

### A. INTRODUCTION

The Metropolitan Transportation Authority's (MTA) Long Island Rail Road (LIRR) is proposing the LIRR Expansion Project from Floral Park to Hicksville (the "Proposed Project" or "LIRR Expansion Project"). The Proposed Project is a key element of Governor Andrew M. Cuomo's transportation infrastructure initiatives and is a strategic component of a comprehensive plan to transform and expand New York's vital regional transportation infrastructure. The Proposed Project extends 9.8 miles between the Floral Park and Hicksville stations, where five branches converge carrying approximately 41 percent of LIRR's daily ridership. The addition of a third track would increase track capacity through the corridor making it easier to run trains along this busy, congested rail corridor. This would improve service reliability and make transit more attractive, with the further goal of getting travelers out of cars, reducing traffic congestion, and reducing adverse environmental impacts. This 9.8-mile stretch also includes seven street-level train crossings ("grade crossings") where road traffic must stop and loud train horns must blow each time a train passes. Eliminating these grade crossings through grade separation (e.g., underpasses) or potentially, in one or two cases, closure is anticipated to substantially reduce noise, traffic congestion, delays, and air pollution, and greatly improve safety for residents, motorists, and pedestrians.

The Proposed Project is a new project and is completely different from a previous proposal for a third track. The prior proposal required substantial acquisition of residential properties along the Main Line corridor and did not eliminate all seven grade crossings. The Proposed Project, in contrast, eliminates the need for any residential property acquisitions, will modify all seven grade crossings, and reduces the number of full commercial property acquisitions to less than five.

The Proposed Project will have the following benefits:

- Improves service and reduces delays for more than half a million passengers per week – given 40 percent of LIRR's daily passengers pass through the Main Line corridor;
- Reduces road congestion and pollution from cars idling at crossing gates; eliminates noise from train horns, crossing bells and honking cars at grade crossings; and greatly improves safety by removing areas where vehicles and pedestrians can collide with trains by eliminating all seven grade crossings;
- Significantly reduces noise from current levels throughout the Project corridor with the elimination of seven grade crossings and installation of sound attenuation walls along significant portions of the railroad's right-of-way;
- Provides an additional 2,490 net new parking spaces at the New Hyde Park, Mineola, Westbury, and Hicksville stations to help address future ridership growth;

## Long Island Rail Road Expansion Project

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- Provides major station upgrades like new, longer platforms to accommodate full-length trains, removing delays and safety issues associated with passengers needing to move among cars on shorter platforms, as well as making stations fully ADA-compliant; and
- Upgrades and modernizes track infrastructure such as switches, signals, and power equipment.

These and other proposed components of the Proposed Project are the result of months of direct consultation with local elected officials and community members, as well as analysis by experienced transit engineers.

This document is the Draft Environmental Impact Statement (DEIS), which is required by the New York State Environmental Quality Review Act (SEQRA) for all projects requiring discretionary state actions that may result in significant adverse environmental impacts. LIRR is the lead state agency for SEQRA for this Proposed Project. The New York State Department of Transportation (NYSDOT) is an involved agency for approval of the work associated with the elimination of the grade crossings and proposed parking facilities. After publication of this DEIS and subsequent public hearings and a public comment period, LIRR will prepare a Final Environmental Impact Statement (FEIS) that addresses comments received on the DEIS and potentially revises the analysis based on information received during the public comment process. This DEIS, along with all technical memoranda used to make the assessments set forth in the DEIS, are available for review on the Proposed Project's website at [www.amodernli.com](http://www.amodernli.com).

## B. PROJECT PURPOSE & NEED

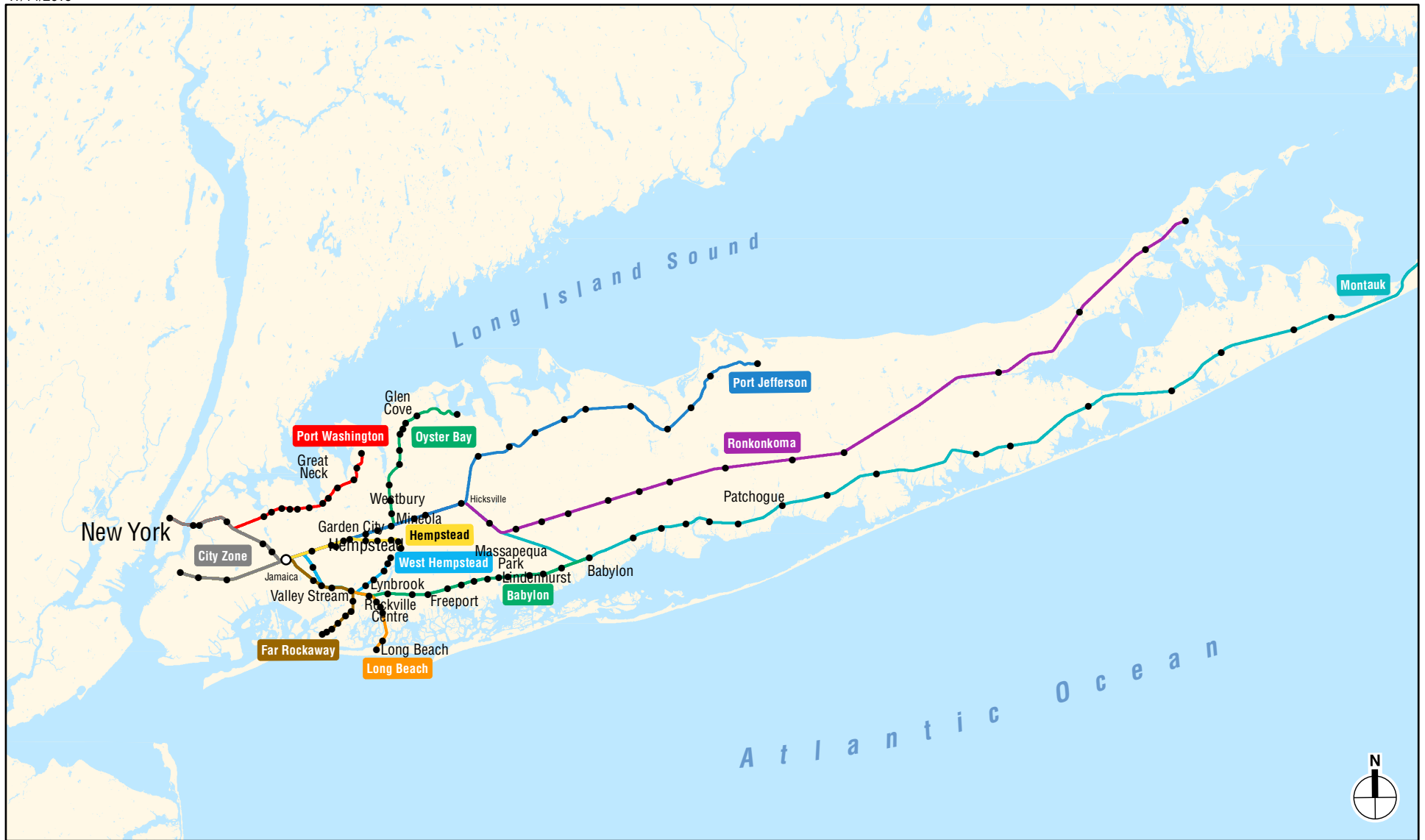
### BACKGROUND

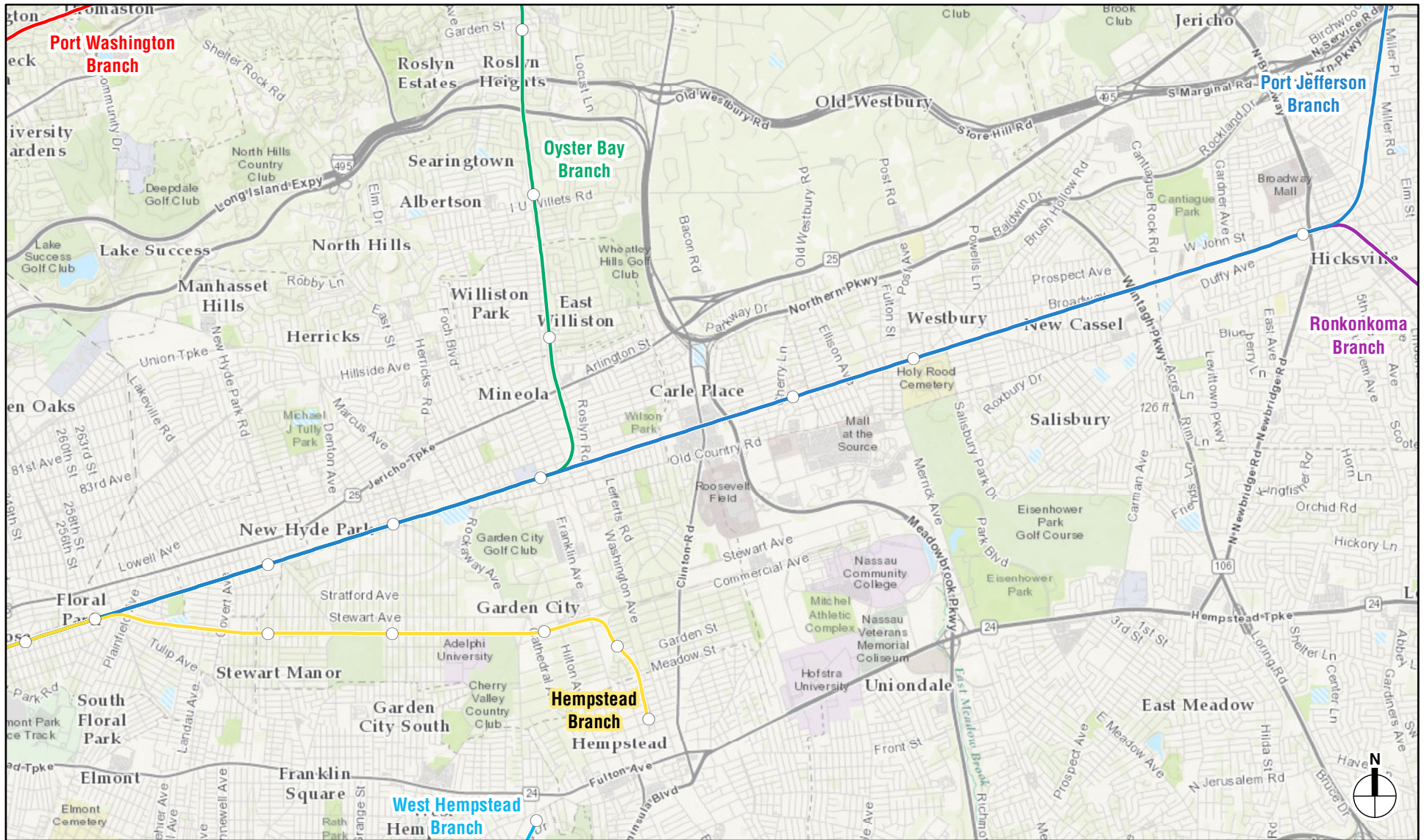
The MTA is North America's largest transportation network, serving a population of 15.2 million people in a 5,000-square-mile area that extends from New York City to Long Island, the southeastern portion of New York State, and Connecticut. MTA LIRR is the busiest commuter railroad in North America, currently carrying approximately 304,000 customers each weekday on approximately 750 daily trains. The MTA LIRR system comprises over 700 miles of track on eleven different branches (see **Figure S-1**). The LIRR's Main Line is the central artery of the commuter rail system in Nassau and Suffolk Counties. At various points east of Jamaica, five LIRR branches split off from the Main Line—the Hempstead, Oyster Bay, Port Jefferson, Ronkonkoma, and Montauk Branches. The number of tracks along the Main Line corridor varies: it primarily has four tracks west of Floral Park, but narrows to two tracks east of Floral Park through to Hicksville. The Main Line is also used by the New York & Atlantic Railway for limited freight service that runs during non-peak hours.

### PROJECT PURPOSE AND NEED

The Proposed Project addresses the heavily utilized two-track Main Line segment between Floral Park and Hicksville (see **Figure S-2**). This busy portion of the Main Line services the Hempstead, Ronkonkoma, Oyster Bay, and Port Jefferson Branches, as well as some Montauk Branch trains. This 9.8-mile segment services approximately 107,000 riders on an average weekday. This two-track portion of the corridor is problematic for several reasons, including:

- Severe congestion during peak periods





Station Name ● LIRR Station

- Frequent delays with rippling effects to other branches due to bottlenecks caused by emergency repair, a disabled train or other disruptions that would not allow trains to bypass during peak periods
- Insufficient track capacity to operate both eastbound and westbound service during peak periods
- Safety concerns related to railroad traffic, roadway traffic, and pedestrians at grade crossings
- Traffic delays due to grade crossings
- Noise issues due to required horn blasts at grade crossings

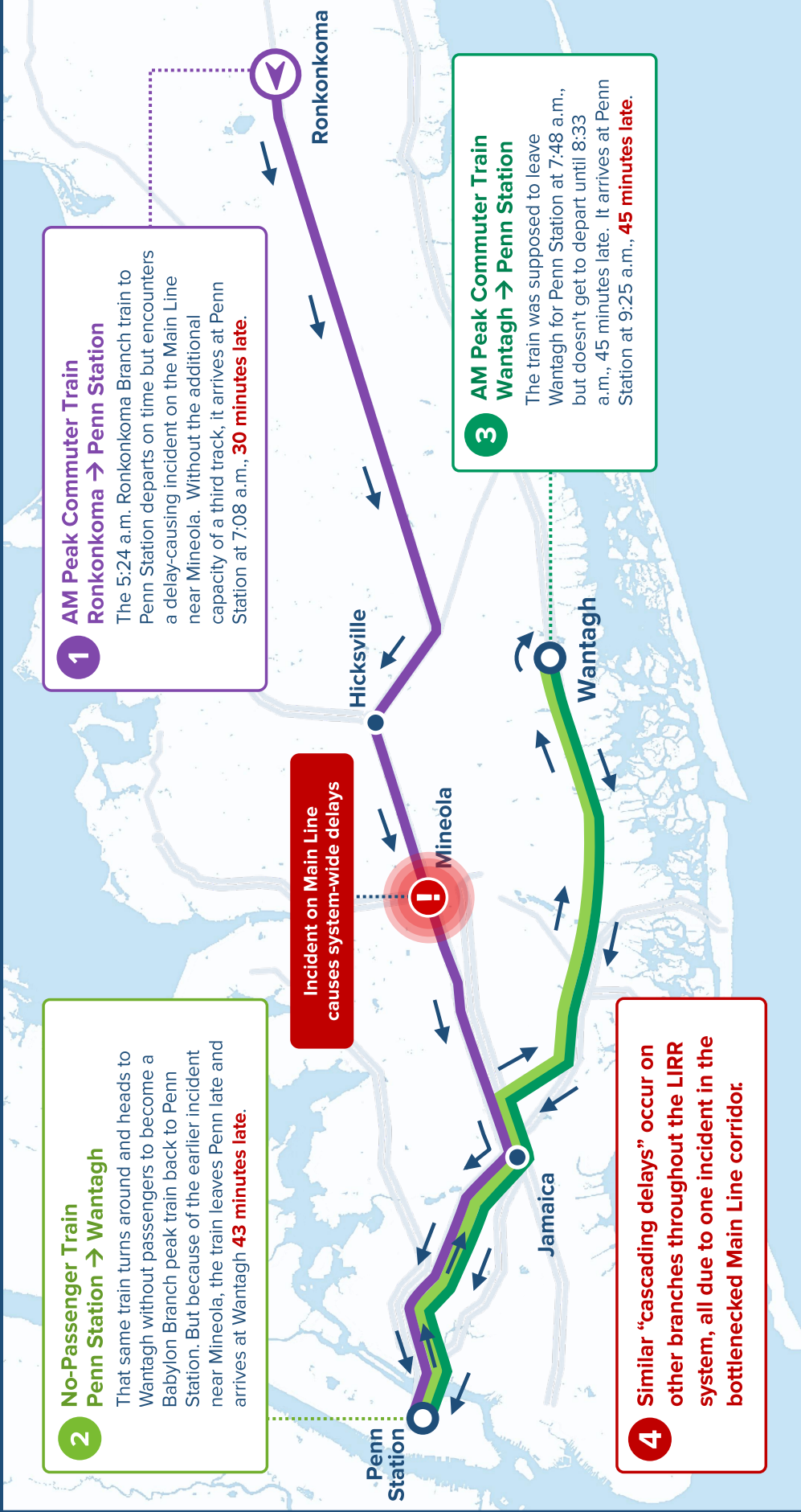
The primary purpose of the LIRR Expansion Project is to improve rail service, reliability, public safety, and quality of life along the LIRR Main Line segment between Floral Park and Hicksville by constructing a third track and by eliminating street level grade crossings. The goals and objectives of the Proposed Project are as follows:

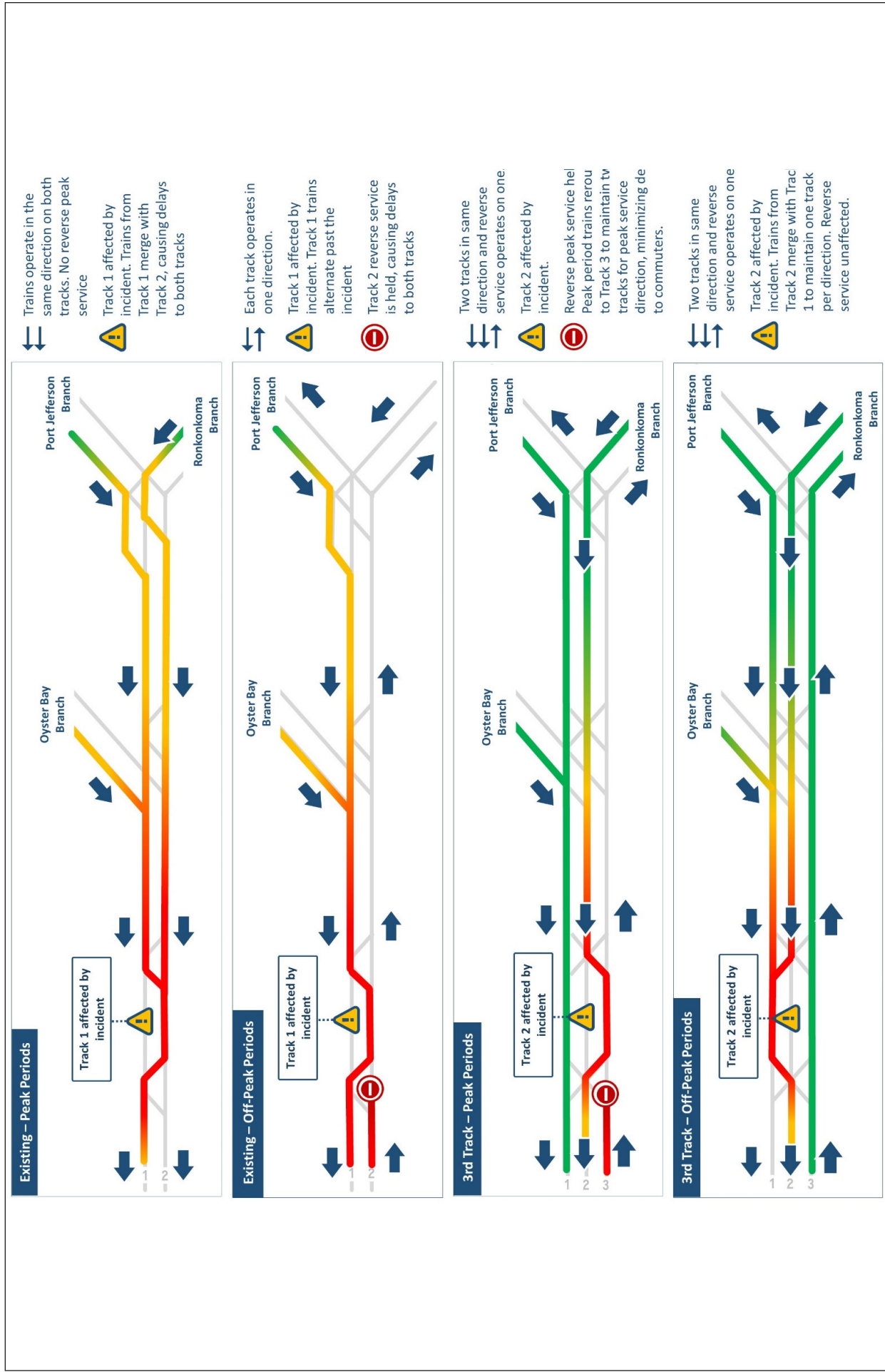
- Reduce delays to commuters from Main Line congestion and rippling effects
  - Improve on-time performance on all branches
  - Add resiliency and accelerate recovery time from unplanned service disruptions
  - Reduce train delays due to roadway incidents or accidents near grade crossings
- Add operational flexibility eastbound and westbound
  - Improve mobility with additional intra-island service
  - Improve mobility with additional reverse peak service
  - Facilitate scheduled and unscheduled maintenance
- Provide additional track capacity to accommodate projected system-wide passenger service growth
- Improve public safety and roadway conditions
  - Eliminate Main Line street-level grade crossings
  - Enhance north-south vehicular and pedestrian connectivity in communities along the Main Line
  - Reduce traffic delays due to grade crossings
- Reduce noise and improve neighborhood quality-of-life
  - Reduce noise from train horns
  - Reduce noise from crossing-gate warning bells

#### *CONGESTION AND DELAYS ALONG EXISTING LIRR MAIN LINE*

The existing LIRR Main Line segment between Floral Park and Hicksville comprises two tracks, and currently serves more than 250 passenger trains on a typical weekday. The volume of train traffic carried along this Main Line segment during a normal rush hour leads to significant train congestion. Because of the current two-track configuration, LIRR has very few options to route service around a disabled train or track outage. Typically, the trains along the affected track cannot move until the situation is resolved, compounding delays and affecting thousands of train riders (see **Figure S-3**). The limited two-track Main Line segment also slows recovery time after an incident. **Figure S-4** presents a typical scenario involving an incident and how the two-track section hinders recovery time from an incident.

## HOW AN INCIDENT ON THE MAIN LINE CAUSES SYSTEM-WIDE DELAYS





**LIRR Expansion Project  
Floral Park to Hicksville**

Recovery From Delay  
**Figure S-4**

### *On-Time Performance*

One commonly used measure of train reliability is “on-time performance.” A wide array of issues can influence a rail branch’s on-time performance; however, the number of tracks on the branch is an important factor. In most cases, Metro-North has demonstrated greater on-time performance than the LIRR Main Line over the same time period. These differences in on-time performance are due in part to the number of tracks available. The most heavily-traveled segments of Metro-North’s Harlem Line, New Haven Line, and Hudson Line consist of three or four tracks. This additional track capacity provides operational flexibility that enables Metro-North to re-route trains around a stalled train or unforeseen track outage.

The on-time performance on some LIRR branches that run along the Main Line during the evening peak period is lower than 85 percent. In other words, trains along these branches may be late 17 or 18 percent of the time. On-time performance has decreased in recent years, frustrating commuters and reducing the region’s productivity. As discussed above, the root causes of some delays (police activity, passenger emergencies, etc.) are not predictable or easily rectified. To improve reliability and reduce delays, operational flexibility must be incorporated into the rail system.

### *FUTURE RIDERSHIP PROJECTIONS*

Independent of the Proposed Project, LIRR projects a substantial increase in service to Manhattan due to the East Side Access project, which will include a new LIRR terminal in Manhattan at Grand Central Terminal. The East Side Access Project, which is expected to be completed by the end of 2022, will enable LIRR to increase peak hour capacity by more than 50 percent, resulting in an increase in the number of trains run during peak periods. LIRR’s projections show significant regional ridership growth; an increased need for reverse peak and intra-island service opportunities; and planned future service growth to Manhattan terminals. Due to projected background growth, LIRR has estimated that the number of peak period customer trips on the Main Line in the project corridor will increase by 6.9 percent westbound and 8.4 percent eastbound by 2020 (see **Table S-1**). From 2020 to 2023, LIRR has estimated an increase of 22.2 percent, primarily as a result from the opening of the new East Side Access terminal. Ridership is projected to increase by 65.4 percent westbound and 76.2 percent eastbound by 2040.<sup>1</sup> Without the third track, the existing bottleneck, coupled with the additional ridership and additional train service to Manhattan terminals, will result in increased congestion, delays, and passenger crowding, as well as additional gate-down time at Main Line grade crossings in the future.

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<sup>1</sup> According to the New York Metropolitan Transportation Council (NYMTC), the population on Long Island (Nassau County and Suffolk County) is expected to grow from approximately 2,856,200 people in 2015 to 2,868,500 by 2020 and 3,195,800 by 2040, an ultimate population increase of nearly 12 percent. NYMTC’s data supports LIRR’s general projections of increased ridership.

**Table S-1**

**LIRR Rail Operations:**  
**Existing Conditions, 2020 Conditions, and 2040 Conditions**

	Main Line Trains * Floral Park to Mineola		Main Line Trains* Mineola to Hicksville	
	Eastbound (no. of trains)	Westbound (no. of trains)	Eastbound (no. of trains)	Westbound (no. of trains)
<b>Existing Conditions</b>				
Daily (24-HR) Total	127	125	109	106
4-HR AM Peak Period	24**	49	21	43
4-HR PM Peak Period	47	24	41	20
<b>2020 No Build Conditions</b>				
Daily (24-HR) Total	141	138	123	119
4-HR AM Peak Period	24	49	21	43
4-HR PM Peak Period	47	24	41	20
<b>2020 Build Conditions</b>				
Daily (24-HR) Total	150	147	132	128
4-HR AM Peak Period	32	50	29	44
4-HR PM Peak Period	48	32	42	28
<b>2040 No Build Conditions</b>				
Daily (24-HR) Total	150	150	131	131
4-HR AM Peak Period	23	57	20	51
4-HR PM Peak Period	52	22	46	19
<b>2040 Build Conditions</b>				
Daily (24-HR) Total	158	159	139	140
4-HR AM Peak Period	31	58	28	52
4-HR PM Peak Period	53	30	47	27
<b>Notes:</b> * Main Line train volumes include revenue (e.g., LIRR trains carrying passengers) and non-revenue trains (e.g., LIRR trains that are not carrying passengers and are being moved back to the next position). ** Currently, in the AM peak there are zero eastbound trains for approximately 90 minutes due to the “2 and 0” operations. The converse is true for the PM peak. This same condition would apply in the 2020 and 2040 No Build conditions. <b>Source:</b> LIRR schedule (Effective 3-7-16 to 5-22-16). 2020 No Build based on LIRR current schedule, plus Double Track project. 2020 Build based on current schedule, plus Double Track project and LIRR Expansion Project. 2040 No Build based on East Side Access opening day service plan (includes Double Track project). 2040 Build based on East Side Access opening day service plan, plus LIRR Expansion Project.				

### *INTRA-ISLAND, REVERSE PEAK, AND REVERSE DIRECTION SERVICE LIMITATIONS*

In addition to operational constraints, the two-track Main Line limits LIRR’s ability to offer a broader range of services. The heavy demand for directional peak-period service (Manhattan-bound service in the morning rush hours and Long Island-bound service in the evening rush hours) requires full use of both tracks and restricts other services such as intra-island service and reverse direction travel. The use of both tracks in the peak direction and no reverse service during peak periods is referred to as “2 and 0 operation.” The result is no eastbound service for one and a half hours in the morning peak period and no westbound service for one hour in the evening peak period. Consequently, passengers who want to travel by train east in the AM peak period to their jobs or schools to the east are severely limited in their ability to do so; similarly Suffolk and Nassau County residents who want to travel by train west, including to New York City, in the PM peak period are severely limited in the available service.

Because several large and many smaller employers are located on Long Island—which draw employees and visitors from the wider New York City metropolitan region—and because of increasing demand for service into New York City during evening hours, LIRR anticipates

increasing demand for intra-island travel and reverse peak travel—consistent with New York Metropolitan Transportation Council (NYMTC) projections for employment in Nassau and Suffolk counties.<sup>2</sup> The current Main Line configuration cannot support intra-island travel and reverse peak travel during critical times of the day.

### *STREET-LEVEL GRADE CROSSINGS*

Along the LIRR Main Line segment between Floral Park and Hicksville are seven locations where the east-west rail line crosses the street bed of a north-south vehicular roadway (see **Figure S-5**). These locations are as follows:

- New Hyde Park/Garden City
  - Covert Avenue
  - South 12th Street
  - New Hyde Park Road
- Mineola
  - Main Street
  - Willis Avenue
- Westbury/New Cassel
  - School Street
  - Urban Avenue

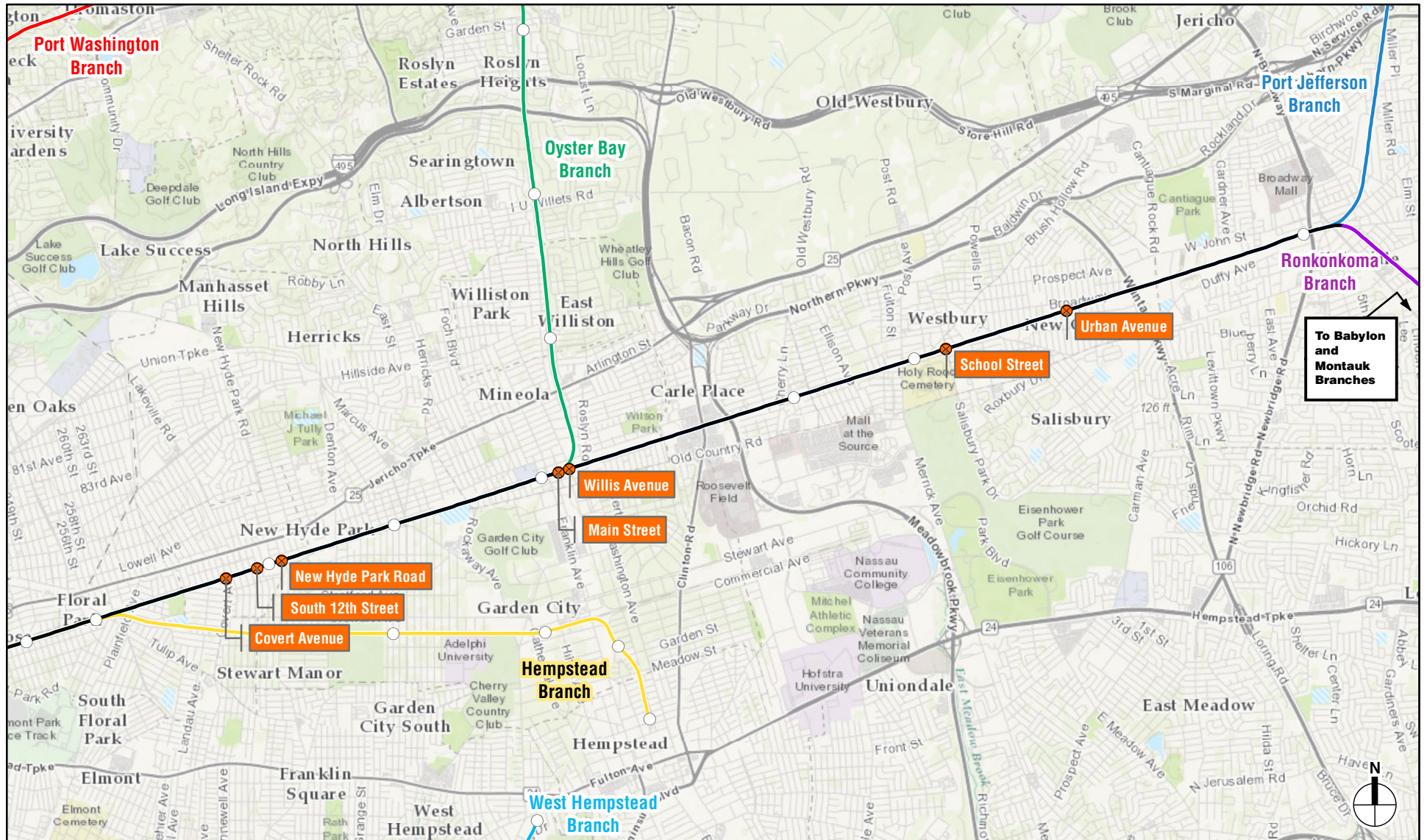
Street-level grade crossings adversely impact traffic, train operations, and neighborhood quality-of-life, as well as vehicle, pedestrian and bicyclist safety. Under normal conditions grade crossings add automobile traffic congestion due to gate-down time. When incidents occur at or near grade crossings that affect operation of gates and/or bells, grade crossings also can slow train travel because trains must approach the grade crossing at a reduced speed. In addition, train horns that must be blown at grade crossings and bells that ring when gates are down create noise in the adjacent communities. They also increase risk to pedestrian, bicycle, and automobile safety. Grade crossings also raise safety concerns related to response times for emergency vehicles that may need to cross the tracks. Accordingly, the desired option from a safety, quality-of-life, and traffic flow standpoint is to eliminate the grade crossings through grade-separating the two modes of transportation (e.g., building a roadway underpass) or potentially, in one or two cases with consideration of public input, closure of the grade crossing.

### **PLANNING CONTEXT AND PROJECT HISTORY**

Separate from the Proposed Project, LIRR is moving forward with several regional transportation projects and plans. However, these present and future projects, independent of the third track, would not individually or collectively satisfy the Purpose and Need for the Proposed Project because they would not eliminate the bottleneck along the Main Line (See **Figure S-6**), and thus would not reduce

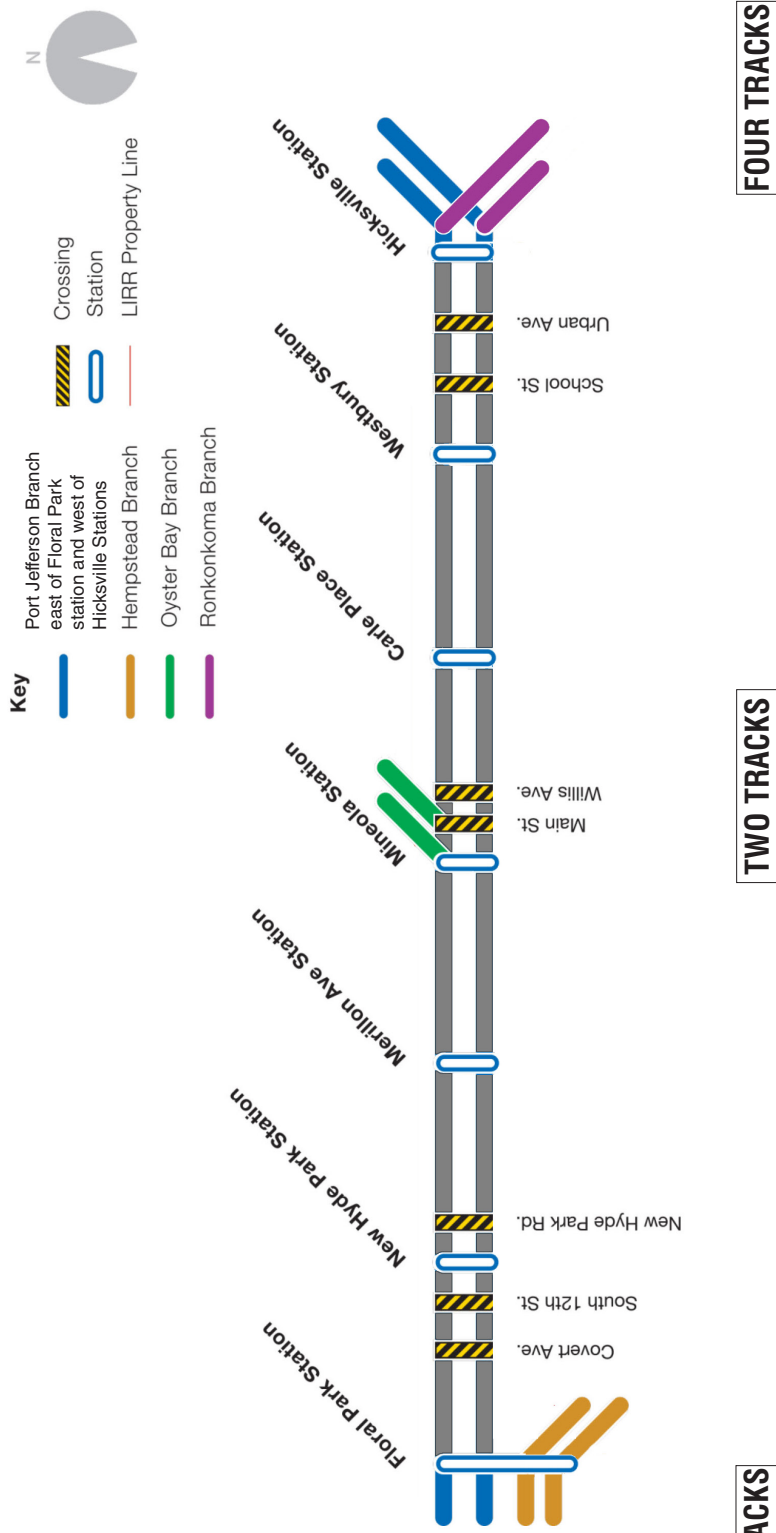
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<sup>2</sup> According to NYMTC, the employment on Long Island (Nassau County and Suffolk County) is expected to increase from approximately 1,304,900 jobs in 2015 to 1,343,800 by 2020 and 1,440,400 by 2040, an ultimate increase of 135,500 jobs. NYMTC's data support LIRR's general projections of increased intra-island, reverse peak, and reverse direction service demand.



- X Grade Crossings
 — Hempstead
 — Port Washington
- Station
 — Oyster Bay
 — Ronkonkoma
- LIRR Main Line
 — Port Jefferson
 — West Hempstead

0 2 MILES



LIRR Expansion Project  
Floral Park to Hicksville

Existing Track Schematic  
Figure S-6

congestion and delays along the Main Line corridor and branches that feed into the Main Line corridor. Nor would these projects add operational flexibility within the 9.8-mile Project Corridor, particularly for bi-directional travel at peak times. The projects also do not optimize project system-wide growth, and would not improve safety and quality of life through grade crossing elimination and installation of sound attenuation walls within the 9.8-mile Project Corridor.

## **C. DESCRIPTION OF THE PROPOSED PROJECT**

As previously stated, the LIRR Expansion Project from Floral Park to Hicksville extends 9.8 miles from the Village of Floral Park to the Hamlet of Hicksville. The Study Area for the Proposed Project generally is defined as one-quarter mile from either side of the railroad centerline, with a one-half mile radius around each LIRR station within the 9.8-mile Project Corridor. The Proposed Project entails the following major components:

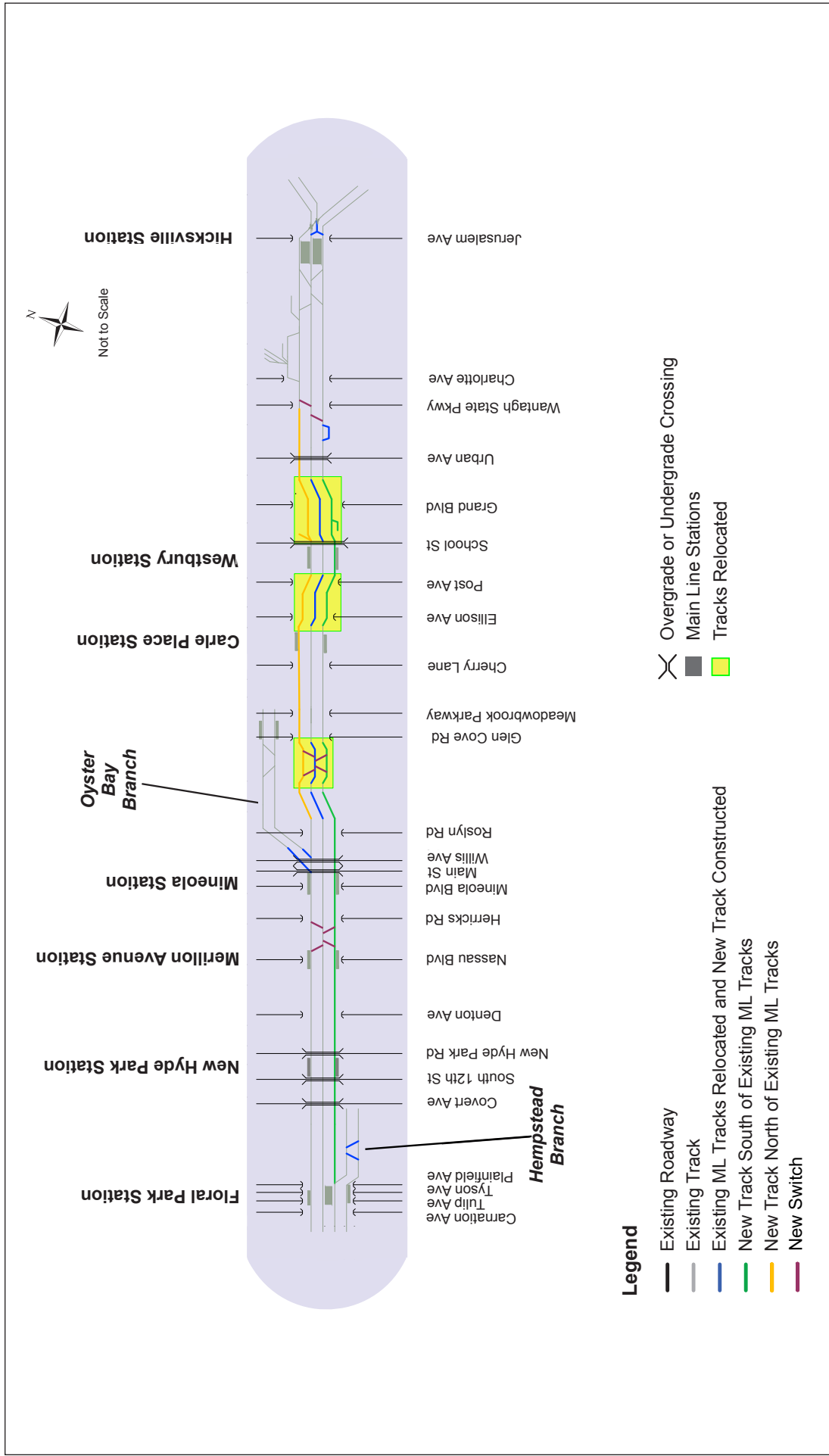
- Installation of a third Main Line track from Floral Park Station to Hicksville
- Elimination of seven existing grade crossings within the project limits to provide grade-separated crossings or potentially, in one or two cases, full closures to vehicular traffic, with the nature of the modification to be based on NYSDOT design criteria, consideration of construction impacts and duration, traffic impacts, and input from the community
- Construction of retaining walls along portions of the corridor
- Installation of sound attenuation walls along portions of the corridor
- Modifications to passenger rail stations, platforms, and parking (e.g., modified and improved platforms, passenger shelters, Americans with Disabilities Act (ADA) enhancements, and parking modifications including new parking facilities at the New Hyde Park, Mineola, Westbury, and Hicksville stations)
- Construction of new pedestrian overpasses with elevators
- Modifications to railroad infrastructure including overpasses, signal systems, substations, culverts, interlockings, crossovers, sidings, track bed, power systems, communications and signals
- Utility relocations, including electric, signal, communications, gas, water, sewer, and storm sewer systems

### **THIRD TRACK ALIGNMENT**

Currently, the LIRR Main Line segment between the Floral Park Station and the Hicksville Station comprises two tracks. Various rail sidings exist on both the north and south sides and run parallel to the Main Line, but these sidings are not continuous. The LIRR Expansion Project would minimize property impacts and optimize these existing rail sidings by incorporating them into the third track alignment. As a result, the third track would be placed on the north side of the existing two Main Line tracks in some locations and on the south side in other locations.

A detailed schematic plan for the third track is shown in **Figure S-7**. Appendix 1-A, “Technical Memorandum,” contains detailed track alignment drawings.

In several areas, existing underutilized rail sidings would be incorporated into the third Main Line track. In some locations, the two existing Main Line tracks would be shifted slightly to the north or south to facilitate a more desirable alignment and avoid additional property impacts.



LIRR Expansion Project  
Floral Park to Hicksville

Detailed Schematic  
**Figure S-7**

The Proposed Project would include rail signal improvements, modifications to rail interlockings, and installation of new crossovers. Crossovers allow trains to move from one track to another, providing operational flexibility and allowing trains to change routes. A universal crossover is an arrangement of crossovers that allow trains to move in both directions, from one track to another, or across all tracks where there are more than two. An interlocking is an arrangement of signal equipment and track that prevents conflicting movements through an arrangement of tracks such as junctions or crossovers. Interlockings allow for flexibility of movement and provide a mechanism for trains to safely change tracks and connect to other rail branches. To facilitate movements between the two existing Main Line tracks and the new third track, several interlockings within the project limits would be modified. In addition, signal equipment would be relocated within the LIRR ROW. Existing communication systems, including cable for ticket vending machines and public address systems, would be relocated as required.

### RETAINING AND SOUND ATTENUATION WALLS

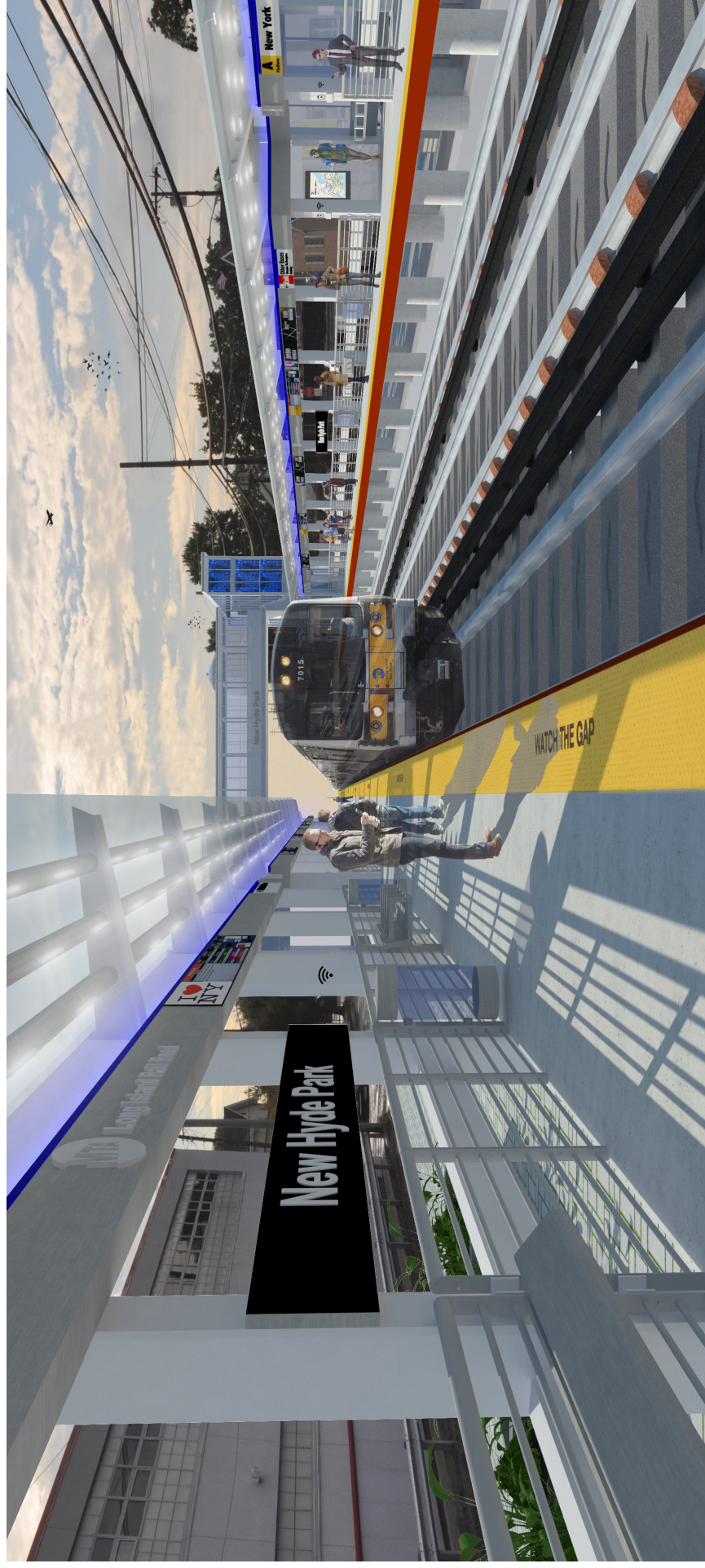
The LIRR Expansion Project would include installation of several types of retaining and sound attenuation walls along the corridor. The main purpose of these retaining walls is to reduce impacts to adjacent properties and minimize the need for property acquisition. Without a retaining wall, the portions of the rail line that are elevated above ground surface would require an earthen embankment to be placed underneath, and this embankment would gradually taper down on a slope. Retaining walls also support the placement of track in rail segments that are below grade (i.e., “depressed” or “cut” segments). In addition to minimizing direct property impacts (i.e., acquisition), retaining walls would help retain soil and ballast, stormwater runoff, track debris, and third rail sparks originating from the rail ROW, and prevent such items from migrating onto neighboring properties. In some locations, retaining walls optimize the use of LIRR property for station parking and/or equipment. Retaining wall height would be increased in a number of locations near residential properties so that they also provide a sound attenuation function. In a number of locations, freestanding sound attenuation walls would also be constructed.

### PASSENGER RAIL STATION IMPROVEMENTS

The LIRR Expansion Project would include improvements to several of the passenger rail stations within the Project Corridor—New Hyde Park Station, Merillon Avenue Station, Mineola Station, Carle Place Station, and Westbury Station. As part of the separate Hicksville Station and North Track Siding Improvements Project, station improvements at Hicksville Station are currently being implemented.

The five modified stations would accommodate the new third track, enhance pedestrian access and ADA accessibility, improve platforms and passenger waiting areas, and meet the requirements of the LIRR station guidelines and applicable codes (including NFPA 130 and the NYS Building Code). **Figure S-8** shows an illustrative rendering of a typical station improvement. The stations would include the following elements:

- Removal of all platforms and replacement with platforms to accommodate 12-car trains (platforms would be heated to facilitate snow removal).
- Eight-foot-wide side platforms, meeting LIRR minimum station guidelines, with ten-foot-wide platforms in certain locations where feasible.
- Canopies for both the eastbound and westbound platforms per LIRR station guidelines.
- Platform furnishings and accoutrements (e.g., benches, shelters, signage) per LIRR station guidelines.



- Provision of pedestrian overpasses/underpasses to connect the eastbound and westbound platforms. Except as noted below, pedestrian overpasses would include ADA-compliant elevators, as well as covered stairs for general access at each platform.
- A minimum of four staircases at each platform to comply with egress requirements.
- A minimum of two ADA-compliant ramps at each platform per NYS accessibility code requirements.

## STRUCTURE MODIFICATIONS

Modifications to existing bridges and other structures along the LIRR Main Line would be required to accommodate the new third track. **Table S-2** lists the bridges and tunnels that traverse the Main Line between Floral Park and Hicksville and the proposed changes to each structure.

## UTILITY RELOCATIONS

As part of the engineering design process, a utility inventory was conducted to determine the type, location, and ownership of utilities within the Project Corridor (including at the affected grade crossings and adjacent roadways). Utilities located within the Project Corridor include: LIRR signals and communications; gas; electric; fiber optic; telephone; cable; water; sanitary sewer; and storm sewer. In general, PSEG-LI electric transmission, LIRR signal and communications, Verizon, and Cablevision are located within the ROW; other types of utilities cross the LIRR ROW along local roads, aerial structures (such as transmission poles), and/or through underground routes. **Appendix 1-A, “Technical Memorandum,”** provides a list of known utilities and identifies specific locations where the Proposed Project may require utility relocation or other measures such as replacement and upgrade of utility poles.

**Table S-2**  
**Bridges and Structures along LIRR Main Line**

Structure Location	Jurisdiction	Proposed Structure Type
South Tyson Avenue - Hempstead Branch	Village of Floral Park	Widen existing station viaduct and construct new single track bridge bay
Plainfield Avenue	Nassau County	New single track bridge.
Tanners Pond / Denton Avenue	Village of Garden City	Remove and replace existing bridge superstructure and construct new three track bridge
Nassau Boulevard	Nassau County	Remove and replace existing bridge superstructure and construct new three track bridge
Herricks Road	Nassau County	Existing bridge to remain.
Mineola Boulevard	Nassau County	Existing bridge to remain.
Roslyn Road	Nassau County	Existing bridge to remain.
Glen Cove Road	Nassau County	Remove and replace existing bridge superstructure and construct new three track bridge
Meadowbrook Parkway	NYSDOT	Existing bridge to remain and construct new single track bridge bay
Cherry Lane	Town of North Hempstead	Remove and replace existing bridge superstructure and construct new three track bridge
Ellison Avenue	Village of Westbury	Existing bridge recently replaced.
Post Avenue	Village of Westbury / Nassau County	Existing bridge being replaced in another project
Grand Boulevard	Town of North Hempstead	Existing bridge to remain.
Wantagh State Parkway	NYSDOT	Existing bridge to remain.
Charlotte Avenue	Town of Oyster Bay	Existing bridge to remain.
Newbridge Road Ramp	NYSDOT	Existing bridge to remain.
Jerusalem Avenue	Nassau County	Existing bridge to remain.

### TRACTION POWER SUBSTATIONS

Eight LIRR traction power substations exist within the project limits:

- Floral Park Substation, located on Plainfield Avenue opposite 111 Plainfield Avenue
- New Hyde Park Substation, located at Third Avenue and South 9th Street
- Merillon Avenue Substation, located at Atlantic Avenue and Hilton Avenue
- Mineola Substation, located at the southwest corner of Main Street and Front Street
- Carle Place Substation, located in the southeast quadrant of Meadowbrook State Parkway and the LIRR just north of Mallard Road
- Westbury Substation, located southeast of Union Avenue and Sullivan Street north of the LIRR
- New Cassel Substation, located at Broadway and Bond Street north of the LIRR
- Hicksville Substation, located on the south side of West Barclay Street near Marion Place and adjacent to the LIRR ROW.

With the exception of the Floral Park Substation (which was replaced in 2010), the remaining substations need to be enhanced to accommodate the new third track. These seven existing substations are roughly 40 years old and near the end of their operating service life. Their present condition and the inability to obtain spare parts warrant that these substations be replaced rather than modified. Given the tight site constraints, it is anticipated that the new replacement substations would occupy the same parcels as the present equipment. Each substation would be removed from service and prefabricated substation equipment would be used to expedite the implementation of the new units. This would allow the existing substations to function for a longer period of time, as the prefabricated building can be constructed and factory tested offsite until such time it is deemed necessary to de-energize the existing equipment.

### STREET-LEVEL GRADE CROSSINGS

This DEIS considers several potential options for grade separation (or in two instances grade crossing closure) of each Main Line grade crossing in the Study Area. The selection of a particular option will also consider the input received from the public and elected officials for the municipalities where the grade crossing is located. Various other concepts (e.g., one-way and two-way overpass concepts) were considered and dismissed from further analysis, as explained in the Final Scoping Document.

Unlike the project considered in 2005, the LIRR Expansion Project does not require the substantial number of property acquisitions at the grade crossings or the disruption to local communities through extended construction periods. The LIRR Expansion Project avoids these concerns through re-designing the grade crossing separations in response to community input.

The grade crossings options include:

#### *COVERT AVENUE CROSSING*

At Covert Avenue, a two-way underpass with sidewalk would be constructed. To avoid taking residential properties, the LIRR tracks would be raised several feet to reduce the depth of Covert Avenue and to accommodate the vehicular clearance under the tracks.

#### *SOUTH 12TH STREET CROSSING*

At South 12th Street, two options are being considered: permanent closure of the grade crossing with construction of a new pedestrian overpass; or construction of a one-way underpass with sidewalk and pedestrian overpass.

#### *NEW HYDE PARK ROAD CROSSING*

At New Hyde Park Road, two options are being considered: a five-lane underpass with a kiss-and-ride northwest of the railroad tracks with a new 95-space surface parking lot; or a four-lane underpass with a kiss-and-ride located southwest of the railroad tracks.

#### *MAIN STREET CROSSING*

At Main Street, two options are being considered: permanent closure of the grade crossing with construction of a roundabout on the north side of the railroad tracks, a Kiss-and-Ride lot southwest of the tracks, and a new pedestrian overpass; or construction of a one-way underpass with a new pedestrian overpass.

#### *WILLIS AVENUE CROSSING*

At Willis Avenue, two options are being considered: construction of a two-way underpass, or construction of a one-way underpass. A new pedestrian overpass would be constructed under both options.

#### *SCHOOL STREET CROSSING*

At School Street, a two-way underpass would be constructed. To accommodate the clearance under the tracks and avoid additional property impacts, the LIRR tracks would be raised several feet.

#### *URBAN AVENUE CROSSING*

At Urban Avenue, a two-way underpass would be constructed. To accommodate the clearance under the tracks and avoid taking residential properties, the LIRR tracks would be raised several feet.

### **PARKING**

The Proposed Project would add a significant amount of new parking near train stations located in the Study Area. Specifically, six new parking garages and one new surface parking lot with a total capacity of 3,488 parking spaces near the New Hyde Park, Mineola, Westbury, and Hicksville stations would be constructed. Because several of these new parking garages are located on existing surface parking lots, a total of 2,490 net new parking spaces would be added. The Proposed Project would also result in the loss of approximately 233 parking spaces due to conversion of head-on parking spaces to parallel parking spaces; construction of new platforms, ramps, or stairs; or the grade crossings. The total net new parking spaces resulting from the Proposed Project would be 2,257.

The following parking garages and lots would be provided as part of the Proposed Project:

- A new 95-space surface parking lot at 115 New Hyde Park Road between Plaza Avenue and Second Avenue in the Village of New Hyde Park.

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- A new 424-space seven-level parking deck (with one level below grade) on Second Street between Main Street and Willis Avenue on an existing 115-space Village of Mineola surface parking lot. The total supply of 424 parking spaces would represent a net increase of 309 parking spaces.
- A new 553-space six-level parking deck (with one level below grade) on an existing Village-owned 120-space parking lot west of Mineola Boulevard between Harrison Avenue and First Street. The total supply of 553 parking spaces would represent a net increase of 433 parking spaces.
- A new four-level parking deck would be constructed on the south side of the LIRR tracks at the Westbury station in the current 302-space surface lot. The new 503-space parking deck would occupy the central portion of the existing parking lot leaving the east and west ends open for 123 surface parking spaces to remain. The total supply of 626 parking spaces would represent a net increase of 324 parking spaces.
- A new four-level parking deck would be constructed on the north side of the LIRR tracks near the Westbury station in an existing 275-space Village-owned surface parking lot south of Scally Place. The 630-space parking deck would retain 52 existing surface spaces to yield a total supply of 682 parking spaces (net increase of 407 parking spaces).
- A new four-level 608-space parking deck (with one level below grade) would be constructed on the north side of the LIRR tracks near the Hicksville station south of West Barclay Street on an existing 190-space surface parking lot. The total supply of 608 parking spaces would represent a net increase of 418 parking spaces.
- A new four-level 675-space parking deck would be constructed on the north side of the LIRR tracks near the Hicksville station north of West Barclay Street (west of Bob's Self Storage) on an existing 184-space surface parking lot. The total supply of 675 parking spaces would represent a net increase of 491 parking spaces.

## **DRAINAGE IMPROVEMENTS**

Drainage improvements needed for the Proposed Project were developed based on the various “high points” and delineated watershed areas. In most cases, the new third track would displace existing station platform areas and/or existing drainage ditches. Therefore, relocation and upgrading of drainage ditches and channels would be required. The Proposed Project would include a combination of drainage improvements—such as reuse of existing drainage ditches within the LIRR ROW wherever practical, installation of interconnected drain-perforated pipes, stormwater swales, connections to local recharge basins, potential deepening of existing recharge basins to accommodate additional flow, and extension of existing culvert crossings. All stormwater practices would be able to accommodate the peak volume generated by the 100-year storm.

## **PROPERTY ACQUISITIONS**

There would be no residential property takings as a result of the Proposed Project. As stated above, avoidance of residential property acquisitions and minimization of all property acquisitions are key guiding principles of the LIRR Expansion Project. The strategic placement of retaining walls is critical to optimizing the existing LIRR ROW and minimizing property acquisition. Nonetheless, in some locations, the Proposed Project would extend beyond the existing ROW and require non-residential property acquisition. Most of these acquisitions would result from the grade crossing eliminations. The Proposed Project would require four full commercial property acquisitions and

ten partial (strip) acquisitions of commercial or industrial properties that will not affect business operations. In addition, there would be ten permanent easements on commercial or industrial properties to accommodate retaining walls or driveway access that would not compromise business operations. A number of temporary easements would also be required during the construction period as determined by the design-build contractor for construction staging.

### **CONSTRUCTION PHASING**

Final design and commencement of construction of the Proposed Project is anticipated to commence in 2017. Construction of the Project would take approximately three to four years, depending on the schedule of the competitively-bid contract awarded to the design-build contractor. The bid process will give preference to the shortest construction period with the least impact to the community. However, as detailed in Chapter 13, “Construction,” in any given location, construction activities would occur over a much shorter period. Expedited construction techniques for both the construction of the third track segments as well as the grade crossing eliminations would result in shorter construction periods of the Proposed Project; grade crossings requiring complete temporary road closure would target approximately six months for construction. Expedited construction measures at grade crossings requiring only partial temporary road closure would target approximately nine months for construction. Construction of the Proposed Project would entail varying temporary disruptions to rail service, certain passenger rail stations, and local traffic operations.

For the purpose of analyzing construction impacts, this DEIS conservatively assumes that the Proposed Project construction would take approximately four years, commencing in 2017 and completed in 2021. As is typical with a major transportation project, two separate build years are used for DEIS analysis purposes. This approach provides a comprehensive and conservative analysis of environmental impacts for both the 2020 and 2040 build years. Some project elements such as the grade crossings may be completed before 2020, and some would be completed shortly thereafter.

Under the Proposed Project, a number of measures to minimize community impacts would be implemented, such as continued communication with the community, coordination with local school districts, coordination with local emergency service providers, measures to ensure community safety and quality of life, and measures to minimize construction-related environmental impacts. A complete list of these measures is available in Chapter 13, “Construction.”

### **PROJECT COST**

The construction cost estimate for the LIRR Expansion Project is approximately \$2 billion, with funding to come from the MTA and other State sources. .

## **D. SUMMARY OF POTENTIAL IMPACTS OF THE PROPOSED PROJECT**

### **LAND USE, COMMUNITY CHARACTER, AND PUBLIC POLICY**

Under the Proposed Project, no changes to land use (with the exception of impacts to a limited number of businesses) or land use patterns in general would occur either in the build year (2020) or analysis year (2040.) Land use within the LIRR ROW would continue to exclusively consist

of railroad transportation. Use of the ROW for ancillary purposes such as power transmission to serve the transportation facility also would continue. Transportation land use within existing roadways would continue. Use of properties abutting roadways would not be subject to adverse impacts with a small number of exceptions—small slivers of land associated with commercial uses would be acquired and converted to transportation use, and four existing non-residential structures would be acquired, demolished and repurposed to accommodate transportation use. The Proposed Project would not impact general land use patterns of the communities in the Study Area. Residential areas within the Study Area would remain residential. Commercial areas would remain commercial. Other use patterns also would persist. Any deviation from this persistence of land use would occur with or without the Proposed Project, as a result of other planned projects and reasonably foreseeable changes.

Under the Proposed Project, community character would not change within the 2020 or 2040 analysis year timeframes. While fourteen individual commercial parcels (four full acquisitions and ten partial acquisitions) along the existing 9.8-mile railroad corridor would be affected in order to accommodate grade crossing elimination and installation of third track segments, the communities in which those parcels are located would not experience significant adverse impacts. The addition of a third track within the existing LIRR ROW and the concomitant addition of train trips and the increase in bi-directional service would not have any adverse impact on the character of the communities within the Study Area; instead, the Proposed Project would improve mobility within these communities, benefiting those communities and the people who live in them, work in them, or would like to work in them, as well as community businesses that stand to benefit from improved transportation connectivity. The construction of grade-separated crossings within these communities would improve vehicular and pedestrian safety, better facilitate north-south traffic movement, decrease idling times and thereby improve air quality, and eliminate the need for crossing gates, their attendant bells, and train horns, thereby reducing noise related to railroad operation. These would be beneficial impacts in terms of community character.

The Proposed Project would not result in adverse impacts in terms of public policy in the foreseeable future, including both the 2020 and 2040 analysis year timeframes. Both the rail component and the grade crossing component of the Proposed Project are entirely consistent with the policies set forth in the applicable land use and transportation plans, the salient points of which are summarized in Chapter 2 “Land Use, Community Character, and Public Policy.” Increasing grade crossing safety, reducing congestion, noise and idling time at crossings, improving operational rail flexibility and resiliency and providing for consistent bi-directional and intra-Island passenger rail service support the goals and objectives expressed in the land use and transportation plans.

### **SOCIOECONOMIC CONDITIONS**

Overall, the Proposed Project is intended to increase train capacity and improve mobility in the region, which would be beneficial to residents, transit users, and employees in the study area. There would be no residential displacement with the Proposed Project. While four existing businesses would have their parcels acquired and would be displaced, the parcel owners would receive just compensation and the business owners would receive relocation assistance, with priority given to relocation within the same hamlet or village where the displaced business currently operates.

The construction of the Proposed Project would result in the investment of significant capital into the local and regional economy. The Proposed Project is estimated for study purposes to cost approximately \$2 billion, which includes construction, design, contingency, force account, and agency cost. Construction of the Proposed Project is estimated to create 1,297 full-time equivalent (FTE) direct construction employment opportunities in Nassau County. In addition to direct employment, construction of the project would create additional jobs off-site in Nassau County (762 FTE) and Suffolk County (24 FTE) and the rest of the state (46 FTE). In the broader state economy, total direct and indirect employment from construction of the project would be 2,130 FTE. Direct wages and salaries from constructing the project are estimated at about \$637.07 million. In the broader New York State economy, total direct and indirect wages and salaries from constructing the project would be even greater (approximately \$962.42 million, including \$926.70 million in Nassau and \$10.36 million in Suffolk). The total effect on the local economy, expressed as economic output or demand for local industries, is estimated at approximately \$3.18 billion for Nassau County, \$47.14 million for Suffolk County, and approximately \$3.33 billion for the New York State economy overall.

While the Proposed Project would result in temporary disruptions to business districts during the construction necessary to eliminate the grade crossings, general business operations would not change and there would be improved vehicular and pedestrian access to the Study Area's business districts following completion of the grade crossing eliminations.

## **ENVIRONMENTAL JUSTICE**

Environmental justice communities as defined by the New York State Department of Environmental Conservation exist within the Study Area, including at the locations of the seven grade crossings that would be eliminated under the Proposed Project.

Construction of the Proposed Project elements would occur throughout the Project Corridor over a four-year period. However, temporary impacts associated with construction at localized segments would be of shorter duration, limiting construction impacts. These temporary impacts would be experienced broadly through the Study Area. The Proposed Project would not result in disproportionate construction impacts to environmental justice communities. In the operational phase, the Proposed Project would result in beneficial impacts within the Study Area, including to environmental justice communities, in terms of enhanced mobility, air quality and reduced noise due to the elimination of grade crossings and the installation of sound walls, including in environmental justice communities. Accordingly, no disproportionate adverse noise impacts would be experienced in environmental justice communities.

## **VISUAL AND AESTHETIC RESOURCES**

Construction of the Proposed Project would require removal of vegetation within the LIRR ROW, construction of new retaining and sound attenuation walls, construction of new pedestrian overpasses and parking garages, and relocation of certain utility infrastructure within the LIRR ROW and near the grade crossings. New project elements such as retaining and sound attenuation walls, overpasses, parking garages and new utility poles would be visible from multiple locations within the Study Area and would constitute a change in the visual character of certain locations. However, they would not result in any significant adverse visual impacts as use and enjoyment of any sensitive receptors (e.g., parks and open spaces or historic resources) identified in the Study Area, where views of the new project elements would be possible, would

not be degraded. Accordingly, the Proposed Project would not result in significant adverse impacts to visual and aesthetic resources.

## **HISTORIC AND ARCHAEOLOGICAL RESOURCES**

### *ARCHAEOLOGICAL RESOURCES*

No previously identified archaeological sites, New York State (NYS) Museum sites, National Register archaeological listings, or archaeological districts are located within the Project Corridor or within the ¼-mile archaeological resources study area for the LIRR Expansion Project.

The LIRR ROW along the 9.8-mile length of the Project Corridor has been determined to possess little to no pre-contact or historic period archaeological potential. Therefore, the proposed track alignment and station modifications would have no adverse impact on archaeological resources.

The Proposed Project would involve temporary ground disturbance during construction at the seven proposed grade crossing locations. However, research has documented extensive prior disturbance at each of the grade crossing locations through the installation of multiple utility lines, excavation for catch basins and storm drains, construction and demolition of structures, and realignment of streets. Due to the extent of prior subsurface disturbance, it is highly unlikely that the proposed grade crossing modifications would have the potential to impact any intact archaeological resources that may once have been present at the seven grade crossing locations.

The preliminary list of possible construction staging area locations includes existing LIRR substations, commercial properties, station parking lots, existing roads, potential commercial property takings, a wooded area, and certain areas within and adjacent to the LIRR ROW. Most of these areas do not possess precontact- or historic period archaeological potential due to the extent of documented prior subsurface disturbance. The wooded area is a recharge basin/sump that has been excavated and therefore does not possess archaeological potential. The remaining staging areas are located at existing parking lots, or on extant streets, and are paved. From an archaeological perspective, paved surfaces serve to protect any buried archaeological resources that may be present. Therefore, the use of the staging areas during construction would have no effect on archaeological resources because all work would occur on the paved surfaces with no subsurface disturbance.

The new parking structures proposed near the Mineola, Westbury, and Hicksville stations have the potential to affect archaeological resources. In locations where previous disturbance cannot be documented it is possible that undisturbed soils could be present beneath the paved surface of the parking lot that could contain intact precontact deposits. In order to minimize any potential significant adverse impacts, LIRR would prepare and implement a Construction Protection Plan (CPP) in consultation with OPRHP for any archaeological resources located within 100 feet of Proposed Project construction. The CPP would set forth the specific measures to be implemented to protect archaeological resources during construction of the Proposed Project.

### *ARCHITECTURAL RESOURCES*

#### *Direct Impacts*

There are two historic architectural resources within the LIRR ROW, south of the tracks along the Project Corridor—the Nassau Tower and the former Mineola LIRR Electrical Substation,

both of which are eligible for listing on the State/National Registers of Historic Places (S/NR-eligible). These two historic structures would be demolished and the site would be redeveloped with station area improvements. The demolition of S/NR-listed properties—the Nassau Tower and the former Mineola LIRR Electrical Substation—would constitute an Adverse Impact to historic resources under SEQRA and Section 14.09. Measures to mitigate the adverse impact would be developed in consultation with OPRHP and set forth in a Letter of Resolution (LOR) to be executed among the involved parties would be prepared. No other historic architectural resources are located within the LIRR ROW, therefore, no other historic architectural resources would be directly impacted by modifications to the track alignment or parking structures and surface parking lots.

The proposed modifications to the seven Project Corridor train stations and the preliminary construction staging areas also would not directly impact any known or potential architectural resources as none of the affected train stations or preliminary staging area locations include any known or potential architectural resources. The proposed alterations to the grade crossings and bridges also would not directly impact any known or potential architectural resources within the Project Corridor.

#### *Indirect impacts*

To ensure that construction activities associated with the Proposed Project that would be undertaken within 100 feet of architectural resources would not cause inadvertent physical impacts to historic architectural resources, LIRR would prepare and implement a CPP in consultation with OPRHP for any architectural resources located within 100 feet of the Proposed Project construction. The CPP would set forth the specific measures to be implemented to protect historic architectural resources during construction of the Proposed Project.

The proposed changes to the track alignment would be entirely within the LIRR ROW and the proposed station modifications would be minimal. These project components would not affect the setting, views to, or historic character of historic resources in the Study Area. Therefore, the proposed track alignment would not indirectly impact any historic architectural resources in the Study Area. The preliminary construction staging areas would be located at a distance from historic architectural resources, and as such, would not result in indirect impacts.

The proposed grade crossings and parking structures would result in new physical features that could affect the setting of historic architectural properties. No historic architectural resources are located within sight of the proposed grade crossings. However, one known architectural resource and one potential architectural resource are located within sight of proposed parking structures in Westbury and Hicksville. In Westbury, the 164 Post Avenue building—a potential architectural resource—is located approximately 50 feet northwest of the Scally Place parking structure site. Although this potential architectural resource is within sight of the Scally Place parking structure site, the building's primary façade is oriented toward Post Avenue, away from the parking structure site. Further, the 164 Post Avenue building does not have a contextually meaningful relationship with the proposed parking structure site. Therefore, the proposed parking structure would not introduce visual, audible, or atmospheric elements that would be out of character with the 164 Post Avenue building, nor would the proposed parking structure isolate the potential architectural resource from its surroundings or adversely alter its setting. In Hicksville, the proposed parking structures located north and south of West Barclay Street would be within sight of the Hicksville USPS Main Post Office to the west. However, the post office building is oriented away from these parking structure sites and does not have a meaningful visual or contextual relationship to the surface parking lots that would be redeveloped with new parking

structures. The two Hicksville parking structures would not introduce visual, audible, or atmospheric elements that would be out of character with the Post Office, nor would the proposed parking structures isolate the Post Office from its surroundings or adversely alter its setting. Therefore, the Proposed Project would not result in any adverse indirect impacts to historic architectural resources.

### **NATURAL RESOURCES**

Habitat for vegetation and wildlife within and surrounding the Study Area is limited due to extensive residential, commercial and industrial land uses present within the Study Area and associated large areas of impervious surface. The Study Area does not contain any floodplains, naturally-occurring water bodies or wetlands, or threatened, endangered, or special concern species. Groundwater is a concern given the sensitivity of the Nassau/Suffolk Aquifer System, a sole source aquifer underlying the Study Area. However, drainage and stormwater management practices will ensure the protection of groundwater during operation of the Proposed Project. Overall, the Proposed Project will not result in significant adverse impacts on the natural resources within the Study Area.

### **CONTAMINATED MATERIALS**

Soil, soil gas and groundwater beneath a site can be contaminated because of past or present uses within the Study Area or on nearby properties. Portions of the Study Area are and/or were used historically for railroad operations and other industrial activities. Common contaminants found in the subsurface at railroad properties include creosote, petroleum products, solvents, volatile and semi-volatile organic compounds, heavy metals, polychlorinated byphenols (PCBs), pesticides, and herbicides. Based on the DEIS analysis there are a number of potentially contaminated sites within the Study Area that may be of concern during construction of the project. These are known as Category B sites, which are defined as sites that have some reasonable potential to have been impacted by the presence of contaminated materials and thus additional analysis is prudent. Phase 1 Environmental Assessments were prepared for each of these sites. The identification of a site as “Category B” does not necessarily indicate that the site is contaminated. Subsurface investigations, which would only be performed at the sites within or close to an area where subsurface disturbance would be required for the Proposed Project, would be required prior to construction in those areas to determine whether contamination actually exists in the areas of concern. No further analysis is recommended for “Category A sites” (defined in the following section).

The potential for adverse impacts at Category B sites would be avoided by ensuring that construction activities are performed in accordance with the following protocols:

- Once the limits of subsurface disturbance associated with the Proposed Project have been determined, subsurface (Phase II) investigations would be conducted at all of the acquisition Category B sites and all other Category B sites with a significant potential to affect one or more of the areas of proposed subsurface disturbance (based on proximity, depth of disturbance, type/mobility of contaminants, etc.).
- Based on the results of the subsurface investigations, a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) would be prepared for implementation during project construction. These plans would address both known environmental conditions and others could be encountered during all subsurface disturbance associated with project construction. The plans would present measures for contaminated soil,

groundwater, and USTs in accordance with applicable federal, state, and local regulations. Contaminated soil management includes guidelines for temporary on-site stockpiling and off-site transportation and disposal. The plans would incorporate safety and other measures to minimize the potential for impacts to the community and construction workers.

- If dewatering is required for construction, testing would be performed to ensure compliance with applicable discharge regulatory requirements. If necessary, pre-treatment would be conducted prior to discharge.
- If removal and disposal of any electrical equipment that may include mercury or PCBs, including transformers, was necessary it would be performed in accordance with applicable federal, state and local regulations and guidelines.
- Prior to any activities required as part of the Proposed Project that could disturb potential asbestos containing material (ACM), a comprehensive asbestos survey of areas (including underground utility vaults) to be disturbed by the Proposed Project would be conducted that included the sampling of all suspect materials to confirm the presence or absence of asbestos. All identified ACM would be removed and disposed of prior to construction in accordance with all federal, state, and local regulations.
- Any demolition activities with the potential to disturb lead-based paint (LBP) would be performed in accordance with applicable Occupational Safety and Health Administration regulations including OSHA 29 CFR 1926.62 - Lead Exposure in Construction.
- All material that needed to be disposed of (e.g., miscellaneous debris, tires, contaminated soil and any excess fill) would be characterized and disposed of off-site in accordance with applicable federal, state, and local requirements.

With the implementation of these protocols, no significant adverse impacts related to hazardous materials would result from demolition and/or construction activities related to the Proposed Project. Following construction, there would be no potential pathways for human exposure to hazardous materials and thus no further potential for significant adverse impacts.

## **INFRASTRUCTURE AND UTILITIES**

The Proposed Project will require new LIRR-specific utility infrastructure and may require the relocation of some existing utilities both within the LIRR right-of-way and grade crossings where improvements are proposed. As these improvements are made, in close coordination with the respective utility companies, LIRR will explore opportunities to improve the existing infrastructure or upgrade it to current design standards. For instance, in the case of utility poles carrying overhead electric power lines, design standards were modified after Hurricane Sandy to avoid or minimize impacts that might occur from future powerful storms. As a result, all overhead electric power lines running longitudinally along the LIRR in the Project Corridor that would have to be relocated for the Proposed Project would be installed on new, approximately 90-foot-tall steel poles. Poles at grade crossings would also be replaced with wood utility poles that would be approximately five to ten feet higher than existing wood poles near the grade crossings.

The businesses and residents of Long Island rely on these utilities and their related infrastructure to be available on a daily, round-the-clock basis. Inventorying utilities within the Study Area will facilitate the relocation of existing utilities in coordination with construction of the Proposed Project; thereby avoiding or minimizing impacts on the residents and businesses in the Study Area. Since all existing utilities would be replaced within the LIRR ROW, or in locations where

utility poles currently exist, because the replacement would relate to an overall reduction in the number of utility poles, and because no long-term disruptions in service to Study Area customers would result there would be no significant adverse impacts to utilities within the Study Area.

### TRANSPORTATION

#### *RAIL SERVICE AND RIDERSHIP*

The Proposed Project would result in the expansion of Main Line train service with eight additional eastbound trains (reverse peak direction) and one more westbound train (peak direction) during the morning peak period; equivalent additional service in the reverse pattern would be offered in the evening peak period. Beyond these enhancements to services offered, the Proposed Project would improve reliability and flexibility in operations, critical for supporting the planned 50 percent peak hour service increases associated with East Side Access. The Proposed Project would result in ridership increases associated with expanded reverse peak service. In the 2040 Build Condition, the Main Line corridor would see more than 60 percent growth in reverse peak ridership when compared to the existing condition. Furthermore, the improvements in reliability of the LIRR operation associated with the Proposed Project support the anticipated ridership growth with the East Side Access Project and are necessary to sustain those ridership benefits over time.

#### *BUS SERVICE*

The Proposed Project is not anticipated to change the demand for Nassau Inter-County Express (NICE) bus services with connections to LIRR stations. While increased reverse peak service in the Proposed Project could result in increased demand for NICE bus service with connections to LIRR stations, this increased demand would be accommodated with adjustments to NICE bus service to complement the changes in LIRR ridership.

#### *VEHICULAR TRAFFIC*

The Proposed Project would eliminate all vehicular traffic delays and queues at each of the seven grade crossings, which in turn would improve traffic flow and mobility throughout the Study Area. In New Hyde Park, when trains approach the station, the LIRR gates are in the down position approximately 32 to 42 percent of the time in the AM and PM peak hours. In Mineola, the gates are in the down position as much as 53 percent of the time; in Westbury, they are in the down position approximately 27 to 35 percent of the time. Without the Proposed Project but with additional trains being operated with the LIRR's East Side Access Project in place by 2023, gates would be in the down position for more time during the peak hours; vehicular traffic delays, which are already substantial today, would increase as would the unpredictability to motorists as to how long their delays would be, especially when back-to-back trains through the station areas cause extended gate down times.

With the elimination of all seven grade crossings, including the possible closure of South 12th Street in New Hyde Park and Main Street in Mineola, traffic diversions are expected to occur. The potential impacts of these diversions were analyzed in detail and are documented in this section. The detailed vehicular traffic analyses account for the annual growth in general background traffic, traffic expected to be generated by new commercial or residential development in the station areas, and new station-oriented traffic that would be generated by new LIRR riders. Adverse significant traffic impacts that could be generated by the Proposed Project in both the Year 2020 and 2040 analysis years could all be mitigated with the

implementation of standard traffic capacity improvements such as signal phasing and timing modifications, the installation of two new traffic signals (one in Mineola and one in Westbury), lane re-striping and intersection channelization modifications, and on-street parking prohibitions at select locations where additional traffic capacity is needed. New traffic signals would also be installed as part of the Proposed Project at up to two intersections in New Hyde Park, at up to two intersections in Mineola, and at one intersection in Westbury.

Emergency vehicle travel times would remain comparable or improve with the elimination of grade crossings via the construction of underpasses. Should the two grade crossings in New Hyde Park (i.e., South 12th Street) and Mineola (i.e., Main Street) be closed, emergency vehicles would divert to the adjacent crossing locations where they could proceed unimpeded by stoppages due to LIRR gates being in the down position. With the elimination of existing grade crossings and the implementation of traffic mitigation measures outlined under “Vehicular Traffic”, emergency vehicle access times would remain generally comparable to conditions without the Proposed Project or improve.

#### ***PARKING***

Parking demands that would be generated by the Proposed Project itself are not substantial and would not generate the need for additional station area parking. However, the East Side Access Project, which is projected to open at the end of 2022, is expected to add to the demand for parking. The Proposed Project recognizes that demand for parking will grow in the future and therefore includes additional parking. It would add 95 parking spaces at New Hyde Park under one of the two Build options, two parking garages totaling 977 spaces at Mineola, two parking garages totaling 1,133 parking spaces at Westbury, and two parking garages connected by a pedestrian overpass totaling 1,283 spaces at Hicksville. These six new parking garages would replace existing surface parking lots at those stations. The proposed vehicular traffic mitigation measures would also result in parking losses on-street where additional traffic capacity is needed to improve traffic flow at key intersections. The net increase in commuter parking spaces would be substantial at Mineola, Westbury, and Hicksville and would be a major benefit of the Proposed Project.

#### ***PEDESTRIAN CONNECTIVITY AND BICYCLE ACCESS***

The Proposed Project would not significantly increase the volume of pedestrians crossing the tracks, but would provide for the safe crossing of pedestrians at locations where underpasses or pedestrian overpasses would be built or where street closures would occur. There would be no conflicts between pedestrians and vehicular traffic crossing from one side of the tracks to the other. Pedestrian connectivity would be maintained wherever underpasses are built. Bicycle access at New Hyde Park, Mineola, and Westbury would remain similar to existing conditions.

#### ***VEHICULAR AND PEDESTRIAN SAFETY***

There have been a total of six crashes over the past ten-year period that resulted in a fatality at the seven grade crossing locations, and additional crashes that resulted in personal injuries or property damage to the vehicles involved. The elimination of grade crossings would eliminate fatalities involving vehicular traffic being struck by LIRR trains. With the reduction in vehicular traffic delays due to elimination of the seven grade crossings, pedestrian and vehicular safety would also be improved at these locations and potentially at nearby locations.

### **AIR QUALITY**

Future air quality conditions would be improved in the Study Area, as compared to existing conditions. This improvement is attributable to federal and statewide efforts to reduce pollution from newer vehicle models as well as additional improvements to air quality in the neighborhoods along the corridor due to reduction in idling time at grade crossings. The overall improvement to critical rail transit infrastructure also has beneficial air quality impacts to the extent that it encourages additional rail transit over motor vehicle use. At some local intersections, air quality could be slightly affected due to changes in traffic patterns. Overall, based on the air quality analysis described in this section, no significant adverse air quality impacts would occur as a direct result of the Proposed Project.

### **NOISE AND VIBRATION**

Under the Proposed Project, noise and vibration conditions would be significantly improved over existing conditions and in the Future Without the Proposed Project due to the inclusion in the Proposed Project of the grade crossing eliminations and installation of sound attenuation walls. The grade crossing eliminations would eliminate the need for the use of train horns and warning bells at grade crossings, and installation of sound attenuation walls would reduce noise from trains below existing conditions despite the increase in train traffic projected in the future. Similarly, with the inclusion of under-tie pads and/or high-speed turnouts with movable point frogs as part of the design, no significant adverse vibration impacts are predicted as a result of the Proposed Project.

### **CONSTRUCTION IMPACTS**

Construction of the Proposed Project would result in some temporary disruptions in the surrounding area. This DEIS conservatively assumes a four-year construction schedule, commencing in 2017, for construction of the Proposed Project. However, construction at any particular location would be significantly less than that, and in no instances would exceed two years. In addition, the design-build contractor would be incentivized to develop methods to expedite the construction period and to minimize community impacts.

Construction of the Proposed Project would not result in significant adverse impacts with respect to land use and community character, environmental justice, visual resources, natural resources, and site safety. Construction of the Proposed Project would result in the temporary change of the use of a limited number of individual parcels used for construction staging, but would not permanently change the patterns of land use and character of the communities within the Study Area; temporary construction impacts would be localized and would not result in disproportionate construction impacts to environmental justice communities; construction activities would be phased to minimize the duration of construction at any particular location so as to lessen the visual effects of construction on the surrounding communities; with the implementation of a Stormwater Pollution Prevention Plan (SWPPP), a Remedial Action Plan (RAP) and a Construction Health and Safety Plan (CHASP), construction of the Proposed Project would not result in significant adverse impacts to groundwater, the Nassau/Suffolk Aquifer System, or wetlands. In addition, construction of the Proposed Project would not result in significant adverse impacts to ecological communities, wildlife or any habitat that is of value to wildlife; and construction would follow existing MTA and LIRR operational safety and security programs and processes to provide the riding public and construction employees with a

safe and secure environment. Construction impacts to other resources are set forth in the respective resource discussions herein.

Noise levels from construction activities along the Project Corridor, although temporary, could be a nuisance at nearby sensitive receptors such as residences, schools and other institutional land-uses. As noted, most construction activities are generally expected to last less than 2 years at any one location, depending on the type of activity. During this time frame, increased noise and vibration levels are expected along the Project Corridor. LIRR is committed to minimizing impacts in the community by requiring appropriate noise and vibration control measures that would minimize noise and vibration levels. These measures would include implementing a community noise and vibration monitoring program, working with the communities and local schools to schedule nearby construction activity as unobtrusively as practicable and feasible, minimizing noisy work during night hours where practicable and feasible, and implementing a CPP to protect historic architectural resources from vibration impacts.

In order to avoid potential temporary construction air quality impacts to the nearby community, LIRR is committed to implementing an air quality control plan during construction and would include the following measures: dust control, ultra-low sulfur diesel fuel, the use of best available tailpipe technologies such as diesel particulate filters, and the utilization of newer equipment. A complete list of potential mitigation measures is included in Chapter 13, "Construction."

## **CUMULATIVE AND SECONDARY IMPACTS**

The Proposed Project, taken in concert with other past, present, and reasonably foreseeable future action, would not result in significant adverse cumulative impacts, particularly because the intensity of its own adverse impacts would be minimal.

The additional parking provided by the Proposed Project would reduce a projected parking deficit within the Study Area associated with East Side Access. In the Future Without the Proposed Project, the same parking shortfalls would exist without any plans to reduce the deficit. Therefore, the Proposed Project would confer a cumulative net benefit in terms of parking.

In the Future Without the Proposed Project, increased rail activity associated with East Side Access would result in increased noise levels within the Study Area. Where increased noise levels would exist, sound attenuation walls would be constructed on grade or on top of retaining walls to eliminate the predicted noise impacts. Thus, the Proposed Project is providing a cumulative benefit by mitigating increased noise associated with cumulative impacts.

The Study Area comprises a densely developed corridor largely characterized by downtowns and surrounding residential areas. That land use pattern is well established and would not be changed with the Proposed Project. Moreover, the Proposed Project, because it is an enhancement to existing transportation infrastructure serving a mature, mixed use community, would not typically lead to induced growth. Considering these factors, the Proposed Project would not lead to significant adverse secondary impacts.

## **SAFETY AND SECURITY**

The Proposed Project would not result in any significant adverse impacts to public safety and security. Rather, the completion of a continuous third track and the elimination of seven (7) grade crossings would provide the opportunity for improvements to safety and security for the adjacent communities, LIRR customers, and workers. These benefits include:

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- Reduction in the potential for conflicts between pedestrians, bicyclists, vehicles, and trains
- Enhanced railroad operational flexibility and capacity in the event of a safety or security incident
- Improvements and upgrading of station conditions to improve lighting and visibility

### **ELECTROMAGNETIC FIELDS**

EMF exposure levels from traction power may increase due to closer proximity to the public spaces; however, since EMF levels from railroad operations are not considered hazardous to the public, increases in EMF levels at sensitive locations would not be considered significant.

The Proposed Project would also result in some electrical LIRR and PSEG-LI utility line relocations; however, EMF levels near relocated utility would be anticipated to be well below established exposure standards.

### **CLIMATE CHANGE / SUSTAINABILITY**

#### *GHG EMISSIONS*

Improving the overall reliability, attractiveness, and convenience of mass transit is an important part of maintaining and increasing transit use into the future and reducing traffic congestion, and thus reducing region-wide GHG emissions. It is important to note in this context that region-wide emissions are not driven solely by the transportation mode choice. Transit use reduces emissions relative to private vehicle use, but also reduces congestion and thus indirectly reduces emissions further. Moreover, the availability of well-connected transit systems also affects land use such that more compact and transit-oriented development occurs, resulting in further efficiency in travel, services, utilities, and more. Therefore, as part of the larger region-wide transit system, improving the overall reliability, attractiveness, and convenience of the LIRR supports New York State's long term GHG emission reduction policies.

The Proposed Project would result in some additional GHG emissions associated with operating electric locomotives (indirect emissions from power generation), and would reduce some emissions associated with on-road vehicular emissions due to the shift of trips in the off-peak direction from on-road to LIRR, with some increased emissions associated with local park-and-ride and taxi trips to and from stations. There would also be direct emissions associated with construction vehicles and indirect emissions associated with the extraction, production, and delivery of materials.

Since the Proposed Project is a transit enhancement project, the Proposed Project would be consistent with the State's GHG emissions reduction goals and policies.

#### *ADAPTATION TO CLIMATE CHANGE*

With respect to sea level rise, the Proposed Project is well above the current "100-year" and "500-year" flood elevations (the elevations which would potentially be inundated during a coastal storm of a magnitude with a 1-percent and 0.2-percent probability of occurring in any given year, respectively). Therefore, the Proposed Project area would not be flooded during such storm in the future either, when accounting for the highest projected sea level rise by the year 2100.

Average and extreme temperatures are projected to increase, and extreme temperature events (“heatwaves”) are likely to increase in the future as a result of climate change, appropriate design, maintenance, and operational procedures for track buckling in the current condition would also address the future condition when heatwaves may be more frequent or intense.

Stormwater management practices for the Proposed Project have been designed for the current 100-year storm event. With the potential for substantial increases in the frequency and scale of downpour events it is possible that these systems may not be as resilient as possible. However, it would not be practicable to install stormwater management practices sized for a larger event given the space constraints of the right-of-way.

The Proposed Project would be designed to accommodate any reasonably foreseeable potential future changes in climate, and would, therefore, be consistent with state and federal policies requiring climate change resiliency.

## **ALTERNATIVES**

The New York State Environmental Quality Review Act (SEQRA) and its implementing regulations require the consideration of alternatives to the Proposed Project. Part 617.9(5)(v) of SEQRA regulations requires that a DEIS describe and evaluate “the range of reasonable alternatives to the action that are feasible, considering the objectives and capabilities of the project sponsor.” SEQRA also requires analysis of a “No Action” alternative, under which the Proposed Project would not be constructed. In addition to the No Action alternative and the Proposed Project, the DEIS also considered the following two alternatives:

- **Transportation System Management Alternative**—This alternative would include a combination of operational and equipment modifications (e.g., bus rapid transit, extended platforms, double-decker trains, limited rail passing sidings) in lieu of the Proposed Project.
- **Upgrade Switches and Signals Only Alternative**—This alternative would include upgrading of existing railroad switches and signals to improve rail operation efficiency. No third track would be installed, no station or platform improvements would be implemented, and no changes to the existing grade crossing configurations would be made.

A number of other alternatives to the Proposed Project were considered in the Alternatives Chapter of the DEIS (Chapter 18) but eliminated from further analysis or consideration because they were found to require a greater number of property acquisitions, including the acquisition of residential property, or were otherwise determined to be unreasonable. Those alternatives are (1) the prior Main Line Corridor Improvements Project alternative; (2) North Alignment Only alternative; (3) South Alignment Only alternative; and (4) Elevated New Hyde Park Segment alternative.

Several additional alternatives were suggested during the public Scoping period, including a “Grade Crossing Only Alternative” and an “Implement Other LIRR Capital Projects Only”. These alternatives were determined to not fulfill the purpose and need for the project, which includes the addition of a third track to enhance system reliability and enable intra-Island peak service at times when such service is currently not feasible due to lack of track capacity. Accordingly, they have not been included in this DEIS for further consideration.

Based on consideration of all retained alternatives, only the Proposed Project and the Reconfigured Grade Crossings Alternative both met the project Purpose and Need and minimized cost while avoiding the need to acquire residential property. The potential impacts of

these two alternatives are similar insofar as neither would result in any long-term significant adverse impacts.

### **IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

Natural and man-made resources would be expended in the construction and operation of the Proposed Project. These natural resources include the use of land and energy. Man-made resources include the effort required to develop, construct, and operate the Proposed Project; building materials; financial funding; and motor vehicle use. These resources are considered irretrievably committed because it is highly unlikely that they would be used for some other purpose.

The use of land is the most basic of irretrievably committed resources, as the development of the Proposed Project requires the commitment of land for new physical elements such as parking lots. However, the Proposed Project is using land already used for urban development and transportation purposes so would not be further committing land resources.

The Proposed Project would result in irreversible clearing and grading of vegetation within the LIRR ROW as well as modification to topography along the ROW and at grade crossings. The loss of vegetation is considered an irreversible commitment of resources as it is unlikely that replacement vegetation would be included in the ROW due to safety concerns. Soil or rock used to modify the grade of the ROW or grade crossings would be irretrievably committed for the lifetime of the Proposed Project.

The actual building materials used in the construction of the Proposed Project (wood, steel, concrete, glass, etc.) and energy, in the form of gas and electricity, consumed during the construction and operation of the Proposed Project would also be irretrievably committed to the Proposed Project.

None of these irreversible or irretrievable commitments of resources is considered significant.

### **UNAVOIDABLE ADVERSE IMPACTS**

The Proposed Project would result in several unavoidable adverse impacts. While mitigation measures would be implemented where practical and feasible, unavoidable adverse impacts nonetheless would occur with respect to certain resources and conditions.

As discussed in Chapter 3, “Socioeconomic Conditions,” the Proposed Project would require the acquisition of four complete parcels that would require the demolition of commercial structures, and the rededication of this land to transportation use. Ten partial acquisitions, or “strip takings,” would also be required for the Proposed Project. No residential properties would be acquired. While the full parcel acquisitions would not result in any significant adverse impacts to land use or community character, the loss of the buildings themselves is considered an unavoidable adverse impact.

As set forth in Chapter 5, “Visual and Aesthetic Resources,” the Proposed Project would result in a change in the visual and aesthetic qualities of the communities through which the Main Line passes. New transportation structures such as pedestrian overpasses and tiered parking structures would be constructed and would be visible. Retaining walls supporting the third track and sound attenuation walls would also be visible. It would not be possible to screen visibility from all locations within the Project Corridor. Thus, visibility of project elements would be noticeable and potentially adverse. Visibility of these project elements from designated sensitive receptors

was evaluated pursuant to NYSDEC methodology on assessing visual impacts. While none of the impacts were considered significant and adverse, these changes may be considered unavoidable adverse impacts.

As described in Chapter 7, “Natural Resources,” the Proposed Project would result in the unavoidable removal of vegetation within the LIRR ROW. Since the vegetation does not constitute significant habitat its loss is not considered significant and adverse, but the loss of the vegetation itself is considered unavoidable.

Most of the adverse impacts associated with the Proposed Project would occur in the construction, rather than the operational, phase, and are discussed in Chapter 13, “Construction Impacts.” Construction activities associated with the Proposed Project would result in temporary short-term impacts that cannot be avoided. Construction of bridge repair and grade crossing elements would require temporary lane closures and traffic diversions, resulting in temporary adverse impacts to vehicular and pedestrian traffic. Construction activities may result in temporary noise/vibration and air quality impacts to nearby sensitive receptors. Air quality impacts would chiefly be attributable to fugitive dust and diesel engine exhaust. Mitigation measures would be undertaken to control fugitive dust, such as spraying of water on exposed surfaces and covering any stockpiles. Noise/vibration impacts would be mitigated to the extent possible by incorporation of control equipment and best practices.

## **PUBLIC INVOLVEMENT**

Governor Andrew M. Cuomo has directed MTA, LIRR, and NYSDOT to engage in an unprecedented level of public outreach for the Proposed Project. To this end and to ensure a comprehensive and inclusive public involvement effort, the project team has developed and implemented a robust Public Involvement Plan consisting of numerous actions that have been collectively unseen in local public projects, such as:

- Door to door outreach to project neighbors
- Close consultation with elected officials and community representatives to help formulate proposed project elements
- Close coordination with state and local government agencies potentially affected by the Proposed Project
- A staffed Project Information Office to answer questions and provide information
- Numerous public meetings to allow the public to help shape the Proposed Project’s environmental study
- Localized information sessions to explain the contents of the DEIS and answer questions from local communities about the Proposed Project

The Public Involvement Plan was formulated to engage stakeholders—including a broad range of individuals and organizations, such as community groups, elected and appointed officials, and business and commercial entities—located within or having interests within the Project Corridor. The public outreach effort is informing stakeholders about the Proposed Project, soliciting their feedback, and communicating the potential benefits of and impacts from the Proposed Project. Many of the Proposed Project’s elements, and aspects of the environmental study, are the direct result of feedback given by the public.

MTA, LIRR, and NYSDOT have extensive experience designing and constructing large public infrastructure projects. It is essential to maintain a continuous dialogue and open lines of

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communication throughout the design and construction phases. As described throughout this DEIS, the project team will continue coordinating with the affected communities throughout future project phases. Notifications of street closures, advanced notice of anticipated work hours, rail service changes, and temporary changes to passenger rail station access are just a few examples of important information that will be clearly communicated. A complete list of outreach measures proposed to be conducted during construction is available in Chapter 13, “Construction”. The project team will continue its robust public outreach and agency coordination program to disseminate such information and provide ongoing opportunity for input throughout the course of the project. \*