

the west. The homes on Hemenway are increasingly far from the right-of-way. There are then no homes on the east side until Colonial Drive, where one is within 50 feet.

On the west side, there are four abutting homes on Hiram Road, the closest of which is 60 feet away. The abutting homes on Nob Hill Drive are about 200 feet or more from the right-of-way. The last home in Framingham before the Sudbury line, on Eaton Road West, is about 50 feet away.

There are four more culverts before the Sudbury line, two for Hop Brook, which is the largest tributary of the Sudbury River. The first Hop Brook culvert is about 2,900 feet north of Water Street. There is then a culvert about 100 feet further north, and then another culvert for Hop Brook 900 feet further north. Just over 800 feet further north is a gas line (about 1,200 feet south of the Sudbury line). Another culvert is located 100 feet further north.

Sudbury

Land use adjacent to the right-of-way at the Sudbury/Framingham town line transitions from single-family homes to woods (see Figure 5). North of the town line, in Sudbury, woods transition to open fields and extensive wetlands. Further north, toward Route 20, commercial developments abut the east side. They are also found along Nobscot Road on the west. There are a few residential properties on Nobscot Road abut the right-of-way; these homes, however, are close to Nobscot and far removed from the right-of-way.

There are four culverts between the town line and Route 20. They are located approximately 1,870 feet, 2,350 feet, 3,450 feet, and 3,925 feet north of the Framingham line. There are also two public wells adjacent to the right-of-way, on the east side, about 3,200 and 4,100 feet north of the town line.

North of Route 20, the right-of-way continues about 1,100 feet to the Central Mass. line, where the study area ends. Commercial establishments abut both sides of the corridor. Just south of the Central Mass., a spur runs off from the west side. The former South Sudbury Station, now a commercial establishment, is at the northeast corner of the railroad junction. The Lowell Secondary continues north to Route 3 at the Lowell-Chelmsford line. This is the section owned by the Commonwealth of Massachusetts, through EOT.

C RIGHT-OF-WAY WIDTH

According to federal¹⁰ and state¹¹ guidelines, the recommended width for a shared-use path is 10 feet. An additional 2 feet on each side is recommended for clearance, yielding a total cleared width of 14 feet. Factors that affect trail width are discussed in Chapter 3.

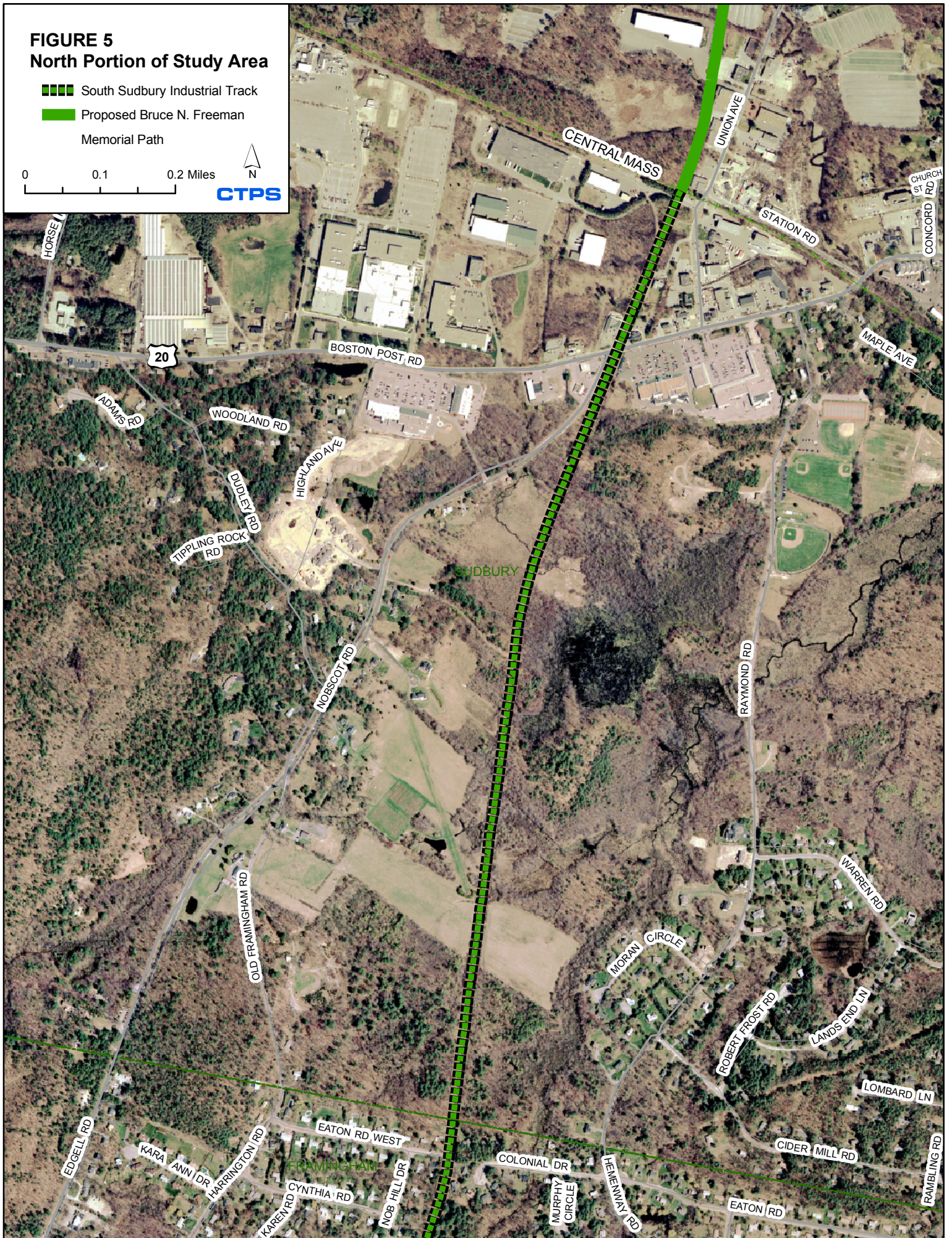
¹⁰ American Association of State Highway and Transportation Officials (AASHTO), *Guide for the Development of Bicycle Facilities*, 1999, pp. 35–36. Three feet is recommended for clearance from poles, fences, walls, trees, etc. Five feet is desirable for separation from slopes steeper than 1:3.

¹¹ MassHighway, *Project Development and Design Guidebook*, 2006, Section 11.4.1.1. A width of 12 or even 14 feet is desirable “to accommodate substantial use by bicycles, joggers, skaters, and pedestrians, and to provide access for maintenance vehicles.”

FIGURE 5
North Portion of Study Area

- ■ ■ ■ South Sudbury Industrial Track
- Proposed Bruce N. Freeman Memorial Path

0 0.1 0.2 Miles



The South Sudbury Industrial Track has ample space for a trail; the narrowest width is 55 feet. Below are the width variations along the corridor, south to north, according to VAL plans obtained from CSX.

Framingham

Junction with Fitchburg	
Secondary to Pleasant Street:	<i>65; 90 feet.</i>
Bridge over I-90:	<i>85 feet.</i>
I-90 to Grove:	<i>85; 130; 140; 145; 135; 110; 100; 75 feet; a triangular section on the west side, approximately 300 feet long, juts out to a maximum width of 230 feet; then the right-of-way tapers to 75 feet.</i>
Grove to Belknap:	<i>75 feet.</i>
Belknap to Edgell:	<i>75 feet.</i>
Edgell to Frost:	<i>75 feet.</i>
Frost to Water:	<i>75; 60 feet.</i>
Water to Sudbury line:	<i>75; 85; 95; 85; 75; 90; 75 feet.</i>

Sudbury

Framingham line to Route 20:	<i>75 feet except a triangular section on the east side, 90 feet long, that juts out to a maximum width of 290 feet, located about 1,600 feet south of Route 20.</i>
Route 20 to the Central Mass.:	<i>55; 65 feet.</i>

A railroad bed must be relatively flat, while the adjacent land may not be. Thus the bed is sometimes cut into the land (“cut” section), is sometimes at grade, and sometimes rises above the adjacent land on an embankment. In some locations the land may be at grade on one side of the railroad bed, and below or above grade on the other.

In segments where the railroad bed is on an embankment, it typically occupies only a portion of the right-of-way width. Embankments were measured at several locations on the right-of-way and were found to be approximately 16 feet wide.

D ROADWAY CROSSINGS

There are six at-grade roadway/right-of-way crossings. There are two grade-separated crossings: bridges over I-90 and Grove Street. Table 5 below compares the rate of occurrence of grade crossings on this right-of-way relative to major rail trails in Massachusetts.

The table illustrates that the incidence of at-grade crossings on the South Sudbury Industrial Track is comparable to the rates on the three trails cited. There are slightly fewer crossings per mile on this right-of-way than on the Minuteman Commuter Bikeway, and slightly more than

Table 5
Comparison of Rate of Occurrence of At-Grade Intersections on
South Sudbury Industrial Track and Major Massachusetts Rail Trails

Facility	Length (miles)	At-Grade Intersections	Miles per At-Grade Crossing
Cape Cod Rail Trail	25	25	1.0
Minuteman Commuter Bikeway	11	17	0.6
Norwottuck Rail Trail	8	8	1.0
South Sudbury Industrial Track	5	6	0.8

on the Cape Cod and Norwottuck rail trails. On average, a traveler can go eight-tenths of a mile between grade crossings on the South Sudbury Industrial Track. The longest and shortest continuous segments are Water Street in Framingham to Route 20 in Sudbury (about two miles) and Edgell Road to Frost Street (about 500 feet). Chapter 3 includes details on the roadway crossings.

E ENVIRONMENTAL ISSUES

According to Federal Highway Administration regulations, bicycle facilities are usually exempt from federal requirements for environmental impact statements. They are subject to the provisions of the Massachusetts Environmental Policy Act (MEPA). An Environmental Notification Form is required to determine whether an environmental impact report would be necessary for permitting a rail trail to be constructed on the right-of-way. The project also would need to meet state and local wetlands bylaw requirements, the requirements of the Natural Heritage and Endangered Species Program,¹² and the State Stormwater Guidelines.¹³

An environmental assessment of the right-of-way from the January 2004 Report of the Nobscot Trail Task Force, working on behalf of the Town of Framingham, is provided as Appendix B of this study.

Noise and Air Quality

It is anticipated that modest noise and air emissions will be generated during construction of a trail. Once constructed, use of the right-of-way for a rail trail will generate minimal, if any, on-site air emissions and noise levels since motorized vehicles would not be permitted (except police and service vehicles, and motorized wheelchairs). The exclusion of snowmobiles and other off-road motorized vehicles would need to be enforced by police.¹⁴

¹² This program seeks to protect the 190 species of animals, vertebrate and invertebrate, and 258 species of native plants officially listed as “Endangered, Threatened, or of Special Concern” in the Commonwealth. An initial review suggests that there are no core habitats in the study area.

¹³ Administered by the Massachusetts Department of Environmental Protection.

¹⁴ There is anecdotal evidence of motorized vehicles now using the right-of-way. Although this is trespassing, there is no enforcement: the right-of-way is owned by CSX and there is no agreement in place for local police jurisdiction. Based on past experiences, once a right-of-way is converted to a trail, such activities as loitering, use by motorized vehicles, and rubbish disposal become much less frequent or cease altogether.

The project should generate positive benefits to air quality and noise in the neighborhoods through which the right-of-way passes since the path is expected to eliminate some motor vehicle trips, especially short trips or so-called “cold starts,” which contribute disproportionately to air quality degradation. The only additional noise should be conversations of trail users.

Floodplain Areas

CTPS reviewed Federal Emergency Management Agency (FEMA) maps to assess floodplain issues. Figure 6¹⁵ indicates three FEMA classifications: (1) an area inundated by 100-year flood and with a Base Flood Elevation (BFE)¹⁶ determined, (2) an area inundated by 100-year flood and no BFE determined, and (3) an area not considered in the Special Flood Hazard Area (SFHA) but inundated up to one foot in 500-year flood. Federal, state, and local policies direct proponents of most transportation projects to minimize construction and implement mitigation measures in areas categorized as within a 100-year floodplain.

As seen in Figure 6, the right-of-way enters a 100-year floodplain about 800 feet north of the Massachusetts Turnpike for a distance of 100 feet. It then enters another approximately 200 feet north of Water Street. It is at first on the western edge of the 100-year floodplain for about 1,000 feet and then passes through the floodplain for about 500 feet.

About 1,500 feet further north, about halfway between Water Street and the Sudbury line, the right-of-way enters another 100-year floodplain for a distance of 1,000 feet. Approximately 1,500 feet north of the Framingham/Sudbury line, the right-of-way is on the western border of a 100-year floodplain for about 3,000 feet.

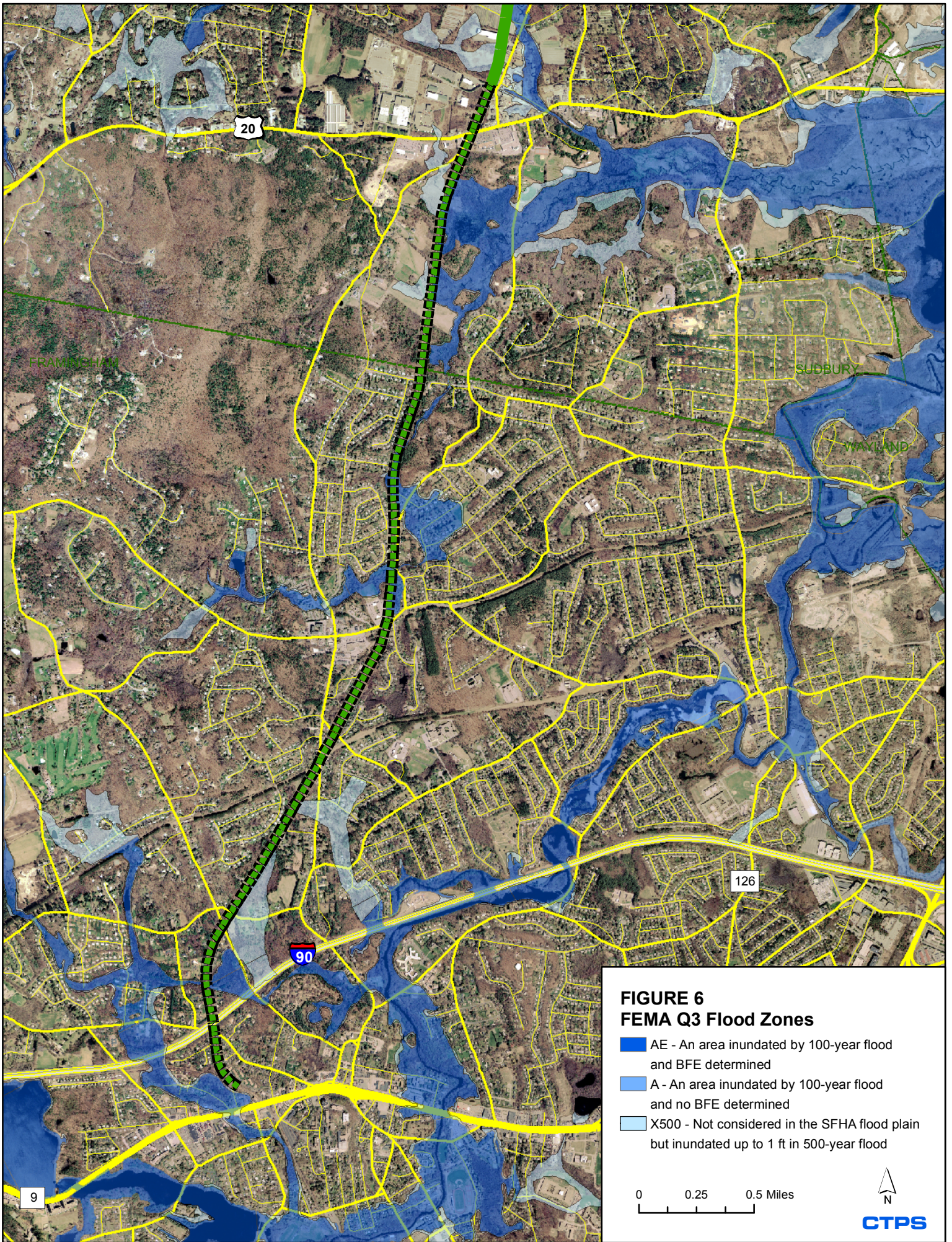
Environmental Contamination

The work scope for this study does not include soil testing for the presence of environmental contamination. Whoever purchases the right-of-way ought to test for contaminants prior to acquisition and the initiation of design and engineering work. CTPS has assumed that since the right-of-way supported both passenger and freight operations for many years, there is the potential for environmental contamination. Sources of potential contaminants may include: substances leached from tracks, ties, bridges, or signal infrastructure; illegal dumping; leaks or spills from railroad cars; substances deposited through the implementation of vegetation management programs; and derailments.

There have been at least two derailments in Sudbury, one in the summer of 1999 and one on April 13, 2000. The latter occurred on the last rail trip made on the line. The derailment resulted in “debris and parts of one box car” being “piled on the well head of public well

¹⁵ Figure 6 shows Q3 flood data, which are digital representations of certain features of FEMA’s Flood Insurance Rate Maps (FIRMs).

¹⁶ Base Flood Elevations (BFEs) are the computed elevations to which floodwater is anticipated to rise during the base flood. They are shown on FIRMs. The BFE is the regulatory requirement for the elevation or flood proofing of structures. The relationship between the BFE and a structure’s elevation determines the flood insurance premium.



**FIGURE 6
FEMA Q3 Flood Zones**

- AE - An area inundated by 100-year flood and BFE determined
- A - An area inundated by 100-year flood and no BFE determined
- X500 - Not considered in the SFHA flood plain but inundated up to 1 ft in 500-year flood

0 0.25 0.5 Miles



#7.”¹⁷ Testing done at the behest of the Drinking Water Division of the Department of Environmental Protection (DEP) found the presence of a volatile organic compound called trichloroethylene.¹⁸ CSX and the Sudbury Conservation Commission subsequently reached a settlement concerning the derailment and its aftermath.¹⁹

F CURRENT USES OF THE SOUTH SUDBURY INDUSTRIAL TRACK

Sixty-two years of passenger service on this line ended in 1933. One hundred and twenty-nine years of freight service ended in 2000. With no rail activity from 2000 to 2004, much of the land had become overgrown and difficult to pass through. The removal of tracks and ties in 2004 made the right-of-way much easier to traverse. Currently, hikers, snow-shoers, cross-country skiers, and snowmobilers use the corridor, as evidenced by their tracks and by anecdotal accounts. People have dumped trash in many areas.

As indicated earlier, any use of the right-of-way is illegal without an agreement with CSX. Local police enforcement also requires such an agreement. Although CSX has indicated to the towns that it is amenable to a lease that would allow interim use, including police access, no action has occurred to date.

CSX has advised CTPS that there is only one lease agreement recorded for the South Sudbury Industrial Track. This agreement provided for installation and maintenance of a sidetrack south of the Central Mass., on the west side of the South Sudbury Industrial Track. This lease was executed in 1931 as a tenancy-at-will with a 30-day termination clause.²⁰ It is a safe assumption that this lease is no longer in effect. There is a gas line crossing under the right-of-way about a quarter-mile south of the Framingham-Sudbury line.

Field reconnaissance to date has not recorded any right-of-way encroachments. A survey is necessary to determine this definitively.

¹⁷ Order of Conditions, Sudbury Wetlands Administration Bylaw File # 301-722, August 10, 2000.

¹⁸ Letter from Richard P. Carroll, Superintendent, Sudbury Water District, to Deborah Dineen, Town of Sudbury Conservation Commission, October 30, 2000. The letter goes on to state that these “tests have been performed routinely for many years. This is the first time a positive result has been realized.”

¹⁹ CSXT v. Sudbury Conservation Commission, Civil Action No. 00-4687 (Middlesex).

²⁰ Correspondence from Lee Chastain, CSX, January 12, 2005.