EVALUATION AND RECOMMENDATIONS REPORT

Complete Streets Prioritization Plan North Reading, MA



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Prepared for:

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1.0 Introduction

1.1 Overview

The Town of North Reading retained WorldTech Engineering LLC to provide engineering services to assist the Town in establishing a baseline inventory and performs a condition assessment program to be used in the development of the Town's Complete Streets Prioritization Plan in accordance with MassDOT's Complete Streets Funding Program guidelines. The scope of the work included collecting and analyzing field data on infrastructure assets strictly pertinent to the development of a multi-year Capital Improvement Plan (CIP) to assist the Town in the implementation of recommendations with respect to Complete Streets. Data collection focused on identifying gaps in the Town's pedestrian and bicycle network, focusing on locations linking schools, recreational facilities, public buildings, public and senior housing, and commercial centers. Through a collaborate effort with the Town's Planning Department, Public Works Department, Police, and Commission on Disabilities, projects were identified for inclusion on the Complete Streets Prioritization Plan based on the resulting data analysis, prior local and regional studies, and the MAPC Local Access Score tool.

1.2 MassDOT Complete Streets

As described in the MassDOT Complete Streets Funding Program Guidance, a complete street is one that provides safe and accessible options for all travel modes (walking, biking, transit, and motorized vehicles) for people of all ages and abilities. Complete street implementation may vary from small scale improvements such as adding "share the road" signs to alert motorists that bicycles are using the roadway, to large scale improvements such as roadway widening and sidewalk construction to provide enhanced pedestrian accommodations. Research has shown that the implementation of Complete Street elements promotes safer and more convenient access and travel for people of all abilities. Additional benefits include:

- Provides an efficient transportation system;
- Provide reliable public transportation;
- Enhance the livability and walkability of the community;
- Promote the use of public transportation;
- Encourage healthier and more energy efficient options such as walking, biking, and transit;
- Reduction in greenhouse gas emissions that improve air quality, etc.;
- Economic benefits through higher property values and increased business revenues.

While Complete Streets provide the above listed as well as many more valuable benefits to the community, it is recognized that there may be various obstacles that





create challenges in implementing many of the features of a "Complete Street". They include;

- Existing features or Right-Of-Way constraints;
- Fiscal constraints;
- Environmental constraints;
- Emergency vehicle access, event management, incident management;
- Public Works operational requirements (snow storage, etc.);
- Roadways involving ownership by multiple jurisdictions.

The Complete Streets Funding program offered by MassDOT is organized into three (3) tiers. Tier 1 is designed to provide guidance for municipalities in developing a Complete Streets Policy. Representatives from the Town attended a Complete Streets workshop during the development of the policy. The Town of North Reading's Complete Street Policy was approved by MassDOT and adopted by the Board of Selectmen in May, 2016. Tier 2 of the program provides technical assistance for municipalities to determine its Complete Streets needs in support of the development of a Complete Streets Prioritization Plan. This report and the methodology contained herein were completed under this phase of the program. Subsequent to approval of the Complete Street Prioritization Plan by MassDOT, the Town will be eligible for up to \$400,000 in construction funding for the implementation of Complete Streets infrastructure projects included in the Prioritization Plan. The funding applications can include multiple projects or a single project. Allowable uses for the funding award fall under four major categories of improvements including:

- 1. Traffic and Safety;
- 2. Bicycle Facilities;
- 3. Pedestrian Facilities;
- 4. Transit Facilities

Criteria for the award of potential funding is based on the following:

- How well the project encompasses and accomplishes the various Complete Street goals in terms of safety, connectivity, mobility and accessibility;
- Equity of Town-wide median household incomes at or below the statewide average, gateway communities, and environmental justice/Title VI areas;
- Geographic distribution of funding;
- Number of submitted projects;
- Available funding

1.3 Community Profile

The Town of North Reading is a predominantly suburban community which includes a total population of 14,892 (MassDOT), and a land area of approximately 13.2 square miles, which yields a population density of 1,128 persons per square mile. There are about 96 centerline miles of roadway in the Town, of which 79 miles are Town-owned,





and the remainder, are under the jurisdiction of the Massachusetts Department of Transportation (MassDOT), Department of Conservation and Recreation (DCR), or Private.

2.0 Methodology

The Field Inspection program required an organized approach. The approach included;

- GIS layer creation for the location and condition of sidewalks, bicycle routes, and related infrastructure;
- GIS layer creation for wheelchair ramps and access inventory, their conditions and compliance with American Disability Act (ADA);
- GIS layer creation for crosswalk and access inventory, their condition and compliance with ADA;
- Identification of locations of transit network gaps and obstacles to implementing Complete Streets concepts at the location.

2.1 Database Set-up and Mapping

WorldTech utilizes a Microsoft Access database coupled with ArcGIS mapping to setup, collect, analyze, and display data provided by the Town and information collected in the field. ArcGIS is primarily utilized for base mapping, and as the main tool used in collecting data in the field. Roadway centerline layers, parcel data, and 30cm Orthophotography are imported from the MassGIS website and represent the primary base mapping tools needed for accurate field data collection. Secondary layers include open space areas, schools, hospitals, bike paths, etc.

Determining the validity of this planimetric data is an important first step in setting up the database and mapping elements of the project. A custom Microsoft Access and GIS selection interface tool was developed. This enables point and attribute data to be stored simultaneously in both a Microsoft Access database and ArcGIS environment. This also allows the field data to be collected in a format that can be easily integrated and coordinated with the Town's existing Pavement Management Program. The Access database is primarily used to store, tabulate, and analyze the collected data used in association with this report and attached appendixes.

2.2 Field Data Collection Program

To establish a baseline assessment of gaps in the Town's pedestrian and bicycle networks, public roadways in the Town were inspected to collect relevant sidewalk, wheelchair ramp, and crosswalk data. A point feature was created for each wheelchair ramp and a line feature was created for crosswalks and sidewalks, respectively. These features were created in ArcMap using a field laptop; spatially located using the base mapping as a reference. The attribute data collected includes;





Sidewalks (Line Feature)

- Length and Width;
- Percent of Roadway where Sidewalk Exists on each side
- Material (Concrete, Asphalt, Brick, Mix);
- Identified Distresses (Grass, Cracking, Lifting, Depressions, etc.)
- Condition (Good, Fair, Poor)

Ramps (Point Feature)

- Street and Intersecting Street;
- Types (Parallel, Perpendicular);
- Condition (Good, Fair, Poor);
- Material (Concrete, Bituminous, Brick);
- Obstructions;
- Ramp Opening Width (In.);
- Ramp Slope (%);
- Transition Length (In.);
- Transition Slope (%);
- Top Landing (In.);
- Bottom Landing (In.);
- Detectable Warning Panel;
- Number of Crosswalks;
- Priority Type and Location (School, Church, High Volume, Etc.);
- ADA Compliant (Yes, No, Retrofit)

Crosswalks (Line Feature)

- Length and Width;
- Striping Width;
- Striping Color and Inside Color;
- Control type and details (Signalized, Stop Sign, Yield Sign, Ped. Sign, None);
- Crosswalk type (Continental, Parallel, Ladder, Textured);
- Marking Type and Condition;
- Roadway Condition (Good, Fair, Poor);
- Obstructions

Physical inspection and measurements aided in the determination of sidewalk and crosswalk conditions, including ADA compliance (Table 1).

Crosswalk attribute measured in the field was categorized as shown in the table below;





Attributes	Categories				
Crosswalk Type	Continental	Ladder	Parallel	Imprint	
Traffic Condition	Flashing Light	Ped. Sign	Stop Sign	Traffic Signal	None
Crosswalk Inside Color	Yellow	White	Red	None	
Stripping Width	0.5′	1'			
Crosswalk Width	5'	6'	7'	8'	9'
Marking Condition	Good	Fair	Poor		
Roadway Condition	Good	Fair	Poor		
Obstruction	Catch Basin	Manhole	Watergate	Gas Gate	None
Priority Location	Community Center	High Volume	School	Senior Housing	None

Table 1: Crosswalk Field Attributes

The Ramp data and attributes measured in the field are categorized as shown in the table below and measurements made in the field were compared to the MassDOT standards to determine if the ramps are in compliance.

Table 2: Wheelchair Ramp Attributes

Attributes		Ca	ategories		
Ramp Type	Parallel	Perpendicular			
Ramp location	Apex	Tangent			
Ramp Material	Concrete	Bituminous	Brick	Gravel	Mix
Priority Location	Community	High Volume	School	Senior	Non-
	Center			Housing	Priority
Alignment with	Aligned	Non-Aligned			
Crosswalk					
Obstruction	Curb	Catch Basin	Manhole	Pole	None
ADA Compliance	Compliant	Non-Compliant	Retrofit		





3.0 Summary of Findings

The sidewalk, crosswalk, and ramp databases created provide key information regarding the unique identity and conditions of individual elements that will be useful to the Town moving forward to Tier 3 (Project Construction Funding) of the Complete Streets Funding Program. The information gathered will assist the Town create a roadmap for future infrastructure improvement projects. While the Town's goal of this current program is to receive funding to implement Complete Streets projects, the data collection and analysis completed (using Mass DOT Construction Standard details – Table 3) in this phase of the program will serve as a useful tool as the Town seeks to implement many of the improvements identified to enhance the livability of the community now and in the future.

Table 3: Standard Wheelchair Ramp Attributes

Туре	Attributes	Standard Measurement
Wheelchair Ramps on Less	Ramp Slope	7.5% MAX
than 12'-4" Sidewalk	Transition Slope	7.5% MAX
	Ramp Width	5'-0" MIN
	Low Side Transition Length	6'-6"
	Top Landing/Slope	4'-0'/1.5%
	Detectable Panel	2'
Wheelchair Ramps on	Ramp Slope	1.5%
narrow Sidewalk	Transition Slope	7.5 MAX
	Ramp Width	5'-0" MIN
	Low Side Transition Length	6'-6"
	Top Landing/Slope	-
	Detectable Panel	2'
	Ramp Slope	7.5% MAX
	Transition Slope	7.5% MAX
Wheelchair Ramps on	Ramp Width/Length	5'-0" MIN /4'-0" MIN
Greater than 12'-4"	Low Side Transition Length	6'-6"
Sidewalk	Top Landing/Slope	4'-0"/1.5%
	Detectable Panel	2'
Wheelchair Ramps for one	Ramp Slope	7.5% MAX
continuous direction of	Transition Slope	-
Pedestrian travel	Ramp Width	3'-0" MIN
	Low Side Transition Length	6'-6"
	Top Landing/Slope	-
	Detectable Panel	2'





3.1 General Findings

3.1.1 Sidewalks

Sidewalks are provided along a total of 51.9 (66%) miles of Town roadways. Of these, the total mileage of roadway with sidewalk on both sides is 32.9 miles, and an additional 19.3 miles of roadway have sidewalks on one side only (Figure 1).



Figure 1: Street Mileage with Sidewalk on one or both sides

Of the Sidewalks analysed, 13% are found to be in excellent or good condition, 51% in fair condition and 36% in poor condition. Figure 2 summerises the condition of sidewalk analysed.



Figure 2: Sidewalk Condition





Pedestrians Network gaps were identified based on the lack of existing sidewalk or existing sidewalks which are in poor condition. The following streets without sidewalk or with poor sidewalk were identified as Pedestrian network gaps;

- Haverhill Street
- **Central Street**
- Chestnut Street Elm Street
- North Street
- Marblehead Street
- Lowell Street Main Street (State Highway)
- 3.1.2 Wheelchair Ramps

There is a total of 475 ramps in the town, 14 (3%) of which are ADA compliant, 455 (96%) are non-compliant, and 6 (1%) are identified as retrofit. 89 (19%) ramps are parallel type while 386 (81%) are perpendicular; seven are apex ramps, 34 (9%) are radius ramps while 434 (91%) are tangent ramps.

Material classification shows one brick ramp, one gravel ramp, 315 (66%) ramps are bituminous concrete (asphalt) while 156 (33%) are cement concrete. For priority locations, only three ramps (non-ADA compliant) were located near community centers, 89 (3 ADA compliant) at high volume areas, 20 (1 ADA compliant) in school areas. Sixty (60) of the ramps is aligned with crosswalk. Ten ramps were found to be obstructed by vertical curb; 2 ramps are obstructed by catch basins; 6 ramps have manhole, water, or gas gate castings within the limits of the ramps; 7 ramps are obstructed by utility poles; 1 obstructed by a hydrant; and 1 by tree roots. The remaining 448 ramps are not obstructed.



Figure 4: Priority Locations





3.1.3 Crosswalks

Field verification of crosswalks show a total of 105 marked crosswalks in the town; 71 (68%) are parallel, 22 (21%) are Zebra, 7 are imprint, and 5 are ladder type (Table 4); the crosswalk line is generally white and width varying from 6 to 12 inches. The inside color is either red or none; crosswalk width varies from 5' to 9'.

With respect to traffic control at crosswalks, 2 crosswalks (2%) are controlled by flashing beacons, 17 (16%) have pedestrian warning signs, and 39 (37%) are stopsign controlled. 4 crosswalks (4%) were found to be in poor condition, 48 (46%) in fair condition and 53 (50%) in good condition. Roadway condition is good at 60 (57%) crosswalks, fair at 44 (42%) crosswalks and poor at 1 (1%) crosswalk. There are no obstructions on 81 (77%) crosswalks, catch basins in 7 crosswalks (7%), manhole castings in 10 crosswalks (10%), and water or gas gates in 7 crosswalks (7%). One crosswalk (1%) is near a community center, 15 crosswalks (14%) are located near schools, and 40 crosswalks (38%) are in other areas with high pedestrian volumes. Crosswalk condition, traffic control, and priority locations are summarized in Figures 5 through 7.



Figure5: Summary of Traffic Control at Crosswalks

Crosswalk	Number
Types	
Parallel	71
Zebra	22
Imprint	7
Ladder	5

Table 4: Summary of Crosswalk Types







Figure 6: Summary of Crosswalk Marking Condition



Figure 7: Summary of Crosswalks at Priority Locations





4.0 Recommendations

Analysis of Complete Streets field data identifies streets with poor pedestrian and bicycle accommodation which includes; Sidewalk network gaps, poor crosswalk condition and ADA accessibility. The combination of priority streets identified by the Town, analysis of field data and information acquired from MAPC tool resulted in the following recommendations for Complete Street Infrastructure projects. A summary of these projects utilizing the MassDOT Prioritization Plan template is found in the Appendix.

1. Haverhill Street (Foley Drive to North Street - 0.371 miles):

PCI: 57-60Width: 24 ftROW: 40 ftSpeed Limit: 40 MPHWalk Utility Score: 0-1.68Total Project Cost: \$435,000Other Funding Source: \$198,000Complete Streets Funding Component Requested: \$237,000

Haverhill Street extends from the North to the South of the Town of North Reading providing access to and from the central business district and downtown. It also provides access to J. Turner Hood Elementary School. There is existing sidewalk on the even side (in fair condition) and it is discontinuous between Foley Drive to North Street. Based on input from schools, sidewalk installation is recommended to fill the network gap to complete access to the Hood School from surrounding neighborhoods. Project design was previously funded by the Planning Commission using Community Development Funds, and bid documents have been completed.

2. Central Street – Phase 1 (Park Street to Spruce Road - 0.871 miles) PCI: 29-55 Width: 24 ft ROW: 30 ft Speed Limit: 30 MPH* Walk Utility Score: 1.39-2.15 *Total Project Cost: \$1,066,000 Other Funding Source: \$829,000 Complete Streets Funding Component Requested: \$237,000*

Central Street is an important corridor connecting residential streets and senior housing with the Town Center, Ipswich River Park, Park Street (Route 62), North Street, and other local roads. From North Street to Ipswich River Park, there is no sidewalk on either side of the roadway. The roadway was reclaimed in 2015; during the public meeting process, there was overwhelming consensus by residents, including residents of 55+ housing developments along the corridor, that the addition of a sidewalk was badly needed. Sidewalk construction was initially funded as part of a private senior housing development; however, the project went bankrupt and the funding became unavailable. Install new sidewalk on the odd side of Central Street in conjunction with the roadway reclamation project.





3. Central Street – Phase 2 (Spruce Road to North Street - 0.663 miles)

PCI: 29-55Width: 24 ftROW: 30 ftSpeed Limit: 30 MPH* Walk Utility Score: 1.39-2.15Total Project Cost: \$875,000Other Funding Source: \$475,000Complete Streets Funding Component Requested: \$400,000

Central Street is an important corridor connecting residential streets and senior housing with the Town Center, Ipswich River Park, Park Street (Route 62), North Street, and other local roads. From North Street to Ipswich River Park, there is no sidewalk on either side of the roadway. The roadway was reclaimed in 2015; during the public meeting process, there was overwhelming consensus by residents, including residents of 55+ housing developments along the corridor, that the addition of a sidewalk was badly needed. Sidewalk construction was initially funded as part of a private senior housing development; however, the project went bankrupt and the funding became unavailable. Install new sidewalk on the odd side of Central Street in conjunction with the roadway reclamation project.

4. Chestnut Street Phase 1 (Haverhill Street to Flint Street - 0.644 miles)

PCI: 55-72Width: 22 ftROW: 40 ftSpeed Limit: 25-35 MPHWalk Utility Score: 0.21-1.59Total Project Cost: \$735,000Other Funding Source: \$335,000Complete Streets Funding Component Requested: \$400,000

Chestnut Street has existing sidewalk on one side varying from good to poor but it also has a network gap at different segments, one of which is from Haverhill Street to the Lynnfield Town Line. Installation of new sidewalk on the even side is recommended to fill the network gap for pedestrian access.

5. Chestnut Street Phase 2 (Flint Street to Lynnfield Town Line - 0.551 miles)PCI: 55-72 Width: 22 ft ROW: 40 ft Speed Limit: 25-35 MPH Walk Utility Score: 0.21-1.59Total Project Cost: \$585,000Other Funding Source: \$234,000Complete Streets Funding Component Requested: \$351,000

Chestnut Street has existing sidewalk on one side varying from good to poor but it also has a network gap at different segments, one of which is from Haverhill Street to the Lynnfield Town Line. Installation of new sidewalk on the even side is recommended to fill the network gap for pedestrian access.

6. Chestnut Street Phase 3 (Park Street to DPW Facility - 0.246 miles) PCI: 72 Width: 28 ft ROW: 40 ft Speed Limit: 35 MPH Walk Utility Score: 0.21-1.59 Total Project Cost: \$279,000 Other Funding Source: \$122,000 Complete Streets Funding Component Requested: \$157,000

This project would install sidewalk on the even side of Chestnut Street from Park Street to the Public Works facility.





7. Lowell Road: (Abbott Road to Edgewood Apartments) North Street: (Lowell Road to Oak Avenue) - 0.767 miles

PCI: 55-72Width: 22 ftROW: 40 ftSpeed Limit: 25-35 MPHWalk Utility Score: 0.21-1.59Total Project Cost: \$593,000Other Funding Source: \$193,000Complete Streets Funding Component Requested: \$400,000

This project would install sidewalk on either side of Lowell Street from Abbott Road to 100 Lowell Street and the same on North Street from Lowell Street to Oak Avenue.

8. Elm Street (Route 62) (Green Meadow Drive to Middleton Town Line - 0.058 miles)PCI: 83 Width: 22 ft ROW: 34 ft Speed Limit: 35 MPH Walk Utility Score: 0-1.45Total Project Cost: \$44,000Other Funding Source: \$7,000Complete Streets Funding Component Requested: \$37,000

Elm Street extends easterly from the Towns Central Business District and has sidewalk on the one side in good condition except for the network gap between Green Meadow Drive and Middleton Town Line. Installation of new sidewalk is recommended to extend the sidewalk to the Town Line.

9. Park Street Phase 1 (Wilmington Town Line to Concord Street and Main Street to Winter Street – 1.54 miles)

PCI: 70-92Width: 24 ftROW: 46 ftSpeed Limit: 25-35 MPHWalk Utility Score: 0.07Total Project Cost: \$1,357,000Other Funding Source: \$957,000Complete Streets Funding Component Requested: \$400,000

Park Street provides access from Winter Street to the Wilmington Town Line. There is existing asphalt sidewalk on the odd side of the street in fair condition from Concord Street to Main Street while other segments have network gaps (e.g. from Main Street to Winter Street and from Concord Street to Wilmington Town Line). This project would provide sidewalk on the odd side of the street and correct the network gaps mentioned above.

10. Park Street Phase 2 (Central Street to Wilmington Town Line – 2.63 miles)PCI: 70-92 Width: 24 ft ROW: 46 ft Speed Limit: 25-35 MPH Walk Utility Score: 0.07Total Project Cost: \$147,000Other Funding Source: \$97,000Complete Streets Funding Component Requested: \$50,000

This project would include line striping for a separated bicycle lane as well as installing bike route signs from Central Street to the Wilmington Town Line.





11. Concord Street (Park Street to Wilmington Town Line – 1.14 miles)

PCI: 55 & 67Width: 31 ft ROW: 42 ftSpeed Limit: 30 MPH*Bike Utility Score: 0.18-0.34Total Project Cost: \$675,000Other Funding Source: \$625,000Complete Streets Funding Component Requested: \$50,000

Concord Street extends from Park Street to the Wilmington Town Line, connecting the Town Centers of both North Reading and Wilmington with sports and recreational facilities and manufacturing businesses along the corridor. Bicycle lane marking and bicycle sign installation is recommended to provide access to these facilities and to encourage a bike to work environment. This project was identified in the 2005 North Suburban Regional Bicycle Transportation Plan (Segment NR-2).

12. Marblehead Street Phase 1 (Little Meadow Way to Ten Rod Way – 0.62 miles)

PCI: 50-67 Width: 18-24 ft ROW: 34&38 ft Speed Limit: 30 MPH* Walk Utility Score: 0.06-0.134

Total Project Cost: \$827,000Other Funding Source: \$432,000Complete Streets Funding Component Requested: \$395,000

Marblehead Street provides access from J. Turner Hood School to the North Andover Town Line. New Sidewalk installation is recommended on the even side from approximately 630 feet west of Little Meadow Way to Ten Rod Way.

13. Marblehead Street Phase 2 (Ten Rod Way to North Andover Town Line – 0.95 miles)PCI: 50-67Width: 18-24 ftROW: 34&38 ftSpeed Limit: 30 MPH*Walk Utility Score: 0.06-0.134Total Project Cost: \$1,004,000Other Funding Source: \$604,000Complete Streets Funding Component Requested: \$400,000

Marblehead Street provides access from J. Turner Hood School to North Andover Town Line. New Sidewalk installation is recommended on the even side from Ten Rod Way to the North Andover Town Line.

14. Proposed Rail Trail (Route 28 to Lynnfield Town Line- 2.44 miles)

Total Project Cost: \$670,000Other Funding Source: TIP/Town FundComplete Streets Funding Component Requested: N/A

The former Boston & Maine Railroad right-of-way extends through North Reading south of Route 62 from Wilmington on the west to Lynnfield on the east, passing near the Town Center and through Ipswich River Park. During the past year, residents have been contacting the Town about reclaiming this disused right-of-way as a rail trail with increasing frequency. Although portions of the right-of-way contain encroachments or wetlands, the Town is exploring the feasibility of combining portions of the rail bed with segments of on-street bicycle facilities to create a cross-town bicycle route, with ultimate plans to create connections to the Independence Greenway in Middleton and Peabody.





15. Park Street, Peabody Street, Haverhill Street, Elm Street, Tower Street, Hill StreetTotal Project Cost: \$260,000Other Funding Source: \$199,000Complete Streets Funding Component Requested: \$61,000

This project would include an upgrade of crosswalks and non-compliant wheel chair ramps on Park Street, Peabody Street, Haverhill Street, Elm Street, Tower Street, and Hill Street.

16. Elm Street, Washington Street, Park Street (Route 62) (Middleton Town Line to Central Street–3.36 miles)

Width: 20-31 ft ROW: 38-46 ft Speed Limit: 25-35 MPH Bike Utility Score: 0.042 - 1.47Total Project Cost: \$556,000Other Funding Source: \$522,000Complete Streets Funding Component Requested: \$34,000

Bike lane marking as well as bike sign installation is proposed along Elm Street, Washington Street, and Park Street from the Middleton Town Line to Central Street. This project was identified in the 2005 North Suburban Regional Bicycle Transportation Plan (Segment NR-1).

17. Haverhill Street (North Andover Line to Park Street – 2.12 miles)

PCI: 48-75Width: 24 ft ROW: 40 ft Speed Limit: 30-40 MPHBike Utility Score: 0 - 1.48Total Project Cost: \$1,173,000Other Funding Source: \$1,151,000Complete Streets Funding Component Requested: \$22,000

Shared lane marking as well as bike sign installation is proposed along Haverhill Street from the North Andover Town Line to Park Street. This project was identified in the 2005 North Suburban Regional Bicycle Transportation Plan (portions of Segment NR-7).

18. Chestnut Street / Haverhill Street (Park Street to Reading Town Line – 1.96 miles)Width: 22-28 ft ROW: 40 ft Speed Limit: 25-40 MPHBike Utility Score: 0 - 1.83Total Project Cost: \$553,000Other Funding Source: \$539,000Complete Streets Funding Component Requested: \$14,000

Shared bike lane as well as bike sign installation is proposed along Chestnut and Haverhill Streets from Park Street to the Reading Town Line. This project was identified in the 2005 North Suburban Regional Bicycle Transportation Plan (portions of Segment NR-6).

19. Radar Speed Signs - Townwide

Total Project Cost: \$20,000Other Funding Source: N/AComplete Streets Funding Component Requested: \$20,000

This project would fund the purchase of portable and/or fixed radar speed signs for traffic calming and data collection at various locations.





Projects on State Highway

In addition to the above projects located on roadways under the Town's jurisdiction, critical sidewalk gaps were identified along Main Street (Route 28) in the Town Center, which is under the jurisdiction of the Massachusetts Department of Transportation (MassDOT). Although these projects are ineligible for Tier 3 funding assistance through the Complete Streets program, they are included in the Prioritization Plan to highlight the importance of completing these network gaps.

S1. Main Street (Rte. 28) Phase 1 (Lowell Street to North Street – 0.62 miles)

Complete Streets Funding Requested: \$0 Other Funding Source: \$395,000

Installation of sidewalk on the odd side of Main Street is recommended from Lowell Street to North Street with the purpose of connecting intermittent sidewalk gaps.

S2. Main Street (Rte. 28) Phase 2 (Eaton Avenue to North Street – 0.60 miles) Complete Streets Funding Requested: \$0 Other Funding Source: \$383,000

Installation of sidewalk on the odd side of Main Street from Easton Avenue to North Street is recommended with the purpose of connecting intermittent sidewalk gaps. This project was identified as a priority by the North Reading Commission on Disabilities.

S3. Winter Street at Main Street Intersection (Rte. 28)

Complete Streets Funding Requested: \$0 Other Funding Source: \$28,000

Replacement of all non-compliant wheelchair ramps as well as upgrading the crosswalks at the intersection of Winter Street and Route 28 as well as at the Crescent Village Homes Driveways is recommended. This project was identified as a priority by the North Reading Commission on Disabilities.

30 MPH* - Prima facie speed; no special speed regulation

