PHASE IA ARCHAEOLOGICAL SURVEY

NEW MILFORD RIVER TRAIL NORTHERN AND SOUTHERN SECTIONS

BOARDMAN ROAD TO BROOKFIELD BORDER

NEW MILFORD, CONNECTICUT

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TOWN OF NEW MILFORD
NORTHERN AND SOUTHERN SECTIONS
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NEW MILFORD, CONNECTICUT

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EXECUTIVE SUMMARY

The Town of New Milford, Connecticut is working to create a system of multiuse trails for recreation and transportation. When fully realized, The River Trail will consist of a 13-mile pedestrian and bike trail that extends from Gaylordsville south to the Brookfield border where it will connect to the Still River Greenway in Brookfield. The first phase of the project, Sega Park Meadows, has been completed between Gaylordsville and Boardman Road. Another portion of the trail, the Young's Field Park Riverwalk and Greenway (Riverwalk Park), has recently (June 2017) been completed and opened from Patriots Way south to immediately north of Bridge Street.

The proposed New Milford Trail Northern Section of the trail (Northern Section) is an approximately2.5-mile installation of a multiuse trail that roughly parallels the Housatonic River from Boardman Bridge south to Patriots Way on the east side of the Housatonic River. There are multiple proposed routes within this 2.5 mile Area of Potential Effect (APE). All proposed routes would begin at the north between the railroad tracks and the Housatonic River, immediately south Boardman Road, continue south along the river through the extant MEDInstill Complex, and then continue southerly along the river corridor past Helen Marx Park. It would then continue behind the commercial uses onHousatonic Avenue and Young Field Road, where it would ultimately connect to the north end of the Riverwalk Park near the village of New Milford.

The Southern Section of the proposed trail (Southern Section) is an approximately 6.5-mile installation of a multiuse trail with multiple proposed alternatives that have vastly different routes, all of which constitute the archaeological APE. The route generally parallels the Housatonic River from the southern end of Riverwalk Park, just north of Veterans Bridge where Bridge Street/Route 202 crosses the Housatonic River, south to the New Milford/Brookfield Town Line. It would begin on the east side of the Housatonic River at the southern terminus of Riverwalk Park, cross Bridge Street, and head south along West Street. At the south end of West Street, it would connect to Hidden Treasure open space area and then cross the river and veer west and away from the Housatonic River as it travels south in proximity to the Still River. Alternative route sections have been identified to the north and south of Lovers Leap State Park in the south half of the proposed trail alignment. The trail alignment generally follows or parallels the existing rail corridor for a major portion of the APE.

Milone & MacBroom, Inc. (MMI) was retained to complete the preliminary engineering for the project, and Historical Perspectives, Inc. (HPI) was retained to complete the standard initial archaeological assessment as outlined in the *Environmental Review Primer*, a Phase IA Archaeological Survey. This level of study entails documentary and cartographic research, and provides an assessment of archaeological potential, but precludes actual fieldwork that would confirm the presence or absence of resources. To address the concerns of the review agencies, this study assesses the Area of Potential Effect (APE), defined as any location within the limited, linear project corridors that would experience new subsurface disturbance. Such surveys, as outlined in the *Primer*, address the potential for significant archaeological features and resources from both the Precontact (aka prehistoric) era and the historic era.

Of note, after this Phase IA report was near completion, a preferred route for the trail was selected and presented to the Town of New Milford (September 2017, Appendix C). This preferred route was assessed for archaeological sensitivity within the alternatives reviewed for this study. The report and graphics were not revised to eliminate non-preferred alternatives so that if design plans change due to funding or permitting, alternatives are addressed accordingly.

The results of this Phase IA study indicate that the project site is considered to be highly sensitive for the presence of Precontact and historic archaeological resources in multiple locations. The study also found that there are numerous previously inventoried State and National Register of Historic Places (S/NR) properties and sites that are in or adjacent to the Northern Section and Southern Sections APEs. These locations may be disturbed by subsurface activity or the introduction of new landscape elements.

Where prior road grading, construction, reconstruction, or site development has involved shallow ground disturbance, these locations are less likely to retain Precontact archaeological potential. Locations that have been extensively quarried or previously excavated to greater depths, such as the locations of deep utility pipes, have no Precontact archaeological potential.

The number of known Precontact sites (20+), especially in the Southern Section APE, suggests the strong probability that additional sites exist in locations not previously subjected to archaeological testing. Further, both Precontact and historic archaeological resources can be found at shallow depths where years of plowing have brought artifacts to the surface or where there is undisturbed yard scatter around mapped historic structures. Therefore, in any location identified as potentially sensitive for Precontact or historic archaeological resources, excluding previously tested and disturbed locations, subsurface testing is recommended prior to the initiation of any ground disturbance. Ground disturbance includes, but is not limited to, excavations for regrading or planting, installing pylons, installing utilities, and construction lay-down and staging areas where heavy machinery can potentially compress sensitive strata.

There are also multiple sites and structures that have been identified that could provide users of the trail with the opportunity to learn more about New Milford's historic past where resources are known to have stood in or near the APE. Note that particularly sensitive buried archaeological sites that are not readily evident on the landscape are not recommended for signage since this promotes site destruction. From north to south, sites and structures that may lend well to engaging users of the trail include the following (see Figures 17a and 17b for approximate locations of sites keyed to letter designations below):

Northern Section:

A. Boardman's Bridge (NR). This wrought-iron, lenticular truss bridge was constructed in 1888 by the by the Berlin Iron Bridge Company. As of the writing of this report, it is slated for restoration
B. The Maggi Factory, later Nestle site. Although this is now in the MEDInstill complex, the industrial past of this tract is important to the economic history of New Milford.
C. Wannuppee Island. Early New Milford residents forded the river here prior to the construction of a bridge. It was a critical location that facilitated development of the village.

D. The New Milford Hat Factory. The industrial complex was located on the east side of Housatonic Avenue in the early twentieth century, with worker housing located on the west side of the road. Although not in the APE, there is the opportunity to acknowledge this historic industrial complex that formerly stood along the Aspetuck River.

Southern Section:

E. The Housatonic Railroad Complex (NR). Once the site of numerous rail-related structures, the history of the importance of the railroad to the New Milford economy is of paramount importance.
F. Bridge Street and West Street Warehouses (NR). While many of these have recently been converted to residential use, the history of the development of the industries and the warehouses that served them contributes to the story of New Milford.
G. Ruggles/Stilson Mills and Hydroelectric Plant. The likely location of three, possibly four mills in or near Hidden Treasures Park, was one of the earliest (ca.1717) locations of a mill directly accessible to the Village of New Milford. Also, one of the state's first hydroelectric plants was established here in 1884 and operated through ca.1955. The ruins of the building, a water tank, a dam, and associated turbines are extant resources.
H. The Bleachery. This early-twentieth century complex employed hundreds of New Milford residents, and operated through the late 1950s.
I. The Tobacco Industry. The extensive tobacco fields and the industry of tobacco making was an important part of the local economy. The locations of many of the historic tobacco barns that once stood on the west side of the Housatonic River are now redeveloped; what was once ubiquitous is now a rarity.
J. The Bridgeport Wood Finishing Company complex (SR). Immediately south of Still River on the Housatonic River, this complex contains structural remains of the once-thriving complex (signage already exists in Lovers Leap State Park).
K. Lover's Leap Bridge over the Housatonic River (NR). Built in 1895 by the Berlin Iron Bridge Company, it is one of the last bridges built the company, and is a particularly ornate example of its work Signage already exists in Lovers Leap State Park).
L. Lanesville. The location of the former Reynolds & Booth Hat Factory, the Knowles grist mill, the post office, and school are no longer evident in the vastly reconfigured arrangement of roads in this area.
M. The Still River floodplains. Once home to the Weantinock, these fertile fields provided prime horticultural land for Native Americans and their seasonal villages.

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1.0 INTRODUCTION

Acting through its Trail Committee, the Town of New Milford, Connecticut is working to create a system of multiuse trails for recreation and transportation. When fully realized, The River Trail will consist of a 9-mile pedestrian and bike trail that extends from Gaylordsville south to the Brookfield border where it will connect to the Still River Greenway in Brookfield. The first phase of the project, Sega Park Meadows, has been completed between Gaylordsville and Boardman Road. Another portion of the trail, the Young's Field Park Riverwalk and Greenway (Riverwalk Park), has recently (June 2017) been completed and opened from Patriots Way south to immediately north of Bridge Street.

The proposed New Milford Trail Northern Section of the trail (Northern Section) is an approximately 2.5-mile installation of a multiuse trail that roughly parallels the Housatonic River from Boardman Bridge south to Patriots Way on the east side of the Housatonic River. There are multiple proposed routes within this 2.5-mile Area of Potential Effect (APE). All proposed routes would begin at the north between the railroad tracks and the Housatonic River, immediately south Boardman Road, continue south along the river through the extant MEDInstill Complex, and then continue along the river corridor past Helen Marx Park. It would then follow along the river behind the commercial uses on Housatonic Avenue and Young Field Road, where it would ultimately connect to the north end of the Riverwalk Park near the village of New Milford (Figure 1a).

The Southern Section of the proposed trail (Southern Section) is an approximately 6.5-mile installation of a combination of multiuse trail and sharrows with multiple proposed alternatives that have vastly different routes, all of which constitute the archaeological APE. The route generally parallels the Housatonic River from the southern end of Riverwalk Park, just north of Veterans Bridge where Bridge Street/Route 202 crosses the Housatonic River, south to the New Milford/Brookfield Town Line. It would begin on the east side of the Housatonic River at the southern terminus of Riverwalk Park, cross Bridge Street, and head south along West Street. At the south end of West Street, it would pass through Hidden treasure open space area and cross the river and veer west and away from the Housatonic River as it travels south in proximity to the Still River (Figure 1b). Alternative route sections have been identified to the north and south of Lovers Leap State Park in the south half of the proposed trail alignment. The trail alignment generally follows or parallels the existing rail corridor for a major portion of the archaeological APE.

Milone & MacBroom, Inc. (MMI) was retained to complete the preliminary engineering for the project, and Historical Perspectives, Inc. (HPI) was retained to complete the standard initial archaeological assessment as outlined in the *Environmental Review Primer*, a Phase IA Archaeological Survey. This level of study entails documentary and cartographic research, and provides an assessment of archaeological potential, but precludes actual fieldwork that would confirm the presence or absence of resources. To address the concerns of the review agencies, this study assesses the Area of Potential Effect (APE), defined as any location within the limited, linear project corridors that would experience new subsurface disturbance. Such surveys, as outlined in the *Primer*, address the potential for significant archaeological features and resources from both the Precontact (aka prehistoric) era and the historic era.

This report presents generalized background information regarding the Precontact period and history of the New Milford area, and is then broken down into two separate sections that provide corridor-specific information about the Northern and Southern Sections of the proposed trail. The tasks undertaken for this study, and the resultant technical report, are designed to meet the standards established by the Connecticut State Historic Preservation Office (SHPO) in the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987).

Of note, after this Phase IA report was near completion, a preferred route for the trail was selected and presented to the Town of New Milford (September 2017, Appendix C). This preferred route was assessed for archaeological sensitivity within the alternatives reviewed for this study. The report and graphics were not revised to eliminate non-preferred alternatives so that if design plans change due to funding or permitting, alternatives are addressed accordingly.

2.0 RESEARCH DESIGN

The research design for the Phase IA Archaeological Resources Survey was based on the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 Federal Register 44716-44740), the U.S. Department of the Interior Guidelines for Evaluating and Registering Archaeological Properties (Little et al. 2000), and the Connecticut Commission on Culture and Tourism, State Historic Preservation Office's (SHPO) *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987). These standards assure compliance with the review procedures of the Connecticut SHPO.

Resource Definitions

The basic unit used in determining the historical significance of archaeological resources is the *site*; any potentially *in situ* cultural material or feature 50 years of age or older. An *isolate* or an *isolated find* is the term used to describe a single artifact with no associated cultural material(s) or feature(s).

Area of Potential Effect (APE)

The Area of Potential Effect (APE) is defined as the area that will experience subsurface impacts as a result of the creation of the proposed trails and any associated parking lots. Construction activities such as installing piles, landscaping, and grading can cause subsurface impacts. For the New Milford River Trail Northern Section and Southern Section, there are multiple proposed alternatives, the routes of which constitute the APE (Figure 2a and 2b).

Design and Methodology

The purpose of the Phase IA investigation is to determine the presence or absence of Precontact and historic period archaeological resources within the APE. Generally, a Phase I investigation consists of detailed documentation of the existing cultural resources that might be affected by the project and a determination of sensitivity for potential resources that might be present within the APE (Phase IA). Subsequent Phase I Field Investigations (Phase IB), if warranted, consist of the systematic shovel testing of areas that are lacking prior disturbance to verify the presence or absence of buried cultural deposits.

The documentary review, or Phase IA, is designed to address two major questions: what is the potential for the Northern and Southern Sections of the proposed River Trail to have hosted Precontact and historic era archaeological resources of significance and, what is the likelihood that such resources have survived the subsurface disturbances concomitant with subsequent use of the site, including past farm-related activities.

In order to evaluate the potential of recovering Precontact cultural remains in the APE, it was essential to:

- Establish the predevelopment conditions of the project site to determine if it may have been hospitable for use by Native Americans;
- Understand regional Precontact settlement strategies in each of the Cultural Periods to determine how the project site may have been utilized by Native Americans;
- Establish the historical use of the property and any residential, industrial, or recreational episodes; and,
- Document prior disturbance episodes that may have eliminated potential archaeological site integrity.

Sufficient information was gathered to compare, both horizontally and vertically, the Precontact past, the historical past, and the subsurface disturbance record. In particular, research focused on establishing the extent of prior subsurface disturbance caused by twentieth century residential and recreational development. In order to answer these questions, a series of research tasks was undertaken to collect, synthesize, and review pertinent data in order to establish if Phase IB field testing was warranted. The following tasks were undertaken for this Phase IA study:

Documentary Research: In order to place the project site in a historical context, local and regional histories were reviewed. Prior archaeological and historical research in Litchfield County helped to provide a basis for much of the contextual overview, but additional materials were reviewed at the Archives and Special Collections at the Thomas J. Dodd Research Center, University of Connecticut.

Site File Search: A site file search for inventoried archaeological and historical sites was conducted on both the local and state levels. Nomination and designation files for any pertinent and/or neighboring properties were also researched. Recent work in the area by both professional and amateur archaeologists was reviewed.

Cartographic Review: A cartographic review was conducted to identify land ownership and use of the land through time. This was essential for establishing historical and modern deposition and disturbance episodes. Historical maps and atlases were collected from the UCONN MAGIC website, the New Milford Historical Society, and from various on-line sources. Historical maps provided information on land owners and development, while more modern maps were sought to establish any historical disturbance.

Walkover Survey: A photographic record of the current conditions of the alternatives was completed by archaeologists on May 24, 2017. Additional walkover surveys were completed

prior to this by the engineering team, and their photographs of site conditions taken when trees were defoliated were also reviewed and included in the photographs for this report. The walkover survey noted the current conditions of surface integrity and obvious signs of prior subsurface disturbance in the Northern and Southern Section APEs.

3.0 ENVIRONMENTAL SETTING

Geological and Natural Setting

The Town of New Milford, geographically the largest in Connecticut, has its village center on the east side of the Housatonic River, uphill from low-lying floodplains along both sides of the Housatonic River. The Town of New Milford and the proposed Northern and Southern Trails lie in the southwest corner of Litchfield County within the Western New England Upland geologic region. Characterized by steep hills, ridges, and rivers, the topography of the uplands slopes gradually downward from northwest to southeast with elevation falling from about 1,400 feet to 1,000 feet above sea level (ASL). The region is mainly drained by the Housatonic River, which terminates at Long Island Sound, with smaller tributaries feeding into it. In the project site these tributaries include the West Aspectuck River to the east of the Housatonic (Northern Section), and the Still River to the west (Southern Section).

Housatonic River Valley Geology (Northern and Southern Sections): The courses and bedrock valleys of the Housatonic River are entirely within the terranes of the crystalline (predominantly gneissic and schistose) rocks of the western highlands of Connecticut.

According to the Housatonic Valley Association:

> The basin geology [of the Housatonic Valley] is somewhat complex, reflecting the results of hundreds of millions of years of natural events and processes. Most of the valley is underlain by metamorphic rock, mainly gneiss and schist from the Precambian era. This metamorphic bedrock was formed during the ancient collision of the North American continent with Europe and Africa some 300 to 400 million years ago. The intense pressure of the collision hardened the rock and caused it to fold and fault. These rocks form the steep mountains found in the valley.
>
> Some portions of the valley, notably north of Falls Village, south of Cornwall Bridge and near New Milford are underlain by marble and are known as the "Marble Valley." During the Paleozoic era, seas covered a large portion of the valley, leaving sedimentary rock made up of carbonate mud, shells and marine fossils, material which later formed limestone. Metamorphism turned this limestone to marble. Above the bedrock is found glacial drift, comprised of the sand, silt and boulders left spread across the land by the melting glaciers as they receded over 18,000 years ago. As the glaciers advanced and receded, the river's path was continually altered, especially through the easily eroded Marble Valley.

> Today the Housatonic River begins its journey in Massachusetts, separating the Taconic Mountain and New England Upland sections of the New England Physiographic Province. As it enters Connecticut's Western Uplands, it follows the Northern Marble Valley as far south as the Housatonic Highlands Plateau, two miles south of Falls Village. Here the river leaves the Marble Valley, flowing through the Housatonic Highlands until it rejoins the Northern Marble Valley at Cornwall Bridge, following it until it reaches Gaylordsville.
>
> The river then cuts a gorge through the Hudson Highlands Plateau until it reaches the Southern Marble Valley north of New Milford center. Two miles south of New Milford, the river crosses Cameron's Line[1] and enters the Southwest Hills, flowing south easterly until it eventually reaches the Coastal Slope and discharges into Long Island Sound (HVA 2017).

With regard to surficial deposits, geologist Thompson who has studied the Housatonic and Still River Valleys extensively, including the terrain in the Northern and Southern Section APEs, writes:

> …soil borings…show an interesting characteristic of the surficial deposits close to the Housatonic River in the stretch between the Gorge [Lovers Leap] and Boardman Bridge. All test holes penetrate lacustrine sand, silt, and clay. In 14 of the holes the lake sediments are overlain by 4 to 20 feet of gravel and sand. Near the junction of the Housatonic and Aspetuck Rivers (just upstream from New Milford), a typical test hole log shows 15 feet of gravel over 100 feet of layered silt, clay, and very fine sand. This difference in grain size indicates a drastic change in the regimen of the lake basin. According to the test hole data, these gravels are found at all elevations between 250 feet (the terrace mentioned above) and the present Housatonic level at 200 feet. (1971:24-25).

His observations regarding prior soil borings suggest a vast difference in stratigraphy for the Northern and Southern Section APEs, with the Northern Section having the potential for more gravels; the Southern Section more sand, silt, and clay near the surface.

Still River Valley (Southern Section): Like the Housatonic River Valley, the Still River Valley exists in a geologic formation that was formed by the movement of ice sheets during the Pleistocene Age, several million years ago. During the retreat of the last glacier from the Still River basin, meltwater was ponded between the ice front and the highlands of the region. A large lake, known as Glacial Lake Danbury, covered the entire Housatonic Area. Gradually, ice melting off of the front of the retreating glacier opened different outlets to this glacial lake. The soil deposits and the topography of the Sill River Valley are largely influenced by the settling out of material to the floor of Glacial Lake Danbury and the gradual retreat of the Lake as the glacier continued to melt. Although there has been speculation that the northward flow of the Still River

[1] Cameron's Line is a geological suture fault that formed as part of the continental collision known as the Taconic orogeny around 450 million years ago.

was reversed from its original southward flow, studies completed in the 1970s indicate that it has always flowed northward (Thompson 1971:52).

The bedrock that underlies the Still River is predominately easily eroded Inwood marble, which is overlain by the glacial till deposits that settled out from Glacial Lake Danbury. The topography of the Still River Valley is relatively flat, while the valley is flanked by uplands with more resistant rock types such as schist, gneiss, and granite (Thompson 1971:4). The Inwood Formation may be dolomitic, calcitic, or both. It also contains variable amounts of tremolite, phlogopite, and other silicates (Ibid.:5).

Regarding surficial materials in the Still River Valley, Thompson writes:

> The tills are the oldest of the surficial materials in the Still Valley. There are two principal varieties, which are henceforth referred to as the "lower till" and "upper till." Although it is not very common in the valley proper, excellent exposures of the lower till occur in many, parts of the New Milford and Danbury quadrangles. They are usually located on drumlins. A typical lower till locality is C-2-2, on Beaver Brook Mountain. The usual color of the till is olive-gray to olive (5Y 5/2 - 4/2 - 4/3 according to the Munsell scheme) in the upper oxidized zone and gray (5Y 4/1- 5/1) in the non-oxidized portion. The oxidized zone has a characteristic blockiness that results from sheet jointing (parallel to the land surface) and vertical jointing. Near the top of the lower till/ dark-brown, rusty staining is very common on the joint faces. The oxidation zone is thick and often seen in outcrops. The till is silty and compact in both oxidation states and certainly deserves the name “hardpan." Although it may be very stony, the great majority of the clasts are no larger than pebbles (1971:14).
>
> Ice contact stratified drift is abundant along the Still River. It is found mainly along the lower parts of the valley walls, at elevations below the till uplands and above the lacustrine deposits of the valley bottom. The ice-contact material has a coarse texture and contains large amounts of cobble and boulder gravel. These sediments were deposited by meltwater and slumping as stagnating portions of the last ice sheet melted back from the sides of the valley (1971:17).
>
> There are three principal types of inorganic post- .glacial deposits in the Still River Valley. They are weathered bedrock, eolian silt, and recent floodplain sediments… The eolian mantle that blankets glacial deposits over most of New England is also present in the Still River Valley. It is yellowish-brown, loosely packed silt. The eolian sediment forms several inches of the soil horizon between the humus and weathered glacial drift. Modern floodplain deposits do exist along the Still River, but they are not extensive. The Still is a small stream with a limited watershed, and it only floods the lowest areas that are very close to the river (1971:25-26).

The final section of the Still River, north of the Danbury border, is a 10 mile stretch that flows through Brookfield into New Milford at Harry Brook Park, where joins the Housatonic River immediately north of what is now Lover's Leap Park (SRA 1998).

Soils

There are multiple soil types mapped for both the Northern and Southern Sections due to each section's length, the variety of landforms crossed, the degree of seasonal inundation, and the extent of historical land use along each proposed corridor (U.S.D.A. 2017; Appendices A1, A2, and A3). Properties of the soil types and typical soil profiles are described in the tables below, broken down by Section. Appendices A1, A2, and A3 provide soil maps that show the location of each soil type, as well as more detailed descriptions of soils.

Northern Section (see Appendix A1):

No.	Name	Typical Soil Profile	Slope %	Drainage	Landform
34A	Merrimac fine sandy loam	Ap - 0 to 10 inches: fine sandy loam Bw1 - 10 to 22 inches: fine sandy loam Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand 2C - 26 to 65 inches: stratified gravel to very gravelly sand	0-3%	Somewhat excessively drained	Eskers, kames, outwash plains, outwash terraces, moraines
34B	Merrimac fine sandy loam	Ap - 0 to 10 inches: fine sandy loam Bw1 - 10 to 22 inches: fine sandy loam Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand 2C - 26 to 65 inches: stratified gravel to very gravelly sand	3-8%	Somewhat excessively drained	Eskers, kames, outwash plains, outwash terraces, moraines
46B	Woodbridge fine sandy loam	Oe - 0 to 2 inches: moderately decomposed plant material A - 2 to 9 inches: fine sandy loam Bw1 - 9 to 20 inches: fine sandy loam Bw2 - 20 to 32 inches: fine sandy loam Cd - 32 to 67 inches: gravelly fine sandy loam	0-8%	Moderately well drained	Drumlins, ground moraines, hills
105	Hadley silt loam	Ap - 0 to 12 inches: silt loam C1 - 12 to 29 inches: stratified very fine sand to silt loam C2 - 29 to 40 inches: stratified very fine sand to silt loam C3 - 40 to 45 inches: stratified sand to silt loam C4 - 45 to 60 inches: stratified sand to silt loam	0-3	Well drained	Flood plains
306	Udorthents-Urban land complex	A - 0 to 5 inches: loam C1 - 5 to 21 inches: gravelly loam C2 - 21 to 80 inches: very gravelly sandy loam	0-25%	Well drained	Urban lands

Southern Section (see Appendices A2 and A3)

No.	Name	Typical Soil Profile	Slope %	Drainage	Landform
13	Walpole sandy loam	Oe - 0 to 1 inches: mucky peat A - 1 to 7 inches: sandy loam Bg - 7 to 21 inches: sandy loam BC - 21 to 25 inches: gravelly sandy loam C - 25 to 65 inches: very gravelly sand	0-3%	Poorly drained	Deltas, depressions, depressions, outwash plains, outwash terraces
15	Scarboro muck	Oa - 0 to 8 inches: muck A - 8 to 14 inches: mucky fine sandy loam Cg1 - 14 to 22 inches: sand Cg2 - 22 to 65 inches: gravelly sand	0-3%	Very poorly drained	Depressions, outwash terraces, drainageways, outwash deltas
18	Catden and Freetown soils	Oe - 0 to 2 inches: mucky peat Oa - 2 to 79 inches: muck	0-2%	Very poorly drained	Bogs, depressions, depressions, kettles, marshes, swamps
21A	Ninigret and Tisbury soils	Ap - 0 to 8 inches: fine sandy loam Bw1 - 8 to 16 inches: fine sandy loam Bw2 - 16 to 26 inches: fine sandy loam 2C - 26 to 65 inches: stratified loamy sand to loamy fine sand	0-5%	Moderately well drained	Depressions, kames, kame terraces, outwash plains, outwash terraces, drainageways, moraines
22A	Hero gravelly loam	Ap - 0 to 9 inches: gravelly loam Bw1 - 9 to 18 inches: gravelly silt loam Bw2 - 18 to 24 inches: gravelly silt loam Bw3 - 24 to 27 inches: gravelly sandy loam 2C - 27 to 60 inches: stratified extremely gravelly coarse sand to gravelly loamy	0-3%	Moderately well drained	Outwash plains, terraces

No.	Name	Typical Soil Profile	Slope %	Drainage	Landform
31A 31B 31C	Copake fine sandy loam	Ap - 0 to 6 inches: fine sandy loam AB - 6 to 13 inches: gravelly fine sandy loam Bw1 - 13 to 21 inches: gravelly fine sandy loam Bw2 - 21 to 31 inches: gravelly fine sandy loam 2C1 - 31 to 56 inches: very gravelly coarse sand 2C2 - 56 to 65 inches: fine sand 2C3 - 65 to 75 inches: gravelly sand 2C4 - 75 to 80 inches: gravelly sand	0-3% 3-8% 8-15%	Well drained	Kames, outwash plains, terraces
32A 32B 32C	Haven and Enfield soils	Ap - 0 to 7 inches: silt loam Bw1 - 7 to 14 inches: silt loam Bw2 - 14 to 20 inches: silt loam BC - 20 to 24 inches: fine sandy loam 2C - 24 to 60 inches: stratified very gravelly sand to gravelly fine sand	0-3% 3-8% 8-15%	Well drained	Outwash plains, terraces
34B	Merrimac fine sandy loam	Ap - 0 to 10 inches: fine sandy loam Bw1 - 10 to 22 inches: fine sandy loam Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand 2C - 26 to 65 inches: stratified gravel to very gravelly sand	3-8%	Somewhat excessively drained	Eskers, kames, outwash plains, outwash terraces, moraines
38E	Hinckley loamy sand	Oe - 0 to 1 inches: moderately decomposed plant material A - 1 to 8 inches: loamy sand Bw1 - 8 to 11 inches: gravelly loamy sand Bw2 - 11 to 16 inches: gravelly loamy sand BC - 16 to 19 inches: very gravelly loamy sand C - 19 to 65 inches: very gravelly sand	15-45%	Excessively drained	Eskers, kames, kame terraces, outwash plains, outwash terraces,
60C	Canton and Charlton fine sandy loams	Ap - 0 to 7 inches: fine sandy loam Bw1 - 7 to 15 inches: fine sandy loam Bw2 - 15 to 26 inches: gravelly fine sandy loam 2C - 26 to 65 inches: gravelly loamy sand	8-15%	Well drained	Ridges, hills, moraines
62D	Canton and Charlton fine sandy loams extremely stony	Oi - 0 to 2 inches: slightly decomposed plant material A - 2 to 5 inches: fine sandy loam Bw1 - 5 to 16 inches: fine sandy loam Bw2 - 16 to 22 inches: gravelly fine sandy loam 2C - 22 to 67 inches: gravelly loamy sand	15-35%	Well drained	Ridges, hills, moraines

No.	Name	Typical Soil Profile	Slope %	Drainage	Landform
92B	Nellis fine sandy loam	Ap - 0 to 8 inches: fine sandy loam Bw1 - 8 to 14 inches: fine sandy loam Bw2 - 14 to 25 inches: fine sandy loam BC - 25 to 27 inches: loam C - 27 to 60 inches: sandy loam	3-8%	Well drained	Hills
100	Suncook loamy fine sand	Ap - 0 to 7 inches: loamy fine sand C1 - 7 to 15 inches: stratified coarse sand to loamy fine sand C2 - 15 to 22 inches: stratified coarse sand to loamy fine sand C3 - 22 to 32 inches: stratified coarse sand to loamy fine sand C4 - 32 to 42 inches: stratified coarse sand to loamy fine sand C5 - 42 to 65 inches: stratified gravelly coarse sand to loamy fine sand	0-3%	Excessively drained	Flood plains
102	Pootatuck fine sandy loam	Ap - 0 to 4 inches: fine sandy loam Bw1 - 4 to 16 inches: fine sandy loam Bw2 - 16 to 21 inches: fine sandy loam Bw3 - 21 to 29 inches: sandy loam C1 - 29 to 35 inches: stratified very gravelly coarse sand to loamy fine sand C2 - 35 to 40 inches: stratified very gravelly coarse sand to loamy fine sand C3 - 40 to 65 inches: stratified very gravelly coarse sand to loamy fine sand	0-3%	Moderately well drained	Flood plains
105	Hadley silt loam	Ap - 0 to 12 inches: silt loam C1 - 12 to 29 inches: stratified very fine sand to silt loam C2 - 29 to 40 inches: stratified very fine sand to silt loam C3 - 40 to 45 inches: stratified sand to silt loam C4 - 45 to 60 inches: stratified sand to silt loam	0-3%	Well drained	Flood plains
106	Winooski silt loam	Ap - 0 to 12 inches: silt loam B1 - 12 to 18 inches: silt loam B2 - 18 to 36 inches: silt loam C3 - 36 to 52 inches: very fine sandy loam C4 - 52 to 65 inches: silt loam	0-3%	Moderately well drained	Flood plains

No.	Name	Typical Soil Profile	Slope %	Drainage	Landform
107	Limerick and Lim soils	Ap - 0 to 8 inches: silt loam BCg1 - 8 to 20 inches: silt loam BCg2 - 20 to 36 inches: silt loam BCg3 - 36 to 54 inches: silt loam Cg - 54 to 65 inches: silt loam	0-3%	Poorly drained	Flood plains
108	Saco silt loam	A - 0 to 12 inches: silt loam Cg1 - 12 to 32 inches: silt loam Cg2 - 32 to 48 inches: silt loam 2Cg3 - 48 to 60 inches: stratified very gravelly coarse sand to loamy fine sand	0-2%	Very poorly drained	Flood plains
109	Fluvaquents -Udifluvents complex	A - 0 to 4 inches: silt loam Cg1 - 4 to 14 inches: fine sand Cg2 - 14 to 21 inches: very fine sand Ab1 - 21 to 38 inches: silt loam Ab2 - 38 to 45 inches: fine sandy loam C'g3 - 45 to 55 inches: sand A'b3 - 55 to 60 inches: fine sandy loam	0-3%	Frequently flooded	Flood plains
234 B	Merrimac-Urban land complex	Ap - 0 to 10 inches: fine sandy loam Bw1 - 10 to 22 inches: fine sandy loam Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand 2C - 26 to 65 inches: stratified gravel to very gravelly sand	0-8%	Somewhat excessively drained	Eskers, kames, outwash plains, outwash terraces, moraines
306	Udorthents-Urban land complex	A - 0 to 5 inches: loam C1 - 5 to 21 inches: gravelly loam C2 - 21 to 80 inches: very gravelly sandy loam	0-25%	Well drained	Urban lands
308	Udorthents, smoothed	A - 0 to 5 inches: loam C1 - 5 to 21 inches: gravelly loam C2 - 21 to 80 inches: very gravelly sandy loam	0-35%	Moderately well drained	N/A

Current Conditions

The current conditions in the two sections of the proposed River Trail project vary considerably. The proposed alternatives and conditions of each section are described in more detail below.

Northern Section

The northernmost terminus of the Northern Section APE is located at Boardman Road, south of Sega Meadows Park. From Route 7, Boardman Road crosses west to east over the Housatonic River immediately south of the historic 1888 Boardman's Bridge, a wrought-iron, lenticular truss bridge now on the National Register of Historic Places (NR, USN #76001983; Photograph N1). The existing railroad tracks cross Boardman Road just east of the river, and between the tracks and the river the terrain slopes downward and is heavily forested (Photograph N2). Continuing south, the area between the railroad tracks and the river broadens and levels out, with steeper slopes situated directly at the river's embankment (Photographs N3 and N4). This broader area

is also wooded and has evidence of an unpaved abandoned roadway, possibly once used to access fishing spots or for nineteenth-century railroad construction access. Also in this level area, now part of the MEDInstill complex, is a fenced-in pen surrounding a small, square, concrete block structure that may serve as some type of water or sanitation control (Photograph N5). The function of the structure is not known, but it is likely either related to MEDInstill or their predecessor since there appears to be access to it from their larger landholdings and complex immediately south (Figure 2a). East of the railroad tracks and outside the APE here are several large fields, including soccer and baseball fields, on relatively level terrain (Photograph N6). Along this section of the APE, the railroad tracks are cut down into the existing sloped topography (Photograph N7).

Continuing southeast the proposed trail passes through another field owned by MEDInstill, and past two unused buildings located immediately west of the railroad tracks (Photographs N8 and N9). The trail here would then continue through MEDInstill's main complex of structures, along its western side. Immediately northeast of the main entrance to MEDInstill, the railroad tracks pass above Boardman Road, while the road turns sharply south and then east, resulting in the route of the tracks having shifted to the north side of the road. The proposed trail would continue along existing land bordering the river, to a choke point where the railroad tracks and Boardman Road virtually abut the river (Photographs N10 and N11). Because of the lack of space between the tracks, road, and river, the proposed trail would likely be constructed on elevated structure supported by piles above the steep embankment where there is riprap placed along the river's edge (Photograph N12).

South of this point, both Boardman Road and the railroad swing north and east of the river. There are two alternatives continuing to the south. The first proposed route of the trail would continue close to the river through wooded areas across a seasonally flooded series of parcels called the Wannuppee Islands (Photograph N13). These "islands" are actually a terraced area immediately south of Boardman Road and its southern continuation, Housatonic Avenue. The islands are connected to the mainland when not flooded, and have channels around and crossing them (Photographs N14 and N15). This option would include a new bridge/elevated structure to crossing the channels, and then turning east to Youngfield Road.

To the south the proposed trail would continue across wooded parcels and the ballfield at Helen Marx Park (Photographs N16 and N17). It would then follow the north side of the West Aspetuck River (Photograph N18), which drains into the Housatonic River, north to Housatonic Avenue. The trail would then cross the West Aspetuck River near or over the existing bridge and follow the course of Youngfield Road where it would then join up with the Riverwalk Trail (Photograph N19).

Alternatively, after the choke point the trail would continue through woodland just east of Housatonic Avenue (Photograph N20), and would then run along the south side of Housatonic Avenue, crossing over the West Aspetuck River and south to the existing Riverwalk Trail (Photographs N19, N21, and N22).

Southern Section

The Southern Section APE begins just south of the extant Riverwalk Trail, and it would take one of three potential courses south from the existing trail (Photograph S1). The northernmost portion of each option would travel across terrain that has been modified historically for either the creation of playing fields, raising roadbeds, grading, utility installation, and generalized urban development.

The preferred alternative would turn east from Youngfield Road, cross Young's Field, go up an embankment, turn south through a paved parking lot and continue across Bridge Street onto West Street (Photographs S2 and S3). The field was likely disturbed from grading to create baseball diamonds. The second potential course would follow along the east side of Youngfield Road south to Bridge Street where a tunnel would be excavated to allow the trail to cross beneath the street where there is prior disturbance from bridge construction (Photograph S4). The trail would then turn east along the south side of Bridge Street, and turn south onto West Street (Photographs S5). The third potential option would continue south on Youngfield Road, veer west immediately before Bridge Street so that the trail would go beneath the eastern abutment for the bridge, then immediately turn east and rise up to the elevation of the road on the south side of Bridge Street. The path would then turn south at West Street (Photographs S5 and S6). In all of these potential scenarios, the trail would then continue south on the west side of West Street (Photograph S7). Presumably all roadbeds in this area have been previously disturbed by utility lines, culverts, and the process of grading and paving.

The preferred alternative would continue south to the New Milford Sewer Plant, where it would turn west to pass through Hidden Treasures Park, a heavily vegetated peninsula that juts out into the Housatonic River. The trial would go south through the site of a power house that was once part of the Bleachery complex, and an adjacent storage tank. The building is a roughly-squared stone structure with stone lintels that is currently in poor condition; the roof has caved in and there are cracks in the façade. The trail would then turn west and cross a new bridge to be constructed above the remnants of the Bleachery Dam, a small island, and the falls in the Housatonic River (Photographs S8, S9 and S10). From this point the trail would either veer north for several yards along the west side of the Housatonic River and then climb west and uphill along a parking lot to connect with Pickett District Road, or it would continue south along an existing foot path on the western bank of the Housatonic River.

An alternative to passing through Hidden Treasures Park would continue south on West Street through a parking lot at the Bleachery complex and West Cove Marina, and cross the Housatonic River in proximity to an existing railroad bridge (Photograph S11). The degree of prior disturbance in this area is unknown, but is presumed to be fairly shallow. From the west side of the railroad bridge, the trail would continue along the previously disturbed railroad right-of-way and then turn northwest onto a Kimberly Clark Access Road that turns west to connect with Pickett District Road (Photograph S12).

All proposed alternatives would then continue south along the east side of Pickett District Road (Photograph S13), but diverge at a point just south of Stratus Foods (87 Pickett District Road). From this point, the preferred route would turn east and go back downhill toward the Housatonic River (Photograph S14), and then turn south to cross and then follow either 1) the route of the

existing railroad tracks or, 2) a new path through an open field along the river's edge (Figure 2b). A third alternative to this would turn east at the same location as the preferred option doing downhill toward the river (Photograph S14), but would then turn south at the parking area for Town owned ball fields. All three of these alternatives would continue south and merge at the mouth of the Still River, and cross areas with minimal prior disturbance. A fourth alternative would not turn east but instead would continue south on Pickett District Road as far as Still River Drive, crossing over it and onto Lanesville Road (Photograph S15; Figure 2b).

The first three alternatives, including the preferred route, would cross over a proposed new bridge at the mouth of the Still River where there are existing railroad bridge abutments on either side of the river (Photograph S16 and S17). The preferred alternative would turn southwest at this point to follow an existing former railroad alignment that once served the Bridgeport Wood Finishing Company archaeological site, southwest to Still River Drive. An alternative to this would continue along a new path adjacent to the Housatonic River through the Bridgeport Wood Finishing Company archaeological site. The site is on the State Register of Historic Places (SR) and a Connecticut Archaeological Preserve (Photograph S18). The path would continue southeast to cross Still River Drive into Lovers Leap State Park, uphill to Lovers Leap Bridge, then turn southwest along an existing trail and then down onto the west side of Still River Drive (Photograph S18). Both these options would then turn south onto Franks Lane and enter into the parking area for Harrybrooke Park (Photograph S19). The preferred alternative would continue south into Harrybrooke Park via an existing paved drive and continue through the paved trail system at Harrybrooke Park (Photographs S20).

The Pickett District Road alternative would continue south on Pickett District Road, cross Still River Drive, cross onto Lanesville Road, and then either 1) turn east to enter into Harrybrooke Park via an existing bridge that crosses over the Still River and connects with the northern parking lot (Photograph S21), or 2) continue south on Lanesville Road and enter into the park via an existing park bridge over the Still River (Photograph S22). Prior disturbance in these areas appears to be limited to road and parking lot paving.

After looping through Harrybrooke Park, the trails would then exit at the southeastern corner of the park to follow the existing railroad line south to Erickson Road. One potential route would continue south along the railroad route, while another would veer to the west to follow Erickson Road. The two alternatives merge north of the intersection of Erickson and Cross Roads (Photograph S23), and continue south on Erickson Road, and its continuation, Aldrich Road. The proposed route would terminate on Aldrich Road where it links to Old Middle Road, allowing bikers and pedestrians to continue south on Brookfield's Still River Greenway (Figure 2b).

4.0 CULTURAL OVERVIEW

Precontact Era

In this report the word Precontact describes the period prior to the use of formal written records by European Americans. For the western hemisphere, the Precontact era also refers to the time before European exploration and settlement of the New World. Archaeologists and historians gain their knowledge and understanding of Native Americans in the Connecticut area from three

sources: ethnographic reports, Native American artifact collections, and archaeological investigations. Based on data from these sources, a Precontact cultural chronology has been devised for the Northeast. Precontact periods are traditionally divided into the Paleo-Indian, Archaic, Transitional, and Woodland stages, the Archaic and Woodland usually being subdivided into Early, Middle, and Late substages. The stages are defined by changes in artifact types and assemblages, settlement and subsistence patterns, and cultural systems.

Archaeologists in Connecticut have used archaeological data to establish regional models of Precontact subsistence and settlement patterns. These models, while tentative, provide archaeologists with a baseline for understanding potential resources within the region. This contextual understanding enables an interpretation of archaeological resources and an assessment of Precontact land and resource utilization. The outline presented summarizes the Precontact period for the region, based on long-term archaeological research. It should be noted that as research in the area continues, theoretical issues become more refined, affecting this regional chronology.

Scholars generally characterize Precontact sites by their close proximity to a water source, fresh game, and exploitable natural resources (i.e., plants, raw materials for stone tools, clay veins, etc.). These sites are often placed into three categories: primary (campsites or villages), secondary (tool manufacturing, food processing), and isolated finds (a single or very few artifacts either lost or discarded). Primary sites are often situated in locales that are easily defended against both nature (weather) and enemies. Secondary sites are often found in the location of exploitable resources (e.g., shell fish, lithic raw materials). Archaeologists currently believe that cultural groups inhabiting the region practiced a settlement and subsistence pattern of seasonal rounds exploiting a diverse array of resources.

Conflicting data suggest a Native American presence that pre-dates glaciation; however, post-glacial theory is more widely accepted. During the Wisconsin episode of the Pleistocene in the Northeast, glaciers reached their maximum advance between 18,000 and 16,000 years ago. As glaciers retreated north, gravel deposited along the melting margin formed moraines. Nantucket, Martha's Vineyard, Long Island and Staten Island mark the southern edge of the glacier as it existed about 15,000 years before the present (B.P.). Parts of these islands are formed from moraines left behind as the glaciers retreated north. Most of New York and New England deglaciated and landforms became exposed over the next 2000 years. As the ice melted, glacial lakes formed, and eventually swamps formed as these lakes filled with sediment. By 13,000 B.P. flora and fauna began repopulating southern New England.

Paleo-Indian Period (ca. 12,000 to 10,000 B.P.)

Approximately 16,500 years before present (BP) the Wisconsin Glacier began retreating from Southern New England, with portions of southeastern Connecticut and parts of what is now Long Island Sound deglaciated by this time (Gordon 1983; Lavin 2013). By 13,500 BP all of Connecticut was deglaciated, with the tundra environment slowly becoming more hospitable to human habitation. The earliest date of Paleo-Indian habitation in the Northeast thus varies, but it is generally accepted that sites of this period date roughly to 12,500 BP to 10,000 BP. Many also bear evidence of the exploitation of large fauna such as the mammoth, moose-elk, and bison – although none do in Connecticut. There are six professionally excavated Paleo-Indian sites in Connecticut,

including the Lovers Leap site in New Milford that yielded Paleo-Indian points in strata immediately above bedrock similar to those found at the Templeton Site, below (Lavin 2013).

In addition, there are more than 50 isolated artifact finds across the state, suggesting more widespread habitation and, unfortunately, site degradation. The earliest archaeological evidence for human occupation in Connecticut for this period is Litchfield County's Templeton Site, 6-LF-21, which dates to 10,000 BP (Moeller 1980; Weinstein 2017). Paleo-Indian artifacts have also been found along the Aspectuck and Mill Rivers in Fairfield and Easton, both in Fairfield County to the south (Cruson 1991).

In general, settlement patterns suggest small mobile nomadic groups which utilized a wide range of seasonally available resources. Expected artifacts include fluted points and flaked stone assemblages. The Paleo-Indian Period is theorized to have ended because of "overspecialized subsistence strategies emphasizing big-game hunting" (Snow 1980).

A typical artifact assemblage from Paleo-Indian sites in the Northeast include diagnostic Clovis-type fluted projectile points (points) and processing tools such as scrapers, gravers, and drills indicative of processing faunal material. Stone tools were made from chert native to eastern New York, and jasper from Pennsylvania and New Jersey. To some archaeologists, lithics recovered far from their sources suggest well defined or extensive travel or trade networks in operation at that time. Other research in the Northeast has led to the postulation that small bands of hunters nomadically roamed large territories, relying predominantly on post-Pleistocene megafauna. Alternative hypotheses based on research in New York State suggest that Paleo-Indians inhabiting the area used a wide variety of resources and had a restricted territory in which they operated (Eisenberg 1978).

Early Archaic Period (10,000 to 8,000 B.P.)

The Archaic Period contrasts with the preceding period by a shift in subsistence strategies to a wider variety of plant and animal resources, although this strategy likely originated toward the end of the earlier Paleo-Indian period. This observed subsistence strategy change is most likely a response to the gradual warming of the climate and its affect upon regional faunal and floral resources (McBride 1984). Sea levels continued to rise, and there was an increase in white pine, yellow and gray birch, and oak trees that indicate continued warming and drying. By 9,000 BP Long Island Sound had been flooded, separating Long Island from Connecticut.

A deciduous-coniferous forest emerged because of the milder climate in New England. In Connecticut, the Early Archaic Period is characterized archaeologically by a quartz cobble lithic industry and bifurcate-based projectile points. Diagnostic artifacts of this period include Kanawa, and Hardaway stemmed points, Palmer corner-notched points, and Plano lanceolate points (Snow 1980).

Extensive excavations revealing settlement and tool use were completed at the Dill Farm Site, Site 41-50, in East Haddam with a radiocarbon date of 8,560 BP (Lavin 2013). The Sandy Hill Site in the Mashantucket Pequot reservation in Ledyard dates to between 10,000 to 9,500 BP and bears evidence of subterranean residential lodges in a south-facing sandy hillside (Ibid.). The site also

produced plant-food remains representing a wide variety of sources including wetland plants and tubers, nuts, and small game (Ibid.).

Early Archaic sites are more widely distributed than earlier Paleo-Indian sites have been found to be (McBride 1984). The Pages Millpond Site (#99-010) and the Pages Farm Site (#99-009) in North Branford, southwest of the project site, both bore evidence of Early Archaic occupations (PAL 2004). Diagnostic artifacts of this period typically include Kirk, Kanawa, and Hardaway stemmed points, Kirk and Palmer corner-notched points, and Plano lanceolate points (Snow 1980).

Middle Archaic Period (8,000 to 6,000 B.P.)

The trend toward a drier and warmer climate and greater diversity of faunal and floral resources continued through this period. This trend "brought about the establishment of a deciduous forest which had achieved an essentially modern character by 2,000 BC" (Salwen 1975). Trees associated with this climate included black oak, red oak, mockernut and pignut hickories, hard maple, beech, black and yellow birches, white ash, butternut, basswood, black cherry, and dogwood. The typical shrubs found in this forest type included azalea, blueberry, huckleberry and mountain laurel (Braun 1950). The first appearance of drought-resistant hickory and warmth-growing American holly demonstrates a climate warmer than today (Lavin 2013).

The increasingly rich and diverse resource base available in the region led to a population increase and a greater record of known Middle Archaic sites. The first known Native American occupation of the Connecticut coastal region occurred during the Middle Archaic Period. Netsinkers and plummets found at sites indicate the growing importance of marine resources (Snow 1980). There has been a constant presence in this region through several climatic changes and faunal adaptations since that time. Some researchers argue that Middle Archaic occupations in Connecticut demonstrate an orientation toward upland interior microenvironments (Prindle and Lizee 1989), while others have argued that sites appear evenly distributed between riverine and upland areas of Connecticut (McBride 1984).

The Middle Archaic Neville culture complex is identified by three point types: Neville, Stark and Merrimac points. Neville and Stark points have been reported from over 100 sites in Connecticut, but Merrimac points are rare by comparison (Lavin 2013). In the lower Connecticut River Valley, Neville and Stark points have been found in conjunction with bifaces, hammerstones, and ground stone tools suggestive of heavy woodworking activities.

Late Archaic / Terminal Archaic Period (6,000 to 2,700 B.P.)

There is little concordance in the date of the end of the Archaic Period and the beginning of the Woodland Period, but it is generally accepted that the Late Archaic Period dates to ca. 6,000 to 3,800 BP, while the subsequent Terminal Archaic period dates between 3,800 and 2,700 BP. The existence of numerous perspectives on the demarcation of time periods is indicative of both the large amount of data available and the need for further research.

Numerous sites of this period are known throughout the Northeast. Study has suggested that a seasonally based subsistence pattern was in place with a greatly expanded population base. It is "often considered a period of cultural fluorescence" (Prindle and Lizee 1989) due to occurrences of

burials and long-distance exchange networks (Snow 1980). Steatite bowls first made their appearance during this period.

There are two major cultural traditions of the Late Archaic Period: the Laurentian tradition, and the Narrow-Stemmed tradition (McBride 1984). The Laurentian tradition's known diagnostic artifacts include Vosberg, Brewerton, and Otter Creek projectile point styles. Stone tools include pitted stones, net sinkers, spokeshave scrapers, drills and knives, chipped and ground stone ulus, and ground stone pestles, gouges, axes, plummets, adzes, and atlatl weights (aka bannerstones) (Lavin 2013). This tradition is generally marked by a settlement system in which larger populations would gather around a plentiful seasonal resource but then break up into smaller groups during other, less productive seasons.

The diagnostic artifacts of the Narrow-Stemmed or Narrow Point tradition include Lamoka, Bare Island, Squibnocket Stemmed, and Poplar Island triangular projectile points. Settlement pattern analysis has suggested a uniform site distribution "in respect to major ecological zones such as floodplains, terraces, and uplands" (McBride 1984). The Lovers Leap site had a Laurentian component (Lavin 2013).

Local Terminal Archaic groups added a new type of artifact to their tool kit. Bowls and other utilitarian and decorative items were fashioned from ground and polished steatite, or soapstone. The majority of sites found in the surrounding region were located on the banks of the Housatonic River and its major tributaries. This may be because of the high visibility along major river drainages rather than the actual lack of sites in remote settings.

Early Woodland Period (2,700 to 1,650 B.P.)

The first part of the Woodland Period was essentially a continuation of the stylistic traditions of the Late Archaic. It marked a period of progression in which the production and use of ceramics commenced. Settlement pattern information suggests that the broad-based strategies of the Late Archaic continued, with possibly more extensive use of coastal resources. This last point must be qualified since the larger shell middens of the Woodland Period could merely be representing their greater preservation (Wiegand 1987). Climatic warming continued and resulted in rising sea levels which may have inundated and destroyed many early coastal sites.

The climate gradually cooled during this period, perhaps reducing resource availability. Settlement systems changed with the need to exploit alternative resources. Coastal resources, providing year round availability, were sought while upland hunting and gathering supplemented coastal resources. Fish runs in rivers provided a stable and reliable resource. Fish weirs were used in the Housatonic and smaller tributary rivers to catch large quantities of anadromous fish to feed the growing population (Brumbach 1986).

The Early Woodland Period is characterized by Lagoon, Rosville, and Meadowood projectile points, as well as thick interior and exterior cord-marked ceramics. Sites from this period in Connecticut often contain evidence of a quartz cobble lithic industry and a continuation of the Narrow-stemmed point tradition. Sites of this type with Meadowood components have been identified in New Milford (Lavin 2013).

Middle Woodland Period (1,650 - 975 B.P.)

Research of sites from this period has provided evidence of a significant change in settlement patterns to a more sedentary lifestyle, likely due to the stabilization of environmental fluctuations experienced toward the end of the previous Early Woodland Period. The discovery of large storage pits, larger sites, evidence of oblong pole-framed structures and wigwams further bolsters this supposition (Lavin 2013). In Connecticut, the introduction of maize is evident toward the end of this period, and other horticultural practices may have been utilized at this point as well, though clearly not to the extreme that it was in the subsequent Late Woodland Period. Reliable, predictable sources of food from resource rich environments would have fostered year-round habitation.

Diagnostic artifacts dating to the Woodland Period include Levanna, Orient and Roseville projectile points and various types of pottery.

Late Woodland Period (975 to 450 B.P.)

During the Late Woodland Period food items such as maize, beans, and squash (the Three Sisters) were raised through a specialized agricultural system with the earliest recovered bean seed dating to 550 BP from a site in South Windsor, and maize first dating to 950 BP (Lavin 2013). Early New England settlers described the Native American horticultural practices, with women planting and tending agricultural plots. This radically different subsistence strategy was accompanied by commensurate changes in settlement patterns. Analysis of material culture has suggested significant changes in social organization, long distance trade networks, and an overall increase in population density.

Known sites of this period are much larger than earlier sites. The occurrence of sites found in defensible locations has suggested some degree of regional social conflict possibly due to population pressure. Triangular points are a common diagnostic artifact of this period as well as stamped, cordmarked, brushed, and fabric-marked ceramic designs. The trend toward increasingly agricultural based economies was observed across much of the Northeast during this period.

Within the Late Woodland period, the Windsor cultural tradition predominated in Connecticut, with components found in the Housatonic River drainage. Artifact types of this period include the Levanna triangular projectile point, celts, and horticultural tools. Triangular points are common diagnostic artifacts, as well as stamped, cordmarked, brushed, and fabric-marked ceramic designs. Archaeological assemblages have recovered pendants and pins, suggesting that personal ornamentation was important. Ceramics changed technologically as walls were thinned and overall shape was rounded. This shift to a more rounded vessel base may correspond to the adoption of maize and the need to boil cultigens for longer periods of time (Braun 1980).

Contact Period (450 B.P.)

The Pootatuck and Weantinock were reportedly occupying the region when Europeans first began populating the New Milford area. At that time, Native American groups were organized into small households that banded together along ethnic and territorial lines into larger villages during the spring and summer, and dispersing during the fall and winter (PAL 2004). Native Americans generally lived in round and oblong wigwams that could accommodate single or extended families. Dispersed and decentralized towns extended across stretches of riverbank along secondary streams in wide, sheltered valleys and coves. The number of smaller task-

specific sites from this period corroborates early written descriptions by European settlers who report people living in hunting, fishing, and foraging camps in the hinterlands, largely during winter months (Grumet 1995).

Initial interactions between Native Americans and Europeans transpired when early explorers traded with the native population. As non-indigenous materials were introduced into the native material culture, tool assemblages and settlement and subsistence patterns changed drastically. Traditional stone, bone, and wood tools were replaced by European goods made of copper and iron. Shell beads and wampum were produced, and furs were collected by Native Americans as a medium of exchange. Europeans were happy to procure furs from Native Americans, resulting in many trading posts being established along New England's major tributaries.

By the end of this period, traditional tools were replaced by adopted European goods such as copper and iron. Shell beads and wampum were produced along the coast, and furs were collected by Native Americans as a medium of exchange. As European encroachment on Indian land persisted, these small groups were forced onto smaller and smaller tracts of land, and finally onto reservations. These were small and residents faced economic hardships. As a result, many of these groups moved into English communities or disbanded.

Known Precontact Sites in the Area

According to a 1986 archaeological assessment of the Northwest Hills region of Connecticut, the Housatonic River and uplands bordering the river and tributary streams are expected to contain localized areas of intense prehistoric occupation (Poirier 1986). Ensuing archaeological surveys have shown this to be quite accurate.

The majority of known Precontact sites in proximity to the Northern and Southern Section APEs are situated along the floodplains and terraces along the Housatonic and Still Rivers. Years of archaeological and ethnohistorical research revealed sites dating from each of the cultural periods described previously, with the Woodland period more heavily represented along the floodplains of each of these rivers. These fertile locations were used as planting fields and are considered traditional Weantinock "homelands," once dotted with clusters of wigwam (Handsman 1990). These homelands are represented today by a series of archaeological sites, including wigwam clusters, caches, and planting fields (Carlson 1994). Superimposed over earlier sites dating as many as several thousand years old, these locales are now extensive aggregations ranging in age between 5000 and 300 years old (Handsman 1990). Upland knolls and terraces served as inland hunting and small-scale habitation sites, protected from the flooding rivers.

Locations in proximity to the proposed alignments of the Southern Section of the Trail have been archaeological investigated, with multiple sites having been found along the floodplains of the Housatonic and Still Rivers. Precontact sites located inside and outside the project corridor, have been identified and investigated through a number of professional archaeological surveys including the Iroquois Gas Transmission Survey (Cassedy 1991), the Route 7 bypass alignment in northern Brookfield and New Milford (HPI 1997, 1999, 2004; McBride 1988), the Route 7 expansion project in New Milford (Harper et al. 2007), and a survey for the New Milford High

School (Walwer and Walwer 1998; Lavin, Dumas, and Kania 1999). Another project assessing the sensitivity of the proposed relocation of Lanesville Road also identified a site (CAS 1985, 1991). Many of the other previously recorded sites have been identified by amateur archaeologists and/or through informant interviews.

Multiple Precontact sites have been assigned Connecticut State Site Numbers by the former Connecticut Historical Commission (CHC), now the State Historic Preservation Office (SHPO). Others are only identified on a Connecticut State Archaeological Site Inventory Map as "JP" for John Pawlowski, the local amateur archaeologist who reported the site. Many of the previously recorded sites were reported by the American Indian Archaeological Institute (AIAI), now the Institute for American Indian Studies (IAIS). Some sites were also assigned Connecticut Archaeological Survey (CAS) numbers, while others were previously assigned county trinomials, such as 6LF116, indicating town (New Milford), county (Litchfield), and site number.

The 2009 survey of the Danbury to New Milford rail corridor (Walwer and Walwer) provided a survey of previously reported sites in proximity to the current Southern Section APE, which is in close proximity to the railroad alignment in many places (see Appendix B, Table 2 of this report).

Northern Section:

Many of the previously identified archaeological sites east of the Housatonic River and north of the Village of New Milford have been found adjacent to wetlands or in proximity to tributaries, such as the Aspetuck River. Most of these were identified by amateur archaeologists or collectors. Many of these sites have never been professionally investigated.

Table 1 below provides a brief summary of the previously recorded sites found near, but outside of, the Northern Section APE. No previously recorded sites have been reported in the Northern Section APE.

Table 1: Precontact Sites Reported Near the Northern Section APE.

CHC#	CAS#	Location	Description
#96-38		North of Railroad Tracks near Wannuppee Islands, .25 miles north of APE	None provided
#96-37		North of Railroad Tracks, west of Aspetuck River, .25 miles north of the APE	None provided
#96-47	3072	West side of Railroad at Boardman's Bridge, .3 miles north of the APE	Archaic camp with a sylvan stemmed point, scrapers, and quartz debitage

While sections of northern New Milford to the west and east of the Northern Section APE have been identified as having Native American archaeological resources, no other resources were reported from nearby.

Southern Section:

As previously noted, the Southern Section APE lies in an area where multiple professional archaeological surveys have been undertaken in response to more recent development. As a result, more sites have been reported in or near the Southern Section APE. Specifically relevant to this current study was the 2009 study of the *Danbury Branch Improvement Program* (Walwer and Walwer 2009), which assessed the archaeological and historical sensitivity of the existing railroad corridor and a surrounding buffer area (including much of the current Southern Section APE) from the New Milford and Brookfield border north to the New Milford Railroad Station. Inventories of known Precontact sites were compiled, and recommendations for the future were made (Appendix B). Summary information of known sites is presented herein, and summary tables of resources compiled in the 2009 study are presented in Appendix B, Table 2. Any additional sites recorded at the SHPO are also included in the following discussion.

While no Precontact sites have been recorded directly in the village of New Milford, at the south end of West Street, the West Cove Marina area was previously identified by the SHPO as having a potentially high sensitivity for Precontact resources.

Continuing south on the west side of the Housatonic River, archaeological investigations undertaken in the area of Kimberly Clark on Pickett District Road (HAA 1998, 1999a, 1999b) revealed a Precontact site just south of the railroad crossing of the Housatonic River, between the river and the railroad tracks (#KC-1). Site I was identified west of the APE, and included several loci on the east side of Pickett District Road. Phase Ib testing and surface collections recovered an Early Woodland Lagoon point, a quartz biface, and quartz and chert debitage (HAA 1998). Site I also contained a number of historic ceramic materials scattered throughout a plow zone, while other prehistoric materials were found in the project area further to the west and just outside the current project corridor, including a hammerstone, more debitage, and a Late Archaic Bare Island projectile point. Phase II excavations of the two site locations recovered fire-cracked rock, a steatite fragment, and additional quartz debitage. Development plans were modified to avoid the sites, and no further excavations were undertaken (HAA 1999a).

Continuing south, Site #96-52, the Still River I Site, was identified on the west bank of the Housatonic River adjacent to Town owned ballfields off of Pickett District Road, where several loci of Late Archaic campsites were represented by lithic tools and debitage. South of this Site #96-19, the Dodd Farm Site, is located within the ballfields just north of the mouth of the Still River within the APE. Here, surface collections and subsurface testing has yielded quartzite preforms, a quartzite hoe, steatite fragments, cordmarked ceramics, and a range of projectile points including Vosburg, Brewerton side-notched, Sylvan side-notched, small-stem quartz, and Fox Creek, along with a high density of debitage. The site is located where the Connecticut Archaeology Survey (CAS 1975) previously recorded finding dense quantities of chert and quartz debitage.

Continuing south again, state site forms report two sites (Mike Lawson, Site #96-66; #96-64) near the confluence of the Still River and the Housatonic River, but site forms have no other information other than general location so it is possibly in the APE. Of these, Site #96-64 appeared to be midway between the railroad tracks and Pickett District Road, along the northern

bank of the Still River. Site #96-66 was reported just south of Still River Road where it crosses the Housatonic River (Walwer and Walwer 2009).

One of the most well-known sites near this area is the Lovers Leap Site (#96-29, 6LF70), near the confluence of the Housatonic and Still Rivers immediately east of the APE. The Lovers Leap site sits on a high hill in the middle of the bisected Housatonic River with water flowing on each side. The site covers roughly 12 acres, and has been extensively surface collected and excavated by amateur and professional archaeologists, and is known to have produced thousands of aboriginal ceramic sherds, projectile points, steatite vessel fragments, and features such as hearths, storage pits, cremation burial, and post molds.

The site is located near what was reportedly the main seventeenth century village of the Weantinock tribal community. According to archaeologist Lavin, it contained clay pots reminiscent of Hudson Valley pottery types including Garoga-like rim sherds, Chance Incised, and uncollared cord-wrapped stick stamped pottery reminiscent of Hudson Valley Owasco type pottery (Lavin 2011). While these styles are very similar to those of the Hudson Valley, they are considerably different from those found on sites in other parts of Connecticut (Ibid.).

The Indian Ridge site is part of the Lover's Leap site complex, and overlooks the confluence of the Still and Housatonic Rivers (Lavin and Miroff 1992). The area is interpreted as both a Precontact and historic site complex because artifacts recovered from Lover's Leap by amateur archaeologists and by pothunters strongly indicate repeated (if not continuous) occupation of the entire multi-acre parcel by Native American and European groups, beginning with the Paleo-Indian period and extending into the modern era (Ibid). Occupations seem to overlap and intrude into each other. To date, individual site boundaries and their temporal natures have yet to be determined, but the site did produce one location dating to the Terminal Archaic period with a radiocarbon date of 3,665 B.P. +180 (Swigart 1974).

Further to the south are two prominent knolls where site components cover the full range of prehistoric occupation (Weinstein 1998). Wading River, Levanna points, and other lithic tools were also found during excavations conducted across the river on and around Falls Mountain (Weinstein 2001).

Along the eastern banks of the Housatonic River, across from Lovers Leap, winter roadway construction in 1963 peeled off a dense charcoal layer to uncover a cache of 62 well-fashioned, well-curated Mansion Inn blades dating to the Early Woodland period and dubbed the “Lovers Leap Cache” (Site 6LF65) (IAIS Site Files). The site is far out of the APE but is noted due to the unique artifacts produced.

Two other nearby sites (#96-67 and #96-68) have site forms with only location information available, while Site #96-146 near the intersection of Still River Drive and Pickett District Road revealed chert and quartz debitage, bone, shell, and some historic materials during Phase I testing. The location of the sites suggests it is potentially within the APE. The Harrybrooke Park Site (#96-34) is a multi-component site surface-collected by amateur archaeologists on the east bank of the Still River, with materials dating to at least the Early Archaic period, including scrapers and knives; ground axes, gouges, and bannerstones; and a range of projectile points

including bifurcate, Vosberg, Brewerton, Sylvan, Susquehanna, Orient Fishtail, Fox Creek, and Levanna (Walwer and Walwer 2009). Since site boundaries are not indicated on archaeological site maps, it too may extend into the Southern Section APE.

Professional archaeological testing east of the Candlewood Country Club golf course in Lanesville near the railroad tracks where Erickson Road crosses them revealed relatively light densities of chert and quartz debitage, some fire-cracked rock, post-molds, and some charcoal-rich features with burnt vegetal remains yielding a radiocarbon date of A.D. 1657+70 - indicating that site occupation likely extended into the Contact period (ARS 1994). This site is also possibly in or immediately adjacent to the Southern Section APE.

Continuing south, to the east of the railroad tracks, a cluster of prehistoric sites were previously identified in the vicinity of Old Pumpkin Hill Road where it crosses the railroad tracks. Many were designated as part of the Windwood series of sites named after the property owner to the north of the road (Walwer and Walwer 2009). Included are Sites #96-80 and #96-81. Site #96-80, the Windwood III Site (IGTS 260-2-3), revealed quartz, quartzite, and chert debitage together with one calcined bone fragment (Cassedy et al. 1991). Windwood IV (#96-81 - IGTS 260-3-1) yielded just two chert flakes, a quartz flake, and a possible hammerstone from Phase I subsurface tests, while Phase II testing revealed the site to be a Late Archaic occupation bearing post-mold features, quartz bifaces, chert projectile point base, a quartz Squibnocket stemmed point, a quartz Sylvan side-notched point, and more chert and quartz debitage in relatively light densities (Ibid.). All three of these sites are immediately to the east of the Southern Section APE.

The Windwood II Site (#96-79 - IGTS 260-2-2), to the east of the railroad tracks and outside the APE, contained a Late Archaic occupation bearing a Brewerton side-notched projectile point, another chert point base, quartz and chert debitage, and some late historic intrusive material (Cassedy et al. 1991). Also outside the APE, but directly east of the railroad tracks, the Windwood V Site was encountered (#96-82 - IGTS 260A-1-1), which produced only a single chert flake. Further south, east of the railroad tracks and across from where Cross Road intersects with Erickson Road, the Windwood VI site was identified (#96-83 - IGTS 260A-2-1). The site yielded low densities of chert and quartzite debitage along with some late historic intrusive material in the initial testing, while subsequent Phase II subsurface testing identified a Middle Woodland occupation with chert and quartz debitage, a chert point tip, and a charcoal feature producing a radiocarbon date of 1060 BP + 80 (Ibid.). Further east of this was the Windwood I Site (#96-78 - IGTS 260-2-1). East of and outside the current APE in a heavily overgrown area, the site produced chert and quartz debitage, as well as two pieces of aboriginal ceramics (Walwer and Walwer 2009).

The Windwood VII Site (#96-84 - IGTS 260A-2-2) was identified north of Old Pumpkin Hill Road, west of June Road, and east of Erickson Road and the APE where a house was built in the early 1990s. The site produced quartz debitage during initial archaeological testing, while more intensive Phase II testing revealed a multicomponent site bearing a chert biface, an aboriginal ceramic sherd, a Middle Archaic Stark point, a Lamoka point, a contracting stemmed point, a hammerstone, additional debitage, and various features including post molds (Cassedy et al. 1991).

Another lithic scatter of quartz and chert debitage (Site #96-111 - IGTS 261A-8-2) was recorded just east of the railroad tracks and Aldrich Road, about 2000 feet north of the Brookfield/New Milford border. The site was located just south of another recorded site (#96-110 - IGTS 261A-8-1) that had Late Archaic to Late Woodland components found to contain aboriginal ceramic fragments, a possible Madison chert projectile point, chert and quartz debitage and biface fragments, fire-cracked rock, and calcined bone. Phase II testing at #96-111 and 110 revealed them to be part of the same larger site (Cassedy et al. 1991), with a more expansive material assemblage including Wading River, Squibnocket, Vosburg, Brewerton, and Bare Island projectile points, bifaces, drill fragments, a scraper, retouched flakes, additional ceramic sherds, and chert and quartz debitage (Walwer and Walwer 2009).

Just north of the border of Brookfield and New Milford border, east of the railroad alignment near Old Middle Road, the Aldrich I Site (#96-129 - IGTS 261-5-1) was found and produced quartz debitage and two fragments of aboriginal ceramics, indicating a Woodland era occupation.

To the west of Route 7 and outside the project corridor, the Gallow's Hill Site (#96-44) and Rogg Rockshelter (#96-43) revealed lithic scatters of quartz debitage during amateur surface collections and/or testing. On the east side of Route 7, Site #96-153 was identified during another archaeological survey (Harper et al. 2007). The site produced several chert flakes during Phase I testing. To the west of these sites and outside the project corridor lies the Gallows Shop Site (#96-25) where quartz debitage and some fragments of projectile points were surface-collected.

To the west and outside the Southern Section APE, more sites have produced light densities of debitage (Stack Site, #96-5; AIAI 17 - #96-72), while the Cross Road Site (#96-06) also produced a small-stemmed point, and the Exxon Site (#96-40) revealed a high density of debitage as well as Sylvan side-notched, Orient Fishtail, Susquehanna Broad, and Snook Kill projectile points indicating a Late to Terminal Archaic focus. Vosburg points or blades and bannerstones have also been reported to have eroded from a terrace on the west bank of the Still River in this area (Swigart 1974).

Another cluster of sites was identified west of the APE along Route 7, just north of Cross Road, west of the Southern Section APE. One of the most substantial of these was Site #96-147, where professional excavations documented a Middle-to-Late Archaic site with radiocarbon dates between 7,910 +40 BP and 4,880 +40 BP (Harper et al. 2007). A wide variety of lithic material was recorded at the site, and Squibnocket triangular points were major diagnostic artifacts. The site also featured a high degree of charred botanical remains and calcined bone. Site #96-138 was found on the opposite corner of the same intersection, suggesting it may have been a continuation of Site #96-147, having possibly been bisected by road construction. Here, more lithic debitage and Squibnocket points were recovered, as well as a Beekman point and several lithic scrapers. Both sites were subject to all three phases of professional testing and recording (Harper et al. 2007).

Another major cluster of prehistoric sites was documented to the south of Lanesville in the Still River drainage basin, west of Route 7 and the Southern Section APE. The Larson West-Central

Site (Site #96-22) is a substantial Late Archaic to Terminal Archaic village site that revealed features such a hearth and post molds, steatite vessel fragments, and a radiocarbon date of 4,460 +70 B.P. during Phase II testing (Walwer and Walwer 1998). In addition to a high density of chert and quartz debitage, lithic tools recovered include drills, scrapers, knives, and projectile point forms such as Squibnocket, Perkiomen, Susquehanna Broad, Brewerton, Sylvan side-notched, Beekman, and Lamoka. Phase III investigations at the site recorded approximately three thousand features including hundreds of post molds, and nearly 5,000 artifacts including at least 500 lithic tools, with radiocarbon dates from the Late Archaic and Late Woodland periods (Lavin, Dumas, and Kania 1999).

Other related loci to the east and south revealed less prolific remains, but included Brewerton and Madison points (see also Drake Site - #96-71; #96-144; #96-161). On the east side of Route 7 from this site, Site #96-136 produced lithic debitage, a narrow stem point, and some historic material during Phase I and Phase II testing. The site lies adjacent to Site #96-143 which was also subjected to Phase I and Phase II evaluation, leading to the recovery of just several more flakes.

The Iroquois Gas Transmission System (IGTS) survey led to the identification of three more lithic scatter near Lanesville (Site #96-115 - IGTS 259-5-2, #96-120 - IGTS 259-4-3, and #96-119 - IGTS 259-4-1). Site #96-113 (IGTS 259-8-1) was identified about one-half mile west of the Southern Section APE at Lanesville, and subjected to Phase III data recovery that revealed mostly chert debitage, biface fragments, fire-cracked rock, hammerstone, and projectile points including Lamoka, Beekman, Squibnocket, and Susquehanna types indicating a Late to Terminal Archaic occupation, and represents the most significant site recorded and evaluated by the IGTS study along the project alignment (CRG 1992; Cassedy 1998).

No cultural material was recovered from deep trench testing of the alluvial floodplain at the Still River crossing in the vicinity of the railroad for the IGTS project (Walwer & Walwer 2009).

The Golombeski Site (#96-04) is in or adjacent to the APE in an area that appears slightly graded on the west side of the Still River between Still River Drive and Lanesville Road. Here quartz debitage and a pitted stone were surface-collected by amateur archaeologists. Professional reconnaissance and intensive evaluations of this area and to the west revealed only a light density of quartz and chert debitage (CAS 1985, 1991).

Outside the APE and near Route 7, the Hayes Chevrolet Site (#96-48) was identified northwest of Lanesville Road, where amateur surface collections include quartz triangular and Sylvan side-notched projectile points, quartz debitage, and steatite vessel fragments indicating at least a Terminal Archaic occupation.

Of note, no Precontact resources were encountered during the archaeological survey for the bridge crossing the Still River at Cross Road, immediately west of the current APE (Lizee and Soulsby 1991).

In total, three Precontact sites have been previously identified in or near the Southern Section APE north of the confluence of the Still and Housatonic Rivers, and 17 sites were previously

recorded in or near the APE south of this confluence (see Appendix B, Table 2). The high number of sites identified in proximity to both the Housatonic and Still Rivers strongly indicates that undisturbed locations that have not yet been subjected to professional investigation may also contain Precontact resources.

Historical Era

At the time of contact with Europeans, the Pootatucks, a sub-tribe of the Paugussett Nation, occupied the Still River valley and nearby sections of the Housatonic River valley. Early accounts of Native Americans in the area also cite the Weantinock (a.k.a. Wyántonnucken), another sub-tribe of the Paugussett Nation, as residing in great numbers in the New Milford Area. When the Pootatuck and Weantinock lost most of their homelands, they moved north and founded the tribal community of "Pishgatikuk" (Lavin 2011). This Algonkian word reportedly means "at the meeting of two waters," was mispronounced by the English and later transformed into Scaticook or what is now known as Schaghticoke (Ibid.).

More recent studies of early land-transactions and Native American habitation in the region confirm the Weantinock as the predominant community in the area, and further establishes their relationship to the Mohican in the upper Housatonic River area in Stockbridge, Massachusetts and Salisbury and Sharon, Connecticut (Lavin 2011). Historian Stiles reported in 1762 that the Scatticoke [sic] were living about three miles from New Milford on the river, with 150 people living in "about 30 wigwaums [sic]. The remains of the New Milford Tribe" (Stiles, as printed in Dexter 1916). Sachems and elders traveled along long established Native trails, which linked Native communities in all directions (such as the Old Berkshire Path [now Route 7] and Oronoke Trail), to convene and discuss the actions of the English to the south and east (Lavin 2013).

New Milford's first Euro-American settler, Stephen Goodyear, established a trading post on the Housatonic River in 1644 on what is now Goodyear's Island. His short lived establishment predated the first real attempt to settle the area by almost 60 years. In 1670 a group of men from Stratford purchased 26,000 acres of land along the Housatonic River from the local Weantinock Indians, but never occupied it. At that time, the General Court granted license to Nathan Gould and Jehu and John Burr to purchase land "known as Weantinock" from the Indians, thus forming Weantinock Plantation (Cavallaro 2008). In 1671, another investor – Henry Tomlinson – purchased land from the local Native Americans, and together with John Read and a group of additional investors, later purchased tracts from Gould and Burr. In 1702 a group of men from Milford applied to the General Court for the formal acquisition of the plantation, and were approved despite the fact that Gould, Burr, Read, and Tomlinson had previously acquired title. Legal battles ensued rendering early settlers weary of land acquisitions (Ibid.). The men from Milford were initially found guilty of trespass and Read, Tomlinson, and their investors were found to be the rightful owners of the tract, but the case was eventually overturned on appeal and the Milford group ultimately prevailed.

In 1707, John Noble and his daughter, Sarah, of Westfield, Massachusetts made their journey to what is now New Milford and purchased a tract of land on the banks of the Housatonic. By 1712, twelve additional families had settled in the community. That same year the New Milford plantation became incorporated and was formally recognized as a town, with house lots laid out on Aspetuck Hill (an Indian name for "high place"), at what is now the village of New Milford. In 1718 the first meeting

house was erected, and common fields were established from Wannuppee Island to Four Mile Brook on the west side of the Housatonic River, west of the study area (Orcutt 1976). The village center, established east of the Housatonic River on flat, dry upland divided by a stream and set well above the arable river flood plain, offered the opportunity to geographically concentrate pastureland, buildings, and cropland. Narrow lots were laid east-west around a designated green, still visible today, and roads were later created where worn foot-paths were found on the edges of the green, and west toward the river.

The first settlers crossed the Housatonic River from their homes on the east side to their farm lands on the west side by fording it at a point near the mouth of the Rocky River, about a mile above the settlement, or at Wannuppee Island in times of very low water (Historical Committee of New Milford 1907). In 1720 the town built a boat for this purpose, which was used until 1737 when the first bridge was constructed across the Housatonic River at what is now the foot of Bennett Street (Ibid.)

As the town center grew, more roads were laid out linking outlying farms and industrial sites to the town center. Some of the earliest roads included Main Street and Bridge Street, both laid out in 1714 (Historical Committee of New Milford 1907).

The settlers for many years either ground their grain by hand, or traveled to a mill in one of the nearby towns, namely Danbury or Woodbury. Given the abundance of waterpower and the need for a local miller, in 1715 John Griswold, under an arrangement with the town, built both a grist mill and a saw mill on Still River at what is now Lanesville (Historical Committee of New Milford 1907). Other early industries were also built along rivers and larger streams that offered opportunities for water power. In 1717, another mill was established on the Still River at Lanesville, and in 1718 a highway was laid out from the Danbury Road (what is now Route 7) to the growing Lanesville hub.

After the first 1737 bridge across the Housatonic River washed away in 1740, it was replaced by a toll bridge (Historical Committee of New Milford 1907). In 1766 the bridge was washed away again by floods and rebuilt, an act that was repeated over again numerous times (Ibid.). In 1835 the New Milford Toll Bridge Company incorporated for the purpose of erecting and maintaining two more substantial toll bridges: one at the present location in the village and the other at the great falls near Lovers Leap. In 1837, a third toll bridge was constructed where Boardman's Bridge now sits (Ibid.). This too was later replaced.

New Milford experienced two major periods of population growth and community expansion during the nineteenth century, much of it centered on and fronting onto the town green. The first was associated with the opening of the railroad in 1840. Failed attempts to improve the Housatonic River for water transport contributed to the creation of the Housatonic Railroad, opening new markets for locally produced goods, and contributing to the success of local mills and factories. New Milford's factories once produced tinware, hats, wool cloth, buttons and boots, and the village's early access to the railroad made it a commercial center for surrounding towns. A history of the railroad compiled in 2009 (Walwer & Walwer) is provided in Appendix B of this report (Table 3).

The second growth period spanned between 1870 and 1890 when local tobacco production was at its peak. The fertile iron-rich Housatonic Valley flood plain was well suited for tobacco growing and the late nineteenth century demand for tobacco benefited local farmers and merchants. Around the town center tobacco warehouses and structures for sorting, curing, and packing tobacco dominated the community character. The town center quickly grew with the construction of ornate dwellings for wealthy tobacco merchants, and more modest houses for tobacco workers and their families. Many of these structures are still standing today.

The late nineteenth century also witnessed New Milford's active role in the quest for freedom for all peoples. Historians report several stations of the Underground Railroad in the vicinity (Historical Committee of New Milford 1907). By the late nineteenth century, New Milford's population had grown tremendously, prompting the construction of additional meetinghouses, a public library and a memorial hall. The town green, once swampy, cluttered, and overrun by unpenned livestock, was cleared and drained of standing water in the 1870s. Electric lines, a central sewer system, and an underground piped water supply were installed to attract new businesses and industries. The Town Hall was built in 1875 at the corner of Church and Main Streets, and a new public school was built on East Street in the following year. In 1902 the "great fire" destroyed early structures on the block bounded by Railroad, Bank, and Main Streets bordering the green, displacing local businesses. Following this, a temporary "shantytown" was constructed on the village green, later replaced by more substantial masonry structures extant today.

The twentieth century saw the decline of the railroad and tobacco production, and the growth of large industrial complexes in proximity to the Housatonic River. Concurrent with the rise in automobile use, New Milford became a commuter town for even larger industrial complexes in Danbury and further south. Consequently Route 7 was straightened and widened to accommodate more traffic, and the population of the town continued to grow. While many of the industrial complexes are now gone, others have taken their places such as MEDInstill in the Northern Section APE, and Kimberly Clark adjacent to the Southern Section APE.

History of the Project Site

Northern Section:

Maps of Litchfield County made prior to the mid-nineteenth century lack details showing individual structures. One of the earliest available maps depicting details in the Northern Section APE dates to 1853, when the APE was undeveloped land between railroad tracks to the east and the Housatonic River to the west (Clark 1853; Figure 3a). From north to south, E. Mygatt and David S. Boardman owned houses on the south side of what is now Boardman's Road close to the APE's northernmost end, and two lime kilns were located on the north side of the road, but all were east of the railroad and the APE. The only mapped feature in the APE from Boardman's Bridge south to the West Aspetuck River was a short road that intersected with Boardman's Road roughly where the southern entrance to MEDInstill is now located, immediately south of where the railroad tracks cross above Boardman's Road. Also of note, Wannuppee Island was mapped south of its current location, with the Housatonic River shown split more evenly around either side of it. An 1859 map depicted virtually no changes to the APE, although the short road branching off of Boardman's Road was mapped as extending west and terminating at the Housatonic River (Clark 1859; Figure 4a).

By 1867, a structure was mapped in the APE near the previously mentioned short road, attributed to N.S.B., possibly N. S. Bennett who owned several houses nearby outside the APE (Beers, Ellis and Soule 1867; Figure 5a). Southeast of this was another structure, unlabeled, fronting Boardman's Road east of the "choke point" where the road and railroad are closest to the river. In 1874, the Bennett house was owned by P. Esperee and the second building was extant but again unlabeled (Beers 1874; Figure 6a). No other structures or features were mapped in the APE.

The 1893 atlas provides less detail in that the map does not include any existing structures (Hurd 1893; Figure 9a), while the 1893 USGS and the 1904 USGS both showed only the Esperee structure mapped in the APE (USGS 1893, 1904; Figure 10). The 1906 Birds-Eye-View plan of New Milford only depicted the southernmost portion of the Northern Section APE that is now Housatonic Avenue and Helen Marx Park (Hughes & Bailey 1906; Figure 12). By that time, the New Milford Hat Factory had been constructed on the northeast side of Housatonic Avenue adjacent to the Aspetuck River, and several dwellings were built on the opposite side of the road, adjacent to but immediately out of the APE (see Figure 12 lower right hand corner for a close up view of the New Milford Hat Factory and dwellings on Housatonic Avenue).

A 1934 aerial photograph showed the northernmost end of the Northern Section APE as predominantly undeveloped farmland along the Housatonic River, (Fairchild 1934; Figure 15a). A barn or outbuilding stood west of the railroad tracks in the APE at what is now the northern end of the MEDInstill property, which is currently extant. The location of the structure previously attributed to Esperee was part of an extensive farmstead with agricultural fields, barns, and a dwelling erected roughly where the southern end of the MEDInstill complex is currently located. To the south of this, there was more development on both sides of Housatonic Avenue, more so in proximity to the Hat Factory just north of the Aspetuck River (Ibid.; Figure 15a). None of these buildings appeared to have stood in the APE.

In 1941 the Maggi Company, a subsidiary of a Swiss Company of the same name, announced plans to build a manufacturing plant in New Milford, to be completed by 1942. After the plant was constructed, it produced seasonings and bouillon cubes and employed roughly 200 people (Aoyagi and Shurtleff 2012). In 1947 Maggi was acquired by Nestle, who conducted research and development there through 2007 when they closed. MEDInstill has since purchased the property.

By 1951, three structures were depicted as standing in the Maggi Company complex west of the railroad tracks in what is now the MEDInstill property (USGS 1951). In both 1951 and 1955, no other structures were mapped in the APE (USGS 1955). By 1984 there were four structures in the industrial complex, but still no additional structures mapped in the APE (USGS 1984).

Southern Section:

Early historical maps depicting the State of Connecticut show the general locations of mills on waterways like those in the Southern Section APE. By 1811, both a grist mill and saw mill were mapped in the APE on the east side of the Housatonic River roughly where the Bleachery complex now stands, and a fulling mill was mapped on the opposite side of the river, all powered

by the "little falls" on the river (Warren and Gillet 1811). John Griswold and William Gould first used the site on the east side of the Housatonic River for a gristmill constructed in 1717. By 1733 an iron works was added, and in 1775 Captain Lazarus Ruggles operated grist and saw mills at the site (Raber and Gordon 2000),

To the south, a grist mill was depicted on the south side of the Still River immediately adjacent to the Housatonic River, and another saw mill was depicted further south, also on the Still River (Ibid.). Since early maps lack precise accuracy, all or none of these may have stood in the Southern Section APE.

The earliest map depicting details in the Southern Section APE dates to 1853, when there was largely undeveloped land between railroad tracks and the Housatonic River from the village of New Milford south along what is now West Street, across the river, and then on the south down to the Brookfield border (Clark 1853; Figure 3b). At that time there were two centers of development in the APE. The first was where the gristmill and sawmill were previously portrayed on the east side of the Housatonic River as described above. By this time, they were labeled "Sk. J. J. Stilson Mills." After Stilson's ownership, the gristmill was later owned by Levi Giddings, and in 1888 the mill or mills were owned by Levi Penfield (Ibid.:76).

In 1853, few structures were mapped in the APE south of the little falls on the west side of the Housatonic River, north of the Still River, and those that were mapped fronted onto roads and stood immediately outside the APE itself (Clark 1853; Figure 3b). The second location with development depicted was where the APE passed over the Still River at what was then West Ville, now Lanesville. Here were numerous dwellings and the Reynolds and Booth hat factory that stood in or near the APE (Clark 1853; Figure 3b). Dwellings here were attributed to J. Reynolds, T. Booth, T. Chase, and others. Reportedly, Isaac Reynolds originally established a hat factory in Bridgewater in ca. 1847, and removed to Lanesville where he continued the same business for some years (Orcutt 1888a:444).

In 1859, the APE had not changed vastly, with few structures mapped in the APE other than those at the mill complex on the east side of the Housatonic River near the little falls, and those at Lanesville (Clark 1859; Figure 4b). While the four structures near the little falls were not labeled, those at Lanesville were, and included dwellings as well as the Reynolds Hat Factory and the N. Knowles Grist Mill (Ibid.).

By 1867, maps indicate that structures had been built fronting onto what is now Bridge Street in the Village of New Milford, immediately adjacent to but outside of the APE (Beers, Ellis, and Soule 1867; Figure 5b). Although West Street had only been partially laid out south of Bridge Street, it did not extend south to its current terminus. At that time there were four structures on the east side of the river at the little falls that were labeled, from north to south, J.J. Stilson, Grist Mill, Saw Mill, and Plaster Mill (Ibid.). These building appeared to stand in or directly adjacent to the APE.

Continuing south on the west side of the river, the APE passed several dwellings on both sides of Pickett District Road, and on the west side of the road stood the F. S. Richmond Hotel and adjacent fair grounds with a 1½-mile trotting park (Beers, Ellis and Soule 1867; Figure 5b). To

the south, Lanesville had grown into a more densely populated hub with its own school and a post office, possibly in the APE (Ibid.). The hat factory, grist mill, and multiple dwellings stood on both sides of the road crossing over the Still River, in addition to an ax helve (handle) factory.

In 1884, an electric generating plant, one of the earliest in Connecticut, was established near the mills on the east side of the Housatonic River in what is now Hidden Treasures Park. Built by William Black and Levi Giddings, turbines in the river powered the plant and provided power for lighting in New Milford as well as the New Milford Pottery Company's plant, opened to the south between the railroad tracks and the Housatonic River (where there is parking for the Bleachery Building at 143 West Street). In 1893 it was operated by the New Milford Power Company, which built a new stone and concrete dam in the river (Raber and Gordon 2000:188). The turbines were improved in 1912, and in ca.1916 the Bleachery and Dye Works bought the power plant for their own use. It continued operation through ca.1955 (Ibid.). The extant remnants of the building and turbines are evident on the landscape (see Photographs S8 and S9).

A series of Sanborn Insurance maps of the village of New Milford showed development in and around the train station, and adjacent to Bridge and West Streets in and adjacent to the APE. In 1887, there were railroad-related framed structures that appear to be freight sheds in the APE in what is now a parking lot to the west of the rail station (Sanborn 1887; Figure 7). Although West Street terminated further north than it does today, several large industrial buildings and warehouses had been constructed on both sides of it, likely due to the immediacy of the railroad station. The APE in the village appeared virtually unchanged in 1892 (Sanborn 1892; Figure 8a). The 1892 Sanborn map also depicted details of the recently constructed complex of the Bridgeport Wood Finishing Company that stood on the banks of the Housatonic River, immediately south of its junction with the Still River (Sanborn 1892; Figure 8b).

The Bridgeport Wood Finishing Company complex has been the subject of much study and its site in the APE is listed on the SR and is a Connecticut Archaeological Preserve. According to a 2004 book on the company, *Water, Rock and Wood*, the company incorporated in Bridgeport in 1876 and erected a silex (finely ground silica) manufacturing plant at Fort Ann, New York. In 1881-1882 the company moved to the Still River location in the APE, and erected a large plant to manufacture a wood filler and a concrete product called Silexite, which incorporated coarse fragments of quartz discarded from the milling operations used to make wood finishing materials (Raber and Gordon 2004:7). Water power from the Great Falls on the Housatonic, rerouted to obtain maximum head, provided much of the power needed to turn quartz and other minerals into a fine powder. The complex was served by the adjacent railroad, with a spur running into the complex and across the mouth of the Still River.

At its peak, the plant included multiple structures including a turbine house, a 225-foot by 50-foot mill, an office, a boarding house for workers, kilns for roasting quartz, a paint factory, a box and barrel shop, a japan or varnish plant, a water tower, a wagon and storage shed, and the Still River Station for the railroad spur (Raber and Gordon 2004:9). The principal portion of the plant was destroyed by fire in February 1902 and was rebuilt and improved. The business of the company had a worldwide reputation and an auxiliary silex manufacturing plant was subsequently constructed at Branchville, Connecticut.

The 1893 atlas of the APE lacked detail in that it depicted no structures (Hurd 1893; Figure 9b), while the 1893 USGS and the 1904 USGS maps did not portray individual structures in the village of New Milford, instead showing that the town center was densely developed (USGS 1893, 1904; Figure 10). These both, however, depicted one structure in the APE on the east side of the Housatonic River where the four Stilson Mill buildings had been previously mapped, and in the APE at Lanesville (USGS 1893, 1904; Figure 10). Both these maps also depict development on the west side of the Housatonic River at the site of the Bridgeport Wood Finishing Company, which was detailed on the Sanborn 1904 Insurance map (Sanborn 1904; Figure 11). The 1906 Birds Eye View of New Milford also showed development in the village and south along West Street, as well as a detailed graphics of the Bridgeport Wood Finishing Company (Hughes & Bailey 1906; Figure 12 - see lower left hand section of figure for close up view).

A series of 1915 maps of the Housatonic Railroad depict portions of the Southern Section APE (New York, New Haven, and Hartford Railroad Company 1915). At that time West Street was laid out was far as South Street, and south of this were two buildings on the west side of the tracks in the area leading up to the bridge crossing the Housatonic River (Ibid.). Just south of this river crossing, two tobacco barns were located in the vicinity of the access road that leads from the railroad tracks west to Pickett District Road (see Figure 2B-2 for location). One was adjacent and parallel to the railroad tracks, while the other was perpendicular to and farther west of the tracks. Little was mapped south of this point until reaching the Still River and the Bridgeport Wood Finishing Company complex, which had been reconfigured after the 1902 fire (New York, New Haven, and Hartford Railroad Company 1915; Figure 13).

By 1931, Sanborn Insurance Maps showed that West Street had still not yet been extended south of South Street, but that development along the section that was laid out had intensified (Sanborn 1931; Figure 14). Aerial photographs taken in 1934 showed the railroad-related sheds still standing in the APE just west of the railroad station, and West Street continuing south to a larger industrial complex on the east bank of the Housatonic River (Fairchild 1934; Figure 15b). This complex, while not included in the 1931 series of Sanborn maps, was a bleachery constructed 1916-1917. According to an article on the bleachery, the complex was constructed by Bishop & Company of Massachusetts for the Robertson Bleachery and Dye Works. Robertson owned 22 acres around and below the dam on the little falls, and made arrangements with the railroad company for a side line to service the complex (Fiber and Fabric 1916:11). The 120,000 square foot building reportedly dyed, bleached, and mercerized cotton, wool, silk and linen until 1958 when it was purchased by the New Milford Industrial Corporation (New Milford Historical Society 2015:59). To the west of the main complex within what is now Hidden Treasures Park, two structures were evident: the hydroelectric power plant next to a dam on the river, and a water tower to the north (Fairchild 1934; Figure 15b).

After crossing the river, a long north to south tobacco barn was visible in one potential route. Nothing else was evident in the APE until it reached the site of the Bridgeport Wood Finishing Company complex and the cluster of structures at Lanesville (Figure 15b). South of this, the APE crossed predominantly undeveloped farm land with barns scattered in agricultural fields. By 1965, the location of the Bridgeport Wood Finishing Company complex was devoid of

structures; only foundations remained. The remainder of the Southern Section APE was devoid of development.

In the late twentieth and early 21st centuries, many of the roads in the Southern Section APE were reconfigured; specifically Still River Road, Lanesville Road, and Pumpkin Hill Road (compare Figure 1 with Figure 16).

Historic Sites in the Project Site

For this study, historic sites include extant historic structures, foundations, rail features, and/or buried archaeological resources. There are a number of previously identified historic structures in or immediately adjacent to the Northern and Southern Section APEs that are listed on the State/National Register of Historic Places (S/NR). In addition, previously inventoried historic rail features and archaeological sites have been identified in proximity to the project site in the Southern Section APE. An extant historic structures list was previously compiled as part of the railroad corridor study in 2009, and is presented in Appendix B, Table 4 of this report (Walwer & Walwer 2009). Newly documented historic sites were also identified that study (Ibid.; Appendix B, Table 5). In addition, railroad-related features were identified in the rail corridor in proximity to the Southern Section APE (Ibid.: Appendix B, Table 6).

Below is a description of previously identified standing structures and archaeological sites in or adjacent to the APE that are listed on the State (SR) and/or National Register (NR) of Historic Places.

Northern Section:

- Boardman's Bridge is a wrought-iron, lenticular truss bridge now on the S/NR (NR #76001983). Constructed in 1888 by the by the Berlin Iron Bridge Company, it was built during a period of time when iron was supplanting wood as a preferred bridge-building material, but had not yet itself been replaced by steel. The bridge was closed in 1985, but is currently open to pedestrian traffic.

Southern Section:

- The New Milford Center Historic District encompasses much of the traditional civic and commercial heart of New Milford, and was S/NR listed in 1986 (NR #86001255). The historic district is roughly bounded on the east by East Street and South Main Street, on the south by Mill Street, on the west by South Main Street and Railroad Street (excluding many of the buildings on the latter roadway), and on the north by Bennitt and Elm Streets. Prominent features include one of the state's longest town greens, lined mainly by civic and residential buildings, and the cluster of commercial brick and stone buildings along Bank and Main Streets near the southern end of the green. Residential areas with fine nineteenth century Victorian houses fringe the district, on South Main, East, and Bennitt Streets. Separately listed buildings on the S/NR that are in the district include the United Bank Building and the E. A. Wildman & Co. Tobacco Warehouse.
- The Housatonic Railroad Station is a historic railroad station on Railroad Street and was listed on the S/NR in 1984 (NR #84001062). Built in 1886 by the Housatonic Railroad Company, it cemented the town's importance as a regional tourist and business center. It

served passenger service until 1970, and is now home to the Greater New Milford Chamber of Commerce.

- The Merritt Beach & Son Building is a historic commercial building at 30 Bridge Street and was listed on the S/NR in 1992 (NR #92000403). Built in 1873, it is one of the town's oldest surviving commercial buildings. It was built for Merritt Beach & Son, a lumber and hardware merchant that is one of its oldest continuously operating businesses (although it is no longer at this site).
- The E. A. Wildman & Co. Tobacco Warehouse is a historic commercial/industrial building at 34 Bridge Street, listed on the S/NR in 1988 (NR #88000731). Built in 1870, it is the oldest of the surviving tobacco warehouses in the town, which was a major tobacco processing center in the region. The building has most recently served as a hotel.
- The J. S. Halpine Tobacco Warehouse is another historic tobacco warehouse at the corner of West and Mill Streets and was listed on the S/NR in 1982 (NR #82001002). Built c. 1900-02 for one of the area's leading tobacco processors, it is a reminder of tobacco's historic economic importance in northwestern Connecticut. It has been converted to residential use.
- The Lover's Leap Bridge over the Housatonic River is a wrought-iron lenticular truss bridge over the Housatonic River located in Lovers Leap State Park. Built in 1895 by the Berlin Iron Bridge Company, it is one of the last bridges built the company, and is a particularly ornate example of its work. It was listed on the S/NR in 1976 (NR #76001982), and is now open only to foot traffic.
- The Bridgeport Wood Finishing Company complex immediately south of Still River on the Housatonic River. The 13.5 acre complex is listed on the SR and is a Connecticut State Archaeological Preserve. Completed in 1882 and operated until 1928, the archaeological site is a good example of a large nineteenth century industrial complex situated to exploit the waterpower potential of the Housatonic River and nearby railroad connections for production and marketing purposes.

The proximity of these sites to either the Northern and Southern Section APEs subjects them to further consideration should future trail construction cause disturbance. Direct physical and/or contextual disturbance to existing historic structures or districts could occur through the construction and introduction of new trail features, landscaping, and/or the above-grade placement of signage and lighting. Direct physical disturbance to below-grade archaeological resources could occur through excavation and/or compaction for the new trail bed, the installation of utilities, landscaping, and/or signage.

5.0 POTENTIAL ARCHAEOLOGICAL SENSITIVITY

The potential archaeological sensitivity of the project site is based on two factors; what is the likelihood that potential resources were deposited on the site, and what is the likelihood that those resources have remained undisturbed and intact.

Precontact Archaeological Sensitivity

The project site lies in an area of known Precontact use. Several Precontact sites were reported near the Northern Section APE and numerous sites have been reported in and around the Southern Section APE, as detailed in Chapter 4, Table 1 and Appendix B, Table 2. The most prominent of these is the site of Lovers Leap State Park, where extensive Native American resources have been recovered by both artifact collectors and professional archaeologists. A review of historical documents and archaeological reports confirms that the terraces and floodplains along the Housatonic and Still Rivers were the campsites and homelands of Native Americans for thousands of years. As such, and as evidenced by the number of previously recorded sites along the floodplains, the APE in these locations are particularly sensitive for Precontact resources.

Where prior road grading, construction, reconstruction, or site development has involved shallow ground disturbance, these locations are less likely to retain Precontact archaeological potential. Locations that have been extensively quarried or previously excavated to greater depths, such as the locations of deep utility pipes, have no Precontact archaeological potential.

Because of the extremely sensitive nature of Precontact resources, only generalized locations of areas with the potential for Precontact archaeological sensitivity (which includes known sites) are demarcated on Figures 17a and 17b.

Historical Archaeological Sensitivity

Documentary research found that there were several specific areas of historic archaeological potential in both the Northern and Southern Section APEs. In the Northern Section APE, all locations were undeveloped farmland until 1867 when a dwelling was mapped at the southern end of what is now the MEDInstill complex. Outside of the location of extant structures in the complex, the vicinity of this former homestead is sensitive for mid-nineteenth century historical archaeological resources that include foundations, wells, cisterns, and privies.

In the Southern Section APE, early development centered on the railroad corridor and along the Housatonic and Still Rivers where water power could be harnessed. As such, the parking lot to the west of the train station may contain mid-nineteenth century features, such as foundations of mapped rail-related structures. Continuing south, four mill-related structures stood on the east side of the Housatonic River in or near what is now Hidden Treasures Park or closer to the site of the extant bleachery complex. As early as 1717, a mill was established here, and by 1853 four structures related to the J. Stilson mills were mapped near the little falls – later labeled as grist, saw, and plaster mills. At least one mill continued in operation here until 1888. In addition, a hydroelectric plant operated here from 1884 through ca.1955, and remnants of the power plant, dam, a water tower, and the location of turbines are visible on the landscape. It is quite possible

that subsurface remains of these resources exist in Hidden Treasures Park. he site of the bleachery complex is likewise sensitive for historic industrial resources.

On the west side of the Housatonic River, the APE crosses the former location of several tobacco barns, and continues south to cross the Still River where the Bridgeport Wood Finishing Company complex was located immediately south of Still River at its confluence with the Housatonic River. The 13.5 acre complex is listed on the SR and is a Connecticut State Archaeological Preserve, and is known to contain historic industrial resources. The site is also sensitive for potential domestic archaeological resources related to boarder housing.

To the south where there are falls on the Still River at what is now Lanesville Road, a cluster of nineteenth century industries and dwellings once stood in or adjacent to the APE. By 1853 there were numerous dwellings here along with the Reynolds and Booth hat factory. By 1859, the N. Knowles Grist Mill was also mapped here. The cluster of potential residential and industrial resources along both sides of the river makes this location particularly sensitive for historic archaeological resources.

Because of the sensitive nature of all archaeological resources, only generalized locations of known historic archaeological sites or areas with the potential for historic archaeological sensitivity are demarcated on Figures 17a and 17b.

6.0 RECOMMENDATIONS

The results of this Phase IA study indicate that the project site is considered to be highly sensitive for the presence of Precontact and historic archaeological resources in multiple locations. The study also found that there are numerous previously inventoried S/NR sites that are in or adjacent to the Northern Section and Southern Sections APEs. These locations may be disturbed by any subsurface activity.

The number of known Precontact sites (20+), especially in the Southern Section APE, suggests the strong probability that additional sites exist in locations not previously subjected to archaeological testing. Further, both Precontact and historic archaeological resources can be found at shallow depths where years of plowing have brought artifacts to the surface or where there is undisturbed yard scatter around mapped historic structures. Therefore, in any location identified as potentially sensitive for Precontact or historic archaeological resources, excluding previously tested and disturbed locations, subsurface testing is recommended prior to the initiation of any ground disturbance. Ground disturbance includes, but is not limited to, excavations for regrading or planting, installing pylons, installing utilities, and construction lay-down and staging areas where heavy machinery can potentially compress sensitive strata.

There are also multiple sites and structures that have been identified that could provide users of the trail with the opportunity to learn more about New Milford's historic past where resources are known to have stood in or near the APE. Note that particularly sensitive buried archaeological sites that are not readily evident on the landscape are not recommended for signage since this promotes site destruction. From north to south, sites and structures that may lend well to engaging users of the trail include the following (see Figures 17a and 17b for approximate locations of sites keyed to letter designations below):

Northern Section:

A. Boardman's Bridge (NR). This wrought-iron, lenticular truss bridge was constructed in 1888 by the by the Berlin Iron Bridge Company. As of the writing of this report, it is slated for restoration
B. The Maggi Factory, later Nestle site. Although this is now in the MEDInstill complex, the industrial past of this tract is important to the economic history of New Milford.
C. Wannuppee Island. Early New Milford residents forded the river here prior to the construction of a bridge. It was a critical location that facilitated development of the village.
D. The New Milford Hat Factory. The industrial complex was located on the east side of Housatonic Avenue in the early twentieth century, with worker housing located on the west side of the road. Although not in the APE, there is the opportunity to acknowledge this historic industrial complex that formerly stood along the Aspetuck River.

Southern Section:

E. The Housatonic Railroad Complex (NR). Once the site of numerous rail-related structures, the history of the importance of the railroad to the New Milford economy is of paramount importance.
F. Bridge Street and West Street Warehouses (NR). While many of these have recently been converted to residential use, the history of the development of the industries and the warehouses that served them contributes to the story of New Milford.
G. Ruggles/Stilson Mills and Hydroelectric Plant. The likely location of three, possibly four mills in or near Hidden Treasures Park, was one of the earliest (ca.1717) locations of a mill directly accessible to the Village of New Milford. Also, one of the state's first hydroelectric plants was established here in 1884 and operated through ca.1955. The ruins of the building, a water tank, a dam, and associated turbines are extant resources.
H. The Bleachery. This early-twentieth century complex employed hundreds of New Milford residents, and operated through the late 1950s.
I. The Tobacco Industry. The extensive tobacco fields and the industry of tobacco making was an important part of the local economy. The locations of many of the historic tobacco barns that once stood on the west side of the Housatonic River are now redeveloped; what was once ubiquitous is now a rarity.
J. The Bridgeport Wood Finishing Company complex (SR). Immediately south of Still River on the Housatonic River, this complex contains structural remains of the once-thriving complex (signage already exists in Lovers Leap State Park).
K. Lover's Leap Bridge over the Housatonic River (NR). Built in 1895 by the Berlin Iron Bridge Company, it is one of the last bridges built the company, and is a particularly ornate example of its work Signage already exists in Lovers Leap State Park).
L. Lanesville. The location of the former Reynolds & Booth Hat Factory, the Knowles grist mill, the post office, and school are no longer evident in the vastly reconfigured arrangement of roads in this area.
M. The Still River floodplains. Once home to the Weantinock, these fertile fields provided prime horticultural land for Native Americans and their seasonal villages.

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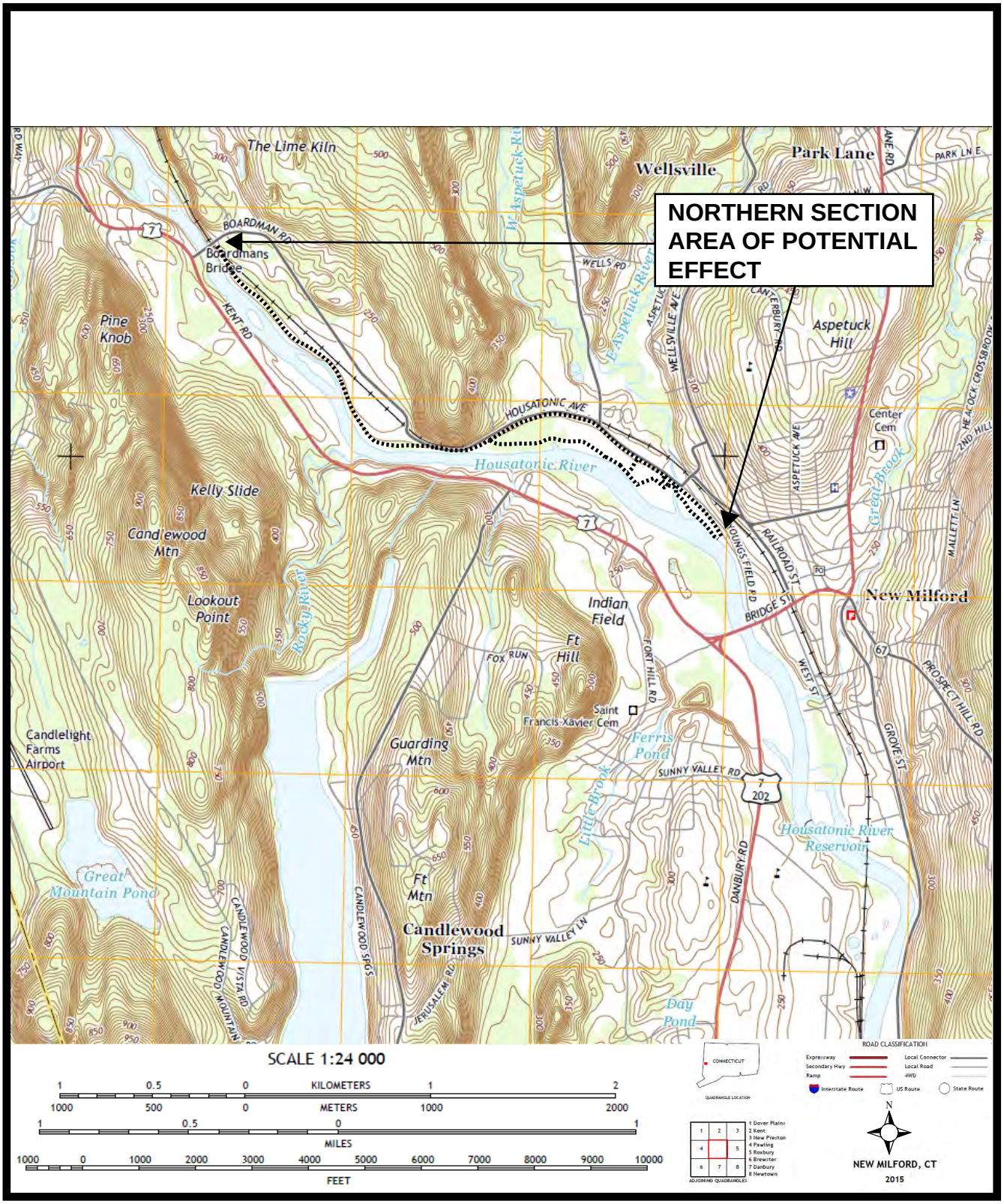
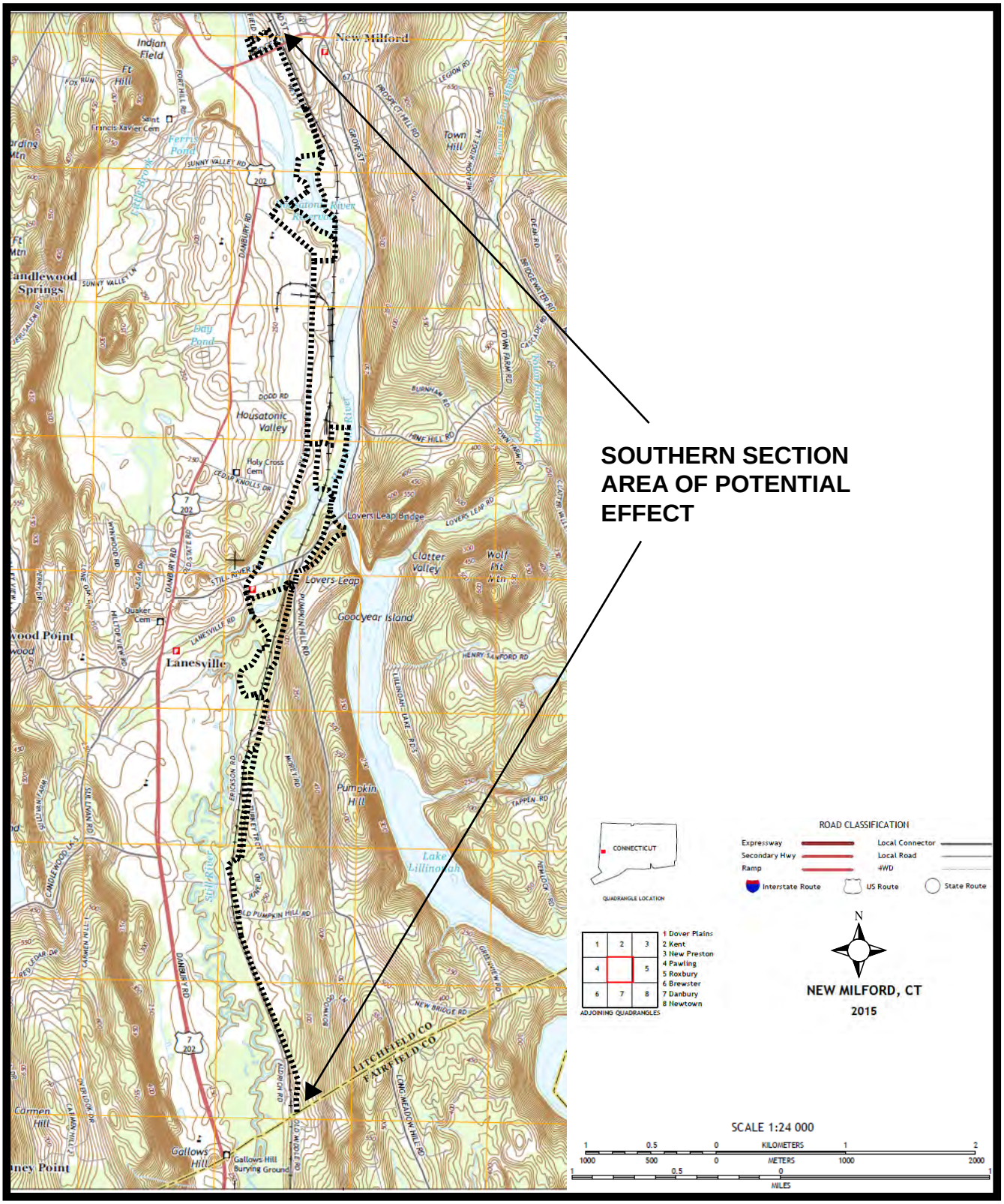


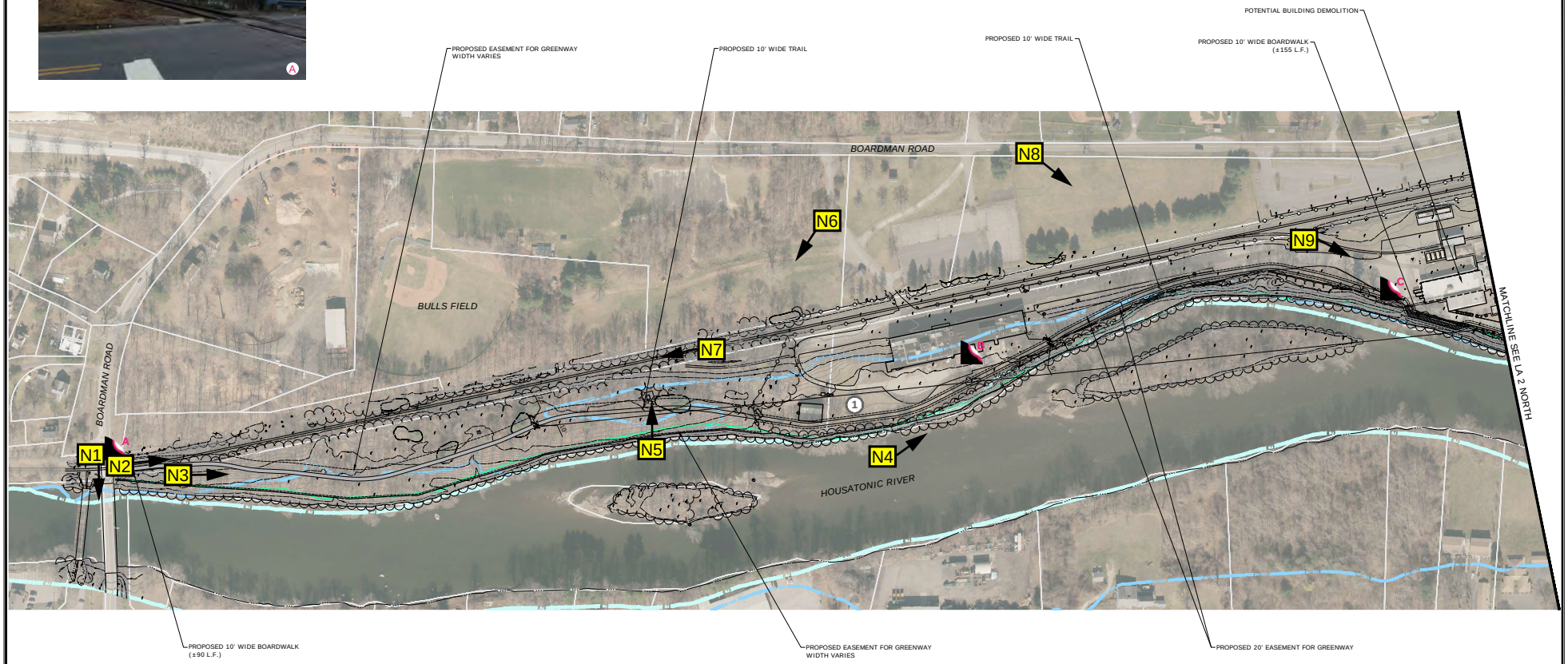
PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 1a: Northern Section Area of Potential Effect on 2015 U.S.G.S. *New Milford, CT Quadrangle*.



PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 1b: Southern Section Area of Potential Effect on 2015 U.S.G.S. *New Milford, CT Quadrangle*.



N1 → PHOTOGRAPH NUMBER AND DIRECTION

① BOARDMAN BRIDGE THROUGH MEDINSTILL

PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

PRELIMINARY TRAIL ALIGNMENT - LA 1 NORTH

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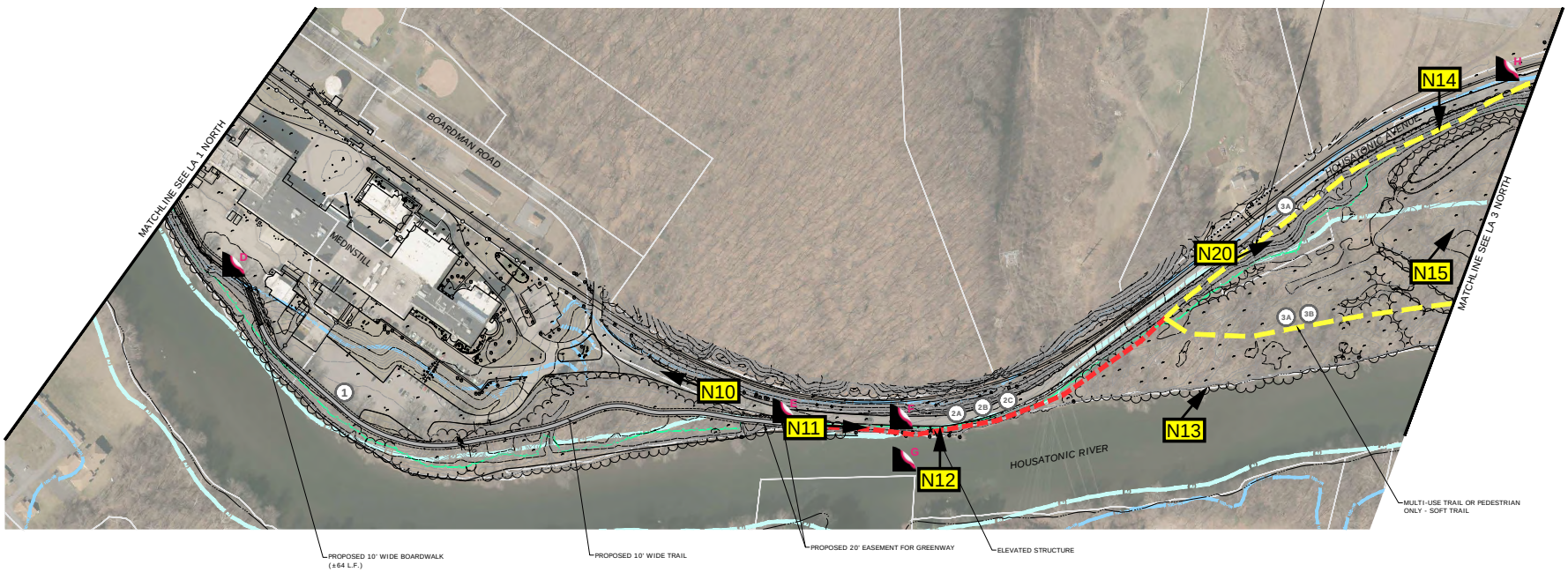
FIGURE 2a-1: Northern Section Area of Potential Effect and Phase IA Photo Key, Boardman's Road to MEDInstill.



N1 PHOTOGRAPH NUMBER AND DIRECTION

1 BOARDMAN BRIDGE THROUGH MEDINSTILL
2A MEDINSTILL TO WANNUPPEE ISLAND - SIDEPATH
2B MEDINSTILL TO WANNUPPEE ISLAND - BOARDWALK
2C MEDINSTILL TO WANNUPPEE ISLAND - BRIDGE STRUCTURES
3A WANNUPPEE ISLAND TO HELEN MARX PARK - SIDEPATH
3B WANNUPPEE ISLAND TO HELEN MARX PARK - OFF ROAD
3C WANNUPPEE ISLAND TO HELEN MARX PARK - SHARROW & SOFT TRAIL

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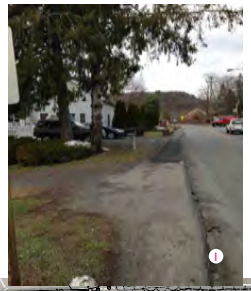
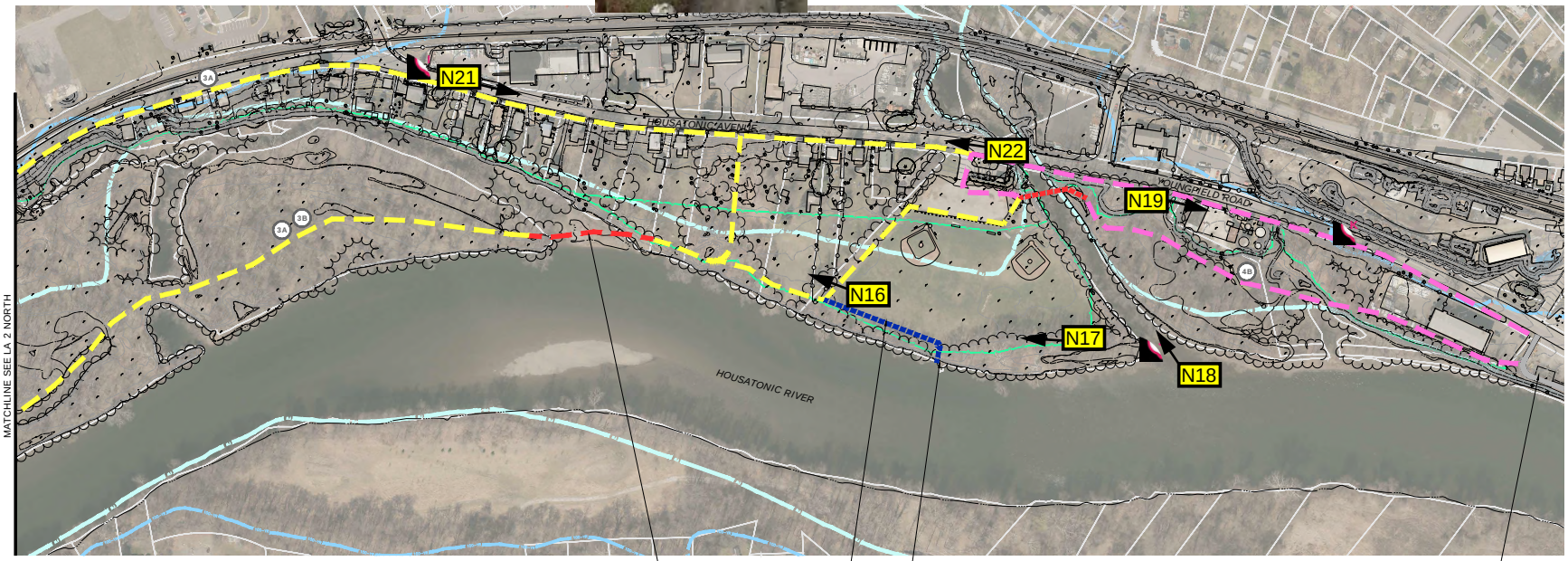
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 2a-2: Northern Section Area of Potential Effect and Phase IA Photo Key, MEDInstill to Wannuppee Island.





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NEW MILFORD RIVER TRAIL
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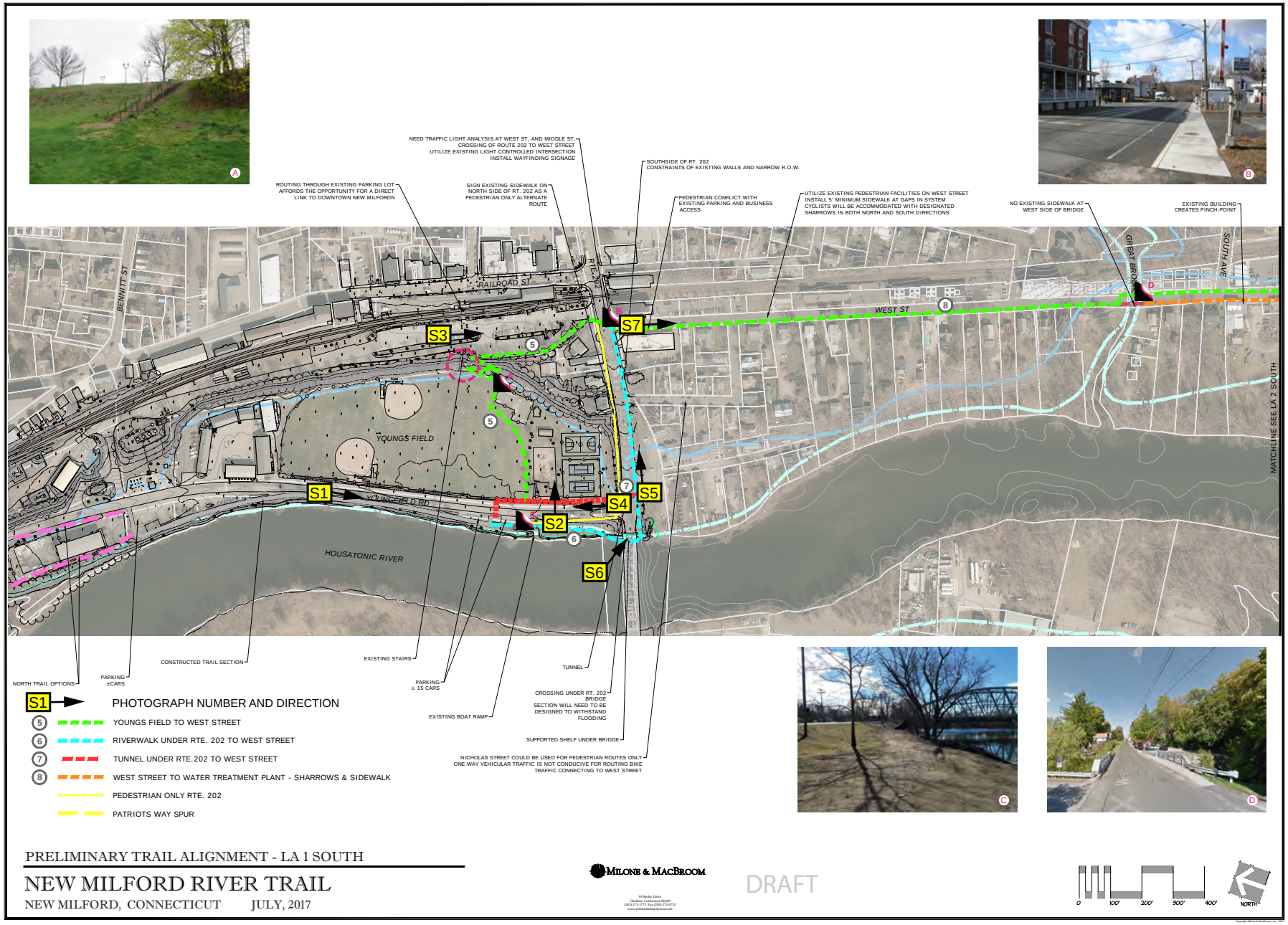
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 2a-3: Northern Section Area of Potential Effect and Phase IA Photo Key, Wannuppee Island to Youngs Field Trail.



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NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
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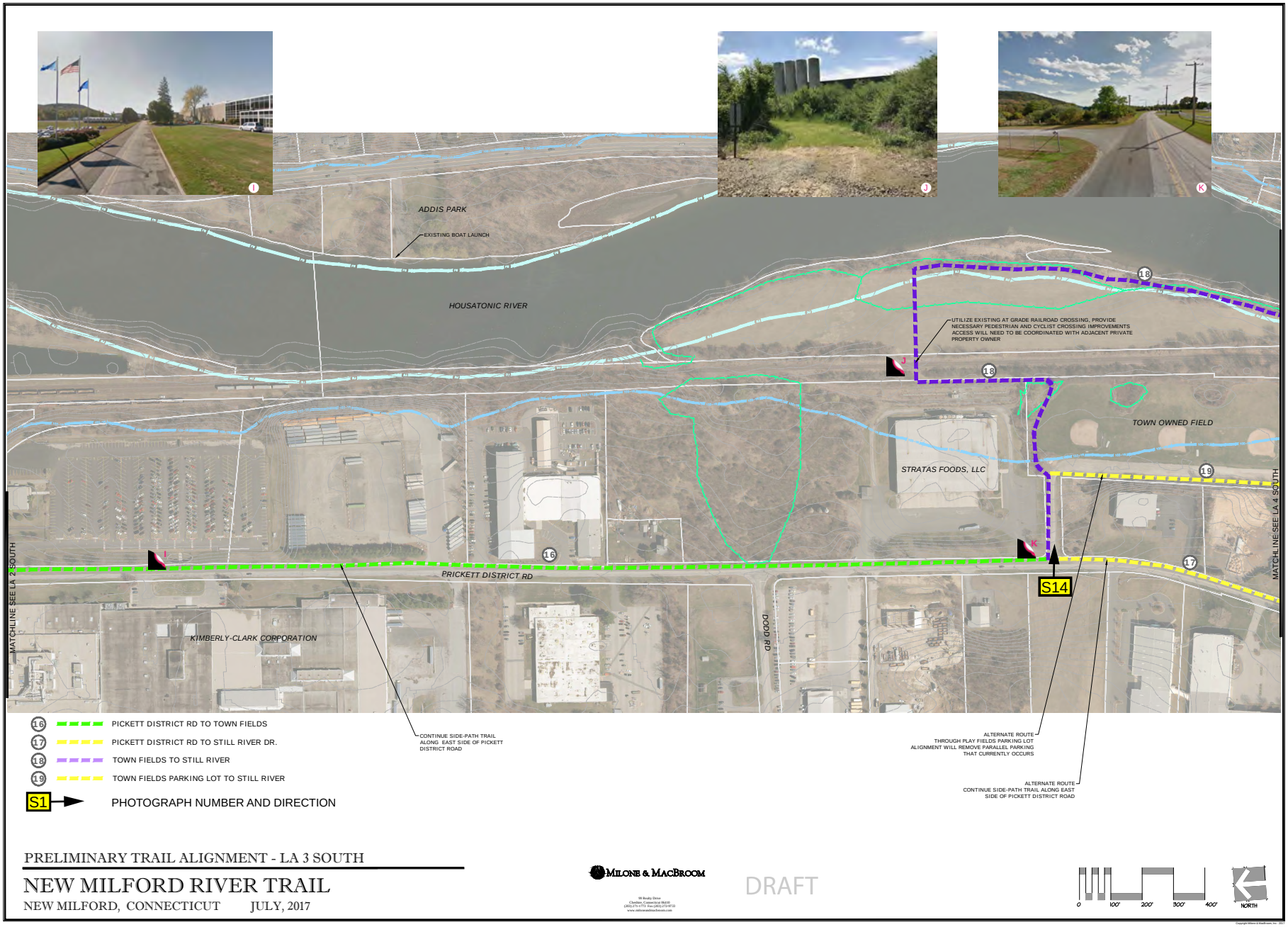
FIGURE 2b-1: Southern Section Area of Potential Effect and Phase IA Photo Key, Youngs Field Trail to West Street Water Treatment Plant.

PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 2b-2: Southern Section Area of Potential Effect and Phase IA Photo Key, West Street Water Treatment Plant to Pickett District Road.



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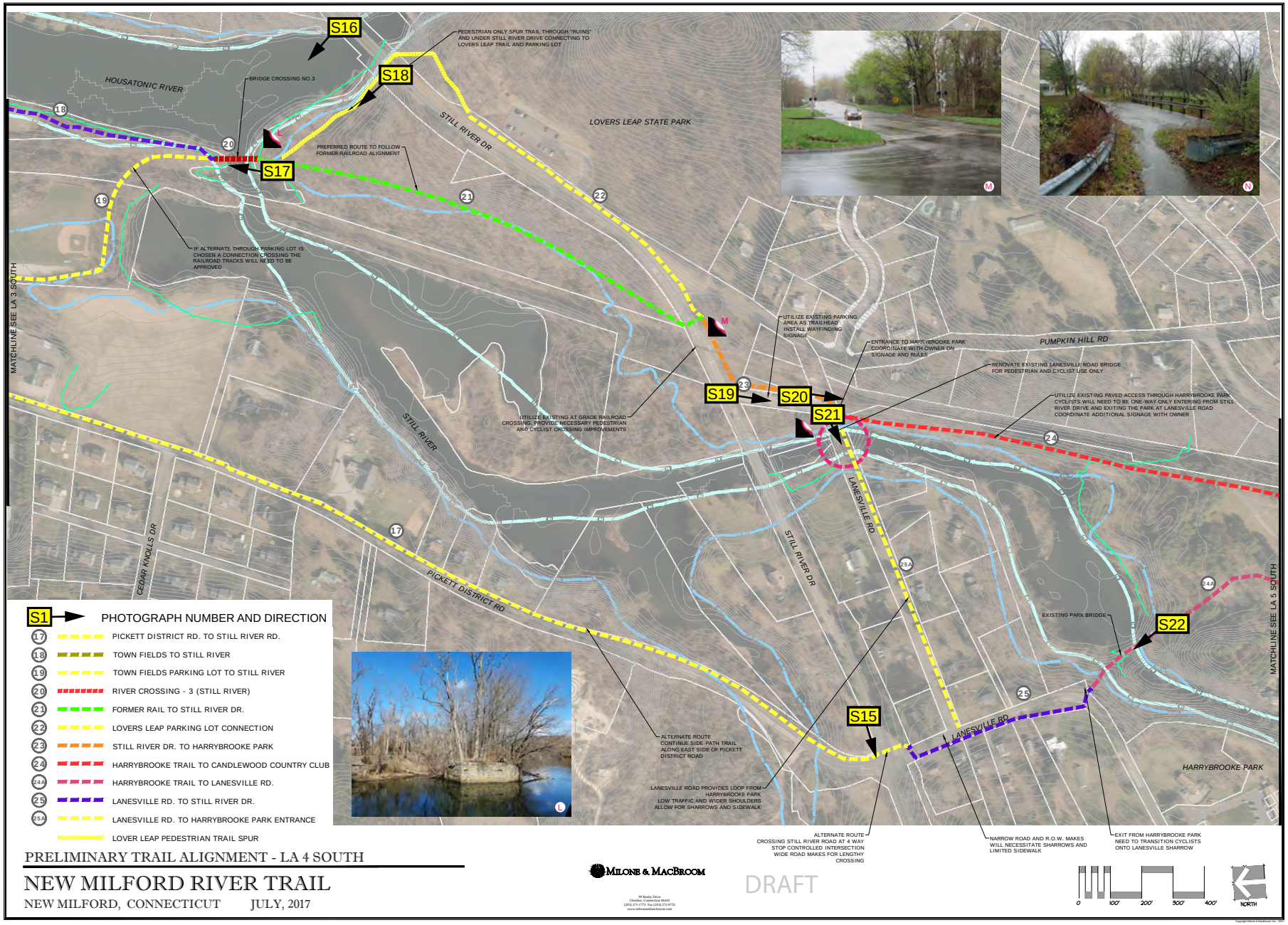
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 2b-3: Southern Section Area of Potential Effect and Phase IA Photo Key, Pickett District Road to Town Owned Ball Fields.



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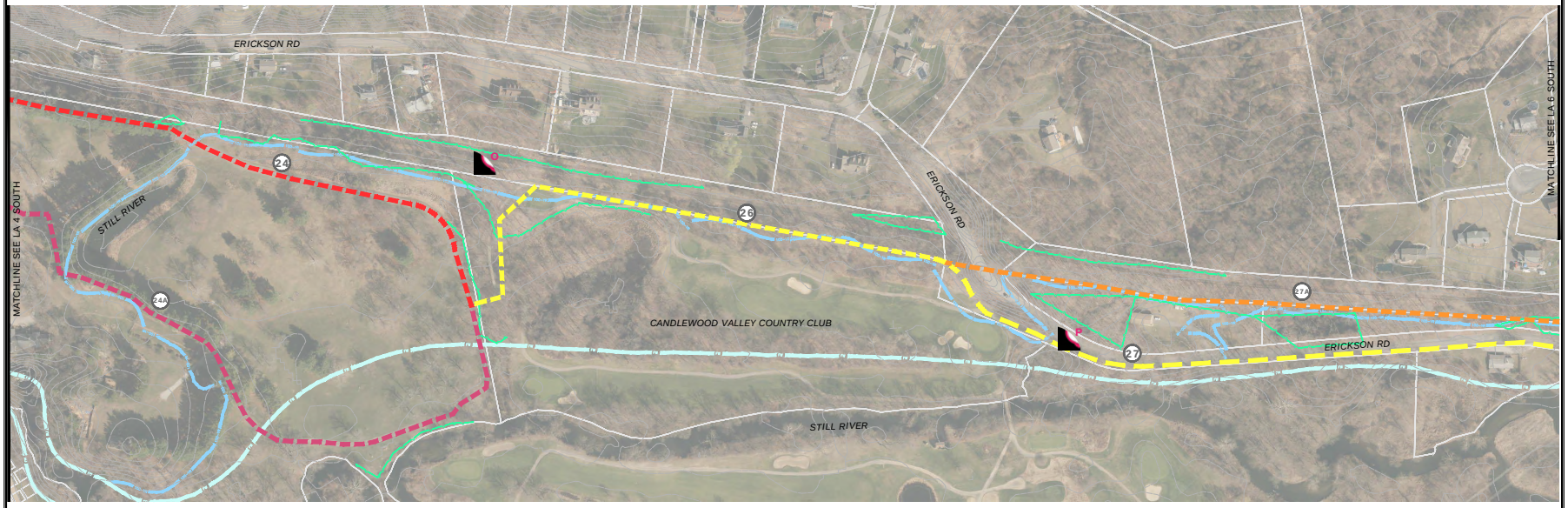
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 2b-4: Southern Section Area of Potential Effect and Phase IA Photo Key, Town Owned Ball Fields to Harrybrooke Park.



24 HARRYBROOKE TRAIL TO CANDLEWOOD COUNTRY CLUB
24A HARRYBROOKE TRAIL TO LANESVILLE RD.
26 CANDLEWOOD COUNTRY CLUB TO ERICKSON RD.
27 ERICKSON RD. TO ALDRICH RD.
27A RAILROAD R.O.W. TO ERICKSON RD.

PRELIMINARY TRAIL ALIGNMENT - LA 5 SOUTH

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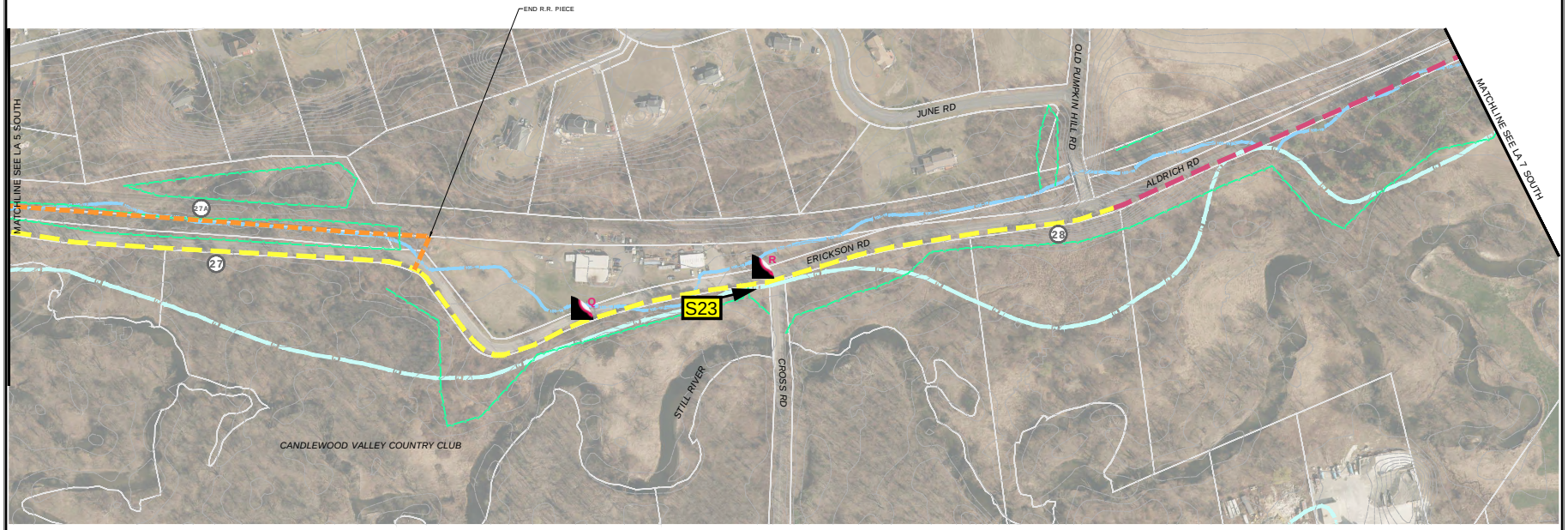
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 2b-5: Southern Section Area of Potential Effect and Phase IA Photo Key, Harrybrooke Park to Erickson Road.



PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 2b-6: Southern Section Area of Potential Effect and Phase IA Photo Key, Erickson Road to Aldrich Road.

28 ALDRICH RD.

PRELIMINARY TRAIL ALIGNMENT - LA 7 SOUTH

NEW MILFORD RIVER TRAIL

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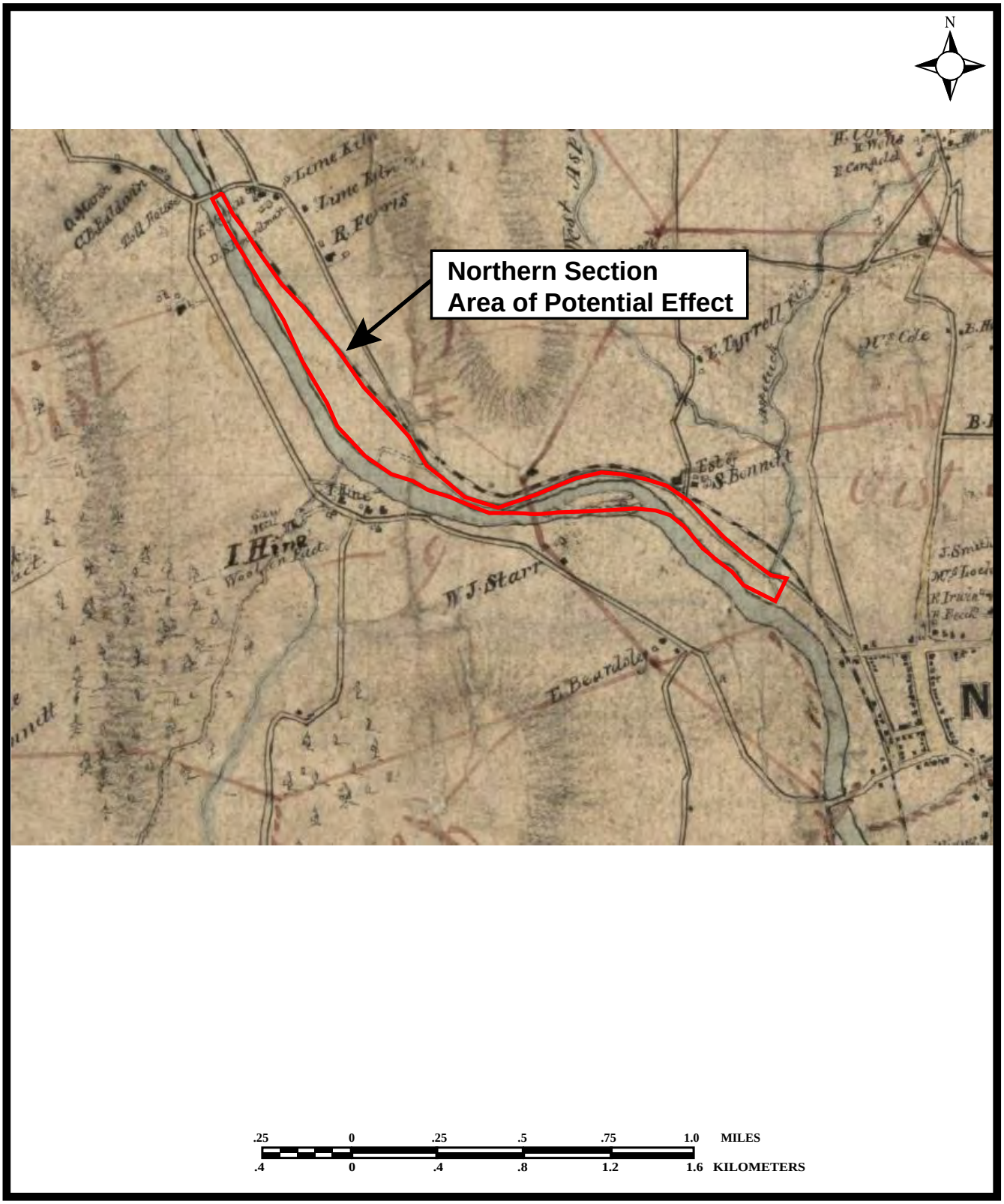
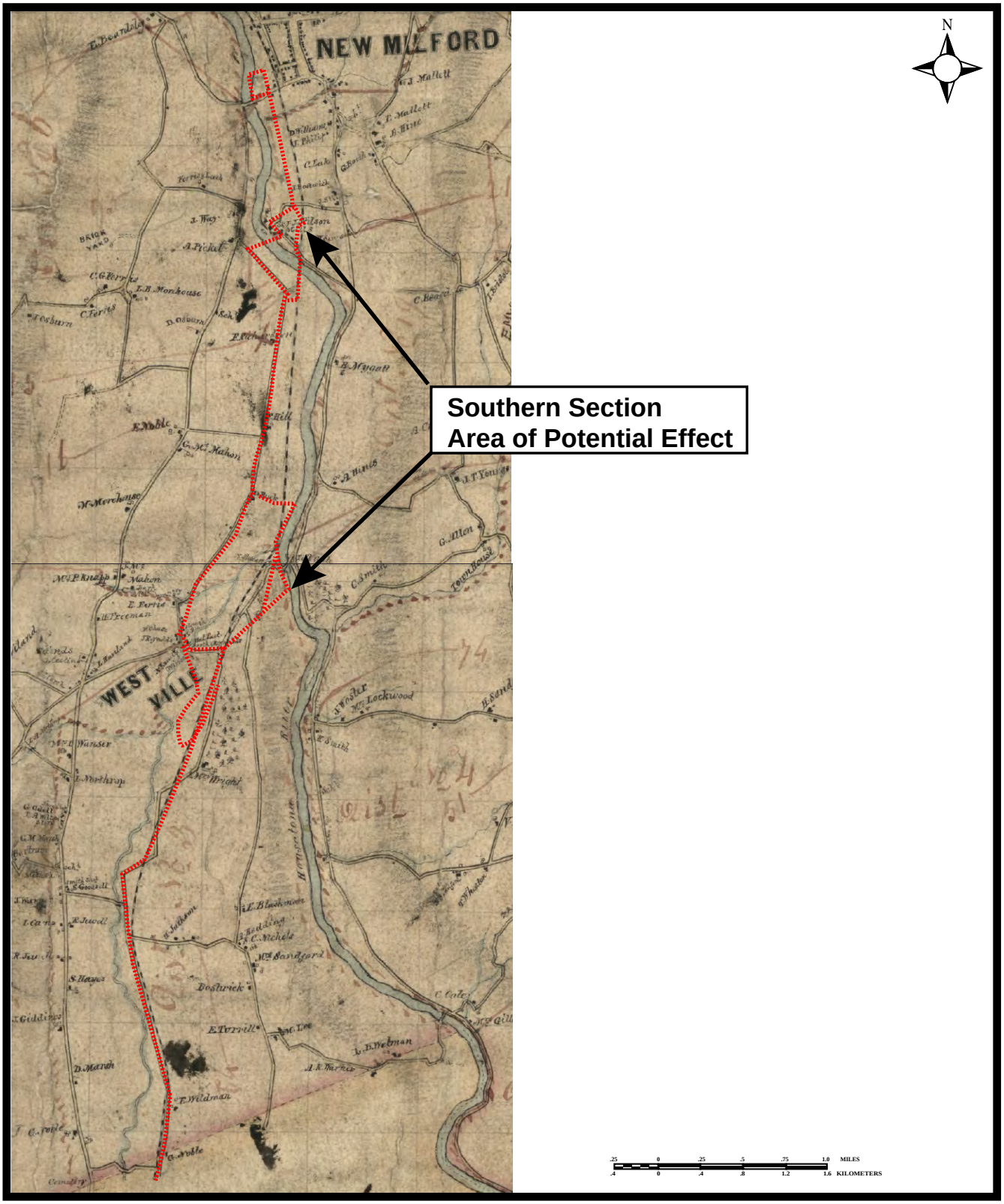
PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 2b-7: Southern Section Area of Potential Effect and Phase IA Photo Key, Aldrich Road to Brookfield Border.



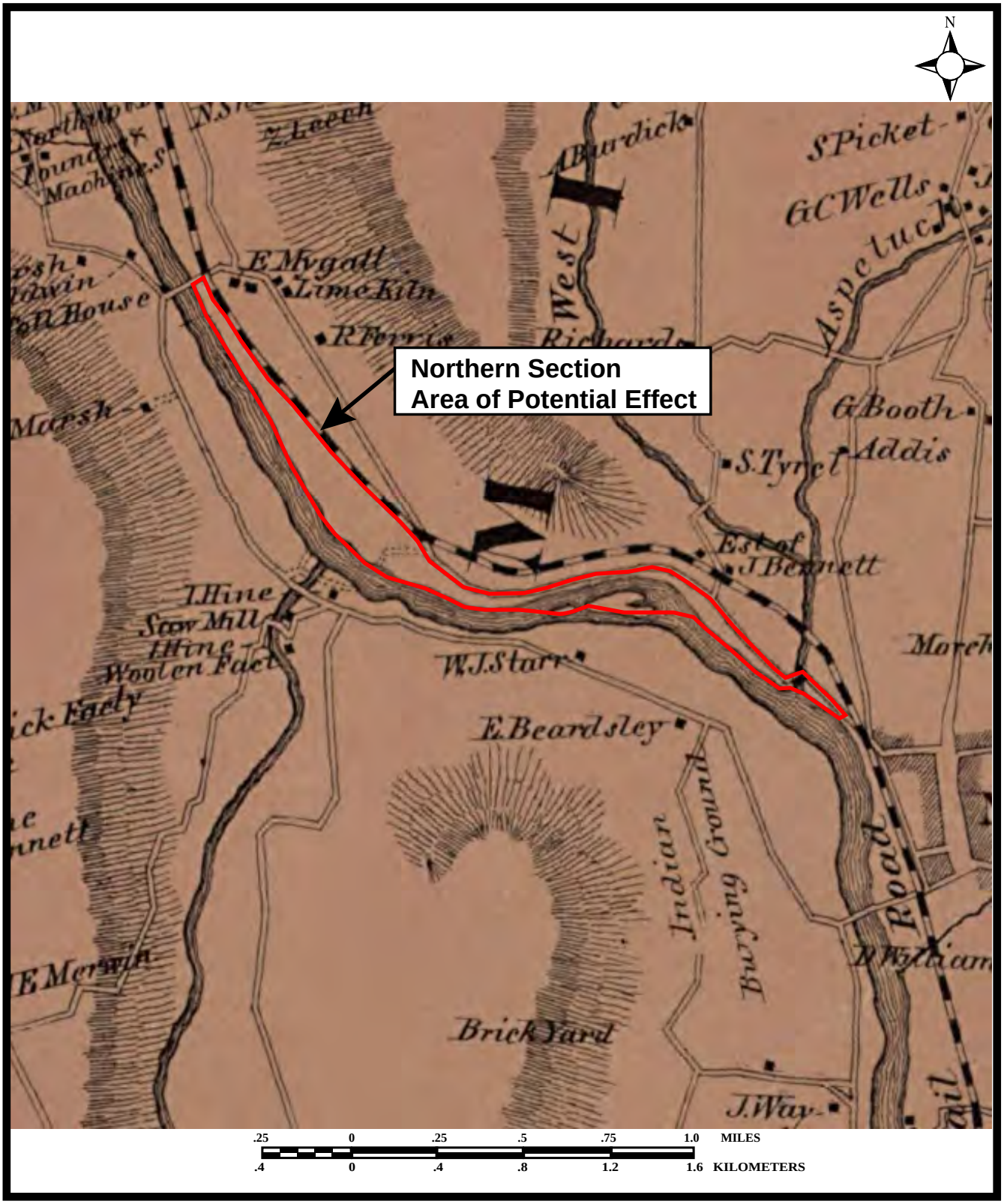
PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 3a: Northern Section Area of Potential Effect on 1853 Clark *Map of New Milford, Litchfield Co., Connecticut, surveyed by L. Fagan.*



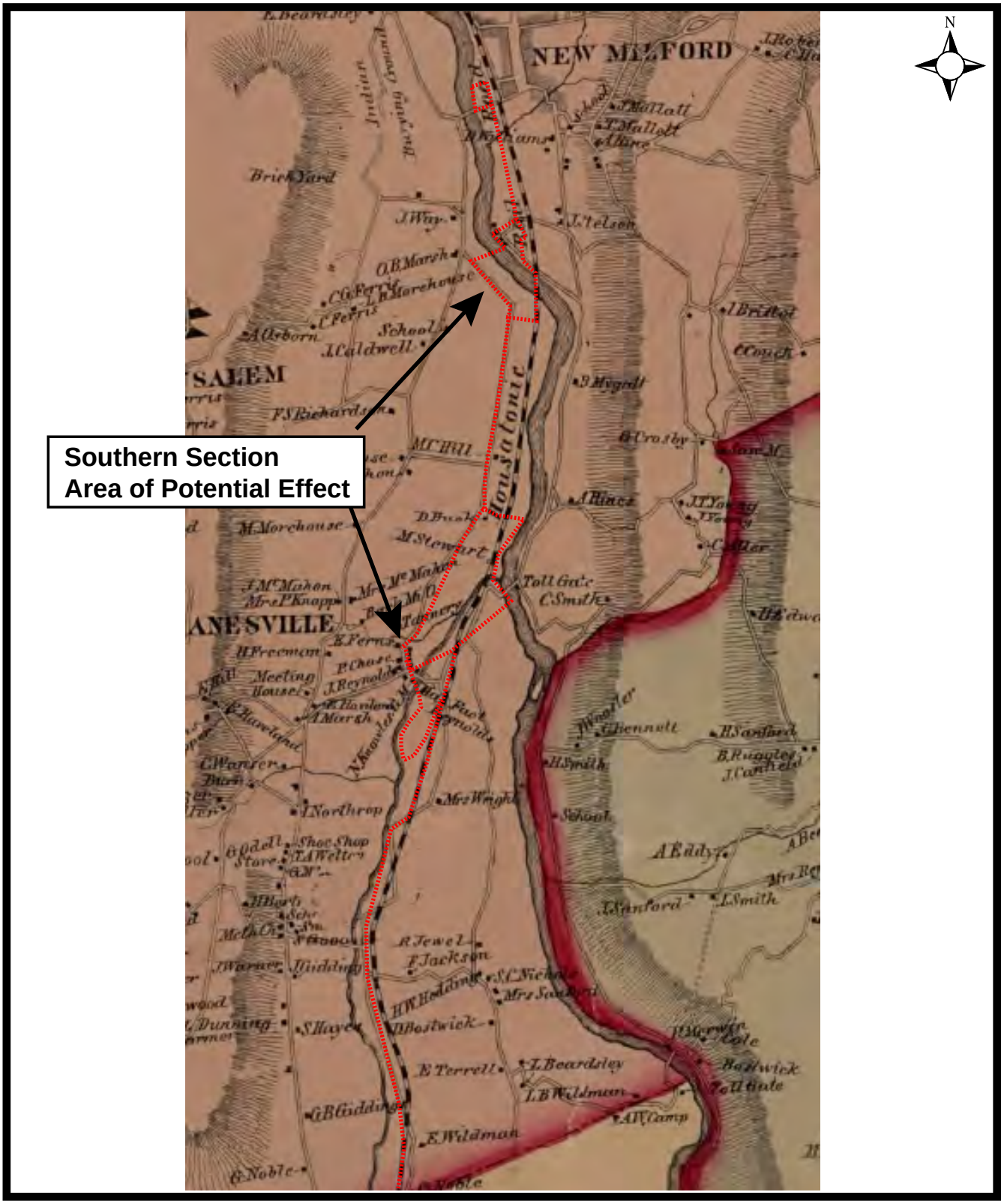
PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 3b: Southern Section Area of Potential Effect on 1853 *Map of New Milford, Litchfield Co., Connecticut, surveyed by L. Fagan.*



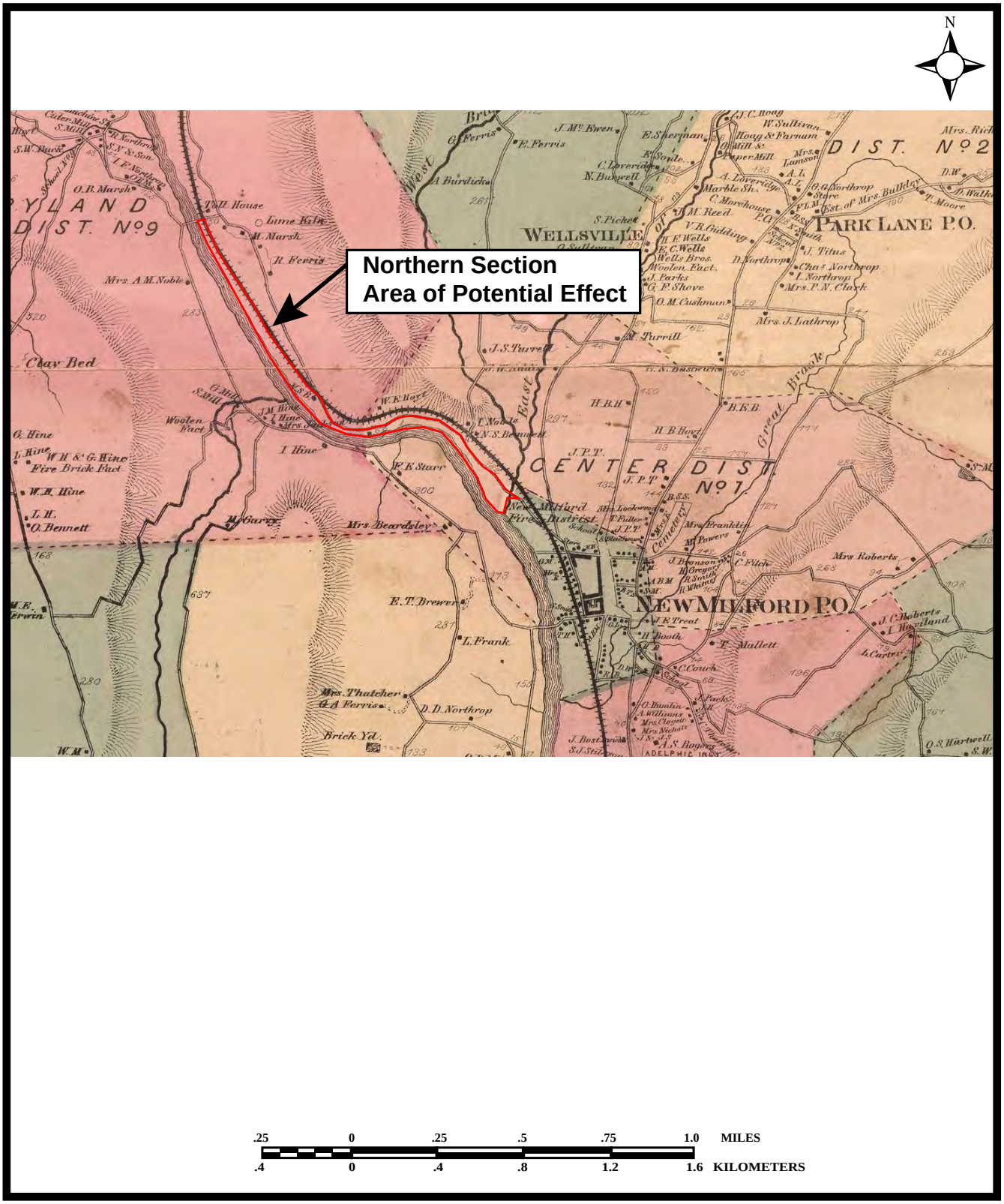
PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 4a: Northern SectionArea of Potential Effect on 1859 Clark *Map of Litchfield County from an Actual Survey by G.M. Hopkins, Jr.*



PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 4b: Southern Area of Potential Effect on 1859 *Clarks Map of Litchfield County from an Actual Survey by G.M. Hopkins, Jr.*



PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
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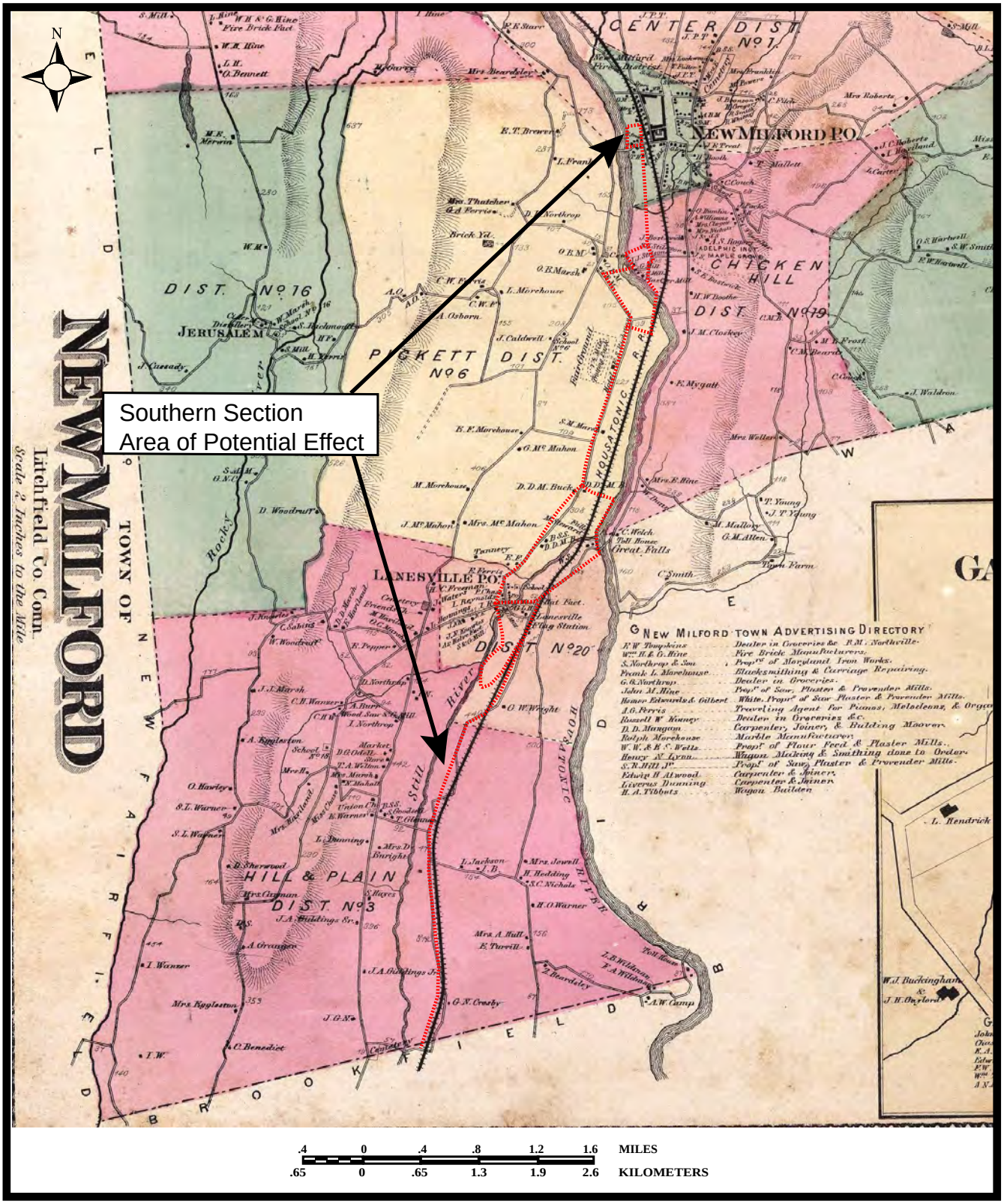
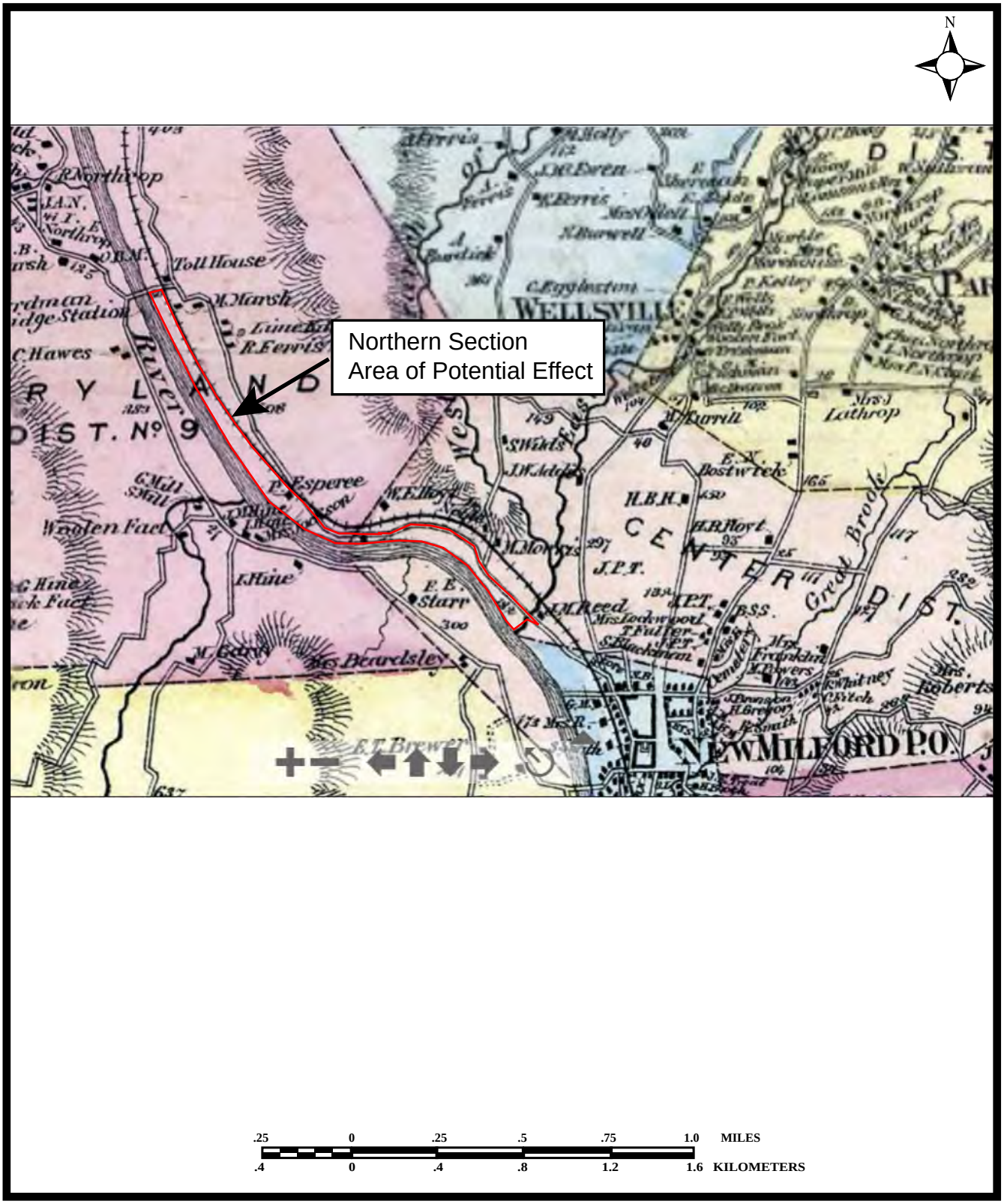
NEW MILFORD, CONNECTICUT

FIGURE 5a: Northern Section Area of Potential Effect on 1867 Beers, Ellis and Soule *County Atlas of Litchfield, Connecticut from actual Surveys by and under the direction of F.W. Beers.*



PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 5b: Southern Section Area of Potential Effect on 1867 Beers, Ellis and Soule *County Atlas of Litchfield, Connecticut, from actual Surveys by and under the direction of F.W. Beers.*



PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
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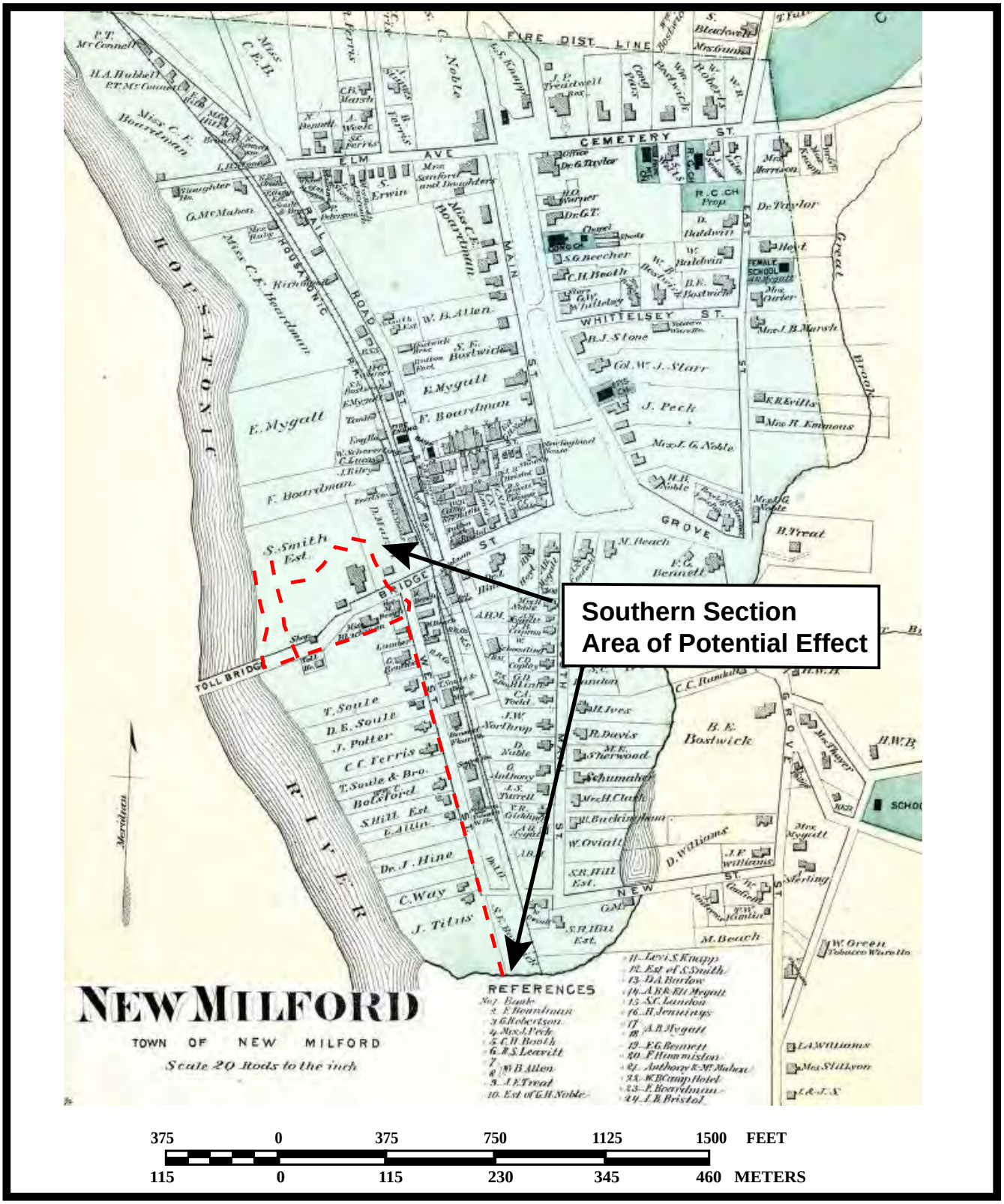
NEW MILFORD, CONNECTICUT

FIGURE 6a: Northern Section Area of Potential Effect on 1874 Beers *County Atlas of Litchfield, Connecticut, from actual Surveys by and under the Director of F.W. Beers.*



PHASE IA ARCHAEOLOGICAL SURVEY
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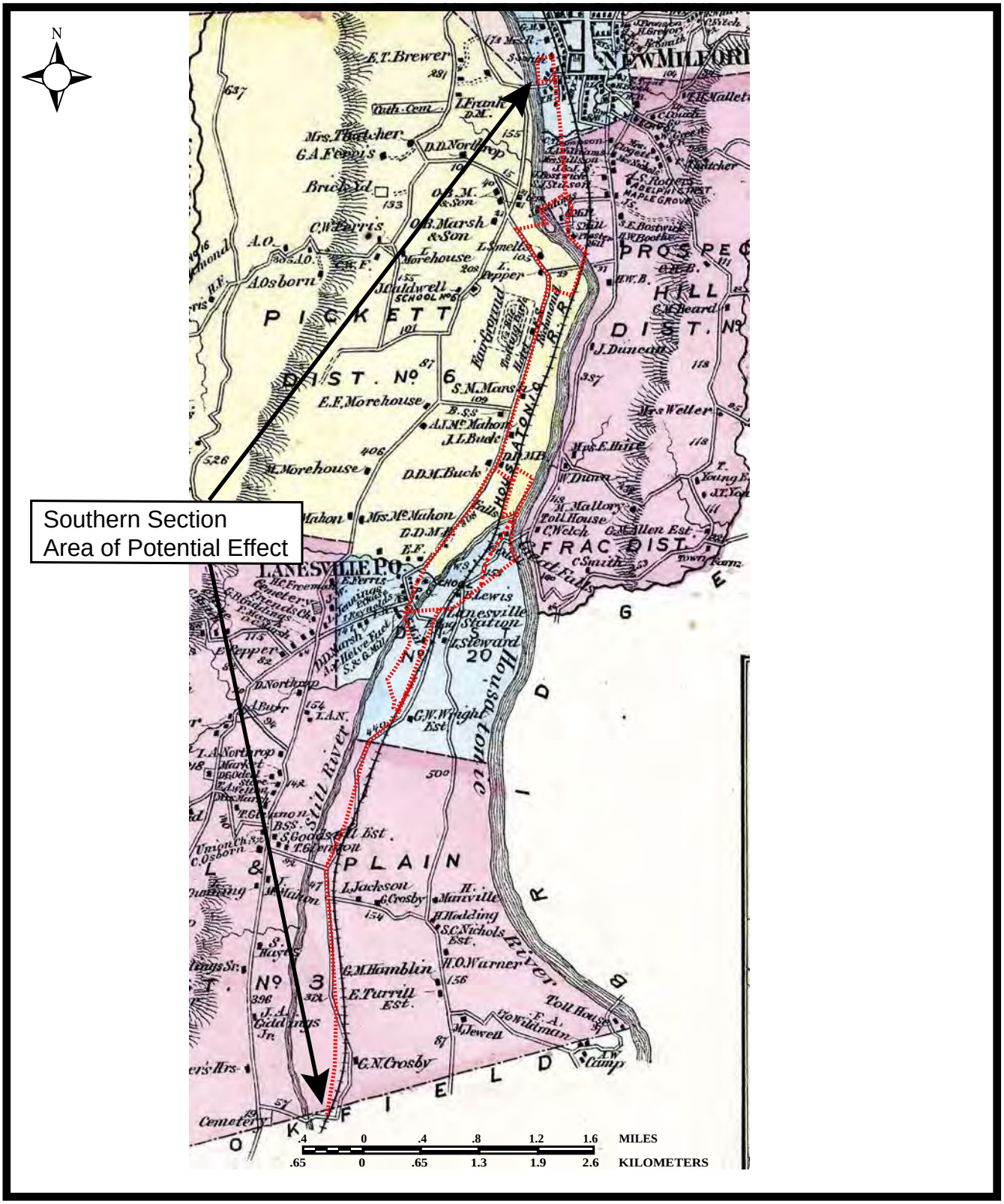
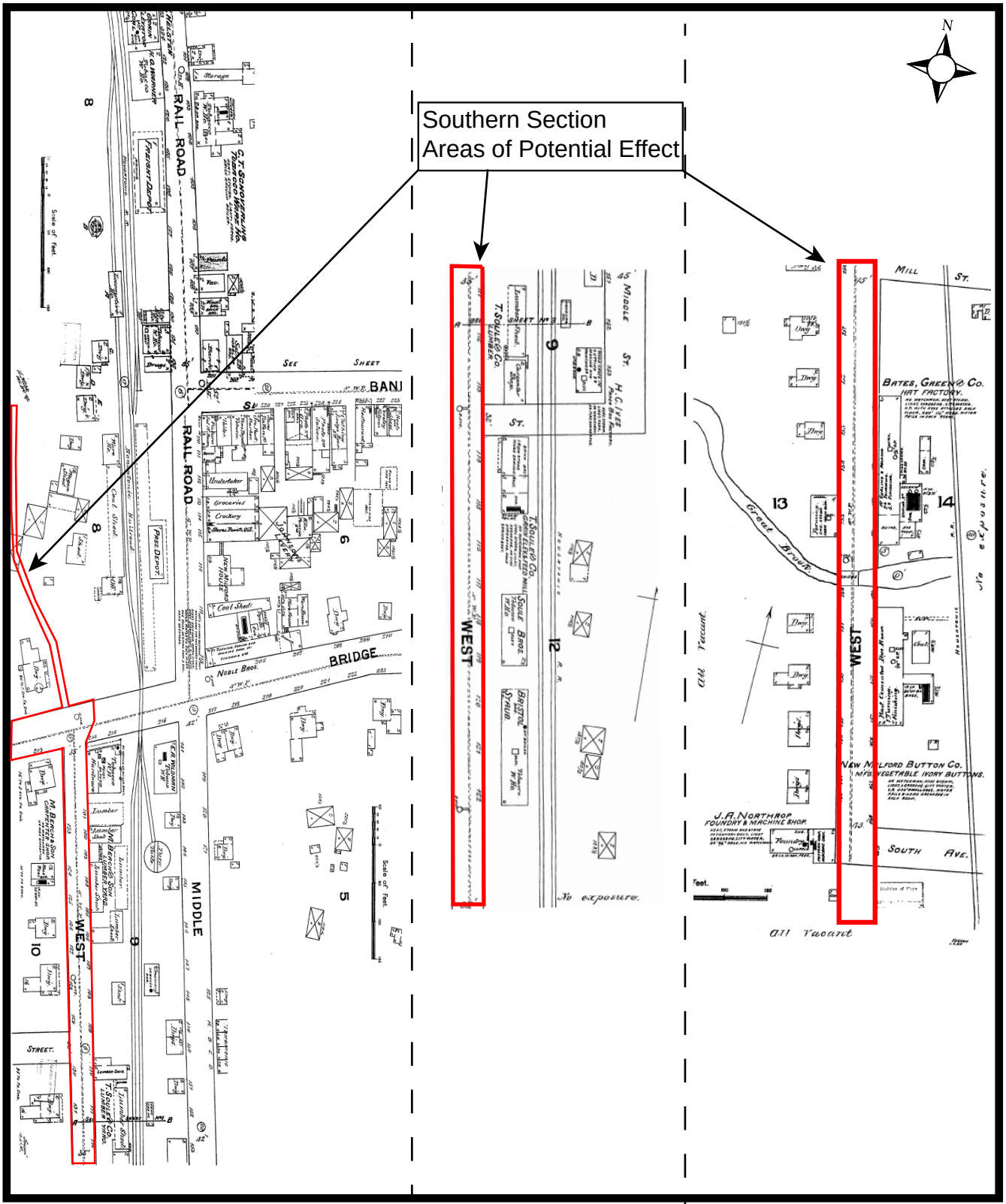
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 6b: Southern Section Area of Potential Effect on close up of New Milford Village, 1874
County Atlas of Litchfield, Connecticut, from actual Surveys by and under the direction of F.W. Beers.



PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 6c: Southern Section Area of Potential Effect on 1874 *County Atlas of Litchfield, Connecticut, from actual Surveys by and under the Director of F.W. Beers.*



PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
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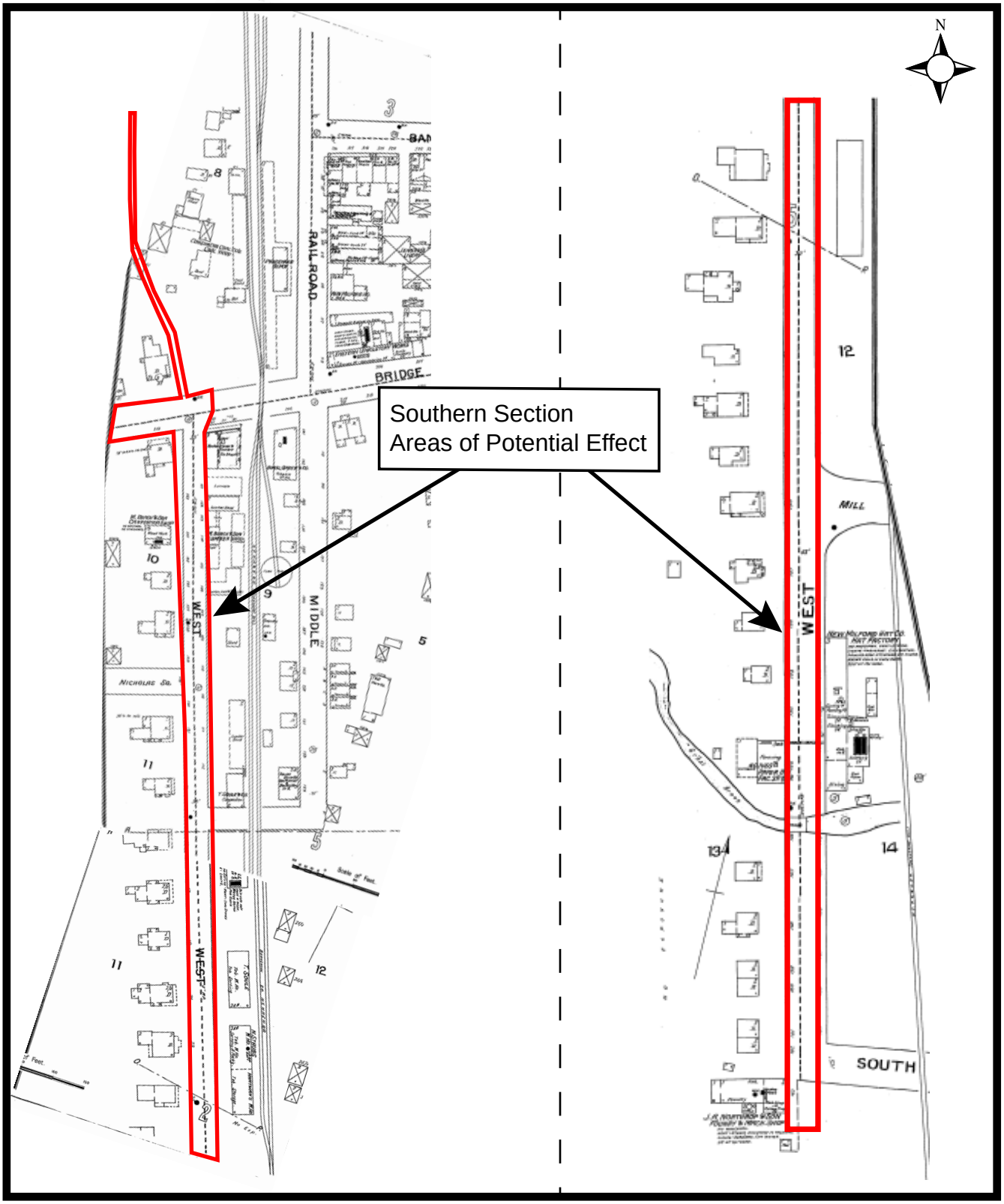
NEW MILFORD, CONNECTICUT

FIGURE 7: Southern Section Areas of Potential Effect on 1887 *Sanborn Insurance Maps of New Milford.*



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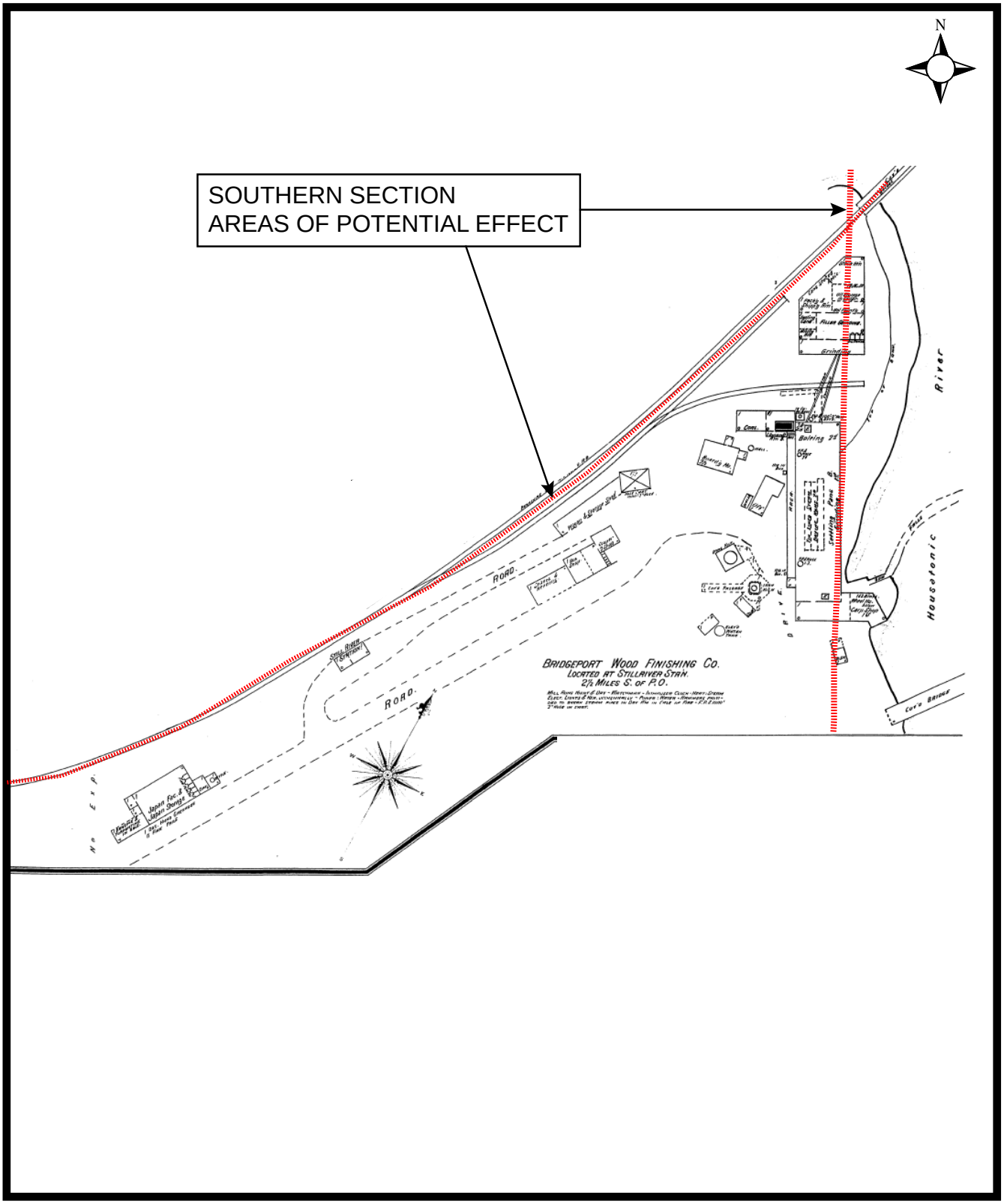
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 8a: Southern Section Areas of Potential Effect on 1892 *Sanborn Insurance Map of New Milford.*



PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
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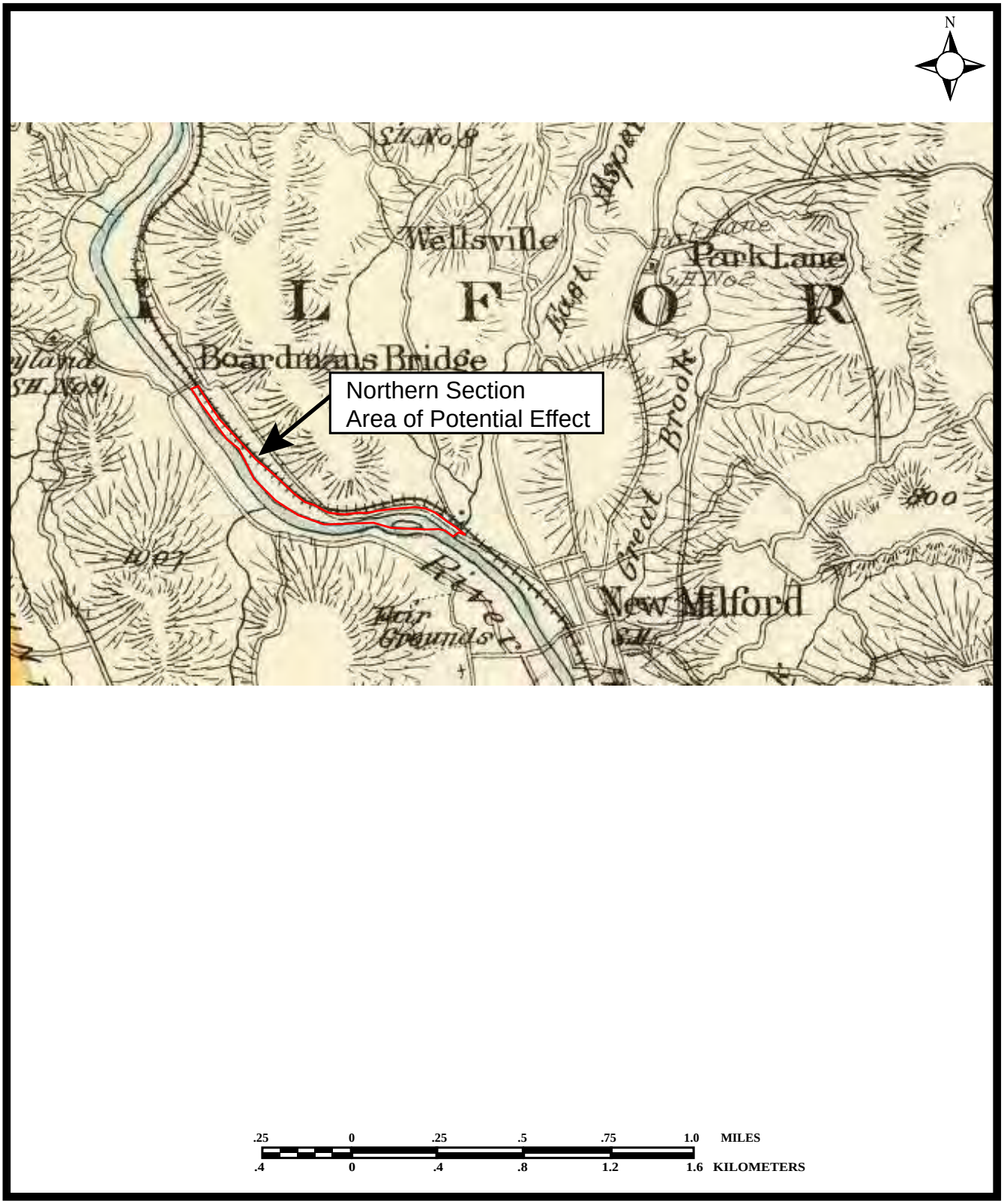
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 8b: Southern Section Areas of Potential Effect near Lovers Leap on 1892 *Sanborn Insurance Map of New Milford.*



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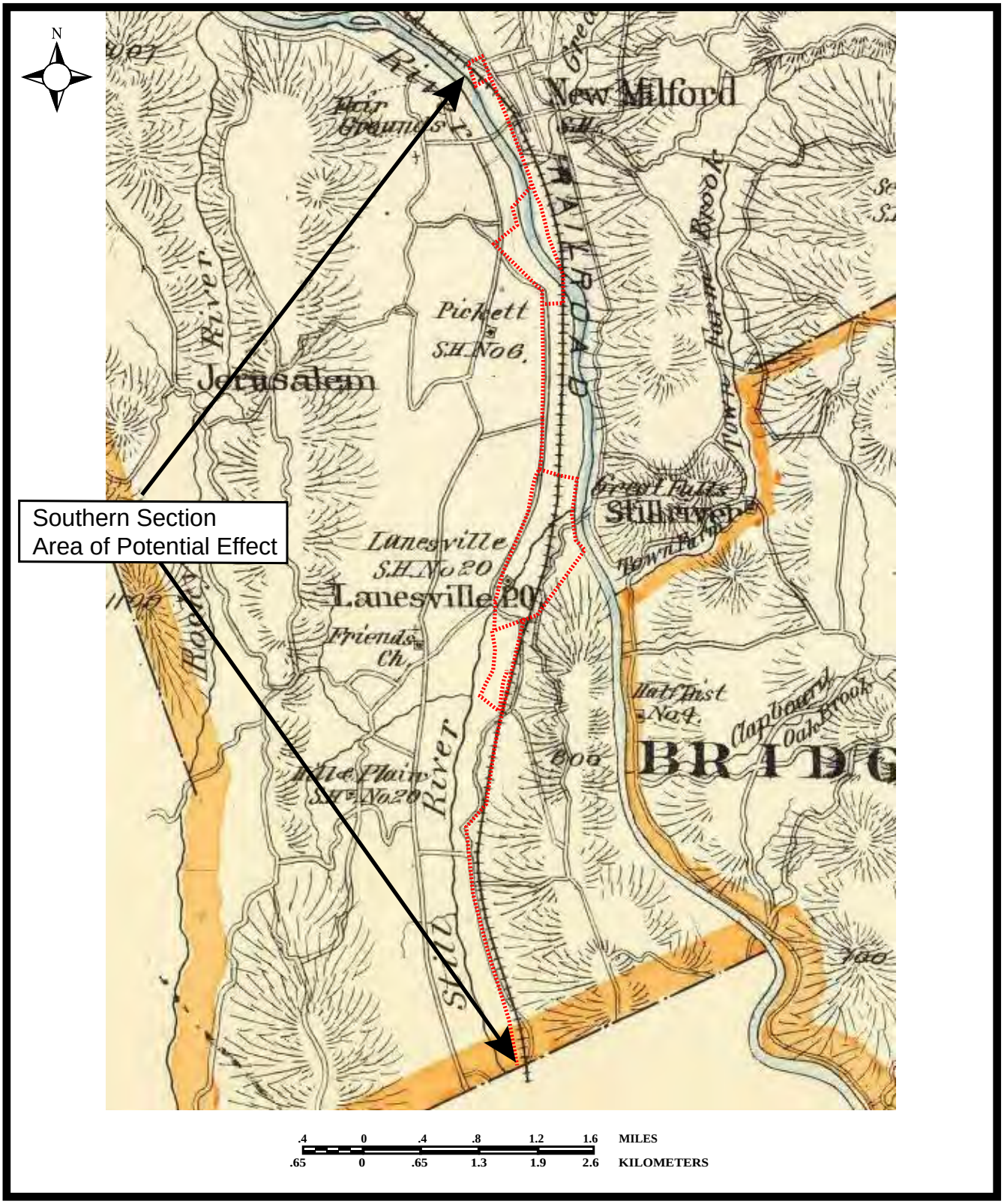
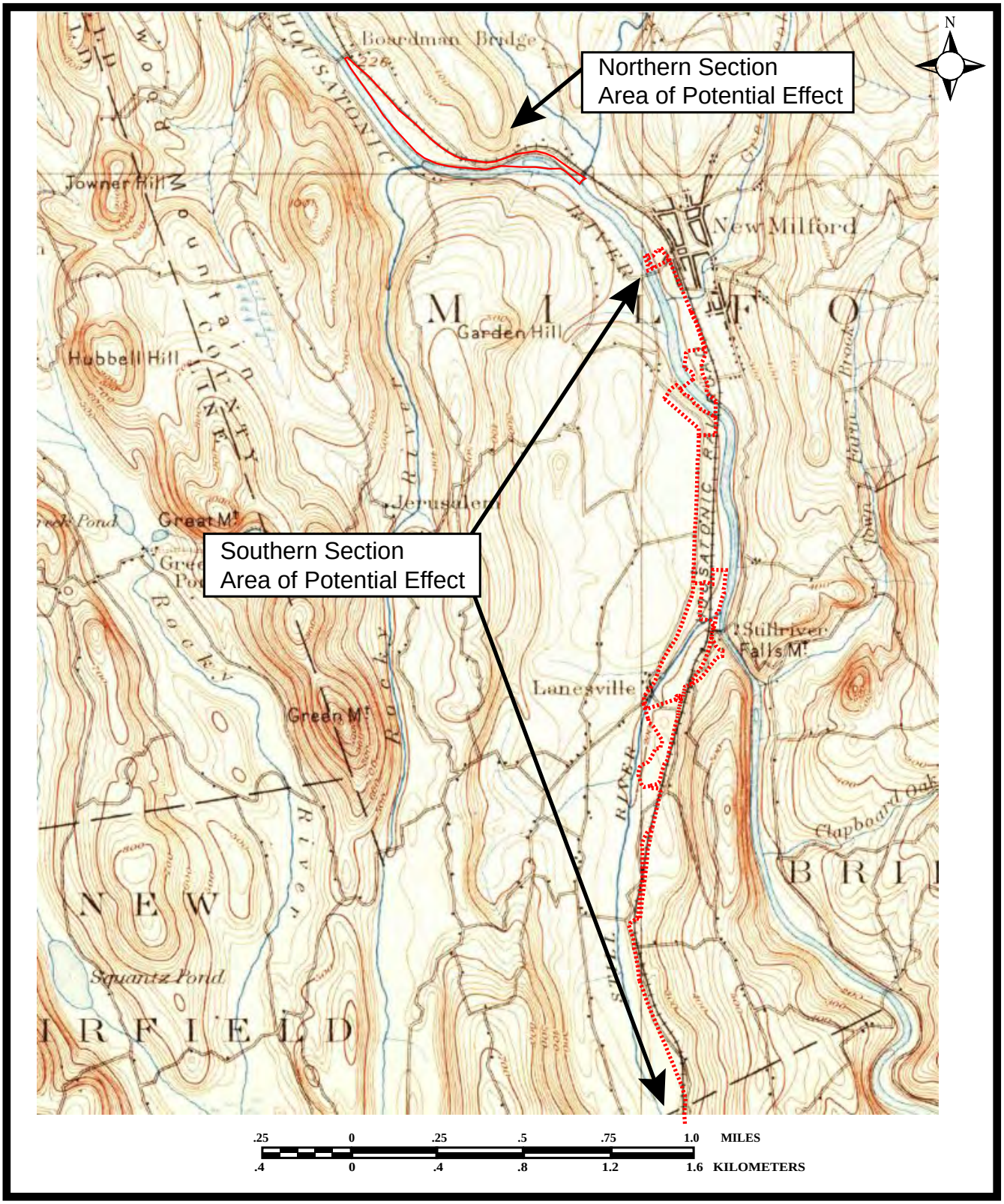
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 9a: Northern Section Area of Potential Effect on 1893 Hurd *Atlas of the State of Connecticut.*



PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 9b: Southern Section Area of Potential Effect on 1893 Hurd *Atlas of the State of Connecticut.*



PHASE IA ARCHAEOLOGICAL SURVEY
NEW MILFORD RIVER TRAIL
NORTHERN AND SOUTHERN SECTIONS
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 10: Northern and Southern Section Areas of Potential Effect on 1893 USGS *New Milford, CT Sheet.*

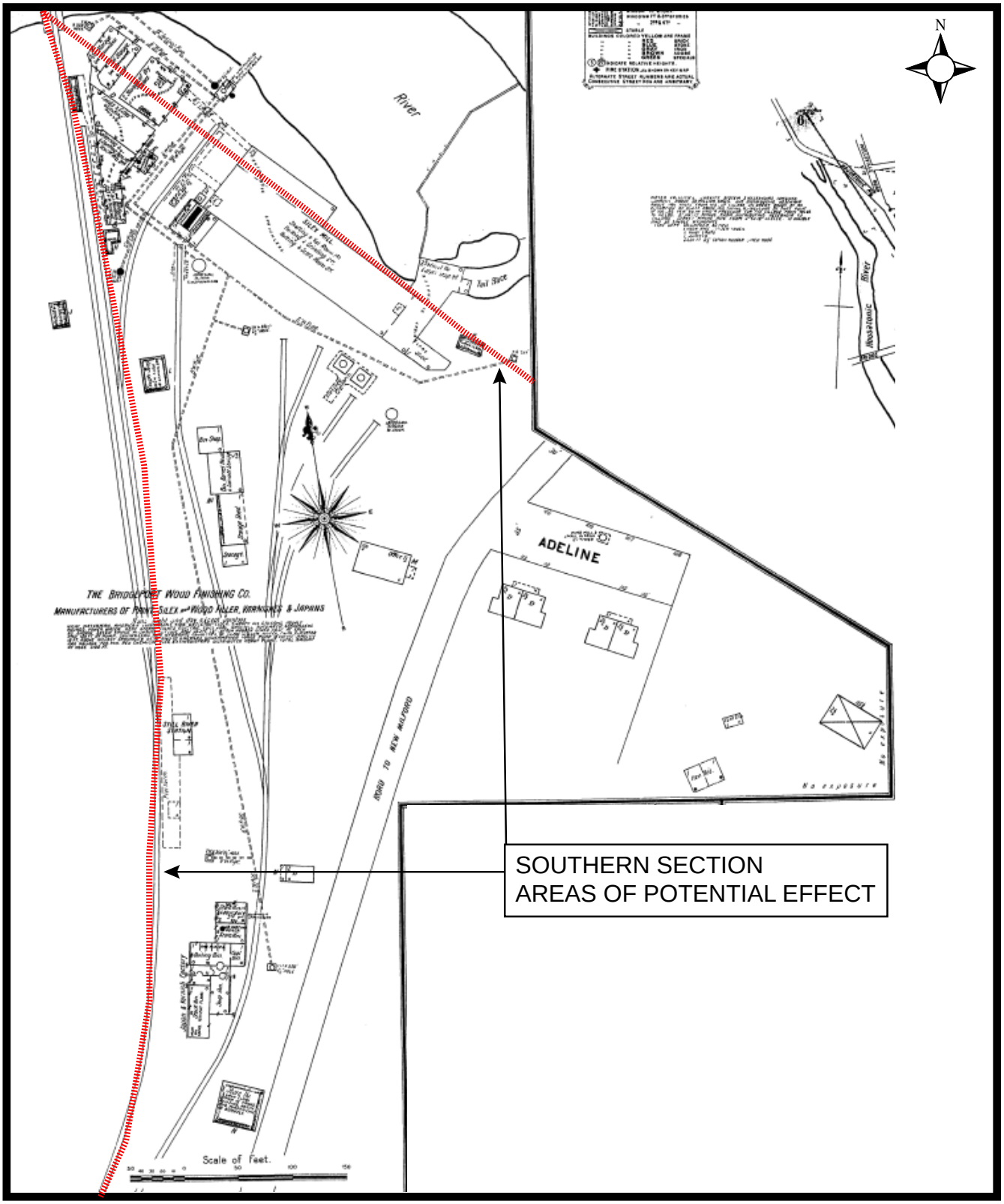


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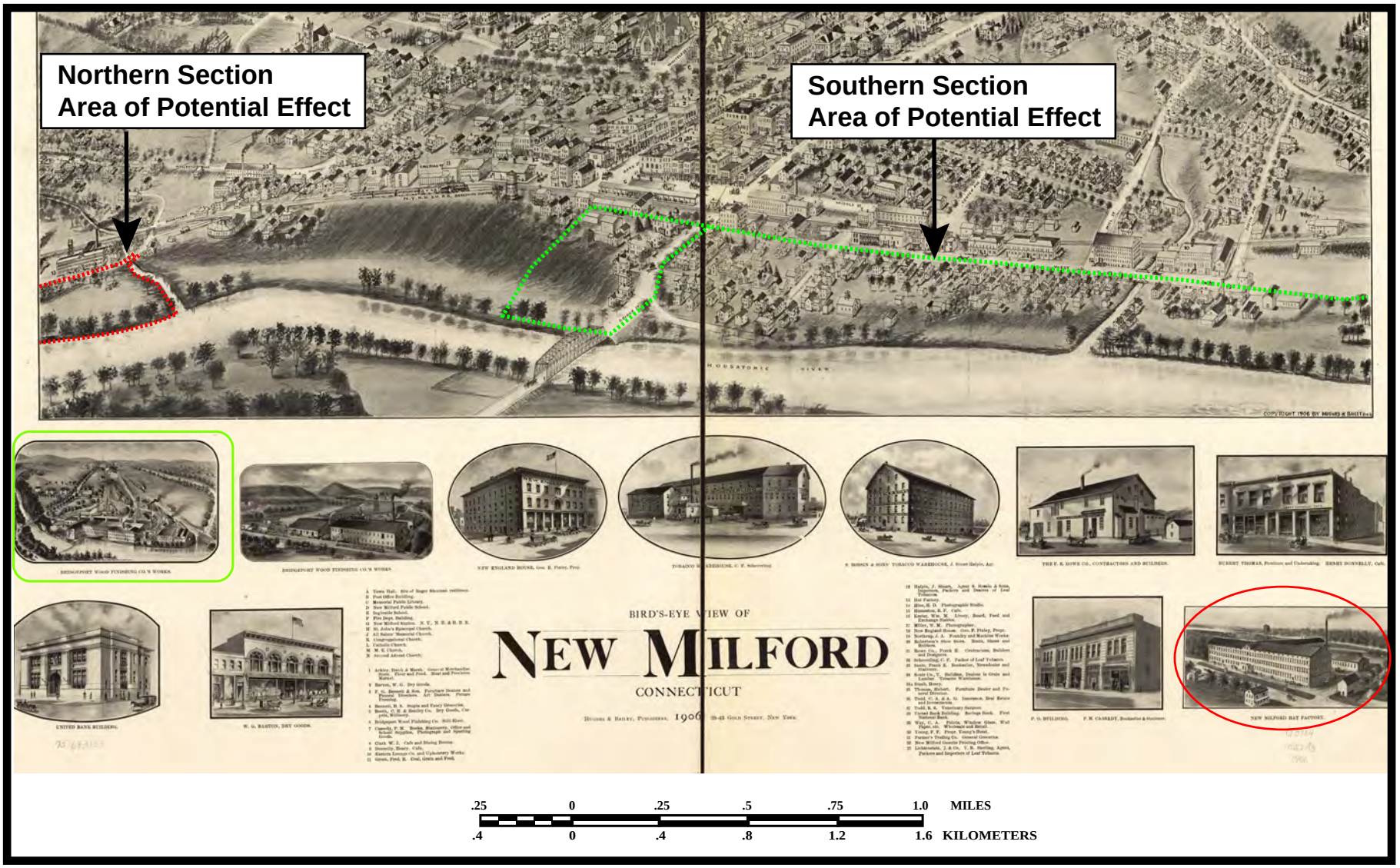
FIGURE 11: Southern Section Area of Potential Effect near Lovers Leap on 1904 *Sanborn Insurance Map of New Milford.*



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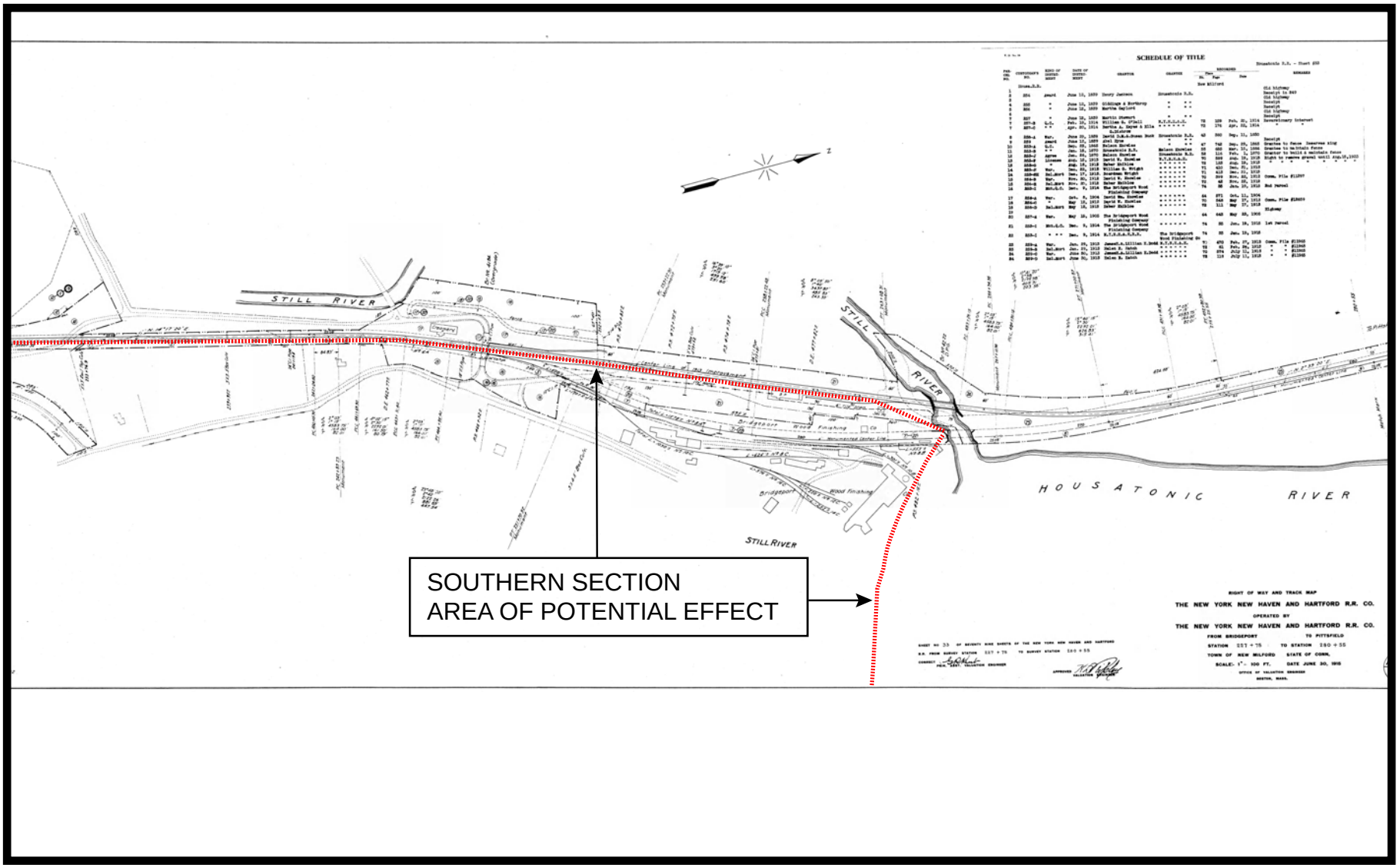
NEW MILFORD, CONNECTICUT

FIGURE 12: Northern and Southern Section Areas of Potential Effect on 1906 Hughes & Bailey *Bird's-eye-view of New Milford, Connecticut.*



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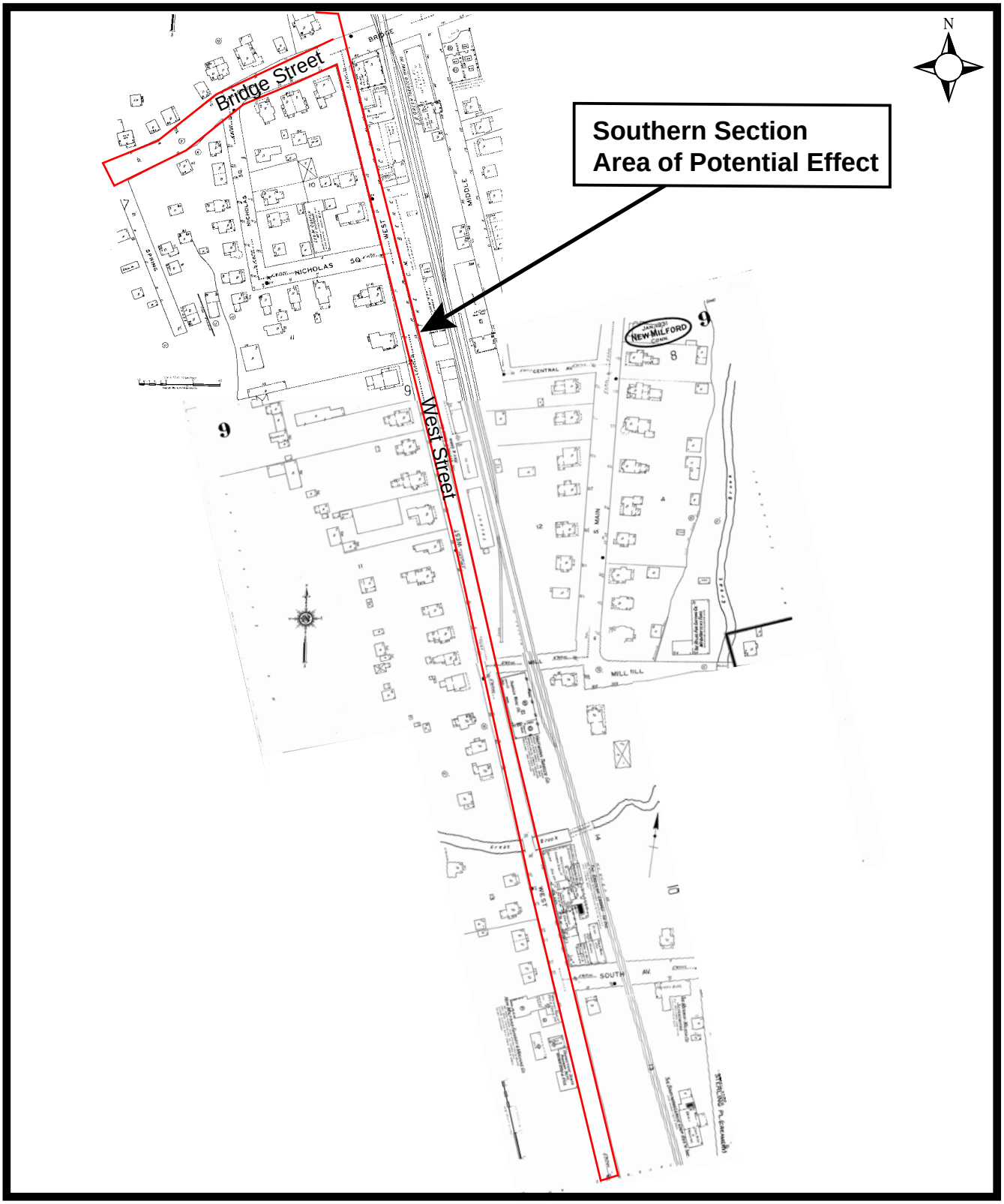
BOARDMAN ROAD TO BROOKFIELD BORDER
NEW MILFORD, CONNECTICUT

FIGURE 13: Southern Section Area of Potential Effect near Lovers Leap on 1915 *Right of Way and Track Map, New York New Haven and Hartford Railroad.*



PHASE IA ARCHAEOLOGICAL SURVEY
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FIGURE 14: Southern Section Area of Potential Effect on 1931 *Sanborn Insurance Maps of New Milford.*

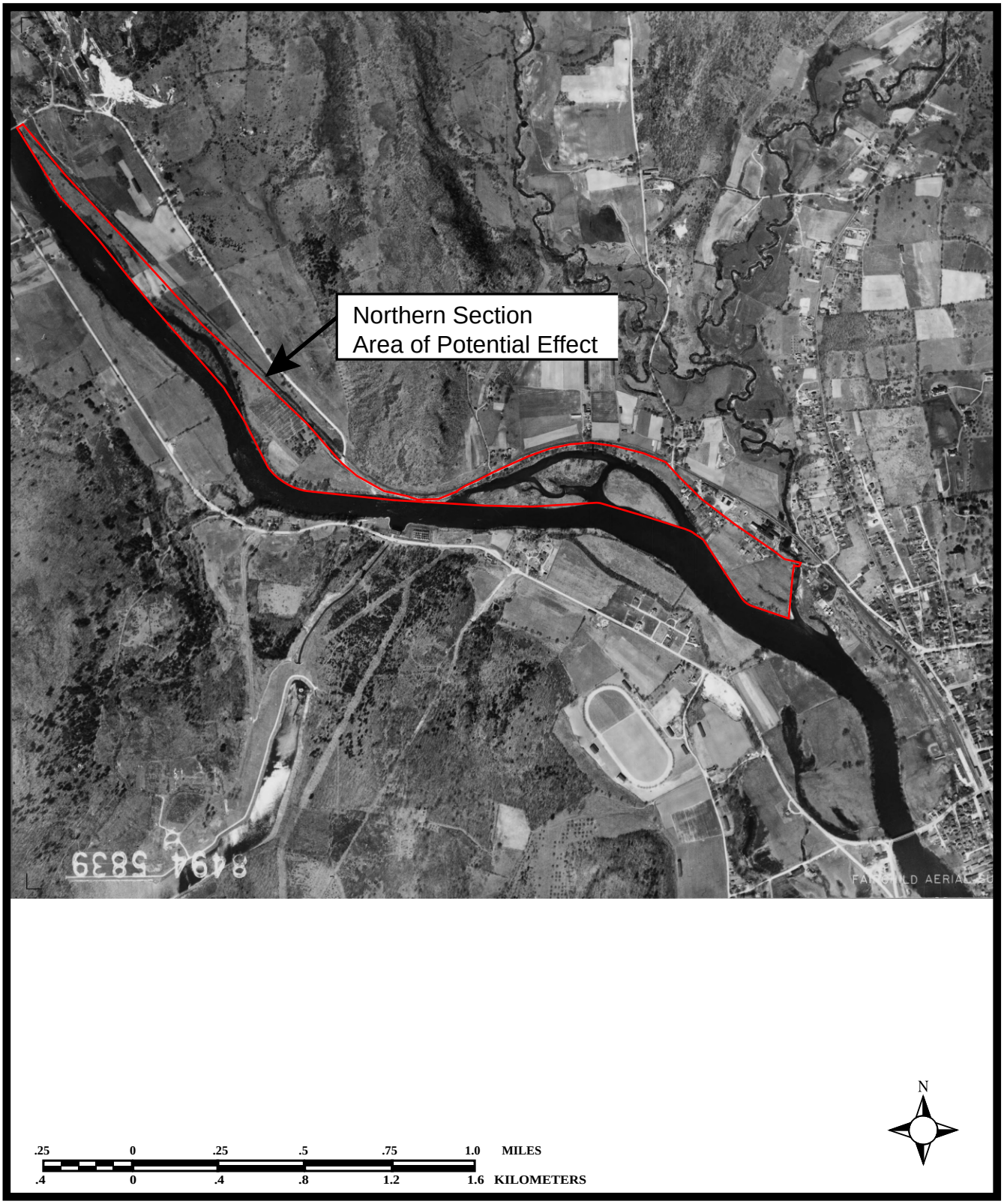

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FIGURE 15a: Northern Section Area of Potential Effect on Fairchild's *Aerial Survey of Connecticut 1934, photograph 05839*.

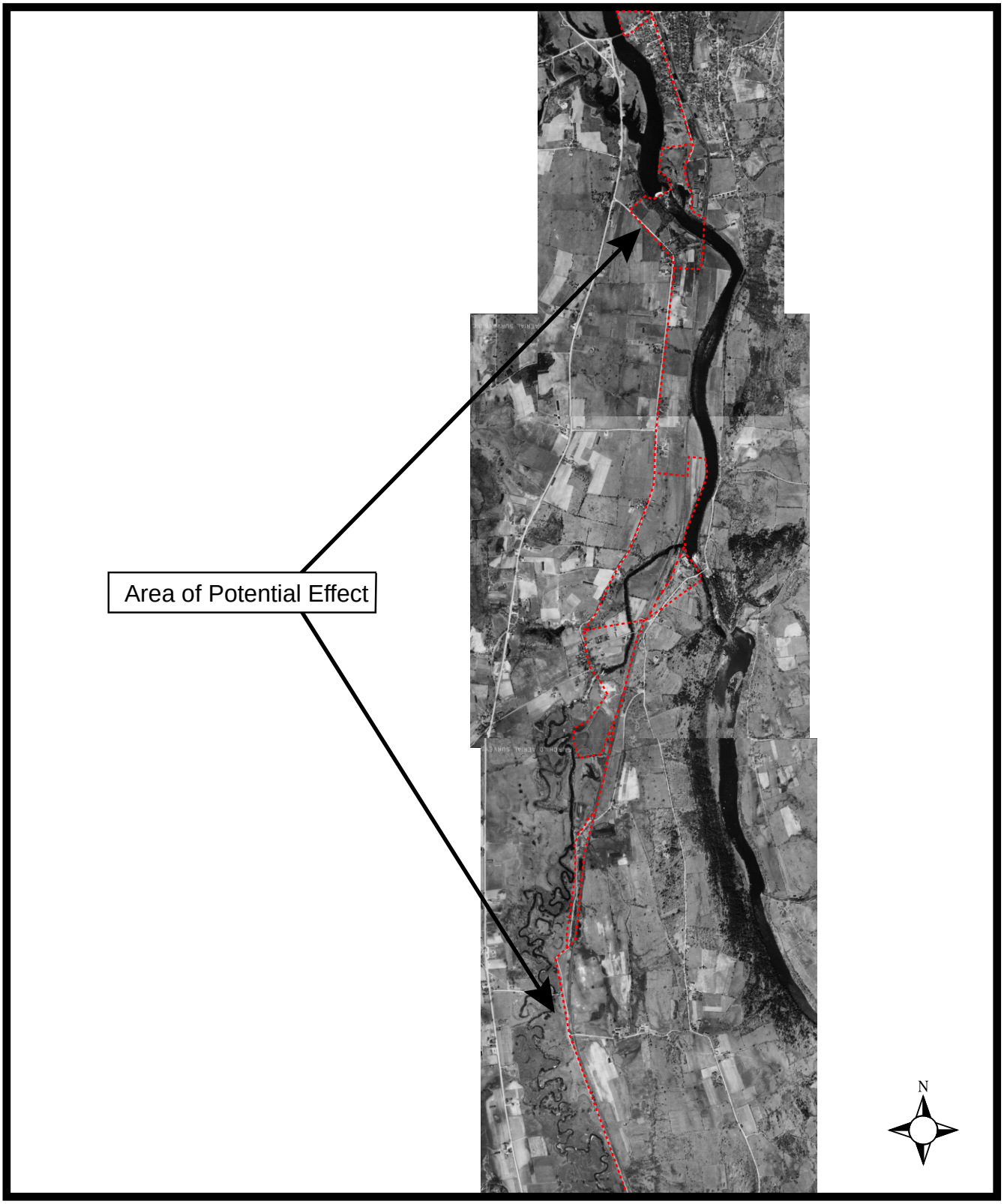

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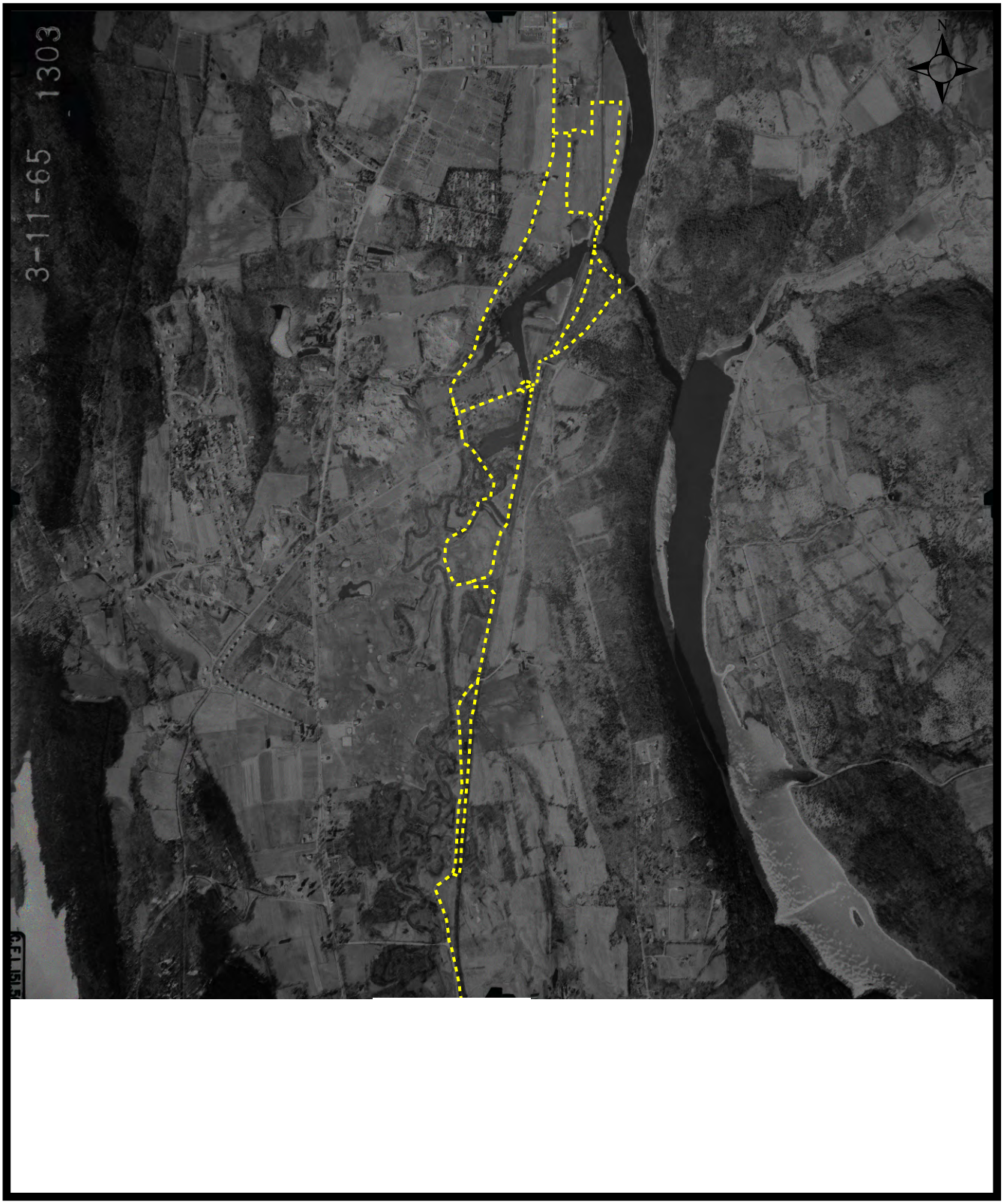
FIGURE 15b: Southern Section Area of Potential Effect on 1934 Fairchild's *Aerial Survey of Connecticut, Photographs 05880 and 05881*.



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BOARDMAN ROAD TO BROOKFIELD BORDER
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FIGURE 16: Southern Section Area of Potential Effect on 1965 Keystone *Aerial survey of Connecticut.*

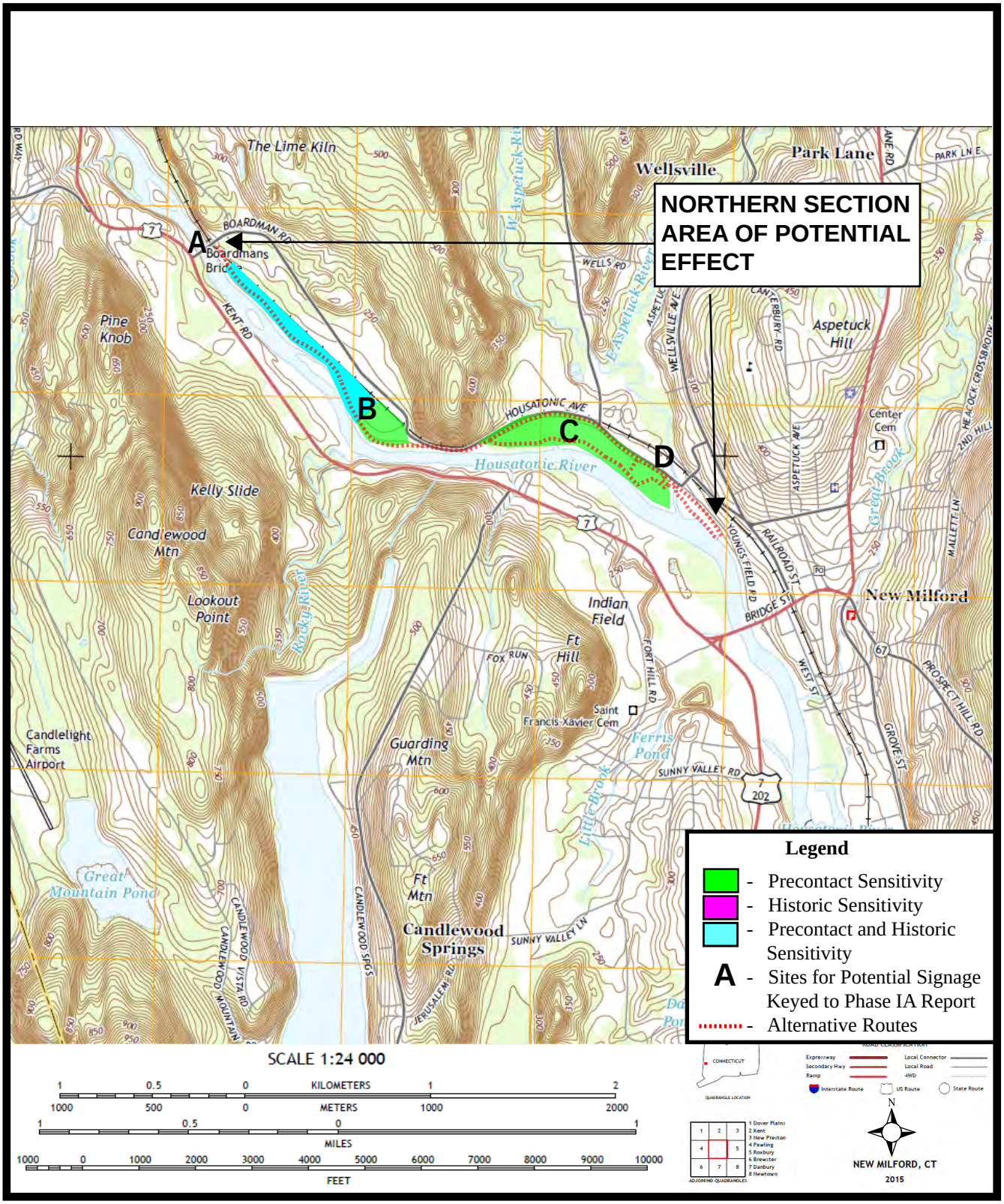

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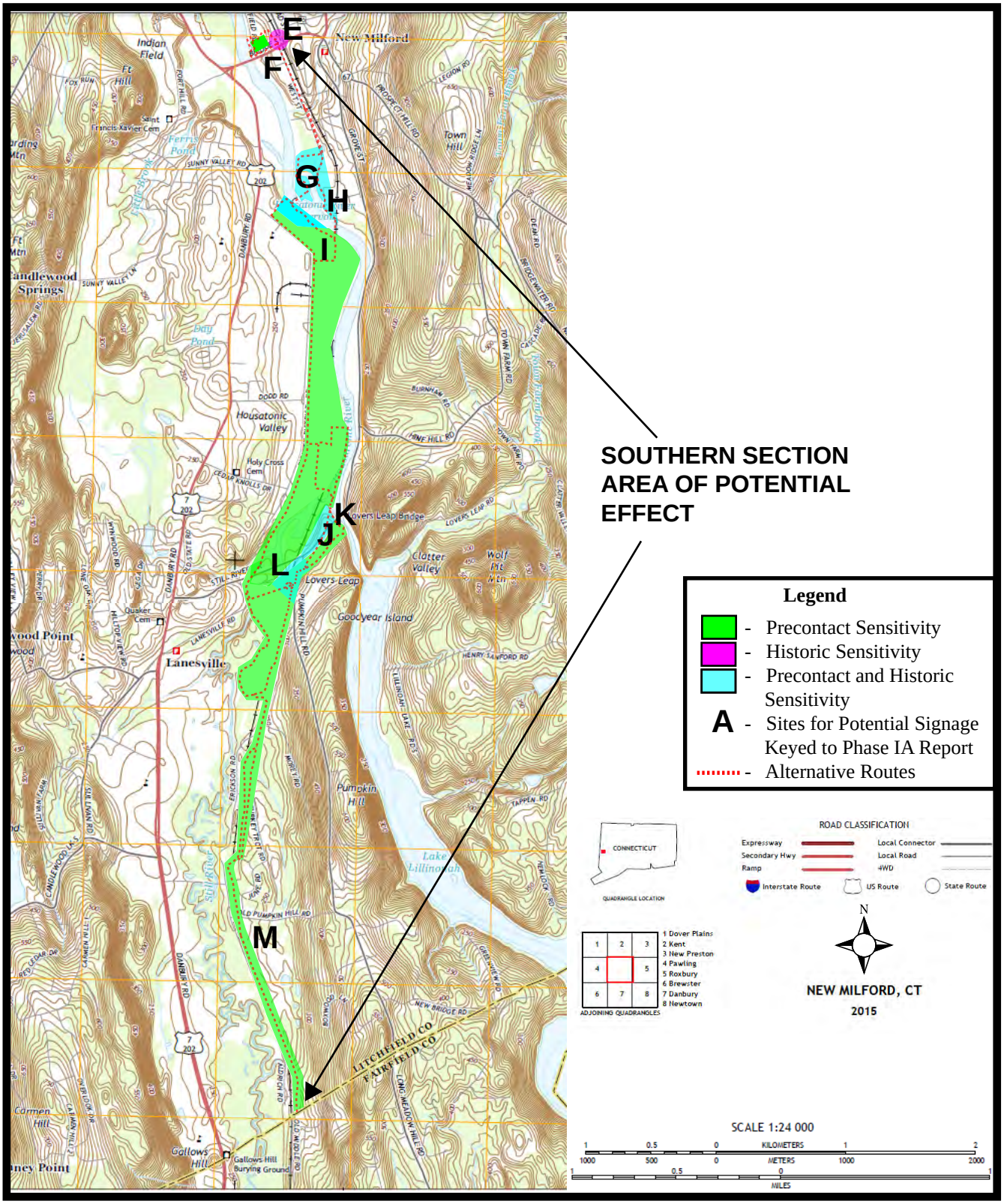
FIGURE 17a: Archaeological Sensitivity in Northern Section Area of Potential Effect on 2015 *U.S.G.S. New Milford, CT Quadrangle*.



PHASE IA ARCHAEOLOGICAL SURVEY
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FIGURE 17b: Archaeological Sensitivity in Southern Section Area of Potential Effect on 2015 *U.S.G.S. New Milford, CT Quadrangle*.

Photograph N1: Boardman Road facing east from north side of road to railroad tracks, with the existing Boardman Bridge at left and the historical 1888 wrought-iron, lenticular truss Boardman Bridge (National Register of Historic Places) at right.

Photograph N2: Railroad tracks facing south Boardman Road toward northern terminus of the proposed River Trail, Northern Section. Note: The grade slopes steeply down to the river, at right, and is heavily wooded.

Photograph N3: Facing south to a level terrace between the Housatonic River, at right, and railroad tracks to the left and out of the photograph. This area is wooded and has a semi-cleared path, possibly an abandoned road used for access to fishing spots or for nineteenth-century railroad construction.

Photograph N4: MEDInstill property with a steep embankment along the east side of the Housatonic River, facing southeast.

Photograph N5: Level terrace between the Housatonic River and the railroad tracks, facing east to a small fenced-off area with a concrete structure, located on MEDInstill property.

Photograph N6: Facing northeast to a relatively level field immediately east of the railroad tracks north of the MEDInstill property.

Photograph N7: Facing north to railroad cut into the terrain, with an embankment down at left, and an embankment up at right.

Photograph N8: Facing southwest to a field at the north end of MEDInstill property, east of the railroad tracks.

Photograph N9: Facing southwest toward two unused buildings at the north end of the MEDInstill property, both to the west of the railroad tracks.

Photograph N10: Facing northwest on Boardman Road to southern entrance of MEDInstill property.

Photograph N11: Facing east to a narrow “choke” point where, from left to right, the railroad tracks, Boardman Road, and the Housatonic River closely align.

Photograph N12: Facing north from the Housatonic River to a point where the railroad tracks and Boardman Road closely align. The trail may be elevated on piles along the south side of the road here.

Photograph N13: The west side of the seasonally flooded Wannuppee Islands, facing northeast from the Housatonic River.

Photograph N14: Northeast side of the Wannuppee Islands, terraced down from Housatonic Avenue, facing south.

Photograph N15: Flooded area separating Wannuppee Island from the upland terrace and the course of Housatonic Avenue, facing northeast.

Photograph N16: Wooded level area to south of Wannuppee Island, facing northwest with the Housatonic River at left.

Photograph N17: Ballfield in Helen Marx Park immediately north of the confluence of the West Aspetuck River and the Housatonic River, facing northwest.

Photograph N18: The confluence of the West Aspetuck River and the Housatonic River, facing north up the West Aspetuck River. The Housatonic Avenue bridge is barely visible in the background.

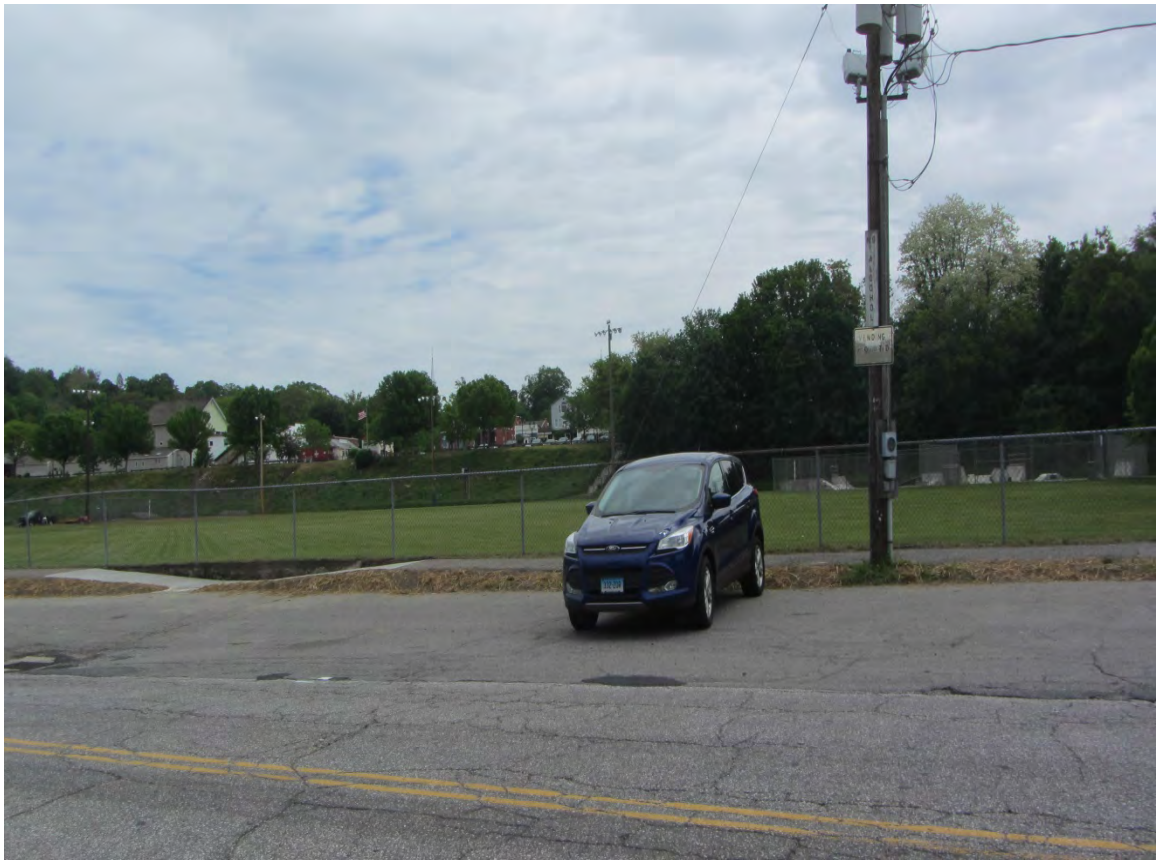
Photograph N19: Recently completed (June 2017) Riverwalk Park between Youngfield Road and the Housatonic River, facing south to the bridge at Bridge Street.

Photograph N20: Wooded area on the south side of Housatonic Avenue and east of the choke point where the road, railroad tracks, and river are in close proximity, facing south.

Photograph N21: Facing southeast on south side of Housatonic Avenue to alternative proposed route of the trail.


Photograph N22: Facing northwest from the center of Housatonic Avenue toward a small bridge crossing over the West Aspetuck River.

Photograph S1: South end of Riverwalk Park on west side of Youngfield Road, facing south.



Photograph S2: Youngs Field facing east from the south end of Riverwalk Park.

Photograph S3: Parking lot east of and elevated above Youngs Field, facing south to Bridge Street.

Photograph S4: East side of Youngfield Road, facing north from Bridge Street.

Photograph S5: South side of Bridge Street facing east from just west of Spring Street.


Photograph S6: Potential route of trail beneath the east side of the Bridge Street Bridge, immediately adjacent to the Housatonic River, facing southeast.

Photograph S7: Looking south down West Street from just south of Bridge Street.

Photograph S8: East façade of old granite and fieldstone mill building in Hidden Treasurers Park, with storage tank to the north.

Photograph S9: Remains of eastern portion of Bleachery Dam adjacent to the mill building in Hidden Treasures Park, facing northwest.

Photograph S10: Facing east from the west bank of the Housatonic River to the western section of the Bleachery Dam on the Housatonic River and, on the opposite side of the river, Hidden Treasures Park.

Photograph S11: Existing railroad bridge over the Housatonic River, south of the West Cove Marina property, facing south.

Photograph S12: Kimberly Clark Access Road, facing west toward Pickett District Road.

Photograph S13: Looking south on west side of Pickett District Road in front of Kimberly Clark toward 71 Pickett District Road.


Photograph S14: Gravel road, facing east downhill from Pickett District Road to Town owned ballfields and potential route of trail.

Photograph S15: Still River Drive facing west from intersection with Lanesville Road, at right.

Photograph S16: Arrow points to the mouth of the Still River where it enters into the Housatonic River, facing northwest from the Still River Drive Bridge over the Housatonic River.

Photograph S17: Historical bridge abutment for former railroad crossing at the mouth of the Still River where it enters into the Housatonic River, facing north.

Photograph S18: Facing north to the Bridgeport Wood Finishing Company site, both on the State Register of Historic Places and a Connecticut Archaeological Preserve.

Photograph S19: Facing south to Franks Lane and northern parking lot at entrance to Harrybrooke Park, with railroad alignment at the extreme left.

Photograph S20: Facing south to paved entrance into Harrybrooke Park from Franks Lane.

Photograph S21: Facing southwest to the Lanesville Road Bridge over the Still River at the south end of Frank's Lane and Harrybrooke Park's northern parking lot.

Photograph S22: Facing northwest to the existing Harrybrooke Park Bridge over the Still River that exits onto Lanesville Road.

Photograph S23: Erickson Road just north of its intersection with Cross Road, facing south.

APPENDIX A1

United States Department of Agriculture

NRCS

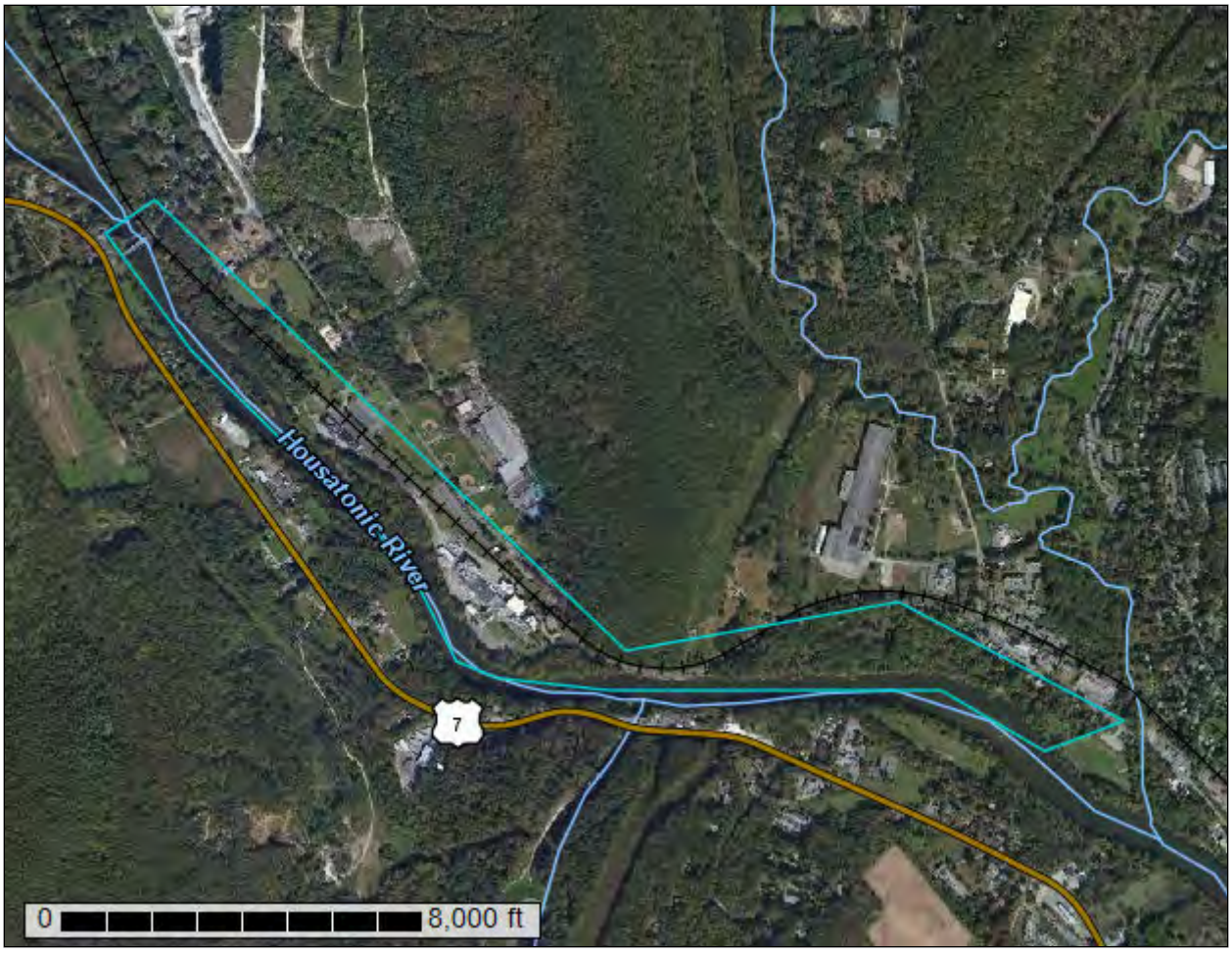
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for

State of Connecticut

River Trail, Northern Section



June 20, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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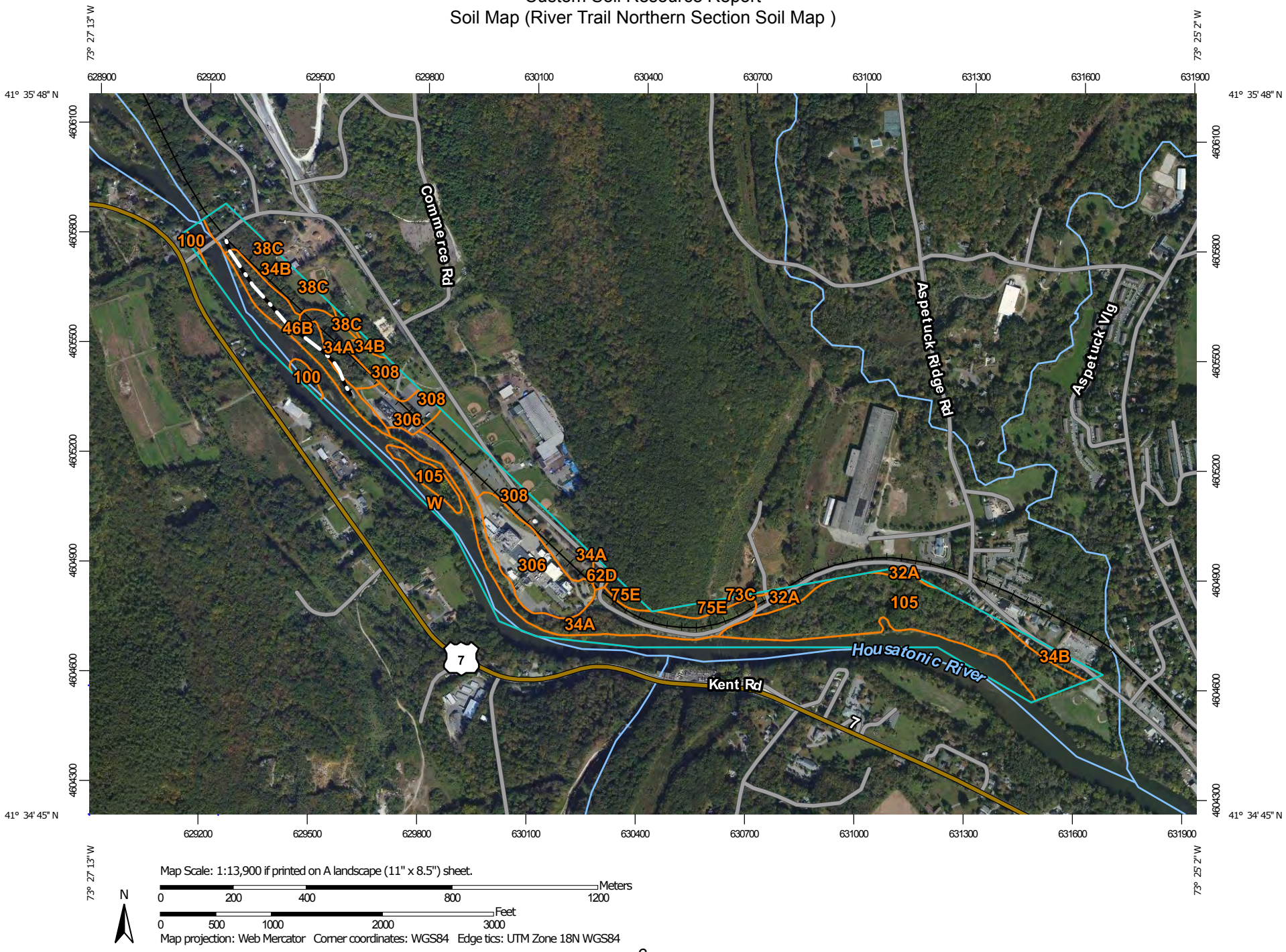
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (River Trail Northern Section Soil Map)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 15, Sep 28, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 28, 2011—Oct 9, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (River Trail Northern Section Soil Map)

State of Connecticut (CT600)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
32A	Haven and Enfield soils, 0 to 3 percent slopes	2.5	1.8%
34A	Merrimac fine sandy loam, 0 to 3 percent slopes	20.1	14.8%
34B	Merrimac fine sandy loam, 3 to 8 percent slopes	10.2	7.5%
38C	Hinckley loamy sand, 3 to 15 percent slopes	0.6	0.5%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	7.3	5.4%
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	0.7	0.5%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	0.1	0.1%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	2.8	2.1%
100	Suncook loamy fine sand	1.4	1.0%
105	Hadley silt loam	29.6	21.8%
306	Udorthents-Urban land complex	16.3	12.0%
308	Udorthents, smoothed	14.5	10.7%
W	Water	29.5	21.8%
Totals for Area of Interest		**135.7**	**100.0%**

Map Unit Descriptions (River Trail Northern Section Soil Map)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some

observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The

pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

State of Connecticut

32A—Haven and Enfield soils, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9lmr
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Haven and similar soils: 60 percent
Enfield and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Haven

Setting

Landform: Outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

Ap - 0 to 7 inches: silt loam
Bw1 - 7 to 14 inches: silt loam
Bw2 - 14 to 20 inches: silt loam
BC - 20 to 24 inches: fine sandy loam
2C - 24 to 60 inches: stratified very gravelly sand to gravelly fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Enfield

Setting

Landform: Outwash plains, terraces

Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-silty eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

O - 0 to 3 inches: slightly decomposed plant material
O - 3 to 4 inches: moderately decomposed plant material
Ap - 4 to 12 inches: silt loam
Bw1 - 12 to 20 inches: silt loam
Bw2 - 20 to 26 inches: silt loam
Bw3 - 26 to 30 inches: silt loam
2C - 30 to 37 inches: stratified coarse sand to very gravelly loamy sand
3C - 37 to 65 inches: stratified very gravelly coarse sand to loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Agawam

Percent of map unit: 4 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Branford

Percent of map unit: 3 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, gravelly surface

Percent of map unit: 2 percent
Hydric soil rating: No

Raypol

Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave

Hydric soil rating: Yes

Tisbury

Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ninigret

Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

34A—Merrimac fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tyqr
Elevation: 0 to 1,100 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Merrimac and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Eskers, kames, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Backslope, footslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 2 percent
Salinity, maximum in profile: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Sudbury

Percent of map unit: 5 percent
Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, eskers, kames, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Agawam

Percent of map unit: 3 percent
Landform: Eskers, kames, outwash plains, outwash terraces, moraines, stream terraces
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Windsor

Percent of map unit: 2 percent
Landform: Deltas, dunes, outwash plains, outwash terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Riser, tread

Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

34B—Merrimac fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyqs
Elevation: 0 to 1,290 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Merrimac and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Eskers, kames, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Backslope, footslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 2 percent
Salinity, maximum in profile: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0

Available water storage in profile: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, eskers, kames, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Windsor

Percent of map unit: 3 percent
Landform: Deltas, dunes, outwash plains, outwash terraces
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Riser, tread
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Agawam

Percent of map unit: 2 percent
Landform: Eskers, kames, outwash plains, outwash terraces, moraines, stream terraces
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

38C—Hinckley loamy sand, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2svmb

Elevation: 0 to 1,290 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Eskers, kames, kame terraces, outwash plains, outwash terraces, moraines, outwash deltas
Landform position (two-dimensional): Footslope, toeslope, shoulder, backslope, summit
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, riser, tread
Down-slope shape: Convex, concave, linear
Across-slope shape: Concave, linear, convex
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 5 percent

Landform: Eskers, kames, kame terraces, outwash plains, outwash terraces, moraines, outwash deltas
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope, summit
Landform position (three-dimensional): Crest, head slope, nose slope, side slope, riser, tread
Down-slope shape: Convex, concave, linear
Across-slope shape: Concave, linear, convex
Hydric soil rating: No

Merrimac

Percent of map unit: 5 percent
Landform: Eskers, kames, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Shoulder, toeslope, backslope, footslope, summit
Landform position (three-dimensional): Side slope, head slope, nose slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Agawam

Percent of map unit: 3 percent
Landform: Eskers, kames, kame terraces, outwash plains, outwash terraces, moraines, outwash deltas
Landform position (two-dimensional): Shoulder, backslope, toeslope, summit, footslope
Landform position (three-dimensional): Crest, head slope, nose slope, side slope, tread, riser
Down-slope shape: Linear, convex, concave
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Sudbury

Percent of map unit: 2 percent
Landform: Kame terraces, outwash plains, outwash terraces, moraines, outwash deltas
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: No

46B—Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2t2qr
Elevation: 0 to 1,440 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Woodbridge, very stony, and similar soils: 82 percent
Minor components: 18 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge, Very Stony

Setting

Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Backslope, footslope, summit
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 9 inches: fine sandy loam
Bw1 - 9 to 20 inches: fine sandy loam
Bw2 - 20 to 32 inches: fine sandy loam
Cd - 32 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Natural drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 19 to 27 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Paxton, very stony

Percent of map unit: 10 percent
Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 8 percent
Landform: Depressions, drumlins, ground moraines, drainageways, hills
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

62D—Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2w81r
Elevation: 0 to 1,640 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Canton, extremely stony, and similar soils: 55 percent
Charlton, extremely stony, and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton, Extremely Stony

Setting

Landform: Ridges, hills, moraines
Landform position (two-dimensional): Backslope, summit, shoulder
Landform position (three-dimensional): Side slope, crest, nose slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 5 inches: fine sandy loam
Bw1 - 5 to 16 inches: fine sandy loam
Bw2 - 16 to 22 inches: gravelly fine sandy loam
2C - 22 to 67 inches: gravelly loamy sand

Properties and qualities

Slope: 15 to 35 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Natural drainage class: Well drained

Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.4 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Charlton, Extremely Stony

Setting
Landform: Ground moraines, ridges, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile
Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 4 inches: fine sandy loam
Bw - 4 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities
Slope: 15 to 35 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 8.7 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Chatfield, extremely stony

Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, backslope, shoulder
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Hollis, extremely stony

Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Sutton, extremely stony

Percent of map unit: 5 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

73C—Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky

Map Unit Setting

National map unit symbol: 2w698
Elevation: 0 to 1,550 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Charlton, very stony, and similar soils: 50 percent
Chatfield, very stony, and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton, Very Stony

Setting

Landform: Ridges, hills

Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 4 inches: fine sandy loam
Bw - 4 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 15 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Chatfield, Very Stony

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 2 inches: fine sandy loam
Bw - 2 to 30 inches: gravelly fine sandy loam
2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 3 to 15 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: 20 to 41 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.3 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Leicester, very stony
Percent of map unit: 5 percent
Landform: Depressions, drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Rock outcrop
Percent of map unit: 5 percent
Hydric soil rating: No

Hollis, very stony
Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Sutton, very stony
Percent of map unit: 5 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

75E—Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes

Map Unit Setting
National map unit symbol: 9lqp

Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 35 percent
Chatfield and similar soils: 30 percent
Rock outcrop: 15 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Landform: Ridges, hills
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy melt-out till derived from granite and/or schist and/or gneiss

Typical profile

Oa - 0 to 1 inches: highly decomposed plant material
A - 1 to 6 inches: gravelly fine sandy loam
Bw1 - 6 to 9 inches: channery fine sandy loam
Bw2 - 9 to 15 inches: gravelly fine sandy loam
2R - 15 to 80 inches: bedrock

Properties and qualities

Slope: 15 to 45 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to high (0.01 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Chatfield

Setting

Landform: Ridges, hills
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy melt-out till derived from granite and/or schist and/or gneiss

Typical profile

Oa - 0 to 1 inches: highly decomposed plant material
A - 1 to 6 inches: gravelly fine sandy loam
Bw1 - 6 to 15 inches: gravelly fine sandy loam
Bw2 - 15 to 29 inches: gravelly fine sandy loam
2R - 29 to 80 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 45 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to high (0.01 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Rock Outcrop

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Runoff class: Very high

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Charlton

Percent of map unit: 7 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Sutton

Percent of map unit: 5 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Leicester

Percent of map unit: 5 percent

Landform: Depressions, drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Brimfield
Percent of map unit: 1 percent
Landform: Ridges, hills
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Unnamed, red parent material
Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, sandy subsoil
Percent of map unit: 1 percent
Hydric soil rating: No

100—Suncook loamy fine sand

Map Unit Setting
National map unit symbol: 9ljl
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Suncook and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Suncook

Setting
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Sandy alluvium

Typical profile
Ap - 0 to 7 inches: loamy fine sand
C1 - 7 to 15 inches: stratified coarse sand to loamy fine sand
C2 - 15 to 22 inches: stratified coarse sand to loamy fine sand
C3 - 22 to 32 inches: stratified coarse sand to loamy fine sand
C4 - 32 to 42 inches: stratified coarse sand to loamy fine sand

C5 - 42 to 65 inches: stratified gravelly coarse sand to loamy fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 99.62 in/hr)
Depth to water table: About 60 to 72 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Occum

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Pootatuck

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Unnamed, no flooding

Percent of map unit: 4 percent
Hydric soil rating: No

Saco

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Rippowam

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

105—Hadley silt loam

Map Unit Setting

National map unit symbol: 9ljr
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hadley and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hadley

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-silty alluvium

Typical profile

Ap - 0 to 12 inches: silt loam
C1 - 12 to 29 inches: stratified very fine sand to silt loam
C2 - 29 to 40 inches: stratified very fine sand to silt loam
C3 - 40 to 45 inches: stratified sand to silt loam
C4 - 45 to 60 inches: stratified sand to silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 72 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Winooski
Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Bash
Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Lim
Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Unnamed, sand or gravel substratum
Percent of map unit: 3 percent
Hydric soil rating: No

Saco
Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Limerick
Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

306—Udorthents-Urban land complex

Map Unit Setting
National map unit symbol: 9lmg
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 50 percent
Urban land: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Drift

Typical profile

A - 0 to 5 inches: loam
C1 - 5 to 21 inches: gravelly loam
C2 - 21 to 80 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)
Depth to water table: About 54 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Urban Land

Typical profile

H - 0 to 6 inches: material

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Unnamed, undisturbed soils

Percent of map unit: 8 percent
Hydric soil rating: No

Udorthents, wet substratum

Percent of map unit: 5 percent
Down-slope shape: Convex
Across-slope shape: Linear

Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent
Hydric soil rating: No

308—Udorthents, smoothed

Map Unit Setting

National map unit symbol: 9lmj
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Down-slope shape: Convex
Across-slope shape: Linear

Typical profile

A - 0 to 5 inches: loam
C1 - 5 to 21 inches: gravelly loam
C2 - 21 to 80 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 35 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)
Depth to water table: About 24 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Udorthents, wet substratum
Percent of map unit: 7 percent
Hydric soil rating: No

Unnamed, undisturbed soils
Percent of map unit: 7 percent
Hydric soil rating: No

Urban land
Percent of map unit: 5 percent
Hydric soil rating: No

Rock outcrop
Percent of map unit: 1 percent
Hydric soil rating: No

W—Water

Map Unit Composition
Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

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APPENDIX A2

United States Department of Agriculture

NRCS

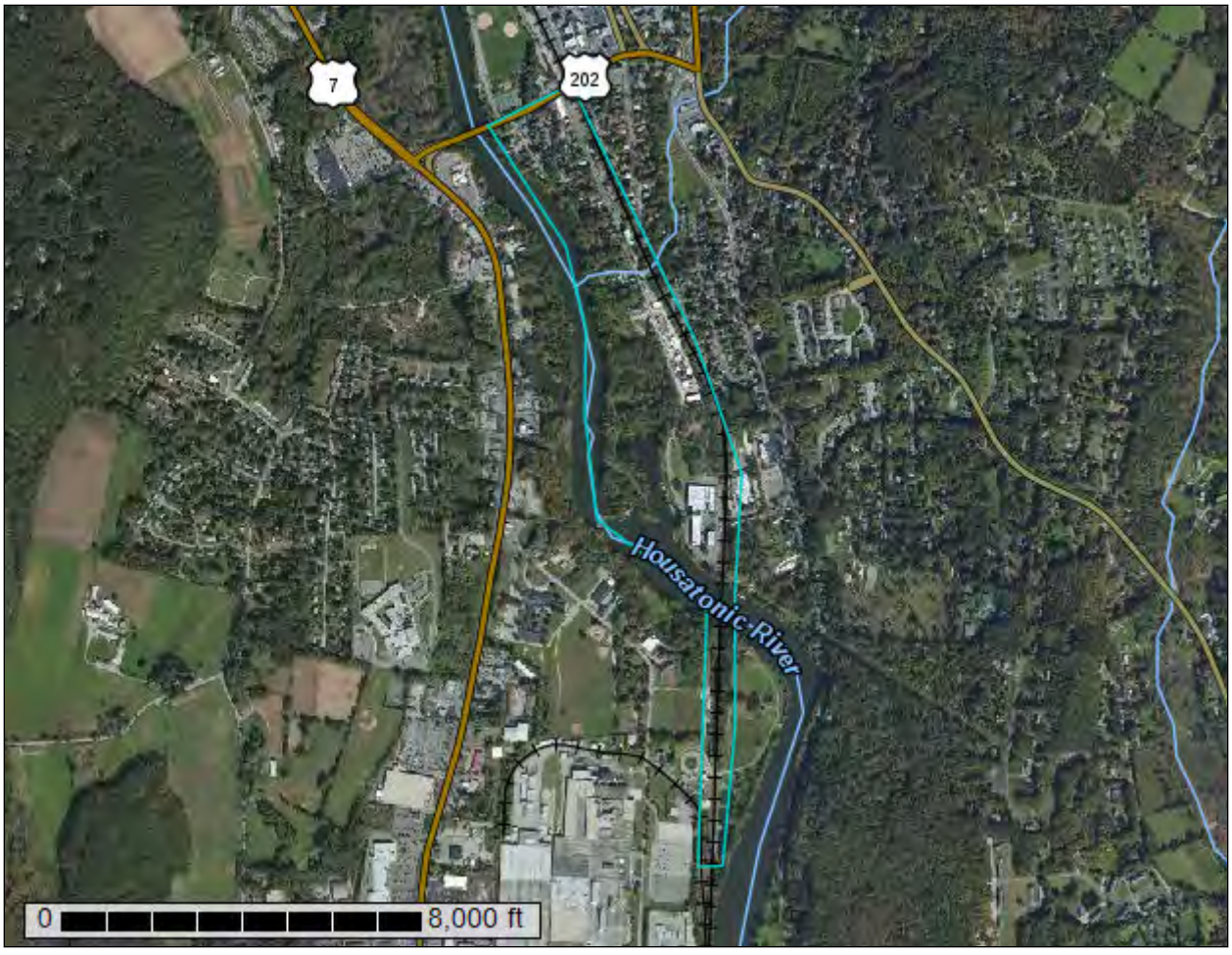
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for

State of Connecticut

River Trail, Southern Section (N)



June 20, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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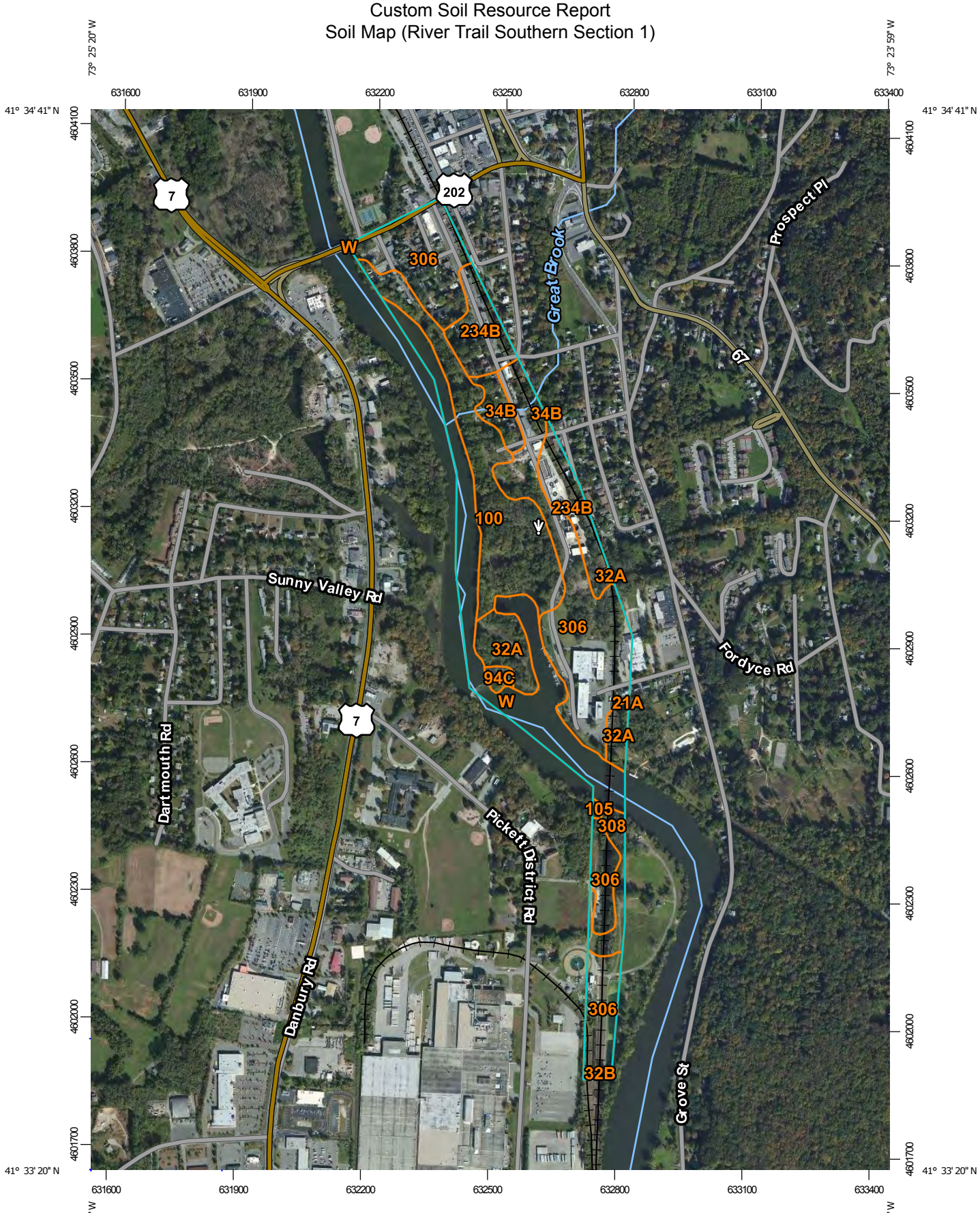
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (River Trail Southern Section 1)



Map Scale: 1:12,100 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 15, Sep 28, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 28, 2011—Oct 9, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (River Trail Southern Section 1)

State of Connecticut (CT600)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
21A	Ninigret and Tisbury soils, 0 to 5 percent slopes	0.0	0.0%
32A	Haven and Enfield soils, 0 to 3 percent slopes	6.1	5.7%
32B	Haven and Enfield soils, 3 to 8 percent slopes	0.4	0.4%
34B	Merrimac fine sandy loam, 3 to 8 percent slopes	2.8	2.6%
94C	Farmington-Nellis complex, 3 to 15 percent slopes, very rocky	0.8	0.7%
100	Suncook loamy fine sand	19.9	18.5%
105	Hadley silt loam	0.3	0.2%
234B	Merrimac-Urban land complex, 0 to 8 percent slopes	11.6	10.8%
306	Udorthents-Urban land complex	42.4	39.4%
308	Udorthents, smoothed	3.4	3.2%
W	Water	19.9	18.5%
Totals for Area of Interest		**107.6**	**100.0%**

Map Unit Descriptions (River Trail Southern Section 1)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called

noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can

be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

State of Connecticut

21A—Ninigret and Tisbury soils, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tx07
Elevation: 0 to 1,260 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Ninigret and similar soils: 60 percent
Tisbury and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ninigret

Setting

Landform: Depressions, kames, kame terraces, outwash plains, outwash terraces, drainageways, moraines
Landform position (two-dimensional): Backslope, shoulder, footslope, summit
Landform position (three-dimensional): Side slope, crest, tread, dip, rise
Down-slope shape: Concave, convex, linear
Across-slope shape: Concave, convex
Parent material: Coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from gneiss, granite, schist, and/or phyllite

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 16 inches: fine sandy loam
Bw2 - 16 to 26 inches: fine sandy loam
2C - 26 to 65 inches: stratified loamy sand to loamy fine sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: 18 to 38 inches to strongly contrasting textural stratification
Natural drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 17 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C

Hydric soil rating: No

Description of Tisbury

Setting

Landform: Deltas, depressions, depressions, outwash plains, outwash terraces, valley trains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-silty eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite, schist, and/or gneiss

Typical profile

Ap - 0 to 8 inches: silt loam
Bw1 - 8 to 18 inches: silt loam
Bw2 - 18 to 26 inches: silt loam
2C - 26 to 65 inches: stratified extremely gravelly sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: 24 to 36 inches to strongly contrasting textural stratification
Natural drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Merrimac

Percent of map unit: 5 percent
Landform: Eskers, kames, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Backslope, footslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Agawam

Percent of map unit: 5 percent
Landform: Kames, kame terraces, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Backslope, shoulder, footslope, summit
Landform position (three-dimensional): Side slope, crest, tread, riser, rise

Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Haven

Percent of map unit: 3 percent
Landform: Kames, kame terraces, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Shoulder, footslope, backslope, summit
Landform position (three-dimensional): Side slope, crest, tread, riser, rise, dip
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Raypol

Percent of map unit: 2 percent
Landform: Deltas, depressions, depressions, outwash plains, outwash terraces, valley trains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

32A—Haven and Enfield soils, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9lmr
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Haven and similar soils: 60 percent
Enfield and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Haven

Setting

Landform: Outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

Ap - 0 to 7 inches: silt loam

Bw1 - 7 to 14 inches: silt loam
Bw2 - 14 to 20 inches: silt loam
BC - 20 to 24 inches: fine sandy loam
2C - 24 to 60 inches: stratified very gravelly sand to gravelly fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Enfield

Setting

Landform: Outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-silty eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

O - 0 to 3 inches: slightly decomposed plant material
O - 3 to 4 inches: moderately decomposed plant material
Ap - 4 to 12 inches: silt loam
Bw1 - 12 to 20 inches: silt loam
Bw2 - 20 to 26 inches: silt loam
Bw3 - 26 to 30 inches: silt loam
2C - 30 to 37 inches: stratified coarse sand to very gravelly loamy sand
3C - 37 to 65 inches: stratified very gravelly coarse sand to loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1

Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Agawam
Percent of map unit: 4 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Branford
Percent of map unit: 3 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, gravelly surface
Percent of map unit: 2 percent
Hydric soil rating: No

Raypol
Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Tisbury
Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ninigret
Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

32B—Haven and Enfield soils, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9lms
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Haven and similar soils: 60 percent
Enfield and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Haven

Setting

Landform: Outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

Ap - 0 to 7 inches: silt loam
Bw1 - 7 to 14 inches: silt loam
Bw2 - 14 to 20 inches: silt loam
BC - 20 to 24 inches: fine sandy loam
2C - 24 to 60 inches: stratified very gravelly sand to gravelly fine sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Enfield

Setting

Landform: Outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-silty eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

O - 0 to 3 inches: slightly decomposed plant material
O - 3 to 4 inches: moderately decomposed plant material
Ap - 4 to 12 inches: silt loam
Bw1 - 12 to 20 inches: silt loam

Bw2 - 20 to 26 inches: silt loam
Bw3 - 26 to 30 inches: silt loam
2C - 30 to 37 inches: stratified coarse sand to very gravelly loamy sand
3C - 37 to 65 inches: stratified very gravelly coarse sand to loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Agawam

Percent of map unit: 4 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Branford

Percent of map unit: 3 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, gravelly surface

Percent of map unit: 2 percent
Hydric soil rating: No

Raypol

Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Tisbury

Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ninigret

Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

34B—Merrimac fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyqs
Elevation: 0 to 1,290 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Merrimac and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Eskers, kames, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Backslope, footslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum in profile: 2 percent
Salinity, maximum in profile: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, eskers, kames, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Windsor

Percent of map unit: 3 percent
Landform: Deltas, dunes, outwash plains, outwash terraces
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Riser, tread
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Agawam

Percent of map unit: 2 percent
Landform: Eskers, kames, outwash plains, outwash terraces, moraines, stream terraces
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

94C—Farmington-Nellis complex, 3 to 15 percent slopes, very rocky

Map Unit Setting

National map unit symbol: 9ls1
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Farmington and similar soils: 40 percent
Nellis and similar soils: 35 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Farmington

Setting

Landform: Ridges, hills
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy melt-out till derived from limestone and dolomite and/or schist

Typical profile

A - 0 to 3 inches: fine sandy loam
Bw1 - 3 to 8 inches: fine sandy loam
Bw2 - 8 to 17 inches: fine sandy loam
2R - 17 to 80 inches: bedrock

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Available water storage in profile: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Nellis

Setting

Landform: Hills
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from limestone and dolomite and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 14 inches: fine sandy loam
Bw2 - 14 to 25 inches: fine sandy loam
BC - 25 to 27 inches: loam
C - 27 to 60 inches: sandy loam

Properties and qualities

Slope: 3 to 15 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 20 percent
Available water storage in profile: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 6 percent
Hydric soil rating: No

Stockbridge

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Georgia

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Amenia

Percent of map unit: 2 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Mudgepond

Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

100—Suncook loamy fine sand

Map Unit Setting

National map unit symbol: 9ljl
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Suncook and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Suncook

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Sandy alluvium

Typical profile

Ap - 0 to 7 inches: loamy fine sand
C1 - 7 to 15 inches: stratified coarse sand to loamy fine sand
C2 - 15 to 22 inches: stratified coarse sand to loamy fine sand
C3 - 22 to 32 inches: stratified coarse sand to loamy fine sand

C4 - 32 to 42 inches: stratified coarse sand to loamy fine sand
C5 - 42 to 65 inches: stratified gravelly coarse sand to loamy fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 99.62 in/hr)
Depth to water table: About 60 to 72 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Occum

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Pootatuck

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Unnamed, no flooding

Percent of map unit: 4 percent
Hydric soil rating: No

Saco

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Rippowam

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

105—Hadley silt loam

Map Unit Setting

National map unit symbol: 9ljr
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hadley and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hadley

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-silty alluvium

Typical profile

Ap - 0 to 12 inches: silt loam
C1 - 12 to 29 inches: stratified very fine sand to silt loam
C2 - 29 to 40 inches: stratified very fine sand to silt loam
C3 - 40 to 45 inches: stratified sand to silt loam
C4 - 45 to 60 inches: stratified sand to silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 72 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Winooski
Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Bash
Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Lim
Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Unnamed, sand or gravel substratum
Percent of map unit: 3 percent
Hydric soil rating: No

Saco
Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Limerick
Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

234B—Merrimac-Urban land complex, 0 to 8 percent slopes

Map Unit Setting
National map unit symbol: 2tyr9
Elevation: 0 to 820 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Merrimac and similar soils: 45 percent
Urban land: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Eskers, kames, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Backslope, footslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 2 percent
Salinity, maximum in profile: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Urban Land

Typical profile

H - 0 to 6 inches: material

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, eskers, kames, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, crest, head slope, side slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Landform: Deltas, dunes, outwash plains, outwash terraces
Landform position (three-dimensional): Riser, tread
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

306—Udorthents-Urban land complex

Map Unit Setting

National map unit symbol: 9lmg
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 50 percent
Urban land: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Down-slope shape: Convex

Across-slope shape: Linear
Parent material: Drift

Typical profile
A - 0 to 5 inches: loam
C1 - 5 to 21 inches: gravelly loam
C2 - 21 to 80 inches: very gravelly sandy loam

Properties and qualities
Slope: 0 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)
Depth to water table: About 54 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.8 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Urban Land

Typical profile
H - 0 to 6 inches: material

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Unnamed, undisturbed soils
Percent of map unit: 8 percent
Hydric soil rating: No

Udorthents, wet substratum
Percent of map unit: 5 percent
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop
Percent of map unit: 2 percent
Hydric soil rating: No

308—Udorthents, smoothed

Map Unit Setting

National map unit symbol: 9lmj
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Down-slope shape: Convex
Across-slope shape: Linear

Typical profile

A - 0 to 5 inches: loam
C1 - 5 to 21 inches: gravelly loam
C2 - 21 to 80 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 35 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)
Depth to water table: About 24 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Udorthents, wet substratum

Percent of map unit: 7 percent
Hydric soil rating: No

Unnamed, undisturbed soils
Percent of map unit: 7 percent
Hydric soil rating: No

Urban land
Percent of map unit: 5 percent
Hydric soil rating: No

Rock outcrop
Percent of map unit: 1 percent
Hydric soil rating: No

W—Water

Map Unit Composition
Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

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APPENDIX A3

United States Department of Agriculture

NRCS

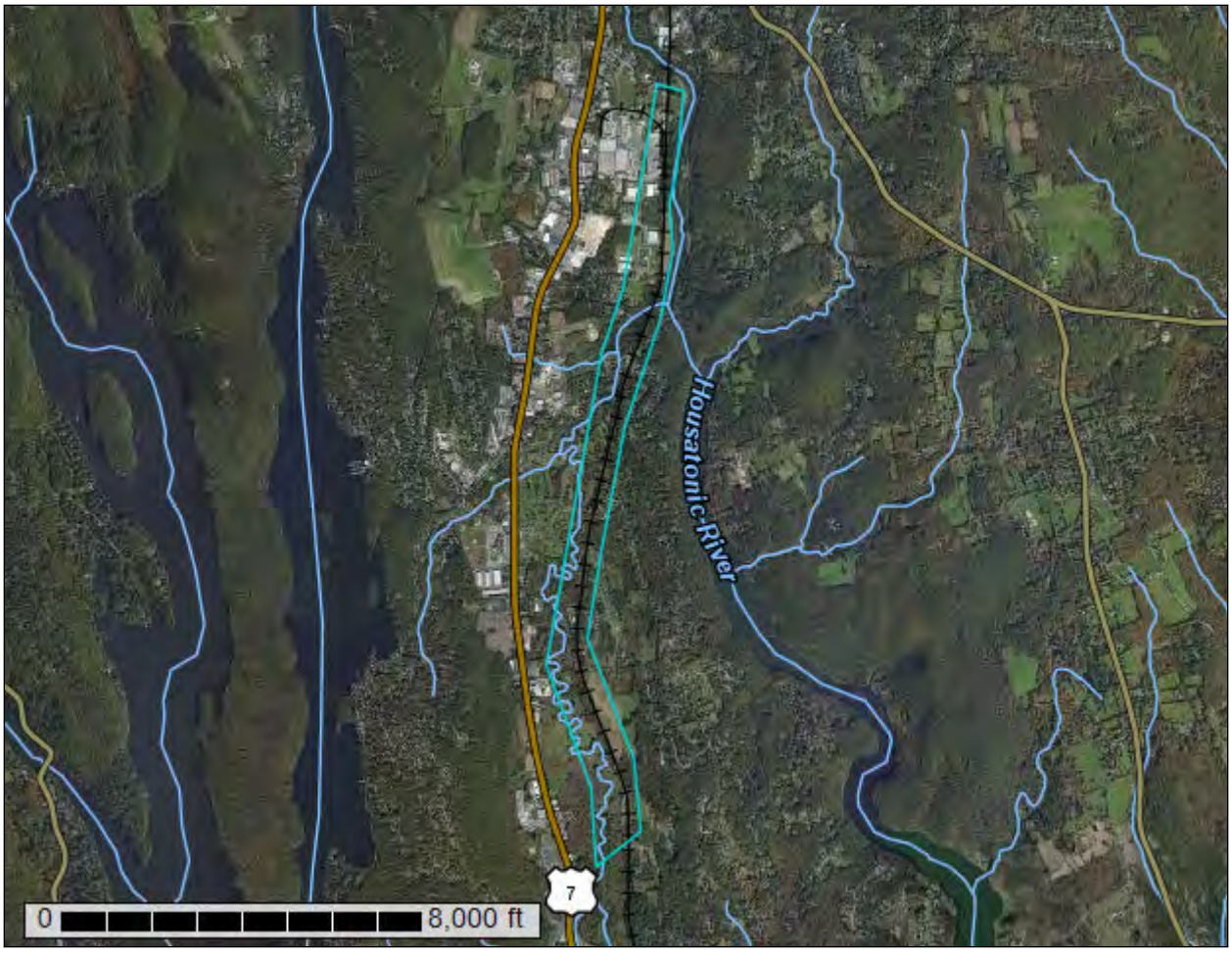
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for

State of Connecticut

River Trail, Southern Section (S)



June 20, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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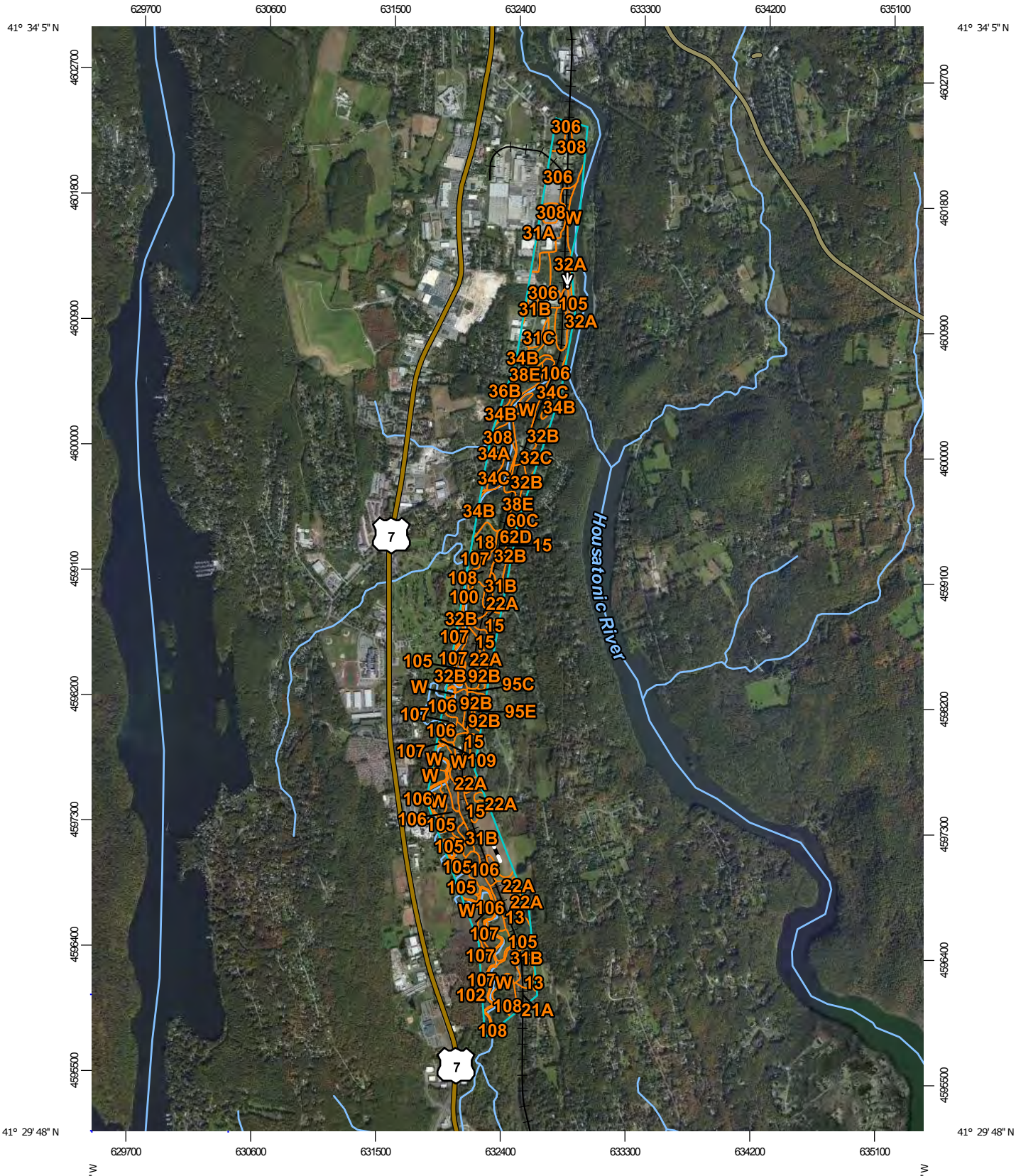
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


73° 26' 56" W
73° 22' 37" W
41° 34' 5" N
41° 29' 48" N
629700
630600
631500
632400
633300
634200
635100
4602700
4601800
4600900
4600000
4599100
4598200
4597300
4596400
4595500
Housatonic River
7
306
308
306
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32A
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31B
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31C
34B
38E
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36B
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34B
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34B
308
32B
34A
32C
34C
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60C
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62D
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31B
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106
105
22A
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106
22A
13
107
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107
31B
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102
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21A
108
Map Scale: 1:38,600 if printed on A portrait (8.5" x 11") sheet.
N
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3000
Feet
0
1500
3000
6000
9000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 15, Sep 28, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 28, 2011—Oct 9, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (River Trail Southern Section (s) Soil Map)

State of Connecticut (CT600)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
13	Walpole sandy loam, 0 to 3 percent slopes	17.4	3.2%
15	Scarboro muck, 0 to 3 percent slopes	15.3	2.8%
18	Catden and Freetown soils, 0 to 2 percent slopes	8.1	1.5%
21A	Ninigret and Tisbury soils, 0 to 5 percent slopes	4.7	0.9%
22A	Hero gravelly loam, 0 to 3 percent slopes	20.4	3.7%
31A	Copake fine sandy loam, 0 to 3 percent slopes	10.8	2.0%
31B	Copake fine sandy loam, 3 to 8 percent slopes	70.4	12.8%
31C	Copake gravelly loam, 8 to 15 percent slopes	4.4	0.8%
32A	Haven and Enfield soils, 0 to 3 percent slopes	14.4	2.6%
32B	Haven and Enfield soils, 3 to 8 percent slopes	46.7	8.5%
32C	Haven and Enfield soils, 8 to 15 percent slopes	5.1	0.9%
34A	Merrimac fine sandy loam, 0 to 3 percent slopes	4.4	0.8%
34B	Merrimac fine sandy loam, 3 to 8 percent slopes	44.7	8.1%
34C	Merrimac fine sandy loam, 8 to 15 percent slopes	5.7	1.0%
36B	Windsor loamy sand, 3 to 8 percent slopes	1.5	0.3%
38E	Hinckley loamy sand, 15 to 45 percent slopes	16.6	3.0%
39C	Groton gravelly sandy loam, 3 to 15 percent slopes	6.5	1.2%
60C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes	0.0	0.0%
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	0.6	0.1%
92B	Nellis fine sandy loam, 3 to 8 percent slopes	4.9	0.9%

State of Connecticut (CT600)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
95C	Farmington-Rock outcrop complex, 3 to 15 percent slopes	4.7	0.9%
95E	Farmington-Rock outcrop complex, 15 to 45 percent slopes	2.2	0.4%
100	Suncook loamy fine sand	11.3	2.1%
102	Pootatuck fine sandy loam	17.5	3.2%
103	Rippowam fine sandy loam	0.2	0.0%
105	Hadley silt loam	46.8	8.5%
106	Winooski silt loam	38.7	7.1%
107	Limerick and Lim soils	9.4	1.7%
108	Saco silt loam	20.7	3.8%
109	Fluvaquents-Udifluvents complex, frequently flooded	0.4	0.1%
306	Udorthents-Urban land complex	40.8	7.4%
307	Urban land	0.0	0.0%
308	Udorthents, smoothed	15.3	2.8%
W	Water	37.4	6.8%
Totals for Area of Interest		**548.4**	**100.0%**

Map Unit Descriptions (River Trail Southern Section (s) Soil Map)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different

management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

State of Connecticut

13—Walpole sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2svkl
Elevation: 0 to 1,020 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Walpole and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Walpole

Setting

Landform: Deltas, depressions, depressions, outwash plains, outwash terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy glaciofluvial deposits derived from igneous, metamorphic and sedimentary rock

Typical profile

Oe - 0 to 1 inches: mucky peat
A - 1 to 7 inches: sandy loam
Bg - 7 to 21 inches: sandy loam
BC - 21 to 25 inches: gravelly sandy loam
C - 25 to 65 inches: very gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 4 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Sudbury

Percent of map unit: 10 percent
Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Scarboro

Percent of map unit: 10 percent
Landform: Deltas, outwash plains, outwash terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

15—Scarboro muck, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2svkt
Elevation: 0 to 1,350 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Scarboro and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scarboro

Setting

Landform: Depressions, outwash terraces, drainageways, outwash deltas
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread, dip
Down-slope shape: Concave
Across-slope shape: Concave, linear
Parent material: Sandy glaciofluvial deposits derived from schist and/or gneiss and/or granite

Typical profile

Oa - 0 to 8 inches: muck
A - 8 to 14 inches: mucky fine sandy loam
Cg1 - 14 to 22 inches: sand

Cg2 - 22 to 65 inches: gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (1.42 to 14.17 in/hr)
Depth to water table: About 0 to 2 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Timakwa

Percent of map unit: 10 percent
Landform: Swamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Walpole

Percent of map unit: 8 percent
Landform: Deltas, depressions, depressions, outwash plains, outwash terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Deerfield

Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

18—Catden and Freetown soils, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2t2r2
Elevation: 0 to 1,390 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Freetown and similar soils: 40 percent
Catden and similar soils: 40 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Freetown

Setting

Landform: Bogs, depressions, depressions, kettles, marshes, swamps
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Highly decomposed organic material

Typical profile

Oe - 0 to 2 inches: mucky peat
Oa - 2 to 79 inches: muck

Properties and qualities

Slope: 0 to 2 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Rare
Frequency of ponding: Frequent
Available water storage in profile: Very high (about 26.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Catden

Setting

Landform: Bogs, depressions, depressions, depressions, fens, kettles, marshes, swamps
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Highly decomposed herbaceous organic material and/or highly decomposed woody organic material

Typical profile

Oa1 - 0 to 2 inches: muck
Oa2 - 2 to 79 inches: muck

Properties and qualities

Slope: 0 to 2 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Rare
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very high (about 26.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Natchaug

Percent of map unit: 7 percent
Landform: Depressions, depressions, depressions
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Whitman

Percent of map unit: 6 percent
Landform: Depressions, drainageways
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Timakwa

Percent of map unit: 5 percent
Landform: Depressions

Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Scarboro

Percent of map unit: 2 percent
Landform: Depressions, outwash terraces, drainageways, outwash deltas
Landform position (three-dimensional): Base slope, tread, dip
Down-slope shape: Concave
Across-slope shape: Concave, linear
Hydric soil rating: Yes

21A—Ninigret and Tisbury soils, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tx07
Elevation: 0 to 1,260 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Ninigret and similar soils: 60 percent
Tisbury and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ninigret

Setting

Landform: Depressions, kames, kame terraces, outwash plains, outwash terraces, drainageways, moraines
Landform position (two-dimensional): Backslope, shoulder, footslope, summit
Landform position (three-dimensional): Side slope, crest, tread, dip, rise
Down-slope shape: Concave, convex, linear
Across-slope shape: Concave, convex
Parent material: Coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from gneiss, granite, schist, and/or phyllite

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 16 inches: fine sandy loam
Bw2 - 16 to 26 inches: fine sandy loam
2C - 26 to 65 inches: stratified loamy sand to loamy fine sand

Properties and qualities

Slope: 0 to 5 percent

Depth to restrictive feature: 18 to 38 inches to strongly contrasting textural stratification
Natural drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 17 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Tisbury

Setting

Landform: Deltas, depressions, depressions, outwash plains, outwash terraces, valley trains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-silty eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite, schist, and/or gneiss

Typical profile

Ap - 0 to 8 inches: silt loam
Bw1 - 8 to 18 inches: silt loam
Bw2 - 18 to 26 inches: silt loam
2C - 26 to 65 inches: stratified extremely gravelly sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: 24 to 36 inches to strongly contrasting textural stratification
Natural drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Merrimac

Percent of map unit: 5 percent
Landform: Eskers, kames, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Backslope, footslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Agawam

Percent of map unit: 5 percent
Landform: Kames, kame terraces, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Backslope, shoulder, footslope, summit
Landform position (three-dimensional): Side slope, crest, tread, riser, rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Haven

Percent of map unit: 3 percent
Landform: Kames, kame terraces, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Shoulder, footslope, backslope, summit
Landform position (three-dimensional): Side slope, crest, tread, riser, rise, dip
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Raypol

Percent of map unit: 2 percent
Landform: Deltas, depressions, depressions, outwash plains, outwash terraces, valley trains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

22A—Hero gravelly loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9lkg
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 52 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hero and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hero

Setting

Landform: Outwash plains, terraces
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy over sandy and gravelly glaciofluvial deposits derived from limestone and dolomite and/or schist

Typical profile

Ap - 0 to 9 inches: gravelly loam
Bw1 - 9 to 18 inches: gravelly silt loam
Bw2 - 18 to 24 inches: gravelly silt loam
Bw3 - 24 to 27 inches: gravelly sandy loam
2C - 27 to 60 inches: stratified extremely gravelly coarse sand to gravelly loamy fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 20 percent
Available water storage in profile: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Copake

Percent of map unit: 5 percent
Landform: Kames, outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Groton

Percent of map unit: 5 percent
Landform: Eskers, kames, outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Fredon

Percent of map unit: 3 percent
Landform: Depressions, terraces, drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Halsey

Percent of map unit: 2 percent
Landform: Depressions, terraces, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

31A—Copake fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9lmn
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 52 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Copake and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Copake

Setting

Landform: Kames, outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy and gravelly glaciofluvial deposits derived from limestone and dolomite and/or schist

Typical profile

Ap - 0 to 6 inches: fine sandy loam
AB - 6 to 13 inches: gravelly fine sandy loam
Bw1 - 13 to 21 inches: gravelly fine sandy loam
Bw2 - 21 to 31 inches: gravelly fine sandy loam
2C1 - 31 to 56 inches: very gravelly coarse sand
2C2 - 56 to 65 inches: fine sand
2C3 - 65 to 75 inches: gravelly sand
2C4 - 75 to 80 inches: gravelly sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 25 percent
Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Hero

Percent of map unit: 5 percent
Landform: Outwash plains, terraces
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Groton

Percent of map unit: 5 percent
Landform: Eskers, kames, outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Fredon

Percent of map unit: 3 percent
Landform: Depressions, terraces, drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Halsey

Percent of map unit: 2 percent
Landform: Depressions, terraces, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

31B—Copake fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9lmp

Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 52 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Copake and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Copake

Setting

Landform: Kames, outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy and gravelly glaciofluvial deposits derived from limestone and dolomite and/or schist

Typical profile

Ap - 0 to 6 inches: fine sandy loam
AB - 6 to 13 inches: gravelly fine sandy loam
Bw1 - 13 to 21 inches: gravelly fine sandy loam
Bw2 - 21 to 31 inches: gravelly fine sandy loam
2C1 - 31 to 56 inches: very gravelly coarse sand
2C2 - 56 to 65 inches: fine sand
2C3 - 65 to 75 inches: gravelly sand
2C4 - 75 to 80 inches: gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 25 percent
Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Hero

Percent of map unit: 5 percent
Landform: Outwash plains, terraces
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Groton

Percent of map unit: 5 percent
Landform: Eskers, kames, outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Fredon

Percent of map unit: 3 percent
Landform: Depressions, terraces, drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Halsey

Percent of map unit: 2 percent
Landform: Depressions, terraces, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

31C—Copake gravelly loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9lmq
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 52 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Copake and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Copake

Setting

Landform: Kames, outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy and gravelly glaciofluvial deposits derived from limestone and dolomite and/or schist

Typical profile

Ap - 0 to 6 inches: fine sandy loam
AB - 6 to 13 inches: gravelly fine sandy loam
Bw1 - 13 to 21 inches: gravelly fine sandy loam
Bw2 - 21 to 31 inches: gravelly fine sandy loam

2C1 - 31 to 56 inches: very gravelly coarse sand
2C2 - 56 to 65 inches: fine sand
2C3 - 65 to 75 inches: gravelly sand
2C4 - 75 to 80 inches: gravelly sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 25 percent
Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Hero

Percent of map unit: 5 percent
Landform: Outwash plains, terraces
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Groton

Percent of map unit: 5 percent
Landform: Eskers, kames, outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Fredon

Percent of map unit: 3 percent
Landform: Depressions, terraces, drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Halsey

Percent of map unit: 2 percent
Landform: Depressions, terraces, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

32A—Haven and Enfield soils, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9lmr
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Haven and similar soils: 60 percent
Enfield and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Haven

Setting

Landform: Outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

Ap - 0 to 7 inches: silt loam
Bw1 - 7 to 14 inches: silt loam
Bw2 - 14 to 20 inches: silt loam
BC - 20 to 24 inches: fine sandy loam
2C - 24 to 60 inches: stratified very gravelly sand to gravelly fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Enfield

Setting

Landform: Outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-silty eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

O - 0 to 3 inches: slightly decomposed plant material
O - 3 to 4 inches: moderately decomposed plant material
Ap - 4 to 12 inches: silt loam
Bw1 - 12 to 20 inches: silt loam
Bw2 - 20 to 26 inches: silt loam
Bw3 - 26 to 30 inches: silt loam
2C - 30 to 37 inches: stratified coarse sand to very gravelly loamy sand
3C - 37 to 65 inches: stratified very gravelly coarse sand to loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Agawam

Percent of map unit: 4 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Branford

Percent of map unit: 3 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, gravelly surface

Percent of map unit: 2 percent
Hydric soil rating: No

Raypol

Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Tisbury

Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ninigret

Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

32B—Haven and Enfield soils, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9lms
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Haven and similar soils: 60 percent
Enfield and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Haven

Setting

Landform: Outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

Ap - 0 to 7 inches: silt loam
Bw1 - 7 to 14 inches: silt loam

Bw2 - 14 to 20 inches: silt loam
BC - 20 to 24 inches: fine sandy loam
2C - 24 to 60 inches: stratified very gravelly sand to gravelly fine sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Enfield

Setting

Landform: Outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-silty eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

O - 0 to 3 inches: slightly decomposed plant material
O - 3 to 4 inches: moderately decomposed plant material
Ap - 4 to 12 inches: silt loam
Bw1 - 12 to 20 inches: silt loam
Bw2 - 20 to 26 inches: silt loam
Bw3 - 26 to 30 inches: silt loam
2C - 30 to 37 inches: stratified coarse sand to very gravelly loamy sand
3C - 37 to 65 inches: stratified very gravelly coarse sand to loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B

Hydric soil rating: No

Minor Components

Agawam

Percent of map unit: 4 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Branford

Percent of map unit: 3 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, gravelly surface

Percent of map unit: 2 percent
Hydric soil rating: No

Raypol

Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Tisbury

Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ninigret

Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

32C—Haven and Enfield soils, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9lmt
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Haven and similar soils: 60 percent
Enfield and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Haven

Setting

Landform: Outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

Ap - 0 to 7 inches: silt loam
Bw1 - 7 to 14 inches: silt loam
Bw2 - 14 to 20 inches: silt loam
BC - 20 to 24 inches: fine sandy loam
2C - 24 to 60 inches: stratified very gravelly sand to gravelly fine sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Enfield

Setting

Landform: Outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-silty eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

O - 0 to 3 inches: slightly decomposed plant material
O - 3 to 4 inches: moderately decomposed plant material
Ap - 4 to 12 inches: silt loam
Bw1 - 12 to 20 inches: silt loam
Bw2 - 20 to 26 inches: silt loam

Bw3 - 26 to 30 inches: silt loam
2C - 30 to 37 inches: stratified coarse sand to very gravelly loamy sand
3C - 37 to 65 inches: stratified very gravelly coarse sand to loamy sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Agawam

Percent of map unit: 4 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Branford

Percent of map unit: 3 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, sand or gravel substratum

Percent of map unit: 2 percent
Hydric soil rating: No

Raypol

Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Tisbury

Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ninigret

Percent of map unit: 2 percent

Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

34A—Merrimac fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tyqr
Elevation: 0 to 1,100 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Merrimac and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Eskers, kames, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Backslope, footslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 2 percent

Salinity, maximum in profile: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Sudbury

Percent of map unit: 5 percent
Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, eskers, kames, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Agawam

Percent of map unit: 3 percent
Landform: Eskers, kames, outwash plains, outwash terraces, moraines, stream terraces
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Windsor

Percent of map unit: 2 percent
Landform: Deltas, dunes, outwash plains, outwash terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Riser, tread
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

34B—Merrimac fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyqs
Elevation: 0 to 1,290 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Merrimac and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Eskers, kames, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Backslope, footslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 2 percent
Salinity, maximum in profile: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Hinckley
Percent of map unit: 5 percent
Landform: Deltas, eskers, kames, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Sudbury
Percent of map unit: 5 percent
Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Windsor
Percent of map unit: 3 percent
Landform: Deltas, dunes, outwash plains, outwash terraces
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Riser, tread
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Agawam
Percent of map unit: 2 percent
Landform: Eskers, kames, outwash plains, outwash terraces, moraines, stream terraces
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

34C—Merrimac fine sandy loam, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 2tyqt
Elevation: 0 to 1,030 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Merrimac and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Eskers, kames, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Backslope, footslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 2 percent
Salinity, maximum in profile: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Sudbury

Percent of map unit: 5 percent
Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, eskers, kames, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Landform: Deltas, dunes, outwash plains, outwash terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser, tread
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

36B—Windsor loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svkf
Elevation: 0 to 1,210 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Windsor, loamy sand, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor, Loamy Sand

Setting

Landform: Deltas, dunes, outwash plains, outwash terraces
Landform position (three-dimensional): Riser, tread
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

O - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: loamy sand
Bw - 3 to 25 inches: loamy sand
C - 25 to 65 inches: sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Hinckley, loamy sand

Percent of map unit: 10 percent
Landform: Deltas, eskers, kames, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Deerfield, loamy sand

Percent of map unit: 5 percent
Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

38E—Hinckley loamy sand, 15 to 45 percent slopes

Map Unit Setting

National map unit symbol: 2svmj
Elevation: 0 to 1,280 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Eskers, kames, kame terraces, outwash plains, outwash terraces, moraines, outwash deltas
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, riser
Down-slope shape: Linear, convex, concave
Across-slope shape: Linear, concave, convex
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 5 percent
Landform: Eskers, kames, kame terraces, outwash plains, outwash terraces, moraines, outwash deltas
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, riser
Down-slope shape: Concave, convex, linear

Across-slope shape: Linear, concave, convex
Hydric soil rating: No

Merrimac

Percent of map unit: 5 percent
Landform: Eskers, kames, outwash plains, outwash terraces, moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, head slope, nose slope, crest, riser
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Agawam

Percent of map unit: 3 percent
Landform: Eskers, kames, kame terraces, outwash plains, outwash terraces, moraines, outwash deltas
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, riser
Down-slope shape: Linear, convex, concave
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Sudbury

Percent of map unit: 2 percent
Landform: Eskers, kames, kame terraces, outwash plains, outwash terraces, moraines, outwash deltas
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

39C—Groton gravelly sandy loam, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9lnd
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 52 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Groton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Groton

Setting

Landform: Eskers, kames, outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly glaciofluvial deposits derived from limestone and dolomite and/or schist

Typical profile

Ap - 0 to 8 inches: gravelly sandy loam
Bw1 - 8 to 18 inches: very gravelly sandy loam
Bw2 - 18 to 24 inches: very gravelly loamy sand
Bw3 - 24 to 30 inches: very gravelly loamy sand
C1 - 30 to 52 inches: stratified extremely gravelly coarse sand to very gravelly loamy fine sand
C2 - 52 to 72 inches: stratified extremely gravelly coarse sand to gravelly loamy fine sand

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 10 percent
Available water storage in profile: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Copake

Percent of map unit: 5 percent
Landform: Kames, outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Hero

Percent of map unit: 5 percent
Landform: Outwash plains, terraces
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Fredon

Percent of map unit: 3 percent
Landform: Depressions, terraces, drainageways

Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Halsey
Percent of map unit: 2 percent
Landform: Depressions, terraces, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

60C—Canton and Charlton fine sandy loams, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 2w81z
Elevation: 0 to 1,620 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Canton and similar soils: 50 percent
Charlton and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton

Setting
Landform: Ridges, hills, moraines
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile
Ap - 0 to 7 inches: fine sandy loam
Bw1 - 7 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: gravelly fine sandy loam
2C - 26 to 65 inches: gravelly loamy sand

Properties and qualities
Slope: 8 to 15 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Natural drainage class: Well drained
Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Charlton

Setting

Landform: Ground moraines, ridges, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw - 7 to 22 inches: gravelly fine sandy loam
C - 22 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Chatfield

Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex

Across-slope shape: Linear, convex
Hydric soil rating: No

Sutton

Percent of map unit: 5 percent
Landform: Ground moraines, ridges, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Leicester

Percent of map unit: 5 percent
Landform: Depressions, ground moraines, drainageways, hills
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

62D—Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2w81r
Elevation: 0 to 1,640 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Canton, extremely stony, and similar soils: 55 percent
Charlton, extremely stony, and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton, Extremely Stony

Setting

Landform: Ridges, hills, moraines
Landform position (two-dimensional): Backslope, summit, shoulder
Landform position (three-dimensional): Side slope, crest, nose slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 5 inches: fine sandy loam
Bw1 - 5 to 16 inches: fine sandy loam
Bw2 - 16 to 22 inches: gravelly fine sandy loam
2C - 22 to 67 inches: gravelly loamy sand

Properties and qualities

Slope: 15 to 35 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Charlton, Extremely Stony

Setting

Landform: Ground moraines, ridges, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 4 inches: fine sandy loam
Bw - 4 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 15 to 35 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 8.7 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Chatfield, extremely stony
Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, backslope, shoulder
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Hollis, extremely stony
Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Sutton, extremely stony
Percent of map unit: 5 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

92B—Nellis fine sandy loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9lry
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Nellis and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nellis

Setting

Landform: Hills
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from limestone and dolomite and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 14 inches: fine sandy loam
Bw2 - 14 to 25 inches: fine sandy loam
BC - 25 to 27 inches: loam
C - 27 to 60 inches: sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 20 percent
Available water storage in profile: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Farmington

Percent of map unit: 5 percent
Landform: Ridges, hills
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Amenia

Percent of map unit: 3 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Georgia

Percent of map unit: 3 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Mudgepond

Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Alden

Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

95C—Farmington-Rock outcrop complex, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9ls3
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Farmington and similar soils: 60 percent
Rock outcrop: 20 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Farmington

Setting

Landform: Ridges, hills
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy melt-out till derived from limestone and dolomite and/or schist

Typical profile

A - 0 to 3 inches: fine sandy loam
Bw1 - 3 to 8 inches: fine sandy loam
Bw2 - 8 to 17 inches: fine sandy loam

2R - 17 to 80 inches: bedrock

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Available water storage in profile: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Rock Outcrop

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Runoff class: Very high

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Nellis

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Stockbridge

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton

Percent of map unit: 3 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, moderately deep to deep
Percent of map unit: 3 percent
Hydric soil rating: No

Georgia
Percent of map unit: 2 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Amenia
Percent of map unit: 2 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

95E—Farmington-Rock outcrop complex, 15 to 45 percent slopes

Map Unit Setting
National map unit symbol: 9ls4
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition
Farmington and similar soils: 60 percent
Rock outcrop: 20 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Farmington

Setting
Landform: Ridges, hills
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy melt-out till derived from limestone and dolomite and/or schist

Typical profile
A - 0 to 3 inches: fine sandy loam
Bw1 - 3 to 8 inches: fine sandy loam
Bw2 - 8 to 17 inches: fine sandy loam
2R - 17 to 80 inches: bedrock

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Available water storage in profile: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Ridges, hills

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Runoff class: Very high

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Nellis

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Stockbridge

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton

Percent of map unit: 3 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, moderately deep to deep
Percent of map unit: 3 percent
Hydric soil rating: No

Georgia
Percent of map unit: 2 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Amenia
Percent of map unit: 2 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

100—Suncook loamy fine sand

Map Unit Setting
National map unit symbol: 9ljl
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Suncook and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Suncook

Setting
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Sandy alluvium

Typical profile
Ap - 0 to 7 inches: loamy fine sand
C1 - 7 to 15 inches: stratified coarse sand to loamy fine sand
C2 - 15 to 22 inches: stratified coarse sand to loamy fine sand
C3 - 22 to 32 inches: stratified coarse sand to loamy fine sand
C4 - 32 to 42 inches: stratified coarse sand to loamy fine sand
C5 - 42 to 65 inches: stratified gravelly coarse sand to loamy fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 99.62 in/hr)
Depth to water table: About 60 to 72 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Occum

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Pootatuck

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Unnamed, no flooding

Percent of map unit: 4 percent
Hydric soil rating: No

Saco

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Rippowam

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

102—Pootatuck fine sandy loam

Map Unit Setting

National map unit symbol: 9ljn
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Pootatuck and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pootatuck

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Coarse-loamy alluvium

Typical profile

Ap - 0 to 4 inches: fine sandy loam
Bw1 - 4 to 16 inches: fine sandy loam
Bw2 - 16 to 21 inches: fine sandy loam
Bw3 - 21 to 29 inches: sandy loam
C1 - 29 to 35 inches: stratified very gravelly coarse sand to loamy fine sand
C2 - 35 to 40 inches: stratified very gravelly coarse sand to loamy fine sand
C3 - 40 to 65 inches: stratified very gravelly coarse sand to loamy fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Suncook
Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Occum
Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Lim
Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Rippowam
Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Saco
Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Limerick
Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

103—Rippowam fine sandy loam

Map Unit Setting
National map unit symbol: 9ljp
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 140 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Rippowam and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rippowam

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Coarse-loamy alluvium

Typical profile

A - 0 to 5 inches: fine sandy loam
Bg1 - 5 to 12 inches: fine sandy loam
Cg2 - 12 to 19 inches: fine sandy loam
Cg3 - 19 to 24 inches: sandy loam
Cg4 - 24 to 27 inches: sandy loam
Cg5 - 27 to 31 inches: loamy sand
Cg6 - 31 to 65 inches: stratified very gravelly coarse sand to loamy fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Suncook

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Occum

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear

Hydric soil rating: No

Pootatuck

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Lim

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Saco

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Limerick

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

105—Hadley silt loam

Map Unit Setting

National map unit symbol: 9ljr
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hadley and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hadley

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear

Parent material: Coarse-silty alluvium

Typical profile

Ap - 0 to 12 inches: silt loam
C1 - 12 to 29 inches: stratified very fine sand to silt loam
C2 - 29 to 40 inches: stratified very fine sand to silt loam
C3 - 40 to 45 inches: stratified sand to silt loam
C4 - 45 to 60 inches: stratified sand to silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 72 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Winooski

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Bash

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Lim

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Unnamed, sand or gravel substratum

Percent of map unit: 3 percent
Hydric soil rating: No

Saco

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave

Across-slope shape: Concave
Hydric soil rating: Yes

Limerick

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

106—Winooski silt loam

Map Unit Setting

National map unit symbol: 9ljs
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Winooski and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Winooski

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-silty alluvium

Typical profile

Ap - 0 to 12 inches: silt loam
B1 - 12 to 18 inches: silt loam
B2 - 18 to 36 inches: silt loam
C3 - 36 to 52 inches: very fine sandy loam
C4 - 52 to 65 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Hadley

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Bash

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Lim

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Limerick

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Saco

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Unnamed, strongly acid ph

Percent of map unit: 2 percent
Hydric soil rating: No

Unnamed, sand or gravel substratum

Percent of map unit: 2 percent
Hydric soil rating: No

107—Limerick and Lim soils

Map Unit Setting

National map unit symbol: 9ljt
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Limerick and similar soils: 50 percent
Lim and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Limerick

Setting

Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-silty alluvium

Typical profile

Ap - 0 to 8 inches: silt loam
BCg1 - 8 to 20 inches: silt loam
BCg2 - 20 to 36 inches: silt loam
BCg3 - 36 to 54 inches: silt loam
Cg - 54 to 65 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Lim

Setting

Landform: Depressions on flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy alluvium

Typical profile

A - 0 to 6 inches: very fine sandy loam
Bg1 - 6 to 11 inches: very fine sandy loam
Bg2 - 11 to 15 inches: very fine sandy loam
Bg3 - 15 to 22 inches: silt loam
Bg4 - 22 to 29 inches: fine sandy loam
CBg5 - 29 to 42 inches: stratified very gravelly coarse sand to loamy fine sand
Cg6 - 42 to 50 inches: stratified very gravelly coarse sand to loamy fine sand
Cg7 - 50 to 57 inches: stratified very gravelly coarse sand to loamy fine sand
Cg8 - 57 to 65 inches: stratified very gravelly coarse sand to loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Saco

Percent of map unit: 8 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Rippowam

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Winooski

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Linear

Across-slope shape: Linear
Hydric soil rating: No

Bash

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Hadley

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

108—Saco silt loam

Map Unit Setting

National map unit symbol: 9ljv
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Saco and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saco

Setting

Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-silty alluvium

Typical profile

A - 0 to 12 inches: silt loam
Cg1 - 12 to 32 inches: silt loam
Cg2 - 32 to 48 inches: silt loam
2Cg3 - 48 to 60 inches: stratified very gravelly coarse sand to loamy fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained

Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Available water storage in profile: High (about 10.1 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Lim
Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Limerick
Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Winooski
Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rippowam
Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Bash
Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Hadley
Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

109—Fluvaquents-Udifluvents complex, frequently flooded

Map Unit Setting

National map unit symbol: 9ljw
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Fluvaquents, frequently flooded, and similar soils: 50 percent
Udifluvents, frequently flooded, and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fluvaquents, Frequently Flooded

Setting

Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Alluvium

Typical profile

A - 0 to 4 inches: silt loam
Cg1 - 4 to 14 inches: fine sand
Cg2 - 14 to 21 inches: very fine sand
Ab1 - 21 to 38 inches: silt loam
Ab2 - 38 to 45 inches: fine sandy loam
C'g3 - 45 to 55 inches: sand
A'b3 - 55 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Udifluvents, Frequently Flooded

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

A - 0 to 2 inches: fine sandy loam
C - 2 to 4 inches: loamy fine sand
Ap - 4 to 12 inches: fine sandy loam
AC - 12 to 18 inches: fine sandy loam
C1 - 18 to 35 inches: loamy sand
C2 - 35 to 38 inches: very gravelly loamy sand
C3 - 38 to 60 inches: very gravelly coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (0.57 to 35.99 in/hr)
Depth to water table: About 72 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Riverwash

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Saco

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Rippowam

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Pootatuck

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Occum

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

306—Udorthents-Urban land complex

Map Unit Setting

National map unit symbol: 9lmg
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 50 percent
Urban land: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Drift

Typical profile

A - 0 to 5 inches: loam
C1 - 5 to 21 inches: gravelly loam
C2 - 21 to 80 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)

Depth to water table: About 54 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.8 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Urban Land

Typical profile
H - 0 to 6 inches: material

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Unnamed, undisturbed soils
Percent of map unit: 8 percent
Hydric soil rating: No

Udorthents, wet substratum
Percent of map unit: 5 percent
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop
Percent of map unit: 2 percent
Hydric soil rating: No

307—Urban land

Map Unit Setting
National map unit symbol: 9lmh
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition
Urban land: 80 percent
Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Typical profile

H - 0 to 6 inches: material

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Udorthents, wet substratum

Percent of map unit: 10 percent
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, undisturbed soils

Percent of map unit: 10 percent
Hydric soil rating: No

308—Udorthents, smoothed

Map Unit Setting

National map unit symbol: 9lmj
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Down-slope shape: Convex
Across-slope shape: Linear

Typical profile

A - 0 to 5 inches: loam
C1 - 5 to 21 inches: gravelly loam
C2 - 21 to 80 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 35 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)
Depth to water table: About 24 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Udorthents, wet substratum

Percent of map unit: 7 percent
Hydric soil rating: No

Unnamed, undisturbed soils

Percent of map unit: 7 percent
Hydric soil rating: No

Urban land

Percent of map unit: 5 percent
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Hydric soil rating: No

W—Water

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

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APPENDIX B: Danbury Branch Improvement Program Cultural Resources Chapter 10 Tables and Graphics (Walwer and Walwer 2009)

Table 2: Previously Documented Prehistoric Sites (Walwer and Walwer 2009)
(Highlighted sites are in or adjacent to the Southern Section APE)

Site #	Site Name	Town	Time / Date	Type	Condition	Prior Testing	Reported	Refe
96-129	Aldrich I	New Milford	Woodland	Camp	Good per IGTS	Phase I	Aldrich	IGTS
96-111	NA	New Milford	NA	Lithic	Fair per IGTS	Phase II	Docktor	IGTS
96-110	NA	New Milford	LA-LW	Camp	Good per IGTS	Phase II	Docktor	IGTS
96-112	NA	New Milford	LA-MW	Camp	Good per IGTS	Phase II	Docktor	IGTS
96-109	NA	New Milford	NA	Lithic	Good per IGTS	Phase I	Docktor	IGTS
96-84	Windwood VII	New Milford	MA,	Camp	Fair per IGTS /	Phase II	Windwood	IGTS
96-78	Windwood I	New Milford	Woodland	Camp	Good per IGTS	Phase I	Windwood	IGTS
96-83	Windwood VI	New Milford	MW	Camp	Good per IGTS	Phase II	Windwood	IGTS
96-82	Windwood V	New Milford	NA	Lithic	Fair per IGTS	Phase I	Windwood	IGTS
96-79	Windwood II	New Milford	Late Archaic	Camp	Good per IGTS	Phase I	Windwood	IGTS
96-80	Windwood III	New Milford	NA	Camp	Good per IGTS	Phase I	Windwood	IGTS
96-81	Windwood IV	New Milford	LA	Camp	Good per IGTS	Phase II	Windwood	IGTS
NA	Candlewood	New Milford	LW	Camp	Good per ARS	Phase I	Candlewood	ARS
96-34	Harrybrooke	New Milford	EA-LW	Village	Poor per CAS	Surface Collected	Harrybrooke	Site
96-4	Golombeski	New Milford	NA	Lithic	Poor per CAS	Surface Collected	Golombeski	Site
96-29	Lovers Leap	New Milford	Paleo-TA+	Village	Poor per CAS	Amateur Excavations	State of CT	Swig
96-66	Mike Lawson	New Milford	NA	NA	Fair / landscaped	NA	State of CT	Site
96-64	NA	New Milford	NA	NA	Landscaped lawn	NA	NA	Site
96-19	Dodd Farm	New Milford	LA-MW	Village	Fair per CAS	Phase I	New Milford	CAS
96-52	Still River I	New Milford	NA	Village	Good per AIAI	Surface Collected	Sunny Valley	Site
NA	KC Site I	New Milford	TA-EW	Camp	Good per HAA	Phase II	Kimberly Clark	HAA

Table 3: Historic Chronology of the Local Railroads

1825 Completion of Erie Canal inspires unexecuted plans for Westport / Danbury canal.
1835 First CT railroad charter - Fairfield County RR Company - plans unexecuted for Norwalk / Danbury line.
1835 Another line considered from Danbury to West Stockbridge, MA, unexecuted.
1836 Bridgeport pledges $200,000 for construction of railroad to New Milford.
1840 "Ousatonic Railroad" completed between Bridgeport and New Milford.
1842 Ousatonic Railroad completed between New Milford and MA, main link between NYC and Albany.
1844 New York & New Haven (NYNH) charter granted.
1849 New York & New Haven (NYNH) line completed.
1852 Danbury & Norwalk railroad line completed.
1860s Housatonic Railroad reaches profitability, 100,000 quarts of milk sent each day to NYC.
1864 New York, Housatonic & Northern RR charter granted to connect White Plains and Danbury.
1868 New York, Housatonic & Northern RR extended to Brookfield, not quite connected to Housatonic RR.
1872 NYNH acquires Hartford & Boston / Hartford & New Haven -becomes the New York, New Haven & Hartford (NYNHH).
1874 Line between Danbury and Brookfield junction (~4 miles) finally completed.
1881 Boston, Hartford & Erie railroad line built through Danbury.
1886 Danbury / Brookfield section and southern Danbury branch leased by Housatonic Railroad Company, connecting loop between D&N and Housatonic branch to Danbury established.
1892 Danbury / Brookfield section and southern Danbury branch becomes part of NYNHH (Consolidated Rd)
1893 Two stations at Danbury replaced by single station.
1900 30 independent lines of 19th century reduced to just three major systems.
1902 Union Station built at Danbury.
1903/14 NYNHH electrifies lines between New York and New Haven.
1910/25 Danbury branch between Norwalk and Danbury electrified.
1912 NYNHH almost insolvent.
1913 Alignment between New Milford and Berkshire Junction double-tracked, new bridges in place.
1916 Locomotive turntable built at Union Station.
1921 NY / Mass. route changed to include Danbury branch and section to Brookfield Brookfield / Hawleyville branch abandoned.
1924 NYNHH returns to profitability.
1935 NYNHH files for reorganization, never returns to profitability.
1961 Norwalk / Danbury branch de-electrified, switches to Diesel locomotives.
1968/69 New York Central, parent of bankrupted NYNHH, merges with Penn RR to become Penn Central.
1971 Penn Central files for bankruptcy, largest in American history.
1971 Danbury branch leased to New York MTA and ConnDOT, Housatonic line barely used.
1976 Penn Central lines become part of federally funded Conrail system.
1983 South Danbury branch becomes part of Metro-North Commuter Railroad.
1992 Housatonic Railroad expands to include freight from Danbury to New Milford.

Table 4: Previously Documented Historic Sites

(Highlighted sites are in or adjacent to the Southern Section APE)

Site #	Site Name	Town	Address	Time / Date	Type	Condition	Prior Testing	Reported Owner	Reference
NA	Trash Dump	New Milford	Lanesville Road	Early 20th C	Residential	Not identified	Phase I	NA	CAS 198
96-101	Bridgeport Wood Finishing	New Milford	Grove Street	1881+	Industrial	Fair per site form	Surface Collected	NA	Weinstein 2004
NA	Housatonic Railroad Bridge	New Milford	Housatonic River	1913	Railroad	Good per ACS	Historic Evaluation	NA	Roth 198
195	Colonel Elisha Bostwick House	New Milford	102 Grove Street	1782	Residential	Good per ACS	Historic Evaluation	Dickey	Gilchrist
NA	New Milford Center	New Milford	New Milford Center	18th to E. 20th C.	District	Good per ACS	NRHP Evaluation	Various	Gilchrist
73	A.B. Mygatt House	New Milford	44 South Main Street	ca. 1860	Residential	Good per ACS	Historic Evaluation	Beaudoin	Gilchrist
64	William Schoverling House	New Milford	18 South Main Street	ca. 1870	Residential	Good per ACS	Historic Evaluation	NA	Gilchrist
NA	J.S. Halpine Tobacco	New Milford	West & Mill Street	1899	Agricultural	Condo conversion	NRHP Evaluation	Bost	Gilchrist
NA	E.A. Wildman & Co. Tobacco WH	New Milford	34 Bridge Street	1870	Agricultural	Good per ACS	NRHP Evaluation	NA	Devlin 1
NA	Merritt Beach & Son Building	New Milford	30 Bridge Street	1873	Commercial	Good per ACS	NRHP Evaluation	NA	Devlin 1
NA	Housatonic Railroad Station	New Milford	Railroad Street	1886	Railroad	Chamber Commerce	NRHP Evaluation	NA	Gilchrist
55	Village Laundry	New Milford	38 Bridge Street	ca. 1950	Commercial	Good per ACS	Historic Evaluation	Lindstedt	Gilchrist
56	SNET	New Milford	44 Bridge Street	ca. 1950	Commercial	Good per ACS	Historic Evaluation	SNET	Gilchrist
57	New Milford Telephone Company	New Milford	46 Bridge Street	ca. 1970	Commercial	Good per ACS	Historic Evaluation	Arnold	Gilchrist
58	Connecticut National Bank	New Milford	48 Bridge Street	ca. 1970	Commercial	Gone	Historic Evaluation	CTNB	Gilchrist
47	Cuddy's Texaco	New Milford	45 Bridge Street	1960s	Commercial	Good per ACS	Historic Evaluation	CM Beach	Gilchrist
48	NM Public School	New Milford	47 Bridge Street	ca. 1950	Commercial	Good per ACS	Historic Evaluation	USPO	Gilchrist
49	Eclectique	New Milford	49-53 Bridge Street	20th C.	Commercial	Gone	Historic Evaluation	Wagenseil	Gilchrist
50	NA	New Milford	55-57 Bridge Street	ca. 1900	Commercial	Gone	Historic Evaluation	Hulton	Gilchrist
51	Mobil Station	New Milford	Corner of Bridge / Main	20th C.	Commercial	Gone	Historic Evaluation	Socony	Gilchrist

Table 5: Newly Documented Historic Sites

(Highlighted sites are in or adjacent to the Southern Section APE)

Site Name	Town	Address	Time / Date	Type	Condition
Aldridge Road RR Bridge	New Milford	Aldridge Road	20th C.	Railroad	Good per ACS
NMA1	New Milford	Aldridge Road	19th C.	Artifacts	Fair per ACS
Still River RR Bridge	New Milford	Still River	Late 19th to Early 20th C.	Railroad	Good per ACS
Marina	New Milford	Anderson Avenue	Early to mid 20th C.	Commercial	Good per ACS
NA	New Milford	120 Grove Street	Late 19th to Early 20th C.	Residential	Good per ACS
NA	New Milford	108 Grove Street	Late 19th to Early 20th C.	Residential	Good per ACS
NMF1	New Milford	West Street	19th C.	Foundation	Good per ACS
Merwin Wilson	New Milford	2 Sterling Place	Late 19th to Early 20th C.	Commercial	Fair per ACS
South Avenue	New Milford	3,5,7,8,10,11 South Ave	Late 19th to Early 20th C.	Residential	Good per ACS
High Street	New Milford	3,5,8,10,16,18,20 High Street	Late 19th to Early 20th C.	Residential	Good per ACS
West Street	New Milford	84,81,76,74,3 workers,62,60,41-57 condos,56,54,52,50,46,44,40		Residential	Good per ACS
West Street continued	New Milford	34,30/32,28,26 w/barn,29/1865 Soule, 20 w/barn, 27 barn, 16,12,10		Residential	Good per ACS
Great Brook RR Bridge	New Milford	Great Brook	Late 19th to Early 20th C.	Railroad	Good per ACS
NMA2	New Milford	West Street	19th-20th	Artifacts	Fair per ACS
NMF2 - Mill foundation	New Milford	Mill Street	19th C.	Foundation	Good per ACS
NMA3	New Milford	Middle Street	19th-20th	Artifacts	Fair per ACS
Nicholas Square	New Milford	5,7,9,10,11,12,13,14,15,16,17,18,19,21-23,25 Nicholas Square		Residential	Good per ACS
NA	New Milford	25 Bridge Street	19th C.	Commercial	Good per ACS
NA	New Milford	4,14 Railroad	Late 19th to Early 20th C.	Commercial	Good per ACS

Table 6: Railroad Features

Feature #	Feature Type	Location / Coordinates	Comments
1	Crossing signs	200' north of NM RR station	two signs
2	Switching device	75' north of NM RR station	Lackawanna Ohio 1923, patents 1798283, 2124190
3	Switching device	south end of NM RR station	green and red reflectors, Ramaco Ajax Corp., Millburn, NY
4	Grade crossing	Bridge Street	WRRS Company type 2149
5	Sideline	J.S. Halpine building	along condo complex on West Street
6	Whistle post	20' north of Mill Street	
7	Grade crossing	Mill Street	Lackawanna Ohio 1924, 107lb.
8	Flanger sign	south end of Halpine bldg	
9	Retaining wall	south of warehouse	marble stone
10	Grade crossing	South Avenue	
11	Sideline	water treatment facility	section ca. 200 feet in length
12	Whistle post	water treatment facility	
13	Whistle post	632775 / 4602768	custom rail sign post also
14	Grade crossing	Anderson Avenue	not active
15	Switching device	632767 / 4602201	
16	10 mile marker	632769 / 4602078	
17	Sideline	Kimberly Clark	not active
18	Sideline	south of water treatment plant	near pile of ties
19	Switching device	632735 / 4601509	1990
20	Switching device	Kimberly Clark	two
21	Switching device	Kimberly Clark	culverts nearby
22	Switching device	Kimberly Clark	1984 / 1985
23	Grade crossing	Sunola plant	not paved
24	9 mile marker	632723 / 4600418	broken switching device, pile of ties nearby
25	Grade crossing	Still River Road	
26	Whistle post	632433 / 4599522	modern
27	Culvert	632401 / 4599411	cement and stone
28	Rail rack stands	632401 / 4599400	custom welded, pink paint, ca. 25 feet apart
29	Culvert	632324 / 4599029	
30	8 mile marker	632280 / 4598857	
31	Concrete base	632224 / 4598633	broken metal post
32	Overpass	Ericson Road	
33	Concrete base	632198 / 4598485	broken metal post
34	Culvert	632101 / 4597765	
35	7 mile marker	Old Pumpkin Hill Road	
36	Concrete base	632138 / 4597158	broken metal post
37	Concrete base	632100 / 4597311	broken metal post
38	Culvert	632321 / 4596708	stone at base, ties on top
39	6 mile marker	632562 / 4595737	nearby rails, Lackawanna Ohio 1925
40	Culvert	632555 / 4595374	iron pipe
41	Culvert	632563 / 4595327	iron pipe
42	Culvert	632561 / 4595201	stone
43	Stone wall	632586 / 4595014	east side of tracks
44	Culvert	632596 / 4594951	concrete

Feature #	Feature Type	Location / Coordinates	Comments
45	Culvert	632634 / 4594823	iron pipe
46	Culvert	632679 / 4594663	stone at base, ties on top
47	Culvert	632701 / 4594580	staggered stone
48	Culvert	632720 / 4594507	iron pipe
49	Culvert	632777 / 4594301	stone
50	5 mile marker	632799 / 4594217	
51	Culvert	632804 / 4594187	iron pipe
52	Culvert	632817 / 4594104	stone
53	Culvert	632822 / 4594238	iron pipe
54	Culvert	632826 / 4593937	stone
55	Culvert	632835 / 4593793	stone, brick, iron pipe
56	Culvert	632842 / 4593739	iron pipe
57	Culvert	632863 / 4593637	iron pipe
58	Culvert	632874 / 4593816	iron pipe
59	Culvert	632896 / 4593730	stone and concrete
60	Culvert	633006 / 4593221	stone and iron pipe

Table 7: Recommendations Table (Prehistoric)
(Highlighted sites are in or adjacent to the Southern Section APE)

Site #	Site Name	Town	Condition	Prior Testing	Preservation Status	Recommendation
96-129	Aldrich I	New Milford	Good per IGTS	Phase I	Avoid or Test	Phase II on impact
96-111	NA	New Milford	Fair per IGTS	Phase II	ROW Restriction, eligible	Phase III on impact
96-110	NA	New Milford	Good per IGTS	Phase II	ROW Restriction, eligible	Phase III on impact
96-112	NA	New Milford	Good per IGTS	Phase II	Not Eligible per IGTS	Test area on impact
96-109	NA	New Milford	Good per IGTS	Phase I	No further conservation	Test area on impact
96-84	Windwood VII	New Milford	Fair per IGTS / house	Phase II	NRHP Eligible per IGTS	Phase III on impact
96-78	Windwood I	New Milford	Good per IGTS	Phase I	Avoid or Test	Phase II on impact
96-83	Windwood VI	New Milford	Good per IGTS	Phase II	NRHP Eligible per IGTS	Phase III on impact
96-82	Windwood V	New Milford	Fair per IGTS	Phase I	No further conservation	Test area on impact
96-79	Windwood II	New Milford	Good per IGTS	Phase I	Avoid or Test	Phase II on impact
96-80	Windwood III	New Milford	Good per IGTS	Phase I	Avoid or Test	Phase II on impact
96-81	Windwood IV	New Milford	Good per IGTS	Phase II	NRHP Eligible per IGTS	Phase III on impact
NA	Candlewood	New Milford	Good per ARS	Phase I	Avoid or Test	Phase II on impact
96-34	Harrybrooke Park	New Milford	Poor per CAS	Surface Collected	Site Form	Phase I on impact
96-4	Golombeski	New Milford	Poor per CAS	Surface Collected	Site Form	Phase I on impact
96-29	Lovers Leap	New Milford	Poor per CAS	Amateur Excavations	Site Form	Phase I on impact
96-66	Mike Lawson	New Milford	Fair / landscaped park	NA	Site Form	Phase I on impact
96-64	NA	New Milford	Landscaped lawn	NA	Site Form	Phase I on impact
96-19	Dodd Farm	New Milford	Fair per CAS	Phase I	Site Form	Phase II on impact
96-52	Still River I	New Milford	Good per AIAI	Surface Collected	Site Form	Phase I on impact
NA	KC Site I	New Milford	Good per HAA	Phase II	No further conservation	No further conservation

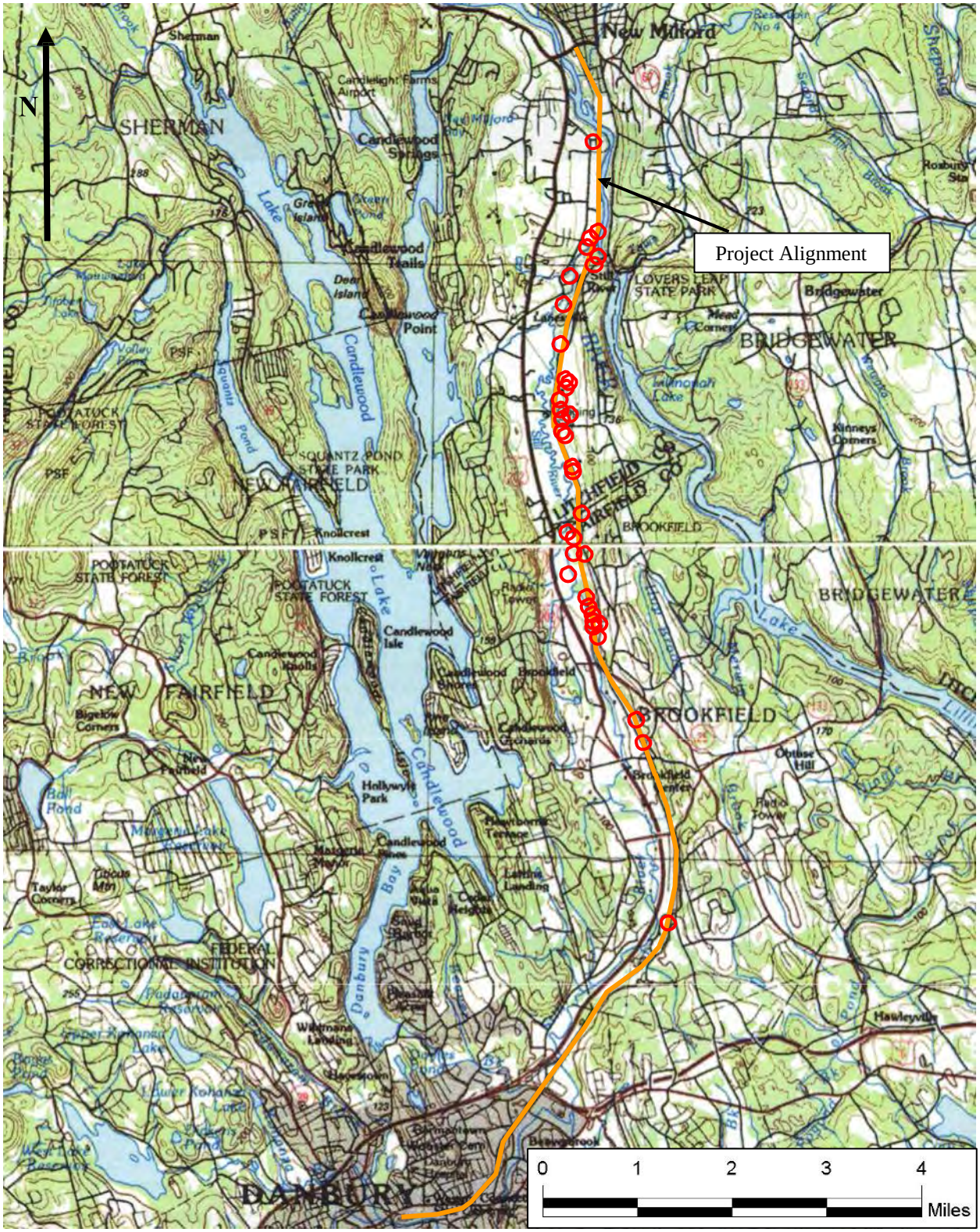
Table 7: Recommendations Table (Previously Documented Historic)
(Highlighted sites are in or near the Southern Section APE)

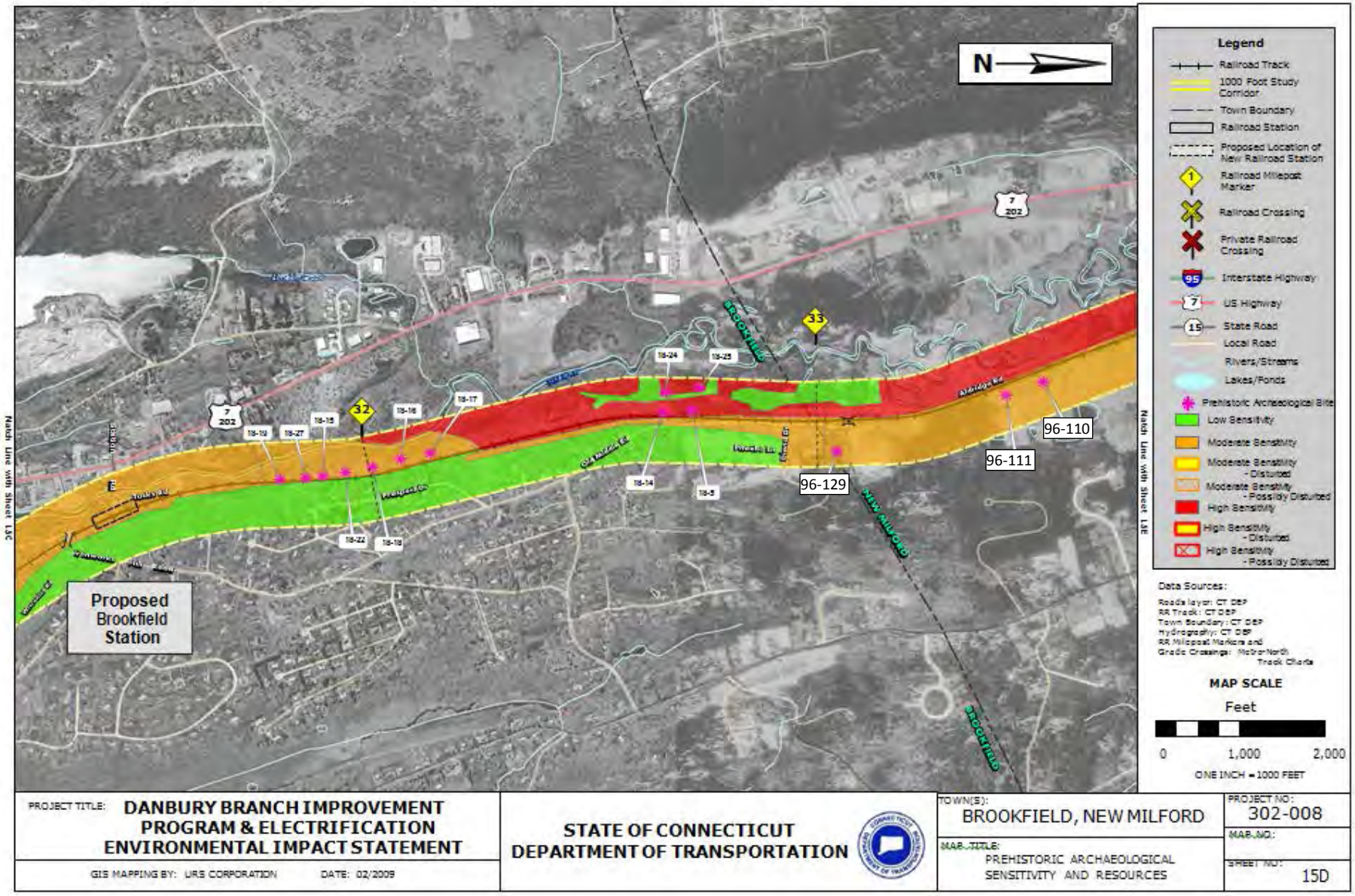
Site #	Site Name / Address	Town	Condition	Prior Testin	Preservation Status	Recommendation
NA	Trash Dump	New Milford	Not identified	Phase I	Site Form	No further conservation
96-101	Bridgeport Wood Finishing	New Milford	Fair per site form	Surface Collected	State Preserve	review for NRHP
NA	Housatonic Railroad Bridge	New Milford	Good per ACS	Historic Evaluation	HAER	Account for Visual Impact
195	102 Grove Street	New Milford	Good per ACS	Historic Evaluation	NMHPS	review for NRHP
NA	New Milford Center	New Milford	Good per ACS	NRHP Evaluation	Nominated NRHP	Account for Visual Impact
73	44 South Main Street	New Milford	Good per ACS	Historic Evaluation	NMHPS	review for NRHP
64	18 South Main Street	New Milford	Good per ACS	Historic Evaluation	NMHPS	review for NRHP
NA	J.S. Halpine Tobacco Warehouse	New Milford	Condo conversion	NRHP Evaluation	Nominated NRHP	Account for Visual Impact
NA	34 Bridge Street	New Milford	Good per ACS	NRHP Evaluation	NRHP	Account for Visual Impact
NA	30 Bridge Street	New Milford	Good per ACS	NRHP Evaluation	NRHP	Account for Visual Impact
NA	Housatonic Railroad Station	New Milford	Chamber of	NRHP Evaluation	Nominated NRHP	Account for Visual Impact
55	38 Bridge Street	New Milford	Good per ACS	Historic Evaluation	NMHPS	Not Eligible
56	44 Bridge Street	New Milford	Good per ACS	Historic Evaluation	NMHPS	Not Eligible
57	46 Bridge Street	New Milford	Good per ACS	Historic Evaluation	NMHPS	Not Eligible
58	48 Bridge Street	New Milford	Gone	Historic Evaluation	NMHPS	Not Eligible
47	45 Bridge Street	New Milford	Good per ACS	Historic Evaluation	NMHPS	Not Eligible
48	47 Bridge Street	New Milford	Good per ACS	Historic Evaluation	NMHPS	Not Eligible
49	49-53 Bridge Street	New Milford	Gone	Historic Evaluation	NMHPS	Not Eligible
50	55-57 Bridge Street	New Milford	Gone	Historic Evaluation	NMHPS	Not Eligible
51	Mobil Station	New Milford	Gone	Historic Evaluation	NMHPS	Not Eligible

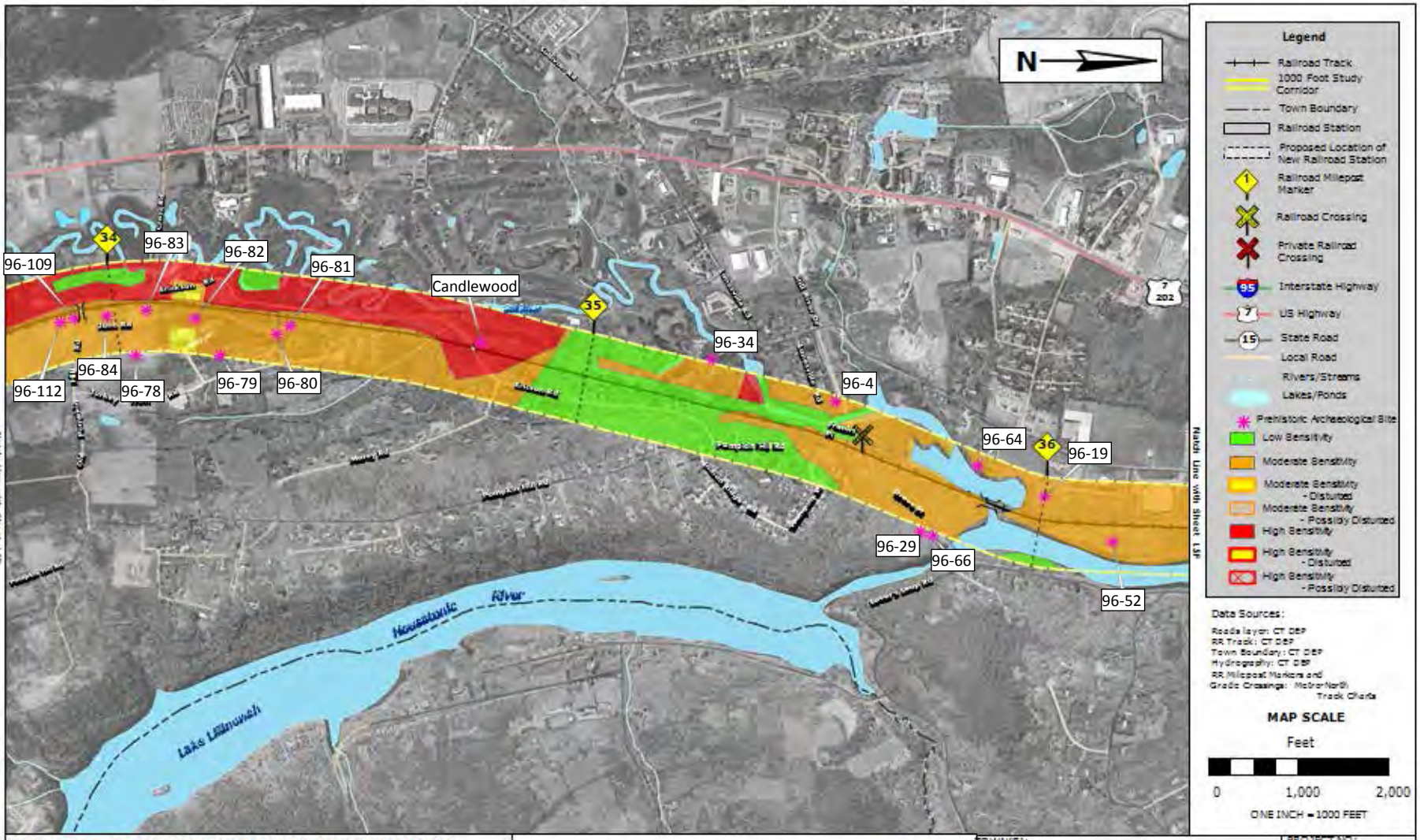
Table 7: Recommendations Table (Newly Documented Historic)
(Highlighted sites are in or adjacent to the Southern Section APE)

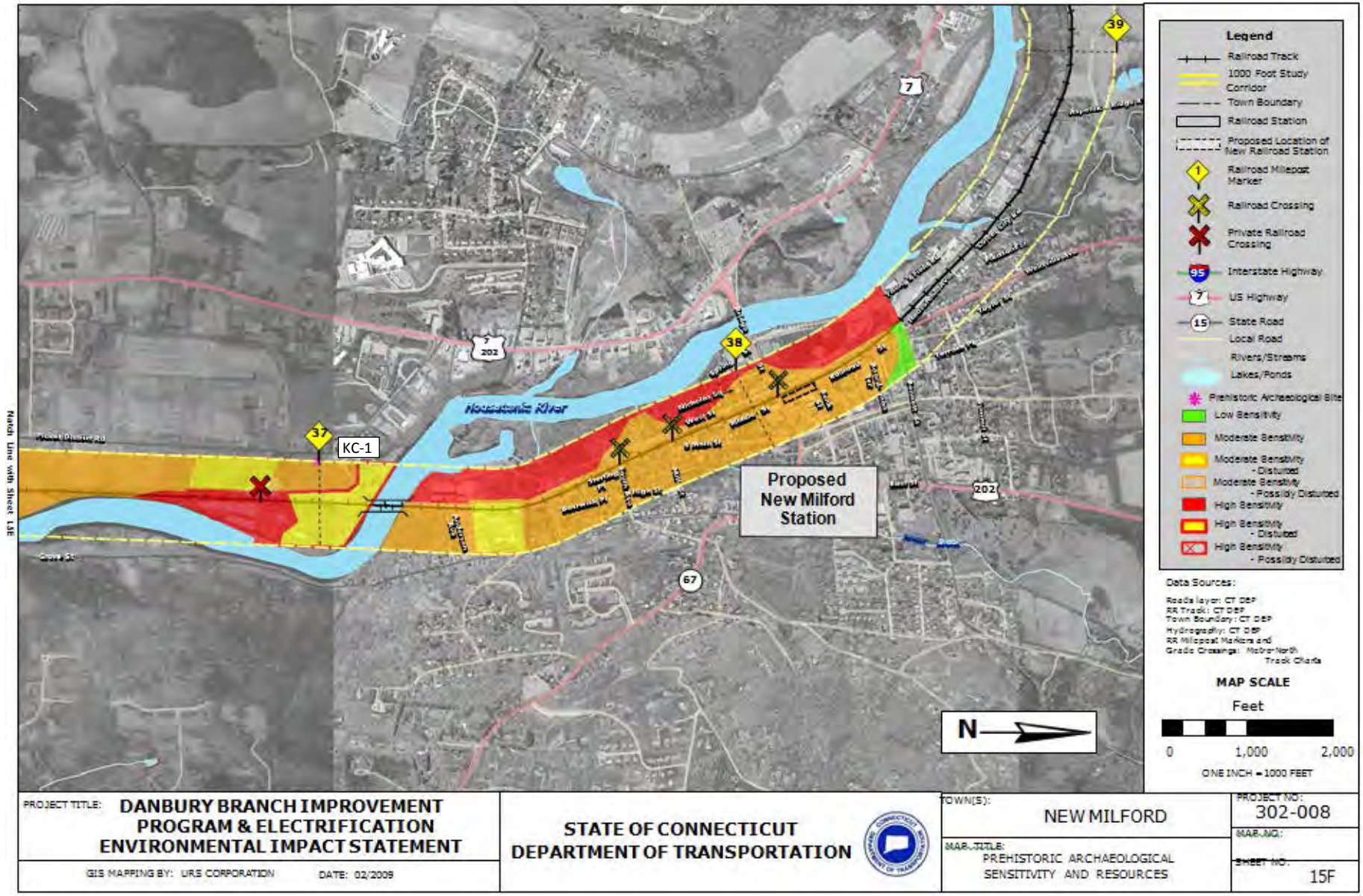
Site #	Site Name / Address	Town	Condition	Prior Testin	Preservation Status	Recommendation
NA	Aldridge Road RR Bridge	New Milford	Good per ACS	NA	NA	Not Eligible
NA	NMA1	New Milford	Fair per ACS	NA	NA	Phase I on impact
NA	Still River RR Bridge	New Milford	Good per ACS	NA	NA	review for NRHP
NA	Marina	New Milford	Good per ACS	NA	NA	review for NRHP
NA	120 Grove Street	New Milford	Good per ACS	NA	NA	review for NRHP
NA	108 Grove Street	New Milford	Good per ACS	NA	NA	review for NRHP
NA	NMF1	New Milford	Good per ACS	NA	NA	Phase I on impact
NA	Merwin Wilson Company	New Milford	Fair per ACS	NA	NA	review for NRHP
NA	South Avenue	New Milford	Good per ACS	NA	NA	review for NRHP
NA	High Street	New Milford	Good per ACS	NA	NA	review for NRHP
NA	West Street	New Milford	Good per ACS	NA	NA	review for NRHP
NA	Great Brook railroad tunnel / drainageway	New Milford	Good per ACS	NA	NA	review for NRHP
NA	NMA2	New Milford	Fair per ACS	NA	NA	Phase I on impact
NA	NMF2 - Mill foundation	New Milford	Good per ACS	NA	NA	Phase I on impact
NA	NMA3	New Milford	Fair per ACS	NA	NA	Phase I on impact
NA	Nicholas Square	New Milford	Good per ACS	NA	NA	review for NRHP
NA	25 Bridge Street	New Milford	Good per ACS	NA	NA	review for NRHP
NA	4, 14 Railroad Street	New Milford	Good per ACS	NA	NA	review for NRHP

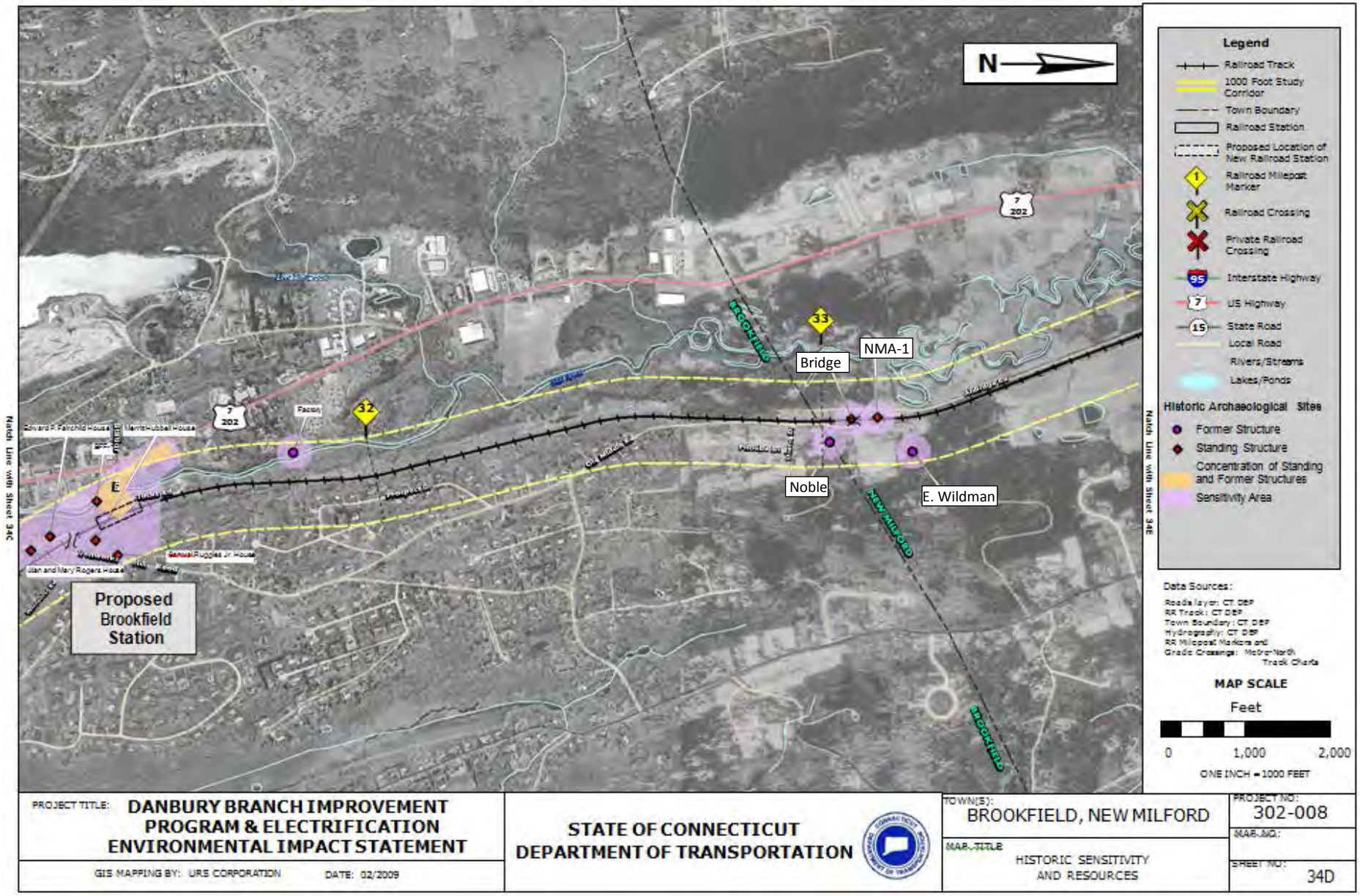
Figure No. 11: Prehistoric Sites of the Project Corridor




N
Legend
Railroad Track
1000 Foot Study Corridor
Town Boundary
Railroad Station
Proposed Location of New Railroad Station
Railroad Milepost Marker
Railroad Crossing
Private Railroad Crossing
Interstate Highway
US Highway
State Road
Local Road
Rivers/Streams
Lakes/Ponds
Prehistoric Archeological Site
Low Sensitivity
Moderate Sensitivity
Moderate Sensitivity - Disturbed
Moderate Sensitivity - Possibly Disturbed
High Sensitivity
High Sensitivity - Disturbed
High Sensitivity - Possibly Disturbed
Data Sources:
Roads layer: CT DEP
RR Track: CT DEP
Town Boundary: CT DEP
Hydrography: CT DEP
RR Milepost Markers and Grade Crossings: Metro-North Track Charts
MAP SCALE
Feet
0
1,000
2,000
ONE INCH = 1000 FEET
Proposed Brookfield Station
96-110
96-111
96-129
Match Line with Sheet 15E
Match Line with Sheet 15C
PROJECT TITLE: DANBURY BRANCH IMPROVEMENT PROGRAM & ELECTRIFICATION ENVIRONMENTAL IMPACT STATEMENT
GIS MAPPING BY: URS CORPORATION DATE: 02/2009
STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION
TOWN(S): BROOKFIELD, NEW MILFORD
PROJECT NO: 302-008
MAP TITLE: PREHISTORIC ARCHAEOLOGICAL SENSITIVITY AND RESOURCES
SHEET NO: 15D


N
96-109
96-83
96-82
96-81
Candlewood
96-34
96-4
96-84
96-112
96-78
96-79
96-80
96-64
96-19
96-29
96-66
96-52
Housatonic River
Lake Lillinonah
Match Line with Sheet 15D
Match Line with Sheet 15F
Legend
Railroad Track
1000 Foot Study Corridor
Town Boundary
Railroad Station
Proposed Location of New Railroad Station
Railroad Milepost Marker
Railroad Crossing
Private Railroad Crossing
Interstate Highway
US Highway
State Road
Local Road
Rivers/Streams
Lakes/Ponds
Prehistoric Archeological Site
Low Sensitivity
Moderate Sensitivity
Moderate Sensitivity - Disturbed
Moderate Sensitivity - Possibly Disturbed
High Sensitivity
High Sensitivity - Disturbed
High Sensitivity - Possibly Disturbed
Data Sources:
Roads layer: CT DEP
RR Track: CT DEP
Town Boundary: CT DEP
Hydrography: CT DEP
RR Milepost Markers and Grade Crossings: Metro-North Track Charts
MAP SCALE
Feet
0
1,000
2,000
ONE INCH = 1000 FEET
PROJECT TITLE: DANBURY BRANCH IMPROVEMENT PROGRAM & ELECTRIFICATION ENVIRONMENTAL IMPACT STATEMENT
GIS MAPPING BY: URS CORPORATION DATE: 02/2009
STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION
TOWN(S): NEW MILFORD
PROJECT NO: 302-008
MAP TITLE: PREHISTORIC ARCHAEOLOGICAL SENSITIVITY AND RESOURCES
MAP NO:
SHEET NO: 15E


Housatonic River
KC-1
Proposed New Milford Station
N
Legend
Railroad Track
1000 Foot Study Corridor
Town Boundary
Railroad Station
Proposed Location of New Railroad Station
Railroad Milepost Marker
Railroad Crossing
Private Railroad Crossing
Interstate Highway
US Highway
State Road
Local Road
Rivers/Streams
Lakes/Ponds
Prehistoric Archeological Site
Low Sensitivity
Moderate Sensitivity
Moderate Sensitivity - Disturbed
Moderate Sensitivity - Possibly Disturbed
High Sensitivity
High Sensitivity - Disturbed
High Sensitivity - Possibly Disturbed
Data Sources:
Roads layer: CT DEP
RR Track: CT DEP
Town Boundary: CT DEP
Hydrography: CT DEP
RR Milepost Markers and Grade Crossings: Metro-North Track Charts
MAP SCALE
Feet
0
1,000
2,000
ONE INCH = 1000 FEET
Match Line with Sheet 15E
PROJECT TITLE: DANBURY BRANCH IMPROVEMENT PROGRAM & ELECTRIFICATION ENVIRONMENTAL IMPACT STATEMENT
GIS MAPPING BY: URS CORPORATION
DATE: 02/2009
STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION
TOWN(S): NEW MILFORD
MAP TITLE: PREHISTORIC ARCHAEOLOGICAL SENSITIVITY AND RESOURCES
PROJECT NO: 302-008
MAP NO.:
SHEET NO.: 15F



PROJECT TITLE: **DANBURY BRANCH IMPROVEMENT PROGRAM & ELECTRIFICATION ENVIRONMENTAL IMPACT STATEMENT**

GIS MAPPING BY: URS CORPORATION DATE: 02/2009

STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION

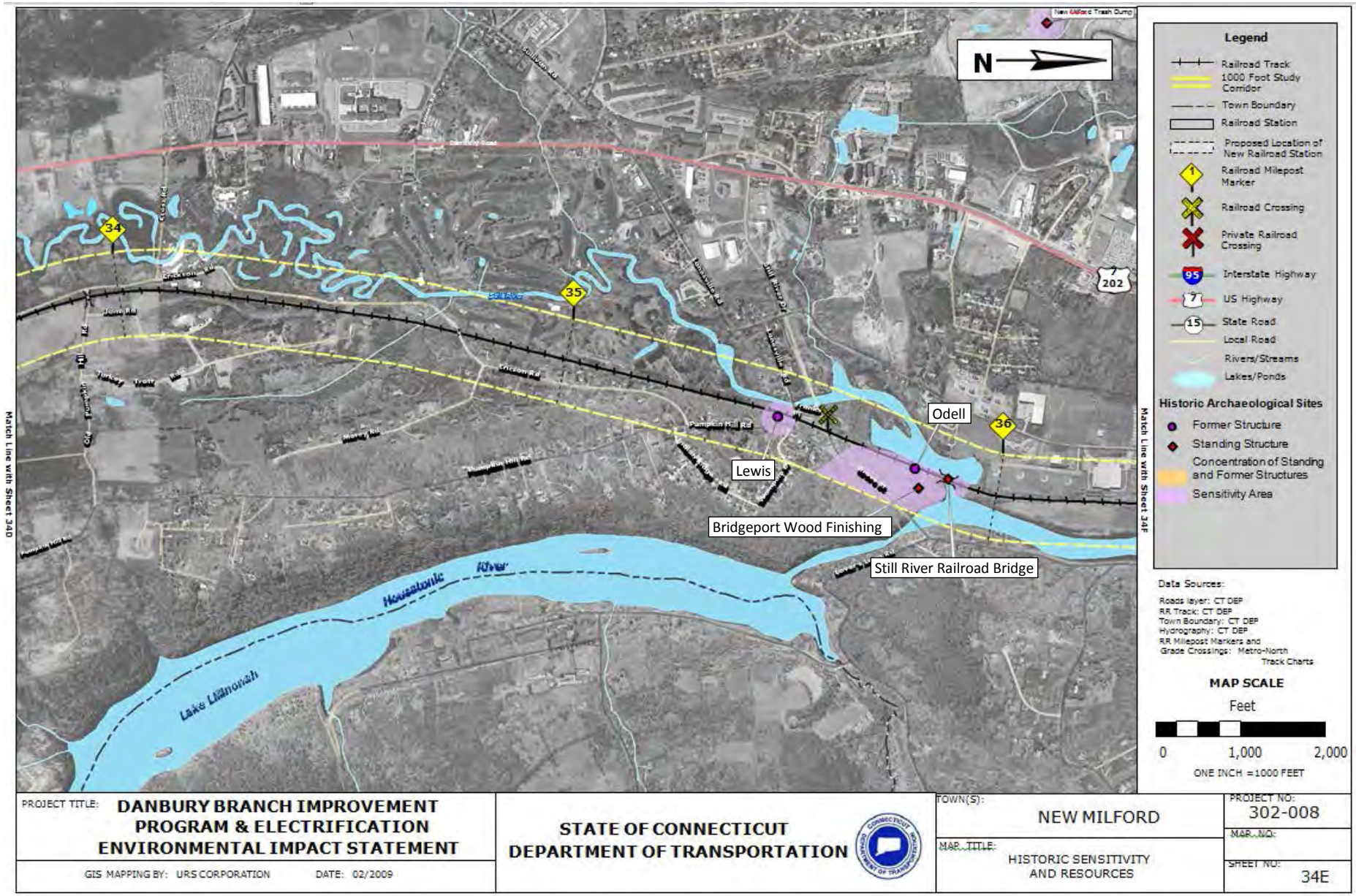
TOWN(S): BROOKFIELD, NEW MILFORD

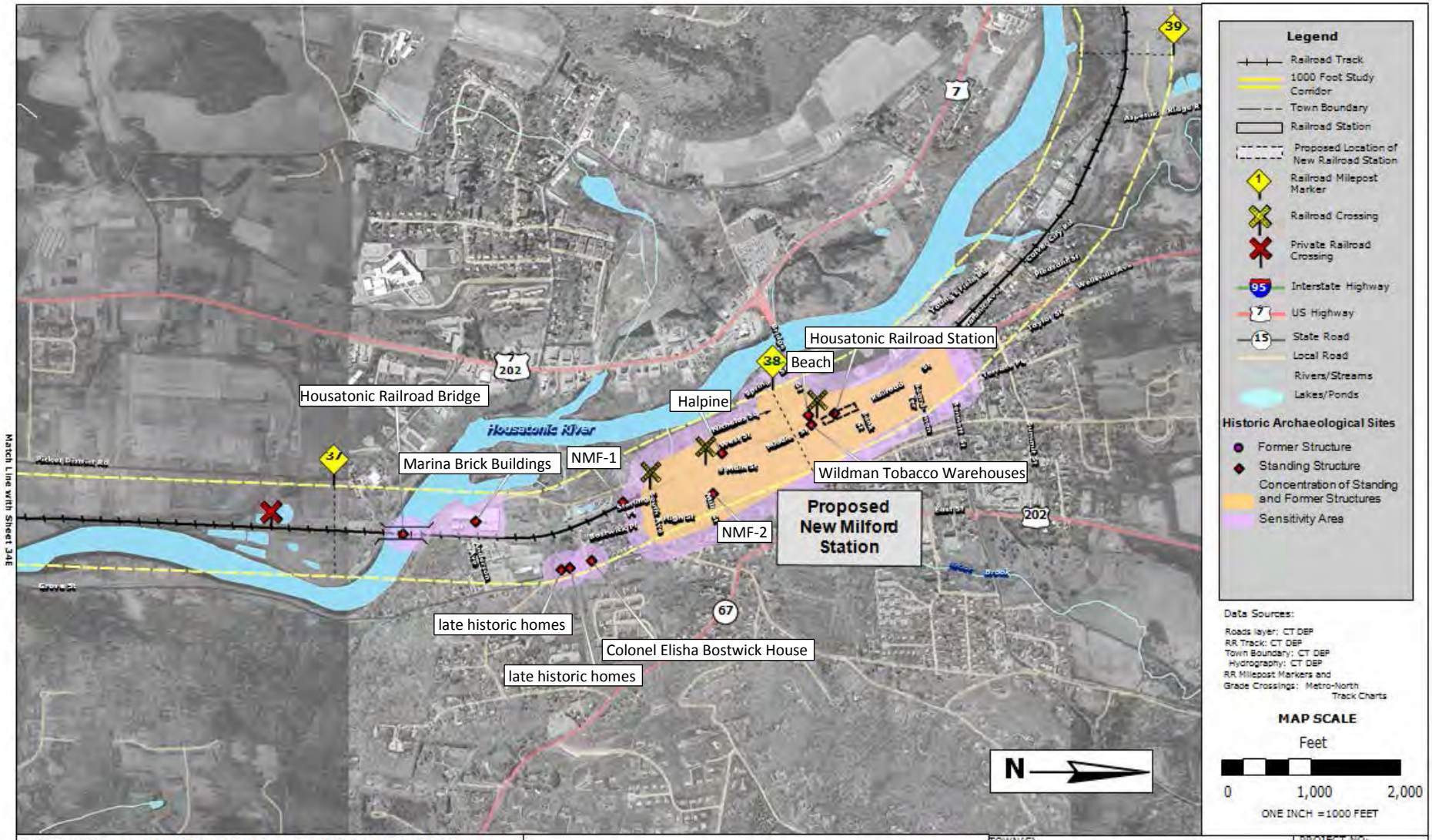
PROJECT NO: 302-008

MAP TITLE: HISTORIC SENSITIVITY AND RESOURCES

MAP NO:

SHEET NO: 34D

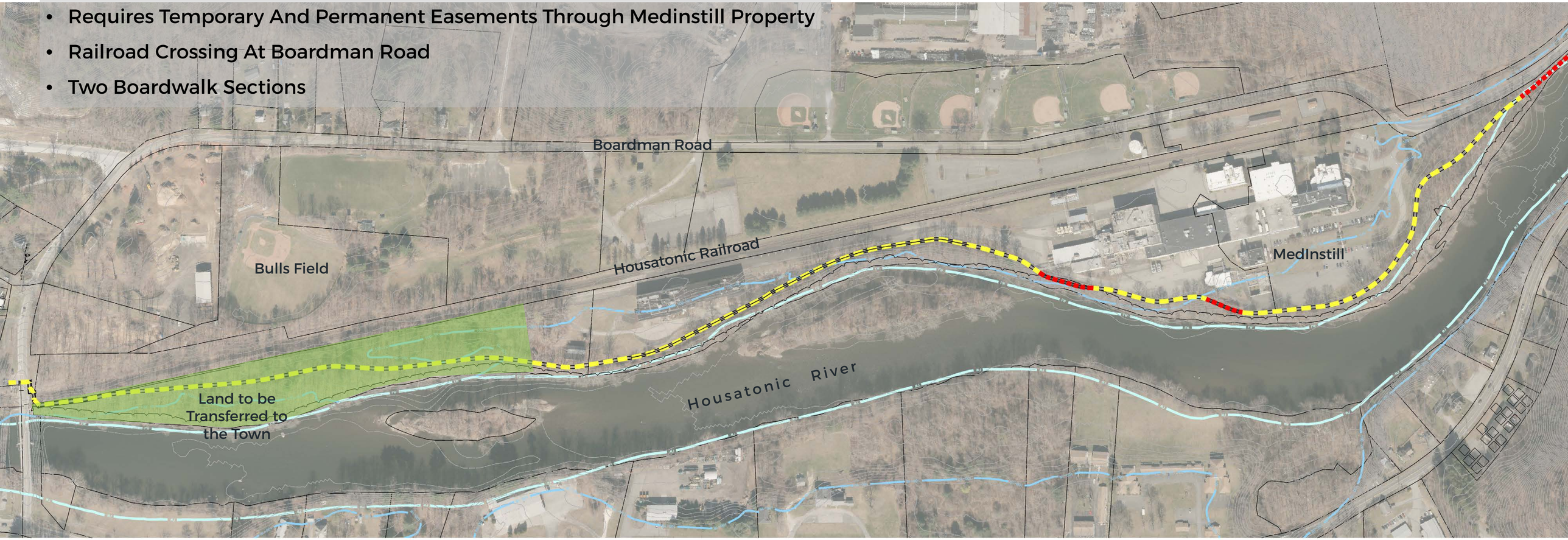

N
Legend
Railroad Track
1000 Foot Study Corridor
Town Boundary
Railroad Station
Proposed Location of New Railroad Station
Railroad Milepost Marker
Railroad Crossing
Private Railroad Crossing
Interstate Highway
US Highway
State Road
Local Road
Rivers/Streams
Lakes/Ponds
Historic Archaeological Sites
Former Structure
Standing Structure
Concentration of Standing and Former Structures
Sensitivity Area
Odell
Lewis
Bridgeport Wood Finishing
Still River Railroad Bridge
Housatonic River
Lake Lillinonah
Still River
Match Line with Sheet 34D
Match Line with Sheet 34F
Data Sources:
Roads layer: CT DEP
RR Track: CT DEP
Town Boundary: CT DEP
Hydrography: CT DEP
RR Milepost Markers and Grade Crossings: Metro-North Track Charts
MAP SCALE
Feet
0
1,000
2,000
ONE INCH = 1000 FEET
PROJECT TITLE: DANBURY BRANCH IMPROVEMENT PROGRAM & ELECTRIFICATION ENVIRONMENTAL IMPACT STATEMENT
GIS MAPPING BY: URS CORPORATION
DATE: 02/2009
STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION
TOWN(S): NEW MILFORD
MAP TITLE: HISTORIC SENSITIVITY AND RESOURCES
PROJECT NO: 302-008
MAP NO:
SHEET NO: 34E


Housatonic Railroad Station
Beach
Housatonic Railroad Bridge
Halpine
Housatonic River
Marina Brick Buildings
NMF-1
Wildman Tobacco Warehouses
Proposed New Milford Station
NMF-2
late historic homes
Colonel Elisha Bostwick House
late historic homes
Match Line with Sheet 34E
Legend
Railroad Track
1000 Foot Study Corridor
Town Boundary
Railroad Station
Proposed Location of New Railroad Station
Railroad Milepost Marker
Railroad Crossing
Private Railroad Crossing
Interstate Highway
US Highway
State Road
Local Road
Rivers/Streams
Lakes/Ponds
Historic Archaeological Sites
Former Structure
Standing Structure
Concentration of Standing and Former Structures
Sensitivity Area
Data Sources:
Roads layer: CT DEP
RR Track: CT DEP
Town Boundary: CT DEP
Hydrography: CT DEP
RR Milepost Markers and Grade Crossings: Metro-North Track Charts
MAP SCALE
Feet
0 1,000 2,000
ONE INCH =1000 FEET
N
PROJECT TITLE: DANBURY BRANCH IMPROVEMENT PROGRAM & ELECTRIFICATION ENVIRONMENTAL IMPACT STATEMENT
GIS MAPPING BY: URS CORPORATION DATE: 02/2009
STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION
TOWN(S): NEW MILFORD
MAP TITLE: HISTORIC SENSITIVITY AND RESOURCES
PROJECT NO: 302-008
MAP NO:
SHEET NO: 34F

APPENDIX C: Preferred Alternative, September, 2017

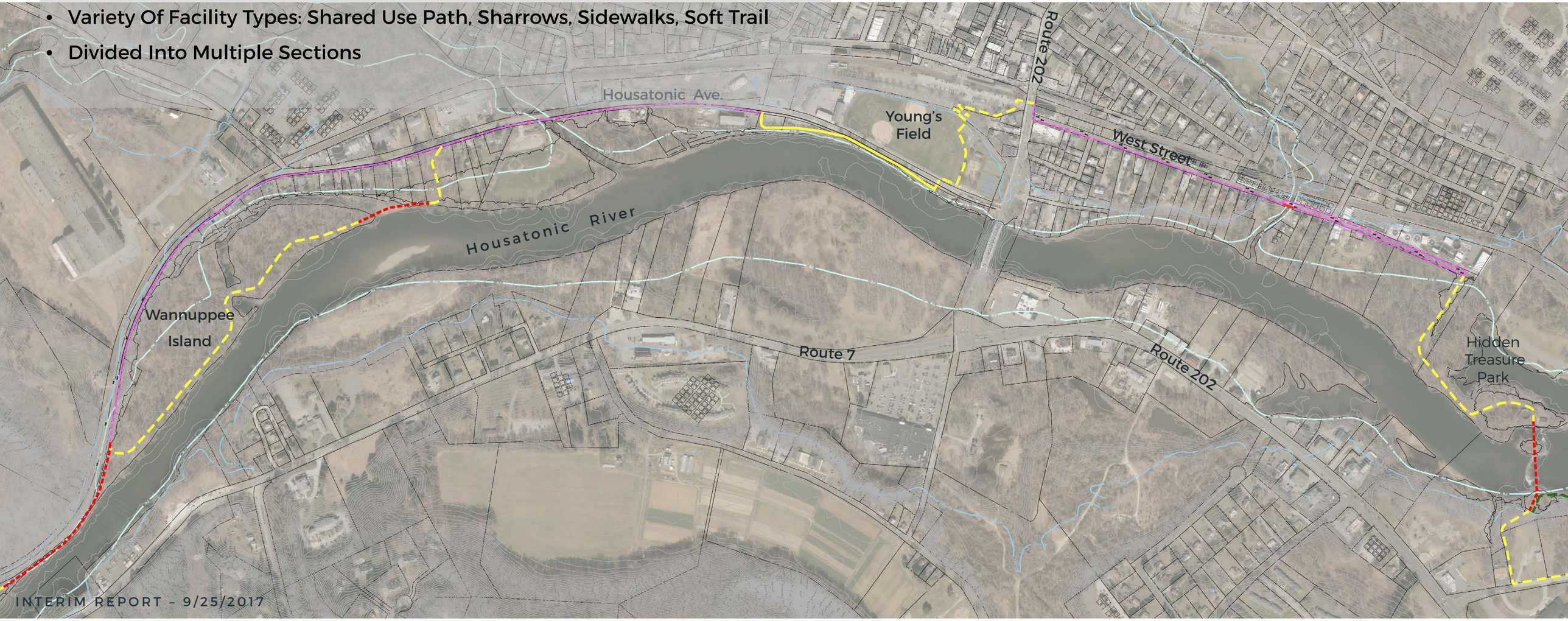
PHASE 1: MEDINSTILL

- Approximately 1 Mile In Length
- Land Transfer By Medinstill To Town
- Requires Temporary And Permanent Easements Through Medinstill Property
- Railroad Crossing At Boardman Road
- Two Boardwalk Sections



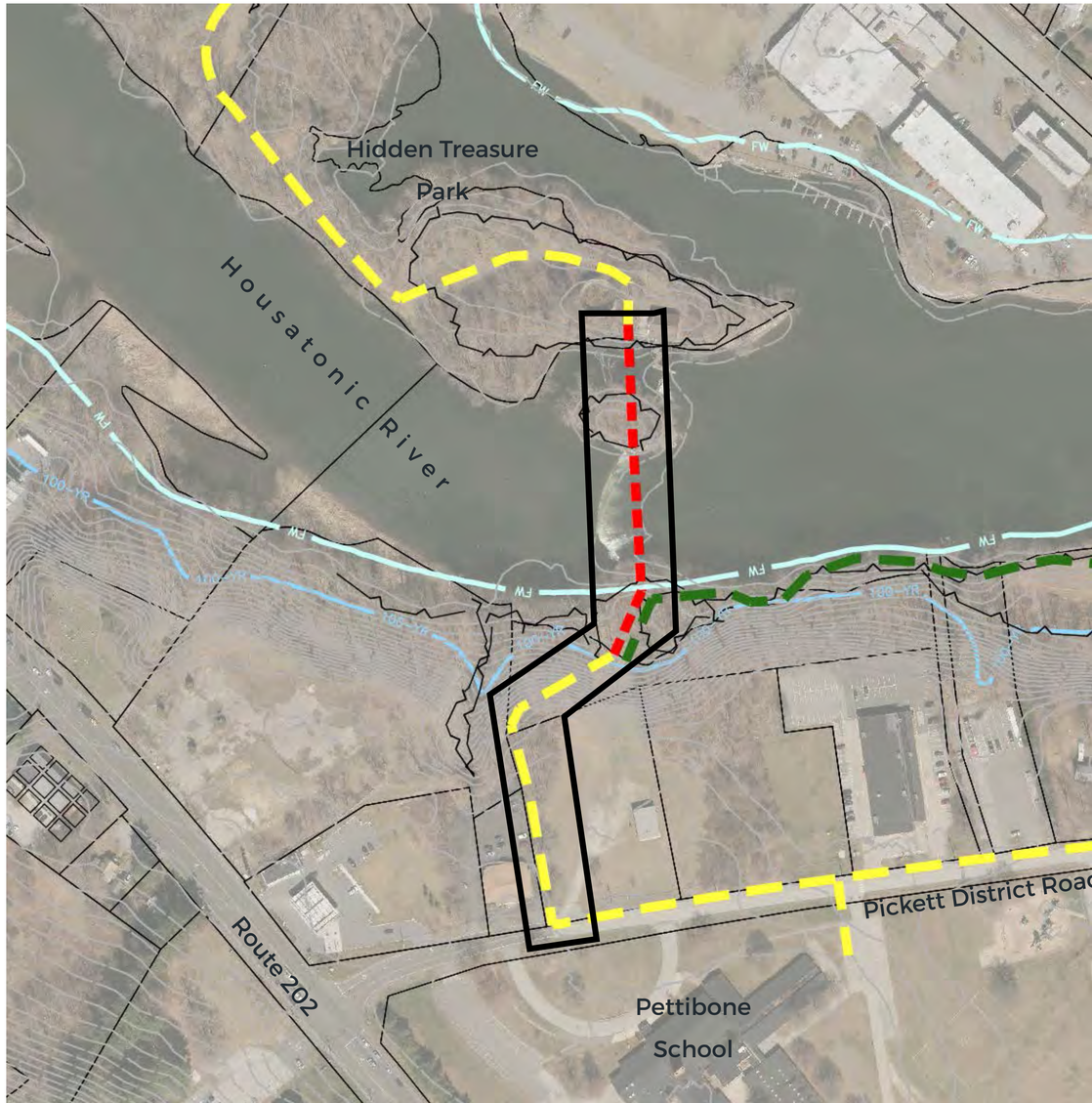
PHASE 2: MEDINSTILL TO HIDDEN TREASURE PARK

- Approximately 2.8 Miles In Length Including Sidewalks And Trails
- Variety Of Facility Types: Shared Use Path, Sharrows, Sidewalks, Soft Trail
- Divided Into Multiple Sections



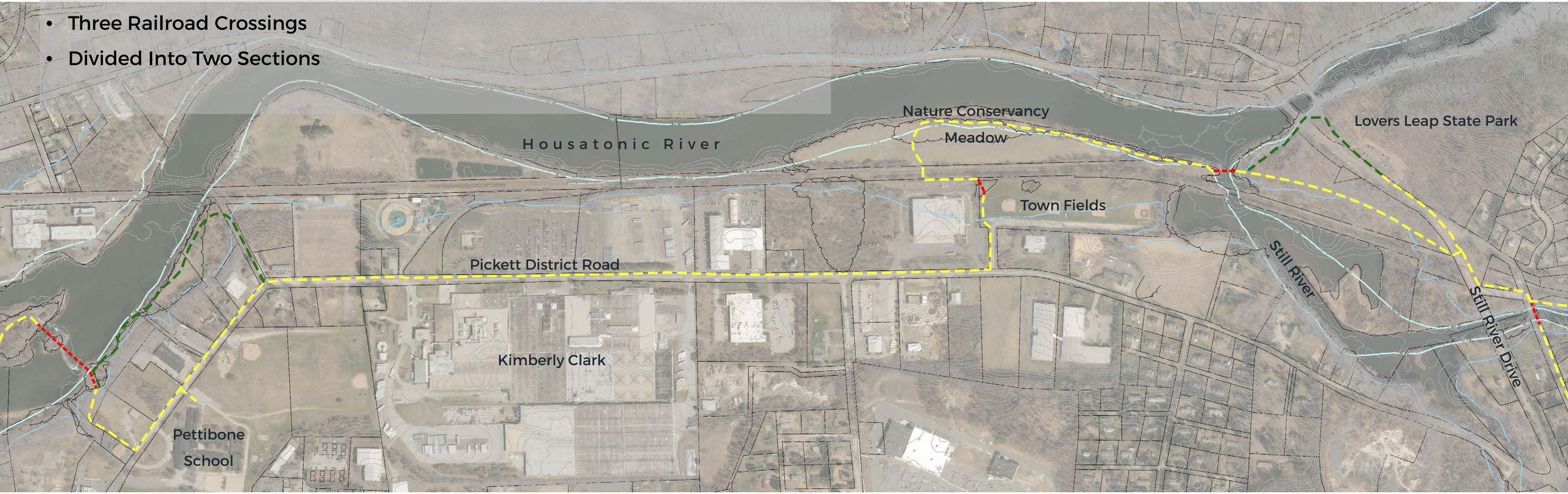
PHASE 3: HIDDEN TREASURE BRIDGE & TRAIL

- 2 Bridge Sections, 175 & 285 Feet In Length
- Boardwalk To Bridge Elevation
- Trail On West Side Connecting to Pickett District Road
- Maintain Foot Path And Fishing Access



PHASE 4: PETTIBONE SCHOOL TO HARRYBROOKE PARK

- Approximately 2.5 Miles In Length
- Facility Types: Shared Use Path, Sidepath, Soft Trail
- Three Railroad Crossings
- Divided Into Two Sections



PHASE 5: HARRYBROOKE PARK TO BROOKFIELD

- Approximately 3.5 Miles In Length including Loop Through Harrybrooke Park
- Facility Types: Shared Use Path, Sidepath, Soft Trail
- Divided Into Three Sections