

**Written and Photographic Documentation:
New York, New Haven & Hartford Railroad:
South Norwalk and East Norwalk
Norwalk, Connecticut**

**Walk Bridge Replacement Project
Norwalk, Connecticut
State Project No. 0301-0176**



**Prepared for the
Connecticut Department of Transportation**

by

**Marguerite Carnell, M. Phil.
Bruce Clouette, Ph.D.**

**Archaeological and Historical Services, Inc.
Storrs, Connecticut**

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**NEW YORK, NEW HAVEN & HARTFORD RAILROAD:
SOUTH NORWALK AND EAST NORWALK
Norwalk, Connecticut**

Location:	Along the Metro-North Commuter Railroad main line, between the intersection of South Main and Washington Streets in South Norwalk and a point 340' east of the Fort Point Street underpass in East Norwalk.
U.S.G.S. Quadrangle:	Norwalk South
Latitude/Longitude:	41° 5' 56.89"N / 73°25' 7.29" W (west end) 41° 6' 7.87" N / 73° 24' 33.38" W (east end)
Design Engineer:	As originally built: Alexander C. Twining
Contractor:	As originally built: Alfred Bishop
Date of Construction:	Original line: 1847-1849 Tracks raised: 1890-1896 Electrification: 1914
Significance:	The resources included in this documentation recall a major episode in Connecticut's transportation history, the four-track rebuilding of the New York, New Haven & Hartford Railroad's shore line between New Haven and New York in the 1890s. The addition of two more tracks allowed greater capacity for what was already one of the country's busiest passenger lines and facilitated the movement of the growing freight volume that resulted from the railroad's near-monopolization of Southern New England rail lines. The high towers are significant as components of the railroad's pioneering mainline electrification, completed in 1914.
Project Information:	<p>This document fulfills a stipulation in a Memorandum of Agreement among the Federal Transit Administration, the Connecticut Department of Transportation, the Connecticut State Historic Preservation Office, and other parties regarding the Walk Bridge Replacement Project, State Project No. 0301-0176. This documentation was completed in February 2018.</p> <p style="text-align:right">Marguerite Carnell, M.Phil., Historian Bruce Clouette, Ph.D., Historian Archaeological and Historical Services, Inc. Storrs, Connecticut 06268</p>

I. INTRODUCTION

The Connecticut Department of Transportation (CTDOT) is planning the replacement of the Norwalk River Railroad Bridge (Walk Bridge) in Norwalk (State Project No. 0301-0176). Because of associated improvements on either side of the bridge, the project extends from the intersection of South Main and Washington Streets in South Norwalk to a point 340' north of the Fort Point Street underpass in East Norwalk (see Figure 1, Appendix A). The undertaking is the subject of a Memorandum of Agreement (MOA) among the Federal Transit Administration (FTA), the Connecticut Department of Transportation (CTDOT), the Connecticut State Historic Preservation Office (CTSHPO), and other parties. The stipulations in the project's MOA, executed in May 2017, include the following:

CTDOT shall prepare written and photographic documentation of other historic structures [in addition to the Walk Bridge and historic catenary structures] on the New Haven Line, within the limits of the Undertaking, to the professional standards of CTSHPO. The documentation will address the high towers, stone retaining walls, interlocking tower (South Norwalk Switch Tower Museum), Fort Point Street Railroad Bridge, and any historic trackside features such as mileposts. The documentation will also provide context views that incorporate the former Norwalk Lock Company buildings, the former Norwalk Iron Works buildings, and the buildings of the South Main and Washington Streets Historic District. CTDOT shall submit the documentation to the FTA and CTSHPO for review and revise the documentation according to any comments. Upon completion, CTDOT shall submit the revised documentation to CTSHPO for permanent archiving and public accessibility.

This documentation is intended to fulfill that stipulation. The methodology that was used to prepare the documentation is described in the next section, followed by detailed descriptions of the high towers, stone retaining walls, interlocking tower, and Fort Point Street Railroad Bridge, as well as an assessment of the resources' historical and engineering significance. References to historical and secondary sources of information are at the end of the document. The bound version of this report includes prints of 50 captioned photographs as Appendix C, along with an index to photographs and a graphic photographic key (on separate sheets).

This documentation was prepared by Marguerite Carnell, M.Phil., Historian, and Bruce Clouette, Ph.D., Senior Historian, both of Archaeological and Historical Services, Inc. of Storrs, Connecticut. Copies of this report, as well as archival copies of the text and photographs, will be submitted by CTSHPO to become part of the Connecticut Historic Preservation Collection housed at the Dodd Research Center at the University of Connecticut in Storrs.

II. METHODOLOGY

The products that make up this documentation include the following:

- Narrative text on acid-free, archival paper
- Digital color images on CD-ROM, .tif format, 300 dpi, minimum 1,200 by 1,600 pixels
- Index of photograph numbers and captions
- Graphic photograph keys
- Archival 5" by 7" color prints, labeled in soft pencil and placed in archival paper sleeves

In addition to the archival version deposited at the Dodd Center at the University of Connecticut, bound copies of the text and photographs have been compiled for CTDOT and CTSHPO, and one copy of the bound version will be included as part of the archived materials.

Standards for written and photographic documentation have been issued by CTSHPO (Saunders and Moore 2007), and the narrative text and photographs that make up this documentation meet or exceed all the specifications in the standards. The photographs were taken in September 2017 (unless otherwise noted) using a 14.5-megapixel Pentax K-7 camera. Digital color images were saved on DVD-ROM as uncompressed .tif files, 300 dpi, 24-bit RGB color, at a resolution of 2000 by 3000 pixels or greater. The archival 5" by 7" color prints produced for this documentation meet National Park Service standards for permanency; they were printed using Epson Claria™ high-definition archival inks and Epson Premium Glossy Photo Paper™. The prints were labeled using soft pencil and numbered sequentially. Photographs were placed in 5" by 7" acid-free paper archival sleeves, which also were labeled with the photograph number. In the bound copies, the photographs appear as Appendix C.

The historic resources are grouped together as follows: high towers, stone retaining walls, Fort Point Street Railroad Bridge, and the interlocking tower. No additional historic trackside features were identified during the fieldwork. In order to fulfill the stipulation in the MOA, additional context photographs were included that show nearby historic buildings and districts in relationship to the rail line.

The graphic keys accompanying the photographs (Appendix B) were prepared at a scale of 1" = 120'. This scale was chosen so that the resources could be related to some nearby intersection or other landmark, rather than being presented in isolation; at the same time, the scale is adequate to show the vantage points from which the photographs were taken.

In addition to the photographs, this documentation includes narrative text that gives a brief history of the railroad line and discusses the historical and engineering significance of the various features. To prepare the narrative text, background research was conducted using published histories of Norwalk (e.g., Selleck 1896, Ray and Stewart

1979), railroad histories (e.g., Karr 1995, Turner and Jacobus 1989), and the reports filed by the railroad company with the Connecticut Railroad Commission. Archival sources included railroad-company maps of the line, insurance maps produced by the Sanborn Map and Publishing Company, and the local-history collection at the Norwalk Public Library. The sources of information for the narrative are identified in the References section of this document (Section VI).

In order to identify and record all historic features, the entire line between the intersection of South Main and Washington Streets in South Norwalk and the Fort Point Street Bridge and retaining wall in East Norwalk was inspected on foot by a team consisting of an industrial historian and an architectural historian. The team compiled extensive notes and took a total of 220 photographs, from which 50 were selected for inclusion in the documentation. Subsurface investigations were beyond the scope of the project.

Previous documentation of historic resources along the NHL between the intersection of South Main and Washington Streets in South Norwalk and the Fort Point Street Bridge in East Norwalk include the following:

- “Northeast Railroad Corridor, Amtrak Route between New York/Connecticut & Connecticut/Rhode Island State Lines.” Historic American Engineering Record (HAER No. CT-11); 1977 aerial photography by Jack E. Boucher included several photographs of the high towers.
- “New York, New Haven & Hartford Railroad, Automatic Signalization System.” Historic American Engineering Record (HAER No. CT-8); 1980 photographs by Thomas Brown included four interior and two exterior views of the interlocking tower, now the South Norwalk Switch Tower Museum, 67 Washington Street.
- “Interlocking Station No. 44 (South Norwalk Switch Tower).” State-Level Documentation, 1994.
- “The New Haven Railroad Catenary System.” State-Level Documentation, Historical Technologies, September 2000.
- “New York, New Haven & Hartford Railroad Catenary Systems, 2017 Supplement.” State-Level Documentation, Archaeological and Historical Services, September 2017.

Immediately west of the area covered in this documentation is the South Norwalk Railroad Bridge (State Bridge 3693R), a four-track through-truss built in 1896 to carry the tracks over South Main Street and Washington Street. In 1998, a recordation of the bridge was undertaken for the Historic American Engineering Record, including large-format photography and reproductions of the original drawings (HAER No. CT-168). No further documentation of the bridge for this project was deemed necessary.

III. DESCRIPTION OF THE HISTORIC RESOURCES

The following resources were inventoried for this documentation:

A. River-Crossing High Towers

In order to maintain electrical and signal continuity when the bridge opened, the crossing required the signal and feeder lines to be carried over the river at a level that would not obstruct navigation, including schooners with tall masts. The solution employed in 1914 was to carry the lines using high towers on either side of the river (Photographs 1 to 11, 19, 21, 37-41, 43-45, 47-50). The two Norwalk River towers are numbered as Catenary Bridges 529 and 530. The towers are 198.5' high (measured from the top of the rail and excluding the modern utility-line fixtures that have been added to the original lattice finials). Each tower has two tapered sets of legs on either side of the tracks. The legs are formed from 9" x 13" angles connected by angle diagonal cross-bracing, resulting in a channel-shaped section that measures 5'-2" wide. The legs are set 22'-9" apart at the rail level, with the distance between them decreasing as the legs rise. The legs are braced by horizontal members consisting of paired angles forming a T-section and by 3 ½" x 5" angle diagonal cross-bracing. The legs feature large gusset plates (the rectangular plates where the diagonal braces cross), measuring 22" by 36".

The two sets of legs are connected across the tracks by three box-section cross-members, one 27' above the tracks (where it serves as a support for the catenary), one at the top of the tower, just below the tapered lattice finials, and one midway between. The webs of the cross-members consist of angle diagonal bracing. The towers rest on pyramidal concrete bases, except for the north side of Bridge 529, which has a rectangular base built adjacent to a stone retaining wall (Photograph 19).

B. Stone Retaining Walls

The four-tracking of the rail line in the 1890s in part required stone retaining walls for the embankments that carried it above street level. The portion from East Norwalk to Bridgeport is the earlier, begun in 1890, while the South Norwalk portion dates from 1895. The embankments were constructed by means of large wooden trestles that allowed dump cars to deposit fill (see Figure 4). In contrast to the rail line's bridge abutments, which are typically ashlar masonry, the retaining wall stonework is rough in character, with irregular stone blocks exhibiting a wide range in size. The stone masonry varies in color from gray to brown, set in gray mortar. The wall segments are typically topped with brownstone capping; most of the capping stones are rusticated, with quarry-faced blocks surrounded by a smooth 1 ½" wide border.

■ Walls West of North Water Street

West of North Water Street, stone retaining wall segments begin at the west abutment of the Norwalk River Railroad Bridge (Walk Bridge) and terminate at the Washington Street Railroad Bridge (Photographs 12 to 21). On the south side, the stone walls vary from over 20' to 2' in height, tapering to ground level in some places. At the lower stone sections there are earthen berms above, and in one place

the wall tapers down to ground (Photograph 17). The walls' mortar joints vary in color, profile, and condition, the result of multiple episodes of repointing. Many joints are roughly tooled, while in a few areas mortar is entirely absent (Photograph 16).

On the north side, the stone wall is continuous from the west abutment of the Norwalk River Railroad Bridge (Walk Bridge) west approach span across North Water Street to the southwest corner of the former Norwalk Lock Company factory complex (Photographs 19 to 21). It is highest at its east end (over 20'), where the east high tower (Bridge 529) rests on a concrete base the same height as the wall (Photograph 19). At its west end, the stone wall tapers down to several feet in height, where a new concrete masonry unit (CMU) wall abuts it along the building's parking lot (Photograph 21).

- **Wall East of Fort Point Street Railroad Bridge**

On the east side of the Fort Point Street Railroad Bridge is a stone retaining wall on the north side of the railway, along the short section of Fort Point Street that runs east-west (Photographs 22 to 24). It is very similar in character to the walls west of North Water Street, although the brownstone capping stones lack the smooth borders. At the east end the wall is several feet high, gradually increasing to about 15' where it joins the brownstone bridge abutment at the west end (Photograph 24). There are no historic masonry retaining walls on the south side of the railway, either east or west of the bridge.

C. Fort Point Street Railroad Bridge (State Bridge No. 4131R)

The bridge carrying the railroad over Fort Point Street in East Norwalk was built in 1941 and has four parallel I-beam structures, one beneath each of the four tracks (Photographs 25-33). The structure has a span length of 37' between abutments and an overhead clearance for the roadway of 14' 3"; the bridge is set at a 33° skew relative to the street. It replaced an earlier plate-girder bridge at the site that had been built in 1890, at the beginning of the four-track project. The earlier bridge's abutments were re-used for this bridge.

Each of the four tracks is carried by a pair of rolled 300-lb/ft. wide-flange beams, 36" deep by 16'-6" wide. The beams have welded stiffeners spaced at 4' intervals (Photograph 28). I-beam cross-members, 10" deep by 8" wide (45 lb./ft.), run between the main beams; the ends are shimmed to account for the fillets in the main beams. There is a welded-plate longitudinal stiffener for the cross-members midway between the main beams. The cross-members are joined to the main beams and the longitudinal stiffener with riveted angle connectors (Photograph 29). On top of the cross-members, steel plating forms a base for a concrete-slab that supports the roadbed. Asphalt-impregnated planking was installed against the plating prior to the slab being poured. The main beams for the four separate structures are butted up against each other, though there is no actual connection.

The abutments for the bridge are a random ashlar of quarry-faced brownstone blocks, typically about 8" to 18" high and ranging in length from about 24" to 48" (Photographs

30-33). The ends of the abutments are stepped at the northwest and southeast corners, where they are capped with projecting brownstone blocks, roughly 18" by 36". At the northeast corner, the east abutment is joined to the retaining wall that runs along the south side of Fort Point Street (previously described). Both ends of the bridge rest on 2'-high concrete seats set into the abutment stonework (Photograph 29).

D. Interlocking Tower

The interlocking tower that now accommodates the South Norwalk Switch Tower Museum is located at 67 Washington Street (Photographs 34-36). It measures 12' by 49' in plan, with the long side set parallel to the tracks; as a result, the building appears to be set at an angle relative to the north side of Washington Street. It is three stories high, with the lower two of brick construction and the third story frame, resting on a rubble stone foundation. Because of the height of the embankment, only two stories are visible on the track-side elevation (Photograph 36). The tower's shallow-pitch, gable-on-hip roof is covered with asphalt shingles; the exposed rafter ends have a simple notched cutout as decoration. The second-story walls are recessed behind simple piers or pilasters, with two intermediate pilasters on the long sides in addition to the corner pilasters. The exterior material on the top story is currently vertical aluminum siding; however, an early insurance drawing (Figure 7) indicates it was originally iron cladding. The various levels of the tower are accessed by a metal exterior stairway affixed to the street-side elevation; a shed-roofed wooden porch shelters the first-floor landing. This stairway is a replacement for the wooden stairs shown in the 1980 HAER photograph (Figure 13). Windows in the brick part are segmental-arched. The third story features continuous bands of windows on both the street side (six windows) and the track side (thirteen windows). A small brick exterior chimney is built into the side wall near the building's southeast corner. The interlocking tower's original New York, New Haven & Hartford Railroad name was S.S. 44 (Signal Station 44); in the Penn Central era, it had the designation "Berk."

Although it no longer operates the line's track switches and signals, the tower retains much of its historic equipment, including a 1919 38-lever Johnson Signal Company manual switch machine on the top level (Figures 14 and 15) and banks of electro-mechanical relays on the second level.

Because the tower was recorded in depth by the Historic American Engineering Record as part of the "New York, New Haven & Hartford Railroad, Automatic Signalization System" in 1980 and for the Connecticut Historic Preservation Collection in 1994 as "Interlocking Station No. 44 (South Norwalk Switch Tower)," additional photographic coverage in this documentation has been limited to exterior views that show the building in relationship to the railroad and the adjacent historic district.

E. Context Views

The high towers, the railway's retaining walls, and the former interlocking tower are integral to South Norwalk's historical urban setting. The high towers are the tallest structures in the area and are visible above much of South Norwalk, including the commercial buildings on Main Street and Washington Street (Photographs 37-45).

As the railway turns south at the intersection of Washington Street and Main Street, it is nestled up against the backs of commercial buildings that face Washington Street (Photographs 42 and 46). Two former factory complexes are directly adjacent to the railway just north of the tracks: the Norwalk Lock Company and the Norwalk Iron Works, the latter now part of The Maritime Aquarium at Norwalk (Photograph 47). The railway's stone retaining walls border these properties and the high towers form a prominent backdrop. Along the river north of the former Iron Works complex, both the high towers and the Norwalk River Railroad Bridge (Walk Bridge) are clearly visible (Photograph 37).

The high towers are also prominent landmarks across the river in East Norwalk. Liberty Square is a row of late 19th- and early 20th-century commercial buildings, two and three stories high, a vestige of the extension of South Norwalk's Washington Street commercial district into East Norwalk. Behind Liberty Square is Goldstein Place, which includes several late 19th- and early 20th-century residential properties, modern commercial buildings, and a marina on the Norwalk River. The high towers are visible throughout this area (Photographs 48-50).

IV. HISTORICAL BACKGROUND OF NORWALK AND THE NEW YORK, NEW HAVEN & HARTFORD RAILROAD

The earliest European settlement of the area was in 1649 along East Avenue in East Norwalk, where homesteads were allotted, a cemetery established, and a Congregational meetinghouse erected. Although the settlers made some use of marine resources, particularly salt meadows for hay production, Norwalk was primarily an agricultural town throughout the 17th and 18th centuries. Two other early nodes of settlement were Norwalk Center, at the head of navigation on the Norwalk River, and “Old Well,” now known as South Norwalk. Shortly before the Revolutionary War, the town became the hub of a growing regional agricultural market. Infrastructure around the harbor began to develop as shipbuilding, oystering, and trade thrived. In the early 19th century, a division began to emerge between Norwalk’s other areas and South Norwalk; by 1840, South Norwalk housed a large working-class population who worked in potteries, hat factories, carriage shops, silversmith shops, and other industrial enterprises. Built along the deepest part of the harbor, South Norwalk was a prime shipping location and it surpassed Norwalk proper as the premier port.

The New York & New Haven Railroad completed its line and began full service to Norwalk in 1848. With the addition of a line to Danbury opened by the Danbury and Norwalk Railroad in 1852, South Norwalk quickly became a busy railroad junction and emerged as the town’s leading commercial and industrial center. Local manufacturers benefited greatly from their access to the nation’s nascent rail network, including such companies as the Norwalk Ironworks (now the Maritime Aquarium, Photograph 40) and the Norwalk Lock Company (Photograph 41) on North Water Street, both of which had their own rail sidings.

East Norwalk largely remained a farming community through the mid-19th century. One exception was a densely settled area that grew as an extension of the Washington Street Bridge (1867) linking South Norwalk and East Norwalk. Dozens of shops were built on the wooden bridge itself and extended a short distance into East Norwalk, the area now known as Liberty Square. Industrial and commercial growth was slow, hampered by the lack of a train station. After the East Norwalk station opened in 1885, residential, commercial, and industrial development accelerated concurrently, continuing through the 1920s. East Norwalk became a commercial and industrial center in its own right, and some South Norwalk factories and businesses relocated there.

The New York, New Haven & Hartford Railroad (NY, NH & H, or simply the New Haven, as it was commonly known in the 20th century) was formed in 1872 by a merger of the Hartford & New Haven Railroad (chartered in 1833), and the New York & New Haven Railroad (chartered in 1844). Over the next several years, the railroad absorbed other lines through merger, purchase, or long-term lease, until it controlled virtually all the rail transportation in southern New England. At the same time, the company used its political influence to quash every attempt to establish parallel, competing routes (Karr 1995: 46-48, 74). The chief architect of the railroad’s growth was Charles Peter Clark (1836-1901), who served as president from 1887 to 1899. Clark was an enthusiastic

believer in monopolies; in one public statement, he promised the railroad's investors that he would "so manage your affairs that competition will never come" (Turner and Jacobus 1996: 211). The railroad's service area was one of the country's most densely populated and fastest-growing industrial regions, and both passenger and freight operations were exceptionally profitable. In addition to absorbing nearly all the region's rail lines, the New Haven Railroad acquired controlling interests in nearly all of Long Island Sound's steamship lines and, after 1900, most of the electric street railways in Connecticut, Rhode Island, and southern Massachusetts.

In the 1890s, the entire main line between New York and New Haven was widened to four tracks. In addition to increasing capacity, the project was intended to eliminate grade-level crossings, particularly in Connecticut's bustling commercial and industrial centers. In major cities such as Stamford, Norwalk, and Bridgeport, the four-tracking was accompanied by elevation of the rail line above street level, necessitating long, stone-walled viaducts, dozens of new bridges to carry the tracks over city streets, and ramped freight tracks to provide access to trackside industries that formerly had been served at grade level. The construction was completed in phases, progressing outward from several intermediate points. South Norwalk east to Bridgeport was begun in 1890, Greenwich to Port Chester, N.Y. in 1891, and Greenwich to South Norwalk in 1894. Urban central business districts were among the last to be completed. Downtown South Norwalk was under construction in 1895 and the Norwalk River Railroad Bridge was completed the following year.

Building the four-tracking through the center of South Norwalk was a complex undertaking, with extensive temporary structures. In September 1895, "Contractor Lathrop" was awaiting orders to begin construction of a section of the retaining walls. The west-bound station platforms were about to be built. A large caisson was built in the river, with a bridge pier under construction on top of it. The west pier was finished and the abutment was almost complete (*Norwalk Evening Hour*, September 7, 1895).

A few weeks later the *Norwalk Evening Hour* added more details about the progress of construction:

They are eliminating the grade crossings both on the main line and the Danbury & Norwalk Road, are constructing a new drawbridge and new freight and passenger stations have been built. In order to continue the train service while all this work is in progress it has been necessary to build a trestle about a fourth of a mile in length and of a maximum height of 16 feet above the present main line double track. This trestle is on the south side of the road and also extends across the Norwalk River where the old drawbridge will be taken out to give place to a four track bridge. The trestle is in use and the trains are run over it at slow speed. . . . Over the river the new drawbridge will be 30 feet above high water mark and trains will be elevated at that point higher than at almost any other point on the New York Road.

To bring the tracks at the proper elevation to clear the grade crossings, an immense amount of solid and expensive masonry is required, much of which is

in place. . . . It is expected the new four tracks through South Norwalk will be ready for use in early spring (*Norwalk Evening Hour*, September 28, 1895).

Railroad construction crews included many Italian laborers; large numbers of Italians were attracted by the United States actively recruiting immigrant workers in the post-Civil War labor shortage. In 1891, Italian workmen building the four-tracking in Fairfield laid about 1,000 feet of track per day (*Norwalk Gazette*, May 19, 1891, page 2). The construction continued year-round, resulting in difficult conditions on city streets. The problems were exacerbated by lack of coordination between the railroad company and the city; some stations were built, but acquiring the necessary properties for the station's approaches was delayed, making them difficult to access (*Norwalk Evening Hour*, September 7, 1895, page 3 and December 3, 1895).

The construction involved phased activities, in order to maintain railroad service along the line:

Workmen are busy in South Norwalk today, putting up additional timbers and beams over Washington Street for the railroad company. As soon as completed the present tracks will be shifted to the westerly side and active operations on the steel bridge on the easterly side will commence. When the iron trusses and girders have been erected the tracks will be shifted back and the other half of the bridge will be completed. There is much kicking and grumbling over the present state of things (*Norwalk Evening Hour*, September 25, 1895).

The work was also hazardous. In Norwalk, the most spectacular four-tracking construction accident was undoubtedly an explosion during demolition of the old bridge's center pier in September 1895. After the first attempt using thirteen pounds of dynamite failed, another charge was detonated using forty pounds. The huge explosion sent chunks of masonry and river water high into the air, with rocks crashing through the roofs of the Lock Company and the Iron Works factories, among other buildings. Miraculously no one was injured and the only casualty was a horse belonging to Mairs & Lewis, contractors for the woodwork of the bridge (*Norwalk Evening Hour*, September 28, 1895).

Three days after the explosion, railroad construction laborer William Greehe drowned in the river, reportedly having walked off a nearby lumber yard dock while intoxicated. Greehe, from Croton Dam, New York, was in the employ of "Contractor Brown, who had been working on the improvement" (*Norwalk Gazette*, September 28, 1895).

The four-tracking program included two less visible but nonetheless significant innovations: the installation of block signaling along the line, allowing trains to be controlled more safely and therefore increasing the overall capacity of the line, and the use of systematically ballasted roadbed to stabilize the tracks. One of railroad president Clark's interests was adapting electric traction, at the time in use only for streetcars, for mainline railroad service. Short experimental electrified third-rail systems were installed

in central Connecticut and southeastern Massachusetts, and Clark hoped that the entire line from New York to New Haven could one day be electrified. In the railroad's 1892 annual report, he noted that the four-tracking project's improvements to the roadbed, signaling, and elimination of grade crossings would facilitate eventual electrification (NY, NH & H Annual Report, 1892: 4).

In response to legislation that banned steam trains in New York City, the NY, NH & H in 1907 completed the nation's first electrification of a railroad main line, building an overhead catenary system supported by bridge-type structures spaced at 200-to-300-foot intervals. The system ran on 11,000 volts (25 cycle, single phase) of alternating current, generated by the railroad's power plant at Cos Cob; additional power was purchased from other sources (Bean 1927: 960). Numerous improvements to the entire system were made in 1914, when electrification was extended to New Haven, the most significant of which was the use of autotransformers to reduce interference with communications lines. Although the initial cost of electrification was high, electric traction allowed faster acceleration of trains compared with steam locomotives and much lower operating costs, even factoring in a greater frequency of service (Baehr 1969: 318, 429).

The investments in infrastructure proved to be invaluable when, during the World War I period, the region served by the railroad experienced an unprecedented expansion in industrial production. The manufacturing centers of Connecticut, Rhode Island, and southern Massachusetts not only produced large quantities of military-related items for the U.S. Government and for export, they also experienced an explosion in demand for all kinds of goods due to the collapse of the European economies. Brass mills, iron foundries, machine shops, firearms factories, textile mills, and many other kinds of industrial enterprises added to the freight traffic moving over New Haven Railroad tracks, as fuel and raw materials were brought in and finished goods shipped out. During the war itself, American railroads, including the New Haven, were operated by the government, returning to private hands soon after the Armistice.

The railroad continued to prosper through the 1920s, in part because industrial production continued to be strong and in part because the Interstate Commerce Commission made several rate decisions that were favorable to the New Haven (Weller 1969: 197-198). That prosperity came to end in the 1930s with the Great Depression. As the economy contracted, freight and passenger revenue declined precipitously, yet the railroad was obliged to service the debt that was incurred from infrastructure improvements and its acquisitions of other companies. The railroad became bankrupt in 1935 and was operated for many years thereafter by trustees who struggled to return the company to solvency.

Once again, war proved a boon to the railroad, even as the world plunged into a state of suffering and destruction. In anticipation of entering World War II, the federal government provided financial assistance to the New Haven Railroad so it could undertake improvements, and once again, passenger and freight movements took off; compared with 1938, wartime freight volume more than doubled, and passenger volume nearly tripled (Weller 1969: 205). Passenger trains became so overcrowded that the railroad undertook a massive publicity campaign to get the public to think of the young

men going off to war, rather than complain. The railroad's "The Kid in Upper 4" advertisements are today remembered as an iconic part of World War II propaganda. Freight trains ran constantly over the railroad's main line and branches, responding to burgeoning wartime production and also in part to fears that the shipment of coal and oil by water was vulnerable to attack by German submarines. To address the wartime labor shortage, the New Haven hired some 400-500 Mexican citizens for railroad work under the Bracero Program.

In the years just before and after World War II, the importance of rail transportation was diminished by competition from highways. The Merritt Parkway (Route 15), a four-lane limited-access divided highway, paralleled the rail line in the mid-1930s, followed by the Connecticut Turnpike (Interstate 95) in the late 1950s. The railroad's freight and passenger revenue declined as people traveled more by automobile and industries shipped products by truck. In 1968, the NY, NH & H was reorganized as part of the Penn Central merger of the Pennsylvania and New York Central railroads. Combining three railroads, each on the brink of financial collapse, created an economically unstable entity, and Penn Central soon declared bankruptcy. For a time, the Consolidated Rail Corporation (Conrail), formed in 1976, provided both commuter and freight service along the line. Metro North was created in 1983 when the Metropolitan Transit Authority, a quasi-public New York agency, partnered with CTDOT to take over commuter service from Conrail.

Beginning in the mid-20th century, the city of Norwalk has increasingly assumed the identity of a residential commuter community, dependent upon train service to New York City. Many Norwalk factories have been repurposed for multifamily housing and other commercial uses.

V. SIGNIFICANCE OF THE HISTORIC RESOURCES

The resources included in this documentation are significant in a number of interrelated ways: 1) as highly visible structures, the historic components of the rail line, especially the high towers, interlocking tower, and retaining walls, recall the relationship between rail transportation and the economic and demographic growth of this part of Norwalk in the second half of the 19th century and the first half of the 20th century; 2) the resources are associated with the development of the New Haven Railroad main line as a major passenger and freight conduit, an important story in the state's transportation history; and 3) the resources illustrate the development of railroad engineering practices, especially as it regards electrification.

A. Significance for Norwalk local history

It is almost impossible to overstate the importance of railroad connections in the development of Norwalk, especially the South Norwalk section. While maritime commerce and shipbuilding preceded the railroad, and many of the enterprises that became major manufacturers had their roots in an earlier, small-shop phase of industrialization, access to the national rail network undoubtedly sustained these businesses and allowed them to become major producers that employed hundreds of workers. In the late 1890s, the hat industry alone employed some 3,000 people, working at 14 factories in South Norwalk and three in Norwalk. The largest corset manufacturer, Roth & Goldsmith (R & G), had 500 workers, and both the Norwalk Lock Company and the Norwalk Iron Works employed several hundred people as well. More than 100 people worked in South Norwalk's three cigar factories (Underwood et al. 1897: 979-981; Roth 1981: 12-13). In this period, smaller industries included the manufacture of typewriter supplies, pottery, boilers, gas stoves, toys, and architectural ironwork. In Norwalk and further up the Danbury line were textile mills producing felts, shirts, dress silks, and woollens. Large-scale distribution activities in Norwalk included lumber, coal, grocery, and flour-and-feed businesses. One measure of the interdependence of rail transport and industry in Norwalk was the consolidated Dock Yard freight yard, built in the 1890s and electrified in 1914: at its height, its 17 tracks provided more than 2 ½ miles of freight-car capacity (1915 Right of Way and Track Map, Valuation Section 58.69, sheet 24).

B. Significance for Connecticut's transportation history

The New York, New Haven & Hartford Railroad played a pivotal role in Connecticut's economic and social history. Its programs of improvements ensured that freight service kept pace with, and nourished, industrial growth in the state's major cities and large manufacturing towns. Where once industry primarily located where waterpower was available, increasingly industrial districts developed along rail lines where coal and raw materials could most easily be brought in and finished products shipped out. Hartford, New Britain, New Haven, and Bridgeport all had industrial districts ranged along rail line, and even in eastern Connecticut, rail access replaced water power as the prime locational consideration for industry.

The railroad's passenger service also played an important part in Connecticut's transportation history. For more than three-quarters of a century, the New Haven Railroad station was the place in most Connecticut towns where families met out-of-town visitors, boarded trains for business and pleasure travel, and saw young men leave for military service. The physical geography of many towns was transformed by the railroad's passenger stations, as hotels, restaurants, and other commercial uses appeared nearby; in a few places, the location of the depot caused a community's entire focus to shift away from earlier town centers. In the case of the towns in Fairfield County, the railroad facilitated the development of a commuter-based suburban culture. In addition to stations in every community along the main line, the system included branch lines to New Canaan and Danbury that extended the practicality of commuting to work in New York City to inland Fairfield County towns as well. Finally, by providing inexpensive short-distance travel between Connecticut towns, the New Haven Railroad knit together many nearby communities.¹

The resources in this documentation readily convey the line's transportation-history significance. The size of the four-track line suggests the process of acquisition and consolidation that created the railroad's near-monopoly on rail transportation in Connecticut (as well as the rest of southern New England) and the tremendous volume of freight and passenger traffic that passed over these rails. The switch tower, masonry retaining walls, and steel-lattice high towers and other catenary structures identify the late 19th and early 20th century as the period when most of the railroad's expansion took place.

The Fort Point Street Railroad Bridge recalls the important role played by the railroad in America's World War II mobilization and war effort. Because the East Norwalk-to-Bridgeport section was the first to be four-tracked (in 1890), its bridges were among the oldest at the time that planning began for the war. At first, the railroad explored the possibility of reconstructing the bridge by splicing in new members and replacing rivets. But it became clear that complete replacement of the bridges would be necessary to ensure that the line could carry the expected increase in traffic. In all, sixteen of the New Haven Railroad's main line bridges were replaced in 1940 and 1941, using the rolled I-beam form seen in the Fort Point Street Bridge. In its report to the stockholders, the railroad's management confidently asserted that "the New Haven Railroad is in shape to meet any and all demands which may result from the National Defense Program" (NY, NH & H Annual Report, 1940: 126).

C. Engineering significance

Of the resources included in this documentation, the most important in terms of engineering significance are the two high towers for the Norwalk River crossing. As the

¹ To a certain extent, this function was taken over in the early 20th century by street railways (most of which were controlled by the New Haven Railroad through the Connecticut Company and other streetcar subsidiaries). At the same time, the New Haven operated a number of electrified routes under its own name, notably the Hartford-Rockville-Stafford Springs and the New Britain-Berlin-Middletown lines.

solution for carrying feeder and signal lines across the river when the bridge opened to allow vessels to pass through the channels, the high towers were an integral, essential part of the overall electrification project. Virtually identical sets of towers were provided at the Saugatuck, Poquonnock, and other river crossings along the Stamford to New Haven portion of line. Without the towers (or some other solution, such as underwater cables), electrical continuity could not be maintained when movable bridges were opened.²

The main-line electrification of the New Haven Railroad represented a milestone in railroad engineering. The use of high-voltage alternating current allowed great economies in generation and transmission, compared with the 600v DC then in use for streetcar systems and interurban lines; unlike DC, alternating current allowed for expansion of the system over a wide geographic area. The lessons learned in the New York, New Haven & Hartford's first phase, from New York to Stamford (1907), and in the completion phase from Stamford to New Haven (1914), informed subsequent electrification efforts both in the United States and abroad, most notably the electrification of the Pennsylvania Railroad's New York-to-Washington route (1928-1935), which used the same single-phase 11,000-volt 25-Hz power drawn from an overhead catenary. The electrification of the New York, New Haven & Hartford Railroad was named a National Historic Engineering Landmark by the American Society of Mechanical Engineers in 1982.

The 1941 railroad bridge over Fort Point Street is of engineering interest primarily because it illustrates the transition from riveted built-up members to a greater use of rolled members and welded connections. From the 1880s to the early 20th century, the standard railroad bridge was a girder structure in which the major components were riveted together from basic steel shapes such as angles, channels, and plate. Because of the limitations of the period's mills, rolled I-beams were available only in smaller sizes, not for the main girders themselves. As the 20th century progressed, larger and larger rolled I-beams became widely available, and both highway and railroad bridges increasingly made use of such beams in place of riveted plate girders. At the same time, welded connections were replacing riveted connections. The Fort Point Street Railroad Bridge exhibits both types of connections: welded web stiffeners for the main beams, and riveted connections for joining the cross-members to the main beams and center longitudinal members.

No definitive inventory of surviving interlocking towers exists for Connecticut, but anecdotal evidence suggests that this once-common railroad feature is becoming increasingly rare.³ The South Norwalk tower, although no longer operational, is especially notable for retaining its extensive electrical equipment and its 1919 interlocking machine; other surviving Connecticut towers are known to have had these essential features

² None of the historic movable railroad bridges along the New Haven line was a vertical lift bridge, the only type that could have provided electrical continuity within the structure itself.

³ Today, centralized computer-assisted track control, radio communications, and in-cab signals have functionally replaced switch towers; in recent years, interlocking facilities at Hartford, New Haven, and Old Saybrook have been lost.

removed. Although a rail line is most obviously a physical entity, its operation required a neural network of dispatching, train orders, signaling, switch operation, and record-keeping, at the heart of which were the switch towers and their operators.

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APPENDIX A:

FIGURES



Figure 1: Location of structures shown on USGS Norwalk South Quadrangle, scale 1:24000. Shaded area shows the portion of the main line covered by this documentation.



Figure 2: Area west of the Norwalk River as shown on the 1875 O. H. Bailey view, looking west. The railroad has two tracks at grade running through South Norwalk to the railroad station, which at that time was near the southwest corner of South Main and Washington Streets.

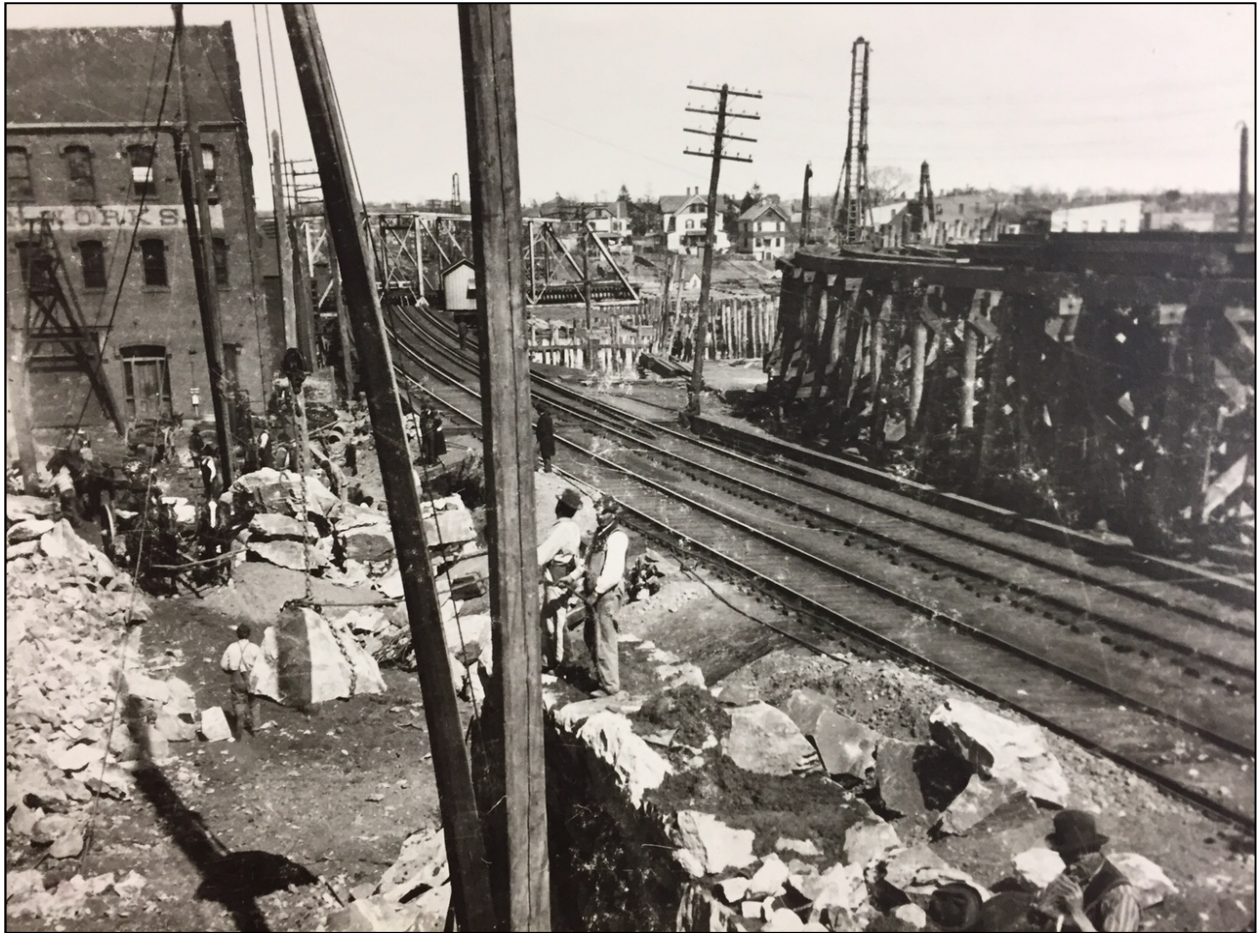


Figure 3: Construction of the retaining wall on the north side of the railroad right-of-way west of Water Street, ca. 1895 (Norwalk History Room, Norwalk Public Library). Trestle at right is for depositing fill for the embankment).



Figure 4: Dumping of fill for the embankment, South Norwalk, at the intersection of the main line (upper left), with trestle for creating the Danbury line embankment in the center, ca. 1895 (Norwalk History Room, Norwalk Public Library).



Figure 5: Completed retaining wall on the north side of the railroad right-of-way west of Water Street, ca. 1895 (Norwalk History Room, Norwalk Public Library). Fill for the embankment has been dumped from the trestle.

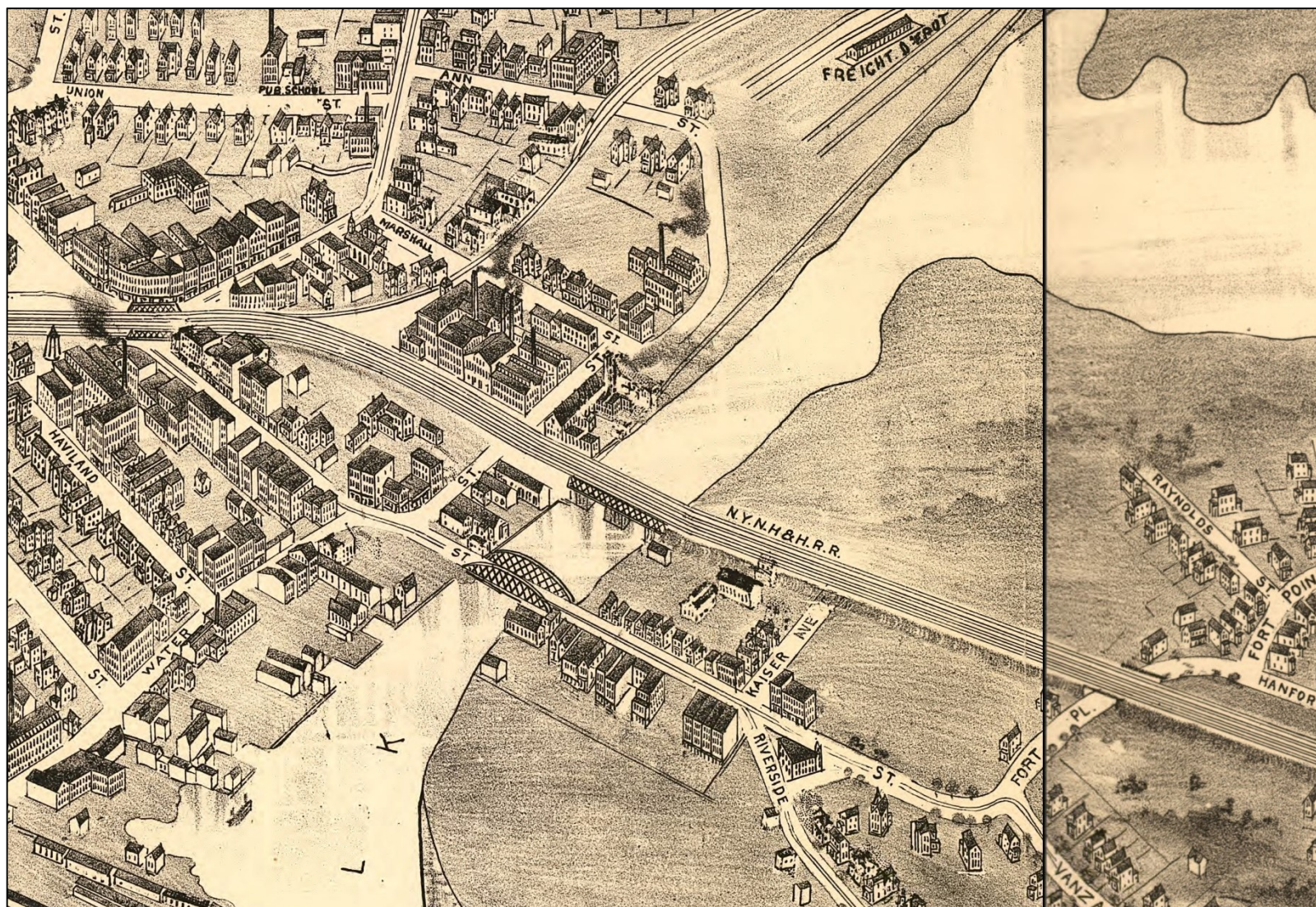


Figure 6: Area between the intersection of South Main and Washington Streets and Fort Point Street (here indicated as Fort Place), as shown on the 1899 Landis and Hughes bird's-eye view.

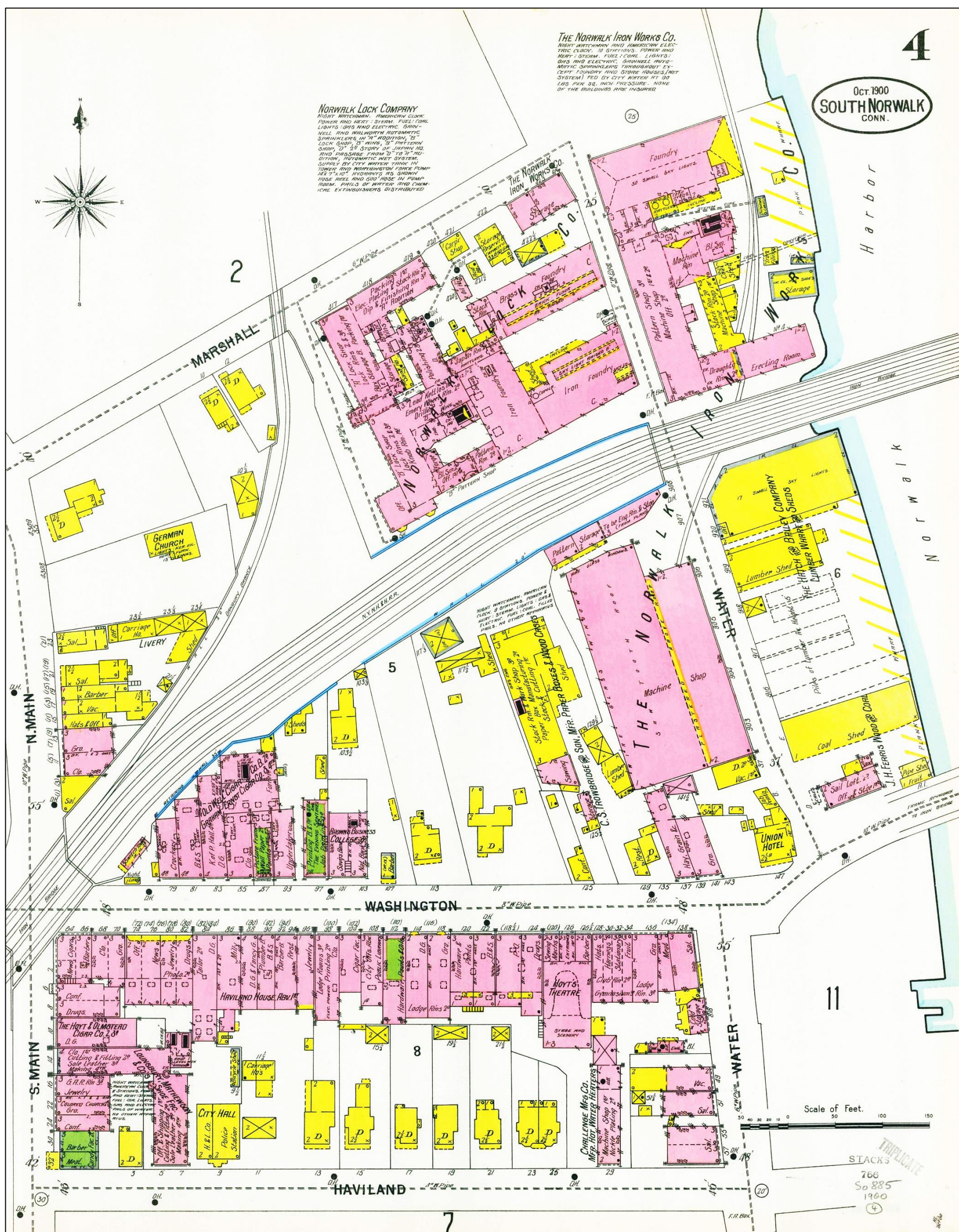


Figure 7: South Norwalk as shown on the 1900 Sanborn insurance map. The retaining walls for the railroad right-of-way have been enhanced with shading.

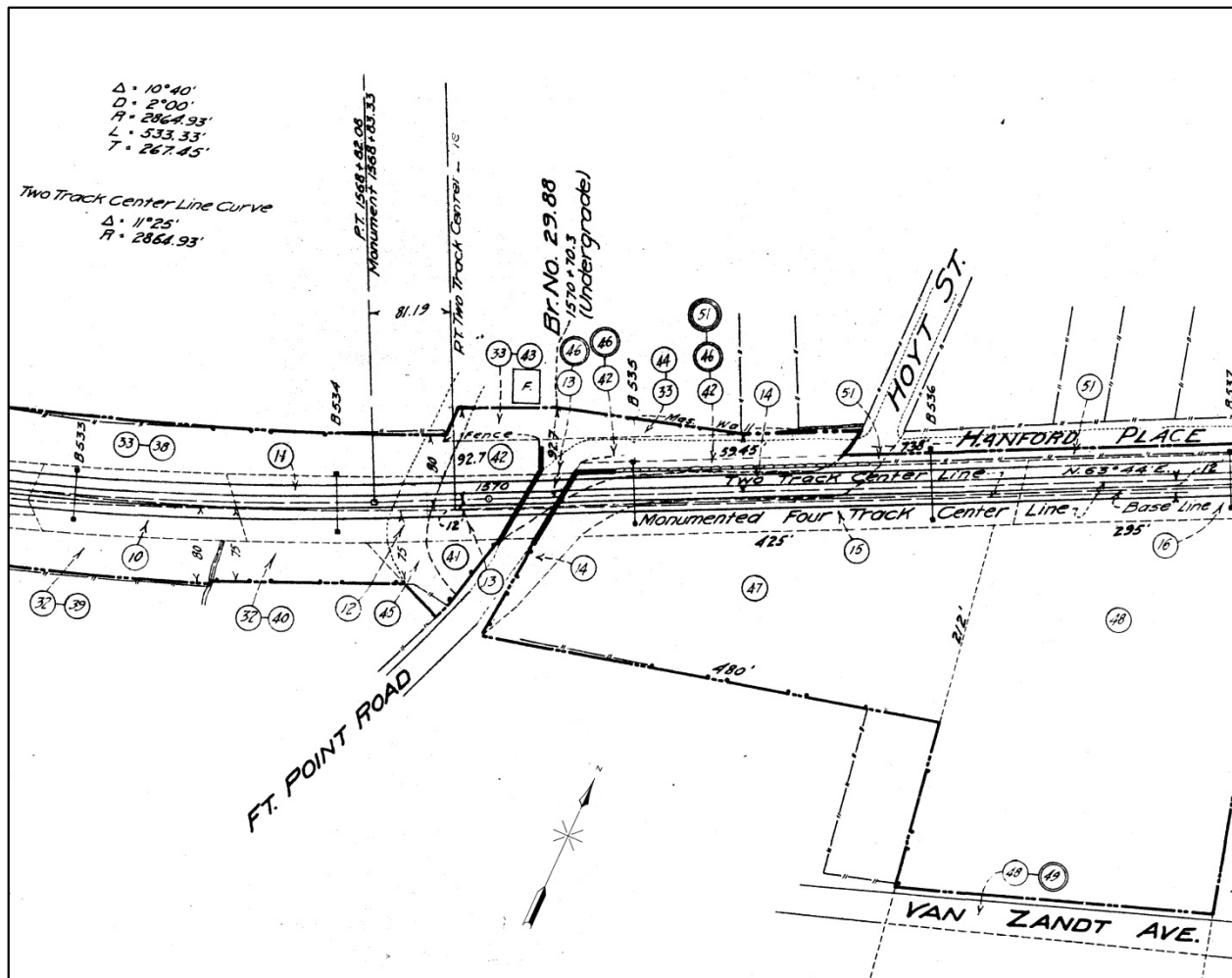


Figure 8: Excerpt from the 1915 railroad valuation map showing the area around the Fort Point Street bridge, designated Bridge No 29.88 at the time. The original alignment of Fort Point Street, indicated by a light dashed line, crossed the railroad right-of-way at even more of an angle prior to the 1890s rebuilding as four tracks.



Figure 9: Norwalk River Railroad Bridge west high tower (Bridge 529) looking east, Harry F. Brown photograph, 1931.



Figure 10: Two photographs of the interlocking tower (S.S. 44, South Norwalk Switch Tower Museum, 67 Washington Street) by T. J. Donahue, ca. 1960 (Lynch 2016: 13-14).



Figure 11: West high tower on left, east high tower on right, looking northeast, 1977
HAER photograph by Jack E. Boucher.



Figure 12: East high tower in foreground, west high tower in background, looking west, 1977 HAER photograph by Jack E. Boucher.



Figure 13: Interlocking tower (S.S. 44, South Norwalk Switch Tower Museum, 67 Washington Street), looking northeast, 1980 HAER photograph by Thomas Brown (CT-8-39).



Figure 14: Interlocking tower (S.S. 44, South Norwalk Switch Tower Museum, 67 Washington Street), overview of switch levers, looking west, 1980 HAER photograph by Thomas Brown (CT-8-37).



Figure 15: Interlocking tower (S.S. 44, South Norwalk Switch Tower Museum, 67 Washington Street), detail of switch levers, looking northwest, 1980 HAER photograph by Thomas Brown (CT-8-36).

APPENDIX B:
INDEX TO PHOTOGRAPHS AND GRAPHIC KEYS

**New York, New Haven & Hartford Railroad:
South Norwalk and East Norwalk
Norwalk, CT**

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**New York, New Haven & Hartford Railroad:
South Norwalk and East Norwalk**

Index to Photographs

All photographs: AHS, Inc., September 2017

Captions:

- Photograph 1. West high tower (Bridge 529), camera facing west.
- Photograph 2. West high tower (Bridge 529), camera facing northwest. The Norwalk River Railroad Bridge (Walk Bridge) approach span over North Water Street is visible on the right.
- Photograph 3. West high tower (Bridge 529) as seen from North Water Street, camera facing south.
- Photograph 4. East high tower (Bridge 530) as seen from the west bank of the Norwalk River, camera facing southeast.
- Photograph 5. East high tower (Bridge 530), camera facing southwest.
- Photograph 6. West high tower (Bridge 529) with former Norwalk Iron Works building and east high tower (Bridge 530) in background, camera facing northeast.
- Photograph 7. West high tower (Bridge 529), detail of lowest cross-member, which also serves as a catenary support, camera facing northeast. Former Norwalk Iron Works, now the Maritime Aquarium, is visible in the background on the left.
- Photograph 8. East high tower (Bridge 530), detail of north support, camera facing northwest.
- Photograph 9. West high tower base, south support, detail of bracing, camera facing southeast.

**New York, New Haven & Hartford Railroad:
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- Photograph 10. East high tower (Bridge 530), detail of gusset plate and cross bracing, camera facing southwest.
- Photograph 11. West high tower (Bridge 529), detail of base, camera facing northeast.
- Photograph 12. Walk Bridge west abutment and south side retaining wall, North Water Street, camera facing west.
- Photograph 13. South side retaining wall west of North Water Street where it joins the west bridge abutment, camera facing north.
- Photograph 14. South retaining wall west of North Water Street, camera facing east. An approach span of the Norwalk River Railroad Bridge (Walk Bridge) is visible on the right.
- Photograph 15. Portion of south retaining wall without capstones west of North Water Street, camera facing north.
- Photograph 16. South retaining wall west of North Water Street, camera facing northwest.
- Photograph 17. West end of south retaining wall section west of North Water Street, camera facing west.
- Photograph 18. South retaining wall (behind 83-85 Washington Street), camera facing southeast.
- Photograph 19. North retaining wall and concrete base of west high tower (Bridge 529), camera facing southwest.
- Photograph 20. North retaining wall and former Norwalk Lock Company building, camera facing southwest.
- Photograph 21. New concrete-block retaining wall and older stone wall adjacent to former Norwalk Lock Company building, camera facing northeast.
- Photograph 22. Retaining wall east of Fort Point Street Railroad Bridge, camera facing southwest.

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- Photograph 23. Detail of masonry, retaining wall east of Fort Point Street Railroad Bridge, camera facing east.
- Photograph 24. Retaining wall east of Fort Point Street Railroad Bridge, detail of junction between wall and east bridge abutment, camera facing southeast.
- Photograph 25. Fort Point Street Railroad Bridge, south elevation, camera facing north.
- Photograph 26. Fort Point Street Railroad Bridge, north elevation, camera facing south.
- Photograph 27. Track level view of Fort Point Street Bridge, camera facing southwest.
- Photograph 28. Fort Point Street Railroad Bridge, detail of main beam, camera facing north.
- Photograph 29. Fort Point Street Railroad Bridge, detail of underside and east abutment, showing concrete bridge seat, camera facing east.
- Photograph 30. Fort Point Street Railroad Bridge, detail of west abutment, north end, camera facing west.
- Photograph 31. Fort Point Street Railroad Bridge, detail of south end of west abutment, camera facing west.
- Photograph 32. Fort Point Street Railroad Bridge, detail of east abutment, north end, camera facing east.
- Photograph 33. Fort Point Street Railroad Bridge, detail of south end of east abutment, camera facing east.
- Photograph 34. Interlocking tower (now the South Norwalk Switch Tower Museum), 67 Washington Street, street-side elevation, camera facing north.
- Photograph 35. Interlocking tower (now the South Norwalk Switch Tower Museum), 67 Washington Street, track-side elevation, camera facing southeast.
- Photograph 36. Interlocking tower (now the South Norwalk Switch Tower Museum), 67 Washington Street, close-up of track-side elevation, camera facing southeast.

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- Photograph 37. High towers (Bridges 530 and 529) and the Norwalk River Railroad Bridge (Walk Bridge), camera facing south. The tower to the former Norwalk Iron Works, now the Maritime Aquarium, is visible on the right.
- Photograph 38. Norwalk River Railroad Bridge (Walk Bridge) and east high tower (Bridge 530), camera facing northeast.
- Photograph 39. West high tower (Bridge 529), former Norwalk Lock Company building, and former Norwalk Iron Works, now the Maritime Aquarium, on North Water Street, camera facing south.
- Photograph 40. East high tower (Bridge 530) and former Norwalk Iron Works, now the Maritime Aquarium, on North Water Street, camera facing southeast.
- Photograph 41. Former Norwalk Lock Company building, west high tower (Bridge 529) and retaining wall, camera facing northeast.
- Photograph 42. Tracksides of the interlocking tower (now South Norwalk Switch Tower Museum, 67 Washington Street) as seen from the South Main and Washington Streets Historic District, North Main Street, camera facing east. The east end of the South Norwalk Railroad Bridge is visible on the right.
- Photograph 43. West high tower (Bridge 529) as seen from the South Main and Washington Streets Historic District, north side of Washington Street, camera facing north.
- Photograph 44. East high tower (Bridge 530) and Norwalk River Railroad Bridge (Walk Bridge) as seen from the South Main and Washington Streets Historic District, east end of the north side of Washington Street, camera facing northeast.
- Photograph 45. Norwalk River Railroad Bridge (Walk Bridge) and east high tower (Bridge 530) as seen from the corner of Washington and North Water Streets, camera facing northeast. The area on the east side of North Water Street is part of the Norwalk Heritage State Park and Norwalk Heritage Greenway.

**New York, New Haven & Hartford Railroad:
South Norwalk and East Norwalk
Norwalk, CT**

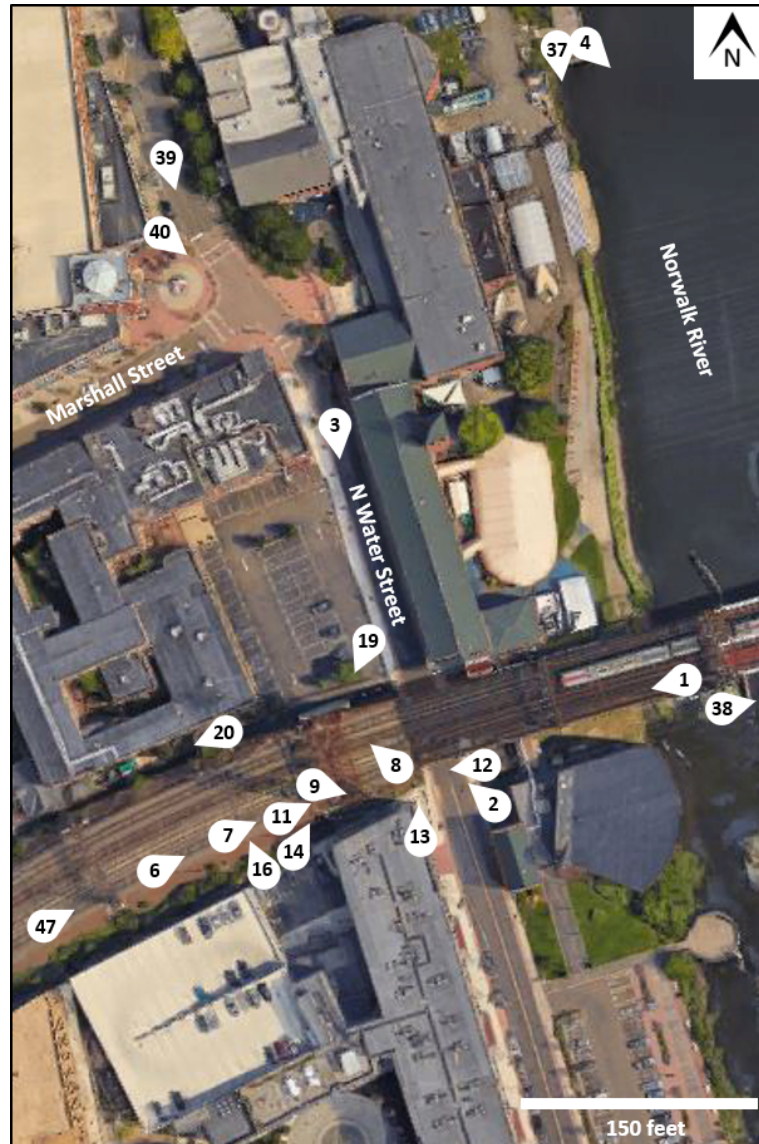
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- Photograph 46. Commercial buildings in the South Main and Washington Streets Historic District, north side of Washington Street, as seen at track level, camera facing southwest. The South Norwalk Railroad Bridge is on the right.
- Photograph 47. Former Norwalk Lock Company and Norwalk Iron Works buildings as seen from the tracks, with high towers (Bridges 529 and 530) visible on the right, camera facing east.
- Photograph 48. High towers (Bridges 529 and 530) behind 19th and early 20th-century commercial buildings on Liberty Square, East Norwalk, camera facing northwest.
- Photograph 49. High towers (Bridges 529 and 530) as seen from Goldstein Place, East Norwalk, camera facing northwest. The Maritime Aquarium's theater is the round brick building on the left.
- Photograph 50. High towers (Bridges 529 and 530) and Norwalk River Railroad Bridge (Walk Bridge) as seen from Goldstein Place, East Norwalk, camera facing northwest. The tower of the former Norwalk Iron Works, now the Maritime Aquarium, is visible in the center, with the Aquarium's theater (round brick building) on the left.

**New York, New Haven & Hartford Railroad:
South Norwalk and East Norwalk
Norwalk, CT**

Photograph Keys

Photograph Key 1 of 5



Vicinity of North Water and Marshall Streets, Norwalk, as shown on Google Maps™ satellite view, 2017.

**New York, New Haven & Hartford Railroad:
South Norwalk and East Norwalk
Norwalk, CT**

Photograph Keys

Photograph Key 2 of 5

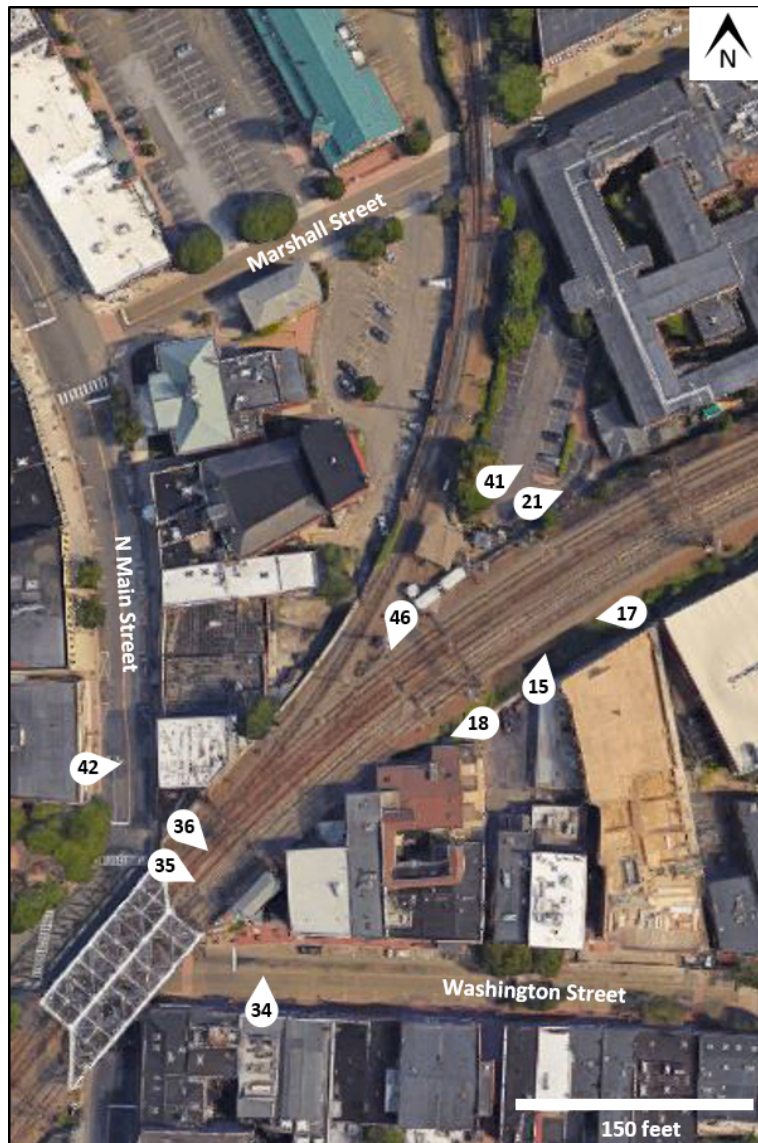


Vicinity of Washington and North Water Streets, Norwalk, as shown on Google Maps™ satellite view, 2017.

**New York, New Haven & Hartford Railroad:
South Norwalk and East Norwalk
Norwalk, CT**

Photograph Keys

Photograph Key 3 of 5



**Vicinity of North Main and Marshall Streets, Norwalk, as shown on Google Maps™
satellite view, 2017.**

**New York, New Haven & Hartford Railroad:
South Norwalk and East Norwalk
Norwalk, CT**

Photograph Keys

Photograph Key 4 of 5

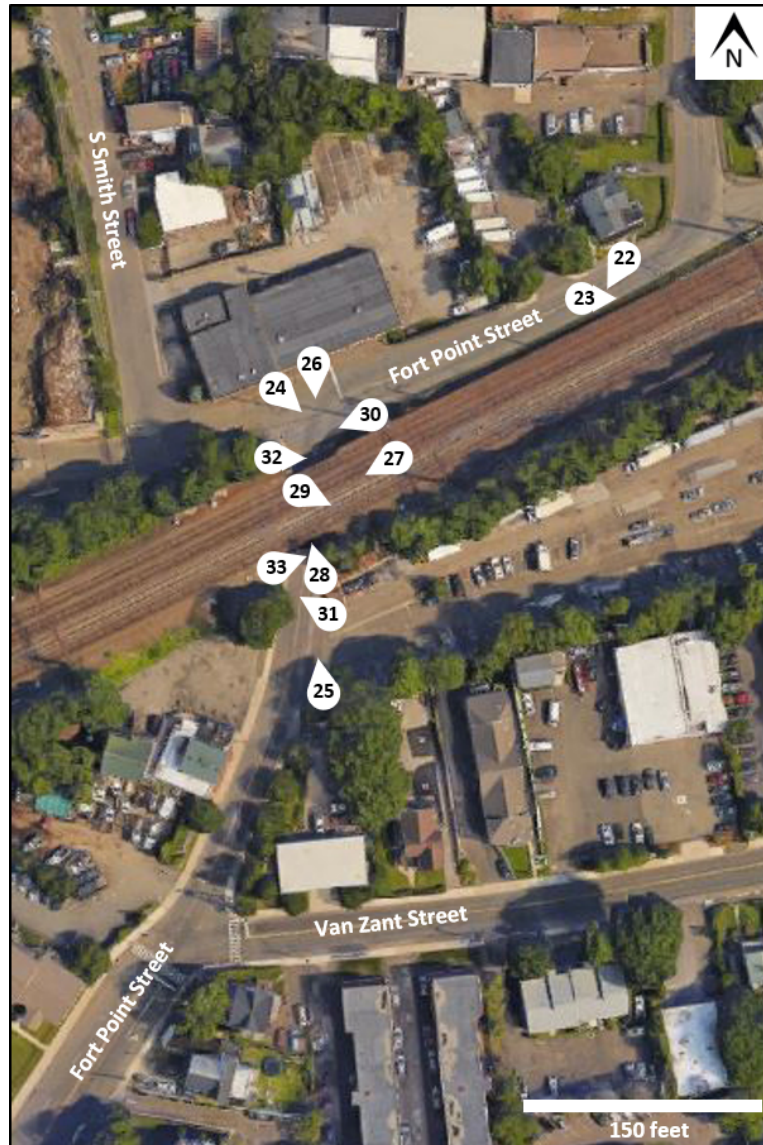


Vicinity of Fort Point Street and Goldstein Place, East Norwalk, as shown on Google Maps™ satellite view, 2017.

**New York, New Haven & Hartford Railroad:
South Norwalk and East Norwalk
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Photograph Keys

Photograph Key 5 of 5



Vicinity of Fort Point and Van Zant Streets, East Norwalk, as shown on Google Maps™ satellite view, 2017.

APPENDIX C:
Photographs



Photograph 1: West high tower (Bridge 529), camera facing west.



Photograph 2: West high tower (Bridge 529), camera facing northwest. The Norwalk River Railroad Bridge (Walk Bridge) approach span over North Water Street is visible on the right.



Photograph 3: West high tower (Bridge 529) as seen from North Water Street, camera facing south.



Photograph 4: East high tower (Bridge 530) as seen from the west bank of the Norwalk River, camera facing southeast.



Photograph 5: East high tower (Bridge 530), camera facing southwest.



Photograph 6: West high tower (Bridge 529) with former Norwalk Iron Works building and east high tower (Bridge 530) in background, camera facing northeast.



Photograph 7: West high tower (Bridge 529), detail of lowest cross-member, which also serves as a catenary support, camera facing northeast. Former Norwalk Iron Works, now the Maritime Aquarium, is visible in the background on the left.



Photograph 8: East high tower (Bridge 530), detail of north support, camera facing northwest.



Photograph 9: West high tower base, south support, detail of bracing, camera facing southeast.



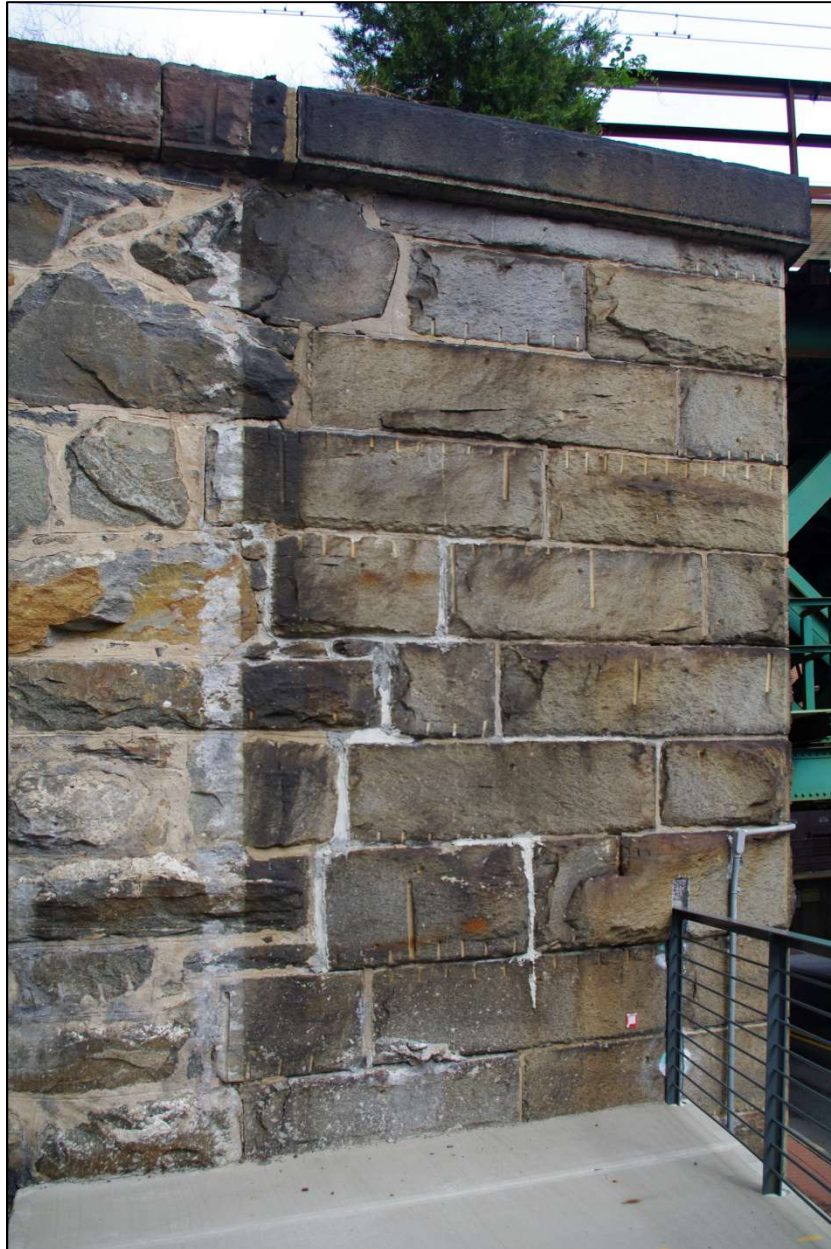
Photograph 10: East high tower (Bridge 530), detail of gusset plate and cross bracing, camera facing southwest.



Photograph 11: West high tower (Bridge 529), detail of base, camera facing northeast.



Photograph 12: Walk Bridge west abutment and south side retaining wall, North Water Street, camera facing west.



Photograph 13: South side retaining wall west of North Water Street where it joins the west bridge abutment, camera facing north.



Photograph 14: South retaining wall west of North Water Street, camera facing northeast. An approach span of the Norwalk River Railroad Bridge (Walk Bridge) is visible on the right.



Photograph 15: Portion of south retaining wall without capstones west of North Water Street, camera facing north.



Photograph 16: South retaining wall west of North Water Street, camera facing northwest.



Photograph 17: West end of south retaining wall section west of North Water Street, camera facing west.



Photograph 18: South retaining wall (behind 83-85 Washington Street), camera facing southwest.



Photograph 19: North retaining wall and concrete base of west high tower (Bridge 529), camera facing southwest.



Photograph 20: North retaining wall and former Norwalk Lock Company building, camera facing southwest.



Photograph 21: New concrete-block retaining wall and older stone wall adjacent to former Norwalk Lock Company building, camera facing northeast.



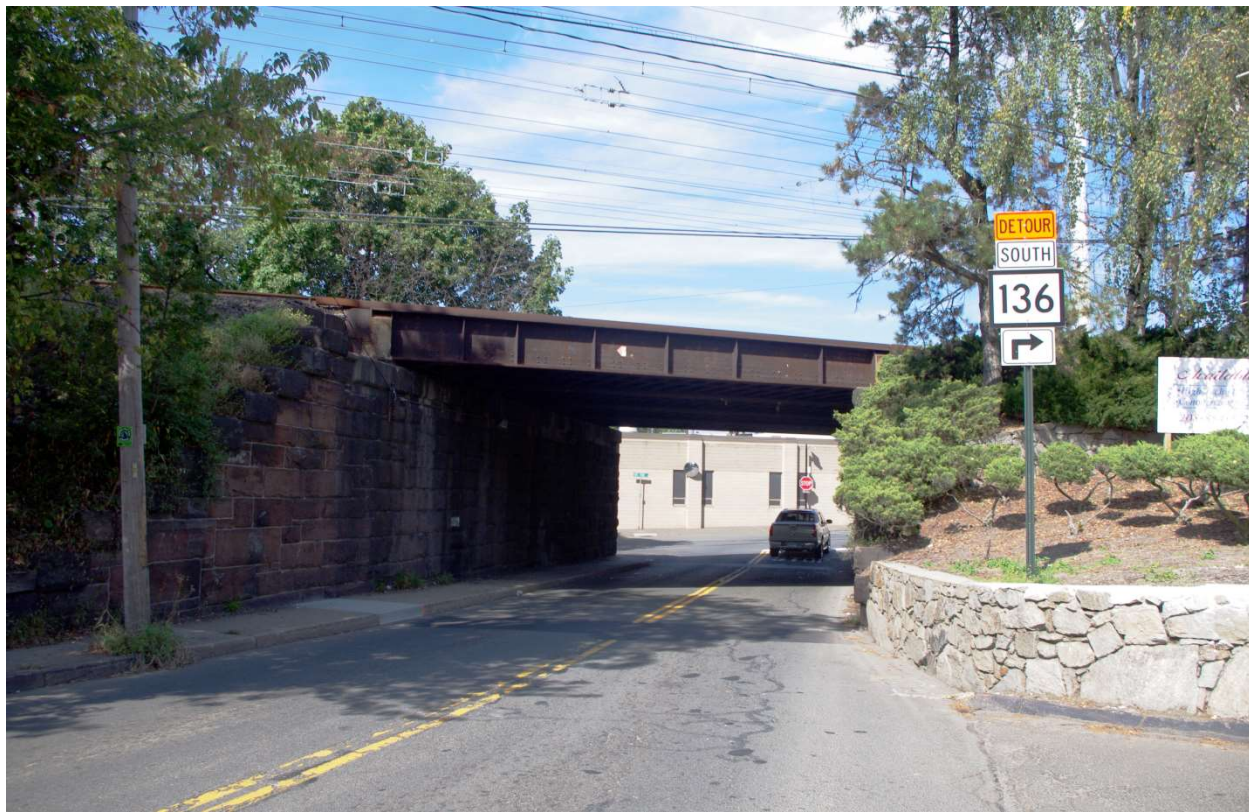
Photograph 22: Retaining wall east of Fort Point Street Railroad Bridge, camera facing southwest.



Photograph 23: Detail of masonry, retaining wall east of Fort Point Street Railroad Bridge, camera facing east.



Photograph 24: Retaining wall east of Fort Point Street Railroad Bridge, detail of junction between wall and east bridge abutment, camera facing southeast.



Photograph 25: Fort Point Street Railroad Bridge, south elevation, camera facing north.



Photograph 26: Fort Point Street Railroad Bridge, north elevation, camera facing south.



Photograph 27: Track level view of Fort Point Street Bridge, camera facing southwest.



Photograph 28: Fort Point Street Railroad Bridge, detail of main beam, camera facing north.



Photograph 29: Fort Point Street Railroad Bridge, detail of underside and east abutment, showing concrete bridge seat, camera facing southeast.



Photograph 30: Fort Point Street Railroad Bridge, detail of west abutment, north end, camera facing southwest.



Photograph 31: Fort Point Street Railroad Bridge, detail of south end of west abutment, camera facing northwest.



Photograph 32: Fort Point Street Railroad Bridge, detail of east abutment, north end, camera facing east.



Photograph 33: Fort Point Street Railroad Bridge, detail of south end of east abutment, camera facing east.



Photograph 34: Interlocking tower (now the South Norwalk Switch Tower Museum), 67 Washington Street, street-side elevation, camera facing north.



Photograph 35: Interlocking tower (now the South Norwalk Switch Tower Museum), 67 Washington Street, track-side elevation, camera facing southeast.



Photograph 36: Interlocking tower (now the South Norwalk Switch Tower Museum), 67 Washington Street, close-up of track-side elevation, camera facing southeast.



Photograph 37: High towers (Bridges 530 and 529) and the Norwalk River Railroad Bridge (Walk Bridge), camera facing south. The tower to the former Norwalk Iron Works, now the Maritime Aquarium, is visible on the right.



Photograph 38: Norwalk River Railroad Bridge (Walk Bridge) and east high tower (Bridge 530), camera facing east.



Photograph 39: West high tower (Bridge 529), former Norwalk Lock Company building, and former Norwalk Iron Works, now the Maritime Aquarium, on North Water Street, camera facing southeast.



Photograph 40: East high tower (Bridge 530) and former Norwalk Iron Works, now the Maritime Aquarium, on North Water Street, camera facing southeast.



Photograph 41: Former Norwalk Lock Company building, west high tower (Bridge 529) and retaining wall, camera facing northeast.



Photograph 42: Trackage of the interlocking tower (now South Norwalk Switch Tower Museum, 67 Washington Street) as seen from the South Main and Washington Streets Historic District, North Main Street, camera facing east. The east end of the South Norwalk Railroad Bridge is visible on the right.



Photograph 43: West high tower (Bridge 529) as seen from the South Main and Washington Streets Historic District, north side of Washington Street, camera facing north.



Photograph 44: East high tower (Bridge 530) and Norwalk River Railroad Bridge (Walk Bridge) as seen from the South Main and Washington Streets Historic District, east end of the north side of Washington Street, camera facing northeast.



Photograph 45: Norwalk River Railroad Bridge (Walk Bridge) and east high tower (Bridge 530) as seen from the corner of Washington and North Water Streets, camera facing northeast. The area on the east side of North Water Street is part of the Norwalk Heritage State Park and Norwalk Heritage Greenway.



Photograph 46: Commercial buildings in the South Main and Washington Streets Historic District, north side of Washington Street, as seen at track level, camera facing southwest. The South Norwalk Railroad Bridge is on the right.



Photograph 47: Former Norwalk Lock Company and Norwalk Iron Works buildings as seen from the tracks, with high towers (Bridges 529 and 530) visible on the right, camera facing east.



Photograph 48: High towers (Bridges 529 and 530) behind 19th and early 20th-century commercial buildings on Liberty Square, East Norwalk, camera facing northwest.



Photograph 49: High towers (Bridges 529 and 530) as seen from Goldstein Place, East Norwalk, camera facing northwest. The Maritime Aquarium's theater is the round brick building on the left.



Photograph 50: High towers (Bridges 529 and 530) and Norwalk River Railroad Bridge (Walk Bridge) as seen from Goldstein Place, East Norwalk, camera facing northwest. The tower of the former Norwalk Iron Works, now the Maritime Aquarium, is visible in the center, with the Aquarium's theater (round brick building) on the left.