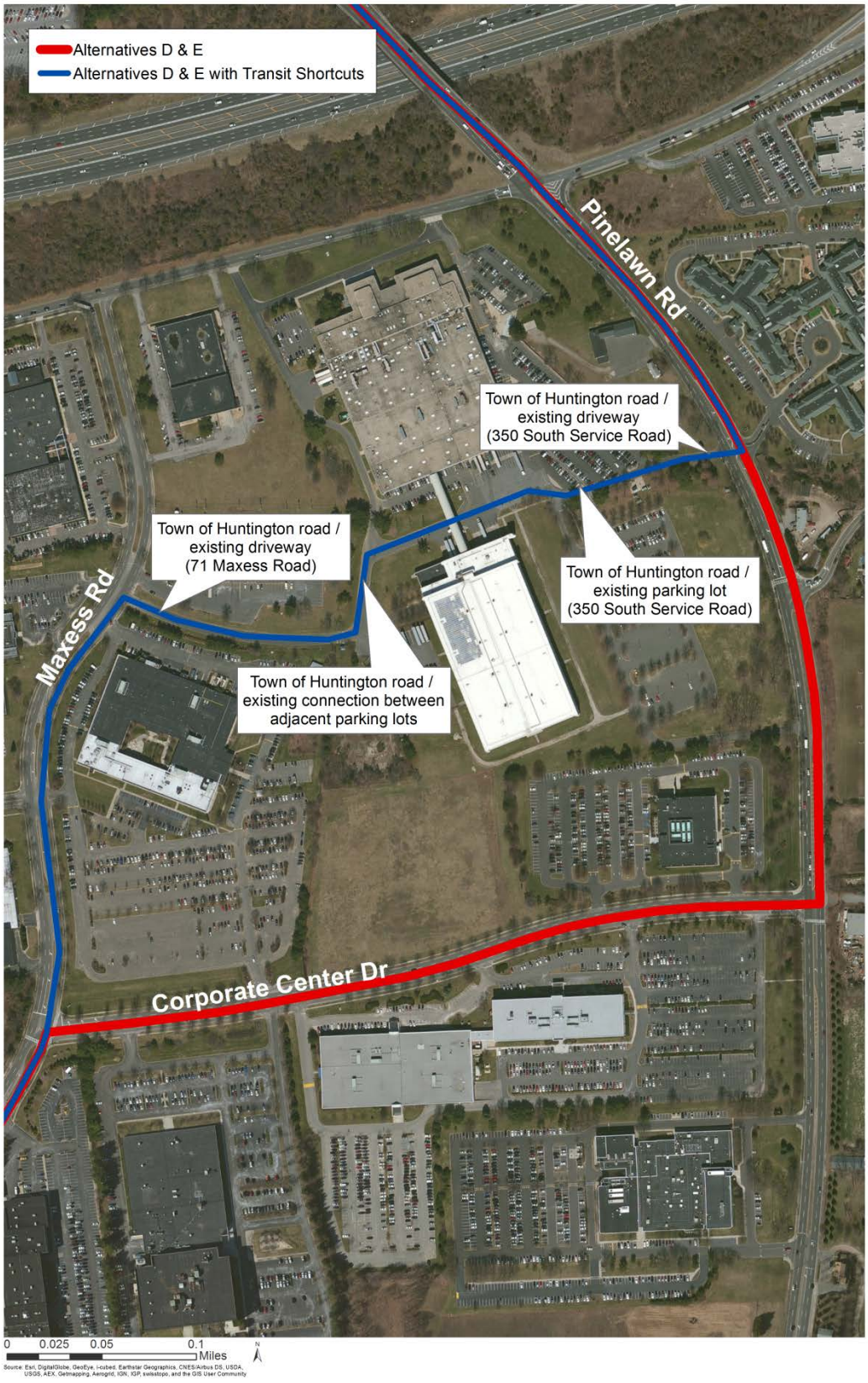


Figure 3: Potential Transit Shortcut within the Huntington Quadrangle

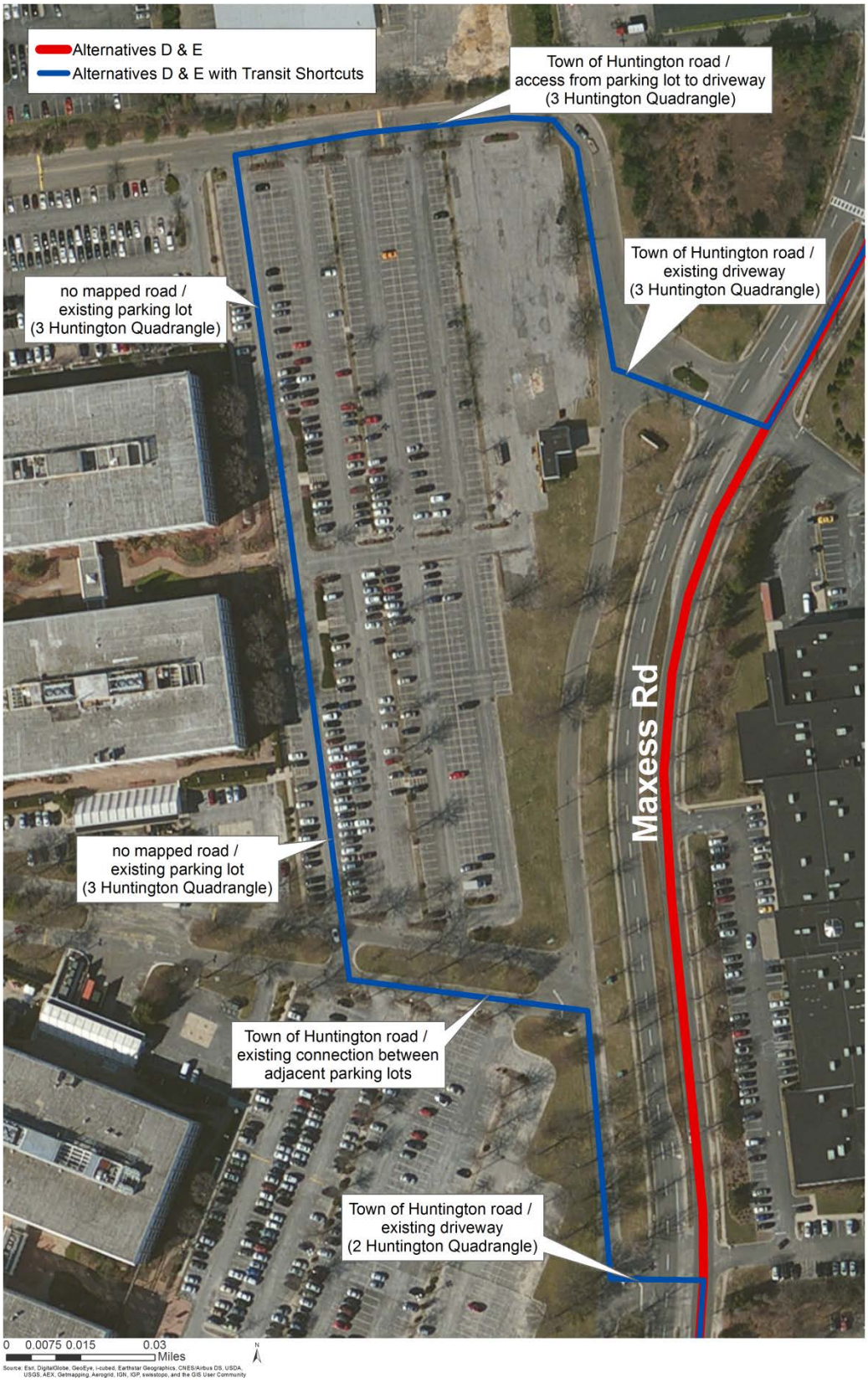
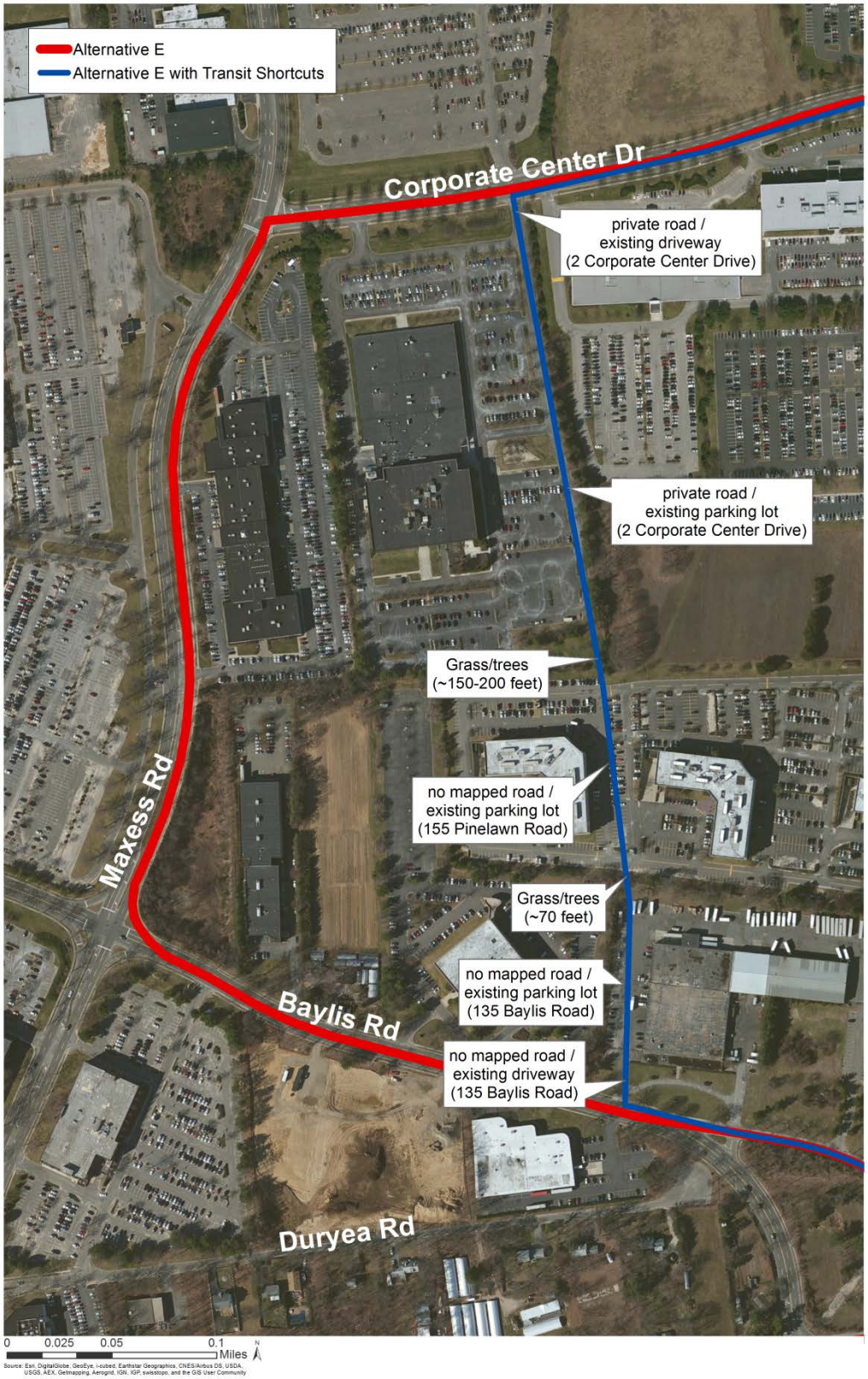


Figure 4: Potential Transit Shortcut between Baylis Road and Corporate Center Drive



Example 1: Between the Long Island Expressway and the Route 110/Pinelawn Road Intersection

One example with relevance to both Alternative D and E is the alignment east of Route 110 between the Long Island Expressway and the intersection of Route 110 and Pinelawn Road. The feeder routes in both Alternative D and E run on Pinelawn Road to serve the front of the office buildings on the west side of the street. However, in the northbound direction, it could be possible to turn west on the North Service Road from Pinelawn Road,[1] and run the alignment through the parking lots that already have a physical connection. As shown in Figure 1, the route could divert off the North Service Road using the driveway at 395 North Service Road, then continue north to the linked parking lot at 35 Pinelawn Road and use the linked parking lot at 225 Broad Hollow Road to access Route 110. The majority of the alignment for this transit shortcut runs along an unnamed Town of Huntington road that cuts through private properties; the only exception is the existing connection between the parking lots of 35 Pinelawn Road and 225 Broad Hollow Road, which is not currently a mapped roadway.[2] This transit shortcut could potentially shorten the walking distance for transit users between the feeder route transit vehicle and their final destination. On the other hand, this could potentially increase total cycle time because the routing is somewhat more circuitous and would also require lower travel speeds within parking lots as compared to running along Pinelawn Road.

Example 2: Between Maxess Road and Pinelawn Road

Another potential transit shortcut with relevance to both Alternative D and E is the routing to serve the Estee Lauder office complex, located between Maxess Road and Pinelawn Road, south of the Long Island Expressway. Both Alternative D and E include service to the Estee Lauder office complex via routing from Corporate Center Drive to Pinelawn Road. However, as shown in Figure 2, it could be possible to cut through the back of the office complex by using the driveway of 71 Maxess Road (north of Corporate Center Drive), which connects Maxess Road to Pinelawn Road. The entire alignment for this transit shortcut runs along an unnamed Town of Huntington road that cuts through private properties. Similar to the previous example, this alignment could potentially shorten the walking distance for transit users between the feeder route transit vehicle and their final destination. This could also potentially expand the catchment area for the feeder route service further north along Maxess Road and west along Melville Park Road, but at the expense of providing service along Corporate Center Drive. This could potentially increase total cycle time because lower travel speeds would likely be required within the parking lot than compared to running along Corporate Center Drive.

[1] This is only possible in the northbound direction because the North Service Road is one-way going westbound.
[2] Street jurisdiction information was compiled from the NYS GIS Program Office's NYS Streets layer (2013).

Example 3: Within the Huntington Quadrangle

For both Alternative D and E, it could be possible to more directly serve the Huntington Quadrangle by diverting off Maxess Road and providing service within the parking lots. Specifically, as shown in Figure 3, the feeder route service could use the driveways at 2 and 3 Huntington Quadrangle. The driveways that connect the parking lots and also lead to Maxess Road are unnamed Town of Huntington roads, and the parking lots are not mapped roadways. A potential shortcoming of this alignment option is that it would likely increase travel time due to rerouting the feeder route off Maxess Road to serve the Huntington Quadrangle.

Example 4: Between Baylis Road and Corporate Center Drive

One potential transit shortcut specific to Alternative E is the alignment between Old Baylis Road and Corporate Center Drive. Alternative E includes service on Baylis Road to Maxess Road, and on Maxess Road to Corporate Center Drive. However, as shown in Figure 4, it could be possible to (1) cut through the driveway of 135 Baylis Road, (2) create a connection with the adjacent parking lot at 155 Pinelawn Road (currently separated by approximately 70 feet of grass/trees), and (3) create an additional connection with the parking lot/driveway at 2 Corporate Center Drive (currently separated by approximately 150-200 feet of grass/trees at different locations). Most of this alignment is not currently a mapped roadway, although the existing parking lot and driveway at 2 Corporate Center Drive is mapped as an unnamed private road. This shortcut could provide more direct service for employees whose final destination is located between Baylis Road and Corporate Center Drive, from Maxess Road to Pinelawn Road. It could also potentially create travel time savings by creating a more direct path between Baylis Road and Corporate Center Drive, but at the expense of providing service along Maxess Road.

To implement any of these transit shortcuts, agreements would need to be established with the respective property owners for use of the driveways and/or parking lots. The agreements would also need to specify the terms and responsibilities for maintenance of the driveways and/or parking lots. In some instances (such as the Baylis Road to Corporate Center Drive example cited above), physical connections between adjacent parking lots do not currently exist, and would require some construction work to link the parking lots. The costs and benefits of these transit shortcut options can be quantified and compared as part of Project Development, at which time a decision can be made whether or not to pursue agreements with the respective property owners.

Appendix D:
Proposed Feeder Route Timetables
(Weekday, Monday – Thursday)

Proposed Feeder Route Timetable (Weekday, Monday - Thursday)
D1/E1 - Farmingdale State College

Station 1	Station 2	Station 3	Station 4	Station 5	Station 6	Station 7	Station 1
5:30	5:33	5:34	5:35	5:36	5:37	5:37	5:39
5:45	5:48	5:49	5:50	5:51	5:52	5:52	5:54
6:00	6:03	6:05	6:05	6:07	6:08	6:08	6:11
6:10	6:13	6:15	6:15	6:17	6:18	6:18	6:21
6:20	6:23	6:25	6:25	6:27	6:28	6:28	6:31
6:30	6:33	6:35	6:35	6:37	6:38	6:38	6:41
6:40	6:43	6:45	6:45	6:47	6:48	6:48	6:51
6:50	6:53	6:55	6:55	6:57	6:58	6:58	7:01
7:00	7:03	7:05	7:05	7:07	7:08	7:08	7:11
7:10	7:13	7:15	7:15	7:17	7:18	7:18	7:21
7:20	7:23	7:25	7:25	7:27	7:28	7:28	7:31
7:30	7:33	7:35	7:35	7:37	7:38	7:38	7:41
7:40	7:43	7:45	7:45	7:47	7:48	7:48	7:51
7:50	7:53	7:55	7:55	7:57	7:58	7:58	8:01
8:00	8:03	8:05	8:05	8:07	8:08	8:08	8:11
8:10	8:13	8:15	8:15	8:17	8:18	8:18	8:21
8:20	8:23	8:25	8:25	8:27	8:28	8:28	8:31
8:30	8:33	8:35	8:35	8:37	8:38	8:38	8:41
8:40	8:43	8:45	8:45	8:47	8:48	8:48	8:51
8:50	8:53	8:55	8:55	8:57	8:58	8:58	9:01
9:00	9:03	9:05	9:05	9:07	9:08	9:08	9:11
9:15	9:18	9:20	9:20	9:22	9:23	9:23	9:26
9:30	9:33	9:35	9:35	9:37	9:38	9:38	9:41
9:45	9:48	9:50	9:50	9:52	9:53	9:53	9:56
10:00	10:03	10:05	10:05	10:07	10:08	10:08	10:11
10:15	10:18	10:20	10:20	10:22	10:23	10:23	10:26
10:30	10:33	10:35	10:35	10:37	10:38	10:38	10:41
10:45	10:48	10:50	10:50	10:52	10:53	10:53	10:56
11:00	11:03	11:05	11:05	11:07	11:08	11:08	11:11
11:15	11:18	11:20	11:20	11:22	11:23	11:23	11:26
11:30	11:33	11:35	11:35	11:37	11:38	11:38	11:41
11:45	11:48	11:50	11:50	11:52	11:53	11:53	11:56
12:00	12:03	12:05	12:05	12:07	12:08	12:08	12:11
12:15	12:18	12:20	12:20	12:22	12:23	12:23	12:26
12:30	12:33	12:35	12:35	12:37	12:38	12:38	12:41
12:45	12:48	12:50	12:50	12:52	12:53	12:53	12:56
13:00	13:03	13:05	13:05	13:07	13:08	13:08	13:11
13:15	13:18	13:20	13:20	13:22	13:23	13:23	13:26
13:30	13:33	13:35	13:35	13:37	13:38	13:38	13:41
13:45	13:48	13:50	13:50	13:52	13:53	13:53	13:56
14:00	14:03	14:05	14:05	14:07	14:08	14:08	14:11
14:15	14:18	14:20	14:20	14:22	14:23	14:23	14:26
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14:45	14:48	14:50	14:50	14:52	14:53	14:53	14:56
15:00	15:03	15:05	15:05	15:07	15:08	15:08	15:11
15:15	15:18	15:20	15:20	15:22	15:23	15:23	15:26
15:30	15:33	15:35	15:35	15:37	15:38	15:38	15:41
15:40	15:43	15:45	15:45	15:47	15:48	15:48	15:51
15:50	15:53	15:55	15:55	15:57	15:58	15:58	16:01
16:00	16:03	16:05	16:05	16:07	16:08	16:08	16:11
16:10	16:13	16:15	16:15	16:17	16:18	16:18	16:21
16:20	16:23	16:25	16:25	16:27	16:28	16:28	16:31
16:30	16:33	16:35	16:35	16:37	16:38	16:38	16:41
16:40	16:43	16:45	16:45	16:47	16:48	16:48	16:51
16:50	16:53	16:55	16:55	16:57	16:58	16:58	17:01
17:00	17:03	17:05	17:05	17:07	17:08	17:08	17:11
17:10	17:13	17:15	17:15	17:17	17:18	17:18	17:21
17:20	17:23	17:25	17:25	17:27	17:28	17:28	17:31
17:30	17:33	17:35	17:35	17:37	17:38	17:38	17:41
17:40	17:43	17:45	17:45	17:47	17:48	17:48	17:51
17:50	17:53	17:55	17:55	17:57	17:58	17:58	18:01
18:00	18:03	18:05	18:05	18:07	18:08	18:08	18:11
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18:30	18:33	18:35	18:35	18:37	18:38	18:38	18:41
18:45	18:48	18:50	18:50	18:52	18:53	18:53	18:56
19:00	19:03	19:05	19:05	19:07	19:08	19:08	19:11
19:15	19:18	19:20	19:20	19:22	19:23	19:23	19:26
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19:45	19:48	19:50	19:50	19:52	19:53	19:53	19:56
20:00	20:03	20:05	20:05	20:07	20:08	20:08	20:11
20:15	20:18	20:20	20:20	20:22	20:23	20:23	20:26
20:30	20:33	20:35	20:35	20:37	20:38	20:38	20:41
20:45	20:48	20:50	20:50	20:52	20:53	20:53	20:56
21:00	21:03	21:05	21:05	21:07	21:08	21:08	21:11
21:15	21:18	21:20	21:20	21:22	21:23	21:23	21:26
21:30	21:33	21:35	21:35	21:37	21:38	21:38	21:41
21:45	21:48	21:50	21:50	21:52	21:53	21:53	21:56

Source: Nelson\Nygaard, Parsons Brinckerhoff (2015)

	Peak
	Off-Peak

Station Legend:

***Station 1**: Route 110 at the Planned LIRR Republic Station
Station 2: Melville Road at Staff Lot #9A, before entrance to Dr. Frank A Cipriani Drive
Station 3: Dr. Frank A Cipriani Drive at Lupton Hall
Station 4: Dr. Frank A Cipriani Drive at Student Lot #5/walkway to Hale Hall
Station 5: Dr. Frank A Cipriani Drive near existing bus stop
Station 6: Dr. Frank A Cipriani Drive across from walkway to Broad Hollow Bioscience Park
***Station 7**: Dr. Frank A Cipriani Drive at Route 110

*Transfers to BRT available at Stations 1 and 7

Proposed Feeder Route Timetable (Weekday, Monday - Thursday)
D2 - Ruland Road/Smith Street

Station 1	Station 2	Station 3	Station 4	Station 5	Station 6	Station 7	Station 8	Station 9	Station 10	Station 11	Station 12	Station 13	Station 1
5:30	5:31	5:32	5:32	5:33	5:34	5:35	5:35	5:36	5:37	5:37	5:38	5:39	5:40
5:45	5:46	5:47	5:47	5:48	5:49	5:50	5:50	5:51	5:52	5:52	5:53	5:54	5:55
6:00	6:01	6:02	6:02	6:03	6:04	6:05	6:06	6:07	6:07	6:08	6:08	6:09	6:11
6:10	6:11	6:12	6:12	6:13	6:14	6:15	6:16	6:17	6:17	6:18	6:18	6:19	6:21
6:20	6:21	6:22	6:22	6:23	6:24	6:25	6:26	6:27	6:27	6:28	6:28	6:29	6:31
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6:40	6:41	6:42	6:42	6:43	6:44	6:45	6:46	6:47	6:47	6:48	6:48	6:49	6:51
6:50	6:51	6:52	6:52	6:53	6:54	6:55	6:56	6:57	6:57	6:58	6:58	6:59	7:01
7:00	7:01	7:02	7:02	7:03	7:04	7:05	7:06	7:07	7:07	7:08	7:08	7:09	7:11
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21:45	21:46	21:47	21:47	21:48	21:49	21:50	21:50	21:51	21:52	21:52	21:53	21:54	21:55

Source: Nelson\Nygaard, Parsons Brinckerhoff (2015)

Peak

Off-Peak

Station Legend:

***Station 1**: Route 110 at Smith Street

Station 2: Ruland Road at Country Pointe Court

Station 3: Ruland Road at Republic Road

Station 4: Ruland Road between Maxess Road and Deshon Drive

Station 5: Ruland Road at Newsday employee entrance

Station 6: Wellwood Avenue/Pinelawn Road at existing bus stop between Ruland Road and Marcus Drive

Station 7: Wellwood Avenue/Pinelawn Road at Finn Court

Station 8: Smith Street at existing bus stop just west of Wellwood Avenue/Pinelawn Road

Station 9: Smith Street at existing bus stop (near 495 Smith Street)

Station 10: Smith Street at existing bus stop (near 375 Smith Street)

Station 11: Smith Street at existing bus stop (near 303 Smith Street)

Station 12: Smith Street at existing bus stop just east of New Highway

Station 13: Smith Street at existing bus stop (near 140 Smith Street)

*Transfers to BRT available at Station 1

Proposed Feeder Route Timetable (Weekday, Monday - Thursday)

D3 - Walt Whitman Road/Pinelawn Road

Station 1	Station 2	Station 3	Station 4	Station 5	Station 6	Station 7	Station 8	Station 9	Station 10	Station 11	Station 12	Station 13	Station 14	Station 15	Station 16	Station 17	Station 18	Station 1
CLOCKWISE																		
5:30	5:30	5:31	5:31	5:32	5:32	5:33	5:34	5:34	5:35	5:37	5:37	5:40	5:41	5:42	5:42	5:44	5:44	5:45
5:45	5:45	5:46	5:46	5:47	5:47	5:48	5:49	5:49	5:50	5:52	5:52	5:55	5:56	5:57	5:57	5:59	5:59	6:00
6:00	6:00	6:01	6:01	6:02	6:02	6:04	6:05	6:05	6:06	6:07	6:07	6:12	6:13	6:13	6:13	6:15	6:16	6:17
6:10	6:10	6:11	6:11	6:12	6:12	6:14	6:15	6:15	6:16	6:17	6:17	6:22	6:22	6:23	6:23	6:25	6:26	6:27
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6:30	6:30	6:31	6:31	6:32	6:32	6:34	6:35	6:35	6:36	6:37	6:37	6:42	6:42	6:43	6:43	6:45	6:46	6:47
6:40	6:40	6:41	6:41	6:42	6:42	6:44	6:45	6:45	6:46	6:47	6:47	6:52	6:52	6:53	6:53	6:55	6:56	6:57
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Station 1	Station 18	Station 17	Station 16	Station 15	Station 14	Station 13	Station 12	Station 11	Station 10	Station 9	Station 8	Station 7	Station 6	Station 5	Station 4	Station 3	Station 2	Station 1
COUNTER-CLOCKWISE																		
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17:10	17

Proposed Feeder Route Timetable (Weekday, Monday - Thursday)

E2 - Walt Whitman Road

Station 1	Station 2	Station 3	Station 4	Station 5	Station 6	Station 7	Station 8	Station 9	Station 10	Station 11	Station 12
NORTHBOUND											
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Station 12	Station 11	Station 10	Station 9	Station 8	Station 7	Station 6	Station 5	Station 4	Station 3	Station 2	Station 1
SOUTHBOUND											
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21:58	22:01	22:01	22:02	22:03	22:04	22:04	22:05	22:06	22:06	22:08	22:10

Source: Nelson\Nygaard, Parsons Brinckerhoff (2015)

Peak

Off-Peak

Station Legend:

***Station 1**: Route 110 at Planned LIRR Republic Station

***Station 2**: Route 110 at Smith Street - Farmingdale State College

***Station 3**: Walt Whitman Road at Route 110

Station 4: Walt Whitman Road at Park Drive

Station 5: Walt Whitman Road at Villas Circle

Station 6: Walt Whitman Road at Baylis Road/Northgate Circle

Station 7: Walt Whitman Road at Paumonauk Hills Court

Station 8: Walt Whitman Road at Canon Park

Station 9: Walt Whitman Road at Melville Marriott driveway

Station 10: Walt Whitman Road at Nikon driveway

Station 11: Walt Whitman Road at Herrmann Place

***Station 12**: Route 110 at Pinelawn Road

*Transfers to BRT available at Stations 1, 2, 3, and 12

Proposed Feeder Route Timetable (Weekday, Monday - Thursday)
E3 - New Highway/Pinelawn Road

Station 1	Station 2	Station 3	Station 4	Station 5	Station 6	Station 7	Station 8	Station 9	Station 10	Station 11	Station 12	Station 13	Station 14	Station 15	Station 16	Station 17	Station 18
NORTHBOUND																	
5:30	5:35	5:35	5:36	5:36	5:37	5:38	5:39	5:40	5:40	5:41	5:41	5:42	5:43	5:43	5:45	5:47	5:48
5:45	5:50	5:50	5:51	5:51	5:52	5:53	5:54	5:55	5:55	5:56	5:56	5:57	5:58	5:58	6:00	6:02	6:03
6:00	6:05	6:06	6:07	6:07	6:08	6:09	6:10	6:11	6:11	6:12	6:13	6:13	6:14	6:15	6:16	6:19	6:21
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Station 18	Station 17	Station 16	Station 15	Station 14	Station 13	Station 12	Station 11	Station 10	Station 9	Station 8	Station 7	Station 6	Station 5	Station 4	Station 3	Station 2	Station 1
SOUTHBOUND																	
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ROUTE 110 ALTERNATIVES ANALYSIS

Appendix I:
Task 10 Technical Memorandum

TOWN OF BABYLON
SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

Task 10: Ridership Forecast

September 21, 2015

Submitted by:

RSG
the science of insight

Submitted by:

PARSONS BRINCKERHOFF

Version Final

QUALITY ASSURANCE/QUALITY CONTROL

Created by:	RSG the science of insight	May 21, 2015
	RSG	**Date**
Reviewed / Updated by:		September 21, 2015
	Maxwell Sokol / Parsons Brinckerhoff	**Date**
Approved by:		September 21, 2015
	Nicole Bucich / Parsons Brinckerhoff	**Date**

REVISIONS

Date	Version Number	Revision
September 1, 2015	1.0	Draft document for review
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1. Introduction

The purpose of the Route 110 Alternatives Analysis is to evaluate alternatives that address the existing and future transportation demand in the Route 110 Corridor, manage congestion, maximize environmental benefits, and enhance the study area's economic competitiveness by increasing mobility options. The Alternatives Analysis is building upon previous and ongoing studies to select a Locally Preferred Alternative (LPA) to advance to Project Development and National Environmental Policy Act (NEPA) review with the Federal Transit Administration (FTA). While the Moving Ahead for Progress in the 21st Century Act (MAP-21)—enacted by Congress in 2012—eliminated the requirement for an Alternatives Analysis, good planning practice dictates the importance of looking at reasonable modal and alignment alternatives in a transportation corridor to ensure that the public and decision-makers have an appropriate level of information necessary to identify and select a solution to address the aforementioned problems and opportunities.

As such, a focused Route 110 Alternatives Analysis is being conducted, based upon the following:

- A firm understanding of transportation needs, problems, and opportunities in the Route 110 Corridor
- The establishment of clear goals and objectives to be achieved by the transportation improvements in the Corridor
- The definition of various technologies and operating plans designed to address Corridor problems, goals, and objectives
- The evaluation of alternatives against multiple measures—including financial feasibility of the grantee/operator/sponsor (in this case the grantee is the Town of Babylon)

This work that is currently being completed will result in a local decision that is well informed, demonstrates strong consensus, and is less vulnerable to delays or public scrutiny in the planning and implementation process.

2. Overview

This technical memorandum serves as the deliverable for Task 10. The document summarizes the methodology and results of the ridership forecasting effort for the Short List Alternatives in the Route 110 Alternatives Analysis, including the bus rapid transit (BRT) trunk route and associated feeder routes. The Short List Alternatives comprise the following:

- **Alternative D**: BRT trunk route along Route 110 with circular feeder routes
- **Alternative E**: BRT trunk route along Route 110 with transit center nodes and connecting feeder routes

Alternatives D and E share the same BRT trunk route alignment and service characteristics, differing only with respect to the feeder routes that would provide service off Route 110.

The ridership forecasting effort was informed by the operations analysis (documented in the Task 9 Technical Memorandum). Specifically, the operating plans for the BRT trunk route and feeder routes were used as inputs to the ridership model, which estimated the number of weekday boardings for the different transit services under the different alternatives.

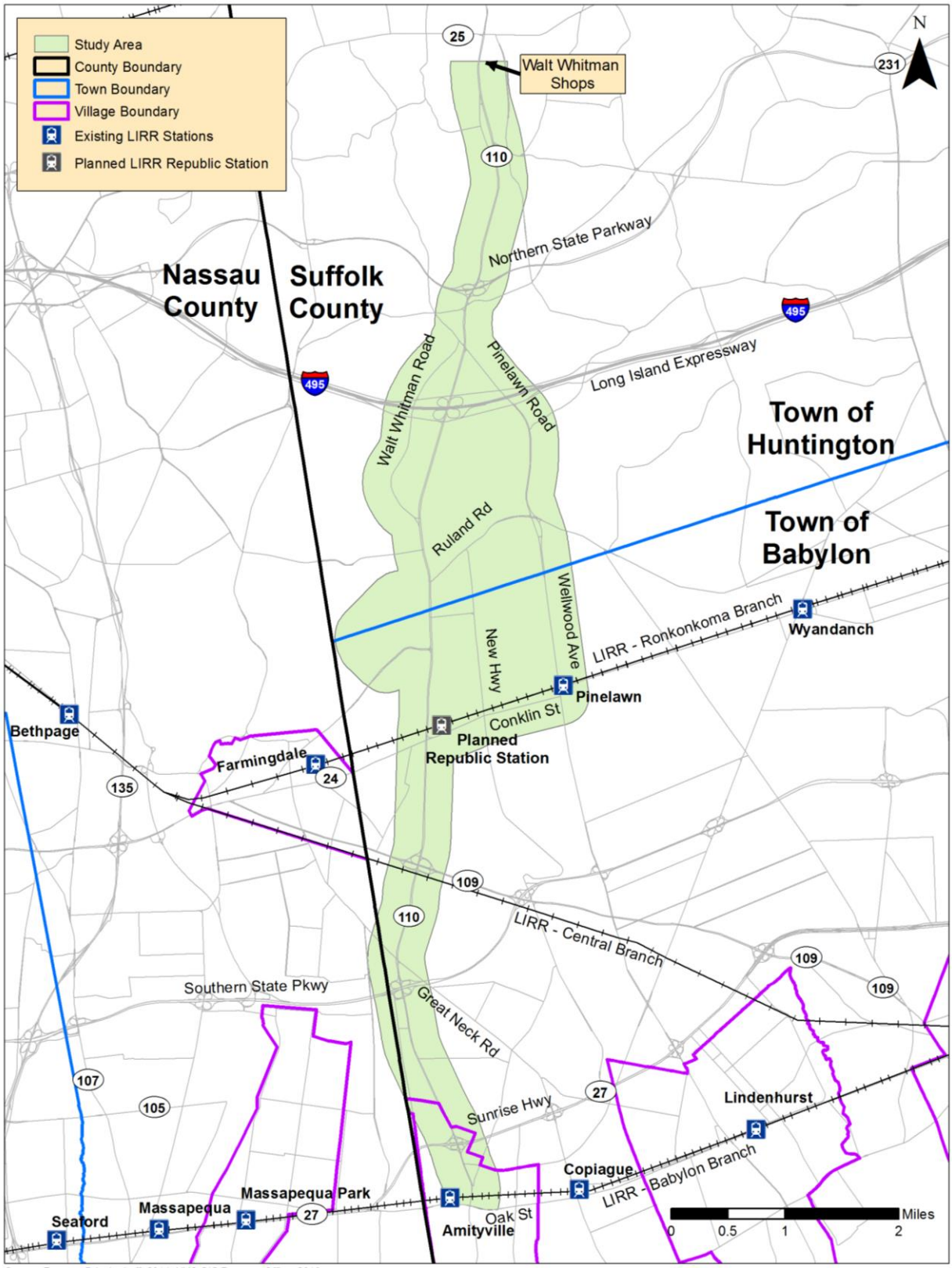
Ridership is one of the key criteria that is used in the Short List Screening to evaluate the strengths, weaknesses, and trade-offs of the Short List Alternatives. The Short List Screening—including, but not limited to, an evaluation of cost effectiveness, land use, and economic development potential—is fully documented in the Route 110 Alternatives Analysis Final Report (Task 14).

3. Study Area

The study area for the Route 110 Alternatives Analysis (Figure 1) includes the areas directly affected by the potential construction and operation of transit improvements. The study area is defined to encompass the portion of the Route 110 Corridor where trip generators and attractors are most concentrated and where the existing right-of-way could best accommodate the introduction of a new premium transit service. Specifically, the approximately 10.5-mile stretch of the Route 110 Corridor in the study area is located between Oak Street in the Village of Amityville at the southern end and the Walt Whitman Shops in the Town of Huntington at the northern end.

The study area also includes areas to the east and west of Route 110 to capture major activity centers that are beyond a reasonable walking distance from the Corridor. The study area extends east as far as Wellwood Avenue in the East Farmingdale portion of the Town of Babylon (at Conklin Street), and continues north to the intersection of Pinelawn Road and Route 110 in the Melville portion of the Town of Huntington. The study area extends west as far Walt Whitman Road in Melville and also includes the Farmingdale State College campus.

Figure 1: Route 110 Alternatives Analysis Study Area Boundaries



Source: NYS GIS Program Office, Parsons Brinckerhoff (2015)

4. Summary of Short List Alternatives

The two Short List Alternatives that were modeled in the ridership forecasting effort include a common BRT trunk route along the Route 110 Corridor with different sets of complementary shuttle bus feeder routes to provide last-mile connectivity to and from off-Corridor activity centers.

4.1 BRT TRUNK ROUTE

The proposed BRT trunk route service for both Alternatives D and E would operate between the LIRR Amityville Station at the southern end and the Walt Whitman Shops at the northern end.

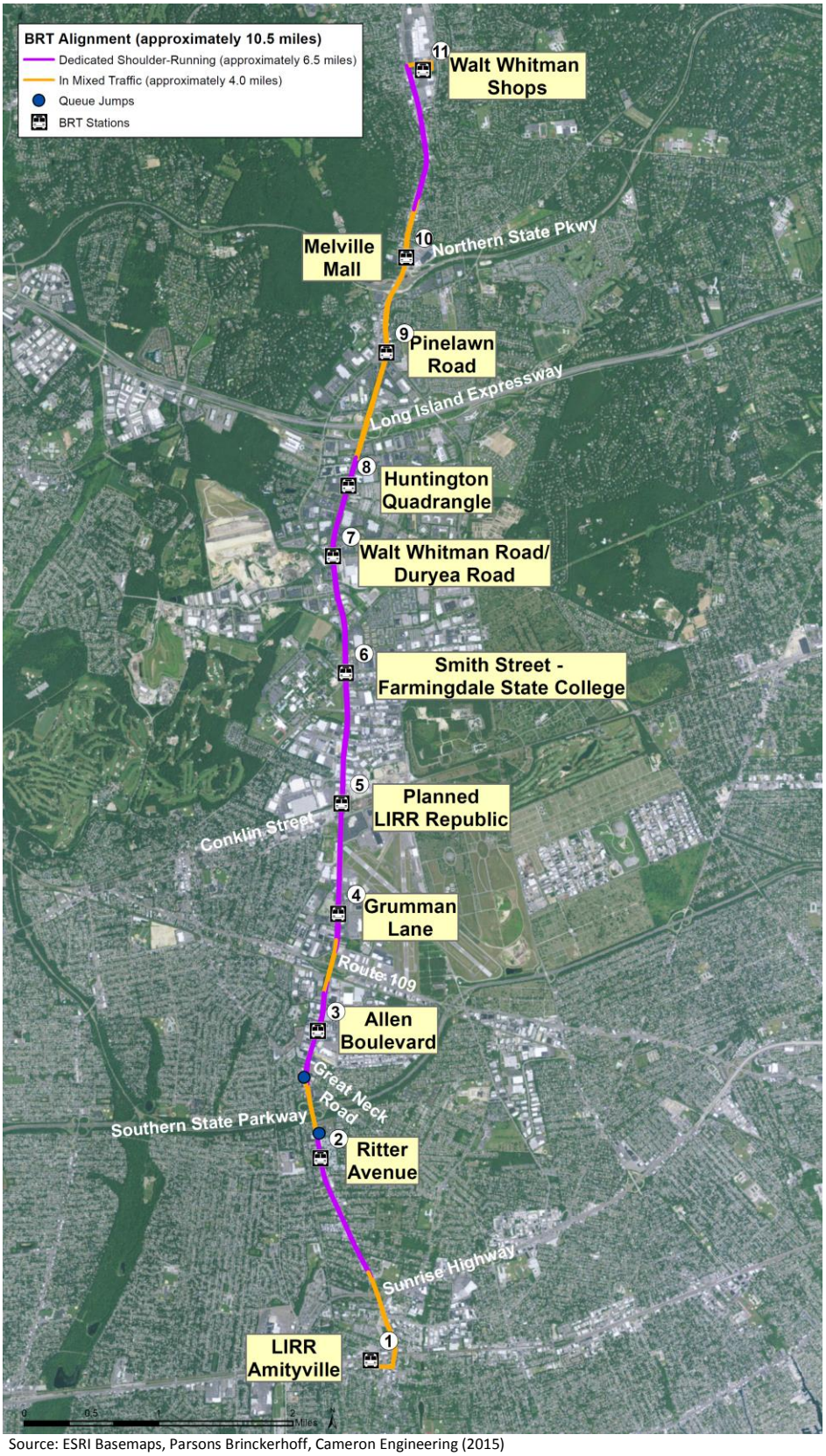
As shown in Figure 2, the proposed BRT service includes the following 11 station locations (from south to north) within the study area and primarily along Route 110:

1. LIRR Amityville Station
2. Route 110 at Ritter Avenue
3. Route 110 at Allen Boulevard
4. Route 110 at Grumman Lane
5. Route 110 at the planned LIRR Republic Station
6. Route 110 at Smith Street – Farmingdale State College
7. Route 110 at Walt Whitman Road/Duryea Road
8. Route 110 at Huntington Quadrangle
9. Route 110 at Pinelawn Road
10. Route 110 at Melville Mall
11. Walt Whitman Shops

The BRT stations are appropriately spaced to maximize ridership potential (with an average distance of 0.9 miles between stations, compared to an average distance of approximately 0.25 miles between existing Suffolk County Transit stops on Route 110), and the station locations effectively capture existing and future activity centers.

Several segments of Route 110 with a wide existing shoulder can accommodate a dedicated BRT lane, which would enable BRT vehicles to bypass traffic congestion on the adjacent general purpose lanes. The 10% conceptual engineering completed for this Alternatives Analysis (documented in the Task 11 Technical Memorandum) demonstrated that on the approximately 10.5-mile trunk route, approximately 6.5 miles can accommodate BRT shoulder-running (Figure 2). Along other roadway segments, BRT would operate in mixed traffic with other vehicles. The dedicated and mixed traffic alignment segments would both benefit from traffic signal priority (TSP), which limits the waiting time at red lights and thereby results in travel time savings for BRT.

Figure 2: Proposed BRT Alignment and Station Locations



Source: ESRI Basemaps, Parsons Brinckerhoff, Cameron Engineering (2015)

Compared to the existing Suffolk County Transit S1 route, the BRT trunk route that is proposed for both Alternatives D and E would reduce headways and thereby offer increased transit service frequency along Route 110. The proposed BRT trunk route would provide more frequent service than the S1 route during the weekday peak period (i.e., every 10 minutes as opposed to every 15 minutes), weekday off-peak period (i.e., every 15 minutes as opposed to every 30 minutes), and on weekends (i.e., every 20 minutes as opposed to every 60 minutes). This service policy would help to brand BRT as a distinct, premium transit service compared to the existing bus service.

The proposed Route 110 BRT system would provide limited-stop service as an *overlay* to the existing bus network. It is not anticipated that the Suffolk County Transit S1 service would be replaced or service reduced. Whereas the Suffolk County Transit S1 service would continue to provide local service, BRT would provide more frequent service with fewer stops.

Overall, the combination of limited-stop service, shoulder-running, and TSP is projected to result in significant time savings and faster operating speeds for BRT as compared to the existing local bus service, thereby making travel by BRT competitive with travel by automobile. These time-savings elements of the proposed BRT service, in conjunction with increased frequency and span of service, can help to attract increased transit ridership along Route 110, which is one of the primary aims of this Alternatives Analysis.

4.2 FEEDER ROUTES

The principal objective of the feeder routes is to provide the last-mile connection between Route 110 and activity centers located beyond a reasonable walking distance from the Corridor. As originally defined for the Long List Alternatives, Alternative D would feature the BRT trunk route along Route 110 with circular feeder routes, and Alternative E would feature the BRT trunk route along Route 110 with transit center nodes and connecting feeder routes.

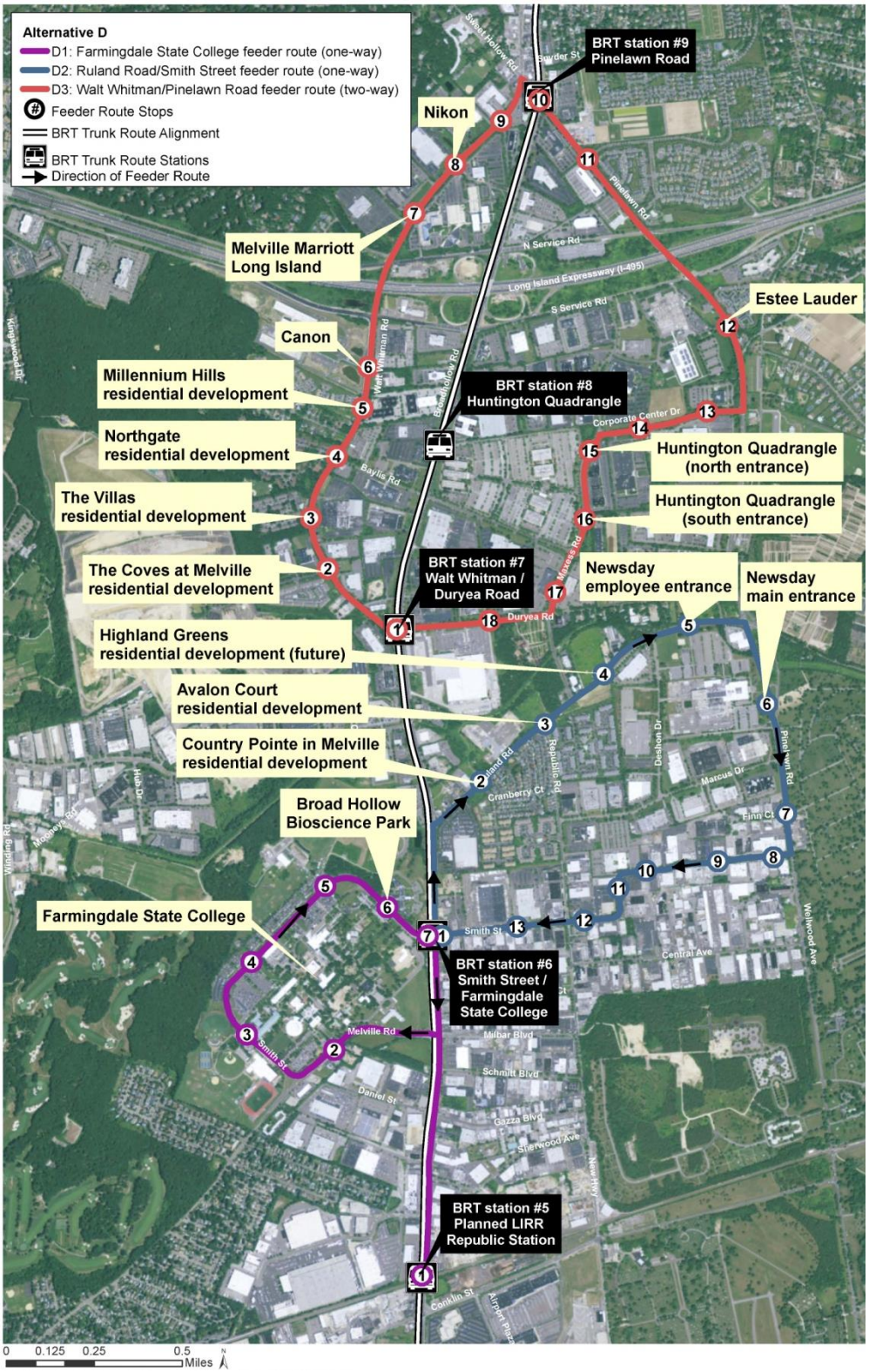
Alternatives D and E are proposed to include the following feeder routes (Figure 3 and Figure 4):

- **Alternative D Feeder Routes**
  - **D1 – Farmingdale State College**

    This circular feeder route would serve Farmingdale State College and Broad Hollow Bioscience Park with one-way service that runs clockwise through the college campus, entering at Melville Road and exiting at Smith Street. There are seven total proposed station locations, two of which would be co-located with BRT stations along Route 110 (i.e., the planned LIRR Republic Station and Smith Street).
  - **D2 – Ruland Road/Smith Street**

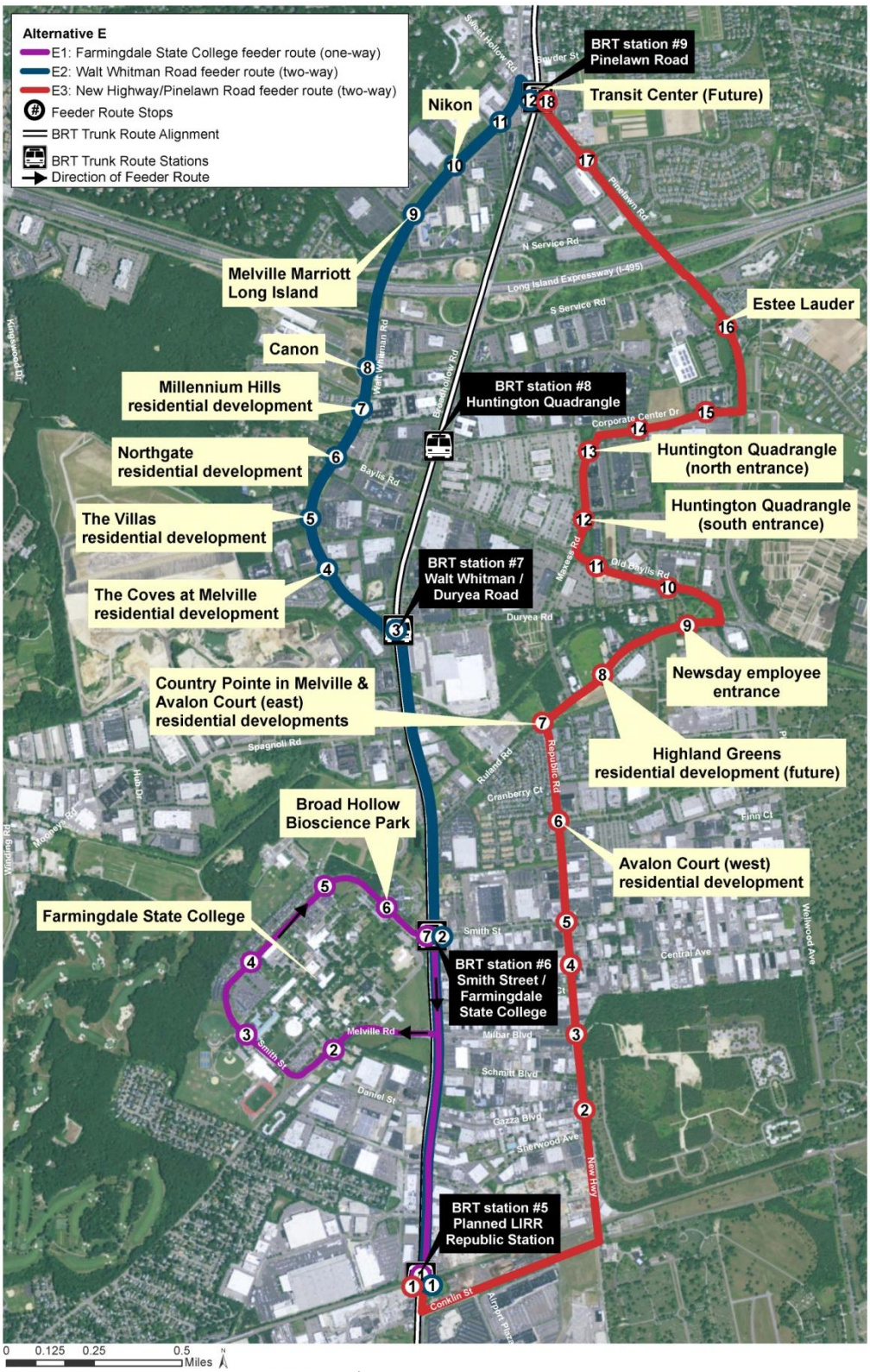
    This circular feeder route would serve residential communities within walking distance of Ruland Road (i.e., Country Pointe in Melville and Avalon Court), as well as multiple entrances to Newsday and various employers along Pinelawn Road and Smith Street to the east of Route 110. The one-way (clockwise) route would include 13 stations, one of which would be co-located with a BRT station along Route 110 (i.e., Smith Street).

Figure 3: Proposed Feeder Routes for Alternative D



Source: ESRI Basemaps, Parsons Brinckerhoff, Nelson\Nygaard (2015)

Figure 4: Proposed Feeder Routes for Alternative E



Source: ESRI Basemaps, Parsons Brinckerhoff, Nelson\Nygaard (2015)

- **D3 – Walt Whitman/Pinelawn Road**

  This circular feeder route would serve a variety of origins and destinations to the west and east of Route 110. Specifically, the route would serve a combination of residential communities within walking distance of Walt Whitman Road (i.e., The Coves at Melville, The Villas, Northgate, and Millennium Hills), several large employers (e.g., Canon, Nikon, and Estee Lauder), the back side of the Huntington Quadrangle office complex on Maxess Road, and other activity centers (e.g., Melville Marriott on Walt Whitman Road and employers on Corporate Center Drive). The proposed route would provide two-way service (both clockwise and counter-clockwise), with 18 station locations in each direction. Transfers between the feeder route and the BRT trunk route would be available at Walt Whitman/Duryea Road and Pinelawn Road.

- **Alternative E Feeder Routes**
  - **E1 – Farmingdale State College**

    This circular feeder route would be the same as Alternative D1.

  - **E2 – Walt Whitman Road**

    This feeder route—anchored by transit center nodes at the planned LIRR Republic Station and Pinelawn Road—would serve the residential communities, major employers, and other activity centers within walking distance of Walt Whitman Road to the west of Route 110, similar to the western portion of Alternative D3. The proposed route would provide two-way service (northbound and southbound), with 12 station locations in each direction. Three of the station locations would be co-located with BRT stations along Route 110 (i.e., the planned LIRR Republic Station, Smith Street, and Pinelawn Road), and an additional transfer would be available at Walt Whitman/Duryea Road.

  - **E3 – New Highway/Pinelawn Road**

    Similar to Alternative E2, this feeder route would be anchored by transit center nodes at the planned LIRR Republic Station and Pinelawn Road. The route would serve a combination of residential communities, major employers, and other activity centers to the east of Route 110, including along New Highway/Republic Road, Ruland Road, Old Baylis Road, Maxess Road, Corporate Center Drive, and Pinelawn Road. The proposed route would provide two-way service (northbound and southbound), with 18 station locations in each direction. Two of the station locations would be co-located with BRT stations along Route 110 (i.e., the planned LIRR Republic Station and Pinelawn Road).

In this early stage of service planning, the frequency and span of service were assumed to be the same for the feeder routes and the BRT trunk route in order to maximize ridership potential by providing timed connections for all trips. During subsequent stages of service planning, different service policy assumptions for the feeder routes could be explored to reduce projected operating expenses.

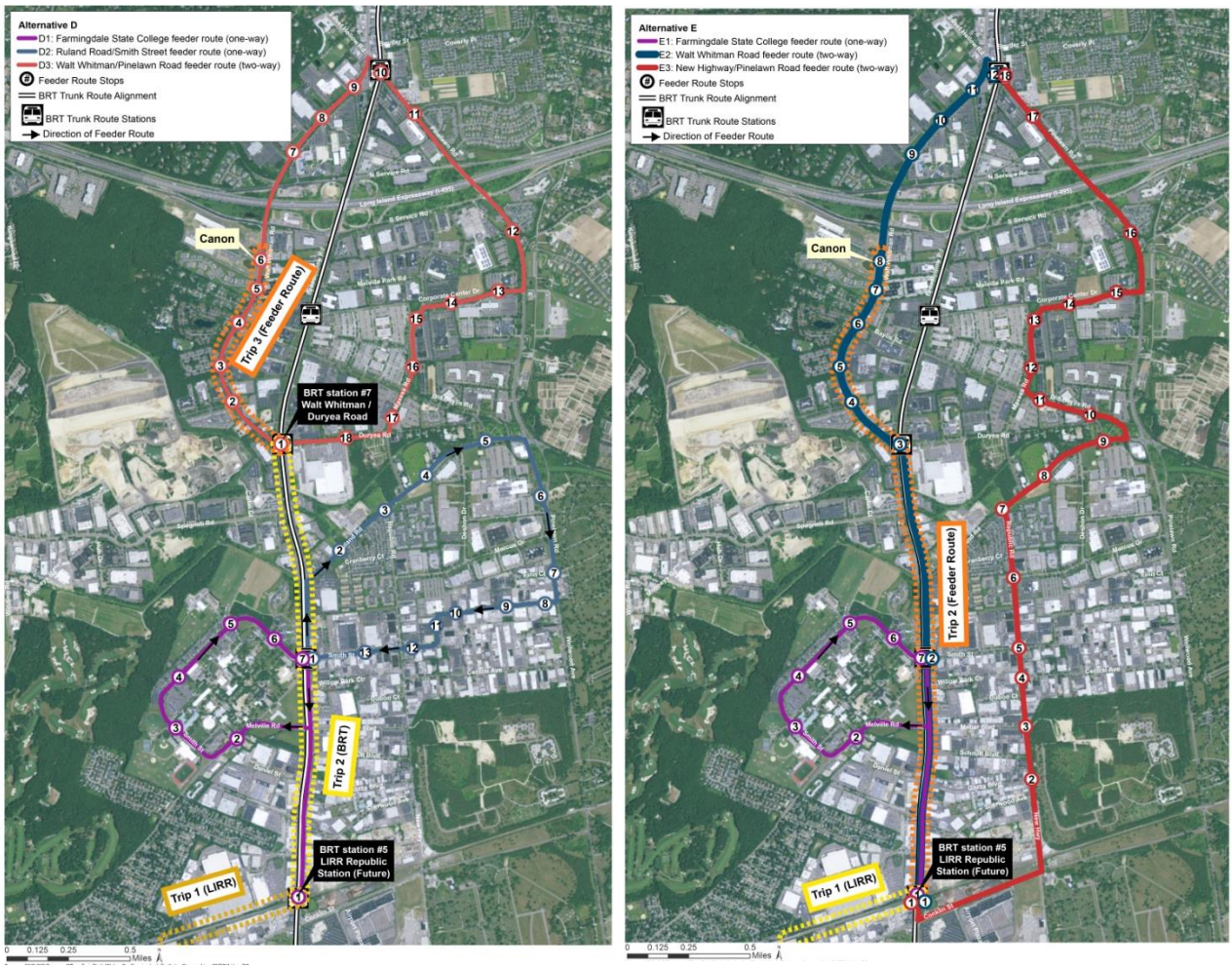
Overall, although the feeder routes that would complement the BRT trunk route differ among the two alternatives, both sets of feeder routes would provide transit service and improve access to activity centers located off the main spine of Route 110. The proposed feeder routes for both alternatives would serve major origins and destinations beyond a reasonable walking distance from Route 110, including residential developments and significant employers along the outer edges of the study area.

However, one noteworthy difference between the two alternatives is the extent to which they increase connectivity between the LIRR (notably, at the planned LIRR Republic Station) and major activity centers in the study area without requiring intermediate transfers. Both alternatives would provide a one-seat ride between the planned LIRR Republic Station and activity centers along Route 110 (via the BRT trunk route), as well as Farmingdale State College and the Broad Hollow Bioscience Park (via a feeder route). However, only the Alternative E feeder routes would directly connect the planned LIRR Republic Station and other activity centers to the east and west of Route 110, as Alternative D would require passengers to first transfer from the LIRR to BRT before boarding a feeder route shuttle bus to access their final destination. (The same transfer would be also required in the reverse direction for Alternative D, as passengers would be required to transfer from a feeder route shuttle bus to BRT in order to access the planned LIRR Republic Station.)

As shown in Figure 5, one example of the intermediate transfer that would be required under Alternative D is for workers who reverse commute from New York City or Nassau County to Canon's office complex along Walt Whitman Road. Under Alternative D, a Canon employee who lives west of Route 110 would take the LIRR to Republic Station, ride BRT to Walt Whitman/Duryea Road, and then transfer to the Walt Whitman/Pinelawn Road feeder route to access Canon. Under Alternative E, the same employee would be able to take the LIRR to Republic Station and board the Walt Whitman Road feeder route that would provide a direct connection to Canon, eliminating the intermediate transfer to BRT. Trips between the planned LIRR Republic Station and activity centers to the east of Route 110—such as Estee Lauder and Newsday—would similarly require an intermediate transfer under Alternative D, whereas the New Highway/Pinelawn Road feeder route under Alternative E would offer a one-seat ride.

Nevertheless, as discussed in the following sections, both Alternatives D and E would result in approximately the same increase in overall transit ridership, which is one of the principal objectives of this project.

Figure 5: Example of Intermediate Transfer Required under Alternative D Compared to Direct Connection under Alternative E



Source: ESRI basemaps; Parsons Brinckerhoff (2015)

5. Ridership Forecast

Ridership forecasting is a critical component of the Alternatives Analysis process, as it informs the evaluation of the Short List Alternatives. The ridership forecasting effort was conducted using the FTA's Simplified Trips-on-Project Software (STOPS) model (Version 1.5, released May 2015), which is explicitly referenced in the FTA *New and Small Starts Evaluation and Rating Process Final Policy Guidance* as a tool that can significantly streamline generation of ridership estimates and vehicle-miles traveled data for use in the evaluation of alternatives. Once calibrated, STOPS utilized demographic forecasts from the New York Metropolitan Transportation Council (NYMTC) to represent expected changes in population and employment and generate ridership estimates for transit use in the future with and without the BRT and feeder route services for the Short List Alternatives.

5.1 METHODOLOGY

The STOPS model used the following information as inputs to the ridership forecast:

- NYMTC forecasts of population and employment by Traffic Analysis Zone (TAZ) for 2000, current year (2014), and horizon year (2040)
    - Note: The current year for this analysis is 2014 , based on the commencement of the Alternatives Analysis in 2014 and the availability of data obtained from Suffolk County Transit and NYMTC
- Year 2000 work trip-making by all persons using all modes of transportation obtained from the 2000 Census Transportation Planning Package (CTPP) Journey-to-Work flows
    - Note: The STOPS model updates year 2000 trip-making to represent 2014 and 2040 by growing journey-to-work flows according to the growth in population and employment
- Highway travel times obtained from the NYMTC regional forecasting model
- Transit schedule data provided by Suffolk County Transit, Nassau-Inter County Express (NICE), and LIRR in General Transit Feed Specification (GTFS) format, supplemented by hand-coded representations of Huntington Area Rapid Transit (HART) service
- Year 2000 transit mode shares from the Census Journey-to-Work
- Transit boardings by station, stop, and route for Suffolk County Transit

The STOPS model used this information to:

- Estimate current year and horizon year all-mode person travel by factoring the 2000 CTPP using zone-level estimates of population and employment
- Estimate zone-to-zone travel times by reading each transit schedule and finding the best origin-to-destination path for each of the following conditions:
    - Access mode: walk access, kiss-ride access, and park-ride access
    - Path type: fixed guideway (rail) only, bus only, and fixed guideway + bus

- Time of day: AM Peak and midday
  - Note: In the STOPS model, AM Peak is used to represent home-to-work travel flows in the morning, and it is assumed to be similar for work-to-home travel flows in the afternoon/evening.
- Scenario: Existing, No-Build, and Build (Alternatives D and E)
  - Note: These scenarios are defined in Section 5.1.3.
- Year: 2014 and 2040

- Estimate current year mode shares and transit ridership by station and route and then adjust model parameters to match both CTPP mode shares and current year counts
  - Note: The calibration process is explained in Appendix A
- Estimate scenario ridership for 2014 and 2040 using the model calibrated in the previous step and transit travel times for each scenario and each year

5.1.1 Key Assumptions

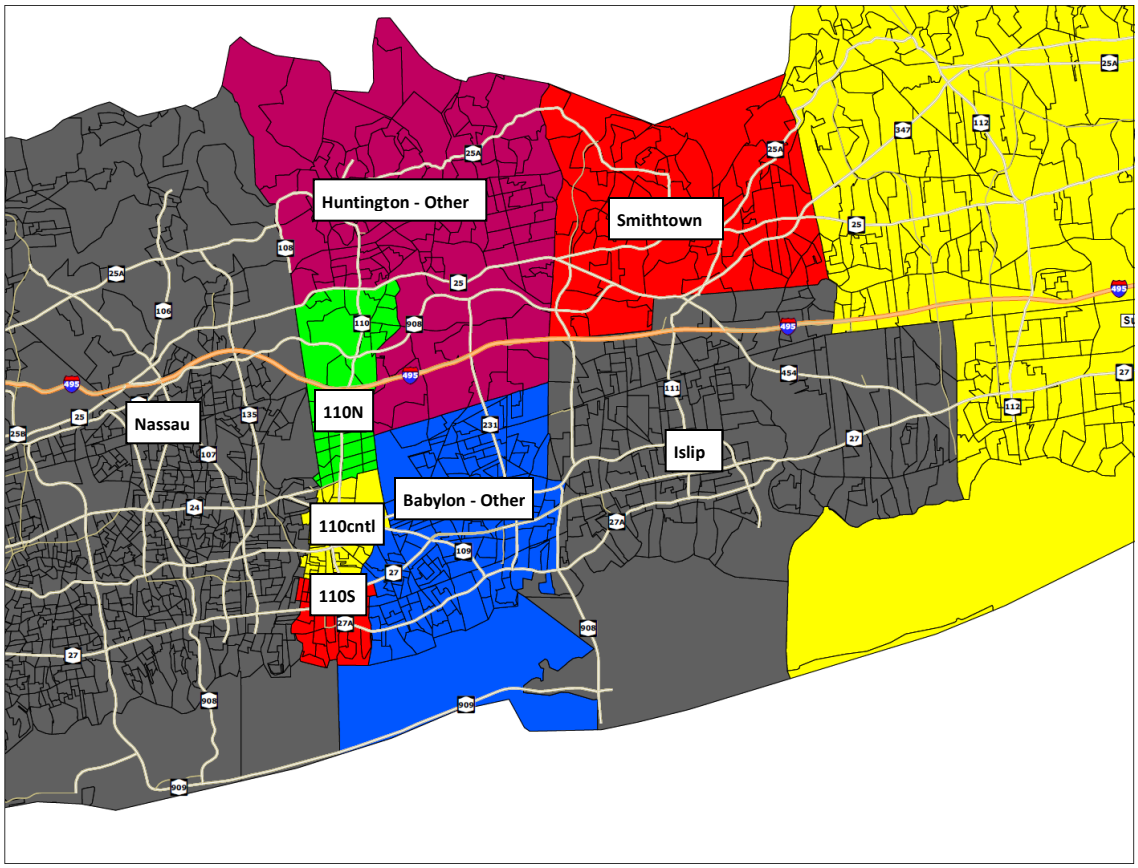
This section describes the key assumptions that were used to configure the STOPS model to forecast ridership for the Route 110 Corridor. These assumptions represent the conditions expected in the Corridor with or without the proposed project. Alternative-specific assumptions (i.e., different service assumptions associated with each alternative) are described in Section 5.1.3.

Geographic Scope of Analysis

The STOPS model uses the census geography coded in the 2000 CTPP for most processing. In the New York metropolitan area, the most detailed information is provided at the Census Block Group level, which is the level of detail that was used for the Route 110 Alternatives Analysis. The geographic scope of the analysis includes all of Suffolk and Nassau Counties, Queens and Kings (Brooklyn) Counties within walking distance of the LIRR, central Brooklyn, and Manhattan south of 60th Street. This area was selected since it represents nearly all origin and destination locations for transit travel in the Route 110 Corridor.

The STOPS model uses aggregations of census geography (known as “districts”) for calibration and reporting. Districts for the Route 110 Alternatives Analysis are focused on the study area with larger areas to represent transit travel outside of the Corridor. Figure 6 presents the districts defined in the vicinity of the Route 110 Corridor.

Figure 6: STOPS Districts in the Vicinity of the Route 110 Corridor



Source: RSG (2015)
Note: Colors signify district boundaries

The districts of greatest relevance to the proposed Route 110 project are denoted:

- **110 South (110S).** Census Block Groups that are approximately bounded by Pittsburgh and Harrison Avenues to the north; Albany Avenue, Great Neck Road, and Lake Drive to the east; South Oyster Bay to the south; and West Shore Drive and Arlyn Drive to the west.
- **110 Central (110cntl).** Census Block Groups that are approximately bounded by Conklin Street to the north; Wellwood Avenue, New Highway, and Albany Avenue to the east; Pittsburgh and Harrison Avenues to the south; and Staples Street to the west.
- **110 North (110N).** Census Block Groups that are approximately bounded by the Jericho Turnpike to the north; Pigeon Hill Road, Old Country Road, Old East Neck Road, and Wellwood Avenue to the east; Conklin Street to the south; and the Suffolk-Nassau County line to the west.

Population and Employment Assumptions

Estimates of population and employment for the modeling region were obtained from NYMTC, the official metropolitan planning organization (MPO) for the region that includes the Route 110 Corridor. Population and employment assumptions were provided for each NYMTC TAZ. Table 1 summarizes the NYMTC forecasts by County in the modeling area. Note that CTPP-based

employment is used in NYMTC's travel forecasting model and excludes self-employed persons who often work at home.

As shown in Table 1, population of Suffolk County is expected to grow from 1.53 million in 2014 to 1.79 million in 2040, a 17% increase. Employment is expected to grow from 0.64 million to 0.81 million between 2014 and 2040, an increase of 27%. Manhattan employment, another key driver of transit demand, is expected to grow by 24% between 2014 and 2040.

Table 1: NYMTC Forecasts of Population and CTPP-Based Employment by County (in thousands)

	Population				Employment			
District	2000	2014	2040	2014 – 2040 (% change)	2000	2014	2040	2014 – 2040 (% change)
Suffolk	1,419.6	1,529.2	1,788.2	17%	630.6	641.9	814.3	27%
Nassau	1,334.3	1,350.7	1,525.0	13%	566.1	574.8	648.5	13%
Queens	2,229.4	2,276.1	2,643.8	16%	608.6	603.3	717.1	19%
Kings	2,465.3	2,524.6	2,800.9	11%	721.1	687.4	879.7	28%
New York	1,537.2	1,613.7	1,848.5	15%	2,147.4	2,010.0	2,493.2	24%
Total	**8,985.8**	**9,294.4**	**10,606.4**	**14%**	**4,673.7**	**4,517.4**	**5,552.8**	**23%**

Source: NYMTC population and CTPP-based employment forecasts by TAZ; RSG (2015)

District-level estimates of population and employment are presented in Table 2 for the three districts located along Route 110. The Route 110 North district has particularly strong population and employment growth between 2014 and 2040—23% and 31%, respectively. The remaining sections of the Route 110 Corridor are expected to have population and employment growth rates of about 15% during the same period.

Table 2: Population and CTPP-Based Employment Forecasts by District

	Population				Employment			
District	2000	2014	2040	2014 – 2040 (% change)	2000	2014	2040	2014 – 2040 (% change)
110 South	28,266	29,974	33,560	12%	10,917	8,926	10,294	15%
110 Central	27,391	28,818	33,406	16%	14,096	18,400	21,070	15%
110 North	18,954	24,681	30,371	23%	17,185	52,665	69,113	31%

Source: NYMTC population and CTPP-based employment forecasts by TAZ; RSG (2015)

Highway Operating Speed Assumptions

TAZ-to-TAZ estimates of travel time were prepared by NYMTC for 2014 and 2040 and were used to show how automobile travel conditions are expected to evolve between the current year and horizon year. These assumptions are summarized in Table 3 for travel from the Route 110 North district to all other districts in the region. In general, automobile travel times to Manhattan from the Route 110 Corridor are expected to increase by 8 minutes or approximately 10% between 2014 and 2040. For travel within the 110 North district, and from the 110 North district to the 110 Central district, travel times are expected to decrease slightly (approximately 0.4 – 0.5 minutes) due

to roadway improvements that are now being constructed in the Corridor by the New York State Department of Transportation (NYSDOT).

Table 3: Average Peak Automobile Travel Times from 110-North District to All Other Districts for 2014 and 2040

District	Travel Time (minutes)		
	2014	2040	2014 – 2014 (% Change)
New York Penn Station (NYPS) Area	82.1	90.8	11%
Other Midtown (Manhattan)	84.9	92.7	9%
Valley (between NYPS Area/Other Midtown and Lower Manhattan)	88.7	97.3	10%
Lower Manhattan	91.7	100.8	10%
Brooklyn	79.8	88.4	11%
Nassau (except Route 110 Corridor)	26.9	27.8	3%
110 South	16.6	16.8	1%
110 Central	7.7	7.2	-6%
110 North	5.9	5.5	-7%
Babylon-Other	18.1	17.4	-4%
Huntington-Other	14.9	15.9	7%
Islip	23.8	25.4	7%
Smithtown	21.6	22.4	4%
Suffolk-Other	44.5	46.8	5%

Source: NYMTC; RSG (2015)

Background Transit Operating Assumptions

The ridership forecasting effort incorporated the following assumptions regarding future transit service in 2040:

- All existing bus services will continue to operate without any service modifications
- The planned LIRR Republic Station will be operational
- LIRR East Side Access, Double Track, and Third Track projects will be complete
- Service frequency to LIRR Republic Station will include 20-minute peak headways (peak period, peak direction) and 30-minute reverse peak and off-peak headways

Assumptions regarding LIRR service in 2040 are based on preliminary discussions with the LIRR during the Alternatives Analysis process. The assumptions can be revisited and revised as necessary during Project Development that will follow the Alternatives Analysis.

5.1.2 STOPS Representation of Existing and Future Total Travel Demand

This section describes STOPS estimates of existing and future travel demand for all travel (i.e., travel by all modes) in the Route 110 Corridor. These results illustrate the impact that population and employment growth assumptions have on forecasts of the overall demand for travel.

The STOPS estimate of total travel is defined as "transit candidate" person trips which, when coupled with the STOPS mode choice model, is designed to generate an accurate estimate of transit usage. Transit candidate person trips include most, but not all, travel that is included in MPO models. All trip purposes are estimated from the CTPP Journey-to-Work flows and then scaled to represent both current and future trip-making.

The STOPS trip-end estimates for each home- and work/other district along the Route 110 Corridor are presented in Table 4. Growth in trip ends matches the projected growth in population and employment. Home and work/other trip-ends for the north portion of the Route 110 Corridor are both expected to grow by over 30% between 2014 and 2040. The home trip ends in the remaining portions of the Corridor are expected to grow by about 20% and work/other trip ends are expected to grow by 14% between 2014 and 2040.

Table 4: Growth in Transit Candidate Person Trips

	Home Trip Ends			Work/Other Trip Ends		
District	2014	2040	2014 – 2040 (% Change)	2014	2040	2014 – 2040 (% Change)
110 South	92,572	108,951	18%	57,955	65,988	14%
110 Central	110,706	133,133	20%	122,456	139,181	14%
110 North	373,312	498,334	33%	1,001,289	1,325,055	32%

Source: RSG (2015)

5.1.3 Scenario Definitions

The STOPS model was used to estimate transit ridership for the following scenarios:

- **2014 Existing** – 2014 estimates of population and employment, as well as current transit schedules for the LIRR, Suffolk County Transit, NICE, and HART.
- **2040 No-Build** – 2040 estimates of population and employment, as well as transit schedules reflecting the assumptions listed above. This scenario served as a baseline for comparing the anticipated ridership of the Short List Alternatives.
- **2040 Alternative D** – 2040 estimates of population and employment, the 2040 No-Build transit schedules reflecting the assumptions listed above, and additional service representing the BRT trunk route and Alternative D feeder routes.
- **2040 Alternative E** – 2040 estimates of population and employment, the 2040 No-Build transit schedules reflecting the assumptions listed above, and additional service representing the BRT trunk route and Alternative E feeder routes.

All BRT and feeder buses were coded as GTFS Type 3 routes (bus). In addition to estimating ridership for the Short List Alternatives in the horizon year (2040), the STOPS model also generated ridership forecasts for the two alternatives for the current year (2014) (Appendix B).

Furthermore, ridership estimates were also generated for the BRT trunk route only, without the addition of any feeder routes, in both the current year and horizon year (Appendix C).

5.2 RESULTS

The results of the ridership forecast are presented as number of weekday boardings by scenario in Table 5 through Table 7. The number of weekday boardings can be interpreted as the number of people who board any given route or service, often referred to as "unlinked trips" when summed over the entire transit network. Since unlinked trips represent the total number of boardings, a trip that includes one transfer would be counted as two boardings or two unlinked trips (i.e., one for the first vehicle that was boarded and another for the transfer).

While the discussion below focuses on the number of weekday boardings (unlinked trips), the output of the STOPS model also included a forecast of "linked trips," which count just the original boarding for all trips that connect home, work, and other origins or destinations. Overall, compared to the No-Build scenario, both Alternative D and Alternative E result in approximately 900—950 new weekday linked trips.

Table 5 presents an overview of the ridership forecast results for each of the scenarios, including a summary of the number of weekday boardings for the proposed BRT service, the proposed feeder route service, and existing Suffolk County Transit routes that operate within the study area. The 2014 Existing and 2040 No-Build scenarios only include existing Suffolk County Transit routes, and the 2040 Alternative D and 2040 Alternative E scenarios add the proposed BRT route—which is the same for both alternatives—as well as the respective feeder routes for each alternative.

Table 5: Summarized Ridership Forecast (Weekday Boardings, by Scenario)

Route	2014 Existing (STOPS Calibrated Estimate)	2040 No-Build	2040 Alternative D	2040 Alternative E
Proposed BRT	--	--	3,910	3,135
Proposed Feeder Routes (Combined)	--	--	685	1,520
Subtotal, Proposed BRT and Feeder Routes (Combined)	--	--	4,595	4,655
Suffolk County Transit S1 Route	2,785	4,660	2,405	2,325
Total, All Routes	**2,785**	**4,660**	**7,000**	**6,980**
		Change in Total (vs. No-Build)	***2,340***	***2,320***

Source: RSG; Parsons Brinckerhoff (2015)
Note: All numbers rounded to the nearest five boardings.

Key ridership statistics include the following:

- The 2040 No-Build scenario attracts 4,660 weekday boardings on the Suffolk County Transit S1 route, a nearly 70% increase over the 2014 Existing scenario. This growth is a result of increases of population and employment and transit ridership increases associated with improvements to LIRR service and increases in highway travel times between Route 110 and New York City.

- Alternative D and Alternative E both attract a total of approximately 4,600—4,700 weekday boardings on the proposed BRT and feeder routes (combined), in addition to approximately 2,300—2,400 weekday boardings on the Suffolk County Transit S1 route. The total ridership of all routes combined (i.e., BRT, feeder routes, and S1) is approximately 7,000 weekday boardings for both Alternative D and Alternative E, an increase of approximately 2,300 (nearly 50%) compared to total ridership in the No-Build scenario. The source of BRT and feeder route ridership is a combination of approximately 2,300 existing Suffolk Country Transit riders shifting to the new service, as well as approximately 2,300 new transit users who previously used another mode of transportation. Therefore, the overall increase in transit ridership is comparable for the two Short List Alternatives.
- Alternative D attracts approximately 800 more BRT boardings than Alternative E, but Alternative E attracts approximately 800 more feeder route boardings than Alternative D. This outcome is logical because of the routing of the respective feeder routes for each alternative, and specifically the connectivity to the planned LIRR Republic Station. The Alternative E feeder routes offer direct connections between the planned LIRR Republic Station and activity centers to the east and west of Route 110. The Alternative D feeder routes—with the exception of the Farmingdale State College feeder route, which is the same for both alternatives—require a transfer to/from BRT to connect passengers with the planned LIRR Republic Station. Therefore, the Alternative E feeder routes attract more passengers than the Alternative D feeder routes, and the BRT trunk route attracts more passengers with Alternative D than Alternative E.

Table 6 summarizes the number of projected weekday BRT boardings at each of the 11 proposed stations, compared to the 2007 Ridecheck data combined for the existing Suffolk County Transit routes. The BRT stations that serve connections to/from the LIRR are projected to have the highest ridership in both Alternative D and E. The planned LIRR Republic Station attracts the greatest number of weekday boardings for both alternatives, followed by the LIRR Amityville Station. The fact that projected BRT ridership is lower at the planned LIRR Republic Station for Alternative E does not mean that this alternative is less attractive for this market. Instead, riders transferring from the LIRR at the planned Republic Station are more likely to board one of the Alternative E feeder routes that provide a direct connection from this location to the activity centers east and west of Route 110.

After the two LIRR stations, the BRT station with the next highest projected ridership is Walt Whitman Shops, which offers convenient connections from multiple service providers, including Suffolk County Transit, NICE, and HART. The Walt Whitman Shops is the only station location in which projected BRT ridership is less than 2007 Suffolk County Transit ridership; this is because many existing transit riders who currently board the S1 at the Walt Whitman Shops will continue doing so to travel further north, as the Walt Whitman Shops is the northern terminus of the proposed BRT service.

For all BRT stations combined, Alternative D is projected to attract approximately 3,900 weekday boardings, or approximately 800 more weekday boardings than Alternative E.

Table 6: BRT Station Ridership Forecast (Weekday Boardings, by Scenario)

BRT Station (south to north)	2007 Ridecheck Data[1]	2040 Alternative D	2040 Alternative E
	Existing Suffolk County Transit Routes	Proposed BRT	Proposed BRT
LIRR Amityville Station	270	715	645
Ritter Avenue	75	170	160
Allen Boulevard	45	205	200
Grumman Lane	25	45	45
Planned LIRR Republic Station	80	1,025	725
Smith Street – Farmingdale State College	65	145	95
Walt Whitman Road/Duryea Road	30	290	170
Huntington Quadrangle	75	230	145
Pinelawn Road	45	290	170
Melville Mall	45	340	325
Walt Whitman Shops	485	455	455
Total, All BRT Stations	**1,240**	**3,910**	**3,135**

Source: Suffolk County Transit; RSG; Parsons Brinckerhoff (2015)
Note: All numbers rounded to the nearest five boardings.
[1] The STOPS calibration process did not result in station-specific outputs for the 2014 Existing scenario. Therefore, the 2007 Ridecheck data from Suffolk County Transit is reported in this table.

The results of the ridership forecast for the respective feeder routes of Alternatives D and E are presented in Table 7. The highest ridership is projected for feeder route E2 (Walt Whitman Road), with 885 weekday boardings, whereas the lowest ridership is projected for feeder route D2 (Ruland Road/Smith Street), with approximately 50 weekday boardings. For all feeder routes combined, Alternative E is projected to attract approximately 1,500 weekday boardings, or approximately 800 more weekday boardings than Alternative D.

Table 7: Feeder Route Ridership Forecast (Weekday Boardings, by Scenario)

Feeder Route	2040 Alternative D	2040 Alternative E
D1: Farmingdale State College	285	--
D2: Ruland Road/Smith Street	50	--
D3: Walt Whitman/Pinelawn Road	350	--
E1: Farmingdale State College	--	240
E2: Walt Whitman Road	--	885
E3: New Highway/Pinelawn Road	--	395
Total, All Feeder Routes	**685**	**1,520**

Source: RSG; Parsons Brinckerhoff (2015)
Note: All numbers rounded to the nearest five boardings.

Alternatives D and E differ slightly with respect to the projected number of transfers between different transit services. As shown in Table 8, Alternative E is projected to have about 150 additional weekday transfers from the LIRR and existing bus services to either the BRT or feeder routes, whereas Alternative D is projected to have about 200 additional weekday transfers directly between the BRT and feeder routes. This projected outcome is consistent with expectations, given the different alignments of the feeder routes among the two alternatives. For instance, more transfers from the LIRR are anticipated with Alternative E because of the enhanced multi-modal connectivity offered with this alternative. Additionally, more transfers between the BRT and feeder routes are anticipated with Alternative D because the feeder routes circulate from BRT stations along Route 110 to serve off-Corridor activity centers. Despite the slight difference in the breakdown of transfers among the two alternatives, both Alternatives D and E are projected to have approximately 4,600–4,700 total weekday boardings.

Table 8: Ridership Forecast – Number of Transfers (Weekday Boardings, by Scenario)

Boarding	2040 Alternative D	2040 Alternative E
Initial boardings on BRT and feeder routes (combined)	2,395	2,525
Transfers from LIRR and existing bus services (combined)	1,910	2,060
Transfers between BRT and feeder routes (combined)	290	70
Total, All Boardings	**4,595**	**4,655**

Source: RSG; Parsons Brinckerhoff (2015)
Note: All numbers rounded to the nearest five boardings.

Overall, the ridership forecast demonstrated that both Alternatives D and E would increase transit ridership in the study area by approximately 2,300 weekday boardings. Additionally, ongoing and future TOD opportunities within the study area could add to the potential ridership base of the BRT and feeder routes.

6. Conclusion

This technical memorandum presented the methodology and results of the ridership forecasting effort for the BRT and feeder routes of the two Short List Alternatives. The results will inform the evaluation of the Short List Alternatives and the selection of the LPA.

Following completion of the Alternatives Analysis, the final planning in Project Development may include modifications to the service plans to optimize the BRT and/or feeder routes from an operational and cost perspective, in which case the ridership model would be re-run to generate updated forecasts. Potential concepts to be explored in Project Development will be summarized in the Final Report of the Alternatives Analysis.

Appendix A:
Transit Calibration Data for Ridership Forecast

Transit Calibration Data for Ridership Forecast

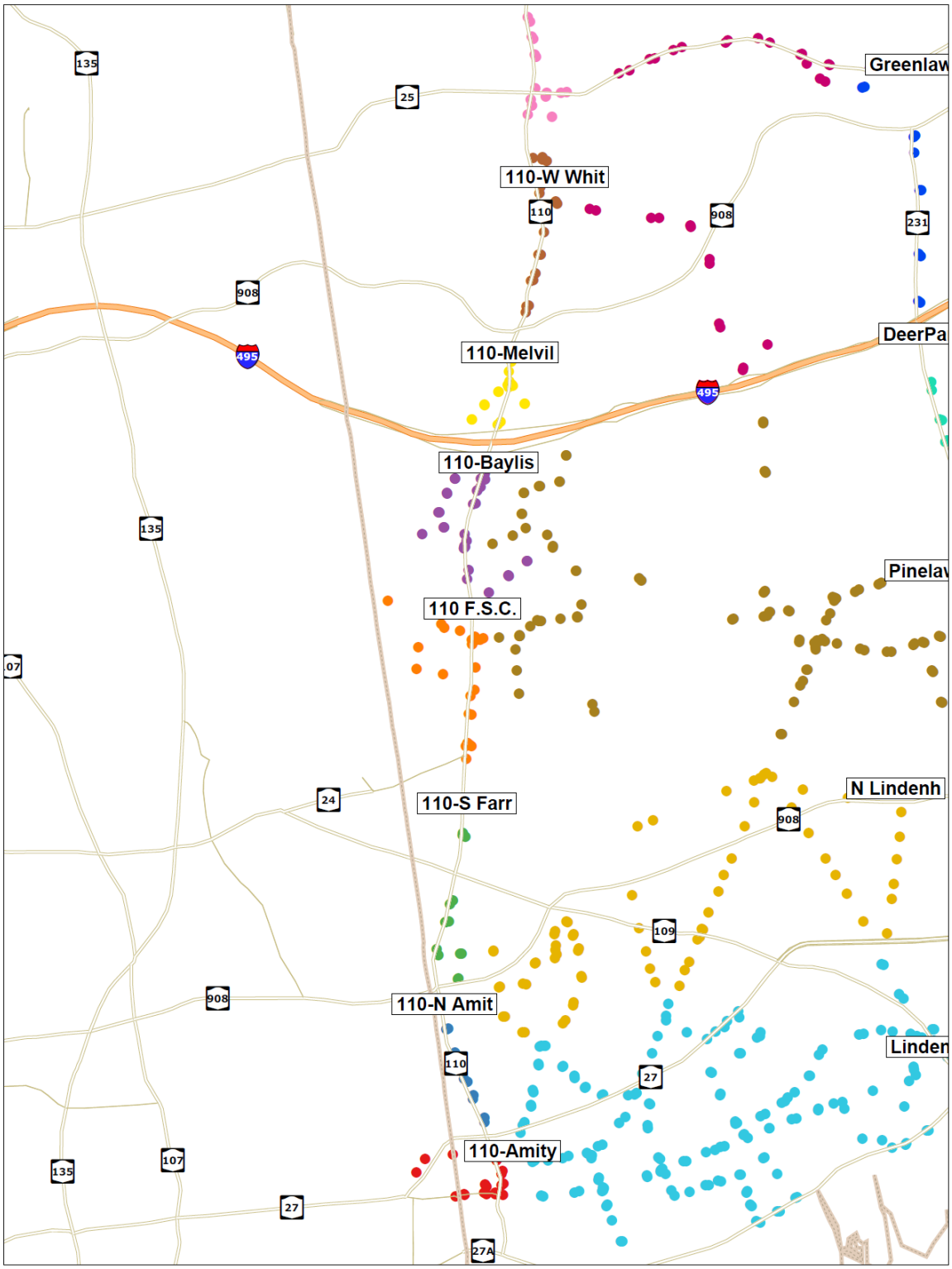
The Simplified Trips-on-Project Software (STOPS) model uses transit count data to refine its estimates of current-year transit ridership to match counted volumes and then uses this understanding to estimate ridership for the No-Build and Build scenarios. Year 2007 Ridecheck count data was obtained for all Suffolk County Transit stops and aggregated into a series of stop "groups" to provide information suitable for model calibration. The STOPS model uses this group-level count information to adjust its estimate of transit demand to match actual ridership in different parts of the Route 110 Corridor. Figure 1 shows the station groups defined for the Route 110 Corridor and Figure 2 shows the groups for a larger section of Suffolk County.

As discussed in the Task 2 Technical Memorandum, Suffolk County Transit ridership for routes that serve the Route 110 Corridor declined by approximately 15 percent between the time of the Ridecheck counts and the present. Therefore, an estimated 2014 group count was estimated by reducing 2007 counted group ridership by 15 percent and setting the minimum volume at each stop to 1 daily boarding. The latter step prevents the STOPS model from treating a boarding location with zero counted boardings as a missing count and substituting its own estimate. Table 1 presents the number of weekday transit boardings for each stop group for 2007 and the estimated 2014 count that was used as an input to the STOPS calibration.

Route level ridership for corridor routes is used as a final check on ridership estimates. These counts are presented in the Task 2 Technical Memorandum.

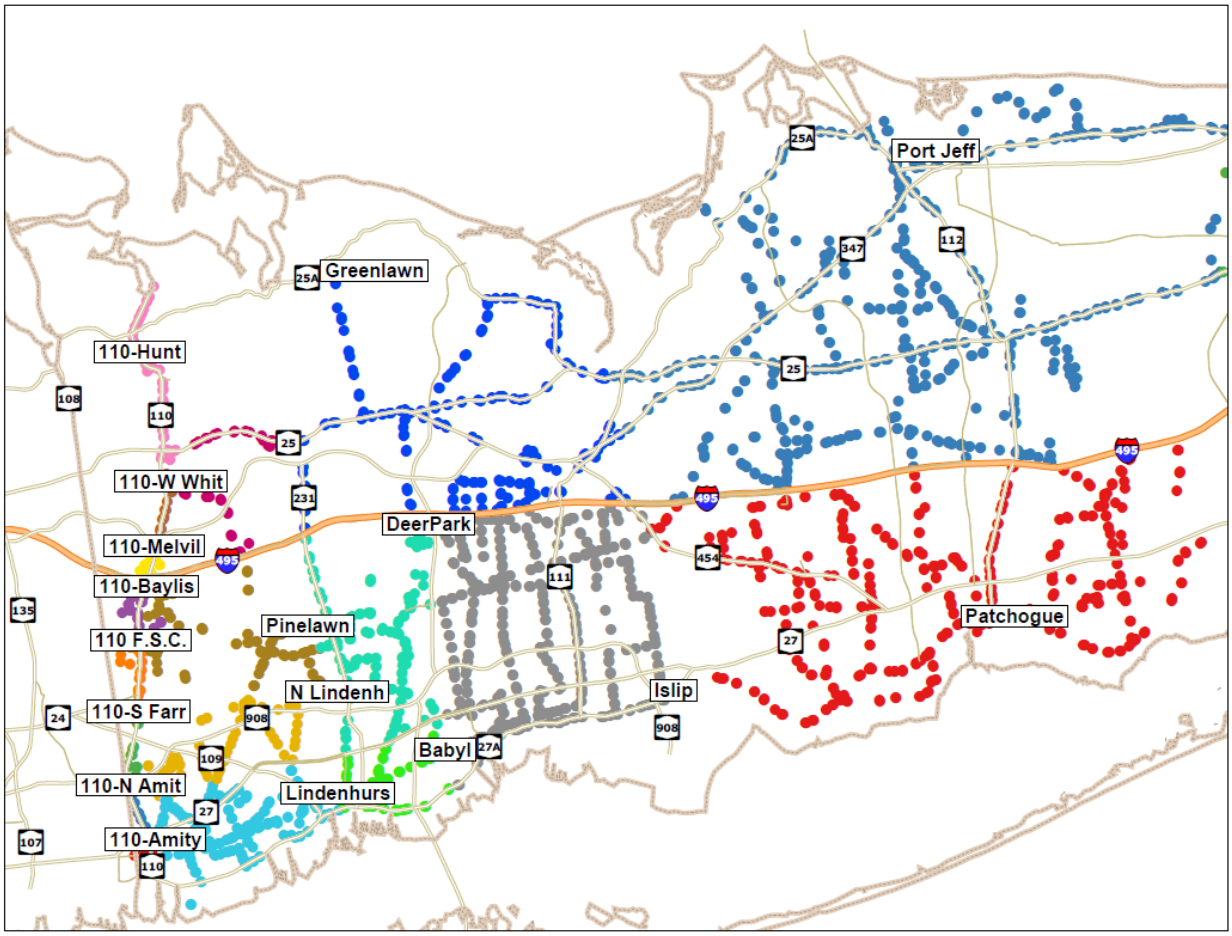
Overall, the STOPS estimate of 2014 ridership on the Suffolk County Transit S1 route (approximately 2,790 weekday boardings) is very close to observed ridership in 2013 (approximately 2,780 weekday boardings), which indicates that the STOPS calibration process succeeded in generating modeled ridership that closely matches input count data.

Figure 1: Station Groups for Suffolk County Transit Stops Located on Route 110



Source: RSG (2015)

Figure 2: Station Groups for a Larger Section of Suffolk County



Source: RSG (2015)

Table 1: Year 2007 and Estimated 2014 Stop Group Boardings

Station Group	2007 Ridecheck	2014 Estimate	Difference (%)
110-Amityville Station	712	607	-15%
110-North Amityville	234	195	-17%
110-South Farmingdale	156	131	-16%
110-Farmingdate State College area	342	284	-17%
110 Baylis Road area	206	170	-17%
110 Melville area	101	84	-17%
110 Walt Whitman Shops area	761	643	-16%
110 Huntington	1,050	884	-16%
Subtotal, Station Groups on Route 110	3,562	2,998	-16%
Lindenhurst area	440	433	-2%
North Lindenhurst area	291	240	-18%
Pinelawn area	614	508	-17%
South Huntington area	197	163	-17%
Babylon area	808	686	-15%
Deer Park area	810	668	-18%
Greenlawn area	1,543	1,282	-17%
Islip area	5,001	4,183	-16%
Patchogue area	2,736	2,341	-14%
Port Jefferson area	3,641	3,059	-16%
Other Suffolk	3,086	2,695	-13%
Subtotal, Other Station Groups in Suffolk County	19,167	16,258	-15%
Total	**22,729**	**19,256**	**-15%**

Source: Suffolk County Transit; RSG (2015)

Appendix B:
Ridership Forecast for the Short List Alternatives in the Current Year (2014)

Ridership Forecast for the Short List Alternatives in the Current Year (2014)

Summarized Ridership Forecast (Weekday Boardings, by Scenario)

Route	2014 No-Build	2014 Alternative D	2014 Alternative E
Proposed BRT	--	2,195	1,985
Proposed Feeder Routes (Combined)	--	235	420
Subtotal, Proposed BRT and Feeder Routes (Combined)	--	2,430	2,405
Suffolk County Transit S1 Route	2,785	1,595	1,585
Total, All Routes	**2,785**	**4,025**	**3,990**
Change in Total (vs. No-Build)		**1,240**	**1,205**

Source: RSG; Parsons Brinckerhoff (2015)
Note: All numbers rounded to the nearest five boardings.

BRT Station Ridership Forecast (Weekday Boardings, by Scenario)

BRT Station (south to north)	2007 Ridecheck Data[1]	2014 Alternative D	2014 Alternative E
	Existing Suffolk County Transit Routes	Proposed BRT	Proposed BRT
LIRR Amityville Station	270	665	610
Ritter Avenue	75	130	120
Allen Boulevard	45	135	130
Grumman Lane	25	55	50
Planned LIRR Republic Station	80	180	150
Smith Street – Farmingdale State College	65	100	80
Walt Whitman Road/Duryea Road	30	165	130
Huntington Quadrangle	75	130	105
Pinelawn Road	45	140	110
Melville Mall	45	215	210
Walt Whitman Shops	485	285	285
Total, All BRT Stations	**1,240**	**2,220**	**1,980**

Source: Suffolk County Transit; RSG; Parsons Brinckerhoff (2015)
Note: All numbers rounded to the nearest five boardings.
[1] The STOPS calibration process did not result in station-specific outputs for the 2014 Existing scenario. Therefore, the 2007 Ridecheck data from Suffolk County Transit is reported in this table.

Feeder Route Ridership Forecast (Weekday Boardings, by Scenario)

Feeder Route	2014 Alternative D	2014 Alternative E
D1: Farmingdale State College	25	--
D2: Ruland Road/Smith Street	30	--
D3: Walt Whitman/Pinelawn Road	180	--
E1: Farmingdale State College	--	20
E2: Walt Whitman Road	--	230
E3: New Highway/Pinelawn Road	--	170
Total, All Feeder Routes	**235**	**420**

Source: RSG; Parsons Brinckerhoff (2015)
Note: All numbers rounded to the nearest five boardings.

Ridership Forecast – Number of Transfers (Weekday Boardings, by Scenario)

Boarding	2014 Alternative D	2014 Alternative E
Initial boardings on BRT and feeder routes (combined)	1,330	1,355
Transfers from LIRR and existing bus services (combined)	955	980
Transfers between BRT and feeder routes (combined)	140	75
Total, All Boardings	**2,425**	**2,410**

Source: RSG; Parsons Brinckerhoff (2015)
Note: All numbers rounded to the nearest five boardings.

Appendix C:
Ridership Forecast for the BRT Trunk Route Only (No Feeder Routes) in the Current Year (2014) and Horizon Year (2040)

Ridership Forecast for the BRT Trunk Route Only (No Feeder Routes) in the Current Year (2014) and Horizon Year (2040)

Summarized Ridership Forecast (Weekday Boardings, by Year)

Route	2014		2040	
	No-Build	BRT Trunk Route	No-Build	BRT Trunk Route
Proposed BRT	--	2,110	--	3,820
Suffolk County Transit S1 Route	2,785	1,565	4,660	2,405
Total, BRT and S1	**2,785**	**3,675**	**4,660**	**6,225**
Change in Total (vs. No-Build)	**890**		**1,565**	

Source: RSG; Parsons Brinckerhoff (2015)
Note: All numbers rounded to the nearest five boardings.

BRT Station Ridership Forecast (Weekday Boardings, by Year)

BRT Station (south to north)	2007 Ridecheck Data[1]	2014 BRT Trunk Route	2040 BRT Trunk Route
	Existing Suffolk County Transit Routes	Proposed BRT	Proposed BRT
LIRR Amityville Station	270	635	710
Ritter Avenue	75	125	170
Allen Boulevard	45	135	210
Grumman Lane	25	55	45
Planned LIRR Republic Station	80	160	920
Smith Street – Farmingdale State College	65	100	185
Walt Whitman Road/Duryea Road	30	150	280
Huntington Quadrangle	75	140	255
Pinelawn Road	45	110	230
Melville Mall	45	215	350
Walt Whitman Shops	485	280	465
Total, All BRT Stations	**1,240**	**2,105**	**3,820**

Source: Suffolk County Transit; RSG; Parsons Brinckerhoff (2015)
Note: All numbers rounded to the nearest five boardings.
[1] The STOPS calibration process did not result in station-specific outputs for the 2014 Existing scenario. Therefore, the 2007 Ridecheck data from Suffolk County Transit is reported in this table.

Ridership Forecast – Number of Transfers (Weekday Boardings, by Year)

Boarding	2014 BRT Trunk Route	2040 BRT Trunk Route
Initial boardings on BRT and feeder routes (combined)	1,230	2,130
Transfers from LIRR and existing bus services (combined)	880	1,695
Transfers between BRT and feeder routes (combined)	--	--
Total, All Boardings	**2,110**	**3,825**

Source: RSG; Parsons Brinckerhoff (2015)
Note: All numbers rounded to the nearest five boardings.



ROUTE 110 ALTERNATIVES ANALYSIS

Appendix J:
Tasks 12-13 Technical Memorandum

TOWN OF BABYLON
SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

Tasks 12 and 13: Stakeholder Coordination and Community Participation Outreach Plan

June 19, 2014

Submitted by:

PARSONS BRINCKERHOFF

QUALITY ASSURANCE/QUALITY CONTROL

Created by:		April 24, 2014
	Stephanie Camay / Parsons Brinckerhoff	**Date**
Updated by:		June 9, 2014
	Maxwell Sokol / Parsons Brinckerhoff	**Date**
Reviewed by:		June 17, 2014
	Kenneth Lin / Parsons Brinckerhoff	**Date**
Approved by:		June 19, 2014
	Lawrence Lennon / Parsons Brinckerhoff	**Date**

REVISIONS

Date	Version Number	Revision
April 24, 2014	1.0	Draft copy for review and comment
June 19, 2014	2.0	Addressing Town of Babylon's comments on version 1.0, received 6/6/14

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1. Introduction

Route 110 is Suffolk County's economic engine. The corridor accounts for 20 percent of the County's employment, and is home to corporate headquarters, major technology firms, educational institutions, research facilities, and retail centers. However, the corridor's future success is at risk as traffic volumes and congestion continue to increase, its sprawling auto-centered development patterns become less attractive to employers and residents alike, and competition from other business centers continues to grow.

The introduction of premium bus rapid transit service or BRT to the Route 110 corridor, with seamless "last mile" connections to nearby major generators, will provide the attractive transit option that employers, residents and visitors increasingly demand, while reducing traffic congestion and improving environmental conditions and quality of life. Moreover, it will effectively support and stimulate smart growth and sustainable economic development within the corridor, guaranteeing its future success.

The Route 110 BRT project is also a critical element of the Connect Long Island Regional Transportation and Development Plan. The Connect Long Island plan envisions growing regional employment centers and walkable, mixed-use, transit-oriented developments (TODs) linked by the Long Island Rail Road (LIRR) and high-quality, north-south mass transit connections. The BRT system will provide the transit infrastructure necessary to promote and support robust economic growth and improved environmental conditions on Route 110.

Stakeholder coordination and community outreach are important components of the alternatives analysis (AA) process. Effective coordination and outreach will enable the project team to identify concerns early in the planning and design process, inform involved parties of the findings and potential impacts, and build a network of advocates to support the plan's implementation. Collectively, stakeholder coordination and community outreach will inform the development and evaluation of alternatives by contributing subject matter expertise and local knowledge to the AA process. The Town of Babylon is the sponsor of the AA and will play a central role in the coordination and outreach process.

2. Project Overview

The Route 110 BRT AA Study is a follow-up initiative to the 2010 Route 110 Bus Rapid Transit Feasibility Study to investigate the BRT opportunities along Route 110, and supplements the Town of Babylon's efforts in the corridor, including the East Farmingdale Community Vision Process and East Farmingdale Downtown Center Transit-Oriented Development (TOD) Plan focusing on the redevelopment of Airport Plaza. The study will identify viable solutions for expanding transit along Route 110 that facilitate TOD. Community and stakeholder input will be critical in identifying the locally preferred BRT route. While the previous study had limited public outreach, due to study scope and budget, the Route 110 BRT AA Study will have more robust outreach to ensure an inclusive and innovative process for obtaining meaningful input from area stakeholders.

3. Outreach Goals

The following goals have been identified for outreach related to the Route 110 BRT AA Study:

- Engage stakeholders and the public in helping to define the issues along the Corridor early on in the process
- Build a network of advocates to provide a source of BRT ridership
- Provide accurate information to the public about existing conditions, issues, and options for BRT
- Involve a broad, inclusive, and representative set of stakeholders, organizations, and residents from throughout the study area as a basis for informed decisions
- Offer convenient and varied avenues for stakeholders and the public to learn about and participate in the Route 110 BRT AA Study
- Develop alternatives that reflect public priorities for improved service and economic development
- Promote open and transparent discussion of alternatives and their potential impacts
- Establish criteria for screening and selecting alternatives
- Provide timely responses to public and stakeholder concerns about alternatives, the planning process, and decision-making
- Engage stakeholders who may be in a position to help fund or sponsor elements of a proposed BRT mainline or BRT shuttle service, or who own property that can provide an easement for potential "BRT shortcuts," or who own property that could be a component of future TOD
- Promote project elements for inclusion on priority funding lists, such as the region's Transportation Improvement Program (and document on the Unified Planning Work Program)

4. Stakeholders

The coordination and outreach process for the Route 110 AA includes a tiered approach that engages a wide range of stakeholders and interested groups (Task 12), as well as the general public (Task 13). As discussed below, key stakeholders include public sector agencies and transit operators with subject matter expertise to inform the development and evaluation of alternatives. The coordination process also includes input from businesses and other interested stakeholders. In addition to stakeholder coordination, the project team will conduct broad-based public outreach, targeted to local civic organizations, service providers, and the general public.

4.1 KEY STAKEHOLDERS

A Technical Advisory Committee (TAC) will be formed, and the following governmental organizations and transit operators will be invited to participate:

- Town of Babylon
- Town of Huntington
- Huntington Area Rapid Transit (HART)
- Amityville Downtown Revitalization Committee
- Suffolk County Department of Economic Development and Planning
- Suffolk County Department of Public Works (including Suffolk County Transit)
- Town of Babylon Industrial Development Agency (IDA)
- New York State Department of Transportation (both Region 10 and the Aviation Bureau)
- Long Island Rail Road
- New York Metropolitan Transportation Council

Three (3) TAC meetings will be held, at various stages of the study. These meetings are envisaged to present and discuss:

- Project kick-off and reiteration of feasibility study
- Screening results and conceptual engineering
- Final presentation of Locally Preferred Alternative (LPA)

4.2 BUSINESSES AND OTHER INTERESTED STAKEHOLDERS

In addition to the agencies noted above, major commercial property owners, educational institutions, and economic and commercial organizations will be engaged throughout the course of the study. These include:

- **Melville Chamber of Commerce**, who can serve as a liaison to private property owners along the corridor.
- **Major office park employers**, such as Canon, Newsday, United States Postal Service, and Estee Lauder, that can distribute maps, schedules and other marketing materials to their staff to promote BRT as an employee benefit, in the same manner as Transit Check. These employers may also be interested in funding or sponsoring elements of the BRT service.
- **Office park property owners**, such as Huntington Quadrangle, that can actively promote BRT as a sales marketing tool to attract tenants, in the same manner as one offers large, open span office spaces, latest IT, etc. These stakeholders may also be interested in funding or sponsoring elements of the BRT service, such as providing innovative “parking lot” BRT stations on their property and allowing an easement for the potential “BRT shortcuts.”
- **Republic Airport**—owned by New York State and managed by URS Corporation, which the Town of Babylon will reach out to—that can provide tie-ins to BRT and public transportation services, participate with car sharing and car rental services efforts, and potentially help promote BRT use for staff and those using the airport.

- **Adventureland**, which could provide a source of BRT ridership, as it is an amusement park that serves as a family-oriented destination along the corridor, offering an array of rides, attractions, and games.
- **Educational institutio**ns, such as Farmingdale State College and Molloy College, that can actively promote BRT to their faculty, students, and staff as an employee benefit, in the same manner as Transit Check. These institutions may be interested in funding or sponsoring elements of the BRT service.
- **Major retail malls**, such as the Walt Whitman Shops (Simon Properties) and Westfield Sunrise Mall, that may be interested in locating BRT stations on their property, and using BRT as a marketing tool for shoppers and employees.
- **Hotels and residential complexes**—such as the Melville Marriott Long Island, Hilton, Extended Stay America, TownePlace Suites, and Courtyard by Marriott—who can actively promote BRT as a sales marketing tool to attract customers, provide mobility for their guests, and help fund or sponsor elements of the BRT service, such as providing BRT stations on their property.
- **Major hospitals** that can distribute maps, schedules and other marketing tools to their staff to promote BRT as an employee benefit, in the same manner as Transit Check. In addition, hospitals may be interested in funding or sponsoring elements of the BRT service.
- **Private sector property developers** who may be seeking to build within the study area will be engaged to ascertain their interests in proactively providing new BRT elements as part of their development offer.

The Town of Babylon will lead the efforts with the business community, with technical support from its consultants. These efforts will include providing contacts and prioritizing a list of commercial property owners, educational institutions, and economic and commercial organizations. In addition, the Town will hold two (2) meetings with the business community—one early in the process to introduce them to the project, discuss sponsorship opportunities and benefits to employees, and the potential for locating routes and stations off of Route 110, closer to the "front door"; and a second meeting after the locally preferred alternative is selected, to discuss BRT engineering components and possible development opportunities.

4.3 PUBLIC

Two (2) public meetings/open houses will be conducted during the Route 110 BRT Study. Each meeting will have an identified purpose and an expected outcome, with the goal of making each activity as effective as possible. The meetings, which will be held at different locations along the corridor, will create opportunities to share information on the study, and obtain input or feedback on study elements to improve the study process and integrity of findings. Such meetings will focus on local civic organizations, service providers (such as the East Farmingdale Fire Department), area schools, and the general public.

The first meeting will be held to introduce the BRT concept and the alternatives being considered, and to seek comments for use in determining the locally preferred alternative. The second meeting will be held towards the end of the study to present final results and the next steps for implementation.

Prior to the meetings, these stakeholders and the public will be contacted via a mailing to notify them about the study and anticipated timeline. This mailing will also include a project fact sheet.

It could be possible to coordinate the first and third TAC meetings to align with the dates of the public meetings, perhaps with the TAC meeting beginning at 3:30pm and the public meeting beginning at 7:30pm. This will be discussed with the Town of Babylon as the project proceeds.

5. Communications Tools

The following communication tools will be developed to support the outreach process. Tools will be utilized flexibly as appropriate to the study task and issues under consideration. Project communications will use a common name, logo, and color scheme for ready identification and to enhance public awareness. The outreach effort will be led by the Town, including preparation of flyers and post cards.

5.1 FACT SHEET

A single-page, illustrated fact sheet will be developed to keep stakeholders and the public up to date on project developments and solicit input. This fact sheet will be updated up to three (3) times throughout the course of the study. The fact sheets will be prepared for distribution at TAC meetings, to up to forty (40) additional stakeholders (commercial property owners, educational institutions, and economic/commercial organizations), and an electronic version will be available on the project website (see Section 5.1.3).

5.2 CONTACT LIST

The Town will develop and maintain a Mailing List/Database with the names and addresses/e-mails of stakeholders, interested individuals, and groups that wish to stay informed of the study. The database will be used to provide electronic meeting notification.

5.3 WEBSITE

Electronic materials will be prepared to include a project-specific section on the Town of Babylon's website. These materials will include information on the study purpose and goals, announcements, including public meeting notification, service branding, and results of public meetings, as well as more detailed study data technical memoranda and the locally preferred BRT route recommendations.



ROUTE 110 ALTERNATIVES ANALYSIS

Appendix K: Presentations and Meeting Minutes from TAC and Public Meetings

TOWN OF BABYLON SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

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Route 110 Alternatives Analysis

Technical Advisory Committee (TAC) Meeting #1

December 15, 2014



Source: Town of Babylon

PARSONS BRINCKERHOFF

Agenda

- **Welcome/Introduction**
- **Update on East Farmingdale Initiatives**
  – Jonathan Keyes
  Director, Office of Downtown Revitalization, Town of Babylon
- **Overview of Route 110 Alternatives Analysis**
  – Parsons Brinckerhoff Team
- **Comments/Questions & Answers**

Where We've Been…Where We're Going

Jonathan Keyes
Director, Town of Babylon Office of Downtown Revitalization

PARSONS BRINCKERHOFF

Project History

2002

- Town of Babylon holds press conference calling for the re-opening of Republic Train Station



IN BABYLON

The Rub in a Plan for Train Hub

Property sale would prevent reopening of an LIRR station

By Sumathi Reddy
STAFF WRITER

THE DAILY COMMUTE between Howard Beach in southern Queens and her job at Swiss Air in Melville is quite a "ballish" journey for Margie Peperone.

The 35-mile stretch each way can take up to two hours of bestling traffic on the Southern State Parkway.

So the thought of kicking back on a Long Island Rail Road ride to Route 110 and taking a quick shuttle ride to her company's door sends Peperone into exhilaration. A new train stop might not reduce her commute by a huge chunk of time (she'd have to drive or take a bus to the Jamaica stop) but it's an option she'd explore, especially in bad weather.

"I'd love it," the receptionist said. "I think it would be an excellent idea, especially if there's a shuttle."

Though far from a reality, the idea of reopening the former Republic LIRR train station at the northeast corner of Route 110 and Conklin Street in East Farmingdale has been gaining steam. A coalition of business leaders and officials from Huntington and Babylon Towns is calling on state and national politicians for support.

The urgency was sparked by news that the state Department of Transportation, owner of the 12.5-acre property, was close to leasing the land to Mairoll Inc., a part of the Fairchild Corp. and developer of the nearby Airport Plaza shopping center.

Last month, Action 110 Long Island Chairman Sheldon Sackstein wrote to Gov. George Pataki and DOT Commissioner Joseph Boardman, asking them to place a temporary moratorium on the land negotiations. Also, Babylon town board member Steven Bellone said he's planning to meet with Sen. Charles Schumer and Rep. Steve Israel (D-Dix Hills) about the issue soon.

Calling it a "10-round heavyweight fight to try to retain the property," Sackstein said he's hoping state officials will step in and throw their weight behind the proposed station.

"We're really quite disappointed with the fact that the state is not looking more favorably on trying to reopen the train station," Sackstein said.

DOT officials say they're holding off on finalizing the lease negotiations until the LIRR conducts a study on the feasibility of reopening the station, which closed in 1958. LIRR spokesman Brian Dolan said the study should be completed by the end of the year.

"We still believe that the arrangement we were pursuing for the property is advantageous to the tax rolls and to economic development," DOT spokeswoman Eileen Peters said, referring to payments in lieu of tax dollars Farmingdale school district would receive if the land is leased.

Proponents of the train station have grand visions for the land now littered with vandalized buildings and debris, remnants of its days as home of airplane manufacturer Fairchild Republic Co. They are calling for a transportation hub with a regional parking lot and shuttle service to businesses along the Route 110 corridor, ending at the Huntington Station LIRR stop. The proposal, which does not have an estimated price tag, would be financed through state and federal monies.

The most immediate sticking point is the Mairoll-DOT deal, in which the DOT was negotiating to lease the land to Mairoll Inc. in exchange for buying from them 11.5 acres at Conklin Street for Airport.

The airport needs that land for a runway safety area, a requirement of the Federal Aviation Administration when a runway is altered, according to Airport Director Hugh Jones. Airport officials want to shift one runway and lengthen landing lights as part of its master plan update. But advocates for the train hub say it would reduce traffic on the congested Route 110 peripheral work at some 5,000 companies.

They also say it would encourage the reverse commute from the city to Long Island, allowing room for more economic development. "We're gonna grow in the corridor, which is one of the reasons you have to address the problem of traffic right now," said Bellone, a member of the Route 110 Redevelopment Corp., formed by officials in Huntington and Babylon several years ago.

The question of how much demand there is for a train station in East Farmingdale remains to be determined.

There are two LIRR stops within a mile or two of the proposed hub and the Farmingdale LIRR stop provides shuttle bus service. Advocates say that if you build the station, they will come, but the number of reverse commuters continues to remain below those commuting in the other direction, and no one has determined how many reverse commuters would be needed to justify an East Farmingdale stop.

According to LIRR's most recent figures, peak morning ridership from the city into Long Island is 8,770. And in those eyes, the DOT's deal with Mairoll is all but final. He said a conceptual agreement was reached a year ago and a lease was to be signed this summer.

Babylon and Huntington officials have criticized the airport's master plan updates but say their support for a train station is a separate issue.

Sackstein, of Action 110 Long Island said, "We tried not to link the two together, but they're definitely linked. The airport wants that land very badly, and we're strongly opposed to their expansion."

Babylon Councilman Steve Bellone, at podium, speaks at a June press conference in East Farmingdale about reopening a train station

Newsday Photo / Jim Judkis

PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Project History

2007

- East Farmingdale Residents submit plan calling for the development of a vibrant downtown center and improved bus service



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Project History

2008

- Town of Babylon calls for re-opening of Republic Train Station
- Newsletter sent to East Farmingdale Residents



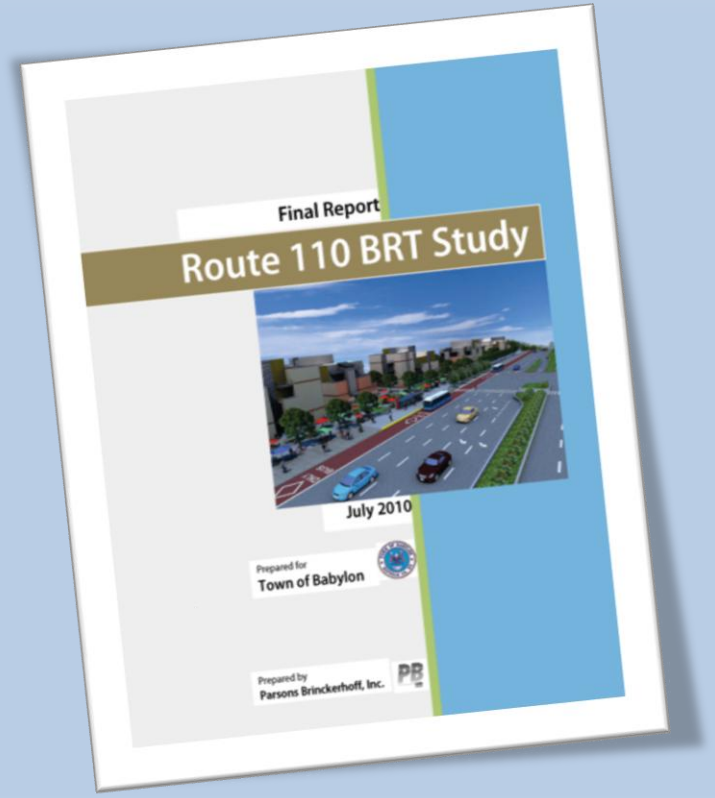


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Project History

2009

- Town commissions study funded by MTA to determine feasibility of Bus Rapid Transit System



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Project History

March 18 , 2010

- Community meeting to launch comprehensive planning process and present results of BRT study
- Screening of the Long Island Index video “The Clock is Ticking on Long Island”





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TOWN OF BABYLON SUFFOLK CO., NY

Project History

April 17, 2010

- Airport Plaza Walking Tour
- Documentary about Long Island's future screened, followed by a discussion in the theater





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Project History

September 18, 2010

- Patchogue Walking Tour

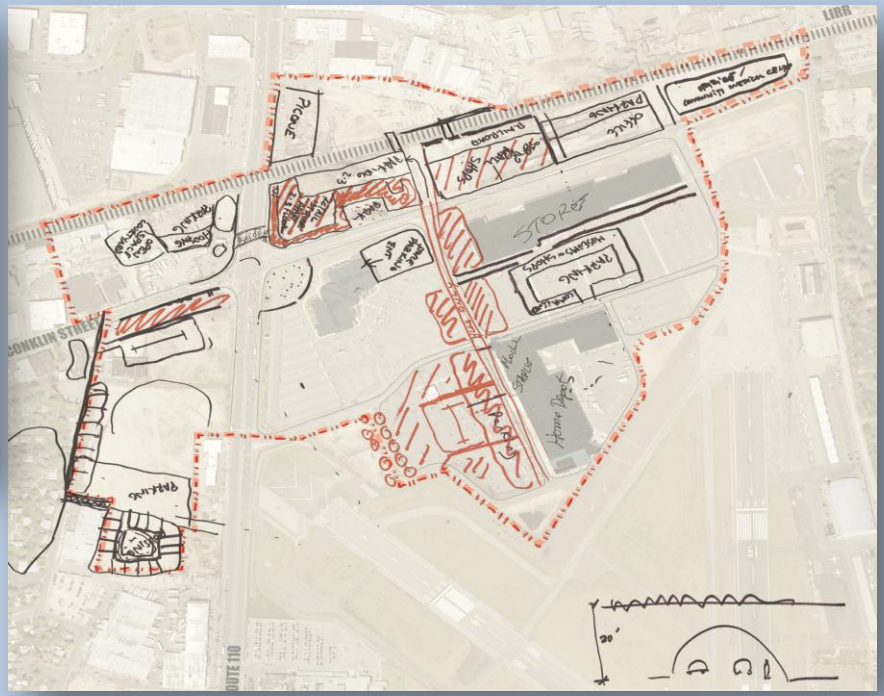




Project History

- **November 4, 2010**





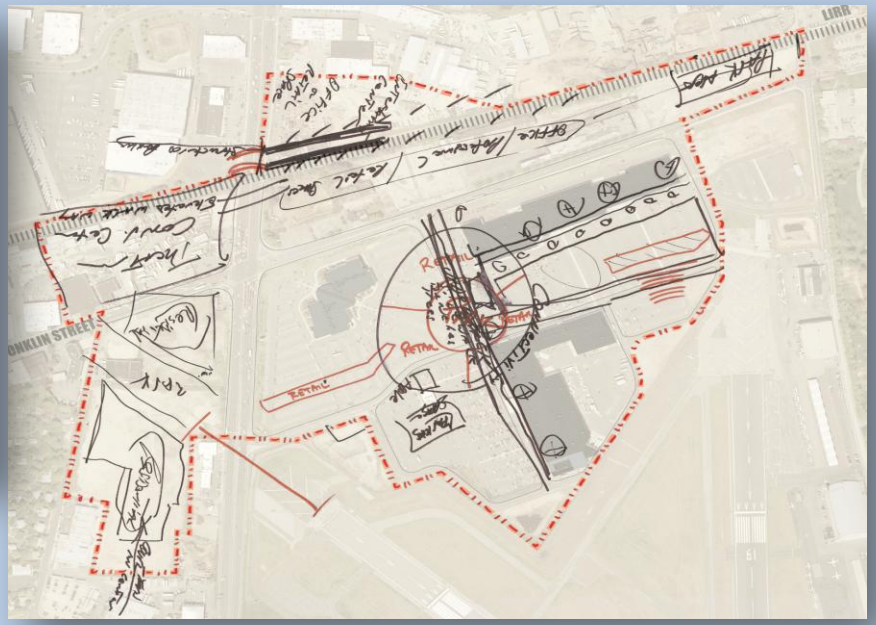
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TOWN OF BABYLON SUFFOLK CO., N.Y.

Project History

- **November 4, 2010**





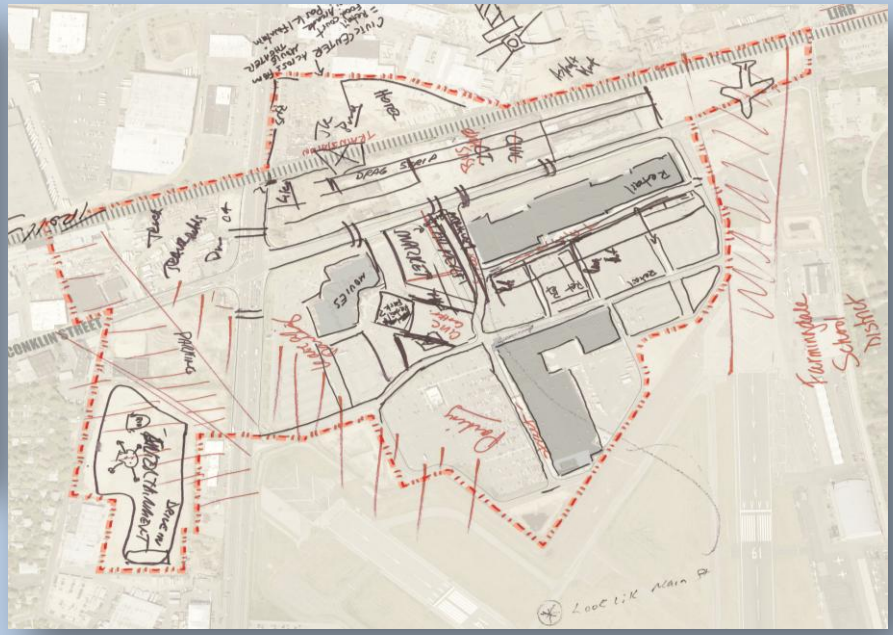
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TOWN OF BABYLON SUFFOLK CO., N.Y.

Project History

- **November 4, 2010**





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TOWN OF BABYLON SUFFOLK CO., NY.

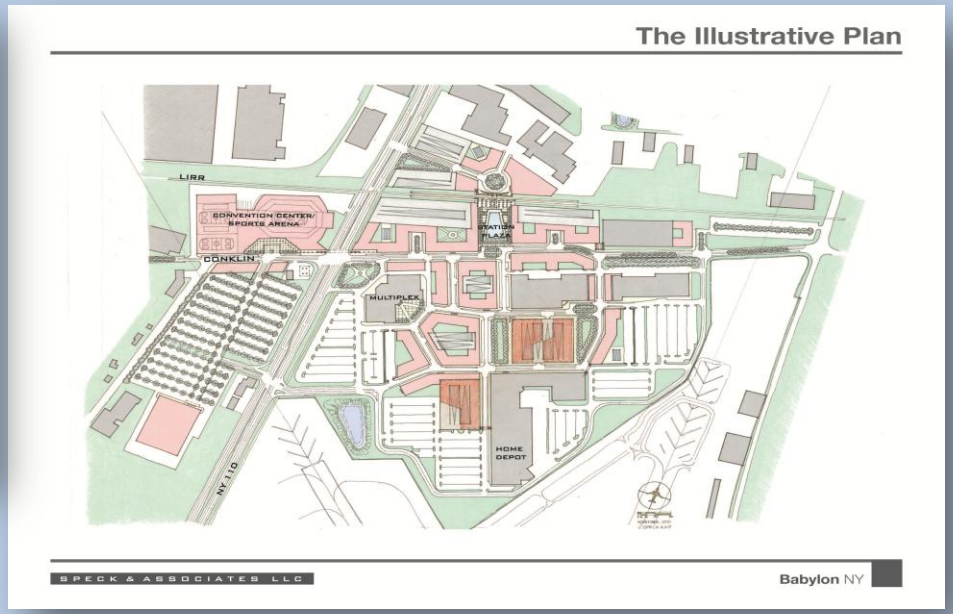
Project History

- Retain young Long Islanders in East Farmingdale.
- Create areas for live entertainment, civic and institutional uses.
- Improve the quality of life for East Farmingdale residents.
- Implement transit-oriented development through the creation of affordable residential units and mixed-use development in East Farmingdale.
- Create a distinctive and positive “sense of place” for East Farmingdale.
- Satisfy the existing and future parking demands of commuters, the business community and residents.
- Improve the vehicular traffic infrastructure to serve the long-term needs of East Farmingdale.
- Enhance and encourage walkability throughout East Farmingdale.
- Enhance public “green” space, open space, public plazas, sidewalk/trail linkages and landscaping in East Farmingdale.
- Further the revitalization of East Farmingdale through significant new private investment in residential, retail, and parking development, as well as in public infrastructure, transit, and traffic improvements.

Project History

- **April 12, 2011**

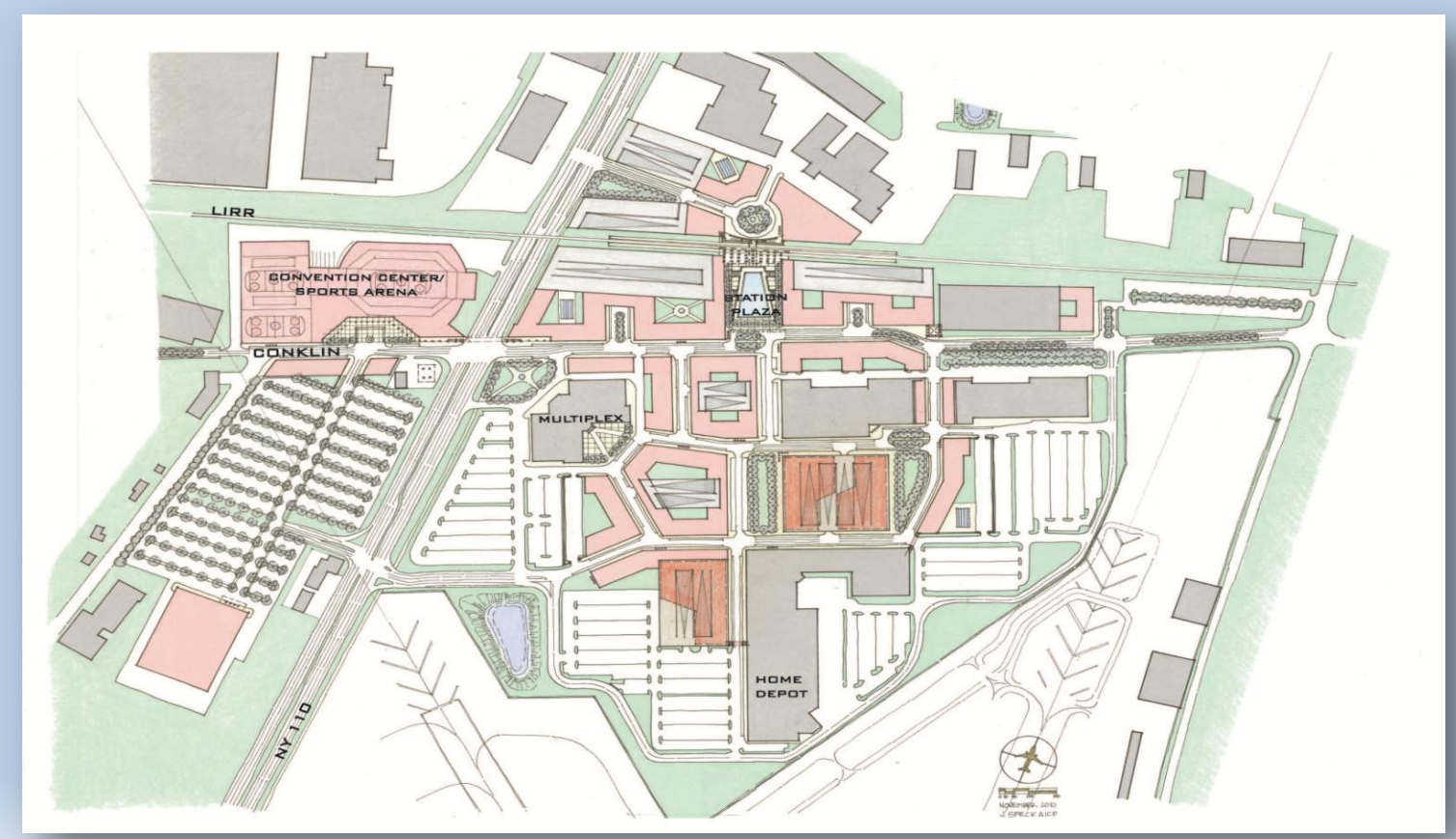




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TOWN OF BABYLON SUFFOLK CO., NY

Project History



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TOWN OF BABYLON
SUFFOLK CO., N.Y.

Project History



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Project History

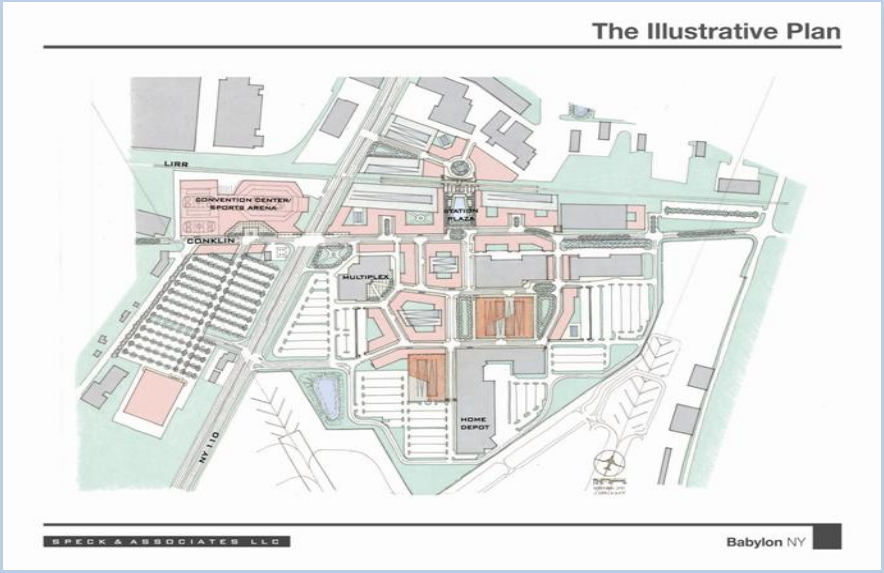


On the edge of the Central Square, a parking deck places shops at ground level, connecting the existing strip centers with continuous shopping.



The proposed pedestrian bridge spanning Route 110 is integrated into arcades enfronting the two flanking buildings.

TOWN OF BABYLON EAST FARMINGDALE DESIGN PRESENTATION APRIL 12, 2011



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Project History

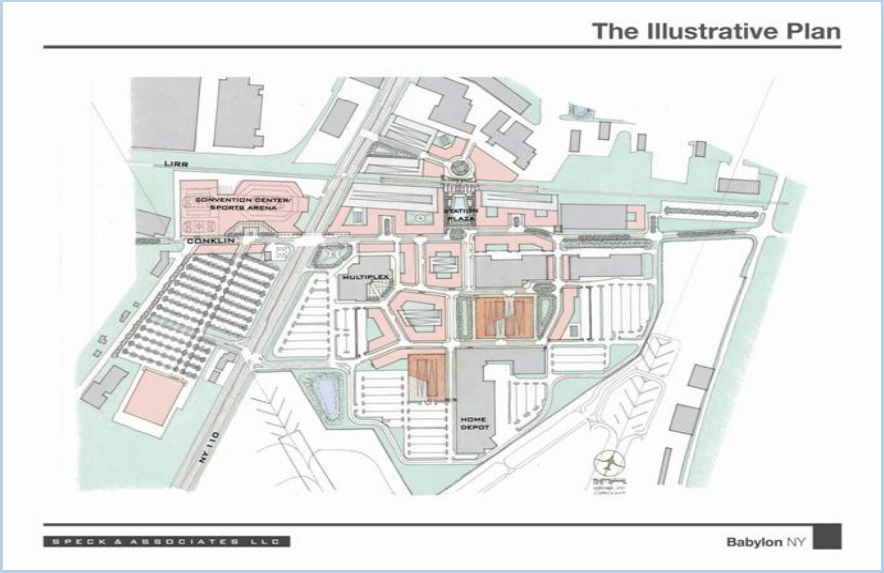


Streets approaching the Cinema and its plaza aim at its marquee, supporting its role as a social anchor.



Small "liner buildings" shield the arena's entry plaza from its parking lot and provide Conklin Street with a traffic-calming edge.

TOWN OF BABYLON EAST FARMINGDALE DESIGN PRESENTATION APRIL 12, 2011

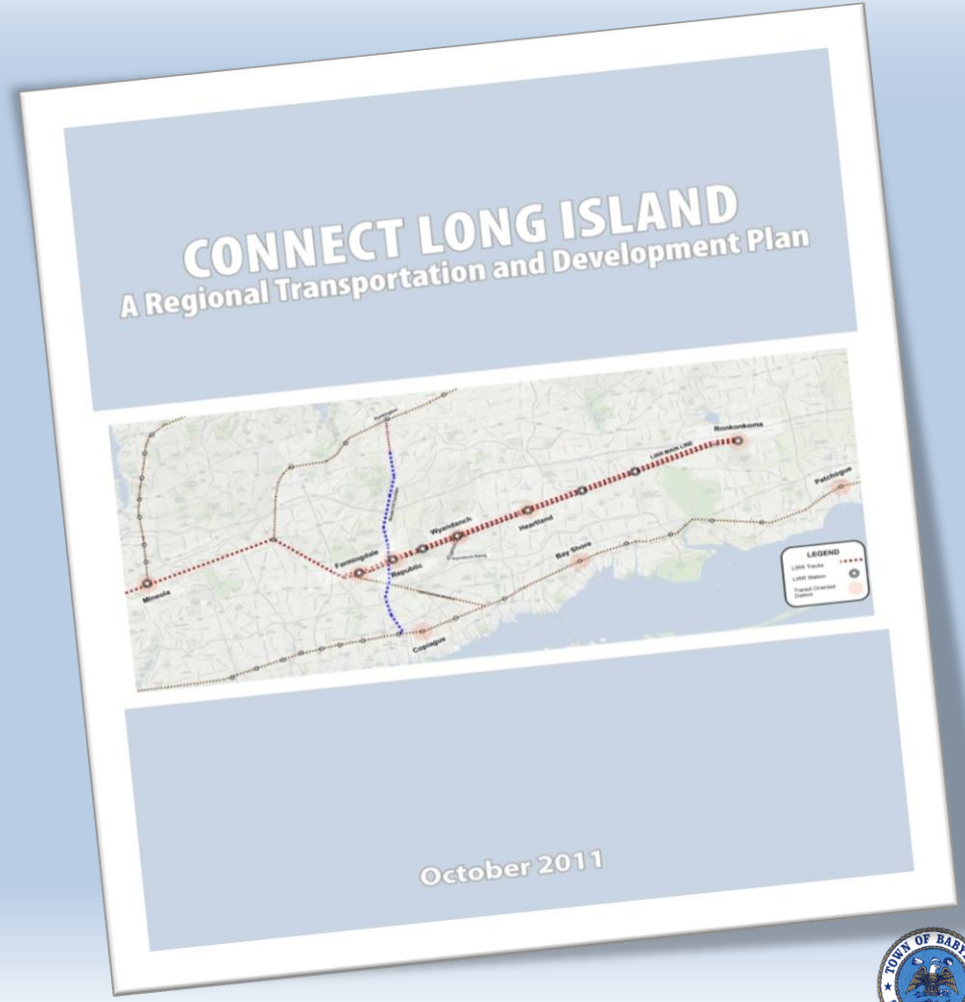


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Project History

2011

- Town of Babylon unveils the Connect Long Island Regional Transportation and Development Plan
- Connect Long Island calls for a three-pronged approach to development

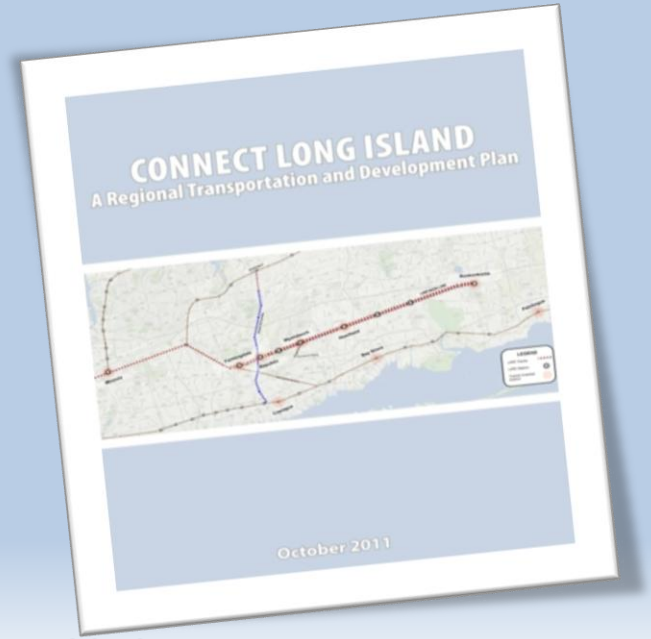


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Project History

Transit Oriented Developments

- Create walkable, mixed-income, mixed-use developments





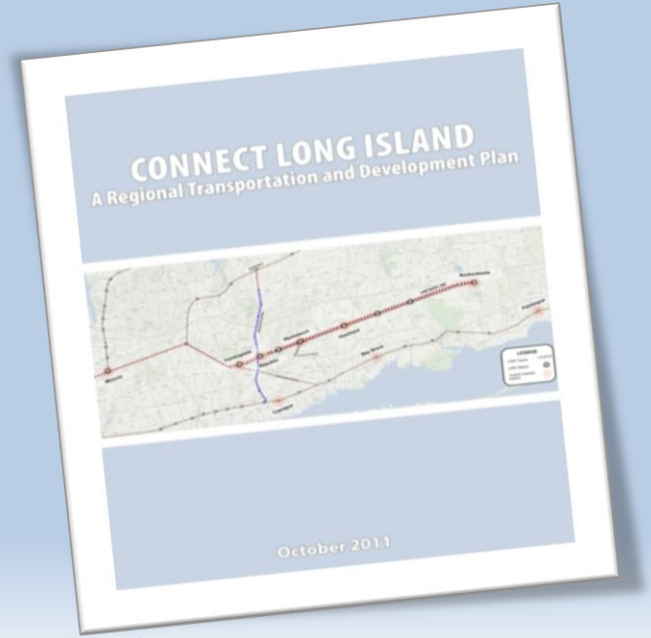
PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Project History

Supportive Transportation Investments

- Bolster the existing transportation system by investing in projects like LIRR Double Track, East Side Access, and support opening new train stations.



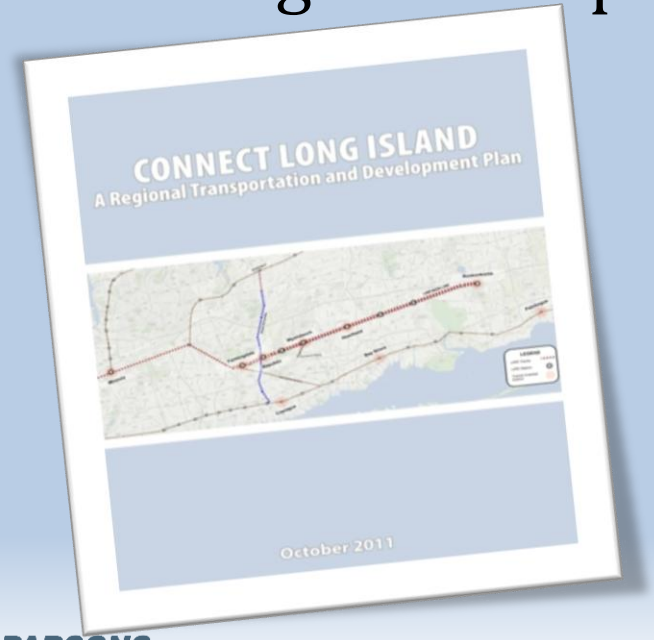


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Project History

North-South Mass Transit

- Introduce new rapid transit connections along Long Island's primary north-south corridors



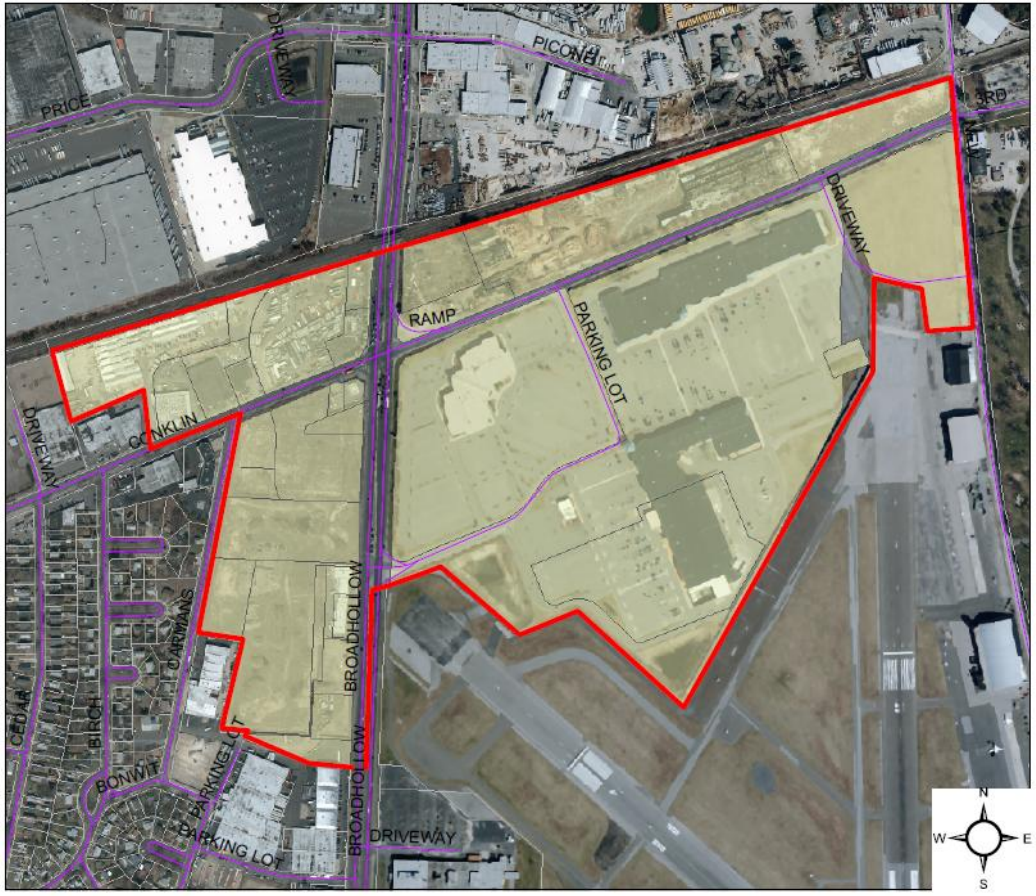


PARSONS BRINCKERHOFF

Update on East Farmingdale Initiatives

- Master Developer RFQ
- Conceptual Design and Form-Based Zoning Code RFPs
- Regional Plan Association
- Republic LIRR Station
- Applying for Brownfields Grant from EPA

Master Developer RFQ



East Farmingdale Redevelopment - Project Area

TOWN OF BABYLON
SUFFOLK CO., NY.

PARSONS BRINCKERHOFF

Master Developer RFQ

Goals & Objectives

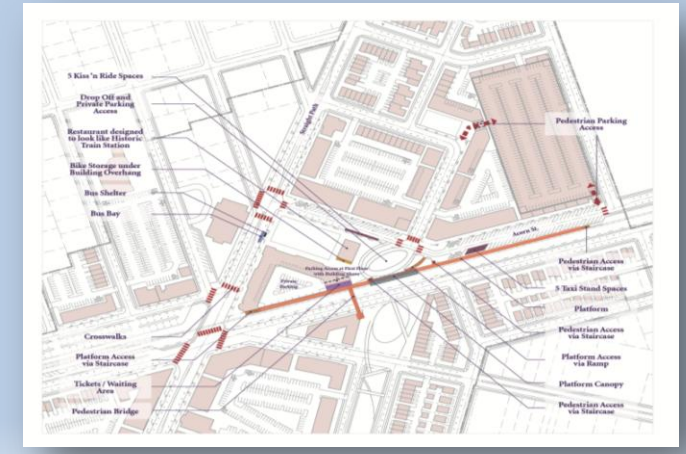
- Respond to community goals outlined in Community Visioning process
- Create a regionally significant destination in a vibrant and mixed-use setting that will meet the needs of East Farmingdale residents today and in the future
- Secure a feasible and sustainable development
- Secure a development which integrates its components, operational aspects, designs, and site layouts within the context of existing and proposed transit networks
- Provide sufficient development to support the re-opening of the Republic Station and the creation of Bus Rapid Transit on Route 110

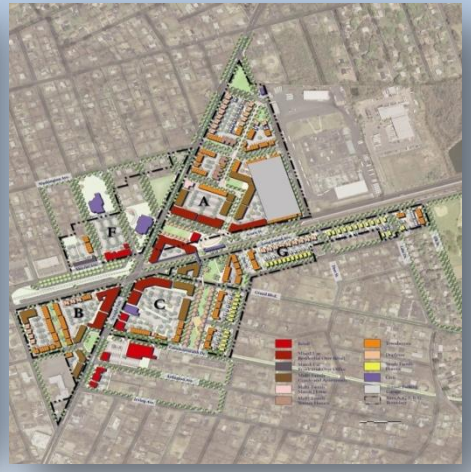
Master Developer RFQ

- Received four team responses
- Conducted interviews with top three teams in April 2014
- Received written responses to follow-up questions

Conceptual Design and Form-Based Zoning Code RFPs

- $700,000 in New York State grants from ESD and NYSERDA
- Conceptual site and area plan, form-based zoning code, and a streamlined review and approval process
- Planning, environmental, market, and cultural studies
- Provide background and basis for redevelopment







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Design Guidelines

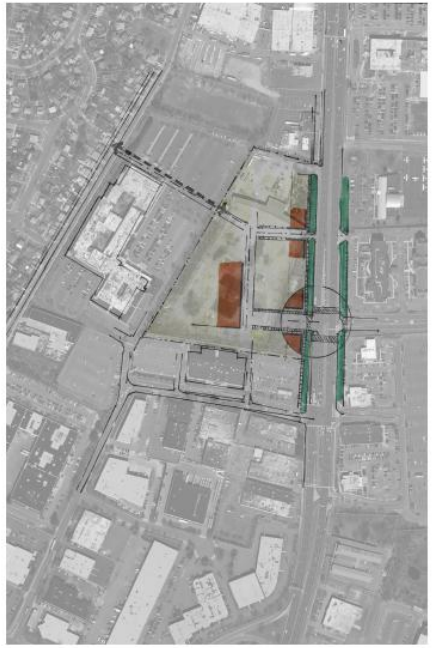
Design & Development Principles

Anticipate that in keeping with the previous Visioning Plans, the intersection of Rt.110 and __Road becomes a signature corner along Route 110. If this happens, the multi-plex theaters on the east side of Route 110 will probably be redeveloped for higher and better uses, such as Class A office space.

Route 110 will have to change in terms of its character and appearance, but it will remain a high-volume "boulevard". Therefore, the development framework diagrams assume that buildings will address Route 110 even if those buildings are set back behind a well-landscaped, pedestrian-friendly buffer:

- It is not necessary to create a continuous street wall. But a minimum amount of frontage along a "build-to" line should be mandated (see diagram). Significant landscaping between buildings should define the space of Route 110.
- Buildings should be positioned where they can frame important points of entry, define the edges of internal streets and public spaces, clarify internal circulation through the site.
- The internal layout should suggest a street and block network comparable to what has been suggested for the other redevelopment areas.
- Route 110 will become a BRT corridor. In order to make it possible to for the surrounding neighborhoods to have access to the BRT stations, a well-designed pedestrian route through the site to the neighborhoods should be required. In some cases this will require cross-access through other properties.





Republic LIRR Station

MTA 2015-2019 Capital Program

Commitments
($ in millions)

ELEMENT DESCRIPTION/PROJECT	NEEDS CODE	2015	2016	2017	2018	2019	Total All Years
04 STATION AND BUILDINGS							
UL Station Platform Lighting	NR	1.0	1.0	1.0	1.0	1.0	5.0
UM Murray Hill Station - New Elevators	SI	0.0	5.7	0.0	0.0	0.0	5.7
UN Nostrand Ave. Station Rehabilitation	NR	27.5	0.0	0.0	0.0	0.0	27.5
UP Port Washington Station Improvements	NR	0.0	2.0	11.0	0.0	0.0	13.0
UQ Babylon Station Platform Replacement	NR	0.0	5.0	0.0	46.0	0.0	51.0
UR Station Platform Railing Replacement	NR	1.0	1.0	1.0	1.0	1.0	5.0
US Station Signage Program	NR	2.8	2.8	2.8	2.8	2.8	14.0
UT Station & Building Electrical Systems	NR	1.4	1.4	1.4	1.4	1.4	7.0
UU Mentor Allowance - Stations	NR	6.0	11.0	2.0	2.0	1.0	22.0
UV New Fare Payment System	SI	0.0	15.0	0.0	0.0	0.0	15.0
UW GCT/ESA Unified Trash Facility	SI	11.1	0.0	0.0	0.0	0.0	11.1
UX Hunterspoint Avenue Station Renewal	NR	0.0	2.9	0.0	26.1	0.0	29.0
UY Elmhurst Station - New Station	SI	0.0	4.0	0.0	36.0	0.0	40.0
UZ New Republic Station on Main Line	SI	0.0	0.0	5.0	0.0	0.0	5.0
Element Total 04		**$50.8**	**$51.8**	**$24.2**	**$116.3**	**$7.2**	**$250.3**

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Ongoing Projects: Alternatives Analysis

- Continuation of engagement process
- Now in FTA pipeline
- Significant roles for public and stakeholders

Overview of Route 110 Alternatives Analysis

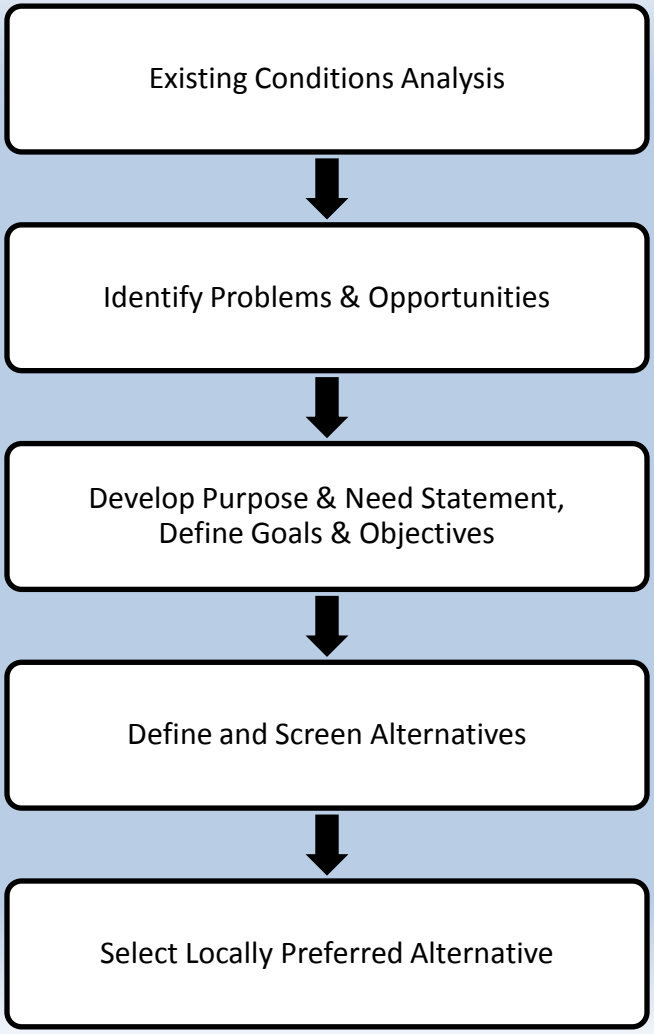
- Consider reasonable options for **mode and alignment** in developing and screening alternatives
- Develop a financially feasible **Locally Preferred Alternative** that supports the vision of **Connect Long Island** and promotes:
  - Economic development
  - Increased mobility
  - Improved quality of life
- Conduct ongoing stakeholder and public involvement



- Lead Agency: Federal Transit Administration (FTA)
- Project Sponsor: Town of Babylon
- Consultant Team: led by Parsons Brinckerhoff

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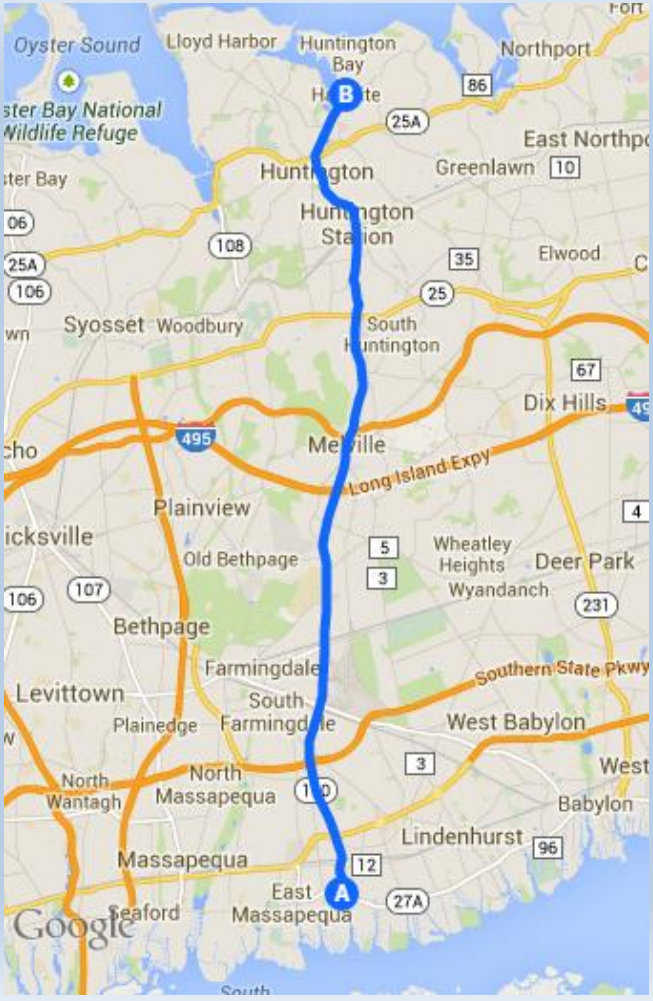
Study Process



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Route 110 – Suffolk County's "High Tech Main Street"

- Major north-south employment corridor, located in the Towns of Babylon and Huntington, just east of the Nassau/Suffolk border
- Running from Route 27A (Montauk Highway) in Amityville to Halesite in Huntington
- Home to corporate headquarters, office complexes, retail centers, educational institutions, research facilities, industry, and an airport

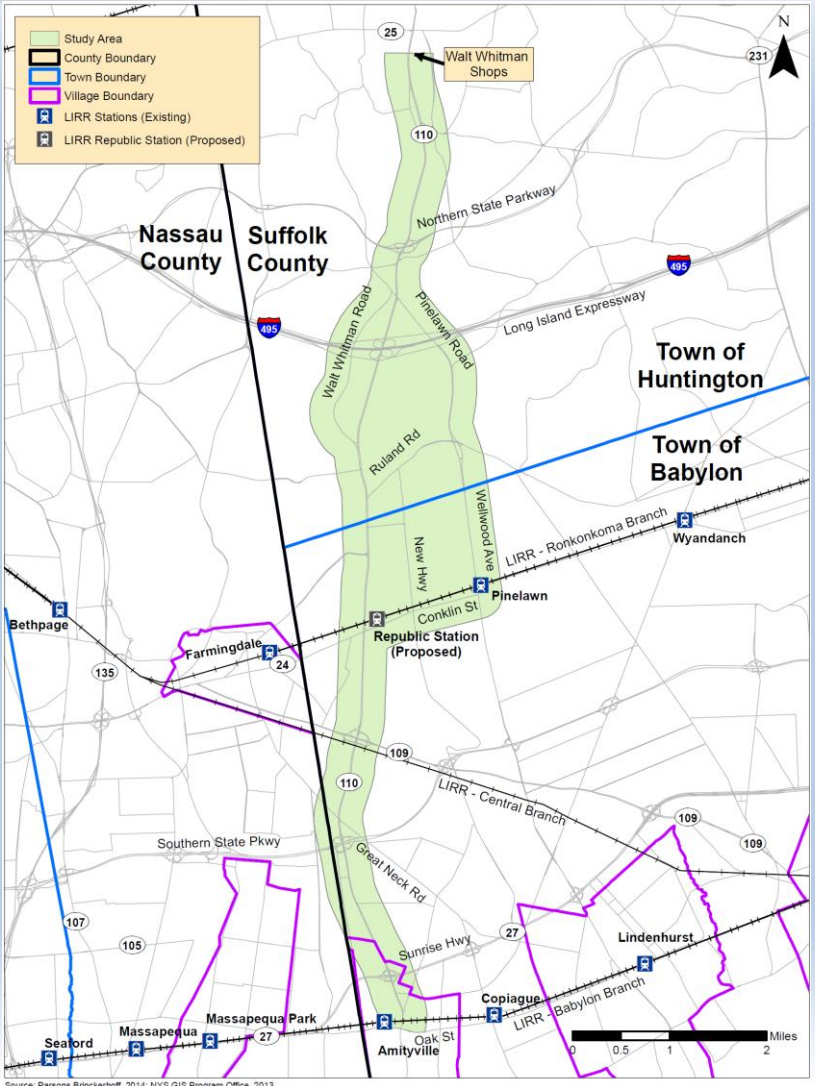


Source: Google Maps

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Study Area

- 10.3-mile corridor between Amityville LIRR Station and Walt Whitman Shops
- Extends east to Wellwood Avenue and west to Walt Whitman Road



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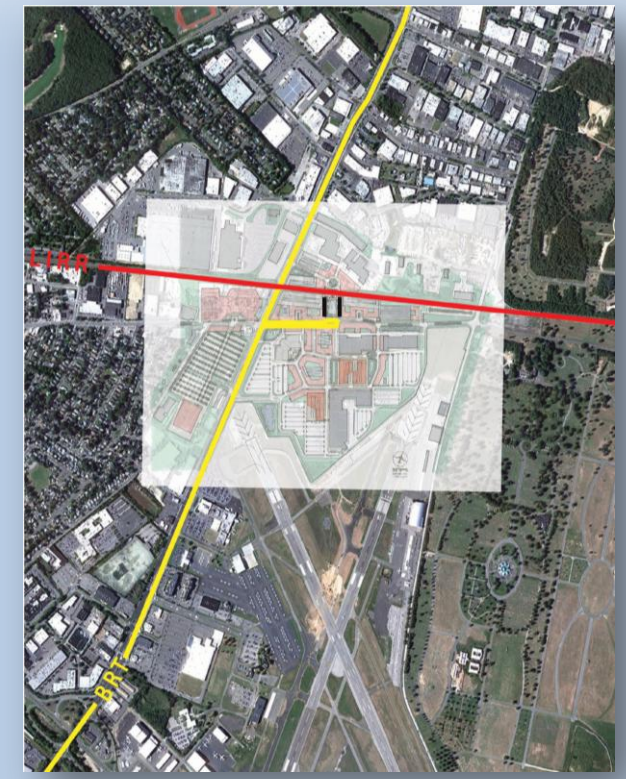
Route 110: Transportation Issues

- Constrained travel choices
- Inadequate multi-modal connectivity
- Existing and projected future traffic congestion
- Bus travel times are not competitive (disincentive for transit use)
- Existing auto-centric land use and building development patterns
- Limited walkability



Route 110: Key Transportation Opportunities

- Large employers as a source of existing/potential future transit ridership
- Relatively high existing bus ridership
- Multiple branches of the LIRR
- Multiple travel markets to be served
- Potential reopening of LIRR Republic station and East Farmingdale redevelopment (*Connect Long Island*)
- LIRR Double Track & East Side Access



Source: Speck & Associates, LLC

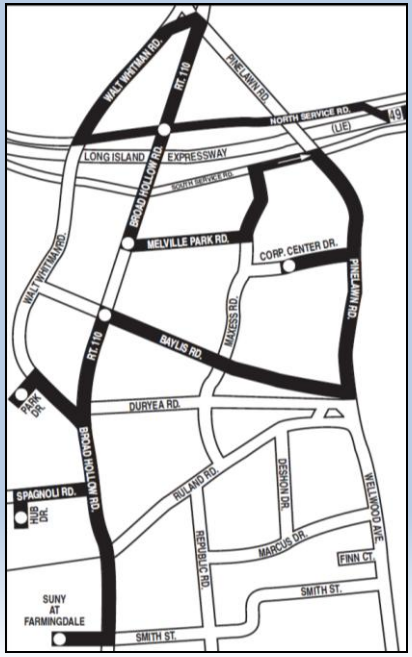
Purpose & Need

The purpose of the Route 110 Alternatives Analysis is to:

- Improve north-south mobility
- Increase transit access to and from employment and other activity centers
- Enhance multi-modal connectivity with the LIRR and existing bus service
- Promote increased transit use
- Support TOD along Route 110 and in the study area



Source: Parsons Brinckerhoff



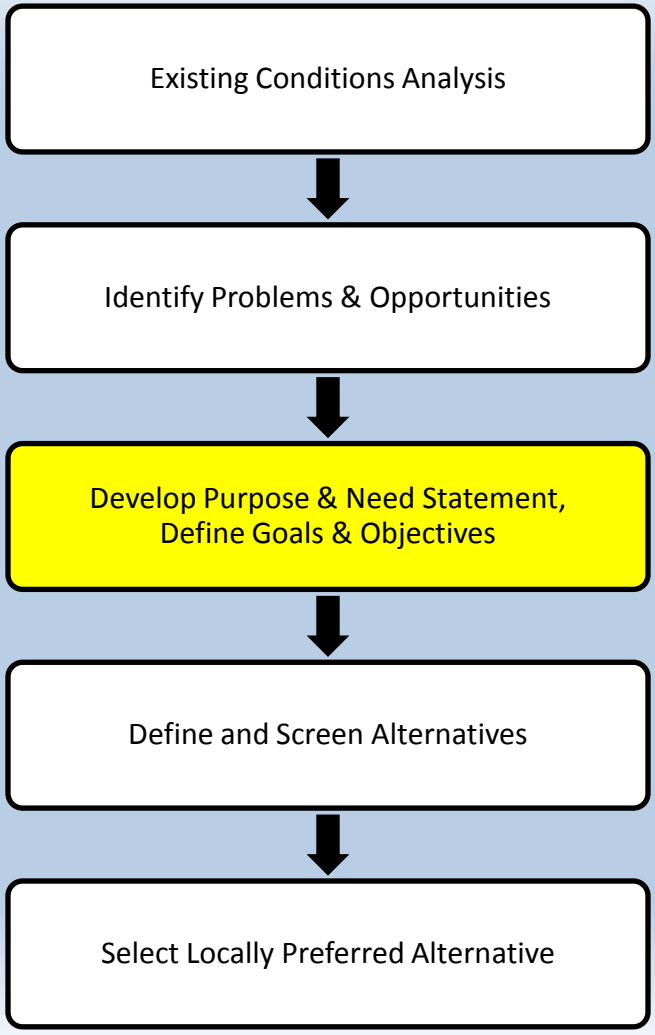
Source: Suffolk County Transit

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Project Goals

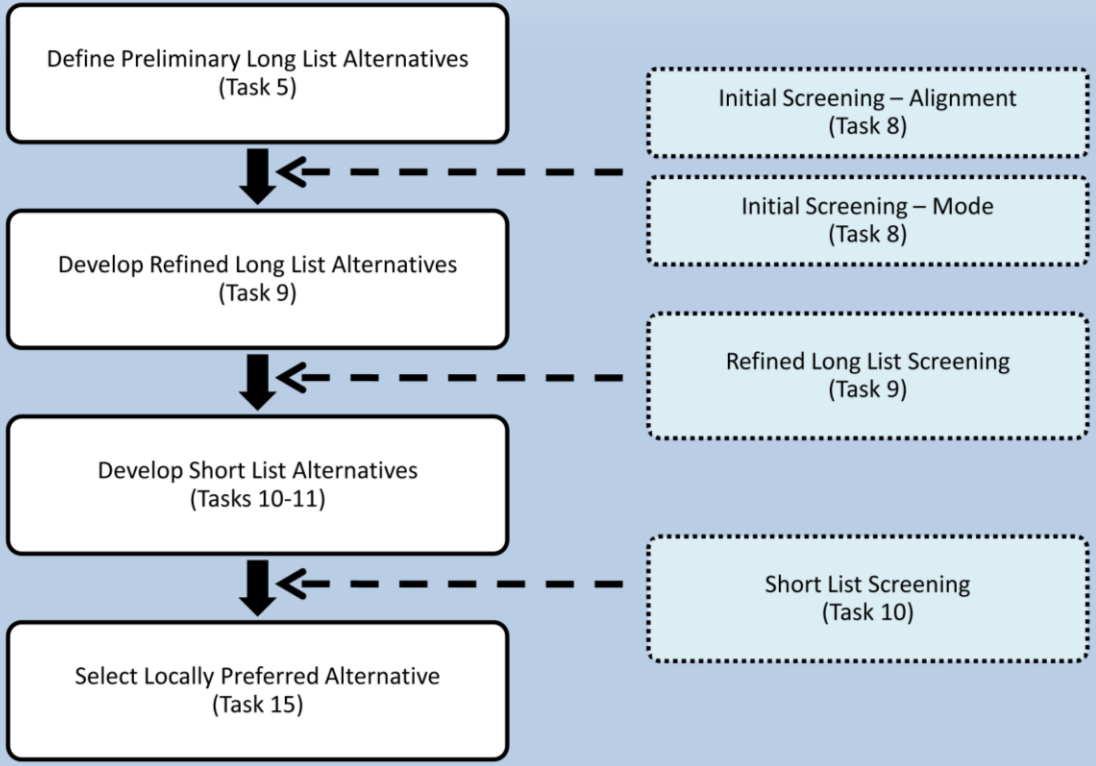
- **Improve Mobility and Connectivity**
- **Enhance Economic Competitiveness and Promote Economic Growth**
- **Maximize Cost and Operational Effectiveness**
- **Minimize Adverse Environmental Impacts**



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Alternative Evaluation Process

- Evaluation criteria are directly linked to project goals and objectives.



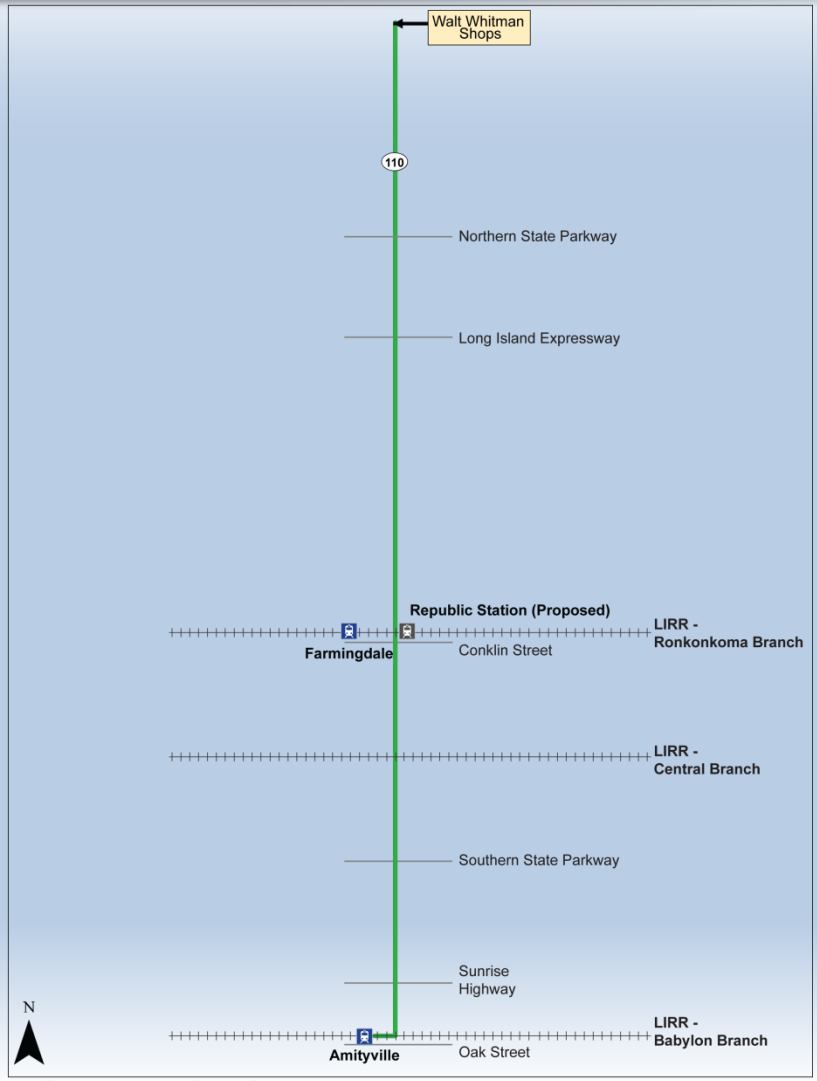
Preliminary Long List Alternatives

Alternative Number	Alternative Name
	No-Build alternative
A	Enhanced bus service along Route 110
B	Trunk route along Route 110 only
C	Trunk route along Route 110 with diversions off Route 110
D	Trunk route along Route 110 with circular feeder routes
E	Trunk route along Route 110 with transit center nodes and connecting feeder routes

Results of Initial Screening – Alignment

Preliminary Long List
Alternative B
Trunk route along Route 110 only

Legend
- Route 110 Trunk Route
- LIRR Stations (Existing)
- LIRR Republic Station (Proposed)



Note: Schematic representation; not drawn to scale.

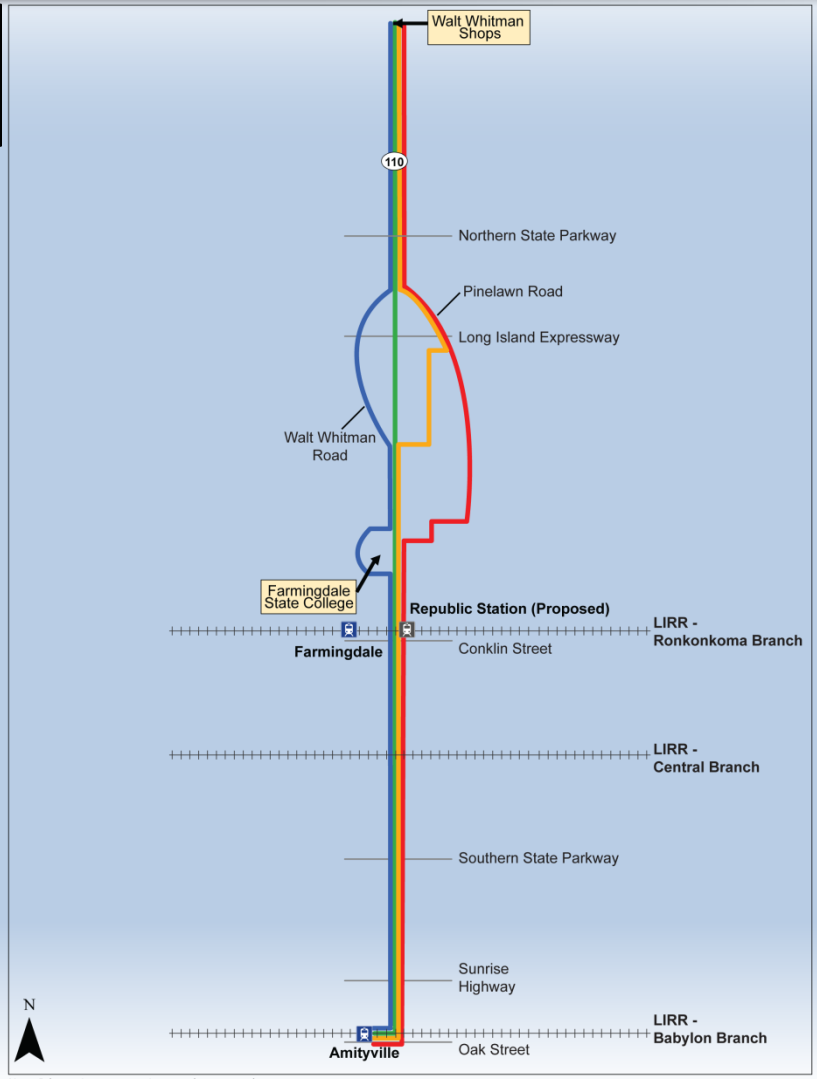
Eliminated from consideration:
The route does not provide last-mile connectivity to off-corridor destinations

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Results of Initial Screening – Alignment

Preliminary Long List
Alternative C
Trunk route along Route 110 with diversions off Route 110

Legend
- Route 110 Trunk Route
- Trunk Route Variation
- Trunk Route Variation
- Trunk Route Variation
- LIRR Stations (Existing)
- LIRR Republic Station (Proposed)



Note: Schematic representation; not drawn to scale.

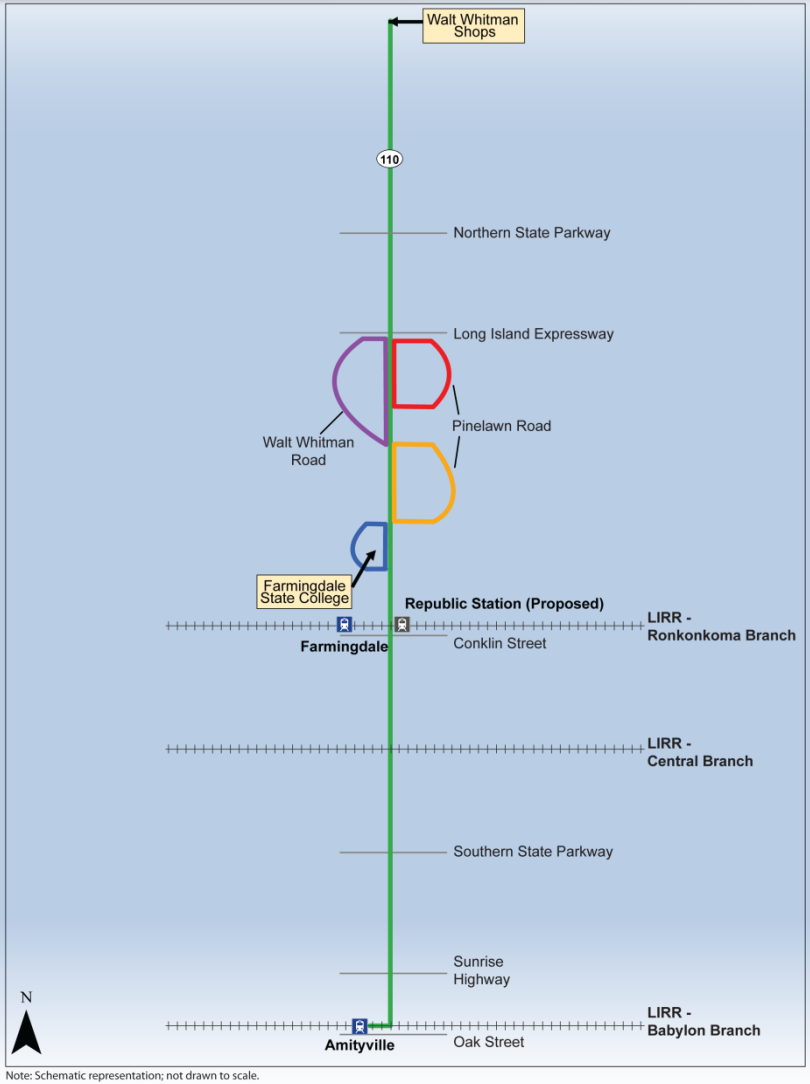
Eliminated from consideration:
The route fails to maximize cost and operational effectiveness

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Results of Initial Screening – Alignment

Preliminary Long List
Alternative D
Trunk route along Route 110 with circular feeder routes

Legend
- Route 110 Trunk Route
- Feeder Route
- Feeder Route
- Feeder Route
- Feeder Route
- LIRR Stations (Existing)
- LIRR Republic Station (Proposed)



Note: Schematic representation; not drawn to scale.

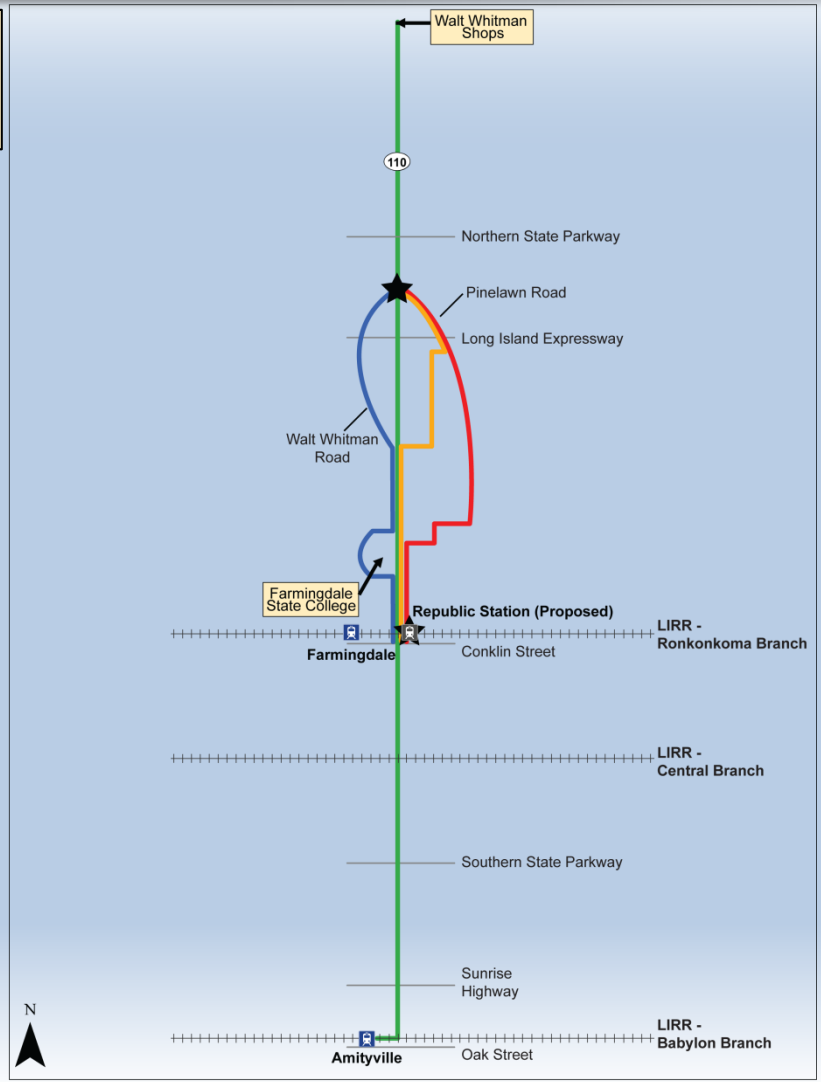
Advanced to next round of screening

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Results of Initial Screening – Alignment

Preliminary Long List
Alternative E
Trunk route along Route 110 with transit center nodes and connecting feeder routes

Legend
- Route 110 Trunk Route
- Feeder Route
- Feeder Route
- Feeder Route
- LIRR Stations (Existing)
- LIRR Republic Station (Proposed)
- Proposed Transit Center



Note: Schematic representation; not drawn to scale.

Advanced to next round of screening

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Potential Transit Modes for Alignment Alternatives



Bus Rapid Transit (BRT)



Streetcar



Light Rail Transit (LRT)

Automated Guideway Transit (AGT)



Commuter Rail (LIRR)



Subway



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Sources: New York City Department of Transportation (NYCDOT); Metropolitan Transportation Authority (MTA) New York City Transit; Portland Streetcar; Flickr; NJ Transit; Ultra Global PRT; Londonist; Newsday; NYCSubway.org; MTA LIRR

TOWN OF BABYLON SUFFOLK CO., NY

Potential Transit Modes for Alignment Alternatives



Bus Rapid Transit (BRT)



Streetcar



Light Rail Transit (LRT)

Automated Guideway Transit (AGT)



Commuter Rail (LIRR)



Subway



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Sources: New York City Department of Transportation (NYCDOT); Metropolitan Transportation Authority (MTA) New York City Transit; Portland Streetcar; Flickr; NJ Transit; Ultra Global PRT; Londonist; Newsday; NYCSubway.org; MTA LIRR

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Results of Initial Screening – Mode

- Streetcar, LRT, AGT, commuter rail, and subway alternatives were eliminated from consideration because the alternatives fail to maximize cost and operational effectiveness.

- **Two BRT alternatives** were advanced to the next round of the screening process:
  - BRT trunk route along Route 110 with circular feeder routes (Alternative D1)
  - BRT trunk route along Route 110 with transit center nodes and connecting feeder routes (Alternative E1)



Source: Route 110 BRT Study

What is BRT?

- High performance bus systems that provide faster, more efficient service than ordinary bus
- Approach the service quality of rail transit while still enjoying the cost savings and flexibility of bus transit
- BRT invests in improvements to speed up bus service
- Improvements to bus vehicles, stations, operations, roadways, rights-of-way, intersections, and traffic signals



Source: Parsons Brinckerhoff

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Elements of BRT

User-Friendly

Stylish Vehicles



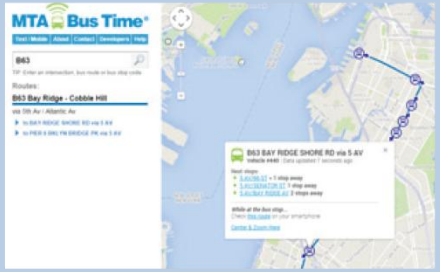
Attractive Stations



Strong Brand Identity



Real-Time Information



Faster Service

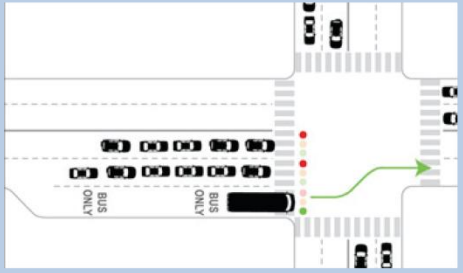
Bus Lanes



Faster Fare Collection



Traffic Signal Prioritization



More Frequent Service with Fewer Stops



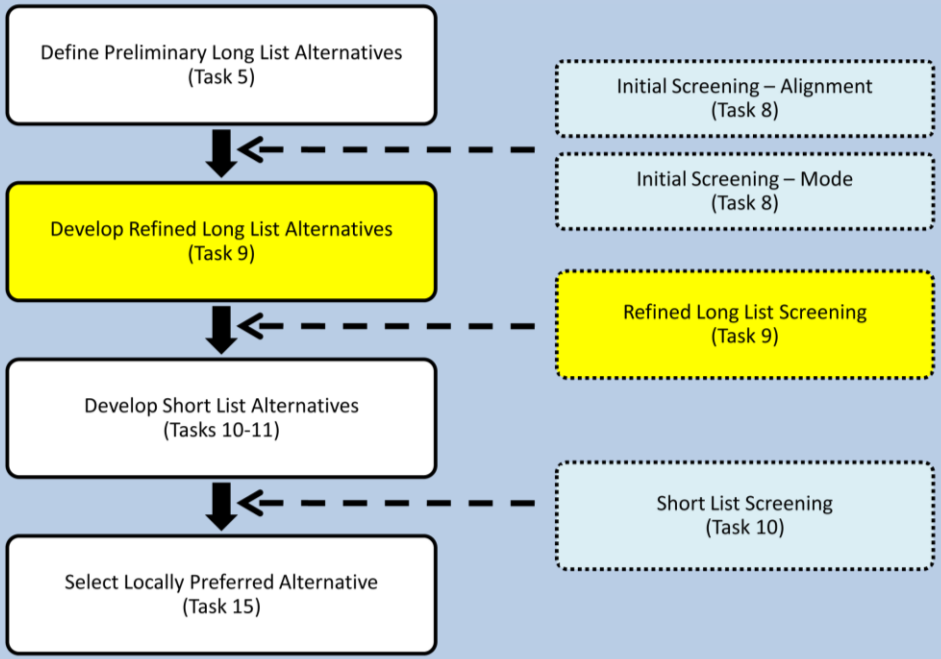
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Sources: Cleveland Regional Transit Authority; WNYC; MTA New York City Transit; New York City Department of Transportation; Metro-Magazine; Capital District Transportation Authority; Ontario Ministry of Transportation; Metrolinx; Bergen BRT

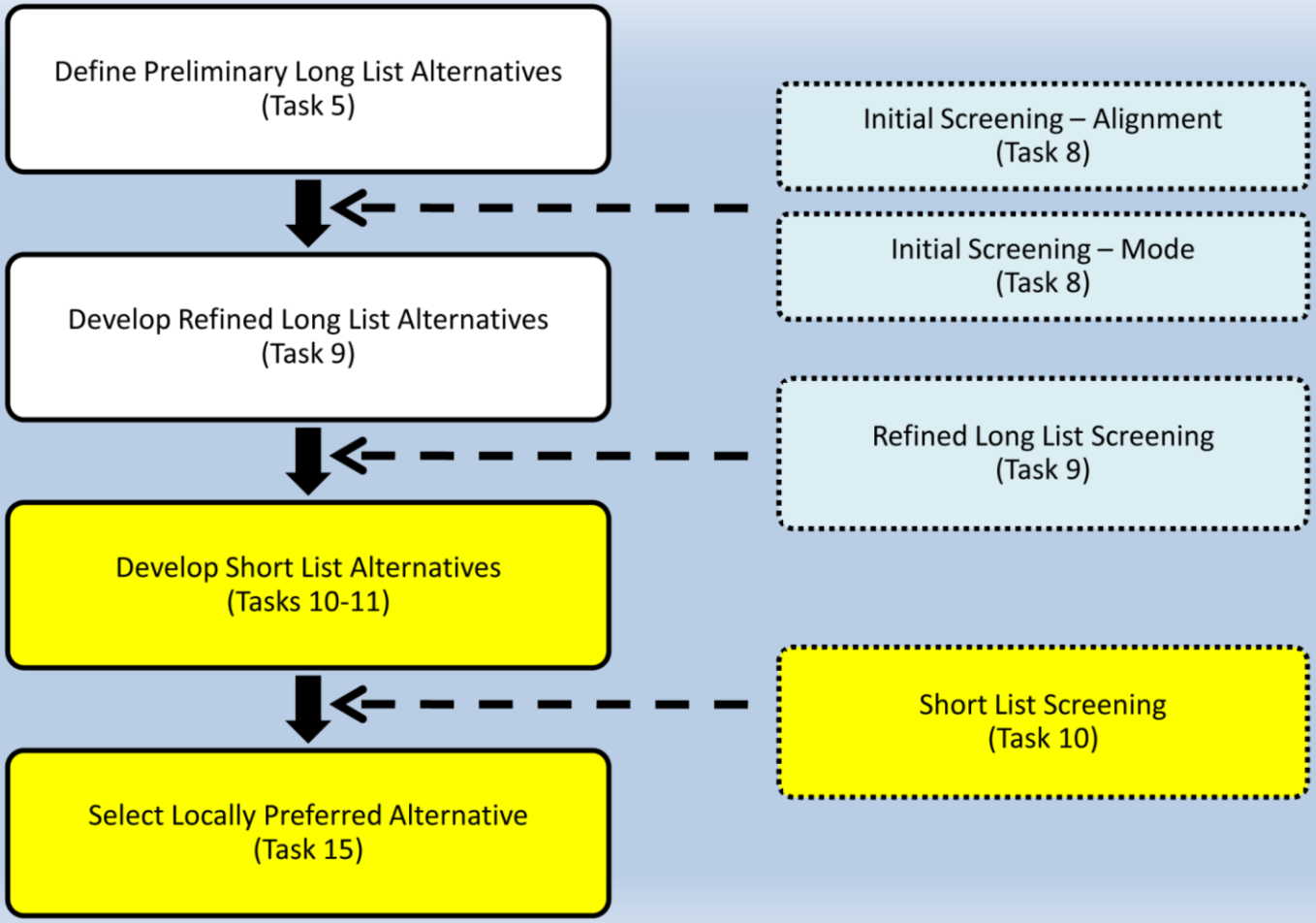
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Next Steps – Refined Long List Screening

- Two BRT alternatives developed in greater detail through the preparation of operating plans



Subsequent Steps – Short List Screening & LPA Selection



Comments/Questions & Answers

For more information about the ongoing Route 110 Alternatives Analysis, contact
Town of Babylon Office of Downtown Revitalization

Jonathan Keyes, Director
631-957-7430
jkeyes@townofbabylon.com

Or

Eric Zamft, Project Manager
631-957-7408
ezamft@townofbaylon.com

MEETING MINUTES:
TECHNICAL ADVISORY COMMITTEE (TAC) MEETING #1

Date: Monday, December 15, 2014

Time: 3:00 PM

Location: East Farmingdale Fire House
930 Conklin Street
Farmingdale, NY 11735

Attendees:

Name	Agency/Organization	Phone	Email
Jonathan Keyes	Town of Babylon, Office of Downtown Revitalization	631-957-7430	jkeyes@townofbabylon.com
Eric Zamft	Town of Babylon, Office of Downtown Revitalization	631-957-7408	ezamft@townofbabylon.com
Matt McDonough	Town of Babylon Industrial Development Agency (IDA)	631-587-3679	mmcdonough@babylonida.org
Craig Turner	Town of Huntington, Planning & Environment Department	631-351-3379	cturner@huntingtonny.gov
Hon. James Wandell	Village of Amityville	631-264-6000, x404	mayor@amityville.com
Stephen Greenwald	Village of Amityville	631-804-3543	smgreen@optonline.net
Eileen McCarthy	Amityville Downtown Revitalization Committee	516-446-8103	emccarthy@amityvillelaw.net
Kevin McAndrew	Amityville Downtown Revitalization Committee	516-660-9132	KMcAndrew@cameronengineering.com
Louis Bekofsky	Suffolk County Department of Economic Development and Planning	631-853-4774	Louis.Bekofsky@suffolkcountyny.gov; lbekofsky@gmail.com (gmail per TAC meeting sign-in sheet)
Tiffany Ann Taylor	Suffolk County Department of Economic Development and Planning	631-853-5821	Tiffany.taylor@gmail.com
Darnell Tyson	Suffolk County Department of Public Works	631-852-4012	Darnell.Tyson@suffolkcountyny.gov
Garry Lenberger	Suffolk County Department of Public Works, Suffolk County Transit	631-852-4880	G.Lenberger@suffolkcountyny.gov
Christopher McVoy	Suffolk County Department of Public Works, Suffolk County Transit	631-852-4882	mcvoyc@suffolkcountyny.gov
Elisa Picca	Long Island Rail Road	718-558-3701	ecpicca@lirr.org
Mary Catherines	Long Island Rail Road	718-558-3691	mvcathe@lirr.org
Nicole Bucich	Parsons Brinckerhoff	212-465-5220	bucichna@pbworld.com
Maxwell Sokol	Parsons Brinckerhoff	212-465-5138	sokolml@pbworld.com
James Rigert	Parsons Brinckerhoff	212-465-5665	rigertjw@pbworld.com

Purpose:

The purpose of this meeting was to convene the Technical Advisory Committee (TAC) so the Town of Babylon could provide an update on East Farmingdale Initiatives, and Parsons Brinckerhoff could provide an overview of—and get feedback on—the ongoing Route 110 Alternatives Analysis, including project status and next steps.

Discussion Items:

Topic	Discussion
Welcome & Introductions	• Attendees introduced themselves and summarized their respective roles in their agency/organization.
Update on East Farmingdale Initiatives	• J. Keyes opened the meeting by discussing previous, ongoing, and future initiatives in East Farmingdale. These initiatives include a call for the re-opening of LIRR Republic station, a Bus Rapid Transit (BRT) feasibility study along Route 110, preparation of the *Connect Long Island Regional Transportation and Development Plan*, and plans for development of a vibrant downtown center in the vicinity of Airport Plaza. • Several ongoing initiatives are linked to the potential East Farmingdale development, including a Master Developer Request for Qualifications (RFQ), conceptual design and form-based zoning code Requests for Proposals (RFPs), draft design guidelines prepared by the Regional Plan Association (RPA), an application for a Brownfields Grant from the Environmental Protection Agency (EPA), and inclusion of environmental review and design of LIRR Republic station in the Draft 2015-2019 Metropolitan Transportation Authority (MTA) Capital Program.
Overview of Route 110 Alternatives Analysis	• N. Bucich introduced the Route 110 Alternatives Analysis by summarizing the project background and study area, and presenting the problems and opportunities, purpose and need, goals and objectives, and alternative evaluation process. The Alternatives Analysis is building upon previous work to select a Locally Preferred Alternative (LPA) to advance to Project Development and National Environmental Policy Act (NEPA) review with the Federal Transit Administration (FTA). • M. Sokol presented an overview of the Preliminary Long List Alternatives and the results of the two-step Initial Screening (alignment and mode). Two BRT alternatives were advanced to the next round of the screening process: BRT trunk route along Route 110 with circular feeder routes, and BRT trunk route along Route 110 with transit center nodes and connecting feeder routes. • M. Sokol concluded by summarizing next steps, which include developing the remaining alternatives in greater detail through the preparation of operating plans, followed by the Refined Long List Screening and Short List Screening, leading to selection of an LPA. The LPA will specify the route alignment and associated transit elements, developed to a 10% level of engineering.

Topic	Discussion

Comments/Questions & Answers	• E. McCarthy commented on the image included in the "What is BRT" slide in the presentation, wondering what Jeff Speck would say regarding the use of the roadway for different modes.
	  ○ J. Keyes indicated that the image included in the slide is conceptual and is not meant to imply that the Alternatives Analysis will include that roadway design as part of the LPA.
	• K. McAndrew asked whether the Town of Babylon (and/or the Town of Huntington) intends to look at zoning along the full Route 110 corridor to incentivize appropriate development.
	  ○ J. Keyes and E. Zamft noted that the Town of Babylon is interested in using zoning to promote appropriate development along the corridor, and that in the absence of a transit-oriented development (TOD) ordinance, RPA's work in drafting design guidelines for Route 110 (funded through the Suffolk County IDA) will help to achieve that goal.
	• M. Catherines asked whether the East Farmingdale development would go forward without BRT on Route 110.
	  ○ J. Keyes and E. Zamft indicated that the development proposition is independent of BRT (i.e., the preferred mode as identified in the Alternatives Analysis), but that BRT would enhance the development and make it more attractive. The Alternatives Analysis assumes that LIRR Republic station will be operational in the future.
	• G. Lenberger asked about the timeline for LIRR Republic station.
	  ○ E. Picca noted that there are two ingredients necessary in order for the re-opening of LIRR Republic station to be possible: completion of LIRR Double Track (scheduled for 2018), and the development at East Farmingdale. The draft 2015-2019 MTA Capital Program includes $5M in 2017 for environmental review and design of LIRR Republic station, and it is anticipated that construction would be funded in the 2020-2024 Capital Program.
	  ○ N. Bucich noted that as part of the Alternatives Analysis, interim service to the Farmingdale LIRR station will be treated as a phasing option for implementation of the alternatives until the LIRR Republic station is built and operational.
	• G. Lenberger provided an overview of Suffolk County Transit funding sources, noting that operations costs are generally $5.50 per revenue mile, and that the operation is largely self-funded by Suffolk County, although approximately 1/3 of the costs are covered by Statewide Transportation Operating Assistance (STOA) funds. Federal funding assists with capital costs through Section 5307. Additional Federal funding sources could be pursued for BRT implementation, including TIGER and New/Small Starts. G. Lenberger noted that the S1 service has about 70 stops (northbound and southbound) along the full length of the Route 110 corridor and that access to these stops should remain.

Topic	Discussion

Comments/Questions & Answers	• G. Lenberger noted that the New York State Department of Transportation (NYSDOT) is not in attendance, and that it is important for NYSDOT to support this project.
	  ○ J. Keyes noted that NYSDOT was invited to attend the meeting, and that they have been helpful throughout the planning process thus far, with Margaret Conklin as the primary contact.
	• Hon. J. Wandell asked about the prospects of using a public private partnership (PPP) for implementation of BRT on Route 110, and also asked more generally about the involvement of Route 110 area businesses in the planning process. Businesses should be involved early in the planning process.
	  ○ J. Keyes and E. Zamft noted that a meeting with area businesses is being planned for early 2015, and it is possible that partnerships could eventually be established with employers and property owners to assist with implementation.
	  ○ G. Lenberger noted that Suffolk County Transit was approached several years ago by Canon, who was interested in potentially running its own route to serve its headquarters in Melville, although that did not come to fruition.
	• D. Tyson commented that now is a good time to host this first TAC meeting because of the project status and next steps. He noted that the transit improvements proposed through this study should be context-specific, as solutions that work in some locations will not work everywhere.
	• M. McDonough indicated that the schematic maps of the alternatives do not seem to show service to the large industrial park east of Route 110 and just north of Conklin Street. The industrial park has employees from Copiague, North Amityville, Wyandanch, Brentwood, etc., many of whom commute using a “gypsy bus” today.
	  ○ N. Bucich indicated that service planning has not yet started, and the schematic maps of the alternatives are only intended to demonstrate alignment concepts. Specific destinations to be served will be identified as part of the operations planning effort, which is one of the next steps in this project.
	• S. Greenwald commented that the Alternatives Analysis should be cognizant of other locations on Long Island that serve as origins for trips destined to Amityville, such as Freeport and Bay Shore on the South Shore.
	• An attendee noted that many people looking to transfer from NICE Bus to Suffolk County Transit actually walk to Farmingdale State College rather than wait for the bus to cycle around.
	• C. Turner noted that BRT stations could potentially be sited in front of businesses located on Route 110 within large setbacks, as opposed to behind buildings, which could potentially require eliminating some off-street parking.

Topic	Discussion

Comments/Questions & Answers	• G. Lenberger commented that some private property owners do not want bus shelters on their properties. C. McVoy commented that, in other instances, private property owners want bus shelters but do not want maintenance responsibilities.
	• E. McCarthy commented that all alternatives under consideration should include narrowing of general purpose lanes to encourage transit use and make traveling more difficult for automobile drivers.
	• E. Picca commented that BRT is flexible, affordable, and able to be implemented incrementally, unlike fixed guideway transit modes.
	• G. Lenberger noted that a smart phone application is under development for Suffolk County Transit (anticipated to be completed in the next 1-2 years) that will provide real-time information for transit users. One of the biggest complaints of Suffolk County Transit riders is reliability/on-time performance. The County is installing Automatic Vehicle Location (AVL) systems on the bus fleet, which should be fully operational by summer 2015.
	• L. Bekofsky indicated that, as part of the Nicolls Road Alternatives Analysis project, Suffolk County is working with Stony Brook University to find out what customer amenities students want to see on transit vehicles. The County could similarly assist with such an effort for Farmingdale State College.
	• E. Picca asked how the Alternatives Analysis will account for the planned East Farmingdale development, which will be both a trip generator and attractor.
	  ○ N. Bucich indicated that the ridership forecasting effort will not explicitly account for the new trips associated with this development because the development is not programmed and committed. The ridership forecasting effort will be completed using the FTA's Simplified Trips-on-Project Software (STOPS) model. It is possible that future developments can be analyzed using "off-model" methods.
	• C. Turner asked whether traffic data has been collected for this project.
	  ○ M. Sokol indicated that automatic traffic recorder (ATR) counts and turning movement counts (TMC) were collected along key roadway segments and at key intersections for this project. The locations were determined through a review of previously collected data, including the recently completely traffic study in the vicinity of the Canon headquarters.

Materials Transmitted or Received:
None

Attachments:
Presentation from meeting

Distribution:
Attendees

These minutes represent the recorder's understanding of the issues discussed. Please report any discrepancies to the recorder within seven days; otherwise the record will remain as written.

Route 110 Alternatives Analysis

Technical Advisory Committee (TAC) Meeting #2 – Webinar

April 1, 2015



Source: Parsons Brinckerhoff

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Agenda

- **Introductions**
- **Welcome from the Town of Babylon**
  – Jonathan Keyes
  Director, Town of Babylon Office of Downtown Revitalization
- **Update on Route 110 Alternatives Analysis**
  – Parsons Brinckerhoff Team
- **Comments/Questions & Answers**

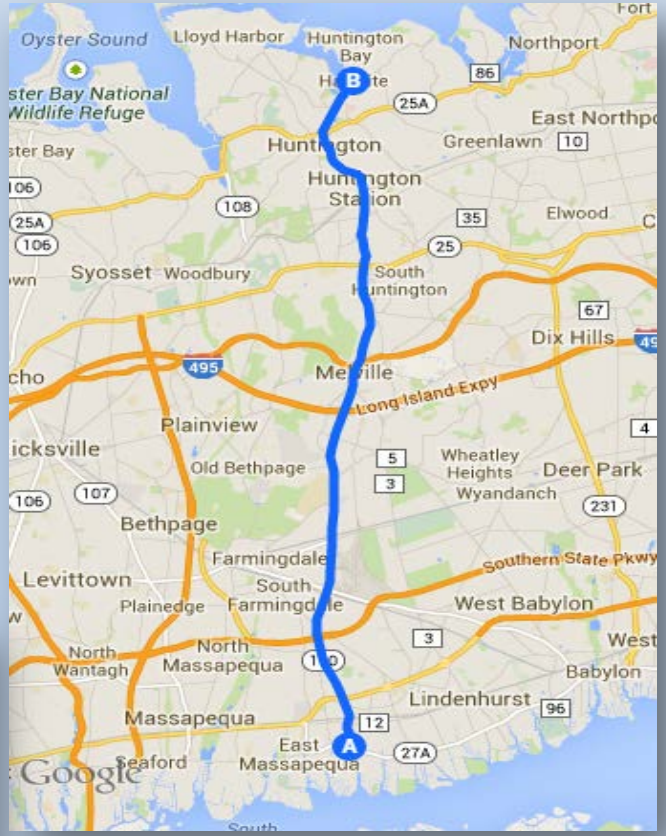
Welcome from the Town of Babylon

Jonathan Keyes
Director, Town of Babylon Office of Downtown Revitalization

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Route 110 – Suffolk County's "High Tech Main Street"

- Major north-south employment corridor, located in the Towns of Babylon and Huntington, just east of the Nassau/Suffolk border
- Running from Route 27A (Montauk Highway) in Amityville to Halesite in Huntington
- Home to corporate headquarters, office complexes, retail centers, educational institutions, and research facilities







PARSONS BRINCKERHOFF

Route 110 – Suffolk County's "High Tech Main Street"

- Viewed as critical corridor for Long Island's long-term regional economic viability
- Key component of Suffolk County Executive Steve Bellone's Connect Long Island plan



The county executive said the state surplus money would help fund Connect Long Island, a regional plan that includes construction projects linking train stations and transit hubs to the three research centers.

Bellone said some of the funds would help the Long Island Rail Road build a train station at the Brookhaven lab. He also touted a bill that will be introduced in the Suffolk legislature that would offer incentives to municipalities for participation in regional planning.

Part of Connect Long Island's goal is to link Brookhaven, Stony Brook and the Cold Spring Harbor lab with existing downtowns and planned developments such as the Ronkonkoma Hub, Wyandanch Rising and the Heartland Town Square project in Brentwood.

Bellone also called for funding the "double track" on the Ronkonkoma line and electrifying the rail lines farther east. Bus routes would run north-south along Nicolls Road, Route 110 and the Sagtikos Parkway, linking the three Long Island Rail Road lines.



A8 TOP STORIES

BELLONE'S PLEA ON ECONOMY

- **Urges NY** to fund transit, sewers, parking projects
- **Presses** 'innovation' in his State of County speech

BY DAVID M. SCHWARTZ
david.schwartz@newsday.com

Suffolk County Executive Steve Bellone urged state leaders in his State of the County speech last night to fund transportation projects, sewers and parking at research hubs and downtowns as a way to spur job growth and keep young people on Long Island.

Bellone said using part of the state's $5 billion surplus from financial settlements is key to improving commuter access to Stony Brook University, Cold Spring Harbor National Laboratory and Brookhaven National Laboratory as well adding more jobs and housing.

"We cannot reach our economic potential, we cannot build a prosperous future if we are not a region that can attract the high-knowledge, high-skill workers necessary to build an innovation economy," Bellone said at the Legislative Building in Hauppauge.

Bellone used the speech to pay tribute to Suffolk police officer Mark Gallins, who was shot and wounded March 11 by a suspected gang member after a chase in Huntington Station.

He also said Suffolk has put off construction of a new Yaphank jail, and criticized county government as "over-processed, over-regulated."

"We have a government in Suffolk County where devotion to process is rewarded while innovation is discouraged," he said. Bellone said he would introduce a program to use data to evaluate county services.

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Suffolk County Executive Steve Bellone gives his State of the County address yesterday in Hauppauge.

JOHN CORCORAN

cism from Long Island business groups that Suffolk groups didn't get more money. Senate Republicans have said they'd advocate for more funding for Long Island. Bellone, a Democrat, is running for re-election this year. Republicans have yet to announce a candidate.

Minority Leader Kevin McCaffrey (R-Lindenhurst) said in the Republican response that the county faced large financial problems, which he compared to Nassau County before it was put under the oversight of a financial control board.

"Suffolk County has an out-of-control spending problem. This problem is bringing us close to complete financial ruin, akin to the disaster which befell Nassau County," McCaffrey said.

McCaffrey said the Bellone administration has filled "no fewer than 20 positions" with Democratic political staffers, at a cost of $1.5 million. He called for more legislative oversight over employees making $100,000 a year or more.

He said abandoned houses on Long Island are proof that young people, professionals and businesses are leaving.

Bellone said a referendum that eliminated the elected treasurer showed residents want more efficiency.

"They get that the status quo isn't good enough, that government needs to change," he said.

Nassau, Suffolk rank high on health

Nassau and Suffolk continue to rank among the healthiest counties in the state, a study has found.

The sixth annual study by the Robert Wood Johnson Foundation and the University of Wisconsin, released Wednesday, ranked Nassau fifth and Suffolk 15th for overall health among New York's 62 counties.

Last year, Nassau was sixth and Suffolk 13th – which it has been for the past four years.

For the third year in a row, Nassau ranked No. 1 in the "health factors" category, which includes smoking and obesity.

Nassau also ranked first in "clinical care," "social and economic" and "physical environment factors," such as clean water.

"This report is a testament to the combined efforts of government, businesses, health care providers, schools and community-based organizations working together to improve the health and safety of Nassau County residents," County Executive Edward Mangano said in a statement.

For the past four years, Suffolk has ranked eighth in health factors.

Nassau ranked third in the state for "length of life" and 20th overall for quality of life.

Suffolk ranked 15th for "length of life" and 23rd for "quality of life," which includes such indicators as low-birth weight babies and the percentage of residents in poor or fair health.

Statewide, Rockland County ranked first and the Bronx last in overall health.

For more information, visit countyhealthrankings.org.

— RIDGELY OCHS

MONDAY, FRIDAY, MARCH 27, 2015 newsday.com

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TOWN OF BABYLON SUFFOLK CO., NY

Route 110 “At a Glance”

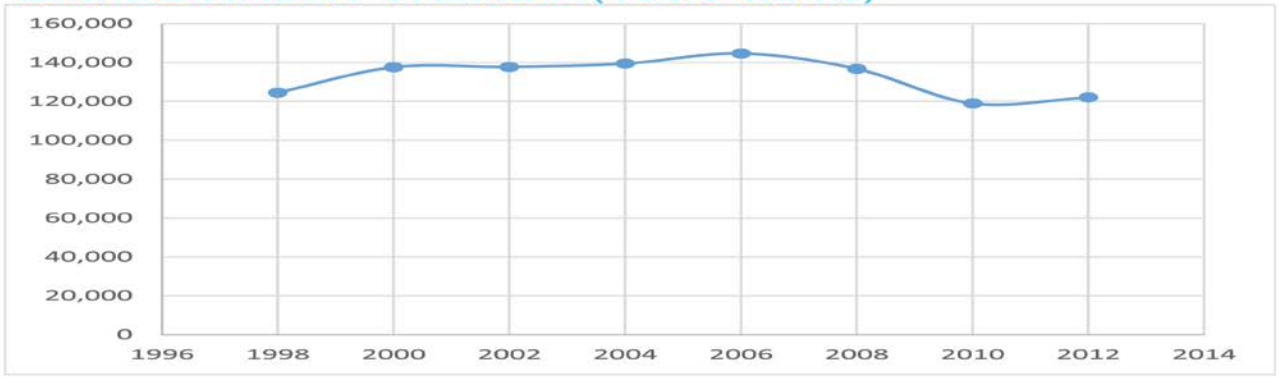
TOTAL WORKFORCE

110 CORRIDOR 154,913

SUFFOLK COUNTY 531,776

NASSAU COUNTY 511,467

EMPLOYMENT TRENDS (1998-2012)



United States Census Bureau - County Business Patterns

MAJOR SECTORS

19,802 PROFESSIONAL, SCIENTIFIC & TECH. SERVICES

9,266 FINANCE & INSURANCE

2,888 REAL ESTATE

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Project Foundation

2002-2008



IN BABYLON

The Rub in a Plan for Train Hub

Property sale would prevent reopening of an LIRR station

By Sumathi Reddy
STAFF WRITER

THE DAILY COMMUTE between Howard Beach in southern Manhattan and her job at Secret Service for Margaret Spence. The 35-mile stretch of the way can take up to two hours of hassle traffic on the Southern State Parkway. So the thought of kicking back on a Long Island Rail Road ride to Ronkonkoma sounds like a quick shuttle ride to her commuter door sends Peperone roughly into a new train stop. Stage shock of time, she have to resign her job or take a leave of absence, especially if it's an option she'd explore.

"I'd love it," the receptionist said. "I think it would be a great opportunity to have a chauffeured ride, although the train is reality, the idea of reopening the former Republic LIRR station at the northeast corner of Farmingdale has been gaining steam. A coalition of businessmen and officials from Huntington and Babylon towns is calling on state and national politicians for support.

The campaign was sparked by news that the owner of the property, Sebastian, owner of Sebastian's Restaurant, Inc., was close to selling the land to Gov. George Pataki and DOT Commissioner Joseph Boardman, asking them to place a temporary moratorium on the land negotiations. Assemblyman Steve Bellone (D-Babylon) said he would meet with Boardman and Spano on Monday to discuss the issue soon.

Bellone, a lifelong heavyweight fight to try to retain the property, said he's hoping state officials will step in and throw their weight behind the plan.

"We're really pretty disappointed with the state's position. We're trying to preserve the train station for the future," Bellone said.

DOT officials have been looking off and on at the LIRR station for nearly 20 years, but the LIRR conducts a study on the feasibility of reopening the station, which closed in 1966. LIRR spokesman Brian Dobo said the study should be completed by the end of the year.

"We still have concerns that the arrangement we were pursuing for the property is advantageous to the taxpayers," Dobo said.

Assistant Commissioner for DOT spokeswoman Eileen Peters said the agency is close to two of the dollars that the Town of Babylon and the Farmingdale school district would receive if the land is leased.

Proponents of the train station have grand visions for the land once cleared of vacant buildings and cleaned of remnants of the days as home of airplane manufacturer Fairchild Republic Co. They are vying for a townowned lot with a railroad parking lot and shuttle service to the station, and the Route 110 corridor, ending at the Huntington Station LIRR stop. The proposal, which does not have an estimated price tag, would be financed through state and federal monies.

The most controversial sticking point is the Maird-DOT's sticking point. It was negotiating to lease the land from Maird, Inc. in exchange for buying and New Highway, adjacent to Republic Airport.

The airport needs that land for a runway safety area, a requirement of the Federal Aviation Administration when a runway is altered, such as the 1,000-foot runway extension that Republic Airport officials want, which one runway, Deighton, landing aid known as part of the master plan update. But advocates for the train hub say it could reduce traffic on the congested Route 110 corridor, where an estimated 110,000 cars pass each day.

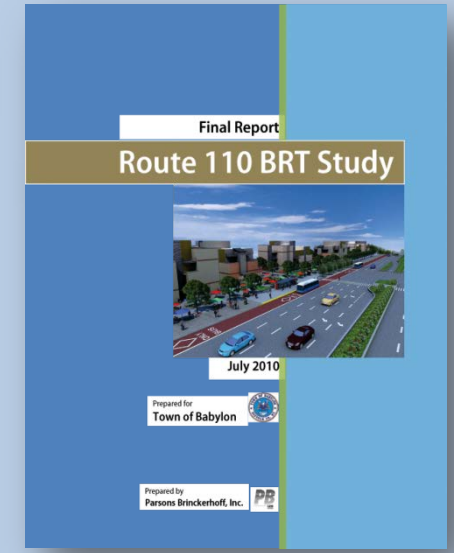
They also say it would encourage commuters now say it would encourage commuters to leave their cars behind, allowing them to take the train to Long Island, allowing from the city to Long Island, allowing from the city to Long Island relocation. "We're more economic development right now," said Peters, "and we have to address the issue of traffic flow," said Bellone, a member of the Town's Redevelopment Corp. formed by officials in Huntington and Babylon several years ago.

The question of how much demand there is for a train station in East Farmingdale remains to be determined. There are two LIRR stops within a few miles of the proposed site, the Ronkonkoma LIRR stop now has shuttle service. Advocates say that if you build the station, they will come, but the number of reverse commuters continues to remain small. Most commuting in the other direction, and no one has determined how many reverse commuters there would be needed to justify an East Farmingdale stop.

According to the agency's most recent figures, peak morning ridership from the city into Long Island was 2,500 at the Main[illegible] town, the DOT's deal with Maird is all but final. He and Spano expect an agreement was reached a year ago and a lease was to be signed this summer.

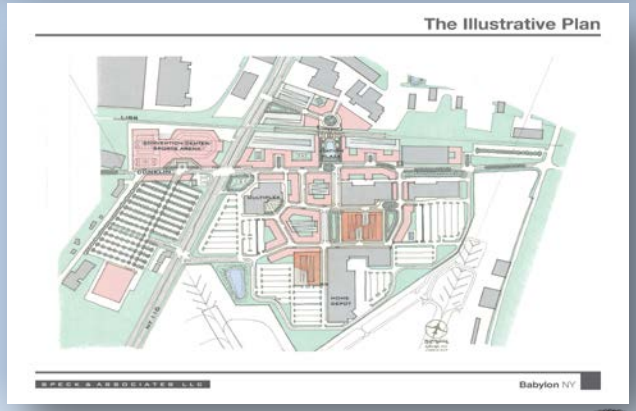
Bellone and Huntington officials have criticized the airport's master plan update but say they support for a train station as a separate project. "We've tried not to link the two together, but we're definitely linked badly, and we're strongly opposed to their expansion."

2009-2010



2002-2008





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TOWN OF BABYLON SUFFOLK CO., N.Y.

Current Route 110 Initiatives (Town/State/County)

- **Route 110 Alternatives Analysis**
- Master Developer
- Form-Based Code (NYSERDA Grant)
- Engineering and Planning Studies (NYSESD Grant)
- RPA Study
- Various proposals in East Farmingdale
- (Future) Republic Station Design and Construction
- Republic Airport

Overview of Route 110 Alternatives Analysis

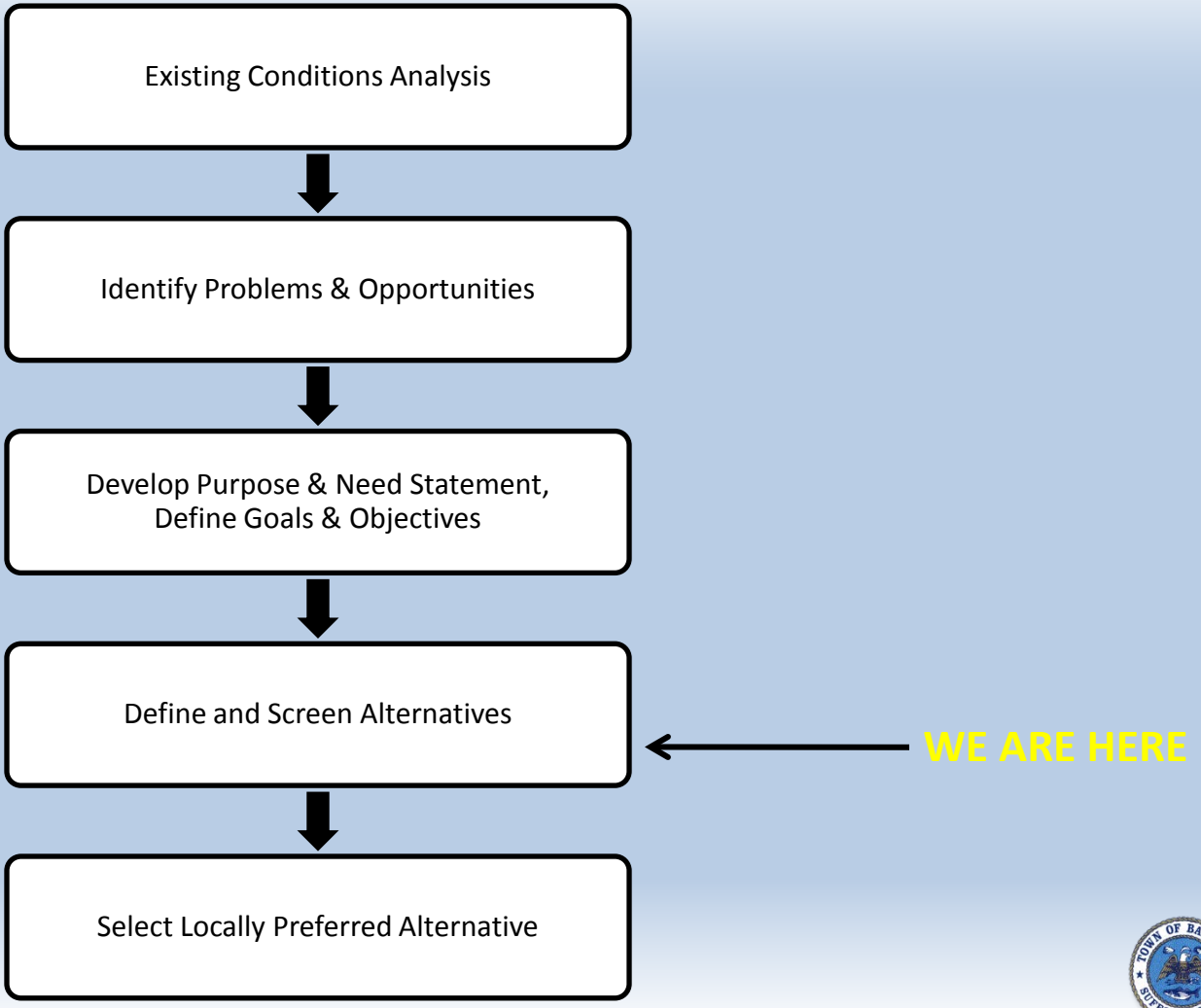
- Consider reasonable options for **mode and alignment** in developing and screening alternatives
- Develop a financially feasible **Locally Preferred Alternative** that supports the vision of **Connect Long Island**
- Conduct ongoing stakeholder and public involvement



- Lead Agency: Federal Transit Administration (FTA)
- Project Sponsor: Town of Babylon
- Consultant Team: led by Parsons Brinckerhoff

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Study Process

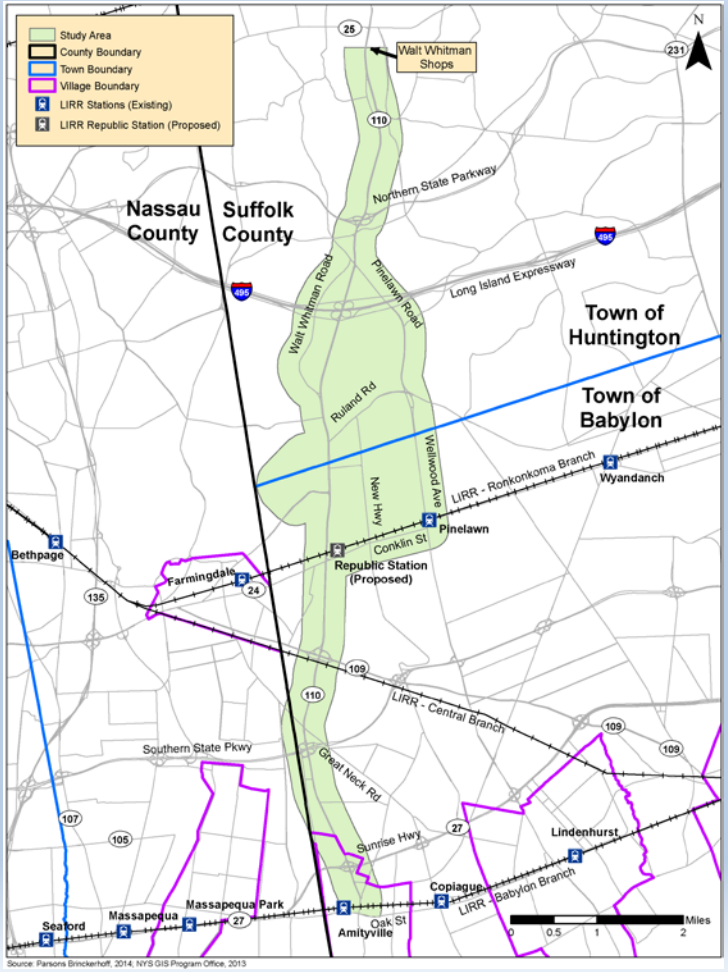


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Study Area

- 10.3-mile corridor between Amityville LIRR Station and Walt Whitman Shops

- Extends east to Wellwood Avenue and west to Farmingdale State College campus and Walt Whitman Road



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Transportation Issues

- Constrained travel choices
- Inadequate multi-modal connectivity
- Existing and projected future traffic congestion
- Bus travel times are not competitive (disincentive for transit use)
- Existing auto-centric land use and building development patterns
- Limited walkability



Key Transportation Opportunities

- Large employers as a source of existing/potential future transit ridership
- Relatively high existing bus ridership; opportunities to integrate with multiple service providers (Suffolk County Transit, NICE, HART)
- Multiple branches of the LIRR
- Multiple travel markets to be served
- Potential reopening of LIRR Republic station and East Farmingdale redevelopment (*Connect Long Island*)
- LIRR Double Track & East Side Access



Source: Speck & Associates, LLC

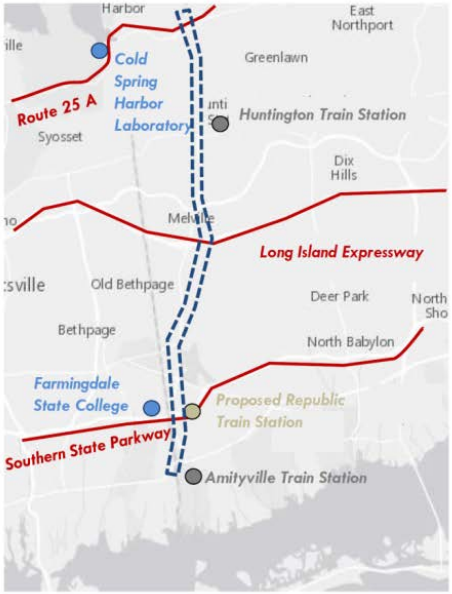
Additional Opportunities

The Route 110 Corridor plays a vital role in Long Island's economy, with over 60,000 jobs located within a half-mile of the corridor.

Significant efforts have been made to bolster the corridor, including proposals for a bus rapid transit (BRT) system, and multiple requests for proposals (RFPs) to concentrate new development in the corridor. The corridor holds significant potential for TOD, with large investments being made around the Huntington and new Republic LIRR Stations.

The corridor currently has over 1 million SF of vacant office space and 500,000 SF of vacant industrial space. With this space availability and its proximity to major facilities, the corridor is a logical physical locus for Long Island's biomedical cluster.

Route 110 Corridor



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Purpose & Need

The purpose of the Route 110 Alternatives Analysis is to:

- Improve north-south mobility
- Increase transit access to and from employment and other activity centers
- Enhance multi-modal connectivity with the LIRR and existing bus service
- Promote increased transit use
- Support TOD along Route 110 and in the study area



Source: Parsons Brinckerhoff

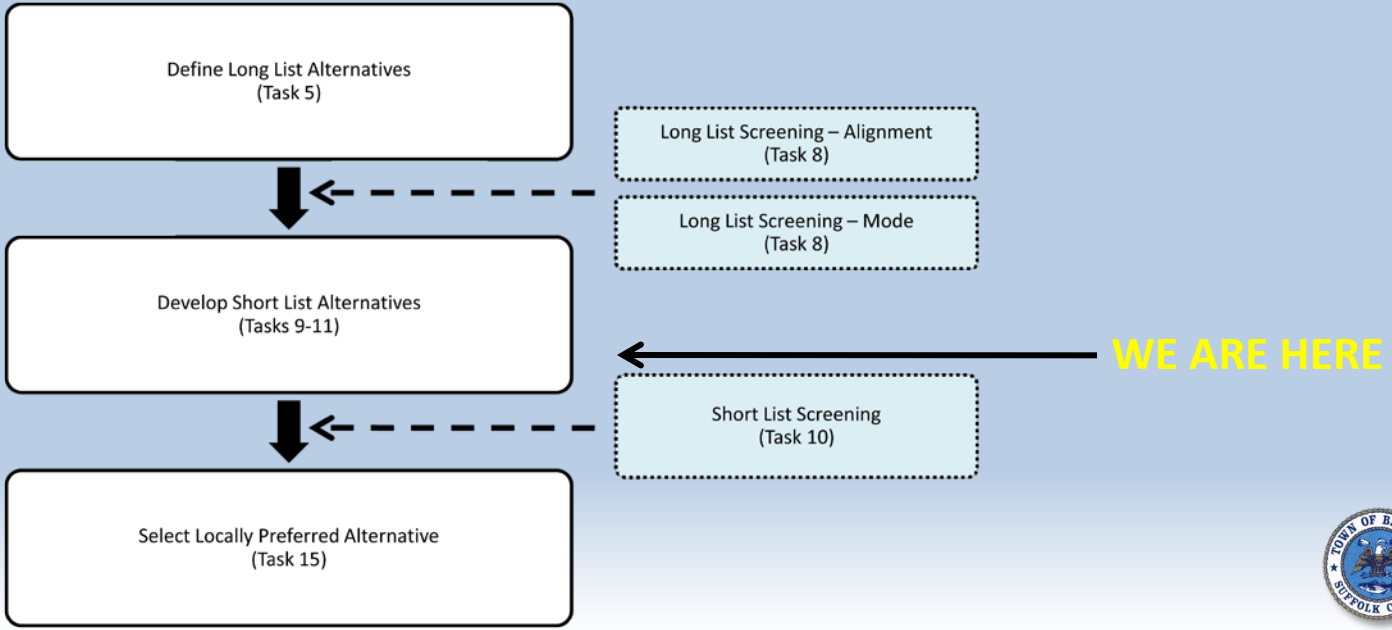


Source: Parsons Brinckerhoff

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Project Goals & Evaluation Process

- **Improve Mobility and Connectivity**
- **Enhance Economic Competitiveness and Promote Economic Growth**
- **Maximize Cost and Operational Effectiveness**
- **Minimize Adverse Environmental Impacts**



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Long List Alternatives

Alternative Number	Alternative Name
	No-Build alternative
A	Enhanced bus service along Route 110
B	Trunk route along Route 110 only
C	Trunk route along Route 110 with diversions off Route 110
D	Trunk route along Route 110 with circular feeder routes
E	Trunk route along Route 110 with transit center nodes and connecting feeder routes

Potential Transit Modes for Alignment Alternatives



Bus Rapid Transit (BRT)



Streetcar



Light Rail Transit (LRT)

Automated Guideway Transit (AGT)



Commuter Rail (LIRR)



Subway



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Sources: New York City Department of Transportation (NYCDOT); Metropolitan Transportation Authority (MTA) New York City Transit; Portland Streetcar; Flickr; NJ Transit; Ultra Global PRT; Londonist; Newsday; NYCSubway.org; MTA LIRR

TOWN OF BABYLON SUFFOLK CO., NY

Potential Transit Modes for Alignment Alternatives



Bus Rapid Transit (BRT)



Streetcar



Light Rail Transit (LRT)

Automated Guideway Transit (AGT)



Commuter Rail (LIRR)



Subway



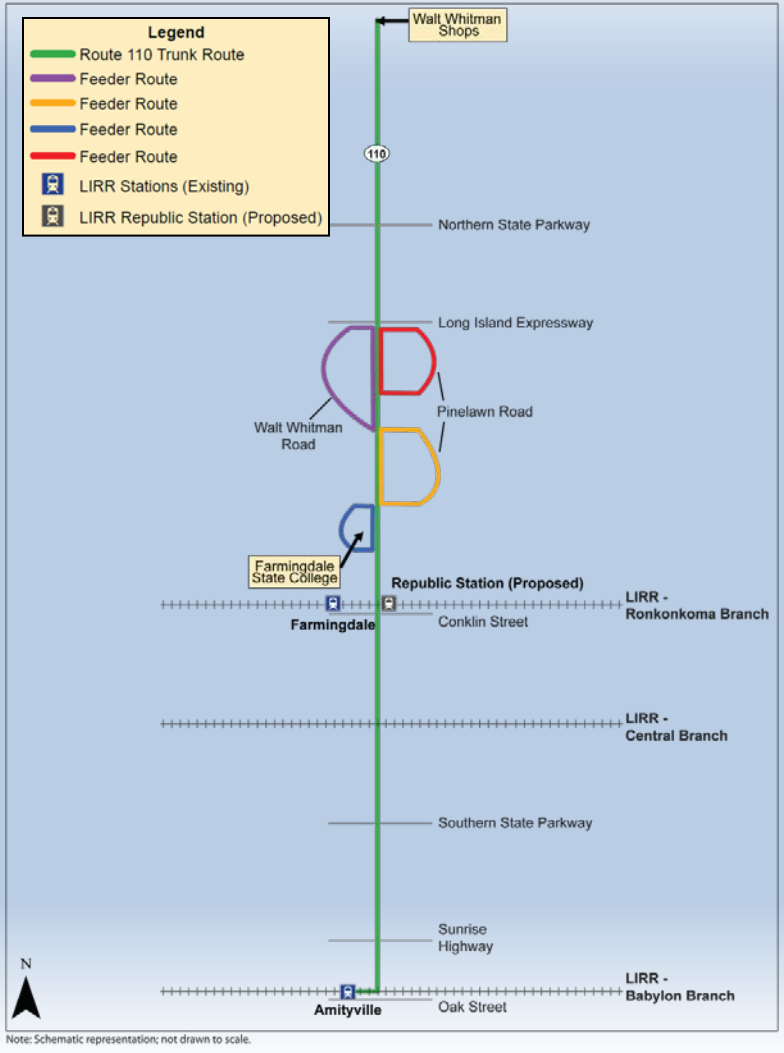
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Sources: New York City Department of Transportation (NYCDOT); Metropolitan Transportation Authority (MTA) New York City Transit; Portland Streetcar; Flickr; NJ Transit; Ultra Global PRT; Londonist; Newsday; NYCSubway.org; MTA LIRR

TOWN OF BABYLON SUFFOLK CO., NY

Results of Long List Screening – Alternative D

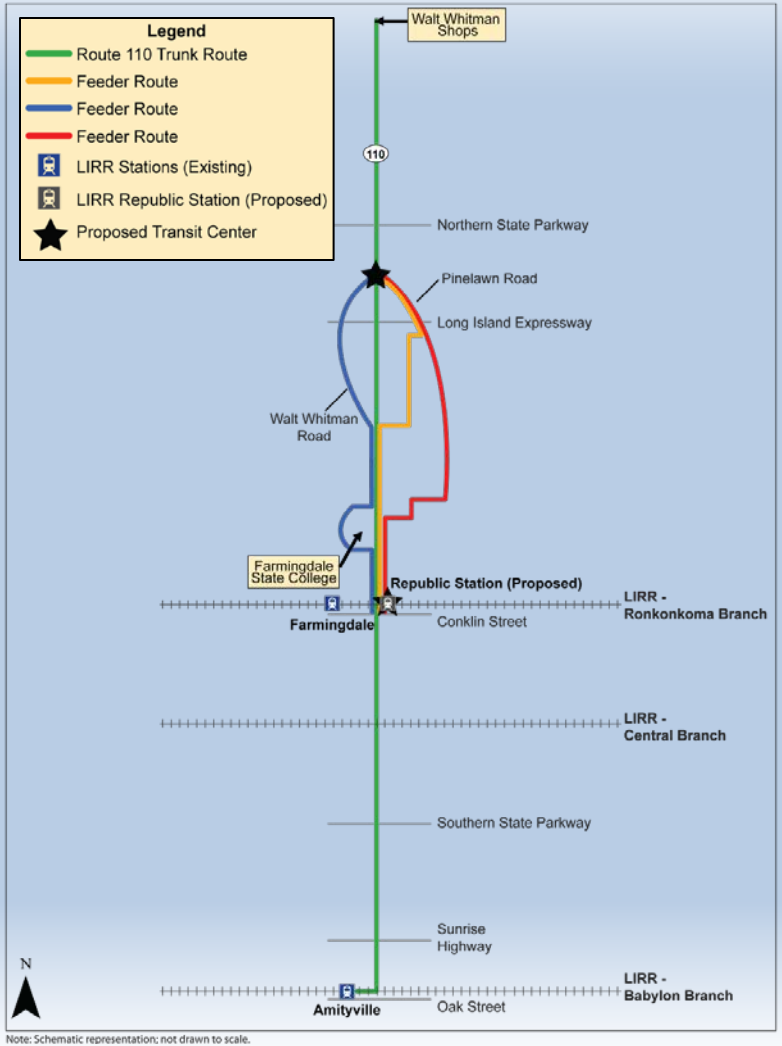
- Bus Rapid Transit (BRT) trunk route along Route 110 with circular feeder routes



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Results of Long List Screening – Alternative E

- Bus Rapid Transit (BRT) trunk route along Route 110 with transit center nodes and connecting feeder routes



Elements of BRT

User-Friendly

Stylish Vehicles



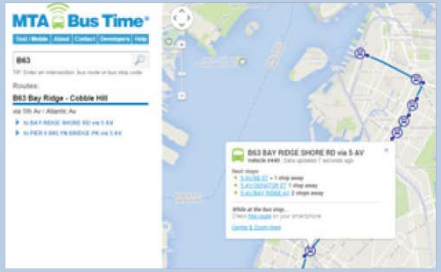
Attractive Stations



Strong Brand Identity



Real-Time Information



Faster Service

Bus Lanes



Faster Fare Collection



Traffic Signal Prioritization



More Frequent Service with Fewer Stops

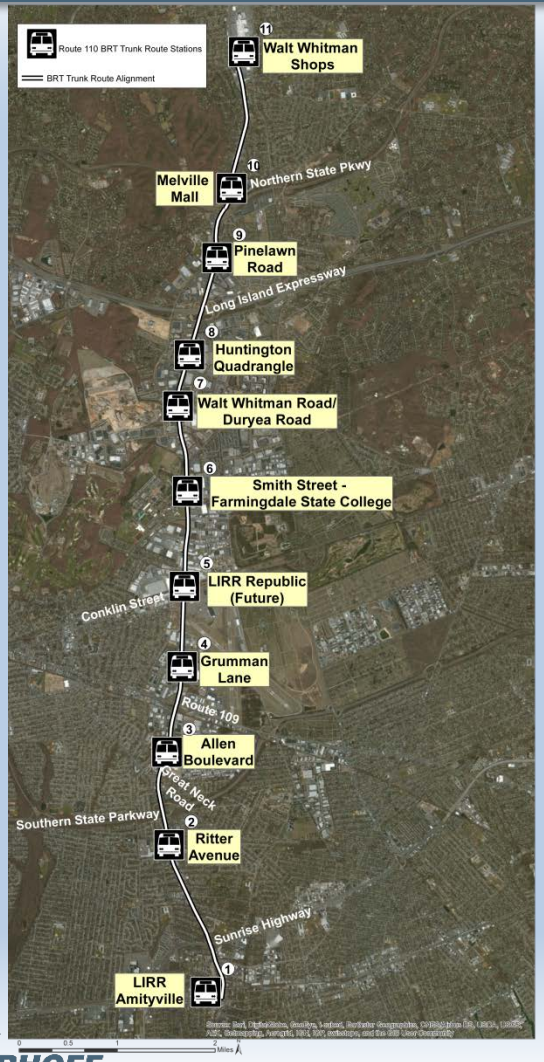


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Sources: Cleveland Regional Transit Authority; WNYC; MTA New York City Transit; New York City Department of Transportation; Metro-Magazine; Capital District Transportation Authority; Ontario Ministry of Transportation; Metrolinx; Bergen BRT

TOWN OF BABYLON SUFFOLK CO., N.Y.

BRT Trunk Route Stations

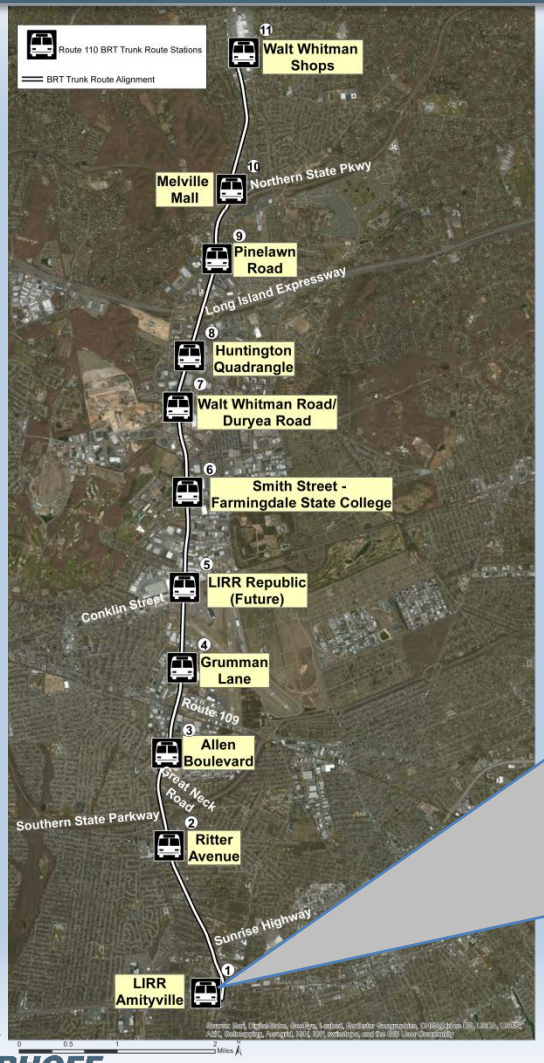


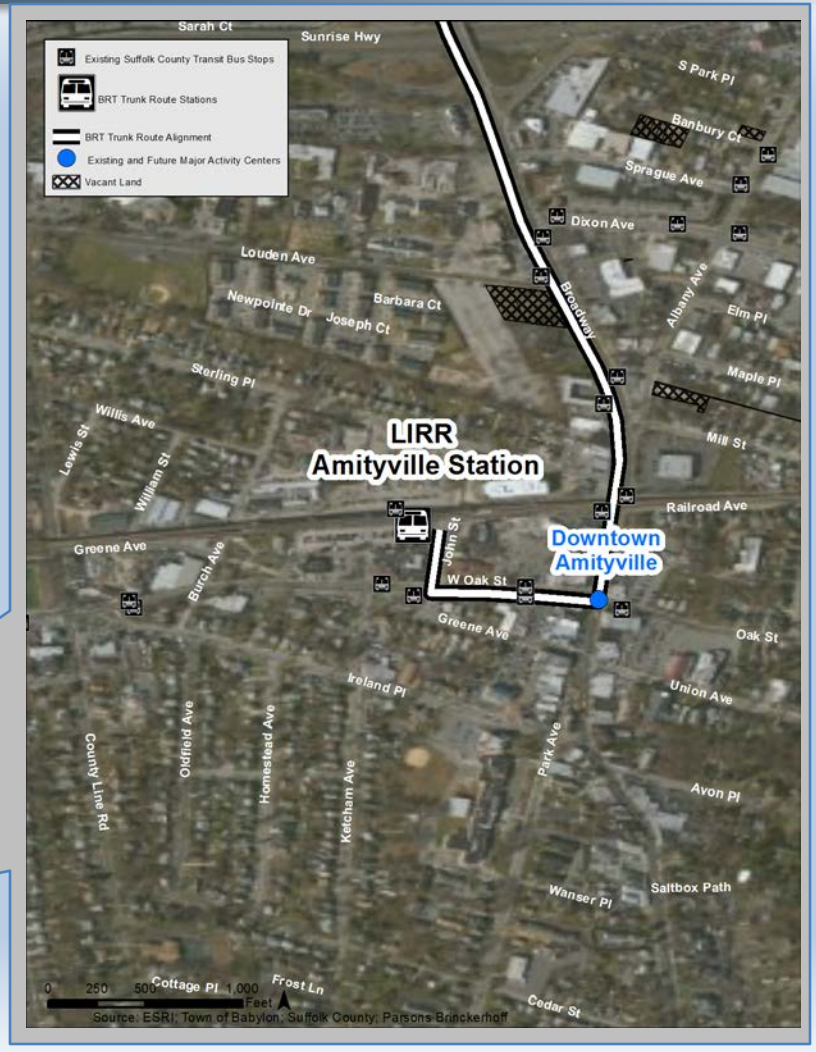
- Limited stop service as an overlay to the existing Suffolk County Transit local S1 service
- Criteria for identifying station locations:
  - Serve existing and future activity centers, striking a balance between origins and destinations (trip generators and attractors)
  - Maximize ridership potential and transfer opportunities
  - Optimize distance between stations
  - Minimize physical constraints for implementation

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TOWN OF BABYLON SUFFOLK CO., N.Y.

BRT Trunk Route Stations

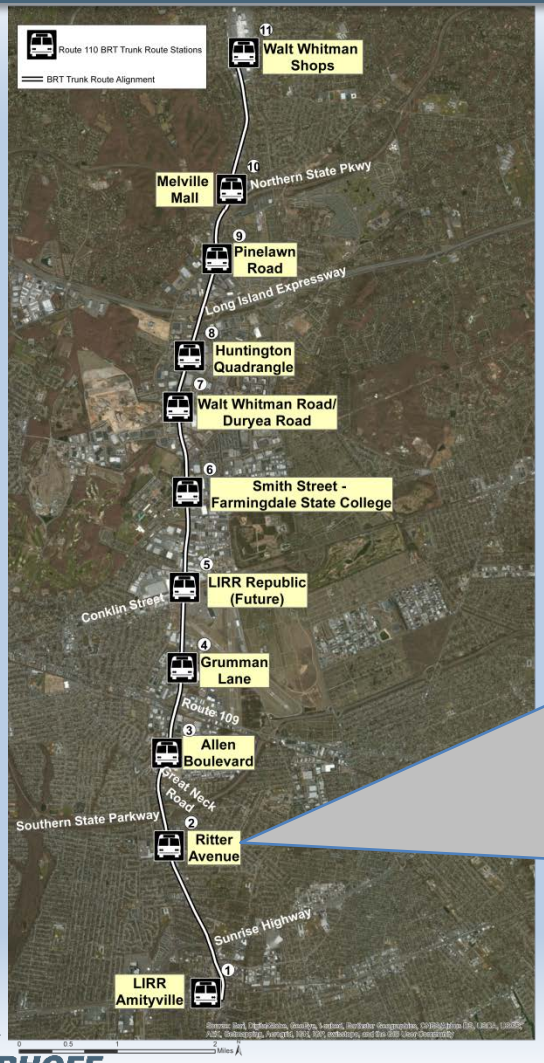


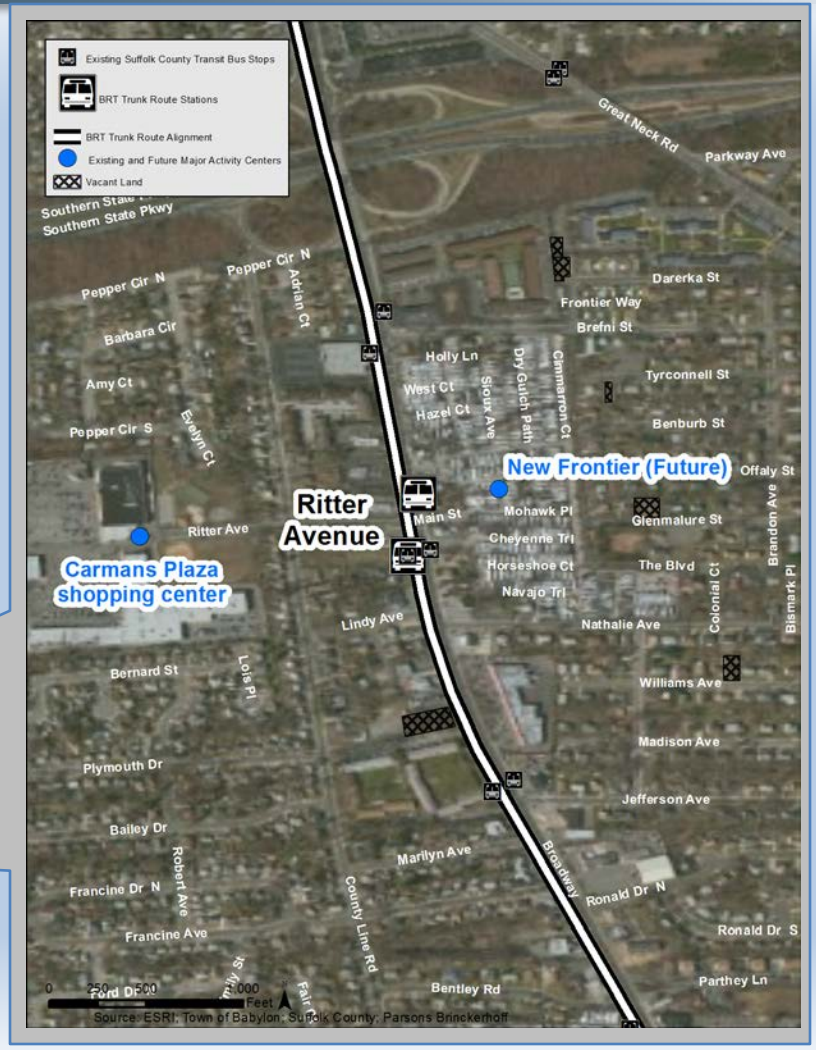


PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

BRT Trunk Route Stations

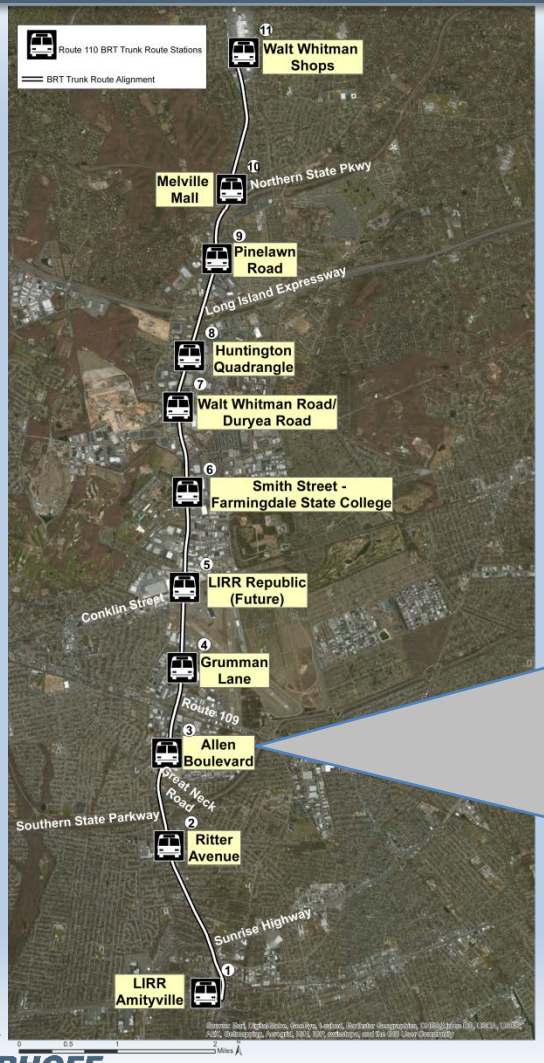


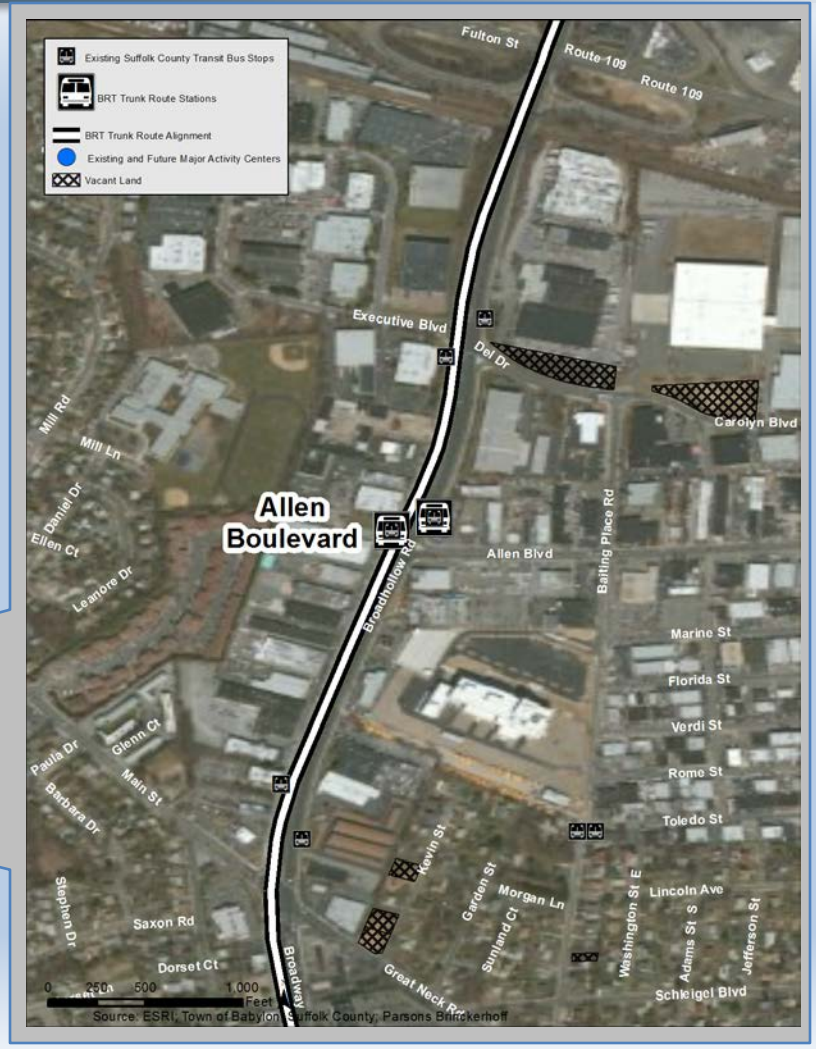


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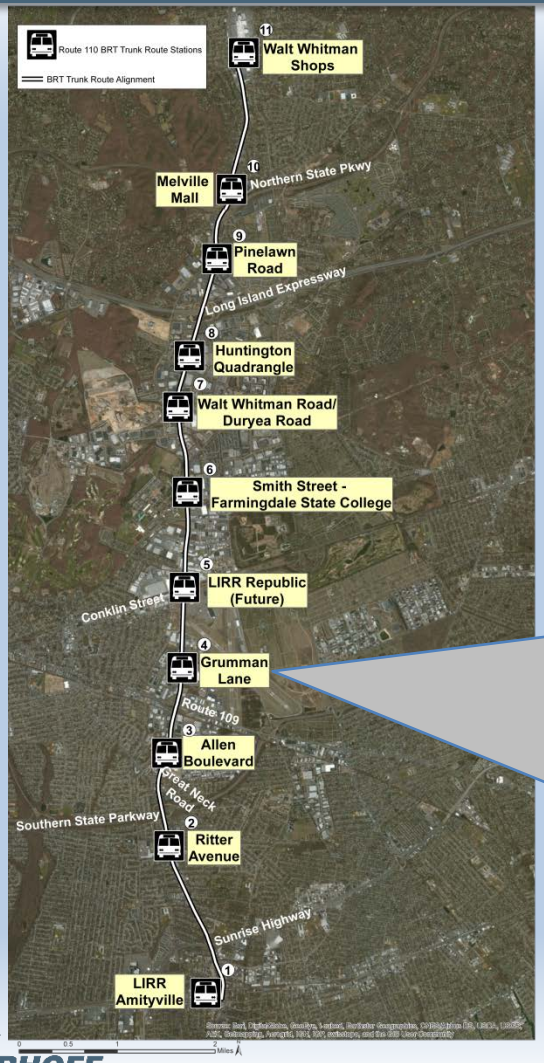




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BRT Trunk Route Stations

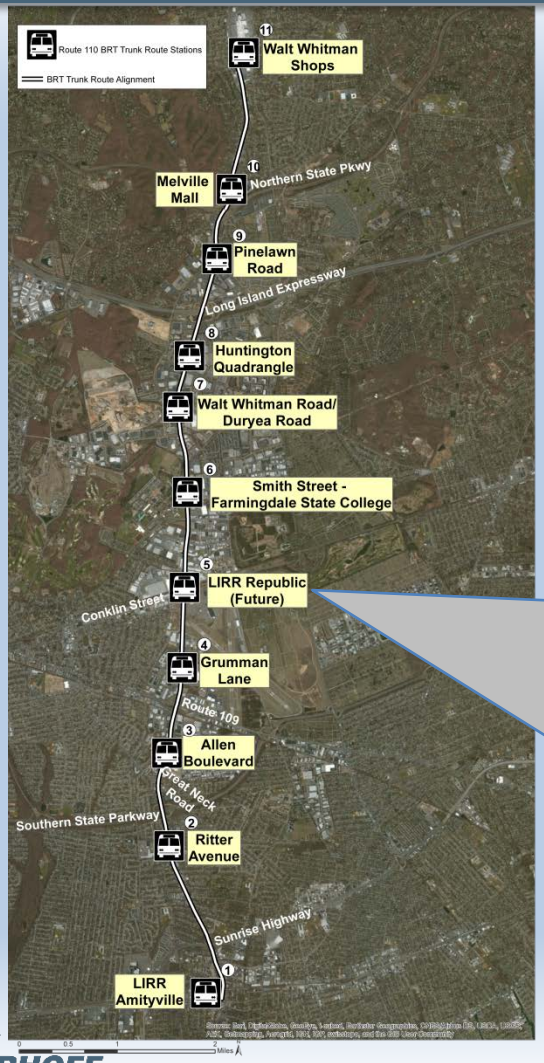




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BRT Trunk Route Stations

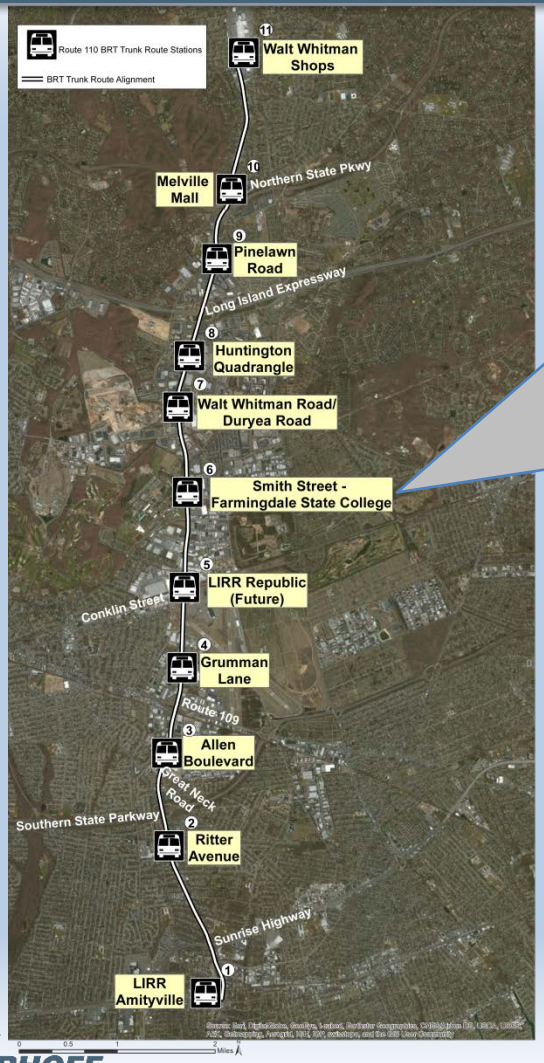




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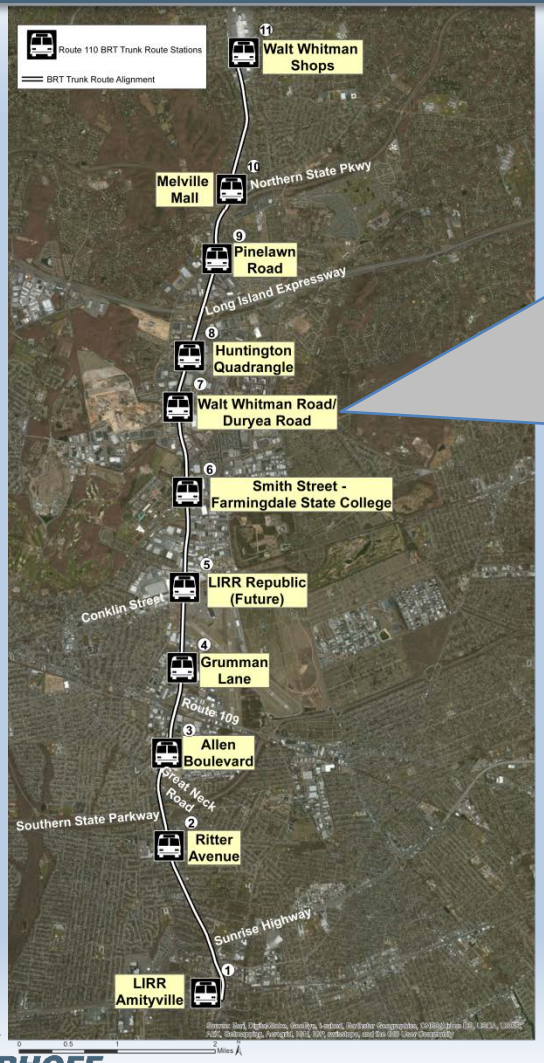




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BRT Trunk Route Stations

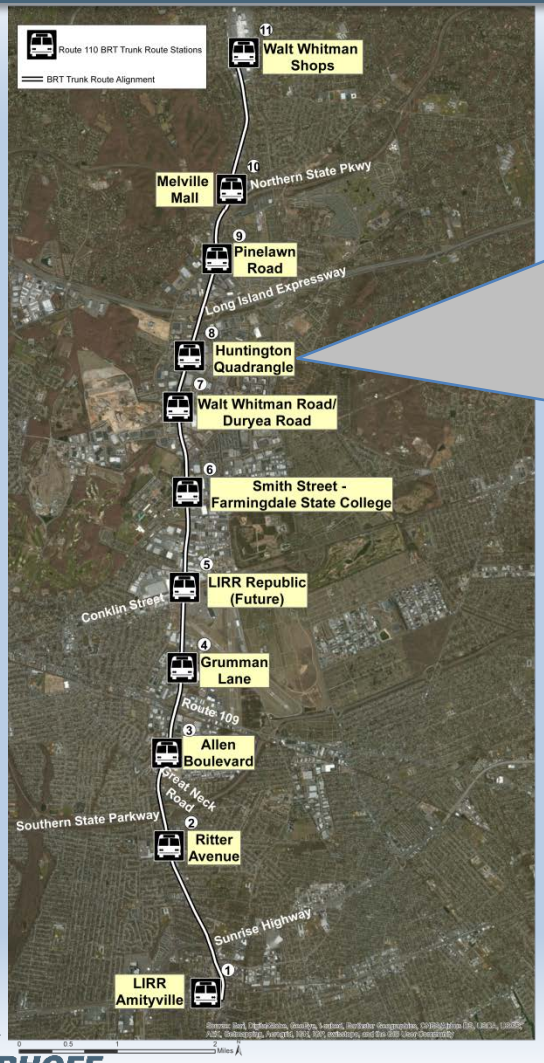




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BRT Trunk Route Stations

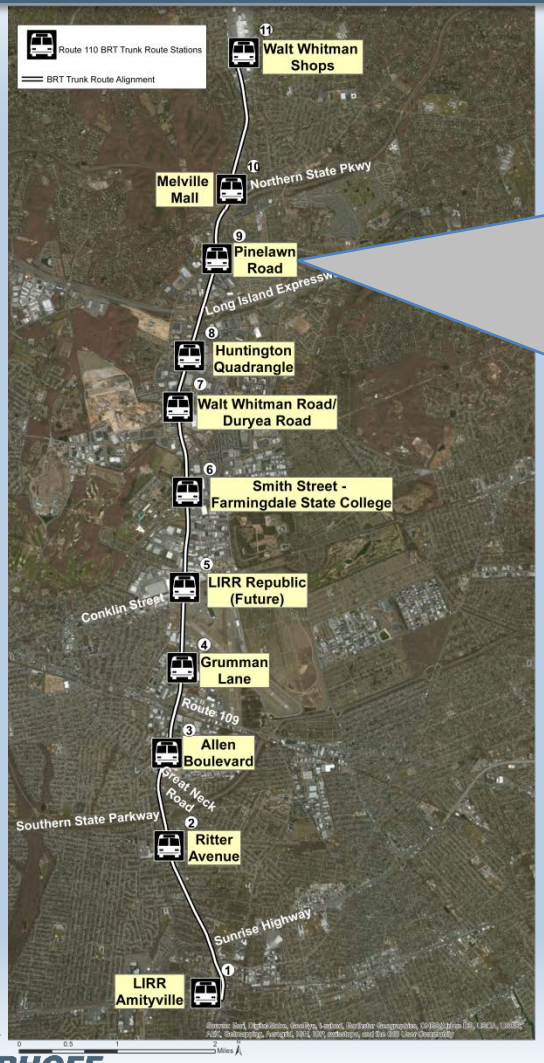




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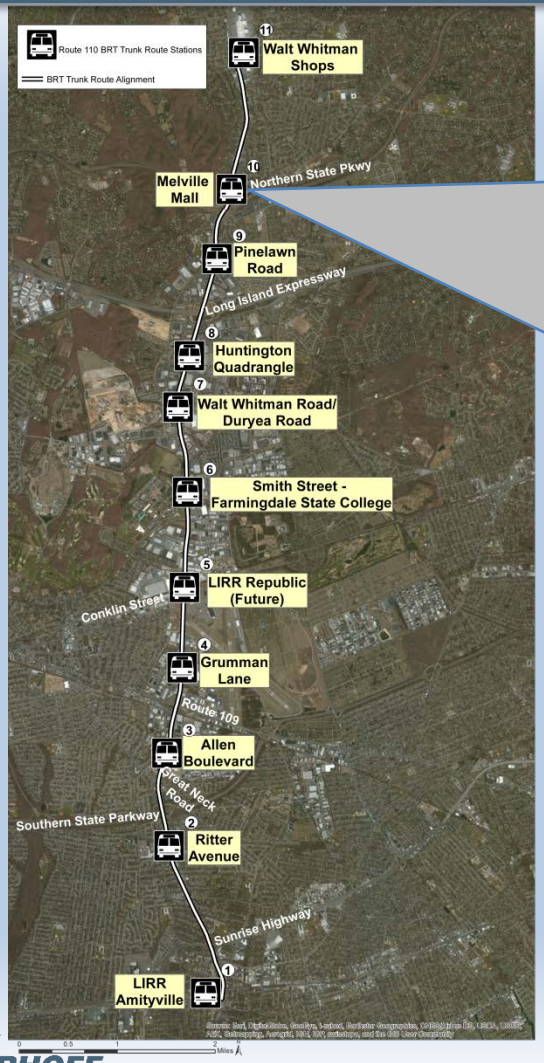




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BRT Trunk Route Stations

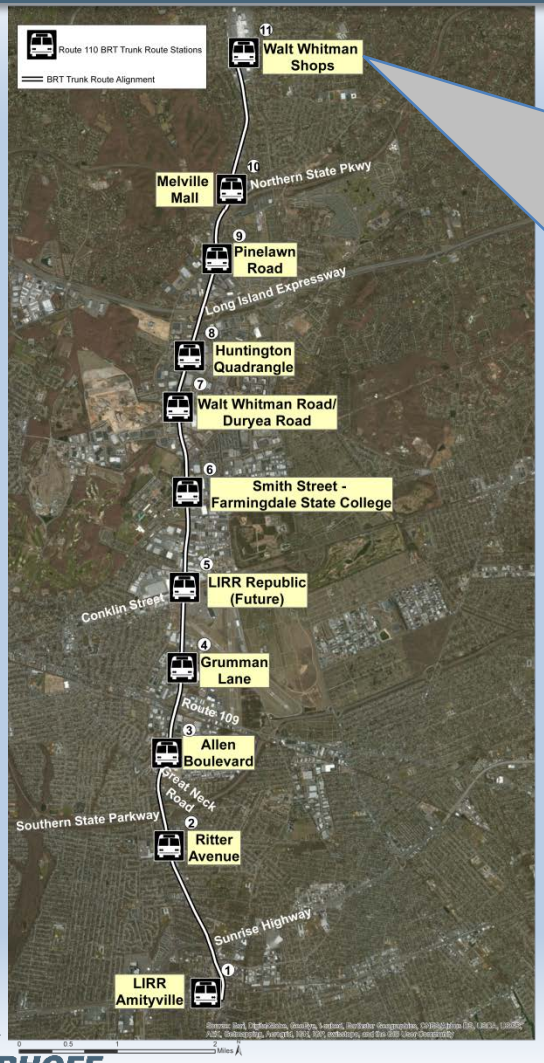


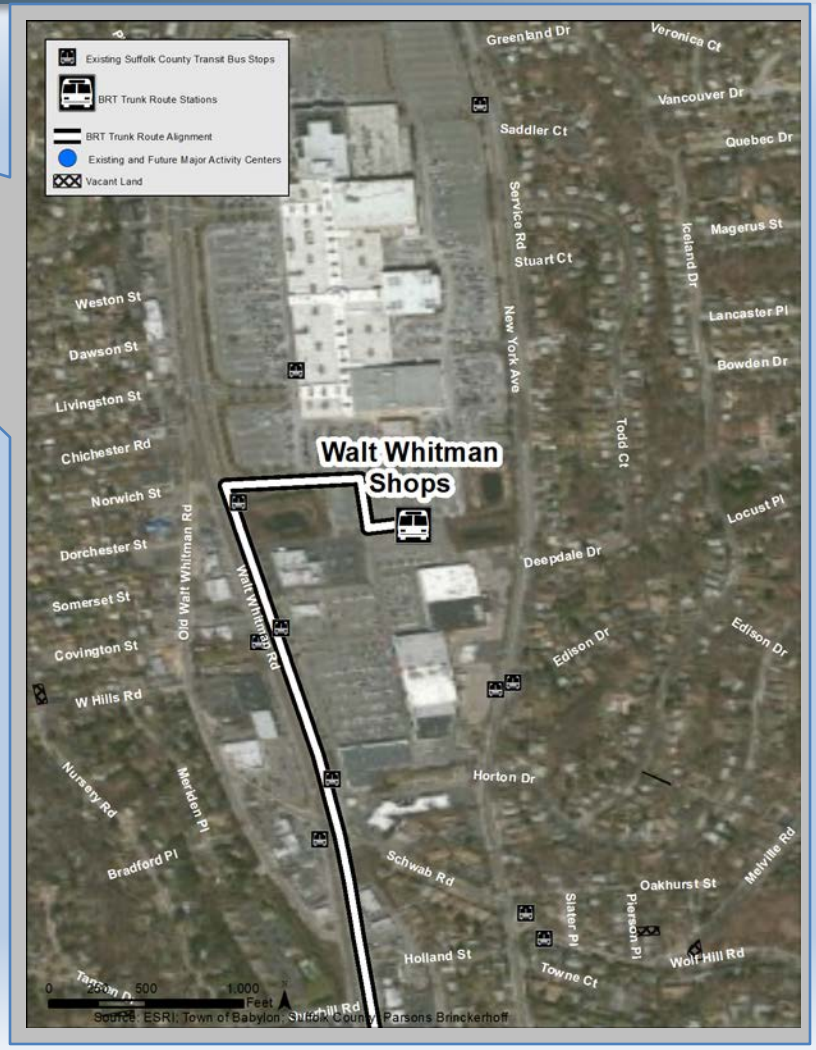


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TOWN OF BABYLON SUFFOLK CO., N.Y.

BRT Trunk Route Stations





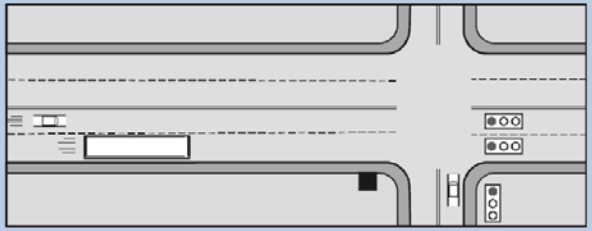
PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

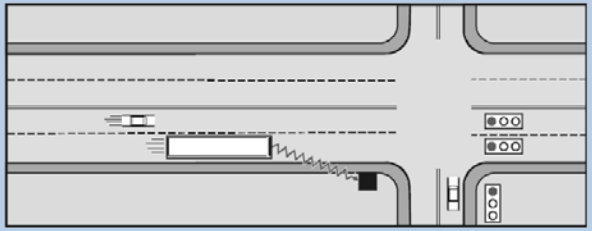
Maximize Effectiveness of Traffic Signal Priority (TSP)

- Where possible, stations will be located on the far side of signalized intersections to make TSP as effective as possible

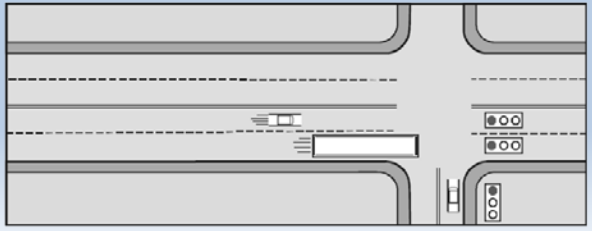
Bus approaches green signal



Signal controller detects bus;
extends current green phase



Bus proceeds on extended green signal



Source: TCRP Report 118

PARSONS BRINCKERHOFF

Dedicated BRT Shoulder-Running along Route 110

- Several segments of Route 110 with a wide existing shoulder can accommodate a dedicated running way for BRT, allowing the BRT vehicles to bypass traffic congestion
  - On the approximately 10.3-mile corridor, 6.5 miles northbound and 6.2 miles southbound can accommodate BRT shoulder-running

- Along other roadway segments, BRT would operate in mixed traffic with other vehicles



Source: Parsons Brinckerhoff

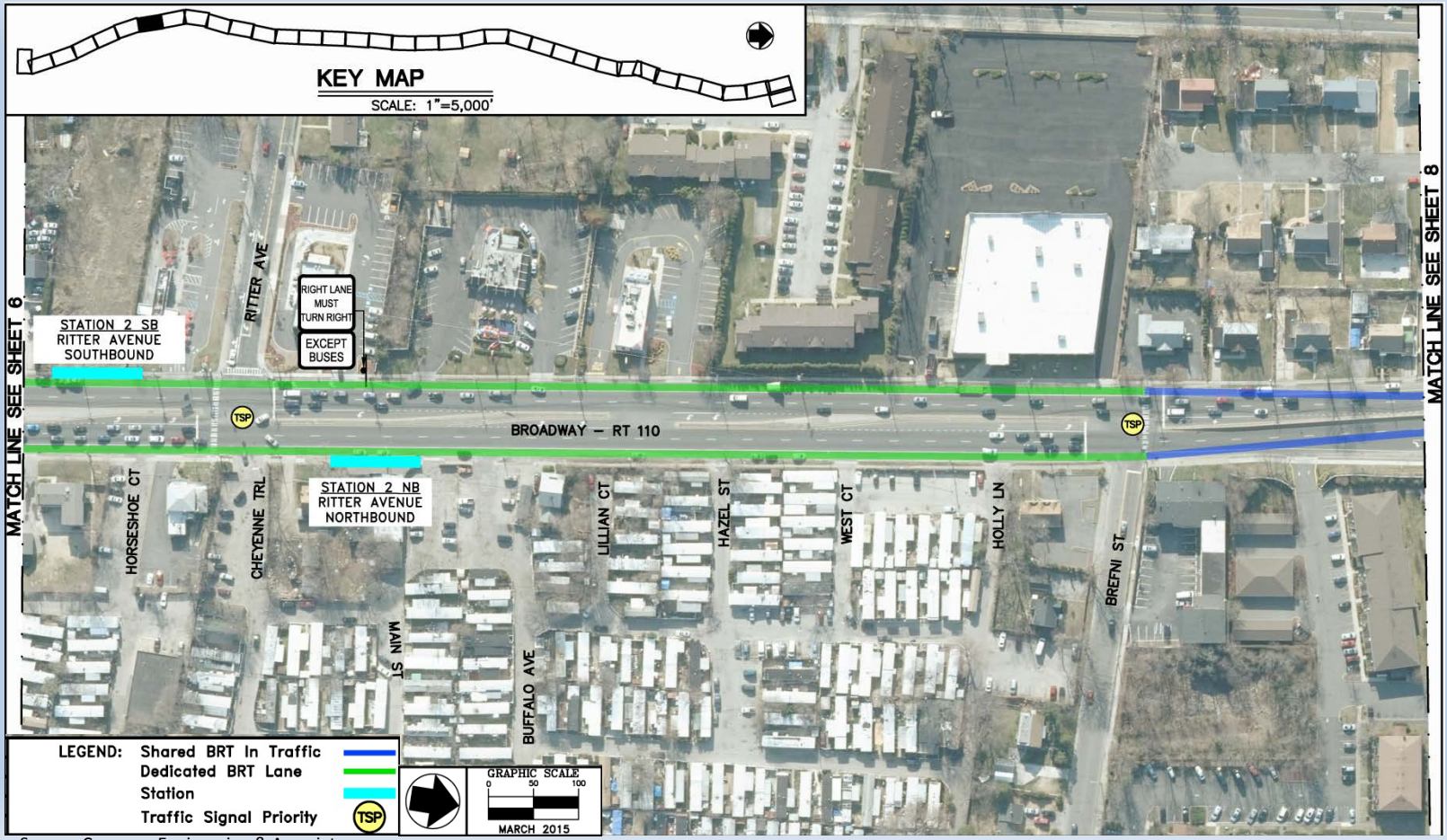


Source: Parsons Brinckerhoff

PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Conceptual Engineering for BRT Trunk Route (Sample)

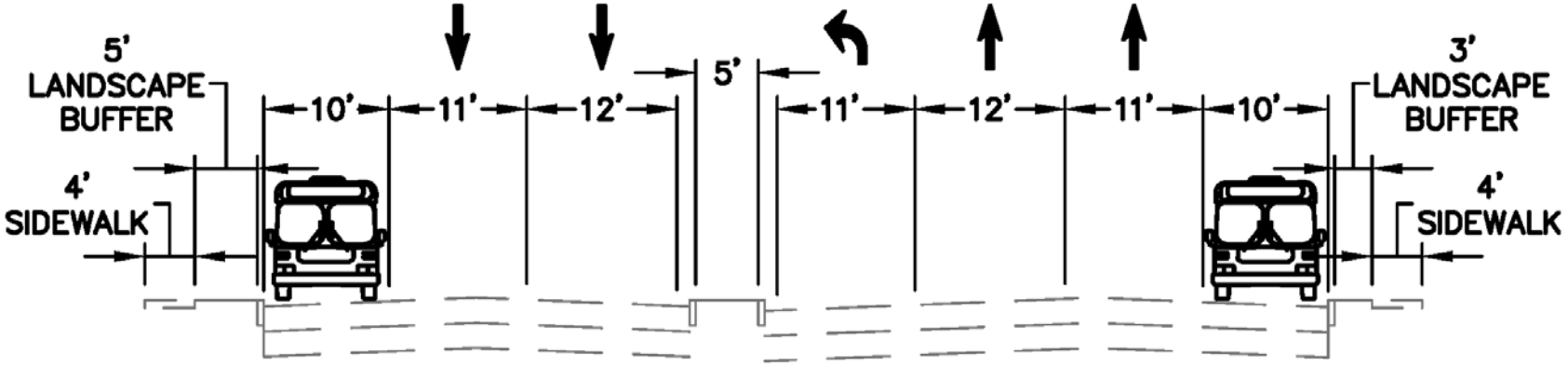


Source: Cameron Engineering & Associates

PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Typical Section for BRT Trunk Route



PROPOSED CONDITION
BROADHOLLOW ROAD – RT 110 NEAR
HAZEL STREET (LOOKING SOUTH)

Source: Cameron Engineering & Associates

PARSONS BRINCKERHOFF

BRT Travel Time Improvements

	Travel time (AM Peak): LIRR Amityville Station ⇔ Walt Whitman Shops	
	Northbound	**Southbound**
Current Suffolk County Transit S1 Service	**45 minutes**	**35 minutes**
Field Verified (Automobile)[1]	**27 minutes**	**21 minutes**
BRT (Projected)[2]	**26 minutes**	**20 minutes**

DRAFT

[1] An average of travel time runs conducted on a typical Tuesday/Wednesday/ Thursday during the morning peak period

[2] Time savings resulting from shoulder-running, TSP, and limited stop service



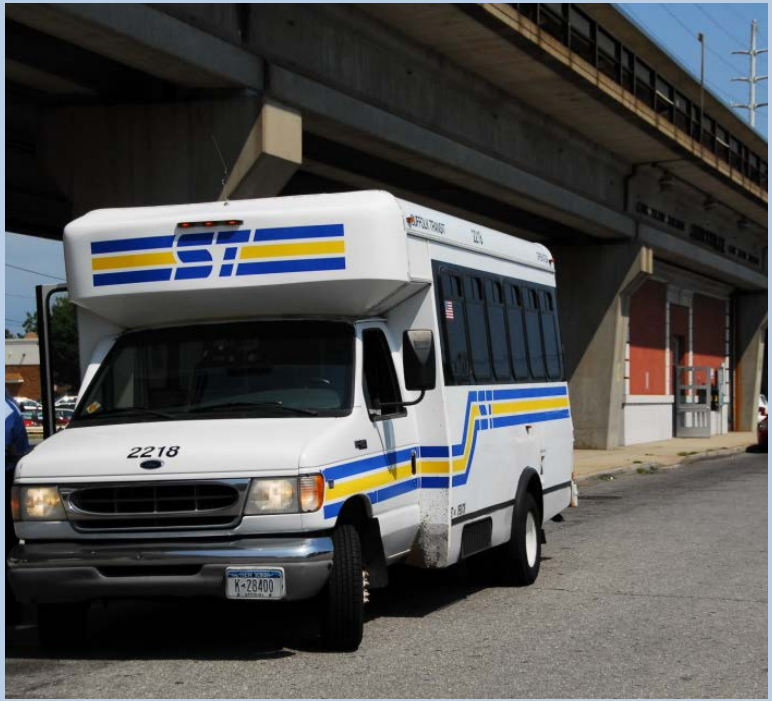
Source: Route 110 BRT Study

PARSONS BRINCKERHOFF

Process for Identifying Feeder Route Alignments

- Determine trunk route station locations and potential transfer points
- Define feeder route focus area

  (from Conklin Street in the south to Pinelawn Road/Route 110 in the north)
- Identify major origins and destinations beyond a reasonable walking distance from Route 110
- Minimize duplicative service
- Simplify operations (e.g., avoid one-way roads for two-way service)



Source: Parsons Brinckerhoff

Serving a Range of Off-Corridor Origins & Destinations

Residential communities



Country Pointe in Melville



Millennium Hills



Avalon Court



The Villas

Major employers



Nikon



Canon



Huntington Quadrangle



Newsday



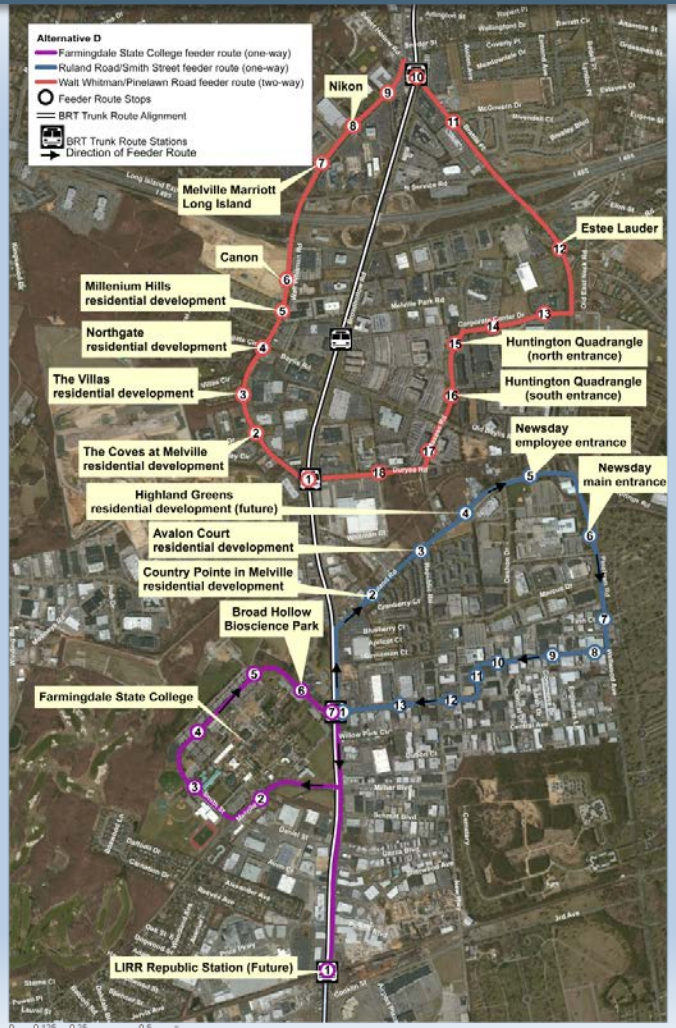
Estee Lauder


Bank of America

PARSONS BRINCKERHOFF

Source: Parsons Brinckerhoff

Alternative D Feeder Routes

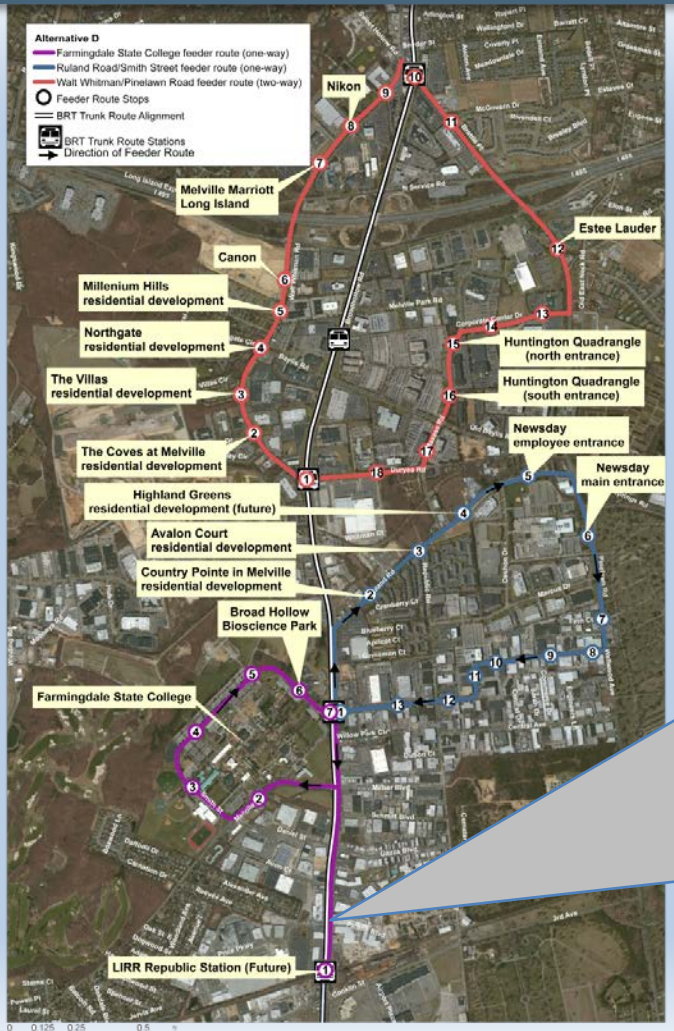


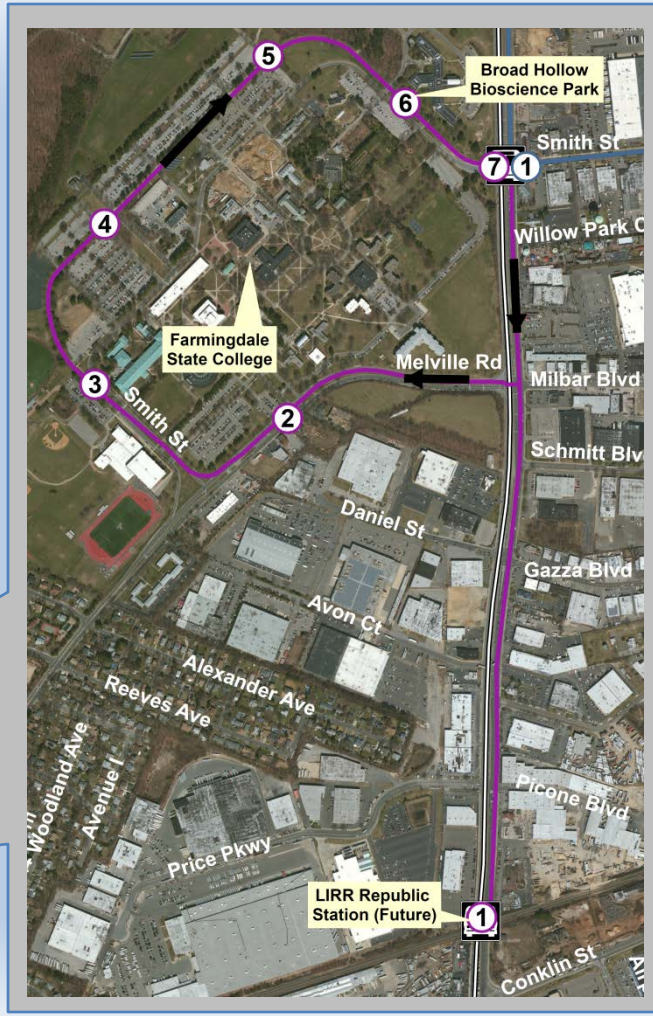
- Feeder routes circulate from select trunk route stations to serve destinations located off Route 110
  - One-way feeder route to serve Farmingdale State College
  - One-way feeder route to serve Ruland Road, Pinelawn Road, and Smith Street
  - Two-way feeder route to serve Walt Whitman Road/Duryea Road, Pinelawn Road, Corporate Center Drive, and Maxess Road

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Alternative D Feeder Routes

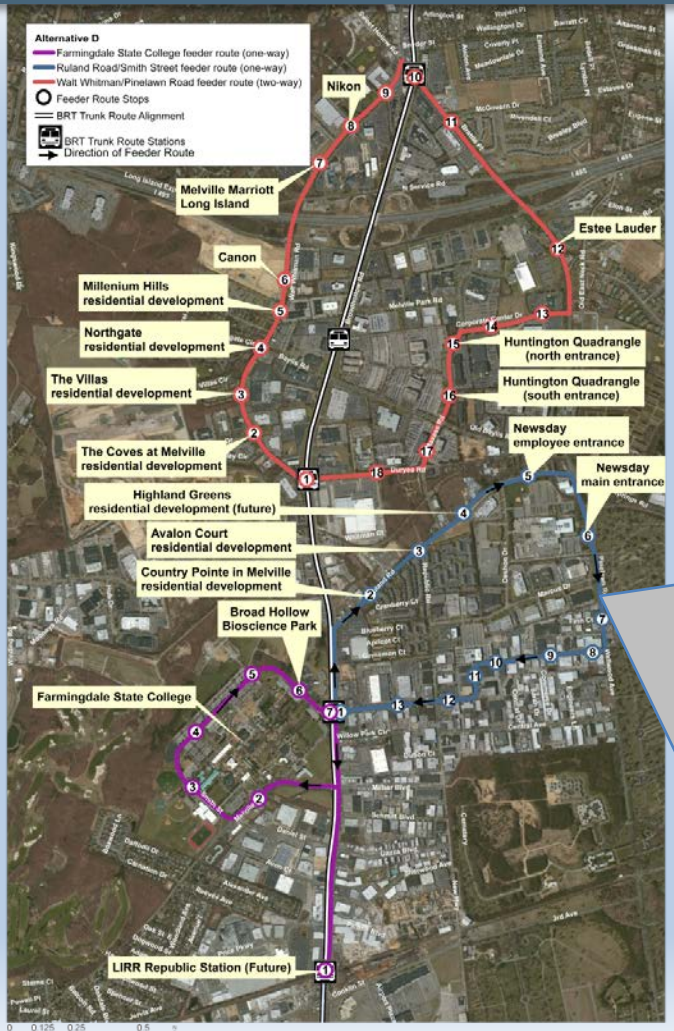


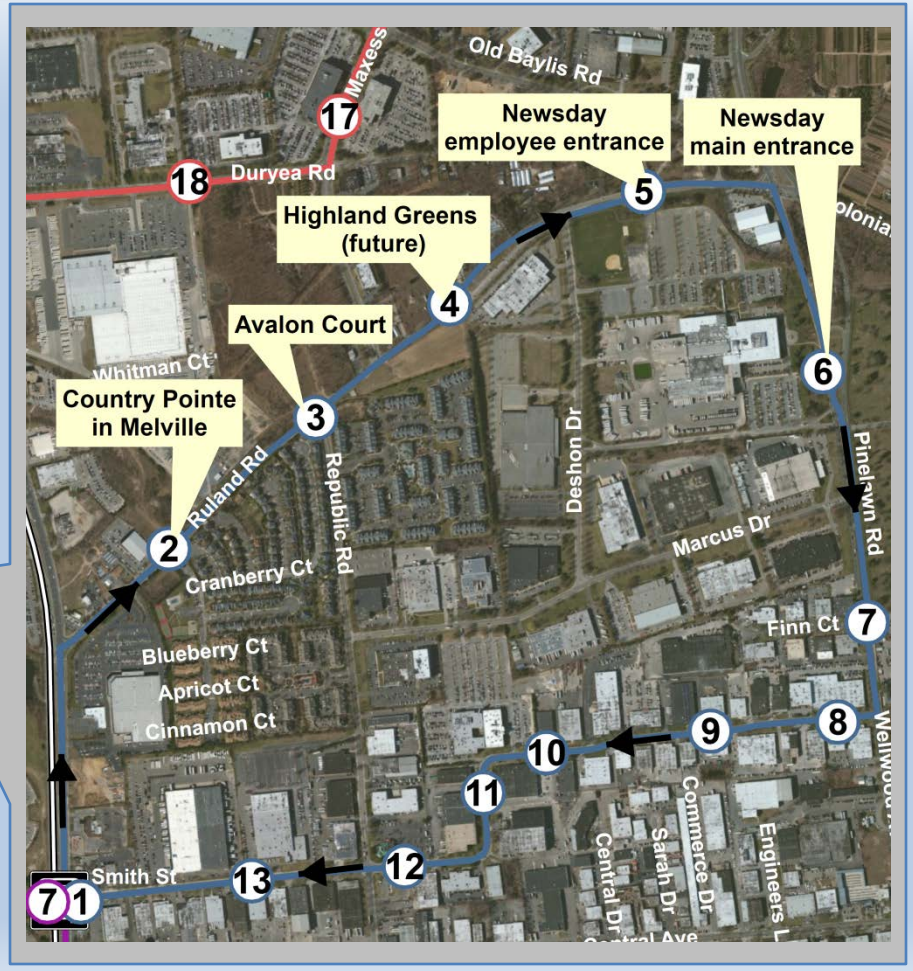


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TOWN OF BABYLON SUFFOLK CO., N.Y.

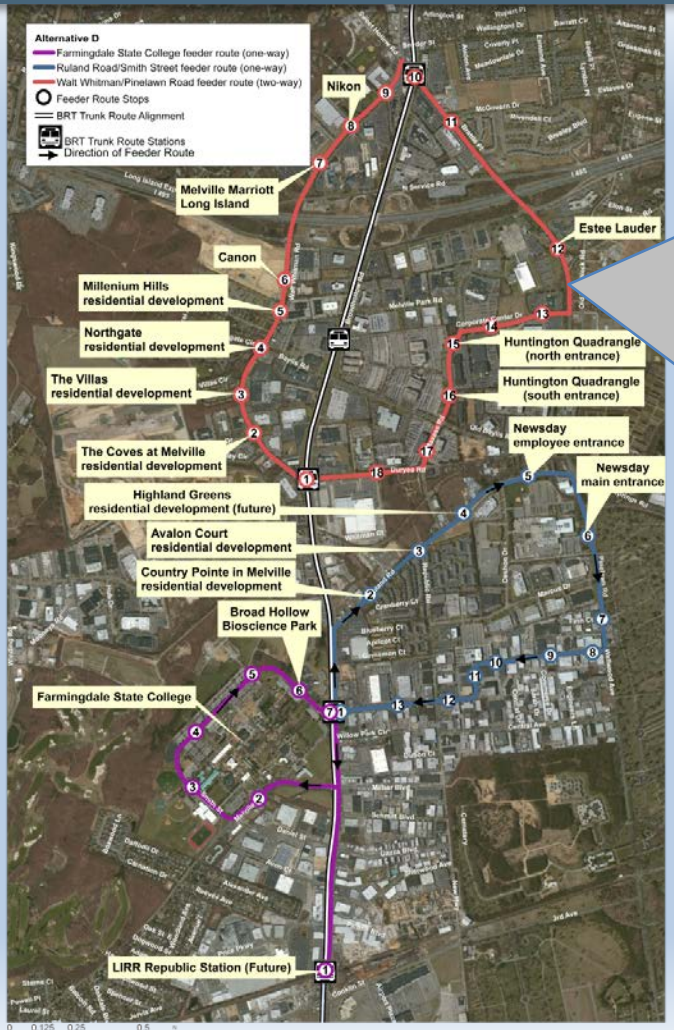
Alternative D Feeder Routes

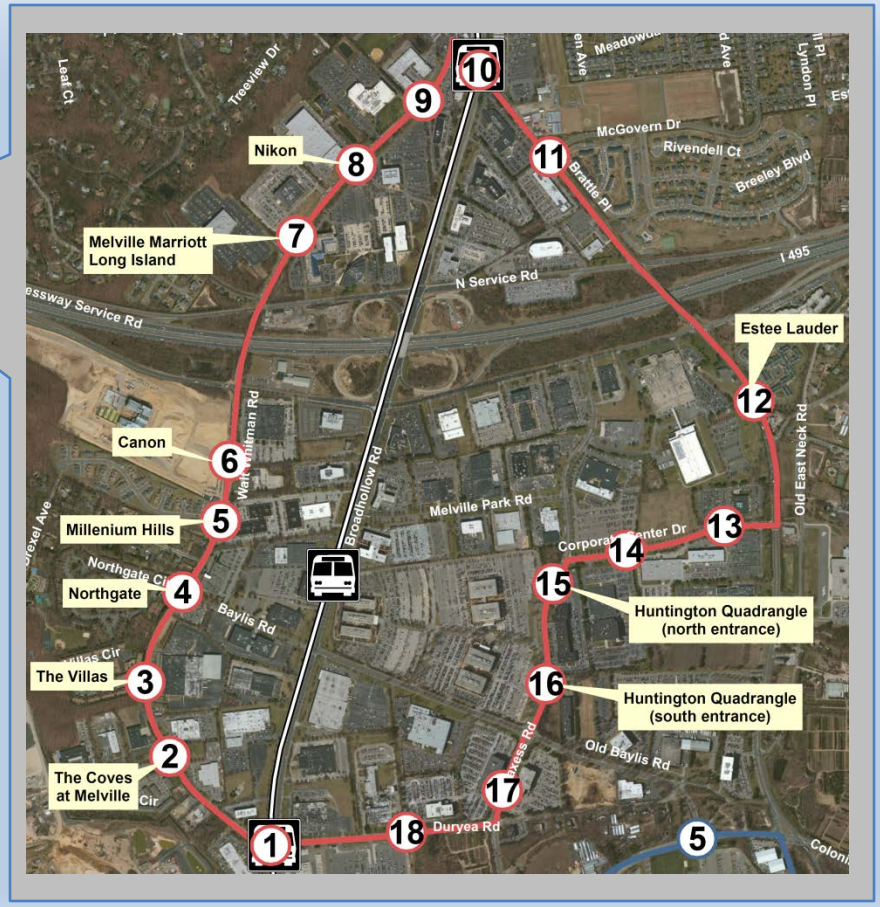




PARSONS BRINCKERHOFF

Alternative D Feeder Routes

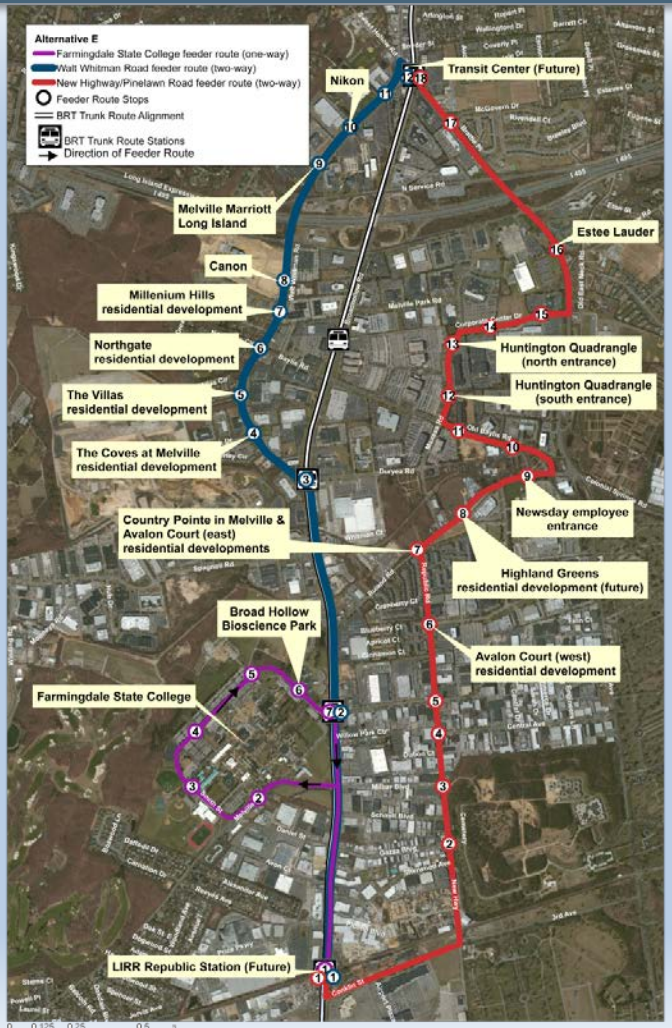




PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Alternative E Feeder Routes

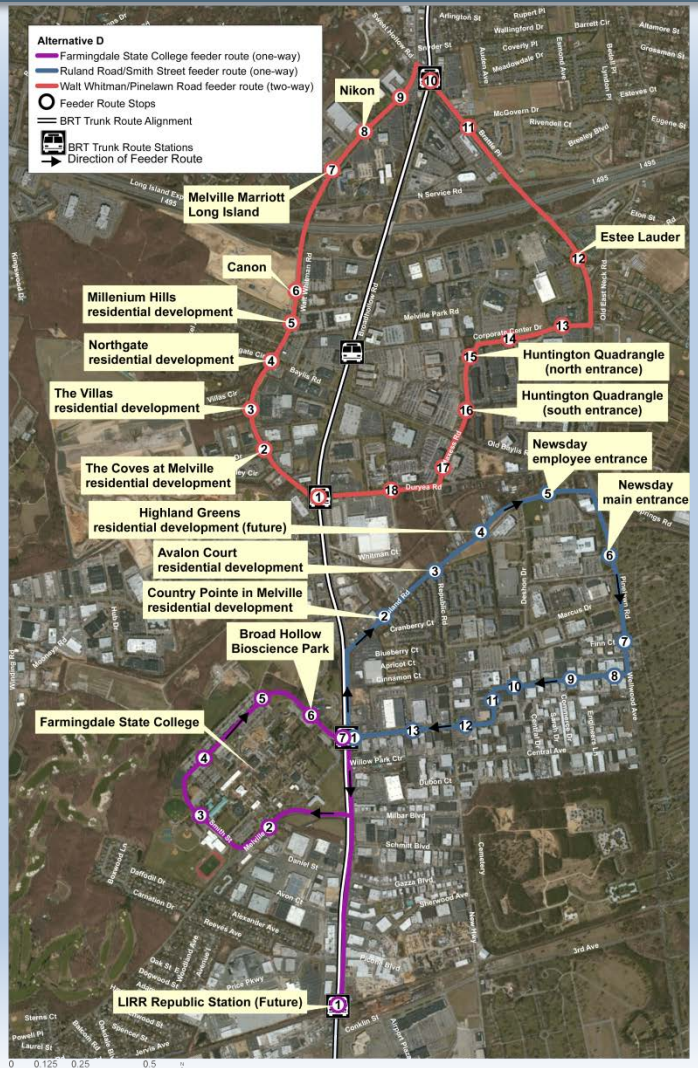


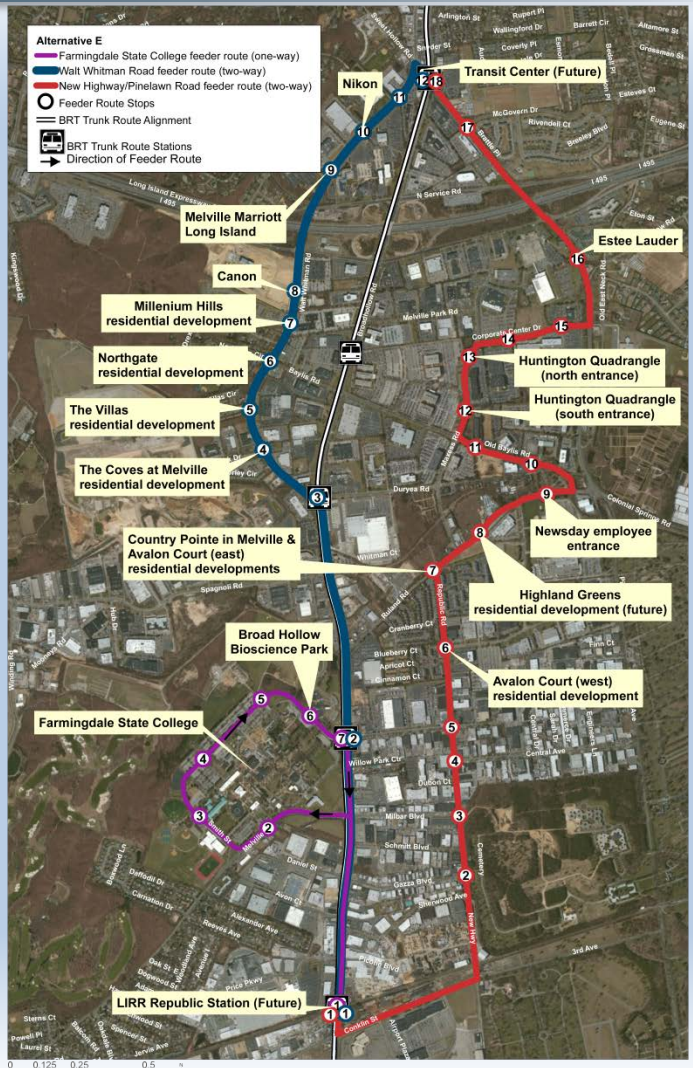
- Feeder routes circulate from two new transit centers on Route 110 to serve destinations located off Route 110
  - One-way feeder route to serve Farmingdale State College
  - Two-way feeder route to serve Walt Whitman Road
  - Two-way feeder route to serve New Highway/Republic Road, Ruland Road, Baylis Road, Maxess Road, Corporate Center Drive, and Pinelawn Road

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Alternatives D & E – Feeder Route Comparison





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TOWN OF BABYLON SUFFOLK CO., N.Y.

Operating Plan/Assumptions for Trunk & Feeder Route Service

- Service span (trunk & feeder)
  - Monday – Thursday: 5:30am – 10:00pm
  - Friday & Saturday: 5:30am – 12:00am
  - Sunday & Holiday: 6:00am – 10:00pm
- Frequency
  - Monday – Friday
    - 10 minutes peak/
      15 minutes off-peak (trunk)
    - 15 minutes (feeder)
  - Weekends & Holidays
    - 20 minutes (trunk & feeder)
- Features specific to trunk route:
  - TSP at all signalized intersections
  - Combination of shoulder-running and mixed traffic operations



Source: Parsons Brinckerhoff

Fare Policy Assumptions

- BRT and feeder route fare equivalent to existing Suffolk County Transit fare

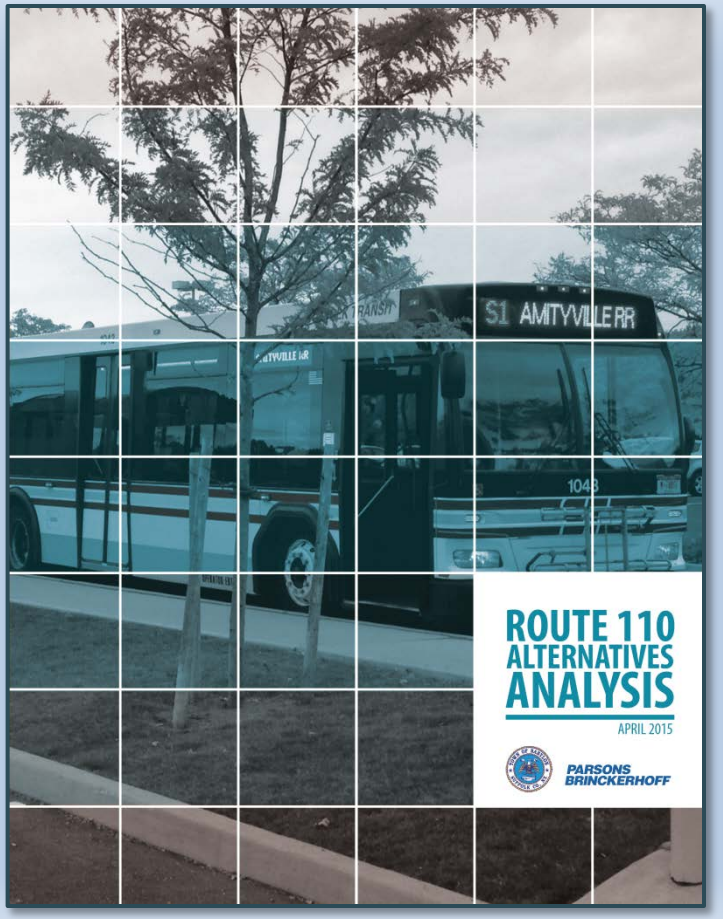
- Transfers consistent with existing Suffolk County Transit policy



Source: Parsons Brinckerhoff

Next Steps

- Capital and Operating & Maintenance Costs
- Ridership Forecast
- Short List Screening
- Public Meeting: April 27, 2015
- Selection of LPA
- Financial Plan
- Alternatives Analysis Final Report
- FTA Project Development Application
- Ongoing coordination with NYMTC (RTP, TIP, Transportation Conformity Determination)



Comments/Questions & Answers

For more information about the ongoing Route 110 Alternatives Analysis, contact
Town of Babylon Office of Downtown Revitalization

Jonathan Keyes, Director
631-957-7430
jkeyes@townofbabylon.com

Or

Eric Zamft, Project Manager
631-957-7408
ezamft@townofbaylon.com

MEETING MINUTES:
TECHNICAL ADVISORY COMMITTEE (TAC) MEETING #2 – WEBINAR

Date: Wednesday, April 1, 2015

Time: 12:30 PM

Location: Webinar hosted at
Parsons Brinckerhoff
One Penn Plaza
New York, NY 10119

Participants:

Name	Agency/Organization	Email
Abraham, Sasha	Town of Huntington, Planning & Environment Department	SAbraham@huntingtonny.gov
Baer, Daniel	Project Team (Parsons Brinckerhoff)	Baer@pbworld.com
Balter, Jacob	Long Island Rail Road (LIRR)	jbalter@lirr.org
Bekofsky, Louis	Suffolk County Department of Economic Development and Planning	Louis.Bekofsky@suffolkcountyny.gov
Bogacz, Gerry	New York Metropolitan Transportation Council (NYMTC)	gbogacz@dot.state.ny.us
Bucich, Nicole	Project Team (Parsons Brinckerhoff)	bucichna@pbworld.com
Catherines, Mary	Long Island Rail Road (LIRR)	mvcathe@lirr.org
Farwell, Randy	Project Team (Nelson\Nygaard Consulting Associates)	rfarwell@nelsonnygaard.com
Gazzo, Desiree	Project Team (B. Thayer Associates)	dgazzo@bthayerassociates.com
Goldberg, Rebecca	Project Team (Cameron Engineering & Associates)	RGoldberg@cameronengineering.com
Greenwald, Stephen	Village of Amityville	sgreenwald@amityville.com
Jijina, Janice	Project Team (Cameron Engineering & Associates)	JJijina@cameronengineering.com
Keyes, Jonathan	Town of Babylon, Office of Downtown Revitalization	jkeyes@townofbabylon.com
Khzouz, Jack	Nassau Inter-County Express (NICE)	jack.khzouz@transdev.com
Lemberger, Aryeh	Nassau County Department of Public Works, Traffic Engineering Unit	alemberger@nassaucountyny.gov
Lenberger, Garry	Suffolk County Department of Public Works, Transportation Division	GarryL@suffolkcountyny.gov
Lin, Kenneth	Project Team (Parsons Brinckerhoff)	LinKen@pbworld.com
Mascali, Rosemary	Transit Solutions	rmascali@transitsolutions.org

Name	Agency/Organization	Email
McVoy, Christopher	Suffolk County Department of Public Works, Transportation Division	Christopher.McVoy@suffolkcountyny.gov
Oral, Sarah	Project Team (Cameron Engineering & Associates)	SOral@cameronengineering.com
Sokol, Maxwell	Project Team (Parsons Brinckerhoff)	sokolml@pbworld.com
Turner, Craig	Town of Huntington, Planning & Environment Department	CTurner@huntingtonny.gov
Tyson, Darnell	Suffolk County Department of Public Works	Darnell.Tyson@suffolkcountyny.gov
Woodford, William	Project Team (RSG)	Bill.Woodford@rsginc.com
Zamft, Eric	Town of Babylon, Office of Downtown Revitalization	ezamft@townofbabylon.com

Purpose:

The purpose of this webinar was to convene the Technical Advisory Committee (TAC) so the Town of Babylon and the Project Team (identified above in the list of webinar participants) could provide an update and get feedback on the ongoing Route 110 Alternatives Analysis, including project status and next steps. The webinar was hosted at the offices of Parsons Brinckerhoff, and TAC members either attended in-person or participated remotely.

Discussion Items:

Topic	Discussion
Introductions	• Attendees introduced themselves and summarized their respective roles in their agency/organization.
Welcome from the Town of Babylon	• J. Keyes opened the meeting by indicating that this webinar is the second convening of the TAC. The first TAC meeting, which immediately preceded the first public meeting, was held on December 15, 2014. There are new members of the TAC that have joined since the first meeting. The presentation and minutes from the first meeting were shared with the full TAC, including the new members. • J. Keyes provided background about the Route 110 corridor, including its role as a major employment hub on Long Island and the need to encourage future growth in a sustainable manner that does not simply add more cars to the roadway. • J. Keyes noted that Suffolk County Executive Steven Bellone's recent State of the County Address highlighted the importance of improved north-south transit connectivity on Long Island, which is a focal point of his *Connect Long Island Plan*. • J. Keyes indicated that the process of planning for transit improvements along Route 110 (including the potential reopening of Long Island Rail Road (LIRR) Republic Station, supported by the potential for the creation of an East Farmingdale Downtown Center – a major mixed-use transit-oriented development (TOD) in East Farmingdale) dates back to 2002. This included the 2010 *Route 110 Bus Rapid Transit (BRT) Study*.

Topic	Discussion
Welcome from the Town of Babylon	• J. Keyes added that there are several ongoing initiatives along Route 110, including the Route 110 Alternatives Analysis (the subject of this TAC webinar), multiple efforts related to the East Farmingdale Downtown Center (Master Developer selection, form-based code preparation, and engineering and planning studies), the preparation of design guidelines by the Regional Plan Association (RPA) along the entire corridor, the inclusion of environmental review and design of LIRR Republic station in the Draft *2015-2019 Metropolitan Transportation Authority (MTA) Capital Program*, and development opportunities related Republic Airport. • J. Keyes introduced N. Bucich to present an overview and update of the Route 110 Alternatives Analysis.
Overview of Route 110 Alternatives Analysis	• N. Bucich and M. Sokol provided a summary of the work presented during the first TAC meeting to get everyone (including the new TAC members) up to speed and set the context for the project before updating the group about work completed since the first TAC meeting. o N. Bucich introduced the Route 110 Alternatives Analysis by summarizing the project background and study area, and presenting the problems and opportunities, purpose and need, goals and objectives, and alternative evaluation process. The Alternatives Analysis is building upon previous work to select a Locally Preferred Alternative (LPA) to advance to Project Development and National Environmental Policy Act (NEPA) review with the Federal Transit Administration (FTA). o M. Sokol presented an overview of the screening process, the Long List Alternatives, and the results of the two-step Long List Screening (alignment and mode). Two bus rapid transit (BRT) alternatives were advanced to the next round of the screening process: 1) BRT trunk route along Route 110 with circular feeder routes (Alternative D), and 2) BRT trunk route along Route 110 with transit center nodes and connecting feeder routes (Alternative E). ▪ The two alternatives would have the same BRT trunk route service along Route 110. The feeder routes would be the distinguishing features between the two alternatives. o M. Sokol discussed the various elements of BRT, and indicated that at this stage of the analysis, the Project Team has focused on the engineering and operational feasibility of limited stop service, traffic signal priority (TSP), and shoulder-running for BRT on Route 110. This focus, however, does not preclude the inclusion of other BRT elements as the project is refined.

Topic	Discussion
Overview of Route 110 Alternatives Analysis	• N. Bucich discussed the criteria that were used in identifying trunk route station locations, and M. Sokol walked through each of the 11 stations (i.e., from south to north: LIRR Amityville, Ritter Avenue, Allen Boulevard, Grumman Lane, LIRR Republic (future), Smith Street/Farmingdale State College, Walt Whitman Road/Duryea Road, Huntington Quadrangle, Pinelawn Road, Melville Mall, and Walt Whitman Shops). o It is assumed that BRT on Route 110 would provide limited-stop service as an *overlay* to the existing (S1) bus network. • N. Bucich presented an overview of TSP and shoulder-running for BRT on Route 110, and R. Goldberg presented a sample plan from the ongoing conceptual engineering. On the approximately 10.3-mile corridor, approximately 6.5 miles northbound and 6.2 miles southbound can accommodate BRT shoulder-running, based on the preliminary analysis completed to date. • Travel time on Route 110 by BRT is projected to be competitive with travel time by automobile. Significant travel time savings over local bus service would result from shoulder-running, TSP, and limited stop service. • N. Bucich discussed the criteria that were used in identifying feeder route alignments, and M. Sokol walked through each of the three feeder routes for both alternatives. o Alternative D (circular feeder routes): 1) one-way feeder route to serve Farmingdale State College; 2) one-way feeder route to serve Ruland Road, Pinelawn Road, and Smith Street; and 3) two-way feeder route to serve Walt Whitman Road/Duryea Road, Pinelawn Road, Corporate Center Drive, and Maxess Road o Alternative E (transit center nodes): 1) one-way feeder route to serve Farmingdale State College (same as Alternative D); 2) two-way feeder route to serve Walt Whitman Road; and 3) two-way feeder route to serve New Highway/Republic Road, Ruland Road, Baylis Road, Maxess Road, Corporate Center Drive, and Pinelawn Road • M. Sokol discussed the operating plan/assumptions and fare policy assumptions for the BRT trunk route and feeder routes. These assumptions tentatively include: o Service span/hours of operation (trunk and feeder): ▪ Monday – Thursday: 5:30am – 10:00pm ▪ Friday & Saturday: 5:30am – 12:00am ▪ Sunday & Holiday: 6:00am – 10:00pm o Service frequency: ▪ Monday – Friday: 10 minutes peak/15 minutes off-peak (trunk); 15 minutes (feeder) ▪ Weekends & Holidays: 20 minutes (trunk & feeder) o Fare for BRT and feeder route service equivalent to the existing Suffolk County Transit fare o $0.25 transfer fee between services, consistent with existing Suffolk County Transit policy

Topic	Discussion
Overview of Route 110 Alternatives Analysis	• N. Bucich discussed next steps in the Alternatives Analysis, which include Capital and Operating & Maintenance costs, ridership forecast, Short List Screening, public meeting (scheduled for April 27, 2015), selection of the LPA, financial plan, final report, FTA Project Development application, and ongoing coordination with NYMTC on air quality conformity (as well as the Regional Transportation Plan and Transportation Improvement Program).
Comments/Questions & Answers	• G. Lenberger indicated that as of April 1, 2015, the base fare for Suffolk County Transit has been increased from $2.00 to $2.25. • A. Lemberger commented that 10-foot-wide shoulders, as indicated in the "typical section for the BRT trunk route" slide, are too narrow to accommodate shoulder-running for BRT vehicles. G. Lenberger concurred, noting that the existing Suffolk County Transit fleet consists of 8.5-foot-wide vehicles with mirrors on both sides. o N. Bucich noted that the Project Team will consider this potential constraint for shoulder-running, and will also examine vehicle options. o R. Goldberg indicated that 10-foot-wide shoulders are deemed "acceptable" (although 11- to 12-foot-wide shoulders are "desirable") for operating speeds under 45 miles per hour (mph), according to American Association of State Highway and Transportation Officials (AASHTO) guidelines. • A. Lemberger asked if there is any consideration of park-and-ride lots in this study. o N. Bucich noted that park-and-ride lots are not being considered at this stage of the analysis, in part because feedback received during the first public meeting was overwhelmingly in opposition to the provision of additional parking (particularly in East Farmingdale). However, there is an abundance of surface parking at the Walt Whitman Shops, which could potentially serve as a park-and-ride lot with the property owner's authorization. o G. Lenberger noted that the Suffolk Clipper currently serves the park-and-ride lot along the Long Island Expressway North Service Road, just east of Route 110. • G. Lenberger commented that the proposed feeder routes closely mirror the former N95 service that was discontinued by NICE. • A. Lemberger asked about the plan for maintenance facilities for the BRT and feeder route vehicles. o N. Bucich indicated that this will be discussed with Suffolk County Transit based on the vehicle requirements for the proposed services.

Topic	Discussion

Comments/Questions & Answers	• A. Lemberger asked to what extent Complete Streets principles are being taken into account, given the County's and Town's Complete Streets legislation.
	  o R. Goldberg noted that BRT by its very nature as a transit service is compatible with Complete Streets principles. Additionally, the BRT stations will be compliant with the Americans with Disabilities Act (ADA) and will include amenities for passengers.
	  o J. Keyes noted that RPA's effort to create design guidelines for future development along Route 110 will incorporate pedestrian elements and streetscape enhancements, which are consistent with Complete Streets principles.
	• R. Mascali indicated that anecdotal evidence points to people not using the existing S1 local bus service because of safety concerns regarding crossing Route 110 (due to both the lack of sufficient pedestrian facilities and adequate crossing time).
	  o N. Bucich indicated that most of the proposed BRT stations would be located where there is an existing Suffolk County Transit bus stop with relatively high ridership.
	  o In addition, N. Bucich added that as part of the future station area planning, enhanced bicycle and pedestrian facilities will be explored.
	• G. Bogacz indicated that a corollary to Route 110 is the I-287 corridor in the Hudson Valley, which can perhaps impart relevant lessons learned for Route 110.
	• G. Bogacz mentioned that, if desired, he can provide contacts in New York City with experience in planning Select Bus Service (SBS).
	• G. Bogacz commented that the span of service in the evening is very important, as employees of different businesses leave work at different times, often late into the evening.
	  o N. Bucich indicated that evening service for the BRT and feeder routes would run to 10pm on Mondays to Thursdays, Sundays, and holidays, and to 12am on Fridays and Saturdays, which is later than the existing S1 service along Route 110.
	• G. Bogacz noted the importance of stop locations at office parks along the feeder routes.
	  o N. Bucich indicated that for purposes of this study, the feeder routes are all proposed to run on main roads (i.e., not within parking lots), with the goal of locating stops as close as possible to the entrances of office buildings. The possibility of traveling within parking lots to better serve the entrances (e.g., at Canon) can be explored in Project Development, which will follow the Alternatives Analysis.
	  ▪ G. Lenberger noted that Canon previously reached out to Suffolk County Transit requesting a route during the AM and PM peak periods between their office park and the Farmingdale LIRR station.

Topic	Discussion

Comments/Questions & Answers	• G. Bogacz asked whether the Project Team will be looking at feeder route travel times and transfer wait times.
	  o N. Bucich confirmed that this will be examined by the Project Team, and that it is an input to the ridership model.
	• R. Mascali asked what inputs are used in the ridership model, how the model accounts for transfers, and what assumptions are being made about future LIRR service.
	  o N. Bucich indicated that specific stop locations and schedules for the BRT and feeder route services are key inputs to the model that stem from the operations planning effort in this study. M. Sokol added that the model uses socioeconomic and demographic forecasts adopted by NYMTC to inform projections of future travel trends. N. Bucich mentioned that the ridership model determines mode choice for trips based on a number of factors, and penalties for transfers are built into the model.
	  o N. Bucich indicated that the Project Team is coordinating with the LIRR regarding assumptions about future service. J. Balter confirmed that the guidance provided by the LIRR to the Project Team was to assume design and construction of a LIRR Republic station, as well as completion of the East Side Access, Double Track, and Third Track projects by 2040.
	• A. Lemberger asked who the intended riders are for the BRT and feeder services.
	  o N. Bucich noted that Route 110 is a diverse corridor with multiple travel markets, including work trips during the morning and evening peak periods, non-work trips by employees during the lunch hour, and non-work trips made by shoppers, visitors, university students, and other non-workers during both peak and off-peak periods.
	  o E. Zamft indicated that the dual goal is to attract “choice riders” (i.e., those who own an automobile), as well as provide improved transit service for existing transit users on Route 110.
	• A. Lemberger asked whether there has been any consideration to future changes in the local Suffolk County Transit S1 service.
	  o N. Bucich indicated that it is not anticipated that the Suffolk County Transit S1 service would be replaced or service reduced. Whereas the Suffolk County Transit S1 service would continue to provide local service, BRT would provide more frequent service with fewer stops.
	• S. Greenwald commented that the Village of Amityville intends to promote TOD in the Village, which would improve accessibility to not only the LIRR, but also the proposed BRT.
	• G. Bogacz requested that the Town of Babylon send the public meeting date and time to the TAC (see below). Other members of the TAC indicated a desire to attend the public meeting.
	• J. Keyes concluded the meeting by thanking the TAC for their ongoing participation and reminding the TAC to contact him with any additional questions or comments.

NOTE: The second Public Meeting for the Route 110 Alternatives Analysis is scheduled for Monday, April 27, 2015, starting with an open house at 6:00 PM, with the formal meeting starting at 6:30 PM. The location of the public meeting will be the second floor of the East Farmingdale Fire Department (930 Conklin Street).

Materials Transmitted or Received:
None

Attachments:
Presentation from meeting

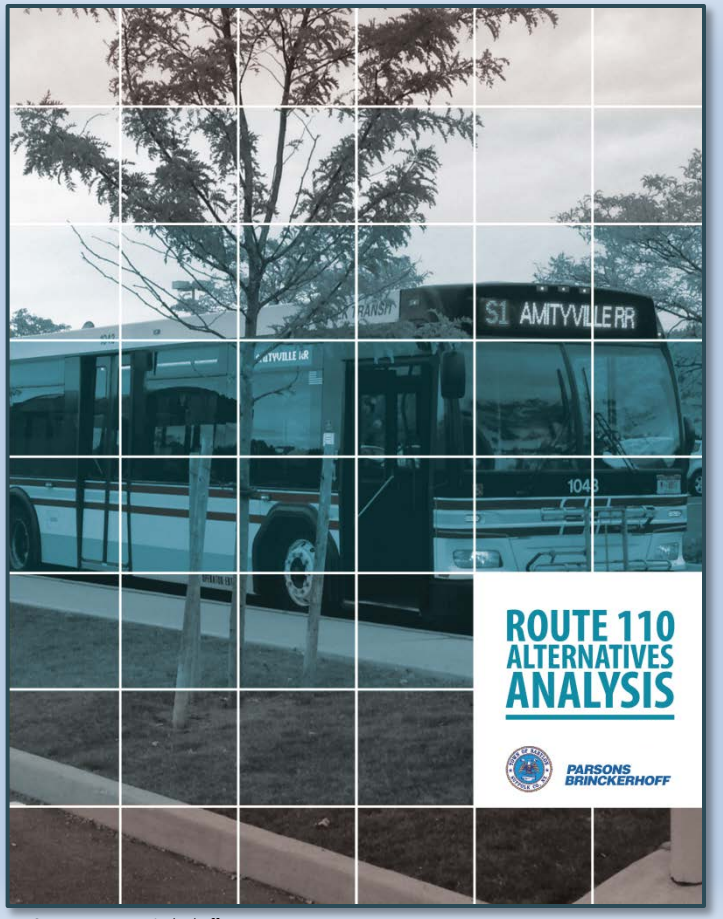
Distribution:
TAC

These minutes represent the recorder's understanding of the issues discussed. Please report any discrepancies to the recorder within seven days; otherwise the record will remain as written.

Route 110 Alternatives Analysis

Technical Advisory Committee (TAC) Meeting #3 – Webinar

July 1, 2015



Source: Parsons Brinckerhoff

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Agenda

- **Introductions**
- **Welcome from the Town of Babylon**
  – Jonathan Keyes
  Director, Town of Babylon Office of Downtown Revitalization
- **Update on Route 110 Alternatives Analysis**
  – Parsons Brinckerhoff Team
- **Comments/Questions & Answers**

Welcome from the Town of Babylon

Jonathan Keyes
Director, Town of Babylon Office of Downtown Revitalization

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What's New since TAC Meeting #2?

- Ridership Forecasts
- Evaluation of Short List Alternatives
- Financial Plan



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Study Process



Existing Conditions Analysis

↓

Identify Problems & Opportunities

↓

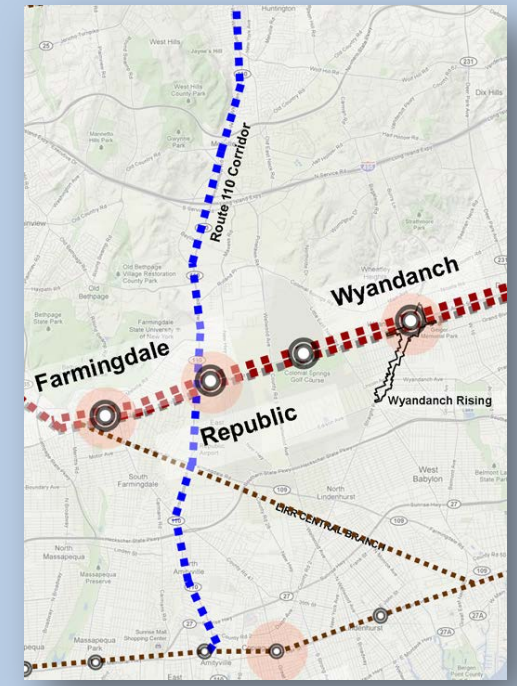
Develop Purpose & Need Statement,
Define Goals & Objectives

↓

Define and Screen Alternatives

↓

Select Locally Preferred Alternative



Source: Connect Long Island Plan

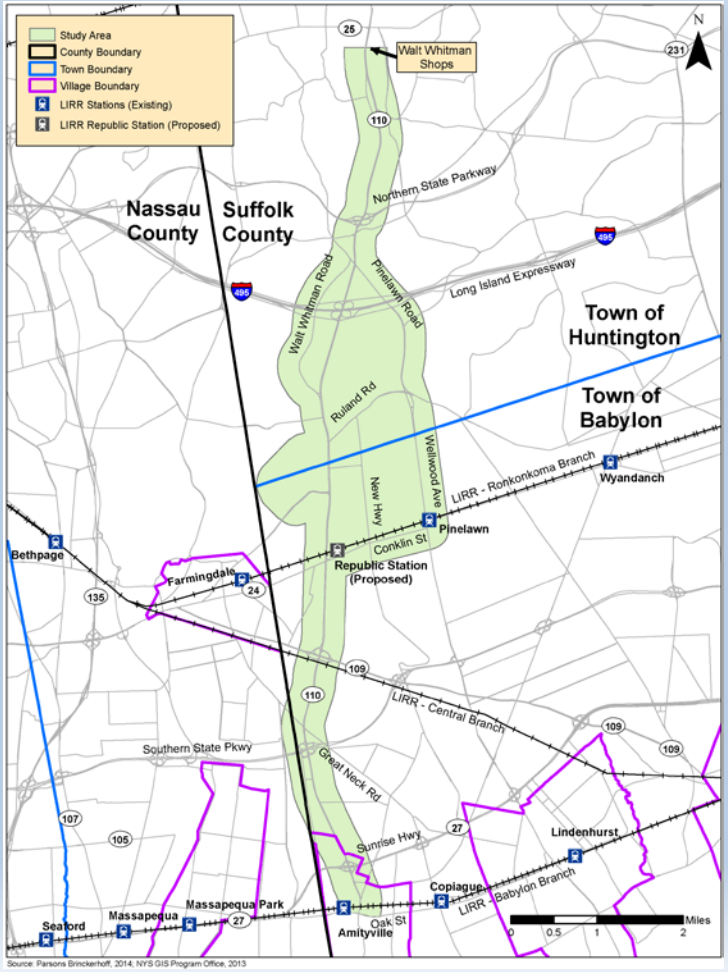
WE ARE HERE

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Study Area

- 10.5-mile corridor between Amityville LIRR Station and Walt Whitman Shops

- Extends east to Wellwood Avenue and west to Farmingdale State College campus and Walt Whitman Road



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Purpose & Need

The purpose of the Route 110 Alternatives Analysis is to:

- Improve north-south mobility
- Increase transit access to and from employment and other activity centers
- Enhance multi-modal connectivity with the LIRR and existing bus service
- Promote increased transit use
- Support TOD along Route 110 and in the study area



Source: Parsons Brinckerhoff

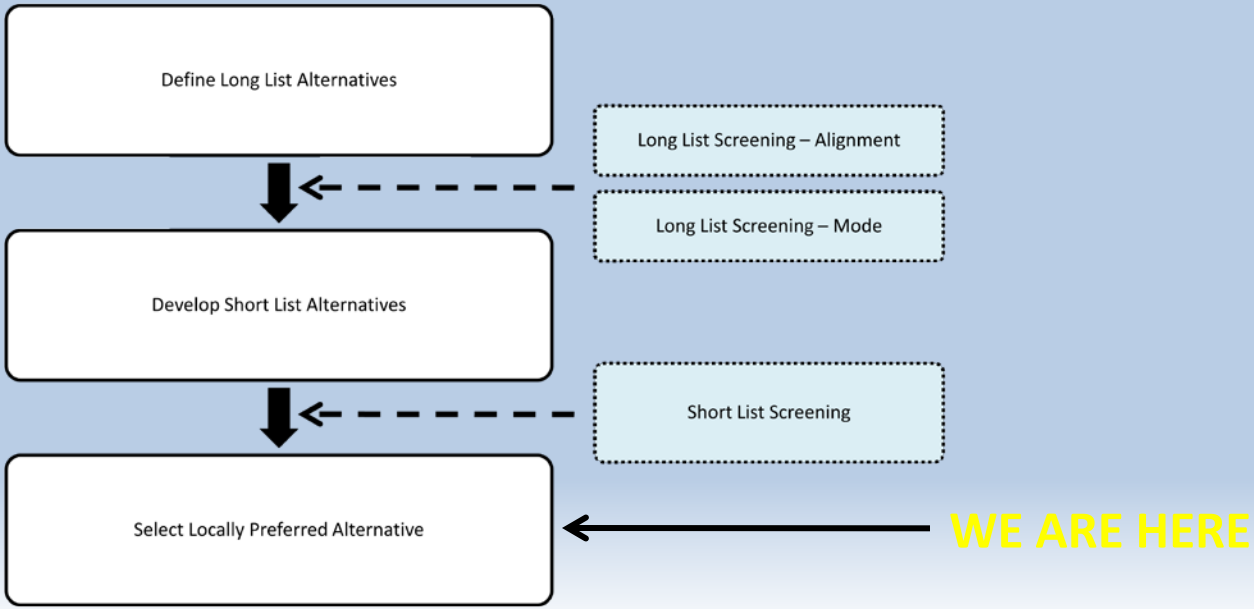


Source: Parsons Brinckerhoff

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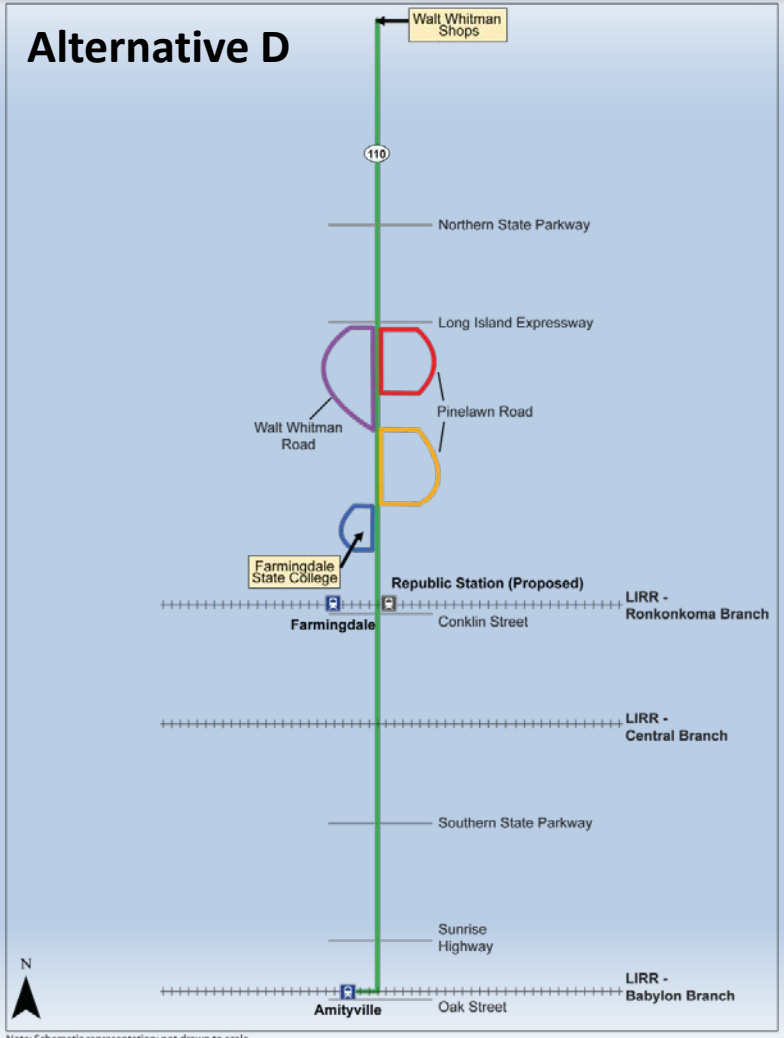
Project Goals & Evaluation Process

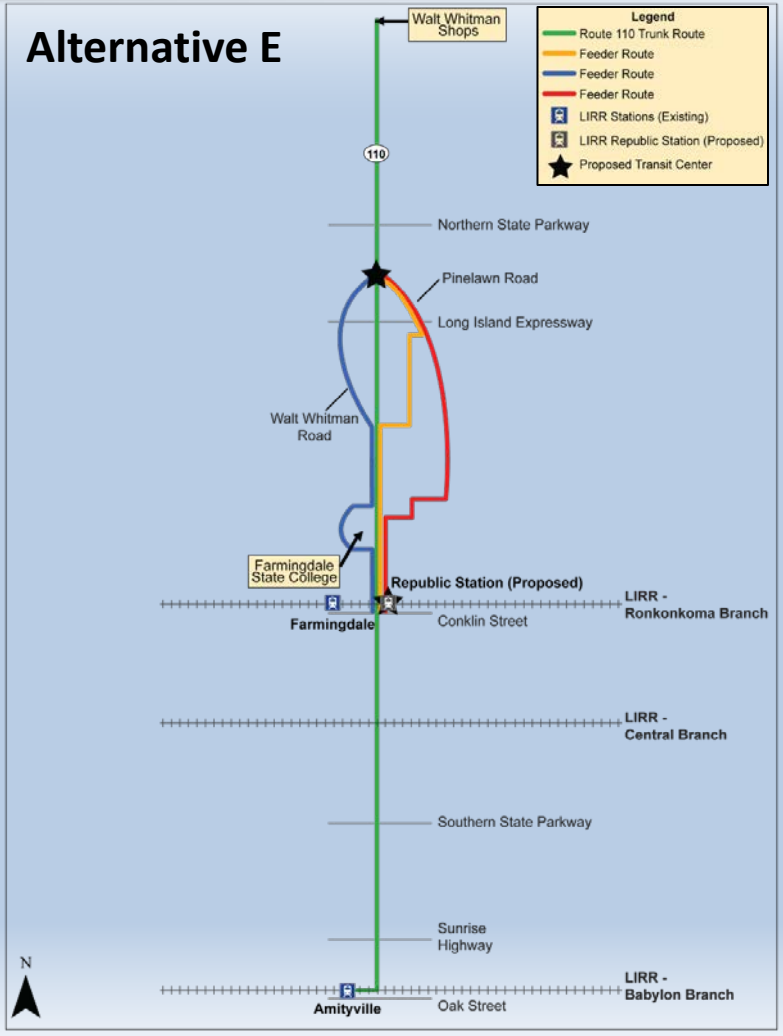
- **Improve Mobility and Connectivity**
- **Enhance Economic Competitiveness and Promote Economic Growth**
- **Maximize Cost and Operational Effectiveness**
- **Minimize Adverse Environmental Impacts**



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Results of Long List Screening





Note: Schematic representation; not drawn to scale.

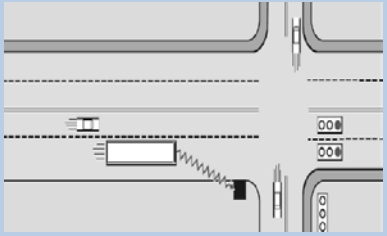
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Elements of Route 110 BRT – Currently Proposed

- More frequent service with fewer stops
- Dedicated BRT lane
- Traffic signal priority (TSP)
- Stylish vehicles
- Attractive stations
- Strong brand identity
- Real-time information











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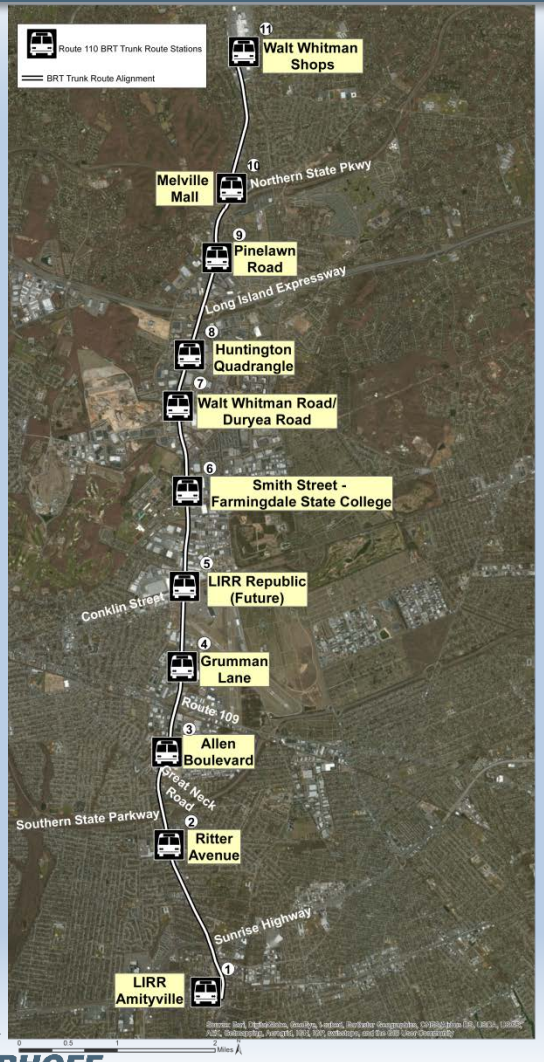
Sources: MTA New York City Transit; New York City Department of Transportation; TCRP 118; Metro-Magazine; Capital District Transportation Authority; Bergen BRT

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Development of Short List Alternatives

Route 110 BRT Trunk Route
(Common to Both Alternatives)

Route 110 BRT Stations



- Limited stop service as an overlay to the existing Suffolk County Transit local S1 service
- Criteria for identifying station locations:
  - Serve existing and future activity centers to maximize ridership potential
  - Promote economic development along Route 110
  - Optimize distance between stations
  - Maximize transfer opportunities
  - Minimize physical constraints for implementation

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Dedicated BRT Shoulder-Running along Route 110

- About 6.5 miles of the 10.5-mile trunk route can accommodate BRT shoulder-running (with two queue jumps)
  - Allows BRT vehicles to bypass traffic congestion, resulting in travel time savings of 36 seconds per mile (based on Transit Cooperative Research Program guidance)
- Along other roadway segments, BRT would operate in mixed traffic with other vehicles



Source: Parsons Brinckerhoff



Source: Parsons Brinckerhoff

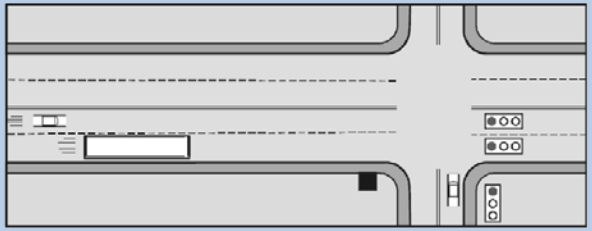
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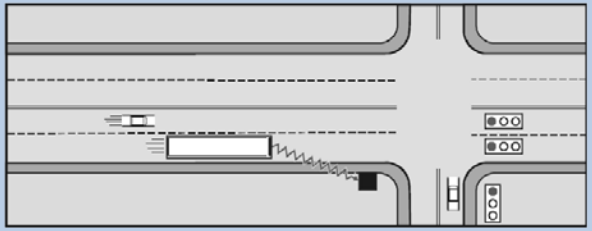
Speeding up Service through Traffic Signal Priority (TSP)

- BRT vehicles wait at fewer red lights due to TSP
- Results in travel time savings of 5 seconds per signalized intersection (based on Transit Cooperative Research Program guidance)
- Where possible, stations will be located on the far side of signalized intersections to make TSP as effective as possible

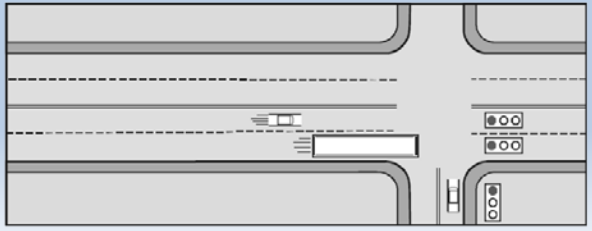
Bus approaches green signal



Signal controller detects bus; extends current green phase



Bus proceeds on extended green signal



Source: TCRP Report 118

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BRT Travel Time Improvements

	Travel time (AM Peak): LIRR Amityville Station ⇔ Walt Whitman Shops	
	Northbound	**Southbound**
Current Suffolk County Transit S1 Service	**45 minutes**	**35 minutes**
Field Verified (Automobile)[1]	**27 minutes**	**21 minutes**
BRT (Projected)[2]	**26 minutes**	**20 minutes**

[1] An average of travel time runs conducted on a typical Tuesday/Wednesday/ Thursday during the morning peak period

[2] Time savings resulting from shoulder-running, TSP, and limited stop service



Source: Route 110 BRT Study

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Off-Corridor Feeder Routes

Improving Transit Access to and from Major Activity Centers

Residential developments



Country Pointe in Melville



Millennium Hills



Avalon Court



The Villas

Major employers



Nikon



Canon



Huntington Quadrangle



Newsday



Estee Lauder


Bank of America

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Source: Parsons Brinckerhoff

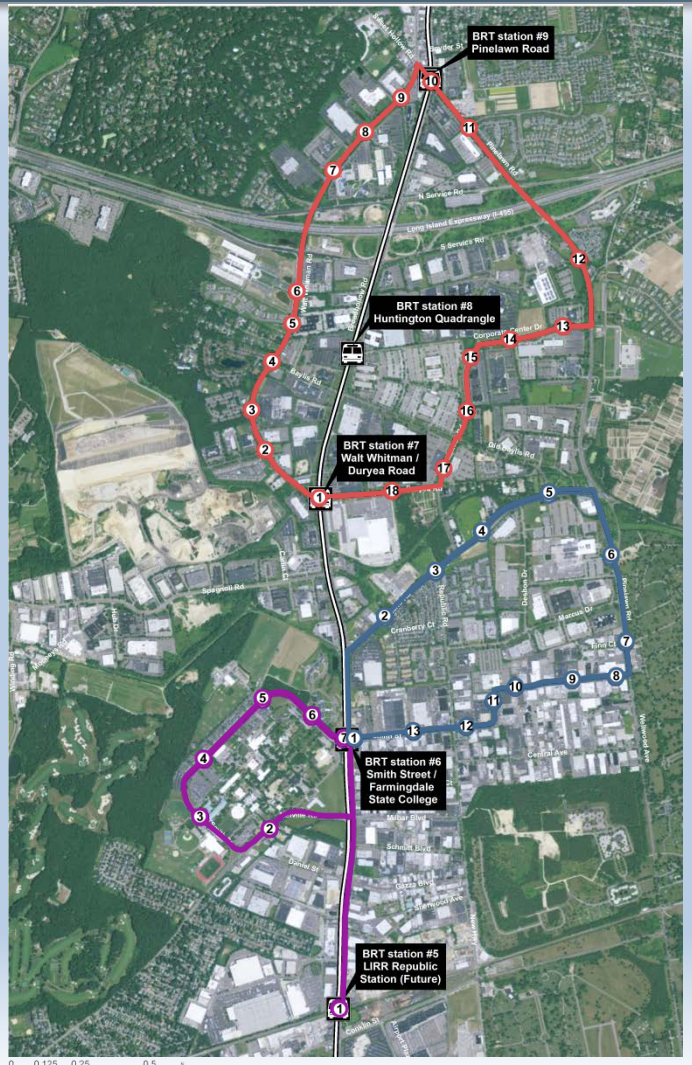
Feeder Route Service

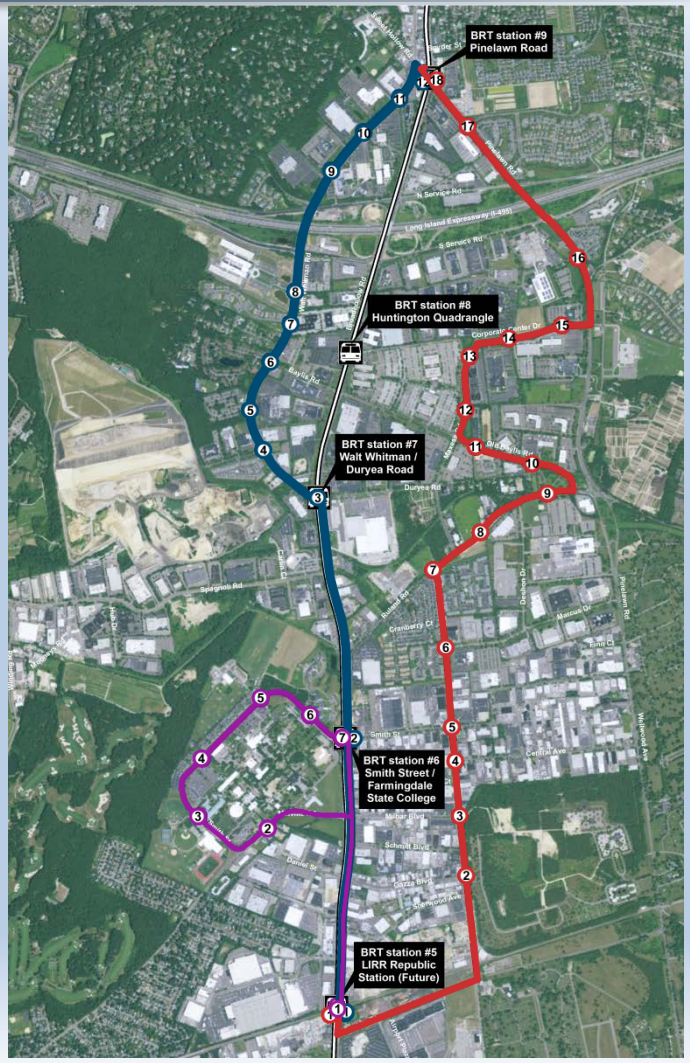
- Smaller vehicles with timed connections to BRT and LIRR
- Serving major employment centers and residential communities beyond a reasonable walking distance from Route 110
- Improving transit access to locations between Conklin Street and Pinelawn/Sweet Hollow Road



Source: Parsons Brinckerhoff

Alternatives D & E – Feeder Route Comparison

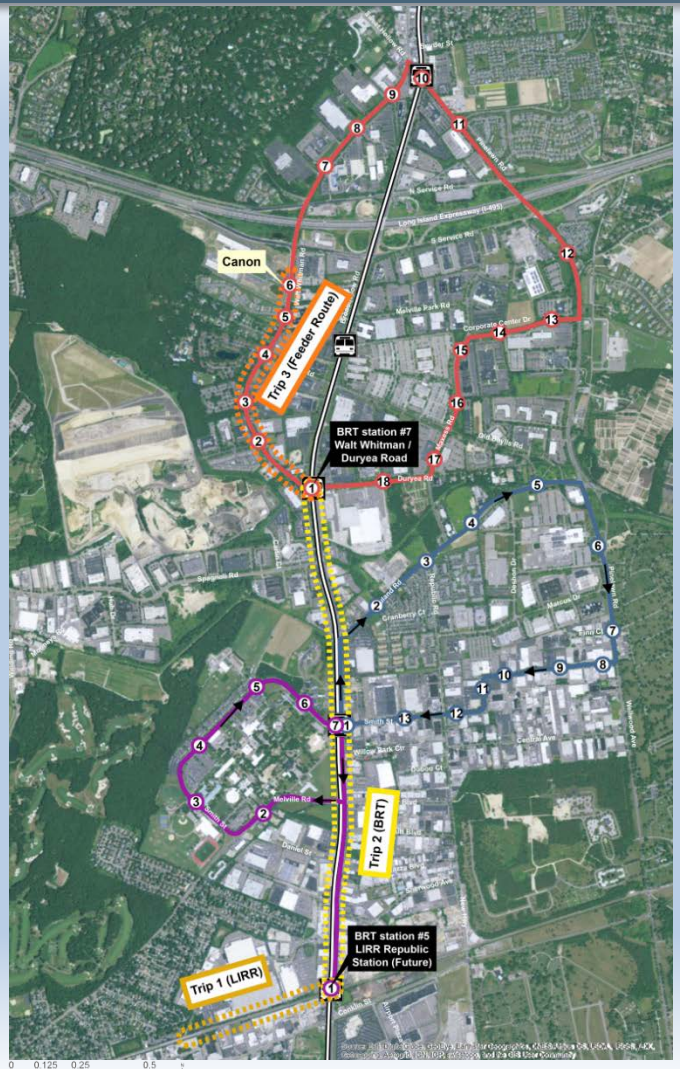


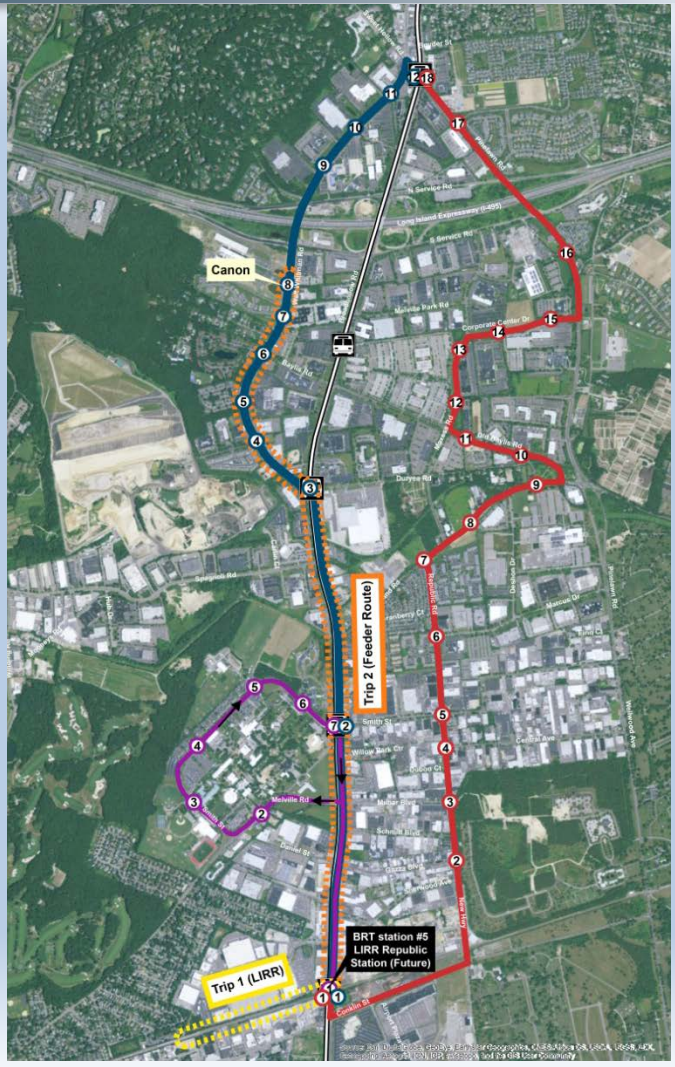


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Alternatives D & E – Sample Trip Comparison





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Operating Plan/Assumptions for BRT & Feeder Route Service

- What hours will the service run?
  - Monday – Thursday: 5:30am – 10:00pm
  - Friday & Saturday: 5:30am – 12:00am
  - Sunday & Holiday: 6:00am – 10:00pm
- How often will the service run?
  - Weekdays: every 10-15 minutes
  - Weekends & Holidays: every 20 minutes



Source: Parsons Brinckerhoff

Service Comparison between S1 and Proposed BRT

Route	Span of Service (Number of hours/day, rounded to the nearest whole number)			
	Monday – Thursday	Friday	Saturday	Sunday & Holiday
Existing Suffolk County Transit S1 Route	16 hours	16 hours	12 hours	12 hours[1]
Proposed Route 110 BRT Trunk Route	17 hours	19 hours	19 hours	16 hours

[1] No service during observed holidays.

Route	Service Frequency		
	Weekday Peak	Weekday Off-Peak	Weekends
Existing Suffolk County Transit S1 Route	Every 15 minutes	Every 30 minutes	Every 60 minutes
Proposed Route 110 BRT Trunk Route	Every 10 minutes	Every 15 minutes	Every 20 minutes

Fare Policy Assumptions

- BRT and feeder route fare equivalent to existing Suffolk County Transit fare

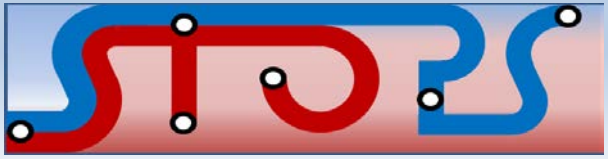
- Transfers consistent with existing Suffolk County Transit policy



Source: Parsons Brinckerhoff

Ridership Methodology

- FTA's Simplified Trips-on-Project Software (STOPS)
- Data sources:
  - Census Transportation Planning Package (CTPP)
  - Existing and proposed schedules (GTFS)
  - NYMTC highway times and socioeconomic forecasts
  - Suffolk County Transit counts
- Calibration:
  - Adjusts to local ridership counts
  - National calibration to actual ridership growth from recent rail and BRT projects.



Source: FTA

Ridership Forecasts (Weekday Boardings)

Route	2014 Existing (STOPS Calibrated Estimate)	2040 No-Build	2040 Alternative D	2040 Alternative E
Proposed BRT	--	--	3,910	3,140
Proposed Feeder Routes (Combined)	--	--	690	1,520
Subtotal, Proposed BRT and Feeder Routes (Combined)	--	--	4,600	4,660
Suffolk County Transit S1 Route	2,790	4,660	2,410	2,320
Total, All Routes	2,790	4,660	7,010	6,980
Change in Total (vs. No-Build)			2,350	2,320

Source: RSG; Parsons Brinckerhoff

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Short List Screening

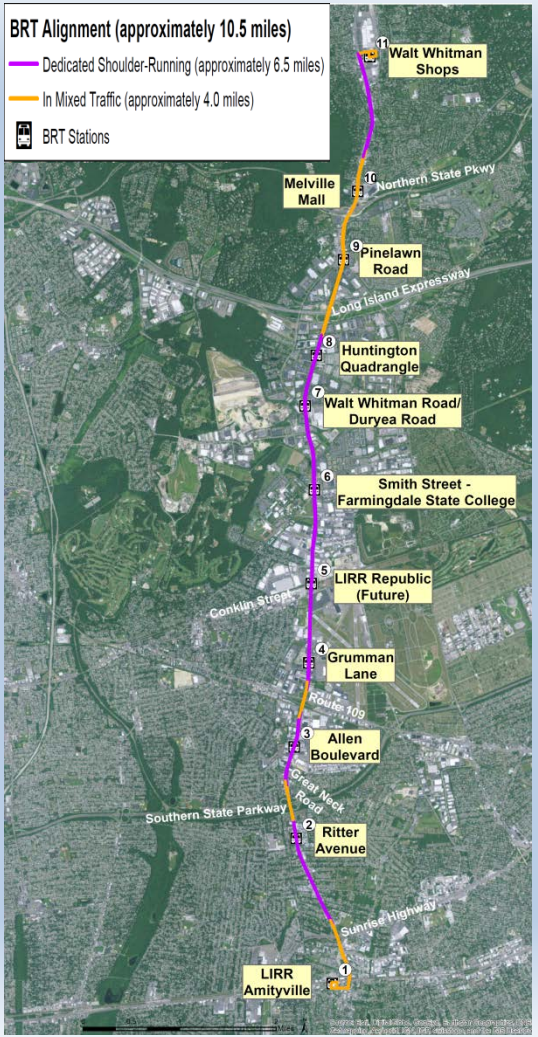
- Both Alternatives D and E would **achieve the project goals and objectives**
  - Neither alternative emerged as the definitive superior option

- **Marginal differences are outweighed by similarities**, as both alternatives would:
  - Improve mobility and connectivity
  - Drive sustainable economic growth
  - Offer cost effective and operationally efficient solutions to the identified transportation problems
  - Result in comparable environmental benefits while avoiding adverse environmental impacts

- Outcome:
  - BRT trunk route (common to both alternatives) as one component of the LPA
  - Feeder routes to be finalized in Project Development that will follow this AA

BRT Trunk Route Component of LPA

- 10.5 mile BRT trunk route between LIRR Amityville Station and Walt Whitman Shops
- 11 stations (average 0.9 miles between stations)
- Proposed BRT Elements:
  - Shoulder-running for approximately 6.5 miles; queue jumps at two locations; TSP at 44 signalized intersections
  - Limited stop service
  - Station-area passenger amenities
  - Aesthetically enhanced low-floor vehicles
  - Branding (to be coordinated with Suffolk County)
- Ridership:
  - 3,820 weekday BRT boardings (1,490 new transit boardings, compared to No-Build condition)



Source: Parsons Brinckerhoff; Cameron Engineering

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Route 110 BRT Station Perspective



Source: B Thayer Associates

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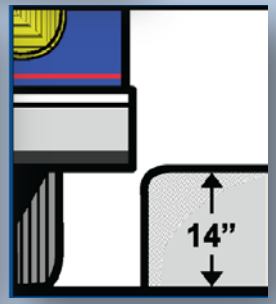
Elements of Route 110 BRT – Long-Term

- Off-board fare collection



- Level boarding





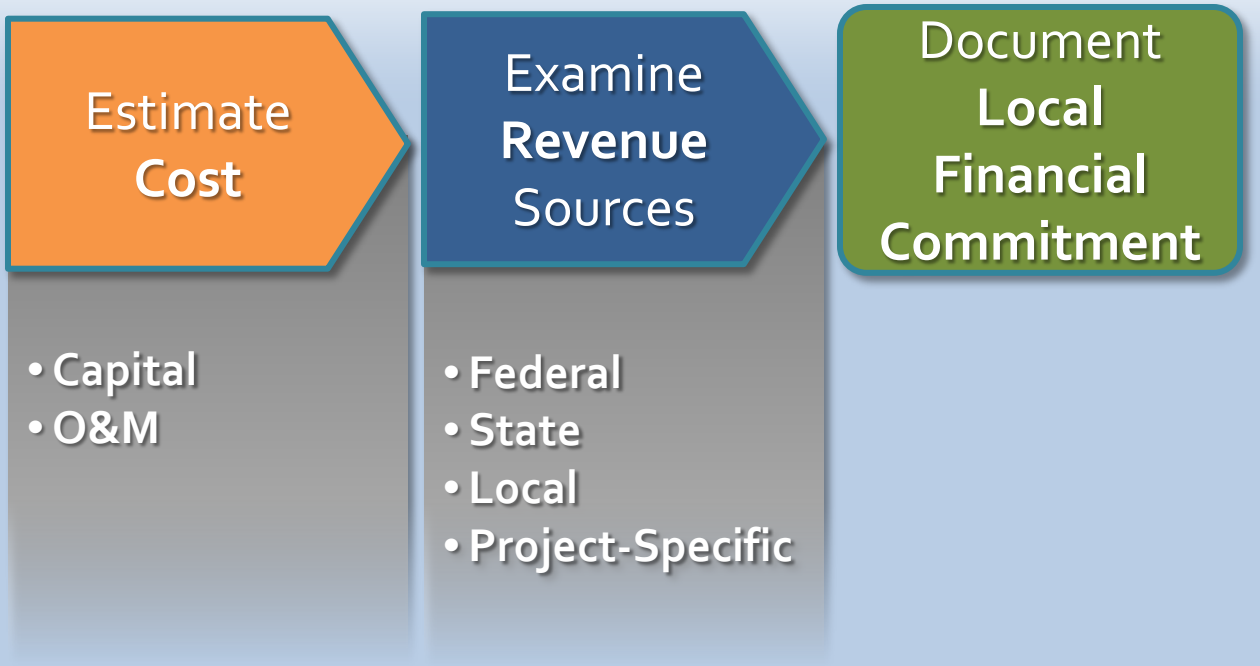
- Enhanced station-area intersections



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Sources: Bergen BRT; MTA NYC Transit; http://finance-commerce.com/; METRO Red Line; FTA 2009; Context Sensitive Solutions

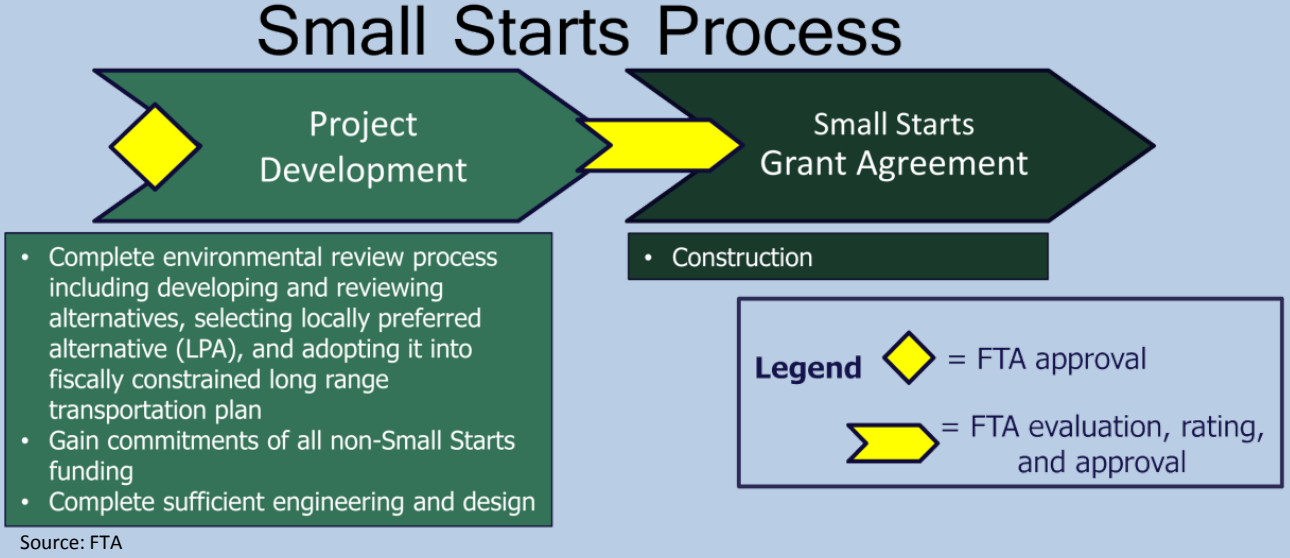
Financial Plan



- Evaluation of funding options based on a number of factors:
  - Revenue potential; correlation with inflation; equity; nexus with beneficiaries; stability/predictability; administrative costs; political support

FTA Small Starts Program

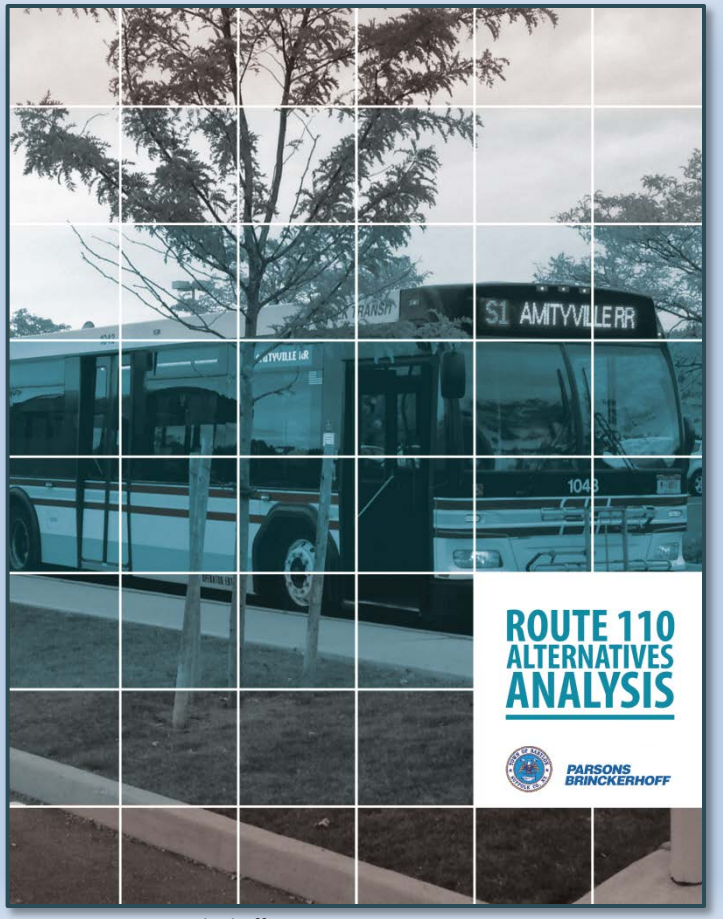
- Small Starts share <$75 million and total project cost <$250 million



Source: FTA

Next Steps

- Develop cost estimates
- Publish Alternatives Analysis Final Report
- Ongoing stakeholder/public engagement
- Ongoing coordination with Suffolk County and NYMTC (RTP, TIP, Transportation Conformity Determination)
- FTA Project Development
  - Application to enter Project Development
  - Environmental Review (NEPA & SEQR)
  - Finalize feeder routes to complement BRT trunk route (select LPA)
  - Document local financial commitment
  - Engineering and design



Source: Parsons Brinckerhoff

PARSONS BRINCKERHOFF

Comments/Questions & Answers

For more information about the ongoing Route 110 Alternatives Analysis, contact
Town of Babylon Office of Downtown Revitalization

Jonathan Keyes, Director
631-957-7430
jkeyes@townofbabylon.com

Or

Eric Zamft, Project Manager
631-957-7408
ezamft@townofbaylon.com

MEETING MINUTES:
TECHNICAL ADVISORY COMMITTEE (TAC) MEETING #3 – WEBINAR

Date: Wednesday, July 1, 2015

Time: 1:30 PM

Location: Webinar hosted at
Parsons Brinckerhoff
One Penn Plaza
New York, NY 10119

Participants:

***Project Team*:**

Name	Agency/Organization	Email
Baer, Daniel	Parsons Brinckerhoff	Baer@pbworld.com
Bucich, Nicole	Parsons Brinckerhoff	bucichna@pbworld.com
Keyes, Jonathan	Town of Babylon, Office of Downtown Revitalization	jkeyes@townofbabylon.com
Macek, Nathan	Parsons Brinckerhoff	maceknm@pbworld.com
Sokol, Maxwell	Parsons Brinckerhoff	sokolml@pbworld.com
Woodford, William	RSG	Bill.Woodford@rsginc.com
Zamft, Eric	Town of Babylon, Office of Downtown Revitalization	ezamft@townofbabylon.com

Technical Advisory Committee (TAC):

Name	Agency/Organization	Email
Amanna, Richard	Long Island Rail Road (LIRR)	ramanna@lirr.org
Balter, Jacob	Long Island Rail Road (LIRR)	jbalter@lirr.org
Bogacz, Gerry	New York Metropolitan Transportation Council (NYMTC)	gbogacz@dot.state.ny.us
Catherines, Mary	Long Island Rail Road (LIRR)	mvcathe@lirr.org
Goveia, James	Federal Transit Administration (FTA), Region 2	james.goveia@dot.gov
Greenwald, Stephen	Village of Amityville	sgreenwald@amityville.com
Jones, Ann Marie	Town of Babylon Department of Planning and Development	ajones@townofbabylon.com
Khzouz, Jack	Nassau Inter-County Express (NICE)	jack.khzouz@transdev.com
Lenberger, Garry	Suffolk County Department of Public Works, Transportation Division	GarryL@suffolkcountyny.gov
Mascali, Rosemary	Transit Solutions	rmascali@transitsolutions.org
Picca, Elisa C	Long Island Rail Road (LIRR)	ecpicca@lirr.org
Sallie, Sean	Nassau County Department of Public Works – Planning Division	ssallie@nassaucountyny.gov

Name	Agency/Organization	Email
Turner, Craig	Town of Huntington, Planning & Environment Department	CTurner@huntingtonny.gov
Tyson, Darnell	Suffolk County Department of Public Works	Darnell.Tyson@suffolkcountyny.gov
Vanterpool, Veronica	Tri-State Transportation Campaign	vvanterpool@tstc.org
Wallach, Alex	Town of Babylon Department of Planning and Development	awallach@townofbabylon.com

Purpose:

The purpose of this webinar was to convene the TAC so the Town of Babylon and the consultant team could provide an update and get feedback on the ongoing Route 110 Alternatives Analysis (AA), including project status and next steps. The webinar was hosted at the offices of Parsons Brinckerhoff, and TAC members either attended in-person or participated remotely.

Discussion Items:

Topic	Discussion
Introductions	• Attendees introduced themselves and indicated their respective agency/organization.
Welcome from the Town of Babylon	• J. Keyes opened the webinar by welcoming the participants and indicating that this webinar is the third convening of the TAC. J. Keyes noted that the Route 110 AA is nearing completion, and that this webinar would provide an additional opportunity to share technical expertise amongst local and regional agencies. • J. Keyes introduced the consultant team, led by Parsons Brinckerhoff, to present an overview and update of the Route 110 AA.
Overview of Route 110 AA	• N. Bucich indicated that this webinar would include a summary of the work presented during the previous two TAC meetings to get everyone (including the new TAC members) up to speed, followed by a presentation of work completed since the second convening of the TAC. o The first TAC meeting, which immediately preceded the first public meeting, was held on December 15, 2014. A TAC webinar (with an in-person meeting option) was subsequently hosted on April 1, 2015, and a second public meeting was hosted on April 27, 2015. o Input received during the previous TAC and public meetings has informed the work completed in this AA. For instance, based on feedback from the previous TAC webinar, the conceptual engineering for the bus rapid transit (BRT) shoulder-running along Route 110 was revised to reflect a minimum lane width of 11 feet. Additionally, based on feedback from both the TAC and public meetings, pedestrian safety has emerged as key issue in planning BRT station access on Route 110. o New work to be presented during this TAC webinar includes ridership forecasts, the evaluation of the Short List Alternatives, and the financial plan.

Topic	Discussion
Overview of Route 110 AA	• N. Bucich introduced the Route 110 AA by summarizing the study process and study area, and presenting the purpose and need, goals and objectives, and alternative evaluation process. • N. Bucich presented the results of the Long List Screening. Two BRT alternatives were advanced to the next round of the screening process: 1) BRT trunk route along Route 110 with circular feeder routes (Alternative D), and 2) BRT trunk route along Route 110 with transit center nodes and connecting feeder routes (Alternative E). o The two alternatives would have the same BRT trunk route service along Route 110. The feeder routes would be the distinguishing features between the two alternatives. • N. Bucich identified the various elements of BRT that are currently proposed for Route 110, including limited stop service, shoulder-running, traffic signal priority (TSP), stylish vehicles, attractive stations, strong brand identity, and real-time information. • N. Bucich presented elements of the BRT trunk route (common to both alternatives) that would result in travel time savings for transit users along Route 110. The elements can be revised as necessary in Project Development that will follow completion of this AA. o Along the 10.5 mile trunk route between the LIRR Amityville Station and the Walt Whitman Shops, BRT would offer limited stop service as an overlay to the existing Suffolk County Transit S1 route, with 11 BRT station locations (i.e., an average 0.9 miles between stations). o BRT shoulder-running is currently proposed for approximately 6.5 miles of the trunk route (with two queue jumps), which would allow BRT vehicles to bypass traffic congestion. o TSP is currently proposed at all 44 signalized intersections along the trunk route, which would allow BRT vehicles to wait at fewer red lights. o Significant travel time savings over local bus service would result from the combination of limited stop service, shoulder-running, and TSP. Travel time by BRT is projected to be competitive with travel time by automobile. • M. Sokol discussed the need to complement the BRT trunk route with off-corridor feeder routes to provide last-mile connection to activity centers located beyond a reasonable walking distance from Route 110. M. Sokol then described through each of the three feeder routes for both alternatives. o Alternative D (circular feeder routes): 1) one-way feeder route to serve Farmingdale State College; 2) one-way feeder route to serve Ruland Road, Pinelawn Road, and Smith Street; and 3) two-way feeder route to serve Walt Whitman Road/Duryea Road, Pinelawn Road, Corporate Center Drive, and Maxess Road. o Alternative E (transit center nodes): 1) one-way feeder route to serve Farmingdale State College (same as Alternative D); 2) two-way feeder route to serve Walt Whitman Road; and 3) two-way feeder route to serve New Highway/Republic Road, Ruland Road, Baylis Road, Maxess Road, Corporate Center Drive, and Pinelawn Road.

Topic	Discussion
Overview of Route 110 AA	• M. Sokol discussed that one noteworthy difference between the two alternatives is the extent to which they increase connectivity between the planned LIRR Republic Station and off-corridor activity centers without requiring intermediate transfers. Using the hypothetical example of an employee who reverse commutes from New York City or Nassau County to Canon's office complex on Walt Whitman Road, M. Sokol explained that Alternative D would require an additional transfer (i.e., LIRR to BRT to feeder route) compared to Alternative E (i.e., LIRR to feeder route) to make the same trip. • M. Sokol discussed the operating plans for the BRT trunk route and feeder routes. To maximize connectivity between the BRT and feeder route services, the operating plans for the different services applied the same assumptions, as follows: o Service span/hours of operation ▪ Monday – Thursday: 5:30am – 10:00pm ▪ Friday & Saturday: 5:30am – 12:00am ▪ Sunday & Holiday: 6:00am – 10:00pm o Service frequency: ▪ Monday – Friday: 10 minutes peak/15 minutes off-peak ▪ Weekends & Holidays: 20 minutes o The BRT trunk route is proposed to offer longer hours of service and more frequent service than the existing S1 route, which would help to brand BRT as a distinct, premium service. • M. Sokol discussed the fare policy assumptions for the BRT and feeder route services. It is currently assumed that the BRT and feeder route fare would be equivalent to the existing Suffolk County Transit fare, and that the transfer fee between services would be consistent with existing Suffolk County Transit policy. • W. Woodford explained the methodology and results of the ridership forecasting effort. o FTA's Simplified-Trips-on-Project Software (STOPS) was used to forecast ridership, which uses a number of data sources and is calibrated to local ridership counts. o The combined BRT and feeder route ridership for both alternatives is approximately 4,600–4,700 weekday boardings. The source of BRT and feeder route ridership is a combination of approximately 2,300 existing Suffolk Country Transit riders shifting to the new service, as well as approximately 2,300–2,400 new transit users who previously used another mode of transportation. Overall, the two alternatives would result in comparable increases in transit ridership by attracting new transit trips within the study area.

Topic	Discussion
Overview of Route 110 AA	• N. Bucich discussed the results of the Short List Screening, which demonstrated that both alternatives would achieve the project goals and objectives. o Neither alternative emerged as the definitive superior option, and marginal differences were outweighed by similarities between the two alternatives. o The recommendation in this AA is that the BRT trunk route (common to both alternatives) should be advanced to Project Development as one element of the Locally Preferred Alternative (LPA), and that the feeder routes to complement the BRT trunk route would be finalized in Project Development. • N. Bucich presented a summary of the BRT trunk route, including a sample perspective of a BRT station along Route 110, which would include a number of passenger amenities (e.g., enhanced shelter, seating, variable message signage, way finding signage, bicycle racks, tinted concrete, and trees/landscaping). • N. Bucich discussed long-term elements of Route 110 BRT that can be considered in the future to further bolster the image of BRT and attract more choice riders. These elements include off-board fare collection, level boarding, and enhanced station-area intersections. • N. Macek presented a summary of the financial planning process, which includes estimating project costs, examining potential revenue sources, and documenting local financial commitment. o A wide range of federal, state, local, and project-specific funding sources were evaluated in this AA based on a number of factors: revenue potential; correlation with inflation; equity; nexus with beneficiaries; stability/predictability; administrative costs; and political support. o The recommended federal funding option is the Small Starts program, which is a discretionary grant program administered by the FTA that provides federal grants to major transit capital investments. By statute, the maximum federal grant for a Small Starts project is 80% of the capital cost of the project, but most applicants are anticipated to receive a grant of approximately 50% of the capital cost of the project. Additional state, local, and/or project-specific funding options would be required to complement the federal funding and demonstrate local financial commitment for the proposed project. • N. Bucich concluded the presentation with a discussion of next steps, which include developing cost estimates, publishing the AA final report, conducting ongoing stakeholder/public engagement, coordinating with Suffolk County, the New York State Department of Transportation (NYSDOT), and NYMTC, and completing Project Development, which is a required step in the federal process to be eligible for Small Starts funding.

Topic	Discussion
Comments / Questions & Answers	• V. Vanterpool commented that Alternative E seems to be preferable from a connectivity standpoint, as the Alternative D feeder routes seem to be isolated. She suggested that it is surprising that the difference in projected ridership between the two alternatives is negligible. o G. Bogacz and R. Mascali subsequently added that Alternative E may be better because the number of transfers that would be required to access off-corridor activity centers would be minimized (compared to Alternative D). G. Bogacz asked whether the project team conducted an operational analysis to determine the number of transfers under each alternative. ▪ N. Bucich noted that the service planning effort in the AA sought to make each alternative as attractive as possible, for instance by running the feeder route service as frequently as the BRT to maximize connectivity (although this assumption can be revisited in Project Development). N. Bucich indicated that the project team completed an operational analysis to code the service plan for the ridership model. ▪ M. Sokol added that the output of the ridership model differentiates between linked and unlinked trips. Therefore, it is possible to determine the number of transfers under each alternative, which will be summarized in the ridership technical memorandum. • V. Vanterpool asked why off-board fare collection is not currently proposed for the near- or medium-term. o N. Bucich indicated that the projected ridership (while healthy) is not to the level that would warrant off-board fare collection. Additionally, one of the project goals is to maximize cost effectiveness, and since the time savings from off-board fare collection would be on the margin in a suburban corridor such as Route 110, the marginal benefits would not justify the significant costs for implementation and ongoing operations and maintenance. o N. Bucich added that the project team had a discussion with Suffolk County Transit about fare collection, and the technology is evolving rapidly. ▪ G. Lenberger concurred with N. Bucich, noting that the fare collection system that will be procured by Suffolk County Transit over the next year will include a smart phone application, as well as pre-pay via the internet. Suffolk County Transit is not currently considering off-board fare collection for a variety of reasons, including maintenance costs and security issues.

Topic	Discussion
Comments / Questions & Answers	• V. Vanterpool asked whether three-door vehicles (i.e., articulated vehicles) are envisioned for long-term BRT implementation along Route 110 to expedite boarding and alighting. o G. Lenberger indicated that Suffolk County Transit does not envision purchasing any bus larger than 40 feet at this time, but if the BRT system grows, it could be possible to look into articulated buses if warranted by demand. G. Lenberger added that double-wide doors represent another option to expedite boarding and alighting. At this time, it is envisioned that passengers would only board from the front door. • G. Bogacz commented that the Small Starts grant program is a great funding source right now, but asked whether the project team has considered the possibility that the program may not be carried forward in the next federal transportation authorization bill. o N. Macek indicated that the project team's impression is that Small Starts will survive the reauthorization process. There is strong support in the Senate for Small Starts, and the new appropriations proposal in the House for Fiscal Year 2016 would limit (but not eliminate) Small Starts. Additionally, Small Starts has supported a wide range of projects that would not qualify for New Starts, and it is anticipated that it will likely be maintained and remain a viable option. Even if the Small Starts program is not renewed in its current form, N. Macek felt that a similar program would likely replace it. o G. Bogacz added that Small Starts is a national competition, and that there is no guarantee that the Route 110 project would be awarded a grant through the program. Additionally, an application for Small Starts would need to be part of the metropolitan planning organization (MPO) process. • J. Khzouz asked whether the project team has considered the possibility of demand-responsive feeder routes instead of fixed-route service. o N. Bucich indicated that the project team discussed this and acknowledged it as an option, which can be revisited in Project Development. For purposes of the ridership model in the AA, the feeder routes were all coded as fixed-route service. • V. Vanterpool asked whether the project team has considered the possibility of accommodating bicycles inside the BRT vehicles. o N. Bucich indicated that this has not been discussed to date, but can be coordinated system-wide with Suffolk County Transit. o G. Lenberger added that at this time, NYSDOT only allows bicycle racks on the front of buses (i.e., not the back). Bicycle accommodations inside the vehicles would take up capacity that would otherwise be used for passenger seating.

Topic	Discussion

Comments / Questions & Answers	• V. Vanterpool asked whether the Route 110 BRT would qualify for a categorical exclusion (CE).
	  o N. Bucich indicated that it is currently anticipated that the proposed project will qualify for a CE with supplemental studies as needed. For instance, one environmental impact category that warrants additional analysis is traffic, as it will be necessary to (1) confirm the feasibility of TSP from a traffic operational standpoint, and (2) evaluate the safety and curb access implications of BRT shoulder-running.
	  ▪ J. Goveia noted that the FTA is very focused on safety.
	• J. Goveia asked (1) if the feeder routes for the two alternatives differ in the extent to which they serve various socioeconomic groups, and (2) whether there are noteworthy differences in the walking distances between the activity centers and the feeder route stations for the two alternatives.
	  o M. Sokol indicated that the two alternatives serve the same off-corridor activity centers (i.e., residential developments and employment centers), but in slightly different ways due to the alignments of the respective feeder routes. Environmental Justice implications of the feeder routes will be considered during the environmental review in Project Development. The feeder routes were defined to provide improved transit service to the transit-dependent population and to also attract choice riders.
	  o N. Bucich commented that the feeder routes were defined to serve a combination of origins and destinations to achieve the objective of maximizing ridership potential.
	  o N. Bucich noted that Alternative D would serve the residential developments near Ruland Road slightly better than Alternative E (because of a shorter walking distance to the feeder route stations). However, it could be possible to create new pedestrian access points from the developments to the feeder route stations (which can be explored in Project Development); this could make the difference in the walking distances for the two alternatives essentially negligible.
	  o E. Zamft added that the Town of Huntington has started work on the Melville Employment Center Plan, which is a parallel study that can inform options to be considered in Project Development.
	• N. Bucich closed the webinar by thanking the participants for their comments and questions, and indicating that additional input can be shared with the Town of Babylon. Additionally, the presentation and meeting minutes from the webinar would be shared with the TAC.

Materials Transmitted or Received:
None

Attachments:
Presentation from meeting

Distribution:
TAC

These minutes represent the recorder's understanding of the issues discussed. Please report any discrepancies to the recorder within seven days; otherwise the record will remain as written.

Route 110 Alternatives Analysis

Public Meeting #1

December 15, 2014



Source: Town of Babylon

PARSONS BRINCKERHOFF

Agenda

- **Welcome/Introduction**
  – Hon. Antonio A. Martinez
  Deputy Supervisor, Town of Babylon

- **Update on East Farmingdale Initiatives**
  – Jonathan Keyes
  Director, Office of Downtown Revitalization, Town of Babylon

- **Overview of Route 110 Alternatives Analysis**
  – Parsons Brinckerhoff Team

- **Comments/Questions & Answers**

Welcome/Introduction

Hon. Antonio A. Martinez
Deputy Supervisor, Town of Babylon

Where We've Been…Where We're Going

Jonathan Keyes
Director, Town of Babylon Office of Downtown Revitalization

PARSONS BRINCKERHOFF

Project History

2002

- Town of Babylon holds press conference calling for the re-opening of Republic Train Station



IN BABYLON

The Rub in a Plan for Train Hub

Property sale would prevent reopening of an LIRR station

By Sumathi Reddy
STAFF WRITER

THE DAILY COMMUTE between Howard Beach in southern Queens and her job at Swiss Air in Melville is quite a "ballish" journey for Margie Peperone.

The 35-mile stretch each way can take up to two hours of bestling traffic on the Southern State Parkway.

So the thought of kicking back on a Long Island Rail Road ride to Route 110 and taking a quick shuttle ride to her company's door sends Peperone into exhilaration. A new train stop might not reduce her commute by a huge chunk of time (she'd have to drive or take a bus to the Jamaica stop) but it's an option she'd explore, especially in bad weather.

"I'd love it," the receptionist said. "I think it would be an excellent idea, especially if there's a shuttle."

Though far from a reality, the idea of reopening the former Republic LIRR train station at the northeast corner of Route 110 and Conklin Street in East Farmingdale has been gaining steam. A coalition of business leaders and officials from Huntington and Babylon Towns is calling on state and national politicians for support.

The urgency was sparked by news that the state Department of Transportation, owner of the 12.5-acre property, was close to leasing the land to Mairoll Inc., a part of the Fairchild Corp. and developer of the nearby Airport Plaza shopping center.

Last month, Action 110 Long Island Chairman Sheldon Sackstein wrote to Gov. George Pataki and DOT Commissioner Joseph Boardman, asking them to place a temporary moratorium on the land negotiations. Also, Babylon town board member Steven Bellone said he's planning to meet with Sen. Charles Schumer and Rep. Steve Israel (D-Dix Hills) about the issue soon.

Calling it a "10-round heavyweight fight to try to retain the property," Sackstein said he's hoping state officials will step in and throw their weight behind the proposed station.

"We're really quite disappointed with the fact that the state is not looking more favorably on trying to reopen the train station," Sackstein said.

DOT officials say they're holding off on finalizing the lease negotiations until the LIRR conducts a study on the feasibility of reopening the station, which closed in 1958. LIRR spokesman Brian Dolan said the study should be completed by the end of the year.

"We still believe that the arrangement we were pursuing for the property is advantageous to the tax rolls and to economic development," DOT spokeswoman Eileen Peters said, referring to payments in lieu of tax dollars Farmingdale school district would receive if the land is leased.

Proponents of the train station have grand visions for the land now littered with vandalized buildings and debris, remnants of its days as home of airplane manufacturer Fairchild Republic Co. They are calling for a transportation hub with a regional parking lot and shuttle service to businesses along the Route 110 corridor, ending at the Huntington Station LIRR stop. The proposal, which does not have an estimated price tag, would be financed through state and federal monies.

The most immediate sticking point is the Mairoll-DOT deal, in which the DOT was negotiating to lease the land to Mairoll Inc. in exchange for buying from them 11.5 acres at Conklin Street for Airport.

The airport needs that land for a runway safety area, a requirement of the Federal Aviation Administration when a runway is altered, according to Airport Director Hugh Jones. Airport officials want to shift one runway and lengthen landing lights as part of its master plan update. But advocates for the train hub say it would reduce traffic on the congested Route 110 peripheral work at some 5,000 companies.

They also say it would encourage the reverse commute from the city to Long Island, allowing room for more economic development. "We're gonna grow in the corridor, which is one of the reasons you have to address the problem of traffic right now," said Bellone, a member of the Route 110 Redevelopment Corp., formed by officials in Huntington and Babylon several years ago.

The question of how much demand there is for a train station in East Farmingdale remains to be determined.

There are two LIRR stops within a mile or two of the proposed hub and the Farmingdale LIRR stop provides shuttle bus service. Advocates say that if you build the station, they will come, but the number of reverse commuters continues to remain below those commuting in the other direction, and no one has determined how many reverse commuters would be needed to justify an East Farmingdale stop.

According to LIRR's most recent figures, peak morning ridership from the city into Long Island is 8,770. And in those eyes, the DOT's deal with Mairoll is all but final. He said a conceptual agreement was reached a year ago and a lease was to be signed this summer.

Babylon and Huntington officials have criticized the airport's master plan updates but say their support for a train station is a separate issue.

Sackstein, of Action 110 Long Island said, "We tried not to link the two together, but they're definitely linked. The airport wants that land very badly, and we're strongly opposed to their expansion."

Babylon Councilman Steve Bellone, at podium, speaks at a June press conference in East Farmingdale about reopening a train station

Newsday Photo / Jim Judkis

PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Project History

2007

- East Farmingdale Residents submit plan calling for the development of a vibrant downtown center and improved bus service



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Project History

2008

- Town of Babylon calls for re-opening of Republic Train Station
- Newsletter sent to East Farmingdale Residents



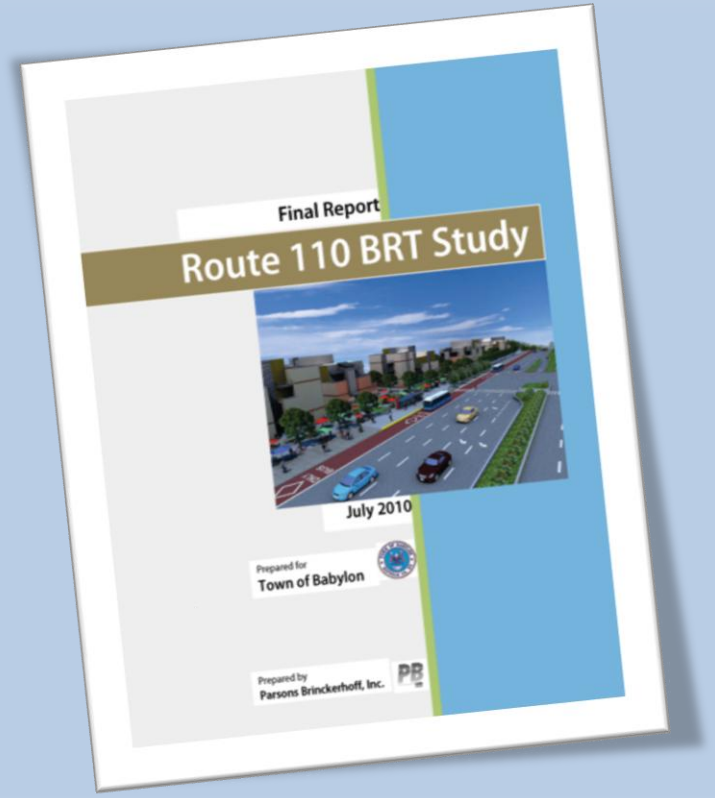


PARSONS BRINCKERHOFF

Project History

2009

- Town commissions study funded by MTA to determine feasibility of Bus Rapid Transit System



PARSONS BRINCKERHOFF

Project History

March 18 , 2010

- Community meeting to launch comprehensive planning process and present results of BRT study
- Screening of the Long Island Index video “The Clock is Ticking on Long Island”





PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., NY

Project History

April 17, 2010

- Airport Plaza Walking Tour
- Documentary about Long Island's future screened, followed by a discussion in the theater





PARSONS BRINCKERHOFF

Project History

September 18, 2010

- Patchogue Walking Tour

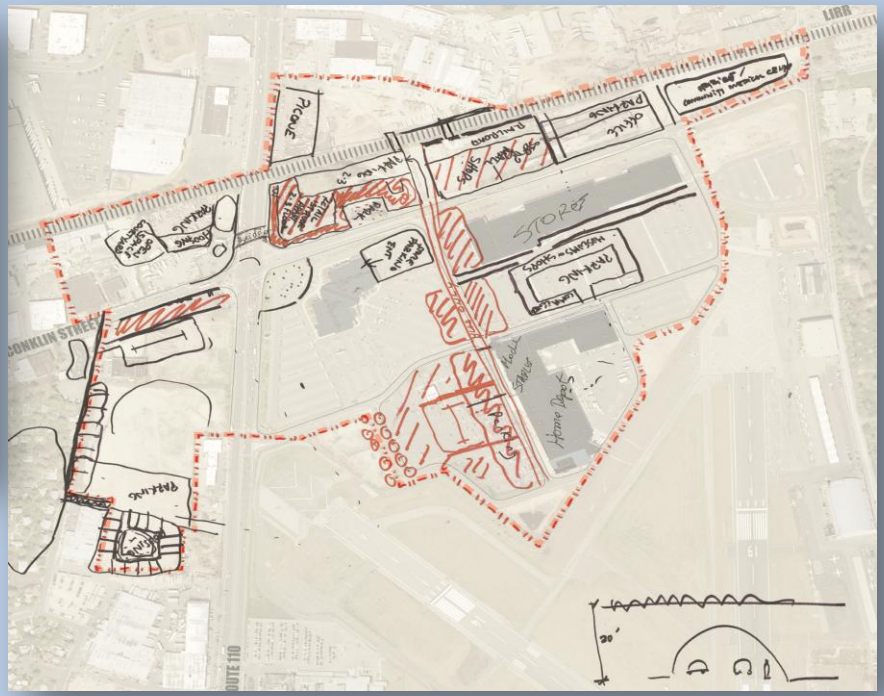




Project History

- **November 4, 2010**





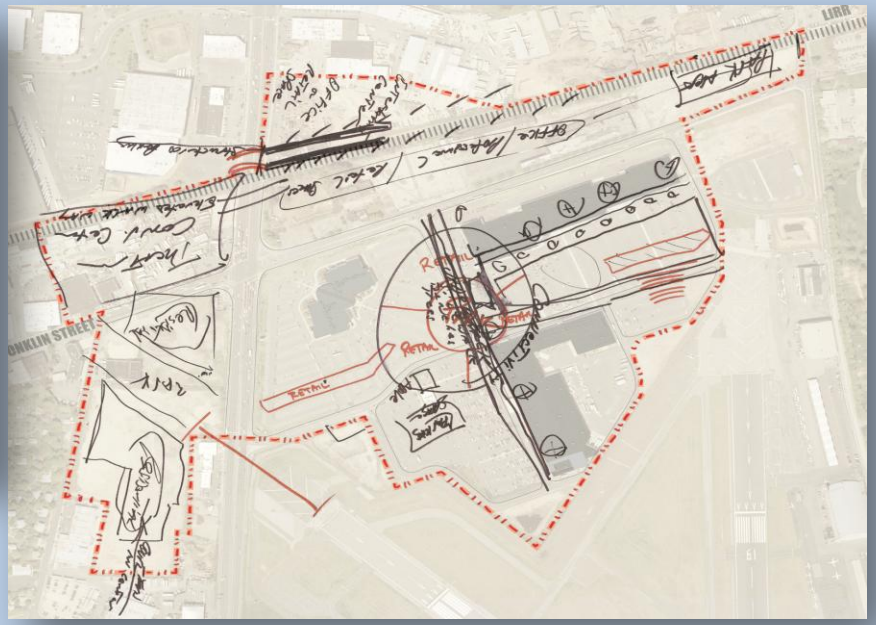
PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Project History

- **November 4, 2010**





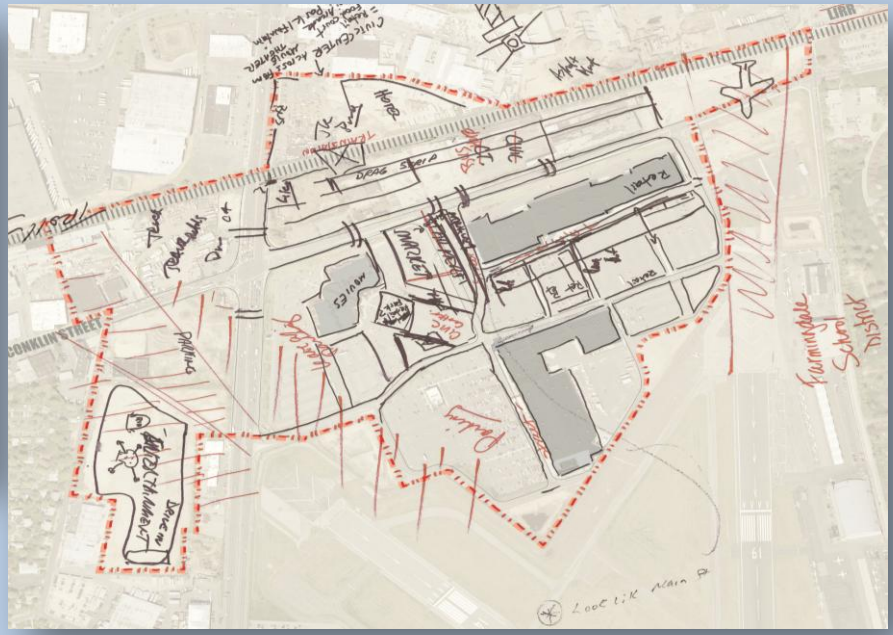
PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Project History

- **November 4, 2010**





PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., NY.

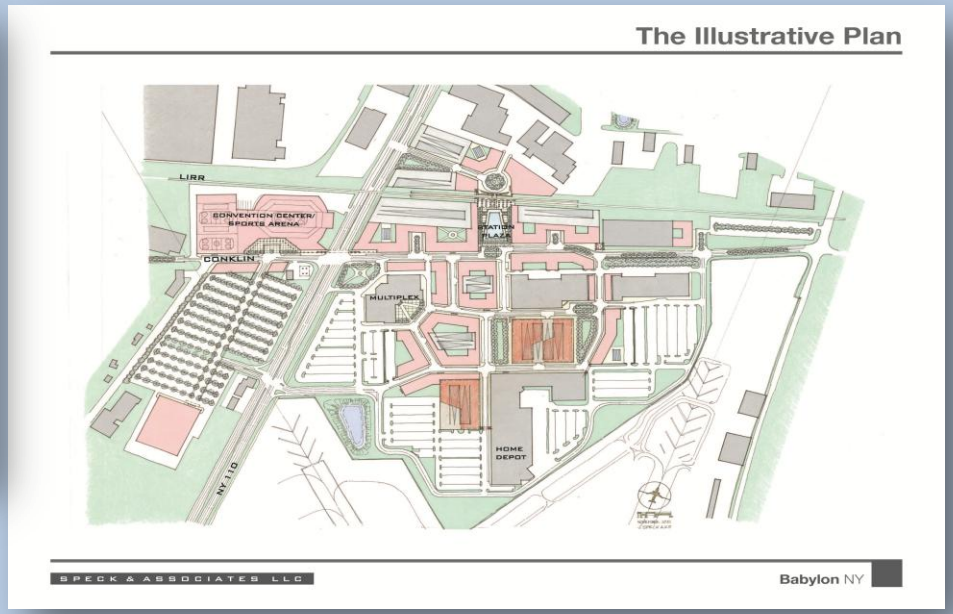
Project History

- Retain young Long Islanders in East Farmingdale.
- Create areas for live entertainment, civic and institutional uses.
- Improve the quality of life for East Farmingdale residents.
- Implement transit-oriented development through the creation of affordable residential units and mixed-use development in East Farmingdale.
- Create a distinctive and positive “sense of place” for East Farmingdale.
- Satisfy the existing and future parking demands of commuters, the business community and residents.
- Improve the vehicular traffic infrastructure to serve the long-term needs of East Farmingdale.
- Enhance and encourage walkability throughout East Farmingdale.
- Enhance public “green” space, open space, public plazas, sidewalk/trail linkages and landscaping in East Farmingdale.
- Further the revitalization of East Farmingdale through significant new private investment in residential, retail, and parking development, as well as in public infrastructure, transit, and traffic improvements.

Project History

- **April 12, 2011**

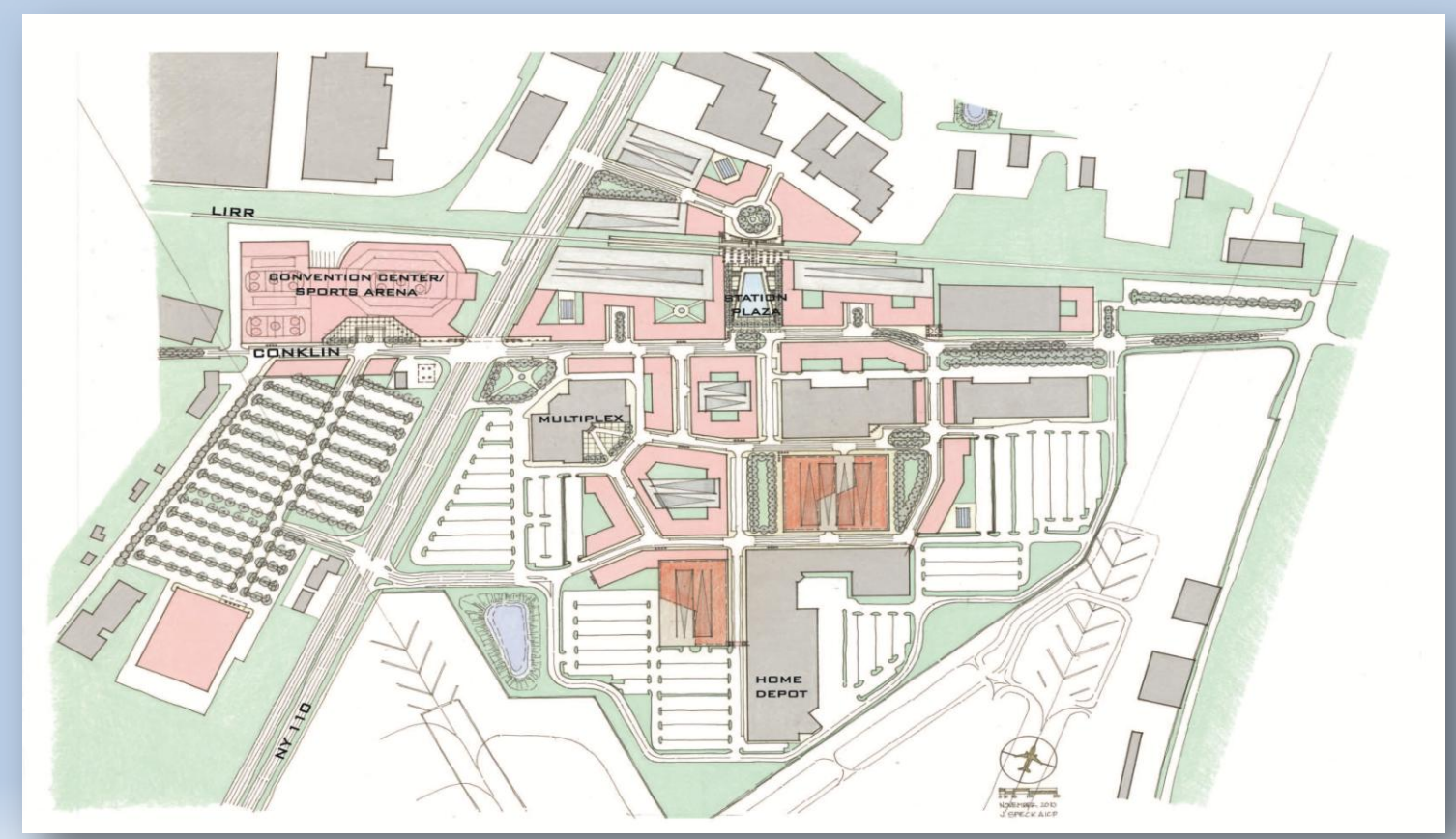




PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., NY

Project History



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TOWN OF BABYLON
SUFFOLK CO., N.Y.

Project History



PARSONS BRINCKERHOFF

Project History

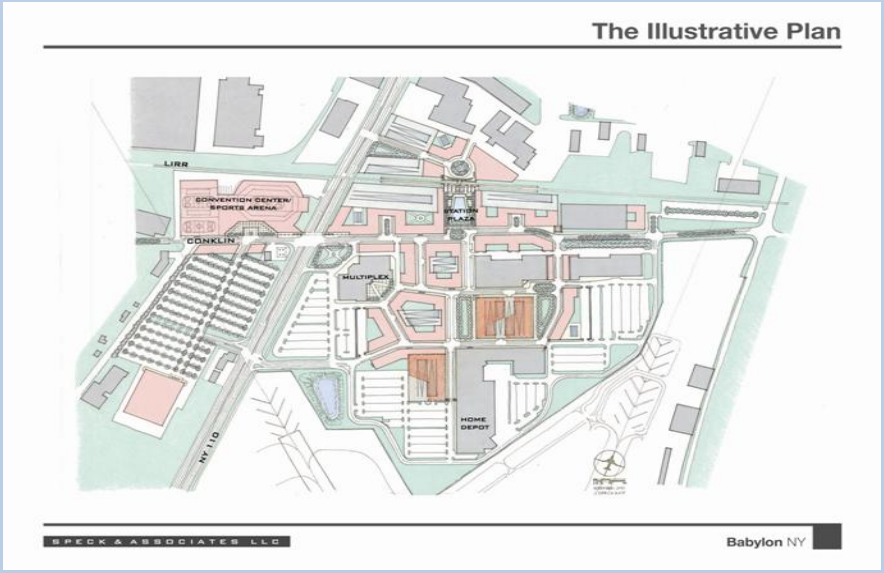


On the edge of the Central Square, a parking deck places shops at ground level, connecting the existing strip centers with continuous shopping.



The proposed pedestrian bridge spanning Route 110 is integrated into arcades enfronting the two flanking buildings.

TOWN OF BABYLON EAST FARMINGDALE DESIGN PRESENTATION APRIL 12, 2011



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Project History

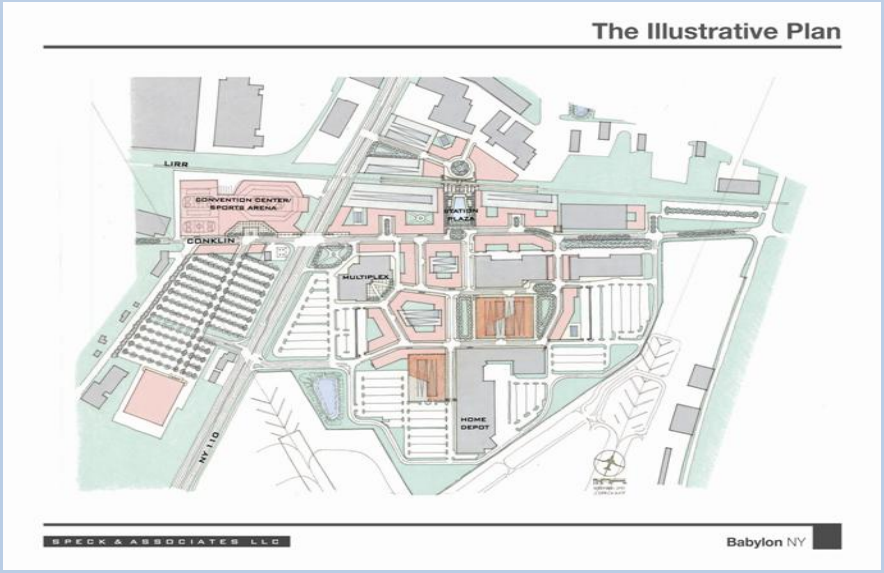


Streets approaching the Cinema and its plaza aim at its marquee, supporting its role as a social anchor.



Small "liner buildings" shield the arena's entry plaza from its parking lot and provide Conklin Street with a traffic-calming edge.

TOWN OF BABYLON EAST FARMINGDALE DESIGN PRESENTATION APRIL 12, 2011

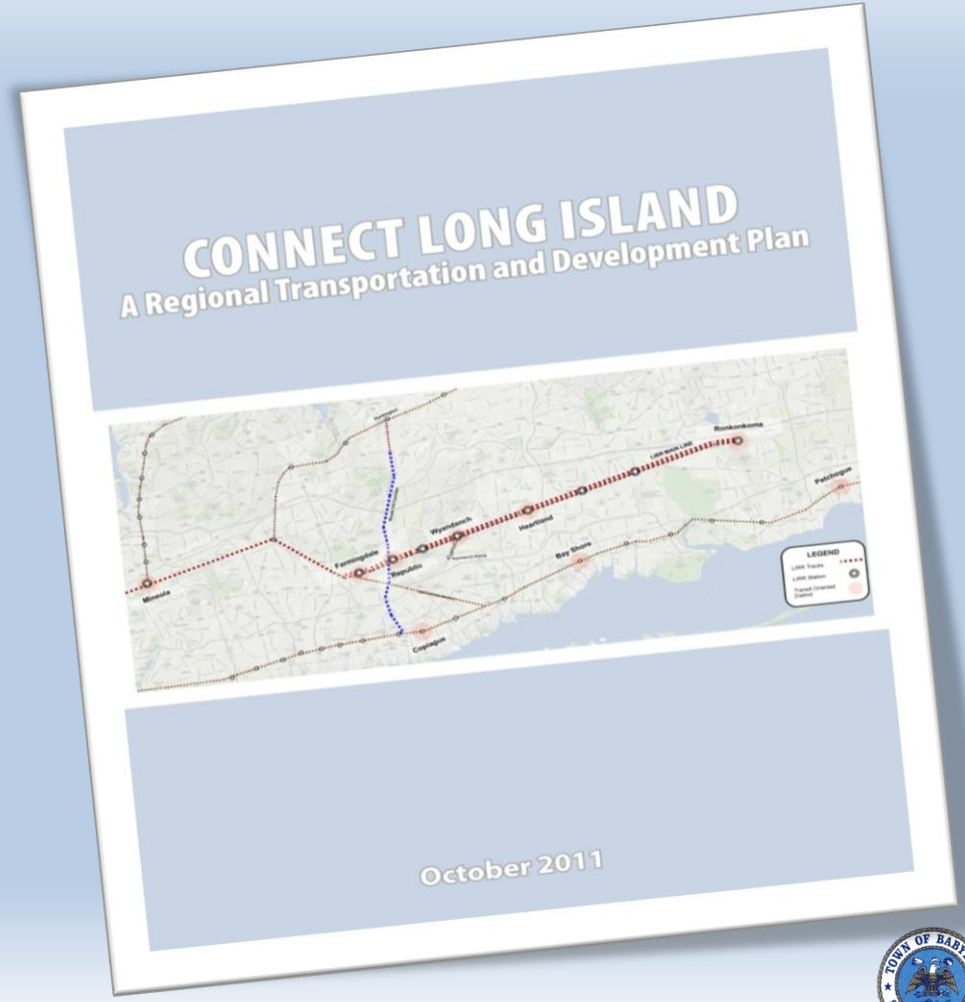


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Project History

2011

- Town of Babylon unveils the Connect Long Island Regional Transportation and Development Plan
- Connect Long Island calls for a three-pronged approach to development

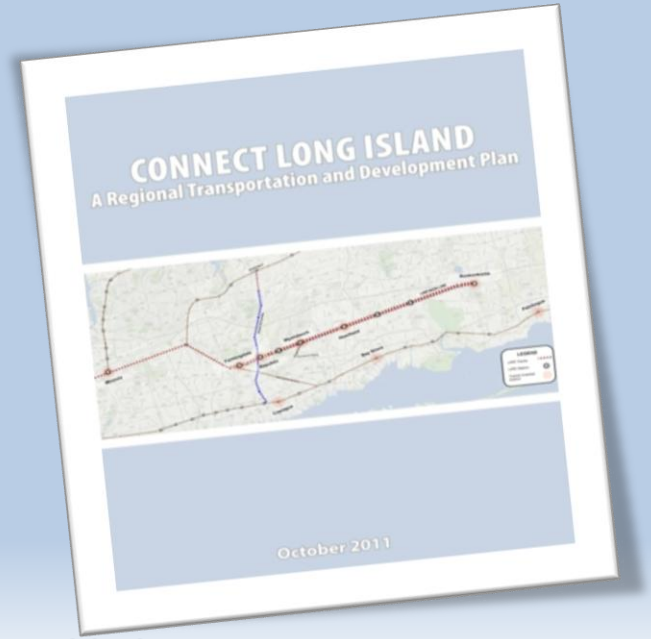


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Project History

Transit Oriented Developments

- Create walkable, mixed-income, mixed-use developments





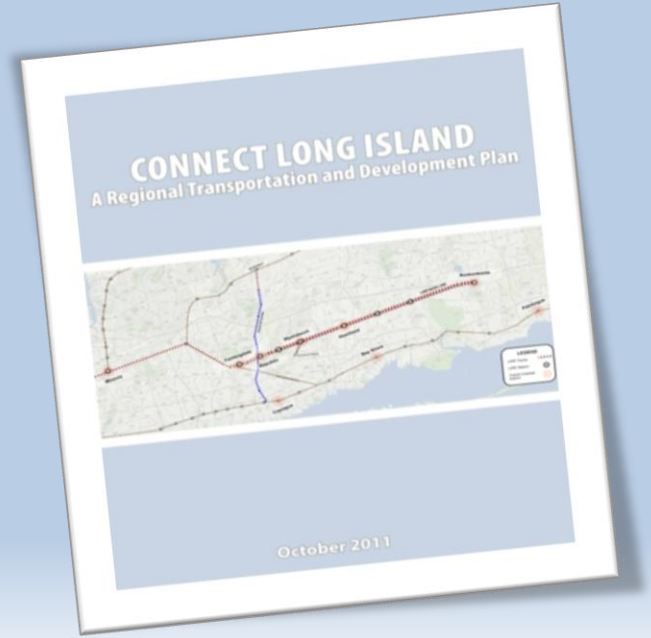
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TOWN OF BABYLON SUFFOLK CO., N.Y.

Project History

Supportive Transportation Investments

- Bolster the existing transportation system by investing in projects like LIRR Double Track, East Side Access, and support opening new train stations.



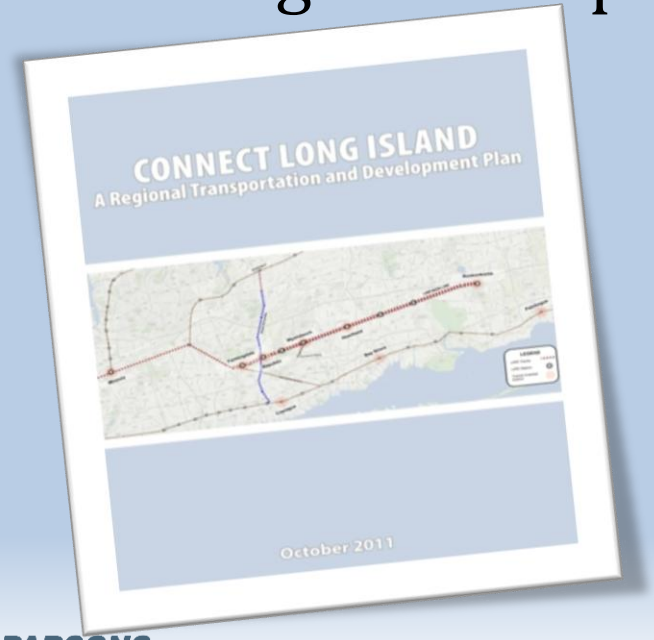


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Project History

North-South Mass Transit

- Introduce new rapid transit connections along Long Island's primary north-south corridors



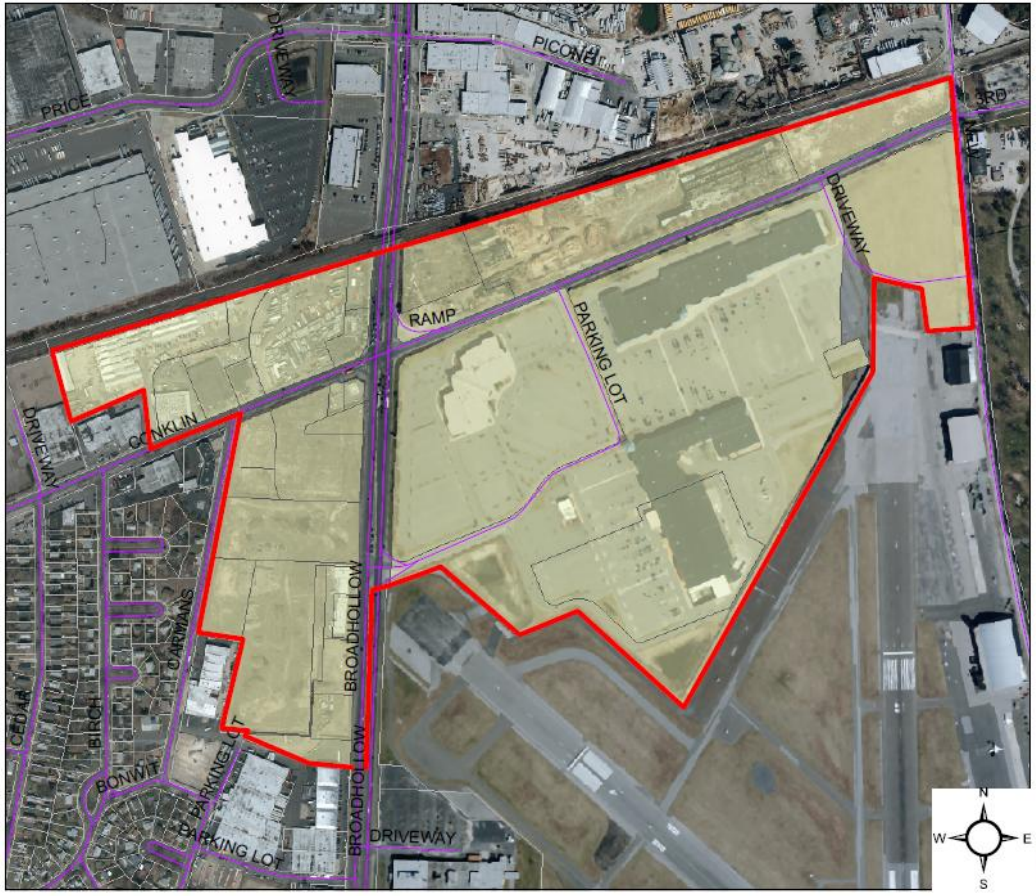


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Update on East Farmingdale Initiatives

- Master Developer RFQ
- Conceptual Design and Form-Based Zoning Code RFPs
- Regional Plan Association
- Republic LIRR Station
- Applying for Brownfields Grant from EPA

Master Developer RFQ



East Farmingdale Redevelopment - Project Area

TOWN OF BABYLON
SUFFOLK CO., NY.

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Master Developer RFQ

Goals & Objectives

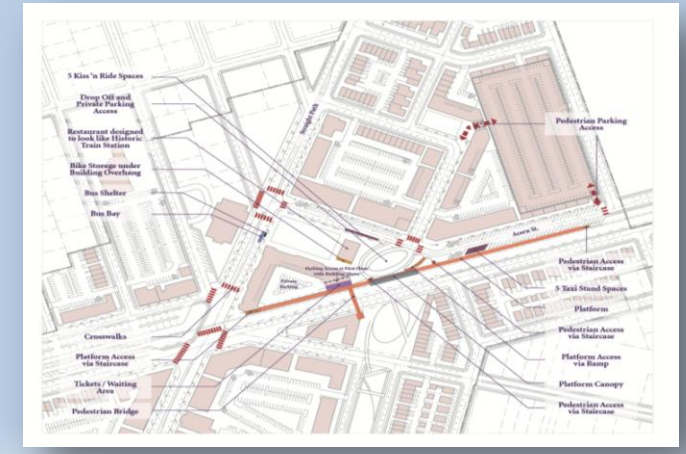
- Respond to community goals outlined in Community Visioning process
- Create a regionally significant destination in a vibrant and mixed-use setting that will meet the needs of East Farmingdale residents today and in the future
- Secure a feasible and sustainable development
- Secure a development which integrates its components, operational aspects, designs, and site layouts within the context of existing and proposed transit networks
- Provide sufficient development to support the re-opening of the Republic Station and the creation of Bus Rapid Transit on Route 110

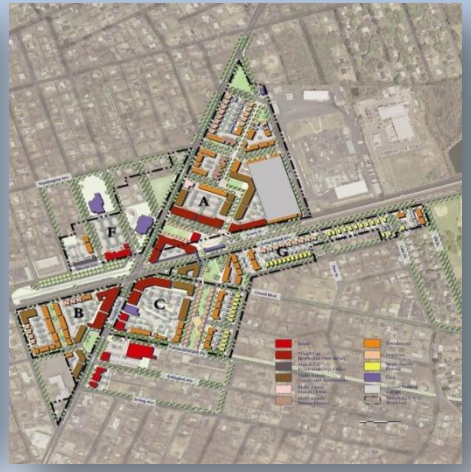
Master Developer RFQ

- Received four team responses
- Conducted interviews with top three teams in April 2014
- Received written responses to follow-up questions

Conceptual Design and Form-Based Zoning Code RFPs

- $700,000 in New York State grants from ESD and NYSERDA
- Conceptual site and area plan, form-based zoning code, and a streamlined review and approval process
- Planning, environmental, market, and cultural studies
- Provide background and basis for redevelopment







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Design Guidelines

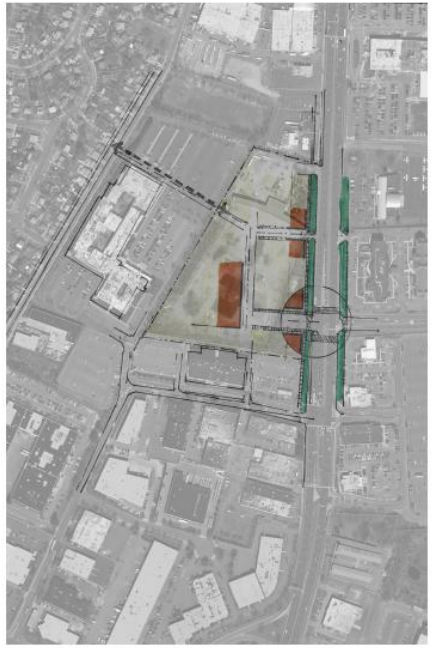
Design & Development Principles

Anticipate that in keeping with the previous Visioning Plans, the intersection of Rt.110 and __Road becomes a signature corner along Route 110. If this happens, the multi-plex theaters on the east side of Route 110 will probably be redeveloped for higher and better uses, such as Class A office space.

Route 110 will have to change in terms of its character and appearance, but it will remain a high-volume "boulevard". Therefore, the development framework diagrams assume that buildings will address Route 110 even if those buildings are set back behind a well-landscaped, pedestrian-friendly buffer:

- It is not necessary to create a continuous street wall. But a minimum amount of frontage along a "build-to" line should be mandated (see diagram). Significant landscaping between buildings should define the space of Route 110.
- Buildings should be positioned where they can frame important points of entry, define the edges of internal streets and public spaces, clarify internal circulation through the site.
- The internal layout should suggest a street and block network comparable to what has been suggested for the other redevelopment areas.
- Route 110 will become a BRT corridor. In order to make it possible to for the surrounding neighborhoods to have access to the BRT stations, a well-designed pedestrian route through the site to the neighborhoods should be required. In some cases this will require cross-access through other properties.





Republic LIRR Station

MTA 2015-2019 Capital Program

Commitments
($ in millions)

ELEMENT DESCRIPTION/PROJECT	NEEDS CODE	2015	2016	2017	2018	2019	Total All Years
04 STATION AND BUILDINGS							
UL Station Platform Lighting	NR	1.0	1.0	1.0	1.0	1.0	5.0
UM Murray Hill Station - New Elevators	SI	0.0	5.7	0.0	0.0	0.0	5.7
UN Nostrand Ave. Station Rehabilitation	NR	27.5	0.0	0.0	0.0	0.0	27.5
UP Port Washington Station Improvements	NR	0.0	2.0	11.0	0.0	0.0	13.0
UQ Babylon Station Platform Replacement	NR	0.0	5.0	0.0	46.0	0.0	51.0
UR Station Platform Railing Replacement	NR	1.0	1.0	1.0	1.0	1.0	5.0
US Station Signage Program	NR	2.8	2.8	2.8	2.8	2.8	14.0
UT Station & Building Electrical Systems	NR	1.4	1.4	1.4	1.4	1.4	7.0
UU Mentor Allowance - Stations	NR	6.0	11.0	2.0	2.0	1.0	22.0
UV New Fare Payment System	SI	0.0	15.0	0.0	0.0	0.0	15.0
UW GCT/ESA Unified Trash Facility	SI	11.1	0.0	0.0	0.0	0.0	11.1
UX Hunterspoint Avenue Station Renewal	NR	0.0	2.9	0.0	26.1	0.0	29.0
UY Elmhurst Station - New Station	SI	0.0	4.0	0.0	36.0	0.0	40.0
UZ New Republic Station on Main Line	SI	0.0	0.0	5.0	0.0	0.0	5.0
Element Total 04		**$50.8**	**$51.8**	**$24.2**	**$116.3**	**$7.2**	**$250.3**

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Ongoing Projects: Alternatives Analysis

- Continuation of engagement process
- Now in FTA pipeline
- Significant roles for public and stakeholders

Overview of Route 110 Alternatives Analysis

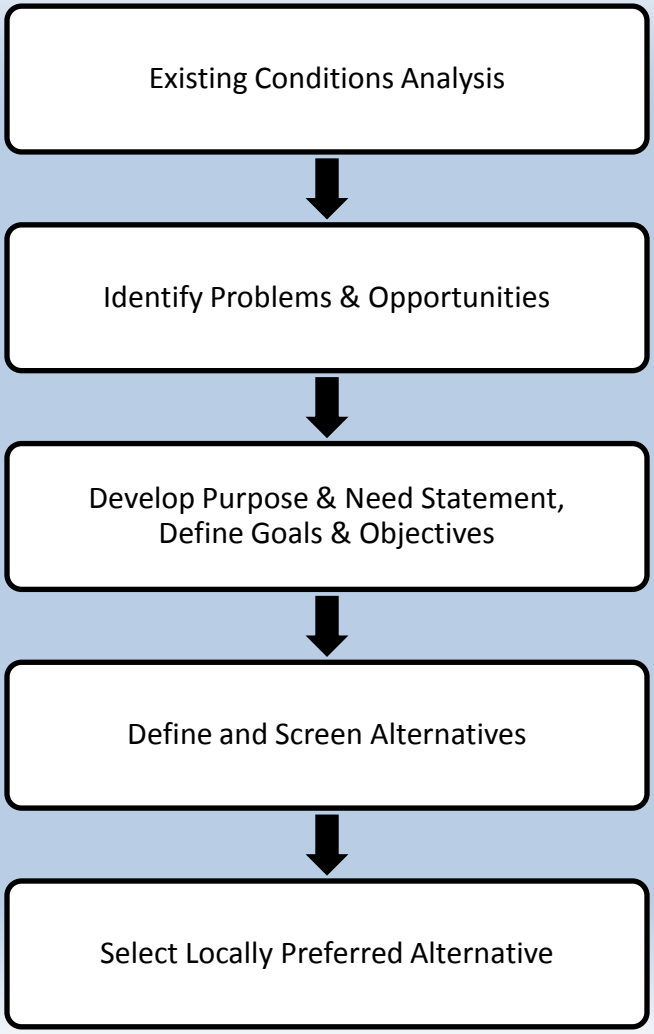
- Consider reasonable options for **mode and alignment** in developing and screening alternatives
- Develop a financially feasible **Locally Preferred Alternative** that supports the vision of **Connect Long Island** and promotes:
  - Economic development
  - Increased mobility
  - Improved quality of life
- Conduct ongoing stakeholder and public involvement



- Lead Agency: Federal Transit Administration (FTA)
- Project Sponsor: Town of Babylon
- Consultant Team: led by Parsons Brinckerhoff

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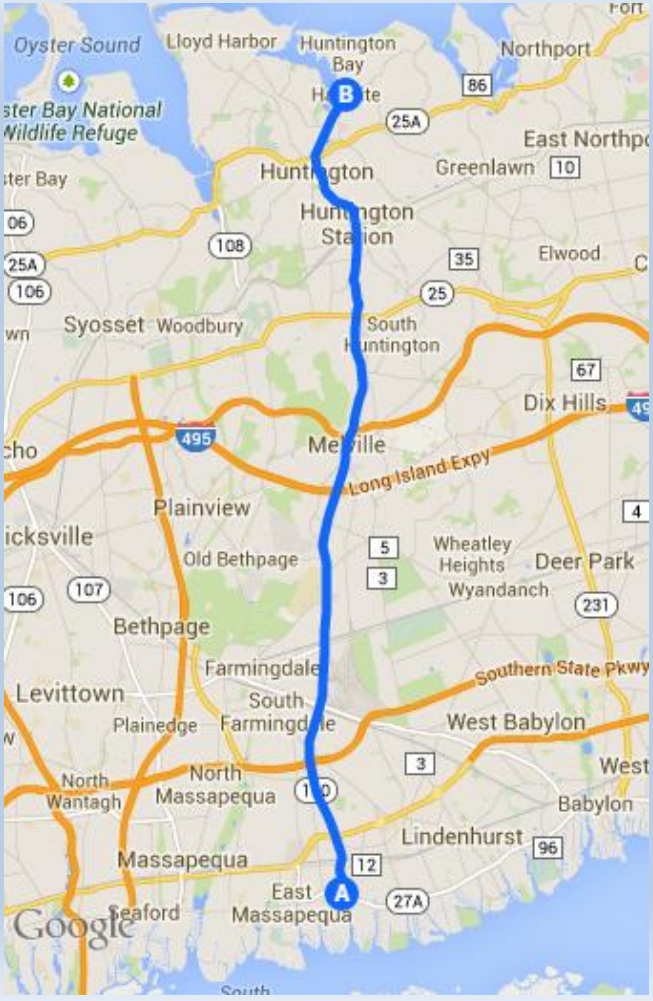
Study Process



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Route 110 – Suffolk County's "High Tech Main Street"

- Major north-south employment corridor, located in the Towns of Babylon and Huntington, just east of the Nassau/Suffolk border
- Running from Route 27A (Montauk Highway) in Amityville to Halesite in Huntington
- Home to corporate headquarters, office complexes, retail centers, educational institutions, research facilities, industry, and an airport

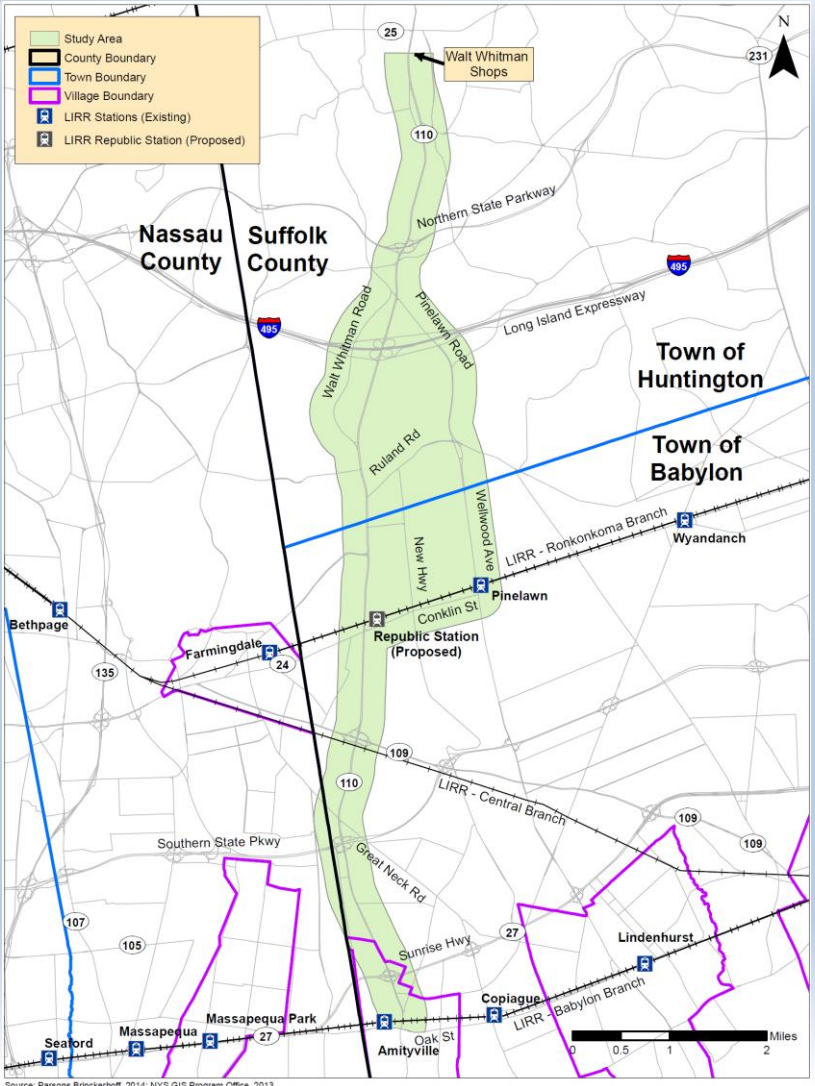


Source: Google Maps

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Study Area

- 10.3-mile corridor between Amityville LIRR Station and Walt Whitman Shops
- Extends east to Wellwood Avenue and west to Walt Whitman Road



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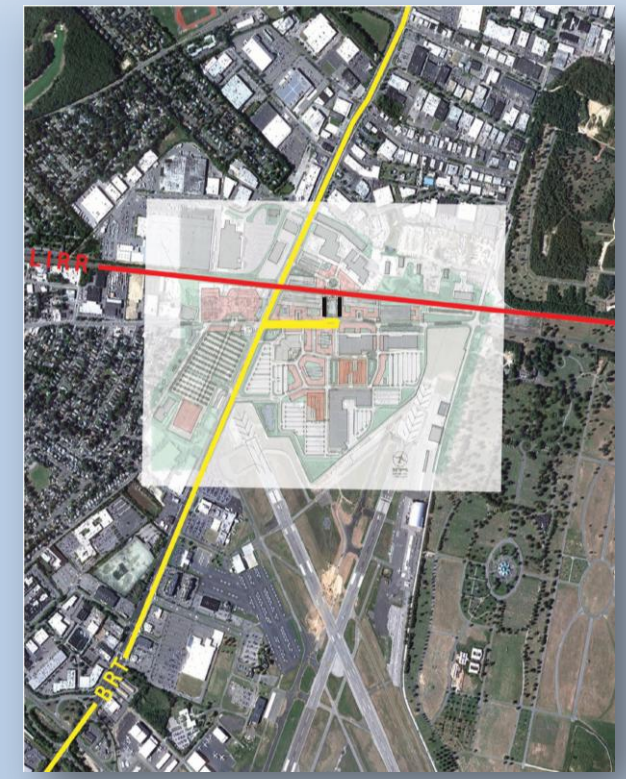
Route 110: Transportation Issues

- Constrained travel choices
- Inadequate multi-modal connectivity
- Existing and projected future traffic congestion
- Bus travel times are not competitive (disincentive for transit use)
- Existing auto-centric land use and building development patterns
- Limited walkability



Route 110: Key Transportation Opportunities

- Large employers as a source of existing/potential future transit ridership
- Relatively high existing bus ridership
- Multiple branches of the LIRR
- Multiple travel markets to be served
- Potential reopening of LIRR Republic station and East Farmingdale redevelopment (*Connect Long Island*)
- LIRR Double Track & East Side Access



Source: Speck & Associates, LLC

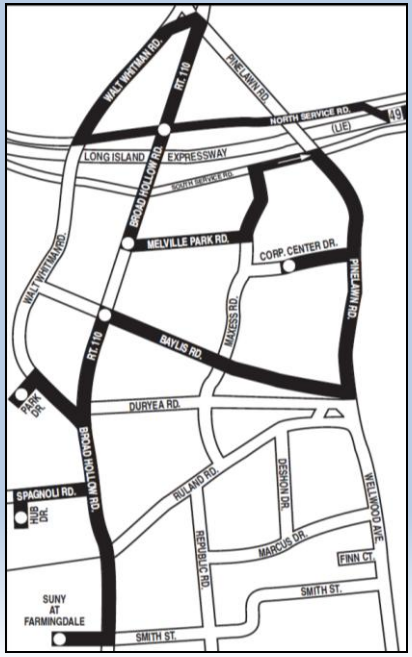
Purpose & Need

The purpose of the Route 110 Alternatives Analysis is to:

- Improve north-south mobility
- Increase transit access to and from employment and other activity centers
- Enhance multi-modal connectivity with the LIRR and existing bus service
- Promote increased transit use
- Support TOD along Route 110 and in the study area



Source: Parsons Brinckerhoff



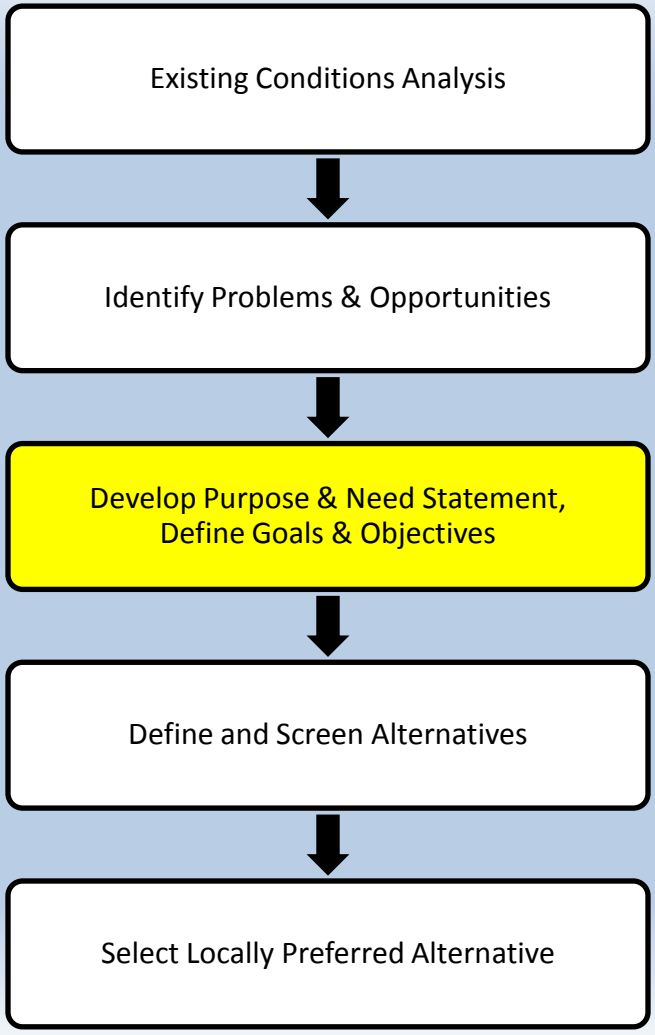
Source: Suffolk County Transit

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TOWN OF BABYLON SUFFOLK CO., N.Y.

Project Goals

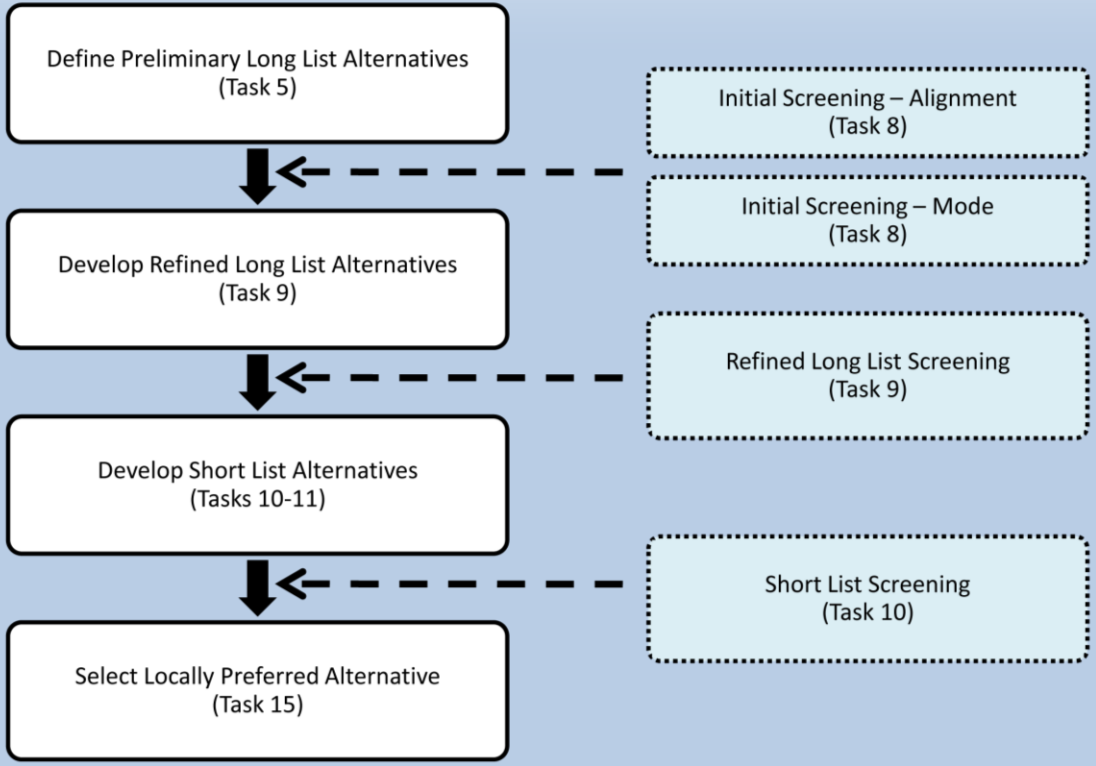
- **Improve Mobility and Connectivity**
- **Enhance Economic Competitiveness and Promote Economic Growth**
- **Maximize Cost and Operational Effectiveness**
- **Minimize Adverse Environmental Impacts**



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Alternative Evaluation Process

- Evaluation criteria are directly linked to project goals and objectives.



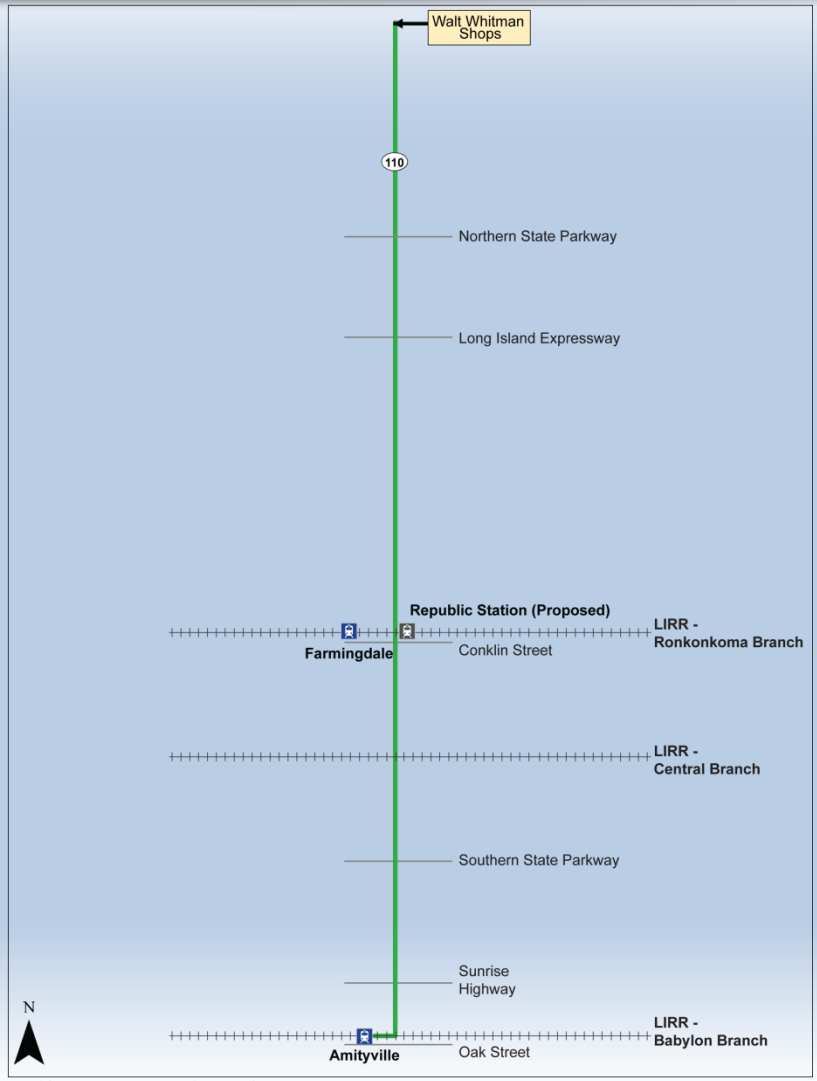
Preliminary Long List Alternatives

Alternative Number	Alternative Name
	No-Build alternative
A	Enhanced bus service along Route 110
B	Trunk route along Route 110 only
C	Trunk route along Route 110 with diversions off Route 110
D	Trunk route along Route 110 with circular feeder routes
E	Trunk route along Route 110 with transit center nodes and connecting feeder routes

Results of Initial Screening – Alignment

Preliminary Long List
Alternative B
Trunk route along Route 110 only

Legend
- Route 110 Trunk Route
- LIRR Stations (Existing)
- LIRR Republic Station (Proposed)



Note: Schematic representation; not drawn to scale.

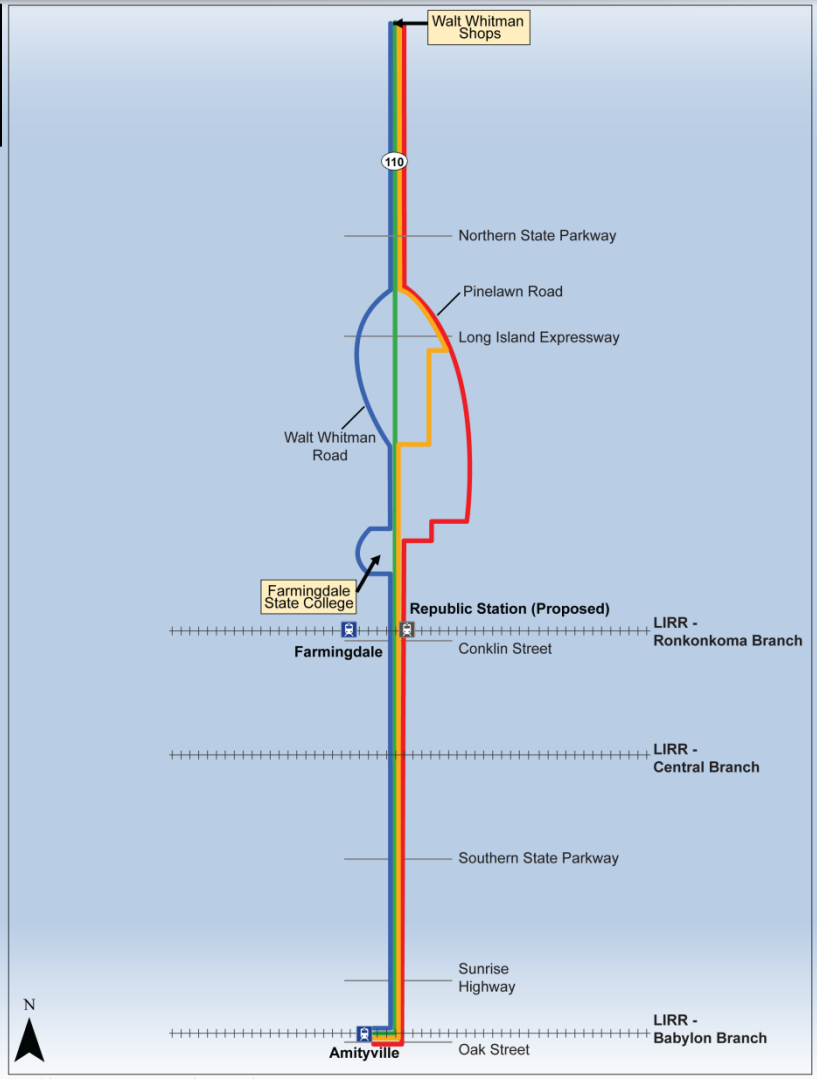
Eliminated from consideration:
The route does not provide last-mile connectivity to off-corridor destinations

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Results of Initial Screening – Alignment

Preliminary Long List
Alternative C
Trunk route along Route 110 with diversions off Route 110

Legend
- Route 110 Trunk Route
- Trunk Route Variation
- Trunk Route Variation
- Trunk Route Variation
- LIRR Stations (Existing)
- LIRR Republic Station (Proposed)



Note: Schematic representation; not drawn to scale.

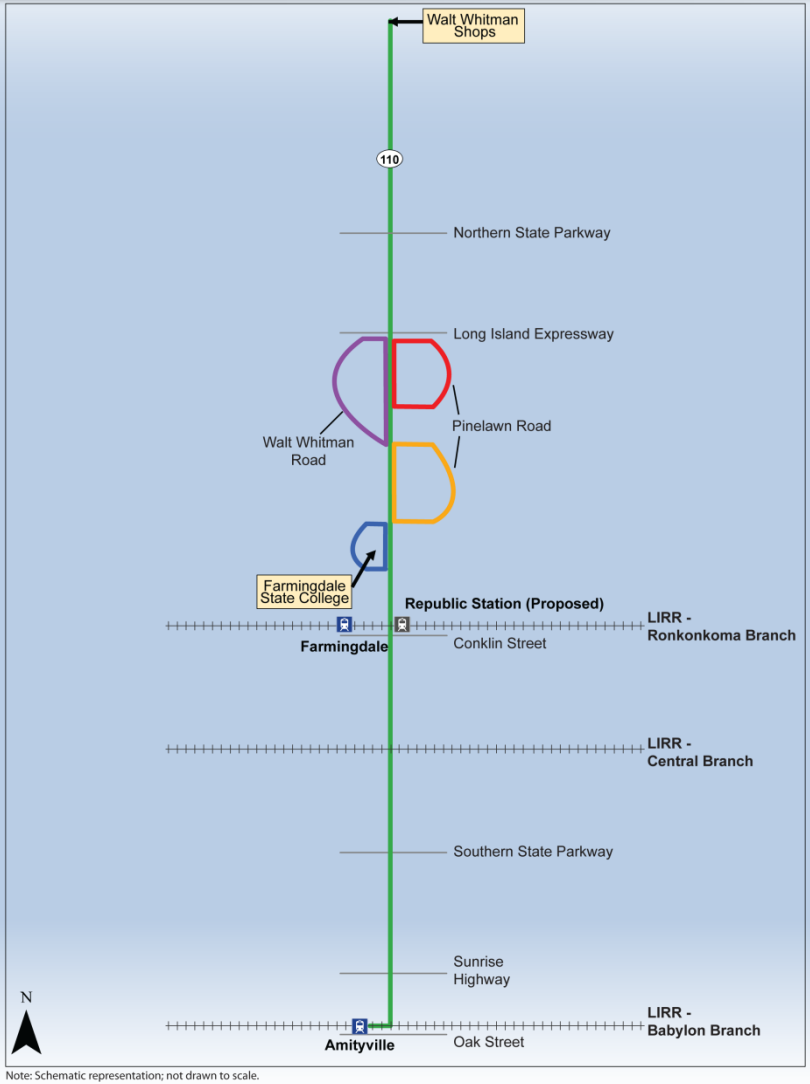
Eliminated from consideration:
The route fails to maximize cost and operational effectiveness

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Results of Initial Screening – Alignment

Preliminary Long List
Alternative D
Trunk route along Route 110 with circular feeder routes

Legend
- Route 110 Trunk Route
- Feeder Route
- Feeder Route
- Feeder Route
- Feeder Route
- LIRR Stations (Existing)
- LIRR Republic Station (Proposed)



Note: Schematic representation; not drawn to scale.

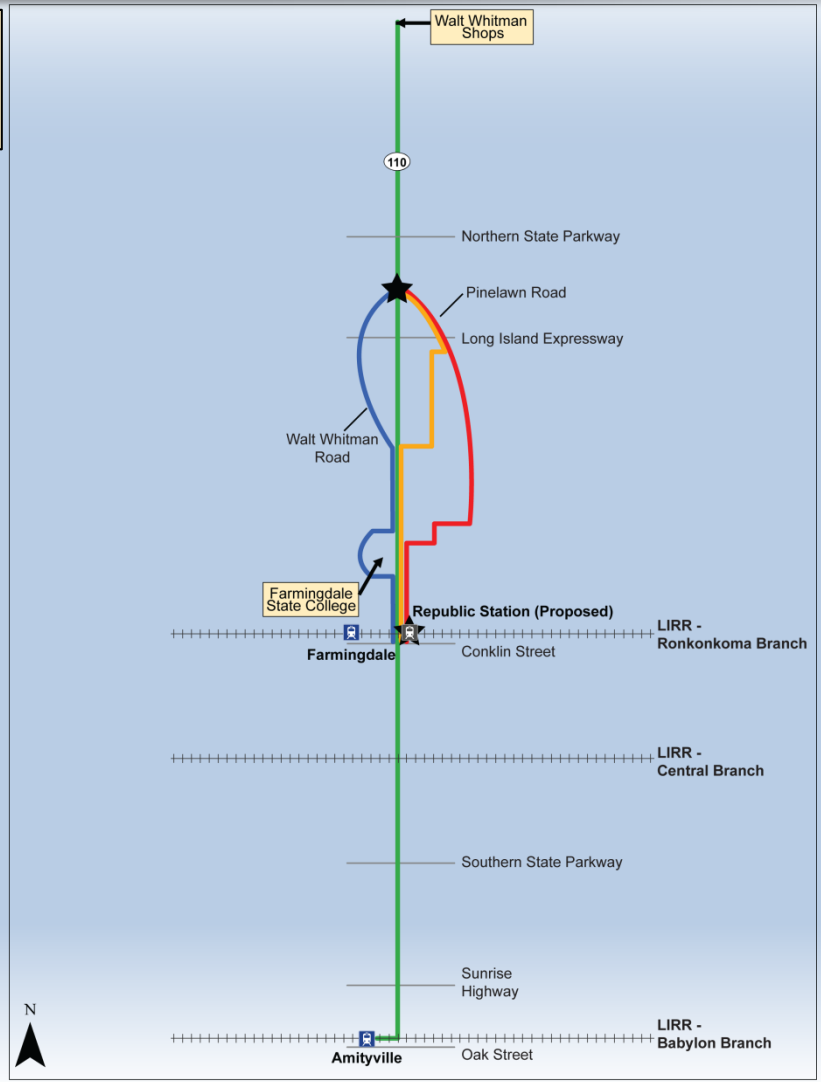
Advanced to next round of screening

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Results of Initial Screening – Alignment

Preliminary Long List
Alternative E
Trunk route along Route 110 with transit center nodes and connecting feeder routes

Legend
- Route 110 Trunk Route
- Feeder Route
- Feeder Route
- Feeder Route
- LIRR Stations (Existing)
- LIRR Republic Station (Proposed)
- Proposed Transit Center



Note: Schematic representation; not drawn to scale.

Advanced to next round of screening

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Potential Transit Modes for Alignment Alternatives



Bus Rapid Transit (BRT)



Streetcar



Light Rail Transit (LRT)

Automated Guideway Transit (AGT)



Commuter Rail (LIRR)



Subway



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Sources: New York City Department of Transportation (NYCDOT); Metropolitan Transportation Authority (MTA) New York City Transit; Portland Streetcar; Flickr; NJ Transit; Ultra Global PRT; Londonist; Newsday; NYCSubway.org; MTA LIRR

TOWN OF BABYLON SUFFOLK CO., NY

Potential Transit Modes for Alignment Alternatives



Bus Rapid Transit (BRT)



Streetcar



Light Rail Transit (LRT)

Automated Guideway Transit (AGT)



Commuter Rail (LIRR)



Subway



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Sources: New York City Department of Transportation (NYCDOT); Metropolitan Transportation Authority (MTA) New York City Transit; Portland Streetcar; Flickr; NJ Transit; Ultra Global PRT; Londonist; Newsday; NYCSubway.org; MTA LIRR

TOWN OF BABYLON SUFFOLK CO., N.Y.

Results of Initial Screening – Mode

- Streetcar, LRT, AGT, commuter rail, and subway alternatives were eliminated from consideration because the alternatives fail to maximize cost and operational effectiveness.

- **Two BRT alternatives** were advanced to the next round of the screening process:
  - BRT trunk route along Route 110 with circular feeder routes (Alternative D1)
  - BRT trunk route along Route 110 with transit center nodes and connecting feeder routes (Alternative E1)



Source: Route 110 BRT Study

What is BRT?

- High performance bus systems that provide faster, more efficient service than ordinary bus
- Approach the service quality of rail transit while still enjoying the cost savings and flexibility of bus transit
- BRT invests in improvements to speed up bus service
- Improvements to bus vehicles, stations, operations, roadways, rights-of-way, intersections, and traffic signals



Source: Parsons Brinckerhoff

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Elements of BRT

User-Friendly

Stylish Vehicles



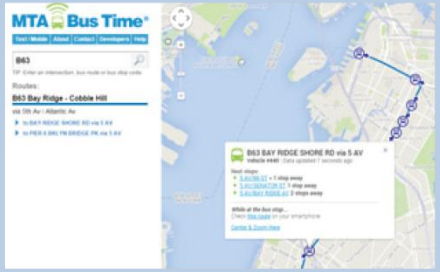
Attractive Stations



Strong Brand Identity



Real-Time Information



Faster Service

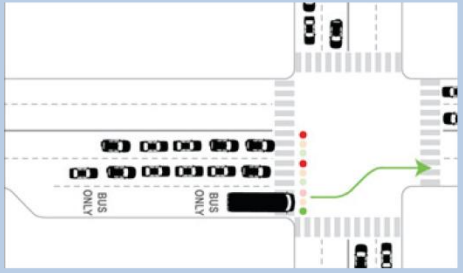
Bus Lanes



Faster Fare Collection



Traffic Signal Prioritization



More Frequent Service with Fewer Stops



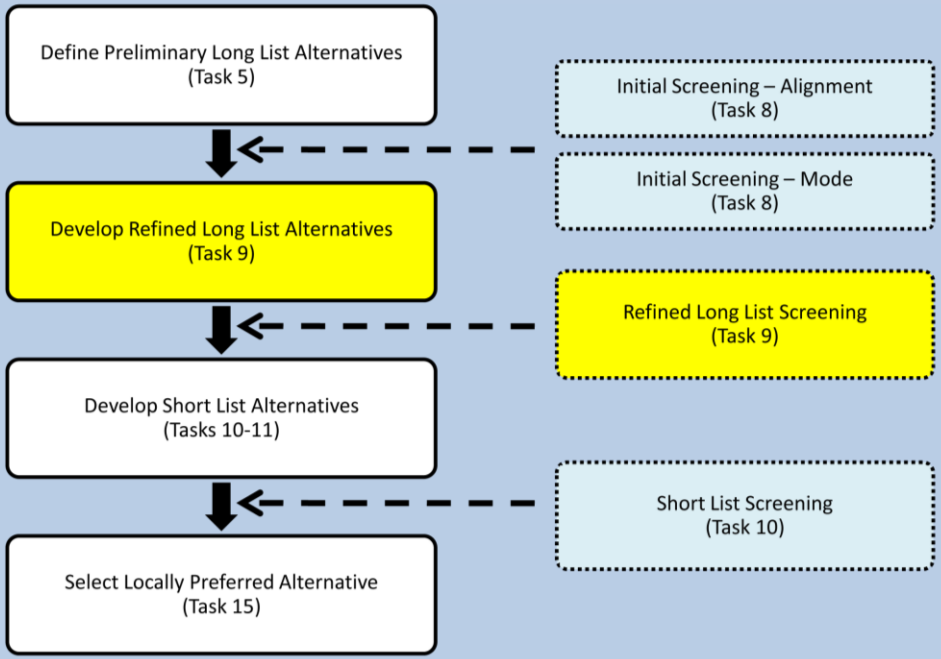
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Sources: Cleveland Regional Transit Authority; WNYC; MTA New York City Transit; New York City Department of Transportation; Metro-Magazine; Capital District Transportation Authority; Ontario Ministry of Transportation; Metrolinx; Bergen BRT

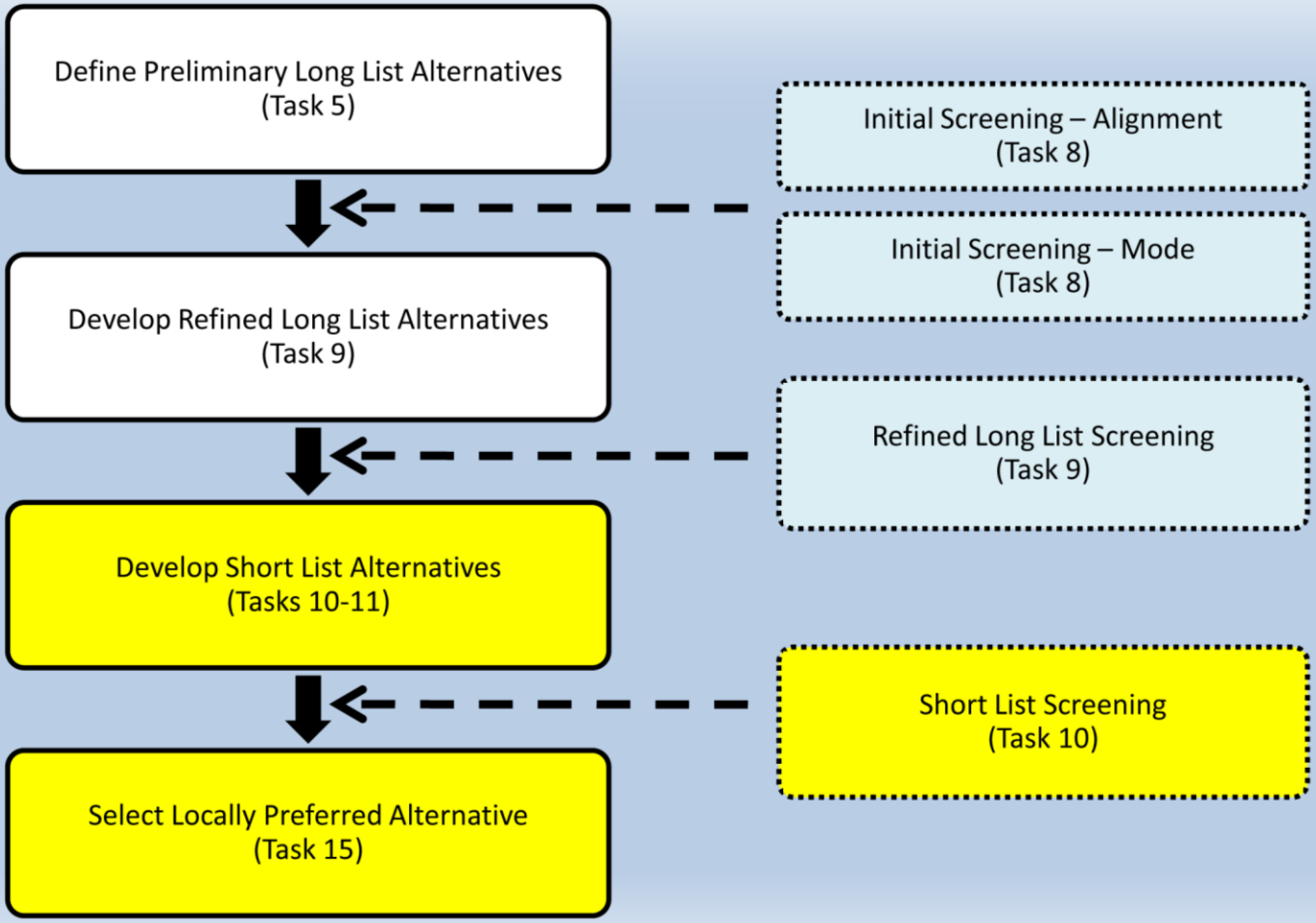
TOWN OF BABYLON SUFFOLK CO., N.Y.

Next Steps – Refined Long List Screening

- Two BRT alternatives developed in greater detail through the preparation of operating plans



Subsequent Steps – Short List Screening & LPA Selection



Comments/Questions & Answers

For more information about the ongoing Route 110 Alternatives Analysis, contact
Town of Babylon Office of Downtown Revitalization

Jonathan Keyes, Director
631-957-7430
jkeyes@townofbabylon.com

Or

Eric Zamft, Project Manager
631-957-7408
ezamft@townofbaylon.com

MEETING MINUTES: PUBLIC MEETING #1

Date: Monday, December 15, 2014

Time: 6:30 PM

Location: East Farmingdale Fire House
930 Conklin Street
Farmingdale, NY 11735

Attendees:

Name	Address	Phone	Email
Jonathan Keyes	Town of Babylon, Office of Downtown Revitalization, 200 East Sunrise Highway, Lindenhurst	631-957-7430	jkeyes@townofbabylon.com
Eric Zamft	Town of Babylon, Office of Downtown Revitalization, 200 East Sunrise Highway, Lindenhurst	631-957-7408	ezamft@townofbabylon.com
Ashton Saber	Town of Babylon, Office of Downtown Revitalization, 200 East Sunrise Highway, Lindenhurst		
Hon. Antonio Martinez	Town of Babylon, 200 East Sunrise Highway, Lindenhurst	631-957-4472	
Hon. DuWayne Gregory	Suffolk County Legislative Office – District Office 15, 15 Albany Avenue, Amityville	631-854-1111	
Gus Cypser	1207 Melville Road, Farmingdale	631-935-5293	guscypser@gmail.com
Sharmine Persaud	1105 Route 110, Farmingdale	631-777-5440	SPersaud@sharminepersaud.com
Michael Katz	6 Larkin Street, Farmingdale	631-293-8856	
Lawrence DeMarco	46 Alexander Avenue, Farmingdale	631-694-5948	Lari81@aol.com
Sal Cinquemani	13 Birch Circle	516-921-2921	Cinque35T@aol.com
Janet Dawson	7 Baldwin Street	631-756-0924	Jvafeas@yahoo.com
James Vafeas	7 Baldwin Street	631-756-0924	Jvafeas@yahoo.com
Allison Saber	116 Rime Avenue	631-243-0768	Asaber@hhh.k12.ny.us
Joseph A. Wisz	32 Cedar Avenue	631-657-2902	Wizzo32fd@yahoo.com
Ken Dickinson	51 Wall Street	516-241-4550	kpdliny@aol.com
Janet Bonczek	23 Alexander Avenue, Farmingdale	631-293-5082	
Thomas Joseph Jr.	118 East Carmans Road	516-359-7268	thjart@aol.com
Steve Noveck	64 Birch Avenue East	631-249-7871	
Karen Williams	39 Alexander Avenue	631-249-8023	karennywilliams@gmail.com
Helen Norjen	26 Hawthorne Street, Farmingdale	631-249-3119	

Name	Address	Phone	Email
Donna Sutherland	521 Cedar Avenue, Farmingdale	631-756-0596	DSutherl@optonline.net
Nancy Cypser	1207 Melville Road, Farmingdale	631-249-7883	cypser@gmail.com; woodlandcivicassoc@gmail.com
Tanya Katz	6 Larkin Street, Farmingdale	631-293-8856	tanyakatz@yahoo.com
Joe/Janet Scura	9 Wall Street	631-753-0818	janetandjoe@juno.com
Lou Iannone Jr.	112 East Carmans Road	516-456-8626	
Nancy Schliwka	18 Hawthorne Street	631-293-7389	Dangelo7@optonline.net
Connie Gunn	39 Cedar Avenue	631-694-9830	(illegible entry on sign-in sheet)
Hon. Kimberly Jean-Pierre			Jeanpierre38@hotmail.com
Nicole Bucich	Parsons Brinckerhoff	212-465-5220	bucichna@pbworld.com
Maxwell Sokol	Parsons Brinckerhoff	212-465-5138	sokolml@pbworld.com
James Rigert	Parsons Brinckerhoff	212-465-5665	rigertjw@pbworld.com

Purpose:

The purpose of this public meeting was for the Town of Babylon to provide an update on East Farmingdale Initiatives, and Parsons Brinckerhoff to provide an overview of—and get feedback on—the ongoing Route 110 Alternatives Analysis, including project status and next steps.

Discussion Items:

Topic	Discussion
Welcome	• Hon. A. Martinez and Hon. D. Gregory offered welcome remarks.
Update on East Farmingdale Initiatives	• J. Keyes opened the meeting by discussing previous, ongoing, and future initiatives in East Farmingdale. These initiatives include a call for the re-opening of LIRR Republic station, a Bus Rapid Transit (BRT) feasibility study along Route 110, preparation of the *Connect Long Island Regional Transportation and Development Plan*, and plans for development of a vibrant downtown center in the vicinity of Airport Plaza. • Several ongoing initiatives are linked to the potential East Farmingdale development, including a Master Developer Request for Qualifications (RFQ), conceptual design and form-based zoning code Requests for Proposals (RFPs), draft design guidelines prepared by the Regional Plan Association (RPA), an application for a Brownfields Grant from the Environmental Protection Agency (EPA), and inclusion of environmental review and design of LIRR Republic station in the Draft 2015-2019 Metropolitan Transportation Authority (MTA) Capital Program.
Overview of Route 110 Alternatives Analysis	• N. Bucich introduced the Route 110 Alternatives Analysis by summarizing the project background and study area, and presenting the problems and opportunities, purpose and need, goals and objectives, and alternative evaluation process. The Alternatives Analysis is building upon previous work to select a Locally Preferred Alternative (LPA) to advance to Project Development and National Environmental Policy Act (NEPA) review with the Federal Transit Administration (FTA).

Topic	Discussion
Overview of Route 110 Alternatives Analysis	• M. Sokol presented an overview of the Preliminary Long List Alternatives and the results of the two-step Initial Screening (alignment and mode). Two BRT alternatives were advanced to the next round of the screening process: BRT trunk route along Route 110 with circular feeder routes, and BRT trunk route along Route 110 with transit center nodes and connecting feeder routes. • M. Sokol concluded by summarizing next steps, which include developing the remaining alternatives in greater detail through the preparation of operating plans, followed by the Refined Long List Screening and Short List Screening, leading to selection of an LPA. The LPA will specify the route alignment and associated transit elements, developed to a 10% level of engineering.

Comments / Questions & Answers	• An attendee requested that a copy of the presentation be made available.
	  ○ J. Keyes indicated that the presentation will be posted on the Town of Babylon website.
	• An attendee commented that traffic backups are problematic on Route 110, in part because there are not many through streets that offer detours when Route 110 is congested.
	• An attendee commented that there is a lack of pedestrian infrastructure on the side streets that are near Route 110.
	• An attendee asked why portions of New Highway/Republic Road do not have sidewalks, although they were recently reconstructed.
	  ○ Hon. D. Gregory discussed the request to the County for reconstruction on New Highway/Republic Road.
	  ○ J. Keyes noted that the Town of Babylon has a Complete Streets Policy that requires all projects on Town of Babylon-owned roads to consider all users of the roadway (i.e., drivers, pedestrians, cyclists, and transit vehicles).
	  ○ Hon. A. Martinez stated that he will ask the Town of Babylon Commissioner of Planning and Development to report to the Town Council about consideration of sidewalks as part of roadway reconstruction projects.
	• An attendee asked whether small vehicles will be used to serve the feeder routes associated with the transit alternatives.
	  ○ N. Bucich indicated that it is anticipated that the mode for the feeder routes would be a shuttle bus because of the nature and anticipated demand for the service, although this will be revisited during the refinement of alternatives and ridership forecasts in subsequent tasks.
	• An attendee commented that BRT needs to be cost effective to attract passengers, and asked whether there will be coordination with the LIRR for reduced fares for connections between BRT and LIRR.
	  ○ J. Keyes mentioned that LIRR fares are set by zone. N. Bucich indicated that assumptions regarding BRT fare will be reflected in the ridership forecasting effort in subsequent tasks.

Topic	Discussion

Comments / Questions & Answers	• An attendee commented that it should be made difficult for people to drive to Route 110, park their car, and then take BRT to their destination. The attendee commented that park-and-ride lots encourage driving as opposed to transit use.
	• An attendee commented on the need for improved conditions for pedestrians and bicyclists.
	• An attendee commented that Route 109 needs to be made safer. When there are accidents on Route 109, traffic diverts to Route 110, contributing to congestion.
	• An attendee commented that stations/stops where passengers will need to wait for BRT vehicles need to be made attractive to encourage transit use.
	• Multiple attendees commented about the planned East Farmingdale development:
	  ○ An attendee commented that there should not be parking garages as part of the development because garages would encourage people to drive to Route 110 to park their cars, which would exacerbate traffic conditions.
	  ○ An attendee commented that every taxpayer in Farmingdale and Half Hollow Hills should be invited to discuss the future of the East Farmingdale development.
	  ○ An attendee commented that there should be a separate meeting dedicated to discussing the development.
	• An attendee asked about the future of the Suffolk County Transit S1 route, given the plan for BRT on Route 110.
	  ○ J. Keyes indicated that it is not anticipated at this time that S1 service would be replaced or service reduced. BRT would provide limited-stop service as an overlay to the existing S1 route, which would continue to provide local service.
	• An attendee asked about the timeframes for the East Farmingdale development, the re-opening of LIRR Republic station, and BRT implementation.
	  ○ J. Keyes indicated that the Town of Babylon is in the process of selecting a master developer for East Farmingdale in conjunction with selecting consultants to complete planning studies associated with the development. The timeframe for the development is not yet known. The re-opening of LIRR Republic station is contingent upon the East Farmingdale development as well as the completion of LIRR Double Track (scheduled for 2018). The draft 2015-2019 MTA Capital Program includes $5M in 2017 for environmental review and design of LIRR Republic station, and it is anticipated that construction would be funded in the 2020-2024 Capital Program. The ongoing Route 110 Alternatives Analysis will identify a potential timeframe for BRT implementation once a Locally Preferred Alternative is selected (scheduled for spring 2015) at the end of the planning process.

Topic	Discussion

Comments / Questions & Answers	• An attendee asked how much contact the Town of Babylon has had with Nassau Inter County Express (NICE) Bus and how the proposed service along Route 110 would mesh with existing NICE Bus service.
	  ○ J. Keyes indicated that there has been minimal contact with NICE Bus, other than to request transit data to support the Alternatives Analysis.
	• An attendee asked about the role of the Town of Huntington in the Alternatives Analysis.
	  ○ J. Keyes indicated that the Town of Huntington is serving on the Technical Advisory Committee (TAC), which was convened earlier this afternoon for its first meeting.
	• Comments posted on the interactive board, "General Issues & Opportunities along the Route 110 Corridor":
	  ○ Traffic: "controlling/easing the congestion along [Route] 110"; "I go out of my way to avoid [Route] 110"; "I don't drive down [Route] 110 during noon - 2pm"; "increasing shopping and housing will increase traffic – how will this be prevented?"; "huge traffic problems north of Melville"; "[Route] 110 is one big parking lot"
	  ○ Pedestrian/bicycle: "making the area more pedestrian friendly"; "build a bicycle path along [Route] 110"; "why wasn't New Highway/Republic Road made pedestrian and bicycle friendly when it was redone?"; "no safe way to cross 110: walking on [Route] 110 or bike"
	  ○ Land use/economic development: "building height"; "convention center traffic"; "school districts involved?"; "tax credits for businesses"; "what is the tax benefit to residents?"
	• J. Keyes noted that comment cards were available at the registration table, which attendees could fill out and either leave with a project team member or mail to the Town of Babylon, Office of Downtown Revitalization.
	• J. Keyes noted that there will be additional meetings in 2015 on the Alternatives Analysis.
	• J. Keyes also noted that the Town will hold a separate meeting to discuss the East Farmingdale development.

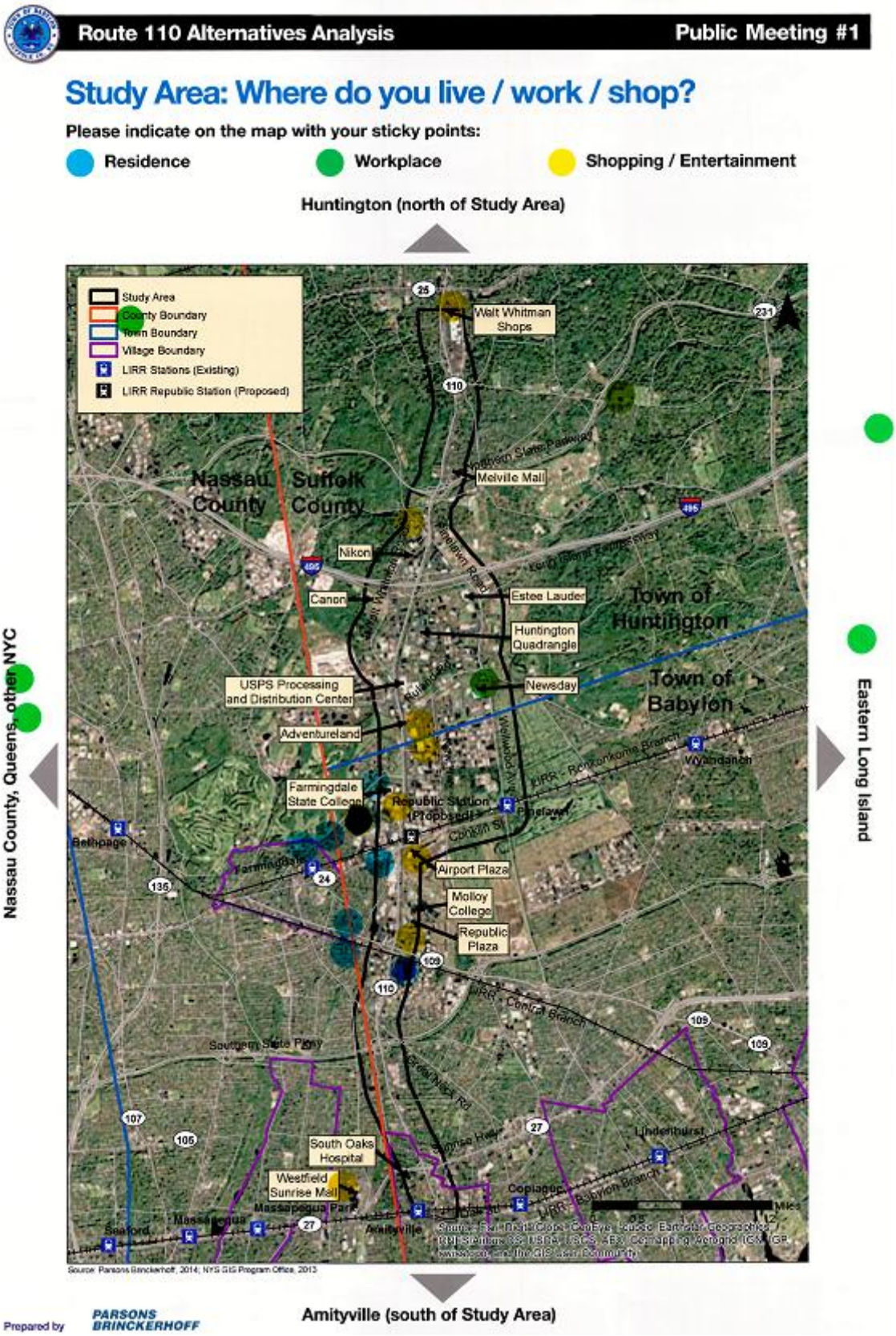
Materials Transmitted or Received:
None

Attachments:
Presentation from meeting; scanned interactive boards from meeting (see below)

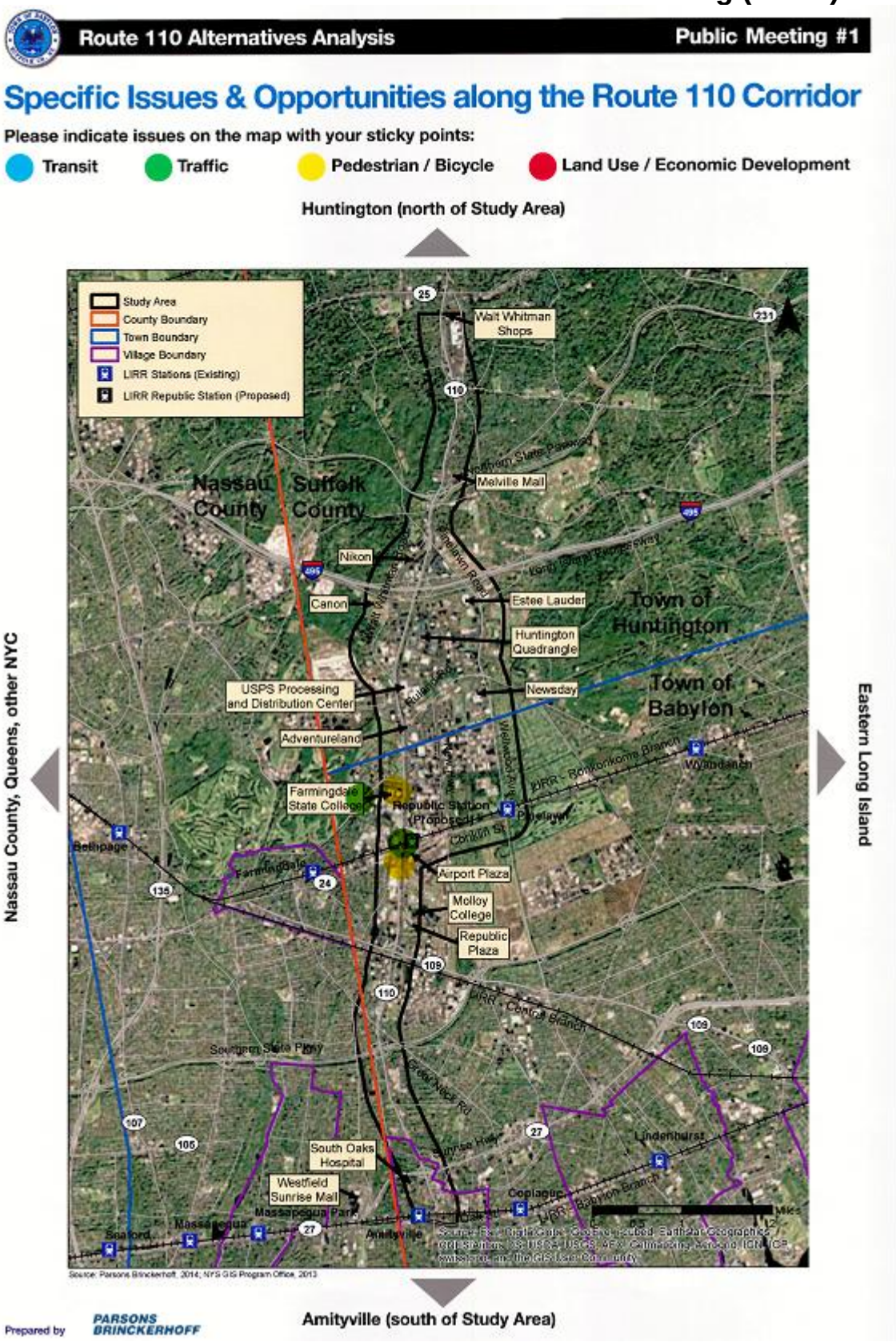
Distribution:
Town of Babylon, Office of Downtown Revitalization

These minutes represent the recorder's understanding of the issues discussed. Please report any discrepancies to the recorder within seven days; otherwise the record will remain as written.

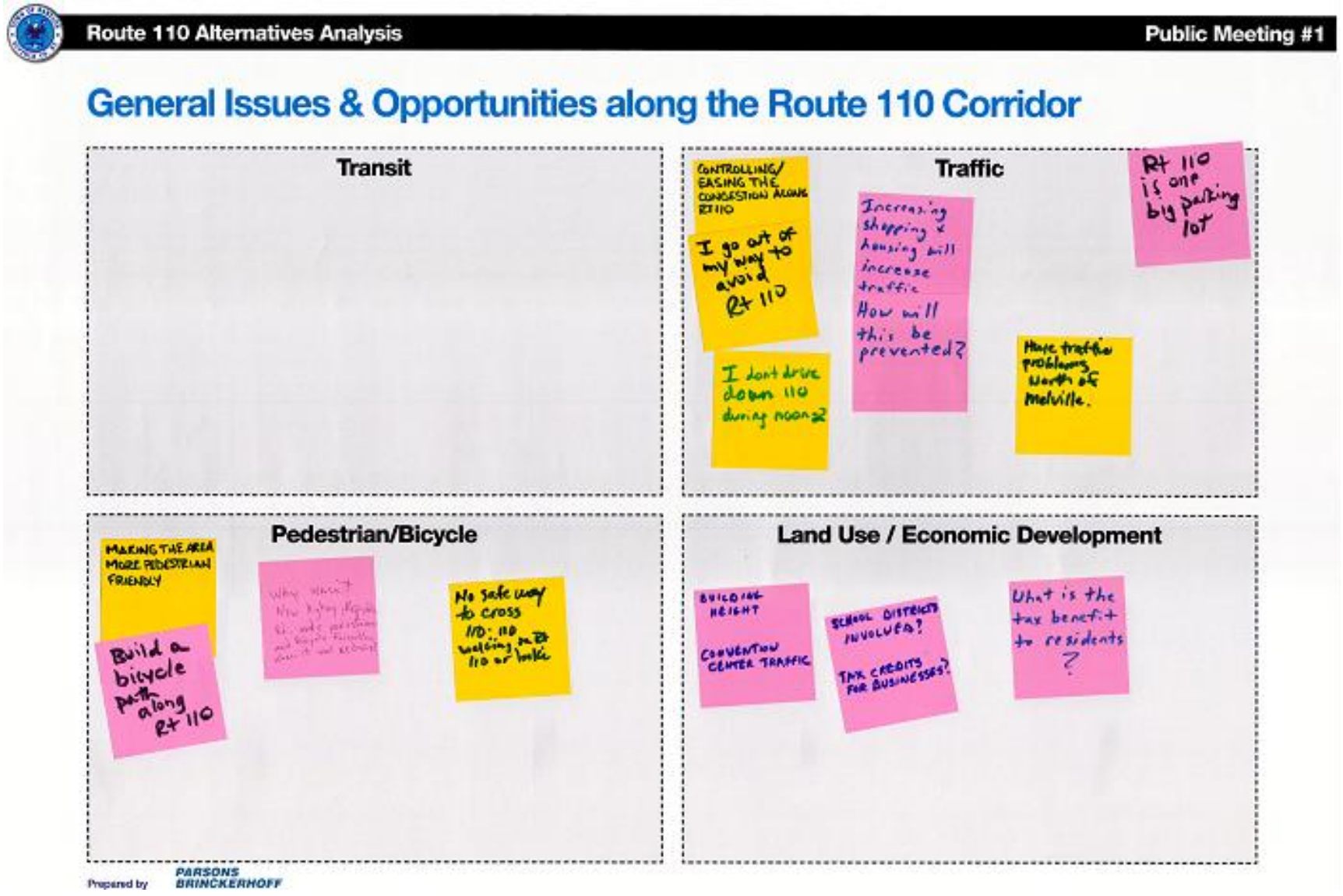
Scanned Interactive Boards from Public Meeting (1 of 3)



Scanned Interactive Boards from Public Meeting (2 of 3)



Scanned Interactive Boards from Public Meeting (3 of 3)

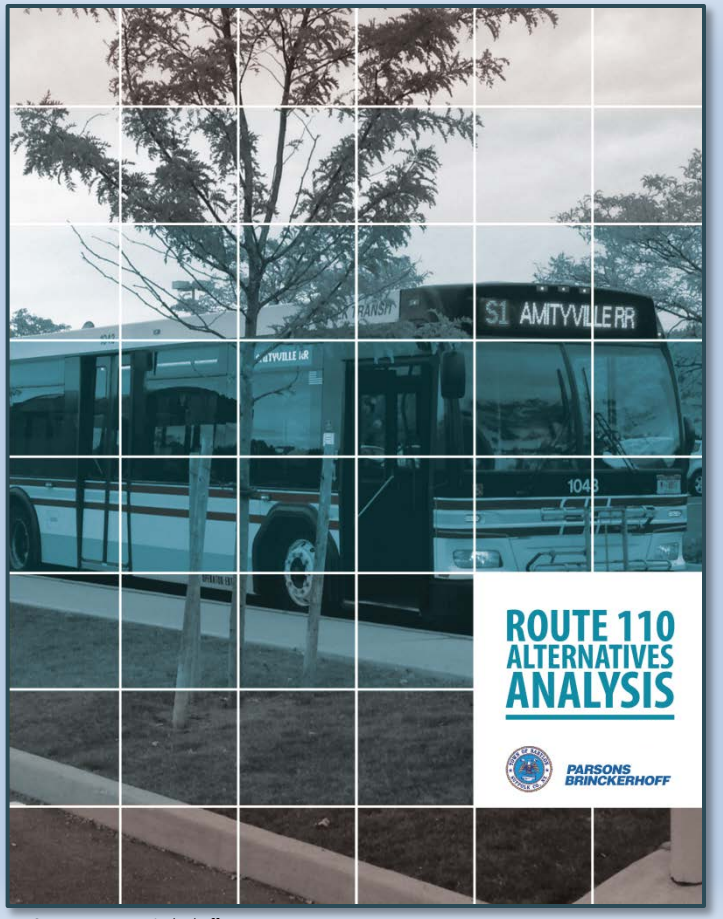


Route 110 Alternatives Analysis

Public Meeting #2

April 27, 2015

East Farmingdale Fire Department
930 Conklin Street



Source: Parsons Brinckerhoff

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Agenda

- **Welcome/Project Background**
  – Jonathan Keyes

    Director, Town of Babylon
    Office of Downtown Revitalization

- **Update on Route 110 Alternatives Analysis**
  – Parsons Brinckerhoff Team

- **Comments/Questions & Answers**

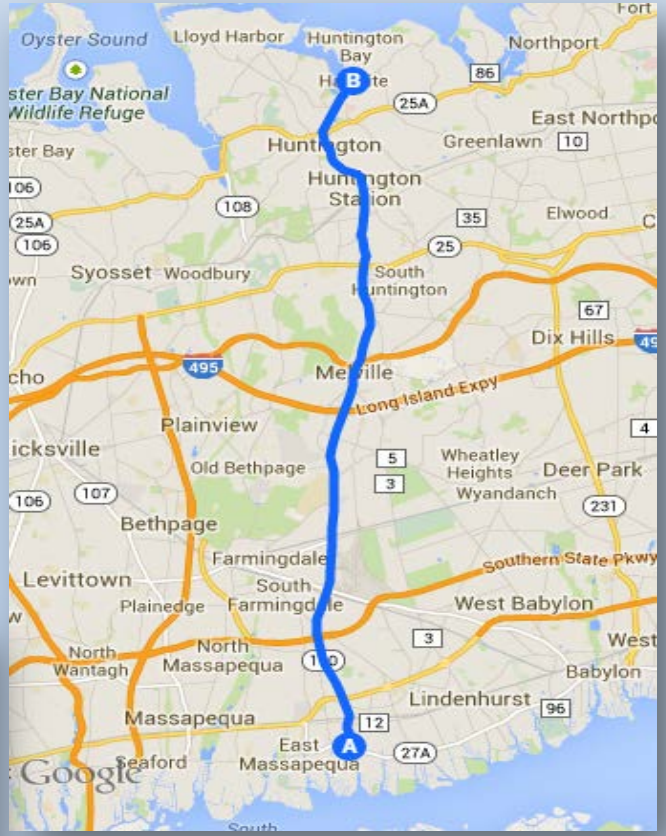
Welcome/Project Background

Jonathan Keyes
Director, Town of Babylon
Office of Downtown Revitalization

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Route 110 – Suffolk County's "High Tech Main Street"

- Major north-south employment corridor, located in the Towns of Babylon and Huntington, just east of the Nassau/Suffolk border
- Running from Route 27A (Montauk Highway) in Amityville to Halesite in Huntington
- Home to corporate headquarters, office complexes, retail centers, educational institutions, and research facilities







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Route 110 – Suffolk County's "High Tech Main Street"

- Viewed as critical corridor for Long Island's long-term regional economic viability
- Key component of Suffolk County Executive Steve Bellone's Connect Long Island plan



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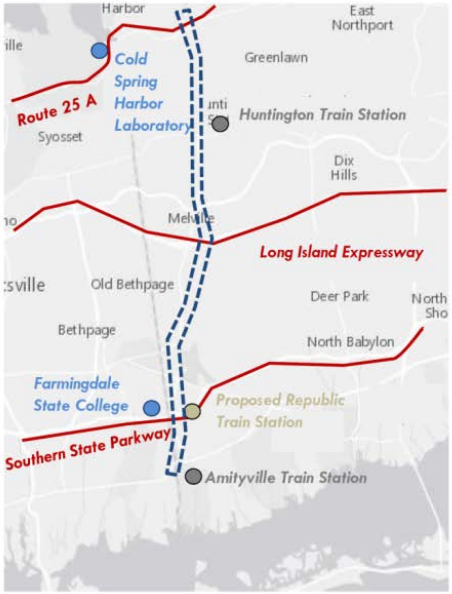
Route 110 as an Economic Engine

The Route 110 Corridor plays a vital role in Long Island's economy, with over 60,000 jobs located within a half-mile of the corridor.

Significant efforts have been made to bolster the corridor, including proposals for a bus rapid transit (BRT) system, and multiple requests for proposals (RFPs) to concentrate new development in the corridor. The corridor holds significant potential for TOD, with large investments being made around the Huntington and new Republic LIRR Stations.

The corridor currently has over 1 million SF of vacant office space and 500,000 SF of vacant industrial space. With this space availability and its proximity to major facilities, the corridor is a logical physical locus for Long Island's biomedical cluster.

Route 110 Corridor



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Project Foundation

2002-2008



IN BABYLON

The Rub in a Plan for Train Hub

Property sale would prevent reopening of an LIRR station

By Sumathi Reddy
Staff Writer

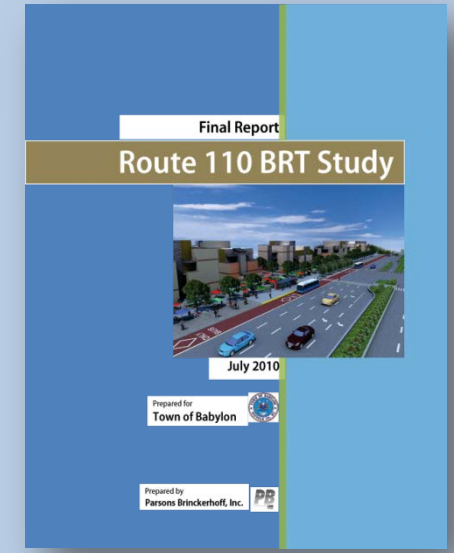
THE DAILY COMMUTE between Howard Beach and southern Queens and her job at Ocean Air in Melville is quite a challenge for Margo Papermeister.

The 70-mile stretch each way can take up to 4 hours of bathing traffic on the Southern State Parkway.

So the thought of hopping back on a Long Island Rail Road ride to Route 110 and taking a quick train into the city's core sounds like heaven to Papermeister. A new train station might help reduce her commute by a huge chunk of time, she'd have a shot at a ride to the Jamaica Center hub, she'd explore, especially in bad weather.

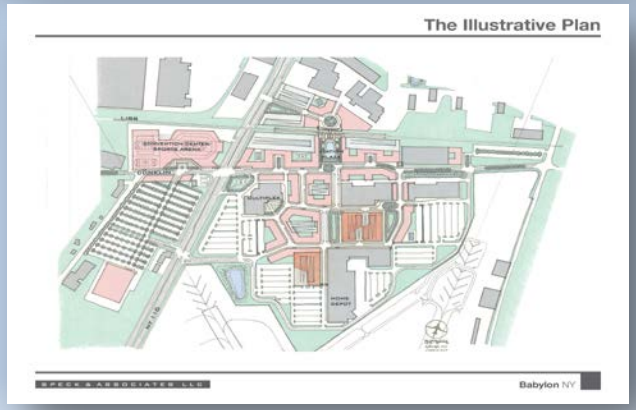
Babylon Councilman Steve Bellone, at podium, speaks at a June press conference in East Farmingdale about reopening a train station

2009-2010



2010-Present





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TOWN OF BABYLON SUFFOLK CO., N.Y.

Overview of Route 110 Alternatives Analysis

- Second step in a multi-step Federal process
- Consider reasonable options for **routing and transit type** in developing and screening alternatives
- Develop a financially feasible **Locally Preferred Alternative** that supports the vision of **Connect Long Island**
- Conduct ongoing stakeholder and public involvement

  • Project Sponsor: Town of Babylon
  • Consultant Team: led by Parsons Brinckerhoff

PARSONS BRINCKERHOFF

Public Meeting #1: December 15, 2014

- What we learned
  - Where meeting attendees live/work/shop in the study area
  - Input on issues and opportunities facing Route 110
  - Concerns about traffic, parking, and pedestrian/bicycle accommodations



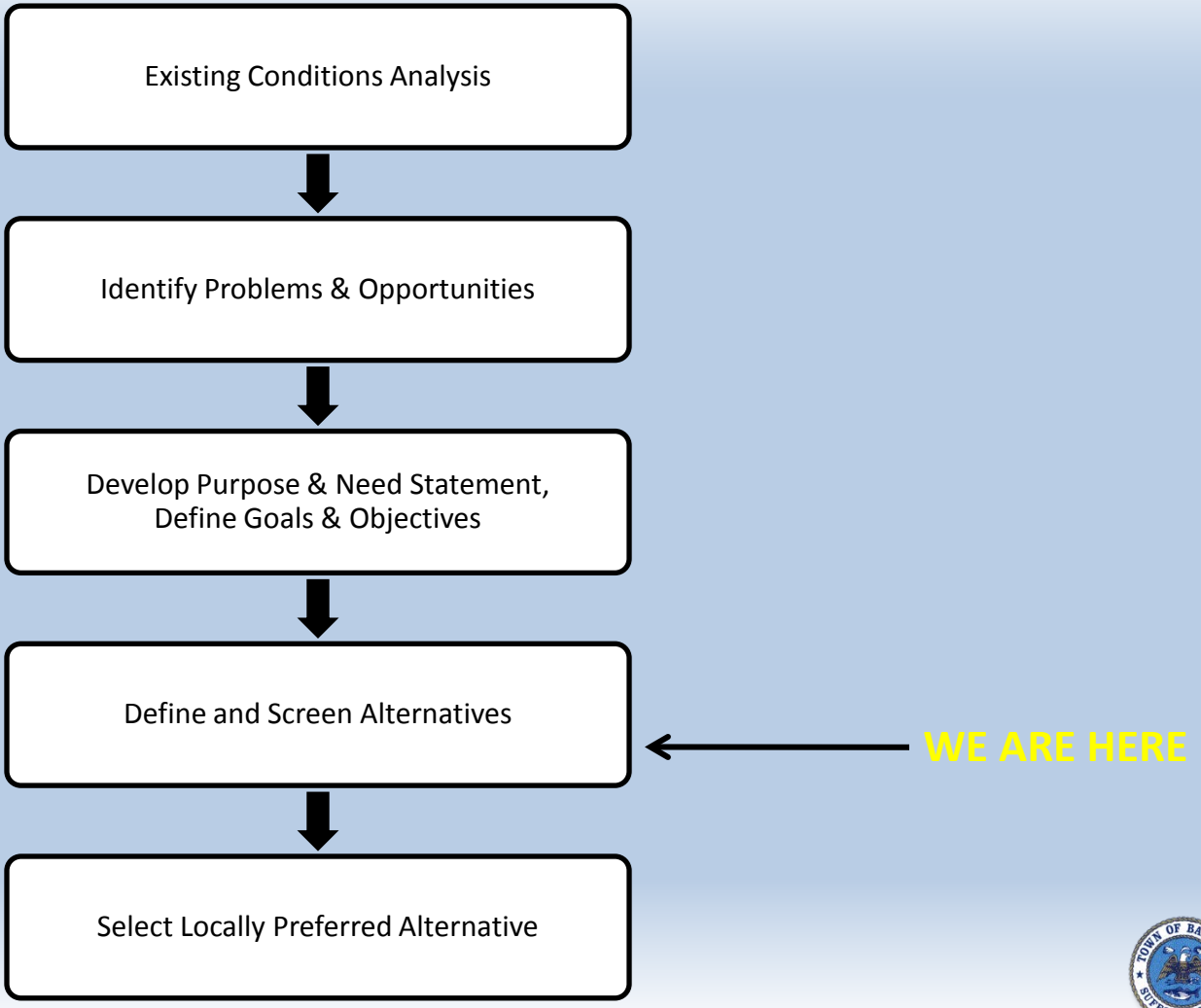
Source: Parsons Brinckerhoff



PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Study Process

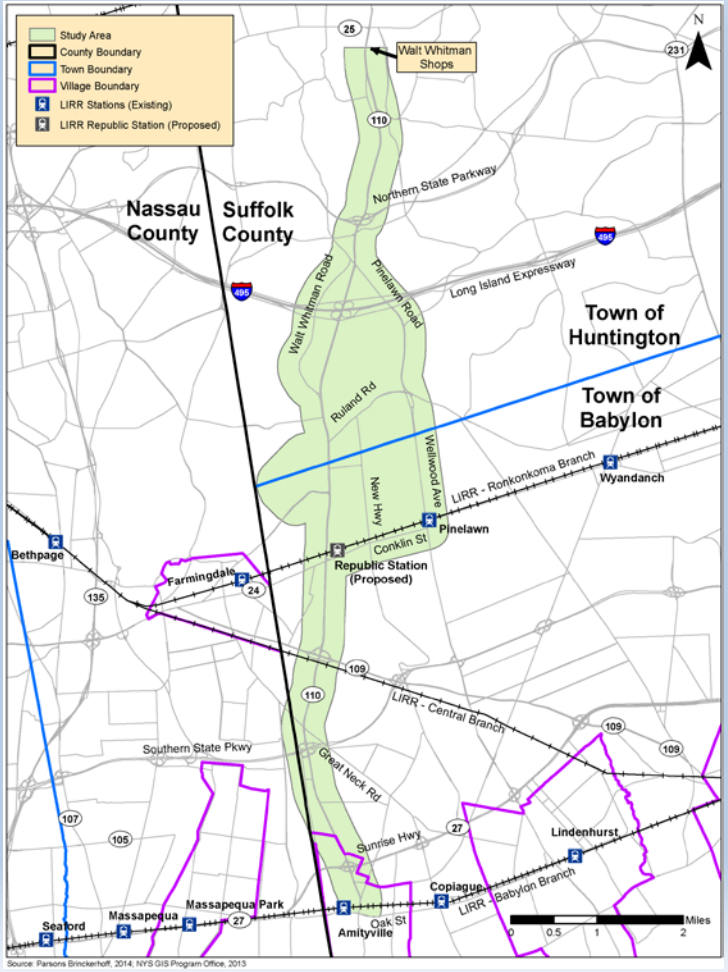


PARSONS BRINCKERHOFF

Study Area

- 10.3-mile corridor between Amityville LIRR Station and Walt Whitman Shops

- Extends east to Wellwood Avenue and west to Farmingdale State College campus and Walt Whitman Road



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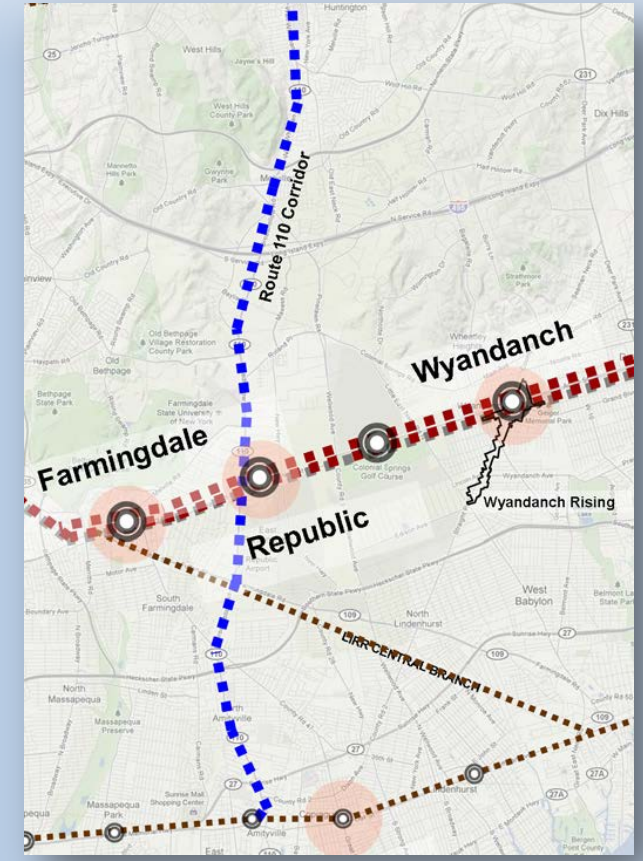
Transportation Issues

- Constrained travel choices
- Inadequate multi-modal connectivity
- Existing and projected future traffic congestion
- Bus travel times are not competitive (disincentive for transit use)
- Existing auto-centric land use and building development patterns
- Limited walkability



Key Transportation Opportunities

- Large employers as a source of existing/potential future transit ridership
- Relatively high existing bus ridership; opportunities to integrate with multiple service providers (Suffolk County Transit, NICE, HART)
- Multiple branches of the LIRR
- Multiple travel markets to be served
- Potential reopening of LIRR Republic station and East Farmingdale redevelopment (*Connect Long Island*)
- LIRR Double Track & East Side Access



Source: Connect Long Island Plan

Purpose & Need

The purpose of the Route 110 Alternatives Analysis is to:

- Improve north-south mobility
- Increase transit access to and from employment and other activity centers
- Enhance multi-modal connectivity with the LIRR and existing bus service
- Promote increased transit use
- Support TOD along Route 110 and in the study area



Source: Parsons Brinckerhoff

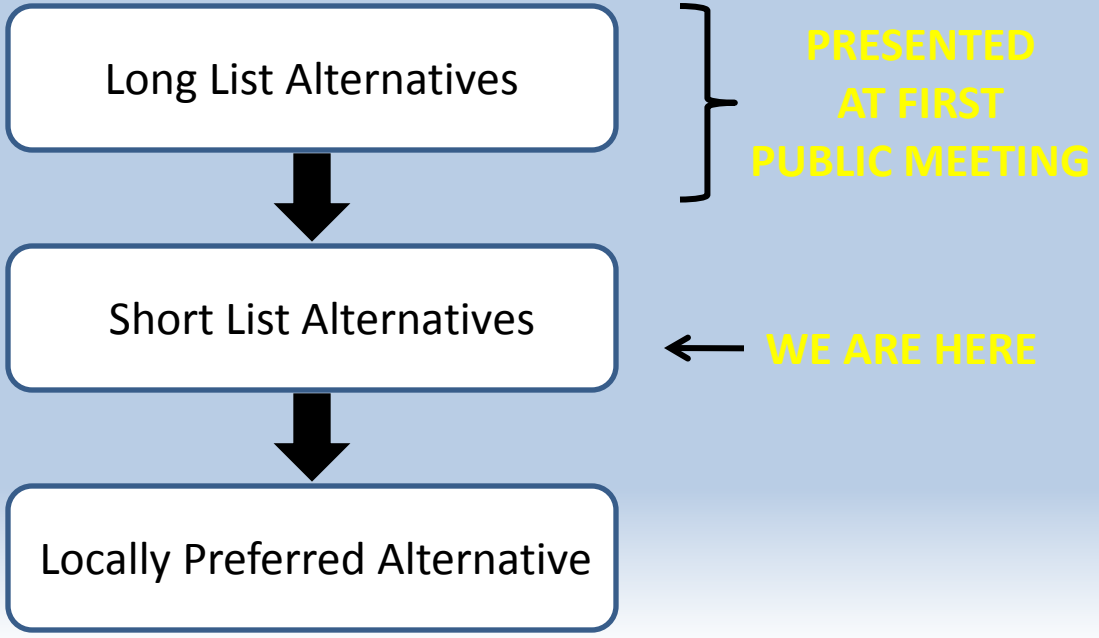


Source: Parsons Brinckerhoff

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Project Goals & Evaluation Process

1. **Improve Mobility and Connectivity**
2. **Enhance Economic Competitiveness and Promote Economic Growth**
3. **Maximize Cost and Operational Effectiveness**
4. **Minimize Adverse Environmental Impacts**



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Long List Alternatives

Alternative Number	Alternative Description	
	No-Build alternative	
A	Enhanced bus service along Route 110	ELIMINATED FROM CONSIDERATION
B	Trunk route along Route 110 only	
C	Trunk route along Route 110 with diversions off Route 110	
D	Trunk route along Route 110 with circular feeder routes	ADVANCED IN SCREENING PROCESS
E	Trunk route along Route 110 with transit center nodes and connecting feeder routes	

Potential Transit Modes



Bus Rapid Transit (BRT)



Streetcar



Light Rail Transit (LRT)

Automated Guideway Transit (AGT)



Commuter Rail (LIRR)



Subway



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Sources: New York City Department of Transportation (NYCDOT); Metropolitan Transportation Authority (MTA) New York City Transit; Portland Streetcar; Flickr; NJ Transit; Ultra Global PRT; Londonist; Newsday; NYCSubway.org; MTA LIRR

TOWN OF BABYLON SUFFOLK CO., NY

Potential Transit Modes



Bus Rapid Transit (BRT)



Streetcar



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Automated Guideway Transit (AGT)



Commuter Rail (LIRR)



Subway



PARSONS BRINCKERHOFF

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TOWN OF BABYLON SUFFOLK CO., NY

Elements of BRT

User-Friendly

Stylish Vehicles



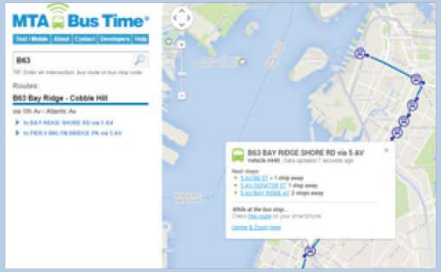
Attractive Stations



Strong Brand Identity



Real-Time Information



Faster Service

Bus Lanes



Faster Fare Collection



Traffic Signal Prioritization



More Frequent Service with Fewer Stops



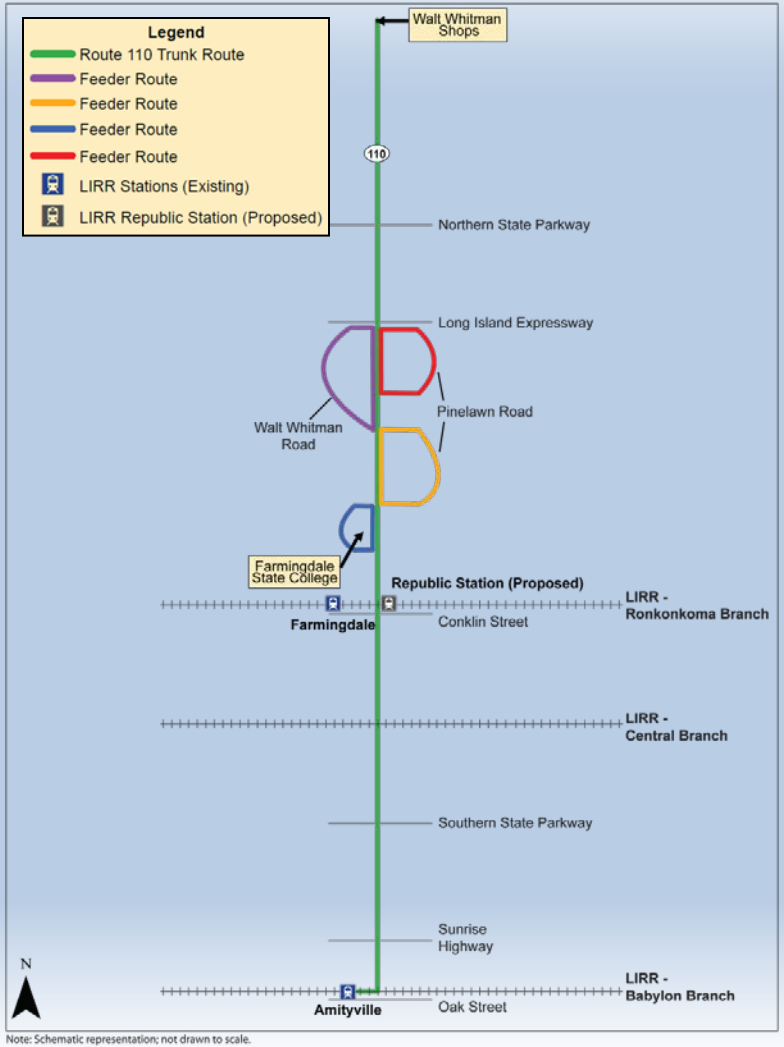
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Sources: Cleveland Regional Transit Authority; WNYC; MTA New York City Transit; New York City Department of Transportation; Metro-Magazine; Capital District Transportation Authority; Ontario Ministry of Transportation; Metrolinx; Bergen BRT

TOWN OF BABYLON SUFFOLK CO., N.Y.

Results of Long List Screening – Alternative D

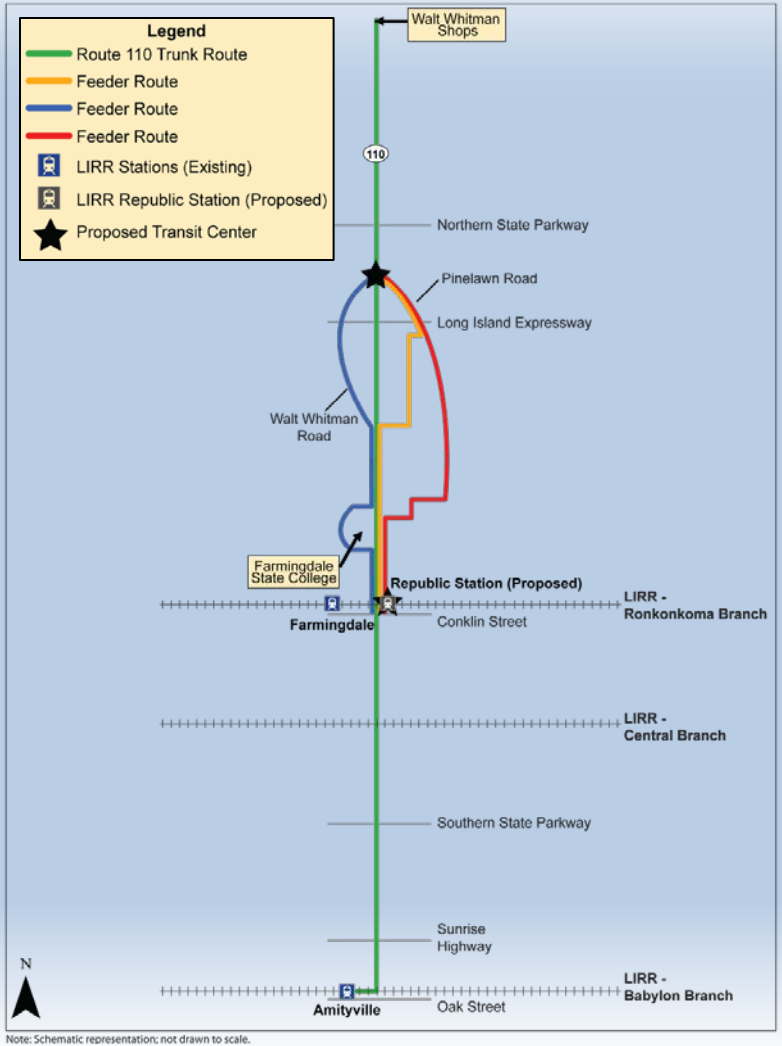
- Bus Rapid Transit (BRT) along Route 110 with circular shuttle bus feeder routes



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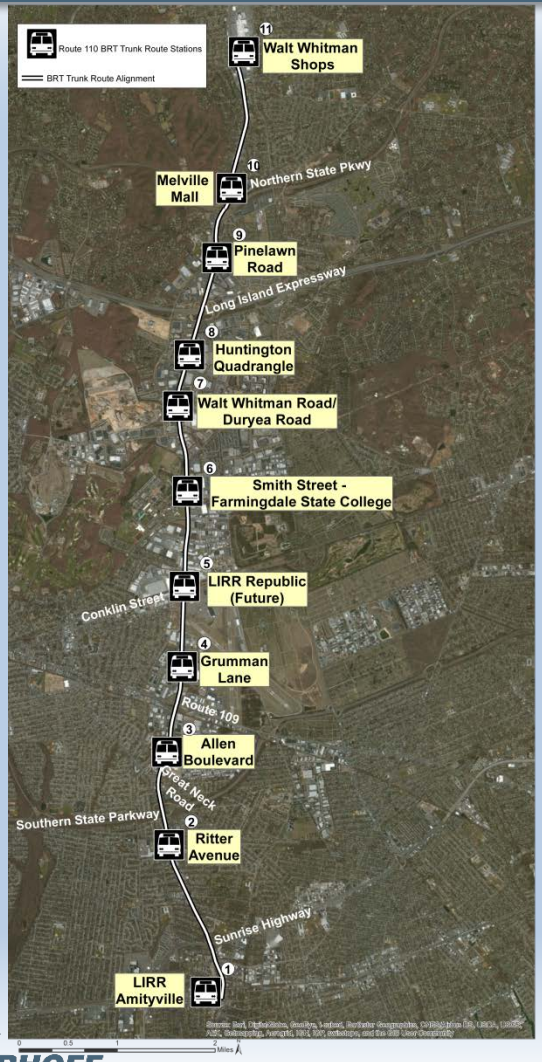
Results of Long List Screening – Alternative E

- Bus Rapid Transit (BRT) along Route 110 with transit center nodes and connecting shuttle bus feeder routes



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Route 110 BRT Stations

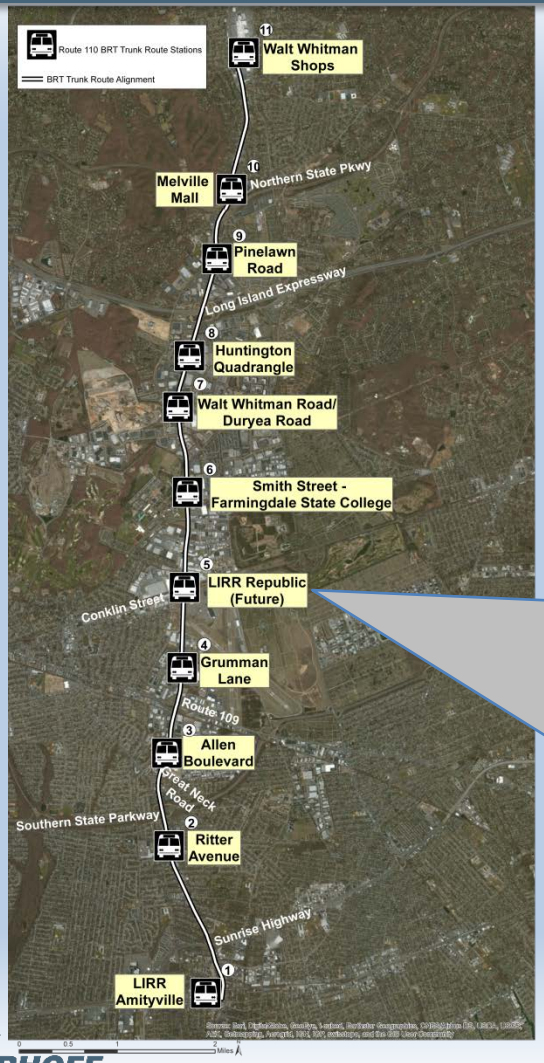


- 11 BRT stops between Amityville LIRR Station and Walt Whitman Shops
- Limited stop service as an overlay to the existing Suffolk County Transit local S1 service
- How did we identify station locations?
  - Serve existing and future activity centers
  - Maximize transfer opportunities to other transit services (LIRR, Suffolk County Transit, NICE, HART)

PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Route 110 BRT Station Example





PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Dedicated BRT Shoulder-Running along Route 110

- About 6 miles of the 10.3-mile corridor can accommodate BRT shoulder-running
  - Allows BRT vehicles to bypass traffic congestion
- Along other roadway segments, BRT would operate in mixed traffic with other vehicles



Source: Parsons Brinckerhoff



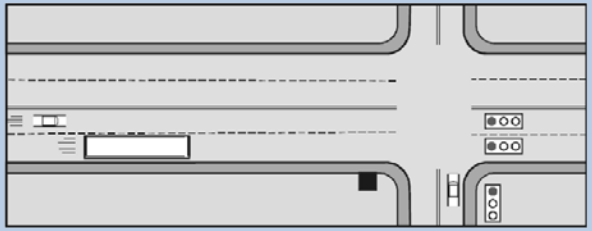
Source: Parsons Brinckerhoff

PARSONS BRINCKERHOFF

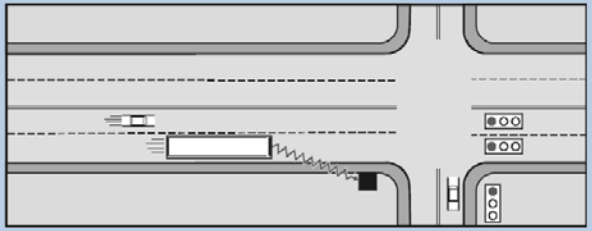
Speeding up Service through Traffic Signal Priority (TSP)

- BRT vehicles wait at fewer red lights due to TSP
- Results in travel time savings and faster service along the corridor

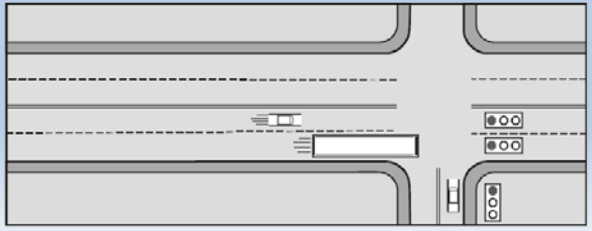
Bus approaches green signal



Signal controller detects bus; extends current green phase



Bus proceeds on extended green signal



Source: TCRP Report 118

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BRT Travel Time Improvements

- Trip from Amityville LIRR Station to Walt Whitman Shops during the morning rush hour
  - By bus: 45 minutes
  - By car: 27 minutes
  - By BRT (projected): 26 minutes



Source: Route 110 BRT Study

Improving Transit Access to and from Major Activity Centers

Residential communities



Country Pointe in Melville



Millennium Hills



Avalon Court



The Villas

Major employers



Nikon



Canon



Huntington Quadrangle



Newsday



Estee Lauder


Bank of America

PARSONS BRINCKERHOFF

Source: Parsons Brinckerhoff

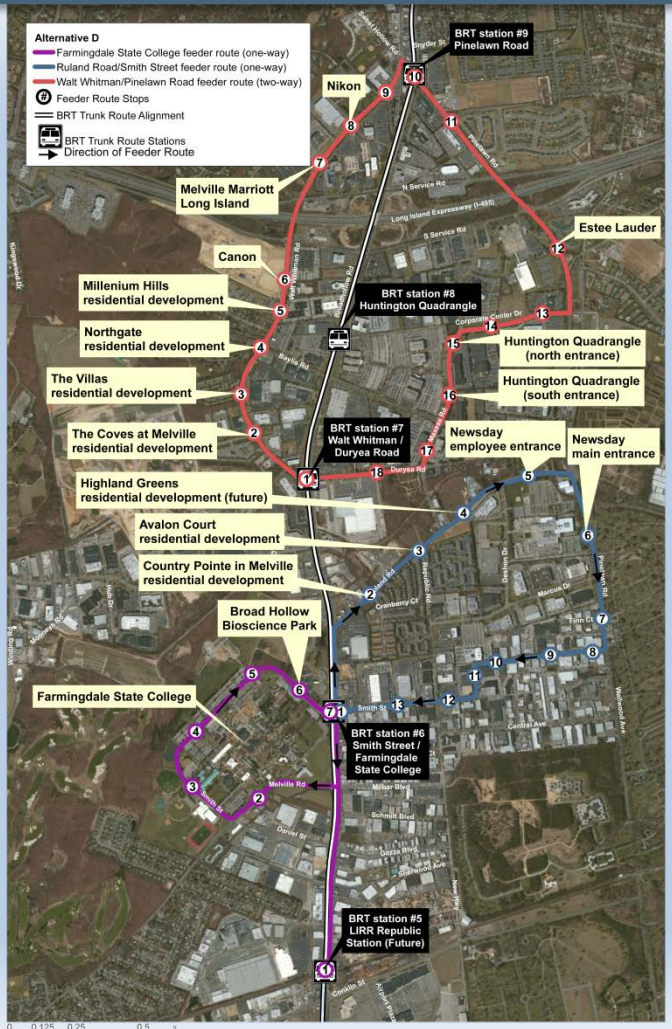
Feeder Route Service

- Smaller vehicles with timed connections to BRT and LIRR
- Serving major employment centers and residential communities beyond a reasonable walking distance from Route 110
- Improving transit access to locations between Conklin Street and Pinelawn/Sweet Hollow Road



Source: Parsons Brinckerhoff

Alternative D Feeder Routes

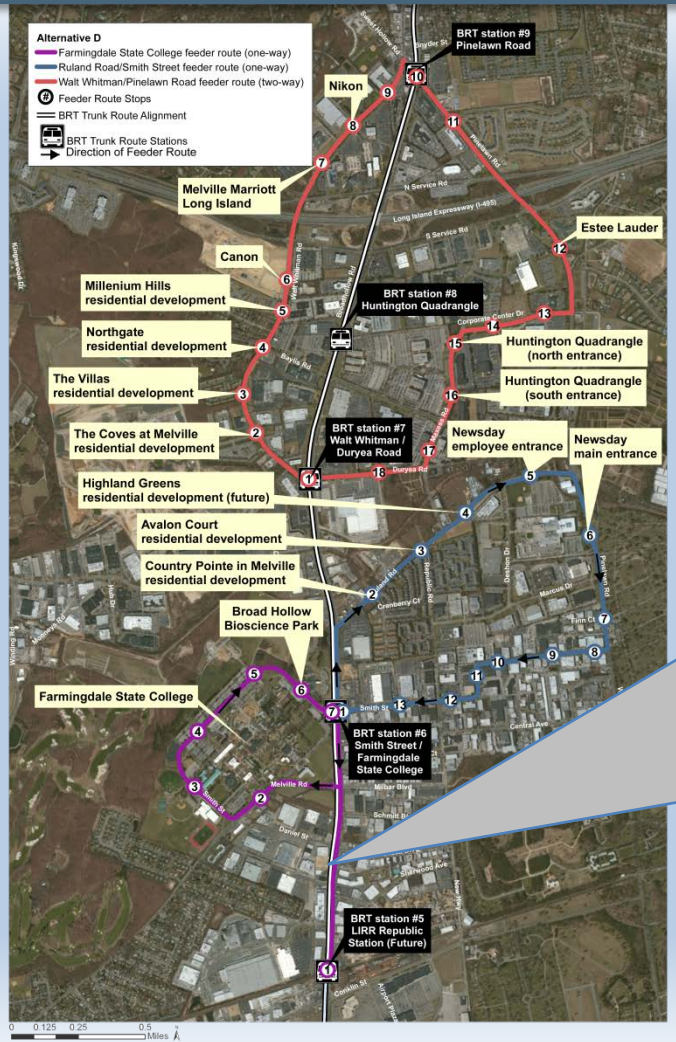


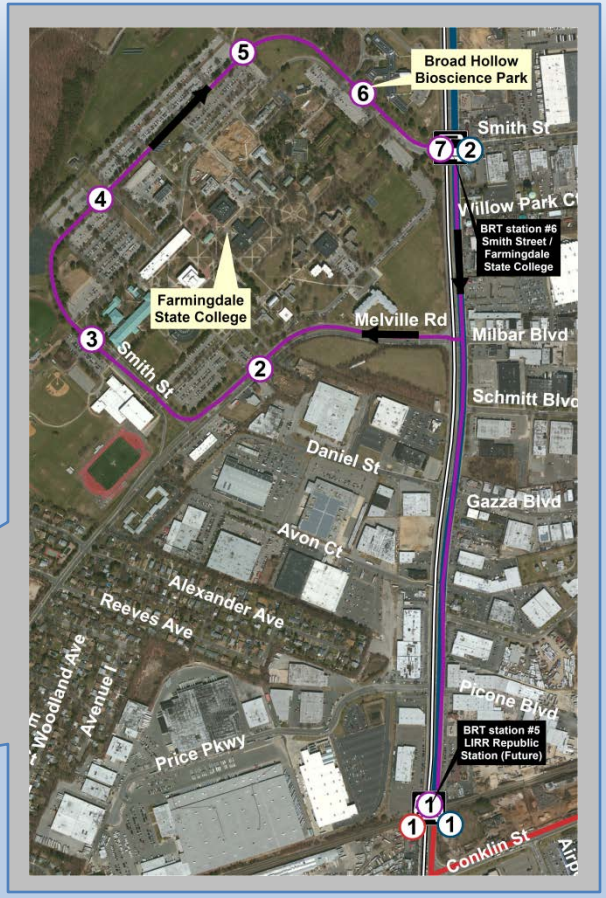
- Shuttle bus feeder routes circulate from select BRT stations to serve destinations located off Route 110

PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Alternative D Feeder Routes



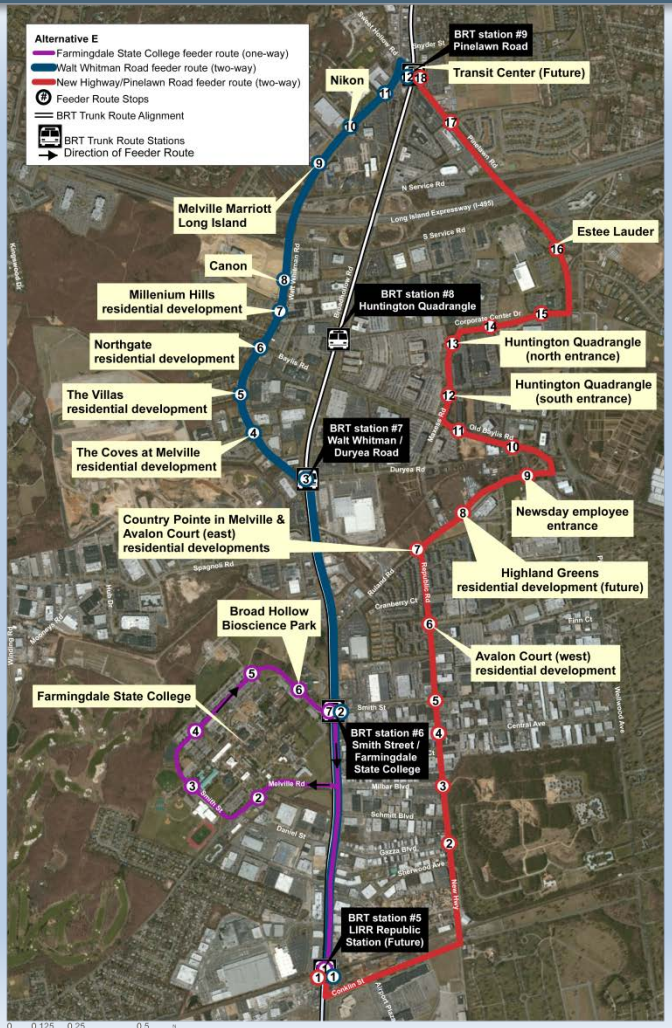


One-way feeder route to serve Farmingdale State College

PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Alternative E Feeder Routes



- Shuttle bus feeder routes circulate from two new transit centers on Route 110 to serve destinations located off Route 110
  - One-way feeder route to serve Farmingdale State College
  - Two-way feeder route to serve Walt Whitman Road
  - Two-way feeder route to serve New Highway/Republic Road, Ruland Road, Baylis Road, Maxess Road, Corporate Center Drive, and Pinelawn Road

PARSONS BRINCKERHOFF

TOWN OF BABYLON SUFFOLK CO., N.Y.

Operating Plan/Assumptions for BRT & Feeder Route Service

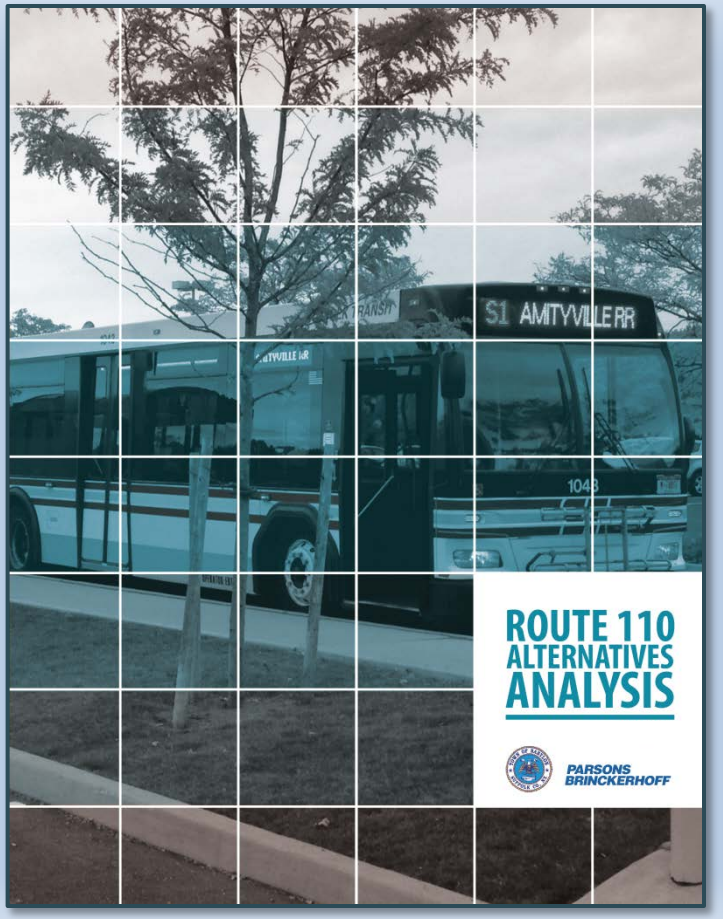
- What hours will the service run?
  - Monday – Thursday: 5:30am – 10:00pm
  - Friday & Saturday: 5:30am – 12:00am
  - Sunday & Holiday: 6:00am – 10:00pm
- How often will the service run?
  - Weekdays: every 10-15 minutes
  - Weekends & Holidays: every 20 minutes



Source: Parsons Brinckerhoff

Next Steps

- Complete Analyses
- Select Recommended Alternative
- Publish Final Report
- Start Federal Funding Process
- Continue Public Outreach



Comments/Questions & Answers

For more information about the ongoing Route 110 Alternatives Analysis, contact
Town of Babylon Office of Downtown Revitalization

Jonathan Keyes, Director
631-957-7430
jkeyes@townofbabylon.com

Or

Eric Zamft, Project Manager
631-957-7408
ezamft@townofbaylon.com

MEETING MINUTES: PUBLIC MEETING #2

Date: Monday, April 27, 2015

Time: 6:30 PM

Location: East Farmingdale Fire House
930 Conklin Street
Farmingdale, NY 11735

Attendees:

***Project Team*:**

Name	Address	Phone	Email
Bucich, Nicole	Parsons Brinckerhoff, One Penn Plaza, New York	212-465-5220	bucichna@pbworld.com
Keyes, Jonathan	Town of Babylon, Office of Downtown Revitalization, 200 East Sunrise Highway, Lindenhurst	631-957-7430	jkeyes@townofbabylon.com
Rigert, James	Parsons Brinckerhoff, One Penn Plaza, New York	212-465-5665	rigerjw@pbworld.com
Saber, Ashton	Town of Babylon, Office of Downtown Revitalization, 200 East Sunrise Highway, Lindenhurst	631-957-4465	asaber.babylon@gmail.com
Sokol, Maxwell	Parsons Brinckerhoff, One Penn Plaza, New York	212-465-5138	sokolml@pbworld.com
Zamft, Eric	Town of Babylon, Office of Downtown Revitalization, 200 East Sunrise Highway, Lindenhurst	631-957-7408	ezamft@townofbabylon.com

Technical Advisory Committee (TAC):

Name	Address	Phone	Email
Lenberger, Garry	Suffolk County Department of Public Works, Transportation Division, 335 Yaphank Avenue, Yaphank	631-852-4880	GarryL@suffolkcountyny.gov
Mascali, Rosemary	Transit Solutions, 36 Bourndale Road South, Manhasset, NY	516-242-8121	rmascali@transitsolutions.org
McVoy, Christopher	Suffolk County Department of Public Works, Transportation Division, 335 Yaphank Avenue, Yaphank	631-852-4882	Christopher.McVoy@suffolkcountyny.gov
Tyson, Darnell	Suffolk County Department of Public Works, 335 Yaphank Avenue, Yaphank	631-852-4010	Darnell.Tyson@suffolkcountyny.gov

Public:

Name	Address	Phone	Email
Beseler, Richard	79 Alexander Avenue, Farmingdale	631-249-1156	RBeseler@optonline.net
Brunning, Rob and Shari	(incomplete entry on sign-in sheet)		shabrun@optonline.net

Name	Address	Phone	Email
Burns, Sue	22 Crescent Drive North, Farmingdale		
Cavagliere, Mr. & Mrs. Luigi	3 Reeves Avenue, Farmingdale	631-293-2558	ocavagliere@gmail.com
Cypser, Gus	1207 Melville Road, Farmingdale	631-935-5293	guscypser@gmail.com
Cypser, Nancy	1207 Melville Road, Farmingdale	631-249-7883	cypser@gmail.com
Dawson, Janet	7 Baldwin Street, Farmingdale	631-756-0924	Janetmedawson@gmail.com
DeMarco, Lawrence	46 Alexander Avenue, Farmingdale	631-694-5948	Lari81@aol.com
DeMarco, Leslie	46 Alexander Avenue, Farmingdale	631-694-5948	Owl76@aol.com
DeVito, Alice	58 Alexander Avenue, Farmingdale	631-694-3377	
Farnacci, Frank	28 Hawthorne Street, Farmingdale	631-390-8573	FFarnacci@gmail.com
Fisk, Joanne	29 Maple Drive, Amityville	631-784-3757	Fisk60@optonline.net
Hilinski, Gene	82 East Carmans Road, Farmingdale	631-752-5730	
Hilinski, Patty	82 East Carmans Road, Farmingdale	631-752-5730	Nybitno1@aol.com
Iannone, Lou Jr.	112 East Carmans Road	516-456-8626	
Jasinski, Laura and Keith	34 Alexander Avenue, Farmingdale		
Kean, Sharon	3 Maplewood Avenue, Farmingdale	631-239-5253	un1075gasman@optonline.net
Mazzeo, Brenda	5 Maplewood Avenue, Farmingdale	(illegible entry on sign-in sheet)	(illegible entry on sign-in sheet)
Norjen, Helen	26 Hawthorne Street, Farmingdale	631-249-3119	
Pesa, Danielle	7 Birch Circle North, Farmingdale	631-694-3145	
Scura, Joseph	9 Wall Street, Farmingdale	631-753-0818	janetandjoe@juno.com
Smith, Michal	1 Birch Circle North, Farmingdale	631-752-2882	(illegible entry on sign-in sheet)
Stetz, Edward	32 North Crescent Drive, Farmingdale	631-249-1947	(incomplete entry on sign-in sheet)
Sutherland, Donna	521 Cedar Avenue, Farmingdale	631-756-0596	DSutherl@optonline.net
Tortoso, Anne	47 Birch Avenue East, Farmingdale	631-756-0243	reretor@optonline.net
Tortoso, Elizabeth	47 Birch Avenue East, Farmingdale	631-756-0243	
Tortoso, Richie	47 Birch Avenue East, Farmingdale	631-756-0243	
Williams, Karen	39 Alexander Avenue, Farmingdale	631-249-8023	karennywilliams@gmail.com
Wilson, Joan	22 Crescent Drive North, Farmingdale		
Wohlafka, Robert	148 East Carmans Road, Farmingdale	631-752-8540	RWohlafka@verizon.net
Young, Alice and George	39 Fallen Leaf Road, Holbrook	631-880-7929	ayoung@siloinc.org

Purpose:

The purpose of this second public meeting was for the Town of Babylon and Parsons Brinckerhoff to provide an update and get feedback on the ongoing Route 110 Alternatives Analysis, including project status and next steps. Similar to the first meeting, this meeting included an open house followed by a presentation.

Discussion Items:

Topic	Discussion
Welcome/Project Background	• J. Keyes opened the meeting by indicating that this is the second public meeting. The first public meeting—also held at the East Farmingdale Fire House—was held on December 15, 2014. • J. Keyes provided background about the Route 110 corridor, including its role as a major employment hub on Long Island and the need to encourage future growth in a sustainable manner that does not simply add more cars to the roadway. • J. Keyes noted that Route 110 is a key component of Suffolk County Executive Steven Bellone's *Connect Long Island Plan*. • J. Keyes indicated that the process of planning for transit improvements along Route 110 (including the potential reopening of Long Island Rail Road (LIRR) Republic Station, supported by the potential for the creation of an East Farmingdale Downtown Center – a major mixed-use transit-oriented development (TOD) in East Farmingdale) dates back to 2002. This included the 2010 *Route 110 Bus Rapid Transit (BRT) Study*. • J. Keyes introduced N. Bucich to present an overview and update of the Route 110 Alternatives Analysis.

Overview of Route 110 Alternatives Analysis	• N. Bucich and M. Sokol provided a summary of the work presented during the first public meeting to get everyone up to speed and set the context for the project before updating the attendees about work completed since the first public meeting.
	  ○ N. Bucich introduced the Route 110 Alternatives Analysis by summarizing the project background and study area, and presenting the problems and opportunities, purpose and need, goals and objectives, and alternative evaluation process.
	  ○ M. Sokol presented an overview of the screening process, the Long List Alternatives, and the results of the two-step Long List Screening (alignment and mode). Two bus rapid transit (BRT) alternatives were advanced to the next round of the screening process: 1) BRT trunk route along Route 110 with circular feeder routes (Alternative D), and 2) BRT trunk route along Route 110 with transit center nodes and connecting feeder routes (Alternative E).
	  ▪ The two alternatives would have the same BRT trunk route service along Route 110. The feeder routes would be the distinguishing features between the two alternatives.

Topic	Discussion
Overview of Route 110 Alternatives Analysis	○ M. Sokol defined BRT as a term applied to public transportation systems that use a series of integrated improvements to provide faster, more efficient service than an ordinary bus line. M. Sokol identified the various elements of BRT (e.g., limited stop service, dedicated lanes, traffic signal priority (TSP), etc.), noting that different BRT systems include different combinations of these elements. • N. Bucich discussed the proposed BRT trunk route along Route 110, which would be the same for the two alternatives. ○ Eleven (11) BRT stations are proposed between Amityville LIRR Station and Walt Whitman Shops. The distance between proposed stations varies from about 0.5 miles to two miles, with an average distance of approximately one mile. N. Bucich encouraged attendees to view the board prepared for the open house that shows a zoomed-in view of each proposed BRT station. ○ It is assumed that BRT on Route 110 would provide limited-stop service as an *overlay* to the existing (S1) bus network. ○ N. Bucich summarized the criteria that were used in identifying the BRT station locations, including the objectives to serve existing and future activity centers and maximize transfer opportunities to other transit services (LIRR, Suffolk County Transit, NICE, HART) ○ N. Bucich presented an overview of two of the BRT elements that are being considered: shoulder-running and TSP for BRT on Route 110. On the approximately 10.3-mile corridor, approximately 6 miles can accommodate BRT shoulder-running, based on the preliminary analysis completed to date. As a complement to shoulder-running, which can allow BRT vehicles to bypass traffic congestion, TSP can enable faster transit service along Route 110 by enabling BRT vehicles to wait at fewer red lights. ○ Travel time on Route 110 by BRT is projected to be competitive with travel time by automobile, with significant times saving as compared to the existing local bus service. Significant travel time savings would result from a combination of limited stop service, shoulder-running, and TSP. • M. Sokol then discussed the proposed feeder routes. M. Sokol indicated that there are a number of activity centers (i.e., major employers and residential communities) to the east and west of Route 110, and the challenge is how best to serve them with transit. A feeder route system to serve activity centers beyond a reasonable walking distance from Route 110 can effectively complement BRT along Route 110. ○ The feeder routes would use smaller shuttle bus vehicles with timed connections to both BRT and LIRR, improving transit access to locations between Conklin Street and Pinelawn/Sweet Hollow Road.

Topic	Discussion

Overview of Route 110 Alternatives Analysis	• M. Sokol presented the feeder routes that comprise the two alternatives under consideration, noting that the details of the feeder routes were shown in the boards prepared for the open house.
	  ○ Alternative D (circular feeder routes): 1) one-way feeder route to serve Farmingdale State College; 2) one-way feeder route to serve Ruland Road, Pinelawn Road, and Smith Street; and 3) two-way feeder route to serve Walt Whitman Road/Duryea Road, Pinelawn Road, Corporate Center Drive, and Maxess Road
	  ○ Alternative E (transit center nodes): 1) one-way feeder route to serve Farmingdale State College (same as Alternative D); 2) two-way feeder route to serve Walt Whitman Road; and 3) two-way feeder route to serve New Highway/Republic Road, Ruland Road, Baylis Road, Maxess Road, Corporate Center Drive, and Pinelawn Road
	• N. Bucich discussed the operating plan/assumptions for the BRT trunk route and feeder routes. These assumptions tentatively include:
	  ○ The services will run during the following hours:
	  ▪ Monday – Thursday: 5:30am – 10:00pm
	  ▪ Friday & Saturday: 5:30am – 12:00am
	  ▪ Sunday & Holiday: 6:00am – 10:00pm
	  ○ The services will run every 10-15 minutes during the weekdays, and every 20 minutes on weekends and holidays.
	• N. Bucich discussed next steps in the project, which include completing the analyses (e.g., costs, ridership forecast, Short List Screening), selecting the recommended alternative, publishing the final report, and beginning the Federal funding process.
	• N. Bucich then discussed the public outreach process. While this will be the final public meeting for the Alternatives Analysis, the public outreach process will continue in the subsequent steps of the project, and there will be additional opportunities to provide input about the project.

Comments/Questions & Answers	• An attendee commented that there are thousands of residents in the Village of Farmingdale who could be potential riders of the proposed service, and asked whether the Village was consulted during this project. ○ J. Keyes indicated that the Town has had conversations with the Village of Farmingdale and, in fact, he recently met the Mayor of the Village and briefly discussed this project. J. Keyes added that interim service to the Farmingdale LIRR station can be treated as a phasing option for implementation of the alternatives until the LIRR Republic station is operational.

Topic	Discussion

Comments/Questions & Answers	• An attendee asked about the timeline for the reopening of LIRR Republic station.
	  ○ J. Keyes stated that the proposed 2015-2019 MTA Capital Program includes the environmental review and design of LIRR Republic station, with construction anticipated to be included in a future capital program.
	  ○ N. Bucich added that the project team has coordinated with the LIRR regarding assumptions for future LIRR service to Republic station.
	• An attendee asked how right turns off Route 110 would be accommodated, given the use of the shoulder for a dedicated BRT lane along certain segments of Route 110.
	  ○ N. Bucich indicated that right turn lanes would be shared by vehicles turning right and BRT vehicles continuing straight on Route 110. There would be signage indicating, “right lane must turn right except buses.” Additionally, most BRT stations are proposed for the far side of signalized intersections, which would prevent the need for right-turning vehicles to wait behind a stopped BRT vehicle.
	• Several attendees asked about pedestrian safety, including how people riding BRT would cross Route 110 to get from the east side of the street to the west side, or vice versa. Is there any plan to add audio-visual pedestrian signals?
	  ○ J. Keyes noted that as part of the future station area planning, enhanced pedestrian (and bicycle) facilities will be explored.
	  ○ N. Bucich indicated that the BRT stations are proposed to include tactile warning strips to improve safety for passengers waiting to board the BRT vehicles. Additionally, most of the proposed BRT stations would be located where there is an existing Suffolk County Transit bus stop with relatively high ridership.
	  ○ M. Sokol added that a forthcoming New York State Department of Transportation (NYSDOT) project will include pedestrian crossing improvements on Route 110 between Amityville and Huntington. These improvements will include crosswalks, signals work, fencing and intelligent transportation systems (ITS) equipment.
	• An attendee asked how the proposed BRT on Route 110 would affect on-street parking and curbside access to destinations along Route 110.
	  ○ N. Bucich indicated that in most locations along the corridor where shoulder-running is proposed, on-street parking is currently either not permitted or limited. The project team is evaluating potential impacts to on-street parking. Curbside access to destinations along Route 110 would be maintained with implementation of BRT.

Topic	Discussion

Comments/Questions & Answers	• An attendee commented that existing buses have very few riders, and expressed doubt that a new transit service is necessary.
	  ○ J. Keyes noted that the Suffolk County Transit S1 route, which serves the length of the Route 110 corridor, has the highest weekday ridership of all Suffolk County Transit bus routes. The project team is forecasting ridership for the proposed BRT to demonstrate the potential demand for the new service. Additionally, as discussed in the presentation, BRT will offer faster service with enhanced stations and vehicles to make it more attractive compared to existing bus service.
	• An attendee asked if the proposed BRT service on Route 110 would include a quick way to collect fares.
	  ○ N. Bucich noted that some BRT systems offer off-board fare collection to speed up the passenger boarding process. For purposes of this study, based on discussions with Suffolk County Transit and in keeping with the goal to maximize cost effectiveness, off-board fare collection is not being proposed at this time, although it can be explored in the future. Additionally, a future ticketing application on smart phones may speed up the passenger boarding process compared to the existing on-board fare collection system.
	• An attendee asked whether the project team is assuming additional development along Route 110 by the future (2040) Build year.
	  ○ N. Bucich indicated that the ridership model uses socioeconomic and demographic forecasts that reflect approved/funded developments to inform projections of future travel trends. However, development propositions that are still in the planning stages and not yet approved/funded will not be explicitly included in the ridership model. Nevertheless, BRT is flexible, so service could be adjusted in the future based on changes in demand.
	• An attendee commented that traffic backups are problematic on Route 110, in part because there are not many through streets that offer detours when Route 110 is congested. Another attendee asked whether BRT would be able to bypass traffic congestion if there is an accident on Route 110.
	  ○ N. Bucich indicated that along the approximately 6 miles of Route 110 that can accommodate shoulder-running, the BRT vehicles would be able to bypass recurring congestion due to high traffic volumes.
	  ▪ However, an attendee added that BRT vehicles would not be able to supersede the use of the shoulder by police or fire vehicles during an emergency.

Topic	Discussion

Comments/Questions & Answers	• An attendee asked whether TSP is being proposed for the feeder routes off Route 110.
	  ○ N. Bucich indicated that, at this time, TSP is only being proposed along Route 110 for the BRT trunk route to maximize cost effectiveness. However, opportunities to implement TSP along the feeder routes can be explored in the future.
	• An attendee asked whether the existing Suffolk County Transit S1 service, in addition to the proposed BRT, would operate within the shoulder along those segments of Route 110 that can accommodate shoulder-running.
	  ○ N. Bucich indicated that, under the current proposal, the S1 service would continue to operate in mixed traffic, only using the shoulder as necessary to make stops. However, the potential use of the shoulder for the S1 service can be explored in the future.
	• An attendee asked whether bicycles would be allowed on the BRT vehicles.
	  ○ N. Bucich confirmed that bicycles can be accommodated on BRT vehicles.
	• J. Keyes concluded the question and answer session by indicating that the open house would continue and that project team members would be available to answer any additional questions.
	• N. Bucich noted that comment cards were available at the registration table, which attendees could fill out and either leave with a project team member or mail to the Town of Babylon, Office of Downtown Revitalization.

Materials Transmitted or Received:
None

Attachments:
Presentation from meeting

Distribution:
Town of Babylon, Office of Downtown Revitalization

These minutes represent the recorder's understanding of the issues discussed. Please report any discrepancies to the recorder within seven days; otherwise the record will remain as written.



ROUTE 110 ALTERNATIVES ANALYSIS

Appendix L:
Task 7 Technical Memorandum

TOWN OF BABYLON
SUFFOLK CO., N.Y.

PARSONS BRINCKERHOFF

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ROUTE 110 ALTERNATIVES ANALYSIS

Task 7: Demonstrate Local Financial Commitment

October 6, 2015

Submitted by:

PARSONS BRINCKERHOFF

Version Final

QUALITY ASSURANCE/QUALITY CONTROL

Created by:		April 28, 2015
	Nathan Macek / Parsons Brinckerhoff	**Date**
Updated by:		October 6, 2015
	Maxwell Sokol / Parsons Brinckerhoff	**Date**
Approved by:		October 6, 2015
	Nicole Bucich / Parsons Brinckerhoff	**Date**

REVISIONS

Date	Version Number	Revision
September 3, 2015	1.0	Draft document for review
October 6, 2015	Final	Addressing Town of Babylon comments, received September 22, 2015

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1. Introduction

The purpose of the Route 110 Alternatives Analysis is to evaluate alternatives that address the existing and future transportation demand in the Route 110 Corridor, manage congestion, maximize environmental benefits, and enhance the study area's economic competitiveness by increasing mobility options. The Alternatives Analysis is building upon previous and ongoing studies to select a Locally Preferred Alternative (LPA) to advance to Project Development and National Environmental Policy Act (NEPA) review with the Federal Transit Administration (FTA). While the Moving Ahead for Progress in the 21st Century Act (MAP-21)—enacted by Congress in 2012—eliminated the requirement for an Alternatives Analysis, good planning practice dictates the importance of looking at reasonable modal and alignment alternatives in a transportation corridor to ensure that the public and decision-makers have an appropriate level of information necessary to identify and select a solution to address the aforementioned problems and opportunities.

As such, a focused Route 110 Alternatives Analysis is being conducted, based upon the following:

- A firm understanding of transportation needs, problems, and opportunities in the Route 110 Corridor
- The establishment of clear goals and objectives to be achieved by the transportation improvements in the Corridor
- The definition of various technologies and operating plans designed to address Corridor problems, goals, and objectives
- The evaluation of alternatives against multiple measures—including financial feasibility of the grantee/operator/sponsor (in this case the grantee is the Town of Babylon)

This work that is currently being completed will result in a local decision that is well informed, demonstrates strong consensus, and is less vulnerable to delays or public scrutiny in the planning and implementation process.

2. Overview

This technical memorandum documents a preliminary assessment of potential federal, state, local, and project-specific funding sources to address the estimated capital and operating and maintenance (O&M) costs for the proposed Route 110 bus rapid transit (BRT) project. As discussed in the Route 110 Alternatives Analysis Final Report, the feeder routes to complement the BRT trunk route will be finalized in Project Development because the Short List Screening did not result in a preferred feeder option. Therefore, for purposes of this Alternatives Analysis, the financial plan is focused on securing the necessary funding for implementation of the BRT trunk route only. Additionally, the financial plan is based on the elements of the BRT trunk route as currently proposed in this Alternatives Analysis, excluding the below-the-line costs of the longer-term BRT elements (i.e., off-board fare collection, level boarding, and enhanced station-area intersections). Potential options to fund the feeder routes will be explored, and the financial plan will be revisited, as the full LPA is selected in Project Development.

This technical memorandum begins with a summary of the order-of-magnitude capital and O&M costs for the proposed Route 110 BRT project, and subsequently presents an overview of potential funding sources. The discussion summarizes the applicability of each funding source to fund the proposed Route 110 BRT project, and concludes with an overview of the recommended funding options. This provides a foundation for identifying and securing commitments of specific funding sources for implementation of the proposed project.

3. Study Area

The study area for the Route 110 Alternatives Analysis (Figure 1) includes the areas directly affected by the potential construction and operation of transit improvements. The study area is defined to encompass the portion of the Route 110 Corridor where trip generators and attractors are most concentrated and where the existing right-of-way could best accommodate the introduction of a new premium transit service. Specifically, the approximately 10.5-mile stretch of the Route 110 Corridor in the study area is located between Oak Street in the Village of Amityville at the southern end and the Walt Whitman Shops in the Town of Huntington at the northern end.

The study area also includes areas to the east and west of Route 110 to capture major activity centers that are beyond a reasonable walking distance from the Corridor. The study area extends east as far as Wellwood Avenue in the East Farmingdale portion of the Town of Babylon (at Conklin Street), and continues north to the intersection of Pinelawn Road and Route 110 in the Melville portion of the Town of Huntington. The study area extends west as far Walt Whitman Road in Melville and also includes the Farmingdale State College campus.

4. Summary of Order-of-Magnitude Capital and O&M Cost Estimates

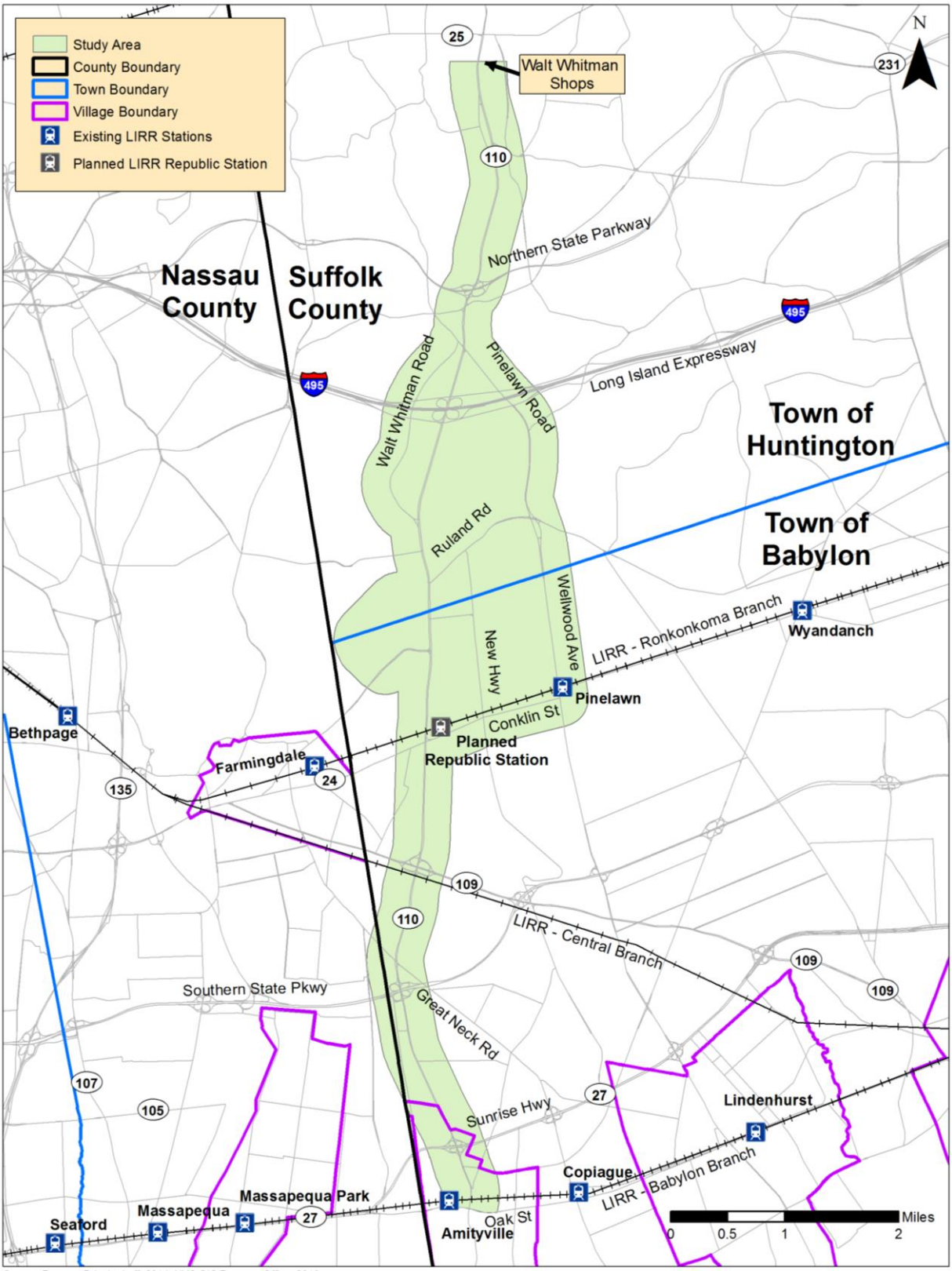
Based on the 10 percent conceptual engineering and operations planning efforts (Tasks 9-11), order-of-magnitude capital and O&M cost estimates were prepared for the Route 110 BRT trunk route element of the LPA (Figure 2). As shown in Table 1, the order-of-magnitude capital cost of the BRT trunk route is approximately $28.0 million, and the order-of-magnitude annual O&M cost is approximately $3.5 million. The preliminary cost estimates that were prepared during the Alternatives Analysis will be refined as appropriate in Project Development, reflecting the continuous nature of the cost estimating process.

Table 1: Summary of Order-of-Magnitude Capital and O&M Cost Estimates for Proposed Route 110 BRT Trunk Route

	Capital Cost Estimate (Million 2015$)	Annual O&M Cost Estimate (Million 2015$)
Route 110 BRT Trunk Route	$27.97	$3.46

Source: Suffolk County, Parsons Brinckerhoff, Cameron Engineering, Nelson\Nygaard (2015)
Note: Refer to the Task 9-11 Technical Memoranda for detailed cost estimates

Figure 1: Route 110 Alternatives Analysis Study Area Boundaries



Source: NYS GIS Program Office, Parsons Brinckerhoff (2015)

Figure 2: BRT Trunk Route Element of the LPA

TRUNK ROUTE ELEMENT OF LPA

BRT MODE

10.5 MILES IN BOTH DIRECTIONS (BETWEEN LIRR AMITYVILLE STATION & WALT WHITMAN SHOPS)

11 NUMBER OF STATIONS

PROPOSED BRT ELEMENTS:

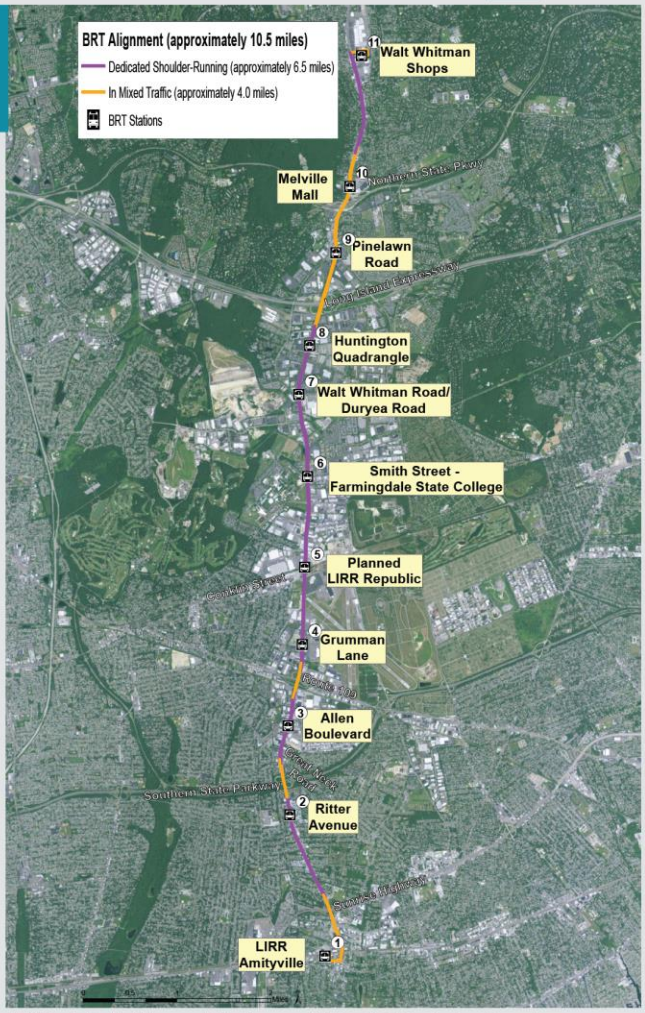
- **Shoulder-running** for approximately 6.5 miles with colored pavement, symbolic pavement markings, and signage; mixed traffic operation for approximately 4 miles
- **Queue jumps** at two locations (northbound at the intersection of Route 110 and Brefni Street, and southbound at the intersection of Route 110 and Main Street/Great Neck Road)
- **TSP** at 44 signalized intersections
- **Limited-stop service** as an overlay to existing Suffolk County Transit service
- **Station-area passenger amenities**, including enhanced shelters with seating, real-time information, way finding signage, bicycle racks, tinted concrete, trees and landscaping
- **Aesthetically enhanced** 35-foot-long, hybrid-style, low-floor vehicles with interior amenities and TSP emitters
- **Branding** (to be coordinated with Suffolk County's system-wide branding and strategic marketing campaign, aligned with the objectives of the Connect Long Island Plan)
- **Additional long-term elements**: off-board fare collection, level boarding, and enhanced station-area intersections

ORDER-OF-MAGNITUDE COST ESTIMATES (2015$):

- Capital Cost: $28.0 million
- Annual O&M Cost: $3.5 million

MULTI-MODAL CONNECTIVITY

- LIRR: Amityville Station (Babylon Branch) and planned LIRR Republic Station (Ronkonkoma Branch/Main Line)
- Suffolk County Transit: S1, S20, S23, S29, S31, S33, S54, 1A, 2B, Clipper
- HART: H20, H30, H40
- NICE: N54, N55, N70, N71, N72, N79
- Republic Airport



BRT Trunk Route Alignment, Stations, and Major Activity Centers Served



Perspective of Typical Proposed BRT Station

Source: ESRI basemaps, Suffolk County Transit, Parsons Brinckerhoff , B Thayer Associates, Cameron Engineering, Nelson\Nygaard, RSG (2015)

4.1 SUMMARY OF FUNDING OPTIONS

Table 2 provides a summary of the federal, state, and local options investigated to fund capital and/or O&M costs of the proposed Route 110 BRT project. Options are divided into four categories: federal funding; existing state and local funding sources for transit; other potential state and local funding sources; and project-specific funding sources.

Table 2: Summary of Route 110 BRT Project Funding Options

Federal Funding	Existing Transit Funding	Other Transit Funding	Project-Specific Funding
New Starts / Small Starts Grant Program Transportation Investment Generating Economic Recovery (TIGER) Grant Program Transportation Alternatives Program (TAP) Surface Transportation Program (STP) Congestion Mitigation and Air Quality Improvement Program (CMAQ) Section 5307 Urbanized Area Formula Grant Section 5339 Bus and Bus Facilities Grant	**Metropolitan Transportation Authority (MTA) and Suffolk County Transit funding** Toll Revenue Regional Sales Tax Petroleum Business Tax Taxes on Certain Transportation and Transmission Companies Regional Franchise Tax Surcharge on Certain Business Motor Vehicle Fees Payroll Mobility Tax (PMT) Real Property Transfer Tax (RPTT) Mortgage Recording Tax Motor Fuel Gallonage Tax **Additional Suffolk County Transit funding** Suffolk County General Funds State Dedicated Fund (SDF) Program	**State** New York State / Long Island Regional Economic Development Council (LIREDC) **Local** Local Option Sales Tax Property Tax Motor Fuel Excise Tax Motor Vehicle Sales Tax Tourism Taxes Income Tax Parking Fees **Miscellaneous** Rockefeller Foundation	Fare Revenue Tax Increment Financing (TIF) Special Assessments Developer Contributions (including Sponsorships and Naming Rights) Joint Development Development Impact Fees

The federal funding options outlined above are summarized in the following section, while other funding options—comprising the project's local financial commitment—are investigated in Section 6.

5. Federal Funding

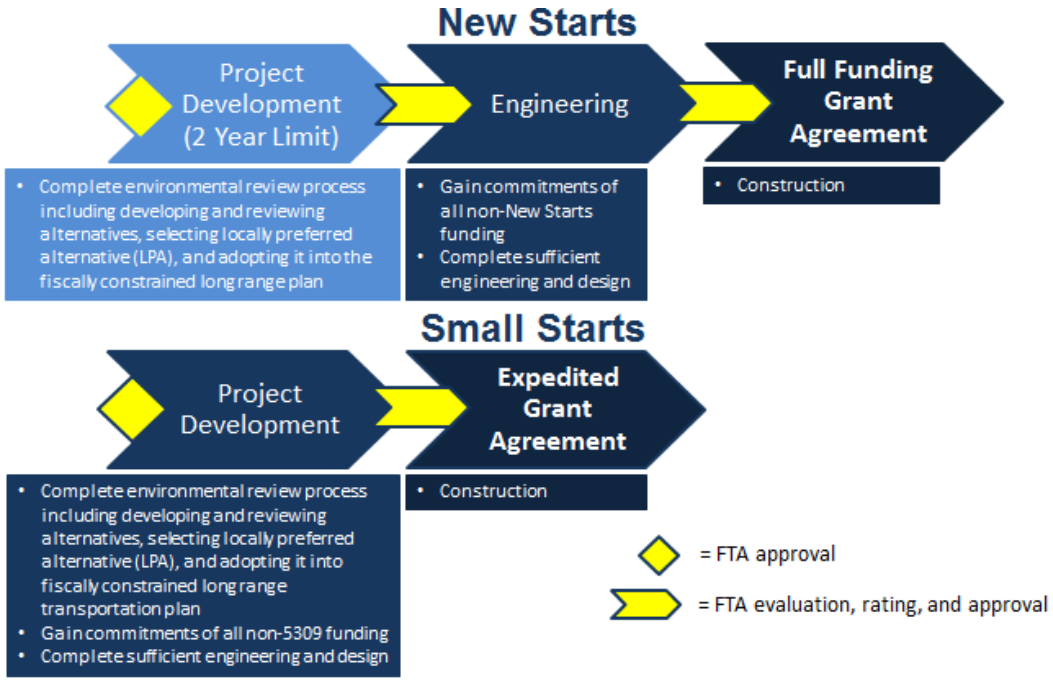
This section summarizes and evaluates potential federal sources to fund the estimated $28.0 million capital cost of the Route 110 BRT project, including the New Starts/Small Starts grant program, TIGER grant program, and federal formula funds.

5.1 NEW STARTS/SMALL STARTS GRANT PROGRAM

New and Small Starts are discretionary grant programs administered by the FTA that provide federal capital grants to major transit capital investments. New Starts is intended to support projects with costs greater than $250 million or projects seeking more than $75 million in federal grants, and Small Starts provides support for eligible projects less than $250 million in cost that are seeking less than $75 million in federal grants. The proposed Route 110 BRT project, with an estimated capital cost of $28.0 million, could be eligible for Small Starts as a "corridor-based BRT" project.

Figure 3 summarizes the New Starts and Small Starts Project Development processes. The process of applying and qualifying for Small Starts grants is significantly streamlined relative to the requirements of the New Starts program, providing an advantage to projects that qualify for Small Starts. The Small Starts process requires FTA approval for two stages compared to three required stages for the New Starts process; the Small Starts process only requires one FTA evaluation, rating, and approval stage compared to the two required for the New Starts process. Upon FTA approval, successful Small Starts projects receive an expedited grant agreement called a Section 5309 Small Starts Grant Agreement (SSGA).

Figure 3: New Starts and Small Starts Project Development Process



Source: Federal Transit Administration Capital Investment Program Webpage (http://www.fta.dot.gov/12304.html)

By statute, the maximum federal grant for a Small Starts project is 80 percent of the capital cost of the project, but—consistent with the typical match for New Starts/Small Starts projects—most applicants are anticipated to receive a grant of approximately 50 percent of the capital costs of the project.

5.2 OTHER FEDERAL FUNDING OPTIONS

The Route 110 BRT project is also eligible for other federal funding programs, including the United States Department of Transportation (USDOT) Transportation Investment Generating Economic Recovery (TIGER) grant program, the Transportation Alternatives Program (TAP), and federal formula funds.

5.2.1 TIGER Grant Program

The TIGER program is a highly competitive USDOT grant program supporting the capital costs of road, rail, transit, and port projects that have a significant impact on the nation, a region, or a metropolitan area. To date, TIGER grants have provided over $4.2 billion in funding to transportation and transit projects that are multi-modal, multi-jurisdictional, or otherwise challenging to fund through existing programs. Another $500 million will be available in 2015. However, during the latest round of TIGER grants in 2014, the program's 797 funding requests were more than 15 times available funding, with only 72 receiving funding. For projects in non-rural areas, TIGER provides a minimum grant of $10 million and a maximum grant of $200 million.

There is always the potential that the Route 110 BRT project could be funded by the TIGER program (and there is consideration of pursuing TIGER funds in 2016), but there is significant competition for available funds. Broad support and local consensus—including support from the business community, various interest groups (e.g., environmental, labor, economic development) and elected officials at the federal, state, and local levels—are key requirements to being competitively positioned for TIGER funding. USDOT also prefers projects that have performed considerable Project Development (e.g., completed environmental clearance) and secured commitments of non-federal funding. If a project cannot meet USDOT's high expectations but expects to do so in one to two years, many project sponsors will submit an application to make USDOT aware of the project and position the project for a future round of TIGER grants. Lessons may be applied from previous TIGER grant submittals to make a project more competitive over time.

5.2.2 TAP

The Transportation Alternatives Program (TAP) is administered by the Federal Highway Administration (FHWA) to provide funding for programs and projects defined as *transportation alternatives*, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former divided highways. In 2014, Suffolk County was awarded TAP funding for creating safe access to transit for pedestrians and bicyclists along the

Nicolls Road BRT corridor. This source could potentially fund a portion of the Route 110 BRT project elements that support pedestrian and bicycle access to the BRT service.

5.2.3 Federal Formula Funds

Several federal grant programs provide funding to the state and region on a formula basis. These funding sources are outlined below.

Surface Transportation Program (STP)

Federal funding is distributed to state and local governments using a formula based on lane-miles of federal-aid highways, total vehicle-miles traveled in federal highways, and estimated contributions to the Highway Account of the Highway Trust Fund attributable to commercial vehicles. Each state must set aside a portion of their STP funds for transportation enhancement activities that preserve and improve the condition and performance of surface transportation, including highway, transit, intercity bus, bicycle, and pedestrian projects.

The proposed Route 110 BRT project is eligible for STP funds. However, existing funds are currently committed to other priorities in the region at this time and may not be available to support this project.

Congestion Mitigation and Air Quality Improvement Program (CMAQ)

Flexible federal funding for the CMAQ Program is distributed to air quality maintenance or non-attainment areas (regions that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter) using a formula based on an area's population by county and the severity of its ozone and carbon monoxide problems with the non-attainment or maintenance area. Greater weight is given to areas that are both carbon monoxide and ozone non-attainment/maintenance areas. Funds are allocated to transportation projects and programs for the purpose of reducing congestion and improving air quality in the existing and former air quality non-attainment area. CMAQ funding can be used for the capital costs of transit projects and up to 3 years of the O&M costs of new transit service.

The proposed Route 110 BRT project is eligible for CMAQ funds (as Suffolk County is currently classified as a nonattainment areas for ozone). However, existing funds are committed to other priorities in the region at this time and may not be available to support this project.

Section 5307 Urbanized Area Formula Grants

Federal formula funding is provided to Urbanized Areas (UZA) for public transportation capital, planning, job access, and reverse-commute projects. Operating expenses may also be eligible. Funding is allocated according to population size, and a combination of bus revenue vehicle miles, bus passenger miles, fixed-guideway revenue vehicle miles, fixed guideway route miles, demographics, and population density. A minimum 20 percent local match is required.

The proposed Route 110 BRT project is eligible for Section 5307 funds. However, existing funds are committed to other priorities in the region at this time and may not be available to support this project.

Section 5339 Bus and Bus Facilities Grants

Federal formula funding is provided for the capital costs of bus facilities construction and bus replacement, rehabilitation, and purchases. A minimum 20 percent local match is required.

The Route 110 program is eligible for Section 5339 funds. However, existing funds are committed to other priorities in the region at this time and may not be available to support this project.

5.3 RECOMMENDED FEDERAL FUNDING OPTIONS

The Route 110 BRT project is well-suited for the Small Starts grant program compared to other federal funding options for the following reasons:

- A Small Starts grant provides the largest likely percentage of federal funding.
- A Small Starts grant is a predictable funding source.
- A Small Starts grant would not compete with existing federal formula funding in the region.
- Multiple similar BRT projects in the nation have been well-positioned and successfully received Small Starts grants.
- The Small Starts program is significantly less competitive than the TIGER program, which is another discretionary federal grant program.

Typically, projects may not combine federal discretionary grant funding from the Small Starts and TIGER programs. Given the close alignment of the proposed Route 110 BRT project with Small Starts program requirements, and the greater certainty associated with Small Starts funding, the project sponsor is advised to focus on securing a Small Starts grant rather than a TIGER grant at this time.

By statute, the maximum federal grant for a Small Starts project is 80 percent of the capital cost of the project, but most applicants are anticipated to receive a grant of approximately 50 percent of the capital cost of the project. Under that assumption and given current capital cost estimates for the proposed Route 110 BRT project, a successful Small Starts grant matched at 50 percent would provide approximately $15.7 million in capital funding for the project. The remaining $15.6 million in capital costs and $3.5 in annual O&M costs would require additional state, local, and/or project-specific funding, which is summarized in the following section.

Additionally, in consultation with NYMTC, the project sponsor could also pursue federal formula funds to complement Small Starts (as long as the total federal share is less than 80 percent of the project cost).

6. Local Financial Commitment

Even with a successful Small Starts or other federal grants, the proposed Route 110 BRT project would require a local financial commitment to cover the balance of the capital costs and the annual O&M costs. The following section summarizes a wide range of funding options for documenting local financial commitment, including existing state and local funding sources for transit, other

potential state and local transit funding programs, and project-specific funding sources. Section 6.4 includes an evaluation of these funding sources according to their ability to fund capital and/or O&M costs of the proposed Route 110 BRT project.

6.1 EXISTING STATE AND LOCAL FUNDING FOR TRANSIT

6.1.1 MTA and Suffolk County Transit Funding

The New York MTA receives the majority of transit funding in the Metropolitan Commuter Transportation District (MCTD) counties of New York (Manhattan), Bronx, Kings (Brooklyn), Queens, Richmond (Staten Island), Rockland, Nassau, Suffolk, Orange, Putnam, Dutchess, and Westchester. Many of the sources used by the MTA—described below—are currently at capacity at this time and may not be available for use by the Route 110 BRT project. Such determination should be made during Project Development.

Toll Revenue

Toll revenues account for approximately 12 percent of MTA's $14.6 billion 2015 operating budget. Traffic on MTA facilities was increasing through 2007, but has been declining in recent years. Similarly, New York-Newark Urbanized Area historical vehicle miles travelled (VMT) increased through 2007, and leveled in recent years. As a result of declining traffic and the lack of annual inflationary toll increases, the share of toll revenue funding for transit has been declining in recent years. In 2015, tolls were increased to current levels as part of a policy introduced in 2013 for biennial toll increases to keep pace with modest inflation. The MTA also plans to increase tolls in 2017. Existing toll revenue for transit is fully committed to other projects and an increase above the planned biennial toll increases is unlikely.

Regional Sales Tax

The 0.25 percent regional sales tax is one of four revenue sources that support the MCTD's portion of the Statewide Mass Transportation Operating Assistance (STOA) fund. The regional sales tax accounts for approximately 4.7 percent of the MTA's 2015 operating budget. Increasing the regional sales tax above this rate is unlikely (because it would require state approval and the current rate is relatively high), and it is unlikely that any increase would be dedicated to the Route 110 BRT project.

Petroleum Business Tax (PBT)

The PBT is a privilege tax on petroleum businesses levied on a cents per gallon basis for petroleum products sold or used in New York State. It accounts for approximately 3.0 percent of the MTA's 2015 operating budget. The tax is indexed each year to reflect changes in producer price index for refined petroleum products. It is collected and administered jointly with the gallonage-based state motor fuel tax and local motor fuel excise taxes. Increasing the PBT above current rates would require state approval, and it is unlikely that any increase would be dedicated to the Route 110 BRT project.

Taxes on Certain Transportation and Transmission Companies

Taxes on certain transportation and transmission companies account for approximately 0.3 percent of the MTA's 2015 operating budget. The state levies an annual franchise tax on capital stock values based on the method that produces the highest tax as well as an additional tax on intrastate gross earnings. Applicable industries include the following:

- Transportation companies such as railroad and trucking corporations
- Telecommunications companies principally engaged in telecommunications transmission activity
- Utility services providers that transport, transmit, or distribute gas or electricity, by means of mains, piers, or wires for ultimate consumption by the purchaser in New York State
- Farmer's cooperatives and agriculture cooperatives

Foreign corporations may be subject to an additional license fee and maintenance fee. If business is conducted inside of the MCTD, businesses may be subject to the Regional Franchise Tax Surcharge on Certain Businesses, described below. Increasing the tax above current rates would require state approval, and it is unlikely that any increase would be dedicated to the Route 110 BRT project.

Regional Franchise Tax Surcharge on Certain Businesses

The regional franchise tax accounts for approximately 5.6 percent of the MTA's 2015 operating budget. Also known as the MTA Surcharge, the regional franchise tax was originally established in 1982 as a temporary surcharge. It has been continually extended by the state as part of the Mass Transportation Operating Assistance Account (MMTOA). The tax is imposed on corporations, transportation and transmission companies, banks, and insurance companies. The total corporate franchise tax is the sum of the highest tax based the subsidiary on four bases (net income, business and investment capital, minimum taxable income, or fixed dollar minimum tax). The MTCD has the highest imposed corporate income tax rate of any jurisdiction in the nation. Increasing the tax above current rates would require state approval, and it is unlikely that any increase would be dedicated to the Route 110 BRT project.

Motor Vehicle Fees

Motor vehicle fees account for approximately 3.4 percent of the MTA's 2015 operating budget. In 2009, New York State raised the following fees and dedicated the revenues to the MTA in conjunction with the Payroll Mobility Tax:

- Supplemental learner permit/license fees in the MCTD
- Supplemental registration fees
- Supplemental tax on every taxicab owner per taxicab ride on every ride that originated in New York City and ends anywhere within the MCTD
- Supplemental tax on passenger car rental

In addition to the sales tax, the state requires the following one-time fees:

- Vehicle plates ($25)
- Title certificate ($50)

The state requires the following renewal fees:

- Registration fee ($26-$140 based on vehicle weight)
- County use fee for New York City and certain other counties ($30 for two years)
- Supplemental MCTD fee ($50 for two years)

Motor vehicle fees are a stable revenue source only if the number of vehicles grows with the economy. Fees should also be indexed to inflation. Increasing the fees above current rates would require state approval, and it is unlikely that any increase would be dedicated to the Route 110 BRT project.

Payroll Mobility Tax (PMT)

The PMT – also known as the Metropolitan Commuter Transportation Mobility Tax – accounts for 11.2 percent of the MTA's 2015 operating budget. Currently, 0.34 percent of an employer's payroll expenses for all covered employees for each calendar quarter is imposed on certain employers and self-employed individuals engaged in business within the MCTD. The tax is indirectly tied to inflation. Increasing the tax above current rates would require state approval, and it is unlikely that any increase would be dedicated to the Route 110 BRT project.

Real Property Transfer Tax (RPTT)

The RPTT accounts for 3.2 percent of the MTA's 2015 operating budget. The tax is a component of urban taxes imposed on the transfer of New York City commercial real properties valued at over $500,000. Tax values are contingent on the value of transferred property. Revenue is unpredictable and growth is unreliable. Increasing the tax above current rates would require state approval, and it is unlikely that any increase would be dedicated to the Route 110 BRT project.

Mortgage Recording Tax (MRT)

The MRT accounts for 4.0 percent of the MTA's 2015 operating budget. The taxes are a component of urban taxes imposed on residential and commercial mortgages of New York City properties valued at over $500,000. An MRT of 30 cents per $100 of mortgaged value is paid by borrowers taking out mortgage loans and an MRT of 25 cents per $100 on mortgaged value is paid by mortgage loan institutions. Revenue growth has been low because the MRT is a one-time levy on mortgage recordings instead of an annual levy. Revenue growth increases with the value of mortgages. Increasing the MRT above current rates would require state approval, and it is unlikely that any increase would be dedicated to the Route 110 BRT project.

Motor Fuel Gallonage Tax

Motor fuel taxes are a primary dedicated funding source for state and federal transportation programs. Revenue is generally stable as long as economic conditions remain strong. Taxes must be indexed to keep pace with inflation.

Motor fuel gallonage taxes account for 0.7 percent of the MTA's 2015 operating budget. New York State levies a motor fuel tax of 8 cents per gallon (8.75 cents per gallon inside the MTCD), which is currently legislatively capped. The tax is levied on fuel that is produced in or imported into New York State and when diesel fuel is first sold or used in the state. In 2006, the basis for motor fuel taxes was altered by the New York State legislature from a state percentage rate sales tax on motor fuel to the current cents-per-gallon method. Taxes are collected and administered jointly with the state's petroleum business tax and local motor fuel excise taxes. Increasing the taxes above current rates would require state approval, and it is unlikely that any increase would be dedicated to the Route 110 BRT project.

6.1.2 Additional Suffolk County Transit Funding

Suffolk County Transit bus service receives many of the same sources as the MTA as a beneficiary of the STOA fund, including the regional sales tax, petroleum business tax, and the regional franchise tax surcharge on certain businesses. STOA funding is allocated to transit agencies and authorities in the state based on passengers and vehicle miles. As a percentage, Suffolk County still receives less state funding support than other counties in the region. For example, state funding for the Nassau Inter-County Express (NICE) bus system accounts for over 50 percent of the bus system's total operating budget compared to Suffolk County Transit's 35 percent.

Suffolk County General Funds

Suffolk County received $1.9 billion in tax revenue in 2013 from real property taxes and local sales and use taxes. It also received $2.9 million from governmental fund revenues, including property taxes, sales and use taxes, state aid, federal aid, and other sources. As discussed in Section 6.4, Suffolk County General Funds have a good likelihood to support capital and O&M costs if funding for the project can compete with other County budget priorities.

State Dedicated Fund (SDF) Program

The SDF program provides transit funding for innovative capital projects to transit providers other than the MTA. The Governor's multi-year Transportation Plan includes State funds to address capital needs for non-MTA transit providers that exceed available federal and local resources. The State funding source is generated through a State gasoline tax and used for highway and transit improvement projects throughout the State. The SDF program requires a 20 percent non-federal match.

The SDF program does not distribute funds to new initiatives (e.g., expansion of service) due to the large amount of unmet needs, therefore, it is unlikely to provide support for the proposed Route 110 BRT project. However, the State takes data on new initiatives into account to assign FHWA flexible funding and/or FTA discretionary funding. Therefore, the SDF program could potentially be

used to free up local funds previously used for eligible capital expenses (replacement buses, facilities/garage modernization, transit related equipment, and other federally-eligible projects), which could in turn be applied to cover a portion of the capital and/or O&M costs of the Route 110 BRT project.

6.2 OTHER POTENTIAL STATE AND LOCAL TRANSIT FUNDING PROGRAMS

There are several additional state or local funding sources that could potentially support the proposed Route 110 BRT project. These sources are summarized below.

6.2.1 State

New York State/Long Island Regional Economic Development Council (LIREDC) Consolidated Funding Application (CFA) Grant

The New York State/LIREDC offers grants through the CFA to fund projects of regional significance. The 2011 LIREDC Strategic Economic Development Plan for the Long Island Region calls for developing multi-modal transit options on north-south corridors, and further acknowledges the potential for BRT implementation on Route 110. Additionally, the LIREDC endorsed Preliminary Engineering and Design for Route 110 as a regional priority in 2015. Therefore, the proposed project may be competitive for grants through the CFA grant program.

As discussed on the program website, the CFA effectively serves as a "single entry point…to access multiple state funding sources." One of the many funding sources available through the CFA is the NYSERDA Cleaner, Greener Communities Program. Suffolk County received a $1.5 million NYSERDA grant for a BRT demonstration corridor in 2013, which may increase the likelihood of the Route 110 BRT project being competitive for grant funding through the program in the future.

6.2.2 Local

The following revenue sources could be instituted as new local funding sources dedicated for transit programs, including the proposed Route 110 BRT project.

Local Option Sales Tax

Sales taxes—assessed as a percentage of retail sales—are commonly used to fund transit systems in many metropolitan areas. Sales taxes fluctuate with economic conditions, but can provide reliable revenue stream if the economy remains strong. The revenue base grows with the price of taxable goods and services and is directly related to inflation.

Sales taxes in Suffolk County include a 4 percent State tax, a 4.25 percent local tax, and the 0.375 percent MCTD tax (total combined rate of 8.625 percent). Increases above the current rate would require legislative approval. Also, the current rate in Suffolk County is one of the highest combined sales tax rates in the nation. As a result, increasing the local sales tax above this rate is unlikely.

Property Tax

Property taxes are commonly used to support transit and roadway programs. Property taxes are assessed as a percentage of the market value of real property, commonly by the "mill" or dollars of tax per $1,000 of assessed value (or sometimes dollars of tax per $100 of assessed value).

In New York, property tax rates are assessed as a percentage, based on four tax classes ranging from 10.684 to 19.157 percent. It has historically been a stable revenue source, but has fluctuated with real estate market trends in recent years. Property taxes in Suffolk County are some of the highest in the nation.

Increasing property taxes above the current level to fund the Route 110 BRT project would require legal authority and political support. Two project-specific funding options using property taxes, tax increment financing (TIF) and special assessments, are explored in Section 6.3.

Motor Fuel Excise Tax

Cities and counties within New York State may impose local percentage sales taxes on qualified fuel products. The current percentages range from 3 to 4.75 percent. These taxes are collected and administered jointly with the State's motor fuel tax per gallon and petroleum business tax. The current local motor fuel percentage for Suffolk County is 4.25 percent. Though Suffolk County has not yet reached its legislative cap, increasing the local sales tax percentage is unlikely.

Motor Vehicle Sales Tax

The purchase of any vehicle in New York State is taxed at the State, local, and regional sales tax rates. Rates are calculated according to the sales tax rate in the vehicle purchaser's jurisdiction of residence. Sales taxes in Suffolk County include a 4 percent State tax, a 4.25 percent local tax, and the 0.375 percent MCTD tax (total combined rate of 8.625 percent). As discussed above, increasing the local sales tax above this rate is unlikely.

Tourism Taxes

A rental car tax is levied on the amount charged for auto rental, either on a per day basis or percentage of total rental charge. Similarly, hotel taxes are levied on the amount charged for hotel room charges on a per day basis or percentage of total rental charge. Hotel taxes are typically opposed by the industry, arguing that it puts them at a competitive disadvantage.

Entertainment and meal taxes are levied as a percentage of the total amount charged for entertainment and prepared meal purchases, respectively. Entertainment taxes may also be assessed as a flat dollar fee for entrance to major venues.

Most, but not all, of these taxes are intended to impact tourist and non-residents. The taxes leverage existing collection mechanisms. Revenue growth fluctuates with economic cycles.

Income Tax

Personal income taxes are local-option taxes on salaries and wages. Personal income taxes are common in Midwestern cities, but are not always dedicated to transportation. Revenue is typically stable and indirectly keeps pace with inflation as salaries and wages grow. However, these taxes are difficult to implement and tend to be politically unpopular.

Parking Fees

Parking fees on surrounding facilities may be implemented to create a dependable revenue stream for capital and/or O&M costs of the Route 110 BRT project. Parking fees may also increase transit ridership in the area by increasing the cost of driving and encouraging property owners to manage supply through pricing policies. Parking fees could be added to both existing and future parking supplies both within and immediately adjacent to the project right-of-way.

The parking fee could include a tax or surcharge on paid parking, assessed as a percentage of receipts or a fixed cost per space. Property owners would be required to maintain daily records of usage by parking space. A market analysis would need to be conducted to develop a district-wide parking strategy and determine the optimal pricing policy to coordinate pricing of on- and off-street parking. This strategy would require buy-in from major employers and property owners in the area.

Base parking taxes in Suffolk County include a 4 percent State tax, a 4.25 percent local tax, and the 0.375 percent MCTD tax on charges for parking services in New York City (total combined rate of 8.625 percent).

6.2.3 Miscellaneous

Rockefeller Foundation

The Rockefeller Foundation has awarded small grants to a number of transportation projects across the United States that "transform cities and regions," one of the foundation's core goals. The Rockefeller Foundation has been particularly interested in advancing BRT projects, citing the similar benefits and permanence of rail transit modes for a fraction of the cost. The foundation recently announced a $1.2 million grant to support BRT systems in Boston, Chicago, Nashville, Pittsburgh, and Montgomery County, Maryland. The grant will support research, communications, and community outreach efforts. In addition, the Rockefeller Foundation is engaging and educating stakeholders on the benefits of BRT, including outreach to New York City officials and other key stakeholders to explore the potential of BRT in the region. The potential for receiving a small grant for the Route 110 BRT project is unlikely given the presence of three higher priority BRT corridors identified by the foundation in the surrounding region.

6.3 PROJECT-SPECIFIC FUNDING

Fare Revenue

According to the National Transit Database (2013), farebox revenues account for approximately 20 percent of Suffolk County Transit's operating expenses, with the balance covered primarily by local

and State funds, with federal assistance. In April 2015, Suffolk County Transit fares were increased to current levels (http://www.sct-bus.org/fares.html). Farebox revenue is generally used by transit providers to offset annual operating costs, but is sometimes bonded against to raise proceeds for the capital program. Farebox revenue for the proposed Route 110 BRT project will likely account for a share of the project's annual operating costs.

Tax Increment Financing (TIF)

TIF could help to cover a portion of the proposed Route 110 BRT project's capital costs. TIF involves the creation of a special district to raise revenue for public improvements by capturing a portion of the additional assessed value generated by private-sector development. The tax base is frozen at predevelopment levels, and all or a portion of property tax revenues derived from increases in assessed values (the tax increment) are applied to a special fund created to retire bonds originally issued for development of the district. Some states only permit TIF districts in blighted areas. The initial TIF revenue yield is relatively low. However, revenue generally increases over time as redevelopment and escalation leads to increased property values. TIFs are often applied for periods of 20 to 30 years. While most TIFs capture the incremental increase in property values, some states allow the capture of other taxes as well.

In general, TIF in New York State has been limited, but recent legislative changes have broadened the revenue generation potential of TIF districts. An alternative approach that is common in New York State is a Payment in Lieu of Taxes (PILOT) Increment Financing, which provides more revenue and is easier to borrow against than standard TIF applications.

Special Assessments

Special assessment districts are areas in which an additional property tax is applied to parcels of land that receive a special benefit from one or more public improvements funded by the special tax. Commercial and residential properties are often taxed at different rates. Special assessments are typically applied for a 20- to 30-year period and generate a consistent revenue stream. Special assessment districts are common throughout Long Island, and could help to cover a portion of the capital and/or O&M costs of the proposed Route 110 BRT project.

Developer Contributions (including Sponsorship and Naming Rights)

Developers often provide in-kind or monetary contributions to facilitate construction of infrastructure that would result in a positive impact on property values. Often these contributions are negotiated to reflect the benefit the developer derives from the project. If funding is negotiated, project sponsors often request the money during the early portion of the debt service period. This enables the project sponsor to better leverage other funding sources.

Developer contributions may be applied to fill the gaps in funding for both capital and operating costs of the project. Alternatively, developer contributions could serve as a backstop for TIF revenues. Any developer contributions for the proposed Route 110 BRT project would likely serve as a supplement to other funding sources identified in this analysis.

An alternate type of developer contributions is sponsorship and naming rights. This is a common practice for sports stadiums and arenas and is beginning to be used for highways and transit. Transit corridors and stations, such as the TECO Streetcar line in Tampa and the Health Line BRT in Cleveland, are now using naming rights for transit lines and sponsorship of individual stations as revenue sources. Naming rights are a form of advertising and can be treated as market transactions. Though it can be a significant revenue source during the initial stages of construction and operation, naming rights can be more difficult to secure later in the life of the line or station.

Joint Development

Joint development is a partnership between a public entity and a private developer created to develop certain assets. According to FTA guidance, the development and the property must have a physical and a functional relationship. Joint development can occur when an agency owns land that can be leased to the developer for a long period of time. This will enable the developer to build on the land with a low risk of losing the capital investment. In exchange, rents are paid to the agency, creating a revenue stream that can be bonded against to support the development of a transit improvement. The revenue potential can vary depending on market conditions, but could help to cover a portion of the capital and/or O&M costs of the proposed Route 110 BRT project.

Development Impact Fees

When a landowner requests a permit for a land use change (such as a building permit or certificate of occupancy) that places a burden on existing infrastructure, local government or another public agency may require that the landowner pay a fee as a condition of issuance. Development impact fees generally are applied for capital improvements and are not used for ongoing operations and maintenance costs. In addition, they are not typically applied to resolve existing infrastructure deficiencies. This type of value capture mechanism will help generate revenues right away, but is not well-suited for yielding a multi-year cash flow.

6.4 EVALUATION OF LOCAL FUNDING OPTIONS

Each revenue source described above was evaluated according to its ability to fund capital and/or O&M costs of the proposed Route 110 BRT project and the qualitative ratings indicated in Table 3. The ratings for each revenue source are summarized in Table 4.

Table 3: Factors for Evaluating Local Funding Options

Factor	Description	Rating
Revenue potential	The estimated amount of revenue the funding source may yield for the Route 110 BRT project	▪ high ● ▪ medium ◑ ▪ low ○
Keep pace with inflation	The extent to which the funding source keeps pace or is correlated with general price inflation	▪ indexed and/or keeps pace with inflation ● ▪ sometimes keeps pace with inflation ◑ ▪ not indexed and does not keep pace with inflation ○
Equity	The proportionate impact of the funding source across income levels, with some consideration regarding discretionary participation by income level	▪ progressive (the tax or fee burden increases with income level) ● ▪ neutral ◑ ▪ regressive (the tax or fee places a larger burden on lower income populations) ○
Nexus with beneficiaries	The extent to which the funding source relates to the beneficiaries of the Route 110 BRT project	▪ directly related the beneficiaries of the project ● ▪ some relation to the beneficiaries of the project ◑ ▪ not directly related to the beneficiaries of the project ○
Stability / predictability	The annual predictability of the funding source	▪ generally stable/predictable ● ▪ can be volatile but is generally predicable ◑ ▪ relatively unpredictable/volatile ○
Legal	The legal authority required to implement the tax or fee	▪ there is legal authority ● ▪ there is no legal authority but obstacles are possible to overcome ◑ ▪ there is no legal authority and obstacles are unlikely to overcome ○
Administration	Administrative and collection costs	▪ the tax or fee is already being collected at some level or would otherwise be low cost ● ▪ administration and collection costs would be moderate ◑ ▪ administration and collection costs would require the creation of a costly new mechanism and/or involves many dispersed points of collection ○
Political support	The overall political palpability of each funding source	▪ there is likely strong political support for using the funding source for the project ● ▪ there is likely neutral political support for using the funding source for the project ◑ ▪ there is likely no political support for using the funding source for the project ○

Source: Parsons Brinckerhoff (2015)

Table 4: Route 110 BRT Project Local Financial Commitment Funding Options

Funding Option	Capital*	Operations*	Revenue Potential	Keeps Pace with Inflation	Equity	Nexus with Beneficiaries	Stability / Predictability	Legal	Administration	Political Support
EXISTING TRANSIT FUNDING										
MTA and Suffolk County Transit Funding										
Toll Revenue	✓	✓	○	◑	○	○	◑	●	●	○
Regional Sales Tax	-	✓	○	●	○	○	◑	●	●	○
Petroleum Business Tax	-	✓	○	●	○	◑	◑	●	●	○
Taxes on Certain Companies	-	✓	○	◑	◑	●	○	●	●	○
Regional Franchise Tax	-	✓	○	●	◑	◑	○	●	●	○
Motor Vehicle Fees	-	✓	○	●	○	●	◑	●	●	○
Payroll Mobility Tax	-	✓	○	●	◑	◑	◑	●	●	○
Real Property Transfer Tax	-	✓	○	◑	◑	○	○	●	●	○
Mortgage Recording Tax	-	✓	○	○	◑	○	○	●	●	○
Motor Fuel Gallonage Tax	✓	✓	○	○	○	◑	◑	●	●	○
Additional Suffolk County Transit Funding										
Suffolk County General Funds	✓	✓	◑	●	◑	●	◑	●	●	◑
SDF Program	✓	✗	◑	●	◑	●	●	◑	○	○
OTHER POTENTIAL FUNDING PROGRAMS										
State										
New York State/LIREDC CFA Grant	✓	✗	◑	●	◑	●	●	●	●	●
Local										
Local Option Sales Tax *(new)*	✓	✓	●	●	○	○	◑	○	●	○
Property Tax *(new)*	✓	✓	●	◑	●	◑	◑	○	●	○
Motor Fuel Excise Tax *(new)*	✓	✓	●	◑	○	●	◑	○	●	○
Motor Vehicle Sales Tax *(new)*	✓	✓	◑	●	○	●	◑	○	●	○
Tourism Taxes *(new)*	✓	✓	◑	●	○	◑	◑	○	●	○
Income Tax *(new)*	✓	✓	●	●	●	○	◑	○	●	○
Parking Fees *(new)*	✓	✓	◑	●	◑	●	●	○	●	◑
Miscellaneous										
Rockefeller Foundation	✓	✗	○	●	◑	●	○	●	●	○
PROJECT-SPECIFIC FUNDING										
Fare Revenue	✗	✓	◑	◑	○	●	◑	●	●	●
TIF	✓	✗	◑	◑	●	●	◑	●	●	◑
Special Assessments	✓	✓	◑	◑	●	●	◑	●	●	◑
Developer Contributions (including Sponsorships and Naming Rights)	✓	✓	◑	○	●	●	○	●	●	◑
Joint Development	✓	✓	◑	◑	●	●	●	●	●	◑
Development Impact Fees	✓	✓	◑	○	◑	●	○	●	●	○

Source: Parsons Brinckerhoff (2015)
* The dashes are applied for existing MTA funding sources to indicate uses not currently funded by each source. Conversely, checks indicate the current use of these MTA funding sources. For the new funding sources, the checks and X's summarize the project team's professional judgment on the best use(s) of each source.

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6.5 RECOMMENDED LOCAL FUNDING OPTIONS

Based on the assessment of these factors, nine funding options were determined to have the strongest potential to provide the local financial commitment for the proposed project. The nine funding options include a range of existing state and local transit funding program, other potential state and local transit funding programs, and project-specific funding sources, as follows:

- **Existing State and Local Transit Funding Programs**
  - Suffolk County General Funds
- **Other Potential State and Local Transit Funding Programs**
  - New York State/ LIREDC CFA Grant
  - Property Tax
  - Parking Fees
- **Project-Specific Funding Sources**
  - Fare Revenue
  - TIF
  - Special Assessment
  - Developer Contributions
  - Joint Development

A summary of each funding source and justification by screening criterion is described below.

Existing State and Local Transit Funding Programs

- **Suffolk County General Funds:** As an integral component of the *Connect Long Island* plan, the proposed Route 110 BRT project is closely aligned with currently budgeted projects that use Suffolk County general funds. This funding source generally keeps pace with inflation, and the County has legal authority and an existing mechanism for collection. The funding source has neutral equity implications, as it is primarily composed of real property taxes, which are progressive, and local sales and use taxes, which are regressive. General funds have moderate, generally predictable revenue potential, as well as a strong nexus with beneficiaries of the proposed project, as funds are provided by Suffolk County tax payers.

  - **Revenue Potential:** ◑ Funds have the potential to cover a moderate portion of capital and/or O&M costs.

  - **Keeps Pace with Inflation:** ● Funds, primarily composed of real property taxes and local sales and use taxes, generally keep pace with inflation.

  - **Equity:** ◑ Funds are considered neutral, being comprised of real property taxes (●) and local sales and use taxes (○).

  - **Nexus with Beneficiaries:** ● Funds are provided by Suffolk County taxpayers, direct benificiaries of the project.

- **Stability / Predicatablity:** ◑ Annual revenue can be volitile due to economic conditions but is generally predictable.
- **Legal:** ● There is legal authority to use the funds for the project.
- **Administration:** ● Funds are already being collected, so collection and administration can be addressed through existing mechanims.
- **Political Support:** ◑ Political support to apply general funds for the project is likely neutral, because constrained County funds must be applied to a variety of budget priorities in addition to transit.

Other Potential State and Local Transit Funding Programs

- **New York State/LIREDC CFA Grant:** The LIREDC has acknowledged the Route 110 BRT project as a strategic priority for the region based on its linkages to other initiatives and positive impact on a significant employment center in Suffolk County. Therefore, the project may be competitive for grants through the LIREDC CFA grant program. Part of an annual grant program, a CFA grant generally keeps pace with inflation, is stable and predictable, and has the potential to fund a moderate portion of the project's capital cost. Funded by New York State, CFA grants are directly related to the benificiaries of the project. There is legal authority to apply a CFA grant to the proposed project. CFA grants are already being administered and would be low cost to apply to the proposed project. The funding source has neutral equity implications. If selected for a CFA grant, there would likely be strong political support to use the grant for the project because the source does not take away from existing committed and local sources for transit.
    - **Revenue Potential:** ◑ A CFA grant has the potential to fund a moderate portion of the project's capital costs.
    - **Keeps Pace with Inflation:** ● As a one-time capital grant, a CFA grant will generally keep pace with inflation.
    - **Equity:** ◑ Funded through the State's existing resources, CFA grants have a neutral impact across all income levels.
    - **Nexus with Beneficiaries:** ● Funded by the State of New York, CFA grants are directly related to the benificiaries of the project.
    - **Stability / Predicatablity:** ● As a one-time capital grant, a CFA grant is generally stable and predictable.
    - **Legal:** ● There is legal authority to apply a CFA grant to the proposed project.

- **Administration:** ● CFA grants are already being administered and would be low cost to apply to the project.

- **Political Support:** ● If selected for a CFA grant, there would likely be strong political support to use the grant for the project because the source does not take away from existing committed and local sources for transit.

- **Property Tax:** Property taxes have strong revenue potential, are progressive, and are currently being collected and administered in Suffolk County. Property tax revenue generally keeps pace with inflation and can be stable depending on real estate market trends. Property taxes are paid by property owners in Suffolk County, representing some relation to the benificiaries of the proposed project. However, there is currently no legal authority to increase property taxes, and political support to do so is likely limited, given that existing property taxes are already some of the highest in the nation.

  - **Revenue Potential:** ● An increase in existing property taxes could potentially fund a large portion of project capital and/or O&M costs.

  - **Keeps Pace with Inflation:** ◑ Property values generally fluctuate based on economic conditions, generally keeping pace with inflation.

  - **Equity:** ● Property taxes are progressive, increasing with property values.

  - **Nexus with Beneficiaries:** ◑ Property taxes are paid by property owners in Suffolk County, representing some relation to the benificiaries of the project.

  - **Stability / Predicatablity:** ◑ Historically, property taxes have been stable, but in recent years revenue has fluctuated with real estate market trends.

  - **Legal:** ○ There is limited legal authority to increase property taxes for the project and obstables are likely difficult to overcome.

  - **Administration:** ● Property taxes are already being collected.

  - **Political Support:** ○ There is likely limited political support to increase property taxes for the project given that existing Suffolk County property taxes are some of the highest in the nation.

- **Parking Fees:** Parking fees generally keep pace with inflation, are generally stable and predictable, and are currently being collected and administered. Parking fees have moderate revenue potential and a neutral impact across all income levels. However, there is currently no legal authority to increase parking fees. The extent of likely political support for increasing parking fees as a funding source for the proposed project depends on the type and structure of the parking fee increase. Generally, there is limited support to increase parking fees. This approach would require buy-in from major employers and property

owners in the area. If this funding source were to be pursued, a market analysis should be conducted to develop a district-wide parking strategy and determine the optimal pricing policy to coordinate pricing of on- and off-street parking.

- **Revenue Potential:** ◑ An increase in parking fees could potentially fund a moderate portion of project capital and/or O&M costs.
- **Keeps Pace with Inflation:** ● Parking fees assessed as a percentage of receipts generally keep pace with inflation.
- **Equity:** ◑ Parking fees have a neutral impact across all income levels.
- **Nexus with Beneficiaries:** ● Parking fees are paid by customers parking around the project right-of-way, directly benefiting as a passenger of the service or traveler in the area.
- **Stability / Predicatablity:** ● Parking fees are generally stable and predictable.
- **Legal:** ○ There is no legal authority to increase parking fees for the project and obstables are likely difficult to overcome.
- **Administration:** ● Parking fees are already being collected.
- **Political Support:** ◑ The extent of political support for increase parking fees for the project depends on the type and structure of the parking fee increase.

Project-Specific Funding Sources

- **Fare Revenue:** Fare revenue will likely account for a share of the project's annual O&M costs. Fares are paid as a user fee by the riders of the transit service, the direct beneficiaries of the project. Charging fares is generally expected on a new transit service. There is likely strong political support to use fare revenue as one of the project funding sources. There is legal authority to charge fares, and fares are currently being administered and collected for other transit services in Suffolk County. The source has moderate revenue potential, can sometimes keep pace with inflation depending on agency fare policies, and can fluctuate with economic conditions. However, fares are regressive, placing a larger burden on low income riders.
  - **Revenue Potential:** ◑ Fare revenue has the potential to fund a moderate portion of project O&M costs.
  - **Keeps Pace with Inflation:** ◑ Fare revenue sometimes keeps pace with inflation, depending on transit agency policies and practices regarding fare increases.

- **Equity:** ○ Fares are regressive, placing a larger burden on low-income, transit-dependent riders.
- **Nexus with Beneficiaries:** ● Fares are paid as a user fee by the riders of the transit service, the direct benficiaries of the project.
- **Stability / Predicatablity:** ◑ Fare revenue can fluctuate with economic conditions, but is generally predicable.
- **Legal:** ● There is legal authority to apply fare revenue to the O&M costs of the project.
- **Administration:** ● Fare revenue is already being collected for other transportation services in Suffolk County.
- **Political Support:** ● Charging fares is generally expected for new transit service. There is likely strong political support to use fare revenue for the O&M costs of the project.

- **TIF:** Property taxes (the most common tax used for TIF) are progressive and are currently being collected and administered. TIF revenue is directly generated from a defined district near the project right-of-way, having direct relation to the beneficiaries of the project. There is also legal authority to create a TIF district for the project. TIF revenue has moderate revenue potential, generally keeps pace with inflation, and can be stable and predictable depending on real estate market trends. Compared to a countywide property tax increase, the benefits of TIF have the potential to foster support from benefiting property owners along the project right-of-way.
  - **Revenue Potential:** ◑ TIF has the potential to fund a moderate portion of project capital costs.
  - **Keeps Pace with Inflation:** ◑ Property taxes (the most common tax used for TIF) change based on economic conditions, generally keeping pace with inflation.
  - **Equity:** ● Property taxes are progressive, increasing with property values.
  - **Nexus with Beneficiaries:** ● TIF revenue generated from a defined district near the project right-of-way has a direct relation to the benificiaries of the project.
  - **Stability / Predicatablity:** ◑ Historically, property taxes have been stable, but in recent years revenue has fluctuated with real estate market trends.

- **Legal:** ● There is legal authority to create TIF districts in New York State, including the commonly used PILOT Increment Finnacing, which provides more revenue and is easier to borrow against compared to standard TIF applications.

- **Administration:** ● Property taxes are already being collected along the project right-of-way.

- **Political Support:** ◑ There is likely limited political support for a property tax increase in Suffolk County. However, there is stronger political support for capturing property tax revenue related to the project's value from property owners benefiting from the project, as is the case with TIF.

- **Special Assessment:** Special assessments have the potential to fund a moderate portion of the proposed project's capital and/or O&M costs. A special assessment would be progressive and could be administered via existing property tax collections. Special assessment revenue is directly generated from a defined district near the project right-of-way, having direct relation to the beneficiaries of the project. There is also legal authority to create a special assessment district for the project. Special assessment revenue has moderate revenue potential, generally keeps pace with inflation, and can be stable and predictable depending on real estate market trends. There may be greater political support for instituting a special assessment along the project right-of-way compared to a countywide property tax increase.

  - **Revenue Potential:** ◑ Special assessments have the potential to fund a moderate portion of project capital and/or O&M costs.

  - **Keeps Pace with Inflation:** ◑ Property taxes change based on economic conditions, generally keeping pace with inflation.

  - **Equity:** ● Property taxes are progressive, increasing with property values.

  - **Nexus with Beneficiaries:** ● Revenue generated from special assessments on a defined district near the project right-of-way has a direct relation to the benificiaries of the project.

  - **Stability / Predicatablity:** ◑ Historically, property taxes have been stable, but in recent years revenue has fluctuated with real estate market trends.

  - **Legal:** ● There is legal authority to use special assessments for the project. Special assessment districts are common throughout Long Island.

  - **Administration:** ● Property taxes are already being collected.

  - **Political Support:** ◑ There is likely limited political support for a countywide property tax increase in Suffolk County. However, there is likely stronger political

support for collecting additional property tax revenue from property owners benefiting from the project, as is the case with TIF.

- **Developer Contributions:** Developer contributions could potentially fund a moderate portion of project capital and/or O&M costs depending on the negotiated amounts. Developer contributions are progressive and directly related to the beneficiaries of the project. The county has legal authority to use developer contribution for the project and administrative costs would be relatively low. There is moderate political support to use developer contributions for the project. However, developer contributions do not keep pace with inflation and are generally not stable or predictable.

    - **Revenue Potential:** ◑ Developer contributions have the potential to fund a moderate portion of the project's capital and/or O&M costs.

    - **Keeps Pace with Inflation:** ○ Developer contributions generally provide an up-front funding amount and therefore do not keep pace with inflation.

    - **Equity:** ● Developer contributions are progressive, generally impacting higher income developers who directly benefit from the project.

    - **Nexus with Beneficiaries:** ● Developer contributions are directly related to developers benifiting from the project. Developer contributions often are negotiated to reflect the benefit the developer will receive from the project.

    - **Stability / Predicatablity:** ○ Developer contributions are generally not stable and predictable. If funding is negotiated, project sponsors often request the contribution during the early portion of the debt service period. This enables the project sponsor to better leverage other funding sources.

    - **Legal:** ● There is legal authority to apply developer contributions to the project.

    - **Administration:** ● Administration costs for developer contributions would be relatively low.

    - **Political Support:** ◑ There is likely moderate political support for using developer contributions to fund the project, depending on the level of developer involvement and support for the project.

- **Joint Development:** Joint development could potentially fund a moderate portion of project capital and/or O&M costs. Joint development is progressive, directly related to the beneficiaries of the project, and generally stable and predictable. The County has legal authority to use joint development for the project and administrative costs would be relatively low. There is likely moderate political support to use joint development for the project. Joint development projects must be appropriately structured to keep pace with inflation.

- **Revenue Potential:** ◑ Joint development has the potential to fund a moderate portion of project capital and/or O&M costs.
- **Keeps Pace with Inflation:** ◑ Joint developments may keep pace with inflation if rent payments generated from development are strucured to escalate with cost indices over time.
- **Equity:** ● Joint developments are progressive, generally impacting higher income developers who directly benefit from the project.
- **Nexus with Beneficiaries:** ● Joint developments are directly related to developers benefiting from the project.
- **Stability / Predicatablity:** ● Joint developments are generally stable and predictable.
- **Legal:** ● There is legal authority to apply joint development revenues to the project.
- **Administration:** ● Administration costs for a joint development would be relatively low.
- **Political Support:** ◑ There is likely moderate political support for using joint development to fund the project, depending on the level of developer involvement and support for the project.

7. Conclusion and Next Steps

The funding recommendations in this technical memorandum reflect findings from an initial review of potential funding options for the proposed Route 110 BRT project. A comprehensive review of each funding option, including revenue projections, is necessary to develop detailed funding recommendations. These recommendations would be applied to develop a detailed financial plan for implementation of the proposed project, informed by current capital and O&M cost estimates.

The project sponsor is advised to secure the commitment of state, local, and/or project-specific funds in order to demonstrate local financial commitment and compete for federal Small Starts funding. The ultimate goal is to ensure a financially sustainable path for implementation, including infrastructure maintenance and continuing operations.