



BENNINGTON COUNTY REGIONAL COMMISSION

Applegate to Willow Brook Path

FEASIBILITY AND SCOPING STUDY

Draft 3-8-13



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This report was produced by the Bennington County Regional Commission. The conceptual plan and cost estimate are by MSK Engineering and Design Inc.

Applegate to Willow Brook Path

FEASIBILITY & SCOPING STUDY



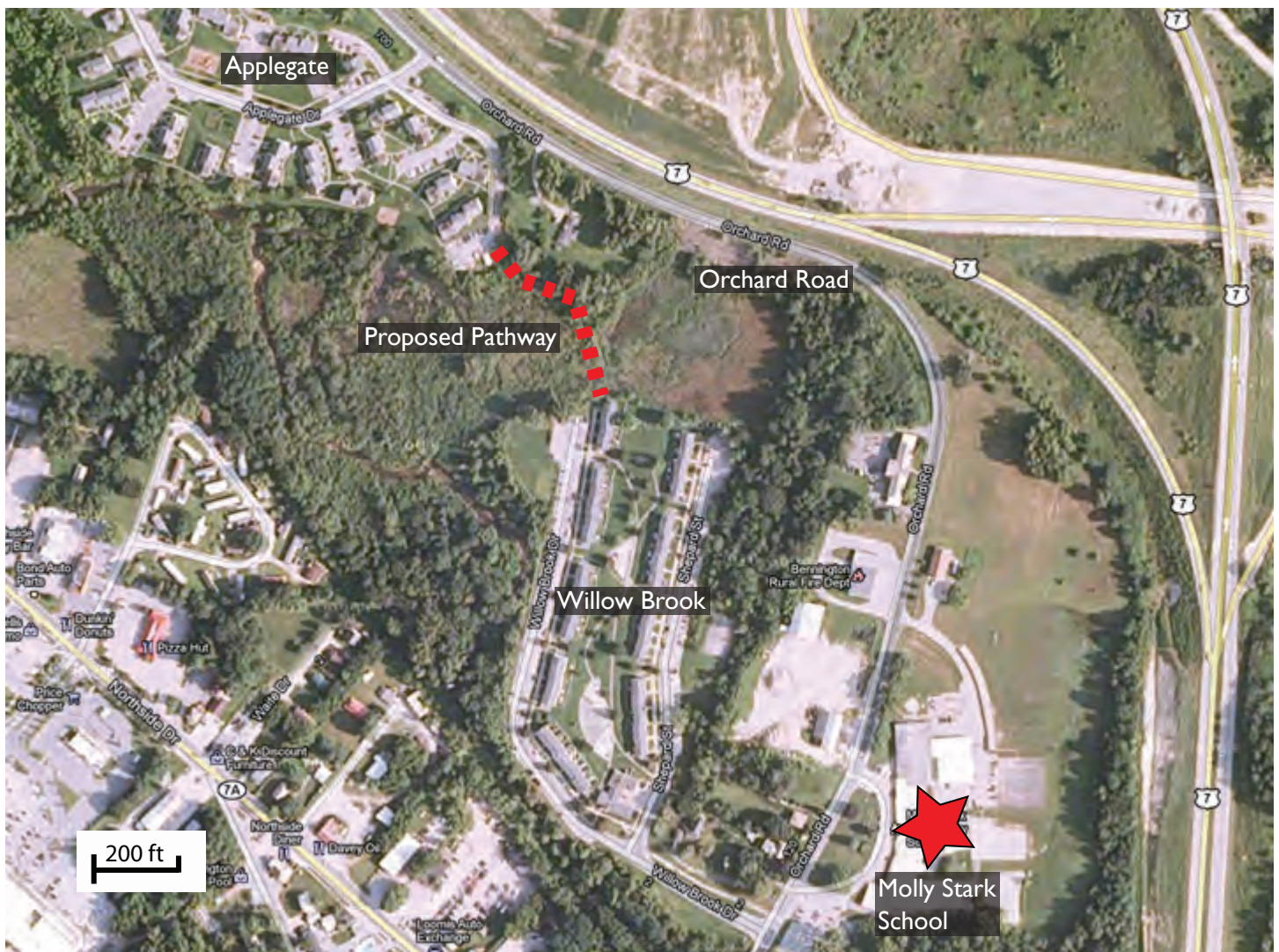
BENNINGTON COUNTY REGIONAL COMMISSION

What is the project?

The project is a new 480-foot gravel path and board-walk that will span a wetland and stream to connect two affordable housing complexes, Applegate Housing and Willow Brook Apartments.

Why is this project needed?

Applegate residents have no safe pedestrian access to the outside world. The new path will connect them to Willow Brook Apartments. From there they can safely walk to schools, jobs and grocery stores.



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Orchard Road's steep embankments make sidewalk construction unfeasible.

Children from Applegate are bussed to the Molly Stark School less than half a mile away, because Orchard Road, which connects Applegate to the school, is unsafe to walk on. Children from Applegate have a high rate of absenteeism. When they miss the bus they often miss school.

Orchard Road lacks sidewalks. Guardrails and steep embankments force pedestrians close to the vehicle travel lane. The steep embankments make sidewalk construction prohibitively expensive. The only feasible way to create a safe walking route from Applegate to the Molly Stark School is to build a path through the wetland to Willow Brook.

What will this project accomplish?

Creates a safe route to school

- * Gives the 107 children from Applegate mobility, independence and a healthy alternative way to get to school and to the larger community.



Applegate residents walking on Orchard Road. Guardrail and embankments force pedestrians to walk in the travel lane.

- * Reduces absenteeism at the Molly Stark Elementary School because children who miss the bus will have a safe walking route.
- * Makes it easier for children to walk or bike to Bennington's middle school, high school and to the Grace Christian School.

Improves public health

- * Encourages physical activity to help reduce childhood obesity and type 2 diabetes. Eight percent of Bennington County residents have type 2 diabetes.
- * According to a recent study by the Robert Wood Johnson Foundation, every \$1 spent on building walking paths and biking trails in Vermont could save approximately \$3 in obesity-related medical expenses.

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Many residents already walk between the two housing complexes. The new pathway will follow a “path of desire.” This bridge made from a shopping cart and a board shows residents’ desire to walk between the two complexes.

Follows a “path of desire”

* Children hop the fence and walk between the two developments now—there is a well-worn “path of desire” and an improvised bridge made from boards and abandoned shopping carts. The existing path is not usable as a route to school because it crosses private property, disturbs a wetland, crosses a stream, and has steep slopes on either end. The new path will be more level, a boardwalk will span the wetland and stream, and a lot line adjustment will make it legal.

* Applegate residents can use the path to safely walk to jobs, grocery stores and other destinations. Twenty-nine Applegate households and twenty-five Willow Brook households do not own a vehicle.



The boardwalk sections of the path will be similar to the Paran Path in North Bennington.

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The new path will have scenic views of Mount Anthony and the Bennington Monument.

Creates a valuable public amenity

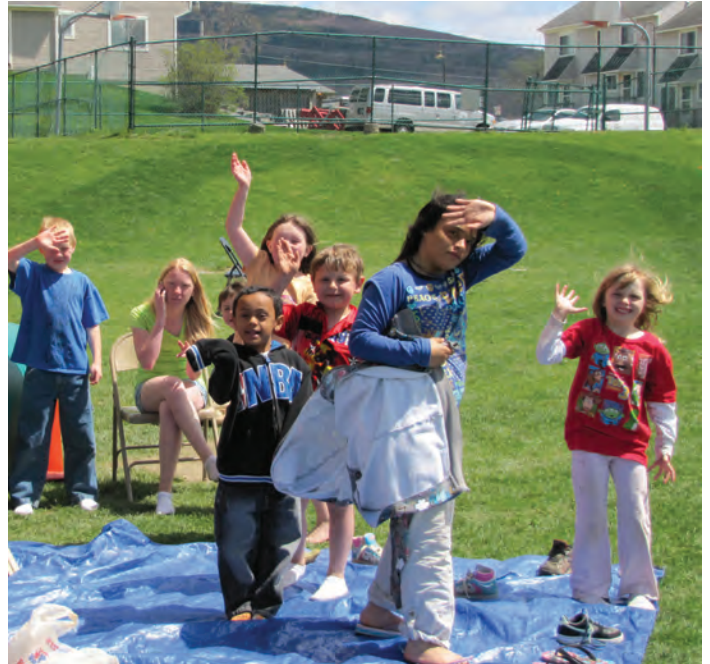
- * The path will give access to a beautiful natural area with a stream and views of the Bennington Monument and Mt. Anthony. It will have a boardwalk, landings, benches and lighting.
- * Willow Brook and Applegate residents, especially the 245 children under the age of 18 who live in the two complexes, will have a beautiful path to use in their backyard.

Fosters connections between Applegate and Willow Brook

- * The path will make it easier for residents to get services and attend events at both developments.

Serves an economically disadvantaged population

- * Residents of Applegate Housing have an average household income of just \$15,750. The state median household income is \$52,776 (American Community Survey 2011).
- * Residents of Willow Brook Apartments have an average household income of just \$19,351.



The 245 children who live in Applegate and Willow Brook will benefit from the new path.

Neighborhood Context

The project area is near Northside Drive, Bennington's business "strip," which includes a Walmart and two large supermarkets, Price Chopper and Hannaford's. Many Applegate residents depend on the neighborhood for shopping and employment.

Applegate Housing

Applegate Apartments has 104 units of mixed income family housing and is owned by a non-profit community organization, Applegate Housing Incorporated, in partnership with Housing Vermont. Maloney Properties Incorporated manages Applegate.

Willow Brook Apartments

Willow Brook Apartments has 75 units of mixed income family housing. It is owned and operated by the non-profit Bennington Housing Authority.

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Stakeholder Support

The path project has strong stakeholder and community support. The Applegate Housing Incorporated Board of Directors approved the path on February 8th, 2012. The Bennington Housing Authority Board of Directors approved it on April 16, 2012.

Path supporters include:

- Applegate Housing Incorporated, Board of Directors
- Bennington Housing Authority, Board of Directors
- Molly Stark School Elementary School
- Southwestern Vermont Medical Center
- Vermont Department of Public Health
- The Bennington County Regional Commission

The Path [See appendix, Conceptual Plan Drawing]

- * The path will be designed to be attractive, convenient and safe; it will be affordable to build and maintain.
- * The boardwalk design and construction will minimize impact to the wetland and stream.
- * Will comply with the Americans With Disabilities Guidelines (ADA)

Alignment

The path will be approximately 480 feet long and will follow roughly the same alignment as the existing makeshift path. It will start from a small lawn in the southeast corner of Applegate, span a stream and wetland, and then connect to Willow Brook's existing path network.

Most of the path will cross what is now private property. A lot line adjustment is needed (see Right of Way).



The new path will replace the existing makeshift path.



The path will connect to the Willow Brook sidewalk network.

Keeping the path completely on property owned by Applegate and Willow Brook may not be feasible due to the necessary wetlands impacts. At a minimum it would require longer sections of boardwalk, would require a long span pedestrian footbridge and would be more expensive to build and maintain.

Typical sections

The path and boardwalk will be eight feet wide. It will have three sections of hard-packed gravel, crowned to facilitate water run-off, and two boardwalk sections with railings where needed.

Lights

Many stakeholders requested that the path be lit at night. The conceptual design and cost estimate includes lights, so the path is inviting and safe after dark.

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Landings

There will be two landings, with benches, in spots where the view is particularly nice.

Accessibility

The path will be safe for wheelchairs; it will comply with Americans with Disabilities Act (ADA) guidelines.

- * It will have slopes no greater than 1:20, or will a conforming ramp with slopes no greater than 1:12.
- * The gravel sections will be hard-packed.
- * The boardwalk will have railings, where needed.

Boardwalk construction

The boardwalks will be supported with helical piles, which are metal rods with helixes welded on and then augered into the ground.



Helical piles support the Paran Pathway in North Bennington.

Maintenance

Snow removal

The path will be used year-round, so snow removal must be part of the maintenance plan (maintenance plan pending).

Beaver control

There are no beavers in the project area now, but in the past, beavers have dammed the stream and flooded the wetland area, and nearly flooded Applegate's sewage transfer station. The sewage transfer station is in the path area, so beaver control is needed even if the path is not built.

Electric Power

The path lights will tie into Applegate's streetlights. Light sensors and energy efficient light bulbs will reduce energy costs.

Security

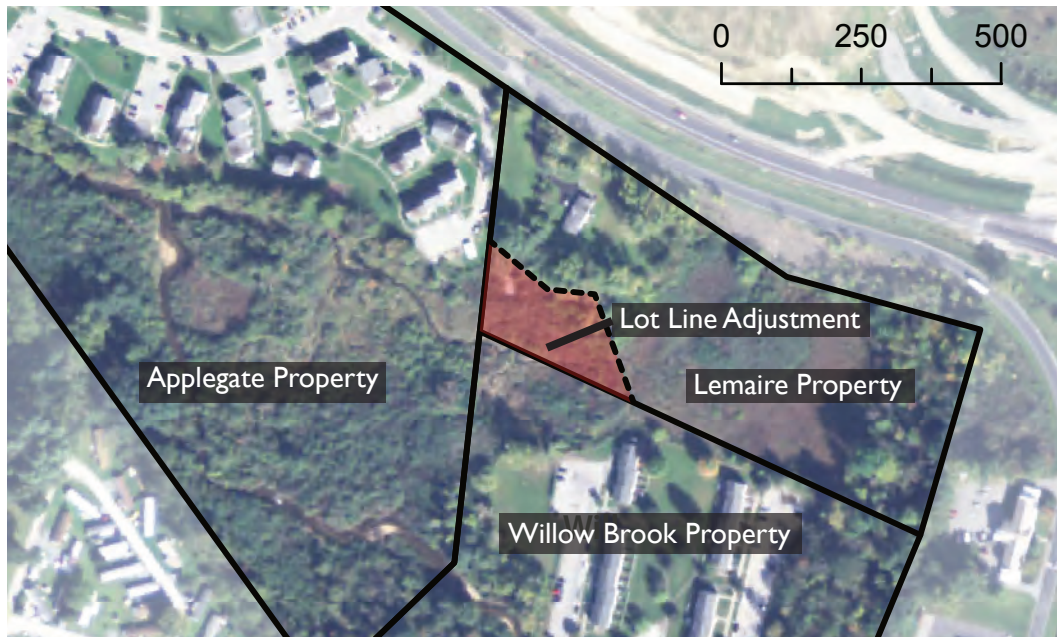
Security is a concern in any public space. Sections of path will be hidden from view and will be difficult to monitor. Motion-activated trail cameras may be a good security measure.

Liability

Vermont's Landowner Liability Law (12 V.S.A. Sec. 5791-5795) protects property owners who let the public use their land and water free of charge for recreational purposes. The purpose of the law is to encourage landowners to open their lands to recreational users and give landowners legal protection from personal injury or property damage claims by these users. The law coverage includes paths, fences and structures and fixtures used to enter the land (including bridges and walkways).

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Permitting

Conditional Use Determination

The only permit needed to construct the project is a Conditional Use Determination (CUD) from the State of Vermont. The CUD is not anticipated to be an obstacle because the path will span the stream and wetland with a boardwalk to minimize ground and water flow disturbance.

Right of Way

The shortest and most financially feasible path alignment crosses property owned by a private landowner, Laurence and Linda Lemaire. A 35,000 square foot lot line adjustment is needed.

The land's assessed value is \$817. The Lemaire's have verbally agreed to a lot line adjustment for \$2,000, but only if they can get the money directly. To legally acquire the property, it may be necessary to pay their lender, Green Tree Financial Services, the assessed value in addition to a \$2,000 payment to the Lemaire's.

Another possibility, since the landowners are willing and the price is already agreed on, is a friendly eminent domain proceeding where the Town of Bennington takes title to the property and donates it to Applegate.

U.S. Army Corps of Engineers

The conceptual plans were sent to the U.S. Army Corps of Engineers. In an email, the regulatory division wrote that the project does not trigger Army Corps jurisdiction since the path will span the stream and wetland with a boardwalk supported by driven piles.

Wetland delineation

The Army Corps requested that the wetland be field-delineated before the final design is finished to ensure that the boardwalk spans the entire wetland.

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Construction Cost Estimate

The project estimate is \$87,813 (see Appendix A, Project Estimate). The cost estimate is based on the conceptual plan and will be updated after the final plan is complete.

Conclusion

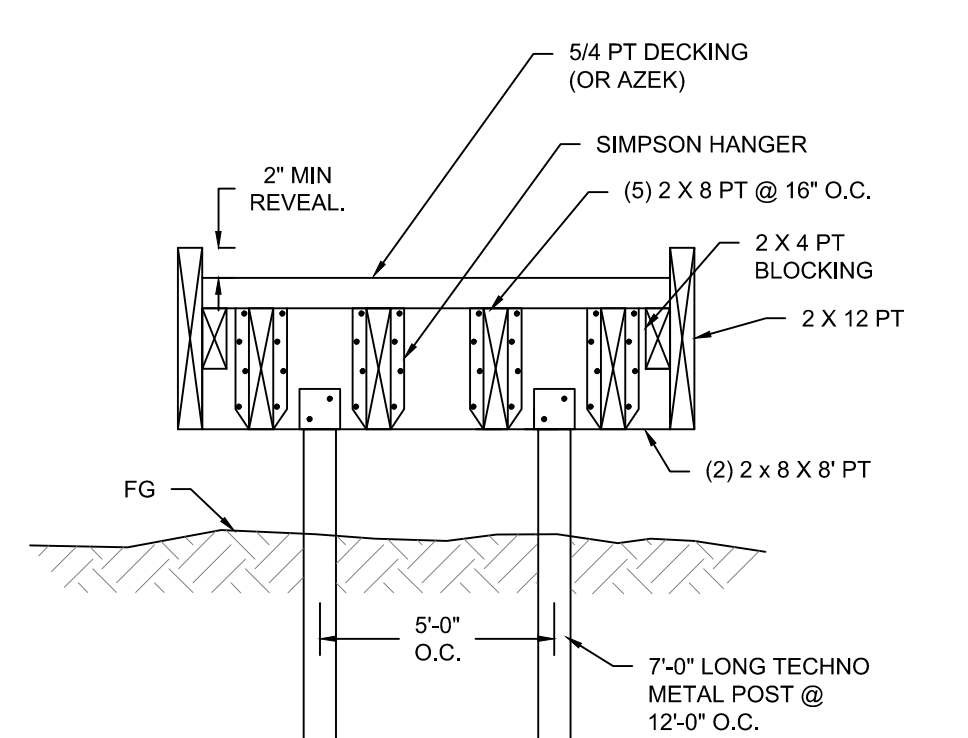
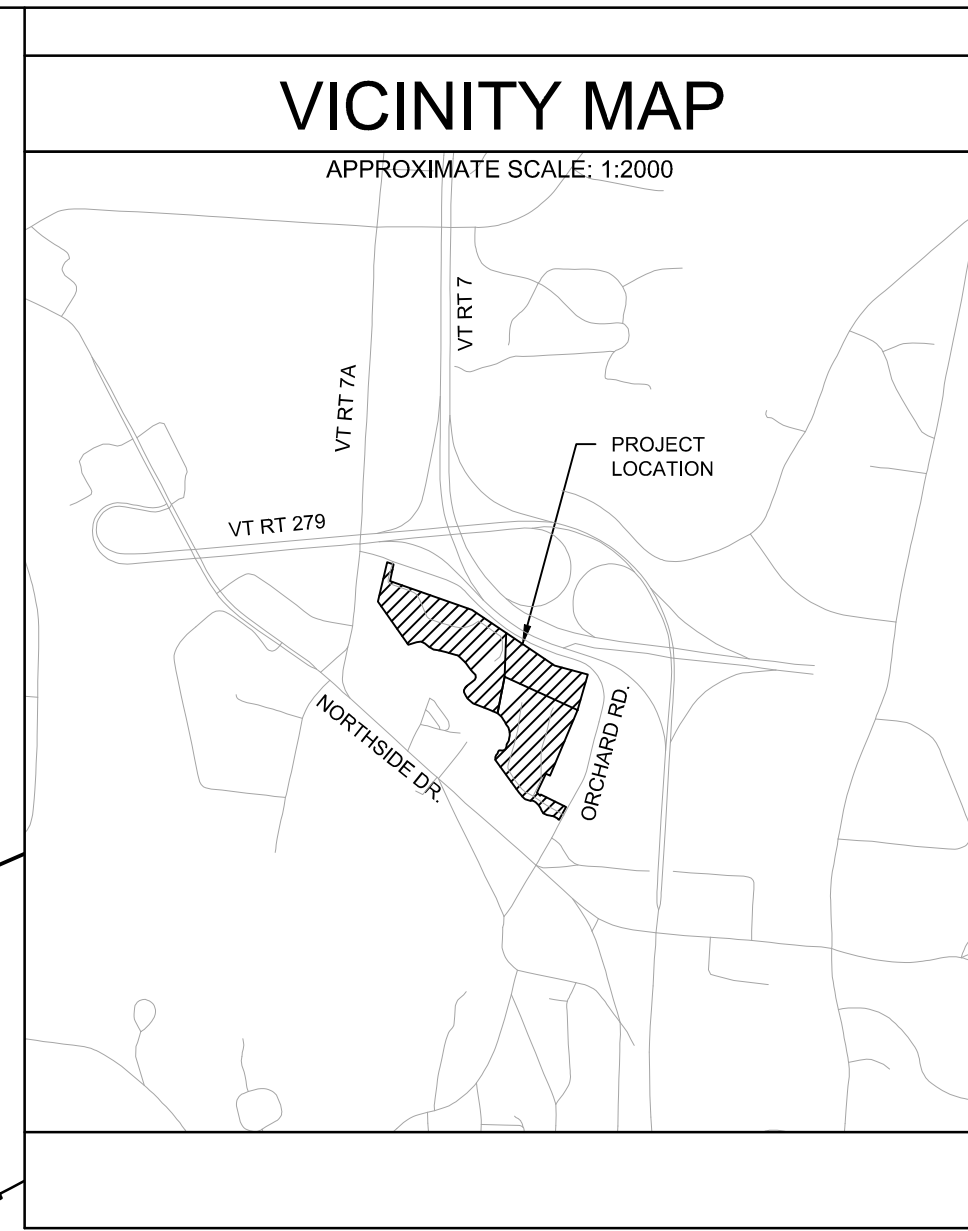
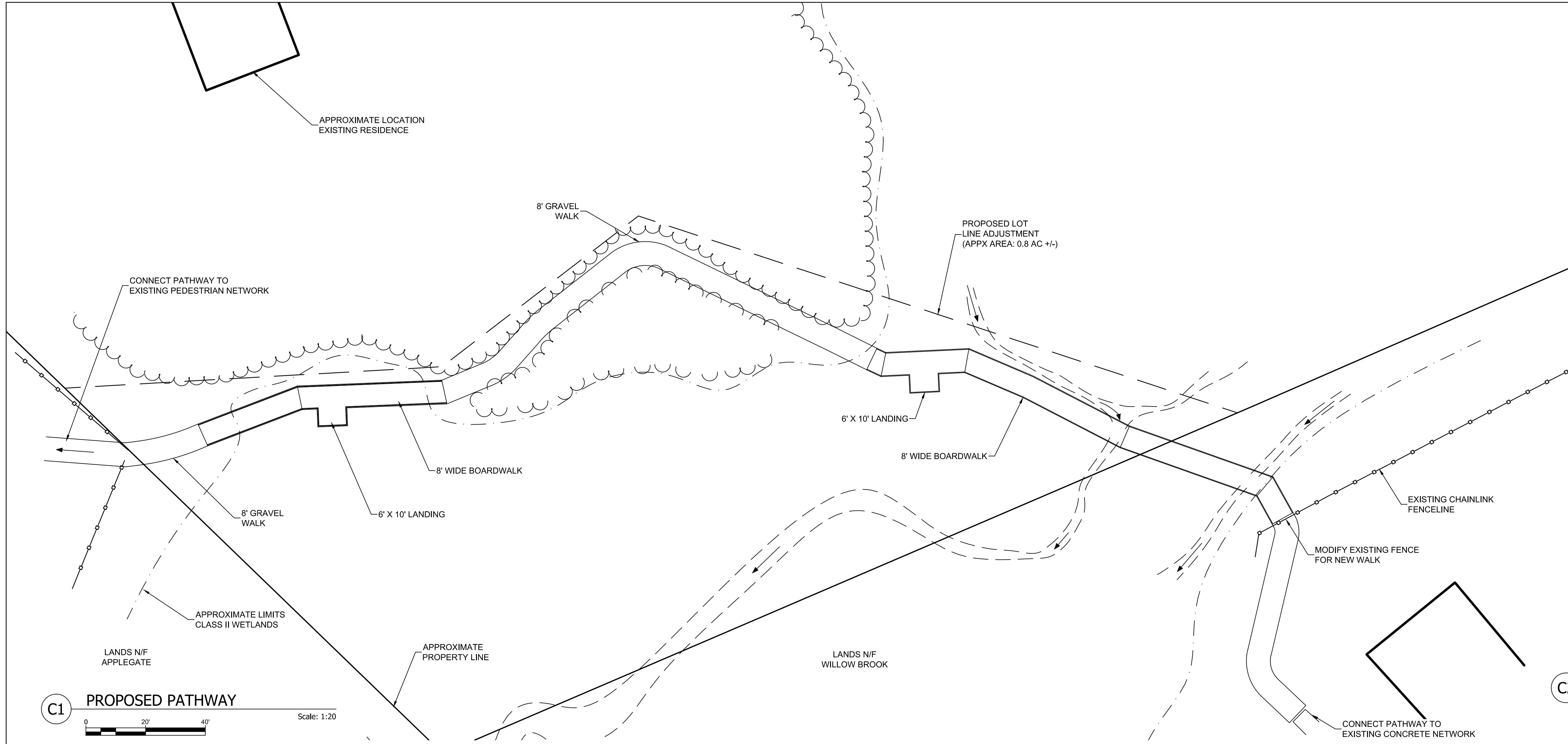
The path is feasible to build and will create many benefits for a reasonable cost. Right of Way is needed from only one landowner who has verbally agreed to a lot line adjustment. The only permit needed is a Conditional Use Determination, which is not likely to be an obstacle. The benefits of the project, which is the creation of a much-needed safe walking route to school and other important destinations for a large, financially disadvantaged community with no safe walking route to the outside world, is well worth the cost.

Applegate to Willow Brook Path

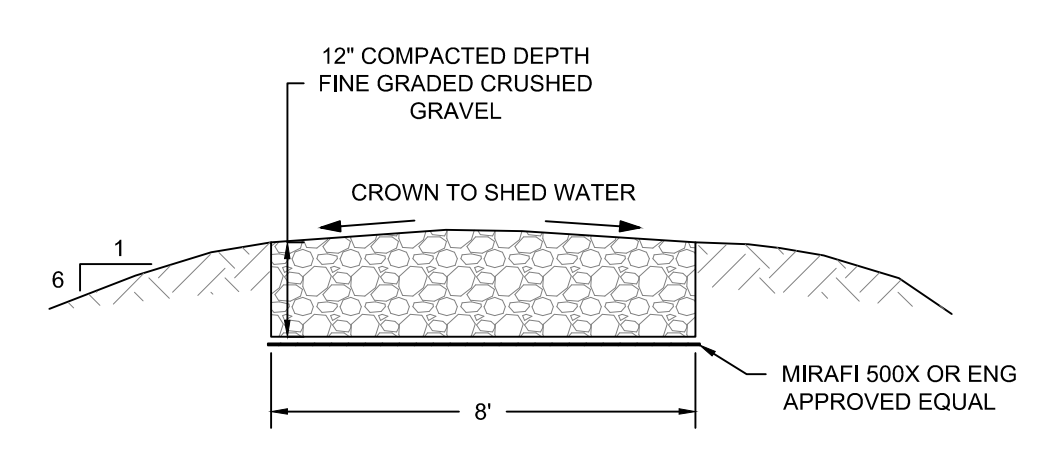
FEASIBILITY & SCOPING STUDY

Appendix Cost Estimate

				ESTIMATE	
ITEM	DESCRIPTION	UNIT	EST. QTY	UNIT PRICE	TOTAL
WALK CONSTRUCTION					
	MOBILIZATION/DEMObILIZATION	LS	0.06	\$39,473.79	\$2,368.43
	FENCE MODIFICATION	ALLOW	1	\$500.00	\$500.00
	BRUSH HOGGING	LS	1	\$500.00	\$500.00
	COMMON EXCAVATION	CY	55	\$15.00	\$825.00
	CRUSHED GRAVEL FINE GRADED	CY	55	\$35.00	\$1,925.00
	FABRIC	SF	2320	\$0.15	\$348.00
	TOPSOIL	CY	20	\$80.49	\$1,609.80
	HAY MULCH	TON	0.1	\$652.00	\$65.20
	SEED	LB	5	\$11.35	\$56.75
	HELICAL PILES	EA	60	\$175.00	\$10,500.00
	2X4X12 PT	EA	58	\$5.04	\$292.32
	2X12X12 PT	EA	58	\$16.24	\$941.92
	2X8X12 PT	EA	145	\$9.24	\$1,339.80
	2X8X8 PT	EA	120	\$6.50	\$780.00
	5/4X6 PT DECKING	LF	4200	\$0.72	\$3,024.00
	HANGERS	EA	200	\$1.33	\$266.00
	FASTENER ALLOWANCE	LS	1	\$2,000.00	\$2,000.00
	WALK CONSTRUCTION LABOR	ALLOW	1	\$15,000.00	\$15,000.00
	MISC CONTINGENCY	ALLOW	0.15	\$39,473.79	\$5,921.07
SUBTOTAL CONSTRUCTION					\$48,263.29
ELECTRICAL					
	LIGHTS CONDUIT AND WIRE	ALLOW	1	\$13,000.00	\$13,000.00
	CONNECT TO EXISTING	ALLOW	1	\$2,500.00	\$2,500.00
	TRENCH EXCAVATION OF EARTH	CY	100	\$30.00	\$3,000.00
	LIGHT BASES	EA	12	\$200.00	\$2,400.00
SUBTOTAL ELECTRICAL					\$20,900.00
ENGINEERING AND PERMITTING					
	LOT LINE ADJUSTMENT	LS	1	\$3,500.00	\$3,500.00
	PROPERTY ACQUISITION	LS	1	\$2,800.00	\$2,800.00
	LEGAL	ALLOW	1	\$2,500.00	\$2,500.00
	WETLANDS DELINEATION	LS	1	\$850.00	\$850.00
	FINAL DESIGN PERMITTING AND CONSTRUCTION DOCUMENTS	LS	1	\$6,000.00	\$6,000.00
	BIDDING AND CA	LS	1	\$3,000.00	\$3,000.00
					\$18,650.00
TOTAL PROJECT					\$87,813.29

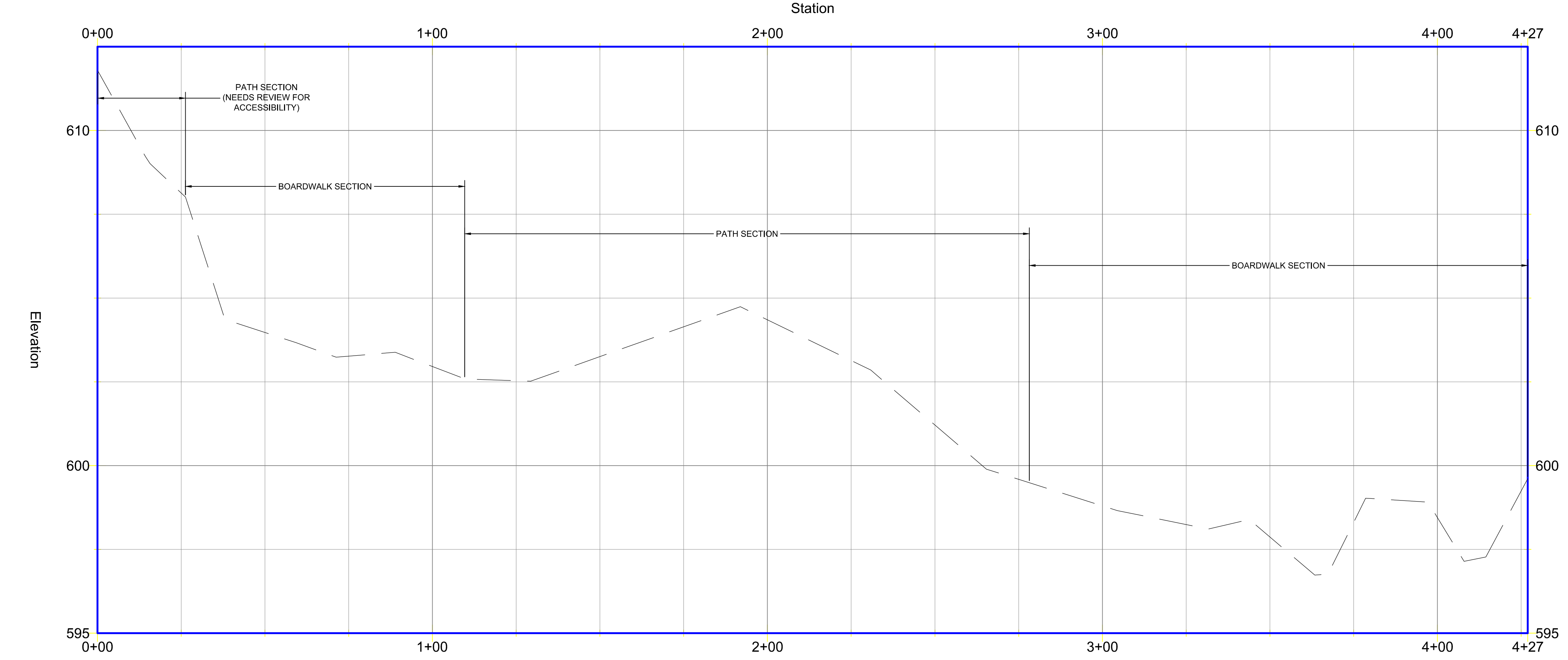


C2 8' WIDE BOARDWALK TYPICAL
Scale: NTS

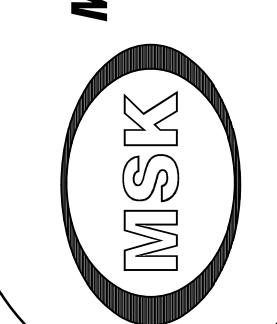


C3 GRAVEL PATH DETAIL
Scale: NTS

C1 PROPOSED PATHWAY
Scale: 1:20



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REVISIONS	
NO.	DESCRIPTION

BCRC- APPLGATE / WILLOW BROOK
ORCHARD ROAD
BENNINGTON, VT

DRAWINGS THIS SHEET
PROPOSED PATHWAY IMPROVEMENTS

NUMBER	DATE
	08-25-12
DRAWN	CHECKED
EM	JMD

SHEET NUMBER
C-101