

4

Recommendations

This section presents detailed recommendations for transportation improvements and land use strategies in the Route 6 Hop River corridor. These recommendations were developed to address identified needs and issues as they relate to vehicular and multimodal safety, mobility, and accessibility in the corridor; and to build upon and complement the recommendations of the Regional Economic Development Council’s recently-completed *Route 6 Regional Economic Development Strategy and Master Plan Study* (REDC, 2010; hereafter referred to as *REDC’s 2010 Study*).

For the purposes of this plan, the recommendations are organized and presented in four general categories including:

- **‘Focus Area’ Recommendations** (described in Section 4.1). Five locations in the Route 6 Hop River corridor were identified by stakeholders as focus areas for in-depth study. The improvements and strategies developed for these focus areas propose to significantly change the character of Route 6 and/or adjacent land uses in order to address transportation issues, and to complement long-term visions for these areas that were developed under the REDC’s 2010 Study. The focus area recommendations are generally comprehensive in that they address all of the various safety, mobility, and accessibility issues within the focus area.
- **Other Access and Safety Recommendations** (described in Section 4.2). These recommendations address specific vehicular access and safety needs at side roads, along Route 66 East, and other locations outside the limits of the five focus areas. These recommendations also address access management and incident management issues in the corridor.
- **Multimodal Recommendations** (described in Section 4.3). These recommendations address specific needs relative to pedestrian, bicycle, transit, and Hop River Trail facilities in the corridor. Some of the recommendations address multimodal needs within the focus areas, but these recommendations are generally more short term and could be implemented independently of the focus area improvements.
- **Green Infrastructure Recommendations** (described in Section 4.4). These recommendations address the importance of incorporating environmentally-sensitive design elements into the future roadway and development projects that are ultimately constructed in the study corridor.

Taken as a whole, the recommendations of this plan will support the long-term viability of the corridor as a regional transportation link and economic growth opportunity. However, as a whole, the recommendations will require many years and significant capital investment to implement. How these recommendations can be implemented over time as a series of projects is discussed in Section 5, *Implementation Plan*.

4.1 'Focus Area' Recommendations

Five locations in the Route 6 Hop River corridor were identified by stakeholders as focus areas for in-depth study. These focus area locations are shown in Figure 4-1 and include:

- Bolton Notch.** Located at the junction of Route 6 and Route 44 in Bolton. Bolton Notch was identified as a focus area because of its importance as the western gateway to the Route 6 corridor and because of the Town of Bolton's expressed priority of addressing safety at the Notch Road intersection, and providing full directional access between Notch Road, Route 44, and Route 6. A number of improvement concepts were vetted for this location, each of which investigated alternative configurations to the existing Route 6/Route 44 intersection. Ultimately, the preferred concept¹ for Bolton Notch (described in Section 4.1.2) retains the interchange nature of the intersection to maintain traffic capacity and mobility, while modifying the layout to improve safety for Notch Road and to improve overall connectivity between routes and modes in this area.

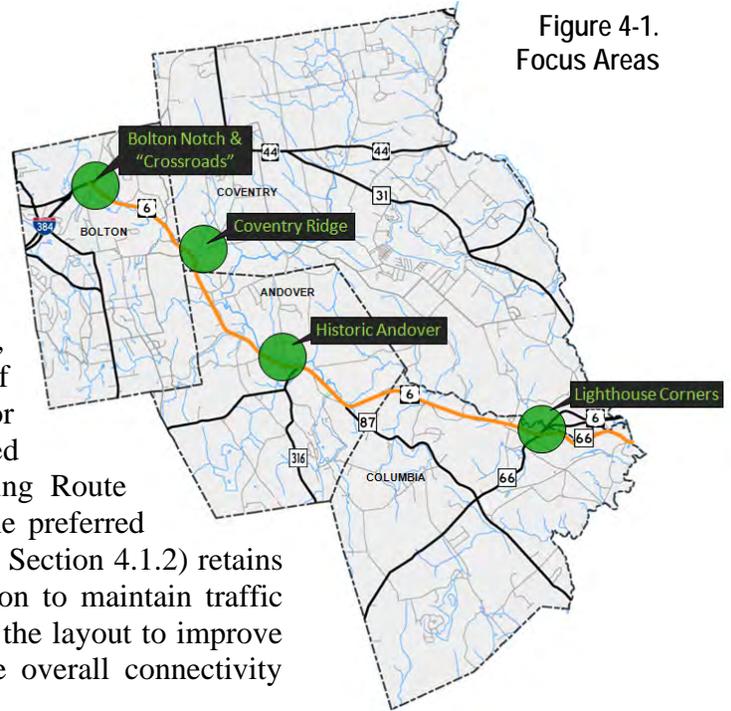


Figure 4-1.
Focus Areas

- Bolton Crossroads.** Located at and around Bolton Ice Palace and Munson's Chocolates in Bolton. The *Crossroads* moniker for this area was a product of REDC's 2010 Study, which included recommendations for a future development node here as part of the study's Corridor Master Plan. Crossroads was identified as a focus area of this study because of a recognized opportunity to significantly change the character of Route 6 in this area to help create a village context for future transportation and development. The preferred concept for Crossroads (described in Section 4.1.3) includes recommendations for new local streets and physical changes to Route 6 that will accommodate and support a future development node in this area.
- Coventry Ridge.** Located west of South Street and north of Route 6 in Coventry. REDC's 2010 Study included recommendations for a future development node on a large, undeveloped parcel located north of Route 6 in Coventry. *Coventry Ridge*, as the node was termed, was identified as a focus area of this study to assess site access opportunities from Route 6. The preferred concept (described in Section 4.1.4) includes recommendations for site access to be provided from a new South Street alignment.

See Section 4.1.1 for details on creating village context in the Route 6 Hop River corridor.

¹ Preferred concepts, as they are referred to in this document, were selected as "preferred" by REDC representatives after a thorough assessment of alternative concepts in each of the focus areas. The development of the concepts was carried out through an iterative planning process involving direct input from the REDC, CRCOG, CTDOT, and local stakeholders. See Appendix 5.1 for a Concept Development Summary, including discussion on other alternatives in Bolton Notch, Historic Andover, and Lighthouse Corners focus areas.

- **Historic Andover.** Located west of Long Hill Road and north of Route 6 in Andover. REDC’s 2010 Study included recommendations for a future development node in Historic Andover as part of the study’s Corridor Master Plan, though no specific development concepts were proposed. This area was identified as a focus area of this study because of a recognized opportunity to significantly change the character of Route 6 in Historic Andover to help create a village context for future transportation and development opportunities. Several concepts were vetted for this location, including alternatives to realign a short segment of Route 6 in this area. Ultimately, the preferred concept for Historic Andover (described in Section 4.1.5) includes recommendations for several new local streets and changes to existing Route 6 that will accommodate and support a future development node in this area and provide future opportunities to enhance the village and its connectivity to the nearby Hop River Trail.
- **Lighthouse Corners.** Located at the intersection of Route 6 and Route 66 in Columbia. The *Lighthouse Corners* moniker for this area was a product of REDC’s 2010 Study, which included recommendations for a future development node here as part of the study’s Corridor Master Plan. Lighthouse Corners was identified as a focus area of this study because of safety issues and a high accident history at the existing intersection. Like Historic Andover and Bolton Crossroads, there is a recognized opportunity to significantly change the character of Route 6 to help create a village context for future transportation and development opportunities at Lighthouse Corners, while also creating an aesthetic gateway to the corridor. The preferred concept for Lighthouse Corners (described in Section 4.1.6) includes recommendations for a modern two-lane roundabout to replace the existing signalized intersection, and recommendations for new local streets and changes to Route 6 that will accommodate and support a future development node in this area.

4.1.1 Creating Village Context

The Bolton Crossroads, Historic Andover, and Lighthouse Corners focus areas all include recommendations to create village context for future transportation and development opportunities along Route 6. The purpose of creating village context in these discrete areas is to effect changes in driver behavior that will translate to slower speeds and safer travel conditions on Route 6, making these areas more attractive and accessible for development, and making them more bicycle and pedestrian-friendly. Achieving the village context as it is envisioned in each of these three focus areas will require significant changes to both the adjacent land uses and the supporting roadway network that will occur gradually over time.



The REDC identified the character of New Hartford’s village center, located along Route 44 in Connecticut, as a desirable model for the character of future village areas along Route 6.

Land Uses

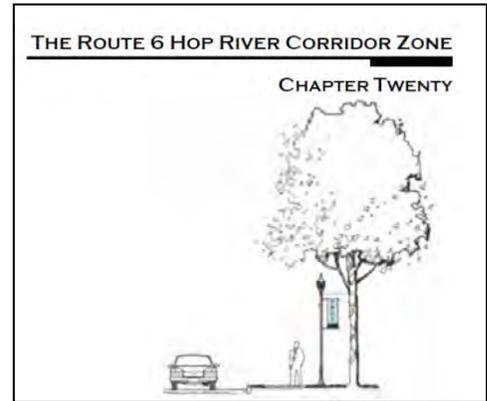
The mechanism to change land uses within these three focus areas is the Corridor Zone, which is a new, unified zoning regulation for the four-town Route 6 Hop River corridor that was developed under REDC's 2010 Study. Once it is adopted by each of the four towns, the Corridor Zone will promote economic growth in eight development nodes throughout the corridor – including Bolton Crossroads, Coventry Ridge, Historic Andover, and Lighthouse Corners.

Characteristics of future development within the nodes would include:

- Village-scale development and density.
- Mixed-use development consisting of office, retail, and residential uses in close proximity.
- New multi-story buildings located closer to Route 6.
- Parking provided on side or rear lots.

Roadway Network

The current design of Route 6, which provides for efficient and relatively high-speed travel between regional destinations, is generally not compatible with the desire to promote economic growth in development nodes, where safe access to local commercial and residential land uses will be required. Where possible, development nodes are located within reduced speed zones on Route 6 (Bolton Crossroads, Historic Andover, and Lighthouse Corners included) such that lower speeds in these areas would otherwise translate to safer access for new development. However, actual speed data shows that motorists generally do not respond effectively to the lower speed limits within reduced speed zones in the corridor. One explanation for this is the character of Route 6 itself, which is consistent throughout the length of the study corridor. Because the character of the roadway does not change between the higher speed sections and the reduced speed zones, there are no physical or psychological cues for motorists that would encourage a change in driving behaviors and a reduction in travel speeds.



Chapter 20 of REDC's 2010 Study includes proposed regulations for a unified Corridor Zone for the Route 6 Hop River Corridor in Bolton, Andover, Coventry, and Columbia.

Addressing Corridor Travel Speeds

- Speed data obtained for this study shows that speeding is a safety concern throughout the corridor.
- Within reduced speed zones (where speed limits are 40 or 45 mph), average speeds exceed posted speeds by 9 mph, on average.
- The recommended design of Route 6 within future villages is intended to encourage slower speeds by changing the character of the roadway and providing cues for motorists to reduce speeds.
- In addition to special design measures, speed monitoring and police enforcement will be a necessary component of speed management in the corridor.

As illustrated in Figure 4-2, Route 6 within and approaching Bolton Crossroads, Historic Andover, and Lighthouse Corners should be modified to provide a low-speed “village arterial” design that would incorporate the following:

- Speed mitigation measures that encourage vehicle travel speeds of 35 mph, consistent with a village context. Specific design elements include narrower travel lanes (11 ft instead of 12 ft); landscaped medians (not to preclude access to existing businesses); street trees; and dynamic speed display signs in key locations². It is noted that the use of alternative median treatments – such as depressed vegetated median strips that serve to handle stormwater runoff – or other green infrastructure elements could be explored and incorporated into the improvement recommendations during future design phases (see Section 4.4 Green Infrastructure Recommendations, p. 4-47, for more details).
- Sidewalks with streetscape elements and bike-safe shoulders (5 ft wide) to encourage walking and bicycling along Route 6.

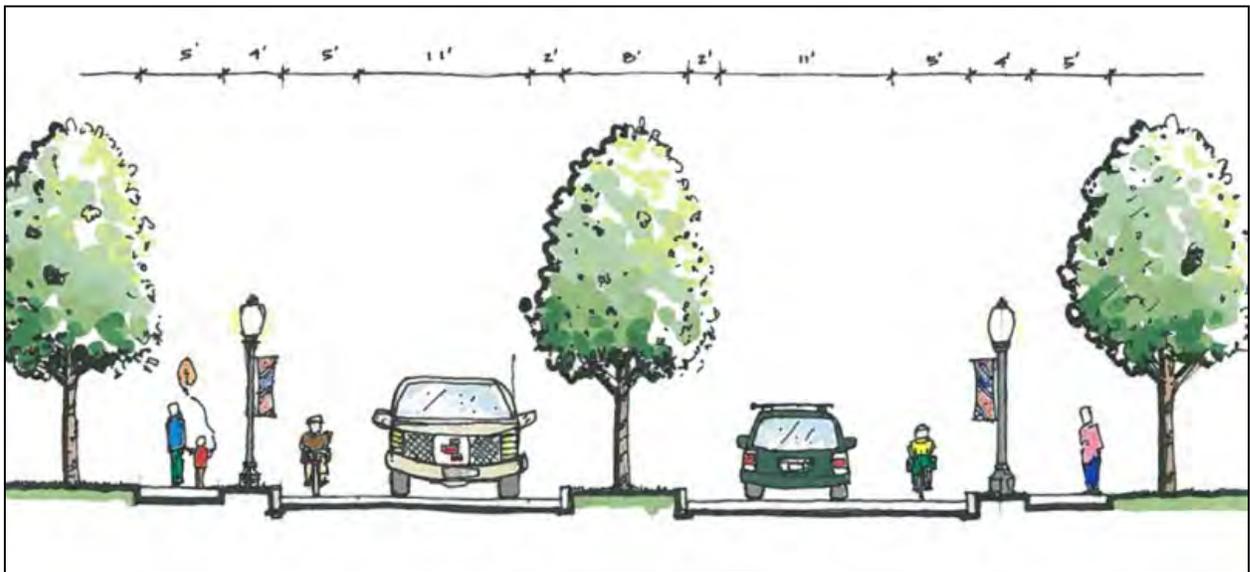


Figure 4-2. Recommended Low-speed Arterial Design for Route 6 in Village Areas

It is also recommended that small networks of new local streets be provided in a traditional grid pattern within the village areas. These streets would create the transportation framework for new development and would be the primary points of access from Route 6 to these developments. It is intended that, by relocating most Route 6 driveways to new local streets within the limits of each village, access to Route 6 would be consolidated to its intersections with the new local streets. These intersections would be appropriately designed with turn lanes on Route 6 and other access management measures (such as restricted left turns from some local roads) to minimize turning conflicts and preserve through traffic mobility.

² Street trees should be of columnar varieties (in the median) that reach no more than 4” in diameter at maturity if located within the median or within the roadside clear zone. Street trees and landscaped medians will have to be maintained by the towns under encroachment permits from CTDOT’s Maintenance and Construction District 1 (for Bolton, Coventry, and Andover) and District 2 (for Columbia).

4.1.2 Bolton Notch

The preferred concept for Bolton Notch, which is illustrated in Figure 4-3 (page 4-7), modifies the layout of the existing junction of Route 6 and Route 44 to improve connectivity between Bolton Center and Routes 6 and 44 via Notch Road, and to accommodate full access (from both eastbound and westbound directions) between Route 6 and Route 44. The preferred concept also provides opportunities for improved bicycle and pedestrian connectivity within the junction via a shared use path that would connect Route 44, Route 6, Notch Road, and the Hop River Trail.



Recommendations:

- Address high eastbound travel speeds into the junction by relocating the expressway terminus approximately a half-mile to the west (near the Route 6/Route 44 eastbound flyover). Reclassify the section of roadway between the Route 6/Route 44 flyover and Notch Road from a principal arterial – expressway, to a principal arterial – other, and change the roadway characteristics accordingly to encourage slower speeds. Provide a landscaped median, narrower shoulders, and smaller-scale signing that is characteristic of a low-speed, arterial boulevard and consistent with the posted speed limit of 40 mph (see Figure 4-4 for low-speed arterial boulevard concept, page 4-8).
- Extend the new, low-speed boulevard through the junction and transition to meet the existing two lane Route 44 located east of Quarry Road. Eliminate the existing eastbound Route 44 ramp and accommodate eastbound traffic along the new boulevard. Provide a new flyover carrying westbound Route 6 over Route 44 to accommodate the extension of the boulevard.
- Realign and extend Notch Road and provide a new Notch Road Extension that terminates at a new signalized intersection with Route 44. Relocate the existing eastbound Route 6 ramp to accommodate the Notch Road modifications. It is noted that the alignment of Notch Road Extension shown in Figure 4-3 represents one possible layout; there are alternative alignments (such as a through-roadway alignment) and alternative ramp intersection configurations that could be explored under subsequent engineering efforts.

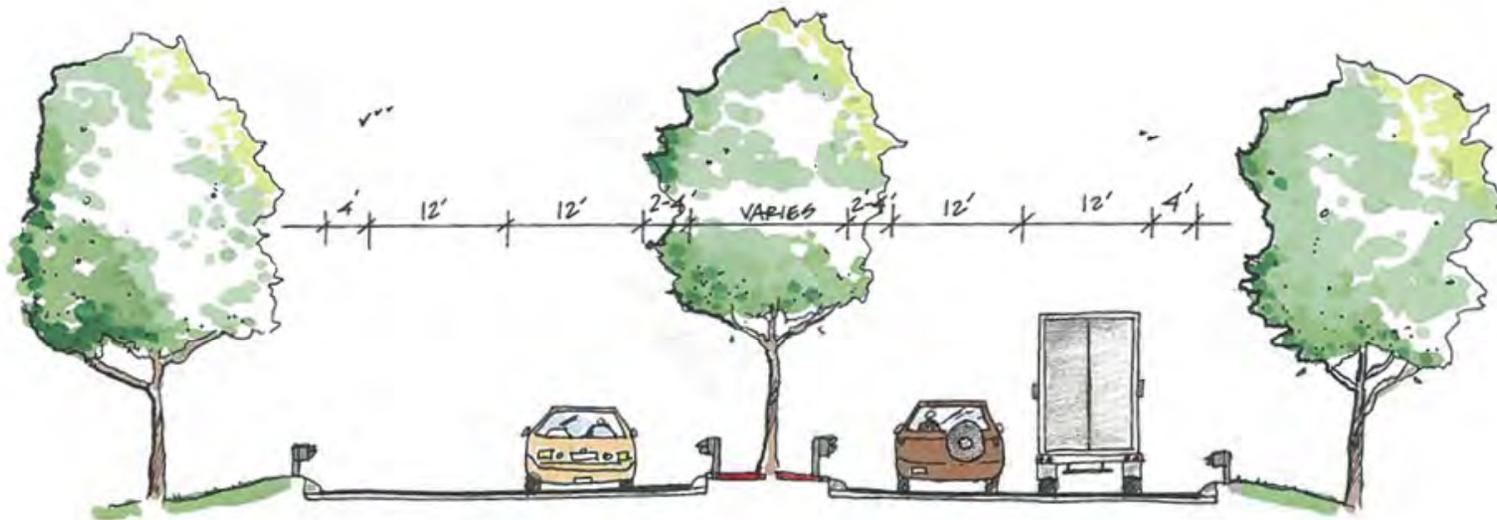
Summary of Issues in Bolton Notch:

- Safety and operational issues at the existing unsignalized intersection of Notch Road with Route 6/44 including inadequate sight distance and long delays.
- Lack of a connection between westbound Route 6 and eastbound Route 44, and between westbound Route 44 and eastbound Route 6.
- Lack of a direct connection from Notch Road to westbound Route 6 and from westbound Route 44 to Notch Road.
- Lack of bicycle and pedestrian access to the Hop River Trail and between roadways within the existing junction.
- High eastbound travel speeds entering the junction.
- Stakeholder concerns about the safety and convenience of emergency vehicle and school bus access to and from Bolton Center via Notch Road.

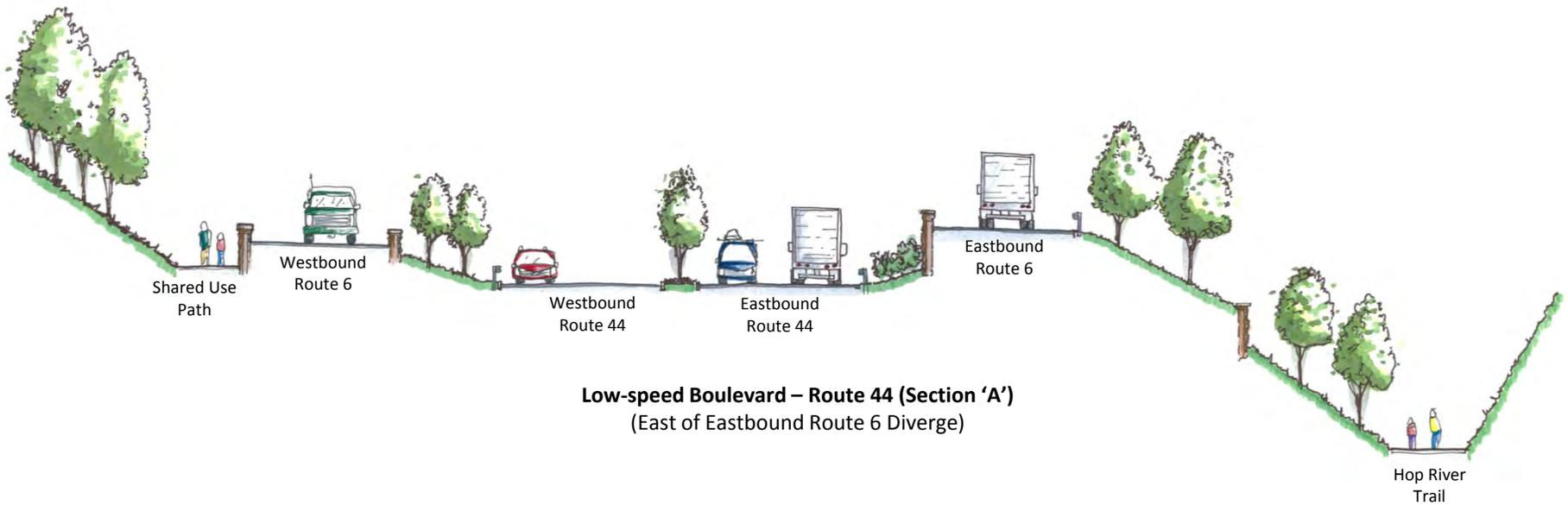



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Route 6 Hop River Corridor Transportation Study
 Figure 4-3.
 Bolton Notch Focus Area
 Preferred Concept



Low-speed Boulevard - Route 6/Route 44 Overlap
 (between Route 6/Route 44 Flyover and Notch Road)



Low-speed Boulevard – Route 44 (Section 'A')
 (East of Eastbound Route 6 Diverge)

Note: As shown in this figure, street trees located within a median or within the roadside clear zone should be no more than 4" in diameter at maturity, unless protected from vehicular collisions by guardrail. Street trees and landscaped medians will have to be maintained by the Town of Bolton under an encroachment permit with CTDOT's Maintenance and Construction District 1.

NOT TO SCALE

Route 6 Hop River Corridor Transportation Study

Figure 4-4.
 Route 6/Route 44
 Low-speed Boulevard Concept

Recommendations (Continued):

- Accommodate full directional access between Route 6, Route 44, and Notch Road by:
 - Providing a new ramp connection from Notch Road Extension (accessible from Route 44) to eastbound Route 6.
 - Providing a new ramp connection from westbound Route 6 to the new Notch Road Extension (accessible to Route 44).
- Coordinate the adjacent signalized intersections of Notch Road Extension and Quarry Road with Route 44 to optimize traffic operations. Resultant intersection operations are (LOS AM(PM)):
 - Notch Road Extension – LOS B(C)
 - Quarry Road – LOS B(B)
- Provide a new shared use path within the reconfigured junction that connects the Hop River Trail, Route 6, Route 44, and Notch Road. It is noted that the route of the path shown in Figure 4-3 represents one possible layout; there are other potential opportunities to enhance bicycle and pedestrian connectivity in the junction, as well as other alternative routes for a shared use path that could be explored under subsequent engineering efforts³.
- Provide a new trailhead with parking located off Route 44 opposite Notch Road Extension. This new trailhead with full directional signalized access to Route 44 and Notch Road Extension would be an alternative to the Hop River Trail access located off the expressway section of westbound Route 6/Route 44.
- Provide pedestrian accommodations (including high-visibility crosswalks, pedestrian signals, and sidewalk ramps) at the signalized Route 44 intersections with Notch Road Extension and Quarry Road. Additionally, provide pedestrian warning signs (with beacons, as deemed necessary), high-visibility crosswalks, sidewalk ramps, and short crossing distances for other shared use path crossings within the junction, particularly for those crossings located at the eastbound and westbound Route 6 ramp intersections with Notch Road Extension.
- Install a gateway sign for the Route 6 Hop River corridor along eastbound Route 6.

Design Considerations:

- Visibility of the traffic signal at the intersection of Route 44 and the new Notch Road Extension from eastbound Route 44 was a noted concern by CTDOT due to the proximity of the intersection to the new bridge carrying westbound Route 6 over Route 44. Subsequent engineering efforts will determine the actual vertical clearance of this structure and whether measures to mitigate sight line obstructions will be required.

³ One potential alternative route for the recommended shared use path has been suggested by CTDOT and includes a connection to the Hop River Trail at a point located between the tunnel under Route 44 and the proposed bridge for Notch Road Extension. The shared use path would continue through the junction between Notch Road Extension and the eastbound Route 6 alignment; continue under Route 6 along the north and west sides of Notch Road Extension; and cross to the east side of Notch Road Extension at the Route 44 intersection. This alternative route would replace the section of the shared use path illustrated in Figure 4-3 and located south of Route 44.

Design Considerations (Continued):

- The location of the merge of the eastbound ramp from Notch Road with eastbound Route 6 should be coordinated with the recommendations for Bolton Crossroads. Specifically, the location of eastbound traffic queues for a potential signal at Bolton Crossroads should not interfere with merge operations. It is noted that alternative locations for the merge, such as downstream of a signal at the future Bolton Crossroads intersection, could be evaluated along with other geometric requirements of the merge area during subsequent engineering efforts.

Potential Impacts and Constraints:

- **Historic Resources.** Squaw Cave is a historic landmark located in Bolton Notch State Park on the rocky hillside immediately north of the existing westbound Route 44 ramp. To avoid potential impacts to this landmark, the realigned westbound Route 6 should be aligned to not encroach beyond the footprint of existing westbound Route 44.
- **Bridge Structures.** The proposed improvements will require modification (lengthening) of the existing tunnel/bridge structure that conveys the Hop River Trail under Route 6/Route 44. The existing bridge structures carrying Notch Road over the Hop River Trail and westbound Route 6 over Route 44 will be demolished and replaced with new structures.
- **Rights-of-way.** Implementation of the preferred concept will impact up to nine properties, five of which are undeveloped, and three of which are currently owned by the State of Connecticut. No private structures are impacted, and no relocations are anticipated.
- **Environment.** No wetland or floodplain impacts are likely in this area.

4.1.3 Bolton Crossroads

The preferred concept for Bolton Crossroads, which is illustrated in Figure 4-5 (page 4-12), is derived from the original Bolton Crossroads concept that was included in the Corridor Master Plan developed under REDC’s 2010 Study. Similar to the original concept, the preferred concept illustrates potential development opportunities located near the Bolton Ice Palace that are consistent with the development that would be accommodated within the context of a node as it is defined in the proposed Corridor Zone.

The preferred concept includes provisions for a small network of local streets and physical changes to Route 6 that will accommodate and support the community’s long-term vision for a pedestrian and bicycle-friendly mixed-use village in this area. The physical changes to Route 6 include access management measures and speed mitigation measures to promote safety, and streetscape improvements to create a western gateway, or sense of arrival, for travelers as they enter the Route 6 Hop River corridor. The preferred concept also includes a new street connection between Route 6 and Route 44 that will provide access for additional development opportunities.

Recommendations:

- Locate the primary *Crossroads* intersection (intersection of Route 6 and the new street connection between Route 6 and Route 44) approximately 500 ft east of the existing Bolton Ice Palace driveway to minimize approach grades on Route 6, maximize distance from the Bolton Notch improvements, and to maximize future development potential adjacent to Munson’s Chocolates on the north side of Route 6. It is not practical to locate the intersection any further east due to environmental constraints on the north side of Route 6 in this area.

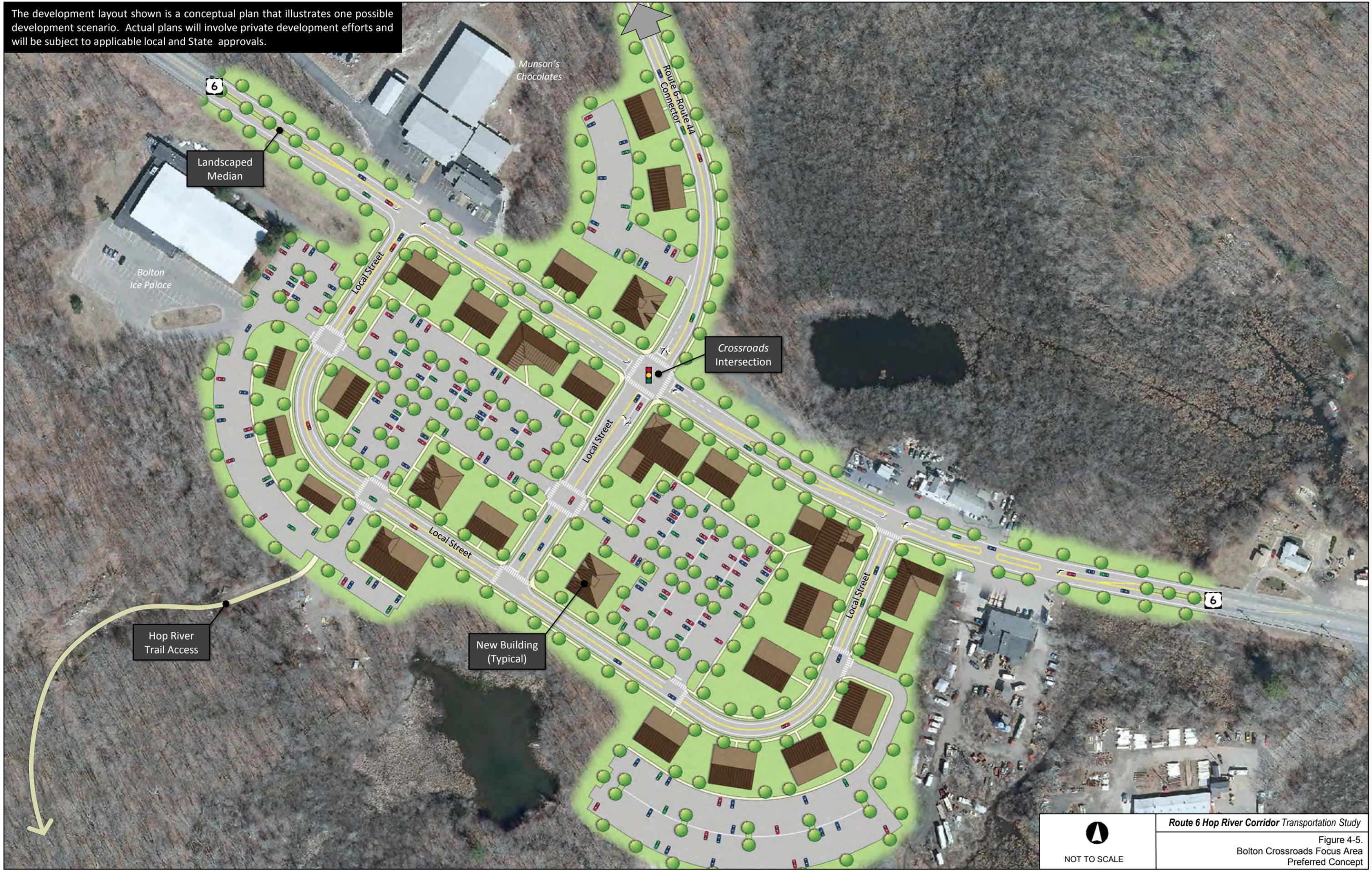


The original Bolton Crossroads concept, shown here from the Corridor Master Plan, included a new business park development located north of Route 6 (to be serviced by a new boulevard connecting Route 6 to Route 44), and a new mixed-use village development located south of Route 6. Access to these developments would be provided via a single new intersection (likely to be signalized) located just east of the Munson’s Chocolates retail store. The original concept also included provisions for landscaped medians and streetscape features on Route 6 in this area.

Summary of Issues for Bolton Crossroads:

- Relatively high eastbound travel speeds entering the area.
- Effects of the grade of Route 6 on westbound traffic operations, particularly trucks during inclement winter weather.
- Potential of exacerbating the effects of the grade by introducing a potential new traffic signal.

The development layout shown is a conceptual plan that illustrates one possible development scenario. Actual plans will involve private development efforts and will be subject to applicable local and State approvals.



Route 6 Hop River Corridor Transportation Study
Figure 4-5.
Bolton Crossroads Focus Area
Preferred Concept

Recommendations (continued):

- Modify Route 6 within and approaching the village limits to provide: landscaped medians (where possible considering left turn lanes and access needs), 11 ft travel lanes, 5 ft outside shoulders, and street trees. The change in roadway appearance and narrowing of the pavement surface would affect driving behavior and encourage reduced travel speeds, thereby improving safety for motorists, bicyclists, and pedestrians within the village.
- Construct a new two-way local street (or development road) from the *Crossroads* intersection north to Route 44 to provide access to future development opportunities and to provide a relatively direct connection between Route 6 and Route 44. The street would be approximately 3600 ft long and would traverse two properties – one owned by the State of Connecticut and one owned by a private entity. The north end of the street could align with existing Howard Road, which would require some improvement of Howard Road, or could follow an alternative alignment depending on site constraints and other access considerations at Route 44.
- Provide a small network of two-way local streets on the south side of Route 6 to accommodate access to the village development and to accommodate on-site circulation for bicyclists, pedestrians, and motorists.
- Manage commercial access to Route 6 by encouraging shared parking lots with access from a limited number of new local streets or shared driveways.
- Provide sidewalks along portions of Route 6 and on new local streets to promote walking between destinations within the village.
- Provide Hop River Trail access with dedicated trailhead parking from the new village.

Future Development Considerations:

- The preferred vision involves development located along a new north-south connector roadway between Route 6 and Route 44, and build out of a mixed-use village located south of Route 6. Figure 4-5 is a conceptual plan that illustrates one possible development scenario for the area south of Route 6. Actual future development – both in terms of location, intensity, and character – will be dependent upon private developers to propose and implement through the typical site plan review process of both the Bolton Planning and Zoning Commission and the REDC.

As shown in the figure, the potential new floor area is approximately 90,000 sf. There are approximately 315 parking spaces shown for this development area, which equates to approximately 3.5 spaces per 1000 sf. It is assumed that parking demands for the proximate, mixed uses will reflect some shared parking efficiencies.

Design Considerations:

- Provide signalization for the new *Crossroads* intersection when required based on future signal warrants and traffic generation associated with future development in the area. Any future development proposal would likely be subject to the certification requirements of the Office of the State Traffic Administration (OSTA). The certification process would determine whether signalization of the intersection would be required at a cost to the developer.

Design Considerations (continued):

- The improvements for Bolton Crossroads should be coordinated with the recommendations for Bolton Notch. Specifically, traffic demands at the future *Crossroads* intersection may or may not require additional approach lanes on Route 6 (compared to the approach lane configuration shown in Figure 4-5) and the resultant eastbound traffic queues could affect the location of the upstream merge for eastbound Route 6 and the ramp from Notch Road. Subsequent engineering efforts would resolve these coordination issues.

Potential Impacts and Constraints:

- **Rights-of-way.** Implementation of the preferred concept will impact up to 10 properties, two of which are undeveloped, and one of which are currently owned by the State of Connecticut. Five relocations are anticipated.
- **Environment.** Some minor impacts to floodplains and wetlands are possible. The magnitude of the impacts, both permanent and temporary, will depend on the actual layout of streets and buildings within the village.

4.1.4 Coventry Ridge

The preferred concept for Coventry Ridge, which is illustrated in Figures 4-6A and 6B (pages 4-16, 17), relocates South Street to the west to provide an improved intersection with Route 6 and to accommodate access to developable lands. In support of the community’s vision for a future development node in this location, the relocated South Street provides access to a key undeveloped 100-acre Coventry parcel located northwest of the existing Route 6/South Street intersection. By relocating South Street, the existing undesirable intersection with Route 6 is eliminated; roadway conditions on South Street are improved for local through traffic, adding increased visibility to the Coventry Ridge development; and the new South Street intersection becomes the “gateway” to Coventry from the Route 6 Hop River corridor.

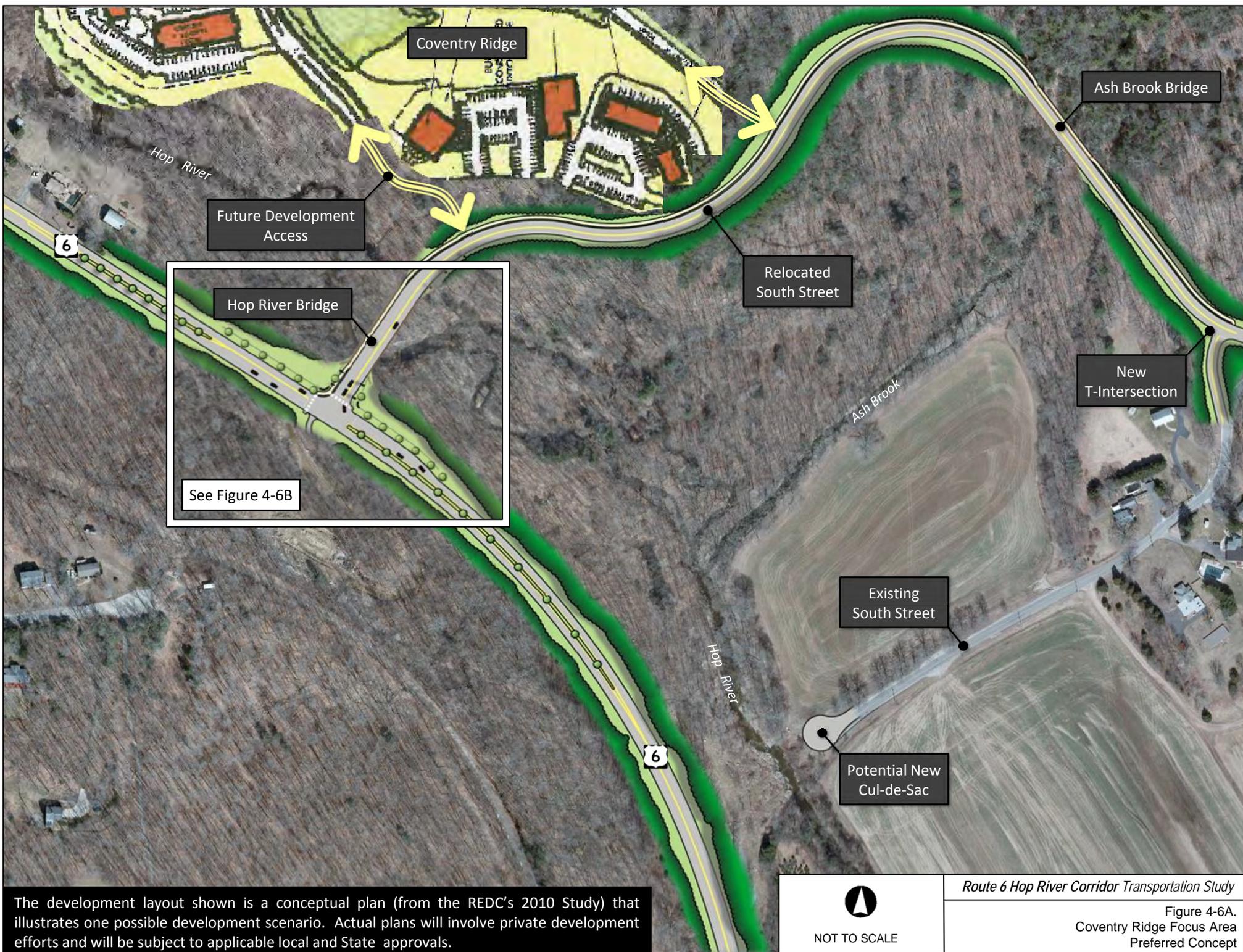


Summary of Issues for Coventry Ridge:

- New access needed from Route 6 to service development opportunities on the Coventry parcel.
- Undesirable South Street approach to Route 6 and awkward intersection geometry.
- Non-standard curvature and grades on existing South Street near the Coventry parcel.

Recommendations:

- Relocate the South Street intersection approximately 1400 ft to the west of its existing location. This involves realigning approximately 2900 ft of South Street and constructing two new bridge structures to span Hop River and Ash Brook and their associated floodways.
- Eliminate the existing South Street intersection and remove the existing bridge over Hop River, or consider other opportunities for existing South Street (see *Design Considerations*, page 4-19, for other opportunities). Realign approximately 300 ft of existing South Street to provide a “T” intersection with the new/relocated South Street.
- Modify Route 6 on the approaches to the new intersection to provide: landscaped medians, 11 ft travel lanes, and 5 ft outside shoulders. The change in roadway appearance and narrowing of the pavement surface in the vicinity of the new intersection would affect driving behavior and encourage reduced travel speeds, thereby improving safety for turning vehicles. The overall required roadway width of 43 ft would be approximately the same width as the existing pavement surface generally requiring no significant widening.
- Provide signalization for the new intersection as required based on future signal warrants and traffic generation associated with future development on the Coventry parcel. Any future development proposal would likely be subject to the certification requirements of the Office of the State Traffic Administration (OSTA). The certification process would determine whether signalization of the intersection would be required at a cost to the developer.



The development layout shown is a conceptual plan (from the REDC's 2010 Study) that illustrates one possible development scenario. Actual plans will involve private development efforts and will be subject to applicable local and State approvals.


 NOT TO SCALE

Route 6 Hop River Corridor Transportation Study
 Figure 4-6A.
 Coventry Ridge Focus Area
 Preferred Concept




 NOT TO SCALE

Route 6 Hop River Corridor Transportation Study
 Figure 4-6B.
 Coventry Ridge Focus Area
 Preferred Concept



Figure 4-7. View Looking East along Route 6, Coventry
(at Relocated South Street Intersection)

Recommendations (continued):

- Provide a shared use path along the west side of Relocated South Street to facilitate safe pedestrian and bicycle access between Route 6 and future development on the Coventry parcel. If future traffic volumes warrant signalization of the Relocated South Street and Route 6 intersection, a crosswalk should be provided at the intersection to connect the shared use path to the eastbound side of Route 6 (see Figure 4-7). Provide directional signage on Route 6 between Relocated South Street and Steeles Crossing Road to direct trail users to and from the existing trailhead on Steeles Crossing Road and destinations in Coventry, including future Coventry Ridge development. See Section 4.3.3 (pages 4-44 and 45) for details on directional signage for the Hop River Trail.
- Reinforce the “gateway” nature of the intersection with decorative stone walls that could double as gateway signs for Coventry; ornamental light standards with banners along South Street; and aesthetic bridge treatments that could include stone facing, rustic bridge railing, and rustic approach guard railing.

Future Development Considerations:

- The preferred concept for this study did not consider the specific development opportunities for the Coventry parcel. It is anticipated that future development would be consistent with the uses that were identified in the Corridor Master Plan developed under REDC’s 2010 Study. These potential uses include a mix of office, recreational, institutional, retail, restaurant, and residential uses that are provided in a “synergistic neighborhood approach.”

Design Considerations:

- There are various opportunities for the treatment of existing South Street that could be considered by the Town. These include: eliminating the existing South Street intersection, removing the existing bridge over Hop River, and terminating existing South Street in a cul-de-sac located just north of the river; maintaining a gated emergency-access-only connection to Route 6; providing Hop River access from existing South Street; and moving the location of the cul-de-sac to the north end of the large farm property, among others.

Potential Impacts and Constraints:

- **Rights-of-way.** Implementation of the preferred concept will impact up to five properties, two of which are undeveloped. No relocations are anticipated.
- **Environment.** Some permanent impacts to Hop River and Ash Brook floodplains and adjacent wetlands are possible. The magnitude of the impacts, both permanent and temporary, will depend on the type of bridge structures that are ultimately selected for these crossings and the final design of new/relocated South Street. Based on the preferred concept shown in Figure 4-6A, there is less than 0.5 acre of permanent impact to floodplains and wetlands.

4.1.5 Historic Andover

The preferred improvement concept for Historic Andover, which is illustrated in Figure 4-8 (page 4-21), includes provisions for a small network of local streets, physical changes to Route 6, and improved accessibility to the Hop River Trail that will accommodate and support the community's long-term vision for a pedestrian and bicycle-friendly mixed-use village in this area. The physical changes to Route 6 include access management measures and speed mitigation measures to promote safety, and streetscape improvements to create a gateway to Historic Andover in the Route 6 Hop River Corridor.



Summary of Issues in Historic Andover:

- Lack of safe and accessible pedestrian and bicycle connections between residential neighborhoods and important community features in Historic Andover (including the Hop River Trail, library, church, post office, Hop River, and sports fields).
- Lack of a street network and multimodal accommodations to support the Town's vision for a future mixed-use village.
- Lack of speed mitigation measures to reinforce the 40 mph posted speed limit on Route 6.

Recommendations:

- Modify Route 6 within and approaching the village limits to provide: landscaped medians (where possible considering left turn lanes and access needs), 11 ft travel lanes, 5 ft outside shoulders, street trees, and village gateway signage. The change in roadway appearance and narrowing of the pavement surface would affect driving behavior and encourage reduced travel speeds, thereby improving safety for motorists, bicyclists, and pedestrians within the village.
- Construct a small network of two-way local streets on the north side of Route 6 to accommodate access to the village and to accommodate on-site circulation for pedestrians, bicyclists, and motorists.
- Manage commercial access to Route 6 by encouraging shared parking lots with consolidated access and access from local streets.
- Provide sidewalks along Route 6 and local streets with crossings between the Hop River Trail, the village, and a new community green space along the Hop River.
- Upgrade the pedestrian crossings at Long Hill Road to provide new pedestrian signal heads, crosswalks, and accessible ramps; exclusive pedestrian signal phasing; and a new trail spur connecting the elevated Hop River Trail down to the Long Hill Road crossing from the west.
- Provide Hop River access via a new shared use path that connects to the village street network.
- Connect the village to sports fields and senior housing located north of Hop River by incorporating sidewalk on a new Long Hill Road structure over Hop River. This sidewalk would be included as part of a future bridge replacement project.

The development layout shown is a conceptual plan that illustrates one possible development scenario. Actual plans will involve private development efforts and will be subject to applicable local and State approvals.



NOT TO SCALE

Route 6 Hop River Corridor Transportation Study
Figure 4-8.
Historic Andover Focus Area
Preferred Concept



Figure 4-9. View Looking West along New Local Street, Historic Andover
(Long Hill Road in Foreground)

Future Development Considerations:

- The preferred vision for Historic Andover includes full build out of a mixed-use village located west of Long Hill Road. Figure 4-8 (page 4-21) is a conceptual plan that illustrates one possible development scenario for this area. Actual future development – both in terms of location, intensity, and character – will be dependent upon private developers to propose and implement through the typical site plan review process of both the Andover Planning and Zoning Commission and the REDC. As shown in the figure, the potential new floor area is approximately 75,000 square feet. There are approximately 225 parking spaces shown for this development area, including 40 additional spaces for commuter parking (to replace the existing Park and Ride lot). Exclusive of the commuter parking allocation, the parking rate illustrated in the figure equates to approximately 3 spaces per 1000 sf. It is assumed that parking demands for the proximate, mixed uses will reflect some shared parking efficiencies.

Design Considerations:

- Any future development proposal would be subject to the certification requirements of the Office of the State Traffic Administration (OSTA). The certification process would determine whether additional measures (such as capacity improvements at the Long Hill Road intersection) would be required on Route 6 to mitigate the potential traffic impacts associated with the development.
- The need for additional access management measures (such as restricted left turns to and from one or more new local street intersections with Route 6) to supplement the Route 6 improvements illustrated in Figure 4-8 could be evaluated during subsequent engineering efforts.

Design Considerations (continued):

- All recommendations should be designed to not preclude the potential improvements detailed under *Other Future Transportation Opportunities*, page 4-24. It is noted that provisions for a future westbound Route 6 connection to Long Hill Road will require raising the grade of Long Hill Road in order to accommodate standard grades for the future connection. Raising the grade of Long Hill Road in the area of the future connection will require replacing the Long Hill Road bridge over Hop River. As such, the future replacement of this bridge – whether as part of the implementation of the local roadway improvements of the preferred concept, or to address the natural deterioration and structural deficiencies associated with the age of the structure – should be designed with consideration to the geometric requirements of a future westbound Route 6 connection. For the purposes of estimating the costs associated with the implementation of the preferred concept, it was assumed that the replacement of the Long Hill Road bridge would be implemented independently of the improvements of the preferred concept; as such, the replacement costs are not included in the cost estimates of this study.

Potential Impacts and Constraints:

- **Historic Resources.** The preferred concept is partially located within the limits of the Andover Center Historic District (see Figure 4-10 at right), which is listed on the National Register of Historic Places. Contributing resources within the district that are proximate to the recommendations include: 349 Hebron Road (located immediately west of the library); 355 Hebron Road, Burnap Skinner Memorial Library; and 359 Hebron Road, Andover Congregational Church and New Andover Cemetery. The village development and roadway improvements will have to be sensitive to avoiding impacts to these resources.
- **Rights-of-way.** Full build-out as shown in Figure 4-8 (page 4-21) could affect a total of eight properties, one of which is owned by the State of Connecticut. One residential property and the town maintenance garage would have to be relocated to accommodate the new local street connections.
- **Environment:** The proposed recommendations as shown in Figure 4-8 could impact approximately two acres of wetland and floodplain area.

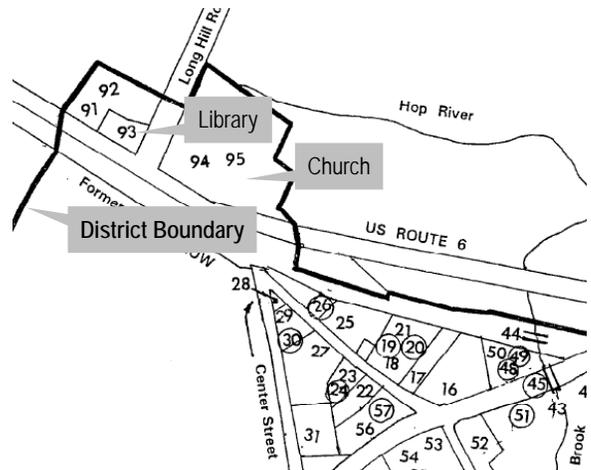


Figure 4-10. Andover Center Historic District (Source: National Register of Historic Places, 2003)

Other Future Transportation Opportunities:

- As shown in Figure 4-8 (page 4-21), there is a potential opportunity under a future improvement initiative to provide a westbound Route 6 connection to Long Hill Road from the east. This connection would facilitate shifting all westbound Route 6 traffic from existing Route 6 to this new northerly connection, following the local street that parallels Route 6, and reconnecting to existing Route 6 west of the village.

As part of this initiative, the local street would be converted to a one-way road in the westbound direction, and existing Route 6 within the village would be converted to a one-way road in the eastbound direction, as shown in Figure 4-11. This context-sensitive street

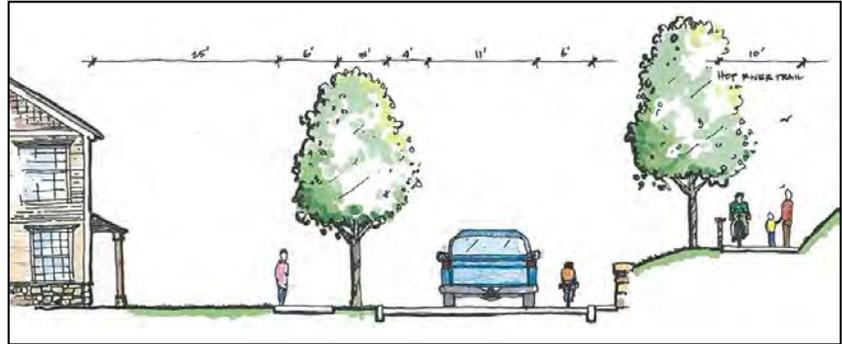


Figure 4-11. Potential Future Eastbound Route 6, Historic Andover

arrangement would better distribute traffic throughout the village while maintaining through traffic mobility, further encouraging reduced travel speeds, improving safety and access between the village and Route 6, and providing some additional development opportunities on the east end of the village. The actual alignment of the future westbound connection would have to consider minimizing or avoiding impacts to environmental and historic resources (see *Potential Impacts and Constraints*, page 4-23).

It is noted that the alignment and configuration of the westernmost local street intersection with Route 6, as it is shown in Figure 4-8, is consistent with the potential future opportunity to shift westbound Route 6 traffic to a new northerly alignment. Alternative intersection configurations are possible and could be explored under subsequent engineering efforts; however, these alternatives should not preclude a future opportunity to shift westbound Route 6.

4.1.6 Lighthouse Corners, Columbia

The preferred concept for Lighthouse Corners (intersection of Route 6 and Route 66 in Columbia), which is illustrated in Figure 4-12 (page 4-26), replaces the existing signalized intersection with a two-lane modern roundabout to improve traffic safety and operations while complementing the future village character that is envisioned by the Town for this area. The future village – including new mixed-use development opportunities and improved multimodal accommodations – would be integrated with existing businesses in the area, including the Lighthouse building (from which the name “Lighthouse Corners” was inspired) and Columbia Plaza.



Recommendations:

- Relocate the intersection slightly north of the existing location to accommodate a two-lane modern roundabout with realigned approach roadways that are less skewed. Resultant intersection operations are LOS C during the afternoon peak hour.
- Provide approach roadways that are designed to encourage reduced travel speeds and enhance aesthetics by incorporating landscaped medians (where possible considering left turn lanes and access needs), 11 ft lanes, 5 ft outside shoulders, and street trees.
- Construct a small network of new two-way local streets (or development roads) to accommodate better access to existing businesses and new businesses, and to accommodate on-site circulation for bicyclists, pedestrians, and motorists.
- Managing commercial access to Route 6 and Route 66 by encouraging shared parking lots with access from a limited number of new local streets or shared driveways.

Summary of Issues at Lighthouse Corners:

- High accident frequency (34 accidents between 2006 and 2008), more than one-third of which involved turning or angle collisions in the intersection, and rear end collisions on turning roadways (slip lanes) between Route 6 and Route 66.
- Future traffic demands that will result in LOS F during the afternoon peak hour (with no capacity improvements).
- Undesirable intersection geometry that includes high-speed slip lanes for right turns from westbound Route 6 and eastbound Route 66.
- Lack of speed mitigation measures to reinforce the reduced speed limit on Route 6 in the area.
- Lack of a street network and multimodal accommodations to support the Town’s vision for a mixed-use village.
- Excessive, visually unappealing pavement areas and lack of attractive gateway features, particularly for travelers from the expressway section of Route 6.
- Periodic roadway flooding on Route 66 just east of the intersection.
- Park & Ride lot demand can exceed capacity.
- Limited access and view of Columbia Plaza from Route 6.

The development layout shown is a conceptual plan that illustrates one possible development scenario. Actual plans will involve private development efforts and will be subject to applicable local and State approvals.



NOT TO SCALE

Route 6 Hop River Corridor Transportation Study
Figure 4-12.
Lighthouse Corners, Columbia Focus Area
Preferred Concept



Figure 4-13. View Looking North along Route 66 to Roundabout, Lighthouse Corners
(Lighthouse Building in Left Foreground)

Recommendations (continued):

- Provide expanded Park and Ride opportunities conveniently accessed via transit and bicycle.
- Provide sidewalks along portions of Route 6 and along new local streets to promote walking between destinations within the village.
- Install a gateway sign for the Route 6 Hop River corridor on the expressway Route 6 westbound approach to the Route 6 and Route 66 intersection.
- Include provisions for future Hop River Trail access via a new shared use path that parallels the westbound lanes of expressway Route 6 and connects to the village street network. Connecting the shared use path to the Hop River Trail located on the north side of the Hop River will require a new pedestrian bridge, or widening of the existing westbound Route 6 bridge, to accommodate a shared use path connection over the river.

Design Considerations:

- For this study, a two-lane roundabout is being considered a viable alternative to a signalized intersection at this location. Currently, two-lane roundabouts are not being designed or implemented by CTDOT, pending more experience with single lane roundabouts in Connecticut; however the actual implementation of the roundabout would be a long-term improvement, occurring as far as a decade or two in the future.
- The location and dimensions of the roundabout and approach roadways are variable and can be refined during subsequent engineering efforts to maximize traffic capacity, optimize development area, and minimize environmental impacts.
- Additional pedestrian crossings and alternative routes for bicycle and pedestrian traffic within a future village development, including potential routes along new local street connections and/or routes through the roundabout which are not illustrated in Figure 4-10, could be reevaluated under subsequent engineering efforts.

Design Considerations (Continued):

- Investigate roadway flooding issues on Route 66 East just east of the Route 6 intersection and incorporate flood mitigation measures into the design of the roundabout. Measures such as raising the elevation of Route 66 East and improving stormwater management in the area, could be studied. Measures that are found to address the flooding issues could be provided in conjunction with the reconstruction of Route 66 East for the roundabout, or as an independent improvement initiative.
- Future development opportunities that are illustrated in the southeast quadrant of the intersection would be founded in whole or in part on a former landfill. It was determined under the REDC's 2010 Study that this area is suitable for development given that appropriate building design measures (such as micropile foundations) and landfill remediation (such as capping) are implemented as necessary.
- Any future development proposal would be subject to the certification requirements of the Office of the State Traffic Administration (OSTA). The certification process would determine whether signalization is required for the main point(s) of access to the future development area.
- The local roadway connection illustrated in the southwest quadrant of the intersection could be perceived as a "cut-through" roadway and could encourage some motorists to use this roadway to bypass the roundabout in travelling between Route 6 (to the west) and Route 66 (to the south). It is suggested that appropriate traffic calming measures that discourage the use of this roadway for through-traffic movements (such as the mini roundabout illustrated in Figure 4-12), be incorporated into the final design of any improvements in this area.

Future Development Considerations:

- The Lighthouse building, which is a well-known and historic destination in its own right, should be a prominent feature in any future village development scenario. As such, building arrangements and street configurations should be carefully laid out to create view corridors of the Lighthouse building from Route 6 and the roundabout.
- Special consideration for how existing businesses in the area will be integrated into a future village setting will be required as future transportation improvements and development plans are being designed. The intent of providing future development within the context of a village setting is to support the overall economic viability of the area and to complement existing businesses by creating an attractive, accessible, and desirable commercial destination for local and regional patrons, commuters, and residents.
- The preferred vision for Lighthouse Corners includes full build out of a mixed-use village in this area. Figure 4-12 (page 4-26) is a conceptual plan that illustrates one possible development scenario. Actual future development – both in terms of location, intensity, and character – will be dependent upon private developers to propose and implement through the typical site plan review process of both the Columbia Planning and Zoning Commission



Lighthouse Building, Route 66, Columbia
(Source: flickr)

and the REDC. As shown in the figure, the potential new floor area is approximately 100,000 square feet. There are approximately 350 parking spaces for this development area, including 80 additional spaces for commuter parking (to replace the existing Park and Ride lot). Exclusive of the commuter parking allocation, the parking rate illustrated in the figure equates to approximately 3.5 spaces per 1000 sf. It is assumed that parking demands for the proximate, mixed uses will reflect some shared parking efficiencies.

Potential Impacts and Constraints:

- **Rights-of-way.** Full build-out as shown in Figure 4-12 could affect a total of five properties, one of which is owned by the State of Connecticut. Only one private property would be impacted to accommodate the Route 6 alignment modifications west of the roundabout.
- **Environment.** The preferred concept could impact approximately five acres of wetland and floodplain area.
- **Algonquin Gas Transmission Line.** There are two existing natural gas transmission lines and associated right-of-way easements that run through the existing Route 6 and Route 66 intersection in a northwest-southeast direction. The locations of these gas lines could affect the layout and configuration of new buildings within the future village area as buildings cannot be constructed within the gas line easements. Coordination with the utility owner will be required in subsequent engineering efforts to avoid or mitigate potential conflicts with these lines.