5 Implementation Plan

Section 4 presented detailed recommendations for transportation improvements and land use strategies in the Route 6 Hop River corridor. This section outlines how the transportation improvements can be implemented over time through a series of projects and provides guidance on the implementation process.

5.1 Improvement Program

The overall transportation improvement program consists of 27 potential projects and initiatives that, once implemented, will accomplish the recommendations presented in Section 4. The details of these potential projects are presented in the following sections.

5.1.1 Project Definitions

Projects in the improvement program are defined by project location, type, and priority.

Project Location

The project location is either specific to one of the four corridor towns (Bolton, Coventry, Andover, or Columbia), or applies to more than one town, in which case the location is considered "multi-town."

Project Type

The project type is classified as small, medium, or large based on three criteria – implementation time, complexity, and approximate construction cost. The project types and their associated criteria are summarized in Table 5-1.

Table 5-1. Project Type Summary

Project Type	Implementation Time	Complexity	Approximate Construction Cost
Small Project	Less than 5 years	Low – Moderate	Low: Less than $2 million
Medium Project	6 – 10 years	Moderate	Moderate: $2 million - $5 million
Large Project	More than 10 years	Moderate – High	High: Greater than $5 million

Implementation time refers to the approximate length of time that is required to complete a project; it is measured from when the project is initiated (see Section 5.2.1, page 5-23, for discussion on project initiation) to when construction is completed.

Project complexity is a qualitative measure that reflects the level of engineering required to implement the project and the level to which the project will impact rights-of-way (ROW), environmental resources, or utilities. As the complexity of the project increases, the timeframe required to implement the project increases. For the purposes of this implementation plan, the various levels of project complexity are defined as follows:

- **Low Complexity.** Little or no additional planning required. Limited design effort. Typically limited or no utility, environmental, or ROW impacts.
- **Moderate Complexity.** Some additional planning required. Detailed design effort. Typically some utility, environmental, or ROW impacts.
- **High Complexity.** Significant planning and design efforts could be required. Typically significant utility, environmental, or ROW impacts.

The provided approximate construction costs are planning-level approximations of the cost of building the project, exclusive of allowances for utility relocations, ROW acquisition, site remediation, and engineering. Costs are reported in 2012-dollars and were estimated using a methodology consistent with CTDOT's latest *Preliminary Cost Estimating Guidelines*[1].

Project Priority

The project priority is reported in terms of transportation priority and community priority. There are three grades of transportation priority which are generally defined based on the relative need and urgency for the safety, accessibility, and/or mobility improvements provided by each project. More specifically, transportation and community priorities are defined as:

Transportation Priorities:

- ★★★ There is an urgency to initiate the project due to a critical safety need and significant safety benefits. There are some moderate to significant accessibility or mobility benefits of the project.
- ★★ There is a moderate level of safety benefit from the project, but there is no urgency to initiate the project based on safety need. There are some accessibility or mobility benefits of the project.
- ★ There may be some safety benefit from the project, but there is no safety need. There may be some accessibility or mobility benefits of the project.

Community Priorities:

- Community priority will generally be defined based on the REDC's preference for which projects should be initiated first, and in addition to transportation elements, takes into account non-transportation elements including potential for economic development, aesthetic value, and community vision.

[1] The methodology outlined in CTDOT's *Preliminary Cost Estimating Guidelines* consists of estimating quantities and prices for major construction items (such as excavation, pavement, curbing, sidewalk, drainage, traffic signals) and applying factors (as a percentage of the sum of major items) to account for minor items (25%), lump sum items (14.5%, including mobilization and traffic control), incidental items (25%-30%), and contingencies (10%).

All transportation priorities referenced in this plan were assigned based on input from the REDC and CRCOG. In general, these priorities, as well as community priorities, are subjective and should be reviewed on an as-needed basis in the future as the implementation of the projects in this plan evolves. This review should be conducted with input from the individual towns, REDC, CRCOG, WINCOG, and CTDOT.

5.1.2 Bolton Projects

The overall improvement program includes eight potential projects that are located in Bolton. Of these projects, two are considered small; five are medium; and one is large. Two projects are considered top (★★★) transportation priorities.

This section describes each of the Bolton projects and provides a summary of the project type, project priority, and approximate construction cost for each.

1. Bolton Notch – Interim Safety Improvements at Notch Road Bolton

Summary: Mitigate safety concerns at Notch Road by improving intersection warning signage and sight lines.

Project Type: Small
Cost: $200,000
Priority: ★★

This project includes:

- Installing a new dynamic intersection warning sign on the eastbound approach to replace the existing warning sign for Notch Road. Flashing beacons for the new sign would only be activated by vehicles waiting on the Notch Road approach to Route 6/Route 44.
- Improving sight lines from Notch Road by removing rock ledge and vegetation.

See Section 4.1.2 for other recommendations in the Bolton Notch Focus Area.

2. Bolton Notch – Low-speed Boulevard Improvements — Bolton

Summary: Relocate the Route 6/44 expressway terminus to the west and implement low-speed boulevard improvements along Route 6/44 overlap to encourage slower speeds into the corridor.

Project Type: Medium
Cost: $3.0 mill.
Priority: ★

This project requires the reclassification of the section of Route 6/44 between the existing eastbound Route 6 flyover and Notch Road from a principal arterial – expressway to principal arterial – other.

Physical improvements include providing a tree-lined median, narrower shoulders, and smaller-scale signing that are consistent with a 40 mph roadway.

Note: The approximate construction cost for this project includes boulevard improvements between the existing eastbound Route 6 flyover and Notch Road. Boulevard improvements east of Notch Road are included under Project 3 (below, this page).

See Section 4.1.2 for more details about the recommendations in the Bolton Notch Focus Area.

3. Bolton Notch – Notch Road Ext. and Route 6/44 Improvements — Bolton

Summary: Modify the junction of Route 6 and Route 44 to enhance safety and to improve connectivity between Route 6, Route 44, and Notch Road.

Project Type: Large
Cost: $25 mill.
Priority: ★★★

This project would implement the recommendations of the preferred concept for the Bolton Notch Focus Area (see Section 4.1.2 for details) and would include:

- Extending Route 44 as a low-speed boulevard through the junction
- Providing Notch Road Extension to connect to Route 44 just west of Quarry Road
- Providing new ramp connections between Notch Road Extension and Route 6
- Providing new multimodal connections and accommodations within the junction.

Note: Project 2 (above, this page) should be implemented prior to or in conjunction with the improvements of this project. Modifications to the Route 6/44 overlap to encourage reduced speeds approaching the junction is a key component of the overall improvements for Bolton Notch.

See Section 4.1.2 for more details about the recommendations in the Bolton Notch Focus Area.

4. Bolton Notch – Pedestrian and Bicycle Improvements — Bolton

Summary: Construct a new shared use path along westbound Route 44 to improve pedestrian and bicycle connectivity through Bolton Notch.

Project Type: Small
Cost: $300,000
Priority: ★★

This project includes construction of a 10 ft wide shared use path along the north side of westbound Route 44 between the Hop River Trail trailhead at Bolton Notch State Park and Quarry Road. The path will improve bicycle and pedestrian access from Route 44 east through the Route 6/44 junction where non-motorized access is prohibited on the roadway.

The alignment of the path should minimize potential impacts to rights-of-way and existing utilities. Where feasible, the alignment should also be consistent with the other recommendations in the Bolton Notch Focus Area.

See Section 4.1.2 for other recommendations in the Bolton Notch Focus Area.

5. Bolton Crossroads – Route 6 Speed Mitigation — Bolton

Summary: Implement low-speed village arterial improvements along Route 6 between Bolton Notch and the eastern limit of the future village to encourage slower speeds.

Project Type: Medium
Cost: $2 mill.
Priority: ★★★

This project includes providing landscaped medians (where possible considering left turn lanes and access needs); 11 ft travel lanes, 5 ft outside shoulders, and street trees along Route 6 within the limits of the future Bolton Crossroads village.

See Section 4.1.3 for more details about the recommendations in the Bolton Crossroads Focus Area.