

Rutland City
Rutland Creek Path
Segment 5 Scoping Study

DRAFT Final Report



Submitted by:

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In conjunction with

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University of Vermont Consulting Archeology Program

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I. INTRODUCTION

A. OVERVIEW

The City of Rutland has been working to realize the Rutland Creek Path for over 10 years. Earlier sections of the Creek Path are in various stages of development or already installed. The City recently received funding through the State of Vermont Agency of Transportation (VTrans) to undertake a scoping study of Segment 5, the southernmost segment in the overall Rutland Creek Path Master Plan. This section picks up at the end of Segment 4, at the Dorr Drive Bridge over Otter Creek and extends west close to Dorr Drive to the College of St. Joseph and possibly to the Ripley Road bridge over the creek near the city line.

The City organized a Steering Committee (SC) for the project of local officials, citizens and the President of the College of St. Joseph to provide direction for the study. The City hired the consulting team consisting of Broadreach Planning & Design, Lamoureux & Dickinson, Heritage Landscapes LLC and the University of Vermont Consulting Archeology Program (the BRPD Team) to assist them with the work.

The Study Area for this project includes the lands around Dorr Drive from River Street to the College of St. Joseph campus.

This summary report is the second product of the work of the SC and the BRPD Team. The summary describes the alternative solutions currently under consideration. The report is formatted for double-sided printing; blank pages are intentional.

B. PURPOSE AND NEED

The purpose of Segment 5 of the Rutland Creek Path is to extend bicycle and pedestrian facilities to the west side of Otter Creek in the City of Rutland and provide a convenient non-motorist link between the schools, business and residents in this area with the other areas served by other portions of the Rutland Creek Path for walkers and bicyclists of all ages and abilities.

Needs for the improvements include:

- The lack of easy walking and bicycling links between the College of St. Joseph, where most of the resident population lacks motor vehicles, and the rest of the City, including the downtown and city parks;
- The limited sight distances around the curve on Dorr Drive that make bicycling and walking along the edge of the road difficult; and
- The high rate of childhood obesity in Rutland caused, in part, by the difficulty of incorporating regular physical activity into daily lives due to the lack of supporting facilities.

C. PROJECT DEVELOPMENT PROCESS

After an initial meeting with the SC, the BRPD Team began work on Task B of their scope of work: to analyze the existing conditions in the Study Area. At the end of the work on this Task, the BRPD Team produced an *Existing Conditions* summary describing in detail the existing conditions in the Study Area. **Appendix A** is a copy of the final *Existing Conditions* summary; the main body of this final report incorporates portions of the summary. Before moving to the next Task, the BRPD Team assisted with a public work session to review the *Existing Conditions* summary and get further input on the issues and suggestions for possible solutions.

After the first public work session, the BRPD Team, again with assistance from the SC during a team work session, developed a set of alternatives for Segment 5 of the Rutland Creek Path. They considered as many different options as possible, including taking no action, during their work session. As part of the subsequent analysis after the work session, the BRPD Team reviewed the potential impacts, benefits and cost ranges for the various alternatives. They summarized the numerous alternatives that they considered and analyzed in the *Alternatives* summary. **Appendix B** is a copy of the final *Alternatives* summary; the main body of this final report incorporates portions of the *Alternatives* summary. After reviewing and refining the alternatives with the SC, the BRPD Team assisted with an Alternatives public work session hosted by the City to review the alternatives and select a preferred alternative.

After the BRPD Team and the SC confirmed the preferred alternative selected at the second public work session, the BRPD Team completed work on a final report summarizing the existing conditions, the alternatives and the recommended alternatives. The final report includes full copies of the *Existing Conditions* and *Alternatives* summaries as part of the appendices.

II. EXISTING CONDITIONS

A. INTRODUCTION

The following text provides an overview of relevant features of the Study Area that have influenced the recommendations. **Appendix A** includes a more complete description of the existing conditions in the Study Area. **Figure 2** provides a graphic overview of the existing conditions in the Study Area.

B. PROJECTED USERS

The City of Rutland has been planning the Rutland Creek Path as a facility that would be available to walkers and bicyclists of all ages and abilities. This means that the path would be usable by school children, elderly citizens and those with disabilities. The *Existing Conditions*

report in **Appendix A** provides more details on the various types of bicyclists and walkers that could use the path.

C. TRANSPORTATION FACILITIES

The primary city street within the Study Area is Dorr Drive. Dorr Drive is a curving road that runs north-south in the eastern portion of the Study Area and east-west in the middle and western portions of the Study Area. It is a two-lane roadway with eleven-foot lanes and very narrow to no paved shoulders and no pedestrian accommodations. The Dorr Drive right-of-way is 49.5-feet wide. Guardrails line the eastern side of Dorr Drive on both sides of the intersection with River Street. The River Street bridge over Otter Creek just east of the intersection with Dorr Drive is scheduled for replacement in 2015 or 2016.

The most recent traffic count on Dorr Drive, done in 2009, showed that the Average Annual Daily Traffic (AADT) was 2,400 vehicles. This is down from the 2005 count which recorded an AADT of 2,900 vehicles.

The City of Rutland has designated and signed Dorr Drive as a City Bike Route from River Street South towards Campbell Road and north towards Ripley Road.

D. UTILITIES

Utility poles owned by Green Mountain Power run along the east/north side of most of the roads in the Study Area. Water and sewer lines are located underground throughout the Study Area.

E. NATURAL RESOURCES

1. TOPOGRAPHY

The topography in the Study Area along Dorr Drive itself is relatively level. It wraps around a small hill that slopes down towards Otter Creek. The sides of Dorr Drive in the eastern portion of the Study Area are steeply sloped on each side, both down towards Otter Creek and up towards the top of the hill. The grades near the western end on either side of Dorr Drive are more level, as is the campus of the College of St. Joseph itself.

2. WATERCOURSES

Otter Creek is the primary watercourse in the Study Area. East Creek joins Otter Creek on the northeast side of the Creek where it curves from north to west in the eastern part of the Study Area.

3. FLOODPLAINS

The Otter Creek floodplain covers much of the Study Area on the eastern and northern side of Dorr Drive.

F. PLANNING DOCUMENTS

City, regional and State planning documents all support the creation of better bicycling and walking facilities. The City Plan specifically supports the completion of the Rutland Creek Path to the College of St. Joseph.

III. RECOMMENDATIONS

A. THE RECOMMENDED ALIGNMENT

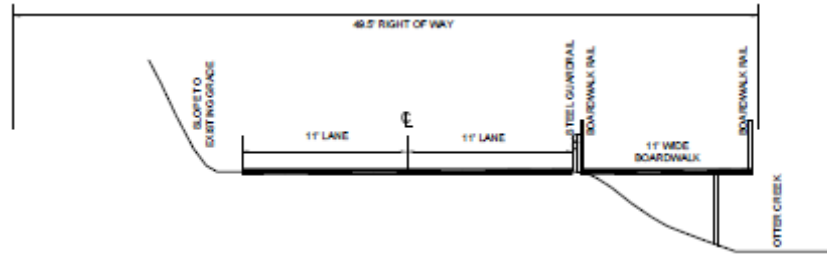
Figure 3 shows the recommended alignment of Segment 5 of the Rutland Creek Path. During the process of developing the recommended alignment for Segment 5 of the Rutland Creek Path, the BRPD Team and the SC considered a wide variety of Alternative alignments. **Figure 4** shows the alignments initially considered. After initial analysis and discussion, BRPD and the SC narrowed the alternatives to a smaller set for presentation to the public. **Figure 5** shows the more limited set of alternatives presented to the public.

This recommended alignment for current consideration includes:

- A shared use path along the north side of Dorr Drive from River Street to the start of residences on the north side;
- Two sections of boardwalk along the shared use path, one close to River Street and once close to the western end;
- A new crosswalk with rapid flashing beacons on Dorr Drive near the northeast corner of the College of St. Joseph's Campus; and
- A shared use path through the northeastern portion of the College of St. Joseph Campus.

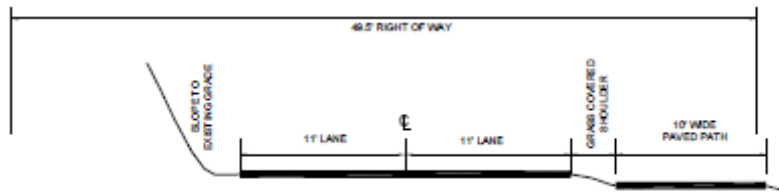
Starting from the east side, the new shared use path would be on the east side of Dorr Drive north of the new River Street bridge. A crosswalk on the new bridge would bring westbound bicyclists across the road to the path. The path would head north along the east side of Dorr Drive as an eleven-foot-wide boardwalk for the first 300 feet. The outside edge of the boardwalk would either be supported by posts outside of the edge of the creek or partially cantilevered as needed to remain out of normal high water of the creek. The boardwalk would be positioned just on the outside of the guardrail. A four-foot-high railing would be on the outside edge of the boardwalk. **Illustration 1** shows a typical cross section through this portion of the recommended alignment.

Illustration 1: Cross Section through Boardwalk Close to River Street Bridge



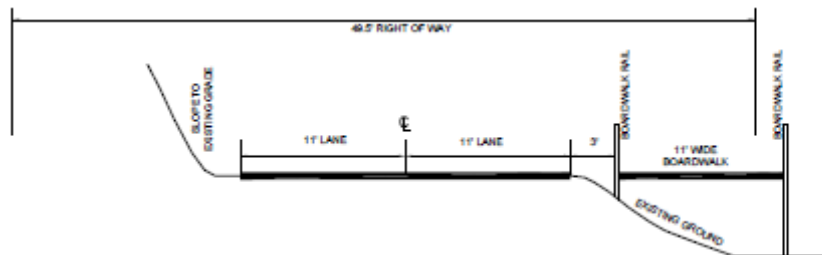
After the boardwalk, the path converts to a ten-foot-wide shared use path along the side of the road, separated from the edge of Dorr Drive by a five-foot-wide green space. The path would extend approximately three feet beyond the outer edge of the Dorr Drive right-of-way. **Illustration 2** shows a typical cross section through this portion of the proposed path alignment.

Illustration 2: Cross Section Through Shared Use Path between the Boardwalks



After approximately 500 feet, the path returns again runs on an eleven-foot-wide boardwalk to keep the path above the floodplain and low areas that are close to the north side of Dorr Drive. The second boardwalk would be approximately 715 feet long. It would also be separated from the road by approximately five feet of space and would have a four-foot-high railing on at least the outside edge. The boardwalk would end adjacent to the old dam. **Illustration 3** shows a typical cross section through this boardwalk.

Illustration 3: Cross Section through the Second Boardwalk

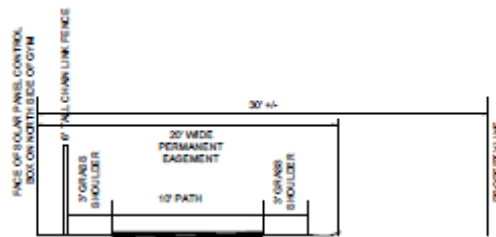


At the old dam, the path again becomes a ten-foot-wide shared use path separated from the roadway by a five-foot-wide green space. It would extend to a point opposite the eastern corner of the College of St. Joseph's campus on the south side of Dorr Drive, a distance of approximately 200 feet.

The crosswalk at the end of the boardwalk would bring users across Dorr Drive to the northeast corner of the College of St. Joseph's campus. It would be placed at a location on the road that has adequate sight distance in both directions. The rapid flashing beacon would be activated by walkers or bicyclists wishing to cross Dorr Drive with more protection than just the marked crosswalk on the road. The bright, rapidly flashing white lights would draw attention to the fact that someone is crossing the road in the crosswalk and that motorists should stop until the crosswalk is clear. The lights would be focused on the road and would not send direct light into adjacent residential windows.

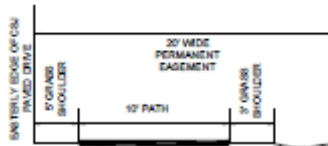
On the south side of the crosswalk, the path would head southwest through a small wooded area on the College of St. Joseph campus. Once through the woods, the path would turn west, passing along the north side of the field and continuing along the north side of the Athletic Center. It would pass at least ten feet away from the new solar panel control area. **Illustration 4** shows a cross section of the shared use path adjacent to the solar panel control area.

Illustration 4: Cross Section through the Shared Use Path next to the Control Panel



The path would stay south of the existing drainage outfalls heading towards the southern portion of the entry drive. It would head north towards Dorr Drive along the east side of the entry drive, ending at the new crosswalk to be installed as part of the Ripley Road bridge replacement project. **Illustration 5** shows a typical cross section of the path next to the College of St. Joseph access drive.

Illustration 5: Cross Section Through the Shared Use Path next to the Entry Drive



B. INFLUENCING CONSIDERATIONS

1. USERS

The SC and the public at the second work session thought that a sidewalk paired with wide bike lanes on Dorr Drive would not serve all of the potential users of the path, especially basic or beginner bicyclists. These bicyclists could potentially feel uneasy about riding on the

road close to motor vehicles, even if in an identified bicycle lane. Primarily for this reason, they recommended the shared use path along the north side of Dorr Drive. It would accommodate bicyclists uneasy about riding on the road. Because of its location directly adjacent to the roadway, it might also accommodate experienced bicyclists who do not mind riding on busy roadways.

At the crosswalk location, the public and SC decided that a shared use path would still be the right choice for the second portion of the path. Because there would be significant impacts to the front yards of the two shared use path alternatives along the north and south side of Dorr Drive, they selected the shared use path that went through the College of St. Joseph Campus as the most appropriate alignment.

The opinion of those attending the second public work session, including the SC, was that experienced bicyclists would continue to ride on Dorr Drive, at least from the crosswalk west, and that it was not necessary to widen the road to accommodate them.

2. RESIDENTIAL IMPACTS

Selecting either the sidewalk or the shared use path options west of the crosswalk would greatly impact the residences along Dorr Drive by using what is perceived as their front yards. The outside edge of the sidewalks on either side of Dorr Drive would be approximately one foot inside the right-of-way and would not require new permanent easements. Even though located totally within the Dorr Drive right-of-way, the sidewalks could be perceived as being well into the front yards of the residents. The City would also need to obtain temporary construction easements to allow disturbance of the adjacent properties while the sidewalks were being installed.

The shared use paths on either side of Dorr Drive west of the crosswalk would need to extend beyond the limits of the Dorr Drive right-of-way if they are to be separated from Dorr Drive by anything larger than a two-foot-wide green strip. Since the BRPD Team thought that just a two-foot separation would be too small, the analysis of the alternatives assumed the extension of the path beyond the right-of-way with a five-foot-wide separation between the road and the path. This would place the outside edge of a shared use path up to fifteen feet away from the current edge of the pavement, requiring both temporary and permanent easements.

The SC and the public thought that these impacts would be too significant to inflict on the existing residences along Dorr Drive and consequently decided that the alternatives that placed either a sidewalk or shared use path on either side of Dorr Drive west of the crosswalk were not preferred.

C. IMPACTS & ISSUES

1. PURPOSE & NEED

The shared use along the side of the road around the curve in Dorr Drive, because it is direct, would meet the purpose and need of the project by providing facilities for walkers and bicyclists of all ages and abilities. The continuation of the shared use path away from the road through the College of St. Joseph Campus would continue to provide facilities separated from motor vehicles for walkers and bicyclists. Those walkers or bicyclists that are comfortable with motor vehicles could still continue to use Dorr Drive as they are now.

2. UTILITY POLES

The proposed shared use path along the north side of Dorr Drive would require the relocation of the utility poles also on the north side of the road. **Figure 6** shows which poles would need to be relocated.

3. ARCHEOLOGICAL RESOURCES

Because the location of the proposed shared use path is along the edges of Otter Creek, it is assumed that the area is sensitive for archeological resources. Even the areas further away from the Creek on the south side of Dorr Drive might be sensitive. The fact that the proposed location for the shared use path on the north side of Dorr Drive is close to the road, the area might have already been disturbed, reducing the chances that archeological resources might be present.

Additional testing for archeological resources should be anticipated as part of the development of this project. If archeological resources are found, there are ways to construct the shared use path so as to not disturb the resources.

4. SURFACE MATERIAL

The shared use path would most likely have the same surface as the other Rutland Creek Path segments. The final decisions as to whether the surface would be asphalt or hard packed crushed stone will be made by the City when it moves the projects forward to construction. Each of these pavement options is considered to be impervious for the purpose of calculating the increase in storm water runoff.

The asphalt pavement is more expensive to initially install but far less costly to maintain. The difference between the cost of asphalt and the lesser cost of packed crushed gravel can typically be recovered with four to five years of maintenance costs. After that point, for at least five more years, the total cost of the packed crushed gravel, installation and maintenance, would most likely be higher than asphalt.

5. UNSAFE WALKING HABITS

There is the chance that walkers would continue along the north side of Dorr Drive instead of using the crosswalk when heading west. This would put them in a position of walking with traffic instead of heading into traffic, which is the proper way to walk along the side of a road. To guard against such potential unsafe walking habits, the path should have a railing along its western end forcing users towards the crosswalk. There should also be a sign directing walkers to the south side of Dorr Drive or the shared use path if they intend to continue westbound.

V. IMPLEMENTATION

A. PHASING

Because of the need to create segment that can serve as viable facilities on their own in the event that no other phases are ever built, the BRPD Team suggests implementing Segment 5 in one phase. There are no logical places to create intermediate stopping points that would be logical into the future on their own.

B. INITIAL ESTIMATE OF PROBABLE CONSTRUCTION COSTS

The BRPD Consulting Team has prepared an initial estimate of probable construction costs for the proposed shared use path. **Table 1** provides the basic cost information.

Table 1: Initial Estimate of Probable Construction Costs

Item	Quantity	Unit	Unit Cost	Total
New 6' Tall Chain Link Fence	50	LF	\$17	\$850
New 11' Wide Boardwalk & Railing	11,150	SF	\$77	\$858,550
Cast-in-Place Concrete Abutment	4	EA	\$10,000	\$40,000
New 10'-Wide ROW Paved Path	7,500	SF	\$50	\$375,000
New 10'-Wide Campus Paved Path	10,500	SF	\$30	\$315,000
New Rapid Flash Beacon	2	EA	\$4,000	\$8,000
New Painted Crosswalk	24	LF	\$7	\$168
			Sub Total	\$1,597,568
Engineering (15%)				\$239,635
MPM (5%)				\$79,878
Contingency (15%)				\$239,635
			Total	\$2,156,717

The initial estimate is based completely on the figures contained in this report. The numbers should be considered as guides in how much funding might be needed to construct the

different recommendations. They are based on having the project completed by an independent contractor. The City might be able to realize savings by constructing the portions of the shared use path within the Dorr Drive right-of-way with its own road crews.

C. FUNDING

Funding for Segment 5 of the Rutland Creek Path might be able to be secured from a variety of sources. Below is a list of various funding sources that could be used to help with the implementation of the recommendations, including:

- **Transportation Alternatives Program (TA Funds):** TA funds can be used to increase bicycle and pedestrian mobility. These funds will cover a maximum of 80 percent of the project with the remaining portions most likely coming from the project-sponsoring organization. TA funds are distributed in Vermont through a competitive grant program.
- **Bicycle and Pedestrian Program:** These State funds cover specific bicycle and pedestrian improvement projects and are provided via a competitive grant program.
- **Public-Private Fundraising:** The Town could work with non-public entities, such as the College of St. Joseph, or the general public to raise funds through private fundraising or grant sources available only to the non-public entities to match public funds for the sidewalk. It could be possible to provide some memorial that acknowledges the contributions.
- **Vermont Community and Urban Forestry Council Grants:** These grants are awarded to municipalities to aid in conducting a street tree inventory and plan, as well as funding of street tree plantings.

A new online tool developed by a partnership between the Alliance for Biking and Walking and the League of American Bicyclists helps find potential federal funding sources for alternative transportation projects. The site can be reached at <http://bit.ly/11xhEtr>.

Other funding sources may be available for the construction of the path, including:

- Potential health grants promoting healthy living;
- The Robert Wood Johnson Foundation (see <http://www.rwjf.org/content/rwjf/en/grants/search.html?k=walking&d=&l=>);
- MCI/Worldcom Royalty Donation Program (For this and several subsequent ideas, see <http://www.americantrails.org/resources/funding/TipsFund.html>);
- Bridge sponsorships (and possibly naming rights);
- People for Bikes grants (see <http://www.peopleforbikes.org/pages/community-grants>); and
- RockShox's Grants (see <http://www.sramcyclingfund.org/fund-overview.html>).

Even other potential sources exist. 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>.

Appendix 1
Existing Conditions Summary

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