

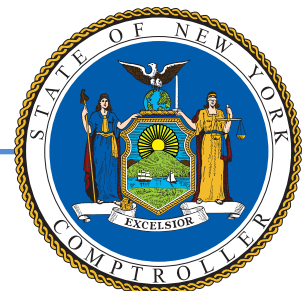
Metropolitan Transportation Authority – Long Island Rail Road

Mitigation for Extreme Weather Conditions and Flooding

Report 2022-S-6 | March 2024

OFFICE OF THE NEW YORK STATE COMPTROLLER
Thomas P. DiNapoli, State Comptroller

Division of State Government Accountability



Audit Highlights

Objectives

To determine whether the Long Island Rail Road (LIRR) performed a systemwide risk assessment to identify potential risks to its system from extreme weather conditions and flooding and developed plans to mitigate their effects. We also determined whether the LIRR tested and updated the plans and inspected/maintained the equipment to ensure they can be deployed when needed. The audit covered the period from April 2009 to January 2023.

About the Program

The LIRR was founded in 1834 and comprises over 700 miles of track on 11 different branches, stretching 120 miles from Montauk in Long Island to Penn Station and Grand Central Madison in Manhattan, to Atlantic Terminal in Brooklyn, and to Hunterspoint Avenue in Queens. The LIRR is the busiest commuter railroad in North America, with an average weekday ridership of about 198,200 customers from March 21, 2023 to April 3, 2023. The LIRR's western terminals (Penn Station, Atlantic Terminal, Hunterspoint Avenue, and Grand Central Madison) and the tunnels leading to them are underground; however, the remaining track is entirely outdoors, exposed to the elements. The LIRR is the primary means of transportation between Long Island and New York City. Therefore, the LIRR must be prepared to operate as effectively as possible during minor to severe weather conditions.

Severe weather includes thunderstorms, tornadoes, hail, lightning, floods, damaging winds, and winter weather. Such events can create hazardous travel conditions throughout the LIRR region and can hamper the LIRR's ability to provide regular train service. Additionally, hurricane season can bring high winds, heavy rain, and lightning, which can result in mudslides, fallen trees, and downed power lines along the right-of-way (tracks).

The LIRR developed an Operating Plan for Winter Storms and Other Contingencies (referred to as the WSOP). It includes standard operating procedures for winter, which are in effect annually from November 15 through April 1. The procedures outlined in this book detail each involved department's procedures for what is required before, during, and after all levels of snowstorms. The WSOP also details each department's responsibilities for heat, high winds, heavy rains, and washouts. The LIRR's Hurricane Guide provides direction for safely maintaining the most service possible during varying hurricane stages. The plan evaluates potential storm effects and implements service plans based on the projected storm category and path.

In September 2007, the MTA established the Blue-Ribbon Commission on Sustainability to develop sustainability-related recommendations for the MTA and its operating agencies. In April 2009, the MTA released the Commission's Final Report, which predicted that, without an adequate investment in adaptation measures, climate change will have even greater adverse impacts on the MTA's vital infrastructure, operations, and revenue streams in the future. The primary risks to the metropolitan region and the MTA service area include more extreme precipitation events, coastal storms and storm surges, flooding, and, in the longer term, rising sea levels.

Key Findings

- The LIRR did not perform a systemwide assessment of its transportation facilities to identify weather-related risks. LIRR officials advised us that a risk assessment was being conducted and was to be completed by the fourth quarter of 2023.

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- The Transportation, Engineering, and Maintenance of Equipment departments either were not in compliance or did not provide documentation to support compliance with the WSOP requirements. For example:
 - Engineering's Signals sub-unit was supposed to have 11 portable generators and four chainsaws; however, we observed only eight portable generators and three chainsaws.
 - Engineering's Track sub-unit was supposed to have one backhoe loader, 10 front loaders, and 12 light towers; however, the backhoe loader, five of the front loaders, and two of the light towers were not at the site. Officials stated that the equipment was currently being used in the field; however, there was no documentation showing the location.
 - Engineering sub-units Power and Track did not complete maintenance, inspections, and testing of equipment for the winter season. For example:
 - Our review of 13 pieces of snow-fighting equipment found there was no documentation to support that two pieces of equipment were prepared for five winter seasons (2018-19 through 2022-23). Another 11 pieces of equipment were missing records for at least one winter season.
 - The WSOP states that the Maintenance of Equipment department winter preparation begins on or before April 30 annually and ends by the second Friday of October. However, Maintenance of Equipment officials stated that they procure winter operation materials and rental equipment almost year-round, which is not in conformance with the WSOP. In addition, the 45-day inspections required by the WSOP are no longer performed. However, the WSOP was not revised to reflect the actual practices.
 - Our review of four Superstorm Sandy capital projects designed to mitigate potential damage from weather found that none were completed on time. For example:
 - One project was supposed be completed in August 2019; however, it will not be completed until December 2024 – over 5 years later. We were advised that delays occurred due to changes in priorities, which resulted in reassigning employees to other projects, as well as issues with access to tracks that are also used by internal and external entities such as Amtrak.

Key Recommendations

- Ensure that the systemwide risk assessment of the LIRR is completed on schedule and documented.
- Ensure that the LIRR operation departments comply with seasonal (winter) preparation guidance.
- Ensure all equipment is maintained, inspected, and tested regularly in a timely manner and documented.
- Review and revise the WSOP, where appropriate, to ensure uniformity between the agency's guidelines and department practices.
- Ensure that all projects include provisions for working with internal and external agencies to expedite the project's completion.



Office of the New York State Comptroller Division of State Government Accountability

March 13, 2024

Janno Lieber
Chair and Chief Executive Officer
Metropolitan Transportation Authority
2 Broadway, 20th Floor
New York, NY 10004

Dear Mr. Lieber:

The Office of the State Comptroller is committed to helping State agencies, public authorities, and local government agencies manage their resources efficiently and effectively. By so doing, it provides accountability for the tax dollars spent to support government operations. The Comptroller oversees the fiscal affairs of State agencies, public authorities, and local government agencies, as well as their compliance with relevant statutes and their observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations. Audits can also identify strategies for reducing costs and strengthening controls that are intended to safeguard assets.

Following is a report of our audit of the Metropolitan Transportation Authority – Long Island Rail Road, entitled *Mitigation for Extreme Weather Conditions and Flooding*. This audit was performed pursuant to the State Comptroller's authority under Article X, Section 5 of the State Constitution and Section 2803 of the Public Authorities Law.

This audit's results and recommendations are resources for you to use in effectively managing your operations and in meeting the expectations of taxpayers. If you have any questions about this report, please feel free to contact us.

Respectfully submitted,

Division of State Government Accountability

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Glossary of Terms

Term	Description	Identifier
MTA	Metropolitan Transportation Authority	<i>Auditee</i>
Commission	Blue-Ribbon Commission on Sustainability	<i>Report</i>
Engineering	Engineering Department	<i>LIRR Department</i>
HSF	Hillside Support Facility	<i>Key Term</i>
LIRR	Long Island Rail Road	<i>Agency</i>
PM	Preventive maintenance	<i>Key Term</i>
SOW	Statement of Work	<i>Key Term</i>
Transportation	Transportation Department	<i>LIRR Department</i>
WSOP	Operating Plan for Winter Storms and Other Contingencies	<i>Key Term</i>

Background

The Metropolitan Transportation Authority (MTA) is a public benefit corporation chartered by the New York State Legislature in 1965. The Long Island Rail Road (LIRR), which provides commuter railroad service, is one of six MTA agencies. The LIRR was founded in 1834 and comprises over 700 miles of track on 11 different branches, stretching 120 miles from Montauk in Long Island to Penn Station and Grand Central Madison in Manhattan, to Atlantic Terminal in Brooklyn, and to Hunterspoint Avenue in Queens. The LIRR is the busiest commuter railroad in North America, with an average weekday ridership of about 198,200 customers from March 21, 2023 to April 3, 2023.

Severe weather includes thunderstorms, tornadoes, hail, lightning, floods, damaging winds, and severe winter weather. These events can create hazardous travel conditions throughout the LIRR region and can hamper the LIRR's ability to provide regular train service. Additionally, hurricane season can bring high winds, heavy rain, and dangerous lightning, which can result in mudslides, fallen trees, and downed power lines along the right-of-way (tracks).

In September 2007, the MTA established the Blue-Ribbon Commission on Sustainability (Commission) to develop sustainability-related recommendations for the MTA and its operating agencies. In April 2009, the MTA released the Final Report of the Commission. The report predicted that, without an adequate investment in adaptation measures, climate change will have even greater adverse impacts on the MTA's vital infrastructure, operations, and revenue streams in the future. The primary risks to the metropolitan region and the MTA service area include more extreme precipitation events, coastal storms and storm surges, flooding, and, in the longer term, rising sea levels. The report recommended that the MTA have a climate change adaptation master plan in place by 2015, one that includes realistic timetables and financing options.

The LIRR developed an Operating Plan for Winter Storms and Other Contingencies (referred to as the WSOP). It includes standard operating procedures for winter, which are in effect annually from November 15 through April 1. The procedures outlined in this book detail each involved department's procedures for what is required before, during, and after all levels of snowstorms. The WSOP also details each department's responsibilities for heat, high winds, heavy rains, and washouts. The LIRR's Hurricane Guide provides direction for safely maintaining the most service possible during varying hurricane stages. The plan evaluates potential storm effects and implements service plans based on the projected storm category and path.

The Incident Command Center, which manages incidents, makes operational decisions and handles interagency communications. It is staffed with senior-level managers from the LIRR's 11 departments, including the Transportation, Maintenance of Equipment, and Engineering departments.

Transportation is responsible for operating train crews and for the operation and supervision of LIRR trains. Maintenance of Equipment is responsible for inspecting

and maintaining its railcars and locomotive fleets. Engineering maintains the track, switches, signal system, and non-revenue equipment.

In addition, the LIRR started 15 capital projects with a total value of over \$568 million to repair damage to its system caused by Superstorm Sandy and to mitigate potential damage that could occur in the future.

Audit Findings and Recommendations

The LIRR did not perform a systemwide assessment of its transportation facilities to identify weather-related risks. Instead, at the request of groups planning capital projects, it produces target area SLOSH¹ (Sea, Lake, and Overland Surges from Hurricanes) maps on a case-by-case basis. These maps include flood zones impacting specific locations within the LIRR's infrastructure.

The LIRR developed a WSOP and Hurricane Guide that are tested annually through tabletop drills. While LIRR officials stated that the plans are updated regularly based on recommendations developed during the lessons learned meetings, LIRR officials were unable to provide documentation for seven of the 16 sampled recommendations (44%) they stated were implemented.

The Engineering department is primarily responsible for monitoring the weather throughout the year; however, while they had an official responsible for receiving, evaluating, and notifying the other departments about inclement weather, they did not designate an alternate to perform this job in the absence of the core employee. Furthermore, there were no written procedures for performing those duties. We reviewed a judgmental sample of 73 weather reports to determine whether other departments were notified of the weather conditions when required. We found that, for 26 days, notification was necessary based on the weather forecast. However, no notifications were sent for 3 of the 26 days, including 2 days related to Hurricane Ida.

The Transportation, Engineering, and Maintenance of Equipment departments either were not in compliance or did not provide documentation to support compliance with the WSOP. For example, Engineering's sub-units did not always document the maintenance, inspection, and testing of equipment in preparation for the winter season. Our review of the records for 13 pieces of snow-fighting equipment listed in the WSOP showed that two rail-bound jet snow blowers (equipment used to blow the snow off the tracks) had no records of maintenance, inspection, and testing for any of the five seasons (2018-19 through 2022-23). Another 11 pieces of equipment were also missing records for at least one winter season. Additionally, Engineering could not locate eight debris-clearing trains assigned to it.

Systemwide Risk Assessment

According to a Federal Railroad Administration report, the rail industry is vulnerable to climate-related weather events and must address the issue of infrastructure resiliency. Adverse conditions, such as excessive heat, flooding, sea-level rise, tornadoes, hurricanes, and wildfires, are exacerbated by climate change and threaten the safety and reliability of the rail network.

Risk is the possibility that an event will occur and threaten or otherwise adversely affect the achievement of an organization's objectives. The act of managing the risks associated with achieving an organization's mission through its objectives requires

¹ The SLOSH model is a computerized numerical model developed by the National Weather Service to estimate storm surge heights (flooding) resulting from historical, hypothetical, or predicted hurricanes by considering the atmospheric pressure, size, forward speed, and track data.

an assessment of these risks. Risk assessment involves a dynamic and iterative process for identifying and analyzing these threats through an organizationwide effort, forming a basis for determining how risks should be managed. Risk management is an ongoing process that must include monitoring the changing environment and tracking planned actions to mitigate the impact and likelihood of risks.

LIRR officials did not provide documents to support that it performed a systemwide risk assessment of its infrastructure. Instead, LIRR personnel provided examples of target area SLOSH maps prepared at the request of groups planning capital construction projects. These maps included Federal Emergency Management Agency flood zones impacting specific locations within its infrastructure. In addition, officials provided documents showing that three sub-stations, which experienced 3 to 4 feet of flooding, were raised after Superstorm Sandy. Electrical components were also replaced and raised on the Long Beach branch signal and communication system.

In response to our preliminary findings, LIRR officials indicated that MTA Construction and Development was currently performing an MTA systemwide climate risk vulnerability assessment, which had a tentative completion date of the fourth quarter of 2023. They further stated that the MTA will be pursuing a course of climate resilience. This will enable it to manage unavoidable climate risks and serve all customers reliably in anticipation of more frequent and intensive extreme weather events exacerbated by climate change. However, as of February 2024, the risk assessment has not been provided.

However, the delayed development of a systemwide risk assessment has left the agency at risk and vulnerable to damage to its system if hit by another major adverse weather event.

Recommendation

1. Ensure that the systemwide risk assessment of the LIRR is completed on schedule and documented.

Weather-Related Operating Plans

The LIRR developed both the WSOP and Hurricane Guide to address extreme weather conditions, including winter storms, heat, heavy rains and high winds, hurricanes, and flooding. Creating an inclement weather plan protects employees and the business. Having a solid plan in place, and the means to communicate with employees, ensures that staff stay safe, connected, and informed during any severe weather event that may arise. These plans are designed to provide guidelines for safely maintaining the most service possible during varying storm stages. The plans may evaluate potential storm effects, and based on projected storm levels, service plans will be implemented accordingly. While the WSOP also provides steps to be followed for winter season preparation, the Hurricane Guide does not have any steps for hurricane season preparation.

The procedures in the WSOP and Hurricane Guide are required to be tested annually through tabletop drills designed as an overview for participants. The LIRR provided documentation of the drills for the years 2012 through 2021, the most recent drill at the time of our request. Additionally, LIRR officials advised us the WSOP and Hurricane Guide are updated based on recommendations generated during lessons learned meetings conducted after weather events.

The WSOP states that, approximately 2 weeks following a hurricane or winter storm, LIRR officials will convene to analyze the activities that occurred during the event, determine the effectiveness of the procedures, and recommend modifications to enhance the LIRR's ability to manage future storms.

During the period January 2018 through January 2022, the LIRR made 78 recommendations related to the WSOP and Hurricane Guide. We selected a judgmental sample of 16 recommendations that LIRR officials indicated were implemented. However, we found seven of the 16 recommendations (44%) were not implemented, including two that have been in process for over 2 years, and one was partially implemented. For example, one recommendation from September 1, 2021 required the LIRR to put a solution in place for the future to address flooding issues. LIRR officials provided a PowerPoint presentation of a vendor's design and construction proposal to resolve the issue. However, officials did not provide any documentation to support that the proposal was implemented as of April 2023.

Officials stated that some items recorded as recommendations were decisions made by more senior agency officials and it is not their role to verify the implementation status. While this may be the case, there still needs to be accountability that the recommendations were implemented, or the lessons learned will remain unaddressed. In response to the preliminary findings, LIRR officials agreed and indicated that they will take corrective action.

Monitoring the Weather

Engineering is primarily responsible for monitoring the weather throughout the year. It uses two contractors to monitor weather conditions and notify the other operating departments. Each contractor is required to submit a weather forecast every 4 hours over a 24-hour period (six total per vendor daily).

The LIRR has not established a formal system for retrieving the daily weather forecasts from its contractors. It also has no written criteria for evaluating which weather reports should be distributed to other departments. While the LIRR has an official designated to perform these duties, it does not have an alternate designated in the absence of this individual.

The LIRR has online access to the weather forecasts of one contractor, but not the other. Where online access is not available, the agency's procedures require them to keep copies of these records. We selected a judgmental sample of 26 of the 51 months from January 2018 through March 2022. For this period, the LIRR should have received 4,752 weather reports. However, the LIRR provided only 729

weather reports, or 15%. We reviewed a judgmental sample of 73 of these reports to determine whether other departments were notified of the weather conditions, when required. We found that, for 26 days, notification was necessary based on the forecasts. However, no notifications were sent for 3 of the 26 days. Two were for Hurricane Ida, and one was for a snow event forecast.

In response to the preliminary findings, LIRR officials stated that written procedures for handling weather notifications exist in the WSOP and Hurricane Guide. However, our review found that the procedures were not included in the WSOP, but in another document that was not formally adopted or incorporated into the WSOP.

Recommendations

2. Verify that the work done to implement the lessons learned-related recommendations was completed.
3. Formalize the written weather monitoring process including, but not limited to:
 - The receipt and review of weather reports and identification of the weather conditions that necessitate a notification to LIRR departments.
 - The retention of weather reports that require notification.
4. Ensure that the responsibility for reviewing and maintaining weather reports has 24/7 coverage.
5. Revise the Hurricane Guide to include written procedures or required steps in preparation for the season.

Winter Equipment Preparation

The WSOP provides seasonal (winter) preparation guidance for the LIRR's operating departments that is in effect annually from November 15 through April 1. Winter preparations are made so the departments will be fully prepared to maximize the effectiveness of their winter operations. For example, Maintenance of Equipment will enhance rolling stock performance and provide clean, comfortable train cars in winter conditions. This includes the inspection of train cars and installing scraper shoes on designated train cars. Scraper shoes assist in cleaning and preventing ice buildup on the third rail. Transportation preparation is intended to ensure that resources, equipment, and supplies are available during winter storm operations. One of the activities is working with Engineering to place snow-fighting equipment where required before a storm.

We reviewed the WSOP guidance relating to three departments – Transportation, Maintenance of Equipment, and Engineering – to determine whether they followed the procedures. Overall, we found that all three operating departments were not following procedures and/or did not maintain sufficient documentation to support compliance with the WSOP.

Transportation

The WSOP requires that, each year, Transportation obtain winter supplies and materials to ensure that resources, equipment, and supplies are available during winter storm operations. In addition, it requires Transportation to define requirement for any special materials or supplies by June 15. However, Transportation officials informed us they do not have any documents to support that they met the WSOP requirements during our review period of 2018 through 2022. They advised us they are working on implementing a process to document this information in the future. Transportation officials also stated that they are responsible for moving employees. To do this, Transportation leased six vehicles starting on December 1 of each year for the years 2018 through 2022. These vehicles are used to move employees to work locations during the winter season.

Maintenance of Equipment

According to the WSOP, the Maintenance of Equipment winter preparation schedule begins on or before April 30 annually and ends by the second Friday of October. This schedule includes compiling and ordering special winter operation materials, ordering rental equipment, and winterizing its on-rail equipment. Maintenance of Equipment officials stated the procurement of winter operation materials and rental equipment is conducted almost year-round; however, we found this is not in conformance with the WSOP. For example, vehicle request records show that Maintenance of Equipment did not submit a timely request to lease additional highway vehicles for the 2019-20 winter season. According to the WSOP, the deadline request date was August 15; however, the request was not submitted until September 10, 2019 – 25 days late.

While the WSOP requires inspections as part of its winterization procedures, Maintenance of Equipment officials advised us that the department satisfies the WSOP requirement by conducting periodic inspections every 92 days on each of their locomotives and train cars that are in service and calendar day inspections each day that the train (each car) is in use. Our review of the inspection records for a random sample of 25 train cars showed they were done on time. However, the WSOP also requires a 45-day inspection of its train cars, but Maintenance of Equipment officials stated that these are no longer required.

Engineering

The WSOP requires Engineering to perform an inventory of all snow-fighting tools, equipment, and supplies; to requisition all essential materials and equipment; and to prepare its equipment for maintenance. Further, Engineering must also ensure contract specifications and requisitions are in place, complete facility preparations, and complete in-house preparations.

Engineering is composed of six sub-units: Signals, Communications, Power, Track, Bridges & Buildings, and Facilities. We met with officials from five of the six sub-units and reviewed documents to determine whether the sub-units were compliant with the WSOP's requirements. We found that Facilities' preparation criteria highlighted

in the WSOP were not updated to incorporate only equipment in use. For instance, although part of the WSOP, we were advised that Hillside Support Facility (HSF) discontinued the use of air curtains (a machine that creates an air barrier between the exterior air and the conditioned interior air) approximately 10 years ago due to mechanical issues and staff complaints. Additionally, the WSOP calls for the maintenance of supply fans; however, HSF removed the fans and replaced them with skylights during a 2012 New York Power Authority project. However, the WSOP was not revised to reflect the actual practices.

There were three lists of equipment: two in the WSOP and one provided by Engineering. The sub-units generally had the type of equipment on hand to meet the requirements of the listings, but not the quantity. For example, Signals was supposed to have 11 portable generators and four chainsaws; however, we observed only eight portable generators and three chainsaws. Track was supposed to have one backhoe loader, 10 front loaders, and 12 light towers; however, the backhoe loader, five of the front loaders, and two of the light towers were not at the site. Officials stated that the equipment was currently being used in the field; however, there was no documentation showing the location. Engineering's list showed eight debris-clearing trains. However, officials at the location could not locate this equipment. Officials believe that this equipment might have been mislabeled.

Maintenance, Inspection, and Testing

The LIRR's equipment is maintained and tested in-house by maintainers, plumbers, and work gangs. In addition, the LIRR retains the services of two contractors to assist in the repairs needed for tools with extensive damage and/or necessary parts replacement upon request, and to perform quarterly preventive maintenance (PM) and emergency repair on all equipment. We requested the service records for Power, Signals, HSF, and Track. While Signals and HSF completed maintenance, inspections, and testing of equipment for the winter season(s), Power and Track did not.

Power

We requested service records for maintenance from the Power sub-unit at the Engineering facility in Bethpage. Power officials stated that no documentation is maintained for in-house repairs. Officials attributed the lack of record keeping to recent staffing changes and no permanent position assigned to organize the record of repairs of the equipment. They further stated that it would be inefficient to maintain daily reports on minor fixes to equipment because it is used year-round.

In addition, Power has a contractor that maintains its portable generators if needed. Power provided a service repair log, which indicated that eight of the 40 portable generators were serviced (PM and/or repairs) between February 2022 and September 2022. However, there was no indication that the other 32 generators received PM or repairs during that period.

Track

According to the WSOP, Track prepares 16 pieces of on-rail snow-fighting equipment for the winter season. We reviewed 13 of the 16 pieces of equipment and found there was no documentation to show that two pieces of equipment (rail-bound jet snow blowers) were prepared for all five winter seasons (2018-19 through 2022-23). The other 11 pieces of equipment (e.g., snow fighter – a multi-position plow that allows for snow placement to the left or right of the track) had records supporting that preparation for at least one winter season was performed.

At the closing conference, Track officials stated that there are records to support the maintenance of the on-rail snow-fighting equipment for all seasons. However, we note that, as of July 28, 2023, we did not receive any documentation to support their statement. The lack of equipment maintenance and testing documentation leaves a degree of uncertainty that the equipment was tested as required.

Signals and HSF

Both Signals and HSF provided documentation to support that they completed preparation for the period requested. For instance, switch heater maintenance is required annually. For Signals, the 2022 winter season included the completed checklists detailing the switch numbers, installations, and equipment testing. HSF provided documentation that its building equipment was prepared for the 2018 through 2022 winter seasons. The documents detailed the unit number, location, date of service, and a brief description of the work performed by the contractor.

Recommendations

6. Ensure the LIRR operation departments comply with seasonal (winter) preparation guidance.
7. Expand written procedures to account for the supply, maintenance, and location of equipment. Additionally, locate the missing equipment items.
8. Review and revise the WSOP, where appropriate, to ensure uniformity between the agency's guidelines and department practices.
9. Update and revise the WSOP to include guidance as to what is required for the winterization of equipment.
10. Ensure all equipment is maintained, inspected, and tested regularly in a timely manner and documented.
11. Establish clear and complete written procedures to address the maintenance, inspection, and testing process of equipment.

Capital Projects for Mitigation Efforts

A Statement of Work, often known as an SOW, is a business agreement that outlines deliverables and project goals. It's created to ensure all parties have a shared understanding of the expectations and responsibilities associated with the project including deadlines, scope of work, and project expectations. A good SOW functions as both a contract agreement and a project management tool.

The LIRR started 12 capital projects with a total value of over \$568 million to repair damage to its system caused by Superstorm Sandy and to mitigate potential damage that could occur in the future. We selected a judgmental sample of four of 12 LIRR capital projects (excluding projects in the planning phase) related to mitigation and tested them to determine whether the projects were completed on time, on budget, and in compliance with the scope of work.

We found that none of the four projects were completed on time. For example, one project's design and construction began in mid-2013 and was supposed to be completed in September 2020. However, the project was not substantially completed until April 2021. Another project was expected to be completed by August 2019; however, the revised completion date is now December 2024. LIRR officials noted that, because the tracks are used by other agencies, access can impede project completion. They also cited competing deadlines and partnerships with other entities as contributing to delays. For two of the four projects, the costs exceeded the revised budget. The project's variance was \$13 million for one project and \$8 million for the other.

Only one of the four projects was closed out (turned over to the agency as a completed project and the contractor received final payment) at the time of our review. This project was closed out almost 6 years after it started. This project's design phase began in August 2014 and was forecasted to be completed in October 2016, but it was not actually completed until September 2019. Further, the construction phase of this project started in November 2013 and was forecasted for substantial completion in January 2019; however, it was not substantially completed until May 2019.

We note that delays in completing projects that include repair and/replacement of critical equipment could impede the LIRR's mitigation efforts.

Recommendation

12. Ensure that all projects include provisions for working with internal LIRR groups and other MTA agencies and external agencies to expedite the project's completion.

Audit Scope, Objectives, and Methodology

The objectives of our audit were to determine whether the LIRR performed a systemwide risk assessment to identify potential risks to its system from extreme weather conditions and flooding and developed plans to mitigate their effects. We also determined whether the LIRR tested and updated the plans and inspected/maintained the equipment to ensure they can be deployed when needed. The audit covered the period from April 2009 to January 2023.

To accomplish our objectives and assess related internal controls, we interviewed LIRR management and staff responsible for assessing the transportation system, identifying capital projects needed to protect it, and developing plans to mitigate the effect of extreme weather conditions and flooding. In addition, we interviewed officials responsible for the maintenance, inspection, and testing of equipment that will be used during weather events (e.g., hurricane, snow, extreme cold or heat) to determine whether the LIRR performed a systemwide risk assessment to identify potential damage to its system. We reviewed the LIRR's plans for addressing extreme weather and flooding events and the recommendations generated from lessons learned meetings held after actual events to determine whether the recommendations were implemented. We reviewed the LIRR's weather dissemination procedures to determine whether its units were advised about inclement weather conditions. We observed available equipment at LIRR locations as identified by the plans and reviewed the maintenance records to determine whether the LIRR maintained, inspected, and tested the equipment to ensure it will work when needed. We also reviewed the LIRR's capital contracts regarding mitigation for extreme weather conditions to determine whether the projects were completed on time, on budget, and in compliance with the scope of work.

We used a non-statistical sampling approach to provide conclusions on our audit objectives and to test internal controls and compliance. We selected judgmental samples. However, because we used a non-statistical sampling approach for our tests, we cannot project the results to the respective populations. Our samples, which are discussed in detail in the body of our report, include:

- Two samples selected from the 729 days of weather reports received: a judgmental sample of 39 weather reports based on the duration of the weather event and a random sample of 34 weather reports between February 2019 and January 2022 for a total of 73 days.
- A random sample of 25 train cars from Maintenance of Equipment's fleet of 988 rolling stock units to determine whether the equipment was inspected as required by the WSOP. The sampled train cars included 20 multiple-use train cars and five locomotives. We reviewed the Maintenance of Equipment 92-day inspection reports and the Daily Calendar Inspection for the sampled train cars to determine if inspections were performed in compliance with the WSOP.
- A judgmental sample of four of 12 capital projects (excluding three projects in the planning stage), based on project status, geographic location, and weather-related damage being mitigated.

-
- A judgmental sample of 16 recommendations of the 78 related to the WSOP and Hurricane Guide, based on implementation status and type of weather event.
 - To review the daily weather reports, we first selected a judgmental sample of 26 of the 51 months between January 2018 and March 2022, selected to ensure all seasons were included. We then requested the daily weather reports for the 4,752 total days in the 26 months we selected but only received 732 from LIRR.
 - We reviewed 13 pieces of on-rail snow-fighting equipment out of the 16 total that Track prepares (the other three were reviewed under a separate audit we conducted of non-revenue service vehicles [\[2020-S-29\]](#)).

We obtained the data used to select our samples and conducted audit work and determined it was sufficiently reliable for the purposes of our audit objectives.

Statutory Requirements

Authority

The audit was performed pursuant to the State Comptroller's authority as set forth in Article X, Section 5 of the State Constitution and Section 2803 of the Public Authorities Law.

We conducted our performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In addition to being the State Auditor, the Comptroller performs certain other constitutionally and statutorily mandated duties as the chief fiscal officer of New York State, including some duties on behalf of public authorities. For the MTA, these include reporting the MTA as a discrete component unit in the State's financial statements and approving selected contracts. These duties could be considered management functions for purposes of evaluating organizational independence under generally accepted government auditing standards. In our professional judgment, these duties do not affect our ability to conduct this independent audit of the MTA's oversight and administration of mitigation for extreme weather conditions and flooding.

Reporting Requirements

We provided a draft copy of this report to MTA–LIRR officials for their review and comment. We considered their comments in preparing our final report and have included them in their entirety at the end of the report.

In their response, LIRR officials stated there are five actions it will take related to improving its records for weather-related events. While the actions LIRR agreed to take address some of the issues identified by the audit, there are other actions that need to be taken. In addition, the LIRR took exception to our conclusion that four capital projects were delayed. However, the facts speak for themselves. For example, for one project, the original completion date for construction of August 2019 was changed to December 2024. Our responses to this and certain other MTA–LIRR comments are included in the State Comptroller's Comments.

Within 180 days after final release of this report, as required by Section 170 of the Executive Law, the Chairman and Chief Executive Officer of the Metropolitan Transportation Authority shall report to the Governor, the State Comptroller, and the leaders of the Legislature and fiscal committees, advising what steps were taken to implement the recommendations contained herein, and where recommendations were not implemented, the reasons why.

Agency Comments

2 Broadway
New York, NY 10004
212 878-7000 Tel

Janno Lieber
Chairman and Chief Executive Officer



Metropolitan Transportation Authority

State of New York

January 25, 2024

VIA E-MAIL

Ms. Carmen Maldonado
Audit Director
The Office of the State Comptroller
Division of State Government Accountability
59 Maiden Lane, 21st Floor
New York, NY 10038

Re: Draft Report #2022-S-6 (Mitigation for Extreme Weather Conditions and Flooding)

Dear Ms. Maldonado:

This is in reply to your letter requesting a response to the above-referenced draft report.

I have attached for your information the comments of Robert Free, Acting President, LIRR.

Sincerely,

A handwritten signature in blue ink that reads "Janno Lieber".

Janno Lieber

c: Laura Wiles, MTA Chief of Staff
Michele Woods, Auditor General, MTA Audit Services

The agencies of the MTA

MTA New York City Transit
MTA Long Island Rail Road

MTA Metro-North Railroad
MTA Bridges and Tunnels

MTA Construction & Development
MTA Bus Company



January 25, 2024

Mr. Janno Lieber
Chair and Chief Executive Officer
Metropolitan Transportation Authority
2 Broadway, 20th Floor
New York, NY 10017

RE: Mitigation for Extreme Weather Conditions and Flooding Report No. 2022-S-6

Dear Chair Lieber,

This letter is in response to the Office of the New York State Comptroller (OSC) report issued on December 19th, 2023, on Long Island Rail Road's (LIRR) Mitigation for Extreme Weather Conditions and Flooding. The focus of the audit was to determine whether LIRR

- performed a systemwide risk assessment to identify potential risks to its system from extreme weather conditions and flooding and developed plans to mitigate their effects and
- tested and updated the plans and inspected/maintained the equipment to ensure they can be deployed when needed.

Below please find detailed responses to the specific findings and recommendations.

Of the 12 recommendations contained within the report, LIRR will take five specific actions to improve weather-related record-keeping and checklists. These are to:

- differentiate "Notes" vs "Recommendations" when documenting lessons learned.
- archive weather reports received from Metro Weather that meet necessary criteria, and that support and correspond to, notifications to departments.
- create a checklist that departments can utilize to help account for winter supplies, maintenance, etc.
- evaluate the Winter Storm Operating Plan (WSOP) documents to ensure uniformity amongst departments, as feasible.
- update and revise the WSOP to include guidance as to what is required for the winterization of equipment.

The other recommendations described in the report do not require taking any additional actions, outside of already completed or underway activities.

In addition, we wish to clarify some statements noted in the report.

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First, OSC concluded that LIRR was “delayed” in performing a systemwide risk assessment without establishing the date or schedule by which such a risk assessment should have been completed, and without such a time frame, OSC’s conclusion that the assessment was “delayed” is unjustified. As outlined below, LIRR utilized other tools to identify, assess, analyze, and test its weather-related risks, and a comprehensive system-wide assessment is underway.

[Comment 1](#)

Second, the MTA finds the OSC’s assertion that all of the sampled Sandy projects are behind schedule is incorrect. The MTA sets project schedules at project contract award -- when a contractor, after bidding, has actually agreed to a specific schedule -- not during the preliminary statement of work (SOW) phase. As it happens, only one of the four sampled Sandy projects was behind schedule. The correct status for these projects is provided on Page 9 under “Other Clarifications”.

[Comment 2](#)

Recommendation #1

- Ensure that the systemwide risk assessment of the LIRR is completed on schedule and documented.

C&D Response:

The MTA acknowledges this response and is already performing a system wide risk assessment. More specifically:

1. LIRR and its partners have already conducted a targeted analysis of specific vulnerability to LIRR’s infrastructure relating to coastal flood areas. Proof of this analysis was previously provided to the OSC and is summarized as follows:
 - a. MTA Climate Adaptation Task Force Resiliency Reports from 2017 and 2019 discussing LIRR projects:
 - Long Beach Branch Signal and Communications Systems: Replaced damaged signal, power and communications system components and cabling along the right-of-way of this low-elevation, coastal commuter rail line.
 - Long Beach Branch Substations: Replaced three Long Beach Branch substations at Oceanside, Oil City and Long Beach Yard damaged by Superstorm Sandy storm surge flooding.
 - b. LIRR Long Beach Branch Damage Assessment - Signals, Power & Communications Systems: Site inspection and damage assessment of the signals, traction power and communications systems on the LIRR’s Long Beach Branch conducted by a team of independent railroad engineering experts with the support of LIRR’s Engineering Department.
 - c. LIRR Post-Sandy Damage Assessment - Signals, Power & Facilities: Third-party assessment (Parsons and its sub-consultants accompanied by LIRR) to provide an informed professional review of the condition of LIRR’s infrastructure following Hurricane Sandy based upon in-field observations of current conditions as well as reports by LIRR employees.
 - d. NYS 2100 COMMISSION Report - Recommendations to Improve the Strength and Resilience of the Empire State’s Infrastructure: Commission convened in response to the unprecedented, severe weather events

experienced by New York State and the surrounding region: most recently, Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee. The Commission was tasked with examining and evaluating key vulnerabilities in the State's critical infrastructure systems and recommending actions that should be taken to strengthen and improve the resilience of those systems. These events informed the selection of Sandy projects that were identified and funded back in 2013 that have been executed (and are being executed) since.

- e. Stormwater Task Force Investigations - Executive Summary Final Draft: Stormwater Task Force initiated by MTA and NYC following a series of major rain events that impacted the MTA in the summer of 2021, including various MTA departments, NYCDEP, NYCDOT, NYCEM, and the New York City Mayor's Office of Climate Resiliency (NYCMOCR) to investigate over 150 MTA locations identified as historic and/or potential future flood risks with the aim of identifying root causes and proposing solutions to mitigate flood impacts. (Already provided by MTA C&D).
2. In addition, LIRR has identified corrective actions and mitigations based on specific assessments, which are conducted on a regular basis:
 - a. Sandy resiliency improvements to mitigate flooding in addition to the Long Beach projects noted above:
 - Raising substations and signal boxes.
 - Flood walls at Long Island City and West Side Yard
 - The LIRR is in the process of working with Amtrak to design barriers for the east portals of the East River Tunnel.
 - b. Efforts along LIRR's Right-of-Way including working with LIPA to replace downed poles, insulating miles of wires, managing an aggressive brushing clearing program, adding infrastructure to heat the 3rd rail in known problem areas, and changing snow clearing strategies in key areas prone to cause shutdowns of service.
3. In addition, MTA C&D has performed a vulnerability assessment of all MTA agencies that is being finalized and will support the MTA's climate resilience plan, which will be publicly released in the first quarter of 2024.

Implementation Status:

Implemented and ongoing.

[Comment 3](#)

Recommendation #2

- Verify the work done to implement the lessons learned related recommendations was completed.

LIRR Response:

The LIRR acknowledges this recommendation. LIRR's Transportation department already identifies recommendations resulting from lessons learned as well as tracks their implementation with applicable departments as noted in the preliminary letter.

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Nevertheless, Transportation will modify its current lessons learned spreadsheet by adding a separate column for “Notes” thereby differentiating between Recommendations and Notes.

The WSOP and Coastal Storm Guidelines and Other Contingencies (Previously known as Hurricane Guide as of June 2023) are updated based on recommendations generated during lessons-learned meetings conducted after weather events. Officials convene to analyze the activities that occurred during the event, determine the effectiveness of the procedure, and recommend modifications to enhance the LIRR’s ability to manage future storms. It is the responsibility of each department to verify and implement their respective recommendations from lessons learned.

[Comment 4](#)

Additionally, the WSOP and Coastal Storm Guidelines and Other Contingencies have recently undergone updates based on lessons learned meetings. While some recommendations have been partially implemented, there are long-term recommendations that are currently on hold, awaiting further action.

Implementation Status:

Implemented and ongoing.

Recommendation #3

- Formalize the written weather monitoring process including, but not limited to, the following:
 - The receipt and review of weather reports and identification of the weather conditions that necessitate a notification to LIRR departments.
 - The retention of weather reports that require notification.

LIRR Response:

The LIRR acknowledges this recommendation. Written procedures for the receipt and review of weather reports and identification of weather conditions already exist in LIRR’s WSOP and Coastal Storm Guidelines and Other Contingencies, both of which have been provided to the audit team.

As stated in the WSOP:

Infrastructure Outlook – “The Engineering Department will normally monitor the weather four times a day. The consultant under contract will provide meteorological information. This information shall be used for storm preparation and planning. Any severe weather/watch/warnings to the railroad area shall immediately be reported to the Engineering System Operating Center, Senior Vice President -Operations, Chief Engineer’s Office in Hillside Support Facility, Chief Transportation Officer, and Movement Bureau.”

Incident Response Structure states that Engineering provides weather updates during conference calls.

As stated in the Coastal Storm Guidelines and Other Contingencies:

Hurricane Weather Monitoring:

- The primary responsibility for weather monitoring throughout the year belongs to the Chief Engineer. Under his direction, Metro Weather Service is under contract to provide the Engineering System Operator weather forecasts. Those forecasts and predictions will be provided to other operating departments.
- Meteorological information will be provided to the LIRR by the meteorological consultant under contract. The Consultant will information and documentation of local hurricane/weather conditions at various locations in Manhattan, Brooklyn, Queens Boroughs, Nassau, and Suffolk Counties. This information shall be the primary source of information for storm preparation and planning.
- The contract Weather Consultant will advise of severe hurricane/weather/watch/warnings to the LIRR immediately after posting.
- The Engineering Operations Department normally monitors the weather five (5) times each day, via the Metro Weather updates at 6:00a.m., 10:00 a.m., 2:00 p.m., 6:00 p.m., and 10:00 p.m. Three (3) days prior to the hurricane, the Weather Consultant will provide the Engineering Department with special weather statements, one (1) in the morning and one (1) in the afternoon, using updates from the National Hurricane Forecast Center and continuing until the event is over.

LIRR will archive weather reports received from Metro Weather that meet the necessary criteria, and that support and correspond to, notifications to departments. LIRR will continue its current process of accessing DTN weather reports via the historical weather section on DTN's website.

The LIRR has updated the Coastal Storm Guidelines and Other Contingencies, and has formalized the written weather monitoring process including, but not limited to, the following:

- The receipt and review of weather reports and identification of the weather conditions that necessitate a notification to LIRR departments.
- The retention of weather reports that require notification.

Implementation Status:

Implemented and ongoing.

Recommendation #4

- Ensure that the responsibility for reviewing and maintaining weather reports has 24/7 coverage.

LIRR Response:

The LIRR acknowledges this recommendation. The LIRR has 24/7 coverage for review of weather reports. Forecasts are available and widely disseminated to department leadership and Engineering System Operations (ESO). Staffing is coordinated and established to cover each forecast as appropriate. In the event of a known weather incident weather is continually monitored 24/7.

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Nevertheless, the WSOP is currently undergoing revisions to ensure it accurately reflects the intended purposes and objectives. This includes incorporating the latest guidance to align with the actual needs and requirements.

Implementation Status:

Implemented.

Recommendation #5

- Revise the Coastal Storm Guidelines and Other Contingencies to include written procedures or required steps in preparation for the season.

LIRR Response:

The LIRR acknowledges this recommendation. The LIRR conducted a review of the Coastal Storm Guidelines and Other Contingencies which included a Pre-storm checklist that departments can utilize, where applicable, in preparation for the season.

[Comment 5](#)

Implementation Status:

Implemented.

Recommendation #6

- Ensure the LIRR operating departments comply with seasonal (winter) preparation guidance.

LIRR Response:

The LIRR acknowledges this recommendation. The Transportation Department ensures compliance with an internal checklist to ensure that all preparation items have been completed. Additionally, the Engineering Department is currently exploring the possibility of documenting weather-related work orders in an Enterprise Asset Management System.

Implementation Status:

Implemented and ongoing.

Recommendation #7

- Expand written procedures to account for the supply, maintenance, and location of equipment. Additionally, locate the missing equipment items.

LIRR Response:

The LIRR agrees with this recommendation. LIRR will create a checklist that departments can utilize to help account for winter supplies, maintenance, etc. as outlined in the plan.

Despite the absence of written procedures, the following clarifications should be noted:

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1. On page 12 under Maintenance of Equipment: “Maintenance of Equipment officials stated that they procure winter operation materials and rental equipment almost year-round...”

MofE reviews, discusses, and coordinates the leasing of equipment almost continuously, but the actual ordering is done only as required.

2. On Page 13: “Track was supposed to have one backhoe loader, 10 front loaders, and 12 light towers; however, the backhoe loader, five of the front loaders, and two of the light towers were not at the site. Officials stated that the equipment was currently being used in the field; however, there was no documentation showing the location.”

The remaining forklifts that were not observed during the site visit to the Upper Holban Shop were all accounted for at the time of the audit. As explained to the auditors, this equipment is disbursed appropriately to various divisions and gangs throughout the 700+ miles of track that Engineering covers in cases of emergencies, as well as for maintenance, inspections, and repairs. It should also be noted that the larger equipment (e.g., front loaders) are equipped with GPS technology that allows Engineering to locate them at any time.

Implementation Status:

Ongoing.

Recommendation #8

- Review and revise the WSOP, where appropriate, to ensure uniformity between the agency's guidelines and department practices.

LIRR Response:

The LIRR agrees with this recommendation. The LIRR will conduct an evaluation of the WSOP documents to ensure uniformity amongst departments, as feasible. As information, this practice is performed and reviewed annually and documented in the appendix of the WSOP.

Implementation Status:

Ongoing.

Recommendation #9

- Update and revise the WSOP to include guidance as to what is required for the winterization of equipment.

LIRR Response:

The LIRR agrees with this recommendation. The WSOP presently includes Winterization Procedures for the Maintenance of Equipment department, specifically focused on Locomotives, Coaches, and MU Equipment. In the Engineering department, winter

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equipment undergoes in-house maintenance and testing conducted by maintainers, plumbers, and work gangs. Additionally, LIRR has engaged the services of two contractors within the Power discipline to handle repairs involving significant damage or parts replacement upon request, as well as quarterly preventive maintenance (PM) tasks. The winterization of equipment and guidance is determined by its respective maintenance specifications.

Implementation Status:

Ongoing.

Recommendation #10

- Ensure all equipment is maintained, inspected, and tested regularly in a timely manner and documented.

LIRR Response:

The LIRR acknowledges this recommendation. LIRR ensures that all equipment is in proper working order in preparation for the winter season and throughout the year. It should be noted that the audit team found no instances where the equipment was not working as intended thus there is no evident cause and effect between the lack of documentation as stated in the report and the working condition of the equipment.

Consumables such as portable generators, pumps, and chainsaws are maintained and repaired by third-party vendors and LIRR in-house personnel. Service tickets are available and attached to paid invoices for the third-party vendors. On-rail equipment receives the necessary winter maintenance each season. Hard-copy work orders are retained specific to maintenance performed and the item repaired, not specific to “winter preparation”.

Moving forward, LIRR can begin to work towards consistently documenting equipment winterization in its maintenance records. Further, LIRR will investigate the feasibility of ensuring service tickets are generated and archived for consumables maintained in-house.

The Engineering Department has developed a system for winter preparation work orders to be created upon the equipment’s arrival and tracked through an Enterprise Asset Management System. In addition, categories have been established to track, analyze, and maintain equipment, as well as inspect and test it. This systematic approach ensures that equipment is appropriately prepared for winter and that records are maintained for future reference.

The LIRR has ensured that all equipment is in proper working order in preparation for the winter season and throughout the year.

Implementation Status:

Implemented and ongoing.

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Recommendation #11

- Establish clear and complete written procedures to address the maintenance, inspection, and testing process of equipment.

LIRR Response:

The LIRR acknowledges this recommendation. The WSOP presently includes Winterization Procedures for the Maintenance of Equipment department, specifically focused on Locomotives, Coaches, and MU Equipment. In the Engineering department, winter equipment undergoes in-house maintenance and testing conducted by maintainers, plumbers, and work gangs. Additionally, LIRR has engaged the services of two contractors to handle repairs involving significant damage or parts replacement upon request, as well as quarterly preventive maintenance (PM) tasks. The winterization of equipment and guidance is determined by its respective maintenance specifications.

Implementation Status:

Implemented and ongoing.

Recommendation #12

- Ensure that all projects include provisions for working with internal LIRR groups and other MTA agencies, and external agencies to expedite the project's completion.

C&D Response:

The MTA acknowledges this response and already includes this in connection with its projects. MTA C&D capital construction contracts include a section entitled "coordination and cooperation with other contractors, utilities and other public agencies" [Article 4.01](#) of the "MTA General Provisions for the Design Build Contract" which addresses this recommendation.

In addition, we note that the MTA C&D project CEO works directly with LIRR, the other MTA agencies, and external agencies to assist in the coordination of all capital project work to ensure minimal impact to their business operations.

Implementation Status:

Implemented.

OTHER CLARIFICATIONS

1. In the draft Report 2022-S-6, titled "Mitigation for Extreme Weather Conditions and Flooding," the Audit Findings and Recommendations for Capital Projects for Mitigation Efforts assert, on page 15, that "none of the four projects were completed on time."

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This finding is incorrect. The four sampled projects and their respective statuses are as follows:

[Comment 6](#)

- a. PNZJ = Atlantic Avenue Tunnel Mitigation – Was completed on time and on budget. The estimated completion date and budget was 6/2018 and \$8.4M and the actual completion date and budget is 6/2018 and \$8.4M .
 - b. PNZK Long Island City Phase 3A – Was completed on time and on budget. The estimated completion date and budget was 5/2019 and \$1.3M actual completion date and budget was 5/2019 and \$1.3M.
 - c. PNZL = Long Island City Phase 3A – Was completed on time and on budget. Estimated completion date and budget was 9/2020 and \$25.6M; actual completion date and budget was 9/2020 and \$25.6M.
 - d. PNZD = West Side Yard Side Yard Restoration - all work except for slip switches has been completed and work is close to budget. Slip switches are scheduled to be complete this quarter. Estimated completion date and budget was 12/23 and \$43.3M the forecasted completion date and budget is 3/24 and \$43.3M. The delay was due to other agency priorities taking precedence over this work.
2. Signals and Hillside is represented as an Engineering sub-unit however it should be noted that Hillside is an Operations Support Facility and not part of an Engineering sub-unit.
 3. In the draft report on page 13, within the Maintenance, Inspection, and Testing section, OSC indicates “we found that there were no written procedures to address the maintenance, inspection, and testing process of equipment” however OSC notes that Signal included the completed checklists detailing the switch numbers, installations, and equipment testing.

[Comment 7](#)

Sincerely,



Robert Free
Acting President

cc:

Jamie Torres-Springer – C&D	Tom Kost - LIRR	Johanna Rosado – MTA
Diane Nardi – C&D	Paul Dietlin – LIRR	Isabel Ramesar - MTA
Andrew Wilson – C&D	Beth Sullivan – LIRR	Darren Jurgens - MTA
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Anthony Tufano – C&D	Ed McGoldrick – LIRR	
Thomas McHugh – C&D	Joe Fischetti - LIRR	

State Comptroller's Comments

1. The systemwide assessment was delayed – it was called for in the Commission's April 2009 Final Report. The auditors met with several LIRR officials during our fieldwork and were not provided with documents to support the systemwide assessment.
2. The LIRR's response to the draft report provides limited information to support on-time performance. In addition, for two of the four projects, the completion dates provided in its response do not match the completion dates given to the auditors. For example, the LIRR responded that the PNZK project's actual completion date was "5/2019," but the auditors received a completion date, in writing, of June 2020.
3. The schedule per LIRR officials was "fourth quarter of 2023"; however, this document has not been provided as of February 2024.
4. The statement that each department is responsible for verifying the implementation of their respective recommendations was not provided during the audit.
5. LIRR officials changed the wording of Recommendation 5 and, as a result, the status is incorrect. They should address the recommendation as written.
6. The finding is correct. LIRR officials chose to provide limited information about the four capital projects that does not reflect the dates when the projects were scheduled to be completed and the actual dates they were completed. In addition, the LIRR's response does not match the information provided to the auditors. For example, the LIRR responded that the PNZD project's forecasted completion date is "3/24," whereas we received a document where the forecasted completion date is 12/24.
7. Although the LIRR indicated that the Hillside Support Facility is not part of Engineering, the auditors were directed to this facility for certain equipment on Engineering's list and compliance with the WSOP.

Contributors to Report

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