REPORT

Archaeological Assessment Survey
Danbury Dock Yard Improvements
Norwalk, Connecticut

State Project No. 0301-0180

Prepared for

HNTB Corporation
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By

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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 planning a series of improvements on the Danbury Branch Line, located just north of the branch line's connection to the New Haven Line (NHL) at NHL Milepost (MP) 41.3 in the South Norwalk section of Norwalk, Connecticut. Construction will take place between MP 0 and MP 1 on the Danbury Branch line. The purpose of the project is to improve operations along the NHL, including accommodating Express-Local train overtakes and limited headways between trains. This work will facilitate rail projects on the NHL, especially related to track outages, while maintaining rail service throughout the area. In particular, improvements at Dock Yard will mitigate operational impacts during the replacement of Walk Bridge (Bridge No. 04288R).

Project improvements include the installation of new storage tracks and track renewal within the limits of Dock Yard, the replacement of existing catenary structures with a new overhead contact system (OCS) that extends the electrified territory, and upgrades to the fiber optic and signal systems. The installation of the new storage track will directly impact Ann Street Bridge (Bridge No. 08200R/MP 0.19), which carries two Metro-North Railroad Danbury branch tracks (Tracks 1 and 2) and an abandoned track (Track 4). To accommodate the required change in vertical alignment of Track 2 and new track proposed in place of Track 4, Ann Street Bridge will be replaced with a new ballast deck steel superstructure for all three tracks. Additionally, existing stone abutments and wing walls at the bridge will be replaced.

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

This report presents the results of an archaeological sensitivity assessment of the areas to be impacted by the Dock Yard project. The report was prepared by Archaeological and Historical Services, Inc. (AHS) under contract to HNTB Corporation. Above-ground historic resources such as buildings and structures are addressed in a companion AHS report (Clouette and Vairo 2016).

The Area of Potential Effects (APE) for archaeological properties includes the railroad right-of-way between MP 0 and MP 1 and the construction easement at 33-45 North Water Street (Parcel 2/19/20) wherein project actions will occur.

AHS researched environmental sources on hydrology, geology and soils, the files of recorded archaeological sites at the Office of State Archaeology (OSA) and CTSHPO, relevant cultural resource management reports and archaeological publications, historic maps, local histories, and primary documents. This research provided a context for assessing the archaeological sensitivity of the APE.

As the proposed action will take place almost entirely within the existing railroad right-of-way footprint and existing railroad and bridge embankments, the majority of the APE is considered to have little or no potential for intact historic-period or pre-colonial archaeological

resources. Extensive disturbance associated with the construction and modification of the rail line and Ann Street Bridge has likely destroyed or deeply buried any archaeological deposits within the ROW and embankments. Based on the results of the assessment survey, AHS determined that the construction easement parcel, located at 33-45 North Water Street, may possess some potential for archaeological deposits related to 19th-20th century working-class houses; however project plans indicate no impacts in these areas. No additional archaeological testing is recommended in the Dock Yard project area.

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.

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I. INTRODUCTION AND SCOPE OF WORK

A. Introduction

The State of Connecticut, through the Connecticut Department of Transportation (CTDOT), is planning a series of improvements on the Danbury Branch Line, located just north of the branch line's connection to the New Haven Line (NHL) at NHL Milepost (MP) 41.3 in the South Norwalk section of Norwalk, Connecticut (Figure 1). Construction will take place between MP 0 and MP 1 on the Danbury Branch line. Except for one construction easement area at 33-45 North Water Street (2/19/20), all work will be conducted within the existing active railroad right-of-way (ROW) (Figures 2a-2f).

The purpose of the project is to improve operations along the NHL, including accommodating Express-Local train overtakes and limited headways between trains. This work will facilitate rail projects on the NHL, especially related to track outages, while maintaining rail service throughout the area. In particular, improvements at Dock Yard will mitigate operational impacts during the replacement of Walk Bridge (Bridge No. 04288R).

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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 (36 CFR 800), 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).

This report presents the results of an archaeological sensitivity assessment, or Phase IA survey, of the areas to be impacted by the Dock Yard project. The report was prepared by Archaeological and Historical Services, Inc. (AHS), the project's historic preservation consultant. AHS performed the work under contract to HNTB Corporation, the engineering firm that is designing the Danbury Dock Yard improvements. Above-ground historic resources such as buildings and structures are addressed in a companion AHS report (Clouette and Vairo 2016).

The archaeological assessment survey was conducted in accordance with the CTSHPO's *Environmental Review Primer for Connecticut's Archaeological Resources* (hereafter *Primer*), *The Standard Requirements for Cultural Resource Survey Work Mandated through CTDOT, OEP* (March 2014), and the Secretary of Interior's *Standards and Guidelines for Archaeology and Historic Preservation*.

B. Scope of Work

As defined by the *Primer*, the purpose of a Phase IA survey is the collection of data sufficient to assess the archaeological sensitivity (i.e., the potential of the project for containing significant buried archaeological resources) of a project area or Area of Potential Effects (APE); assessing the potential impacts to potential significant archaeological resources; recommending additional studies, if necessary, to identify specific archaeological sites rather than broader areas of archaeological sensitivity; and developing strategies for avoiding or mitigating impacts to potential significant archaeological resources. This report addresses only the archaeological aspects of the APE. An assessment of historic resources in the APE, such as buildings and structures, has also been conducted by AHS, and the results of that survey are presented in a companion report, *Historic Resources Evaluation Report, Danbury Dock Yard Improvements, Norwalk, Connecticut* (Clouette and Vairo 2016).

The results of the archaeological assessment will be incorporated into NEPA, Section 106, and Section 4(f) documentation for the project.

The tasks of the archaeological assessment survey include researching the past environment and historical development of the APE, researching previously documented archaeological resources in the vicinity, and conducting a windshield survey to collect sufficient information to delineate portions of the parcels that may be sensitive for pre-colonial Native American sites. A review of historical maps was also conducted in order to compile a capsule history of documented land use in the project area and to assess the potential of the APE to contain historic-period archaeological resources related to past use of the land. While Phase IA assessment surveys may include preliminary subsurface investigation in the form of hand-powered soil cores, no subsurface investigation was conducted for the current project due to access issues, time constraints, the potential for buried utilities, and the existing rail line.

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

For archaeological resources the APE was delineated so as to include the railroad right-of-way between MP 0 and MP 1, the construction easement area at 33-45 North Water Street (Parcel 2/19/20), and the Ann Street Bridge, its abutment walls, and associated embankments wherein project actions will occur (Figures 2a-2f). The project limits within the railroad right-of-way extend from just south of Ann Street to just south of Science Road.

II. METHODOLOGY

The files of recorded archaeological sites at the Office of State Archaeology (OSA) and CTSHPO were examined to identify recorded archaeological sites and previous archaeological survey work conducted in the project area vicinity. Relevant cultural resource management reports and archaeological publications were reviewed to help develop a pre-colonial Native American and historic context preparatory to assessing the potential for significant buried archaeological sites to be present in the APE. Environmental sources on hydrology, geology, and soils were reviewed to establish an understanding of the natural environment that existed prior to urbanization and to also help understand the level of disturbance in the APE.

Historic maps, local histories, and primary documents were researched to establish a historic-period context and aid in identifying archaeologically sensitive areas in the APE. Aerial photographs helped refine the assessment of archaeological sensitivity.

III. ENVIRONMENTAL CONTEXT OF THE PROJECT AREA

Research on the environmental setting is essential to assessing the pre-colonial archaeological sensitivity of the APE. Native Americans were often drawn to rivers and to tidal wetland areas like those that existed along the southern portion of the Norwalk River prior to extensive modern development.

Background research on the physiographic setting, geology, hydrology, and soils in the project area was conducted using published sources and soils data compiled by the Natural Resources Conservation Service (NRCS).

A. Geology and Topography

Bedrock in the town of Norwalk consists of schist and gneiss of the Hartland and Gneiss Dome belts, which form part of the greater Connecticut Valley Synclinorium (Rodgers 1985). These metamorphosed sedimentary and igneous rocks formed during the Middle to Early Paleozoic age (350-500 million years BP [Before Present]) as oceanic terrain that was subsequently deformed and metamorphosed by the collision of crustal plates that formed Pangaea. The process reversed during the Mesozoic Era (ca. 235 million years BP), causing rift basins to form as Pangaea fragmented. The eastern edge of the Hartland Gneiss Dome belts is bounded by the younger Newark (rift basin) terrane of the central Connecticut basin.

During the last glacial maximum (ca. 18,000 ^{14}C[1] BP), the project area was beneath the Connecticut Valley Lobe of the Laurentide Ice Sheet as it deposited its terminal moraine, which constitutes Long Island (Uchupi et al. 2001). The glacier retreated from what is now the Connecticut coastline at ca. 17,500 ^{14}C BP, leaving proglacial Lake Connecticut in its wake. Impounded by Long Island and the Harbor Hill Moraine (on the east side of Long Island Sound), this lake occupied most of what is now Long Island Sound until it drained rapidly at ca. 15,500 ^{14}C BP. According to eustatic shifts, the Long Island Sound basin was slowly inundated during the early to middle Holocene, gradually reducing the gradients of streams and rivers along the paleocoastline. Sea level stabilized along the coast of southern New England by ca. 4000 BP, which facilitated the development of highly productive marshlands and floodplains (Lavin 1988). Rich salt marshes and smaller estuarine environments, in locations such as the lower Norwalk River likely developed during the Late Holocene.

The city of Norwalk is located on Connecticut's Coastal Slope, which is characterized by relatively gentle topography and an average elevation drop of about 50 feet per mile (Bell 1985). Connecticut's rocky and jagged coastline is, in part, a reflection of this relatively steep incline. The natural breakwaters formed by Long Island and Fisher's Island hinder the development of straight-bordered barrier beaches and also contribute to the uneven coastline. The major river basins that empty into Long Island Sound here tend to be long and straight with few branches because they are confined to north-to-south bedrock channels carved by glacial ice that have become "drowned" by post-glacial sea-level rise. Soils in the Coastal Slope from New Haven westward are particularly fertile because they contain a significant proportion of glacially deposited lime that originated from the Marble Valley to the north.

[1] ^{14}C identifies this as a radiocarbon date. Radiocarbon dating is a form of radiometric dating used to determine the age of organic components in ancient materials, on the basis of the half-life of carbon 14 and a comparison between the ratio of carbon-12 to carbon-14 in the sample and the known ratio in living organisms.

B. Hydrology

The project area is located within the Norwalk River watershed, which comprises about 64 square miles within southwestern Connecticut and Westchester County, New York. The Norwalk River originates in ponds located in Ridgefield, Connecticut. The river has two major tributaries; the Silvermine River, which flows into the Norwalk River at Deering Pond in Norwalk, and Comstock Brook, which joins the river in Wilton.

The APE is located on the west side of the Norwalk River, approximately 0.5 miles north of Norwalk Harbor (Figure 1). This area is heavily developed today, but historically much of the land along the river in the project area vicinity was comprised of salt marsh, salt meadow, and the wide tidal flats that paralleled the river channel, which was close to the west side. The 1835 Coast Survey map (Figure 3) shows the extent of the marshlands in the project area vicinity. The 1847 map, along with the 1867 map of Norwalk (Figures 4 and 5), show streams running through the marshy land in the APE to the river.

These tidal wetland areas provided abundant plant and animal resources that were likely attractive to Native American populations. Native people also used marshy or swampy land as refuges in times of unrest and military strife. Historic maps indicate that local Native people likely used a spit of land on the east bank of the river for this purpose. The 1847 and 1867 maps depict a small peninsula extending out from the east bank into the river in the vicinity southeast of the project area. This landform, known as Fort Point, is labeled as the location of an "ancient Indian fort" (Figures 4 and 5).

C. Soils

The soils in the APE are characterized as Urban Land, Udorthents, and Hinckley-Urban Land complex soils. The Natural Resource Conservation Service (NRCS) (2005) defines Urban Land as areas with a specific percentage of pavement, driveways, and buildings (i.e., impervious cover). Such areas may contain intact soils, fill or Udorthents soils, or some combination of those soil types, below impervious surfaces. Udorthents are found on areas that have been cut or filled two feet or more. While it is possible that areas of undisturbed soils exist within these larger categories, Urban Land and Udorthents soils are generally considered to have low archaeological potential, as archaeological sites found within such sediments often lack integrity. However, in situations where areas have been simply filled rather than cut and filled, intact soils and archaeological deposits may exist below the fill or impervious cover.

IV. PRE-COLONIAL, CONTACT AND HISTORIC-PERIOD NATIVE AMERICAN CONTEXT

Although a relatively large number of Native American archaeological sites have been identified in coastal Connecticut, the understanding of pre-colonial cultures in the area remains incomplete. Only a small percentage of the recorded sites along the coast have undergone professional archaeological investigations. Many of the sites were recorded and excavated by avocational archaeologists and many others were destroyed by extensive modern development of coastal areas. Information from several important sites, investigated by avocational and/or professional archaeologists (Coffin 1937, 1938, 1940, 1946, 1951; Glynn 1953; Lavin 1988; Praus 1942; Russell 1942), has contributed to our understanding of Native lifeways in coastal areas. Important coastal sites include Grannis Island (Site 93-3) in New Haven Harbor (Glynn 1953; Lavin 1988), the Old Lyme Shell Heap (Lavin 1988), Mago Point in Waterford (McBride 1984), Fort Shantok and Shantok Cove in Montville (Salwen 1966; Salwen and Ottesen 1972; Williams 1972), the Thomas Site in Groton (Butler 1946), and the Davis Farm Site in Stonington. A number of regional archaeological surveys have also been conducted in coastal areas of Connecticut, and have provided a great deal of information on the nature and distribution of archaeological sites in these areas (McBride 1984).

The following section provides a summary of the regional and local culture history, based on the current local archaeological record for Connecticut and the greater Northeast. The era predating the arrival of Europeans, which lasted roughly 11,000 years, is subdivided into several major periods coinciding with broad technological and settlement patterns observed in the archaeological record.

A. Paleoindian Period (11,000-9,500 BP)

In the Northeast, the Paleoindian Period dates from 11,000 to 9,500 BP, as measured in radiocarbon years, and coincides with the final glacial period, known as the Younger Dryas. Following a brief warming trend in the region, the Younger Dryas marked a return to colder, glacial conditions and ice-sheet re-expansion in portions of eastern North America (McWeeney 1999).

The earliest archaeological evidence for human occupation in New England dates to approximately 11,000 BP (Spiess et al. 1998) and in Connecticut to around 10,200 BP (Moeller 1980, Jones 1999). Paleoindian sites are characterized by distinctive lithic tools kits that include fluted points and unifacial tools such as side- and end-scrapers. Data reflecting Paleoindian Period land-use patterns and subsistence activities in the Northeast is relatively scarce (Spiess et al. 1998). It is assumed that Paleoindian people exploited a wide range of food resources, including large and small game, fish, wild plant foods, and perhaps extinct megafauna (Meltzer 1988; Jones 1998). Most archaeologists also believe that caribou played a significant, if seasonal, role in the Paleoindian subsistence strategy. Settlement patterns during this period are poorly understood. The range of identified sites includes large base camps, small residential camps, and small, task-specific loci. Taken all together, the archaeological evidence suggests a settlement system based on small, highly mobile social groups exploiting dispersed seasonally available resources.

Few intact Paleoindian sites have been found in Connecticut. According to former State Archaeologist Nicholas Bellantoni, about 50 fluted points have been recovered as isolated finds across Connecticut (Bellantoni 1995), but only two sites have been investigated and published in

detail: the Templeton Site in Washington (Moeller 1980, 1984) and the Hidden Creek Site on the Mashantucket Pequot Reservation in Ledyard (Jones 1997). More recently, excavations were conducted at the Ohomowauke Paleoindian Site, which is also located on the Pequot reservation, but the analysis of this site is still in the preliminary stages (Singer 2013). A handful of other sites have received more cursory attention. In 2005, a probable Paleoindian component was identified in the Route 7/15 Interchange in Norwalk, north of the project area (Jones et al. 2005). The scarcity of identified Paleoindian sites suggests a low population density during this period. The small size of most Paleoindian sites and the high degree of landscape disturbance over the past 10,000 years likely contribute to poor site visibility.

B. Archaic Period (9,500-2,700 BP)

The Archaic Period dates from 9,500 to 2,700 BP in the Northeast and it marks a period of dynamic and shifting subsistence and settlement patterns, but the general trend is one of generalist hunter-gatherer populations utilizing a variety of seasonally available resources. The period is subdivided into the Early, Middle and Late Archaic periods on the basis of associated changes in environment, projectile point styles, and inferred adaptations (Snow 1980; McBride 1984). Each sub-period is discussed briefly below.

B.1 The Early Archaic Period (9,500-8,000 BP)

Pollen evidence from swamp cores indicates a gradual warming and drying trend beginning around 10,000 BP (McWeeney 1999). By this time Pleistocene megafauna had been replaced by modern cool-temperate game species such as moose, muskrat, and beaver. Deer populations likely increased in abundance at the end of this period, when oak began to dominate upland forests. As the climate stabilized, plant and animal resources may have become more abundant and predictable, enabling Early Archaic populations to exploit a wider range of seasonal resources. Early Archaic sites are poorly represented in the regional archaeological record and this likely reflects continued low population densities. The dearth of Early Archaic sites may be due in part to changing environmental conditions which have deeply buried, inundated, or destroyed many early sites, or to the difficulty of recognizing some Early Archaic assemblages (Funk 1997; Jones 1998; Forrest 1999).

Archaeologists have recovered Early Archaic stone tool assemblages from several sites in the Northeast. The recovered data suggest that this period can be characterized by a number of distinct traditions. The most poorly understood period, that between 9,500 and 9,000 BP, appears to reflect both local Late Paleoindian and intrusive southern Piedmont Tradition Early Archaic influences. A quartz lithic industry in which projectile points are extremely rare occurs locally between roughly 9,000 and 8,500 BP. The Sandy Hill Site on the Mashantucket Pequot Reservation demonstrates this pattern (Forrest 1999, Jones and Forrest 2003). The site represents a local expression of a much broader techno-complex referred to as the Gulf of Maine Archaic Tradition (Robinson et al. 1992). Sandy Hill produced evidence of multiple semi-subterranean living structures and a variety of plant-food remains, including abundant cattail roots and hazelnuts.

Archaeological evidence indicates a shift in Early Archaic period technology about 8,500 years ago, marked by the arrival of an apparently intrusive temperate forest-adapted culture that utilized bifurcate-based projectile points typically manufactured from non-regional materials (Jones 1998, 1999). The Dill Farm Site in East Haddam is one of the best-documented bifurcate sites in Connecticut (Pfeiffer 1986). Archaeological investigations at this site identified

cooking/refuse features, quartz flakes, retouched tools, bifurcate-based projectile points, and subsistence remains including charred nuts and mammal bone associated with a radiocarbon date of 8560 +/- 270 BP. Bifurcate points are documented throughout the state, though most appear to represent isolated finds without apparent associated artifacts. Bifurcate points are commonly manufactured from rhyolite probably originating from a Boston Basin source or Hudson Valley chert, but few are made from local lithic materials such as quartzite.

B.2 The Middle Archaic Period (8,000-6,000 BP)

Based on pollen evidence, the climate became warmer and drier during the Middle Archaic period and alluvial terraces developed along the state's major river systems (Jones 1999; Jones et al. 2008). This period marks the establishment of most modern nut tree species, which provided a new and abundant food resource for both human foragers and game animals such as bear, deer, and turkey. Evidence of Middle Archaic period occupation in Connecticut is more widely documented than for the preceding periods and it suggests adaptation to local resources during a period of population increase (McBride 1984; Jones 1999). Archaeological evidence of grooved axes suggests that wood became an increasingly important raw material during the Middle Archaic, while the presence of pebble net-sinkers and plummets on some regional sites implies a growing reliance on marine and riverine resources (Dincauze 1976; Snow 1980). Despite their relative abundance, sites in Connecticut have yielded limited information on Middle Archaic subsistence and land-use patterns (Jones 1999). Archaeological assemblages are characterized by the presence of Neville and Stark projectile points and large flake tools usually manufactured from local materials such as quartzite. The Middle Archaic settlement pattern appears to have been seasonally oriented toward large upland interior wetlands (McBride 1984; Jones 1999) and the data suggest seasonal re-use of such locales over long periods of time. The Dill Farm Site and the sites around Great Cedar Swamp on the Mashantucket Pequot Reservation reflect this pattern (Jones 1999, 2002). The limited number of Middle Archaic period coastal and riverine sites may be due to rising sea levels that have resulted in deep alluvial burial.

B.3 Late Archaic Period (6,000-2,700 BP)

The Late Archaic period in the Northeast is characterized by an essentially modern distribution of plant and animal populations. Based on archaeological evidence for population increase, burial ritual, and long-distance exchange networks, the Late Archaic Period is often considered a time of cultural fluorescence (Dincauze 1975; Snow 1980; Ritchie 1994; Cassedy 1999). This period is one of the best-documented temporal sequences in southern New England, and is characterized by three major cultural traditions: the Laurentian (ca. 5,500-4,500 BP), the Narrow-stemmed (ca. 4,500-3,500 BP), and the Terminal Archaic (ca. 3,800-2,700 BP). Late Archaic sites are common throughout the state, although the period between ca. 6,000 and 5,000 BP remains poorly documented. During most of this period, settlement strategies revolved around large, seasonally revisited settlements located in riverine areas and along large wetland terraces, and smaller, more temporary special-purpose sites in the interior and uplands (Ritchie 1969; McBride 1984; Cassedy 1997, 1999). The nature and distribution of sites suggest aggregation during summer months, with seasonal dispersal into smaller groups during the cold weather (McBride and Dewar 1981). In general, the Late Archaic appears to represent a continuation of the land-use and resource acquisition patterns observed during the Middle Archaic.

The Laurentian Tradition (Ritchie 1965) was originally thought to reflect a hunting and fishing culture with origins in the upper St. Lawrence Valley. In Connecticut, its local manifestations may simply represent the adoption of Laurentian technological traits by local residents (Hoffman 1990; Ives 2009). The settlement pattern appears to reflect a central-based wandering pattern (*sensu* Beardsley et al. 1956) in which numerous small communities exploited a wide variety of settings (Snow 1980:230). In southern New England, Laurentian sites are more common in the interior than along the coast. This pattern suggests that Laurentian groups were primarily adapted to upland and riverine environments, with more limited exploitation of coastal areas on a seasonal basis (e.g., Snow 1980, Kingsley and Roulette 1990). Laurentian sites are characterized by a distinctive tool kit which includes diagnostic side-notched and corner-notched projectile points, often found in association with adzes, axes, gouges, ulus, and slate knives.

The transition to the Small- or Narrow-stem phase of the Late Archaic includes notable changes in lithic raw material use. During this phase, the use of quartzite declines significantly and quartz becomes by far the most commonly used material. This pattern has promoted the argument that population increase at this time restricted the availability of even regionally available resources like quartzite. The Narrow-stem phase is characterized by the development of a new quartz cobble technology that focused on the reduction of cobble cores into useful blanks for the production of projectile points, especially the narrow-stemmed forms. It is not known whether restrictions on raw material access drove the development of this new technology or if the technology drove raw material selection. Archaeologically identifiable features are more common on sites from this period and include broad fire-cracked rock pavements, earth ovens, and some fire-cracked rock hearths.

Narrow-stemmed phase sites are the most abundant of any period represented in Connecticut. The more notable Narrow Stemmed sites in Connecticut's coastal zones include the Archaic Midden Site in Haddam and the Grannis Island Site in New Haven (Glynn 1953; Lavin 1988). The Archaic Midden Site has been partially submerged by rising sea levels and is only visible at low tide. This may be typical of many Late Archaic sites in the region, indicating the potential of encountering sites under salt marshes or in coves or bays. Recent research interprets the Cover River Site in West Haven to represent a seasonal base camp associated with the Narrow Stemmed Tradition (Cuzzone et al. 2009).

The Terminal Archaic period appears to mark a transition in settlement and perhaps subsistence strategies (Dincauze 1975). A number of technological innovations appear during this period, including the manufacture and use of steatite bowls and the rare production of cord-marked and grit-tempered pottery. The use of quartz declined during this period, while the exploitation of regionally available quartzites increased. Imported chert and other non-local lithics such as argillite, rhyolite, and felsite are found in high proportions in Terminal Archaic lithic assemblages. This pattern appears to indicate renewed social and economic contact with a broader region. Fire-cracked rock features are often associated with this period and likely reflect intensive food-processing activities. Identified site locations suggest that settlement was focused on expansive lacustrine and wetland areas and upper river terraces, rather than floodplains (McBride and Dewar 1981). The interior and uplands appear to have been less extensively used during this period (McBride 1984), though this may be a reflection of small, difficult-to-locate logistical hunting sites. The Terminal Archaic period also marks the appearance of human cremation burials (Dincauze 1968; Robinson 1996; Leveillee 1999). These cultural attributes may represent intrusive peoples or ideas, but the debate over the possibility of migration remains active (see, for example, Robinson 1996: 38-39).

C. The Woodland Period (2,700-450BP)

The Woodland Period is characterized by the increased use of clay pottery, celts, and exotic raw materials, as well as the introduction of bow-and-arrow technology, smoking pipes and horticulture (Lavin 1984; Feder 1984, 1999). An increase in site size and complexity suggests a trend toward greater sedentism and social complexity, probably the result of a growth in the population base, particularly at the end of this period (McBride and Dewar 1987; Lavin 1988; Jones 2002). The Woodland Period has been traditionally subdivided into Early, Middle, and Late periods on the basis of ceramic styles, settlement and subsistence patterns, and political and social developments (Ritchie 1969, 1994; Snow 1980; Lavin 1984). Despite these changes, most recent scholars see the Woodland as a period well-rooted in the traditions and lifeways of the preceding Archaic period (Feder 1984, 1999).

C.1 Early Woodland Period (2,700-2,000 BP)

Most documented sites in Connecticut containing Early Woodland components are situated along the coast or at the mouths of major rivers such as the Quinnipiac, Connecticut, Thames, and Mystic, although a number of interior upland locations have also been recorded. The Early Woodland Period remains poorly understood, and sites from this period are less well-represented in the archaeological record than sites from the preceding phases of the Late Archaic. This leads some to argue for a probable population decline during the Early Woodland (Fiedel 2001). On the other hand, the apparent dearth of Early Woodland sites may simply reflect the biases of site-recognition strategies (Juli and McBride 1984). Direct association of Narrow-stemmed projectile points with Woodland Period radiocarbon-dated contexts (Herbster and Chereau 1999, 2001, 2003; Herbster 2004), as well as the stratigraphic association of Narrow-stemmed points with Woodland types (Lavin and Russell 1985; Cuzzone and Hartenberger 2009), suggest the possibility that Woodland Period assemblages are frequently misidentified as Late Archaic. The observed change in site patterning from the previous periods may also be a reflection of shifting settlement strategies that promoted the formation of larger, but fewer, seasonal aggregation camps (Jones 2002). Research suggests that year-round habitation of some sites was established by the late Early Woodland period (Ceci 1980; Bernstein 1990).

Early Woodland regional complexes are generally characterized by stemmed, tapered, and side-notched (Meadowood) point forms and preforms, often of Onondaga chert; thick, grit-tempered, cord-marked ceramics; tubular stone pipes; burial ritual; and indications of long-distance trade/exchange networks (Lavin 1984; Juli 1999). It is possible that incipient horticulture focused on native plant species such as goosefoot (*Chenopodium sp.*) had begun by this time (George 1997). The existence of stone pipes also suggests that tobacco was being traded into the region, if not locally produced, by the Early Woodland.

Despite the rarity of Early Woodland sites, a number of very large, deep pit features attributed to this period have been found across southern New England. These pits may represent nut-storage facilities and clusters of these features could indicate repeated use of nut-gathering locations by families, perhaps with established rights to certain groves. This would represent a break from presumed earlier patterns based on more mobile kin-based social units with relatively open access to local areas (Jones 2002).

C.2 Middle Woodland Period (2,000-1,200 BP)

The Middle Woodland Period is characterized by increased diversity in ceramic style and form, continued examples of long-distance exchange (especially of jasper), and at its end, the

introduction of tropical cultigens (Dragoo 1976; Snow 1980; Juli 1999). Much of our current knowledge of the Middle Woodland Period in southern New England is extrapolated from Ritchie's (1994) work in New York State. Ritchie noted an increased use of plant foods such as goosefoot (*Chenopodium sp.*), which he suggested had a substantial impact upon social and settlement patterns. George (1997) reiterated this hypothesis for the Middle Woodland of Connecticut. Ritchie also noted an increase in the frequency and size of storage facilities during the Middle Woodland period, which may reflect a growing trend toward sedentism (Ritchie 1994; Snow 1980). At this time, jasper tool preforms imported from eastern Pennsylvania appear to have been entering the region through broad, formalized exchange networks (Luedtke 1987).

In Connecticut, Middle Woodland sites are relatively rare outside of coastal and near-coastal contexts. Archaeological evidence of settlement patterns suggests an increased frequency of large sites adjacent to wetlands and tidal marshes along the Connecticut River, a decline in large upland occupations, and a corresponding increase in upland temporary camps (McBride 1984). This pattern may reflect a reduction in residential mobility and is likely related to the development, by 2,000 BP, of modern tidal marshes and estuaries in low-lying riverine areas. The tidal marshes would have supported a wide variety of terrestrial and aquatic animal and plant resources, allowing longer residential stays (McBride 1984).

C.3 Late Woodland Period (1,200-450 BP)

The Late Woodland Period is characterized by population aggregation in villages along coastal and riverine locales; more intensive use of maize, beans, and squash; changes in ceramic technology, form, style, and function; the eventual establishment of year-round villages; and the use of the upland-interior areas by small, domestic units or organized task groups on a temporary and short-term basis. The settlement pattern suggests a trend toward intensified settlement in larger villages and hamlets in coastal and riverine areas. It has been hypothesized that these changes can be attributed to the introduction of maize, beans, and squash, but the importance of cultigens in the diet of southern New England groups, especially those with access to coastal resources remains unclear (Ceci 1980; McBride 1984; McBride and Dewar 1987; Bendremer and Dewar 1993; Ritchie 1994; Chilton 1999). Although sites clearly demonstrate the use of tropical cultigens in the Connecticut River valley, wild plant and animal resources were still a primary component of the aboriginal diet. The use of imported cherts increased over time in the Connecticut River valley, suggesting possible social, economic, and/or political ties to the Hudson Valley region. Affinities in pottery styles also suggest western ties at this end of this period (Feder 1999).

D. Contact and Historic-Period Native American Context

Between 1520 and 1650, initial European settlement in southern New England had a significant impact on Native American groups in Connecticut and profoundly altered the pre-Contact geopolitical landscape. In the Late Woodland and early Contact periods, indigenous settlement focused on or adjacent to the floodplains of major rivers and tributaries, reflecting the importance of agricultural activities, fishing, and access to transportation and communication routes (Pagoulatos 1990). After 1600 AD, contact with Europeans likely catalyzed documented shifts in settlement and subsistence strategies, including the intensification of maize agriculture. Planting in the spring required a focused, cooperative kin-based effort, while the capture of anadromous fish at waterfalls and choke-points brought together households as it had for millennia. From late summer through winter, small household groups from larger village-based

communities continued to use upland areas for hunting, trapping, and gathering. The introduction of a market economy related to the development of a large-scale fur-trading industry led to rapidly shifting alliances and power struggles between the various Native American groups in Connecticut. At the same time, Native communities struggled to maintain traditional lifeways as epidemic diseases decimated populations (Carlson et al 1992). Encroachment by newly arrived European settlers also contributed to the rearrangement of the physical and social landscape.

The explorations of Giovanni da Verrazanno in 1524 and Adriaen Block in 1614 are the most often noted examples of early contact between the region's Native population and Europeans, although it is likely that numerous less well-documented fishermen and traders infiltrated the waters of Long Island Sound and interacted with Native populations throughout the 16th century. For the interior tribes, contact with Europeans took longer. By the end of the Pequot War in 1637, however, rapid colonization and sales of land by Native sachems to English colonists were well underway. In the decade that followed, new towns were quickly established and an estimated 20,000 English settled Connecticut during the Great Migration (1629-1642).

At the time of European contact in the early 17th century, the project area vicinity was inhabited or at least utilized by Native Americans. It is likely that the Native people in the area identified as Norwalke, a subset of the larger Siwanoy band that occupied southwestern Connecticut and adjacent portions of present-day New York State.

Norwalk falls within the Western Coastal Slope region–a historical-geographical context defined by the Connecticut Historical Commission in 1996 (Lavin and Mozzi 1996). English occupation here began in the mid-17th century, when a number of land deeds were negotiated with Native American leaders. Local natives suffered a process of dispossession that involved the definition of land reservations within the boundaries of present-day Bridgeport, Fairfield, Orange, Stratford, and Westport. Due to their relatively small sizes, these reservations were not well-suited to supporting large populations through foraging or agriculture. Consequently, some Indians relocated to communities upriver. Others joined ethnically admixed communities that formed in the state's developing coastal urban centers, where careers in the maritime and service industries were available. None of the original Indian reservations exist today, all having been passed into non-Indian ownership by the mid-19th century.

E. Previously Identified Pre-Colonial Archaeological Sites

Files of previously-documented archaeological sites in the state site files of the OSA and CTSHPO were reviewed. No archaeological surveys have been conducted within the project area, but a total of eight pre-colonial sites are documented within one mile of the Dock Yard APE (Figure 1). A review and discussion of those sites is presented below.

Six of the pre-colonial sites (103-20 – 103-22, 103-26, 103-28, and 103-45) are recorded only as points on a map, with no additional information, and two additional sites (103-35 and 103-36) identified by avocational archaeologist Ted Jostrand. Site 103-35, the Ted Jostrand #6 Site, is located immediately north of I-95, approximately 0.9 miles northeast of the northern terminus of the project area. The site form contains very little information about the nature of the site, which was identified based on surface finds in a bulldozed area. Site 103-35 is described as a "probable campsite area, containing a few thin shell pits and very few stone artifacts." This site is located in close proximity to Site 103-22, the Fitch School Site, for which, as noted above, no information apart from the site location is available. Site 103-36, Ted Jostrand site #9, is located about 1 mile southwest of the southern terminus of the APE, south of Flax Hill Road. The site form contains no additional information about the nature of the site.

F. Potential for Pre-Colonial Archaeological Resources in the APE

The environmental setting and data from state archaeological sites files suggest that the project area vicinity is sensitive for pre-colonial archaeological resources. However, as the proposed action will take place within the existing railroad ROW footprint, the railroad embankment, and the Ann Street Bridge embankments, the majority of the APE is considered to have little or no potential for intact archaeological resources. Extensive disturbance associated with the construction and modification of the rail line has likely destroyed or deeply buried any pre-colonial archaeological deposits within the ROW and embankments. The ROW is not considered to be potentially sensitive.

V. HISTORIC-PERIOD CONTEXT

Historical background research was conducted in order to compile a capsule history of documented land use in the project area and to provide a context for assessing the potential of the APE to contain historic-period archaeological resources. The research included a review of local histories, historical maps, and aerial photographs (Figures 3-10), as well as the archaeological files at OSA and CTSHPO.

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. As settlement continued inland, the western side of the river, known as the "over river" community, began to develop. By 1708, a burial ground was organized on common land in the area north of Pine Island (Laird 2009: 2). Further south, 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.

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 the early 19th century, a division began to form between the older established area at the head of navigation and Old Well. By 1840, Old Well was called South Norwalk; the 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 the 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 2,000 workers.

B. 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. A second railroad, the Danbury and Norwalk, began service between its namesakes in 1852. South Norwalk soon became a busy railroad center, with ten trains leaving each day.

After the establishment of the railroads, South Norwalk surpassed Norwalk proper as the town's commercial and industrial center. In 1871, the Norwalk city directory listed the South Norwalk's principal manufacturers as "the Norwalk Iron Works, Norwalk Lock Co., South Norwalk Planing Mill Co., and several hat manufactories" (Price and Lee 1871:xi). 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 company's mansard-roofed plant in South Norwalk, near the junction of the two railroads, was the first large industrial structure in South Norwalk (Roth 1981). Most of its highly skilled workers came from England and Germany. The post-Civil War period saw the construction of the Norwalk Iron Works on Water Street. Algernon Beard and Ebenezer Hill again were the principal stakeholders and directors of the company, which employed 375 workers by the end of the century, manufacturing steel pumps, compressors, and mining equipment (Ray and Stewart 1979:134). Cigar-making was also an important trade in South Norwalk; the Old Well Cigar Company on Washington Street was the largest of several cigar-making enterprises. The R & G Corset Factory on Ann Street was started in the late 19th century and employed 1,000 workers by 1901, almost all of whom were women (Ray and Stewart 1979:143). The company produced bone and steel-stayed lacy corsets, reportedly up to 650 per day. Other notable South Norwalk enterprises included several lumber and coal yards along the riverfront and George S. Bell's shipyard, located on the river just east of the South Norwalk-to-Danbury rail line (but outside the project area; Figure 5).

C. 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 into the surrounding countryside and an extension from South Norwalk to Wilson's Point on Long Island Sound (Ray and Stewart 1979: 110-111). In 1882 the company built a steamboat pier at Wilson's Point to connect with New York. The 1880s were a time of consolidation in the railroad industry, especially for small lines, and in 1886, as part of that nationwide movement the Housatonic Railroad leased the Danbury & Norwalk line for 99 years. The Housatonic Railroad was itself absorbed into the New York & New England Railroad (NY&NE) 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, New York. However, it was plagued by accidents, delays, and breakdowns, and in 1892, the NY&NE was absorbed into the NY, NH & H system.

During the 1890s, the entire New York-to-New Haven line was rebuilt as a four-track main line. In addition to greatly expanding the line's capacity, the project eliminated grade-level crossings. The raised elevation of the track necessitated stone-walled embankments in many areas, and dozens of new bridges were needed to carry the tracks over local roadways. Although the South-Norwalk-to-Danbury line itself was not widened, the southern portion had to be rebuilt to meet the elevation of the main line, so it too received retaining walls and new bridges.

Two important changes to the Danbury line occurred as a result of its integration into the NY, NH & H. Prior to the 1890s, there were two small freight facilities in South Norwalk. The Danbury and Norwalk Railroad's freight house was located just west of the Norwalk Lock Company, near the railroad's junction with the main line, and the NY, NH & H's freight house was located west of the South Norwalk passenger station on Monroe Street, sandwiched in between two large hat factories. After the lines were consolidated, a new freight yard was built north of Marshall Street and east of the Danbury Line, on reclaimed land that had served as lumber storage for a lumber and coal business. It was called Dock Yard, probably because the lumberyard had a long plank wharf that ran along the river bank north of Marshall Street. The new facility included a large freight house with long platforms, sixteen long sidings, and, at the northern end, a small turntable. All of the freight yard components were located outside of the limits of the proposed project; none remains standing today.

The second change resulting from the line's ownership by the NY, NH & H was its electrification. In 1907, the NY, NH & H completed the nation's first electrification of a railroad main line, building an overhead catenary system, supported by lattice-girder bridges spaced at 200-to-300-foot intervals, that delivered 11,000 volts of alternating-current traction power. Numerous improvements to the system were made in 1914, when electrification was extended to

New Haven. Then in 1925, the Danbury line was electrified, one of two Connecticut branch lines integrated into the main line's electrification. Passenger trains heading to Danbury could use the same pantograph-equipped equipment as the main line, thus allowing the possibility of through trains to New York without a change in South Norwalk. Electric-powered trains ran on the Danbury line until 1961, when the service was switched to diesel-hauled trains. However, the lattice-girder uprights used for the branch-line electrification remain in many places along the line, including the project area (where, although no longer energized, the catenary and overhead wires also remain in place).

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

D. Review of Historic Maps

The APE is located on the west side of the Norwalk River, and it includes the active railroad ROW as well as a narrow construction easement that runs along the eastern edge of the ROW at 33-45 North Water Street (Figures 2a-2f). The 1835 Eakin Coast Survey map (Figure 3) and 1847 Hall map (Figure 4) show much of the northern portion of the APE as marshland. The 1847 map, along with the 1867 map of Norwalk (Figure 5), shows streams running through the marshy land in the APE to the river. This area would have been attractive to pre-colonial Native American foragers for plant, animal, and riverine resources and should be considered archaeologically sensitive. The 1867 map also depicts Pine Island Cemetery immediately west of the northern end of the APE, but the cemetery is well outside the ROW and will not be impacted by project actions.

The 1867 map of Norwalk (Figure 5) also shows a property owned by G. Lockwood on the edge of the APE north of Ann Street. To the north, the APE runs past Bell's shipyard, and a structure labeled "blacksmith shop." The 1875 bird's-eye view of Norwalk (Figure 6) depicts what appears to be a cluster of domestic structures on Ann Street, corresponding to the location of the Lockwood property shown on the 1867 map. The 1883 *City Directory* lists George Lockwood, a blacksmith, at 28 Ann Street. The 1892 directory lists him at 24 Ann Street, and the 1902 and 1904 directories list George's widow, Jane, as a border at 24 ½ Ann Street. Based on later Sanborn maps, the even-numbered houses were located on the south side of Ann Street outside of the project area. Two house lots on Ann Street, numbers 29 and 31, fall within the vicinity of the construction easement area (Figures 5-10). These structures were likely rental or tenement housing, and may have had a high turnover. The houses at numbers 29 and 31 Ann Street are visible on the Sanborn maps dating from 1900-1922 (see Figure 8 for an example), and the 1934 aerial photograph (Figure 9). Based on a review of subsequent aerial photographs, the houses were torn down in the late 20th century.

Additional research in census records and town directories could identify the occupants at various times. For example, the 1900 U.S. Federal Census lists working-class families renting space in each the houses. John Toothill, an English immigrant who worked as a brass polisher, lived with his family in part of number 29. The other portion of the house was occupied by Katherine Maloney, an Irish immigrant, along with her two nieces and a boarder. All of the

women worked in the nearby corset factory. Half of number 31 was occupied by a young couple named Charles and Mary Smith. Charles, who was born in Germany, worked as a fireman for the railroad. Alanzo Harris occupied the other part of the house, along with his wife and five children. Like Charles Smith, Harris worked for the railroad. As noted above, by 1930, the Vanclief family, formerly of Kaiser Avenue/Goldstein Place, lived in one half of the house at 31 Ann Street. At that time, the other half of the house was inhabited by Frank Barker and his family. Barker, who worked for the Norwalk Lock Company, was born in England, and his wife Annie was Irish. The couple lived with their three sons, two of whom were adopted, and Annie's elderly father, Robert Ruth.

Historic maps (Figures 4-7, 9, and 10) show that the southern portion of the APE, south of Ann Street, ran alongside several structures, as well as the Norwalk Lock Company. Project plans (Figure 2a-2f), indicate that project actions in this part of the APE will be restricted to the ROW and existing embankments. These areas are considered to be disturbed and project actions will therefore have no impact on potential archaeological resources. The construction easement parcel may contain intact archaeological remains associated with 19th-century houses.

E. Previously-Recorded Historic-Period Sites in the Project Area Vicinity

A review of the archaeological site files at CTSHPO and OSA indicates that there are two historic-period sites (103-17 and 103-50) in Norwalk within a mile of the APE (Figure 1). Site 103-17, the Neptune Site, is located within the 11 Goldstein Place parcel on the east side of the Norwalk River immediately south of the existing Walk Bridge. This portion of the project area is addressed in a separate report (Clouette and Sportman 2015). The Neptune Site is described as the first (unofficial) landfill area for South Norwalk and is believed to date from the early 19th century to the early 20th century. It is possible that landfilling activities are related to the filling of marshy portions of the project area, depicted on historic maps and discussed in greater detail below. The Neptune Site was identified by a collector who surface-collected and "pot-hunted" the site using a metal detector and shovel. Reported artifacts included medicine and beverage bottles from local stores. When the site was recorded in 1982 it measured roughly 30 by 55 feet and cultural materials were visible around the perimeter. The site was situated between wetlands on the east, the marina to the north, the river to the west, and sterile mud to the south. It is possible that remnants of this site may still exist in the APE. An "ancient Indian fort" is also indicated in this parcel on historic-period maps.

Site 103-50, the Metro North Railroad 1910 Electrification Norwalk New Haven Railroad Danbury Branch Site, is located immediately south of the southern terminus of the APE. The site includes the ca. 1910 electrification infrastructure which extends for about one-mile from CP 214, Switch 35 on the Amtrak Northeast Corridor, to a point approximately 5000 feet north, roughly 600 feet north of Jenning's Crossing. Documentary research indicates that electrification actually occurred in 1925, rather than in 1910 (Bruce Clouette, personal communication, 2016).

F. Potential for Historic-Period Archaeological Sites in the APE

As the proposed action will take place almost entirely within the existing railroad ROW footprint and railroad and bridge embankments, the APE is considered to have little or no potential for intact archaeological resources. Extensive disturbance associated with the construction and modification of the rail line has likely destroyed or deeply buried any archaeological deposits within the ROW and railroad and bridge embankments.

The construction easement parcel portion of the APE, located at 33-45 North Water Street, Norwalk (Parcel 2/19/20), may possess potential for historic-period archaeological resources. Review of historic maps shows domestic structures in the vicinity of the construction easement from the mid-19th through the mid to late 20th century. Archaeological deposits associated with these houses may still exist within this portion of the APE (Figure 1). However, the project plans (Figures 2a-2f) indicate that project actions will be restricted to the ROW and railroad and bridge embankments. Therefore, project actions will have no impact on potential archaeological deposits in Parcel 2/19/20.

VI. CONCLUSIONS AND RECOMMENDATIONS

Early historic-period maps (Figures 3-5) show most of the APE as marshland, and the 1847 and 1867 maps (Figures 4 and 5), show a stream running through the project area to the river. This area would have been attractive to pre-colonial Native American foragers for plant, animal, and riverine resources. However, late 19th and early 20th-century Sanborn maps show several rail lines ran through this part of Norwalk in the historic period. As a result, the ROW has been pervasively disturbed and is not considered to have pre-colonial archaeological potential.

In terms of historic-period archaeological resources, available maps indicate that the southern end of the construction easement area, in the vicinity of 33 North Water Street, contained domestic structures from the mid-19th through the mid to late 20th century. However, project plans indicate that project actions will be limited to the ROW and existing railroad and bridge embankments. The work should have no impact on potential archaeological deposits related to the former domestic structures located at 29 and 31 Ann Street, within Parcel 2/19/20, (present-day 33-45 North Water Street; see Figures 8-10). No additional archaeological work is recommended in the Dock Yard APE.

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APPENDIX I

Figures

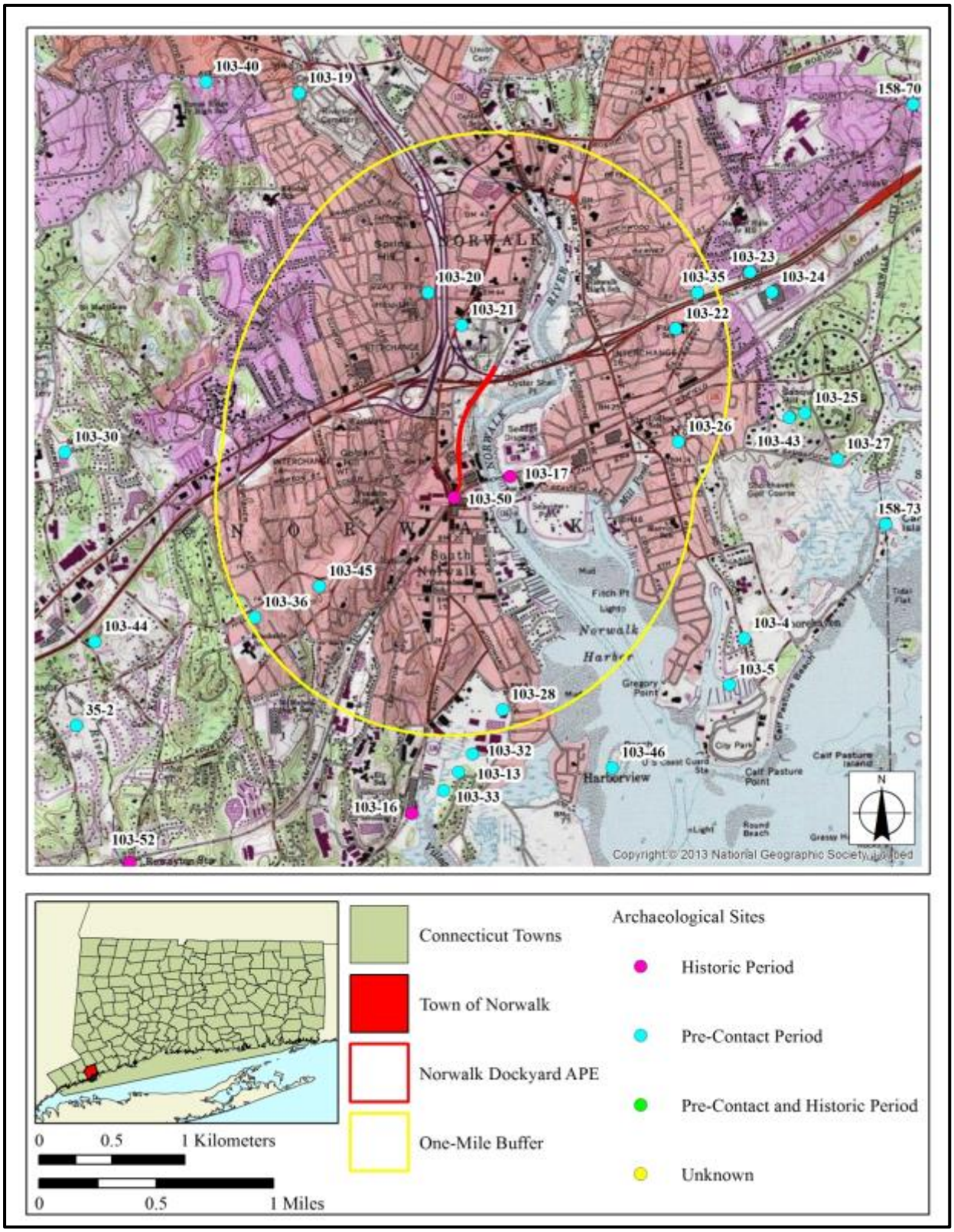

Figure 1: Location of the APE on USGS topographic map, showing documented archaeological sites within one mile.

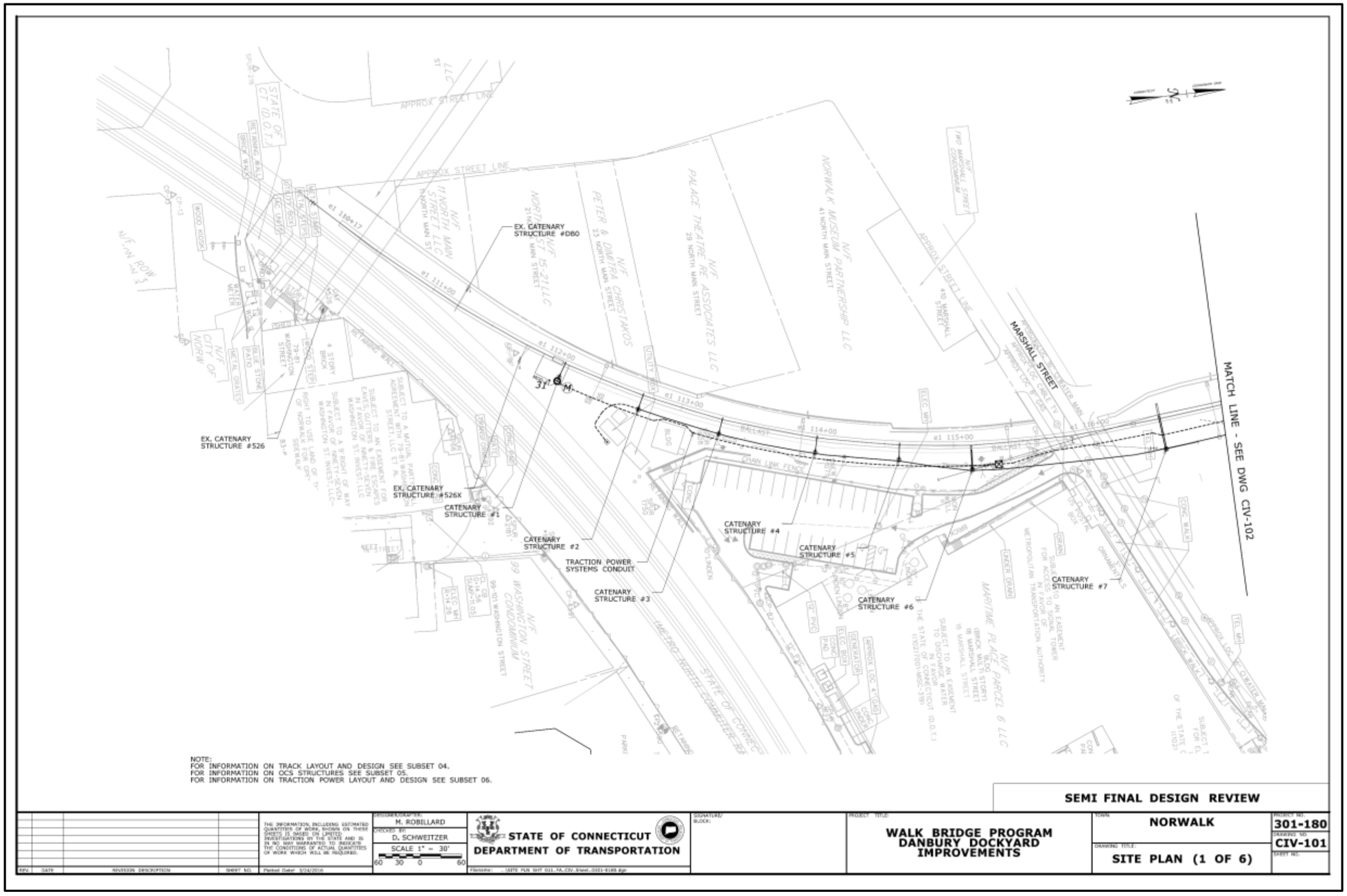

Figure 2a: Dock Yard Improvement project plans, page 1.

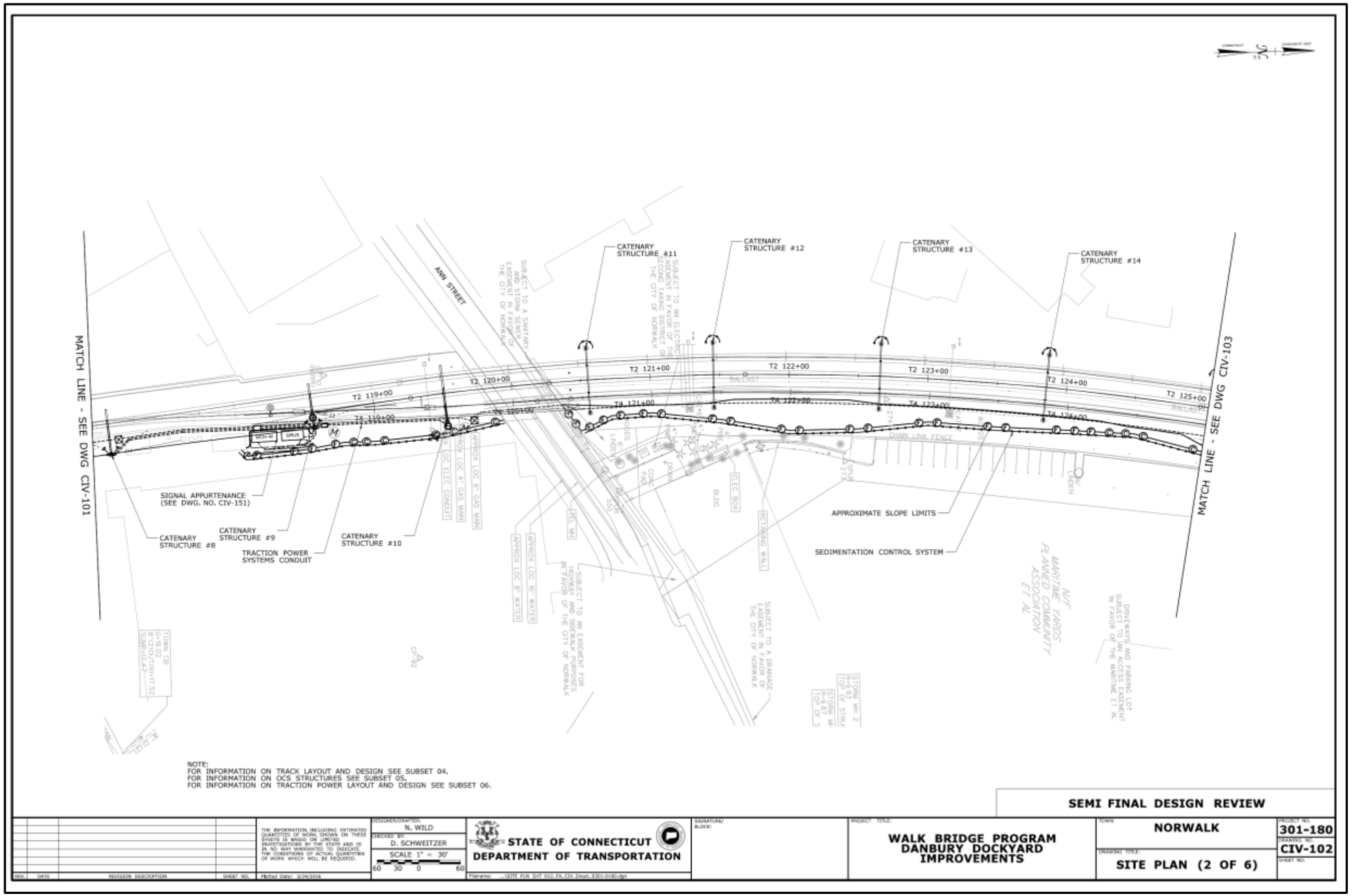

Figure 2b: Dock Yard Improvement project plans, page 2.

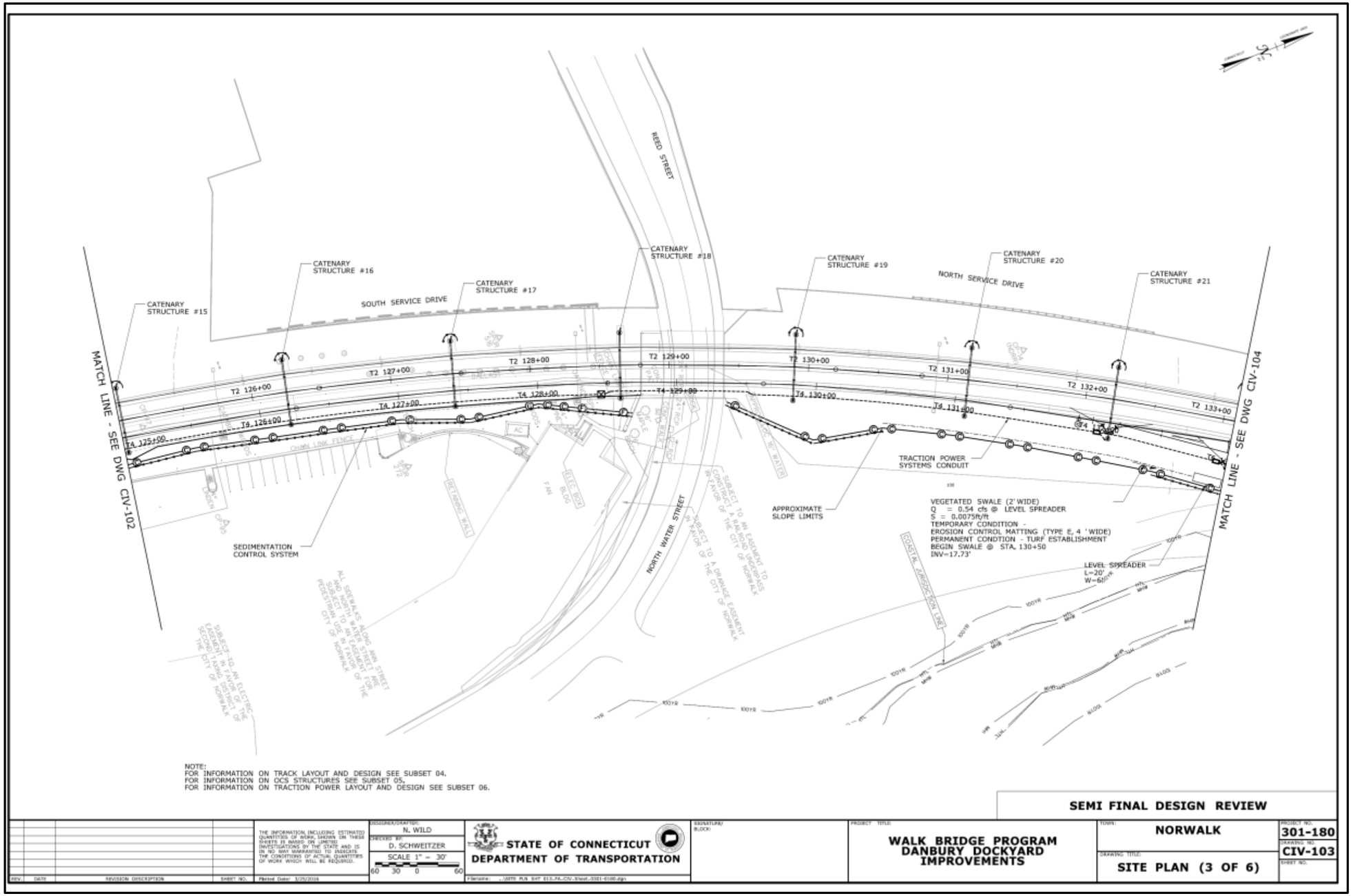

Figure 2c: Dock Yard Improvement project plans, page 3.

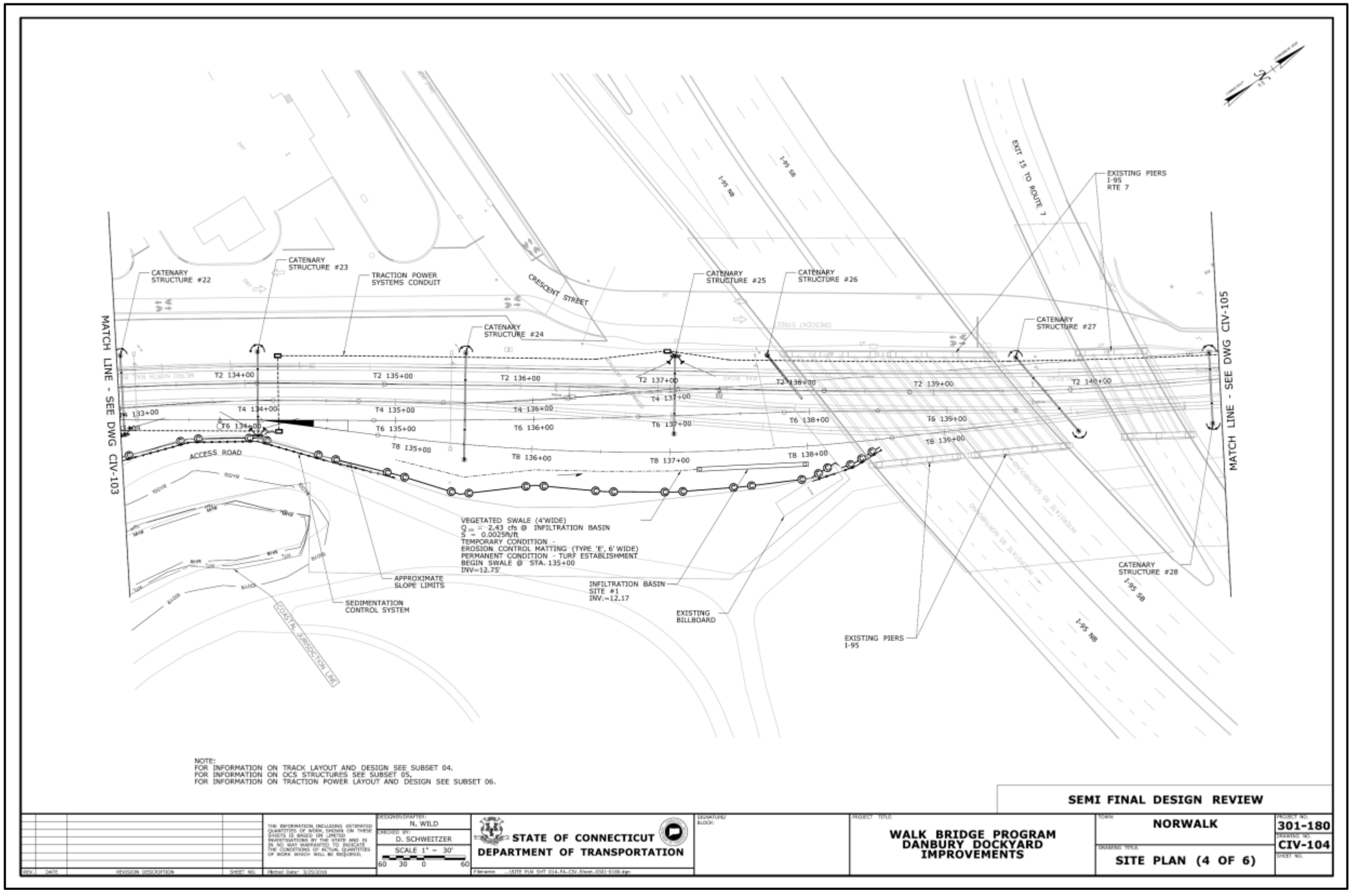

Figure 2d: Dock Yard Improvement project plans, page 4.

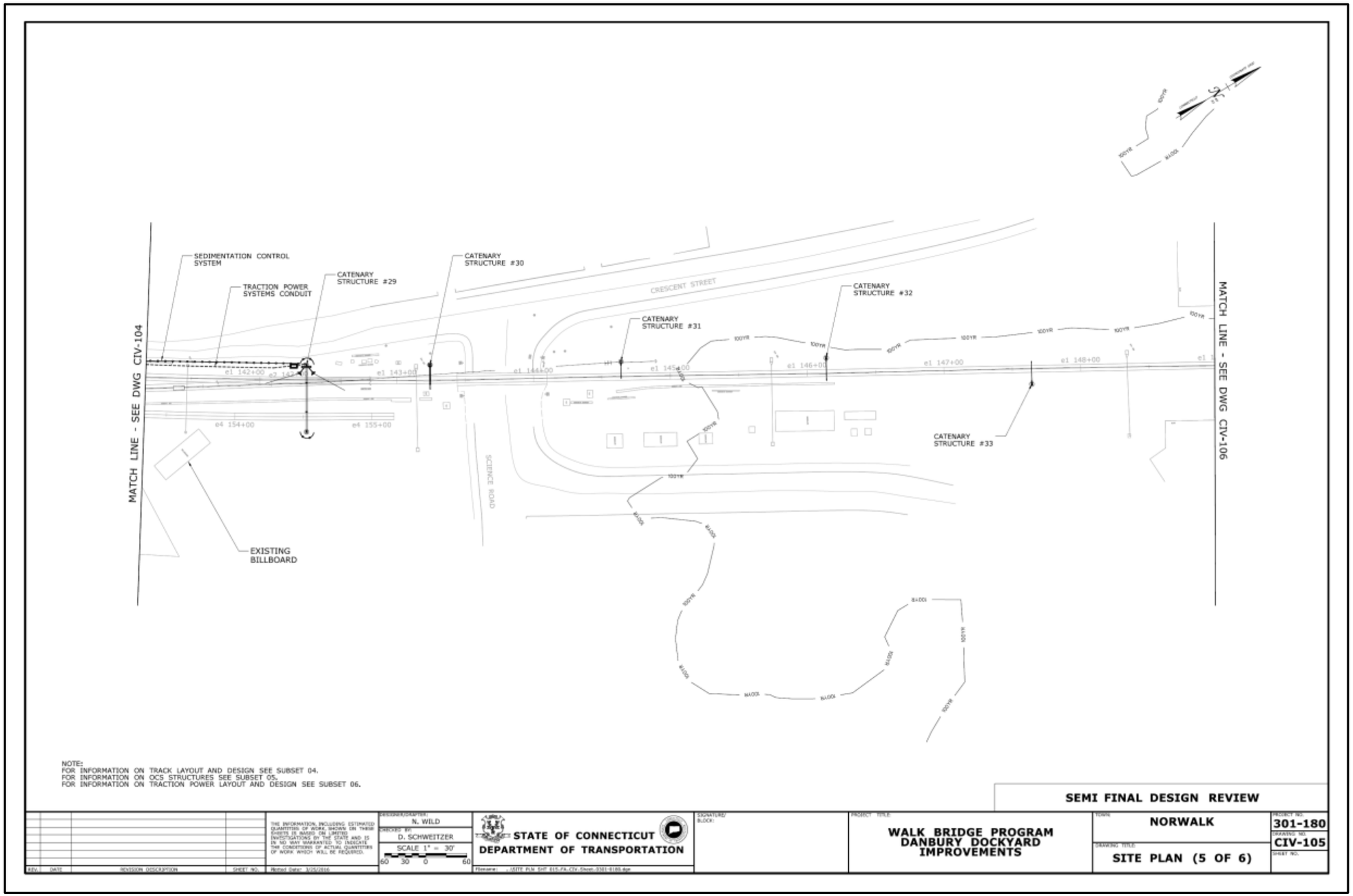

Figure 2e: Dock Yard Improvement project plans, page 5.

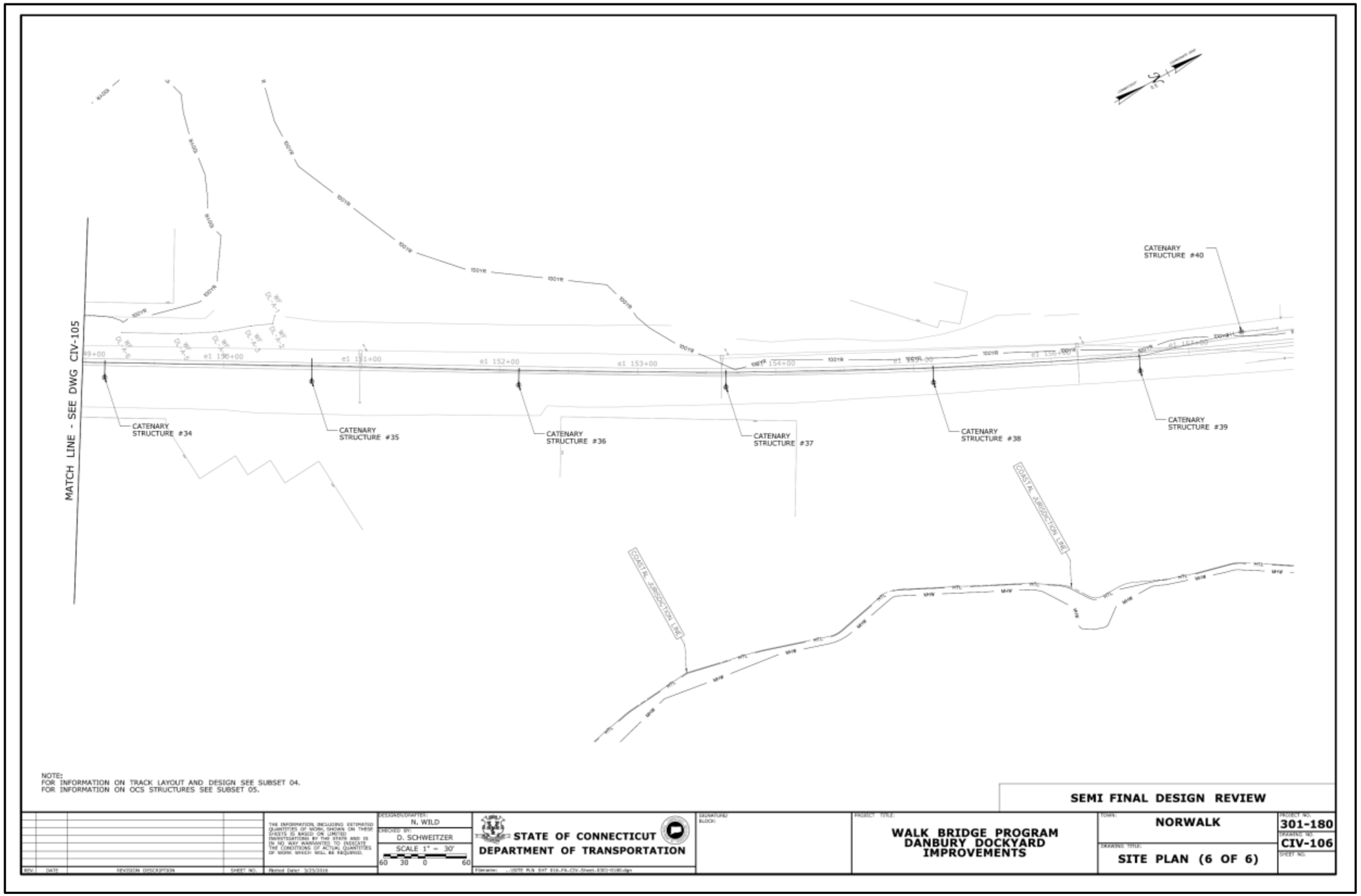

Figure 2f: Dock Yard Improvement project plans, page 6.

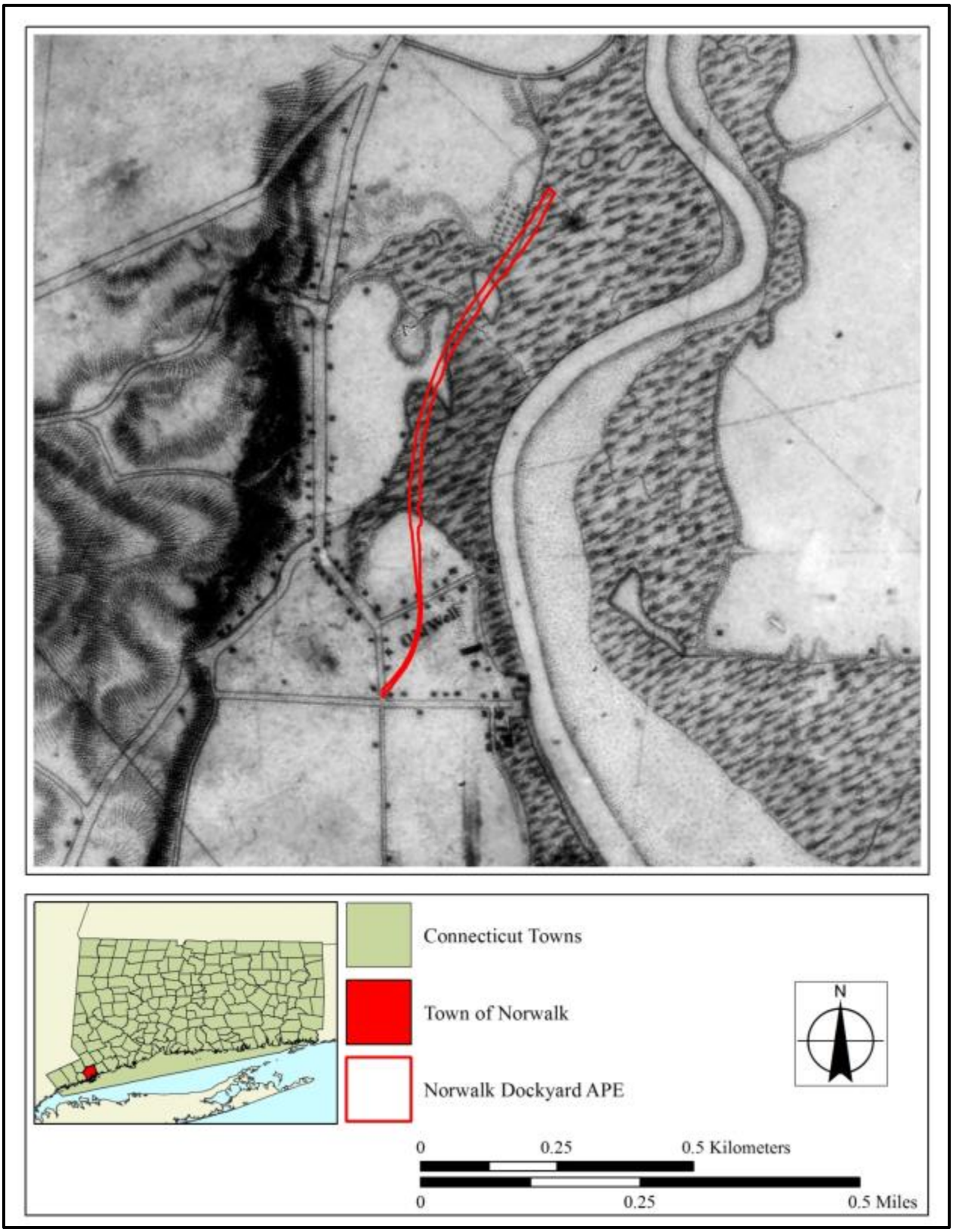

Figure 3: Dock Yard APE, shown on 1835 Coast Survey map.

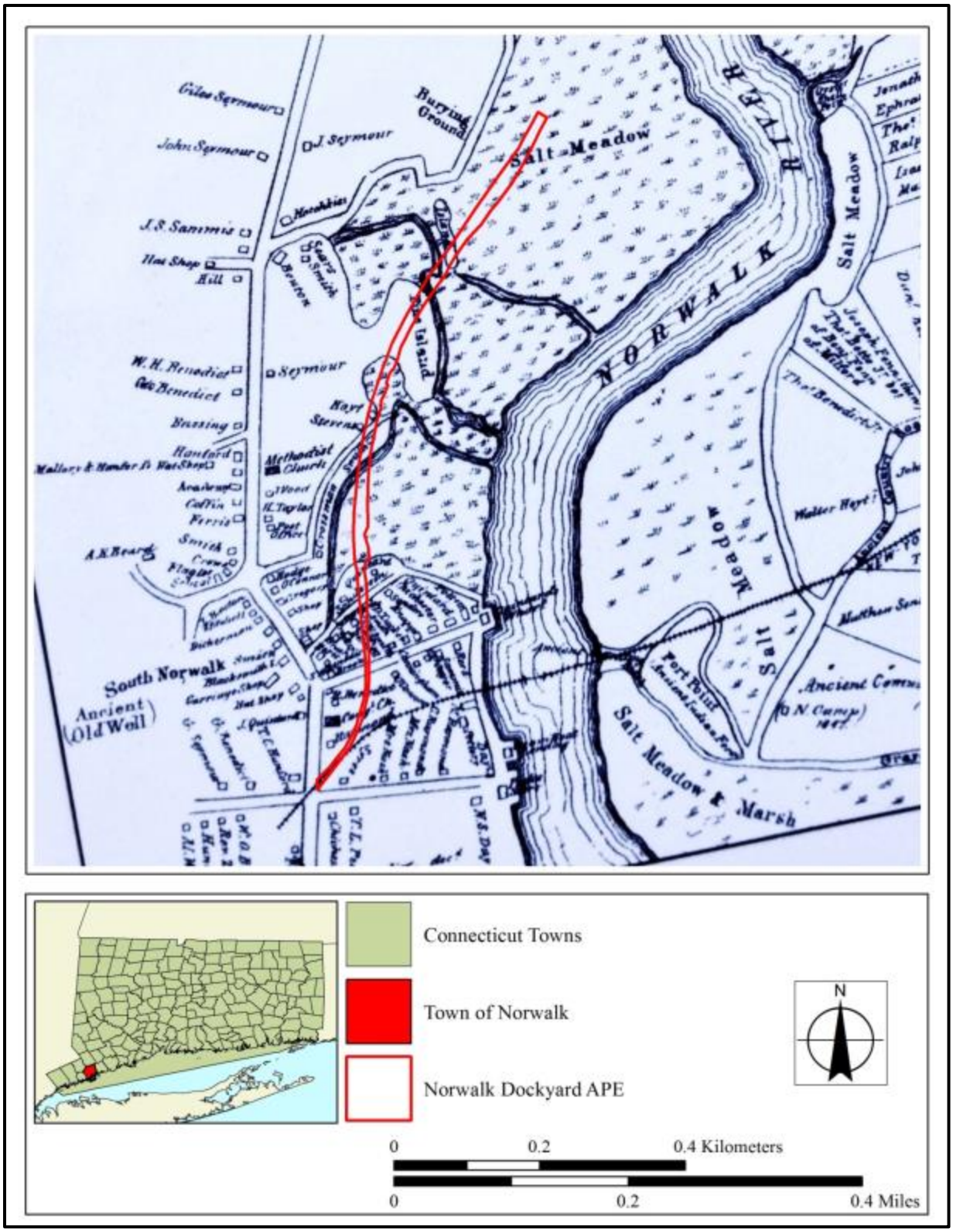

Figure 4: Dock Yard APE, shown on the 1847 Hall map.

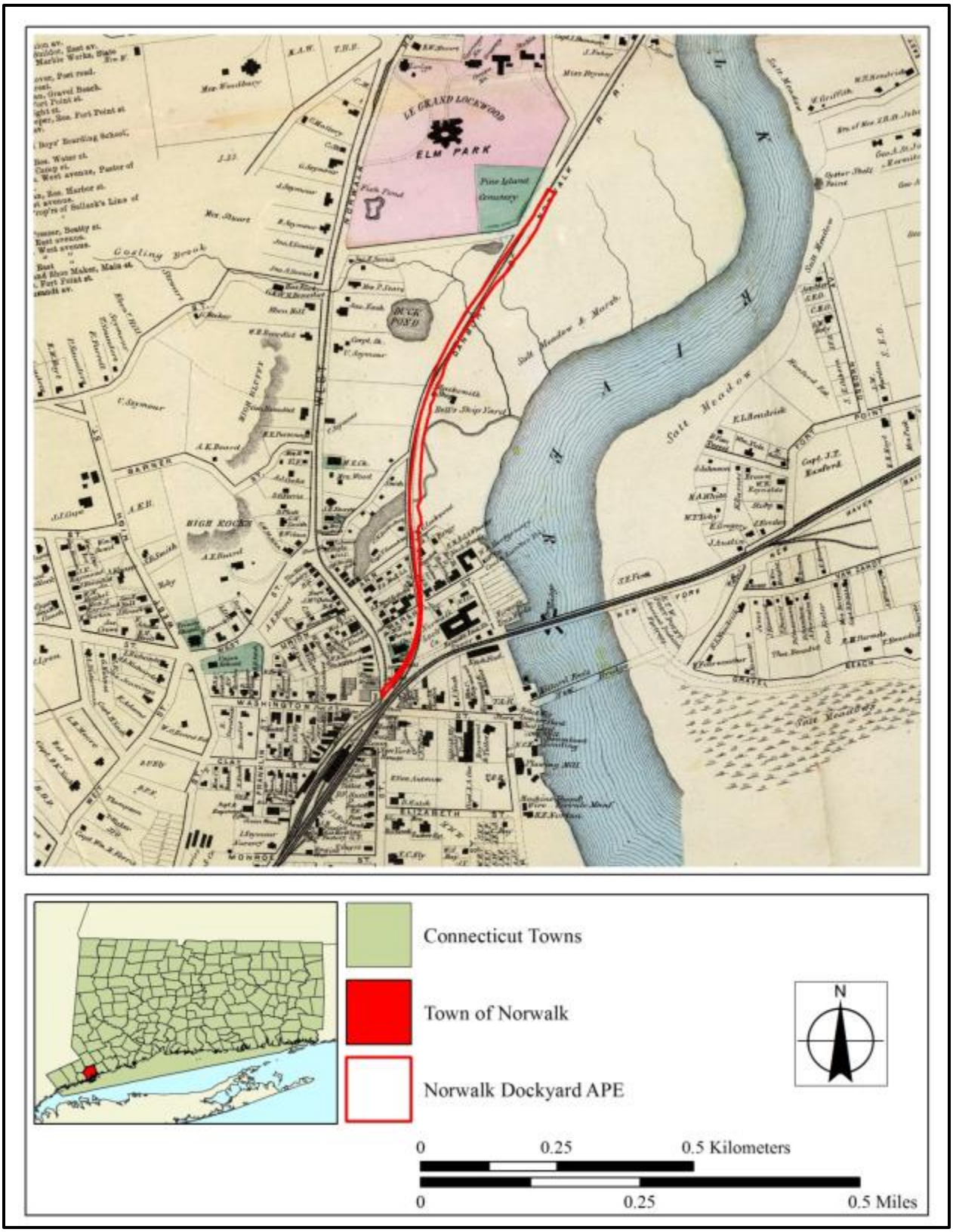

Figure 5: Dock Yard APE, shown on 1867 Beers map.

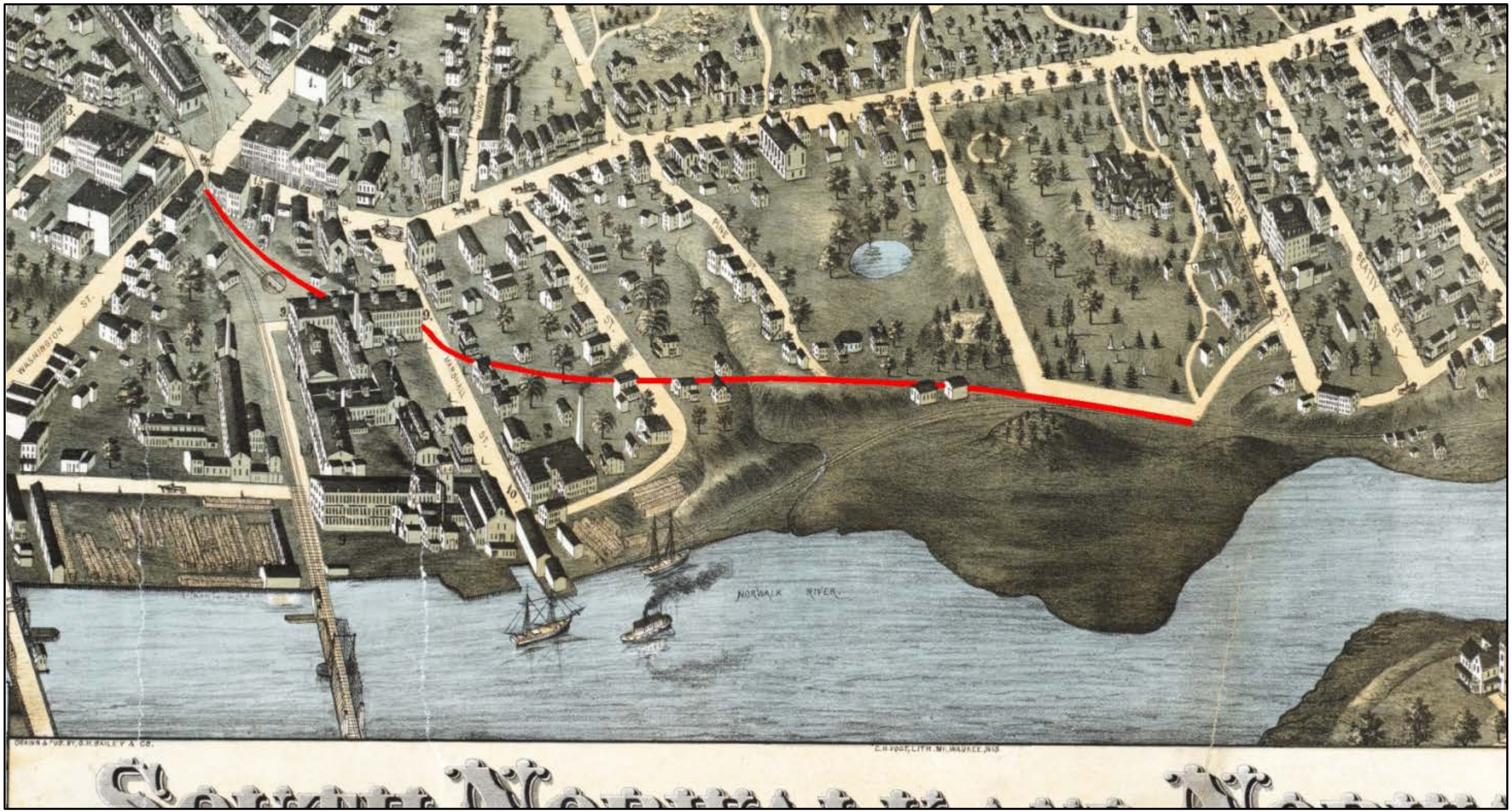

Figure 6: Approximate location of the Dock Yard APE, shown on the 1875 bird's-eye view map of Norwalk.

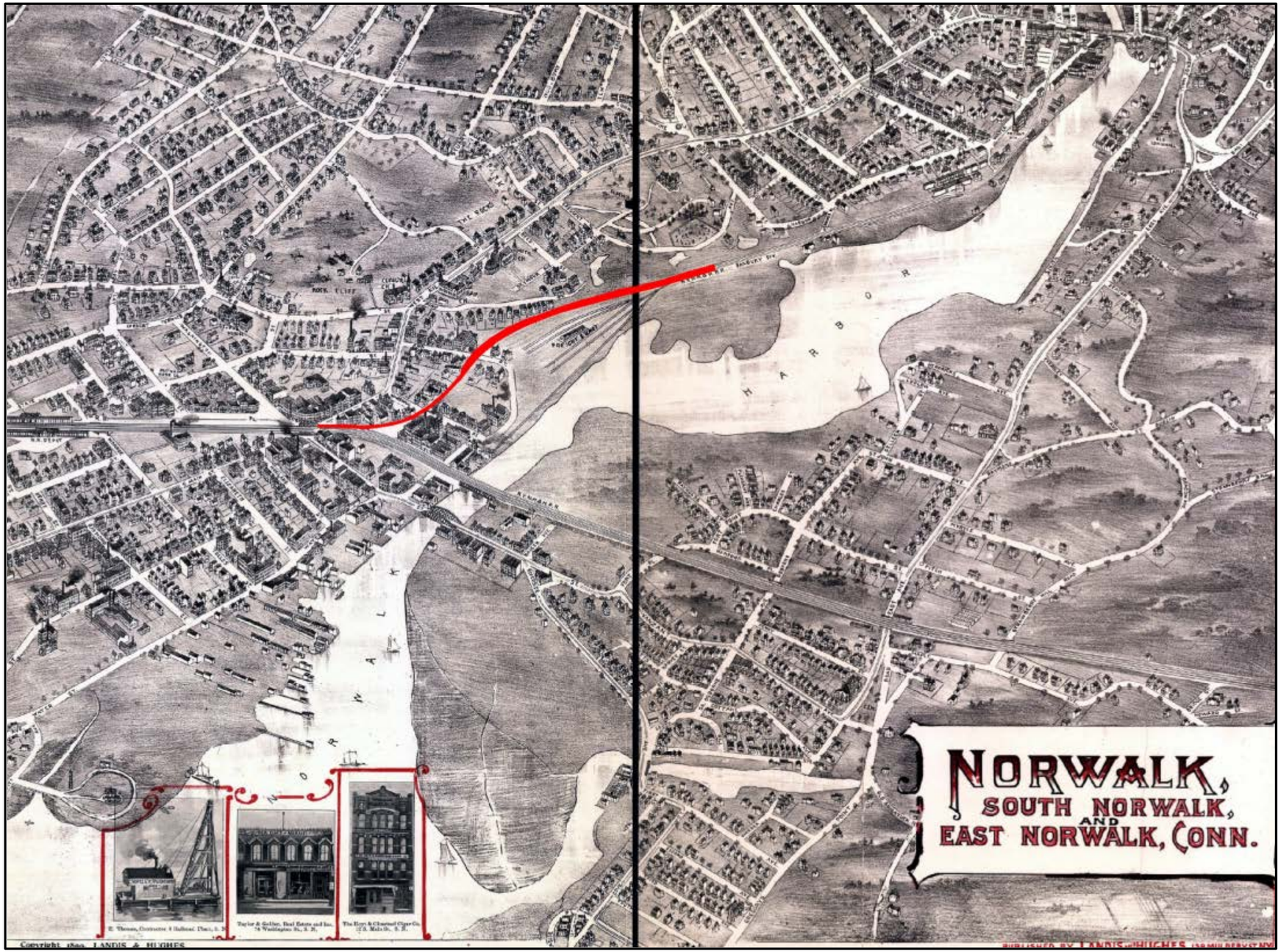

Figure 7: Approximate location of the Dock Yard APE, shown on the 1899 bird's-eye view map of Norwalk.

Figure 8: Detail of the 1922 Sanborn Insurance map, showing the approximate location of the Dock Yard APE and the adjacent houses at 29 and 31 Ann Street.

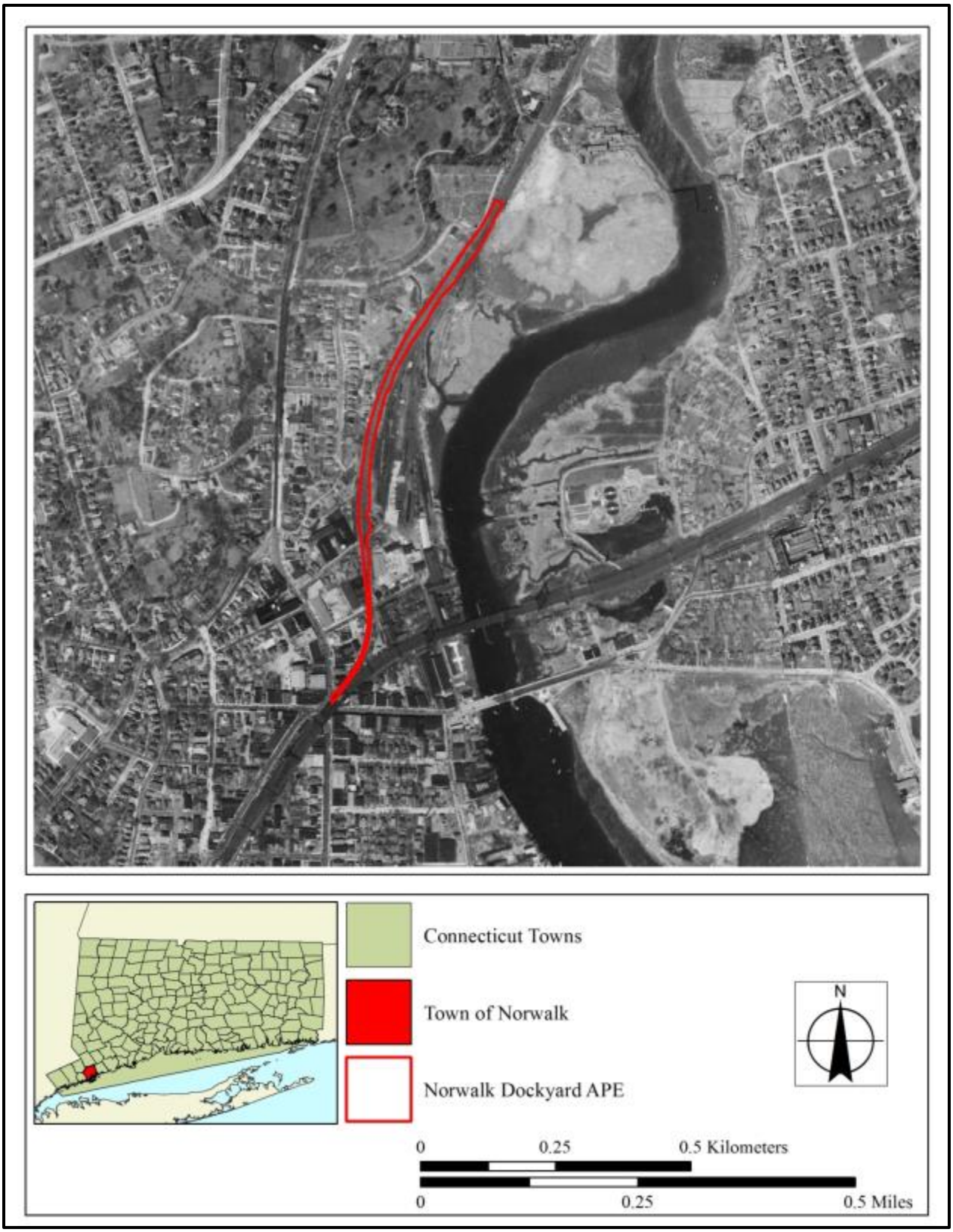

Figure 9: Dock Yard APE, shown on 1934 aerial photograph.

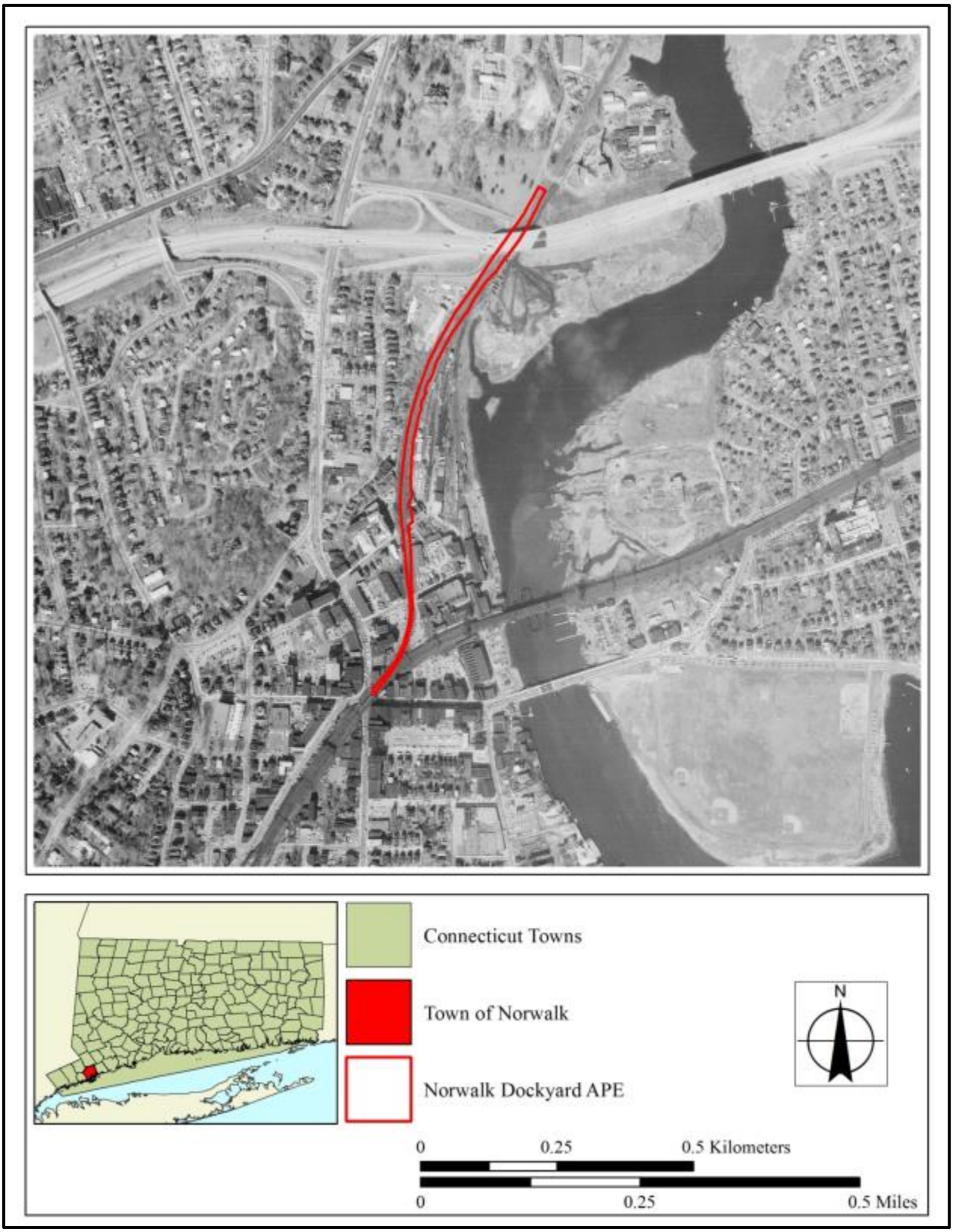

Figure 10: Dock Yard APE, shown on 1965 aerial photograph.