Historic Resources Evaluation Report

CP-243 Interlocking
Norwalk and Westport, Connecticut

State Project No. 0301-0181

Prepared for HNTB Corporation
Boston, Massachusetts

by

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for submission to

The Connecticut Department of Transportation

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ABSTRACT AND MANAGEMENT SUMMARY

The State of Connecticut, through the Connecticut Department of Transportation (CTDOT), is constructing a new universal interlocking along the Metro-North New Haven Railroad Line (NHL) east of the East Norwalk Station in Norwalk and Westport, Connecticut. The proposed project, known as the CP-243 Interlocking Project, will improve operations along the NHL, including the ability of the Metro-North system to accommodate Express-Local train overtakes and limited headways between trains. The CP-243 project will help facilitate the construction of rail infrastructure projects on the NHL, particularly related to track outages, while maintaining rail service through the area. In addition to the interlocking, the project includes signaling system upgrades from the South Norwalk Station to a point just east of the Saugatuck River in Westport.

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. Additionally, 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. 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 (NRHP). Archaeological resources are addressed in a companion report (Sportman 2016).

The Area of Potential Effects (APE) for historic properties was delineated as 1) the area within the railroad right-of-way (ROW) in which project work will take place, including three historic railroad bridges that will be fitted with fiber-optics conduit, and 2) the project's construction staging/access easement area at 10 Norden Place. Properties immediately adjacent to the interlocking portion of the APE were evaluated for their NRHP-eligibility because of the possibility of proximity effects from the project.

The three bridges that will be fitted with fiber-optics conduits, the South Norwalk Railroad Bridge, the Norwalk River Railroad Bridge (Walk Bridge), and the Saugatuck River Railroad Bridge (Saga Bridge), are all listed on the NRHP; the physical and visual impact of the added conduit will be minimal and so will not constitute an adverse effect on any of the bridges. Other historic bridges will not be affected by the project. The construction of the interlocking will involve the removal of catenary support structures associated with the historic rail line's 1914 electrification. These structures are considered contributing components to the rail line within the project limits, a potentially eligible linear historic district, so the removal of the structures will constitute an adverse effect. These structures are also contributing components to the New York, New Haven & Hartford Railroad Electrification and Catenary System, which CTSHPO regards as National-Register-eligible. No additional effects will occur as a result of the new catenary support structures per se. The project will have no effect on the high towers on either side of the Norwalk and Saugatuck rivers. The rail line within the project limits also includes historic stone box culverts and lengths of stone retaining walls that are contributing components; none will be adversely affected by the project.

Several non-railroad-related properties that are more than fifty years old were identified in the vicinity of the interlocking portion of the project, but none appears to be eligible for the NRHP. The upgrading of the line's signaling system with fiber-optic lines buried in the ballasted embankment or carried on existing overhead structures, along with two small electrical-equipment enclosures, will have no impact on adjacent historic properties. Therefore, there will be no adverse

effects to non-rail related historic resources as a result of this project.

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

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I. INTRODUCTION AND SCOPE OF WORK

A. Introduction

The State of Connecticut, through the Connecticut Department of Transportation (CTDOT), is constructing a new universal interlocking along the Metro-North New Haven Railroad Line (NHL) east of the East Norwalk Station in Norwalk and Westport, Connecticut. The proposed project, known as the CP-243 Interlocking Project, will improve operations along the NHL, including the ability of the Metro-North system to accommodate Express-Local train overtakes and limited headways between trains. The CP-243 project will help facilitate the construction of rail infrastructure projects on the NHL, particularly related to track outages, while maintaining rail service through the area. In addition to the interlocking, the project includes signaling system upgrades from the South Norwalk Station to a point just east of the Saugatuck River in Westport. The project location is shown on Figures 1-4 (Appendix I).

Work will take place almost entirely within the footprint of the existing railroad right-of-way (ROW). The new interlocking will include track realignment and crossovers, new track switches, drainage improvements, and track sub-ballast and ballast reconstruction from approximately Strawberry Hill Avenue to a point a short distance east of the Norwalk-Westport town line [corresponding to Milepost (MP) 43.0-43.5]. The proposed project also includes construction of a new access road to the ROW through the parcel at 10 Norden Place, Norwalk, and a construction easement that overlaps the parcel's parking areas.

The CP-243 project will replace a portion of the overhead contact system (OCS) on the main line. Work will include the installation of 18 new catenary structures, removal of approximately ten existing catenary structures, and removal of high voltage extensions from old structures and transfer to new structures.

The existing signaling system from the South Norwalk Station (including CP-241) to the east side of the Saugatuck River in Westport will be upgraded, including new signals, wire and cable replacement, conduit and duct bank installations, and all signal transformer installations and connections. Two small metal signaling equipment enclosures, 10' by 20' in plan, will be installed within the ROW. Except in the case of three railroad bridges, where new fiber-optic conduits will be attached to the bridges, the signalling upgrades will be installed below-grade in the ballasted ROW embankment or carried by overhead structures.

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. In addition, funding 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 historical and archaeological resources listed in or eligible for listing in the National Register of Historic Places (NRHP).

This report presents the results of research, field inspections, and evaluation of historic resources that may be affected by the proposed project. The report was prepared by Archaeological and Historical Services, Inc. (AHS) under contract to HNTB Corporation, the project's consulting engineer. 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 2016).

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 February of 2016. All public streets near the APE were assessed in a windshield survey to identify additional historic properties that could be affected.

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 ROW wherein project actions will occur (Figure 1), along with the property at 10 Norden Place where the project will require construction and access easements and the three railroad bridges that will be fitted with new fiber-optic conduits. The project limits within the railroad ROW extend from just east of the South Norwalk station to the east side of the Saugatuck River in Westport. The interlocking portion of the project extends from just east of the Strawberry Hill Avenue crossing (east of existing catenary structure 545) to a point west of existing catenary structure 566. Because of the possibility of physical effects from construction activities (e.g., damage from vibration), the APE is understood to include all properties that are immediately adjacent to the ROW within the interlocking portion of the project area. Because there is virtually no possibility of visual or other indirect effects on adjacent properties arising from the signaling upgrade portion of the project, the APE was not extended to include adjacent properties for the signaling upgrade portion of the project.

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. 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. A series of historic maps and views (see Appendix II) was assembled, and research was undertaken to establish the historic contexts for evaluating resources in the project vicinity. This included research in the CTSHPO inventory files and the records and photograph collections of the Norwalk Public Library. Railroad records at the Dodd Research Center, University of Connecticut, Storrs, and previous survey information from the Connecticut Historic Preservation Collection, University of Connecticut were also consulted.

Although the rail line was observed from all vantage points accessible by public roads and by multiple trips riding Metro North, it was not practical to do an in-depth walkover due to the need to keep the line in service. While it is possible that some small-scale historic features may not have been inventoried, there is every reason to believe that the majority of historic features, including all the major features, are addressed in this report.

In order to establish an overall historical context and help in the identification of historic resources, general statewide and local published histories of Norwalk were consulted, including histories 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 1976), the Historic American Engineering Record (HAER) documentation of the Northeast Corridor Line in Connecticut (HAER CT-11) and the electrification of the line (HAER CT-8).

Resources identified as being over fifty years of age 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, workmanship, feeling, and association.

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, 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. 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. 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 19th century, a division began to emerge between the older established area at the head of navigation and Old Well, as South Norwalk was then known. By 1840, South Norwalk housed a large working-class population who worked in potteries, hat factories, carriage shops, and silversmith shops. Built along the deepest part of the harbor, it was a prime shipping location, with Quintard's Wharf at the foot of Marshall Street as the center of operations. Soon commercial buildings began to line Marshall and Ann streets, and South Norwalk surpassed Norwalk proper as the premier port. Manufacturing in South Norwalk prospered. For a time, hat-making was the most prominent industry; by the mid-19th-century, Norwalk's hatters employed over 2,000 workers.

Conversely, East Norwalk largely remained a farming community. During the middle of the 19th century, South Norwalk citizens were known to keep small farms on the open land east of the river (Ray and Stewart: 159), but only gradually did commercial and industrial development spread from South Norwalk across the river.

B. Later 19th-Century Development of South Norwalk and East Norwalk

Initial railroad surveys that showed a drawbridge on the Norwalk River drew concern from Norwalk residents, who feared that river traffic would be impeded. Despite some opposition, the New York & New Haven Railroad was able to complete its line and began full service to Norwalk in 1848. With the addition of a second line to Danbury in 1852, South Norwalk quickly became a busy railroad center, with ten trains leaving South Norwalk between

5:16 and 9:36 A.M. each day. After the establishment of the railroads, South Norwalk quickly surpassed the upriver part of Norwalk as a commercial and industrial center. A large commercial district consisting of three-story brick buildings lined Washington Street and continued along South Main and North Main Street, housing a variety of shops, offices, and small-scale industrial enterprises. Large-scale industry along the tracks included the Norwalk Lock Company, the Norwalk Iron Works, and various hat and corset factories (see Maps 1 and 2 for the relationship of the railroad line to commercial and industrial development). Lumber companies and oyster enterprises rounded out the economy.

Development in East Norwalk was hampered by the fact that the area did not have a train station until 1885. Consequently, the kind of industrial and commercial growth seen in South Norwalk was slow to develop. The 1899 Landis & Hughes view (Map 3) shows that there was a densely settled area 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. Trolleys travelled over the bridge, allowing residents to shop on both sides of the river. Nevertheless, there was still relatively little development on the east side of the river, other than a cluster of residences located south of the project area along Maple Avenue (now Winfield Street) and Bridge and Howard streets. After a crossing over the rail line was put into place at Bridge Street in the early 1890s, development began to spread north of the tracks.

Both South and East Norwalk were home to several immigrant populations by the end of the 19th century, including Germans, Irish, Swedes, Hungarians, Italians, and Jews of East European and German decent.

C. The Project Vicinity in the 20th Century

Development slowly began to move away from the bridge area. Along the east bank of the Norwalk River on Seaview Avenue, a row of stylish year-round and summer residences was built in the late 19th and early 20th centuries. By the first decade of the 20th century, houses lined Maple Avenue (now Winfield Street), Howard Street, and Woodside Avenue in the vicinity of the project area. In 1916, a lace factory was constructed immediately north of the rail line at 1 Regent Street by American LaDentelle, Inc., which specialized in the production of Cluny Lace (Price & Lee, 1918: 311). The plant is now home to the handbag retailer Dooney & Bourke. A decade later, one of the city's largest employers, the Crofut and Knapp hat factory, relocated to Van Zant Street in East Norwalk. It had over 1,800 employees and produced over 1.5 million hats annually. This helped bolster growth of residential development east of the river and several new streets were put in place by the 1920s. The 1931 and 1942 Dolph & Stewart maps (Maps 4 and 5) show substantial residential development, particularly south of the tracks where there was a neighborhood known as Forster Park.

A major change came to East Norwalk in 1960, when Norden Systems, a major aviation-electronics company, constructed a large plant north of the railroad ROW on Helen Street (10 Norden Place today). The plant was expanded in 1972 and 1988, and at its height it employed some 4,800 people (Bosak 2013). Norden was an exemplar of the shift in Connecticut manufacturing away from traditional industry to aerospace and defense industries. In recent years, employment at Norden (later a division of Northrop-Grumman) has significantly decreased; the company left Norwalk in 2014 when its lease expired.

D. Westport

While most of the project area lies within the town of Norwalk, the eastern portion lies within the town of Westport, where it ends just east of the Saugatuck River. Like Norwalk, Westport before the coming of the railroad was primarily an agricultural town, with some commercial development and small-scale industrial enterprises associated with the harbor formed by the tidal portion of the Saugatuck River. Because the maritime facilities were not as commodious as those of the Norwalk River, nor was there a north-south rail line to add to the area's commercial viability, the village of Saugatuck remained a much smaller version of South Norwalk, albeit with many of the same components. There were numerous stores, coal and feed businesses, and small-scale manufacturers such as the Wheeler button factory, the Dalton Knitting Machine Company, and the F. L. Hedenberg stove works. In the late 19th and early 20th centuries, Westport, like Norwalk, increasingly assumed the identity of a residential commuter community dependent upon train service to New York City.

E. The New York, New Haven & Hartford Railroad (NY, NH & H)

The NY, NH & H was formed in 1872 by a merger of the Hartford & New Haven Railroad (chartered in 1833), and the New York & New Haven Railroad (chartered in 1844). Over the next several years, the railroad absorbed other lines through merger, purchase, or long-term lease, until it controlled virtually all the rail transportation in southern New England, including both of the lines through Norwalk. The railroad's service area was one of the country's most densely populated and fastest growing industrial regions, and both passenger and freight operations were exceptionally profitable.

In the 1890s, the entire main line between New York and New Haven was widened to four tracks. In addition to increasing capacity, the project was intended to eliminate grade-level crossings, particularly in Connecticut's bustling commercial and industrial centers. In major cities such as Stamford, Norwalk, and Bridgeport, the four-tracking was accompanied by raising the entire rail line above street level, necessitating long, stone-walled viaducts in many areas, and dozens of new bridges were needed to carry the tracks over and under local roadways.

In response to legislation that banned steam trains in New York City, the NY, NH & H undertook the country's first electrification of a railroad's main line. Catenary support structures were installed at 200-to-300-foot intervals along the line to carry traction power and signals; for many years the railroad operated its own power-generation plant at Cos Cob in Greenwich. The example of the NY, NH & H influenced all subsequent railroad electrifications, including the Pennsylvania Railroad's New York to Washington route. In addition to its technological importance, the railroad had profound economic and social effects, sustaining commercial and industrial enterprises throughout its service region and creating some of the state's first instances of suburban commuter communities.

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

Corporation (Amtrak). Metro-North was created in 1983 when the Metropolitan Transit Authority, a quasi-public New York agency, partnered with CTDOT to take over commuter service from Conrail.

IV. HISTORIC RESOURCES: RAILROAD-RELATED PROPERTIES

Background research and field inspections indicate that the proposed project will potentially affect a number of railroad-related historic resources. These historic resources are depicted in Figure 2 and are discussed below.

A. Rail Line and Related Structures

The former NY, NH & H rail line has long been regarded as an important historic resource that includes a pioneering electrification system, numerous early railroad bridges, and historic trackside buildings. The line from the New York state border to New Haven 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). A report on the NY, NH & H's catenary system, prepared for CTDOT in 2000, recommended NRHP listing of the electrification of the line from New Haven to New York (Stewart 2000) under Criterion C (example of a type, period, or method of construction), and in reviewing improvements to the line, CTSHPO has regarded the "New York, New Haven & Hartford Railroad electrification and catenary system" as NRHP-eligible (Maddox 1999). The historic catenary structures and high towers within the project limits should be regarded as contributing components to the NY, NH & H electrification and catenary system.

The portion of the rail line within the project limits is recommended as an NRHP-eligible linear historic district under Criterion A (broad patterns of history) because of the importance of the NY, NH & H in the transportation history of southern New England and the impact of the railroad on the economic development of the communities along the route. The portion of the line within the project limits is also eligible under Criterion C (type, period, and method of construction) because of its significance as an example of the period's railroad engineering, most notably for its electrification components but also for the various bridges and other structures along the line. Most of the engineering elements noted at the time of the HAER documentation remain in place; the various bridges, culverts, and electrification features represent contributing components to the portion of the rail line within the project limits as a NRHP-eligible linear historic district.

B. Bridges

Some of the railroad bridges within the project limits have been replaced relatively recently, but the following historic bridges remain in place, listed from west to east:

- **South Norwalk Railroad Bridge** over South Main and Washington Streets in South Norwalk, a pin-connected steel through-truss dating from 1896 (Photograph 11, Appendix III). The abutment walls and stepped wing walls are built of quarry-faced granite blocks. This structure was listed in the NRHP as a contributing component 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 under Criteria A and C to the rail line within the project limits as an eligible linear historic district.

- **Norwalk River Railroad Bridge (Walk Bridge, Norwalk).** The Walk Bridge is a deck-truss, rim-bearing swing bridge that carries four tracks of Metro-North between New Haven and New York and Amtrak passenger trains on the Boston/New York/Washington corridor, as well as local freight service (Photograph 12). It was built in 1896 by the Pennsylvania Steel Company. The bridge was listed in the NRHP in 1987. In addition to its design significance as an example of period engineering (Criterion C), the bridge is important in Connecticut's transportation history because of the NY, NH & H's role in consolidating rail service in the state (Criterion A).
- **Fort Point Street (Norwalk) Railroad Bridge.** The bridge dates from 1941, when the railroad replaced an earlier plate-girder bridge at the site (Photograph 13). It consists of a series of beams with welded stiffeners spanning stone abutments that continue into the adjacent retaining walls for the elevated tracks. The stone abutments date from the reconstruction of the rail line in the 1890s. The bridge is a contributing resource under Criteria A and C to the rail line within the project limits as an eligible linear historic district.
- **Osborne Avenue (Norwalk) Railroad Bridge**, a d**e**ck-girder structure built in 1894 (Photograph 14). The bridge is a contributing resource under Criteria A and C to the rail line within the project limits as an eligible linear historic district.
- **East Avenue (Norwalk) Railroad Bridge**, a deck-girder structure built in 1905 **(Photog**rap**h 15).** The bridge is a contributing resource under Criteria A and C to the rail line within the project limits as an eligible linear historic district.
- **Strawberry Hill Avenue (Norwalk) Railroad Bridge**, a deck -girder structure built in 1941 as a replacement for an earlier bridge on the site, the stone abutments for which remain in place (Photograph 16). The bridge is a contributing resource under Criteria A and C to the rail line within the project limits as an eligible linear historic district.
- **Saugatuck Avenue (Westport) Railroad Bridge**, a deck -girder structure built in 1941 as a replacement for an earlier bridge on the site, the stone abutments for which remain in place (Photograph 17). The side-track portion along the north side also probably represents a remnant from the earlier bridge, judging by its riveted plate-girder construction. The bridge is a contributing resource under Criteria A and C to the rail line within the project limits as an eligible linear historic district.
- **Saugatuck River Railroad Bridge (Saga Bridge, Westport)**, a deck-girder Scherzer rolling-lift bascule built in 1905 by the Pennsylvania Steel Company (Photograph 18). The bridge was listed on the NRHP in 1987. The listed structure includes an approach span at the west end over Ferry Lane.

C. Catenary Structures

The electrification of the NHL from Stamford to New Haven was completed in 1914. There are currently a number of original steel lattice-girder catenary support structures located within the interlocking portion of the APE, spaced at approximately 200-to-300-foot intervals (Photograph 1), along with other recently installed catenary supports. The catenary supports flanking the Bridge Street and Triangle Street crossings were added later than the original ones but are of similar construction (Photograph 2). In evaluating another project, the CTSHPO

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 catenary support structures represent contributing components to the NY, NH & H electrification system under Criterion C. These structures also represent contributing resources under Criteria A and C to the rail line within the project limits as an eligible linear historic district.

D. High Towers

As part of the electrification of the line that was completed in 1914, tall steel lattice towers were installed to carry power and signal lines over the Norwalk and Saugatuck rivers (Photographs 12 and 18). There is one tower one each side of each river, consisting of a pair of tapered box-section uprights joined by three horizontal members and diagonal bracing above the tracks. Like the catenary support structures, the high towers are an integral part of the historic electrification of the New Haven Railroad main line and therefore represent contributing components to the NY, NH & H electrification system under Criterion C. These structures also represent contributing resources under Criteria A and C to the rail line within the project limits as an eligible linear historic district.

E. Stone Box Culverts

Railroad surveys (e.g., Map 6) indicate that four stone box culverts were at one time found within the interlocking portion of the project. Two were confirmed in the field by the consulting engineer. The first measures 2 ½' x 3' and is located at Station T2 1645+36; the second measures 2 ½' x 2 ½' and is located at Station T2 1652+15. The continued existence of the other two, located further to the east, could not be confirmed. These simple structures, dating either to the rail line's original construction or to its rebuilding in the 1890s, should be considered contributing resources under Criteria A and C to the rail line within the project limits as an eligible linear historic district.

F. Stone Retaining Walls

In the early 1890s, the NHL in South Norwalk and East Norwalk 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 and along the north side of the right-of-way west of Water Street. These structures are contributing resources under Criteria A and C to the rail line within the project limits as an eligible linear historic district.

Lengths of stone retaining walls, 3-feet to 5-feet high, appear at the edges of the ROW at various points (Photograph 19). Although smaller in scale, these too make some contribution under Criteria A and C to the historic character of the rail line within the project limits.

V. HISTORIC RESOURCES: NON-RAILROAD-RELATED PROPERTIES

The consultants considered several individual buildings and groups of buildings located immediately adjacent to the interlocking portion of the APE that were more than 50 years old. None appears to be eligible for the National Register. The more-than-50-year-old properties include:

- A single-story brick factory at 6 Regent Street constructed for American LaDentelle, Inc. in 1916. The company specialized in the production of Cluny lace. The building has been significantly modified by the addition of new windows and a new entrance (Photograph 3).

- A group of 11 houses located along the north side of Winfield Street, and east of the intersection of Stanley Street and Winfield Street, dates from 1850-1900. Only seven of these houses (51-63 Winfield Street) are adjacent to the APE (Photograph 4). They are fairly typical vernacular interpretations of Victorian houses. Most have been altered by incompatible additions, the enclosure of porches, vinyl or aluminum siding and replacement windows. The oldest house in the area is located at 51 Winfield Street (1853), but it does not appear to be individually eligible for inclusion in the NRHP (Photograph 5) due to the ubiquitous nature of the type. Houses of this type are more commonly included in the NRHP as part of historic districts.

- Woodside Avenue is a short street containing houses dating from the 1910s to the 1950s. It is located parallel to the tracks and straddles North Bridge Street. All of the houses have been altered by vinyl or aluminum siding, incompatible additions, and other modifications (Photograph 6).

- Reboda Court is a short street located parallel to the tracks on the eastern side of the Bridge Street crossing. Houses date from the 1930s to 1960s and have all been heavily altered by the addition of siding, replacement windows, enclosed porches and additions (Photograph 7).

- The line of houses located on the southeast side of the Triangle Street crossing dates from 1960-1965 and consists of ranch-type houses of no particular architectural or historical significance (Photograph 8).

- A group of 1950s ranch and cape-type houses located along Fordham Drive, south of the project area, with no apparent architectural or historical significance (Photograph 9).

- A large former industrial plant at 10 Norden Place (Photograph 10), built in 1960 and expanded in 1972 and 1988 for Norden Systems, a major aerospace company. After the lease expired in 2014, the complex was completely remodeled for use as modern office space. It no longer has the integrity of design, materials, and association that would allow it to recall its role in the economic history of 20th-century Norwalk.

Historic properties adjacent to the signaling-upgrade portions of the project area, such as the South Main and Washington Street Historic District in South Norwalk and the 1890s passenger stations in Westport, are not specifically listed in this report because the actions that constitute the signaling upgrade part of the project will take place entirely within the railroad ROW and have little or no potential for visual or other indirect effects. The size and scale of the two new metal signal-equipment enclosures are minimal, and most of the new signaling lines will be buried within the embankment or carried by overhead structures.

VI. ANTICIPATED PROJECT EFFECTS

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, or 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. Indirect effects could include incompatible new construction.

The following project actions could be expected to affect historic resources identified to date:

- Signal lines routed on historic railroad bridges
- Removal of catenary support structures and installation of new support structures
- Potential impacts on stone box culverts by drainage improvements

Below is a review of the anticipated effects, organized by historic resource:

1. Historic Bridges

The upgrade of the signaling system will require fiber-optic conduits to be attached to three historic bridges. The conduits will consist of two parallel 4-inch polyvinyl chloride (PVC) pipes. The addition of the conduits to the north side of the South Norwalk Railroad Bridge, the south side of the Norwalk River Railroad Bridge (Walk Bridge), and the south side of the Saugatuck River Railroad Bridge (Saga Bridge) will be only minimally noticeable, given the size of the conduits in relation to the overall visual mass of the historic bridges. With the two movable bridges, most of the new signaling lines will be carried by existing overhead structures and will only be attached to the bridge structure where needed to reach the piers leading to the underwater portion of the cable crossing (Figures 5 and 6).

All other historic bridges—Fort Point Street Railroad Bridge, Osborne Avenue Railroad Bridge, East Avenue Railroad Bridge, Strawberry Hill Avenue Railroad Bridge, and Saugatuck Avenue Railroad Bridge—will be unaffected by the signaling upgrade because the lines will be carried on existing overhead structures and will not need to be attached to the bridges.

2. Catenary Support Structures

The 1914 catenary support structures contribute to the significance of the rail line within the project limits as a NRHP-eligible linear resource. Approximately ten of these will be removed as part of the interlocking portion of the project, constituting an adverse effect. The new catenary support structures (Figure 7) will be similar to the existing modern catenary support structures—steel lattice portals supported on box-section columns. These have the same overall form as the historic catenary support structures but differ in specific details. Because there are a number of the modern type already in place, generally alternating with the historic catenary supports, no additional effect on the rail line within the project limits as a NRHP-eligible linear historic district will occur as a result of the new catenary support structures per se.

3. High Towers

The project proposes carrying the signal-upgrade lines using underwater conduits at the crossings of the Norwalk and Saugatuck rivers; there will be no effect from this project on either set of high towers.

4. Stone Box Culverts

There are two or more stone box culverts located along the line within the APE. The proposed project's drainage, grading and signal work is not anticipated to have any impact on these structures.

5. Stone Retaining Walls

None of this project's actions is expected to affect the stone retaining walks near Water Street and Fort Point Street. The installation of new catenary support structures in some cases will require removal of adjacent portions of the smaller-scale retaining walls. However, because other lengths of virtually identical walls will remain unchanged, it is recommended that this action be regarded as having No Adverse Effect on the walls taken as a whole.

The foregoing assessment of effects is based upon projected actions at this stage of design. Table 1 summarizes the anticipated effects.

Table 1. Recommended Findings of Effects of Project on Listed, Eligible, and Potentially Eligible Properties

Property	National Register Status	Recommended Effects Finding
South Norwalk Railroad Bridge	Contributing to a listed historic district	No Adverse Effect
Norwalk River Railroad Bridge (Walk Bridge)	Listed	No Adverse Effect
Fort Point Street Railroad Bridge	Contributing to the rail line within the project limits as a potentially eligible linear historic district	No Effect
Osborne Avenue Railroad Bridge	Contributing to the rail line within the project limits as a potentially eligible linear historic district	No Effect
East Street Railroad Bridge	Contributing to the rail line within the project limits as a potentially eligible linear historic district	No Effect
Strawberry Hill Avenue Railroad Bridge	Contributing to the rail line within the project limits as a potentially eligible linear historic district	No Effect
Saugatuck Avenue Railroad Bridge	Contributing to the rail line within the project limits as a potentially eligible linear historic district	No Effect
Saugatuck River Railroad Bridge	Listed	No Adverse Effect
Catenary support structures	Contributing to the eligible NY, NH & H electrification system; also contributing to the rail line within the project limits as a potentially eligible linear historic district	Some will be removed; Adverse Effect
High towers, Norwalk and Saugatuck Rivers	Contributing to the eligible NY, NH & H electrification system; also contributing to the rail line within the project limits as a potentially eligible linear historic district	No Effect
Stone box culverts	Contributing to the rail line within the project limits as a potentially eligible linear historic district	No Effect
Stone retaining walls	Contributing to the rail line within the project limits as a potentially eligible linear historic district	No Adverse Effect

VII. CONCLUSIONS AND RECOMMENDATIONS

The historic resources survey indicates that modifications to the existing track alignment and interlocking will have no effect on historic properties that are listed in or eligible for listing in the NRHP.

The rail line within the project limits appears eligible as a linear historic district, and the original catenary support structures, high towers, historic bridges, and stone box culverts that still remain within the project limits represent contributing elements. The removal of some of the catenary support structures will constitute an adverse effect. No additional effect on the rail line within project limits as a NRHP-eligible linear historic district will occur as a result of the new catenary support structures per se. Neither the stone box culverts nor the stone retaining walls are expected to be adversely affected by the project; therefore, no effects are anticipated for these resources.

Except in three cases, the new signaling lines will be carried on existing overhead structures and so will have no effect on any of the historic railroad bridges or high towers. In those three cases (the South Norwalk Railroad Bridge, the Norwalk River Railroad Bridge (Walk Bridge), and the Saugatuck River Railroad Bridge (Saga Bridge)), the addition of cable conduits will have only minor visual impacts on the historic structures that do not rise to the level of adverse effects.

No additional impacts are anticipated for non-rail-related resources. This includes the parcel at 10 Norden Place, which will have a permanent access easement and a temporary construction easement. The upgrading of the signaling system will take place entirely within the railroad ROW and will have no visual or other indirect impact on adjacent historic resources.

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 potential 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.

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APPENDIX I

Figures

Note for Figures 1-3:

The APE consists of the railroad right-of-way between the limits of the signaling improvements, a construction staging/ access easement area, the Norwalk River Railroad Bridge (Walk Bridge), and the Saugatuck River Railroad Bridge (Saga Bridge).

Figure 1. Location of the APE shown on the USGS Norwalk South and Sherwood Point quadrangles, scale 1:24000.

Figure 2. Railroad-related historic resources in the project area.

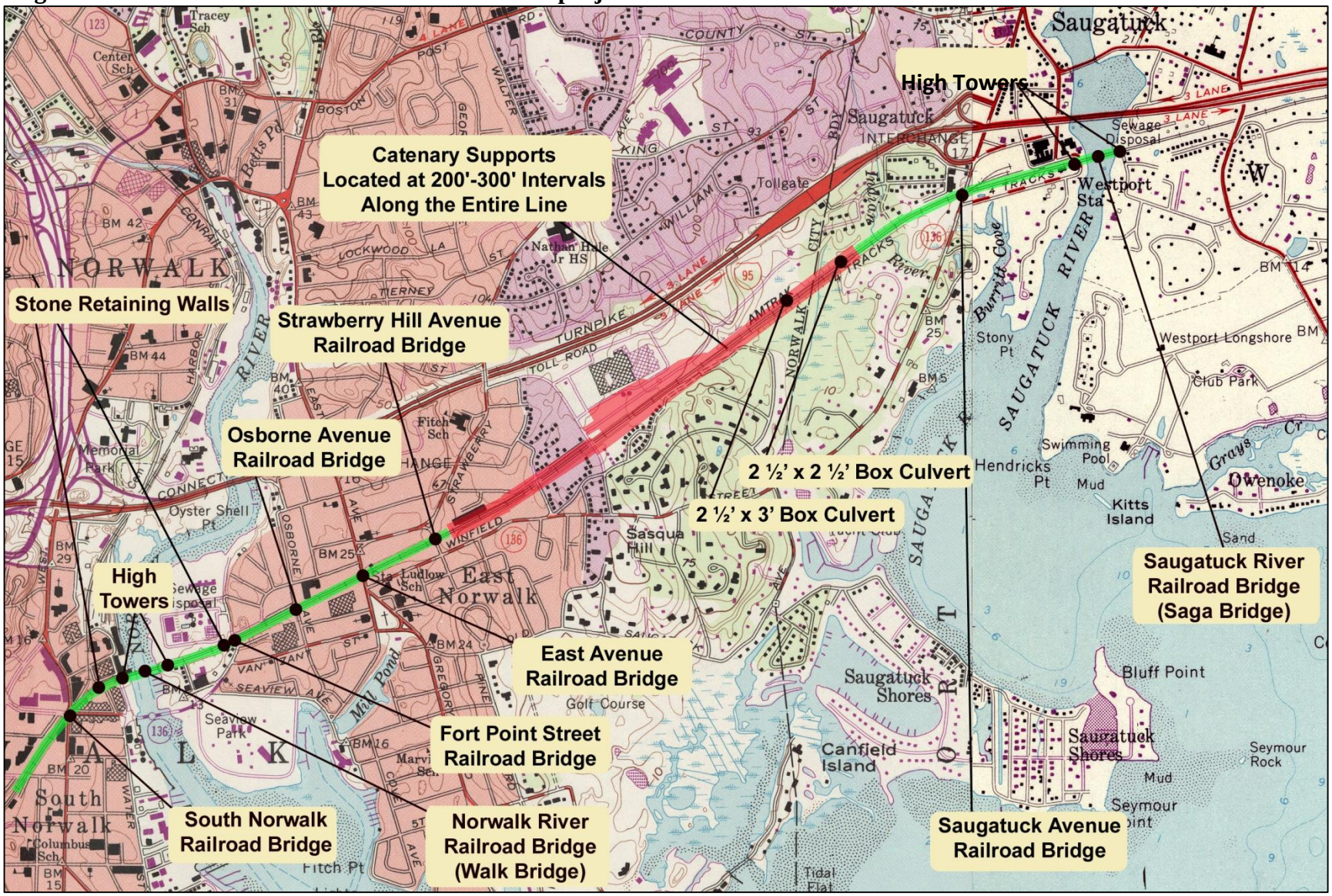


Figure 3. Non-railroad-related properties more than 50 years old (none appears eligible for the NRHP) in the interlocking portion of the project area.

Figure 4. Detail of access and construction easement at 10 Norden Place.

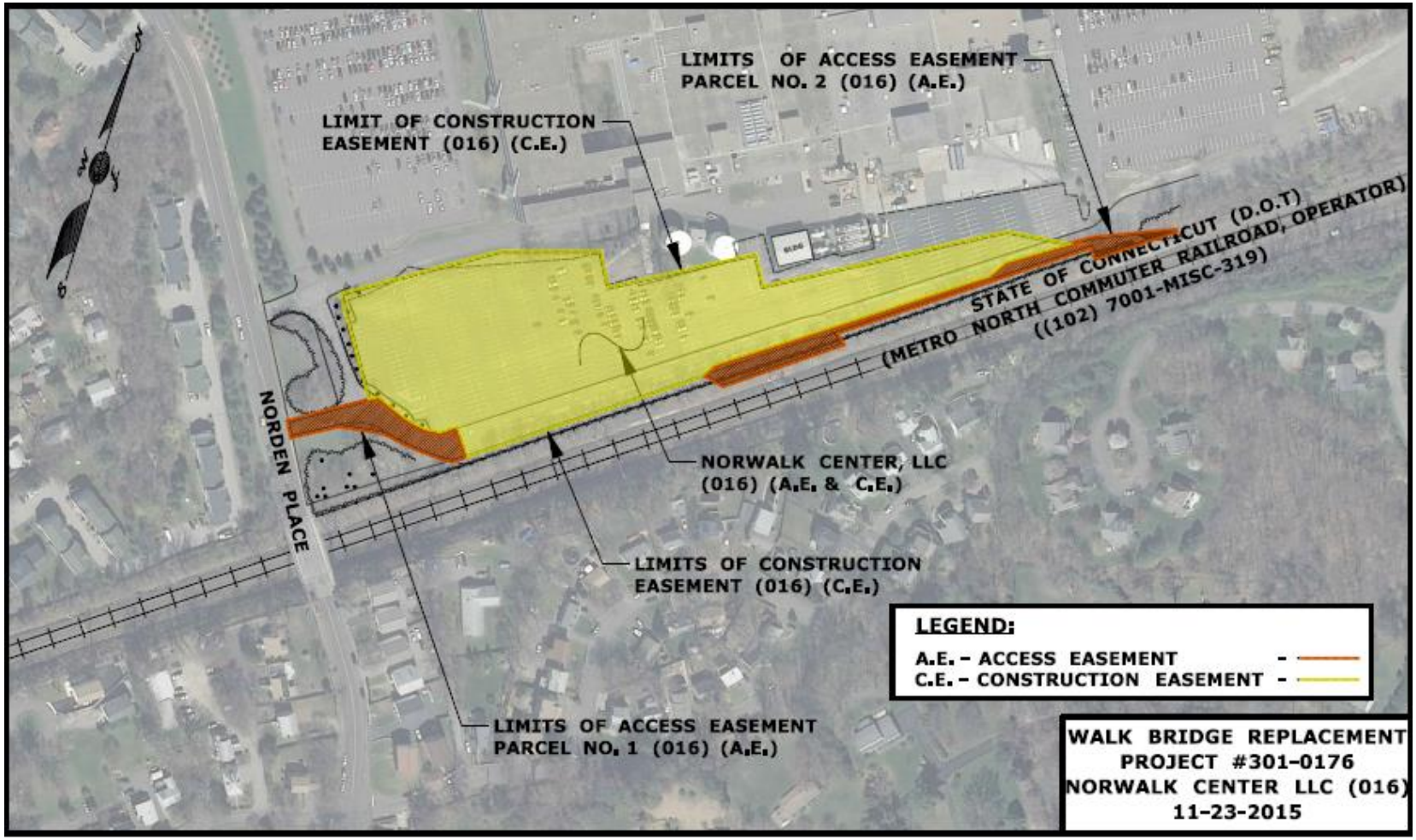


Figure 5. Schematic of cable attachment, Norwalk River Railroad Bridge (Walk Bridge).

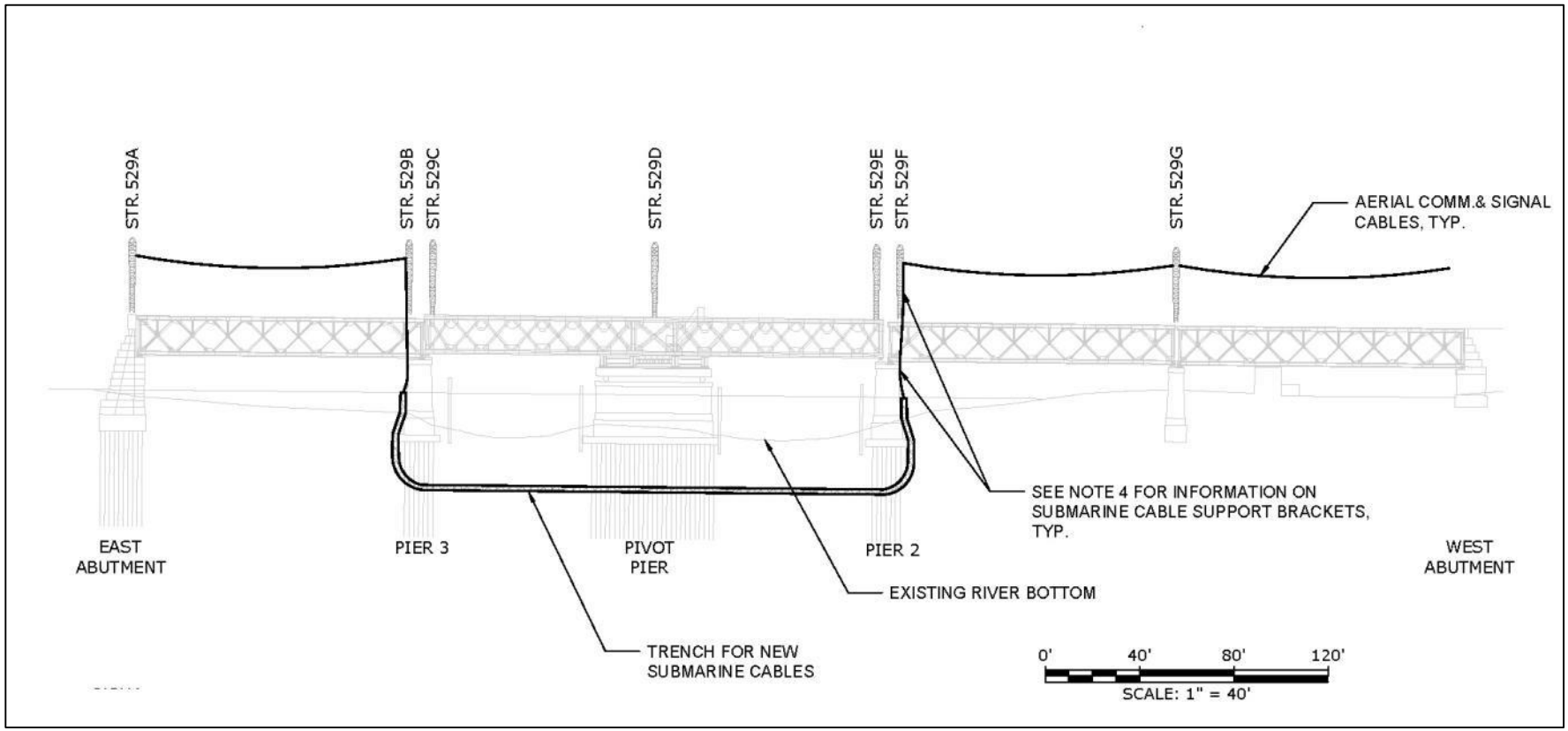


Figure 6. Schematic of cable attachment, Saugatuck River Railroad Bridge.

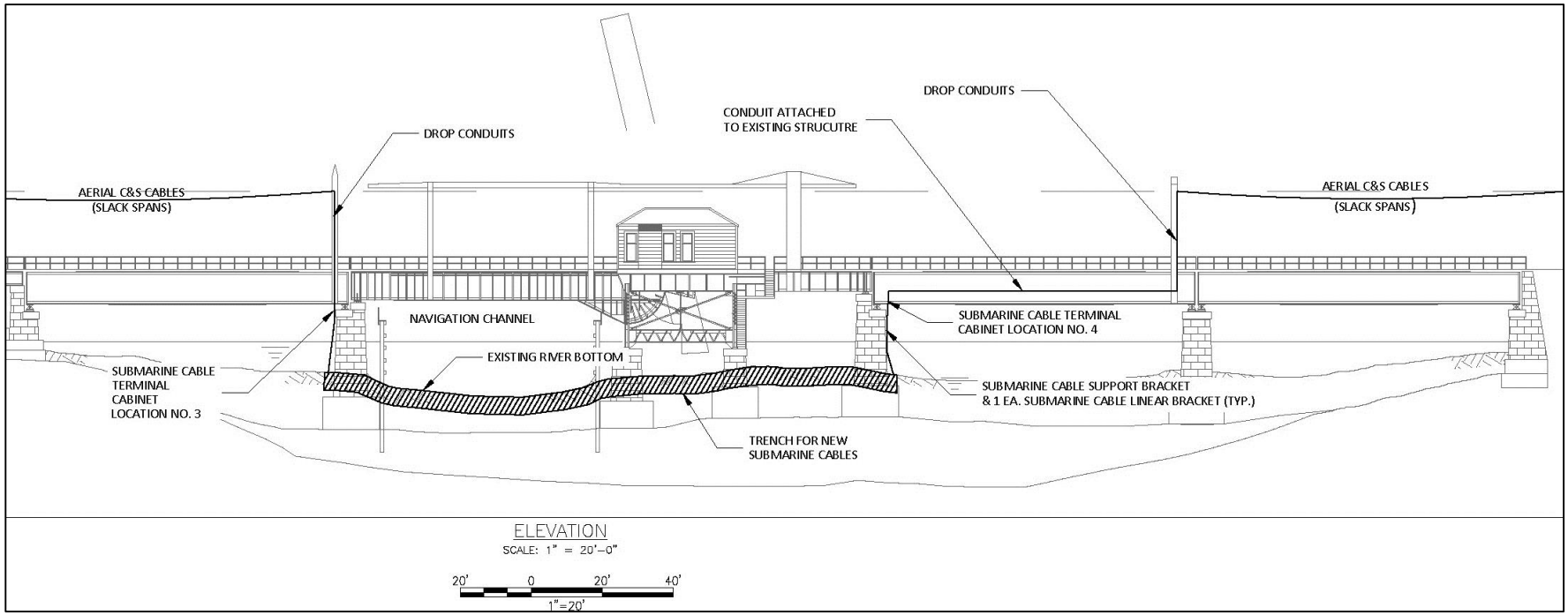
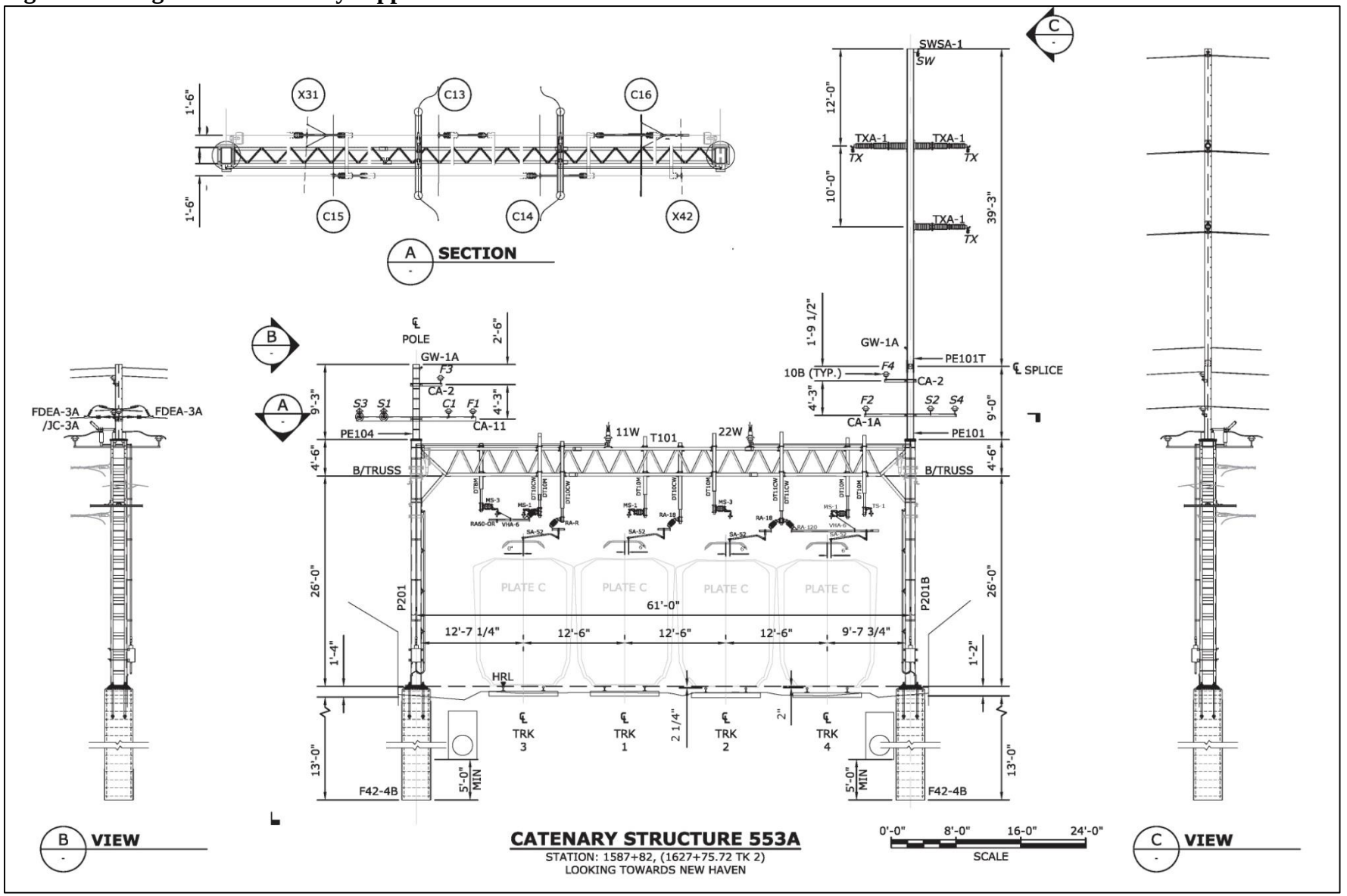


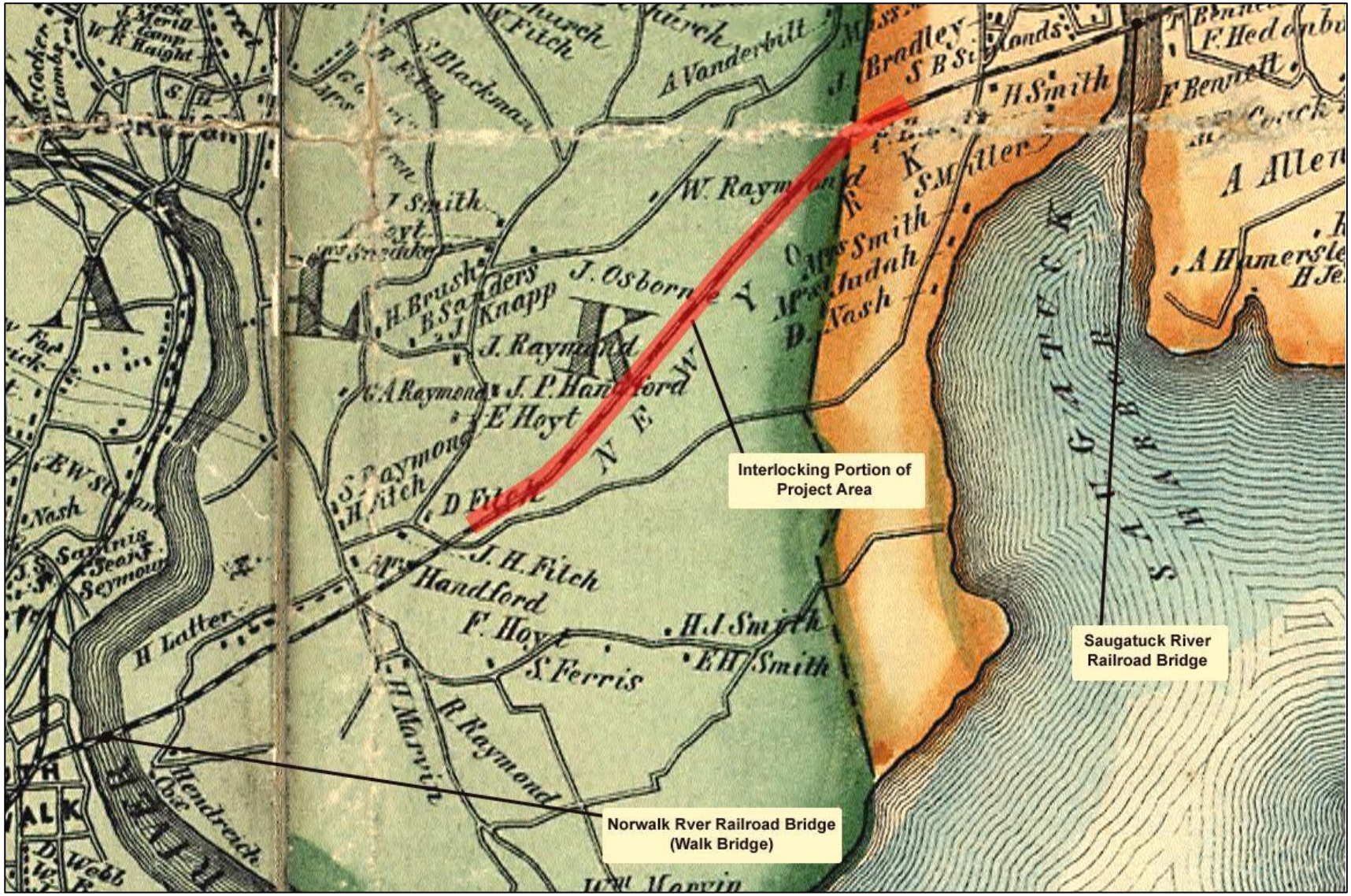
Figure 7. Design of new catenary support structures.



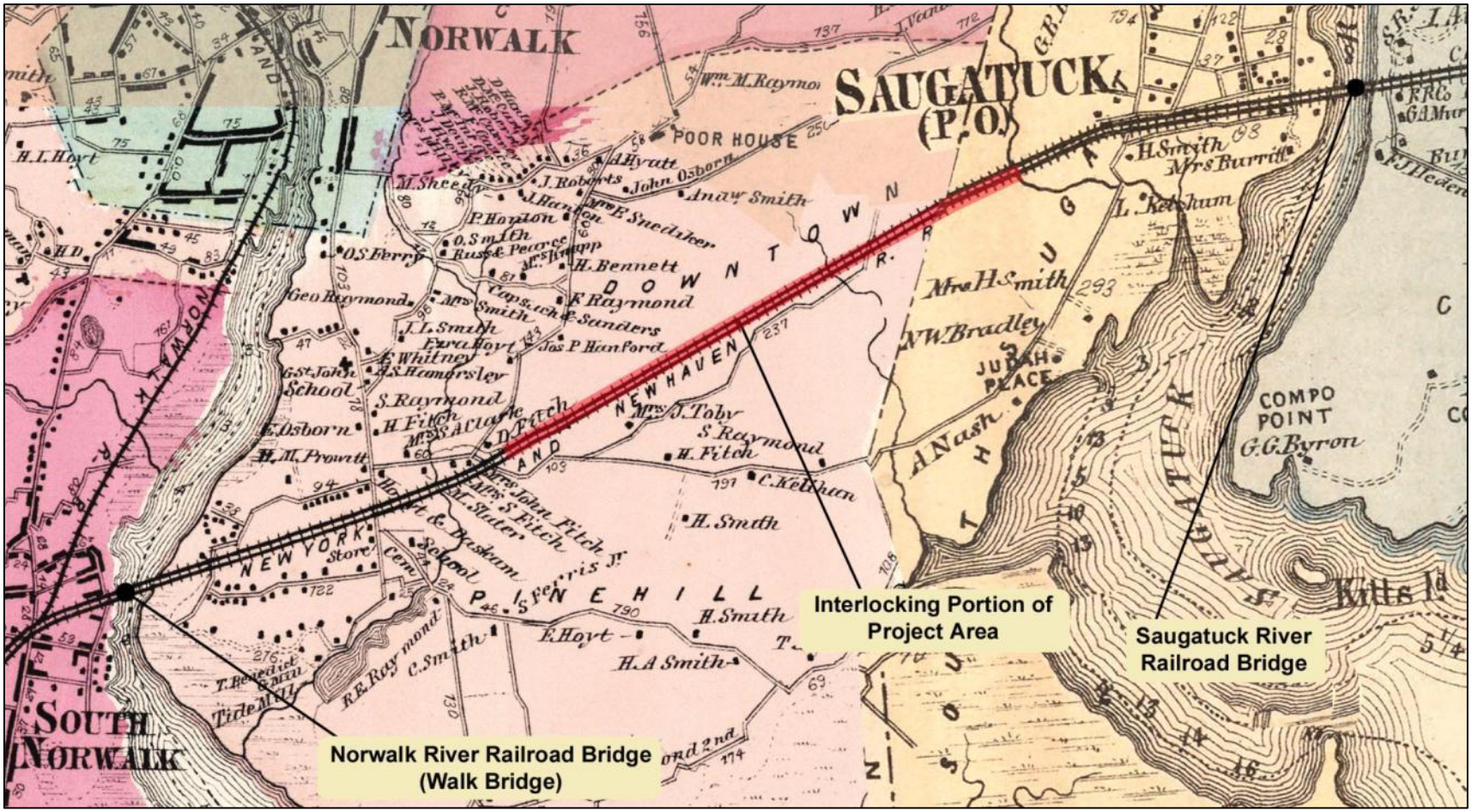
APPENDIX II

Historical Maps

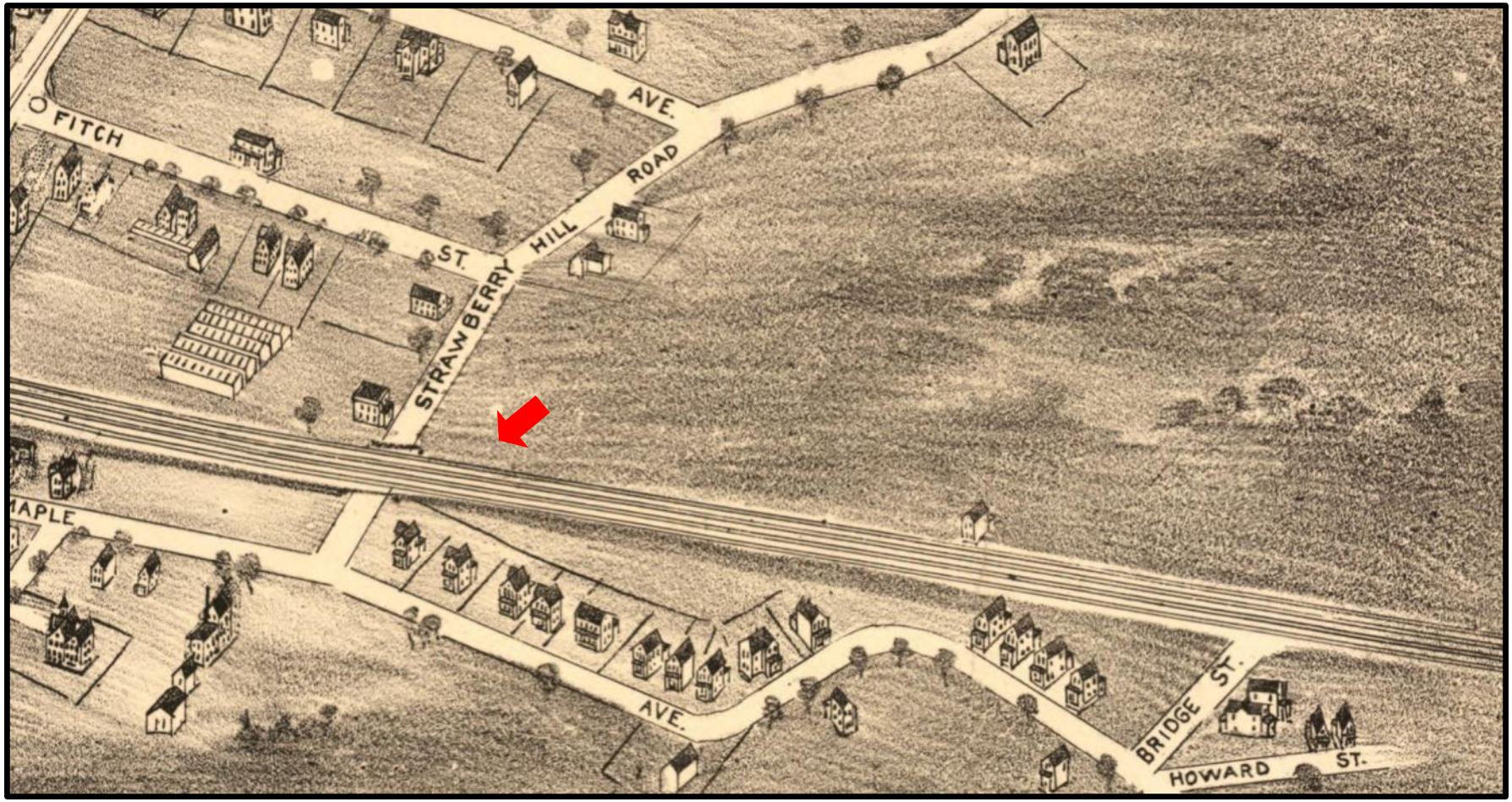
Map 1. The vicinity of the project as shown on the 1856 Chace map of Fairfield County.



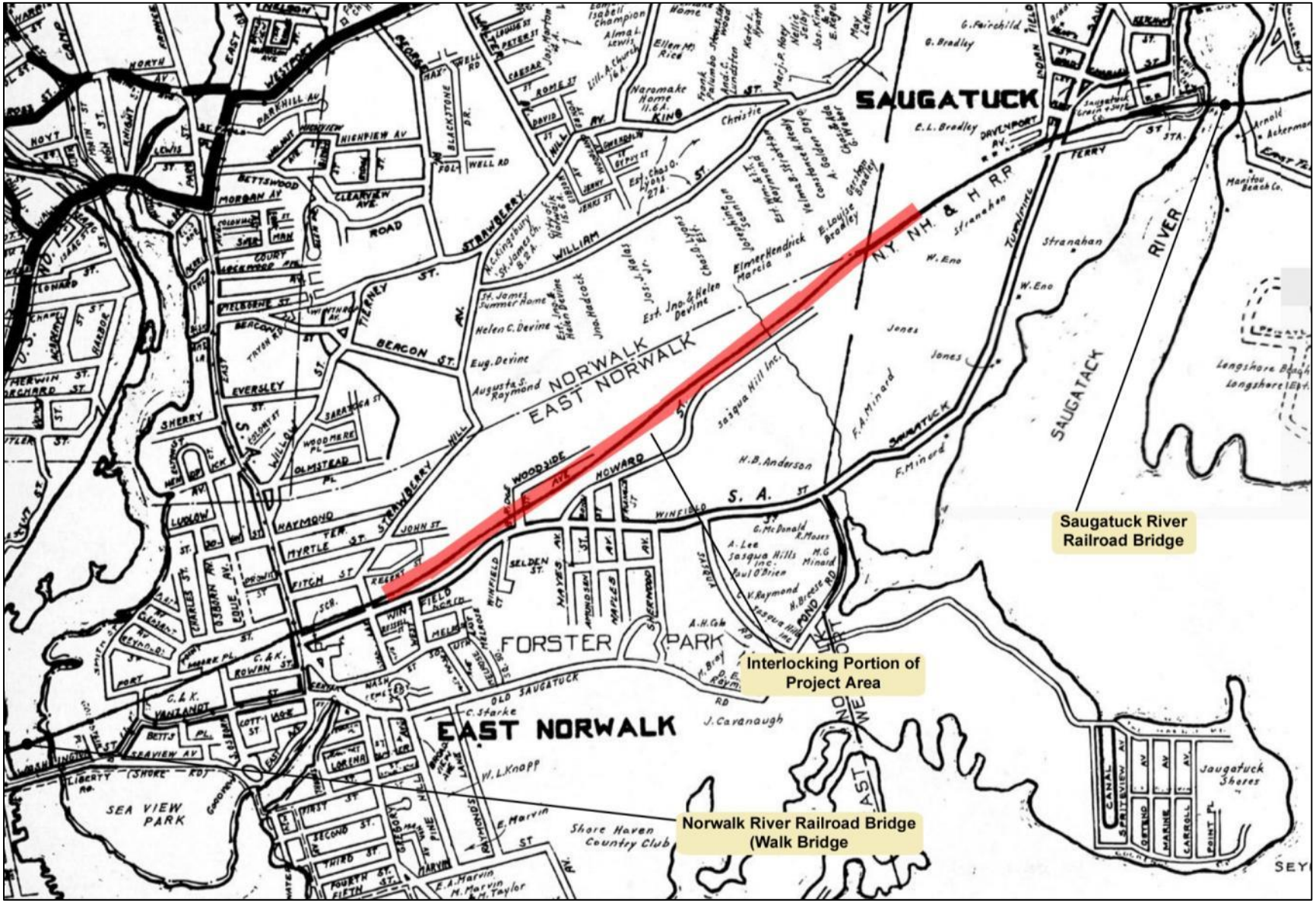
Map 2. The vicinity of the project as shown in the 1867 Beers atlas.



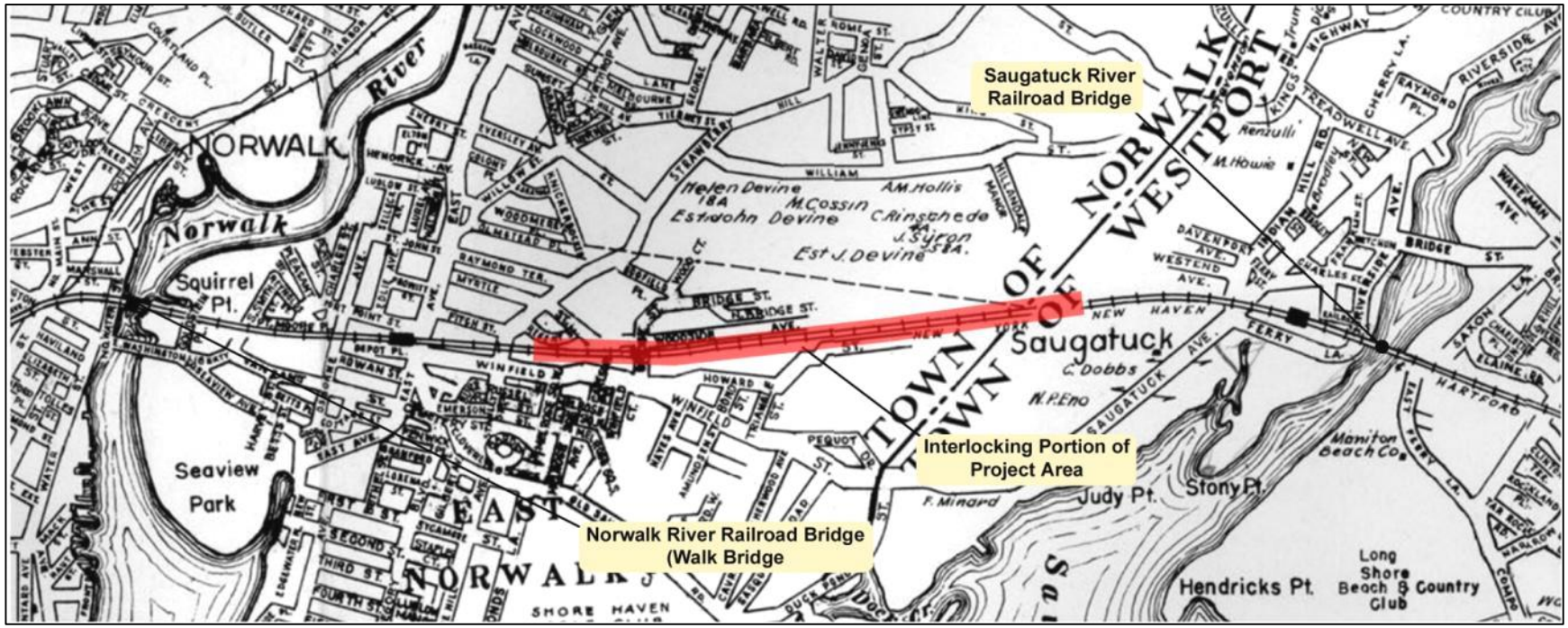
Map 3. Landis & Hughes bird's-eye view, 1899. The interlocking portion of the project begins just east of Strawberry Hill Road (arrow).



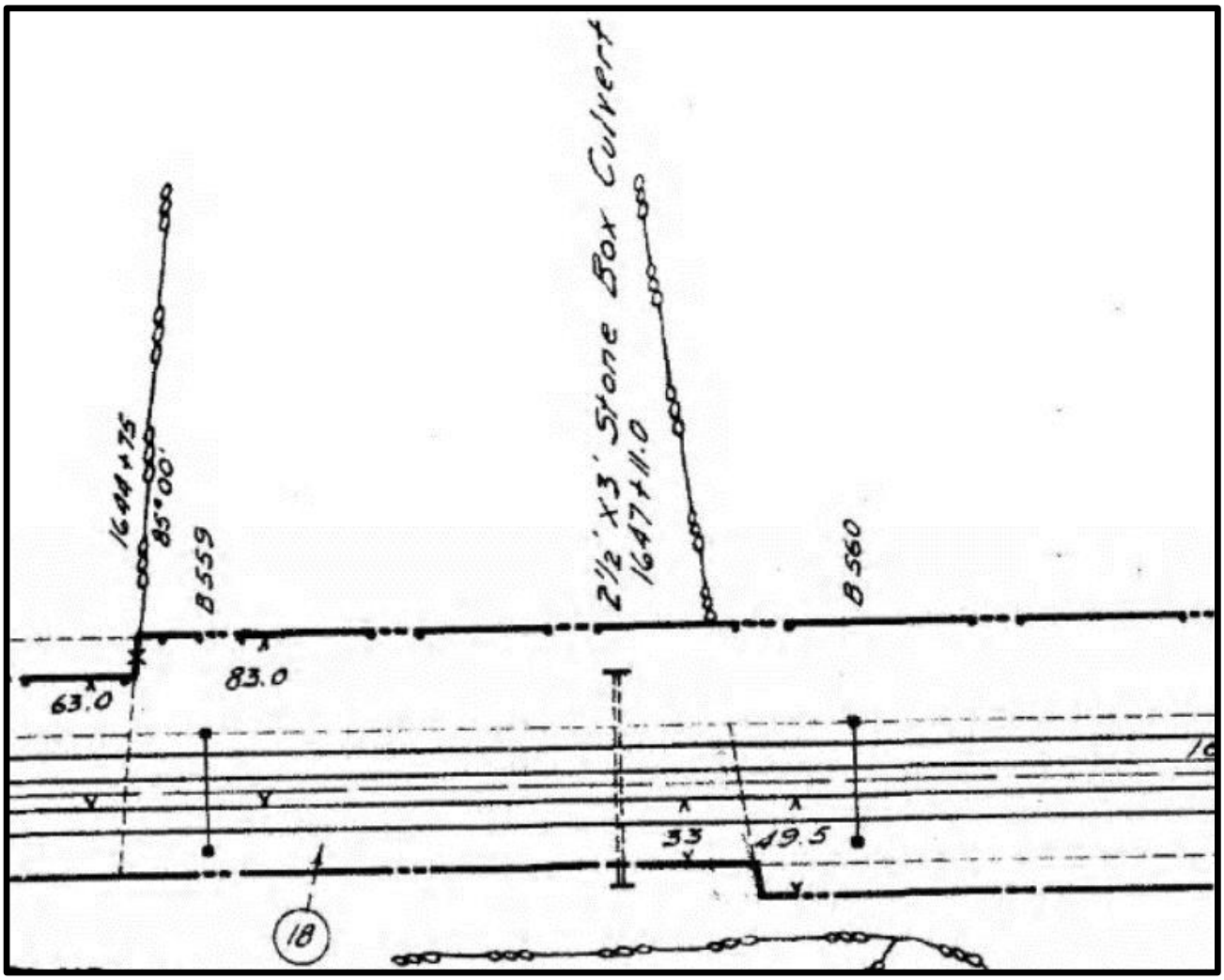
Map 4. Dolph & Stewart map showing the vicinity of the project area, 1931.



Map 5. Dolph & Stewart map showing the vicinity of the project area, 1942.



Map 6. Excerpt from the 1915 valuation map of the New Haven line showing a stone culvert in the interlocking portion of the project area.



APPENDIX III

Photographs

Photograph 1. Typical catenary bridge from the 1914 electrification.

Photograph 2. Catenary supports located on either side of the Triangle Street crossing, view northwest.

Photograph 3. Factory complex at 6 Regent Street, view northeast.

Photograph 4. Streetscape along Winfield Street, view northeast.

Photograph 5. House at 51 Winfield Street, view northwest.

Photograph 6. Typical houses on Woodside Avenue, view southwest.

Photograph 7. Houses on Reboda Court, view northeast.

Photograph 8. Typical houses found southeast of the Triangle Street crossing, view. North (Google Street View, December 2015).

Photograph 9. Representative houses located along Fordham Drive, view southeast. (Google Street View, December 2015).

Photograph 10. Property at 10 Norden Place, view north.

Photograph 11. South Norwalk Railroad Bridge, camera facing southeast.

Photograph 12. Norwalk River Railroad Bridge (Walk Bridge), camera facing north.

Photograph 13. Fort Point Street Railroad Bridge, camera facing north.

Photograph 14. Osborne Avenue Railroad Bridge, camera facing north.

Photograph 15. East Avenue Railroad Bridge, camera facing north.

Photograph 16. Strawberry Hill Avenue Railroad Bridge, camera facing north.

Photograph 17. Saugatuck Avenue Railroad Bridge, camera facing north.

Photograph 18. Saugatuck River Railroad Bridge (Saga Bridge), camera facing northeast.

Photograph 19: Typical length of low stone retaining walls at the edge of the ROW.