

M E M O

To: Andy Beers, Hudson River Valley Greenway

From: GPI

Date: October 10, 2017

Subject: AHET Berkshire Neighborhood Alternative Route Evaluation

This memo serves as design justification for the proposed alignment of the Albany-Hudson Electric Trail (AHET) from Point View Drive south to Greenwood Drive in the Town of East Greenbush, Rensselaer County. These findings are based upon an extensive review of site conditions by both GPI and Alta engineering staff, and meetings that were held on September 11, 13, and 20th with a combination of various private property owners and members of the Town Board in addition to several one-on-one site visitations with property owners.

Recommendation:

Following a review of all alternatives, the GPI and Alta design team recommends that the AHET route utilize Tamarack Lane as the connection from Point View Drive to Greenwood Drive (off-road sections of the AHET trail will run northeast from Point View Drive and southwest from Greenwood Drive). This memo provides a summary of the alternatives analysis leading to the recommendation to utilize Tamarack Lane.

Off-Road Option (National Grid ROW) Eliminated:

Upon detailed review, we have determined that the option of utilizing National Grid ROW in this location (the "hybrid route") is not a feasible option for the following reasons:

- a) the ROW serves as a stormwater detention area along the southern portion, which would require extensive, high-cost engineering modifications to accommodate trail construction; and
- b) construction of a trail entrance on Berkshire Drive directly across from the Holy Spirit School parking lot has the potential to generate conflicts between vehicles and trail users during both school and church events, and to invite unauthorized vehicle parking in the Holy Spirit lot by trail users. Accordingly, this option has been eliminated from further consideration.

On-Road Alternatives:

The GPI and Alta design team evaluated three on-road alternatives based on the existing conditions shown in Table 1 below and applicable design standards. The potential alternatives shown in the attached map all begin at Point View Drive where National Grid ROW meets the roadway and all terminate at the intersection of Greenwood Drive where the National Grid ROW meets the roadway.

Table 1 – Existing Conditions

Roadway	Pavement Width (ft)	Grade (%)	Speed Limit (mph)	Pedestrian Accommodations	Annual Average Daily Traffic (veh/day)	On-street Parking	Approximate Roadway Length (ft)
Point View Drive	30-33	<5	30	None	>400	No restrictions	170,[525],[1,100]
Highland Drive	18-20	<5	30	Sidewalk (SB side)	<400	No restrictions	270
Greenwood Drive	28-29	<5	30	None	>400	No Restrictions	200,[(340)]
Berkshire Drive	20	10 (max.)	30	Sidewalk (Not Continuous)	<400	No restrictions	2,825
Tamarack Lane	32-35	<5	30	None	See below	No restrictions	[1,460],2,050
Evergreen Way	27	<5	30	None	<400	No restrictions	975

1.XXX=Berkshire Drive Alternative, (XXX)= Tamarack Lane Alternative, [XXX]=Evergreen Way Alternative

Roadway Existing Conditions:

Point View Drive – This is a local urban road that serves a residential area but also provides a direct connection to the Columbia Turnpike (US 9/20). The roadway does not provide any pedestrian accommodations but its width and level terrain makes its suitable as a shared-use facility. If chosen as the preferred route the intersection sight distance at the intersection of Point View Drive and Berkshire Drive may be limited due to the existing geometry and would need further detailed evaluation.

Greenwood Drive – This is a local urban road that serves a residential area but also provides a direct connection between Elliot Road and Columbia Turnpike (US 9/20) thru Huntswood Lane. It can be expected that this roadway will have higher traffic volumes than the other roads in the area. Pavement width is adequate for a shared-use facility development and review of the intersection sight distance does not indicate any major deficiencies.

Berkshire Drive Alternative: From the north, this alternative would travel westerly briefly along Point View Drive before traveling south along Berkshire Drive, intersecting Highland Drive and continuing south towards Greenwood Drive (Point View - Berkshire – Highland - Greenwood). The combined alternative totals approximately 3,600 feet. Berkshire Drive is a local road that serves adjacent residences. As part of the AHET project pedestrians would be able to use the existing sidewalks and/or shared roadway while bicyclists would travel in the shared roadway. It is noted that the sidewalks in this area are not ADA compliant as they are in poor condition and lack proper ramps and detectible warnings, minimum widths requirements, and exceed allowable grades. Where the sidewalk ends at Elmwood Drive pedestrians would walk along the shared roadway. A shared-use condition at this location, in conjunction with various vertical and horizontal curvature of the roadway creates potential conflict points between users and motorists.

Evergreen Way Alternative: The Evergreen alternative totals approximately 3,300 feet and travels easterly from Point View Drive south onto Evergreen Way then turns south onto Tamarack Lane ending at Greenwood Drive. (Point View – Evergreen - Tamarack – Greenwood). Evergreen Way is a local road that serves a residential area; therefore, an AADT of <400 vehicles/day can be assumed. The roadway does not currently provide for pedestrian accommodations and similarly to the other alternatives, AHET trail users would utilize the roadway under a shared-use condition.

Tamarack Lane Alternative: The Tamarack alternative totals approximately 3,490 feet and travels easterly from Point View Drive, south onto Tamarack Lane ending at Greenwood Drive. (Point View – Tamarack – Greenwood). Tamarack Lane is a local road that serves residential areas, but also in conjunction with its overall geometry it is expected that traffic along Tamarack Road may be slightly higher than observed along Berkshire Drive and Evergreen Way. There are no existing pedestrian accommodations along Tamarack Lane so pedestrians, bicyclists, and motorists would use it as shared use facility for the AHET (as they currently do). If chosen as the preferred project route, the northbound approach at the intersection of Tamarack Lane and Point View Drive may require a possible road modification (reduction in road width) to minimize crossing distances as the approach at the intersection is excessively wide leading to undefined travel lanes and turning movements, which result in higher rates of speeds. The reconfiguration of this area would be accomplished using either either striping/hatching and/or new curbing.

Design Standards:

Table 2 below compares NYSDOT Standards for Urban Local Non-NHS roads, AASHTO shared use facility standards and the existing conditions for these streets to assist in selecting the optimal alignment.

Table 2 – DOT street standards vs actual conditions

	NYSDOT Non-NHS Urban Local Standards	AASHTO Shared Use Facility
Design Speed (mph)	20-30	20
Total Pavement Width (ft)	24	8 (min.) (10-14 preferred)
Maximum Grade (%)	15%	5%
Pedestrian Accommodation	ADA Sidewalk on at least 1 side	ADA Sidewalk on at least 1 side

Assessment:

Berkshire Drive satisfies most of the basic requirements as identified by both the NYSDOT and AASHTO design guidelines with a few caveats. Though AASHTO does allow for short segments of trail to have grades greater than 5%, this is considered undesirable as it presents greater challenges for pedestrians and bicyclists. Berkshire Drive currently has parking on both sides of the street, the 20-foot pavement width may be unsuitable at times for both the passage of traffic and for the shared-use path although this parking does result in much lower design speeds which is an ideal condition. The relatively steep grade exceeding 10% near Birchwood Drive intersection creates a vertical curve, which greatly reduces the ability to see oncoming vehicle and pedestrian traffic. The existing sidewalks have grade in excess of 20% at some locations making it noncompliant with ADA Pedestrian Accommodations and/or AASHTO trail design standards. Additional the sharp 90 degree turn as Berkshire Drive approaches Highland Drive also significantly restricts sight distance.

Tamarack Lane satisfies most requirements basic requirements as identified by both the NYSDOT and AASHTO design guidelines. The road is wide enough to allow for regular traffic flow in addition to the proposed shared-use trail. The grade is limited enough to allow for a comfortable passage by most AHET users, and the road has few curves that could limit sight distance for motorists and trail users. The roadway lacks any sidewalks and would remain as a shared use facility as it currently operates.

Evergreen Way, similar to Tamarack, meets most requirements however, Evergreen is narrower which may cause more traffic conflicts than Tamarack. Use of Evergreen on AHET's alignment would create a shorter trail connection compared to use of Tamarack, although this distance is only by 200 feet compared to going solely on Tamarack Lane. The street lacks sidewalks and provides no additional benefit over the Tamarack Lane Alternative beyond reducing total path length but has some overall steeper grades. The roadway lacks any sidewalks and would be a shared use facility as it currently operates.

After reviewing the information summarized above, the GPI and Alta design team recommend Tamarack Lane as the preferred alternative for the AHET route connection from Point View Drive to Greenwood Drive.