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Project #: 059373.003

From: VHB; Drew Gingras
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Re: Bolton Valley Access Road Scoping Study
Proposed Scope of Work & Labor Budget

Scope of Work

The Bolton Valley Access Road Scoping Study will identify and evaluate planning-level improvements to enhance roadway resilience, improve drainage performance, mitigate erosion, and support targeted bicycle and pedestrian access along Bolton Valley Access Road. The study is intended to document existing conditions, engage with the community and identified stakeholders, assess key problem areas, and develop prioritized recommendations that the Town can use to guide future implementation and funding efforts.

The study will focus resilience and stormwater evaluation efforts on priority roadway segments south of the "S-Curve", including locations where drainage, embankment, culvert, and erosion conditions affect roadway reliability and long-term maintenance needs. The bicycle and pedestrian component of the study will focus on the upper section of the corridor between Bear Run Road and the Bolton Valley Resort area, where targeted access and safety improvements may be most beneficial.

Recommendations will be developed at a scoping level and may include drainage and culvert improvements, erosion mitigation measures, roadway-edge and embankment treatments, and targeted multimodal access enhancements. The study will culminate in a prioritized set of recommendations, supported by planning-level cost estimates and implementation guidance.

VHB's scope and assumptions are as follows.

Task 1— Project Management, including Kick-Off Meetings, Monthly Check-Ins and Contract Initiation

The VHB Team will schedule, conduct, and document a project team kick-off meeting, the first stakeholder meeting (including a site walk), and subsequent monthly meetings with the CCRPC and project stakeholders.

Deliverables: Contract initiation, monthly invoicing, Kickoff Meeting agenda and notes, Stakeholder Meeting #1 materials and summary, and monthly project coordination meetings with agendas and follow-up notes.

Task 2—Existing Conditions Inventory, Evaluation, Topographic Survey, and Public Meeting #1 (Local Concerns)

Existing Data and Document Review

VHB will review available background information relevant to roadway, drainage, erosion, embankment, and multimodal conditions within the study area. This review will include available GIS mapping, aerial photography, publicly available environmental and land cover data, soils mapping, prior studies, and available drainage infrastructure information provided by CCRPC and the Town. For the drainage and resilience component, VHB will review available inventory information for ditches, drainage culverts, and stream crossing structures and will use those materials to inform the existing conditions assessment and subsequent analysis tasks

Existing Conditions Development for OpenRoads Designer

VHB will develop existing conditions basemapping to later be used for Task 6— Develop Conceptual Alternatives for a Bike/Ped Connection from Bear Run Road to Bolton Valley Resort, Stakeholder Meeting #3 and Public Meeting #2. The basemapping will be comprised of LiDAR information to be obtained from State resources, utility information, and other relevant information collected during field visits. The basemapping will be developed for the approximately 2,800 feet of the Bolton Valley Access Road from Bear Run Road to the Resort. It is assumed that all available utility records available for this segment of the project area will be provided to VHB by the Town of Bolton.

Transportation and Multimodal Existing Conditions Field Verification and Documentation

VHB will compile detailed base mapping between Bear Run Road and Bolton Valley Resort using available mapping including Vermont digital orthophotos, digital parcel maps, and cultural and natural resource-based GIS data available from the CCRPC and/or the Vermont Center for Geographic Information (VCGI). This data will be supplemented with topographic survey information gathered during field reconnaissance as described above, and will include:

- Utility infrastructure
- Drainage features
- Natural resources
- ROW/parcel widths
- Building locations

Drainage, Embankment and Resilience Existing Conditions Field Verification and Documentation

VHB will field review and assess existing drainage conditions for up to 50 roadway segments (as identified in the CCRPC Road Erosion Inventory Dashboard), including 28 culverts south of the S-Curve on the Bolton Valley Access Road to the intersection with US Route 2.

VHB will develop a field data collection inventory using the ESRI ArcGIS Online platform and the mobile applications Field Maps and Survey123. External GPS units will be used to achieve submeter-level positional accuracy. Field data collection will include photographs, documentation of ditch dimensions and lining materials; evidence of ditch erosion; and culvert characteristics, including size, material, condition, headwall presence, and inlet and outlet channel condition. Data collection will leverage existing CCRPC and VTRANS database structures to ensure consistency and compatibility. Using the available inventory and supplemental field verification, VHB will document existing drainage, embankment, culvert, and erosion conditions and identify areas of concern affecting roadway performance, resilience, and maintenance needs.

Data gathered through this field effort will be integrated into ESRI's Operations Dashboard or Experience Builder interface, enabling users to explore survey results both spatially and numerically. The interface will provide insights through dynamic visualizations such as interactive maps, graphs, and formatted tables. VHB will also establish an external shared group with CCRPC to facilitate access to and review of the results.

Public Meeting #1 (Local Concerns)

VHB will prepare materials for and lead Public Meeting #1 (Local Concerns) to gather local input regarding roadway, drainage, erosion, embankment, and multimodal concerns within the study area. Information received through this meeting will be used to supplement the existing conditions assessment and help inform subsequent purpose and needs statement definition, and alternatives and recommendations development. Time to complete this task will be billed under Task 4.

ArcGIS StoryMap & Community Outreach Survey

To provide the Town and the public with ongoing information on the study and to support community outreach, an interactive ArcGIS StoryMap will be created. The StoryMap will be structured to visually exhibit the identified priorities, the evaluated needs and gaps, and the recommended strategies for addressing current and future transportation and resilience needs. This tool will be designed to be user-friendly and purposeful for stakeholders and community members to understand the complexities of the study.

The study team will also create a public engagement survey in collaboration with the CCRPC. A mutually agreeable series of questions will be drafted, which will incorporate the user-friendly Survey123 platform. Accessibility to the Survey123 form can be provided through various means, such as a designated link within the StoryMap, CCRPC Website, the Town website, or a QR code.Survey results will be made available through an administrative dashboard for CCRPC review, with a public-facing summary embedded within a StoryMap to support transparency and public engagement. Time to complete this task will be billed under Task 4.

Tabling at Community Events

To support the Communit Outreach process, VHB will prepare for and attend two community events in the Town of Bolton. We anticipate such events might include the "Live Music on the Lawn" series at the Bolton Valley Resort, or other local meetings or gatherings. Time to complete this task will be billed under Task 4.

Deliverables: Existing conditions technical summary; topographic survey files (sv.dgn, row.dgn, og.dgn); base mapping exhibits; drainage/resilience field verification summary; ArcGIS StoryMap and Community Engagement Survey; Tabling Events preparation and attendance; Public Meeting #1 materials and notes.

Task 3—Purpose and Needs Statement, and Stakeholder Meeting #2

VHB will develop a draft Purpose and Need Statement based upon preliminary existing conditions analysis, public engagement, and stakeholder coordination.

Upon project team and stakeholder (if desired) review of the draft Purpose and Need Statement, VHB will revise and finalize the statement for inclusion in the Scoping Report.

Deliverables: Draft Purpose and Need Statement; Stakeholder Meeting #2 materials; Final Purpose and Need Statement.

Task 4— Community Outreach & Stakeholder Engagement

The purpose of this task is to clearly delineate tasks throughout the Scope of Work that will be covered by the Municipal Planning Grant awarded to the Town of Bolton. These engagement tasks appear throughout the Scope of

Work at the project milestones appropriate for those engagement touch points. Each task description to be covered under Task 4 has been identified as such.

Task 5—Drainage and Resilience Improvement Analysis, Recommendations and Prioritization

Drainage, Culvert, Erosion, Embankment, and Resilience Analysis and Recommendations

VHB will evaluate drainage infrastructure within the resilience study area on a roadway-segment basis, consistent with the segment framework established for the Municipal Roads General Permit ("MRGP") Road Erosion Inventory ("REI"), as applicable to the study area. VHB will complete a desktop assessment to determine whether inventoried crossings convey perennial, intermittent, or ephemeral streams or ditches, and those determinations will be confirmed during field data collection efforts under Task 2.

VHB will develop hydrologic inputs for mapped drainage infrastructure using GIS methods and publicly available data sources, including available land cover and soils data from the Vermont Center for Geographic Information. VHB will determine the applicable design flood and check flood criteria in accordance with the hydraulic criteria for municipal roads outlined in the VTrans Hydraulics Manual, associated Hydraulic Engineering Instructions, and MRGP guidance.

Using available inventory information, desktop methods, and field-confirmed conditions, VHB will develop and apply hydraulic analyses to assess the capacity and general adequacy of inventoried ditches and culverts within the study area. VHB will evaluate whether existing drainage geometry generally meets applicable criteria and will identify known deficiencies and areas of concern. Where erosion is present, VHB will develop planning-level recommendations for remediation. VHB will also provide recommendations regarding whether drainage structures appear to warrant replacement due to end-of-life condition, based on available information and observed field conditions. This task will be completed at a scoping level and will not include topographic surveying.

Recommendations may include drainage improvements, culvert replacement or resizing, ditch improvements, erosion mitigation measures, and embankment or roadway-edge treatments, as appropriate to address identified deficiencies and improve roadway resilience and long-term maintenance performance.

Deliverables: Hydrology and Hydraulics Memo.

Drainage, Culvert, Erosion, Embankment and Resilience Prioritization

Based on the results of the existing conditions review and hydraulic analysis, VHB will prioritize recommended drainage and resilience improvements by roadway segment and infrastructure need. Prioritization will consider observed condition, apparent hydraulic deficiency, erosion risk, infrastructure condition, resilience benefit, and implementation urgency. VHB will prepare a planning-level engineer's opinion of probable cost for recommended drainage and resilience improvements by roadway segment to support comparative evaluation, implementation planning, and future funding efforts.

Deliverables: Prioritized drainage/resilience improvement matrix with planning-level cost estimates.

Task 6— Develop Conceptual Alternatives for a Bike/Ped Connection from Bear Run Road to Bolton Valley Resort, Stakeholder Meeting #3 and Public Meeting #2

Conceptual Alternatives Development

VHB will develop up to three conceptual alternatives for a bicycle and pedestrian connection from Bear Run Road to Bolton Valley Resort that address the purpose and need. The alternatives will be formed in response to information obtained during the field reconnaissance, base mapping and topographic survey, input from project stakeholders, and appropriate guidelines, specifications, and design standards.

Alternatives will be modeled three-dimensionally and presented in the form of a layout plan over aerial imagery.

VHB will consider the following during development of alternatives:

- Relevant previous studies, reports, and other information obtained from the Town, such as the Bolton Valley Master Plan
- Drainage considerations
- Safety and mobility
- ROW impacts
- Location of existing features and resources, e.g., natural or other potential constraints
- Need for new or improved pavement markings and signage
- Ongoing maintenance requirements

Based on our understanding of the project, we will evaluate the following when exploring alternatives:

- Improving safety features for facilities proposed along or crossing the existing roadway
- Minimizing ROW impacts
- Minimizing environmental resource impacts
- Phasing of construction and overall constructability
- Considering facility maintenance needs
- Evaluating trail surface features (i.e., asphalt vs. gravel)
- Crossing natural resources
- Connecting to existing facilities and any planned build out (communicated prior to, or during, the study)

Conceptual Cost Estimate Development

VHB will develop planning-level, order of magnitude conceptual cost estimates for each developed alternative. These will be developed in advance of Public Meeting #2 (Alternatives Presentation) in case it is desired to share that information at the meeting.

Conceptual Alternatives Evaluation Matrices

VHB will develop an Evaluation Matrix for the conceptual alternatives. These alternatives will be scrutinized against the aforementioned criteria (noted in the "Conceptual Alternatives Development" task) and the Purpose and Need Statement.

Tabling at Community Events

To support the Community Outreach process, VHB will prepare for and attend two community events in the Town of Bolton. We anticipate such events might include the "Live Music on the Lawn" series at the Bolton Valley Resort, or other local meetings or gatherings. Time to complete this task will be billed under Task 4.

Stakeholder Meeting #3

Following the development and evaluation of conceptual alternatives, VHB will summarize our findings and determinations into a presentation to be presented to the stakeholder group for discussion. Time to complete this task will be billed under Task 4.

Public Meeting #2 (Alternatives Presentation)

VHB, with CCRPC and Town assistance, will organize, facilitate, and document an Alternatives Presentation meeting to solicit public input on the bike/ped alternatives developed for Bear Run Rd to the Resort, as well as on the findings and recommendations for prioritized stormwater drainage improvements, and resilience improvements identified in Task 4. The VHB team will present the developed alternatives, conceptual costs, and evaluation matrices to attendees for review and comment. The goal of this meeting will be to arrive at public consensus on a preferred alternative for a new bike/ped connection between Bear Run Rd and the Resort. Time to complete this task will be billed under Task 4.

Deliverables: Up to three conceptual bike/ped alternatives; planning-level cost estimates for each alternative; alternatives evaluation matrix; Tabling Events preparation and attendance; Stakeholder Meeting #3 presentation materials; Public Meeting #2 presentation materials and summary.

Task 7—Recommendation of Preferred Alternative and Refinement

Based on the alternatives evaluation, public outreach and stakeholder engagement, the Town of Bolton, the Resort, and CCRPC will work with VHB to identify and refine a preferred alternative for a new bike/ped connection from Bear Run Road to the Resort.

Deliverables: Refined draft alternatives, and a recommended preferred alternative.

Task 8— Draft Scoping Report, Stakeholder Meeting #4, and Public Meeting #3 (Selectboard Presentation)

Development of the Draft Scoping Report

VHB will develop the scoping report in a manner that sufficiently communicates our understanding of the technical elements of the project, while doing so in a way that will be easily understood by any practitioner (or community member) that chooses to read the report.

The draft scoping report will incorporate a summary of existing conditions; include the final Purpose and Need Statement; summarize public engagement and feedback; document the alternatives development, evaluation, and recommendation of a preferred alternative process; and lay out an implementation plan for identified improvements.

Stakeholder Meeting #4

As the final touch point with the stakeholder group, VHB will share the Draft Scoping Report ahead of meeting with the group to discuss the overall findings and conclusions of the study. Time to complete this task will be billed under Task 4.

Public Meeting #3 (Selectboard Presentation)

VHB will develop materials for a presentation to the Town of Bolton Selectboard. This presentation is intended to be open to the public, and will serve to provide the Selectboard with an overview of the study's findings, and to seek their approval of the recommended preferred alternative. Time to complete this task will be billed under Task 4.

Deliverables: Draft Scoping Report, and meeting materials for the Stakeholder and Public Meeting.

Task 9—Final Scoping Report

Based upon review comments from the CCRPC and Selectboard, as well as input from stakeholders – VHB will refine, finalize and deliver the Final Scoping Report.

Deliverables: Final Scoping Report.

Assumptions

The following assumptions and exclusions apply to this scope of work:

- Services will be performed at a scoping/planning level to support evaluation, prioritization, implementation planning, and future funding efforts. This scope does not include final design, permitting, bidding support, or construction phase services.
- Unless otherwise noted, this scope assumes one consolidated review cycle for draft deliverables.
- Monthly coordination meetings are assumed to occur up to once per month during the study period. Additional meetings, workshops, or presentation rounds beyond those described above may require an amendment.
- CCRPC and/or the Town will provide reasonably available background information, prior studies, available infrastructure inventory information, and project coordination support in a timely manner.
- Topographic survey is limited to the corridor and approximate extents described in Task 2 and to areas that are reasonably accessible. Boundary resolution, title review, and subsurface utility engineering beyond ASCE Quality Level D are not included.
- Planning-level opinions regarding drainage structure condition and conceptual cost estimates are based on available information at the time of the study and are intended to support comparative evaluation and future project development.

- Public and stakeholder input will inform the study; however, final decisions regarding selection, endorsement, or advancement of improvements remain the responsibility of CCRPC, the Town, and other applicable decision-makers.

Project Schedule

Assuming a Notice to Proceed is issued by May 15, 2026, and that no unforeseen delays or obstacles are encountered during the course of the project, we anticipate the project to proceed along the following schedule:

• Project Kickoff Meeting & Stakeholder Meeting #1	June 2026
• Existing Conditions Inventory, Evaluation, and Topographic Survey	June – August 2026
• Stakeholder Meeting #2 and Public Meeting #1 (Local Concerns Meeting)	August 2026
• Drainage and Resilience Analysis, Recommendations and Prioritization	August – September 2026
• Conceptual Alternatives Development	August – October 2026
• Stakeholder Meeting #3 and Public Meeting #2 (Alternatives Presentation)	October – November 2026
• Alternatives Refinement and Recommendation of the Preferred Alternative	December 2026
• Draft Scoping Report	January – March 2027
• Stakeholder Meeting #4 and Public Meeting #3 (Selectboard Presentation)	April 2027
• Final Report Preparation and Submission	April – May 2027