Chapter 5
Socio-Economic Inventory

Under the National Environmental Policy Act, (NEPA), if a federally-funded action like the New Haven – Hartford – Springfield Commuter Rail service is ultimately determined to be feasible, it may be necessary to study the environmental and social impacts associated with such a project with additional environmental documentation. Most environmental impacts would be limited to the existing railroad bed, new passenger station buildings and parking areas. The environmental effects of this project would therefore generally be expected to be fairly minimal. While a detailed evaluation of environmental and socioeconomic impacts are not warranted at this preliminary feasibility stage of analysis, a sensitivity review of existing socio-economic and environmental conditions has been performed. The reason for this effort is to ensure proper NEPA compliance can be achieved in subsequent phases, if the project is pursued beyond the feasibility effort.

This chapter considers the socioeconomic conditions in the corridor. An inventory of the natural environment is found in Chapter 6.

5.1 Land Use, Zoning, and Planned Economic Development

The study corridor for the land use evaluation covers the area roughly one-half mile on either side of the existing railroad line from its southern end in New Haven, Connecticut to its northern end in Springfield, Massachusetts.

Land use data provides meaningful information when considering the potential location of new train stops. Stations located in areas with higher existing or planned residential land use or in areas with high concentrations of businesses can provide greater service than those located in low density or undeveloped areas. Understanding the future plans developed by the communities also provides guidance for considering station locations. For example, several communities along the study corridor have factored in the potential creation of new train stops at certain locations into their municipal planning efforts. These plans are highlighted in the following pages. Future plans for Transit Oriented Development can be suggested to ensure the commuter rail line provides maximum benefit to the community, and also so that the community can provide maximum ridership for the commuter rail system. Current zoning ordinances also provide a basis for future recommendations on the integration of possible stations into the communities.

The New Haven, Hartford, Springfield commuter rail line study area is a broad linear corridor that lies within 15 communities in Connecticut: New Haven, Hamden, North Haven, Wallingford, Meriden, Berlin, New Britain, Newington, West Hartford, Hartford, Windsor, Windsor Locks, Suffield, East Windsor, and Enfield; and two communities in Massachusetts: Longmeadow and Springfield. Since the corridor lies within a small portion of Hamden, New Britain, West Hartford, Suffield, and East Windsor, these towns will not be studied within this report. Data collection therefore focuses on the remaining communities.

This study analysis uses information on land use and zoning obtained for each of the municipalities from their municipal plans of development, zoning ordinances, special reports, studies and discussions with those involved. The information is presented by municipality from south to north, starting with New Haven, Connecticut and ending in Springfield, Massachusetts. The information presented for each municipality varies depending on the amount of information each community has available.

New Haven

The City of New Haven covers approximately 9,843 acres with a mix of residential, commercial, institutional and industrial land uses. According to the New Haven Comprehensive Plan of Development Data Book completed in 2002, most of the residential units are multifamily, almost 60% of the residential units are in buildings with three or more units, and only 22% of the residential units in New Haven are single-family.

The study area begins at Union Station in New Haven and extends generally northward. In addition to Union Station, the current Amtrak line passes by the new State Street Station. The land uses around both of these existing stations are mostly commercial with some high-density residential uses.

On its way north, the train line traverses five of New Haven's neighborhoods: Downtown, Wooster Square, Mill River, Fair Haven, and Quinnipiac/Foxon. Table 5.1-1 provides information on the land use in these neighborhoods.

Table 5.1-1
New Haven Land Use by Neighborhood in Acres

Neighborhood	Res.	Comm.	Apt.	Ind.	Inst.	Condo	Utility	Total
Downtown	1.0	76.3	2.7	0.0	123.3	6.6	6.0	215.9
Wooster Sq.	24.3	27.6	11.9	5.7	24.0	5.5	0.8	99.8
Mill River	4.9	34.8	0.6	59.2	25.7	0.0	25.4	150.6
Fair Haven	232.9	48.0	12.3	76.9	103.5	8.4	0.4	482.4
Quinn./Foxon	215.0	123.2	45.0	118.5	157.3	36.0	2.2	700.2

Source: Comprehensive Plan of Development, Data Book, City of New Haven, June, 2002

The zoning in the neighborhoods is similar to the existing land uses. Much of the Downtown Neighborhood is either zoned for a form of business or high density residential uses associated with Yale University. The Wooster Square neighborhood is zoned for business adjacent to the rail line and along the two major east west roadways. The center of the neighborhood is zoned for residential uses. The Mill River Neighborhood has residential zoning on most of the north side of the rail line, with the rest of the neighborhood south of the rail line in industrial zoning districts. The Fair Haven Neighborhood is zoned for industrial uses along its edges with residential uses dominating the interior. The Quinnipiac/Foxon Neighborhood contains exclusively industrial districts close to the rail line, with some residential districts generally further than a half-mile away from the rail line.

North Haven

North Haven consists of approximately 13,376 acres of land lying north and slightly east of New Haven. Based on information in the 1982 North Haven Plan of Development, the most recent information available, 60% of North Haven land was developed. Table 5.1-2 shows the breakdown of the uses of the developed land. Over 99% of the residential units in the Town are single family.

Table 5.1-2
North Haven Land Use by Percentage

Land Use	Res.	Institutional & Utilities	Retail & Commercial	Open Space	Vacant	Industrial
Percentage of Developed Land	37%	10%	4%	3%	43%	3%

Source: Town Plan of Development, North Haven, Connecticut, 1982

The study corridor traverses the middle of the town, close to the Quinnipiac River. Amtrak no longer maintains a passenger platform in North Haven, which was located along the rail line under the Route 40 overpass in the southern portion of the Town, near the intersection of Route 40 and State Street. The rail line is entirely within North Haven's Quinnipiac planning neighborhood, which runs north and south the entire length of the Town. Most of the land close to the rail line is industrial, commercial or open. Several large, former industrial properties near the rail line are now vacant, but still contain unoccupied industrial buildings. The Town is currently pursuing ways to redevelop these sites, including the potential construction of new rail stops on or near them.

The Springfield Line comes close to the Southwest North Haven, Clintonville North and Washington Avenue East neighborhoods in North Haven. These neighborhoods contain mixed uses closest to the rail line with residential uses further away. The single-family neighborhoods within a half-mile of the west side of the railroad are in the southern portions of the Town, from the Hamden Town line to approximately Bishop Street. On

the east side of the rail line, the single-family land uses within a half-mile of the railroad line extend from Bishop Street north to Scrub Oak Road.

The current town center lies slightly to the east of the rail line in the approximate center of the Town. It has a civic center as its core, with mixed land uses to the north, residential use to the east and south and I-91 to the west. Industrial land lies between the I-91 and the rail line. The 1982 Plan of Development also briefly discusses a Transportation Center to be serviced by trains and buses just to the west of the train line at the junction of Route 40 and Route 5, close to the former passenger platform.

Wallingford

Wallingford covers 24,920 acres of land area, and approximately 550 acres of water. Table 5.1-3 presents the latest available land use information from the 1991 Wallingford Plan of Development. About 65% of the residential units were single family; approximately 19% were multifamily units, 13% were condominiums, and 3% were mobile homes.

Table 5.1-3
Wallingford Land Use by Percentage

Land Use	Vacant	Residential	Industrial	Commercial
Percentage ±	28%	57%	11%	4%

Plan of Development Update, 1993, Town of Wallingford

The study corridor runs north and south through the center of the town. The town center, or central business district, lies on the east side of the railroad tracks. The rail line marks the western end of the central business district, which runs east from the rail line for approximately six blocks. The land uses in the central business district consists primarily of retail and personal services, and financial and other types of offices. Zoning in this area supports the current land uses, but actually allows a much wider range of commercial uses. There is an existing Amtrak passenger station and platform in Wallingford along the rail line in the Town Center.

Surrounding the central business district on the north, south and east is a residential area with average densities of a quarter-acre per unit. The zoning in most of this area requires only a 6,250 square-foot lot size and also allows multi-family dwellings in certain locations close to the business center. This same zone also lies in a rough half circle on the west side of the rail line, close to the existing train station. Much of this area is also designated for higher-density apartments.

For almost the entire length of the town, commercial uses along Route 5 lies to the east of the rail line north and south of the town center, and industrial uses lie to the west. Further to the east, on the other side of the commercial strip along Route 5, the land uses are low- to moderate-density (half- to one acre per unit) residential for the southern two-thirds of the town and light industrial and office park for the northern one-third. The current

zoning matches these land uses, although the residential district only requires 18,000 square feet or less for residential lots in this area.

The Town is actively pursuing the rejuvenation of the town center and central business district through new zoning regulations and other incentives. Additionally, the Town is exploring the upgrading of the Route 5 commercial area to the north and the south of the central business district, near the existing Amtrak station.

Meriden

The City of Meriden contains 14,900 acres of land. In 1981, 32% of the town was in residential use; only 3.5 % was considered to be commercial, and 2.6% was considered to be industrial or office. Since that time, the city has experienced growth, but much of this has been in the residential land use category. (Land Use Plan, City of Meriden, 1985).

The study corridor runs approximately north south through the middle of the city, moving slightly further to the east as it heads north. The Meriden city center lies within the study area on either side of the rail line. The rail line itself does not bisect other neighborhoods, but rather forms the boundary between the Northwest and Far North Neighborhoods (north of the city center) and between the South Central and Southwest Neighborhoods and the South Central and the South Meriden Neighborhoods (south of the city center).

The land use adjacent to the west side of the rail line and south of the city center is mostly industrial use, intermixed with medium- and low-density residential uses. In the South Central Neighborhood east of the tracks, the land use adjacent to the rail line transitions from mostly medium- and high-density residential closer to the city center to industrial and low-density residential uses further south. North of the city center in the Northwest Neighborhood the land use on the west side of the track consists primarily of low density residential; east of the tracks in the Far North Neighborhood, the land use is mostly industrial.

Meriden has an Amtrak passenger platform and station located in the city center.

Meriden is currently preparing its City Center Initiative, a planning study and action plan to revitalize its city center. This initiative strongly endorses the existence of a train stop in Meriden's city center, indicating that it is a critical element in the city center. It calls for a new transportation center, focused on the train station, which would also be a central transfer location for local and long distance buses and would have easy pedestrian access to the land on both sides of the rail line. The initiative also calls for greater redevelopment of retail, office and high density residential land uses close to the train station. Meriden's plans are to focus growth, as much as possible, into the city center. (Meriden City Center Initiative: A comprehensive Plan for Revitalization, July 2002).

Plans for other neighborhoods call for additional commercial or industrial redevelopment in the northern portions of the city, especially in the Far North Neighborhood. The future

plans for the southern neighborhoods focus on preserving the character of the custom single-family, residential neighborhoods.

Berlin

Berlin occupies 17,357 acres of land. Much of the land use in the town is residential. Approximately 85% of the residential units are single family. Another 8% are two family units, and the remaining 7% contain three or more units or are mobile homes or other types of residential housing. (Berlin Plan of Conservation and Development 2000)

The study corridor moves south to north roughly through the middle of Berlin. There is currently an Amtrak passenger platform in Berlin, at the historic Berlin Railroad Station.

Current zoning on the west side of the railroad track and south of the railroad station is single family residential. On the east side, south of the railroad station, the zoning is a mix of planned industrial and single-family residential districts. A Commercial Core District surrounds the immediate south side of the railroad station; the zoning is all-industrial north of the station within a half-mile of either side of the rail line to the town line.

Berlin is currently updating its Plan of Conservation and Development (the Plan). The Plan in its current draft form focuses on preserving the character of the residential and rural areas of the town, coupled with aggressive marketing of mixed use developments in select locations of the town.

A second planning effort, the Berlin Land Development Analysis, is looking more closely at how these select locations can be developed. This study identifies eleven general planning areas in the town. Most of these areas are located in the eastern portion of the town. Three of these areas focus on the land adjacent to the rail line; one of them focuses on the area surrounding the historic railroad station. Both the updated Conservation and Development Plan and the Land Development Analysis recognize the historic and cultural importance of the railroad station and recommends upgrading the area around it. They both indicate that the area around the station should be the focus of a mixed-use development, including residential units and facilities to service commuters that could be there if the station is part of a commuter rail service in the future. The Plan also strongly supports the establishment of the commuter rail, with a stop in Berlin. The Plan indicates that this area should be upgraded even if commuter service is not initiated. (Town of Berlin Land Developability Analysis, August, 2001).

Newington

Newington has a land area of 8,760 acres. It is considered as an inner ring suburb of Hartford. Table 5.1-4 shows the land uses in the town, according to the 1996 Newington Plan of Conservation and Development. Of the residential units in Newington, almost 80% are single family.

Table 5.1-4
Newington Land Uses by Percentage

Land Use	Residential	Non-Residential	State & Utility	Streets & Highways	Vacant
Percentage	39%	15%	4%	24%	18%

Source: Plan of Conservation and Development, Town of Newington, 1996

The study area traverses roughly in a northeasterly direction through the western portion of the town.

The Newington Industrial District parallels most of the rail line. Beyond this district to the east, almost all of the land is in the R –12 Residential District, requiring single-family units on 12,000 square-foot minimum lots. The exception is a residential district to the southeast of the rail line close to where it enters the town from the south that requires 20,000 square-feet as a minimum lot size. The current zoning in this same area to the west of the Industrial District is the R-7 Residential District, requiring 7,000 square-foot minimum lot sizes for single-family units. The zoning also changes from Industrial to the R-12 District in the far northern portions of the town west of the study area. There are scattered Planned Residential Districts in the northern section of the town within a half-mile of both sides of the rail line.

Most of the commercial and business districts in the town are found along the Berlin Turnpike (Routes 5/15) in the southeastern portion of the town, far from the study corridor. A Town Center Business District is centered north-south in the eastern portion of the town. It lies approximately one mile east of the rail line. Cedar Street provides a direct vehicular connection between the town center and the rail line.

The proposed New Britain – Hartford Busway, currently in design, will run parallel and to the west of the Springfield Line within Amtrak right-of-way from Newington Junction north in the Town of Newington. A busway station is proposed for the Newington Junction area, on the Springfield Line, immediately north of Willard Avenue. It has been suggested that this busway station could possibly be part of a combined station to serve New Haven – Hartford – Springfield commuter rail passengers if the commuter rail service was implemented.

A second busway station in Newington is planned for the area around Cedar Street in (primarily to serve nearby Central Connecticut State University just across the town line in New Britain). That station would be located on the abandoned rail line that runs to downtown New Britain, close to (but outside of) this study's study area.

Hartford

The City of Hartford contains approximately 11,440 acres of land. Table 5.1-5 presents land use information from the 1994 Plan of Development for the City of Hartford.

Table 5.1-5
Hartford Land Use by Percentage

Land Use	Percentage*
Residential	30 %
Commercial	11 %
Industrial	4 %
Institutional	14 %
Open Space	13 %
Transportation	20 %
Vacant	7 %

*The numbers in the table add to 99% due to rounding.
Source: Plan of Development for the City of Hartford, 1996

Approximately 12% of the residential units in the city are single family, 15% are two-family units, 22% are three or four family units, and 49% contain five or more residential units.

The study corridor traverses diagonally through the city, moving further to the east, closer to the Connecticut River as it heads north. There is an existing Amtrak Station on the west side of the downtown area in the north-south center of the city. Residential uses are highest along the portions of the track south of the downtown area. Business, offices and industrial uses along the rail line are highest in the downtown area and north of the downtown. There is a concentration of vacant land adjacent to both sides of the northern sections of the rail line that is primarily zoned industrial.

The rest of the current zoning is varied along the length of the rail line as it passes through Hartford, but almost all of the districts are industrial, business, commercial or high density residential uses within one-half mile of the track. Only on the east side of the railroad, in the southern portion of the city are there lower density residential uses within one-half mile of the rail line.

There is a neighborhood center just west of the rail line, south of the downtown area, close to the rail line. The City has included the improvement of this neighborhood center as one of its planning goals. It also adopted, as another planning goal, the revitalization of the downtown, including the improvement of pedestrian circulation from the train station to the riverfront.

The proposed New Britain – Hartford Busway, currently in design, will run parallel and to the west of the Springfield Line within Amtrak right-of-way in the City of Hartford. Several busway stations have been proposed to be sited along the Springfield Line in Hartford. With the exception of Union Station in Hartford, it is not known at this time if any of the busway stations could also serve commuter rail uses. The stations in Hartford are as follows:

- Flatbush Station: This station is proposed to be located above Flatbush Avenue on an elevated structure (on the west side of the Springfield Line) to avoid busway conflicts with Flatbush Avenue. (The Springfield line tracks would remain at-grade).

- New Park Avenue (Kane Street) Station: This proposed busway station would be located in the Parkville neighborhood of Hartford, near I-84's overpass of New Park Avenue, on the west side of the Springfield Line.

- Park Street Station: The Park Street busway station is proposed to be located at Park Street, close to the heart of Parkville, a densely populated, diverse Hartford neighborhood, on the west side of the Springfield Line.

- Sigourney Street Station: This busway station is proposed to be integrated into new parking garage for Aetna Insurance on Sigourney Street, on the west side of the Springfield Line.

- Armory/Legislative Office Building Station: This busway station, located west of the Springfield Line tracks, would serve government offices in the Armory and Legislative Office Building, Broad Street offices, and the Hartford Courant and provide a gateway into Bushnell Park. A pedestrian overpass is anticipated to carry busway passengers from the destinations east of the Springfield Line tracks to the busway station.

- Union Station, Hartford—This location would combine a busway station with the potential commuter rail station and existing Amtrak service. Union Station will be a terminus for the dedicated busway service before buses circulate through downtown. In addition, future potential busways (from the Griffin and Manchester corridors) could feed into Union Station as well.

Windsor

Windsor covers 19,833 acres, of which 1,019 are water. In the latest information available, slightly more than 3,800 acres or 19% of the town land was still available for residential development. There was also the potential for an additional 28 million square feet of non-residential development. Over 75% of the existing residential units were single family; about 10% were attached single or two family units, and about 14% were structures with three units or more. (Plan of Development, Town of Windsor, 1991).

The study area traverses south and north through the eastern edge of Windsor, close to the Connecticut River. There is an existing Amtrak passenger platform and station in Windsor Center in about the north-south center of the town. The land use around this station in Windsor Center is predominantly non-residential, containing approximately one-third of the town's retail business and office on the west side of the railroad; industrial uses and redevelopment potential is focused on the east side of the rail line.

The Town Plan of Development, dated 1991, recommends encouraging the preservation and expansion of Windsor Center, especially its residential portions just outside of the business core.

The overall land uses adjacent to the rail line throughout the town are predominantly residential. South of the town Center, about three quarters of the residential land uses are, or are planned to be, higher density residential neighborhoods. North of Windsor town Center, the residential uses are primarily single-family.

The Wilson Center area, a small commercial center on the west side of the rail line in the southern end of the town, is designated for improvements and redevelopment in the Town Plan of Development. The proposed plans for Wilson Center in the Town Plan include a proposed second railroad station. The other portions of the Wilson Center Plan focus on additional office and multi-family development.

Windsor Locks

Windsor Locks covers 5,888 acres. Table 5.1-6 presents information shown in the 1996 Town Plan of Development. Over 76% of the residential units in the town were single-family dwellings. A current Amtrak passenger platform is found in Windsor Locks.

Table 5.1-6
Windsor Locks Land Use by Percentage*

Land Use	Percentage*
Residential	31 %
Transportation	30 %
Agricultural or Vacant	12 %
Business or Commercial	10 %
Industrial	9 %
Institutional	6 %
Recreation	3 %

*The numbers in the table add to 101 % due to rounding.
Source: Plan of Development, Windsor Locks, 1996

The town has been encouraging further industrial development closer to Bradley International Airport and along the northern edges of the town, away from the rail line.

Enfield

Enfield consists of 21,914 acres of land on the east side of the Connecticut River adjacent to the Massachusetts State Line. Table 5.1-7 presents the distribution of land uses shown in the latest Town Plan of Conservation and Development (Town Plan), dated 1999.

Table 5.1-7
Enfield Land Use by Percentage*

Land Use	Percentage*
Residential	27.0 %
Commercial	4.5 %
Industrial	4.3 %
Institutional	6.3 %
Open Space/Water	34.2 %
Vacant	15.5 %
Transportation	8.2 %

Source: Town of Enfield, Connecticut Plan of Conservation & Development, 1999

Table 5.1-8 presents a breakdown of the types of residential units in the town as described in the Town Plan.

Table 5.1-8
Enfield Residential Uses by Percentage

Type of Unit	1 to 3 units	4 to 19 units	20+ Units	Condominiums
Percentage	90 %	1 %	3 %	6 %

Source: Town of Enfield, Connecticut Plan of Conservation & Development, 1999

Table 5.1-9 shows the percentage of different types of commercial land uses in Enfield as shown in the Town Plan.

Table 5.1-9
Enfield Commercial Uses by Percentage

Land Use	Retail/Service	Auto Sales/Service	Office/Professional/ Financial	Other
Percentage	50 %	10 %	30 %	10 %

Source: Town of Enfield, Connecticut Plan of Conservation & Development, 1999

The study area traverses through the very western edge of Enfield, close to the edge of the Connecticut River. The rail line enters the town at its southern end after crossing the Connecticut River from Windsor Locks. There are currently no Amtrak stops or passenger platforms in Enfield. The rail line passes through the Lower Enfield Street, Thompsonville Center and North Thompsonville neighborhoods. Within the Lower Enfield Street neighborhood, the land use along the edges of the railroad line is mostly open in the southern portion and single family residential in the northern portions. The zoning for this section of the town is mostly residential, requiring three-quarters to one acre per residential unit. There is a small industrially zoned area near the southern end of the rail line in Enfield, close to the railroad bridge over the River. The Thompsonville Center neighborhood is a mix of high density residential and retail land uses in a typical

older industrial village setting. The zoning districts in the Thompsonville Center Neighborhood tend to support this land use, although the Residential 33 District surrounds the Thompsonville Village Center District within the Thompsonville Center Neighborhood. The land use close to the rail line in the North Thompsonville neighborhood is more than half vacant, with the rest equally divided between single family residential, retail commercial and agricultural. The land in this area is mostly in the Residential 33 District. All of the land to the west of the rail line falls within the Connecticut River Conservation Zone.

The town has been actively working to revitalize Thompsonville, through both public and private efforts. The Town Plan specifically cites the addition of a train stop in Thompsonville as one of the goals of the town. It also encourages developing more comprehensive public transportation for all of Enfield with connections to Thompsonville and the desired train station, Hazardville, the Enfield Mall and other centers in the town.

Other future plans in the Town Plan include development of an industrial park in the southwest corner of the town adjacent to the east side of the rail line, increased commercial development near the existing Enfield Mall, the improvement of Route 5, north of Thompsonville and east of the rail line, and commercial or residential development north of Hazardville in the middle of the town.

Longmeadow, MA

Longmeadow, Massachusetts abuts the Connecticut-Massachusetts state line. It covers 6,147 acres. Table 5.1-10 shows the land use as reported in the town's draft Vision Framework Plan completed in 2002.

Table 5.1-10
Longmeadow Land Use by Percentage

Land Use	Residential	Agricultural	Professional & Business	Highways
Percentage	74 %	23 %	1 %	2 %

Source: Town of Longmeadow Draft Vision Framework Plan, 2002

According to the Vision Framework Plan, the Town of Longmeadow is about 90 percent built out, with the town itself being the largest landowner of the remaining vacant land.

The Vision Framework Plan recommends promoting more density through infill development and land use diversity for the Bliss Road/Williams Street Commercial Area, including elements to enhance the pedestrian environment and activities and uses that could serve as a community focal point.

The Vision Framework Plan also recommends considering the creation of an overlay district to allow transition of homes to offices, commercial or multi-family uses, but under strict design guidelines.

There is no discussion of the railroad or its relationship to the rest of the town.

Springfield, MA

Springfield serves as the northern terminus of the New Haven – Hartford – Springfield study area. The City of Springfield completed its Master Plan for the Metro Center of the city in 2001. The Metro Center runs east from the Connecticut River for approximately 1.1 miles. It extends north to Interstate 291 and south to Lenox Street or, at its eastern end, to State Street. This master plan calls for the upgrading of the entire Metro Center with improved commercial and residential land uses, greater pedestrian mobility and generally easier vehicular access into and out of the center. (Master Plan for the Metro Center, City of Springfield, 2001).

The land use within one-half mile of the railroad in the Metro Center, as described in the master plan, consists of offices, retail and government use east of the north south section. West of this section, the land use is mostly open or undeveloped. The land uses are more varied close to Union Station, the northern terminus of the potential commuter line, where residential and industrial uses are a significant portion of the land use.

One aspect of the master plan is a rehabilitated and improved Union Station. A private investor is in the process of pursuing this improvement. They are currently marketing the Springfield Union Station project as a mixed commercial center, including retail, dining and office space along with a hotel, rail and bus facilities. An Amended Master Plan for Union Station, completed in 1999, does not anticipate intercity commuter rail service, but is organized so that it appears to be an easily added use. (Union Station, Intermodal Redevelopment Project Amended Master Plan 1999).

The Springfield Line runs along the west side of the parking lot of the new Basketball Hall of Fame building, as well as the adjacent building which formerly housed the Basketball Hall of Fame. This is one of the most prominent tourist attractions in the Pioneer Valley.

5.2 Demographics

Population, employment, mode share and auto ownership are all important characteristics for the projection of ridership in a corridor. The employment data shown in this section has been collected from the Connecticut Department of Labor and the Massachusetts Division of Employment and Training. The rest of the demographics data in this section is from the US Census Bureau. Table 5.2-1 shows the population of the study area towns in 1970, 1980, 1990 and 2000, as well as the total population for the study area towns. Table 5.2-2 shows the change in population for each decade as well as the thirty year period from 1970 to 2000.

Table 5.2-1
Population History in the Study Corridor

Town/City	1970 Census	1980 Census	1990 Census	2000 Census
New Haven	137,707	126,089	130,474	123,626
North Haven	22,194	22,080	22,247	23,035
Wallingford	35,714	37,274	40,822	43,026
Meriden	55,959	57,118	59,479	58,244
Berlin	14,149	15,121	16,787	18,215
Newington	26,037	28,841	29,208	29,306
West Hartford	68,031	61,301	60,110	63,589
Hartford	158,017	136,392	139,739	121,578
Windsor	22,502	25,204	27,817	28,237
Windsor Locks	15,080	12,190	12,358	12,043
Enfield	46,189	42,695	45,532	45,212
Longmeadow	15,630	16,301	15,467	15,633
Springfield	163,905	152,319	156,983	152,082
Corridor Total	**781,114**	**732,925**	**757,023**	**733,826**

Sources: 1970, 1980, 1990, 2000 US Census

Table 5.2-2
Population Change in the Study Corridor

Town/City	Change 1970 to 1980	Change 1980 to 1990	Change 1990 to 2000	Change 1970 to 2000
New Haven	-8.4%	3.5%	-5.2%	-10.2%
North Haven	-0.5%	0.8%	3.5%	3.8%
Wallingford	4.4%	9.5%	5.4%	20.5%
Meriden	2.1%	4.1%	-2.1%	4.1%
Berlin	6.9%	11.0%	8.5%	28.7%
Newington	10.8%	1.3%	0.3%	12.6%
West Hartford	-9.9%	-1.9%	5.8%	-6.5%
Hartford	-13.7%	2.5%	-13.0%	-23.1%
Windsor	12.0%	10.4%	1.5%	25.5%
Windsor Locks	-19.2%	1.4%	-2.5%	-20.1%
Enfield	-7.6%	6.6%	-0.7%	-2.1%
Longmeadow	4.3%	-5.1%	1.1%	0.0%
Springfield	-7.1%	3.1%	-3.1%	-7.2%
Corridor Average	**-6.2%**	**3.3%**	**-3.1%**	**-6.1%**

Sources: Wilbur Smith Associates from 1970, 1980, 1990, 2000 US Census

As shown in Table 5.2-2, population in the urban centers (New Haven, Hartford and Springfield) has generally been decreasing for each decade and for the thirty year period. In addition to the urban centers, Windsor Locks had a significant decrease in population

over the thirty year period. The greatest thirty year population increase occurred in Berlin, Windsor and Wallingford. For the corridor as a whole, the population increased from 1980 to 1990, but decreased over the other two decades, for a total decrease of -6.1% over the thirty year period.

Projected population for Massachusetts for 2010 is available from the Massachusetts State Data Center and projected population for Connecticut for 2020 is available from the Office of Policy and Management, Policy and Planning Division. However, both of these data sets were conducted based on the 1990 census and are no longer considered accurate projections. New projections based on 2000 census data are currently being performed in both states.

Table 5.2-3 shows the employment history in 1995 and 2001 and change in employment in the study corridor.

Table 5.2-3
Employment History and Change in the Study Corridor

Town/City	1995	2001	Change 1995 to 2001
New Haven	76,150	77,920	2.3%
North Haven	22,910	21,540	-6.0%
Wallingford	21,910	25,180	14.9%
Meriden	24,280	26,250	8.1%
Berlin	11,050	11,240	1.7%
Newington	17,350	16,540	-4.7%
West Hartford	25,330	26,580	4.9%
Hartford	121,650	122,200	0.5%
Windsor	18,850	18,660	-1.0%
Windsor Locks	13,580	14,580	7.4%
Enfield	18,940	18,170	-4.1%
Longmeadow	2,802	3,267	16.6%
Springfield	74,928	79,948	6.7%
Corridor Total	449,730	462,075	2.7%

Source: Connecticut Department of Labor and the Massachusetts Division of Employment and Training

As shown in the table, employment is generally increasing in the corridor as a whole over the past six years at 2.7%. The greatest increases in employment have been in Wallingford and in Longmeadow. The towns showing decreases in employment include North Haven, Newington, Windsor, and Enfield. The urban centers of New Haven, Hartford and Springfield have shown small increases in employment over the six year period.

Table 5.2-4 shows a portion of the journey to work data collected with the 2000 US Census. Data shown includes the number of workers in each town and the number of those who drove alone, carpooled, used transit, walked, used another mode or worked from home. Table 5.2-5 shows the percentage of workers using each of these modes.

Table 5.2-4
2000 Journey to Work Data for the Study Corridor

Town/City	Workers	Drive Alone	Carpool	Transit	Walk	Other	Work at Home
New Haven	47,857	26,655	7,188	5,295	6,522	932	1,265
North Haven	11,472	10,247	740	152	66	81	186
Wallingford	22,163	19,394	1,610	130	318	177	534
Meriden	27,345	22,818	2,832	332	692	162	509
Berlin	9,519	8,613	526	37	115	52	176
Newington	15,299	13,525	1,200	162	76	65	271
West Hartford	28,374	23,825	1,917	844	578	199	1,011
Hartford	41,009	23,084	6,746	7,609	2,374	507	689
Windsor	14,619	12,549	1,217	213	208	87	345
Windsor Locks	6,143	5,326	593	61	66	17	80
Enfield	21,479	18,659	1,828	119	183	269	421
Longmeadow	7,396	6,716	268	3	104	10	295
Springfield	58,967	43,031	8,421	3,401	2,454	505	1,155
Corridor Average	**311,642**	**234,442**	**35,086**	**18,358**	**13,756**	**3,063**	**6,937**

Source: 2000 US Census

As shown in Table 5.2-5, most of the workers in the corridor use an automobile to get to work, with 75.2% driving alone and 11.3% carpooling. Transit use is 5.9% of the workers, with walking slightly less at 4.4%. The greatest transit use in the corridor occurs in the urban centers of New Haven and Hartford, with Springfield having transit mode share approximately equal to the average in the corridor. The other towns all have below the corridor average transit mode share, with the lowest percentage in Longmeadow at 0%.

Table 5.2-6 shows the number of autos owned by households in the study area and the percentage of households falling into each auto ownership category.

Table 5.2-5
2000 Percent Journey to Work Mode Share for the Study Corridor

Town/City	Drive Alone	Carpool	Transit	Walk	Other	Work at Home
New Haven	55.7%	15.0%	11.1%	13.6%	1.9%	2.6%
North Haven	89.3%	6.5%	1.3%	0.6%	0.7%	1.6%
Wallingford	87.5%	7.3%	0.6%	1.4%	0.8%	2.4%
Meriden	83.4%	10.4%	1.2%	2.5%	0.6%	1.9%
Berlin	90.5%	5.5%	0.4%	1.2%	0.5%	1.8%
Newington	88.4%	7.8%	1.1%	0.5%	0.4%	1.8%
West Hartford	84.0%	6.8%	3.0%	2.0%	0.7%	3.6%
Hartford	56.3%	16.5%	18.6%	5.8%	1.2%	1.7%
Windsor	85.8%	8.3%	1.5%	1.4%	0.6%	2.4%
Windsor Locks	86.7%	9.7%	1.0%	1.1%	0.3%	1.3%
Enfield	86.9%	8.5%	0.6%	0.9%	1.3%	2.0%
Longmeadow	90.8%	3.6%	0.0%	1.4%	0.1%	4.0%
Springfield	73.0%	14.3%	5.8%	4.2%	0.9%	2.0%
Corridor Average	75.2%	11.3%	5.9%	4.4%	1.0%	2.2%

Source: 2000 US Census

Table 5.2-6
Auto Ownership for the Study Corridor

Town/City	0 auto	1 auto	2 autos	3 or more autos	% 0 auto	% 1 auto	% 2 autos	% 3+ autos
New Haven	14,005	20,820	9,706	2,563	29.7%	44.2%	20.6%	5.4%
North Haven	332	2,388	4,149	1,728	3.9%	27.8%	48.3%	20.1%
Wallingford	946	5,250	7,413	3,088	5.7%	31.4%	44.4%	18.5%
Meriden	2,769	8,649	8,426	3,107	12.1%	37.7%	36.7%	13.5%
Berlin	203	1,832	3,146	1,611	3.0%	27.0%	46.3%	23.7%
Newington	536	3,972	5,633	1,873	4.5%	33.1%	46.9%	15.6%
West Hartford	2,190	8,867	10,396	3,123	8.9%	36.1%	42.3%	12.7%
Hartford	16,257	18,885	7,740	2,104	36.1%	42.0%	17.2%	4.7%
Windsor	609	3,306	4,533	2,129	5.8%	31.3%	42.9%	20.1%
Windsor Locks	268	1,713	2,106	848	5.4%	34.7%	42.7%	17.2%
Enfield	814	5,331	7,499	2,774	5.0%	32.5%	45.7%	16.9%
Longmeadow	326	1,179	3,177	1,052	5.7%	20.6%	55.4%	18.3%
Springfield	12,864	24,387	15,709	4,170	22.5%	42.7%	27.5%	7.3%
Total / Average	52,119	106,579	89,633	30,170	18.7%	38.3%	32.2%	10.8%

Source: 2000 US Census

As shown in Table 5.2-6, 18.7% of the study area households own no automobiles; 38.3% of the households own one automobile; 32.2% own 2 automobiles and 10.8% own three or more automobiles. The greatest percentage of zero automobile households

occurs in the urban centers of New Haven, Hartford and Springfield. The greatest percentages of households owning three or more vehicles occur in North Haven, Berlin and Windsor.

Table 5.2-7 shows age distribution in the study corridor, including number and percentage of residents that are school age (below 18 years), workforce age (age 18 to 64) and those over the age of 65 (generally considered retirement age).

Table 5.2-7
Age Distribution in the Study Corridor

Town/City	Population	School Age (0-17)	Workforce Age (18-64)	65 and over (65+)	% School Age	% Workforce Age	% 65 and over
New Haven	123,626	31,446	79,509	12,671	25.4%	64.3%	10.2%
North Haven	23,035	5,202	13,543	4,290	22.6%	58.8%	18.6%
Wallingford	43,026	10,326	26,154	6,546	24.0%	60.8%	15.2%
Meriden	58,244	14,966	35,067	8,211	25.7%	60.2%	14.1%
Berlin	18,215	4,496	10,690	3,029	24.7%	58.7%	16.6%
Newington	29,306	6,047	17,749	5,510	20.6%	60.6%	18.8%
West Hartford	63,589	14,045	37,165	12,379	22.1%	58.4%	19.5%
Hartford	121,578	36,568	73,422	11,588	30.1%	60.4%	9.5%
Windsor	28,237	6,955	17,192	4,090	24.6%	60.9%	14.5%
Windsor Locks	12,043	2,849	7,206	1,988	23.7%	59.8%	16.5%
Enfield	45,212	10,234	28,778	6,200	22.6%	63.7%	13.7%
Longmeadow	15,633	4,189	8,659	2,785	26.8%	55.4%	17.8%
Springfield	152,082	44,027	89,149	18,906	28.9%	58.6%	12.4%
Total / Average	733,826	191,350	444,283	98,193	26.1%	60.5%	13.4%

Source: 2000 US Census

Of the 733,826 residents in the study corridor, 191,350 or 26.1% are of school age; 444,283 or 60.5% are of workforce age; and 98,193 or 13.4% are 65 years and older. On a percentage basis, Hartford and Springfield have the most school age residents. North Haven, Newington, West Hartford and Enfield have the least school age residents. Similarly, North Haven, Newington, West Hartford and Longmeadow have the most residents over 65 years old. New Haven and Hartford have the least. The greatest percentage of workforce age residents, those 18 to 64, occurs in New Haven and Enfield, with Longmeadow having the least number.

5.3 Environmental Justice

Title VI of the Civil Rights Act of 1964 requires that "no person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Title VI bars intentional discrimination as well as

disparate impact discrimination (i.e. a neutral policy or practice that has the effect of a disparate impact on protected groups).

In 1994, President Clinton issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.* The Executive Order further amplifies Title VI by providing that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental affects of its programs, policies, and activities on minority populations and low-income populations".

Consequently, this section of the feasibility study responds to this mandate by identifying the presence of low-income and minority populations within the Study Area using 2000 U.S. Census data. Environmental justice characteristics, specifically race and low-income status, are necessary for evaluation to ensure that both benefits and impacts are distributed fairly within a region. The information found in this section has been assembled on a town by town basis from 2000 US Census Bureau data available on their website.

Table 5.3-1 shows the number and percentage of white, minority (non-white), and Hispanic residents in the study corridor on a town by town basis, as well as a corridor total and average. It is important to note that the 2000 Census allowed residents to choose multiple categories for race, therefore numbers in the categories White and Minority will not add to the total in Population. The Hispanic population is counted separately from race, as a Hispanic person can be considered Hispanic and White or Hispanic and Black and so on.

Of the 733,826 residents in the study corridor, 481,228 or 65.6% are white and 277,382 or 37.8% are minorities. Of the 733,826 residents in the study corridor, 140,590 or 19.2% are Hispanic. On a percentage basis, the portion of Hartford within the study area has the most minority population at 75.0%, with the study area portions of New Haven and Springfield following at 58.3% and 45.6%. Other communities whose study area limits contain greater than 10% minorities include Meriden, West Hartford, Windsor, and Enfield. The community with the largest percentage of Hispanic population within the study area also is Hartford at 40.5%. Other communities whose portion within the study area is greater than 10% Hispanic population include New Haven, Meriden and Springfield.

Table 5.3-1
Minority and Hispanic Status of Study Corridor Residents

Town/City	Population	White	Minority	Hispanic	% White	% Minority	% Hispanic
New Haven	123,626	56,794	72,043	26,443	45.9%	58.3%	21.4%
North Haven	23,035	21,567	1,682	433	93.6%	7.3%	1.9%
Wallingford	43,026	41,193	2,361	1,946	95.7%	5.5%	4.5%
Meriden	58,244	48,152	11,876	12,296	82.7%	20.4%	21.1%
Berlin	18,215	17,804	551	267	97.7%	3.0%	1.5%
Newington	29,306	27,393	2,303	1,079	93.5%	7.9%	3.7%
West Hartford	63,589	55,414	9,309	3,990	87.1%	14.6%	6.3%
Hartford	121,578	37,422	91,204	49,260	30.8%	75.0%	40.5%
Windsor	28,237	18,769	10,194	1,405	66.5%	36.1%	5.0%
Windsor Locks	12,043	11,279	954	267	93.7%	7.9%	2.2%
Enfield	45,212	41,110	4,855	1,691	90.9%	10.7%	3.7%
Longmeadow	15,633	15,003	738	170	96.0%	4.7%	1.1%
Springfield	152,082	89,328	69,312	41,343	58.7%	45.6%	27.2%
Total/Average	**733,826**	**481,228**	**277,382**	**140,590**	**65.6%**	**37.8%**	**19.2%**

Source: 2000 US Census

Table 5.3-2 shows the number and percentage of low-income residents as individuals and as families in the study corridor on a town by town basis, including the total number of low income individuals and families in the corridor total and average percentage of individuals and families that are low income. Low income is defined as those individuals or families making a yearly income below the poverty limit.

A total of 113,377 individuals in the corridor, or 16.2%, are low-income individuals. When counted on the basis of families, 23,309 families or 12.9% are considered low-income. The cities with the greatest percentage of low-income individuals or families include Hartford, New Haven, Springfield and Meriden.

Table 5.3-2
Number and Percentage of Low Income Individuals and Families in the Study Corridor Communities

Town/City	Low Income Individuals	% Low Income Individuals	Low Income Families	% Low Income Families
New Haven	27,613	24.4%	5,381	20.5%
North Haven	799	3.5%	150	2.3%
Wallingford	1,531	3.6%	285	2.4%
Meriden	6,306	11.0%	1,284	8.5%
Berlin	450	2.5%	75	1.4%
Newington	1,005	3.5%	179	2.2%
West Hartford	2,669	4.5%	465	2.9%
Hartford	35,741	30.6%	7,748	28.2%
Windsor	1,011	3.7%	169	2.2%
Windsor Locks	520	4.4%	110	3.3%
Enfield	1,648	4.0%	320	2.8%
Longmeadow	312	2.1%	43	1.0%
Springfield	33,772	23.1%	7,100	19.3%
Total / Average	**113,377**	**16.2%**	**23,309**	**12.9%**

Source: 2000 US Census

5.4 Historic Resources

Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f) states that any Federally funded project must "take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register." The first step in evaluating potential impacts to historic resources is to establish an Area of Potential Effect (APE) for the project. For this Feasibility Study, the APE was defined as 250 feet from the centerline of the existing rail corridor from New Haven, Connecticut to Springfield, Massachusetts. The size of the APE was selected because it was determined that commuter rail operations along the existing rail corridor would not incur any potential impacts, including visual impacts, beyond 250 feet on ether side of the corridor. This proposed APE has not been reviewed by the State Historic Preservation Offices (SHPO) from either state. During the further analysis of cultural resources that would take place during the NEPA phase (Environmental Impact Statement) for this project, the size of the APE would be formally approved by both of the SHPOs at that time.

With the APE defined, potential historic and archaeological resources within the APE were identified through consultation with the SHPOs, review of available maps provided by local planning departments and historical societies, and searches of the State Register of Historic Places, the Historic American Engineering Record, and of the National Register Information System Database. In addition to this research, a visit to portions of

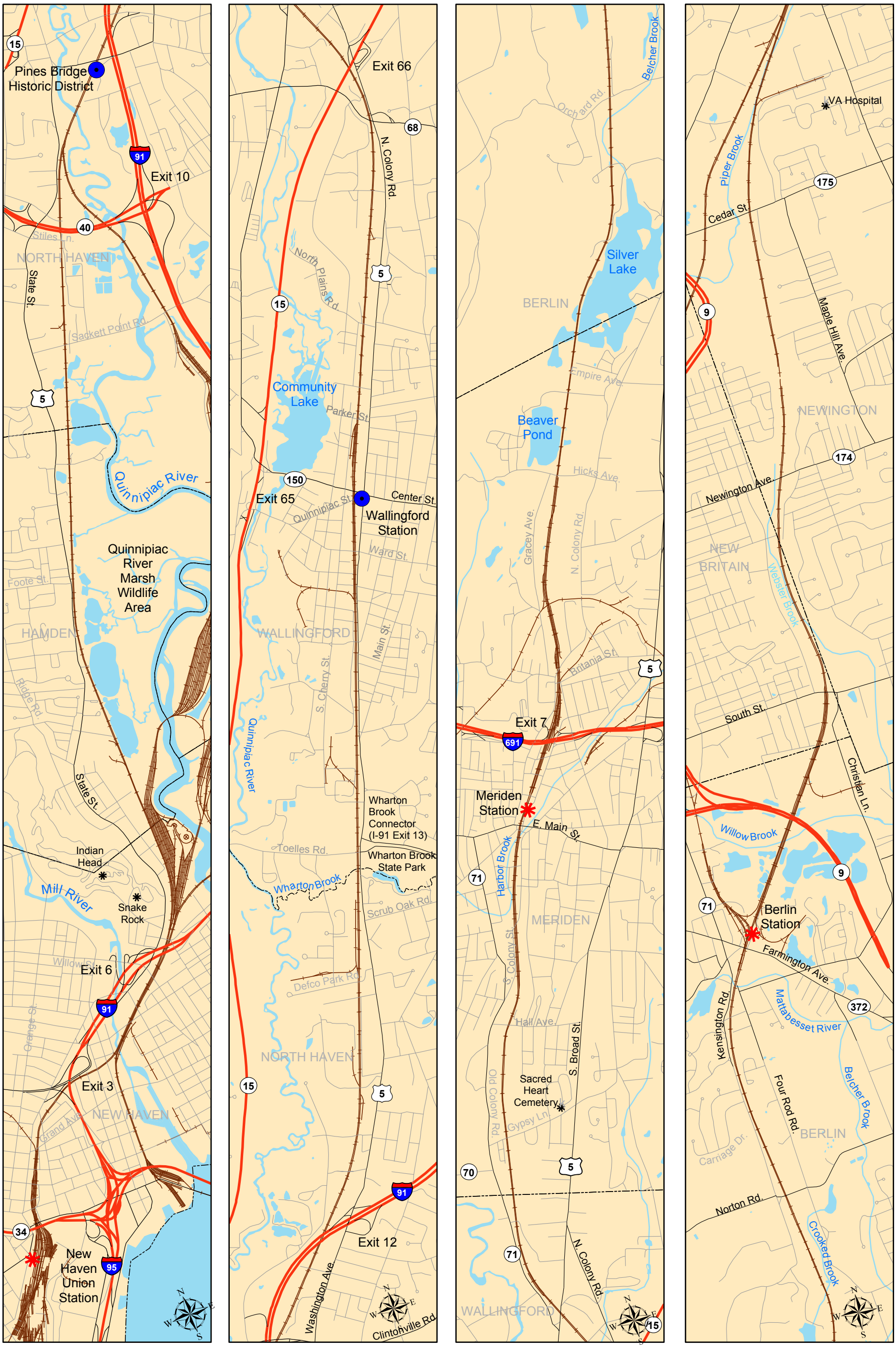
the study area in Connecticut was conducted on November 14, 2002 by Fitzgerald & Halliday, Inc. (FHI) and Dr. David Poirier, Staff Archaeologist for the Connecticut Historical Commission (CHC). Portions of the corridor that were accessible by nearby roads were reviewed during the reconnaissance. For the Massachusetts portion of the study area, historic and cultural resource information was readily available online, therefore a visit was not conducted. The document research and reconnaissance revealed that a number of historic resources fall within and/or abut the APE. These historic resources are listed in the following tables, which are broken out by town along the corridor. Note that those historic resources listed as being "eligible" for inclusion on the National Register of Historic Places were field checked. Many of the resources that are "not listed on the National Register" may also be eligible. Further research to determine their eligibility will be conducted when the project progresses to the next development stage.

The SHPO is aware that a number of historic and architectural resources listed or eligible for the National Register exist in the study area. If a selected project advances, the SHPO would require additional project information, including preliminary design plans, in order for their professional staff to provide further technical assistance and guidance to ensure the protection of significant cultural resources along the corridor. A determination of effect on historic and archaeological issues would be issued, and mitigative measures would be necessary if an adverse effect would be expected.

It should be noted that while a search of SHPO files was performed for this study and the SHPO has participated in field review as noted above, there were no secondary sources providing a detailed inventory of railroad resources within the Springfield Line corridor itself (signs, switches, towers, signals, depots, etc.). A field inventory of these resources was not performed for this study. Based upon research performed for the New Britain – Hartford Busway project, it is known that the Springfield Line is the oldest rail alignment in Connecticut, dating from about 1839. There is the potential for railroad resources, particularly those older than 50 years in age, to be eligible for the National Register, and SHPO will be interested in documentation of such resources. Therefore, a detailed inventory of such rail appurtenances will be necessary for subsequent phases of implementation if the commuter rail service is found to be feasible and if additional construction is needed.

Several communities have a notable number of properties on or eligible for the National Register, while others have none. It should be noted that throughout the Thompsonville area of Enfield, the study corridor closely parallels thickly settled residential areas, many of which may be eligible for inclusion on the National Register of Historic Places.

Figures 5.4-1 and 5.4-2 show the locations of historic resources. (The railroad spur to Bradley airport is not pictured because there are no documented resources along that corridor.) Table 5.4-1 summarizes the historic resources in the corridor.



Historic Resources Southern Section

New Haven - Hartford - Springfield
Commuter Rail Feasibility Study

Legend

Listed Historic Sites

Figure 5.4-1

Historic Resources
Northern Section

New Haven - Hartford - Springfield
Commuter Rail Feasibility Study

Figure 5.4-2

0 0.5 1 Miles

Legend

Listed Historic Sites

Wilbur Smith Associates

Engineers Planners Economists

Connecticut Department of Transportation

Table 5.4-1
Historic Resources

Town	Name	Location	Description	National Register of Historic Places Status
New Haven	Union Station	At Union and Meadow Streets	Brick Classical Revival-style structure dating from the early 20th century.	Not listed, eligible
	Bridge	Just north of New Haven Union Station	Wrought iron, truss bridge built by the Berlin Iron Bridge Company in 1894.	Not listed, eligible
	Olive Street Bridge	Crossing Olive Street	Steel, truss bridge, 1907	Not listed, eligible
	Blatchley Avenue Bridge	Crossing Blatchley Avenue	Wrought iron, truss bridge built by the Berlin Iron Bridge Company, 1888	Not listed, eligible
	Strouse Carpet Factory	78-84 Olive Street	Brick factory complex built in the 1850s	Not listed, eligible
	Ferry Street Bridge	Crossing Ferry Street	Steel, truss, 1912	Not listed, eligible
	New Haven Clock Company	North side of St. John Street, west of East Street	Brick factory complex built in the 1850s	Not listed, eligible
	Chapel Street Bridge	At the Mill River Crossing	Swing Bridge, 1899	Not listed, eligible
Hamden	-	-	-	-
North Haven	Pines Bridge Historic District	3-17 Bishop Street; 70-99 Old Broadway; 2-10 Phillip Place; 9-56 State Street	A grouping of residential and commercial structures dating from 1900-1949	Listed
	Bridge crossing the Quinnipiac River	South of the Pines Bridge Historic District	Is not listed on any of the reviewed resources but should be noted. Further review should take place as the project progresses.	Not listed, eligible
Wallingford	Wallingford Railroad Station	At the intersection of Hall and Meadow Streets	Elaborately decorated brick rail station, dating from the late 19th century.	Listed
	Center Street Cemetery	At the southeastern corner of the intersection of South Colony Street and Route 150	Burial ground containing graves of some of the earliest settlers of the town of Wallingford.	Listed
Meriden	-	-	-	-

Town	Name	Location	Description	National Register of Historic Places Status
Berlin	Kensington Stone Arch Railroad Bridge	Crossing the Mattabessett River	Dressed stone arch bridge, 1870	Not listed
	Berlin Construction Company Shops	Northwest of the study corridor	A complex of steel frame, corrugated fiberglass structures, 1912	Not listed
New Britain	-	-	-	-
Newington	Newington Junction West Historic District	55-108 Willard Avenue	A grouping of residential homes dating from 1850-1949 and built in a variety of styles	Listed
	Newington Junction Railroad Depot	160-200 Willard Avenue	Railroad depot dating from the middle of the 19th century	Listed
West Hartford	-	-	-	-
Hartford	Union Station	1 Union Place.	An operational Railroad station built in 1875.	Listed
	Union Station Historic District	The block surrounding Union Station, Union Place	Various commercial structures dating from the late 19th century.	Local historic district
	Bushnell Park	Bounded by Elm, Jewell and Trinity Streets	Municipal Park dating from 1861.	Listed
Windsor	Windsor Railroad Bridge	Crossing the Farmington River	Arched stone bridge, 1867	Listed
Windsor Locks	Enfield Canal and Enfield Canal gates	Within the study corridor, west of the Connecticut River	This waterway served as one of the chief transportation routes for freight in the 19th century.	Listed
	Windsor Locks Train Station	Main Street	A recently restored brick structure dating from the late 19th century	Not listed
	Montgomery Wire Company	Along Main Street between the Connecticut River and the Enfield Canal	Industrial complex dating from the early 20th century	Not listed, eligible
	Dexter Corporation Buildings	Along Main Street between the Connecticut River and the Enfield Canal	Industrial complex dating from the early 20th century	Not listed, eligible
	Pedestrian Swing Bridge	Crossing the Enfield Canal at the Montgomery and Company buildings	Steel truss swing bridge	Not listed, eligible

Town	Name	Location	Description	National Register of Historic Places Status
	Windsor Locks Historic District	Area between School and Dexter Streets, parallel to the study corridor	Houses in this area lining Main Street date from the late 18th century to mid 20th century	Not listed, eligible
	House	Maple Street, just west of the alignment within the study corridor	Brick Italianate structure, 1901	Not listed, eligible
Suffield	-	-	-	-
Enfield	Enfield Dam	Connecticut River across from Fairview Street	Industrial Structure	Listed
	Kelly Fradet Iron Foundry	Prospect Street south of South Street east of the study corridor	Brick structure, c. 1900	Not listed, eligible
	The Bigelow-Hartford Carpet Mills Historic District	Roughly bounded by Lafayette St., Hartford Ave., Alden Ave., Pleasant, High, Spring and Prospect Sts.	Structures date from 1825 to 1949.	Listed
	The Bigelow-Sanford Carpet Mills	At the intersection of Main and Pleasant Streets in Enfield	An industrial complex active at the end of the 19th century.	Listed
	Enfield Canal	Within the study corridor, west of the Connecticut River	This waterway served as one of the chief transportation routes for freight in the 19th century.	Listed
	Connecticut River Bridge	The Connecticut River at the Enfield, Suffield, Windsor Locks town lines.	A large steel truss bridge dating from the second half of the 19th century.	Not listed, eligible
	Bridge	At Asnuntuck and South River Road	Stone arch bridge beneath South River Road, c. 1900	Not listed, eligible
	Rail Bridge	At Asnuntuck and South River Road	Steel girder bridge with ashlar and brick abutments, c. 1900	Not Listed, eligible
Long - Meadow	-	-	-	-
Springfield	Downtown Springfield Railroad District	Between Main and Congress Streets and bounded roughly by Liberty and Lyman Streets	Group of buildings dating from 1875-1927 related to the railroad, business and commerce in the area.	Listed

Town	Name	Location	Description	National Register of Historic Places Status
	Wason-Springfield Steam Power Blocks	Bounded by Lyman, Taylor, Kaynor and Main Streets	A grouping of industrial structures dating from 1875-1899.	Listed
	Forest Park Heights Historic District	A small portion of this district falls within the study corridor at the intersection of Columbus and Longhill Streets	An example of an early planned community with a number of residences dating from the period between 1875 and 1925.	Listed
	Henkin Hotel and Café	15-21 Lyman Streets	A Colonial Revival Hotel built by William Becker in the late 19th century.	Listed
	Chapin National Bank Building	1675-1677 Main Street	This structure dates from c. 1900 and was built in the Classical Revival style by the architectural firm of Mowbry & Uffinger	Listed
	The Sanderson Theater	1676-1708 Main Street	An early 20th century theater built by Ernest Carlson in the Classical Revival style.	Listed
	Old Springfield Post Office	436-442 Dwight Street	No description is available	Listed

5.5 Archeological Resources

Review of archaeological sites mapped by the CHC revealed a medium to high level of sensitivity in several areas throughout the corridor. As the project progresses into the design phase, consultation with CHC Staff Archaeologist Dr. David Poirier and Massachusetts State Archaeologist Ms. Brona Simon will continue and further study will be undertaken as needed.

5.6 Public 4(f) and 6(f) Lands

Section 4(f) of the Department of Transportation Act of 1966 states that "the Secretary [of Transportation] may approve a transportation program or project requiring the use of publically owned land of a public park, recreation area, or wildlife and waterfowl refuge, or land of a historic site of national, state, or local significance only if there is no prudent and feasible alternative to using the land; and the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge or historic site resulting from the use. Historic 4(f) resources were listed in Table 5.4-1 in Section 5.4 above, and while they are protected similarly to recreational resources and refuges from the standpoint of Section 4(f), they are not listed below in the write-ups that follow.

Section 6(f) of the Land and Water Conservation Act of 1965 (LWCA) states that any lands purchased or improved in part with Federal LWCA funding may not be "converted" to another use without being replaced in kind by land of like size and value. Properties that are protected under Section 6(f) would also be protected under Section 4(f).

For this study, a 250-foot buffer was used for determining Section 4(f) and Section 6(f) impacts.

Consultation with the Connecticut Department of Environmental Protection (CTDEP) and review of maps and local documentation provided by study area towns revealed that the following public parklands, listed below by town, are located within approximately 250 feet of the rail study corridor. As the project advances beyond the conceptual planning phase, each of these resources will be researched in greater detail to determine specific Section 4(f) and Section 6(f) impacts. All recreational properties listed below are potential Section 4(f) properties, and some would also be potential Section 6(f) properties (as specifically noted).

Subsequent phases of this study will determine actual potential construction limits and therefore assess potential impact and mitigation that would be needed. Section 4(f) impacts would require mitigation of impacts that either directly take recreational property or create "constructive" impacts (which would indirectly compromise the recreational use of the property). Section 6(f) impacts would require mitigation "in kind", as noted above.

New Haven and Hamden, CT

The Quinnipiac River Marsh Wildlife Area is a 540-acre state designated wildlife area, located in New Haven, Hamden and North Haven that stretches along the eastern boundary of the study corridor. In addition to the cultural resources previously cited, this is the only Section 4(f) property along the rail corridor within the City of New Haven and Town of Hamden. There are no 6(f) lands known to occur within 250 feet of the rail corridor in the City of New Haven, or the Town of Hamden.

North Haven and Wallingford, CT

Wharton Brook State Park, which abuts the eastern side of the rail corridor (across Route 5 from the rail corridor) is the only recreational/refuge Section 4(f) property along the rail corridor within the Towns of North Haven and Wallingford. There are no 6(f) lands known to occur within 250 feet of the rail corridor in these two towns.

Meriden, CT

The CTDEP lists the public park at the southern end of Beaver Pond as a 6(f) land. This park would also be classified as a Section 4(f) property.

Berlin, CT

Silver Lake Park, which is located east of the rail study corridor in the vicinity of Northern Lane and Silver Lake, is the only recreational/refuge Section 4(f) property along the corridor in the Town of Berlin. There are no 6(f) lands known to occur within 250 feet of the rail corridor in the Town of Berlin.

New Britain, CT

There are no recreational/refuge Section 4(f) or 6(f) public lands located along the commuter rail study corridor where it crosses the extreme southeastern corner of the City of New Britain.

Newington, CT

The Newington High School Athletic Fields are located east of the study corridor near Alumni, Old Farm and Memorial Roads. This is the only recreational/refuge Section 4(f) property proximate to the rail study corridor within the Town of Newington. There are no 6(f) lands known to occur within 250 feet of the rail corridor in the Town of Newington.

West Hartford, CT

There are no recreational/refuge Section 4(f) or 6(f) public lands known to occur along the rail study corridor within the Town of West Hartford.

Hartford, CT

Bushnell Park, which is listed in Table 5.4-1 of the historic resources discussion, is the only recreational/refuge Section 4(f) property directly adjacent to the rail study corridor in the City of Hartford. Bushnell Park is also a 6(f) land as it has been improved with LWCF funds.

Windsor, CT

The rail study corridor passes just west of Windsor Meadows State Park, which is located to the north of the Bissell Bridge along the western shoreline of the Connecticut River. A small portion of Sharon Park is also located just within the study corridor boundary, west of Windsor Meadows State Park and north of Garden Street. These are the only two recreational/refuge Section 4(f) properties located along the rail corridor within the Town of Windsor. There are no 6(f) lands known to occur within 250 feet of the rail corridor in the Town of Windsor.

Windsor Locks, CT

There are no recreational/refuge Section 4(f) or 6(f) public lands known to occur along the rail study corridor within the Town of Windsor Locks.

Suffield, CT

There are no recreational/refuge Section 4(f) or 6(f) public lands known to occur within 250 feet of the rail spur that services Bradley International Airport in the Town of Suffield.

Enfield, CT

The Enfield High School Athletic Fields are located east of the existing rail corridor. These fields are the only recreational/refuge Section 4(f) property along the rail study corridor in the Town of Enfield. There are no 6(f) lands known to occur within 250 feet of the rail corridor in the Town of Enfield.

Longmeadow, MA

There are no recreational/refuge Section 4(f) or 6(f) public lands known to occur within 250 feet of the rail study corridor within the Town of Longmeadow.

Springfield, MA

There are no recreational/refuge Section 4(f) or 6(f) public lands known to occur within 250 feet of the rail study corridor within the City of Springfield.

5.7 Scenic Roads

There are no scenic roads present within the study corridor.

5.8 Visual / Aesthetic Resources

The New Haven – Hartford – Springfield railroad corridor is an existing railroad bed that contains one or more existing sets of railroad tracks between its southern terminus at Union Station in New Haven and its northern terminus at Union Station in Springfield. The visual quality impacts associated with the potential implementation of commuter rail are generally expected to be extremely limited, as the existing active rail operations already constitute a level of visual disturbance. These rail operations have been ongoing since the 1800s, and are therefore well-established in this corridor.

New visual impacts from the construction of new railroad infrastructure, both beneficial and adverse, would be limited to localized impacts at new stations and other improvements (e.g., installation of new tracks) within the existing rail bed. There are two types of viewers that would be affected by the project:

- Persons in neighboring land uses (residential, commercial, industrial, institutional, parkland, etc.) that would be viewing more frequent train operations and infrastructure

- Passengers that would use the new commuter rail service or those that currently ride on Amtrak's New Haven – Springfield intercity rail service that would be viewing the outside landscape from within a train

Between New Haven and Springfield, the corridor traverses a wide range of landscapes and land uses, covering urban uses, industrial properties, open space/wetlands, some agricultural property, surface waters, railroad stations, etc. The following is a generalized inventory of the types of visual resources within and adjoining the study corridor by community. In many places, unless noted, the rail bed is built up on a berm several feet above the surrounding land elevation.

New Haven

Heading north out of New Haven's Union Station, the corridor is generally depressed below the surrounding landscape, often through the use of vertical retaining walls. Features that are visible from the rail corridor within New Haven city limits include urban arterial streets, downtown New Haven buildings, industrial properties, high-density urban residential properties (mostly single-family and multi-unit houses), and an extensive tidal marsh area associated with the Quinnipiac River. East Rock, a sheer cliff on the border of New Haven and Hamden, dominates the landscape to the west of the railroad corridor.

Hamden

Continuing northward in the Town of Hamden, much of the corridor's viewscape is associated with the extensive wetlands and open spaces associated with the Quinnipiac River. To the west, industrial properties are visible associated with State Street (Route 5).

North Haven

In the southern portions of North Haven, the corridor parallels Route 5 (State Street), with industrial and commercial properties located between Route 5 to the west and the rail bed. A potential station location is found in an industrial area north of where Route 40 overpasses the rail line. Further north, Route 5 jogs over the rail corridor to the east side, and the rail corridor abuts more industrial and commercial properties on both sides. This land use continues up to the Wallingford town line.

Wallingford

In the southern portion of Wallingford, the rail line runs to the west of, and parallel to Route 5, and abuts a similar land use composition and viewscape as found in North Haven. Wharton Brook State Park is located across Route 5 (which is a busy four-lane arterial roadway) in this area. As the corridor enters downtown Wallingford, the composition of the land use changes to more of a higher-density downtown-type environment, with commercial properties, residential properties, churches, a cemetery, and other visual elements adding to the industrial mix. In addition to higher densities, these land uses are also somewhat closer to the rail corridor than in less-developed areas. A number of at-grade railroad crossings are found in close proximity to each other. North of downtown Wallingford, the density of land use declines, and the viewscapes are similar to south of downtown, with commercial and industrial properties along Route 5 paralleling the corridor to the east.

Meriden

The viewscape through much of Meriden south of downtown is a mix of woods, lower-density residential property, and some industry. As one approaches downtown, the residential densities increase and the landscape changes into a downtown environment, with taller buildings, a number of arterial downtown roadways, and more commercial properties. Meriden station is an established Amtrak station with a nondescript building, but with some recent improvements to its platform shelter. North of downtown Meriden, the corridor changes back to a more residential area at lower densities, and the corridor crosses under Interstate 691. The density of residential property decreases, and views are afforded of Beaver Pond to the west and Silver Lake to the east.

Berlin

Continuing into Berlin, Silver Lake and Lamentation Mountain are two important visual landmarks to the east. The rail corridor abuts wooded areas, with some residential property nearby. Further to the north, the viewscape becomes more developed, as the corridor enters Berlin station and the industrial and commercial development associated with Route 372. The corridor crosses beneath Route 9, a major expressway, and then enters New Britain.

New Britain

For the short segment of railroad within the City of New Britain, the corridor is primarily industrial/commercial to the west of the corridor, along with some open space to the east associated with Brock Brook, a tributary of Webster Brook.

Newington

Within Newington, the corridor abuts a mixture of wooded open spaces, light industrial uses, residential properties, and pockets of commercial use. Some substantial wooded

and wetland areas associated with Piper Brook are found north and south of Route 175. The corridor joins the New Britain – Hartford Busway corridor, with a potential station at Newington Junction, immediately north of Willard Avenue. This area contains a collection of older railroad buildings. Heading northward towards West Hartford, the view from the corridor is of industrial properties to the west, and a mixture of industrial and residential uses to the east.

West Hartford

Within West Hartford, almost the entire corridor abuts industrial or commercial properties. The rail corridor is on a high berm in the vicinity of New Britain Avenue (Route 71), and gradually declines to the grade of the surrounding area, crossing Oakwood and Flatbush Avenues at-grade. Land use through to the Hartford border continues to be predominantly industrial in nature, with some commercial properties.

Hartford

As the rail corridor enters the Hartford city limits, it encounters continued industrial uses, with some residential properties also in close proximity. The I-84 viaduct west of downtown Hartford is a prominent view in the landscape, and hangs over the corridor through much of the approach into Hartford's Union Station. As the corridor comes closer to Union Station, the urbanized area surrounding the corridor becomes denser, with many residential uses and office buildings as well as commercial uses. Bushnell Park in Downtown Hartford, which also contains the State Capitol building, is a prominent landmark, and the rail corridor passes over the park on a vertical retaining wall.

North of Union Station, the area becomes progressively less densely developed. After passing some high-density residential complexes, the corridor views larger public facilities like the Meadows Music Center, Connecticut Expo Center, and other institutional uses. The corridor continues north, opening out into large areas of open space and a more industrial character. The corridor passes under I-91 before crossing the town line into Windsor.

Windsor

Between the Hartford city limits and the Farmington River, much of the rail corridor within the Town of Windsor is surrounded by open fields and wooded areas adjacent to the Connecticut River. Occasional industrial uses and single-family residential properties are in view from afar to the west, and the Windsor Meadows State Park provides open areas and wooded views to the east. The I-291 Bissell Bridge is a major visual element in the landscape, running well above the surrounding terrain. North of the Bissell Bridge, the landscape consists of woods (continuation of Windsor Meadows State Park), and further away to the west, buffered residential property, continues to the north, with less industry. The Loomis-Chaffee school borders on the corridor to the east.

North of the school, the corridor enters Windsor Center, which has a well-restored historic train station and attractive streetscape treatments, with brick walks, decorative street furniture, etc. Views of this area would be favorably received, and train operations would be consistent with the railroad context of the area.

North of Windsor Center, the train line crosses over Route 159 (Palisado Avenue) and crosses the Farmington River on a multiple stone-arch structure. The river and nearby areas are open and wooded, and offer attractive views. Further to the north, the corridor becomes more lightly-developed, with low-density residences, light industrial buildings, and open fields.

Windsor Locks

As the corridor crosses north into Windsor Locks, Route 159 is visible off in the distance to the east, separated from the rail line by open fields. Route 159 crosses over the corridor, and the Windsor Locks train station is seen. The I-91 Dexter Coffin Bridge over the Connecticut River is a visual landmark in this area. After passing under the bridge, the corridor enters a more built-up area in the vicinity of Route 140, with nearby residences, and shopping centers. The most notable visual landmarks in this area are industrial buildings (Dexter Corporation) to the east, separated from the railroad by the beginning of the Windsor Locks canal. The corridor continues to parallel the canal further to the north as the character of the area becomes more wooded and open. Towards the northern end of Windsor Locks, the rail corridor splits into two lines, with the Bradley Airport spur line veering off to the west and the Springfield line continuing north and east, passing over the Connecticut River on an older steel structure, with King's Island visible to the north. The views over the Connecticut River are very striking, and afford a panoramic view of wooded banks along the river upstream and downstream of the crossing.

Suffield

The Bradley Airport spur passes through a mixture of wooded areas, low-density single-family residential areas, and as one gets closer to the airport, industrial buildings. In many cases, the residences are well-buffered from the spur line by woods. Near the airport, the terrain becomes very flat and contains few trees.

Enfield

Returning to the main Springfield line, after crossing the Connecticut River bridge, the corridor continues to parallel the Connecticut River, this time on the east side of the river. Views in Enfield are generally wooded, with few residences until the corridor passes under the Route 190 Bridge, reaching the Thompsonville section of Enfield. This area contains a number of historic structures, both industrial and residential in use, on both sides of the railroad tracks. Many of these buildings are notably close to the railroad line, indicating their historic relationship to the railroad. North of Thompsonville, the corridor

passes a cemetery to the east, then the area becomes more wooded and affords attractive views of the river and its banks, with few other land uses visible.

Longmeadow

Entering Longmeadow, the corridor is very wooded, with few homes or other land uses visible. The corridor veers away from the river, and is surrounded by woods. Further to the north, I-91 comes into view to the east and becomes the primary visual focus.

Springfield

Entering into Springfield, the rail corridor again comes close to the Connecticut River, which is visible to the west. The corridor parallels a regional bike/pedestrian trail. Commercial properties come into view to the east, and the new Basketball Hall of Fame building is a notable visual element, as is the old Basketball Hall of Fame building. The downtown skyline comes into view over I-91 to the east. The corridor passes under the Memorial Bridge, and then makes a 90-degree turn to the east to enter the Springfield Union Railroad Station. The historic railroad building will be renovated, making a striking visual addition to the downtown area.