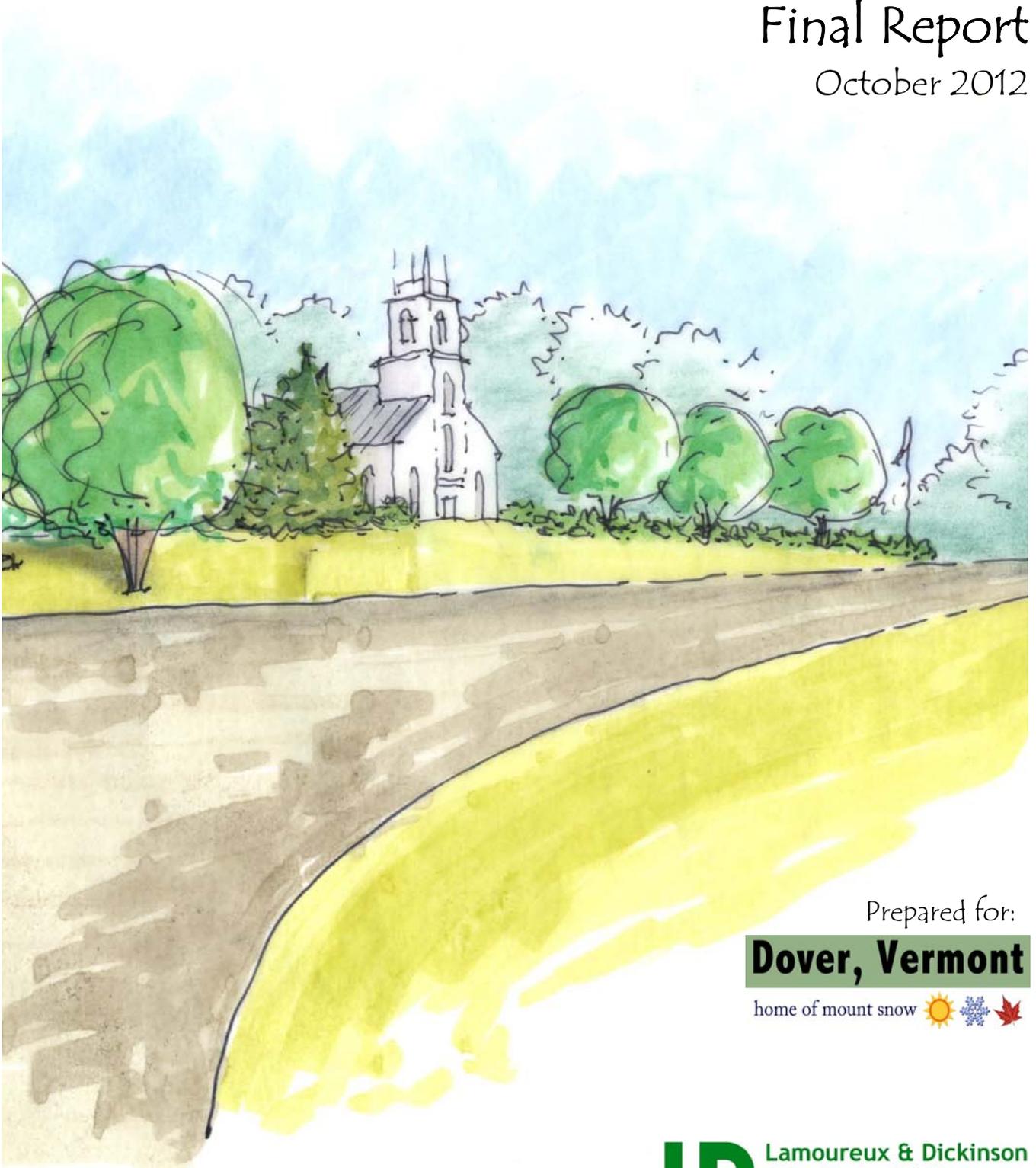


# Dover Landscape Master Plan

## Final Report

October 2012



Prepared for:

**Dover, Vermont**

home of mount snow   

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**BROADREACH**  
Planning & Design

# Dover Landscape Master Plan

## Final Report

For the Town of Dover, Vermont

October 2012

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## I. Introduction

### A. Overview

Dover, a historic town located in Windham County, embodies the typical Vermont landscape image of the Green Mountains with a rural agrarian landscape and the Deerfield River running through it. Dover has a strong connection to the ski industry with the presence of Mount Snow. This relationship has brought tourism and second home development to the community over the years. With historic West Dover Village prominently located on Route 100, many tourists and visitors come to enjoy the scenery, experience the

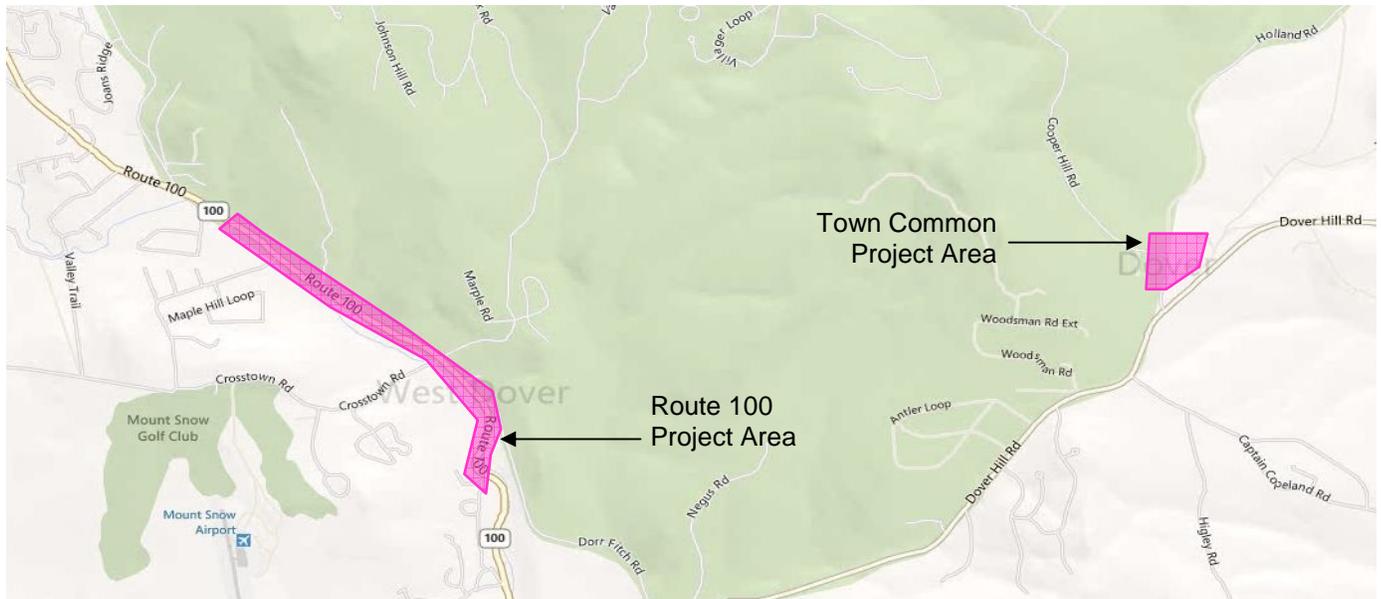


Figure 1: Project Area Locations within the Town of Dover

local festivals, or partake in the various outdoor activities. The Town Common, home to the Town Hall and the Dover public library, is a more rural area oriented towards its residents due to its physical location away from a major roadway.

The Town of Dover has worked over the past decade to make Segment B of the Dover Valley Trail a reality along a portion of Route 100 in the West Dover Village area. The Town has subsequently secured an Enhancement Grant for funding of Segment A of this trail, which will connect the end of Segment B with the southern end and the historic center of West Dover.

Development of the Dover Valley Trail is just one aspect of the dynamic Town of Dover. In May 2007, the Town established the Dover Economic Development Committee (DEDC). The DEDC has been critical in creating short- and long-term visions and action items for the community. One of their visions is to continue to enhance the historic West Dover Village; another is the enhancement and refinement of the Town Common in Dover Center.

The Town of Dover is now moving towards fulfilling these visions with the development of Landscape Master Plans for the Town Common as well as the Route 100 corridor through the West Dover Village. A Landscape Master Plan is a comprehensive long-range plan that will guide the development /

redevelopment and stewardship of the public landscapes and open spaces of these areas. By establishing a vision for the form and expression of the landscape and its components, the Plan will provide the Town with a guide for appropriate long-term development of the public landscape through the creation of sustainable improvements complementing the historic development with its future needs and desires. The Town has enlisted the assistance of a consulting team (the L&D Team) led by Lamoureux & Dickinson teamed with Broadreach Planning & Design and Cynthia Knauf Landscape Design to help in the completion of the Landscape Master Plan.

### **B. Project Purpose**

The purpose of the Dover Landscape Master Plan project is to provide:

- Community enrichment,
- Transportation enhancement,
- Aesthetic and landscape improvements,
- Economic development, and
- Expanded uses for public spaces.

As the project moved forward, this purpose helped guide the development of the master plan.

### **C. Study Process**

To begin work on the project, the L&D Team, with the assistance of the DEDC and the Project Steering Committee, conducted a review of the existing conditions in both portions of the project area. Appendix A contains a graphic representation/ photographic documentation of the existing conditions. The initial existing conditions review continued with a public work session that the L&D Team used to verify the existing conditions information and gather comments and concerns from the community on the Study Area and the proposed Landscape Master Plan. After the completion of the existing conditions analysis, L&D Team worked with the DEDC and the Project Steering Committee to develop a set of three alternative enhancement plans for the Town Common and an extensive list of improvements options for Route 100 in West Dover. After further reviewing and refining the alternatives, the L&D Team assisted with an “Alternatives” public work session to review the alternatives and begin the selection of preferred alternatives. Appendix C contains the Alternatives presented at the public work session. After the second public work session, the DEDC, Project Steering Committee, and the L&D Team developed a draft set of recommendations. They presented the draft set of recommendations at a third public work session. After reviewing the comments and editing the recommendations as appropriate, the L&D Team submitted the draft final plan for the Town’s final review and acceptance.

This final plan report is formatted for double-sided printing; blank pages are intentional.

## II. Existing Conditions

At the beginning of the Landscape Master Planning process, the L&D Team documented the existing conditions for each of the project areas. Appendix A includes a graphic representation/photographic documentation of each of these areas, and Appendix B contains the Existing Conditions Plan and the Site Analysis Plan.

### A. Town Common

The Town Common area is an approximately 7 acre municipally owned parcel that abuts the Town Forest to the north, Holland Road to the west, Taft Brook Road to the south, and privately owned parcels to the east. This space was originally at the crossroads of several major roadways within the community. Taft Brook Road was realigned and became Dover Hill Road, and the Town Common was no longer at this major town crossroads.

There are several buildings located on the Town Common property. The Town Hall building, an architecturally rich historic structure dating to the early 1800's, sits in the eastern side of the site and is a dominant feature in the landscape from these town roads. It is bordered by a large undefined parking area to the west and southwest with an access drive from Taft Brook Road that extends along the east side of the building and crosses in front of it. The Town added a wooden handicapped accessible ramp on the eastern side of the building sometime in the past several decades, which does not reflect the architectural character of the building. A small one story "ice house" exists northeast of the Town Hall. A second prominent building in this space, originally a grade school built in the 1950s, is now the home of the Dover Public Library and a local day care center. It is accessed from Holland Road.

The large undefined parking area between these buildings is accessed in four different locations, two from Taft Brook Road and two from Holland Road. No clear circulation patterns or directional flow is apparent in this parking area. In addition, there are no pedestrian walkways connecting either of these buildings or the roadways. A freestanding dumpster sits at the edge of the parking area and is visible from the roadways, buildings and parking areas. The two intersections on Holland Road that abut the Town Common currently are "y" shaped and are often used as slip lanes rather than full stops.

Surrounding these buildings are several very mature large deciduous trees that connect with the nearby woodlands. A stone wall starts near the northeastern end of the Town Hall and extends north in the woodlands on what appears to be an old roadbed. In front of the Town Hall is a War Veterans' memorial with several shade trees facing Taft Brook Road.

### B. Route 100

The section of Route 100 that is the project area is defined by Dunn's Curve to the south and the intersection with Blue Brook Road to the north. The North Branch of the Deerfield River parallels and crosses under Route 100 throughout this area. The topography slopes to the river with a hillside to the east and west. It encompasses the historic settlement of West Dover, which has an idyllic Vermont village of

white clapboard buildings with various architectural details close to the roadway. Several of the developments to the north and south of West Dover Village have similar architectural characteristics and scale of the buildings.

Within the historic West Dover village and in several developments to the north, there are individual sidewalk segments. The Dover Valley Trail Segment B shared use path starts at the Mount Snow Marketplace bordering Route 100 north of the historic village, crosses the North Branch of the Deerfield River and extends behind the existing buildings to the Mountain Park Plaza. There are informal path connections from several buildings and developments to the Segment B shared use path. However, there is no connection between the existing sidewalks nor are they part of a sidewalk network connecting West Dover village with the surrounding areas or with the Dover Valley Trail Segment B shared use path.

The northern part of the project area has a mix of historic and modern buildings with varied setbacks from the roadway. There are several areas that have a typical strip development pattern of buildings set back far from the roadway with large curb cuts.

There are deciduous trees in various locations along Route 100 and utility poles and lines switching from side to side. The commercial businesses and developments along the road have existing signage that varies in style and size. The Town DEDC has helped fund flower barrels that are placed throughout the corridor and there is a “Welcome to Dover” sign south of Dunn’s curve. However, other than the barrels, there is no unifying character or elements along this roadway that indicate a sense of arrival to the Town of Dover or to West Dover Village.

In front of the Town Offices there are several memorials and monuments with a small garden space between the Town Office building and the Congregational Church. Other than this space, there are no public gathering spaces within the Route 100 project area.

### **C. Regulations, Plans and Previous Studies**

As part of the analysis of existing conditions, the L&D Team reviewed Town plans and regulations, as well as previous studies that might be relevant to the development of the Landscape Master Plan. They found general support for the upgrading of Route 100 in the Town Plan, including goals or policies that:

- Preserve and enhance the community's cultural, historical, architectural, and scenic resources;
- Improve bicycling and walking conditions in the Town; and
- Maintain adequate roadway capacity on Route 100 while not encouraging higher vehicle speeds.

The Vermont Route 100 Corridor Study, completed in 2002, identified several “General Problems” that apply to the West Dover Village Area:

- Inadequate pedestrian facilities,

Uncontrolled (wide) access areas to adjacent properties,  
Lack of “gateways,” or physical clues that motorist are entering a village area at either end of the Village,  
Excessive speed limit in the Village area, and  
Lighting glare from light fixtures on private property adjacent to the road.

Among the numerous recommendations in the study, the report recommends that the Town and/or the Vermont Agency of Transportation:

Capitalize on the Village’s sense of place by developing gateway treatments.  
Use Design elements to slow traffic before it enters the Village; maintain crisp edges to the village.  
Signify areas that are pedestrian oriented with landscape treatments, pavement changes, crosswalks, pedestrian zones, etc.  
Develop consistent themes for signage.  
Establish a coordinated system of bicycle and pedestrian facilities.  
Improve the aesthetic quality of guardrails, fences and bridge rails that are employed with attention to how each installation fits its immediate surroundings as well as its effectiveness under a design-condition impact.

The Strategic Economic Development Plan for Dover and Wilmington also includes numerous goals and objectives that support elements of the Landscape Master Plan, including:

Provide support services for local businesses so they can maximize their potential and provide a living wage,  
Improve physical qualities of the Village,  
Ensure the transportation system is safe, efficient and matches local character, and  
Maximize pedestrian walking opportunities.  
Optimize the use of public transit,  
Integrate mass transit stops with bicycle racks, and  
Post and provide local tourist activity information and maps at available marquees and other key meeting places.

Attachment D contains a more complete review of regulations, plans and previous studies.



### III. Recommendations

The L&D Team worked with the Project Steering Committee and the public to reach consensus on the preferred Landscape Master Plans for each of the project areas. Below is a description of these master plans. Appendices E and F contain the graphic plans, sketches and images for each project area.

#### A. Town Common

##### Overview

The Preferred Master Landscape Plan for the Town Common includes converting much of the existing large parking area that covers a large portion of the site to lawn. It also proposes to modify the on-site circulation to create an interior drive and sidewalks linking the Town Hall and the Library buildings while providing access to several parking areas located close to both buildings. The preferred plan includes suggestions for additional green space; new plantings; and a future nature center, outdoor classroom and trails in the Town Forest to the north of the Town Common. It also includes several other improvements in the Town road rights-of-way surrounding the site. The following sections provide more detail on the various elements of the preferred plan.

##### Vehicular and Pedestrian Access

Vehicular access to the site will be provided via the existing access way from Taft Brook Road on the east side of the Town Hall. The vehicular access point on the west side of the Town Hall from Taft Brook Road will be closed. The Library building parking area will continue to be accessed via two access points; the northern access point will be shifted slightly north to more closely align with the redefined intersection of Cooper Hill and Holland Roads. The southern access point will be modified to be more of a 90-degree intersection with Holland Road. Together, the two Library access points will allow bus access and drop off for the Library building.

The eastern driveway on Taft Brook Road will wrap around the rear of the Town Hall, linking with the Library building parking and access points. It will also provide access to a redesigned parking area west of the Town Hall and south of the Library building as well as to future parking north of the Town Hall along the eastern edge of the site. The driveway in front of the Town Hall will be removed.

Pedestrian access will be provided in the vicinity of the existing vehicular entrance from Taft Brook Road west of the Town Hall; pedestrian access to the Library building will be along the southern access drive from Holland Road. The front of the Town Hall will be reorganized to provide a new handicapped accessible ramp to the front door. The new ramp will be incorporated into a larger “front porch” designed to blend with the historic architecture of the Town Hall while providing a larger paved gathering space by the front entry. A pedestrian path also will link the Town Hall with the Library building. The entry to the Library building will also be enhanced to create a more enjoyable outdoor space that can be used in the summer for outdoor reading.

### Parking

The Town Common parking area will provide approximately 65 total parking spaces. The Library building parking will be reorganized and expanded to be more efficient, for a total of approximately 15 spaces. The parking area between the Library building and Town Hall will provide approximately 30 parking spaces conveniently located to either the Town Hall or the Library. Approximately 20 additional parking spaces will be located along the eastern access point, including several accessible parking spaces. The future parking will be north of the line of large trees behind the Town Hall, located close to the existing stone wall along the eastern edge of the property and at the northern edge of the existing playground area. They will be accessed by an extension of the access drive on the east side of the Town Hall. These parking areas will provide approximately 35 spaces. A pedestrian walkway will link these parking areas to the Library building and the Town Hall. These parking areas will also serve new nature walkways, nature center, and outdoor classroom recommended for the forest north of the Town Common, described in more detail in a later section.

### Town Green and Other Outdoor Gathering Places

The small green space along the southern edge of the Town Common on Taft Brook Road will be expanded significantly into a new Town Green. The new Green will be approximately 100 feet wide and 250 feet long. It will lie between the eastern access drive and Holland Road. It will encompass the existing memorials and include a large lawn area suitable for outdoor events that may require a tent. A new evergreen tree that can be used for holiday decorations will be planted on the western end of the Green so that it is visible from Holland Road south of the intersection with Taft Brook Road but not in a location that blocks the view of the Town Hall. The Green will also provide a gathering place in front of the Town Hall.

A second smaller public green space will be located north of the cross driveway, east of the Library in the lower lawn area where the existing Library building septic field is located. This space could also be used for outdoor events that require a smaller tent, which could be erected on the southern portion of the lawn away from the septic field. This space will be accessed by a short walkway that leads through the row of existing larger trees lining the southern edge of the green space. The play space for the day care that is located in the Library building will be organized into the upper grass field closer to the building.

### Memorials

The existing memorials will remain in their current location. The space around the memorials will be enhanced by the addition of a low hedge defining a more intimate space without obscuring views into the memorial from either Taft Brook Road or the Town Hall. New benches will also be added to the memorial space.

### Plantings

The Town Common will be enhanced by the addition of new trees along the edges of the Green and in the redesigned parking areas. In addition to the new low hedge around the memorials, there will also be new

hedges along the southern edge of the play area to separate it from the internal driveway and along the eastern edge of the play area to separate it from the public green space directly east of the play space. There will also be additional plantings around the Library building and Town Hall and the new entry areas to enhance these buildings and create visually appealing entryways. Other miscellaneous plantings will also be added around the Town Common to create a more inviting set of spaces.

### Rain Gardens

The site will include rain gardens for handling stormwater runoff and allow it to infiltrate into the soil. A rain garden is a shallow depression designed to temporarily hold water and is planted with native plants and grass. It is an aesthetically designed garden that retains stormwater runoff to infiltrate into the ground. The gardens will be placed near a stormwater runoff source on the parking lot and along the roadway, driveways and storm pipes from the buildings, to capture rainwater runoff and slowly soak into the ground, filter contaminants and benefit plants. Capturing rainwater in a rain garden, holding the water for a short time and then slowly releasing it into the soil can help reduce the rush of a large storm and lower the impact of impervious surfaces.

### Adjacent Town Forest

The existing historic ice house building northeast of the Town Hall will be relocated further north and updated to house a small nature center. It will provide not only information on the historic building and area, but also various aspects of the adjacent forest. A nearby outdoor classroom space will accommodate small lectures or other types of hands on presentations. Trails will lead into the forest from the nature center. The Landscape Master Plan recommends the completion of a separate, more detailed plan for the development of the nature center and the trails. Potential considerations for other features that can be considered as part of the development of the detailed nature center plan include a pond at the lower end of the property, interpretive signs along the trails, small forest management demonstrations, and plant and animal habitat enhancement projects.

### Other Site Features

The existing small storage building between the Library and Town Hall will be resituated to a new location close to the existing location but oriented so that it can be accessed from the east from the internal driveway between the Library and Town Hall. The existing Library building dumpster will be situated in the same location. As possible, the building and dumpster could be partially screened by the topography and small plantings from views north from the main parking area. The existing basketball backstop will be relocated to the vicinity of the relocated outdoor shed, possibly attached to the building itself if the grades and paving allow. The existing play area for the day care center will be concentrated in the upper grass terrace just east of the Library and possibly upgraded with Town assistance so that it can be usable by Town residents with children.

### Off-Site Improvements

The Town Common Preferred Plan also includes modifications to the intersections of Holland Road with Taft Brook Road and with Cooper Hill Road.

Taft Brook Road will be reconstructed to be a single “T” intersection with Holland Road, with the intersection located roughly in the middle of the green triangle now dividing the two portions of the road that currently make up the intersection. The road will be narrowed to approximately 24 feet wide with the old roadways on either side converted to additional green space for the Town Green and the front lawn of the house on the south side of the intersection.

Cooper Hill Road will also be reorganized to include a single intersecting roadway that will roughly follow the alignment of the current southern section of roadway. The alignment will be converted closer to a 90-degree intersection between the two roadways. The curve between the two roadways will be reduced, limiting the potential for vehicles to descend Cooper Hill Road and make the turn onto Holland Road with minimal reduction in speed. The realigned intersection will also create a more direct four-way intersection with the Library building access drive.

The existing mailboxes on the north side of Taft Brook Road in front of the Town Common could be relocated to avoid conflicts with the new sign and stone wall. They could possibly be placed farther east by the new access drive to the Town Common or moved to the south side of Taft Brook Road east of the access drive for the parcel on the south side of the road.

### Stone Walls and Signs

The redesign of the Holland Road and Taft Brook Road intersection (described above) will add more land close to the intersection to the Town Green. A decorative stone wall, serving partially as a retaining wall around the southwest corner of the Town Green will raise this area closer to the elevation of the rest of the Town Green. The stone wall will be back far enough from the intersection to maintain adequate sight distances for motorists traveling through the intersection. A Town Common identification sign will be incorporated into the stone wall so that it is visible from the Holland Road approach to the intersection.

A second stone wall will be added to the northern entrance to the library. This stone wall will visually be similar to the one at the corner of the Town Green but it will not also act as a retaining wall. A library identification sign will be incorporate into this stone wall so that it is visible to motorists heading north on Holland Road.

## **B. Route 100**

### Overview

The Preferred Master Landscape Plan for the Route 100 West Dover Village area will create a more unified, distinctive, and appealing image along the road both within the historic village center as well as the surrounding commercial areas to the north and south. The Preferred Landscape Master Plan recommends numerous modifications to the existing roadway, both in terms of the actual road itself, such as lane widths and on street parking, as well as additions within the right of way, such as street trees, lighting, or street furniture. The L&D Team divided the Route 100 project area into five different zones:

Transition Zone South,  
Village Zone,  
Village Transition Zone,  
Intermediate Zone, and  
Transition Zone North A and B.

Appendix F includes the Route 100 project areas preferred plans and tables with recommendations by zone.

Several modifications are consistent through each of the five different zones delineated as part of this study. They include:

- Travel lanes consistently set at eleven feet wide, maximizing the paved shoulder area to reduce vehicular traffic speed and improve conditions for bicyclists;
- Street trees planted as frequently and as close to the road as possible within existing VTtrans guidelines and regulations;
- New solar LED pedestrian scale lighting, mounted either on existing utility poles or on new light poles; and
- Decorative banners changed seasonally.

There is the potential to create a small public park within the Study Area in an appropriate location that would connect with the existing Dover Valley Trail Segment B shared use path or the proposed Dover Valley Trail Segment A sidewalk project. Providing access to and views of the North Branch of the Deerfield River could be one positive attribute of this space. A small park could also be used for local community events such as a farmer's market, concerts or performances in a gazebo or performing arts structure, as well as a seating area for formal or informal gatherings and meetings.

#### Transition Zone South

The southern entrance to the West Dover Village is currently dominated by an extremely large open access on the east side of the road. The most significant recommended change to the Transition Zone South is the proposed reorganization of this large open parking area adjacent to the road into a one-way access drive parallel to Route 100 but separated from the roadway by a narrow green strip with a fence, rain garden and street trees. The new green space would be located on the outer edges of the existing right-of-way and would not encroach into the adjacent properties nor reduce the travel lanes or shoulder width of Route 100. Several curb cuts through the green space will provide access to the parallel drive, which could be lined at least on one side by parallel parking.

The goal of the modifications is to make this portion of Route 100 more visually appealing to visitors to the Town so that residents and visitors may be more inclined to stop and patronize the existing and future

businesses in this area. The direction of the one-way travel on the internal road and the specific location of the opening should be determined in conjunction with VTrans and the adjacent property owners.

The existing parking spaces in front of the buildings where the new green spaces would be located would be reduced by approximately half. The plan anticipates that much of the head in parking in front of the buildings in the middle of the Transition Zone South would be retained so that the building uses can continue to either meet the current zoning regulations or not reduce their pre-existing non-conformance relating to the number of required parking spaces.

Even though the modifications would all be occurring within the Route 100 right-of-way, the Town could work with the land and business owners to develop additional alternate parking arrangements to be sure that there is adequate parking for the uses in the buildings.

Other recommendations for the Transition Zone South are:

- Crosswalk on Route 100 near the end of the Dover Valley Trail Segment A to assist pedestrians in reaching the businesses on the east side of the road,
- Bicycle racks near the businesses,
- Wood guardrails (VTrans approved) leading to the Route 100 bridge over the river, and
- Planter boxes on the bridge railing.

### Village Zone

This historic center of West Dover will be carefully upgraded to enhance, but not overpower, the existing appealing visual character of the area. The Dover Valley Trail Segment A, curbs, at least two crosswalks and selective placement of on-street parking will help reinforce the village character while providing more amenities for residents and future visitors. An organized pull-off on the east side of the road just north of the Dorr Fitch Road intersection will serve the numerous visitors that wish to pull over and take a picture of the Village from that viewpoint. A nearby electronic information kiosk will provide tourist information. A scenic overlook on the west side of Route 100 just south of Crosstown Road will provide views of the Deerfield River. Small rain gardens, plantings meant to collect and recharge stormwater into the ground, will be incorporated where possible into the green spaces along the sides of the road. The existing garden between the Town Offices and the church will be enhanced with additional benches and plantings. Appendix F includes a sketch of how this area could be enhanced.

### Village Transition Zone

The area along Route 100 starting just a bit north of the Route 100 intersection with Crosstown and Valley View Roads will be upgraded with the completion of the Dover Valley Trail Segment A sidewalk on the west side of the road. The new segment will connect with the existing Dover Valley Trail Segment B shared use path. The adjacent properties will be encouraged to provide pedestrian links between the sidewalk and their businesses. New street trees and benches along the sidewalk will make the area more

appealing to visitors and will encourage walking between businesses for pleasure or exercise. Small rain gardens will be incorporated where possible into the green spaces along the sides of the road. Additional crosswalks will link the Valley Trail with the businesses on the east side of Route 100.

#### Intermediate Zone

This zone currently has the least amount of development, either through under development of parcels or the closing of the businesses that formerly operated there. The goal of this zone of the Preferred Master Landscape Plan is to plan for the eventual upgrading of this portion of the road, either as an open space break between the last zone to the north and those to the south, or as a new development area through the reuse of the empty parcels and continuation of the facilities to the north and south. The street trees will be placed to enhance the existing evergreens that now line much of the road, but leave room for a future sidewalk or on-street parking if the area develops. Additional crosswalks will link the Valley Trail with the businesses on the east side of Route 100.

Other recommendations for this area include:

- The reduction of driveway openings to more clearly define motorist travel directions and reduce the length of crossings for pedestrians;
- The addition of wooden guardrails leading to the Route 100 bridge over the river; and
- The addition of planters on the outside edge of the bridge railing.

#### Transition Zone North A and B

The northern most zone of the Master Landscape Plan is already developed but the developments are isolated from each other and do not create a unified, village image. The various developments will be more unified with the recommended new sidewalk along the west side of the road. Property owners will be encouraged to add new pedestrian links to this sidewalk as well as to the existing Valley Trail from their businesses. The new sidewalk along the west side of Route 100 would be a southward extension of the sidewalk the Town is now planning to head north along the west side of Route 100 from the Mountain Park Plaza, where the Dover Valley Trail currently stops. Several crosswalks will tie the two developed areas on the east side of the road to the new sidewalk. The new street trees, benches and other amenities will help encourage more pedestrian activity between the businesses.

The street tree and sidewalk locations should not preclude the eventual addition of on-street parking if the area develops further and such parking becomes reasonable. The Town should also consider developing other public parking in this zone to accommodate recreational users of the Valley Trail.

Further north in Transition Zone North, the guardrails leading to the Route 100 bridge over the river would be converted to wood and planters will be added to the outside edge of the bridge railing. Street trees would be extended northward to the intersection with Blue Brook Road to enhance the existing garden in the center of the intersection. The new street trees would also reinforce the entry into the village area.

### **C. Town Regulations**

No Town regulation documents appear to need editing to implement the proposed improvements for the Town Common and Route 100 project areas.

### **D. Other Actions**

Because Route 100 is a State Road, the amount of changes that the Town can undertake within the right-of-way are limited. Most of the Route 100 project area is a 4-rod right-of-way (ROW) that is approximately 66 feet wide. However, south of the Dorr Fitch Road, the ROW is 3-rods wide; or approximately 49.5 feet. Finding funding options to undertake improvements within State ROWs can be a challenge for communities.

One option for the Town would be to assume control of Route 100 within the Town as a Class 1 Town Highway. This would give the Town much more control over how the ROW is organized and managed. The State would assist the Town with finances through a standard funding formula.

Another option that could be undertaken independently of or in conjunction with the conversion to a Class 1 Town Highway would be the designation of Route 100 in the Town as a scenic byway. This effort would need to be commenced as a joint project with the other towns along Route 100 at least in Windham County and ideally in Windsor, Rutland, Addison and Washington Counties as well. This designation would open funding options for signage and certain other types of improvements.

The Windham Regional Commission can provide additional information on both of these concepts.

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## VI. Implementation

### A. Initial Estimates of Probable Implementation Costs

After the preferred plans were finalized for each area, an initial conceptual estimate of probable construction costs was prepared. Tables 1 through 7 contain the estimates for the two project areas. These initial estimates of probable implementation costs reflect what we have seen reflected in 2012 construction costs and our combined experience. As construction costs fluctuate based on wood and fuel prices, these estimates will need to adjust for implementation in future years..

For each area, the cost estimate includes a breakdown by item, final design and permitting, and a contingency. Including a contingency is a standard practice at the conceptual design phase. When further design refinement and permitting needs are flushed out, the contingency often becomes a smaller percentage of the overall cost: 10%. In Section V-C, there are several options for phasing of the improvements in each area to assist the Town with implementing these projects.

**Table 1: Initial Conceptual Estimate of Probable Construction Costs  
Town Common Preferred Alternative**

	Item	Unit	Quantity	Cost	Total
1	Remove Existing Pavement	Cubic Yards	110	\$22	\$2,420
2	Remove Existing Trees	Each	3	\$500	\$1,500
3	Common Excavation	Cubic Yards	1500	\$17	\$25,500
4	New concrete sidewalk (includes gravel subbase and excavation)	Linear Feet	685	\$100	\$68,500
5	Gravel Subbase for Bituminous Concrete Pavement - Driveways and Parking Areas	Cubic Yards	1290	\$50	\$64,500
6	New Bituminous Concrete Pavement - Driveways and Parking Areas (3" depth)	Ton	645	\$185	\$119,325
7	New Bituminous Concrete Pavement for Realigned intersection at Holland / Cooper Hill Road	Ton	70	\$185	\$12,950
8	New Bituminous Concrete Pavement for Realigned intersection at Holland / Taft Brook Road	Ton	60	\$185	\$11,100
9	Pavement Markings: Parking Spaces	Linear Feet	1200	\$2	\$2,400
10	Pavement Markings: Crosswalks	Linear Feet	54	\$35	\$1,890
11	Pavement Markings: Handicapped Symbols	Each	2	\$85	\$170
12	Street Trees	Each	25	\$600	\$15,000
13	Evergreen Tree	Each	1	\$600	\$600
14	Shrubs	Each	520	\$50	\$26,000
15	Solar LED Pedestrian Scale Lights on New Poles	Each	4	\$4,500	\$18,000
16	New Signs	Each	2	\$1,000	\$2,000
17	New Stone Walls (2' Height Average)	Square Feet	235	\$150	\$35,250
18	Topsoil and Seed	CY	470	\$60	\$28,200
19	Bike Racks	Each	2	\$1,000	\$2,000
20	Benches	Each	11	\$1,500	\$16,500
Subtotal					\$453,805
Mobilization (10%)					\$45,381
SubTotal					\$499,186
Contingency (20%)					\$99,837
Subtotal					\$599,023
Engineering and Permitting (20%)					\$119,805
<b>TOTAL Estimated Costs</b>					<b>\$718,827</b>

**Table 2: Initial Conceptual Estimate of Probable Construction Costs  
Route 100 Preferred Alternative - Entire Project Area**

	Item	Unit	Quantity	Cost	Total
1	Remove Existing Pavement	Cubic Yards	35	\$22	\$770
2	New concrete sidewalk (includes gravel subbase and excavation)	Linear Feet	975	\$100	\$97,500
3	Durable Recessed Pavement Markings: New Crosswalks	Linear Feet	302	\$35	\$10,570
4	Street Trees	Each	178	\$600	\$106,800
5	Evergreen Tree	Each	1	\$600	\$600
6	Rain Gardens (Includes plantings and installation)	Square Feet	3,480	\$15	\$52,200
7	Solar LED Pedestrian Scale Lights on new Decorative Poles	Each	7	\$4,500	\$31,500
8	Solar LED Pedestrian Scale Lights on Existing Utility Poles	Each	20	\$3,200	\$64,000
9	Banners for Light Poles	Each	34	\$350	\$11,900
10	Overlook near bridge on Crosstown Road	Each	1	\$20,000	\$20,000
11	Bike Racks	Each	2	\$1,000	\$2,000
12	Benches	Each	8	\$1,500	\$12,000
13	New Wood Guardrail to replace existing metal guardrail	Linear Feet	860	\$35	\$30,100
14	Wood planter boxes for placement on existing bridge railing	Each	20	\$150	\$3,000
15	New Wayfinding Signs	Each	2	\$1,500	\$3,000
16	Welcome to Dover' signs before Mt. Snow Entrance (beyond project area)	Each	2	\$1,500	\$3,000
				Subtotal	\$448,940
				Mobilization (10%)	\$44,894
				SubTotal	\$493,834
				Contingency (20%)	\$98,767
				Subtotal	\$592,601
				Engineering and Permitting (20%)	\$118,520
				<b>TOTAL Estimated Costs</b>	<b>\$711,121</b>

**Table 3: Initial Conceptual Estimate of Probable Construction Costs  
Route 100 Preferred Alternative: Transition Zone South**

	Item	Unit	Quantity	Cost	Total
1	Remove Existing Pavement	Cubic Yards	35	\$22	\$770
2	New concrete sidewalk (includes gravel subbase and excavation)	Linear Feet	30	\$100	\$3,000
3	Durable Recessed Pavement Markings: New Cross-walks	Linear Feet	30	\$35	\$1,050
4	Street Trees	Each	38	\$600	\$22,800
5	Rain Gardens (Includes plantings, soil and installation)	Square Feet	1980	\$15	\$29,700
6	Solar LED Pedestrian Scale Lights on Existing Utility Poles	Each	4	\$3,200	\$12,800
7	Banners for Light Poles	Each	4	\$350	\$1,400
8	New Wood Guardrail to replace existing metal guardrail	Linear Feet	380	\$35	\$13,300
9	Wood planter boxes for placement on existing bridge railing	Each	8	\$150	\$1,200
Subtotal					\$86,020
Mobilization (10%)					\$8,602
SubTotal					\$94,622
Contingency (20%)					\$18,924
Subtotal					\$113,546
Engineering and Permitting (20%)					\$22,709
<b>TOTAL Estimated Costs</b>					<b>\$136,256</b>

**Table 4: Initial Conceptual Estimate of Probable Construction Costs  
Route 100 Preferred Alternative: Village Zone**

	Item	Unit	Quantity	Cost	Total
1	New concrete sidewalk (includes gravel subbase and excavation)	Linear Feet	70	\$100	\$7,000
2	Durable Recessed Pavement Markings: New Cross-walks	Linear Feet	30	\$35	\$1,050
3	Street Trees	Each	26	\$600	\$15,600
4	Evergreen Tree	Each	1	\$600	\$600
5	Rain Gardens (Includes plantings and installation)	Square Feet	1500	\$15	\$22,500
6	Solar LED Pedestrian Scale Lights on new Decorative Poles	Each	7	\$4,500	\$31,500
7	Banners for Light Poles	Each	14	\$350	\$4,900
8	Overlook near bridge on Crosstown Road	Each	1	\$20,000	\$20,000
9	Bike Racks	Each	2	\$1,000	\$2,000
10	Benches	Each	8	\$1,500	\$12,000
Subtotal					\$117,150
Mobilization (10%)					\$11,715
SubTotal					\$128,865
Contingency (20%)					\$25,773
Subtotal					\$154,638
Engineering and Permitting (20%)					\$30,928
<b>TOTAL Estimated Costs</b>					<b>\$185,566</b>

**Table 5: Initial Conceptual Estimate of Probable Construction Costs  
Route 100 Preferred Alternative: Village Transition Zone**

	Item	Unit	Quantity	Cost	Total
1	New concrete sidewalk (includes gravel subbase and excavation)	Linear Feet	135	\$100	\$13,500
2	Durable Recessed Pavement Markings: New Crosswalks	Linear Feet	60	\$35	\$2,100
3	Street Trees	Each	32	\$600	\$19,200
4	Solar LED Pedestrian Scale Lights on existing Utility Poles	Each	6	\$3,200	\$19,200
5	Banners for Light Poles	Each	6	\$350	\$2,100
6	New Wayfinding Signs	Each	2	\$1,500	\$3,000
				Subtotal	\$59,100
				Mobilization (10%)	\$5,910
				SubTotal	\$65,010
				Contingency (20%)	\$13,002
				Subtotal	\$78,012
				Engineering and Permitting (20%)	\$15,602
				<b>TOTAL Estimated Costs</b>	<b>\$93,614</b>

**Table 6: Initial Conceptual Estimate of Probable Construction Costs  
Route 100 Preferred Alternative: Intermediate Zone**

	Item	Unit	Quantity	Cost	Total
1	New concrete sidewalk (includes gravel subbase and excavation)	Linear Feet	40	\$100	\$4,000
2	Durable Recessed Pavement Markings: New Cross-walks	Linear Feet	32	\$35	\$1,120
3	Street Trees	Each	22	\$600	\$13,200
4	Solar LED Pedestrian Scale Lights on existing Utility Poles	Each	4	\$3,200	\$12,800
5	Banners for Light Poles	Each	4	\$350	\$1,400
6	New Wood Guardrail to replace existing metal guardrail	Linear Feet	330	\$35	\$11,550
7	Wood planter boxes for placement on existing bridge railing	Each	6	\$150	\$900
Subtotal					\$44,970
Mobilization (10%)					\$4,497
SubTotal					\$49,467
Contingency (20%)					\$9,893
Subtotal					\$59,360
Engineering and Permitting (20%)					\$11,872
<b>TOTAL Estimated Costs</b>					<b>\$71,232</b>

**Table 7: Initial Conceptual Estimate of Probable Construction Costs  
Route 100 Preferred Alternative: Transition Zone North A and B**

	Item	Unit	Quantity	Cost	Total
1	New concrete sidewalk (includes gravel subbase and excavation)	Linear Feet	700	\$100	\$70,000
2	Durable Recessed Pavement Markings: New Crosswalks	Linear Feet	150	\$35	\$5,250
3	Street Trees	Each	60	\$600	\$36,000
4	Solar LED Pedestrian Scale Lights on Existing Utility Poles	Each	6	\$3,200	\$19,200
5	Banners for Light Poles	Each	6	\$350	\$2,100
6	New Wood Guardrail to replace existing metal guardrail	Linear Feet	150	\$35	\$5,250
7	Wood planter boxes for placement on existing bridge railing	Each	6	\$150	\$900
8	Welcome to Dover' signs before Mt. Snow Entrance (beyond project area)	Each	2	\$1,500	\$3,000
				Subtotal	\$141,700
				Mobilization (10%)	\$14,170
				SubTotal	\$155,870
				Contingency (20%)	\$31,174
				Subtotal	\$187,044
				Engineering and Permitting (20%)	\$37,409
				<b>TOTAL Estimated Costs</b>	<b>\$224,453</b>

## B. Funding Options

The two portions of the Landscape Master Plan include a variety of recommendations for which there is the potential of a wide range of funding options. Some of the smaller elements, such as road signs, park development or street trees could potentially be funded directly by the community on their own or in conjunction with other funding options. Several of the recommendations could be funded through a public-private partnership in which the municipality contributes some of the funds and private interests contribute the rest. The municipal portion of the funding could come directly from the Town budget or from some other funding source.

Dover might secure funding for the larger budget recommendations from an assortment of sources. Below is a list of various funding potentials that could be used to help with the implementation of the recommendations. Appendix G includes additional notes and information on funding sources. It is a compendium of funding sources maintained by the State of Vermont Division of Historic Preservation. There are numerous other potential funding sources listed in it that could be of interest to the Town.

- **Surface Transportation Program/VTrans Capital Program (STP Funds):** The STP funds are the most flexible funding source from federal transportation funds. These funds could be used for the recommendations relating to the roadway itself, such as the restriping of travel lanes. These funds require a 20 percent match. Projects funded with STP funds need to be included on the States Transportation Improvement Program.
- **Transportation Enhancement Program (TE Funds):** TE funds can be used to increase bicycle and pedestrian mobility, improve aesthetics along a roadway or other specific types of projects that enhance the overall transportation experience. These funds will cover a maximum of 80 percent of the project costs with the remaining portions most likely coming from the project sponsoring organization. TE funds have been distributed in Vermont through a competitive grant program. The most recent federal transportation bill changes the enhancement funding program, providing more flexibility to the States on funding potentials. Consequently, the State has suspended this program while it evaluates how it will administer it in the future.
- **Bicycle and Pedestrian Program:** These funds cover specific bicycle and pedestrian improvement projects and are also provided via a competitive grant program.
- **Safety Improvement Funds:** Safety Improvement Funds are available to cover projects that are directly related to improving specific safety related problems. These funds are administered by VTrans and could potentially be used to fund the intersection reorganizations.
- **Safe Routes to School (SRTS Funds):** The SRTS program provides funds to improve physical connections to grade and middle schools that will increase the ability of students to walk or bicycle to school. These funds also cover training and encouragement programs meant to increase the

incidence of school children walking and bicycling to school. These funds might be used to assist in developing a trail between the library and the school. The most recent federal transportation bill changes the Safe Routes to School program, providing more flexibility to the States on funding potentials. The State's reaction to this new organization has yet to be set.

- **High Risk Rural Roads Program:** This program is meant to address specific safety issues on rural roads with low cost safety improvement projects to achieve significant reductions in traffic fatality and serious injury crashes. The locations for the use of these funds are recommended by the regional planning commissions.
- **Highway Safety Improvement Program:** The focus of this program is to enhance safety at the high crash locations throughout the State. This program attempts to address up to 50 high crash locations a year with studies and recommendations for remedial actions. Federal funds are used for this program.
- **Vermont Local Roads/Circuit Rider Program ([vermontlocalroads.org](http://vermontlocalroads.org)):** This program is made available to local municipalities to assist them in planning and designing better rural roads or addressing specific transportation projects. These funds are not meant to fund construction. These programs may be able to assist the municipalities in more complete studies of the intersection redesigns near the Town Common.
- **State Research & Planning Funds:** These funds are available for the development of plans and research at the State level. They can also be passed through to regional entities to fund planning or research that has statewide significance.
- **Bikes Belong Grants:** These grants are given by the Bikes Belong organization to improve bicycling conditions throughout the United States. The grants are for both facilities and advocacy. The grants for 2012 are by invitation only, but it may still be possible to be invited to submit a grant. Additional information can be found at: <http://www.bikesbelong.org/grants/apply-for-a-grant/who-can-apply/>.
- **Town Roadway Improvement Class 2 paving funds** are also available from VTrans and administered by the VTrans Districts. Dover is in District 1. Other forms of State aid to local communities may also be appropriate; additional information can be found in *The "Orange Book" a Handbook for Local Officials*.
- **Vermont Urban and Community Forestry Grants:** These grants are currently awarded yearly and can be used for tree inventory and tree planting programs. Typically, awards for actual tree planting are given only after an inventory has been completed, but the recommendations in this report may potentially be substituted for a street tree inventory in the village area.

- Clean Water Act Section 319 Funds: These funds are used to improve water quality and could possibly help fund storm water improvements in the historic village zone. (See #4 in Appendix G)
- Community Development Block Grant Program - Accessibility Modification Grants: These funds are meant to improve accessibility to existing municipal buildings and might be a source of funding to improve the access to the Town Hall. (See #7 in the Appendix G)
- Community Facility Loans and Grants (CFLG): This program is meant to help fund “essential” community facilities, including museums and other similar buildings. They might be useful in the moving and upgrading of the ice house into a nature center. (See #8 in the Appendix G)
- Cultural Facilities Grants: This program provides funds for items similar to the CFLG. (See #10 in the Appendix G)

Several other funding sources may be available for the construction of sidewalks, including:

Potential health grants promoting healthy living;

The Robert Wood Johnson Foundation;

MCI/Worldcom Royalty Donation Program (For this and several subsequent ideas, see <http://www.americantrails.org/resources/funding/TipsFund.html>); and

Cliff Bar Sponsorship.

Some additional resources that may provide insight into additional funds include:

<http://www.americantrails.org/resources/funding/Funding.html>,

<http://rlch.org/>, and

<http://atfiles.org/files/pdf/bicentennialsourcebook.pdf>

There may be the potential of creating a Tax Incremental Finance (TIF) District for the Route 100 project area in the future. The purpose for creating a TIF district as defined by Vermont State Statutes 24 VSA § 1893 is:

*“Provide incremental tax revenues for infrastructure improvements that serve the District and that will stimulate private sector development in the District that will provide employment opportunities, improve and broaden the tax base, or enhance the general economic vitality of the municipality, the region, or the state.”*

There are guidelines set by the State of Vermont for creating a TIF district and the proposed projects by themselves may not qualify for this. See Appendix G for more information on creating a TIF district in Vermont.

### C. Phasing and Responsibilities

Phasing of master plan projects is often done by municipalities due to the large costs that are not always available for such improvements. An outline of the phasing options is described below. This will give the Town of Dover an opportunity to finance the projects as funds are available or grant opportunities arise. In addition, if the proposed improvements to both project areas can be constructed in conjunction with other planned municipal or state projects, this can often reduce the overall construction costs. One example is to coordinate improvements as much as possible within the Transition Zone South, Village Zone and the Village Transition Zone with the anticipated construction of the Dover Valley Trail Segment A sidewalk project.

The phasing recommendations have not been further ranked beyond the short and long term Improvements. The order in which they can be implemented is flexible and can be implemented when either specific funding or local momentum dictates. This ranking gives Dover the maximum amount of adaptability to take advantage of ever changing sources of funds without having to complete one job before another can be implemented.

#### **Town Common**

As the proposed overall construction costs are high for the Town Common project area, we are suggesting phasing options for the proposed improvements for the Town Common area. They are broken down into two categories: short and long term and are outlined below.

#### Short Term Improvements

- Realign the Taft Brook Road/Holland Road intersection. Close and remove road in front of the Town Hall.
- Realign Cooper Hill Road/Holland Road intersection. Adjust driveway to Dover Town library correspondingly.
- Start tree plantings along roadways.
- Start creating memorial gardens in front of the Town Hall.
- Add plantings for screening along east side of property.
- Add new driveway behind the Town Hall to connect to the Town Library.
- Create and add new signage for the Town Common space and for the Town Library.

#### Long Term Improvements

- Adjust internal parking areas.
- Remove existing handicapped ramp on east side of the Town Hall and add new front entry to Town Hall on south side of building.
- Add new sidewalks connecting parking areas and buildings.
- Create Town Green space.

## Route 100

Suggested phasing of the proposed improvements for the Route 100 project area are broken down into two categories: short and long term.

### Short Term Improvements

- Start planting street trees in the Village Zone North, Village Zone South and Village Transition Zone. Continue as possible in the other zones.
- Add crosswalks after the installation of the Dover Valley Trail Segment A sidewalk project.
- Coordinate the design and installation of banners throughout all zones. Begin installation in the Village Zone, Transition Zone North A and B, and the Transition Zone South, and continue as funding permits.
- Bridge improvements: work with VTrans on installing flower boxes.
- Work with landowners to add sidewalks to connect with the Dover Valley Trail Segments A and B.

### Long Term Improvements

- Add additional crosswalks.
- Add new sidewalks.
- Work with VTrans to restripe roadway.
- Bridge improvements: work with VTrans on changing the materials for the guardrails.

## D. Permitting

Anticipated permitting needs for each project area are described below.

### Town Common

For the Town Common project area, obtaining a local site plan approval would most likely be needed. Any adjustments to town highways would need Select board approval.

### Route 100

A VTrans Section 1111 Highway Access permit is needed for any construction that will occur within the Route 100 ROW. It is advisable to review the final design plans for Route 100 with the VTrans District 1 Transportation Administrator prior to submitting the permit application to VTrans. This will help determine if there are any concerns that should be addressed before VTrans will issue the Section 1111 permit.

## E. Next Steps

If at all feasible, Dover should move forward with the implementation of at least one recommendation in each project area within the year, so that progress can be seen in both areas. A good starting point could

be the planting of street trees along Route 100 in as many of the zones as possible along with the street trees around the green and the start of the memorial garden. The Dover road crew could also undertake the realignment of Holland Road with Cooper Hill and Taft Brook Roads in the near future as well as the construction of the new internal driveway on behind the Town Hall on the Common.

Dover can also request assistance from the Windham Regional Commission on working with VTrans to implement the restriping, crosswalks, bridge gateway enhancements and other recommendations within the Route 100 right-of-way that they would like to initiate in the short term.

A public education process on the values of the Master Landscape Plan on economic development would also be beneficial. It would assist the Town in working with landowners along Route 100 to support the improvements and begin to add their own, such as the internal sidewalk links.

The table in Appendix H provides a listing of some of the information the Town may want to consider when determining which particular additional recommendations they should pursue and in what order.