

LONG ISLAND RAIL ROAD
NASSAU TOWER
71 MAIN STREET
Mineola
Nassau County
New York

HABS LEVEL II – DOCUMENTATION FOR DEMOLITION
PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA
REDUCED MEASURED DRAWINGS



The Nassau Tower, August 14, 2018.

NEW YORK STATE HISTORIC PRESERVATION OFFICE
Pebbles Island Resource Center
P.O. Box 189
Waterford, NY 12188

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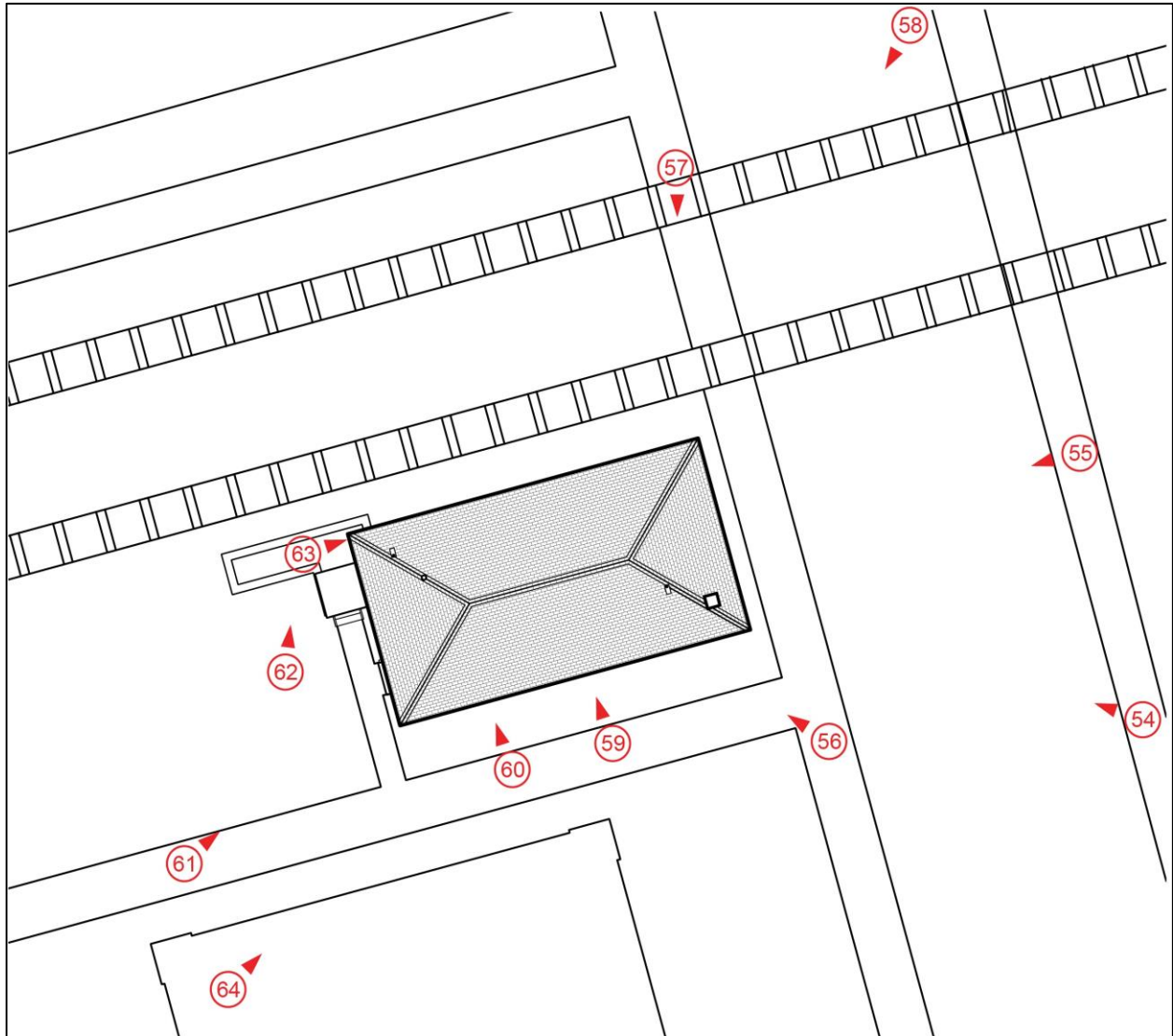
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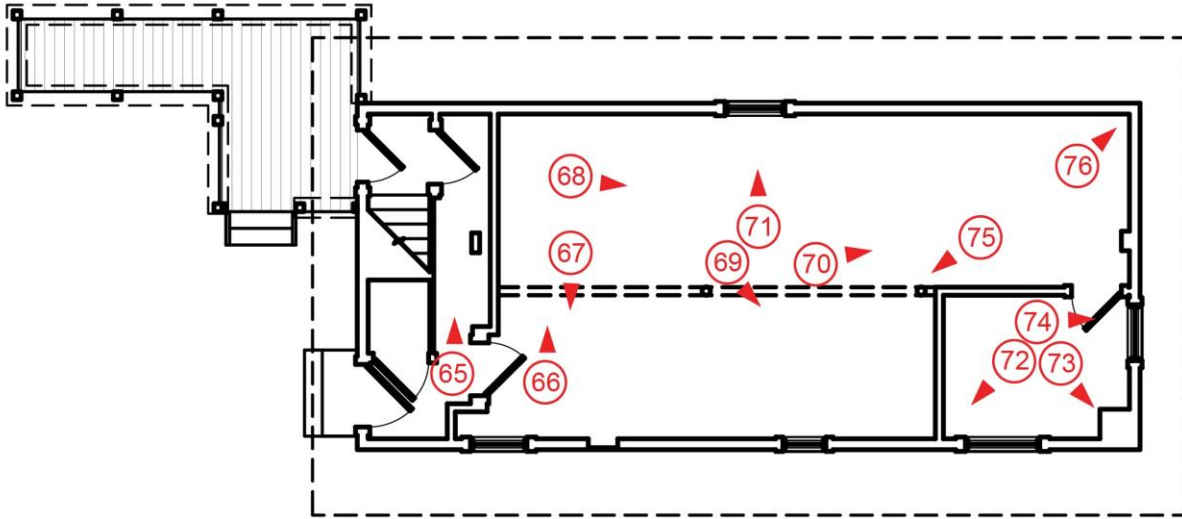
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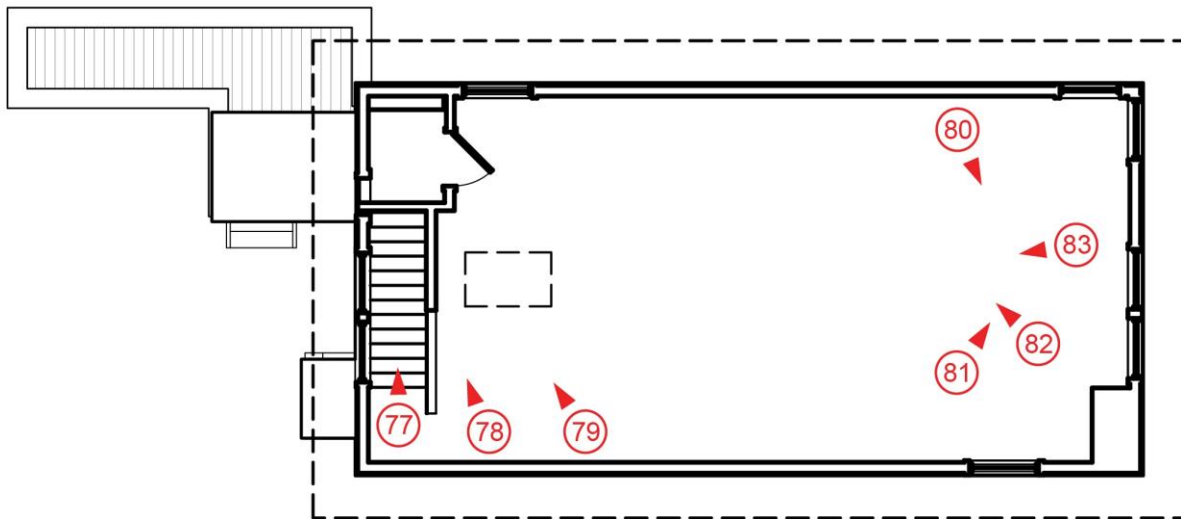


EXTERIOR PHOTO KEY PLAN
NOT TO SCALE





INTERIOR PHOTO KEY PLAN – FIRST FLOOR
NOT TO SCALE



INTERIOR PHOTO KEY PLAN – SECOND FLOOR
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Photographers: Taylor Driscroll, Nicole Ellenberger, Allison Fricke, Siri Olson.

Date of Photographs: August 14 and 15, 2018.

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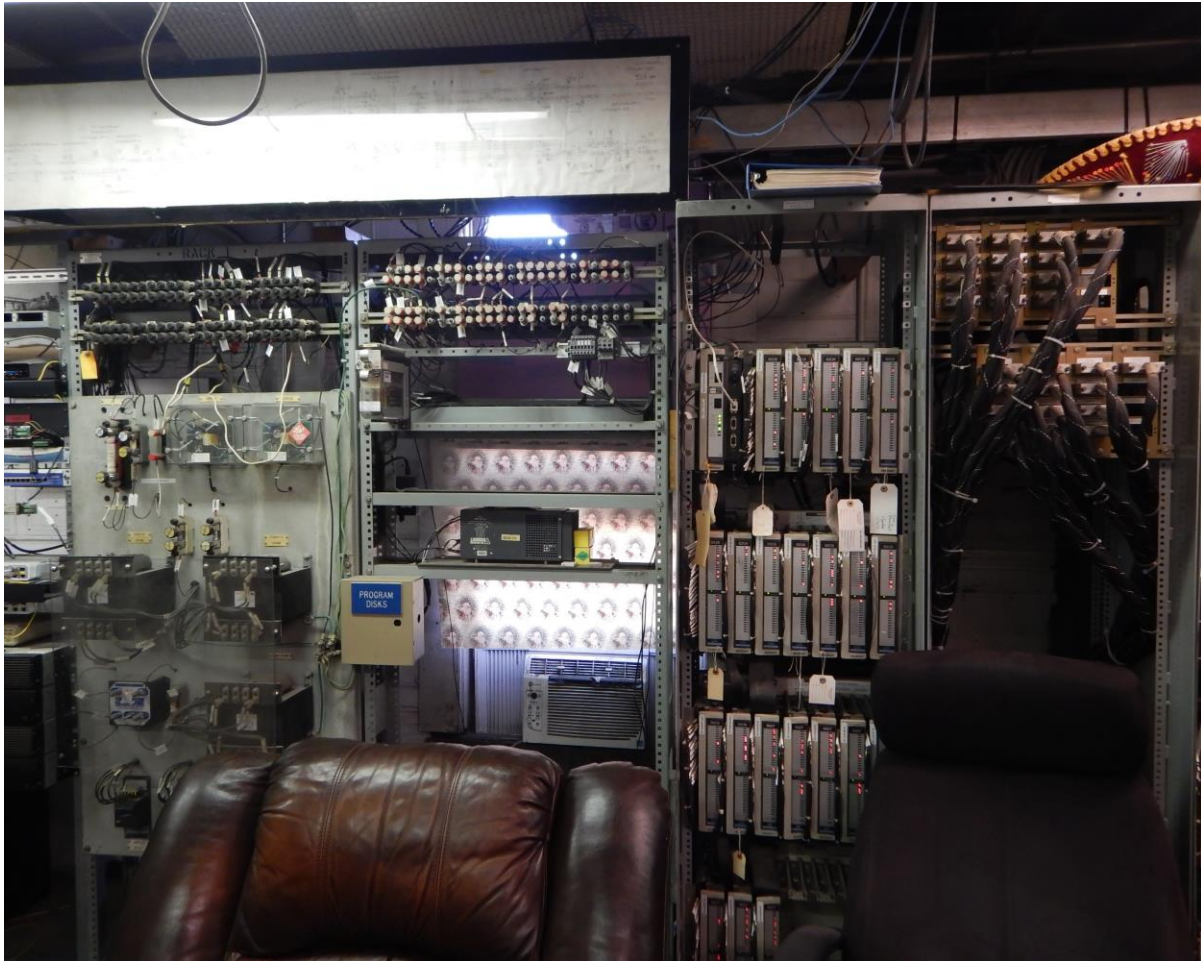


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PHOTO 82. SECOND FLOOR FACING NORTH



PHOTO 83. SECOND FLOOR FACING WEST

**LONG ISLAND RAIL ROAD
NASSAU TOWER**

- Location:** Nassau Tower, 71 Main Street, Mineola, Nassau County, New York 11501
- Present Owner/Occupant:** The Long Island Rail Road, a subsidiary of the Metropolitan Transit Authority, is the present owner and occupant of the building.
- Present Use:** The Nassau Tower remains in use as a signal control tower but soon will be decommissioned as the Long Island Rail Road consolidates interlocking switch signals in the Jamaica Station hub.
- Significance:** The history of the Long Island Rail Road, one of the oldest and busiest railroads in the country, is intricately linked with the growth and development of Long Island. Mineola was and remains a hub of the railroad. The Nassau Tower at Mineola is a rare survivor of a switch tower still serving its original purpose and of the vernacular, wood-frame, hip-roofed structure type used by the Long Island Railroad in the early twentieth century. The tower witnessed the technological advancements of the railroad and is associated with the ambitious expansion and electrification plans of the Long Island Rail Road during one of the company's most productive periods, which permanently influenced local and regional patterns of development.
- Historian(s):** Nicole Ellenberger, Taylor Driscoll, Allison Fricke, and Siri Olson
- Project Information:** The purpose of preparing the graphic, photographic, and written documentation complying with the National Park Service's Historic American Buildings Survey (HABS) requirements for the Nassau Tower and Electrical Substation at Mineola is to prepare for the demolition of both buildings. Chrysalis Archaeological Consultants hired Easton Architects to complete the documentation complying with HABS Level II guidelines as a mitigation effort. Recordation of the two structures in accordance with the *SHPO Structure Documentation Guidelines* was stipulated in the Letter of Resolution among the Long Island Rail Road, New York State Department of Transportation, and New York State Office of Parks,

Recreation and Historic Preservation (executed August and September 2017). The Letter of Resolution pertains to a much broader project: “The Long Island Rail Road Expansion Project From Floral Park to Hicksville in Nassau County.”

Easton Architects visited the site on August 14 and 15, 2018 to survey each property and gather information for the graphic and written documentation of the report. Photographs were taken by Nicole Ellenberger, Taylor Driscoll, Allison Fricke, and Siri Olson.

Attempts were made to update this report with primary sources; however, few such sources are extant or available. An unknown but significant number of Pennsylvania Railroad and Long Island Rail Road records, including employment records, maps, blueprints, and glass-plate valuation negatives of the Long Island Rail Road, were destroyed in the 1950s. This report relies on secondary and tertiary sources produced by railroad enthusiasts, academics, and some extant primary source materials.

Part I: Historical Information

A. Physical History

1. **Date of Construction:** The Nassau Tower was constructed in 1923, after the collapse and demolition of the previous switch tower in December 1922.
2. **Architect/Engineer:** The original architect or engineer is unknown.
3. **Original and subsequent owners, occupants, uses:** The Long Island Rail Road is the original owner of the property and has been the only occupant of the building. It has always functioned as a signal control and switch tower for the Long Island Rail Road.
4. **Builder/Contractor/Supplier:** The original builder or contractor of the building is unknown. The source and supplier of original building materials is unknown.
5. **Original Plans and Construction:** The original appearance of the Nassau Tower was generally how the building appears today, although many alterations have occurred to the fenestration and minor exterior features. Original architectural drawings and construction information for the Nassau Tower are unavailable and were likely destroyed by the Long Island Rail Road in the mid-twentieth century.
6. **Alterations and Additions:** Nassau Tower has undergone a series of alterations since its construction in 1923. Historic photographs, physical evidence, and visual survey indicate the nature and extent of some of these changes. Original second-story windows were two-over-two sash windows; these have all been replaced with one-over-one metal frame windows. The original fenestration pattern remains discernable through existing openings and differences in the shingle cladding where several openings have been infilled. Three windows divided by thick mullions were originally present at the north facade (Fig. 12). One window at the northeast corner of the north façade has been removed and infilled. At the east façade, there were four windows divided by thick mullions (Fig. 14). Historic images from the 1950s and 1971 indicates that some of the windows at the east and north facades contained six-lite sashes (Fig. 15). Window replacements and the infill of openings, at least at the east and north facades, occurred between 1971 and 1979 (Figs. 15 and 16). It is likely that the alterations to the other facades also occurred at this time.

The original lever interlocking machine was replaced with an electronic switch system in 1997. The second-floor wall and ceiling finishes appear mostly unaltered, while the original appearance of the first floor is unknown (Fig. 13). The building was painted white with green trim by 1954, then re-painted grey with red trim by the 1960s. The current "Nassau" signs replaced originals and are larger in size and lettering. Other known alterations, such as the addition of the porch and awnings or the addition of the exterior composite particle board, occurred at unknown times after 1979.

B. Historical Context

Early History and Formation of Mineola

The countryside around Mineola, known as the Hempstead Plains, was flat prairie inhabited by Native Americans of the Massapequa, Merioke, and Rockaway tribes.¹ The Dutch arrived in Long Island in the first half of the seventeenth century, settling in modern-day Brooklyn and Queens. The English followed, first settling on the coasts of eastern Long Island. Both groups of colonists moved inland as century progressed, pushing out the Native American population, which also suffered great losses from western diseases.² The terrain of the Hempstead Plains made the area amenable to overland travel, as well as farming and raising cattle, which the Dutch and English began to do in the early nineteenth century. Dairy farming, agriculture, and fishing became the main sources of economic production on Long Island. As such, the middle of Long Island developed a reputation as a barren, flat, sparsely populated area. In 1786, Mineola became the seat of Queens County, which at that time included modern-day Queens and Nassau Counties, and the first Mineola Courthouse was constructed at that time.³ Industrial development concentrated on the East River while the inland territory of Queens County remained rural, even towards the end of the nineteenth century and early twentieth century. When Queens County voted to join New York City in 1898, the farmer population living in the rural eastern region (now Nassau County) voted to secede later that same year. The residents of newly-formed Nassau County named Mineola the county seat. Mineola subsequently incorporated in 1906.⁴

The Long Island Rail Road

The Long Island Rail Road Company was incorporated by an act of the New York State Legislature on April 24, 1834, with the intention of linking New York and Boston via Long Island and a ferry.⁵ The railroad company chose to build through the flat, largely uninhabited plains in the southern section of the island where tracks could be laid without rivers or topography to maneuver and trains could speed through easily. The Long Island Rail Road (LIRR) had laid the first major section of the Main Line from Jamaica to Hicksville, stopping in several locations including Mineola, by 1837 when an economic crisis temporarily stopped work.⁶ The railroad's first branch line, completed in 1839, ran from Mineola to the relatively active commercial village of Hempstead to the south. For this reason, Mineola was known as "Branch" or "Hempstead Branch" until 1858.⁷ Work on the Main Line recommenced in 1840, reaching the proposed terminus in Greenport in 1844.

¹ Milred H. Smith, *Early History of the Long Island Railroad, 1834-1900* (Uniondale, Long Island: Salisbury Printers, 1958), 5.

² Maureen O'Connell, *Historical Guide to Nassau County* (Mineola, NY: Nassau County Clerk, 2014); Ralph Henry Gabriel, *The Evolution of Long Island* (New Haven, CT: Yale University Press, 1921), 50-60.

³ "This is the Story of Progress in Mineola," *Long Island Jewish Press* (October 1965), 25.

⁴ Rhoda Amon, "Long Island: Our History/Our Towns/Nassau/Mineola/First Farmers, Then Lawyers," *Newsday*, February 22, 1998.

⁵ Smith, *Early History of the Long Island Railroad*, 2.

⁶ Amon, "Long Island: Our History."

⁷ Smith, *Early History of the Long Island Railroad*, 6; "This is the Story of Progress in Mineola," 25. The name "Mineola" has its origins in the Algonquin tribe of Native Americans, but there are a variety of stories about who made the decision to change the name and where exactly it comes from.

Upon reaching Greenport in 1844, the almost all-rail link between New York City and Boston was complete. However, the success was short-lived. The seemingly impossible task of constructing a railroad through Connecticut's challenging topography was achieved in 1848, making the Long Island route obsolete. Faced with potential disaster, the Long Island Rail Road Company formulated a plan to produce a passenger market for their product. The challenge was formidable: the bulk of the population in Long Island at the time lived on the coasts with easy access to ship travel, while the central plains remained sparsely settled, with the exception of Hempstead, now linked to the Main Line via Mineola).⁸ The Long Island Rail Road cautiously expanded its network of rails starting in 1854 and began a long campaign to encourage real estate development and settlement in the interior areas of Long Island.⁹ Changes in policy at the LIRR caused growing animosity between the company and the people of Long Island, which fed competing railroads on the island including the South Side Railroad, North Shore and Flushing Railroad, and Central Railroad. Rate wars among the railroads resulted in 1876 in the acquisition of the Long Island Rail Road by Conrad Poppenhusen of the North Shore and Flushing Railroad.¹⁰ The years of competition ended with Austin Corbin, who became president of the Long Island Rail Road in 1880 and then consolidated the various Long Island railroads. The construction and consolidation completed by Corbin essentially brought the Long Island Rail Road to its present service map (save for its connection to Manhattan) by 1900.¹¹

On April 29, 1899, the New York State Legislature "passed the act giving to the Long Island Railroad the right to build a subway under Atlantic Avenue in Brooklyn, to tunnel under the East River, and to erect a terminal station in New York."¹² However, without the capital to fulfill the dream of a direct rail connection to Manhattan, the Long Island Rail Road looked to the capital-rich Pennsylvania Railroad. The Pennsylvania Railroad acquired the Long Island Rail Road in 1900, paying \$6 million for the controlling interest of Long Island's stock.¹³ By 1907, the Pennsylvania Railroad had published plans for a terminal and four tracks under the East River. Pennsylvania Station on Manhattan's west side opened three years later, on September 8, 1910, "with the LIRR as its inaugural train."¹⁴ Construction on the bridge and tunnel rail connection was complete in March 1917.¹⁵ The continuous rail connection between Manhattan and Long Island was a significant step for Long Island; previously remote areas could now be considered within commuting distance of the city and the railroad facilitated even more real estate speculation and development.¹⁶ The turn of the century was also a watershed moment in the broader history of New York City. Scores of immigrants poured through Ellis Island and swelled the city's population, new building projects were underway including the subway system, and

⁸ "LIRR: Tracking Long Island's History," *Newsday*, April 19, 1998.

⁹ Gabriel, *The Evolution of Long Island*, 143.

¹⁰ George H. Burgess, *Centennial History of the Pennsylvania Railroad Company, 1846-1946* (Philadelphia: The Pennsylvania Railroad Company, 1949), 480.

¹¹ Burgess, *Centennial History of the Pennsylvania Railroad Company, 1846-1946*, 480.

¹² Gabriel, *The Evolution of Long Island*, 143.

¹³ Burgess, *Centennial History of the Pennsylvania Railroad Company, 1846-1946*, 474; Ron Ziel and George H. Foster, *Steel Rails to the Sunrise* (New York: Duell, Sloan and Pearce, 1965), 120.

¹⁴ "LIRR: Tracking Long Island's History."

¹⁵ Gabriel, *The Evolution of Long Island*, 143.

¹⁶ Gabriel, *The Evolution of Long Island*, 144.

many new industries cropped up every year, predominantly in Brooklyn and western Queens.¹⁷ Railroads flourished nationally as a major mode of transportation in the early twentieth century, ushering in a period of economic growth for the Long Island Rail Road.

World War II stressed the Long Island Rail Road capacity with large numbers of military personnel and commuters.”¹⁸ However, the 1950s saw the dramatic decline of public transportation and the rise of the automobile and the suburb. The growth of the highway system also meant that rail freight shipping could not compete with trucking.¹⁹ On February 2, 1949, the Pennsylvania Railroad declared bankruptcy for the Long Island Rail Road. New York State set up the Long Island Transit Authority to oversee safety and improvement measures while former Pennsylvania Railroad official Thomas M. Goodfellow headed up the LIRR. Despite progress, the LIRR was still in need of improvements when New York State took it over with the newly-formed Metropolitan Commuter Transportation Authority (MCTA) in 1966.²⁰

Growth of Mineola

The development of Mineola and other inland Long Island towns is integrally linked to the history of the Long Island Rail Road. Mineola had started to grow as the seat of Nassau County beginning in 1786 and its prominence was strengthened by its location along the LIRR Main Line after 1837. When the short line to Hempstead was completed in 1839, Mineola continued to grow as a center of travel on Long Island. Mineola was one of several Long Island towns with a trolley connection with service to Roslyn, Hicksville, Port Washington, and Hempstead and the south side villages in the late nineteenth century, and from Mineola to Flushing in the early twentieth century.²¹ The Mineola station also served as the departure point for the Oyster Bay line of the Long Island Rail Road, the first leg of which was constructed in 1864 from Mineola to Glen Head.²² The line reached Locust Valley in 1871.²³ As a newly accessible destination, the town began to draw visitors especially once it became the long-time home for the Long Island Fair (later re-named the Mineola Fair), founded in 1842. The town hosted the Fair from 1866 to 1953.²⁴

Mineola and other Hempstead Plains towns experienced accelerated growth as a direct result of the rail connection between Manhattan and Long Island. Transportation between the various villages and regions of Long Island was improved, as well as the connection to the rapidly expanding boroughs of Brooklyn, Queens, and Manhattan.²⁵ Residential developers saw

¹⁷ Robert C. Sturm, *The Long Island Railroad Company: A History, 1834-1965* (Babylon, NY: Long Island—Sunrise Trail Chapter, National Railway Historical Society, 2014), 73.

¹⁸ “LIRR: Tracking Long Island’s History.”

¹⁹ Derek Stadler, “The Modernization of the Long Island Rail Road,” *CUNY Academic Works* (2016), 2.

²⁰ Stadler, “The Modernization of the Long Island Rail Road,” 6-7.

²¹ “In Mineola Neighborhood,” *Brooklyn Times*, March 27, 1909.

²² Smith, *Early History of the Long Island Railroad*, 59; Elizur Brace Hinsdale, *History of The Long Island Railroad Company, 1834-1898* (New York: The Evening Post Job Printing House, 1898), 8.

²³ Smith, *Early History of the Long Island Railroad*, 59.

²⁴ “Long Island Fair Returns to Old Bethpage Village from September 30 to October 3,” *Targeted News Service*, September 17, 2010.

²⁵ John A. Bonafide, “Long Island Railroad Station at Farmingdale,” National Register of Historic Places Inventory/Nomination Form (Albany, NY: New York State Office of Parks, Recreation and Historic Preservation, November 13, 1991), 2.

opportunities to build whole new neighborhoods, journals and newspapers touted health benefits of suburban living and the convenience and improvements of the Long Island Rail Road service, and the influx of wealthy families building recreational estates contributed to the rapid development of Long Island.²⁶ A new Mineola station was constructed in 1923, which significantly boosted land values and development accelerated. The *Long Island Daily Press* reported in July 1923 that local developers had begun buying up land near Mineola Station when the new station was announced for the purposes of constructing apartments and stores, consequently driving up land value.²⁷ The population (and demand for homes and amenities) continued to grow, doubling between 1950 and 1960 as young veterans and their families moved out to the suburbs.²⁸

The flat Hempstead Plains not only nurtured railroad transportation, but also air transportation. Proximity to New York City paired with plenty of flat land helped make Mineola the site of considerable aviation innovation and airplane production, particularly between 1918 and 1939.²⁹ Such early pioneers in aviation as Charles Lindbergh, Clarence Chamberlain and the Curtiss brothers spent time in Mineola during the “Golden Age of Aviation,” later giving rise to commercial airline production near Mineola.³⁰ By the 1950s, other Mineola industries included Swift and Co, the Knickerbocker Ice Company, Pittsburgh Plate Glass, H.O. Penn Machinery Company, National Biscuit Company, Armour Corporation, and Mason Mint.³¹

Evolution of Mineola Station

As the Long Island Rail Road and the town of Mineola developed, so did the Mineola Station. The first Mineola station was located within a wye (a triangle-shaped area bounded by track crossings) formed by the Main Line heading east-west, Hempstead Branch Line heading south, and the Oyster Bay Branch Line heading north (Figs. 1 and 2).³² A photograph of Mineola Station taken by George Brainerd c. 1872-1888 depicts a small, clapboard railroad depot in a rural setting (Fig. 3). In his seminal history of the Long Island Rail Road, author Vincent Seyfried notes that the depot was reportedly rehabilitated or altered in 1872. The photograph appears to have been taken from above the tracks looking east, likely on the A-frame bridge that conveyed pedestrians over the railroad tracks. Seyfried says of the bridge: “As the town grew, the station benefited from one of the earliest grade crossing eliminations—a bridge carrying Mineola Blvd [then 2nd Ave] over the track was erected in March 1878” (Fig. 4).³³ Photographs and historic maps locate the original and rebuilt 1872 train stations slightly west of where Nassau Tower now stands on the corner of Front and Main Streets. The station was rebuilt again in

²⁶ D. Maujer McLaughlin, “Nassau County Now a Great Home Center,” and Ralph Peters, “Electrification of the Long Island Railroad,” *Real Estate Record and Builders Guide* vol. 99 (June 1912), 1222-23.

²⁷ “New Station at Mineola Gives Land Values Big Boost,” *Long Island Daily Press*, July 27, 1923.

²⁸ Martin Weldon, “Salute to Mineola,” script of radio broadcast (New York: Port of New York, 1954), 7.

²⁹ Joshua Stoff, “The Aviation Heritage of Long Island,” Cradle of Aviation Museum, last updated 2018, <http://www.cradleofaviation.org/history/heritage.html>

³⁰ Weldon, “Salute to Mineola,” 7.

³¹ Weldon, “Salute to Mineola,” 4.

³² David D. Morrison, *Long Island Rail Road: Oyster Bay Branch* (Charleston, SC: Arcadia Publishing, 2018), 11.

³³ Vincent F. Seyfried, *The Long Island Rail Road: A Comprehensive History* (Garden City, Long Island: Vincent F. Seyfried, 1966-75), vol. 3, 188.

approximately 1883, again as a simple wood structure with one single interior room, but with the addition of large eaves on either side for waiting passengers.

Seyfried also notes the construction of a new brick switch tower at Mineola completed in May 1890 and operating during the last week of July 1890 (Fig. 5). He writes, “From contemporary descriptions we learn that the building was 16 x 30 in size and 33 feet in height; inside there were 36 levers.”³⁴ This tower was called Tower #48 until 1900, at which point the Long Island Rail Road numbering system changed and the tower was re-named Tower #45. It was renamed again as MT Tower in 1907.³⁵ Offices and storage occupied the first floor while the signal operation, with the panel board and switch levers, took place on the second floor. The tower controlled the switches and signals for the Hempstead Branch, the Oyster Bay Branch, and this section of the Main Line.³⁶ The engineer posted at the tower blew a whistle or horn to alert people at the grade crossing at Main Street about approaching trains.³⁷ The design of this building was very simple: the building was a plain, two-story brick building with a pitched roof. It stood just east of the Mineola station on the corner of Front Street and Main Street, at the grade crossing of Main Street (See Fig. 2). The brick MT switch tower stood until 1922.

The Mineola Substation and Nassau Tower

The Long Island Rail Road Company determined that increased ridership in the early twentieth century would be accommodated by electrification of the rail system. The transition from steam to electric was spurred by the use of electric rails by the Interborough Rapid Transit (IRT) and Brooklyn Rapid Transit (BRT), pressure from municipal governments who wanted the end of steam pollution in their towns, the electrification of Penn Station, and the increased capacity and speed afforded by electrification.³⁸ The electrification of the Long Island Rail Road was a notable and pioneering endeavor, one of the first (if not the first) railway in the nation to attempt the change on such a large scale.³⁹ A central power station was constructed in Long Island City and began operating with a network of six substations in 1905. The first substations were Woodhaven Junction, East New York, Grand Avenue (Brooklyn), Hammel, Rockaway Junction Hammel, and Valley Stream, and two portable sub-stations were temporary placed at Belmont Park and Springfield Junction.⁴⁰ The power station and substations were planned, designed, and built by Westinghouse, Church, Kerr & Company under the direction of George Gibbs, chief engineer of electrical traction for the Long Island Rail Road.⁴¹

³⁴ Seyfried, *The Long Island Rail Road: A Comprehensive History*, vol. 6, 208.

³⁵ Seyfried, *The Long Island Rail Road: A Comprehensive History*, vol. 6, 208.

³⁶ Morrison, *Long Island Rail Road: Oyster Bay Branch*, 26, 29.

³⁷ Morrison, *Long Island Rail Road: Oyster Bay Branch*, 31.

³⁸ Sturm, *The Long Island Railroad Company: A History, 1834-1965*, 81-82.

³⁹ “Electric Operation on the Long Island Railroad,” *Electric Railway Journal* 37, no. 23 (1911), 1002-03.

⁴⁰ “The Pennsylvania Railroad’s Extension to New York and Long Island—The Long Island City Power Station,” *Street Railway Journal* 27, no. 14 (April 1906), 536; W.N. Smith, “The Power Transmission Line and Third-Rail System of the Long Island Railroad-I,” *Street Railway Journal* 27, no. 23 (June 1906), 896.

⁴¹ W.N. Smith, “The Rotary-Converter Substations of the Long Island Railroad,” *Streetcar Railway Journal* 27, no. 25 (June 1906), 983.

In 1910, the Mineola electrical substation, known as electric substation No. 8, was completed and came online.⁴² By this time, substations at Jamaica, Long Beach, and Winfield had also been added and five more were planned to meet increasing demand.⁴³ The Mineola substation replaced a portable substation apparatus that was able to move between branch lines, and a contemporary newspaper account notes that the substation would provide the electricity for the Hempstead and Garden City lines from Rockaway Junction to Hempstead and for the third rail extensions from Floral Park to Mineola and the Oyster Bay branch. Rotary transformers with 1,000 kilowatt capacities were to be installed in the substation.⁴⁴

The process of electrification reportedly proceeded without issue, or at least with enough success to propel future expansion plans.⁴⁵ The main power plant in Long Island City produced and distributed high voltage AC power to a network of electrical substations at strategic locations, of which Mineola was one. The substation contained control equipment, blowers, and a “step-down transformer to reduce the voltage from the transmission line to a safe level for feeding into a rotary converter that acted simultaneously as an AC motor and as a 600-volt DC generator.”⁴⁶ Altogether, the substation equipment served to reduce the high-voltage power from the main power plant and convert it to direct current (DC) power. Electrification of the railroad also involved installing hundreds of miles of new tracks and transmission wires, “double tracking” to increase the number of freight and passenger lines available, and introduced the “third rail,” powered by the substations. In the first six years of the electrification process, 62 miles of the LIRR routes were electrified, 100 trains ran each day in either direction, carrying an average 11,800 daily passengers.⁴⁷

At the Mineola electrical substation specifically, the power was intended to provide electricity to the Hempstead Branch via feeder cables to the third rail and for future expansion of electric lines (Fig. 6); a third rail was not extended on the Main Line to Mineola until 1926.⁴⁸ LIRR documentarian Dave Keller explains that the cables ran “alongside the non-electrified tracks which ran from Mineola to Hempstead Crossing just east of the Garden City station. Electrification via third rail reached Mineola and went south along the spur to Garden City in October 1926, allowing electric trains to run from Mineola to Hempstead, Mineola to West Hempstead and Mineola to Valley Stream via the West Hempstead branch” (Fig. 11).⁴⁹

⁴² Long Island Rail Road Company, *29th Annual Report*, December 1910, 19.

⁴³ Morrison, *Long Island Rail Road: Oyster Bay Branch*, 31; “Development of the Island’s Transportation,” *New York Times*, September 4, 1910.

⁴⁴ “Mineola Sub-Station,” *Brooklyn Daily Eagle*, March 29, 1910.

⁴⁵ Sturm, *The Long Island Railroad Company: A History, 1834-1965*, 81-82.

⁴⁶ Hilton and Due, *The Electric Interurban Railways in America* (1964), 55, as quoted in Bonafide, “Long Island Railroad Station at Farmingdale,” 6.

⁴⁷ “Electric Operation on the Long Island Railroad,” 1002.

⁴⁸ Morrison, *Long Island Rail Road: Oyster Bay Branch*, 29.

⁴⁹ Dave Keller, “L.I.R.R. Telegraphic Call Letter, Number, and Names for Station,” *Trains Are Fun*, last updated June 24, 2018, <http://www.trainsarefun.com/lirrphotos/LIRR%20CALL%20LETTERS.htm>; Dave Keller, email message to author, July 5, 2017.

The early substations required supervision at all times; consequently, they were usually constructed next to stations, switch towers, or “residences of their tenders.”⁵⁰ The Mineola substation was no exception. It was constructed adjacent to the 1883 station and brick switch tower. The size of the electrical substation building necessitated moving the east canopy of the 1883 station closer to the tracks, so all three buildings could fit within the area bound by the wye and Main Street (Fig. 10).⁵¹ Architecturally, the substation was designed in a restrained Beaux Arts style—an immensely popular style at the turn of the century that pervaded civic, commercial, residential, and industrial buildings. Through Classical and European proportions and decoration, the Beaux Arts style was intended to evoke power and permanence. The large round-arched windows at the substation recall monumental Roman arches, and decorative elements such as intermediate stone courses and decorative brickwork balance elegance with industrial functionalism (Fig. 7).

The Mineola substation and the brick switch tower side by side until 1922. A wood platform and stair connected the second story of the switch tower to an interior mezzanine in the substation. On December 31, 1922 a wooden boxcar hitched to an Erie Railroad freight train collided with the MT Tower, severely damaging the structure. When the boxcar was removed, the tower collapsed (Figs. 8 and 9). A wooden platform connecting the tower and substation that had allowed the engineer to escape was removed after the tower collapse, but the electrical substation did not sustain any damage.⁵² The tower was re-built around the existing 1890 Saxby & Farmer 52 lever mechanical interlocking machine.⁵³ The re-built MT Tower, constructed of wood rather than brick, was placed into service on April 25, 1923 (Fig. 12). It was renamed “FAIR” after the annual Mineola Fair in April 1937 and then renamed “NASSAU” in September of 1938.⁵⁴ The Nassau Tower controlled the switches for the Hempstead Line, a portion of the Oyster Bay Line, and a portion of the Main Line up to the closing of the Hempstead Line in 1965. The tower controlled all of the Oyster Bay Line after the closing of Locust Tower in 1975.⁵⁵

Shortly after the construction of the new switch tower, the Long Island Rail Road Co. completed a new station in September 1923. This station moved to the west side of Mineola Boulevard to the present station location.⁵⁶ The moving of the station location in 1923 meant a separation of the stations and the service buildings (i.e., the sub-station and tower).

The Long Island Rail Road constructed buildings in a wide variety of architectural styles throughout the late nineteenth and early twentieth centuries. Monumental masonry buildings with varying ornament often characterized stations and support buildings, as did wood-frame structures with Dutch gable roofs and revival-style details.⁵⁷ However, the railroad also erected

⁵⁰ Hilton and Due, *The Electric Interurban Railways in America*, 55, as quoted in Bonafide, “Long Island Railroad Station at Farmingdale,” 6; Bonafide, “Long Island Railroad Station at Farmingdale,” 5.

⁵¹ David Morrison & Valerie Pakaluk, *Long Island Railroad Stations* (Charleston, SC: Arcadia Publishing, 2003), 48.

⁵² Morrison, *Long Island Rail Road: Oyster Bay Branch*, 28.

⁵³ Morrison, *Long Island Rail Road: Oyster Bay Branch*, 25.

⁵⁴ Keller, “L.I.R.R. Telegraphic Call Letter, Number, and Names for Station”; Dave Keller, email message to the author, July 5, 2017.

⁵⁵ Morrison, *Long Island Rail Road: Oyster Bay Branch*, 8.

⁵⁶ Seyfried, *The Long Island Rail Road: A Comprehensive History*, vol. 3, 188.

⁵⁷ Ron Ziel and Richard Wettreau, *Victorian Railroad Stations of Long Island* (Bridgehampton, NY: Sunrise Special Ltd in conjunction with Amereon House, 1988), 116.

many simple, hip-roofed structures between the 1890s and 1940; the last station of this type was constructed in Medford in 1940.⁵⁸

As of 2018, only a few hip-roofed structures survive, including the Port Washington and Smithtown station buildings and the Locust Valley switch tower.⁵⁹ The hip roof is characteristic of LIRR construction at the time, although the use of wood was atypical for the time. The Long Island Rail Road built primarily in masonry from about 1890 to the start of the Great Depression, building a variety of impressive structures meant to exude permanence and solidity. Most interlocking towers were built of wood until 1900, after which time they were built of masonry.⁶⁰ The reasons for the decisions by the LIRR to construct some buildings of masonry and others of wood in the late nineteenth and early twentieth centuries remain unknown. As author Ron Ziel notes, “Unfortunately, after the passing of a century in which the railroad assiduously destroyed virtually all the records and photographs pertaining to its development, it is impossible to gauge many of the factors that determined station construction decisions.”⁶¹

Currently, the Mineola Electrical Substation is largely out of service, although some signal and power controls still run through the building, suspended across the interior ceiling. Nassau Tower’s 52 lever interlocking machine was replaced with an electronic switch system in 1997.⁶² Nassau Tower was one of the Long Island Rail Road’s few remaining active signal towers, as the LIRR moves to centralize signaling at one location. The signals in Nassau Tower remain in limited use today.⁶³

⁵⁸ Ziel, *Victorian Railroad Stations of Long Island*, 92.

⁵⁹ David D. Morrison, *Long Island Rail Road: Port Jefferson Branch* (Charleston, SC: Arcadia Publishing, 2013), 71.

⁶⁰ Ziel, *Victorian Railroad Stations of Long Island*, 170.

⁶¹ Ziel, *Victorian Railroad Stations of Long Island*, 170.

⁶² Keller, “L.I.R.R. Telegraphic Call Letter, Number, and Names for Station”; Dave Keller, email message to the author, July 5, 2017.

⁶³ Keller, “L.I.R.R. Telegraphic Call Letter, Number, and Names for Station.”

Part II. Architectural Information

A. General Statement

- 1. Architectural character:** The Nassau Tower is a small, two-story building that houses control switches for the Long Island Railroad. The building reflects the broader context of functional railroad buildings and the many iterations of form and style that these utilitarian buildings took over time. The tower is not reflective of a specific trend in Long Island Rail Road support buildings, although it is part of the wide category of wood-frame buildings opposed to masonry.
- 2. Condition of fabric:** Overall, Nassau Tower is in fair to good condition. The structure appears to be generally sound. Paint is peeling extensively and there is minor soiling across all the facades. Some thin horizontal cracks are present in the stucco. Interior finishes, primarily at the first floor, have been removed in several areas.

B. Description of Exterior

Overall dimensions:

Nassau Tower is rectangular in plan. The building is separated into two horizontal sections with different types of cladding: the first story stucco base and the shingled second story. The building measures 36.5' by 16' and rises approximately 27.5' in height. The north and south second-story facades have a shallow overhang above the first story. The building is capped with a pitched hipped roof.

Foundations:

The building sits on a concrete foundation. The foundation is partially visible at the north façade.

Walls:

The exterior facades of Nassau Tower are clad with consistent materials at the first and second stories. Almost all wood elements are painted red; the paint exhibits some peeling across all facades. The first story is clad with rough-textured stucco. The stucco is painted, but the paint is peeling severely and is missing on the majority of wall surfaces. Below the stucco is an underlayment of diagonal wood boards. Door and window surrounds are level with the stucco surface. At the base of the east, south, and west facades, large composite particle or gypsum boards have been screwed into the stucco. Boards have been cut to fit around the window surrounds but cover the wood corner posts that are present at all four corners of the first story.

The second story facades are clad with painted asbestos cement board shingles. The paint at this story is also peeling severely and has been lost in many areas. The soffits of the north and south overhangs are wood beadboard with a thin molding at the stucco surface. The overhangs are faced with a flat wood board and a quarter-turn molding below the second story shingles. At each corner of the overhangs are a thin wood bracket with carved, molded profile. On the east and west facades, the overhang is merely the width of the fascia board and quarter-turn molding.

The west façade contains the building's primary entrance near the south corner and a secondary door and wood porch at the north corner. Composite board is fastened to the stucco cladding between the door openings and wraps around the southwest corner. A square opening has been cut into the stucco and wood underlayment to house a metal vent just above the composite board between the two doors. At the second story, two one-over-one, metal-frame sash windows are located slightly south of center. Differences in the shingle pattern north of the windows indicate the infill of a previous window opening. A sign reading "NASSAU" is attached to the shingles above the secondary door. A square wood frame opening infilled with plywood is present above the sign, and a modern box light, protective electrical wire casings, and wire anchors have been fastened to the façade.

The south façade contains three window openings at the first story and one at the east portion of the second story. An air-conditioning unit is located in a through-wall opening in the western portion of the second story. Modern lights, hose equipment, a small vent, and wire anchors and protective casings are present across the façade. The east façade contains one first-story window to the south and three second-story windows: two paired windows in one opening slightly south of center and one opening at the north corner. An air-conditioning unit has been installed in a through-wall opening between the windows openings, the area of an infilled window opening. A sign reading "NASSAU" is fastened to the shingle cladding between the air-conditioner and window. A utility meter, mechanical control box, pipe casings, a modern box light, and wire anchors are present at the façade.

The north façade contains one window at the center of the first story and two windows at the east and west ends. Interruptions in the shingle pattern adjacent to the east window indicate a previous window opening. There is no composition board at this facade, revealing a horizontal wood board at the base of the first story stucco and the topmost portion of the concrete foundation. Two switch control boxes and a modern box light are attached at the west corner.

Structural system, framing:

Nassau Tower is a wood-frame structure. The structural elements are largely obscured at the exterior by cladding materials. The roof wood trusses are visible at the interior attic level.

Porches, stoops, balconies, porticoes, bulkheads:

A wood porch is located at the northwest corner of the building. The deck extends in an L-shape from the secondary entrance along the railroad tracks. The porch is constructed of dimensional lumber and has a simple, open structure. Three steps flanked by low railings leads from grade to the deck and the secondary entrance. The deck continues north past the façade and turns west. The wood railing has square posts and horizontal mid-boards. Above each of the two entrances are translucent plastic awnings with wood framing. The awning at the secondary entrance connects to the porch, while the awning above the primary entrance sits on diagonal wood braces with a shallower angle. Two concrete stairs lead to the primary entrance.

Chimneys:

One brick chimney is located in the southeast corner of the building. It rises through the hipped roof and is flashed at its base.

Openings

Doorways and doors:

The two doors at the west façade are single, hollow metal doors in metal frames. The appearance and material of original doors at Nassau Tower is unknown. Both rectangular door openings are framed by flat wood board surrounds.

Windows and shutters:

Windows at the first story, with one exception, are typical across the south, east, and north facades. These typical windows are wood-framed, one-over-over sash windows set in rectangular openings that extend from the top of the composite boards to the second story soffit. Openings are surrounded by wide, flat wood boards at the sides, surmounted by a wide board with projecting lip at the top, and have a thin, sloping wood sill. Air-conditioning units have been installed in the west window at the south façade and the window at the north façade. The first story exception is a square opening that contains a small metal-frame, one-over-one sash window with a typical wood surround. A small air-conditioning unit is located in a punched opening in the wall just above this window.

Second-story windows at all four façades are metal-frame, one-over-one sash windows. The wood surround for each opening has a thinner profile than those at the first story. Paired windows at the east and west façades are separated by a thin mullion.

Roof:

Nassau Tower is capped by a pitched hipped roof. The roof is clad with asphalt shingle. A series of lighting rods are installed along the center ridge. Roof eaves extend over the second story at all facades. Flat wood boards and thin strips of molding at the top of the second-story facades meet the eave soffit, which is clad with wood beadboard. The fascia at the eave edges is a flat wood board; at the west façade, the fascia is unpainted.

C. Description of Interior

Floor plans:

The Nassau Tower building is rectangular in plan and consists of two floors. At the first floor, there is an entry hall to the west. The stairway to the second floor is located in the northwest corner. A central main room occupies the majority of the first floor, where large metal racks of servers are held. A small mechanical room has been enclosed at the southeast corner of the first story. The second floor consists of one large room that contains the switch control equipment. A small bathroom has been enclosed in the northwest corner, the walls of which do not extend the full height of the room.

Stairways:

One wood stairway leads from the northwest portion of the first floor along the west wall to the second floor. The stairs are covered with a rubber sheathing with grooved treads. A wood

handrail is attached to the east wall of the enclosed stairway. At the second story, a low wood-framed wall with beadboard finish on one side guards the opening in the floor.

Flooring:

The floor finish at the first floor is vinyl tile, unpainted plywood, and concrete. Carpet covers the floor in some areas of the main room and entry hall. The flooring at the second floor is vinyl tile.

Wall and ceiling finish:

Wall finishes at the first story include painted beadboard and pressed metal panels. The panels are square and have a shallow pattern of concentric squares. Sheet metal trim pressed with a garland pattern is found in most junctions between wall and ceiling. Interior partition walls are wood frame, with the vertical and horizontal members forming a district grid with inset wood panels (painted and unpainted). In the main room, a wood beam runs east/west along the center of the ceiling; two metal columns are bolted to this beam. The first-floor ceiling finish is mostly pressed metal panels; in the northern portion of the main room, the panels have been replaced with acoustic tile or removed to expose the structural wood frame.

The walls at the second floor are painted drywall topped with simple molded trim. The ceiling is painted drywall.

Openings

Doorways and doors:

The door from the entry hall to the stairway is a single, composite wood door covered with wood laminate. The door at the small southeast mechanical room is a paneled wood door. The only door at the second floor is a single, composite wood door at the northwest bathroom.

Windows:

Windows at the first and second floors have wood sills and thin wood surrounds. Many of the first-floor windows are covered or obscured by switch control equipment.

Decorative features and trim:

There are no additional decorative features at the interior. Modern composite wood cabinets have been installed in a kitchen area at the second floor.

Hardware:

There does not appear to be any extant notable hardware.

Mechanical equipment

Heating, air conditioning, ventilation:

Metal radiators are present at both floors. Air-conditioning units have been installed in windows and through-wall openings at both floors.

Lighting:

Florescent lights are suspended from the ceiling at the first and second floors. One pendant light with metal shade is present in the entry hall. Numerous fuse boxes are fastened to walls. A complex network of loose wires, outlets, and plastic and rubber casings run throughout the first floor.

Plumbing:

Copper, iron, and plastic utility pipes are present throughout the first floor. A modern water heater is located in the southeast corner. Pipes at the first and second floors are suspended from the ceilings and fastened to walls to supply the sinks and restroom fixtures throughout the building. All of the second-floor radiators are connected by a suspended pipe.

D. Site Information

Historic landscape design:

Nassau Tower was constructed as a utilitarian signal control tower and was not accompanied by any historic landscape or site treatments. The tower replaced an earlier control tower on the site and its location was determined by the requirements of the signal equipment, the constrained lot size, and the existing Electrical Substation building. The building was necessarily sited very close to the railroad track. The Mineola Station building is no longer located adjacent to the Nassau Tower. To the south is the Electrical Substation and to the east is Main Street.

Outbuildings:

There are no outbuildings associated with the Nassau Tower.

Part III. Sources of Information

A. Historic Documents and Articles

Amon, Rhoda. "Long Island: Our History / Our Towns / Nassau / Mineola / First Farmers, Then Lawyers." *Newsday*, February 22, 1998. ProQuest.

Bonafide, John A. "Long Island Railroad Station at Farmingdale." National Register of Historic Places Inventory/Nomination Form. New York State Office of Parks, Recreation and Historic Preservation, Albany, November 13, 1991.

Burgess, George H. *Centennial History of the Pennsylvania Railroad, 1846-1946*. Philadelphia: The Pennsylvania Railroad Company, 1949.

"Development of the Island's Transportation." *New York Times*, September 4, 1910.

"Electric Operation on the Long Island Railroad." *Electric Railway Journal* 37, no. 23, 1911.

Gabriel, Ralph Henry. *The Evolution of Long Island*. New Haven: Yale University Press, 1921.

Hinsdale, Elizur Brace. *History of the Long Island Railroad Company, 1834-1898*. New York: The Evening Post Job Printing House, 1898.

"In Mineola Neighborhood." *Brooklyn Times*, March 27, 1909.

Keller, Dave. "L.I.R.R. Telegraphic Call Letter, Number, and Names for Station, Block Station, Block Limit Stations, Train Order Offices, Signal Station, Manual & Remote Control (R.C.) Interlockings." *Trains Are Fun*. Updated June 24, 2018.
<http://www.trainsarefun.com/lirrphotos/LIRR%20CALL%20LETTERS.htm>

"LIRR: Tracking Long Island's History." *Newsday*, April 19, 1998. ProQuest.

"Long Island Fair Returns to Old Bethpage Village from September 30 to October 3." *Targeted News Service*, September 17, 2010. ProQuest.

Long Island Rail Road Company, *29th Annual Report*, December 1910. The Archives at Queens Library.

McLaughlin, D. Maujer. "Nassau County Now a Great Home Center." *Real Estate Record and Builders Guide* vol. 99, June 1912: 1222.

"Mineola Sub-Station." *Brooklyn Daily Eagle*, March 29, 1910.

Morrison, David D. *Long Island Rail Road: Oyster Bay Branch*. Charleston, SC: Arcadia Publishing, 2018.

———. *Long Island Rail Road: Port Jefferson Branch*. Charleston, SC: Arcadia Publishing, 2013.

- Morrison, David D. and Valerie Pakaluk. *Long Island Rail Road Stations*. Charleston, SC: Arcadia Publishing, 2003.
- “New Station at Mineola Gives Land Values Big Boost.” *Long Island Daily Press*, July 27, 1923.
- O’Connell, Maureen. *Historical Guide to Nassau County*. Mineola, NY: Nassau County Clerk, 2014.
- Peters, Ralph. “Electrification of the Long Island Railroad.” *Real Estate Record and Builders Guide* vol. 99, June 1912: 1223.
- Seyfried, Vincent F. *The Age of Expansion, 1863-1880*. Vol. 3, *The Long Island Rail Road: A Comprehensive History*. Garden City, Long Island: Vincent F. Seyfried, 1966.
- Seyfried, Vincent F. *The Golden Age, 1881-1900*. Vol. 6, *The Long Island Rail Road: A Comprehensive History*. Garden City, Long Island: Vincent F. Seyfried, 1975.
- Smith, Mildred H. *Early History of the Long Island Railroad, 1834-1900*. Uniondale, Long Island: Salisbury Printers, 1958.
- Smith, W.N. “The Rotary-Converter Substations of the Long Island Railroad,” *Streetcar Railway Journal* 27, no. 25, June 1906: 968-983.
- . “The Power Transmission Line and Third-Rail System of the Long Island Railroad—I.” *Street Railway Journal* 27, no. 23, June 1906: 896-905.
- Stadler, Derek. “The Modernization of the Long Island Rail Road.” *CUNY Academic Works*, 2016.
- Stehling, Nancy A. “Long Island Rail Road Expansion Project: Floral Park to Hicksville.” Final Environmental Impact Statement, Phase 1A Archaeological Investigation, April 2017.
- Stoff, Joshua. “The Aviation Heritage of Long Island.” Cradle of Aviation Museum. Updated 2018. <http://www.cradleofaviation.org/history/heritage.html>.
- Sturm, Robert C. *The Long Island Railroad Company: A History, 1834-1965*. Babylon, NY: Long Island – Sunrise Trail Chapter, National Railway Historical Society, 2014.
- “The Pennsylvania Railroad’s Extension to New York and Long Island—The Long Island City Power Station.” *Street Railway Journal* 27, no. 14, April 1906: 536-553.
- “This is the Story of Progress in Mineola.” *Long Island Jewish Press*, October 1956.

Weldon, Martin. "Salute to Mineola." Script of radio broadcast. New York: Port of New York, 1954.

Ziel, Ron and George H. Foster. *Steel Rails to the Sunrise*. New York: Duell, Sloan and Pearce, 1965.

Ziel, Ron and Richard Wettereau. *Victorian Railroad Stations of Long Island*. Bridgehampton, NY: Sunrise Special Ltd in conjunction with Amereon House, 1988.

B. Historic Images and Figures

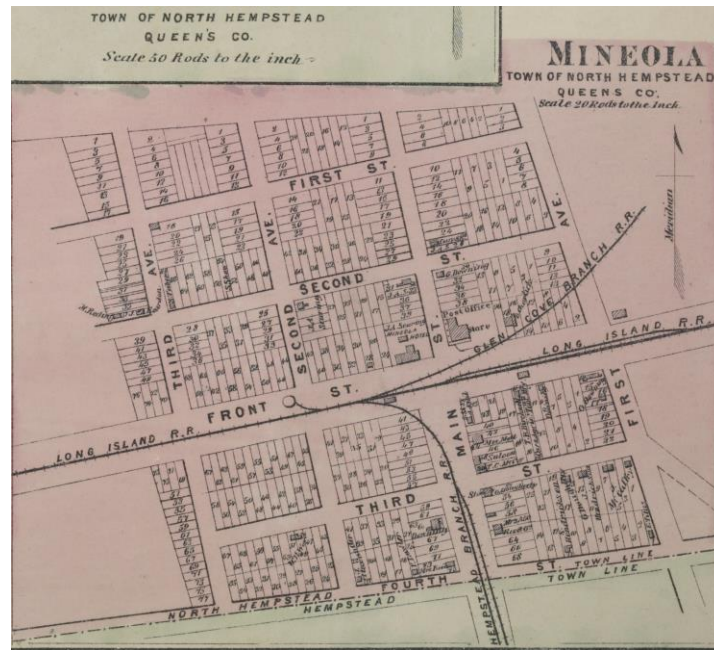


Fig. 1. An 1873 map illustrates the small rectangular station located at the junction of several railroad tracks. Source: (Detail) Map by Frederick W. Beers. "Mineola, Town of North Hempstead, Queens Co.," 1873. Image courtesy of the New York Public Library.

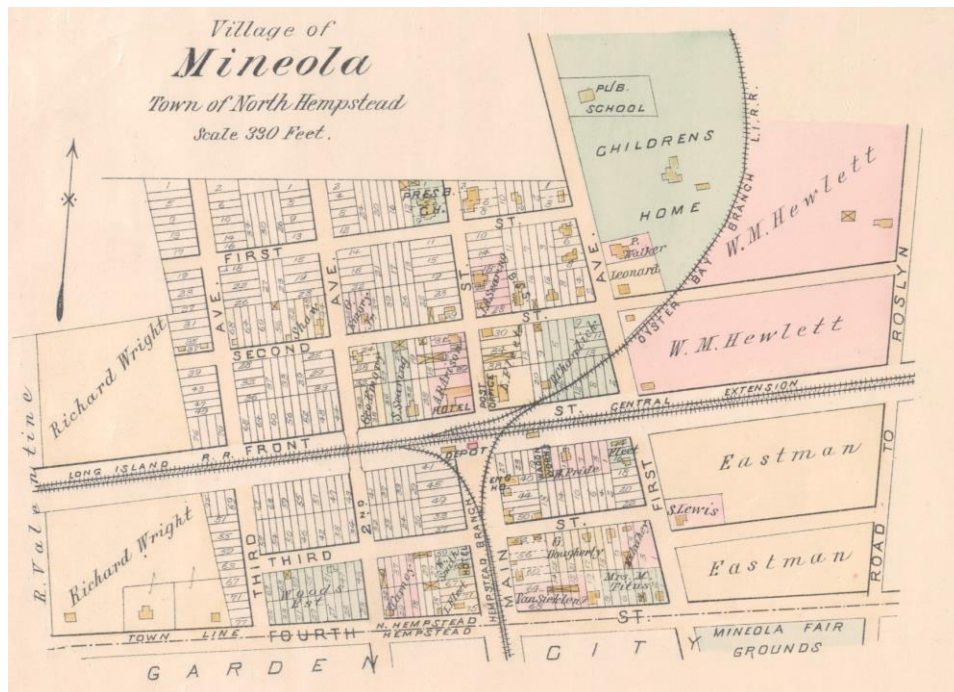


Fig. 2. By 1891, the signal tower has been added and a third rail line constructed to enclose the station buildings. Source: (Detail) Map by Chester Wolverton. "Plate 26: Village of Oyster Bay, Town of Oyster Bay. - Village of Roslyn, Town of North Hempstead. - Village of Mineola, Town of North Hempstead. - Village of Hicksville, Town of Oyster Bay." Atlas of Queens County, Long Island [1891]. Image courtesy of the New York Public Library.



Fig. 3. View of an early Mineola Station, c.1872-1887, looking east along the Main Line tracks. The Hempstead Branch line (right) turns southward. Source: Brainerd, George Bradford. *Mineola Station, Long Island*. 1872-1887. Collodion silver glass wet plate negative. Image courtesy of the Brooklyn Museum, <https://www.brooklynmuseum.org/opencollection/objects/191058>.



Fig. 4. An early grade-crossing elimination bridge carrying Mineola Boulevard. The Mineola station is visible in the distance beyond the bridge. Source: Brainerd, George Bradford. *Bridge, Mineola, Long Island*. 1872-1887. Collodion silver glass wet plate negative. Image courtesy of the Brooklyn Museum, <https://www.brooklynmuseum.org/opencollection/objects/191059>.

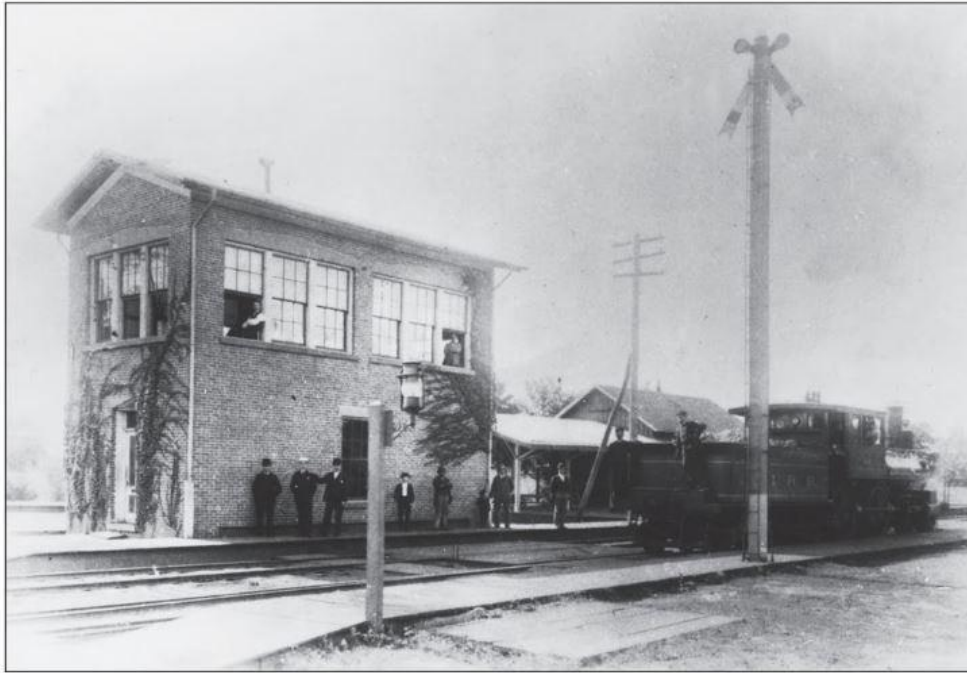


Fig. 5. This photograph depicts the brick signal tower and the 1883 Mineola station (right) prior to the construction of the electrical substation in 1910. Source: *Long Island Rail Road: Oyster Bay Branch*, 26.

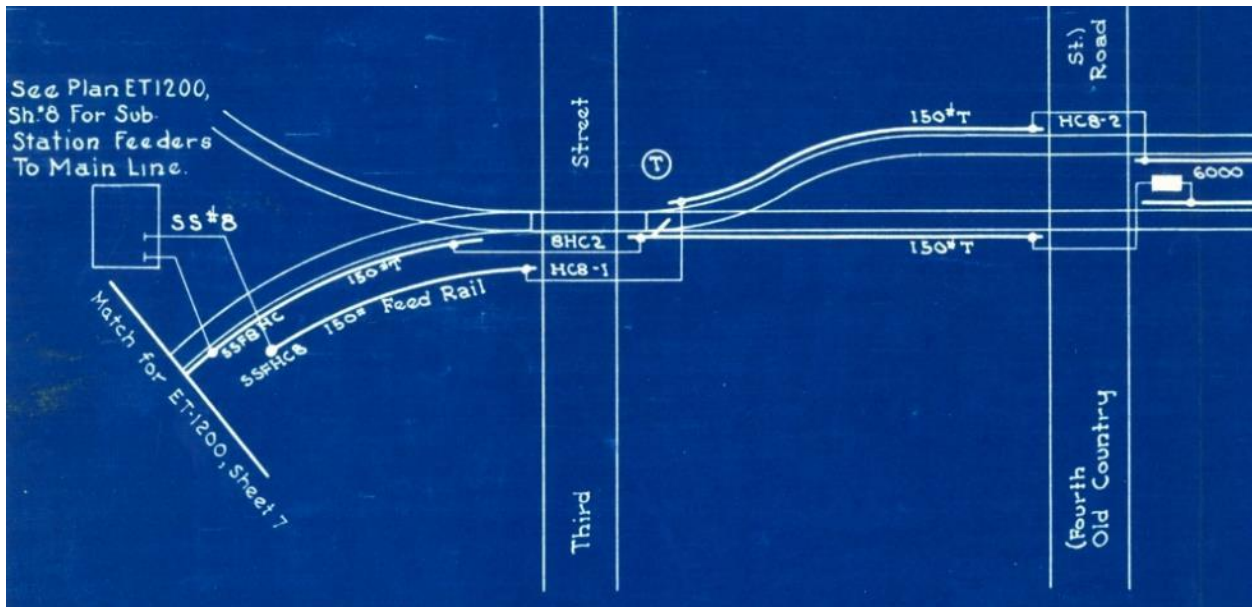


Fig. 6. This blueprint shows the feeders going from Substation No. 8 to the Hempstead Line and the tracks just south of the substation. Source: Huneke, Arthur John. "The L.I.R.R.'s Four Battery Cars." Last modified December 31, 2017. <http://arrrts-archives.com/battery.html>.



Fig. 7. The east and south facades of the Mineola Electrical Substation (substation No. 8) in a photograph dated November 7, 1918, eight years after the building's completion. View looking west from Main Street. The bridge between the substation and signal tower is still intact (visible at the far right). The garage addition has not yet been built. Little else had been altered between this photograph and the current appearance. Source: *Long Island Rail Road: Oyster Bay Branch, 29*.



Fig. 8. The brick signal tower was destroyed on December 31, 1922. The north and east facades of the Substation are unharmed, viewed looking south on Main Street. Source: *Long Island Rail Road: Oyster Bay Branch, 29*.

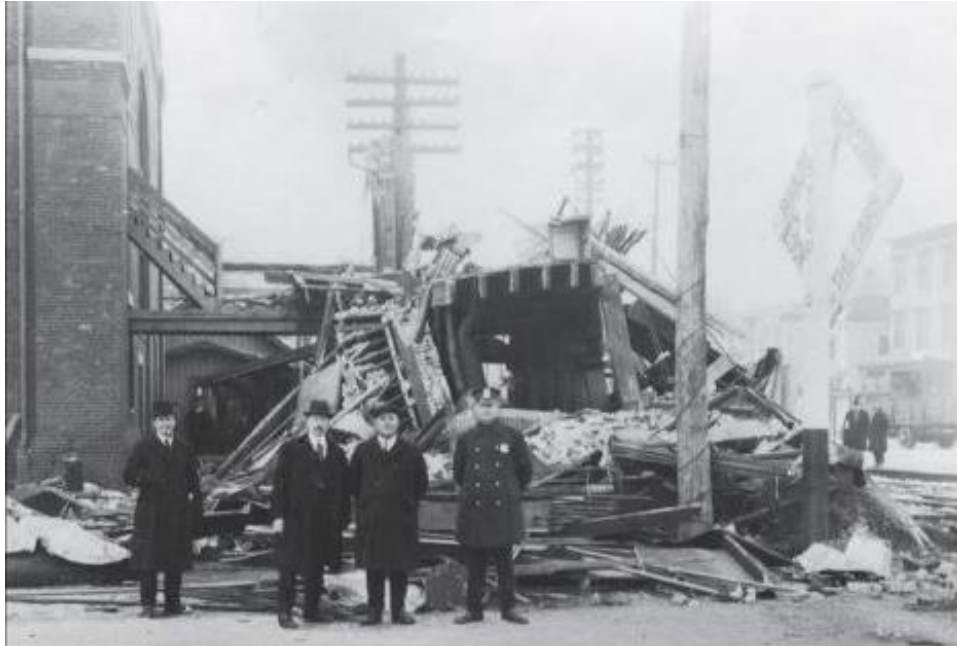


Fig. 9. The destroyed brick signal tower would be replaced by the Nassau Tower in 1923. The platform and stair that connected the tower and the Substation is clearly visible at left. These were likely demolished around the time of the new tower's construction. Source: *Long Island Rail Road: Oyster Bay Branch*, 28.

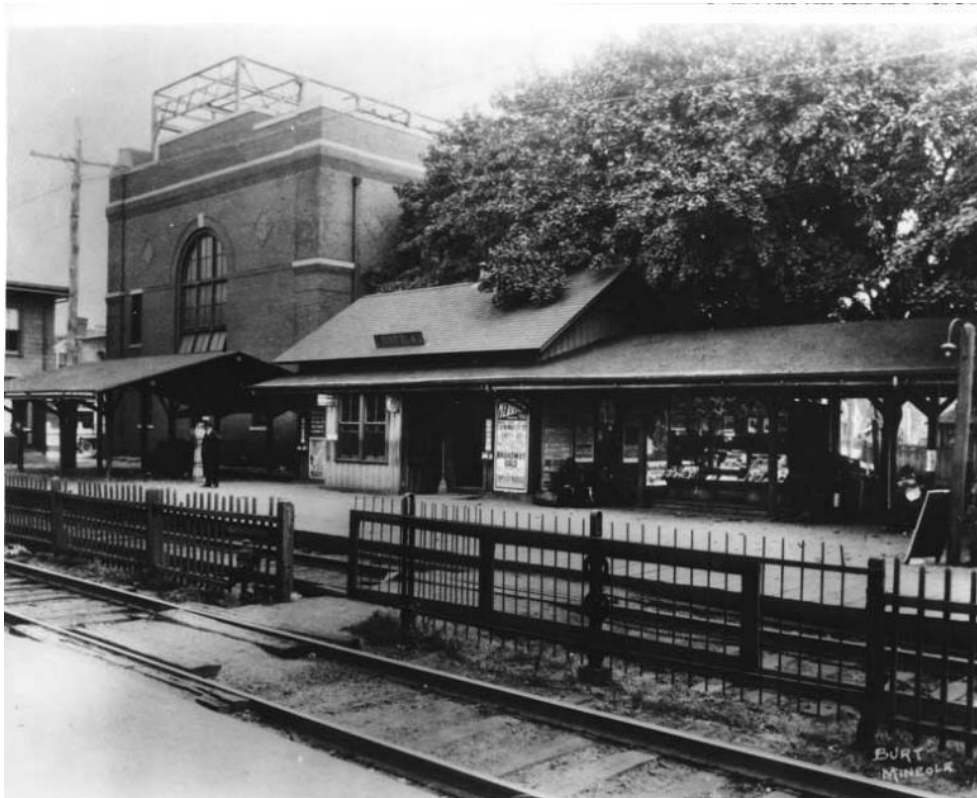


Fig.10. This post-1923 photograph shows how the 1883 station, signal tower (far left), and Electrical Substation are so close to each other that the east canopy of the station had to be moved to accommodate the substation. Source: Photographer Joe Burt, image accessed from the Queens Public Library



Fig. 11. Newly electrified rails in use around 1926, view looking north from the Hempstead Line tracks next to Main Street. The main doors and awning windows at the south facade of the Substation are clearly visible. Source: Huneke, Arthur John. "The L.I.R.R.'s Four Battery Cars." Last modified December 31, 2017. <http://arrts-archives.com/battery.html>. Image courtesy of Dave Keller.



Fig. 12. A train passes the rebuilt signal tower in the 1950s. Source: *Long Island Rail Road: Oyster Bay Branch*, 25, image courtesy of the Mineola Historical Society.

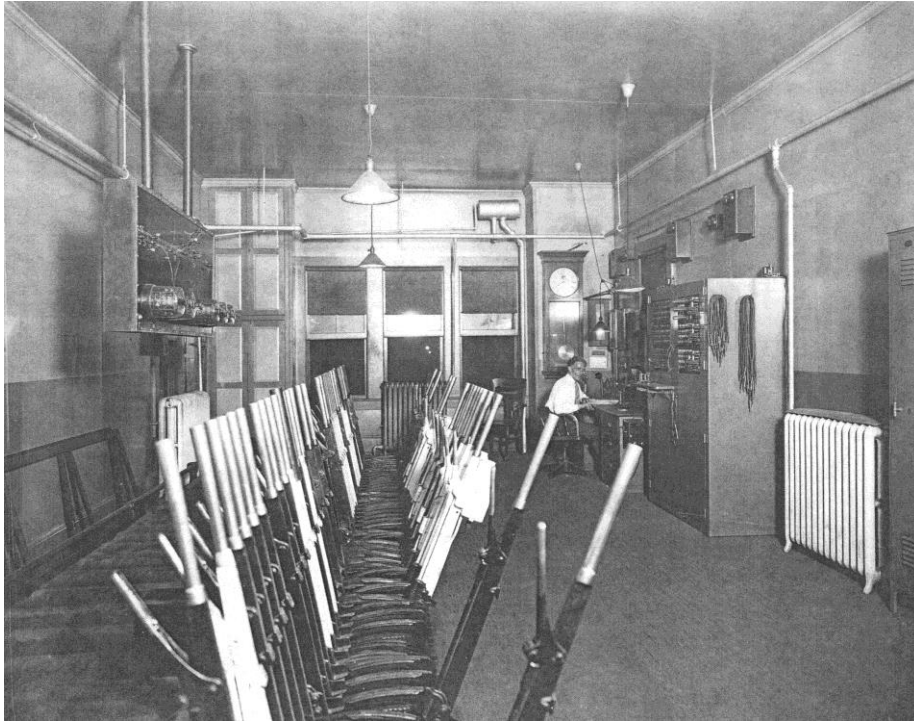


Fig. 13. The original 52 lever interlocking machine that controlled signals at the second story of the Nassau Tower, photographed c.1930. The three original windows of the north facade are seen at the rear wall. Source: Photographer: unknown, image accessed from the Queens Public Library.



Fig. 14. The east facade of Nassau Tower c.1958, showing the four original window openings at the second story, view looking west. Source: Photographer: John Krause, image accessed from the Queens Public Library.



Fig. 15. East and north facades of Nassau Tower in May 1971, view looking southwest. The original fenestration pattern and multi-lite windows are still intact. Source: "LIRR Interlocking Towers & Cabins," <http://www.trainsarefun.com/lirr/lirr%20towers/lirrtowers.htm>, image courtesy of Richard Glueck.



Fig. 16. Nassau Tower pictured in May 1979, view looking southwest. Windows at the north and east facades have been removed, openings infilled, and a new sign installed. Source: "LIRR Interlocking Towers & Cabins," <http://www.trainsarefun.com/lirr/lirr%20towers/lirrtowers.htm>, image courtesy of Steve Rothaug.