Historic Resources Evaluation Report

Walk Bridge Replacement Project
Norwalk, Connecticut

State Project No. 0301-0176

Prepared for HNTB Corporation
Boston, Massachusetts

by

Archaeological and Historical Services, Inc.
Storrs, Connecticut for submission to

The Connecticut Department of Transportation

Authors:

Bruce Clouette
Marguerite Carnell Rodney
Stacey Vairo

August 2016

ABSTRACT AND MANAGEMENT SUMMARY

The State of Connecticut, through the Connecticut Department of Transportation (CTDOT), is planning the replacement of the 1896 Norwalk River railroad swing bridge in Norwalk, Connecticut, in order to improve the safety and reliability of service along the state's busiest rail corridor. The project will receive funding from the Federal Transit Administration (FTA), requiring consultation with the State Historic Preservation Office (CTSHPO) regarding possible impacts to significant historic and archaeological resources under Section 106 of the National Historic Preservation Act and Section 4(f) of the Department of Transportation Act. CTDOT is studying variants of the movable replacement bridge, including a vertical lift span option and a bascule span option.

This report presents the results of research, field inspection, and analysis for the historic resources that may be affected by the project. Historic resources as considered herein are limited to above-ground (i.e., standing) properties: buildings, structures, objects, districts, landscapes, and sites that meet the criteria for listing in the National Register of Historic Places. Archaeological resources are addressed in a companion report (Sportman 2016).

The Area of Potential Effects (APE) for above-ground historic properties was delineated as 1) the limits of project actions within the railroad right-of-way, extending from the South Norwalk Railroad Bridge over South Main and Washington Streets to a point east of the Fort Point Street Railroad Bridge; 2) the project's temporary construction staging/access areas; and 3) historic properties that are immediately adjacent to either of these.

Historic properties potentially affected by the project include the bridge itself, which is National Register-listed; the high towers, catenary structures, stone retaining walls, and Fort Point Street Railroad Bridge, which are contributing components of the overall historic rail line; and four listed or potentially eligible historic districts immediately adjacent to the right-of-way or construction staging/access areas. Adverse effects from project actions will include the replacement of the bridge itself, the loss of contributing components of the overall historic rail line, and indirect (visual) impacts on the settings of one listed and one potentially eligible historic district (the latter of which contains a building determined to be individually eligible for the National Register).

The conclusions and recommendations herein are the opinion of the historic-preservation consultant. Actual determinations of National Register eligibility and assessment of effects are properly part of the ongoing consultative process among FTA, CTDOT, CTSHPO and other stakeholders.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF HISTORICAL MAPS

LIST OF HISTORICAL IMAGES

LIST OF PHOTOGRAPHS

I. INTRODUCTION AND SCOPE OF WORK

A. Introduction

The State of Connecticut, through the Department of Transportation (CTDOT), is planning to replace the 1896 Norwalk River Railroad Bridge (No. 4288R), also known as the Walk Bridge, in Norwalk, Connecticut. The deck-truss swing bridge carries the Metro-North Railroad over the Norwalk River between the South Norwalk and East Norwalk stations. The proposed project (State Project. No. 0301-0176) will include the replacement of the existing bridge and is also expected to require changes to or replacement of elements associated with the electrification of the line, including removal of the steel lattice high towers. The project will improve the safety and reliability of service along the state's busiest rail corridor. The project location is shown on Figure 1 (Appendix I).

CTDOT has determined that the preferred alternative is the replacement of the existing bridge with a movable bridge structure. CTDOT is evaluating options, including a rolling bascule bridge and a vertical lift bridge. Funding for the project will be provided by the Federal Transit Administration (FTA), requiring the project to comply with the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act of 1966, as amended, and Section 4(f) of the United States Department of Transportation Act. These federal laws require consultation with the State Historic Preservation Office (CTSHPO) regarding possible project-related impacts to archaeological and historical resources listed in or eligible for listing in the National Register of Historic Places (NRHP). In addition, the project will receive state funding, requiring it to comply with the Connecticut Environmental Policy Act (CEPA), which mandates consideration of possible impacts to significant historic and archaeological resources, including those listed on the NRHP and State Register of Historic Places (SRHP).

This report presents the results of research, field inspections, and evaluation of historic resources that may be affected by the Walk Bridge project. The report was prepared by Archaeological and Historical Services, Inc. (AHS), under contract to HNTB Corporation, the engineering firm that is developing and evaluating alternative designs for replacing the bridge. For the purposes of this report, historic resources are defined as above-ground (i.e., standing) resources: buildings, structures, objects, districts, landscapes, and sites that meet the criteria for listing in the NRHP. Archaeological resources are addressed in a companion report (Sportman 2015).

The survey of historic resources was conducted in accordance with *The Secretary of the Interior's Standards and Guidelines for Identification* and *The Secretary of the Interior's Standards and Guidelines for Evaluation* (1983 and ongoing revisions). AHS personnel inspected the project area in May and July 2015. A thorough survey of the immediate vicinity of the bridge was conducted on foot, resulting in field notes and some 200 photographs of potentially impacted historic properties. Following the walking survey, all public streets within the visibility area of the high towers were assessed in a windshield survey to identify additional historic properties that could be affected. Assessment of noise and vibration effects on National Register-listed or eligible resources must be deferred until information from those studies becomes available.

The results of the historic resources evaluation will be incorporated into the Environmental Assessment/Environmental Impact Evaluation/ (EA/ EIE) prepared as part of the Walk Bridge Replacement Project under CEPA and NEPA, as well as the Section 4(f) evaluation.

The conclusions and recommendations herein are the opinion of the historic-preservation consultant. Actual determinations of National Register eligibility and assessment of effects are properly part of the ongoing consultative process among FTA, CTDOT, and CTSHPO and will be further developed as the project progresses.

This report is organized as follows: Section II presents the methodology used. Section III provides the historical background of the project area. Section IV discusses railroad-related structures and buildings. Section V addresses non-railroad-related historic resources. Section VI presents an evaluation of impacts to historic resources. Section VII presents conclusions and recommendations regarding historic resources.

B. Delineation of the Area of Potential Effects (APE)

For historic resources, the Area of Potential Effects (APE) was delineated so as to include the railroad right-of-way wherein project actions will occur and the properties that will be used for temporary construction staging/access areas (Figures 5, 6 and 7). The project limits within the railroad right-of-way extend from just east of the South Norwalk Railroad Bridge over South Main and Washington streets to a point east of the Fort Point Street Railroad Bridge (see Figure 2). The APE also includes historic properties that are 1) immediately adjacent to the portion of the railroad right-of-way that is within the project limits and/or 2) adjacent to the construction staging/access areas.

It is necessary to include a consideration of the indirect visual effects on the settings of historic resources. To this end, a wide area corresponding to the area of visibility of the high towers, the project's tallest component, was investigated (see Figure 1). This entire area was subjected to a windshield survey to identify possible historic properties that could be visually affected by the removal of the high towers, as well as other visual effects from project actions. Within this area, there are hundreds of houses, churches, former factories, and commercial buildings dating primarily from the mid- to late 19th century. The windshield survey indicated that most of these resources did not appear to be eligible for listing in the NRHP.

The high towers are visible from a number of historic properties, but such visibility is not necessarily a significant part of the properties' settings. The high towers are visible from the following historic properties, but such visibility does not form a significant part of their settings:

United States Post Office-South Norwalk

This single-story, late Classical Revival-style building houses the U. S. Post Office branch at 16 Washington Street in South Norwalk (Photograph 13). It was built in 1936 as part of a Works Progress Administration program. The single-story, limestone-clad building was listed on the National Register in 1987. The interior features several murals funded by the Treasury Relief Art Project. Although the high towers can be seen in the distance, they do not form a major part of the setting of this building, which faces north. It did not appear appropriate to extend the APE so as to include this property.

Seaview Avenue Historic District, East Norwalk

This potentially eligible historic district (Photograph 15) faces Veterans Memorial Park and Norwalk Harbor to the south. City directories reveal that Seaview Avenue (formerly Riverside Avenue) was composed mainly of residential properties, with some commercial establishments such as groceries and a small cigar shop, near each end. The houses were constructed around the turn of the 20th century in variations of the Queen Anne and Colonial

Revival styles. The 1914 Norwalk City Directory indicates that the street was home to dentists, doctors, contractors, and architects (*Norwalk City Directory* 1914: 348). The houses share a similar size, scale, and setback from the street. The area is potentially eligible as a NRHP district that would be significant on the local level because of its architectural qualities (National Register Criterion C). Although the high towers are visible from the potentially eligible district, the houses face in the opposite direction, so the rail line is much less a part of the district's visual setting than in the case of the historic districts that immediately adjoin the railroad right-of-way. The historical association between the district's development and the railroad is also less direct. It did not appear appropriate to extend the APE so as to include this property.

R and G Corset Factory – 21 Ann Street

This building (Photograph 16) appears to have potential for individual listing in the NRHP. Built in 1881, the factory complex includes the original four-story brick building with a mansard roof and several single-story additions, all constructed before 1920. It has been converted into a condominium complex, but still epitomizes the industrial nature of South Norwalk (Criterion A) and may additionally be eligible under Criterion C as an example of late 19th-century factory construction. Although the high towers can be seen from this building (as well as other railroad-related features from the upper floors), the building relates much more closely to the adjacent former Danbury and Norwalk rail line than it does to the main line, both in terms of historical function and visual proximity. It did not appear appropriate to extend the APE so as to include this property.

Haviland and Elizabeth Streets-Hanford Place Historic District

Listed in the NRHP in 1988, this residential district (Photograph 17) borders the commercial center of South Norwalk and Water Street. The district is significant under Criteria A and C. The houses are two-and-one-half and three-story residences built from the 1870s to 1920s in the Italianate, Second Empire, and Queen Anne styles. Although the high towers are visible from the district, but the district's visual setting terminates with the modern parking garage and the back sides of the buildings on Washington Street. The relationship between the railroad and the historical development of this neighborhood is also substantially less direct than in the case of the historic districts that immediately adjoin the railroad right-of-way. It did not appear appropriate to extend the APE so as to include this property.

Other than being shown for information purposes on the various figures, the above properties are not addressed elsewhere in this evaluation because they lie outside the APE. No further attempt was made to enumerate historic properties in areas where the bridge, catenary supports, retaining walls and/or towers do not significantly contribute to the properties' overall settings.

.

II. METHODOLOGY

The scope of work included an evaluation of potential project-related impacts to historic (above-ground) resources listed in or eligible for listing in the NRHP and/or the SRHP. The study tasks included documentary research to identify historic properties and to establish the historic context to interpret the significance of rail- and non-rail-related historic resources. AHS assembled a series of historic maps and views (see Appendices II and III), reviewed existing National Register forms for individual properties and districts, met with representatives from the Norwalk Public Library and the Norwalk Preservation Trust, and participated in historic resources stakeholder meetings on the project.

Additional research was undertaken to establish the historic contexts for evaluating resources in the project vicinity, including research in the CTSHPO inventory files; the records and photograph collections of the Norwalk Public Library (including the former records of the Norwalk Museum). Railroad records at the Dodd Research Center, University of Connecticut, Storrs, and at the New Haven Museum; and previous survey information from the Connecticut Historic Preservation Collection, University of Connecticut were also consulted by AHS.

In order to establish an overall historical context and help in the identification of historic resources, AHS consulted general statewide and local published histories of Norwalk such as Ray and Stewart (1979), Selleck (1896), and standard works on New England railroad history such as Turner and Jacobus (1989), and Karr (1995). Inventories of historic resources consulted include the reconnaissance-level survey of historic resources in Norwalk (Bloom 1979), the Historic American Engineering Record (HAER) documentation of the bridge, the Northeast Corridor Line (HAER CT-11) and the electrification of the line (HAER CT-8). Site-specific resources included railroad track maps from the late 19th century to ca. 1950; Sanborn insurance maps and other historic maps; annual reports of the Hartford & New Haven Railroad and the New York, New Haven & Hartford Railroad (NY, NH & H); the *Shoreliner* and other publications of the New Haven Railroad Historical and Technical Association.

In addition to the historic resources within or adjacent to the APE that are already listed in the NRHP, other resources identified by the project historians were evaluated for their potential eligibility for listing in the NRHP by applying the National Register criteria of significance, which state the following:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded or may be likely to yield, information important in history or prehistory.

Resources may qualify under one or more of the National Register eligibility criteria. In addition to meeting at least one of the criteria, National Register-eligible resources must also possess "several" of the seven aspects of integrity: location, design, setting, materials, feeling, workmanship, and association.

The criteria for listing in the SRHP closely follow that of the NRHP. Connecticut's SRHP includes districts, sites, buildings, structures and objects of national, state or local significance. These resources possess integrity of location, design, setting, materials, workmanship, feeling and association and:

1. *are associated with events that have made a significant contribution to our history and the lives of persons significant in our past; or*
2. *embody the distinctive characteristics of a type, period or method of construction; or that represent the work of a master; or that possess high artistic values; or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
3. *have yielded, or may be likely to yield, information important in prehistory or history.*

The SRHP includes the following:

- All properties that were surveyed in the 1967-68 state inventory and subsequently adopted by the predecessor of the Connecticut Historic Preservation Council in 1975.
- Properties that have been listed in the NRHP, which are automatically listed in the SRHP as well.
- Properties included in local historic district or historic property study reports that have received favorable recommendation by CTSHPO pursuant to CGS Section 7-147b are listed on the SR.
- Properties that have been submitted to and approved by the Connecticut Historic Preservation Council for listing in the SRHP.

The rail line and its signalization system were the subjects of HAER reports completed in 1977 and 1982 (Library of Congress 1977, 1982). The CTSHPO has determined that the New York, New Haven & Hartford (NY, NH & H) rail line is NRHP-eligible as a linear historic district that fulfills Criterion A (broad patterns of history). Rail transportation was a major factor in the region's economic growth. Because of Norwalk's maritime transportation routes and access to alternative transportation courses, local manufacturing enterprises had the potential to become industrial-scale producers, with hundreds or thousands of employees, and, in many cases, a dominant position in the national market. Lock, hat, corset, and cigar manufacturing are just a few of the industries that flourished in Norwalk in the late 19th and early 20th centuries. The coming of the railroad had an important effect on settlement patterns. South Norwalk, already developed along a portion of the river with the deepest draft, grew into a commercial and industrial center.

Rail-related resources in the APE also contribute to the potential NY, NH & H linear historic district under Criterion C. The catenary system, historic bridges, and retaining walls of the elevated track all represent components of a significant work of engineering.

III. HISTORICAL BACKGROUND OF THE PROJECT AREA

A. Norwalk: Settlement to the Mid-19th Century

The area that became Norwalk was purchased from local Native Americans with what the English viewed as deeds giving them clear title to the land. Daniel Patrick made the first purchase, a large tract on the west side of the Norwalk River in April 1640. He was followed by Roger Ludlow, who bought land on the east side of the river in February of the following year. Ludlow's land, which extended north from the coast as far as a man could walk in a day (Norwalk Historical and Memorial Library Association 1901), was paid for with "eight fathoms of wampum, six coats, ten hatchets, ten hoes, ten knifes, ten scissors, ten jew's-harps, ten fathoms tobacco, three kettles of six hands about, and ten looking glasses." (Schenck 1889: 18). Actual settlement by the English did not begin until 1649, when the families of Richard Olmstead and Nathaniel Ely arrived from Hartford. Other families soon followed, and Norwalk became a town in 1651. The Norwalk River (for which the town was named) made the area particularly attractive to early settlers. The river, which ended in a quiet natural harbor at Long Island Sound, was navigable for almost three miles inland. Lined by rich mud flats and salt marshes, it provided the early settlers with plentiful yields of oysters and salt hay to feed cattle.

The earliest "home lots" flanked Town Street (later renamed East Avenue), and continued on the east side of the Norwalk River and around the Stamford-Fairfield Path, which ran in an east-west direction parallel to Long Island Sound. As settlement continued inland, the area on the west side of the river, known as Old Well (now South Norwalk), was first settled in 1737 by Pierre Quintard, a silversmith. He was joined by a group of artisans specializing in pottery and silversmithing, who also settled in Old Well. Subsistence farming formed the basis of the town's early economy, but shortly before the Revolutionary War, Norwalk emerged as the hub of a growing regional agricultural market. Access to Norwalk Harbor allowed local merchants to replenish their stock with goods from New York, Boston, Charleston, and Barbados. Farmers brought raw goods to Norwalk's merchants in exchange for products such as books, fabrics, sugar, molasses, and spices. Infrastructure around the harbor began to develop. In 1761 merchant Nathan Mallory, who operated a store along the Norwalk River, built a wharf at Oyster Shell Point. Maritime enterprise was limited, however, by the relatively shallow harbor, which could only accommodate 30- to 40-ton vessels; by comparison, New London's harbor could accommodate 300-ton ships (Ray and Stewart 1979: 71).

In the early years of the Revolutionary War, Norwalk served as an important stop on the supply line to Danbury and Fishkill, New York. Merchants and manufacturers prospered by selling provisions to Connecticut troops, while Norwalk saltpeter works supplied gunpowder. This brief period of prosperity came to an abrupt end in July 1779, when British forces, commanded by General Tryon, burned the town of Norwalk. It took nearly a decade for residents to rebuild, but by 1790, the town saw a resurgence in coastal trade. Wharves were rebuilt and the construction of shipyards soon followed. By 1801, merchants and farmers shipped goods on regularly-scheduled packet boats from Norwalk Harbor to Albany, Troy, and New York City. While there were small mills along the town's secondary watercourses, manufacturing during this period was limited by the lack of large waterpower resources.

In 1835, the U.S. Coast Survey prepared a detailed map of the Norwalk River and surrounding land (Map 1, Appendix II). Even at this date, there were very few buildings in the project vicinity. However, a portion of the project area overlays what was shown on the 1835 survey as a small peninsula or spit of land extending out from the east bank into the river. This peninsula was identified as the location of an "ancient" Native American fort as early as 1847,

on a map included in Edwin Hall's history of Norwalk (Historical Map 2). Documentary confirmation that the fort was in this general vicinity can be found in a deed of 1689 given by John Gregory to his son, Thomas, which described the parcel as "lying on the west side of Norwalk Town plot [the East Main Street house lots], 2 acres — bounded east by the common land bank; west, Norwalk river; south by the point of common land where the Indian Fort formerly stood; north by Thomas Betts' marsh meadow" (quoted in Hall 1847: 91-92).

The 1835 map shows that portions of the river channel were filled on the west side, and the east bank (where the water treatment plant is today) has changed since that date (Map 1, Appendix II). Norwalk was incorporated as a borough in 1836; shortly after, a division began to form between the older established area and Old Well. By 1840, Old Well was called South Norwalk; an area that housed a large working-class population who worked in potteries, hat factories, carriage shops, and silversmiths shops. Built along the deepest part of the harbor, it was a prime shipping location. Quintard's Wharf, at base of Marshall Street, was the center of operations. Soon commercial buildings began to line Marshall and Ann Streets, and South Norwalk surpassed Norwalk proper as the premiere port. Steam Boat Landing, built ca. 1820 by a group of local investors, was located on Water Street just north of Washington Street (south of Quintard's Wharf). It attracted over 20 steamship companies providing affordable passage to New York. By 1840, manufacturing in South Norwalk was thriving. Hat-making was the most prominent industry; by the middle of the 19th century, hatters employed over 2000 workers.

B. The Railroads and the Rise of South Norwalk as a Commercial and Industrial Center

Norwalk residents were concerned by initial surveys that showed a drawbridge on the Norwalk River, and they resisted the construction of railroads throughout the 1830s and 1840s for fear of impeding river traffic. Despite the opposition, the New York & New Haven Railroad began full service to Norwalk in 1848, passing through South Norwalk. The map of South Norwalk by Chace et al. depicts the railroad as well as the development west of the river (Map 3, Appendix II). The Danbury and Norwalk, a short line service connecting the two towns, began service in 1852. Norwalk quickly became a busy railroad center, with ten trains leaving South Norwalk between 5:16 and 9:36 A.M. each day. A wooden drawbridge east of the station carried trains across the Norwalk River. On May 3, 1853, the bridge was the site of one of Connecticut's worst rail disasters. The Boston express from New York was approaching the drawbridge when the train's engineer misread the signal indicating that the bridge was open. Several passenger cars plummeted off the open bridge into the river, killing 45 people. The accident prompted the creation of the Connecticut Railroad Commission, which was tasked with inspecting the state's railroads and establishing operating regulations. One of the first actions of the Commission was to urge the Connecticut legislature to pass a law requiring all trains to come to a complete stop before river crossings.

The population of Norwalk doubled after 1860. It remained a town divided; Norwalk proper (referred to as "uptown" by locals), was granted a charter by the state legislature in 1871 to become a borough, allowing control and provision of its own amenities. Always in competition, South Norwalk (known as "downtown") was granted the same status the following year. The boroughs maintained their distinct identities, with Norwalk home to long-time, established residents, and South Norwalk populated by working-class immigrants.

After the establishment of the railroads, South Norwalk quickly surpassed Norwalk as the commercial and industrial center. The rail line ran directly through the center of the town's growing commercial and industrial area and defined the surrounding streetscape. The Norwalk

Lock Company was organized in 1856 by a group of local investors including Algernon Beard, Ebenezer Hill, and Henry Elwell (Ray and Stewart 1979: 109). The mansard-roofed plant in South Norwalk, near the Boston and New Haven tracks was the first large industrial structure in South Norwalk (Roth 1981). Most of its highly skilled workers came from England and Germany. Norwalk Lock shifted from key production to high quality household hardware, after the Yale and Town Company of Stamford began manufacturing flat latchkeys that replaced the long-necked keys made in Norwalk (Ray and Stewart 1979: 132).

The post-Civil War period saw the construction of the Norwalk Iron Works on Water Street, near the tracks of the New York & New Haven Railroad (Map 4, Appendix II). Algernon Beard and Ebenezer Hill were the principal stakeholders and directors of this company, which employed 375 workers by the end of the century, manufacturing steel pumps, compressors, and mining equipment (Ray and Stewart 1979: 134). The oyster industry also remained an important part of the economy well into the 20th century, with oyster houses lining Water and Raymond Streets. In 1871, the Norwalk City Directory listed the "principal manufacturers" as "the Norwalk Iron Works, Norwalk Lock Co., South Norwalk Planing Mill Co., and several hat manufactories in the City of South Norwalk." (Price and Lee 1871: xi). Cigar-making was also an important trade in South Norwalk, with the Old Well Cigar Company on Washington Street as the principal employer. The O.H. Bailey view of Norwalk from 1875 shows a bustling waterfront and the developed streets of South Norwalk (Map 5, Appendix II). A map from 1899 by Landis & Hughes shows even denser development in South Norwalk but relatively sparse development on the east side of the river (Maps 6 and 7, Appendix II).

This period of industrial growth coincided with South Norwalk's growth as a commercial center. Much of this development was due to Samuel Roodner, an immigrant of Russian-Jewish descent, who began as a grocer before becoming a grain and feed merchant. He invested money from his successful ventures in land that would become South Norwalk. Three-story brick buildings with cast-iron facades lined Washington Street and continued to spread along South Main and North Main Street, housing a variety of shops, offices, and small-scale industrial enterprises.

In 1893, the Borough of Norwalk was granted a charter by the State Legislature to become a city, and South Norwalk followed the next year. The rivalry between the two deepened as South Norwalk surpassed Norwalk in terms of infrastructure, benefiting from its own water supply, electrical plant, and superior schools.

South Norwalk and East Norwalk were home to several immigrant populations, including Germans, Irish, Swedish, Hungarian, Jews of Russian and German decent, and, around the turn of the 20th century, Italians. Swedish families congregated in East Norwalk around Fort Point and Van Zant streets and Third, Fourth, and Cove avenues. In South Norwalk, the Springwood section, including Bouton and Ely streets and Lexington Avenue, were settled by immigrants of Hungarian descent. By the mid-1880s, this area took on the name "Whistleville" due to the constant sound of trains' warning whistles as they approached the South Norwalk Station. This section of town became home to many Italian immigrants (from Calabria) in the early 20th century.

East Norwalk did not have a train station until 1885 and consequently its development was slower. The 1899 Landis & Hughes view (Map 7, Appendix II) shows that the most densely settled areas were clustered around the wooden Washington Street Bridge linking East Norwalk and South Norwalk. Dozens of shops, including grocers, fishmongers, and cigar-makers, were built on the bridge itself and extended into East Norwalk (Image 1, Appendix III).

Trolleys travelled over the bridge, allowing residents to easily complete their shopping on both sides of the river.

C. Norwalk in the 20th Century

Manufacturing continued to thrive into the 20th century. The R and G Corset Factory on Ann Street, owned by Messrs. Roth and Goldschmidt, employed 1,000 workers in 1901, almost all of whom were women (Ray and Stewart 1979: 143). They produced boned and laced corsets, reportedly up to 650 per day. Sanborn insurance maps from 1906 and 1912 show the area near the rail bridge in South Norwalk as densely built with factories and a wide variety of shops, including tailors, undertakers, restaurateurs, milliners, and grocers (Maps 8 and 9, Appendix II). The Iron Works and Lock Company occupied several blocks on the north side of the bridge, and the Hatch & Bailey Lumber Yard was on the south side of the tracks. Tailors, grocers, and several dwellings lined the north side of Washington Street. On the east side of Water Street, Steamboat Dock stood along the river near the oyster houses and the J. Shepard & Sons Carriage Factory. That same year, a unification charter was drafted to join the cities of South Norwalk and Norwalk with the East Norwalk Fire District. Initially rejected by all parties, it was revised and approved in June 1913. Two years later, the Washington Street Bridge, connecting South and East Norwalk, was replaced with a steel truss bridge. The loss of the old wooden bridge meant that its shops were also demolished. Today, the only remains of that commercial area are the multi-story brick structures on the east side of the river near what is now known as Liberty Square.

Seaview Avenue, on the east bank of the Norwalk River, was the location of a row of stylish year-round and summer residences built in the late 19th and early 20th centuries in the Queen Anne and Colonial Revival styles. A former dump, known as Duffy's Field, was located across the street. In the 1960s the city closed it and built Veterans Park (Grant 2014: 48).

One of the city's largest employers, the Crofut and Knapp hat factory, relocated to Van Zant Street in East Norwalk in 1926. It had over 1,800 employees and produced over 1.5 million hats annually. Manufacturing declined throughout the region following World War II, with many of the larger Norwalk factories relocating to southern states or closing. The hatting industry was effectively gone in Norwalk by the 1950s.

The Flood of 1955 and the construction of the Interstate Route 95 highway had significant impacts on Norwalk's character. The flood had a devastating effect, particularly in the Wall Street area. The Norwalk Redevelopment Agency undertook a series of improvement projects, chief of which was the revitalization of downtown South Norwalk (or SoNo, as it came to be called). Numerous historic buildings were rehabilitated after the South Main and Washington Streets Historic District was listed in the National Register of Historic Places in 1977. Efforts to sustain development of Norwalk's former industrial properties continued into the latter part of the 20th century and early part of the 21st century. The Norwalk Lock Company, the Iron Works building, R and G Corset Factory, and the Crofut and Knapp Factories have been rehabilitated and converted to new uses. The Lock Company and Crofut and Knapp buildings became commercial office space; the Iron Works now houses the Maritime Aquarium, and the R and G Corset Factory was converted into multi-family housing.

D. The New York, New Haven & Hartford Railroad

The NY, NH & H was formed in 1872 following a merger of the Hartford & New Haven Railroad (chartered in 1833), and the New York & New Haven Railroad (chartered in 1844). The railroad absorbed other lines through merger, purchase, or long-term lease, until it

controlled virtually all the railroads in southern New England. Concurrently, the company used its political influence to undermine competing routes (Karr 1995: 46-48). 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. To meet this increase in demand, double-tracking of the line began in 1853.

In 1872, the New York & New Haven and the Hartford & New Haven merged to form the NY, NH & H, establishing the dominant transportation company in southern New England until the Penn Central merger of 1968. Commonly known as the New Haven or the Consolidated, the line—through leases and acquisitions—came to monopolize not only rail transportation in the region, but steamboat service and eventually streetcars and buses as well.

Charles Peter Clark (1836-1901) served as president of the Hartford & New Haven from 1887 to 1899. His predecessors had already built a significant enterprise through mergers and acquisitions. Under Clark, however, the Hartford & New Haven's consolidation of regional railroads reached new heights. In addition to the Naugatuck, Stonington, Housatonic, and New York and New England railroads in Connecticut, Clark acquired the Old Colony system in southeastern Massachusetts, thereby controlling almost all rail traffic between New York City and Boston. At the same time, he pushed for controlling interests in all the Long Island Sound steamship companies and began to acquire electric street railways. Clark attracted passengers by lowering fares and introducing new services, such as the distribution of newspapers by train and the transportation of perishables in refrigerator cars. New freight, passenger, and service facilities were constructed all along the line. Clark paid for these improvements by raising the limit on the amount of stock the company was authorized to issue. This strategy eliminated the need to borrow money from banks, but attracted financiers such as J. P. Morgan and William D. Rockefeller, who joined the board of directors under Clark's presidency.

The line was already widened to four tracks in the immediate vicinity of New York City, and Clark pursued four-tracking for the entire New Haven line. The project was intended to eliminate grade-level crossings. Particularly in Connecticut's growing cities, grade crossings proved problematic, and by the 1880s and 1890s, the railroad was taking the initiative to eliminate them. In major cities such as Stamford, Norwalk, and Bridgeport, the switch to four-tracking was accompanied by raising the entire rail line above street level, necessitating long, stone-walled viaducts in many areas (Images 2-4, Appendix III). Dozens of new bridges were needed to carry the tracks over local roadways.

The four-tracking program resulted in two significant improvements: the installation of block signaling along the line, allowing trains to be controlled more safely, and the use of ballasted roadbed to stabilize the tracks. At the time, electric traction was only in use for streetcars, but Clark hoped to adopt it for rail service. The railroad's 1892 annual report mentioned that the four-tracking project's improvements to the roadbed, signaling, and elimination of grade crossings would facilitate eventual electrification. The four-tracking project from Greenwich to South Norwalk began in 1894; the portions in downtown Norwalk were among the last to be completed. Images from that time show a busy commercial area that was significantly altered by the end of 1896 (Images 5 and 6, Appendix IV). The Norwalk River Railroad Bridge was built as part of the four-tracking and elevation project (Image 7, Appendix III). Following the elevation of the line through the city, the railroad became an integral part of the streetscape as it passed closely through the factories and shops of South Norwalk. The approach spans of the railroad bridge on the west side of the river and stone retaining walls on the east side of the river altered the streetscapes of Norwalk entirely. These steel and stone structures became an intrinsic part of city.

During Clark's tenure, the railroad's track mileage increased from 450 to 2,047 miles, and its earnings rose from $8 million in 1887 to $38 million in 1899, when he resigned. His improvement programs allowed freight service to remain competitive and facilitated industrial growth in the state's major cities and large manufacturing towns. Manufacturing centers formed along rail lines where once they had developed along waterways. In Norwalk, the rail line was directly responsible for the growth of "downtown" South Norwalk.

Continued suburbanization of Fairfield County through the 20th century made commuting into the New York a daily routine for many. In addition to stations in every community along the main line, the system included branch lines to New Canaan and Danbury, which extended the practicality of commuting to work in New York City to inland Fairfield County towns as well.

In 1903, New York passed legislation to ban steam trains in New York City by 1908. This legislation was considered a matter of public safety, and the rail lines were tasked with finding an alternative form of power. The New Haven Line was electrified and signalized to Stamford in 1907, and continued to New Haven in 1914. A single-phase system was used, since it was thought to offer the most economical solution for the high density of traffic and long distances traveled by the NY, NH & H trains. The upgrade of the line also included an automatic signal system, with overlapping block controls to provide advance notice to engineers. Insulated rail joints formed block limits or separate circuits and ensured that each 2,000-foot section of track was used by just one train at a time. Sidings and movements between tracks were controlled by interlocked signal and switch controls located in towers such as the one on Washington Street. Drawbridge signals guaranteed that no signal was cleared unless the drawbridge and rail junctions were both lined up and locked.

Catenary support structures were generally installed at 300-foot intervals along the line (Images 8 and 9, Appendix III), with closer spacing on curves and in other special circumstances. Typically, the catenary structures are formed from twin latticed box-girder uprights connected by horizontal cross-members at the top. All of the electrification elements along the New Haven Line were designed by the New Haven Railroad engineering division and the Westinghouse Electric Company.

After World War II, Norwalk continued to grow as a bedroom community. In addition to new residential neighborhoods, this period saw many of South Norwalk's industries move away from the rail line to suburban locations served by limited-access highways. During this period, the Walk Bridge remained relatively unchanged (Image 10, Appendix III). The Merritt Parkway (Route 15) represented the first round of highway completion in the late 1930s, with Interstate Route 95 paralleling the rail corridor in the late 1950s. The railroad's freight and passenger revenue declined, as people traveled more by automobile and industries shipped products by truck. Norwalk's industrial age had also begun to wane, as many of the manufacturing centers closed or moved away.

The New Haven Railroad was reorganized in 1968 as part of the Penn Central merger of the Pennsylvania and New York Central railroads. Merging three railroads, each on the brink of bankruptcy, created an economically unstable entity. Penn Central declared bankruptcy in 1970, and entered into an agreement that same year to allow the Metropolitan Transit Authority (also subsidized by the State of Connecticut) to operate along the New Haven and Danbury lines. This arrangement was followed by the formation of the Consolidated Rail Corporation (Conrail) in 1976 to provide freight service to the customers of Penn Central and other freight railroads in the Northeast and Midwest. Metro-North was formed in 1983 when the Metropolitan Transit Authority, a quasi-public New York agency, teamed with the Connecticut

Department of Transportation to take over commuter service from Conrail.

E. The Danbury & Norwalk Railroad

The Danbury & Norwalk Railroad was chartered in 1835, after a proposed canal project connecting the two towns proved too expensive. The charter was obtained from the legislature by several local businessmen, including Jonathan Camp and pottery manufacturer Asa Smith, under the name of "Fairfield County Railroad Company." The project was initially met with great skepticism by residents and merchants. It was not until 1850 that construction on the line began, with service beginning in 1852 (Bailey 1896: 266). The original intention for the short line was much grander: it was planned to end at Wilson's Point in Norwalk and continue by boat to New York City. North of Danbury it was to continue on to connect with the Boston and Albany Railroad.

Initial service operated two southbound and two northbound trains daily (Ray and Stewart 1979: 110). During the Civil War, LeGrand Lockwood took control of the Danbury & Norwalk and greatly expanded the line, adding two smaller branch lines to reach the surrounding countryside and an extension from South Norwalk to Wilson's Point on Long Island Sound (Ray and Stewart 1979: 111). In 1882 the company built a steamboat pier at Wilson's Point to connect with New York. In 1886, as part of a nationwide movement to consolidate smaller rail lines, the Housatonic Railroad leased the Danbury & Norwalk line for 99 years. The Housatonic was absorbed into the New York & New England (NY&NE) railroad soon after. The NY&NE attempted to compete with the NY, NH & H by creating a combined "Long Island and Eastern States Line," which carried passengers and freight from Wilson's Point to Brooklyn. However, it was plagued by accidents, delays, and breakdowns, and closed the Wilson's Point station. In 1892, the line was absorbed into the NY, NH & H system.

IV. HISTORIC RESOURCES: RAILROAD-RELATED PROPERTIES

Background research and field inspections indicate that the replacement of the Norwalk River Railroad Bridge will potentially affect a number of railroad-related historic properties that are listed in or eligible for listing in the National Register. These historic resources are depicted in Figure 3 and are discussed below.

A. Norwalk River Railroad Bridge (Walk Bridge)

The Walk Bridge is a deck-truss, rim-bearing swing bridge that carries four tracks of Metro-North between New Haven and New York, Amtrak passenger trains on the Boston/New York/Washington corridor, and freight trains operated by the Providence & Worcester Railroad and CSX Transportation, Inc. (Photographs 1 and 2). It was built in 1896 by the Pennsylvania Steel Company's Bridge and Construction Department as part of the four-tracking and elevation of the New Haven line. This is the earliest movable bridge on the Northeast Corridor and is the only rim-bearing, deck-truss swing bridge (Clouette 2004). The bridge consists of a steel superstructure and stone masonry piers and abutments. The height above the mean water line is 16 feet, with timber fenders extending approximately 15 feet on either side of the bridge. The bridge is a total of 562 feet long and includes two fixed deck-truss spans, each 120 feet, to the west of the swing span; the 202-foot-long swing span; and another 120-foot deck-truss span to the east of the swing span. The superstructure is composed of gusset-reinforced steel I-beam, angle, channel, plate and bar stock. The major structural components are joined by riveted connections, a construction method commonly used for railroad bridges because it provided great rigidity. The bridge is particularly notable for its swing-span mechanism, which utilizes a series of 96 rollers, set into a steel track atop a drum on the center pier, in order to operate the movable span.

The bridge was listed in the National Register in 1987, primarily under Criterion C, as one of several significant movable railroad bridges along the Northeast Corridor in Connecticut (Clouette et al. 1986), It is the oldest of these bridges and was one of few historic swing bridges then in place along the corridor. In addition to its design significance as an example of period engineering, the bridge is important in Connecticut's transportation history because of the New York, New Haven & Hartford Railroad's role in consolidating rail service in the state (Criterion A). Although the National Register form has the directionals reversed, it is clear that the intent was to include the approach span and abutments over North Water Street as part of the listed resource.

B. Rail Line and Related Structures

The rail line between the New York/Connecticut border and New Haven has long been regarded as an important historic resource that includes a pioneering electrification system, numerous early railroad bridges, and historic trackside passenger stations, freight houses, and interlocking towers. The line was documented by the Historic American Engineering Record (HAER) in 1977 (HAER No. CT-11), and the line's signalization system was documented in 1982 (HAER No. CT-8). That same year, the American Society of Mechanical Engineers designated the electrification of the line a National Historic Engineering Landmark. The CTSHPO determined that the electrification of the line from New Haven to New York was eligible for listing in the National Register (following the same boundaries as the HAER documentation). A report on the New Haven Railroad catenary system, prepared for CTDOT

in 2000, recommended listing of the electrification of the line from New Haven to New York (Stewart 2000) under Criterion C. Because of the importance of the N Y, NH & H RR in the transportation history of Connecticut, and the impact of the railroad on the economic and social history of the communities it served, the overall rail line is eligible under Criterion A (broad patterns of history). The overall rail line is also eligible under Criterion C (example of a type, period, or method of construction) because of its pioneering electrification system and because collectively the various components of the line illustrate the railroad-engineering practices of the 19th and early 20th centuries. This approach, considering the entire rail line as a single National Register-eligible property (specifically as a linear historic district), is consistent with the approach taken by federal and state agencies in the New Haven-Hartford-Springfield Rail Corridor improvement project (Federal Railroad Administration 2012, Stipulation 13) and other Connecticut projects involving historic rail lines.

Besides the bridge itself, rail-related historic structures in the APE include the following (see Table 1):

High Towers and Catenary Support Structures

The electrification of the line was completed in 1914. In addition to numerous catenary support structures, most of which are original to the 1914 extension of electrification, the system includes a high steel lattice tower on either side of the river to carry the transmission lines over the channel (Photograph 3). Similar towers are found elsewhere on the line at major river crossings. The National Register nomination form for the bridge (Baggerman 1977) and the engineering significance statement in the state-level documentation of the bridge (Stewart 1999) do not explicitly address the catenary structures and the two high towers. However, in evaluating the effects of another project on the catenary, the SHPO offered the following opinion:

> This office notes that the extant catenary system is an integral component of the country's first large-scale electrification of a main line railroad right-of-way. We believe that the New York, New Haven & Hartford Railroad electrification and catenary system is eligible for the National Register of Historic Places. (Maddox 1999).

The high towers and catenary support structures contribute to the significance of the overall rail line as a linear historic resource under both Criteria A and C.

Interlocking Tower

The interlocking tower controlled the juncture of the NY, NH & H main line and the Danbury & Norwalk branch line that led north to Danbury (Photograph 5). In 1895, the right-of-way was widened and raised to pass over the intersection of Washington and South Main Streets. At that time the tower structure was raised two stories to sit above the track. The tower is a rare surviving resource since it retains all of the original levers and switches, which were manually operated. This structure was listed in the NRHP as a contributing element of the South Main and Washington Streets Historic District. It also contributes to the overall significance of the rail line as an eligible linear historic district under both Criteria A and C. Currently the building is occupied as a historical site, the South Norwalk Switch Tower Museum.

South Norwalk Railroad Bridge over South Main and Washington Streets

This pin-connected steel-truss bridge was built in 1896 to carry four tracks over the intersection of Washington and South Main streets in South Norwalk. The abutment walls and stepped wing walls are built of quarry-faced granite blocks. This structure was listed in the NRHP as a contributing element of the South Main and Washington Streets Historic District and was the subject of HAER documentation (HAER No. CT-168). It is notable as an example of the work of the Berlin Iron Bridge Company, Connecticut's only large-scale 19th-century bridge fabricator. In addition to being a contributing resource of the listed historic district, the bridge is also a contributing resource to an eligible linear historic district embracing the entire New York to New Haven rail line under Criteria A and C.

Fort Point Street Railroad Bridge

The Fort Point Street Bridge dates from 1941, when the railroad replaced an earlier plate-girder bridge at the site. It consists of a series of built-up steel beams spanning stone abutments that continue into the adjacent retaining walls for the elevated tracks. It is a contributing resource to the potential linear historic district. The structure contributes to the significance of the overall rail line as a linear historic resource under both Criteria A and C.

Stone Retaining Walls

In the early 1890s, the corridor was reconstructed as a four-track main line that was elevated to avoid grade-level crossings. This was a major undertaking that required sections of stone retaining walls for the elevated portions of the right-of-way and new bridges over city streets and watercourses. Notable examples of the stone retaining walls can be found on Fort Point Street (Photograph 6) and along the north side of the right-of-way west of Water Street (Photographs 3 and 7) . These structures are potentially eligible as contributing elements to the overall rail line as a linear historic resource under both Criteria A and C.

Table 1: Railroad-Related Historic Structures in the APE

Historic Resource	Listed	Contributing to an eligible linear historic district
Norwalk River Railroad Bridge (Walk Bridge)	X	
High Towers		X
Catenary Support Structures		X
Stone Retaining Walls		X
Interlocking Tower (Switch Tower Museum)	X	
South Norwalk Railroad Bridge, South Main and Washington streets	X	
Fort Point Street Railroad Bridge		X

V. HISTORIC RESOURCES: NON-RAILROAD-RELATED PROPERTIES

Five historic properties are located within or immediately adjacent to the APE. These resources are listed, eligible, or potentially eligible for listing in the NRHP. These resources are located on Figure 4 and are listed in Table 2, below.

South Main and Washington Streets Historic District (including boundary increases)

This National Register-listed district, including two later boundary expansions, is a T-shaped area of commercial buildings on Washington, South Main, and North Main streets (Photograph 8). The buildings are densely packed and date from the last quarter of the 19th century and the early years of the 20th century. Most are brick, three or more stories high, and many have ornamental cast-iron storefronts and trim, primarily Italianate in style. As a whole, resources in the district are well-preserved examples of particular types of commercial architecture (National Register Criterion C). They also represent Norwalk's economic and civic development and South Norwalk's role in particular as a harbor, railroad junction, and industrial center, which led to commercial expansion in the post-Civil War era (National Register Criterion A). The railroad immediately abuts the district on its northern edge, and the bridge is visible from the district's east end. The district also includes two rail-related structures, the interlocking tower and the South Norwalk Railroad Bridge over the intersection of South Main and Washington streets.

Former Norwalk City Hall

This elaborate red-brick Colonial Revival-style building at 41 North Main Street in South Norwalk was built in 1912. In addition to being a contributing building within the South Main and Washington Streets Historic District, it is individually listed in the National Register under both Criteria A and C.

Addition to the South Main and Washington Streets Historic District

This district could logically be expanded to include three more commercial buildings on Water Street: 50 Water Street (ca. 1900), a two-story brick building with storefronts and a flat roof; 68 Water Street (ca. 1910), a two-story yellow-brick building (Photograph 9); and 53 Water Street (1853), a three-story brick commercial building with an elaborate bracketed wooden cornice, window hoods and cornice above the storefronts (Photographs 9 and 10). Such an addition would complement the existing district by contributing to its significance under both Criteria A and C.

Industrial Buildings Historic District (potential), North Water Street

West of the swing bridge and immediately north of the railroad right-of-way are two 19th-century brick factory complexes. The former Norwalk Lock Company buildings (Photograph 11) have been converted to office use, and the former Norwalk Iron Works plant (Photograph 12) has been incorporated into the Maritime Aquarium facility. Together these resources constitute a small, potentially eligible historic district that recalls the important role of industry in Norwalk's economic history (National Register Criterion A). In addition to their location adjacent to the railroad right-of-way, the two properties have historical associations with the railroad. The Norwalk Lock Company property was individually determined eligible for the National Register in 2000.

Liberty Square Historic District (potential)

This row of late 19th- and early 20th-century commercial buildings, two and three stories

high, is a vestige of the continuation of South Norwalk's Washington Street commercial district into East Norwalk (Photograph 14). This area is a potentially-eligible district that would be significant on the local level because of its architectural qualities (National Register Criterion C) and because of its historical associations with Norwalk's late 19th-century period of economic expansion (Criterion A).

Table 2. Non-Railroad-Related Historic Resources in the APE

Historic Resource	Listed	Eligible	Potentially Eligible
South Main and Washington Streets Historic District (including boundary increases)	X		
Former Norwalk City Hall*	X		
Addition to South Main and Washington Streets Historic District			X
Industrial Buildings Historic District**			X
Former Norwalk Lock Company, 18 Marshall Street		X	
Former Norwalk Iron Works, 10 North Water Street			X
Liberty Square Historic District			X

*Individually listed and also a contributing building within the South Main and Washington Streets Historic District.
**This includes the former Norwalk Lock Company and former Norwalk Iron Works buildings. The Norwalk Lock Company has been formally determined eligible for the NR.

Properties More Than 50 years Old That Do Not Appear to be Eligible

In addition to identifying these listed, eligible, or potentially eligible properties, several buildings within or immediately adjacent to the APE were considered. While more than 50 years old, these buildings do not appear to be eligible for the NRHP. These include:

1, 9 and 11 Goldstein Place

This parcel includes a house from the 1890s (1 Goldstein Place) that has been substantially altered from its original appearance (Photograph 19); it lacks integrity of design and materials and does not appear to be eligible for the National Register. The other buildings on the parcel, currently in use as a marine, are either of recent construction or have been substantially modernized. The oldest is the two-story, flat-roofed concrete block building at 11 Goldstein Place, which the Norwalk Assessor indicates was built in 1942; it does not appear to possess architectural characteristics or historical associations that would make it eligible for the National Register (Photograph 20).

3 Goldstein Place

According to the Norwalk Assessor records, this house (Photograph 18) was built in 1909, but the 1899 bird's-eye view (Map 7) indicates an origin in the 1890s. The house is a modest example of Late Victorian architecture. Most Connecticut houses of this type that are listed in the National Register are part of historic districts, which provide context for both the historical and architectural significance of individual buildings. This house is isolated because of the poor state of preservation of its neighbors (Photograph 19) and the intrusion of modern construction in the nearby marina and across the street, resulting in a serious loss of its integrity of setting and association.

4 Goldstein Place

This property is a modern duplex, built in 1974. It has aluminum siding and replacement windows and does not have the age, characteristics, or associations necessary for National Register eligibility.

5 Goldstein Place

This two-and-one-half-story vernacular frame house (Photograph 19) was built about 1910. It is clad in vinyl siding and the original windows and porch have been removed. It no longer retains the level of integrity necessary to be listed in the National Register.

6 Goldstein Place

This single-story wood frame auto repair shop was built in 1960. It has a gabled roof and vertical board siding. It does not appear to possess architectural characteristics or historical associations that would make it eligible for the National Register.

10 Goldstein Place

This .65-acre site has a number of modern outbuildings. None appears eligible for listing in the National Register.

217 Liberty Square

This property is a concrete block building with a flat roof, built in 1965. Although it is adjacent to the potentially eligible Liberty Square Historic District, it dates from a completely different period and is unlike the other building in style. Individually, it does not appear to possess architectural characteristics or historical associations that would make it eligible for the National Register.

70 Water Street

This building, constructed in 1950, is a flat-roofed commercial concrete block structure that has been altered with an exterior of applied stone facing. It does not appear to possess any architectural or historic significance that would make it eligible for in the National Register.

VI. ANTICIPATED PROJECT EFFECTS

The purpose of the Walk Bridge Project is to replace the existing, deteriorated bridge with a resilient structure that will enhance the safety and reliability of rail service, offer operational flexibility and ease of maintenance, and provide for increased capacity and efficiencies of rail transportation along the New Haven Line/ Northeast Corridor, while maintaining or improving navigational capacity and dependability for marine traffic in the Norwalk River**.** CTDOT has determined that replacement of the existing Walk Bridge meets the Project Purpose and Need. The replacement of the Norwalk River Railroad Bridge can be expected to affect historic properties in the APE that are listed in or likely eligible for listing in the National Register of Historic Places.

An adverse effect occurs when a project directly or indirectly diminishes the integrity of an historic property by altering any of the characteristics that qualify that property for National Register inclusion. Specifically, if the project diminishes the integrity of a property's location, design, setting, materials, workmanship, feeling, and association, then there is an adverse effect. Examples of direct adverse effects include: physical destruction or damage; alteration inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties; relocation of the property; and neglect and deterioration.

Following is a list of project actions that will affect historic resources depending on the option selected as the preferred option and as design is refined:

- Removal and replacement of the existing bridge
- Removal of the high towers
- Removal of stone retaining walls and construction of new retaining walls
- Creation and use of temporary construction staging/access areas
- Removal and replacement of catenary support structures

Some project actions are not addressed in this report because they involve only possible archaeological impacts, not impacts on historic properties. These include the option for a temporary run-around track with supports in the river and the option for submarine cables for Metro North signal and power-transmission lines. Effects of these project actions are included in a companion Archaeological Sensitivity Assessment report (Sportman 2016).

Below is a review of the anticipated effects, organized by historic resource and concentrating on a movable replacement bridge similar in scale and alignment to the existing bridge.

1. Norwalk River Railroad Bridge (Walk Bridge)

The bridge is listed in the National Register. Replacement of the existing bridge will result in a direct adverse effect.

2. High Towers and Catenary Support Structures

The project is also expected to remove the high steel lattice towers on either side of the river that carry transmission lines over the channel (Photograph 3). The towers represent contributing components of the overall rail line as a National Register-eligible linear resource; removal of these components will result in a direct adverse effect. The catenary support structures also contribute to the significance of the overall rail line as a National Register-eligible linear resource; removal and replacement of the catenary supports will result in a direct adverse effect on contributing components of the overall rail line as a National Register-eligible linear resource.

3. Stone retaining walls

The project will require the replacement of the ca. 1896 stone retaining walls west of Water Street and near the Fort Point Street Railroad Bridge (Photographs 3, 6 and 7). These walls represent contributing components of the overall rail line as a National Register-eligible linear resource; the removal of the walls will be a direct adverse effect.

4. South Norwalk Railroad Bridge over Washington and South Main Streets

The proposed project's actions within the railroad right-of-way begin at the end of the bridge with minor changes to the track geometry. These are not expected to have any effect on the bridge itself or its overall setting.

5. Fort Point Street Railroad Bridge

The project willrequire the replacement of portions or all of the 1941 steel-beam railroad bridge over Fort Point Street (Photograph 6). Replacement options range from a superstructure replacement to a full superstructure and substructure replacement. Because it is a contributing component of the overall rail line as a National Register-eligible linear resource, the full or partial replacement of Fort Point Street Railroad Bridge will be a direct adverse effect.

6. South Main and Washington Streets Historic District (including Interlocking Tower and former Norwalk City Hall)

The railroad right-of-way runs through the historic district, which is listed in the National Register (Photograph 8). The existing rail line, bridge, high towers, and catenary structures form an important part of the overall setting of the district, both because the age of these structures (1896-1914) reflects the district's period of significance and because the railroad played a critical role in the area's history. Loss of the Walk Bridge, high towers, and historic catenary structures will result in a diminishment of the district's integrity of setting and therefore an indirect (visual) adverse effect.

The district's setting will be affected by the new bridge. The visual effect of introducing new construction to the district's setting will not be adverse if the design of the new bridge is such that it maximizes its visual compatibility with the historic district.

The project also has the potential to affect the district because of the temporary construction staging/access area that extends into the district north of Washington Street (Figure 5). Most of the area is in a strip of undeveloped land at the rear of the buildings. The area also includes the footprint of the Interlocking Tower (South Norwalk Switch Tower Museum, Photograph 5). Provided no physical damage to any of the district's buildings occurs as a result of the preparation and use of the temporary construction staging/access area (including damage from demolition and/or vibration), there will not be an adverse effect on the Interlocking Tower or other buildings within the district.

7. Addition to South Main and Washington Streets Historic District

The South Main and Washington Streets Historic District could reasonably be enlarged to include additional commercial buildings at the north end of Water Street. One of these, 68 Washington Street, a ca.1910 yellow-brick commercial building (Photograph 9), is adjacent to a temporary construction staging/access area (Figure 6). Provided no physical damage occurs as a result of the preparation and use of the temporary construction staging/access area (including damage from vibration), there will not be an adverse effect.

8. Industrial Buildings Historic District

The existing rail line, Walk Bridge, high towers, retaining walls and catenary structures form an important part of the overall setting of this potential district, both because the age of these components (1896-1914) reflects the district's period of significance and because the railroad played a critical role in the development of the area for industrial use. Replacement of the bridge and the removal of the high towers, catenary structures, and retaining walls could be considered a diminishment of the integrity of settings of the individual buildings and the potential historic district, as could incompatible new construction, thereby resulting in an indirect (visual) adverse effect.

The parking areas of the former Norwalk Lock complex at 18 Marshall Street would be used for temporary construction staging/access areas (Figure 5). Provided no physical damage occurs as a result of the preparation and use of the temporary construction staging/access areas (including damage from vibration), there will not be an adverse effect.

9. Liberty Square Historic District

This potentially-eligible historic district is adjacent to a temporary construction staging/access area (Figure 7). Provided no physical damage to any of the district's buildings occurs as a result of the preparation and use of the temporary construction staging/access area (including damage from demolition and/or vibration), there will not be an adverse effect.

Table 3. Recommended Findings of Effects of Project on Listed, Eligible, and Potentially Eligible Properties

Property	National Register Status	Effects(s) and Recommended Finding
Norwalk River Railroad Bridge	Listed	To be replaced: Adverse Effect.
High Towers	Contributing to an eligible linear historic district	To be removed: Adverse Effect.
Catenary Support Structures	Contributing to an eligible linear historic district	Some of all to be removed: Adverse Effect.
Stone Retaining Walls	Contributing to an eligible linear historic district	To be removed: Adverse Effect.
South Norwalk Railroad Bridge	Contributing to a listed historic district	No Adverse Effect.
Fort Point Street Railroad Bridge	Contributing to an eligible linear historic district	To be removed: Adverse Effect.
South Main and Washington Streets Historic District (including interlocking tower and former Norwalk City Hall)	Listed	1. Removal/replacement of bridge, catenary structures, and high towers will have a visual impact on the district's setting: indirect (visual) Adverse Effect. 2. Construction staging/access area along the edge of the district on the north side of Washington Street: No Adverse Effect conditional upon no buildings being removed and no damage from vibration, etc.
Addition to South Main and Washington Streets Historic District (50, 53, and 68 Water Street)	Potentially eligible	Building at 68 Water Street is adjacent to construction staging/access area: No Adverse Effect conditional upon no damage from vibration, etc.
Industrial Buildings Historic District Former Norwalk Lock Company, 18 Marshall St. Former Norwalk Iron Works (Maritime Aquarium), 10 North Water St.	Potentially eligible Eligible Potentially eligible as contributing to a historic district	 Removal of high towers and removal/replacement of bridge, catenary support structures, and stone retaining walls will have a visual impact on the building's setting and the setting of the potentially-eligible historic district: Indirect (visual) Adverse Effect. 2. Use of parking areas for construction staging/access area: No Adverse Effect conditional upon no damage from vibration, etc. Removal of high towers and removal/replacement of bridge, catenary support structures,l and stone retaining walls will have a visual impact on the building's setting and the setting of the potentially-eligible historic district: Indirect (visual) Adverse Effect.
Liberty Square Historic District	Potentially eligible	Adjacent to construction staging/access area: No Adverse Effect conditional upon no damage from vibration, etc.

VI. CONCLUSIONS AND RECOMMENDATIONS

The historic resources survey indicates that replacement of the Walk Bridge will affect a number of historic properties that are listed in or eligible for listing in the National Register of Historic Places. Walk Bridge was listed in the NRHP in 1987as one of several significant movable railroad bridges along the Northeast Corridor in Connecticut. The replacement of Walk Bridge will result in an adverse effect on this listed structure.

The rail line itself from the New York/Connecticut border to New Haven is eligible as a linear historic district. The high towers, catenary supports, stone retaining walls, and railroad bridges over local roads represent contributing elements of the linear historic district, as does the interlocking tower (Switch Tower Museum), which is also listed in the National Register as a contributing element of the South Main and Washington Streets Historic District. The removal of the high towers, catenary support structures, stone retaining walls, and Fort Point Street Railroad Bridge will be adverse effects on the overall rail line as an eligible historic district. The inclusion of the Interlocking Tower within a temporary construction staging/access area is not expected to result in any adverse effect.

Two historic districts that are immediately adjacent to the APE, the listed South Main and Washington Streets Historic District and the potentially-eligible district made up of the former Norwalk Lock Company buildings (individually eligible) and the former Norwalk Iron Works buildings, will be subject to indirect (visual) adverse effects because the removal of the high towers, catenary structures, stone retaining walls, and the Walk Bridge will diminish the districts' integrity of setting. Provided that the design of new construction is visually compatible with the listed and eligible historic districts, no adverse effect will occur. One listed historic district (South Main and Washington Streets) and two potentially-eligible historic districts (Liberty Square Historic District and an addition to the South Main and Washington Streets Historic District) are immediately adjacent to temporary construction staging/access areas. The districts are not expected to be subject to any adverse effects as a result of this proximity.

The conclusions presented in this report represent the opinions of the project's historic preservation consultant. Actual determinations of National Register eligibility, assessment of effects, and consideration of mitigative actions are all properly part of the ongoing consultative process among FTA, CTSHPO, and CTDOT, and will be further developed as the project progresses.

VII. REFERENCES

Baggerman, Anne
1977 *National Register of Historic Places Inventory Form: Norwalk River Railroad Bridge.* Washington, D.C: National Park Service.

Bailey, James Montgomery
1896 *History of Danbury Connecticut 1684-1896*. New York, NY: Burr Printing House.

Bailey, O. H. & Co.
1875 *South Norwalk and Norwalk, Conn.* Bird's-eye view. Boston.

Beers, F. W.
1867 *Atlas of New York and Vicinity*. New York: Beers, Ellis & Soule.

Bloom, Ralph
1976 *Connecticut Historical Commission, Citywide (378 properties), Reconnaissance-level, Norwalk Redevelopment Agency,* Connecticut Historic Preservation Collection, Archives and Special Collections at the Thomas J. Dodd Research Center, University of Connecticut Libraries.

Chace, J. Jr., W.J. Barker and N. Hector
1856 *Clark's Map of Fairfield County, Connecticut*. Philadelphia, PA: Richard Clark.

Clouette, Bruce
2004 *Where Water Meets Land: Historic Movable Bridges of Connecticut.* Newington, CT: Connecticut Department of Transportation.

Clouette, Bruce, Matthew Roth and John Herzan
1986 *Movable Railroad Bridges on the Northeast Corridor in Connecticut Thematic Resource*. National Register nomination form. Washington, D.C.: National Park Service.

Federal Railroad Administration
2012 *Programmatic Agreement Among the Federal Rail Administration, Federal Transit Administration, the Connecticut State Historic Preservation Office, the Massachusetts State Historic Preservation Office, and the Connecticut Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act As It Pertains to the New Haven-Hartford-Springfield High-Speed Intercity Passenger Rail Project*. Executed in August 2012.
Online at http://www.nhhsrail.com/pdfs/ea/nhhs_pa.pdf, accessed March 30, 2016.

Grant, Lisa Wilson
2014 *Norwalk.* Mount Pleasant, SC: Arcadia Publishing.

Hall, Edwin
1847 *The Ancient Historical Records of Norwalk, Conn.* Norwalk: James Mallory and Company.

Karr, Ronald D.
1995 *The Rail Lines of Southern New England, a Handbook of Railroad History*. Pepperell, MA: Branch Line Press.

Landis & Hughes
1899 *Norwalk, South Norwalk, and East Norwalk, Conn*. Bird's-eye view. New York.

Library of Congress
1977 Historic American Engineering Record No. CT-11, Northeast Railroad Corridor, Amtrak Route between New York/Connecticut and Connecticut/Rhode Island State Lines, New Haven, New Haven County, CT. http://www.loc.gov/pictures/item/ct0338. Accessed online 7/18/2015.

1982 Historic American Engineering Record No. CT-8, New York, New Haven and Hartford Railroad, Automatic Signalization System, Long Island Sound shoreline between Stamford and New Haven, Stamford, Fairfield County, CT. http://www.loc.gov/pictures/item/ct0380. Accessed online 7/18/2015.

New York, New Haven & Hartford Railroad Construction Photograph Collection
ca. 1890 Collection Number: MSS 2002-0023, Connecticut Historic Preservation Collection, Archives and Special Collections at the Thomas J. Dodd Research Center, University of Connecticut Libraries.

Maddox, Dawn
1999 Letter of Dawn Maddox, Deputy State Historic Preservation Officer, to Mark D. Neri, CTDOT Rail Operations, regarding Milford to West Haven catenary replacement project, November 22, 1999.

Norwalk Directory
1914 *Norwalk Directory*. New Haven, CT: Price & Lee Company.

Ray, Debra Wing and Gloria Stewart
1979 *Norwalk Being an Historical Account of that Connecticut Town*. Norwalk Historical Society.

Roth, Matthew W.
1981 *Connecticut, an Inventory of Historic Engineering and Industrial Sites*. Washington, DC: Society for Industrial Archeology.

Sanborn Map and Publishing Company
1884-1930 Insurance maps of Norwalk. Yale University Library, New Haven. http://web.library.yale.edu/digital-collections/connecticut-sanborn-fire-insurance-maps. Accessed online 7/27/2015.

Schenck, Elizabeth Hubbel Godfrey
1889 *The Historic of Fairfield, Fairfield County from the Settlement of the Town in 1639 to 1818*. Published by the author.

Selleck, Reverend Charles M.
1896 *Norwalk, Connecticut: Volume 1 and Supplement*. Published by the author.

Sportman, Sarah P.
2016 *Report: Archaeological Sensitivity Assessmen, Walk Bridge Replacement Project, Norwalk, Connecticut, State Project No. 0301-0176.* Storrs, CT: AHS, Inc.

Stewart, Robert
1999 *Engineering Significance Statement: Walk Bridge (No. 41.47) (Bridge No. 4288R).*Westport, Connecticut: Historical Perspectives, Inc.

2000 *The New Haven Railroad Catenary System*. East Granby, CT: Historical Technologies Connecticut Historic Preservation Collection, Archives and Special Collections at the Thomas J. Dodd Research Center, University of Connecticut Libraries.

Turner, Gregg M., and Melancthon W. Jacobus
1989 *Connecticut Railroads, an Illustrated History*. Hartford, CT: Connecticut Historical Society.

U.S. Coast Survey
1835 *Map of Part of the Coast of Connecticut*. T-Map No. 19. National Archives.

APPENDIX I

Figures

Figure 1: **Location of project (arrows) shown on USGS Norwalk South Quadrangle, Scale 1:24000. The dotted line outlines the approximate area in which the high towers, the tallest structures in the project, are visible.**

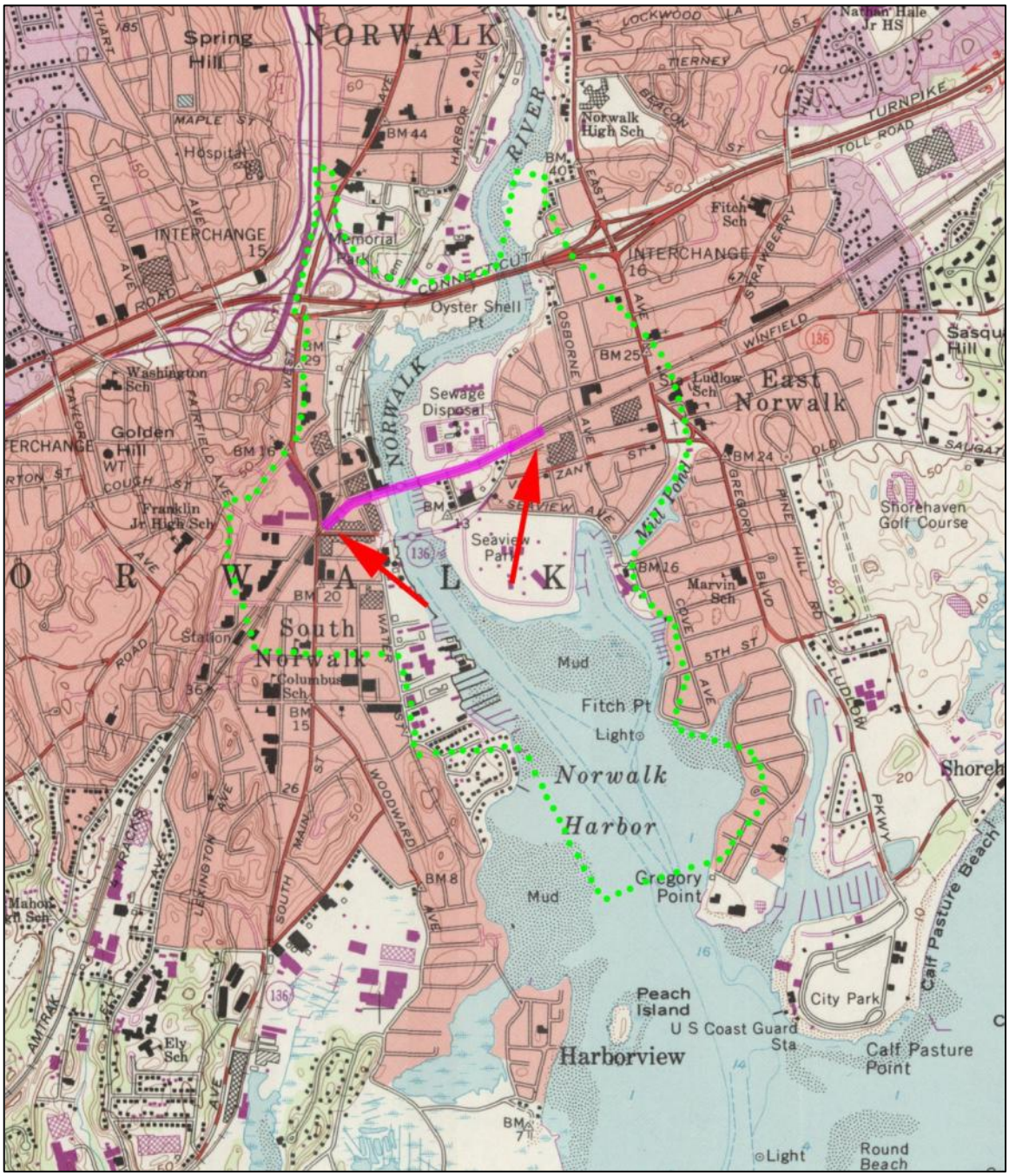
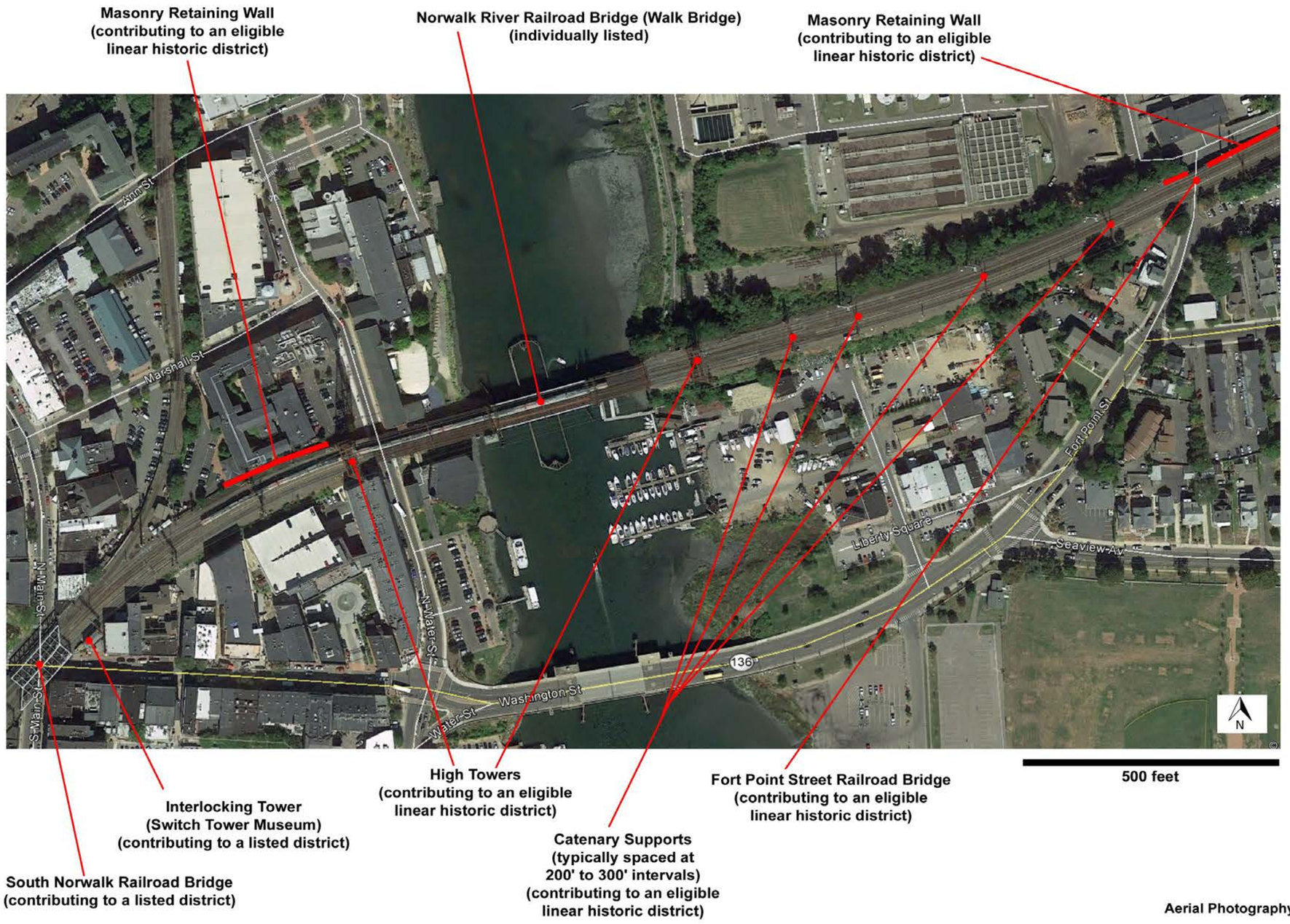


Figure 2:

Extent of Project Work Within Railroad Right-of-Way

Source: City of Norwalk GIS (2013 aerial photograph)



Aerial Photography: Google Earth,™ 9/22/2015

Figure 3:

Railroad-Related Historic Resources Discussed in this Report

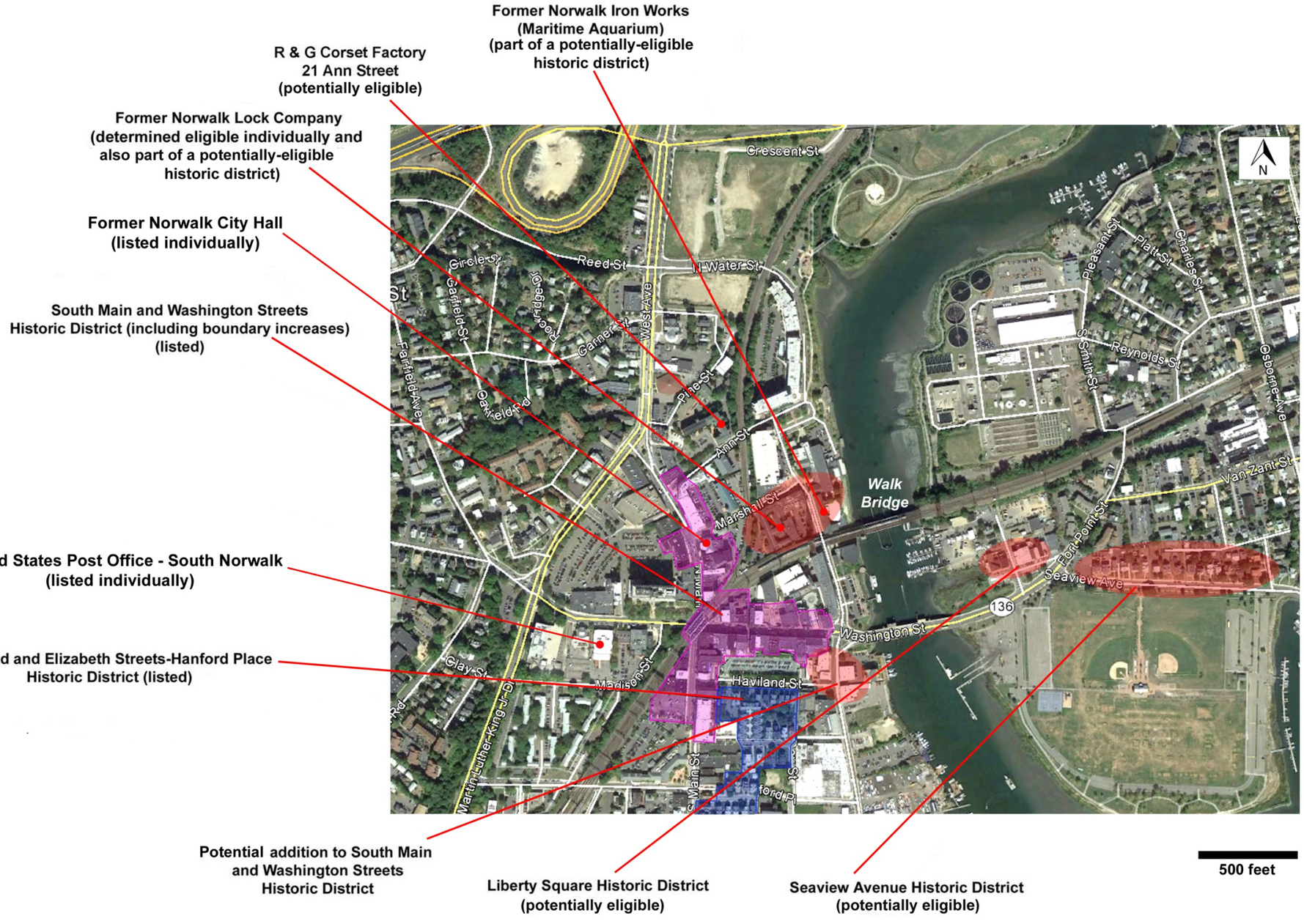
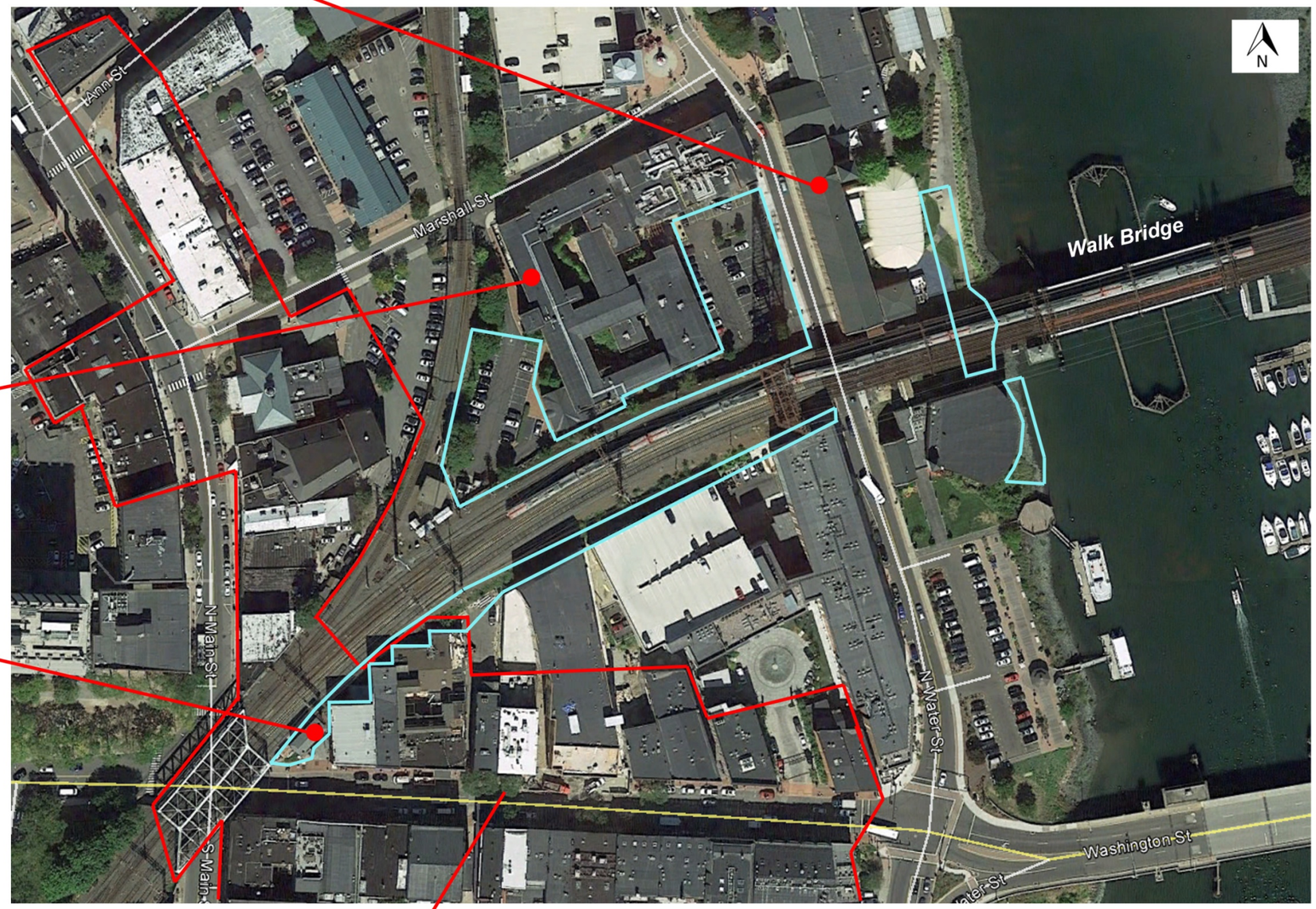


Figure 4:

Non-Railroad-Related Historic Resources Discussed in this Report

Aerial Photography: Google Earth™, 9/22/2015

Former Norwalk Iron Works
(Maritime Aquarium)
(part of a possibly eligible historic district)



Former Norwalk Lock Company
(determined eligible and also part
of a possibly eligible historic district)

Interlocking Tower
(Switch Tower Museum)
(contributing building in listed district)

300 feet

South Main and Washington Streets Historic District
(listed)

Temporary Construction Staging/Access Area

Aerial Photography: Google Earth™ 9/22/2015

Figure 5:

Temporary Construction Staging/Access Areas, West Side of Norwalk River North of Washington Street

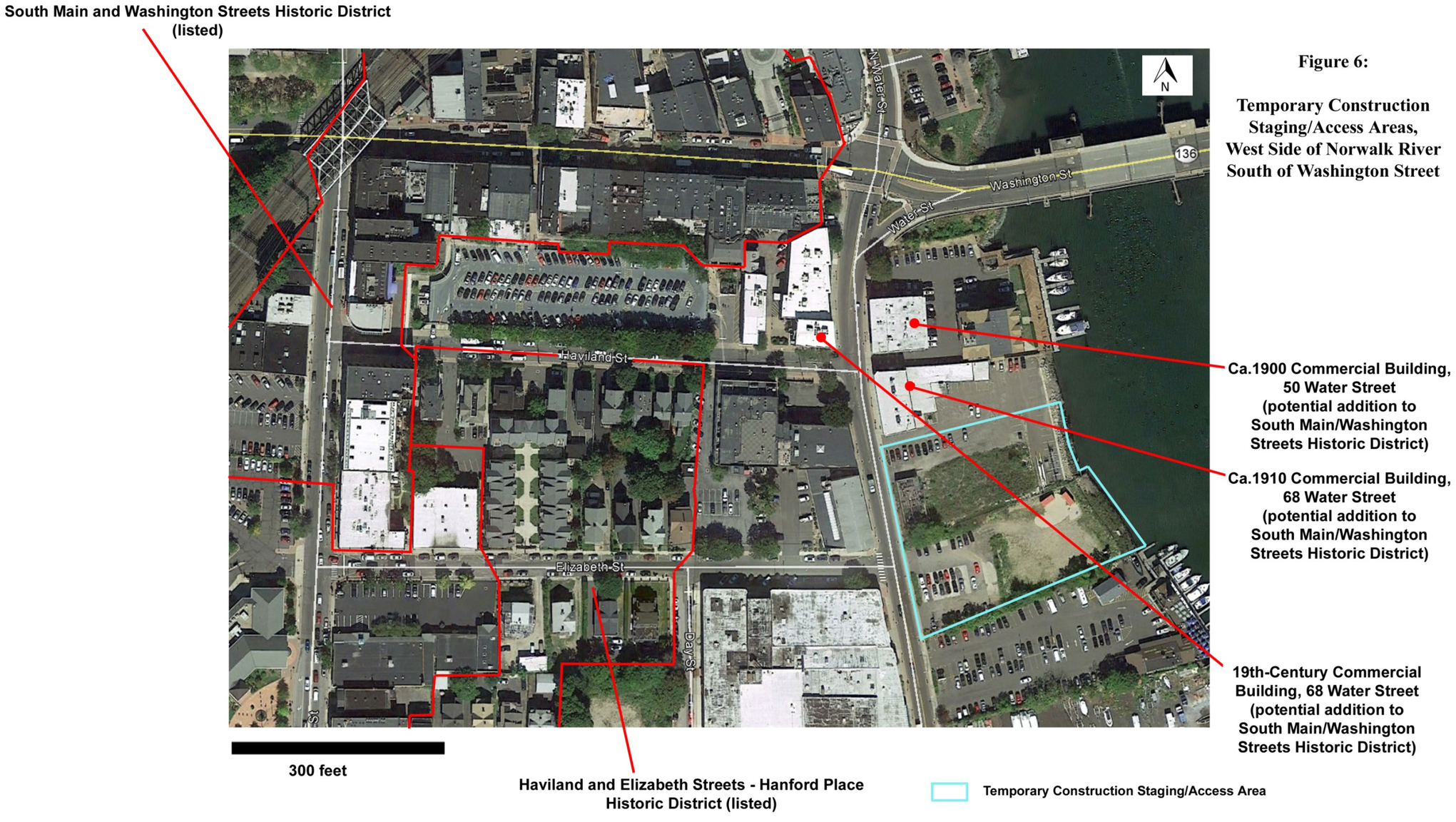


Figure 6:

Temporary Construction Staging/Access Areas, West Side of Norwalk River South of Washington Street

Aerial Photography: Google Earth,™ 9/22/2015

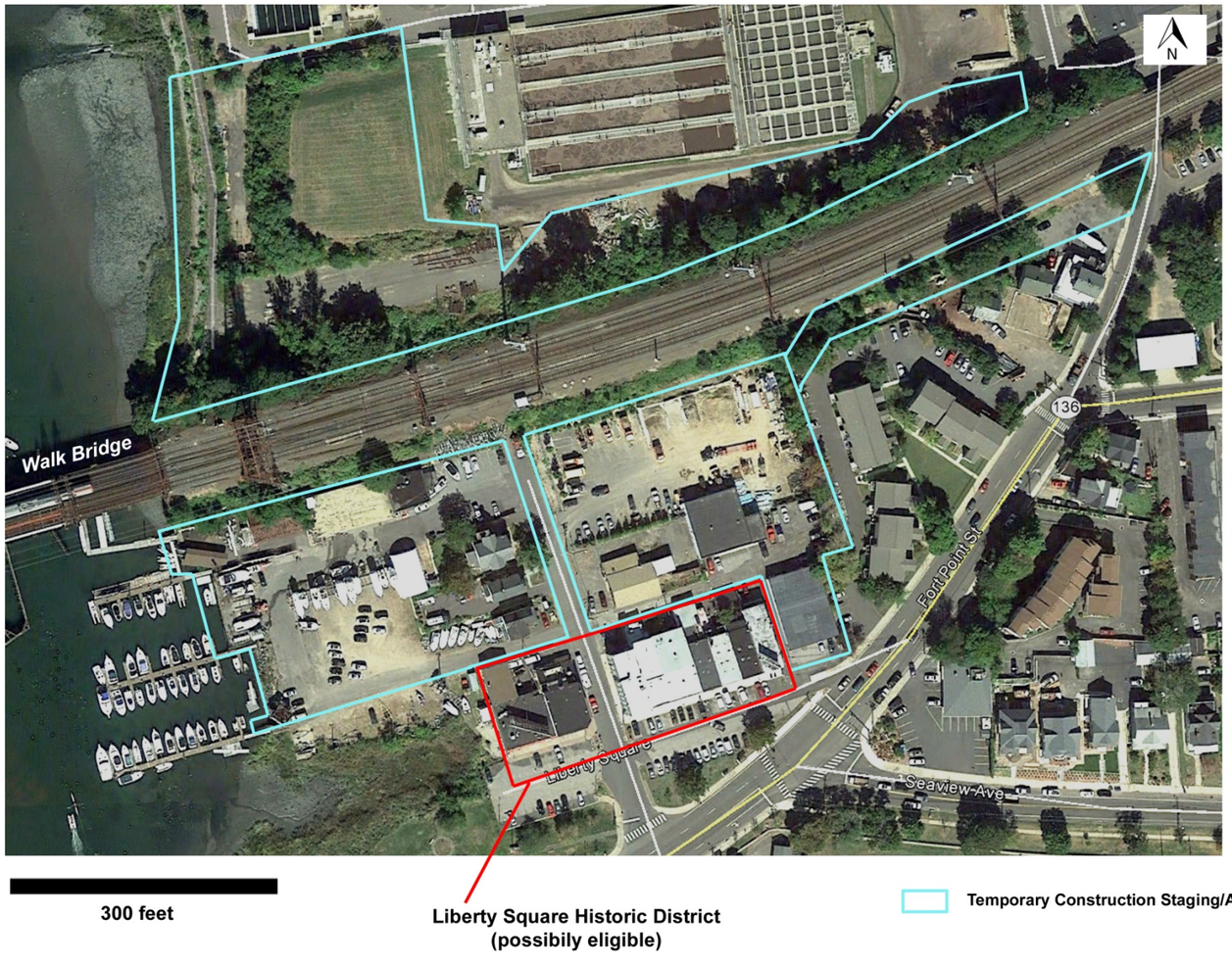


Figure 7:

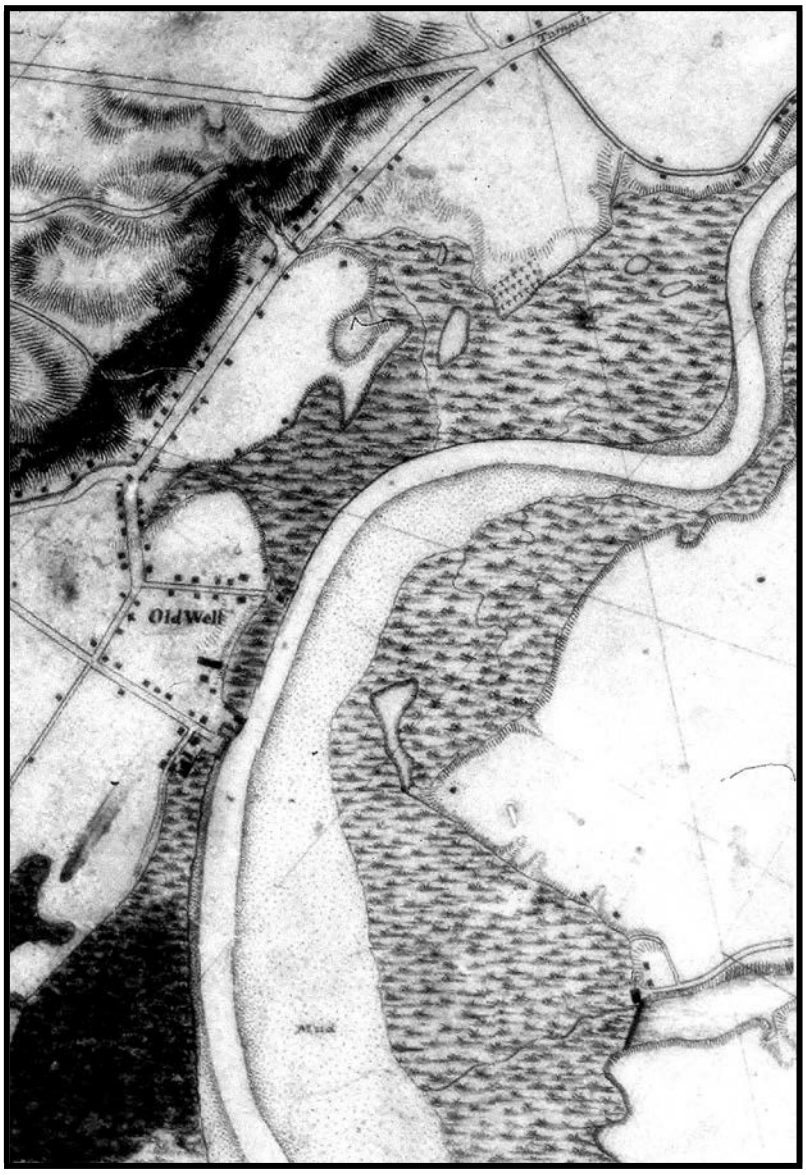
Temporary Construction Staging/Access Areas, East Side of Norwalk River

Aerial Photography: Google Earth™ 9/22/2015

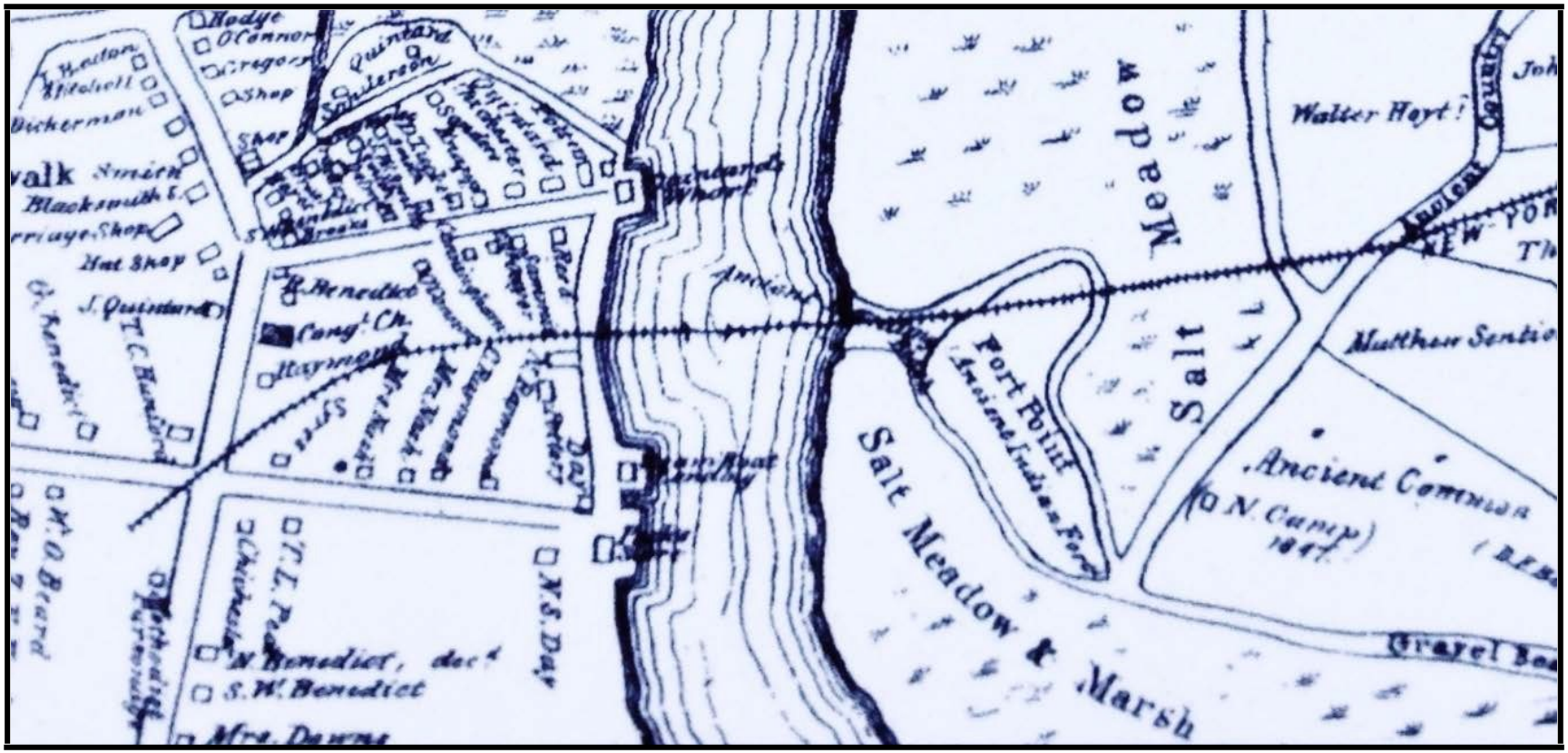
APPENDIX II

Historical Maps

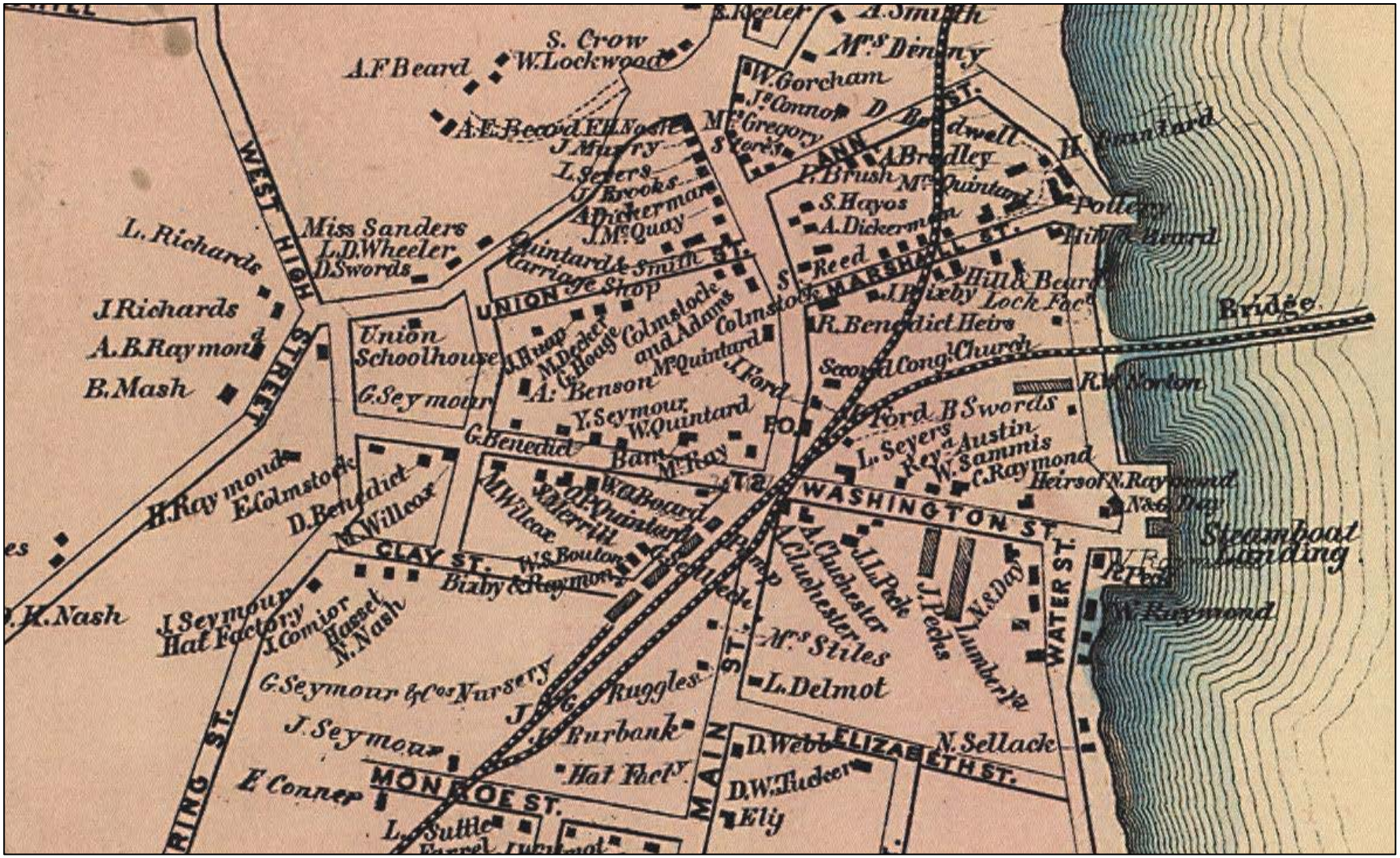
Map 1. U. S. Coast Survey map of Norwalk showing the locations of Old Well (South Norwalk) and Fort Point on the eastern shore of the Norwalk River, 1835.



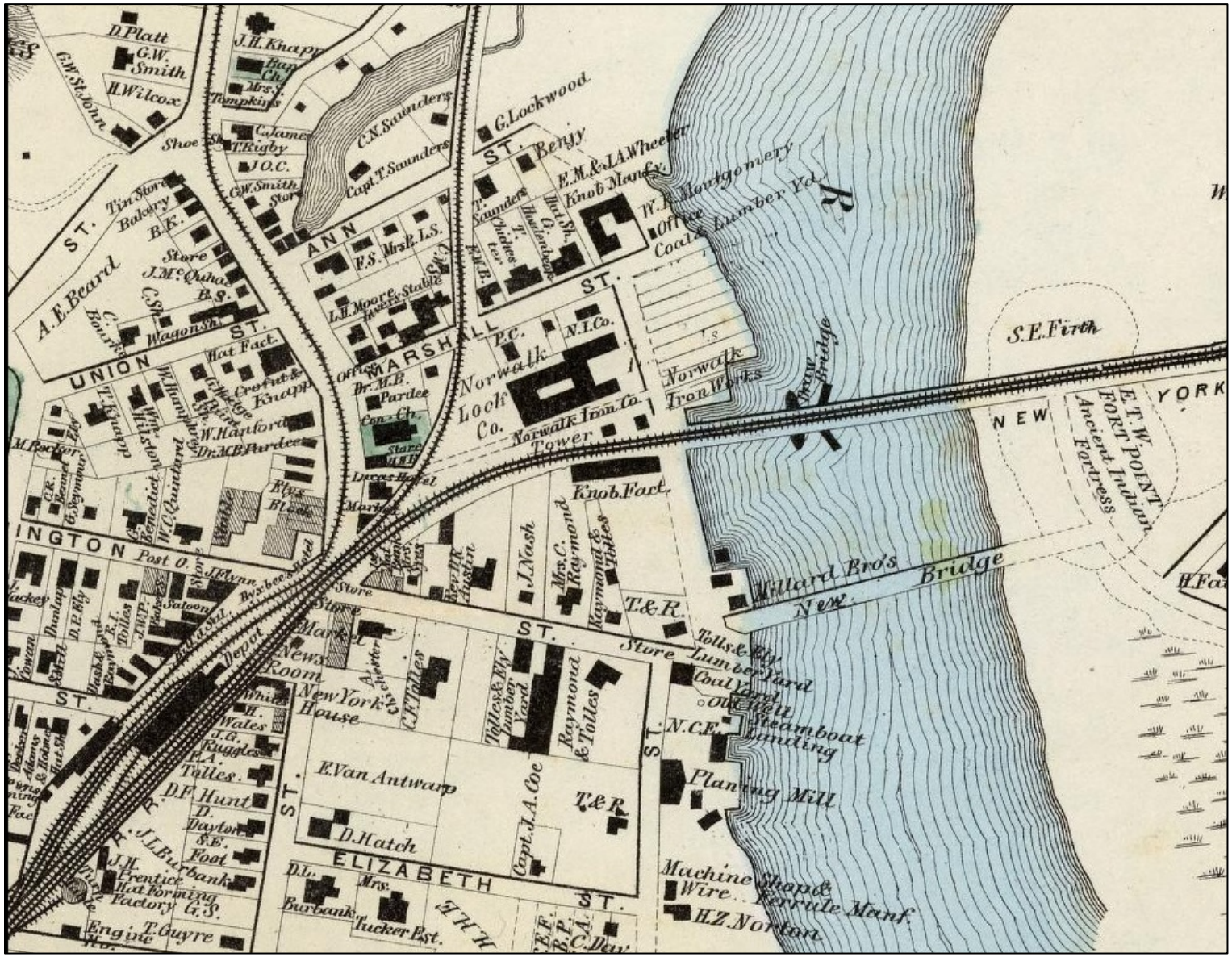
Map 2. Map of the project area ca.1847 (Hall 1847), showing how the land on the eastern side of the river began to be filled to accommodate construction of the rail line.



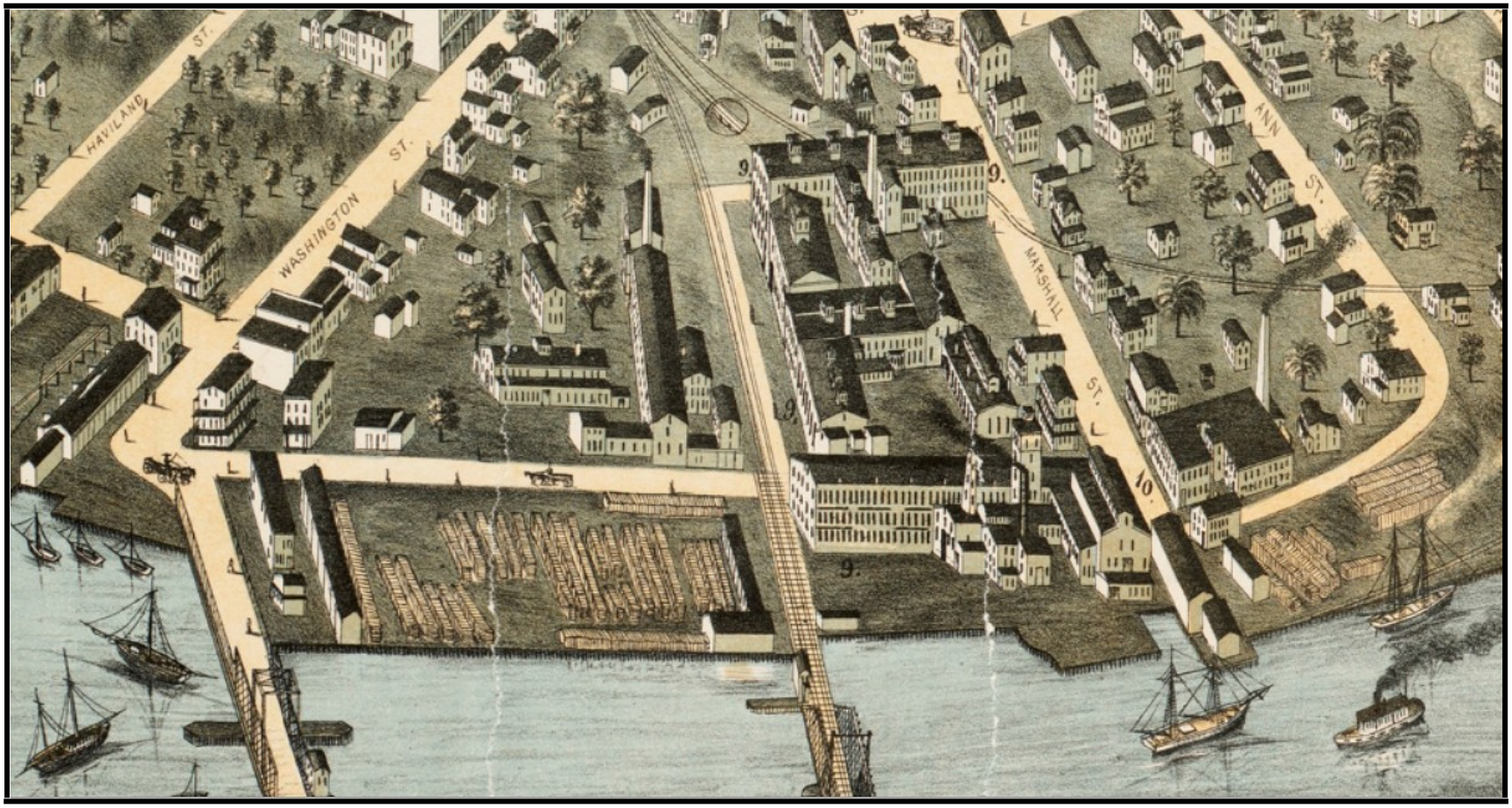
Map 3. South Norwalk, from the 1856 county wall map (Chace et al. 1856).



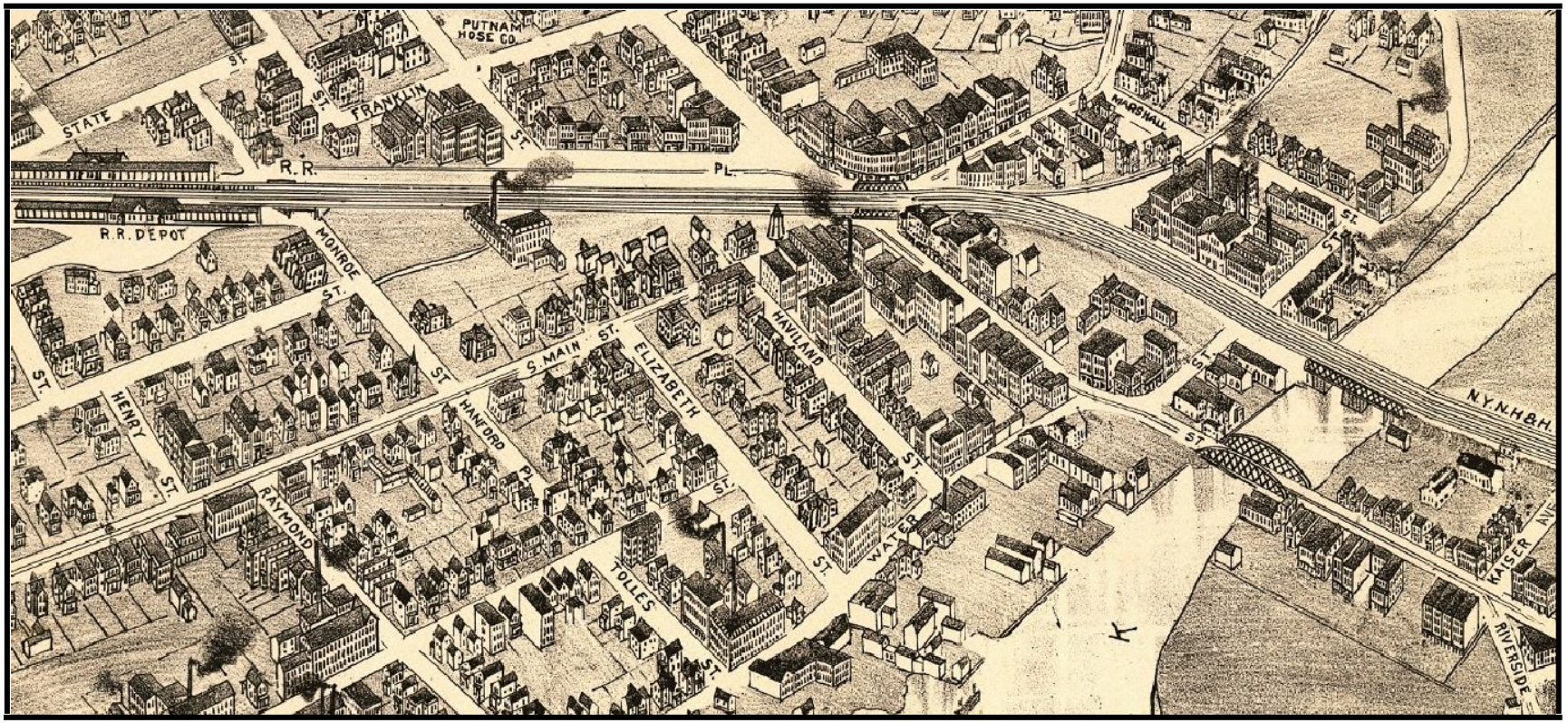
Map 4. South Norwalk as shown in the 1867 atlas (Beers, 1867).



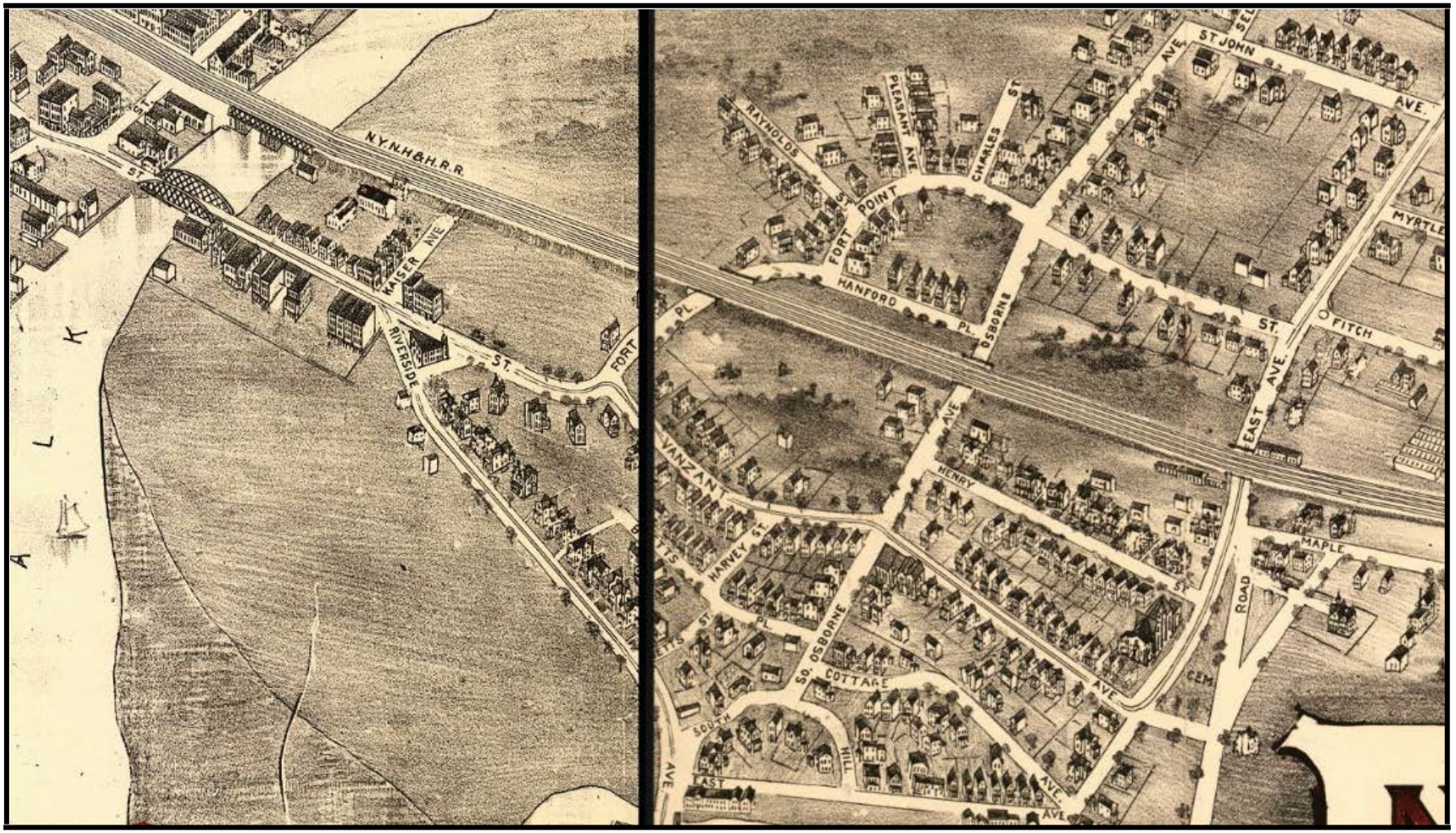
Map 5. South Norwalk waterfront in 1875 showing the many factories as well as the river crossings (O. H. Bailey & Co. 1875).



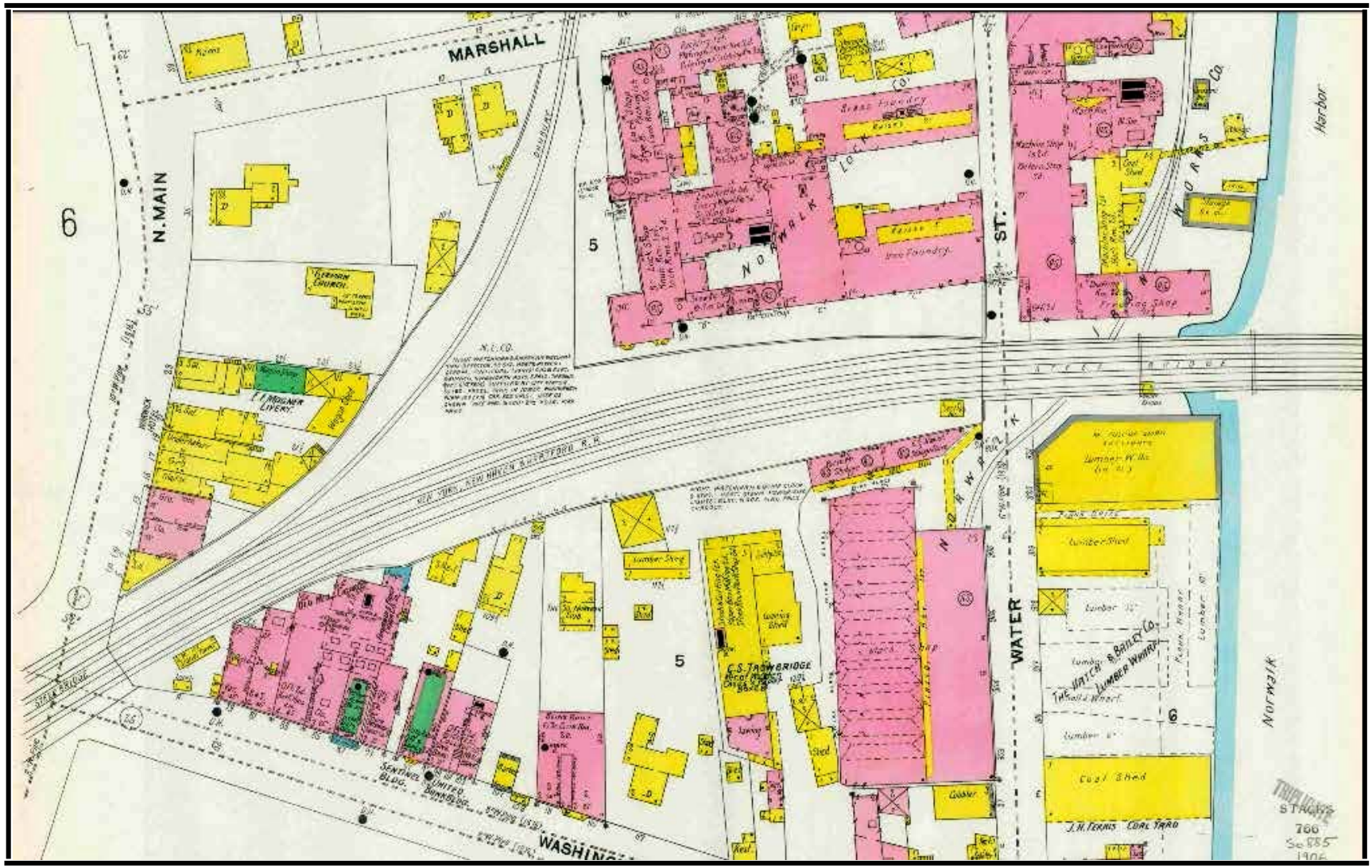
Map 6. Landis & Hughes bird's-eye view of the project area on the west side of the river, 1899.



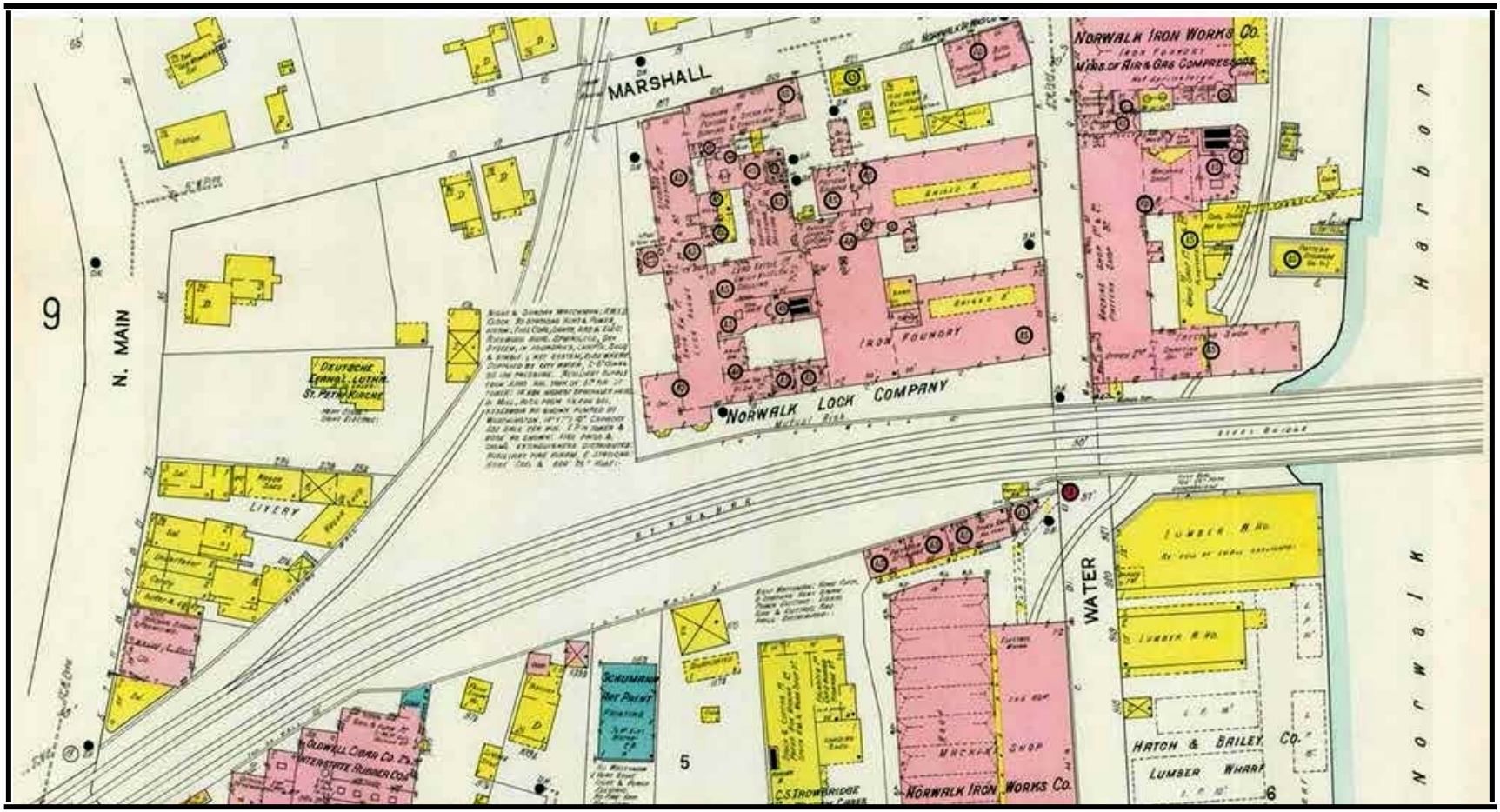
Map 7. Landis & Hughes bird's-eye view of the project area on the east side of the river, 1899.



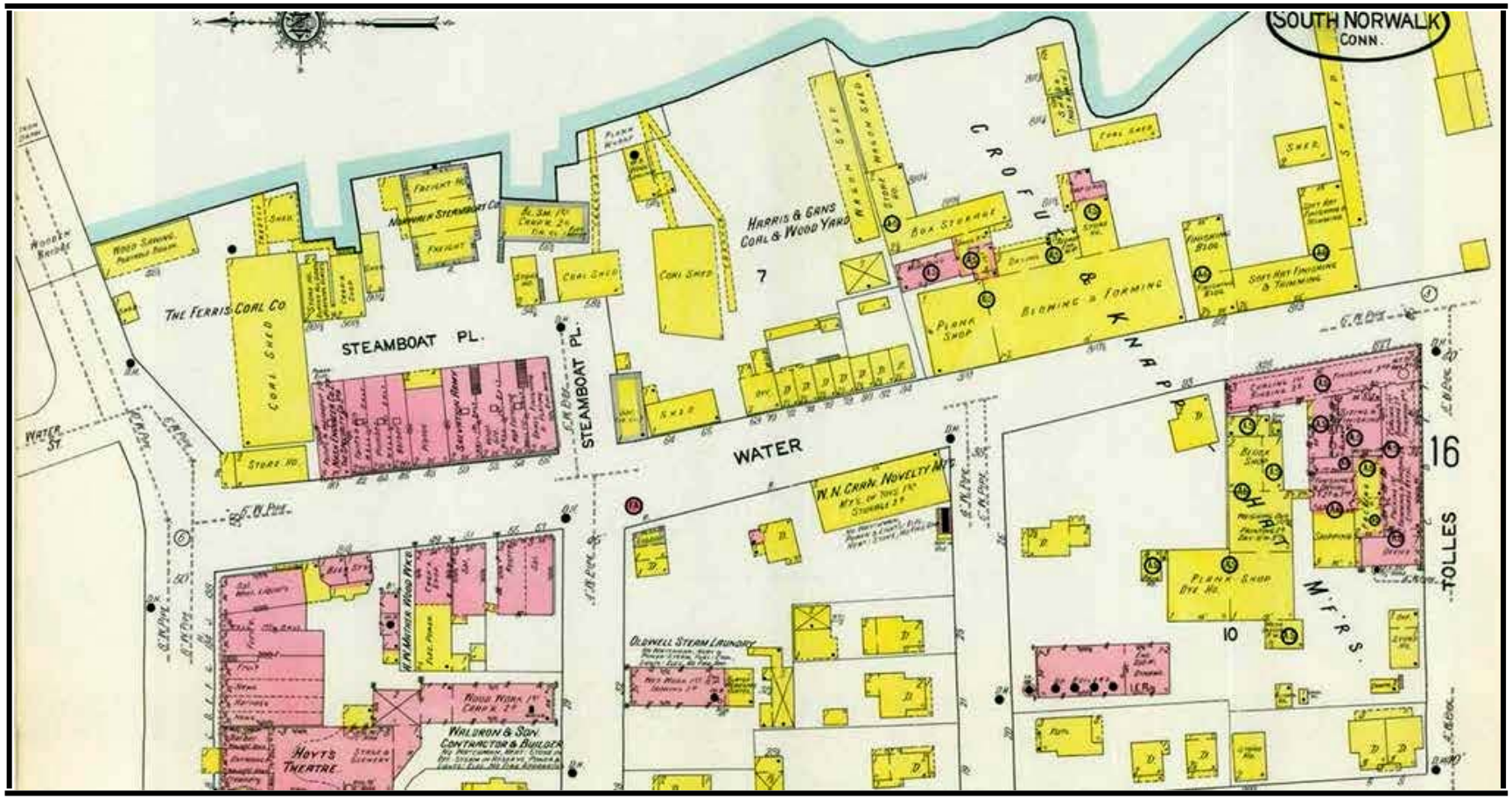
Map 8. Sanborn insurance map from 1906 showing factories along the NY, NH & H line in South Norwalk.



Map 9. Sanborn insurance map showing the central portion of South Norwalk, January 1912.



Map 10. Sanborn insurance map showing the area south of Washington Street, Norwalk January 1912.



APPENDIX III

Historical Images

Image 1. View of stores built along the eastern end of the Washington Street Bridge, ca. 1905 (Bryant 2005; Norwalk History Room, Norwalk Public Library).

Image 2. View of four-tracking and elevation of the NY, NH & H line ca. 1895 (Norwalk History Room, Norwalk Public Library).

Image 3. View of massive retaining walls constructed to elevate the NY, NH & H line ca. 1895 (Norwalk History Room, Norwalk Public Library).

Image 4. View of four-tracking and elevation of the NY, NH & H line in 1895 (Norwalk History Room, Norwalk Public Library).

Image 5. View of the NY, NH & H line at the corner of Washington and Main Streets before elevation, February, 1895 (Norwalk History Room, Norwalk Public Library).

Image 6. View of the intersection in Image 5 after elevation of the line 1897 (Norwalk History Room, Norwalk Public Library).

Image 7. View of four-tracking and elevation of the NY, NH & H line ca. 1895 (Norwalk History Room, Norwalk Public Library).

Image 8. Train going over the tracks on the Norwalk Walk Bridge ca. 1913 (construction of the new Washington Street Bridge is in the foreground) (Norwalk History Room, Norwalk Public Library).

Image 9. View of four-tracking and elevation of the NY, NH & H line ca. 1914 (Washington Street Bridge is in the foreground) (Norwalk History Room, Norwalk Public Library).

Image 10. View of the Norwalk Walk Bridge, ca. 1960.

APPENDIX IV

Photographs

Photograph 1. Norwalk River Railroad Bridge, HAER photograph by Jack Boucher, 1977.

Photograph 2. Norwalk River Railroad Bridge, western approach span, view southeast.

Photograph 3. Western high tower and catenary support structure, view southeast.

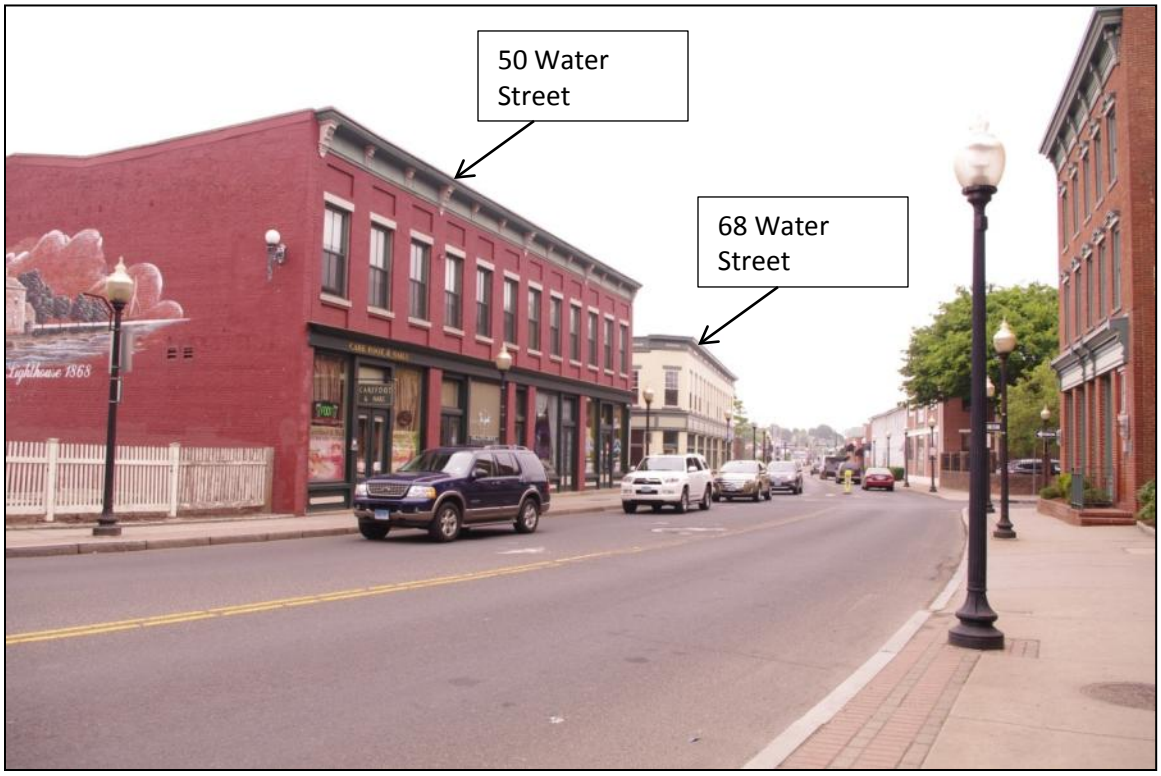
Photograph 4. South Norwalk Railroad Bridge over South Main and Washington streets, view southeast.

Photograph 5. Interlocking tower, view northwest.

Photograph 6. Fort Point Street Railroad Bridge, view southeast.

Photograph 7. Typical section of stone retaining wall for the 1896 four-tracking and grade-separation project.

Photograph 8. South side of Washington Street, east end of historic district, view southwest.



Photograph 9. Buildings at 50 and 68 Water Street, view south.

Photograph 10. Building at 53 Water Street (on right), view south.

Photograph 11. Former Norwalk Lock Company buildings, now in use for business offices, just north of the railroad right-of-way, view east.

Photograph 12. Former buildings of the Norwalk Iron Works, now part of the Maritime Aquarium, view south.

Photograph 13: United States Post Office-South Norwalk, 16 Washington Street, view south.

Photograph 14: Late 19th- and early 20th-century commercial buildings at Liberty Square, view northwest.

Photograph 15. Typical houses in the Seaview Avenue neighborhood, view northwest.

Photograph 16. The former R and G Corset Factory at 21 Ann Street, view northeast.

Photograph 17. Examples of houses in the Haviland and Elizabeth Streets-Hanford Place Historic District, Haviland Street, view southwest.

Photograph 18. House at 3 Goldstein Place, view west.

Photograph 19: Row of three 1890s houses on the west side of Goldstein Place (left to right, 1, 3, and 5 Goldstein Place), camera facing northwest.

Photograph 20: Marina buildings at 11 Goldstein Place, view west (brick building, part of the Norwalk Seaport Museum, is on the west side of the river).