

Project Objectives:

Build a separated bike path along the 289 corridor.
 Prioritize school connection trail from 289.
 Consider trail-free zones to maintain wildlife refugia.

Project Goals:

Build accessible connectivity through Town and partner properties.
 Begin with natural surface trails and eventually transition into paved bike paths.
 Blend recreation with transportation by connecting the trail system to schools, neighborhoods, recreation areas, businesses, and more.
 Maximize trail-free zones to protect wildlife corridors.

Task	Task Details	Timeline	Cost Estimate	Potential Partners	Possible Funding Sources	Permits and Analysis	Additional Planning Needs
Soft Surface Trail Design & Construction							
Formalize existing connector trails on Town land	There are currently several informal trails that traverse Town-owned land in Essex. The Town could consider formalizing those that provided key connections and recreational uses through the development of a management plan with Town staff and the Conservation and Trails Committee.	Short-Term	\$0-\$5,000, part of ongoing operations and possible FOTW partnership	FOTW	N/A	N/A	
Pursue 14 trail realignments as stated in Ide Ride report	Fourteen trail reroutes and additions were suggested by Ide Ride to achieve maximum trail sustainability. This includes reducing trail grades to fall between 2% and 5%, keeping trails out of sensitive ecosystems like wetlands, and adding new trails where necessary to facilitate connections between Essex schools, neighborhoods, and businesses.	Medium-Term	\$365,400 - \$446,600	FOTW	RTP, Athletic Brewing, PayDirt	Wetland General Permit (if impacting wetlands)	
Rebuild 9 bridges as stated in Ide Ride report	Nine bridges are recommended to cross existing streams, wetlands, and areas with poor drainage. These bridges will both protect the associated ecosystems and improve user experience.	Medium-Term	\$171,000 - \$209,000	FOTW	RTP, Athletic Brewing, PayDirt	Wetland General Permit (if impacting wetlands)	
Build 11 kiosks/wayfinding at identified key trailheads/neighborhood connections as stated in Ide Ride report	Installing kiosks and/or other wayfindings options at key entrances and exits into schools and neighborhoods will help keep users oriented throughout the network, improving their experience.	Medium-Term	\$22,500 - \$27,500		RTP	N/A	Kiosk design
Consider a main thoroughfare trail to serve as the "artery" of the network	The Town has prioritized a need for a wide, multi-use trail that serves as the main "artery" of the network. This main thoroughfare should be wide enough to accommodate adaptive cycles and strollers, welcome multiple recreation uses, and be natural surface or crushed stone (not paved), and be able to be plowed in the winter.	Medium-Term	\$180,000 - \$220,000	FOTW	RTP, Athletic Brewing, PayDirt, Lintilhac, Better Connections, MPG, VT Bike/Ped, BGS Recreational Facilities Grants Program	Wetland General Permit (if impacting wetlands)	

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Design and build mountain-bike optimized trail "spurs" off the main thoroughfare/artery trail	The Essex community ranked recreation as the main reason they want to see this trail network developed. Given this high demand for recreation (specifically mountain biking), the main thoroughfare trail should consider spur trails that are optimized for mountain biking to provide more opportunities for recreation within the community. This will also benefit Saxon Hill, ideally spreading the traffic the area sees and reducing wear and tear on its trails.	Medium-Term	Varies, depending on how many spurs the Town would like to build	FOTW	RTP, LWCF, Better Connections, Athletic Brewing, PayDirt	Wetland General Permit (if impacting wetlands)	Trail siting, design, building
Active Transportation Design & Construction for a Path Along 289							
VT 289 Path/ Longitudinal Trail							
Conduct a scoping study to define the project	This would include developing and evaluating alternatives, and documenting the information required prior to obtaining funding and starting engineering design. (Alternatives would include different possible alignments within the VT 289 corridor.)	Medium-Term	\$54,000 - \$66,000	CCRPC or VTrans	VTrans Bicycle and Pedestrian Program, Vtrans Town Highway Structures Program, Vtrans Transportation Alternatives Program	N/A	
Pursue funding for design and construction	This can be done once a scoping study is completed, with a preferred alternative selected and endorsed by VTrans and the Town of Essex	Long-Term	\$0, part of ongoing operations		N/A	N/A	
Engineering design and plan development		Long-Term	10-20% of overall project budget			"VT State Section 1111 Permit Construction General Permit Wetland General Permit (if impacting wetlands) Stormwater Permit Flood Hazard Area and River Corridor General Permit"	
Write and distribute a bid for construction		Long-Term	\$0, part of ongoing operations		N/A	N/A	
VT 289 Pedestrian/ Bicycle Crossing							

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Conduct a scoping study to define the project	A scoping study would include developing and evaluating alternatives, and documenting the information required prior to obtaining funding and starting engineering design. (Alternatives would likely include a pedestrian/bicycle bridge and pedestrian/bicycle tunnel or could just look at tunnel with alternative locations)	Medium-Term	\$54,000 - \$66,000	CCRPC or VTrans	VTrans Bicycle and Pedestrian Program, Vtrans Town Highway Structures Program, Vtrans Transportation Alternatives Program	N/A	
Pursue funding for design and construction	This can be done once a scoping study is completed, with a preferred alternative selected and endorsed by VTrans and the Town of Essex	Long-Term	\$0, part of ongoing operations		N/A	N/A	
Engineering design and plan development		Long-Term	10-20% of overall project budget		N/A	"VT State Section 1111 Permit Construction General Permit Wetland General Permit (if impacting wetlands) Stormwater Permit Flood Hazard Area and River Corridor General Permit"	
Write and distribute a bid for construction		Long-Term	\$0, part of ongoing operations		N/A	N/A	
VT 289 Wildlife Crossing							
Conduct a scoping study to define the project	This would include developing and evaluating alternatives, and documenting the information required prior to obtaining funding and starting engineering design. (Alternatives would include different possible alignments within the VT 289 corridor.)	Medium-Term	\$54,000 - \$66,000	CCRPC or VTrans	VTrans Bicycle and Pedestrian Program, Vtrans Town Highway Structures Program, Vtrans Transportation Alternatives Program	N/A	
Pursue funding for design and construction	This can be done once a scoping study is completed, with a preferred alternative selected and endorsed by VTrans and the Town of Essex	Long-Term	\$0, part of ongoing operations		N/A	N/A	

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Engineering design and plan development		Long-Term	10-20% of overall project budget		N/A	"VT State Section 1111 Permit Construction General Permit Wetland General Permit (if impacting wetlands) Stormwater Permit Flood Hazard Area and River Corridor General Permit"	
Write and distribute a bid for construction		Long-Term	\$0, part of ongoing operations		N/A	N/A	
Planning, Partnerships, Operations, & Maintenance							
Develop a work plan for the Conservation and Trails Committee	The Town's Conservation and Trails Committee has existing "mission, powers, and duties", and an annual work plan to supplement this guiding language will help the committee accomplish its current goals, as well as goals relating to the Keystone Connectivity project. The Committee and relevant Town staff could work together to establish roles and responsibilities for the committee and how they will weave into the interconnected trail network. A work plan will also help the committee plan trail maintenance and management for existing trails on Town-owned land.	Short-Term	\$0, part of ongoing operations		N/A	N/A	
Work with the Fellowship of the Wheel (FOTW), where appropriate, for trail maintenance, trail decommissioning, and associated mapping, trail quantification, etc.	FOTW is the largest chapter of the Vermont Mountain Bike Association. A registered 501c3, this organization has been managing and maintaining the trails in Saxon Hill for decades, in addition to several other trail networks across Chittenden County. Recognizing the Town's Conversation and Trails Committee is largely comprised of volunteers (as is FOTW's board of directors), collaboration between the two groups could help in achieving high-quality maintenance and stewardship across more trails, especially as the Keystone network gets built out.	Short-Term	Roughly \$3,000-\$5,000 annually or compensation to be discussed as needed for specific projects with FOTW	FOTW	N/A	N/A	
Obtain landowner permission for trails from Saybrook/ Allen Brook Development	The Saybrook and Allen Brook Developments are two privately-owned parcels that the proposed Keystone trail network crosses. Working with the landowners to allow public access to their land for the purposes of building and maintaining the trails would help establish the connectivity the Town is seeking. This recommendation was also one that came out of the scenario planning process.	Medium-Term	\$0, part of ongoing operations		N/A	N/A	

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Develop accurate, usable maps and wayfinding signs/ trail blazes.	One of the major goals of this project is to build an interconnected trail network that connects schools, neighborhoods, and shopping centers that residents will use for active transportation and outdoor recreation. Maps, on-trail wayfinding, kiosks entry points will be essential for keeping trail users oriented, and to ensure their experience using the trails is positive. This recommendation was also one that came out of the scenario planning process.	Medium-Term	\$31,500 - \$38,500	FOTW, CCRPC	RTP	N/A	Map design
Identify priority lands for Town ownership, trails, and amenities.	What parcels of land that the trail network will cross should the Town consider acquiring? Are trail easements an option where land acquisition is unfeasible? This recommendation was also one that came out of the scenario planning process.	Medium-Term	\$0, part of ongoing operations		N/A	N/A	
Develop a strong communication system between town staff and committee members, trail managers, landowners, and users.	Maintaining this large trail network will require multi-faceted collaboration across several groups, and strong communication between stakeholders will be crucial. The communication system could include regular meetings, a digital space where updates/needs for the trails are shared, etc. Consider including local chambers and tourism groups as well. This recommendation was also one that came out of the scenario planning process.	Short-Term	\$0, part of ongoing operations		N/A	N/A	
Develop a maintenance plan for the current and future trail network.	Trails require ongoing maintenance to ensure a positive user experience and sustainability. Establishing roles and responsibilities for each group involved in stewarding the trail system, a monitoring plan, how often minor vs major maintenance will occur, how issues that need to be addressed will be reported, an SOP for addressing social/unsanctioned trails, etc., will help guarantee ongoing, high-quality maintenance throughout the trail network.	Medium-Term	Roughly \$3,000-\$5,000 annually or compensation to be discussed as needed for specific projects with FOTW	FOTW	N/A	N/A	
Wildlife Habitat and Connectivity							
Town-Wide Recommendations							
Avoid building trails in hemlock forests to protect Deer Wintering Areas	Maximizing trail-free zones in dense hemlock forests will help protect these deer habitats, which are essential for them to survive Vermont winters	Short-Term	\$0, part of ongoing operations	F&W	N/A	N/A	
Minimize trails and trail crossings in valley-bottom wetlands	Wetlands are extremely valuable for wildlife. The wetlands documented within the project area are long and linear, and located along streams. Avoid building trails along these wetlands.	Short-Term	\$0, part of ongoing operations		N/A	N/A	
Maintaining existing trail-free zones (wildlife refugia) as much as possible	This will help protect remaining unfragmented habitat	Short-Term	\$0, part of ongoing operations		N/A	N/A	

Task	Task Details	Timeline	Cost Estimate	Potential Partners	Possible Funding Sources	Permits and Analysis	Additional Planning Needs
Maintain as much natural cover as possible	This can be done by by keeping existing and/or planting more trees, shrubs, and ground cover to improve wildlife crossing quality	Short-Term	\$0, part of ongoing operations		N/A	N/A	
Reduce artificial lighting at night	Direct artificial lights downward, do not direct lights toward or into a forest block or wildlife corridor, use amber or yellow-colored lights, use time-restricted lighting	Short-Term	\$0, part of ongoing operations		N/A	N/A	
Consider broader wildlife study that assess all of Essex beyond the project area	A Town-wide study would provide a clearer picture of wildlife habitat connectivity and associated preservation/protection opportunities	Medium-Term	\$50,000+		Lintilhac Foundation	N/A	Securing landowner permission for widespread field work for town-wide studies is usually a major roadblock, so a remote modeling analysis with targeted field verification from public access points is usually the most efficient and effective. A very comprehensive study with a lot of public outreach and/or intensive field assessment could be more expensive, and a simplified initial analysis would be less.
Saxon Hollow Park area							
Consider expanding Saxon Hollow Park's northern edge 15-50 feet	50 feet would be ideal to establish a larger zone for wildlife movement	Long-Term			N/A	N/A	
Plant trees, shrubs, and ground cover to improve wildlife crossing quality	See full report for species recommendations	Medium-Term	Going rate of vegetation		N/A	N/A	
Southeastern Sand Hill Road area							
Limit developmet and new trail building		Short-Term	\$0, part of ongoing operations		N/A	N/A	
Consider consolidating existing trails to the west of the area		Medium-Term	\$0, part of ongoing operations		N/A	N/A	

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Plant additional native vegetation to increase cover for improve wildlife movement quality		Medium-Term	Going rate of vegetation		N/A	N/A	
Allen Martin Parkway West areas							
Revegetate the early succession forest to help achieve improved cover for wildlife movement		Medium-Term	\$0, part of ongoing operations		N/A	N/A	
VT Highway 289 South area							
Locate trails away from the valley bottom and Alder Brook to protect the forested corridor		Medium-Term	\$0, part of ongoing operations		N/A	N/A	
Avoid new development and trail infrastructure close to the stream and riparian zones		Short-Term	\$0, part of ongoing operations		N/A		
Future culvert and/or bridge designs should be designed to accommodate wildlife movement		Long-Term	\$0, part of ongoing operations		N/A		
VT 289 area							
Maintain vegetation as close to the highway as possible		Short-Term	\$0, part of ongoing operations		N/A		
Consider designing and building a wildlife overpass over 289.		Long-Term	\$0, part of ongoing operations		N/A		
Alder Brook North-east area							
Avoid severing wildlife connectivity		Short-Term	\$0, part of ongoing operations		N/A		