January 12, 2024 | Technical/Cost Proposal

CCRPC/BTV DPW

PlanBTV
Walk Bike Action Plan

Contents

Project Understanding

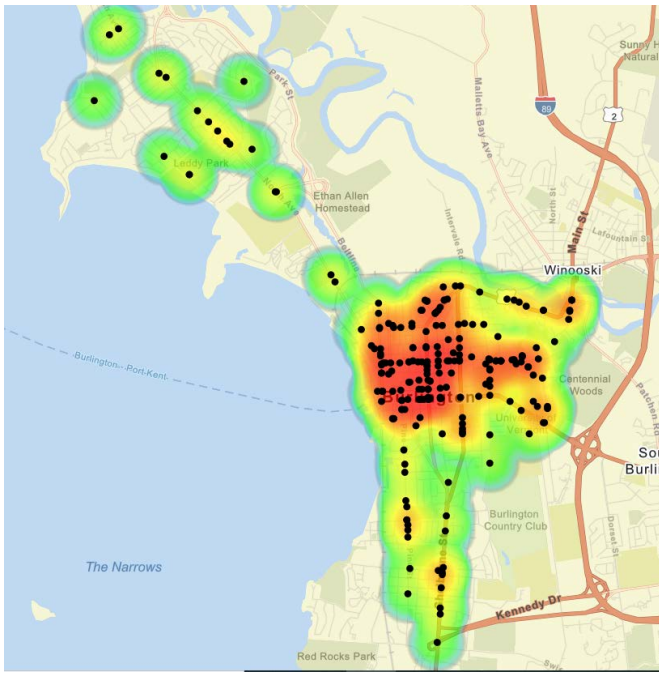
The City of Burlington seeks an updated Walk Bike Action Plan that is data-driven, community-guided, and safety-focused to prioritize and implement active transportation projects, practices, programs, and policies into the future. The City's foundation is the existing PlanBTV Walk Bike plan, which has served as a guidepost for active transportation improvements throughout the City and is one component of the broader PlanBTV comprehensive plan. The City also recognizes the opportunity to move the needle on improving safety outcomes, advancing accessibility, and expanding active transportation mode share for our transportation system's most vulnerable users by leveraging the Safe Streets for All framework.

VHB's experience in collaborating with communities to shepherd successful safety action plans and active transportation plans gives our team a depth of understanding on how to create an updated blueprint for walk bike safety in Burlington. Our team's local presence, nationally-recognized safety practice, active transportation project and plan portfolio, and familiarity collaborating with the City of Burlington and the CCRPC means we understand what it takes to usher in a measurable, achievable, and relevant Walk Bike Safety Plan for the City.

The intersection of Main Street and Winooski Avenue is a hot-spot for pedestrian and bicycle crashes.

Over the last 5 years (2018-2022), 251 crashes in Burlington involved pedestrians or bicyclists. Of these crashes 83% resulted in injury and two crashes resulted in fatality. A recent Vulnerable Road Users Assessment conducted by VHB in partnership with VTrans identified Burlington in the top 10 Vermont cities or towns requiring action to address vulnerable road user safety issues.

Zooming in, a hot spot in Burlington with the most crashes involving pedestrians or bicyclists is the intersection of Main Street at South Winooski Avenue. At this location, 5 of the 8 reported bike/ped crashes involved bicyclists. The intersection is along the South Winooski corridor which was recently restriped to accommodate dedicated bicycle lanes and one of the Main Street intersections subject to a new design that VHB is developing with the City to separate bicycles from traffic along Main Street. These types of countermeasures and a host of others are anticipated to be identified in the examination of the safety data and potential mitigations.



Heat map of reported crashes involving pedestrians and/or bicyclists.

The foundation of the action plan is safety data analysis. Our team has substantial experience analyzing safety data to identify hot spots and systemic factors. Our safety data analysis will support the equity-focused approach, by identifying those that are disproportionately injured in a crash, exposed to unsafe conditions, and/or affected by potential countermeasures.

Key to a data driven and safety focused plan is understanding what the data are, how to interpret the data, and how to translate data into actionable outcomes. Our team has been steeped in the crash and safety data as we develop new approaches to guide the state's safety planning. In collaboration with VTrans and FHWA, we have been engaged in development of the Highway Safety Implementation Plan, Strategic Highway Safety Plan (SHSP), and the recent SHSP Vulnerable Road Users Assessment. In addition, we have recently performed a statewide systemic screening of risk at intersections for vulnerable users. We have local technical expertise in evaluating the safety data inputs and developing actionable safety plans that is supported by a national presence and practice in moving the needle towards Vision Zero, Safe Streets for All, and broader safety improvement outcomes across scores of communities. Further, our experience in data analysis, safety program development, and scenario planning combine to support development of dynamic and responsive plans that account for future uncertainty, evolving demographics, changes to the built environment, and other shifting data inputs.

Key to realizing a community-driven plan is meaningful engagement with community partners around the topics of safety and walking, biking, rolling, and other forms of active transportation. Conducting this work with a focus on equity means not only understanding the needs of disadvantaged, underserved, or underrepresented communities or individuals to improve safety outcomes but also understanding the potential impacts to these communities or individuals in pursuing improvements to the transportation system or other initiatives intended to lead to improved safety outcomes. We will borrow lessons learned from developing safety action plans through an equity lens in other communities, like the equity analysis VHB conducted in support of the Burlington-Graham MPO (North Carolina) Transportation Safety Plan development, combined with local understanding through close coordination with the Racial, Equity, Inclusion and Belonging (REIB) office equity index development project.

Navigating the SS4A Process

Safe Streets and Roads for All (SS4A) grants are funding opportunities for states, territories, and tribal governments to implement strategies that support zero deaths initiatives. There are a variety of reasons that exemplify why the VHB team is particularly well suited to help the City navigate the SS4A process:

- We have supported over 100 State and local agencies with safety planning—Vision Zero, Local Road Safety Plans, City Safety Plans, Statewide Strategic Highway Safety Plans, Regional Safety Plans, Safe Streets For All Plans, and more.
- Our staff have extensive experience with data analysis approaches, including crash typing, predictive tools, and systemic analysis to map high risk areas.
- VHB has developed several methods to assess equity in safety action plans, including identifying disparate impacts and public health outcomes.
- We are skilled in identifying safety improvements based on data analysis and assessing anticipated safety improvements.
- VHB is knowledgeable in FHWA resources and expectations related to both the technical and administrative aspects of the SS4A grant.
- We have assisted many communities with grant administration, and overall we help communities navigate the process.

VHB Safety Planning Experience

*Includes 76 FHWA Sponsored plans

Reaching the community and engaging on these topics requires clear, consistent, digestible, and recognizable outreach materials. Our in-house graphics team is ready to help incorporate the PlanBTV brand into community-oriented resources that support the transformation of technically dense material into comprehensible and accessible information. Our team understands what it takes to make these resources both approachable and translatable.

Key to plan development and successful implementation is creating a dynamic action plan that can evolve with changes in the City and identifying suitable opportunities for funding different types of projects, programs, practices, and policies. Our team has experience developing plans with the CCRPC that contemplate uncertain future landscapes and provide monitoring guidance and methodologies to adjust the plan's implementation over time, like the implementation plan developed for the I-89 2050 Study. Further, our team's experience in helping communities navigate and secure a wide array of funding opportunities, like SS4A Implementation Grants in Richmond, VA or Charlotte, NC, VTrans Bicycle and Pedestrian Grants, or a Reconnecting Communities grant in Burlington or RAISE grant in St. Albans, provides insight into planning for implementation and enables the creation of a plan that has a clear roadmap of next steps.

Project Approach and Scope

The project scope outlined below is consistent with the tasks enumerated in the request for proposals with additional details on the approach VHB intends to take in executing these tasks to develop a dynamic Walk Bike Safety Action Plan for Burlington.

Task 1: Identify Goals and Kick Off Meeting

VHB will coordinate with the City of Burlington and the CCRPC to hold an initial kick off meeting. The kick off meeting will include a brainstorming session that results in clearly defined purpose and objectives for the plan. As planners, we have experience facilitating such visioning exercises to help shape anticipated goals and targets to be achieved through the PlanBTV Walk Bike Action Plan development as well as anticipated deliverables and outcomes.

In addition, the kick off meeting will be the initiation of the public participation plan. In our experience, these participation plans are evolving and we anticipate continually adjusting the framework to meet the demands of engaging with the general public, stakeholders, and targeted communities or individuals where they are. For the purposes of the scope, the public participation plan development is included in Task 3.

The kick off meeting agenda will additionally include a review of the scope and schedule and discussion of any refinements.

Deliverables: *Kick Off Meeting Materials, Agenda, and Meeting Notes; Memorandum summarizing plan goals and objectives*

Task 2: Project Management and Administration

VHB will work collaboratively with the City of Burlington and the CCRPC project team to keep this project on target with focus on the goals identified in Task 1. Monthly check ins will be scheduled throughout the project schedule to maintain an open dialogue on project progress, share materials, and continually adjust the plan development as needed. This approach allows the project team to be nimble in response to input from the community and continue to progress towards an actionable and dynamic plan. VHB will provide meeting agendas and notes to document the discussion and action items from these critical touch points.

The success of the plan development requires an engaged Advisory Committee comprised of stakeholders from across the City. The Advisory Committee will serve to support the plan development process as project ambassadors, with roles including examining materials produced by the project team, liaising with community groups, soliciting input from community members, building community buy in regarding safety and active transportation, and reviewing outcomes and recommendations. VHB will collaborate with the City and CCRPC to identify representatives to form an engaged Advisory Committee, including representation from:

- Burlington City Council
- Burlington Racial Equity, Inclusion, and Belonging Office
- Burlington Walk Bike Council
- Burlington School District
- Burlington Public Works Commission
- Local Motion
- Green Mountain Transit
- Other stakeholders like CATMA or AARP as determined by the project team

It is anticipated that the Advisory Committee will convene four times throughout the study to actively engage in these tasks. VHB will provide materials in advance for review, meeting agendas, and document with meeting notes.

In addition to project team and Advisory Committee touchpoints, this task includes project management and administration time.

Deliverables: *Advisory Committee Meeting Agendas, Materials, and Meeting Notes; Project Team Meeting Agendas and Notes*

Task 3: Public Outreach and Participation

Having robust engagement and stakeholder buy-in is a key component to success in any project. To develop a safety culture within the community and gain input and support for plan strategies, it will be important to have effective community engagement. Our team will prepare a public participation plan that details public outreach and participation activities. Our approach to public participation or involvement plans, much like those we have generated for the Battery Street Scoping Study or the Winooski Walk Bike Plan, is to develop a framework for engagement that will evolve through the project lifecycle and be responsive to feedback.

The plan framework will be designed to align with guidance from the CCRPC's Public Participation Plan and Burlington DPW's Public Engagement Plan. The equity focus of this work will center engagement with underrepresented, underserved, disadvantaged, and/or overburdened populations, informed by the City of Burlington's Resolution on Diversity and Equity Plan and Racial Equity Toolkit as well as the ongoing efforts of the Racial, Equity, Inclusion, and Belonging Office to develop an Equity Index Further, the plan will detail proposed approaches to outreach and engagement inclusive of residents that speak languages other than English at home.

The data-driven approach to a safety-focused walk bike plan will require clear, concise communication of analysis outcomes as well as robust engagement around key topic and focal areas to solicit input and feedback from the public and targeted communities. Given the unique data-driven approach to this type of plan development, we will work closely throughout the project with our in-house graphics team to generate clear, simplified, and graphically enhanced messaging that is easily comprehended and translated.

Other key elements of the public participation plan will include:

Project Fact Sheets

The project overview and outreach plan will be distilled to a single page, graphic enhanced fact sheet. This will serve as an overarching communication tool on the key project elements made available on the project website and at public meetings for broader, printed distribution. The project fact sheet will be translated into the most widely used languages in the City with the aim of meaningful access to the project objectives and engagement. The most prevalent languages for translation of the fact sheets will be discussed at the kick off meeting. Based on our recent experience in neighboring Winooski, translation services were engaged to translate documents to Arabic, Swahili, French, Spanish, Somali, Burmese, Vietnamese, and Nepali.

Public Meetings

Public Meetings will be held at two key project milestones. The meeting formats will be designed to convey project information efficiently and effectively while soliciting feedback on the data-driven identified projects and strategies and collecting information to further refine the priorities.

The first public meeting will be focused on providing background on the PlanBTV Walk Bike Plan, status of projects and strategies from the previous iteration of the plan, and priorities remaining from the previous plan to be integrated into the updated plan effort. The engagement and input solicited at the meeting will be focused around the preliminary projects and strategies identified as countermeasures to the data-driven hot-spot and systemic safety issues. The qualitative feedback from this round of engagement will help to inform and refine the prioritization and ranking criteria.

A second public meeting will be held in conjunction with the draft action plan task to share the comprehensive compilation of prioritized projects and strategies. This meeting will serve primarily to share the prioritized projects and strategies and engage with the community on the roadmap that the priorities and recommendations create for the community going forward.

Public meetings will be held in a hybrid format, allowing for both in person and virtual engagement in real-time. The meeting materials will be made available on the project website to allow for the community to interact with the materials at their own pace. Hybrid meetings will be supplemented by opportunities to provide input via the interactive mapping tool or survey tool as well.

Focus Groups

Targeted focus group engagement will be conducted by the CCPRC or City of Burlington with support from the VHB team. VHB will help to develop materials for the engagement. The focus groups will be focused on bringing the conversation to underrepresented and/or underserved communities. Through the safety and equity analysis, VHB will support the identification of targeted populations for these sessions. Up to four focus group sessions are considered in the project scope and are anticipated to coincide with the first public meeting.

Public Input Tools

Providing expansive opportunities for engagement with the technically rich information from project analysis, opportunities to weigh in on the findings from the analyses, and opportunities to provide qualitative feedback on data-driven priorities will be essential to the effort. Two formats of public input tools will be developed by VHB to support this type of engagement including:

Interactive Input Map: Much like the input tools we have created for other efforts, like the Lamoille Valley Rail Trail Management Plan, an interactive online map will be deployed. The map will allow for users to identify areas of safety concern or particular interest based on their experience interacting with the transportation infrastructure and other users of the transportation system. This tool is anticipated to capture not just areas where the community has witnessed crashes or other documented safety issues, but also locations where they have experienced near misses or discomfort due to safety concerns.

Survey Tool: An online survey tool will be deployed to share the preliminary compilation of identified projects and strategies and engage with the public on prioritization. Specifically, this tool will allow users to rank priority locations, including intersections and corridors, to share prioritization from their perspective. The tool will enable users to comment and provide further insights into their priorities to help the team refine ranking criteria and prioritization.

These tools will be developed and deployed in an online format, posted to the website, and linked in outreach materials. Physical versions of these online tools will be made available at in person engagements like public meetings and focus groups.

Deliverables: *Public Participation Plan Document; Project Fact Sheets; Public Meeting Materials, Agenda, Meeting Notes; Focus Group Materials; Interactive Input Tool; Survey Tool; Memorandum Summarizing Engagement and Findings*

Task 4: Data Collection and Analysis

VHB combines the extensive resources available to us in-house to provide integrated services while tapping into topic specific expertise across our footprint. Our Vermont-based professional staff bring significant safety data analysis and planning experience. Our local resources are further backed by the VHB Safety Team, a group of safety professionals that share practices and have extensive experience serving local, regional, and federal clients. Through hands-on safety and transportation engineering, we develop practical and implementable recommendations for enhancements.

Data Collection

VHB will work closely with City of Burlington DPW and CCRPC project team members to gather relevant data and reports to inform data assembly and preliminary base mapping. Consistent with the scope outlined in the request for proposals, it is anticipated that data gathered in this initial effort will include the following:

- PlanBTV Walk Bike recommendations, priorities, and status
- Vehicular traffic volumes and speeds
- Pedestrian and bicyclist counts
- Bus transit ridership by stop location
- Bus transit stops and routes
- Bicycle and pedestrian facilities (sidewalks, shared use paths, bike lanes, crosswalks, etc.)
- Crash data (10-year history)
- Existing and anticipated land uses and trip generators

- ADA Transition Plan
- Sidewalk prioritization data
- Active transportation projects currently in progress

Through our work with VTrans statewide safety plans, VHB has access to the statewide WebCRASH database and has found that the research narratives provide insight into different causal factors for vulnerable road user crashes. This will serve as a resource to inform early data gathering.

In addition to those data sets identified above, equity data in established databases or those developed by the City Racial Equity, Inclusion, & Belonging Office (REIB) or CCRPC will also be gathered to assist with prioritization later in the plan. Coordination on the status of the REIB Equity Index will be initiated as part of this data gathering effort.

A brief data summary and initial data needs assessment will help to identify any additional data to support analysis. VHB will coordinate with the project team to acquire additional datasets based on this evaluation. It is anticipated that, in addition to the data listed above, information like previously generated bikeway level of stress maps, pedestrian signal equipment and operations (e.g., pedestrian signal heads and leading pedestrian intervals), and other relevant pedestrian and bicyclist environment data will be requested. Mining other City owned data resources, like safety, bicyclist, and pedestrian issues reported on SeeClickFix, may be another feasible data source worth exploring.

Safety Analysis

The foundation of the action plan is safety data analysis. VHB will use the data from WebCRASH supplemented by the information gathered in the previous subtask to identify trends and patterns and establish a baseline of crashes involving injuries or fatalities. Our team has substantial experience analyzing safety data to identify hot spots and systemic factors. For hot spot analysis, specific locations where there are crashes, crash types, severity, or contributing factors that are susceptible to improved outcomes via countermeasures will be identified. For systemic analyses, crash types, underlying conditions, or high risk roadway features will be assessed to identify safety challenges addressed by targeting systemic contributing factors. The data analysis will also be used to support an equity-focused approach, by identifying those that are disproportionately injured in a crash, exposed to unsafe conditions, and/or affected by potential countermeasures. It will be important to address transportation and health equity within the safety plan as we want everyone to be safe; it also will help to support development of implementation criteria.

VHB led the FHWA Data Driven Safety Analysis program, where we created guidance and information on the best methods for safety data analysis. We have also applied this knowledge to our other safety-focused data analysis projects in Vermont. The Vermont based VHB team proposed for this effort led the safety data analysis required as a part of the Strategic Highway Safety Plan (SHSP), Highway Safety Improvement Program (HSIP) and more recently, the Vulnerable Road User Assessment supplement to the SHSP. VHB conducted a deeper dive into bicycle and pedestrian crashes at intersections as a part of a recent systemic analysis conducted statewide. These data analyses identified characteristics associated with high risk facilities on both the local and state roadway system. This experience will inform our approach to analyzing Burlington specific data.

It is anticipated that the safety analysis will result in geospatially resolved information. Our GIS and graphics team members are prepared to support the development of GIS-based map products for future information sharing and mapping as well as graphical maps to demonstrate key themes and outcomes to the public and project stakeholders in a palatable manner.

Prioritization Analysis

Much like our efforts on the Winooski Walk Bike Plan, VHB is prepared to develop a data driven prioritization matrix informed by criteria and metrics customized to Burlington goals, priorities, and desired safety and accessibility outcomes. Quantitative metrics like those we have employed in Winooski or in the recent Vulnerable Road Users Assessment performed for VTrans and the outcomes of the hot-spot and systemic analyses are anticipated to be included in the customized scoring for Burlington's projects and strategies.

Priorities across the City may differ based on neighborhood or population segment. Close collaboration with REIB and their parallel effort developing an equity index will be critical in understanding our most vulnerable populations, targeting outreach and engagement appropriately, and elevating what

is heard from these communities to inform priorities and weight metrics accordingly. Understanding the potential impacts of projects or strategies on these communities will be essential to setting equity-focused priorities.

Familiarity with implementing projects using other City and state guidance, including the City's data driven and neighborhood led traffic calming guidance and quick build design guidance, among others, will help to inform the range of recommended countermeasures to address the safety challenges that surface in analysis and engagement. Further, our safety practice will provide a breadth of successful countermeasures employed in other places that may be adapted to the Burlington context to address safety challenges. Our experience in implementing active transportation, traffic calming, quick build, and corridor design projects in collaboration with the City of Burlington will help to inform realistic project feasibility, costs, and timeframes.

The first round of public engagement is anticipated to coincide with this task in the project schedule. As detailed in Task 3, this round of engagement will include distribution of a project fact sheet, a public meeting, round of focus group meetings, encouragement to use the interactive map input tool, and launching of the survey tool.

Deliverables: *Memorandum Summarizing Data and Data Needs; Mapping Summarizing Safety & Equity Data & Analysis; Memorandum Summarizing Safety Data Analysis; Memorandum Summarizing Equity Analysis & Prioritization Framework*

Task 5: Draft Action Plan

Summaries of the goals and objectives, public engagement and outcomes, data management and analysis methods, and project and strategy prioritization framework will be compiled into a draft action plan. The plan will detail the prioritization of projects and strategies to address hot-spot and systemic safety issues and support reduction of bicycle and pedestrian related injury crashes. The prioritization will include integration of previously identified and not yet implemented projects and strategies as complementary to the updated, safety focused priorities.

The detailed prioritization will be weighted by the opportunity to provide more equitable outcomes, including improvements that serve disadvantaged populations and/or counteract disproportionate impacts on these communities. The plan will provide a framework for incorporating the equity index developed through the REIB effort and methodology for incorporating future instances of the index to account for changing demographics and relevant metrics.

The comprehensive assembly of prioritized projects, practices, programs, and policies will include refined feasibility, costs, and timeframes based on feedback from the project team and Advisory Committee. Additional considerations of partnerships and City staff workload will be incorporated into the plan, as the team has done for projects like the South Burlington Climate Action Transportation Implementation Plan. The draft prioritization will also provide a preliminary set of next steps including appropriate funding opportunities.

It is recognized that the action plan needs to be flexible and evolve as projects are implemented, conditions shift, and new data inputs become available. Our experience developing dynamic implementation plans that anticipate changes in future conditions include implementation for the I-89 2050 Study, which employed a committee and monitoring metrics to adjust the plan and trigger action into the future.

A simplified, graphically enhanced tool for communicating the prioritization of projects and strategies to improve safety outcomes and reduce injuries will be created. This will serve as a blueprint for the City to prioritize addressing safety issues, share with the public as progress is made, and support grant funding pursuits.

Deliverables: *Draft Action Plan*

Task 6: Final Action Plan and Report

VHB will present the Draft Action Plan to the project team and Advisory Committee for review and comment. Upon receipt of comments, if necessary, VHB will meet with the project team to resolve comments. Feedback will be incorporated and VHB will develop the final version of the action plan.

VHB and the project team will present the final draft of the action plan to the City Council for its consideration and approval.

Deliverables*: Final Action Plan; City Council Meeting Materials*

Cost Estimate and Labor Hours

PlanBTV Walk Bike Plan Update

LABOR BUDGET

Task	Task Description	Project Advisor	Project Manager	Active Transportation Advisor	Safety Engineer Advisor	Diversity, Equity & Inclusion Advisor	Transportation Safety Engineer	Transportation Planner / Public Engagement	GIS Analyst	Design / Graphics	Total Hours	Labor Costs
		Jennifer Conley	*Karen Sentoff*	*Drew Gingras*	*Eric Tang / Jeff Gooch*	*Nicole Bennett*	*Evan Haugh*	*E Sundberg / J Vanacore*	*Alexis Coplin*	*Jenn Pechacek*		
1.0	**Project Kick-Off Meeting & Goal Identification**										**28**	
	1.1 Kick Off Meeting	2	2	1	1	1	1	6	1	1	16	$ 2,283
	1.2 Identify Preliminary Goals	2	2					4		4	12	$ 1,665
	1.3 Summary of Purpose & Objectives		2					4		4	10	$ 1,159
2.0	**Project Management & Administration**										**72**	
	2.1 Project Management	2	12								14	$ 2,096
	2.2 Monthly Meetings	6	16					12			34	$ 4,782
	2.3 Advisory Committee Meetings	6	6					12			24	$ 3,457
3.0	**Public Outreach and Participation**										**172**	
	3.1 Public Participation Plan	2	2					10		4	18	$ 2,237
	3.2 Project Fact Sheets		2					8		8	18	$ 2,054
	3.3 Interactive Map		2				2	8	32		44	$ 4,610
	3.4 Public Meeting #1	2	4					10		8	24	$ 3,015
	3.5 Focus Group Support		2				2	8		8	20	$ 2,279
	3.6 Public Survey		2				2	12	8		24	$ 2,475
	3.7 Public Meeting #2	2	4					10		8	24	$ 3,015
	3.8 Summary of Engagement & Findings		2					8		4	14	$ 1,541
4.0	**Data Collection & Analysis**										**210**	
	4.1 Gather and Review Available Data		2	2	2	2	4	16			28	$ 3,432
	4.2 Summary of Data & Data Needs		2	2			4	8			16	$ 1,795
	4.3 Safety Analysis	2	4		4		40	30	20		100	$ 11,247
	4.4 Summary of Safety Data & Analysis Methods		2		2		8	8		4	24	$ 2,815
	4.5 Equity Analysis, Prioritization, & Matrix Development	2	4	4		4	4	16	8		42	$ 5,484
	4.6 Summary of Equity Analysis & Prioritization Framework		2			2	4	8		4	20	$ 2,491
5.0	**Draft Action Plan**										**28**	
	5.1 Summary of Refined Project & Strategy Prioritization	2	4	2	2	2	4	8		4	28	$ 3,951
6.0	**Final Action Plan Development and Submission**										**48**	
	6.1 Development of Final Action Plan Report & Tool	2	4	4			8	12		8	38	$ 4,738
	6.2 Final Presentation to City Council	2	4							4	10	$ 1,548
	TOTAL HOURS:	34	88	15	11	11	83	218	69	73	**602**	
	DIRECT HOURLY RATES:	$ 85.09	$ 44.65	$ 53.24	$ 62.93	$ 84.14	$ 37.92	$ 32.17	$ 35.33	$ 43.15		
	OVERHEAD:	$ 144.53	$ 75.84	$ 90.43	$ 106.89	$ 142.92	$ 64.41	$ 54.64	$ 60.01	$ 73.29		
	PROFIT (10%):	$ 22.96	$ 12.05	$ 14.37	$ 16.98	$ 22.71	$ 10.23	$ 8.68	$ 9.53	$ 11.64		
	TOTAL LABOR COSTS :	**$ 8,588**	**$ 11,664**	**$ 2,371**	**$ 2,055**	**$ 2,747**	**$ 9,342**	**$ 20,817**	**$ 7,236**	**$ 9,350**		**$ 74,169**

TOTAL LABOR COSTS:	**$ 74,169**
Expenses - Mileage:	*$ 100*
Expenses - Translation Services	*$ 650*
TOTAL EXPENSES:	**$ 750**
PROJECT TOTAL:	**$ 74,919**

Schedule

PlanBTV Walk Bike Plan Update

SCHEDULE

Task	Task Description	*February*	*March*	*April*	*May*	*June*	*July*	*August*	*September*	*October*	*November*	*December*	*January*	*February*
		2024											*2025*	
1.0	**Project Kick-Off Meeting & Goal Identification**													
	1.1 Kick Off Meeting													
	1.2 Identify Preliminary Goals													
	1.3 Summary of Purpose & Objectives													
2.0	**Project Management & Administration**													
	2.1 Project Management													
	2.2 Monthly Meetings													
	2.3 Advisory Committee Meetings													
3.0	**Public Outreach and Participation**													
	3.1 Public Participation Plan													
	3.2 Project Fact Sheets													
	3.3 Interactive Map													
	3.4 Public Meeting #1													
	3.5 Focus Group Support													
	3.6 Public Survey													
	3.7 Public Meeting #2													
	3.8 Summary of Engagement & Findings													
4.0	**Data Collection & Analysis**													
	4.1 Gather and Review Available Data													
	4.2 Summary of Data & Data Needs													
	4.3 Safety Analysis													
	4.4 Summary of Safety Data & Analysis Methods													
	4.5 Equity Analysis, Prioritization, & Matrix Development													
	4.6 Summary of Equity Analysis & Prioritization Framework													
5.0	**Draft Action Plan**													
	5.1 Summary of Refined Project & Strategy Prioritization													
6.0	**Final Action Plan Development and Submission**													
	6.1 Development of Final Action Plan Report & Tool													
	6.2 Final Presentation to City Council													

Key Personnel and Experience

Team Leadership

Project Manager

Karen Sentoff has extensive experience preparing transportation studies throughout Vermont. Karen brings a deep resume for delivering technical studies that can be understood by stakeholders and result in implementable recommendations in evolving environments. Karen has experience centering equity in transportation decision making throughout her career, helping to develop metrics like the Vermont Vulnerability Index to identify communities at risk of disproportionate impacts from transportation projects. Her public engagement experience includes projects throughout Vermont bringing together individuals, advocates, technical staff, and leadership with disparate views and ensuring that all voices are heard. She understands the importance of the Walk Bike Plan in providing a blueprint for progress on safer walking and biking from the perspective as a former neighborhood liaison of the Burlington Walk Bike Council. Karen will lead the development of the Walk and Bike Plan Update for the CCRPC.

Principal-in-Charge

Jenn Conley, PE, PTOE, was recently awarded a Highway Safety Award by the Secretary of Transportation for her work improving highway safety in the State of Vermont. This award acknowledges the efforts Jenn and her team have made working with VTrans to improve the HSIP program into a data driven program that addresses safety concerns based on risk. Jenn and the VHB team developed the Municipal Safety Grant program that will support safety interventions on the local roadway system, which has proved difficult to do historically.

VHB Staff

Joining Karen and Jenn are a hand-picked team of highly skilled professionals with specialized knowledge in the key areas needed to create thoughtful, well-conceived recommendations for the PlanBTV Walk Bike Plan Update.

Safety Engineer Technical Advisors

Eric Tang, PE, RSP1, RSP2B, is a transportation safety, policy, planning, and engineering specialist with extensive experience working on highway safety, program management, performance measurement, and traffic operations projects. Eric has developed Safe System-oriented safety plans at the state, regional, and local levels and is highly knowledgeable of highway safety data analysis techniques.

Jeff Gooch, PE, is a transportation safety engineer versed in analysis of safety data and translating data-driven risk assessments into actionable countermeasures that move the needle on safety outcomes. He has supported the delivery of safety plans for numerous communities, including development of a safety plan for the Indian Nations Council of Governments (INCOG) which enabled the association of governments to secure SS4A implementation grant funding.

Diversity, Equity, and Inclusion Support

Nicole Bennett, AICP, is an equity strategist with more than two decades of experience. She is focused on developing strategies to address systemic inequities in the built environment, policies, and programs. She uses her expertise in transportation planning, strategic planning, environmental justice and equity, engagement, and consensus building to help clients embed equity in programs, plans, policies, and service delivery. She has expertise in the National Environmental Policy Act analysis, environmental justice, equitable development, community engagement strategy, and consensus building.

Safety

Evan Haugh, EIT, brings extensive experience working with Vermont's safety data and engaging with state and local stakeholders on safety efforts. Evan supports each of the VTrans safety programs VHB supports, including two recent network screening efforts to identify high-risk locations for roadway departure crashes, as well as intersection crashes. He also supports the overall HSIP program, including the recent Vulnerable User Assessment and the development of the VTrans Small Scale Safety Improvement Grant for municipalities. Evan has supported the preparation of the Highway Safety Plan which gives him an understanding on the behavioral safety grants available and used statewide.

Active Transportation

Drew Gingras, PE, is a trusted ally of the City of Burlington and CCRPC and brings a deep knowledge of Burlington's transportation and modal equity goals to this project. He has extensive knowledge of the City's multimodal and overall transportation infrastructure, as well as the necessary familiarity with the CCRPC's scoping study process through projects like the Colchester Avenue Bikeways, Parking & Intersection Safety Scoping Study and Winooski East Allen Street Scoping Study. Drew is a national expert in the field of bicycle and pedestrian facility planning and design, with a focus on highly active urban environments.

Outreach and Engagement

Elisabeth Sundberg is a Transportation Planner with experience engaging stakeholders for projects ranging from a sidewalk in Tunbridge, to a Walk/Bike Plan in Winooski, to the Lamoille Valley Rail Trail Management Plan, which included engagement with multiple communities. She also supports statewide planning efforts including the Vermont Park and Ride Plan and developing the Vermont Right of Way Policy and Guidance. Each effort requires a different approach to engagement and has resulted in Elisabeth possessing the tools to right size the approach to engagement depending on the challenges.

Workload and Availability

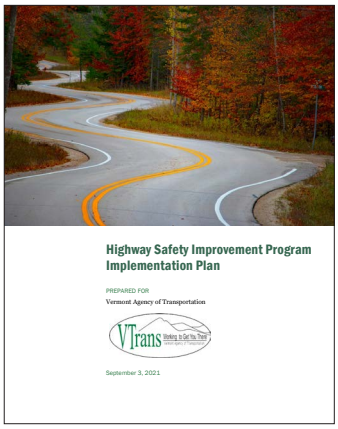
As outlined, transportation safety is a key discipline for our Vermont-based and national teams. We have no ongoing projects that will impact our ability to efficiently advance this project. We have committed the named personnel, with the needed capacity, to project completion. With safety as our main priority, our dedicated team of in-house safety specialists will collaborate with CCRPC, the City of Burlington, and other stakeholders to

deliver safety best practices and procedures for this plan update. We specifically developed this team to encompass the best-qualified professionals for the roles required, with budget and scheduling considerations in mind.

Moreover, VHB is an organization with a depth of resources both in our Vermont offices and nationwide. Where additional resources or more specialized skills may be necessary, we can call upon our colleagues for added support on assignments as needed. Drawing on the skills and experience of these and other VHB professionals, our team is well-equipped to help CCRPC address the wide range of needs required as part of this project.

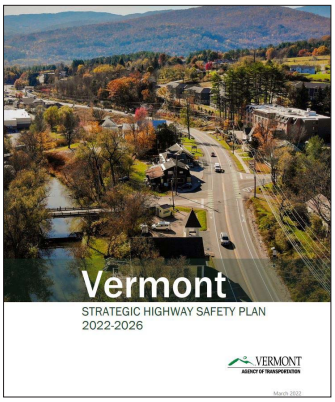
Past Performance

The VHB Team welcomes opportunities to shape communities in meaningful ways, and as a result, we have built a portfolio of strong experience relevant to this project over the years. Whether we are taking an urgent call from a public works department, going the extra mile to help with a grant application, or staying after a public meeting to speak with an interested citizen, we have the ability to be responsive and collaborative, to maintain project schedules, to deliver creative yet cost-effective solutions, and to help build consensus. VHB also brings extensive experience on similar relevant projects throughout our corporate footprint. Some of these examples are highlighted on the following pages. If selected, VHB will incorporate best practices and lessons learned from these projects into our work with the CCRPC and City of Burlington.



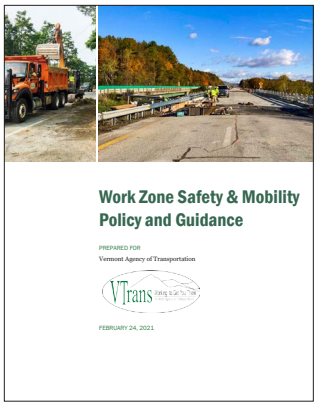
VTrans Highway Safety Improvement Program (HSIP) Statewide, Vermont

VHB is conducting an assessment of the VTrans HSIP. Using the 2016 Vermont HSIP Implementation and subsequent Annual Reports and Process Review as a starting point, VHB has reviewed the existing processes, conducted a thorough review, and interviewed key stakeholders. With feedback from VTrans, VHB is now making recommendations for short- and long-term HSIP processes by subject area in addition to providing VTrans with questions to consider as it makes these decisions. As an additional effort, VHB was tasked with helping VTrans with the completion of the Implementation Plan, which addresses VTrans not meeting safety performance measures. VHB has analyzed the crash data and safety spending profiles to determine where VTrans spending is not in alignment with where crashes are occurring and has proposed tactics to get spending more in alignment.



VTrans 2022–2026 Strategic Highway Safety Plan (SHSP) Statewide, Vermont

VHB worked with VTrans to complete the 2022–2026 Strategic Highway Safety Plan (SHSP) to establish statewide goals, objectives, and key emphasis areas for safety improvement. VHB has updated the analysis and screen of crash data for the state over the past five years and conducted a detailed review of the trends in regards to crash type, driver factors, roadway features, emphasis areas, and geographic locations. These findings were presented at the SHSP Safety Partners Workshop, and VHB led further investigation and discussion by Working Groups for different emphasis areas.



VTrans Work Zone Safety and Mobility Policy and Guidance, Statewide, Vermont

VHB led the effort to assist VTrans with the development of its Work Zone Safety and Mobility Policy and Guidance. As part of this project, the VHB team led a vigorous stakeholder engagement phase to understand how different groups at VTrans affected work zone safety, followed by a best practice review of policy and guidance from other states. Critical to the success of this effort was determining how to incorporate best practices into the VTrans framework. VHB developed a new process to develop TMP input early that could be included in bid documents, providing additional information to contractors early in the process and save VTrans money.

City of Winooski Walk Bike Plan, Winooski, Vermont

VHB supported the City of Winooski to develop a Walk Bike Plan to provide the vision for a connected network of walking and biking facilities that gets people safely where they want to go. The project included use of a web-hosted GIS survey that geolocated areas of concern and missing connections. The engagement process yielded over 1,000 individual comments, which clearly identified areas of concern to stakeholders. VHB developed an evaluation matrix that included five primary criteria, including improving equity, safety, connectivity, and proximity to key locations, and supporting community input. VHB used GIS mapping to develop quantitative methods of assigning points to each of the criteria. We are now evaluating the highest ranked projects to understand the constraints and constructability in order to develop an implementation plan for the City to follow into the future.

Quick Build Conversion Engineering Design, Burlington, Vermont

The Quick Build Conversion Engineering Design project represented the City of Burlington's initial conversions of rapid implementation or "Quick Build," safety improvements into permanent infrastructure. This first effort included three sites, with the goal of improving safety for pedestrians and all roadway users at each location. These sites were the intersections of Battery Street & Pearl Street, Pearl Street & George Street, and Elmwood Avenue & Grant Street.

The Battery Street & Pearl Street site involved the permanent closure of the second right-turn lane from Battery Street onto Pearl Street. VHB worked with the City to identify traffic operation needs, utility relocations, and tree protection requirements in the interest of restoring green space to the former right-turn only lane. Once all challenges were addressed, VHB delivered construction engineering plans and documents that resulted in the successful construction of an expanded greenbelt. The project narrowed the travelway for motorists along Battery Street, representing an improvement to pedestrian safety in the process.

Similarly, the Pearl Street & George Street and Elmwood Avenue & Grant Street projects represented similar opportunities to reallocate pavement space to improve pedestrian infrastructure. The VHB team worked with the City to provide engineering design services to build out two curb extensions at these sites to shorten pedestrian crossings and provide better sightlines for crossings.

Success in Implementation Grants

Planning serves as a vital foundation for safety strategy implementation. Further success requires implementation funding. Our safety team works together with our clients to help improve transportation safety. As such, we have helped to host webinars and live technical assistance events for FHWA on SS4A funding. We worked with FHWA to discuss the key themes, challenges, and takeaways for agencies applying for funding. Some of those key themes include the following:

- **Data Analysis:** Plans should use data to guide plan development.
- **Equity Analysis:** Agencies need to determine if crashes that result in serious injury and death disproportionately impact specific populations and provide potential remedies as part of planned actions.
- **Safe System Approach:** This approach is the framework upon which all plans should be based.
- **Public Engagement:** Collaborative efforts with stakeholders that include public engagement and outreach to any populations identified as part of the equity analysis) will directly lead to improved implementation.
- **Implementation Grant:** The plan may identify general strategies, but an Implementation Grant for supplemental planning can further refine those. For example, after creating a Vision Zero Plan, an agency could apply for an implementation grant to conduct RSAs and conduct preliminary engineering assessments before applying for a grant to fund construction.

Safety Action Plan Projects

VHB is a national leader in transportation safety. To date, we have developed 14 city/vision zero safety plans, 69 local road safety plans, 22 regional safety plans, and 11 statewide safety plans, including the following examples:

City of Raleigh Promising Safety Practices and Safety Planning	NC	2021
Fayetteville Pedestrian Safety Action Plan	NC	2023
Wilmington Pedestrian Safety Action Plan	NC	2023
Pittsburgh Pedestrian Safety Action Plan	PA	2022
City of Richmond Vision Zero Plan	VA	2017
City of Sanford Vision Zero Plan	ME	2024
City of Savannah Local Road Safety Plan*	GA	2020
City of Woodstock Local Road Safety Plan*	GA	2022
Wyoming County Local Road Safety Plan*	NY	2021
Saint Regis Mohawk Tribe Tribal Road Safety Plan*	NY	2022
Capital District Transportation Committee Regional Safety	NY	2019
Burlington-Graham MPO Safety Plan	NC	2022
Indian Nations Council of Governments Road Safety Plan*	OK	2022
Fredericksburg Area MPO Transportation Safety Study	VA	2023
Richmond Regional Transportation Safety Study	VA	2021

*FHWA sponsored

www.vhb.com