

# Town of Bolton Development Review Board

Bolton Town Office  
3045 Theodore Roosevelt Highway  
Waterbury, VT 05676  
802-434-5075

In re: Green Mountain Club | Application #2012-19-CU  
Conditional Use Approval – Winooski Bridge, Long Trail Relocation  
July 23, 2013

### Applicant:

The Green Mountain Club  
c/o Will Wiquist III, Executive Director  
4711 Waterbury-Stowe Road  
Waterbury Center, VT 05697

**Bolton Town Clerk's Office  
Received For Record**  
July 24 2013 A.D.  
at 8 o'clock 00 minutes AM  
Recorded in Book 86 Page 644-659  
Attest: Amy Giovinetti  
Aest. Town Clerk  
AG

### Application

(Application materials on file at the Bolton Town Office, procedural history attached.)

The Green Mountain Club (GMC) has requested conditional use review and approval to construct a 224± foot suspension footbridge (not including approaches and supporting cables) across the Winooski River in association with the relocation of the Long Trail in the Town of Bolton. The proposed bridge will span the river from a 2-acre lot on the Duxbury Road on the south bank of the river, to be conveyed to the GMC by the Lafreniere Estate, to town-owned land (Sarah Holbrook Parcel) on the north bank of the river. The project will also include trail relocation across town land and the New England Central Railroad right-of-way, subject to trail and pedestrian crossing easements held by the GMC, the installation of a 12-car parking area and trail signs within the state highway right-of-way on the north side of Route 2 (RT 2), a new trail following the north side of the RT 2 right-of-way to the Notch Road, and the installation of a pedestrian alert system on the I-89 underpass on the Notch Road. The proposed bridge, trail and parking area are located in the Rural I (RI) and Flood Hazard Overlay II (FHO II) Districts.

This application has been reviewed by the Bolton Development Review Board (DRB) as the development of land for recreational use within the flood hazard area, subject to conditional use review DRB under the Bolton Land Use and Development Regulations (BLUDRs) as most recently amended, effective August 9, 2010, including applicable zoning district criteria (Tables 2.4, 2.8), conditional use and site plan review standards (Sections 5.3, 5.4) and flood hazard area regulations (Section 5.5). The Development Review Board's procedural history and relevant findings are attached.

### Decision – Final Subdivision Amendment (Boundary Adjustment) Approval:

- Denied
- Approved
- Approved with Conditions:

1. The applicants must obtain a zoning permit from the Bolton Zoning Administrator prior to the start of site work and construction. In the event that a zoning permit has not been obtained within one year of the date of this decision, DRB approval shall expire and reapplication shall be required. Prior to the issuance of a zoning permit, the applicant shall:

- a. Record the subdivision plat for the parcel to be conveyed to the Green Mountain Club from the Lafreniere estate, as approved by the Bolton Development Review Board on March 6, 2013, in the land records of the Town of Bolton.
  - b. Record all easements and occupancy agreements, as conveyed to the applicant by the Town of Bolton, the New England Central Railroad (RailAmerica Inc) and/or the Vermont Agency of Transportation in the land and permit records of the Town of Bolton.
  - c. Document to the satisfaction of the Zoning Administrator that all other required federal, state and municipal permits and approvals have been obtained, as referenced on the project review sheet submitted with the application, and provide copies of each for filing in the permit records of the town.
  - d. File final construction plans for the footbridge with the Zoning Administrator.
2. The footbridge across the Winooski River shall be designed and constructed as represented on the Site Plan (Sheet 1), Plan & Elevation (Sheet 2), and Sections (Sheets 3 and 4) dated January 22, 2013, as prepared by Vanasse Hangen Brustlin, Inc. (VHB).
- a. DRB approval of the footbridge across the Winooski River is based on the preliminary bridge design prepared by Vanasse Hangen and Brustlin Inc (VHB), as submitted in support of the application, and as used for the hydraulic analysis serving as the basis for the "no rise" certification required for bridge construction within the floodway. Any subsequent changes or modifications to the bridge design that substantially or materially affect the conditions of DRB approval, or that require additional hydraulic analysis and a new or amended "no-rise" certification, shall be submitted to the DRB for review and approval prior to bridge construction.
  - b. Minor modifications to bridge siting and design that, as determined by the Zoning Administrator do not materially or substantially modify the conditions of DRB approval, may be authorized by the Zoning Administrator in association with the issuance of a zoning permit.
3. In accordance with applicable setback and buffering requirements under the Bolton Land Use and Development Regulations:
- a. A 35-foot minimum setback distance shall be maintained from all property lines and town highway rights-of-way, except as waived by the Development Review Board for the siting of bridge backstay cables within the setback from the Duxbury Road. Any work within the town highway right-of-way must be approved by the Bolton Selectboard.
  - b. A 150-foot setback and 75-foot undisturbed, vegetated buffer shall be maintained from the top of bank of the Winooski River, except as required to accommodate the trail and bridge crossing, to include bridge construction, access and ongoing maintenance. Site clearing and disturbance within the 75-foot buffer area shall be limited to the minimum required for temporary vehicle and equipment access during bridge construction. Disturbed areas within the buffer located outside of permanently maintained bridge approaches are to be stabilized and re-vegetated using native plants and groundcover following bridge construction.
  - c. A 50-foot undisturbed vegetated buffer shall be maintained around all wetlands on town land.
4. The limits of site clearing and disturbance on town land, within town highway rights-of-way and in designated setback and buffer areas shall be clearly delineated on the ground, and all necessary erosion prevention, sediment control and stormwater management measures shall be installed prior to the start of construction.

5. The footbridge is located within the mapped floodway of the Winooski River, as shown on the Flood Insurance Rate Map (50007C0318D), effective July 18, 2011. As such the bridge shall be constructed using flood resistant materials and, as shown on the Plan & Elevation prepared by VHB, dated January 22, 2013, so that:

- a. The bridge will not result in any increase in flood levels during the occurrence of the base flood, and the flood carrying capacity of the Winooski River in the vicinity of the bridge crossing is maintained.
- b. The bottom of the bridge deck is at least one foot above the Base Flood Elevation (330.7 feet msl).
- c. The bridge is adequately anchored as necessary to prevent flotation, collapse or lateral movement of the structure during the occurrence of the base flood.

An elevation certificate for the bridge, as constructed that documents the height of the bridge deck in relation to the Base Flood Elevation, to be completed by a licensed land surveyor, architect or engineer, shall be filed with the Zoning Administrator for recording in the permit records of the town immediately following the completion of construction.

6. The footbridge shall be designed and constructed as represented in the photographic rendering submitted by the applicant to minimize the visual impacts of the bridge as viewed from public rights-of-way (RT 2, Duxbury Road), to include an open bridge design, the use of tree cover and vegetation to screen supporting towers, and the use of materials and colors that visually blend into the background. No lighting or signs are permitted on the bridge structure.
7. The footbridge shall be designed to meet applicable federal and state ADA guidelines to the extent physically feasible, to include an accessible bridge approach from the Duxbury Road, an ADA-compliant bridge deck and railing, and at least one accessible viewing platform that also provides adequate turnaround space. Given physical site constraints, including bank elevation differences, the railroad crossing, and the location of the bridge within a floodway, ADA accessibility from Route 2 over town land is hereby waived by the Development Review Board, consistent with applicable federal exemption guidelines.
8. The footbridge and trail shall be constructed and maintained on town land as specified under easements granted to the Green Mountain Club by the Town of Bolton, dated October 24, 2011, and recorded in the land records of the town. No motorized use of the trail shall be allowed except as permitted for bridge construction and maintenance by the Green Mountain Club.
9. The pedestrian crossing over the New England Central Railroad (RailAmerica Inc.) shall be installed as shown on "Pedestrian Crossing with Railroad" details (Sheet R-3), as revised November 30, 2010, and as indicated on the "Site Plan" (Sheet 1) dated 6/20/12, prepared by Chris Haggerty (License No. 741), Button Professional Surveyors, to include pedestrian crossing signs on Route 2, as approved by the Vermont Agency of Transportation, and bollards that limit vehicle access and use of the rail crossing.
10. The parking area within the Route 2 right-of-way shall be installed as shown on the "Site Plan" (Sheets 1 and 2) dated 6/20/12, to include separate, marked pedestrian/trail and vehicle entrances, subject to approval by the Vermont Agency of Transportation. Agency permits and approvals must be obtained and filed with the Zoning Administrator prior to the issuance of a zoning permit for parking area construction.

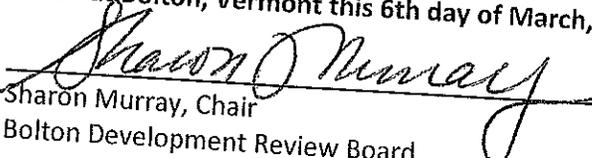
11. Vehicles associated with bridge or trailhead use shall not be parked within town or state highway rights-of-way outside of the designated parking area, and shall not block gated emergency vehicle accesses to I-89. The Bolton DRB reserves the right to require additional off-road trailhead parking, if necessary to address illegal parking within town or state highway rights-of-way.
12. A zoning permit issued by the Bolton Zoning Administrator must also be obtained for any kiosks or signs (other than state or municipal highway signs) erected by the GMC within the project area. Signs shall meet applicable requirements under Section 3.14 (Sign Requirements) of the Bolton Land Use and Development Regulations.
13. The "Cross Alert Pedestrian Warning System" shall be installed on both sides of the I-89 underpass on the Notch Road (tunnel), as indicated on the Site Plan (Sheet 1) dated 6/20/10 and as described in manufacturer materials submitted with the application.
14. The Green Mountain Club shall be solely responsible for ongoing monitoring, maintenance and repair of the footbridge, parking area, trail, pedestrian crossings, and associated signs, structures and equipment, to include the crossing alert system installed at the Notch Road underpass. This shall also include annual bridge inspections to be conducted by or on behalf of the Green Mountain Club each spring, following major flood events (Q50 or above), or as requested by the Bolton Selectboard, to ensure that the bridge is properly maintained, remains structurally sound and is safe for use by hikers and other pedestrians. Written copies or summaries of inspection reports, signed by a representative of the GMC, shall be submitted to the Zoning Administrator by June 1<sup>st</sup> of each year, and upon request.
15. The GMC shall maintain adequate levels of insurance coverage as required under the terms of recorded easements and occupancy agreements referenced in the application, and shall also annually provide the town with updated contact information for use in emergencies, to report any problems concerning the use of Green Mountain Club facilities, and to notify the club in the event of damage or needed repairs to the footbridge or to crossing alert equipment.
16. Except as amended herein, all conditions of prior subdivision approval as issued by the Development Review Board on March 6, 2013 shall remain in full force and effect.
17. These conditions of approval shall run with the land and are binding upon and enforceable against the applicant as permittee and its successors. By acceptance of this permit, the permittee agrees to allow authorized representatives of the Town of Bolton to access the property subject to this approval, at reasonable times, for purposes of ascertaining compliance with the conditions of approval.

Approved with conditions (5-0) by the Bolton Development Review Board:

Jenifer Andrews – Yea  
Charmaine Godin – Yea  
Sharon Murray – Yea

Margot Pender – Yea  
Michael Rainville – Yea

Dated at Bolton, Vermont this 6th day of March, 2013.

  
Sharon Murray, Chair  
Bolton Development Review Board

**NOTICE:**

1. In accordance with 24 V.S.A. § 4449(e), the applicants are hereby notified that state permits also may be required prior to land subdivision or construction. The applicant should contact the DEC Permit Specialist for District #4 (802-879-5676) to determine whether state permits are required.
2. This decision may be appealed to the Environmental Division of the Vermont Superior Court by an interested person who participated in the proceeding before the Development Review Board. Such appeal must be taken within 30 days of the date of this decision, pursuant to 24 V.S.A. § 4471 and Rule 5(b) of the Vermont Rules for Environmental Division Court Proceedings.

**Review Process:**

(Application materials, hearing notices, minutes on file at the Bolton Town Office)

**Sketch Plan Review.** A preliminary application for the Green Mountain Club's proposed Winooski River Bridge project, including land subdivision, bridge construction and trail relocation, dated June 14, 2012, was filed by the Green Mountain Club (GMC) and Ronald Lafreniere Jr., Executor of the Estate of Ronald LaFreniere, Sr., landowner. The application and supporting documents were received by the Bolton Zoning Administrator on June 16, 2012 and forwarded to the Bolton Development Review Board (DRB) for sketch plan review, which was conducted at a regular meeting on the DRB, held on June 26, 2012. At this meeting, it was determined that the proposed development would require subdivision approval for the conveyance of land to the Green Mountain Club, conditional use approval for bridge and trail construction within a designated flood hazard area and required setbacks from the Winooski River, and for the construction of a proposed parking area along Route 2. The DRB agreed to concurrently hear and consider applications for subdivision and conditional use approval in order to expedite the review process.

**Subdivision Review.** Additional application information, including a letter from the applicants dated July 2, 2012 requesting the DRB to waive survey requirements for the larger parcel to be retained by the Lafreniere Estate, was received by the Zoning Administrator on July 7, 2012 and forwarded to the DRB for hearing. The public hearing, scheduled for July 24, 2012, was warned in accordance with Section 9.8 of the Bolton Land Use & Development Regulations (BLUDRs), and 24 V.S.A. § 4464. A copy of the application was also referred to Flood Plain Management, Vermont Department of Environmental Conservation, for review and comment.

The initial public hearing to consider the application was convened on July 24, 2012, 6:30 pm at the Bolton Town Office with a quorum of the DRB present. There were no reported ex parte communications, conflicts of interest, or recusals. The hearing was continued, pending additional information from the state and the applicant, including information regarding final bridge design, through January 22, 2013. At the request of the applicants, the hearing on the subdivision portion of the application was adjourned on January 22, 2013. Final subdivision approval, with conditions, was issued by the DRB on March 6, 2013.

**Conditional Use Review.** The Bolton DRB voted on February 26, 2013 to reconvene the hearing with regard to conditional use review and approval of the bridge and parking area, pending the submission of additional information from the state and the applicant. The hearing for conditional use review was rewarned and reconvened on March 26, 2013 with a quorum of the DRB present. DRB Chair, Sharon Murray reported contacting state agency staff, include Rebecca Pfeiffer at Floodplain Management and Jon Kaplan, VTrans Bicycle and Pedestrian Program Manager, to clarify relevant federal and/or state standards specific to bridge design and construction – including applicable National Flood Insurance Program standards and federal or state accessibility requirements that may apply to the proposed footbridge. No other ex parte communications or conflicts of interest were reported. Following submission requested information from the applicant, the hearing was adjourned on March 26, 2013.

Following the close of the hearing, the GMC forwarded additional information regarding proposed modifications in the bridge design and construction details on May 7, 2013 and, in a letter dated May 10, 2013, agreed to waive, in writing, the 45-day period for issuing a written decision, pending a DRB determination regarding whether the additional information was relevant to the DRB's review and findings, and would therefore warrant reopening the hearing. The DRB reviewed this information at its regular meeting on May 28, 2013, and determined that the hearing would not have to be re-warned unless the Bolton Selectboard required significant changes to bridge siting or design as necessary to

accommodate work within the town highway right-of-way. It is our understanding that, based on applicant's subsequent meetings with the Selectboard through June 18<sup>th</sup>, 2013, no changes in bridge location or design are warranted or have been requested.

The following persons attended and participated in the conditional use review portion of the hearing process, or submitted written comments prior to the hearing date, and may be afforded status as interested persons with rights to appeal this decision:

- Estate of Ronald LaFreniere, Sr., landowner, represented by Ronald LaFreniere, Jr., Executor.
- Green Mountain Club, applicant, represented by Wil Wiquist, Executive Director, David Hardy, Director of Trail Programs, and Susan Shea, Director of Conservation.
- Georgianna Bagby, adjoining property owner; 647 Duxbury Road, Waterbury, VT 05676

The following materials in support of the application were submitted with the application:

1. Completed application form, dated June 6, 2012 and required application fees.
2. Site Location Map (Exhibit A), dated 5/22/2012.
3. Project Narrative (Exhibit B).
4. VTTrans Highway Access Permit Application, dated 6/30/12, including Site Plan Sheets #1, #2, dated 6/20/12, prepared by Christopher Haggerty, Licensed Surveyor (#741), Button Professional Landsurveyors, PC; Cross Alert Systems pedestrian crossing equipment details (Exhibit C).
5. GMC "RailAmerica Application for Railroad Crossing," dated 12/13/10; and "Railroad Occupancy Licensing (Crossing) Agreement," dated July 14, 2011 by and between New England Central Railroad, Inc. and the Green Mountain Club (Exhibit D).
6. GMC Certificate of Liability Insurance for Rail Crossing, dated 7/11/11, issued by Patchner and Associates LLC, Bedford, NY; Notice of Terrorism Insurance Coverage, dated 7/14/2011 (Exhibit E).
7. Landowner Easement Agreements: Town of Bolton, dated October 24, 2011; Michael and Nancy Hauser, dated August 5, 2011; Climbing Resource Access Group of Vermont, dated July 12, 2011 (Exhibit F).
8. Note/sign-off from Chris Brunelle, VT DEC Stream Alteration Engineer, dated 6/14/12 regarding Preliminary Bridge Design, dated 4/30/12, prepared by Norwich University (Sheet 2 of 10) (Exhibit G).
9. Subdivision application: Aerial photo of the LaFreniere parcel; Draft Subdivision Plat (Plan Sheet #1), dated January 6, 2012, prepared by Christopher Haggerty, Vermont Licensed Surveyor (No. 741); survey waiver request, GMC letter dated July 2, 2012 (Exhibit H).
10. Letter from Alan Quackenbush, VT ANR Wetlands Program Manager, dated 7/23/12 regarding field inspection of Class II wetlands on Sarah Holbrook Property (Exhibit I).
11. Letter from Francis Robinson IV and John D. Crock, PhD, UVM Consulting Archaeology Program, dated 1/4/2012, regarding testing at bridge site and recommended determination of no effect (Exhibit J).
12. Correspondence from Robert Zaino, Ecologist, VT Department of Fish and Wildlife, dated June 27, 2012 regarding review for rare, threatened and endangered species (Exhibit K).
13. US Coast Guard Navigable Waterways Application (Exhibit L).
14. Letter from Rebecca Pfeiffer, VT Dept. Environmental Conservation, Flood Plain Management Program, dated May 4, 2011 regarding initial "no-rise" hydraulic analysis for conceptual bridge design (Exhibit M).

The following additional materials pertaining to the Winooski Bridge Project application were also received and reviewed by the DRB:

15. Letter from Giorgianna Bagby, abutting property owner, expressing concerns regarding the impact of the proposed bridge on ice jams, flooding and the riverbank.
16. Letter from Gary Kassof, Bridge Program Management, US Coast Guard, dated July 31, 2012 regarding determination that the Winooski River, at the proposed bridge location, is not a navigable waterway.
17. Correspondence from Mark Ferguson, Zoologist, VT Fish and Wildlife, dated July 15, 2012, regarding the uncommon mussel (triangular floater) at the proposed bridge location.
18. Green Mountain Club Winooski River Bridge Preliminary Plans: Site Plan (Sheet 1), Plan and Elevation (Sheet 2), Sections (Sheet 3, 4), dated January 22, 2013, prepared by Vanasse Hangen Brustlin Inc., Bedford, NH.
19. Federal Emergency Management Agency, Flood Insurance Rate Map Number 50007C0318D, effective July 18, 2011.
20. Green Mountain Club Footbridge: Hydraulics Report, dated December 2012, prepared by Vanasse Hangen Brustlin, Inc., Bedford, NH, based on a revised preliminary bridge design.
21. Correspondence from Rebecca Pfeiffer, VT Floodplain Management, dated January 22, 2013 regarding bridge location within Special Flood Hazard Area, floodway and associated hydraulic analysis.
22. Correspondence from Jon Kaplan, Bicycle and Pedestrian Program Manager, VT Agency of Transportation, dated January 31, 2013 to the DRB regarding US Access Board guidance on trail accessibility.
23. Green Mountain Club Winooski River Bridge Accessibility Review (no date), prepared for the Bolton DRB by Pete Antos-Ketcham, GMC Director of Operations.
24. Letter from Janet Zeller, National Accessibility Manager, USDA Forest Service, dated February 20, 2013 regarding Forest Service Trail Accessibility Guidelines.
25. Project Review Sheet, dated 2/22/13, from Jeff McMahan, VT DEC Permit Specialist.
26. Town of Bolton Final Subdivision Approval, Lafreniere Estate, GMC, dated March 6, 2013.
27. Correspondence from Rebecca Pfeiffer, CFM, VT Floodplain Management, dated March 22, 2013, responding to additional DRB questions regarding bridge design (deck) in relation to the base flood elevation.
28. Property Line and Zoning Map, dated March 25, 2013, prepared by Vanasse Hangen Bruslin Inc.
29. Photo rendition of proposed bridge as viewed from Route 2 (no date).
30. Site Photographs (no date).
31. Construction Timeline, Green Mountain Club (no date)

## **Findings and Conclusions**

The GMC Winooski River Bridge Project, to include bridge and parking area construction and trail relocation, was reviewed by the Bolton DRB for conformance with the following applicable requirements of the Bolton Land Use and Development Regulations (BLU&DR) as amended, effective August 9, 2010:

- Zoning district standards: Rural I District (Table 2.4), Flood Hazard Overlay II District (Table 2.8),
- Site plan and conditional use standards (Sections 5.3, 5.4)
- Height Standards (Section 3.5)
- Surface water protection standards (Section 3.17),
- Flood hazard regulations (Section 5.5)

Board findings and conclusions under applicable standards under each of these standards are presented as follows.

**Zoning District Standards (Tables 2.4, 2.8)**

**Conclusion.** Based on the following findings, the DRB has determined that the proposed GMC footbridge, parking area and trail relocation conform to applicable zoning district standards for the Rural I District in which it is located. Because the bridge is also located within the Flood Hazard Overlay II District –including the mapped AE Zone and floodway – it is also subject to flood hazard area review under Section 5.5.

1. The proposed GMC footbridge is located within the Rural I (R1) Zoning District, as shown on the location map and determined from the Town of Bolton Zoning Map (Exhibits 2, 28).
2. The Long Trail relocation, because it is located in a flood hazard area and involves bridge construction, use of public rights-of-way, and the installation of a new parking area, is not exempt from local regulation, as specified under Section 9.2(4) of the BLUDR (Exhibits 3, 4, 18, 19).
3. The proposed trail relocation, footbridge and parking area, associated with outdoor recreation (Recreation/Outdoor), are allowed within the R1 District subject to site plan and conditional use approval by the DRB (Regulations, Table 2.4).
4. The proposed bridge structure (towers/piers and deck) as shown on the Site Plan dated March 23, 2013, meet the minimum 35-foot district setback requirement from the Duxbury Road and RT2 rights-of-way. The west bridge ramp, as required for accessibility, is exempt from the setback requirement under Section 9.2. The ramp and anchoring (backstay) cables are to be located within the setback area, but outside of the highway right-of-way (Exhibits 18, 28).
5. Proposed bridge towers and piers, as shown on the Site Plan dated March 25, 2013, also meet minimum 35-foot side and rear setbacks as required in the R1 District (Exhibit 28).
6. The bridge towers and piers are, of necessity, located within the required 150-foot setback from the Winooski River, as specified under Section 3.17 of the BLUDR (Exhibits 18, 28). The proposed footbridge, as a functionally dependent structure associated with a river crossing, is an allowed encroachment within the Winooski River setback and buffer area, subject to conditional use review and approval by the DRB under Section 3.17.
7. The east bridge tower and pier, with a total elevation of 40+/- feet above the existing grade as shown on "Section 4," dated March 4, 2013, exceeds the maximum district height requirement of 35 feet. The DRB agreed to waive this height limitation subject to conditional review and approval under Section 5.3(B) of the regulations (see below). The west tower and pier, with a total height of 30+/- feet from exposed bedrock, meets maximum district height requirements (Exhibit 18).
8. The bridge also lies within the Flood Hazard Area Overlay II District (Table 2.8), including the designated AE Zone and floodway as shown on Flood Insurance Rate Map (FIRM) Number 50007C0318D, effective July 18, 2011. Bridge piers, towers, and stairs accessing the east tower are all located outside of the river channel, but within the mapped floodway. As such the proposed bridge is subject to flood hazard area review under Section 5.5 of the BLUDR (see below) (Exhibits 18, 19, 28, 21).

**Height Requirements (Section 3.5)**

**Conclusion:** Based on the following findings, the DRB has determined that a waiver of the district height requirement under Section 3.5(B) for the east (north) tower of the proposed bridge is necessary and

appropriate to accommodate the proposed use given existing site conditions. It will be largely screened from view, and will not represent a hazard to adjoining properties or public rights-of-way.

9. The east (north) tower, as depicted on Section 4, dated March 4, 2013, at 40+/- feet above the existing grade, exceeds the maximum district height limit of 35 feet (Exhibit 18).
10. Under Section 3.5 of the BLUDR, the DRB may waive the district height requirement, and approve a structure in excess of the maximum allowed height as a conditional use, subject to review under Section 5.4 (below) and applicable provisions of Section 3.5(B).
11. The additional height is necessary to address the difference in elevation between the east (north) and west (south) riverbanks, and to raise the bridge deck above the base flood elevation (Exhibit 18).
12. The east (north) tower, given its location outside of public rights-of-way and its distance from adjoining properties (in excess of its height), will not constitute a hazard to public safety or to adjoining properties. Front, side and rear setback distances are sufficient to protect adjoining properties (town land) and public rights-of-way (railroad, RT2) in the event of tower collapse (Exhibits 18, 28).
13. That portion of the tower above 35 feet, as depicted in Section in height is not intended or for public access, and is not accessible by the public (GMC testimony, Exhibit 18).
14. As shown on the photo rendition, the tower will be largely screened from view from public rights-of-way by existing tree cover, and will not be used for advertising purposes. No lighting is proposed (Exhibit 29, GMC testimony).

### **Surface Waters and Wetlands (Section 3.17)**

**Conclusion.** Based on the following findings the DRB has determined that, if constructed and maintained as proposed, the GMC footbridge will be sited and designed to minimize surface runoff and soils erosion and to protect water quality and existing riparian wildlife habitat.

15. The proposed footbridge, of necessity, is located within the required 150-foot setback and 75-foot buffer area for the Winooski River, as measured from the top of bank and shown on the Site Plan dated March 25, 2013 (Exhibits 18, 28).
16. Stream crossings, including bridges, are allowed encroachments within required setback and buffer areas, subject to conditional use review under Section 5.4 (below) and applicable requirements of Section 3.17. Specifically, encroachments must be sited and designed to minimize surface runoff, channeling and soil erosion (BLUDR, Section 3.17(B)).
17. The Town of Bolton has granted the GMC permanent footbridge maintenance and trail easements 20-feet in width to accommodate trail relocation across town land. The town has also granted a temporary construction easement outside of the required buffer area for initial bridge construction. Trail and footbridge easements are to be used only for non-motorized and non-mechanized pedestrian recreation. Motorized use under the maintenance easement is limited to the GMC as necessary for bridge construction and maintenance (Exhibit 7).

18. At completion, the trail corridor and wood-framed access ramp located in the buffer zone will be no more than 5-feet in width. The trail will generally follow an existing woods road across town land (Exhibits 3, 18).
19. Bridge footings and piers, as shown on the Plan and Elevation dated January 22, 2013, are located outside of the river channel. No work is proposed within the river channel or riverbed. No stream alteration permit from the state is required (Exhibits 3, 8, 18, 28).
20. According to GMC testimony, existing site grades and drainage will not be altered. Riverbanks will not be disturbed except for drilling necessary to drilling to install the footing for the west tower on an existing rock ledge along the river, above the riverbank. Footings and piers for the east tower and stair will be installed below the existing grade, requiring limited excavation. No fill is proposed (Exhibits 3, 18).
21. According to GMC testimony, bridge construction will be accomplished in such a way as to minimize impacts to trees and vegetation within the buffer area. Limited clearing of vegetation within required buffer areas on both sides of the river will be required during bridge construction in order to accommodate materials and equipment. Silt fences will be installed to prevent sedimentation during bridge construction. Disturbed areas outside of the trail corridor and bridge approaches will be stabilized and re-vegetated following construction (GMC Testimony).
22. According to GMC testimony, fifty-foot buffers will be maintained around all wetlands during and after bridge and trail construction, to include those wetlands identified on town land as verified in the field by VANR Wetlands Program Manager Alan Quakenbush (Exhibit 10).

**Site Plan Review Standards (Section 5.3)**

**Conclusion:** The DRB has determined that, based on the following findings, the proposed bridge and trail relocation conform to applicable site plan review standards and, if properly installed and maintained as proposed, will improve hiker and pedestrian safety by shortening the length of trail within the Duxbury Road and RT2 highway rights-of-way. Proposed improvements will also provide additional trail access and trailhead parking.

23. **Site Conditions.** Existing site features identified on the land to be developed include areas of steep and very steep slope (along the riverbank), the Winooski River, wetlands and associated setback and buffer areas (as separately addressed under Section 3.17 above); flood hazard areas (as separately address under Section 5.5 below) and scenic views of the Winooski River from RT2 and the Duxbury Road (Exhibits 2, 3, 4, 9, 10, 11, 17, 18, 19, 26, 28, 29, Bolton Natural Resources Map).
24. Proposed site features to be developed include the bridge approach from the Duxbury Road across land to be conveyed to the GMC, the pedestrian bridge across the Winooski River, the bridge approach and trail relocation across town land on the north side of the river, pedestrian use of the existing railroad crossing within the New England Central Railroad's rail right-of-way, a RT2 highway crossing, a new parking area and trail head and trail within the RT 2 right-of-way north of the highway, and a pedestrian signal at the Bolton Notch Road highway underpass (Exhibits 3, 4, 18, 28, 29).
25. An uncommon mussel has been identified by the Vermont Department of Fish and Wildlife in the vicinity of the proposed bridge location, but no work is proposed within the river channel or

- riverbed. Silt fences will be used during bridge construction to avoid sedimentation that may affect mussel populations (Exhibits 12, 17).
26. Based on initial archaeological survey work and testing at the proposed bridge location, there are no known historic or cultural resources located on the site that would be impacted by bridge construction or trail relocation (Exhibit 11).
  27. As indicated from the photo rendering submitted with the application, the bridge has been designed to minimize its visual impacts as viewed from RT 2. It may be more highly visible along a short section of the Duxbury Road, and from the river. Bridge towers will be setback from the river and largely screened by existing tree cover. The suspension bridge has an open design that is intended to blend in with background scenery (Exhibits 3, 29, GMC Testimony).
  28. **Site Layout and Design.** Site layout and design, which incorporate existing features including existing highway and railroad rights-of-way and an old woods road, generally conform to the rural character of the RI District, characterized in this location by wooded riverbanks and hillsides and adjoining open land (Exhibits 2, 3, 4, 18, 28, 29).
  29. **Access and Circulation.** Vehicular access to the bridge and relocated trail will be provided via the parking area to be located within and accessed from the RT2 state highway right-of-way, as shown on the Site Plan dated 6/20/12, subject to Vermont Agency of Transportation highway access approval. No vehicular access to the bridge is currently proposed from the Duxbury Road. Access to the railroad crossing by motorized vehicles will be limited by the installation of three bollards, as shown on the site plan (Exhibit 4).
  30. Vehicular access to the parking area will be separated from pedestrian/ trail access, and from the existing I-89 emergency access to the west, as indicated on the site plan (Sheets 1,2). The parking area will also be fenced along the I-89 right-of-way (south bound lane) (Exhibit 4).
  31. The Long Trail, which currently follows the Duxbury Road right-of-way south of the river, will be relocated out of the road right-of-way onto adjoining state land, except for a short segment leading to the bridge approach from the east. On the north side it will cross town-owned land, the railroad tracks and Route 2, and follow the RT 2 right-of-way to the Bolton Notch Road, as shown on the site plan dated 6/20/12 (Sheets 1, 2). Trail easements have been obtained for portions of the trail to be relocated on town and private land, as included in the application (Exhibits 4, 5, 7).
  32. Non-exclusive, pedestrian use of the existing rail crossing by the GMC is allowed subject to an agreement between Rail America (parent company for the New England Central Railroad Inc.) and the Green Mountain Club, dated July 14, 2012 (Exhibits 5,6). The GMC is authorized to rebuild the access for this use, to consist of the installation of 5-foot wide timber treads installed perpendicular to the tracks, as shown on crossing details (R3) dated November 30, 2010 (Exhibits 5, 6).
  33. The RT 2 pedestrian crossing will be marked by pedestrian crossing signs posted in both directions within the highway right-of-way, as shown on the Site Plan dated 6/20/12, subject to the approval of the Vermont Agency of Transportation (Exhibits 4).
  34. The relocated Long Trail will follow a path from the parking area to the Notch Road within the RT 2 right-of-way, as generally shown on the site plan dated 6/20/12, subject to the approval of the

- Vermont Agency of Transportation. GMC will be responsible for trail maintenance within the right-of-way.
35. The trail will follow the Notch Road right-of-way for a short distance, to include use of the I-89 underpass, as shown on the Site Plan dated 6/20/12. In response to concerns from the Bolton Selectboard regarding associated pedestrian visibility and safety issues, especially given the use of the underpass by gravel trucks on Notch Road, the GMC has proposed to install and maintain an audio-visual pedestrian warning system on each side of the underpass tunnel, to be manually engaged by hikers and other pedestrians before entering the underpass. The application includes details for the proposed Cross Alert system, to be maintained by the GMC (Exhibit 4).
  36. **ADA Compliance.** Compliance with existing and proposed federal and state Americans with Disabilities Act (ADA) guidelines was considered by both the DRB and the GMC, given that the trail and bridge are accessed from town land and public rights-of-way. The bridge as designed includes an accessible, 5-foot wide approach from the Duxbury Road, and a 4.1-foot (50") wide bridge deck with railings, in conformance with current ADA guidelines. The GMC also proposes to install accessible 5x5-foot (or larger) viewing platforms at each end of the deck at the outside edge of the bridge towers. Due to the difference in riverbank elevations, however, the bridge can only be accessed by a stairway from the north site of the river. This difference in elevation, and the fact that the bridge and approaches are located within a mapped floodway, preclude the installation of a fixed ramp in this location (Exhibits 22, 23, 24).
  37. As stated in the letter from Janet Zellar, National Accessibility Program Manager for the USDA Forest Service, dated February, 20, 2013, the Winooski River Trail Bridge as designed..."will not be contrary to the accessibility requirements even though only the south end of the bridge will be able to comply with the technical specifications of the trail accessibility guidelines. The north end of the bridge will comply with the exceptions within the trail accessibility guidelines due to the conditions for departure at that location" (Exhibit 24).
  38. **Parking.** No additional parking to access the bridge is currently proposed on the Duxbury Road. A new parking area and trailhead, as shown on the Site Plan dated 6/20/12 (Sheets 1, 2), is to be located within the RT 2 highway right-of-way, subject to Vermont Agency of Transportation review and approval (Exhibit 4).
  39. The proposed 6,620 square foot graveled parking area, as shown on the site plan, will accommodate up to twelve 9'x18' parking spaces with a turnaround, and will also include room for future expansion for up to eight additional spaces as needed. A proposed trailhead kiosk will be located within the parking area, as shown on the site plan. The GMC will be responsible for year-round maintenance and upkeep of the parking area (Exhibit 4, GMC testimony).
  40. **Outdoor Lighting.** No outdoor lighting is currently proposed, except for that associated with the Cross Alert system to be installed at the Notch Road underpass (Exhibit 4, GMC Testimony).
  41. **Stormwater.** No specific stormwater management and erosion control measures, apart from those associated with bridge construction as noted above, have been proposed (Findings #20-22).

**Conditional Use Review Standards (Section 5.4)**

**Conclusion:** Based on the following findings and the type of development proposed, the DRB has determined that the project as presented to the DRB will not have an undue adverse impact or effect

on the capacity of existing or planned community services and facilities, the character of the area, traffic, local regulations, or renewable energy resources. It also conforms to the Bolton Town Plan, and will not result in any hazards to community facilities or adjoining properties.

42. **Community Facilities and Services.** Municipal facilities and services used by trail users are limited to road rights-of-way, use of town land, and occasional emergency calls. No increase in the level of use of the existing trail network is proposed that would increase the demand for municipal services. Easements have been obtained from the town of use of land. All facilities propose, including the footbridge and parking area, are to be maintained by the GMC. The proposed trail relocation, by reducing pedestrian use of the town highway right-of-way, and by providing well-marked locations for new pedestrian crossings, will also increase pedestrian/hiker safety (Exhibits 3, 4).
43. **Character of the Area.** As noted above, the proposed bridge project supports an existing, allowed recreational use within the Rural I District, and has been designed to visually blend into the surrounding scenery. As such, it will not adversely affect the rural character of the area, as defined for this district under Table 2.4 (Exhibits 3, 28, 29).
44. **Traffic.** The footbridge, trail relocation and parking area, if designed and installed with necessary pedestrian safety features as proposed, will not increase or adversely affect vehicular traffic on highways in the vicinity of the project, including existing traffic on the Duxbury Road, RT 2, and the Notch Road. Proposed safety features to be maintained by the GMC include bollards limiting vehicular access, highway crossing signs, and a pedestrian safety alert system for the underpass on the Notch Road (Exhibits 3, 4).
45. **Bylaws in Effect.** The GMC must obtain approval from the Bolton Selectboard under the town's highway ordinance for any work within the Duxbury Road right-of-way, and for use of the Notch Road right-of-way for trail relocation (Bolton Highway Ordinance). No parking is proposed or allowed within town highway rights-of-way. The GMC has also applied for approval from the Vermont Agency of Transportation for work within the RT 2 right-of-way (Exhibit 4). Zoning permits will be required for any signs (e.g., the kiosk) other than traffic or safety signs within highway rights-of-way, as required by the town or state (BLUDR, Section 3.14).
46. **Renewable Energy.** The project will have no effect on renewable energy resources which include limited solar access and woody biomass production, and the flow of the river – none of which are currently being used in this location for renewable energy production. The nearest hydro dam, at Bolton Falls, is located several miles upstream from the project (Exhibit 2).
47. **Zoning Districts.** The project conforms to applicable zoning district and site plan review standards, as found above (Findings #1-8).
48. **Bolton Town Plan.** The project conforms to the following applicable goals and policies of the Bolton Town Plan, as readopted in 2012, with regard to natural resource protection and trail development:
  - Encourage and maintain naturally vegetated shorelines, buffers and setbacks for all rivers, ponds and streams.
  - Identify and manage pollution, flooding and fluvial erosion hazards along rivers and streams.
  - Ensure that permits issued for development near sensitive areas, such as steep slopes, high elevations, wetlands, scenic vistas and wildlife habitats, contain conditions assuring conformance to the goals set forth in this plan.
  - Maintain, protect, and improve existing recreational trails as well as develop new recreational trails on town land and on private land through the use of easements and agreements.

The DRB is concerned that, based on material floating down the river during Tropical Storm Irene – including trees, hay bales and propane tanks – this may not be sufficient clearance; however this design meets current standards under the regulations that require the lowest occupied level of a structure to be built at or above the base flood elevation. It was also confirmed in consultation with the state that there are no standards specific to bridge elevations under the National Flood Insurance Program, and that the design exceeds current state design standards (Q50) for bridges that are not located on the interstate system (Exhibit 27).

- Cooperate with environmental and recreational groups, including, but not limited to, the Green Mountain Club (the Long Trail), the Vermont Association of Snow Travelers (VAST), the Catamount Trail Association (the Catamount Trail), Climbing Resource Access Group – Vermont (CRAG-VT) and local landowners to ensure continued access to and use of Bolton's extensive network of recreational trails, and other lands for other recreational purposes.

49. **Performance Standards.** The project is not expected to result in any noise or vibration, smoke, dust, noxious gases, electromagnetic disturbances, glare, refuse or fire, explosive or radioactive emission hazards as addressed under Section 3.12 of the BLUDR). No blasting has been proposed in association with bridge construction (Exhibit 3, GMC Testimony).

**Flood Hazard Area Standards (Section 5.5)**

**Conclusion.** Based on the following findings, the footbridge, though located within the designated AE Zone and floodway of the Winooski River, if constructed in accordance with the preliminary bridge design submitted with the application, will not result in an increase in flood elevations during flood events. The footbridge has been designed to minimize flood damage; is adequately anchored to prevent flotation, collapse or lateral movement during the occurrence of a base flood; will be constructed with materials resistant to flooding, using methods and practices that minimize flood damage.

50. The proposed footbridge, relocated trail and parking area are all located within the AE Zone of a mapped Special Flood Hazard Area (SFHA) as shown on the most recent FEMA-issued Flood Insurance Rate Map for the Town of Bolton (Number 50007C0318D, effective July 18, 2011) and on the Site Plan dated 6/20/2012. As such, the application was forwarded for review by Vermont Floodplain Management (Exhibits 2, 14, 18, 19).
51. The proposed footbridge is located outside of the stream channel, but within the mapped floodway of the Winooski River, as shown on the Flood Insurance Rate Map (Exhibits 18, 19).
52. The deck of the footbridge will be suspended between two towers installed on concrete piers located outside of the stream channel, which will be anchored through the use of backstay cables as shown on initial bridge plans and elevations prepared by VHB (Sheets 3, 4) dated January 22, 2013. Stairs providing access to the bridge from the north will include wooden "break-away" treads attached to metal stringers that are hinged to lift during high water (Exhibit 18).
53. Ms. Georgiana Bagby, who has lived on the Duxbury Road for 44 years, expressed in a letter to the DRB dated July 15, 2012, her concerns regarding the effect of winter ice on the bridge, and the increased potential for spring flooding, including flooding on properties next to the river (Exhibit 15).
54. The GMC provided a hydraulic analysis of the footbridge prepared by the engineering firm Vanasse Hangen Brustlin, Inc. (VHB), dated December 2012, as required for development in the floodway. This analysis, based on VHB's preliminary bridge design, was reviewed and accepted by Vermont Floodplain Management staff (Exhibits 14, 18, 20).
55. A "No Rise/No Impact" Certification, signed by VHB's Senior Project Engineer, Michael C. Hansen, PE, CFM (Vermont License No. 9171) and dated July 18, 2011, is included as Appendix A of the VHB report. This includes certification that, based on the preliminary design, the footbridge will not result in any increase in flood levels during the occurrence of a base flood (Q100) flood event (a "100-year" flood or flood having a 1% chance of occurring in any given year) (Exhibit 20).
56. The bottom of the bridge deck is located between 1.3 and 2.5 feet above the base flood elevation (Q100=330.7 feet) as shown on the Plan and Elevation (Sheet 2) prepared by VHB, dated 1/22/2013.