

MEMORANDUM



ENGINEERS
PLANNERS
SURVEYORS

Date: August 29, 2023

To: Lydia Lake, P.E. – New Leaf Energy

From: Dan Berkowsky, P.E. – Creighton Manning Engineering

cc: Matt Van Wie, P.E., Don Adams, P.E. – Creighton Manning Engineering

Project: Wind Transport Study – 0 S Hill Road, Cherry Creek, New York (CM# 121-310)

Re: Preferred Delivery Routes and Temporary Roadway Improvements – (Rev. 1)

Creighton Manning Engineering (CM) was retained by New Leaf Energy (New Leaf) to assess road conditions to facilitate construction of a single-turbine wind project located in Chautauqua County, New York. The address of record for the turbine is 0 S Hill Road, Cherry Creek, New York. The purpose of this assessment was to develop and recommend a feasible delivery route for oversized turbine blades and other heavy construction components. The delivery route alternatives were developed and selected, to the extent possible, to prioritize NY State roadways over county and local roads, avoid underpasses and overhead obstructions, avoid weight limited bridges, and minimize acute angle turns.

A field visit was conducted by CM staff Engineers on June 14, 2023 to confirm route feasibility, identify potential road obstructions or features not readily apparent on satellite imagery, and identify and document potential temporary roadway improvements and/or widening required to accommodate large delivery vehicles. The observations and data collected was then used to further analyze and refine the routing alternatives, confirm vehicle maneuverability, and provide New Leaf with further insight into potential temporary improvements that would be required along the preferred delivery route.

Delivery Vehicles

For this site, New Leaf intends to use the Vestas V163 turbine. Turbine blades of this model measure approximately 263 feet in length and will require vertical clearances of at least 16 feet along the travel path from port of arrival to project site.

Figure 1 illustrates the turning template for a 90-degree turn provided by the turbine vendor, and Figure 2 illustrates a standard 45-degree turn for these vehicles. Analysis contained in this memorandum uses the specifications provided for the V162 components, which are assumed comparable to the V163 model.

MEMORANDUM

S Hill Road, Cherry Creek, NY – Preferred Delivery Routes and Temporary Roadway Improvements
 August 29, 2023

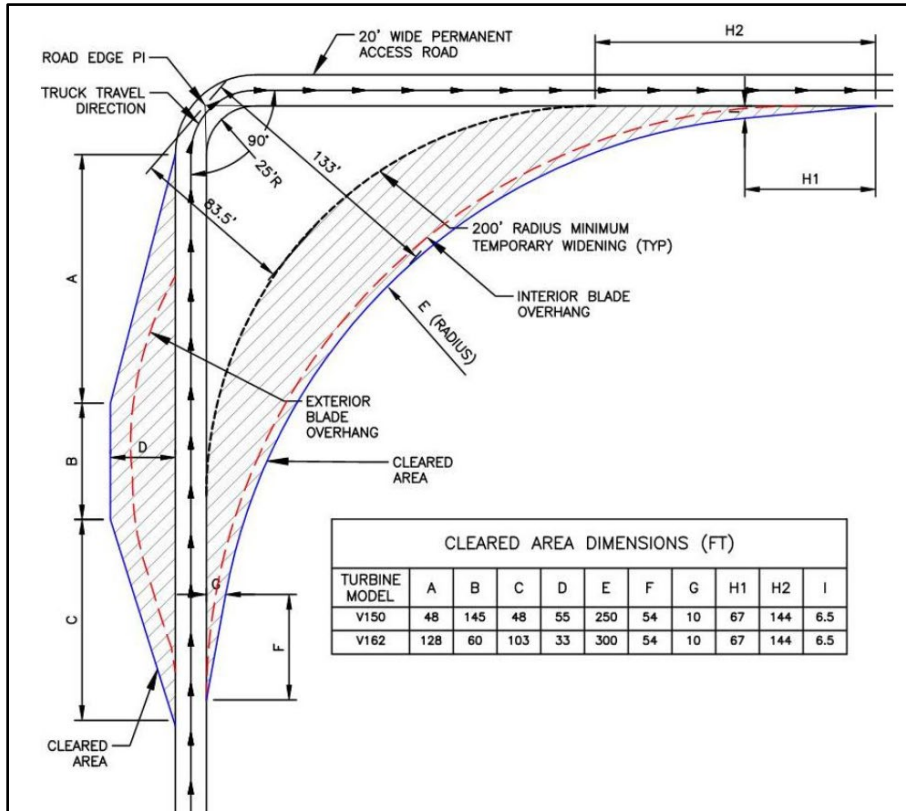


Figure 1 - Vendor Supplied 90-Degree Turning Template for Standard Blade Truck

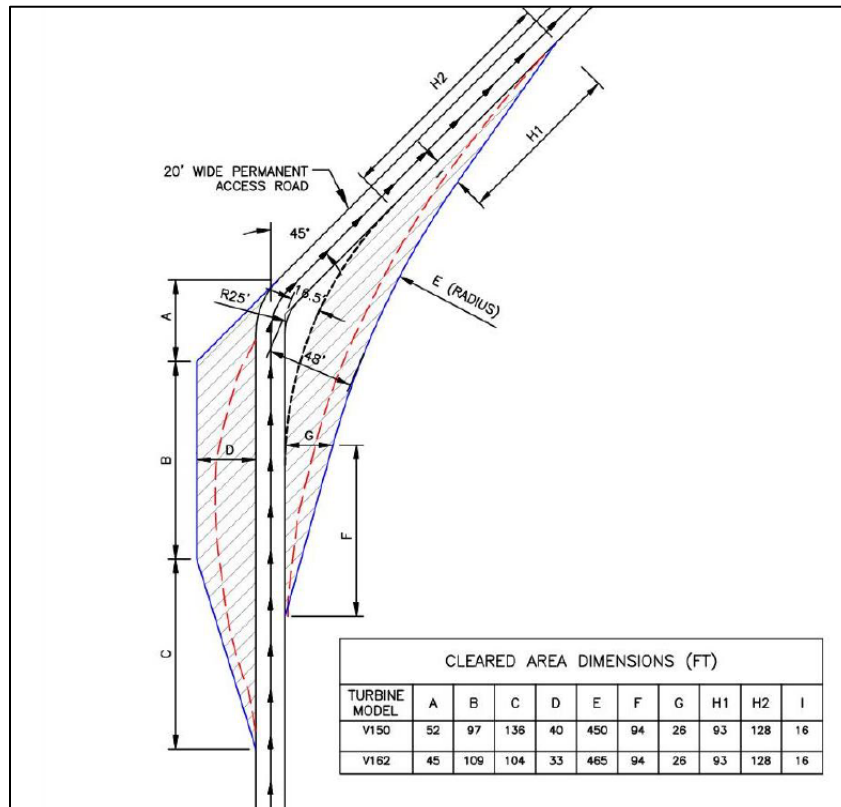


Figure 2 - Vendor Supplied 45-Degree Turning Template for Standard Blade Truck

MEMORANDUM

S Hill Road, Cherry Creek, NY – Preferred Delivery Routes and Temporary Roadway Improvements

August 29, 2023

Based on the above delivery vehicle dimensions and CM's previous experience with turbine delivery vehicles, an assumed 200' inside turning radius for roadway widening, and a 33' outside radius to accommodate the payload backswing was utilized to verify intersection geometry and any potential improvements needed. Additionally, an inside radius of 300' was used to determine above-ground street furniture and other obstructions more than 10 feet tall requiring temporary relocation or permanent removal to provide necessary clearance of rigid-body payloads as the vehicle navigates through turns at intersections.

The turbine blade delivery vehicles are used as the design vehicle for this exercise as they are by far the largest, tallest, and longest of the construction equipment and delivery vehicles required for the project. It is noted that other delivery vehicles and payloads utilized in these projects are typically significantly smaller but may carry heavier loads. An example of such is the nacelle which utilizes a more conventionally sized delivery vehicles but applies over twice the load weight as does the turbine blades.

Vehicle Routing Alternatives Evaluated

Several delivery route alternatives for turbine blade loads with heights of 15'-6" were developed for access to the project site from Interstate I-86. These route alternatives were screened against the New York State Department of Transportation (NYSDOT) database for weight restricted crossings, during which no restrictions were found.

The project is located on a property bounded on the west by S Hill Road, on the east by Aldrich Hill Road, and NY-83 on the north. The final driveway location and access road alignment has not yet been determined. The project team was directed to consider two potential access points for potential locations of driveways to the project site. These points are as follows:

1. "Access Point 1" – 8281-8007 S Hill Road
2. "Access Point 2" – 1105-801 NY-83

Upon review of field conditions, road grades, and assessing turn maneuvers and necessary roadway improvements due to the V163 turbine blade delivery vehicles, Creighton determined it is likely not possible for turbine blade delivery vehicles to access both points with one route alternative. As such, the final preferred route alternative will be determined upon further development of the project plans. These alternatives are described briefly below and are illustrated on the attached route map.

Route Alternative 1 (Green Route) – Access Point 1 Only: This delivery route alternative begins at Exit 15 on I-86. Vehicles would briefly travel northbound on School House Road until the intersection with NY-394. Upon reaching NY-394, delivery vehicles would turn left, traveling westbound until turning right onto Leach Hill Road. Vehicles would then continue northbound on Leach Hill Road and continue north as the road name changes to N Hill Road before turning left onto Bentley Hill Road. Vehicles would travel until the intersection with CR-66/Thornton Road. At CR-66/Thornton Road, delivery vehicles turn right and continue north until turning right onto CR-62/Erwin Road. Vehicles then continue north on CR-62/Erwin Road, make a slight right onto Plank Road continuing north, and then take Plank Road north until it becomes S Hill Road on which Access Point 1 is located.

Route Alternative 2 (Red Route) – Access Points 1 and 2: This route provides access to either Access Point 1 or 2 by utilizing a slightly longer route than described by the Green Route. Route Alternative 2 would match Route Alternative 1 between I-86 and the intersection of Erwin Road and Plank Road. Instead of traveling right onto

MEMORANDUM

S Hill Road, Cherry Creek, NY – Preferred Delivery Routes and Temporary Roadway Improvements

August 29, 2023

Plank Road, delivery vehicles continue straight onto Farrington Hollow Road and take this road northwest until Cassadaga Road. Delivery vehicles would then turn right on to Cassadaga Road and continue westbound. Turbine blade delivery vehicles could then either turn right onto southbound S Hill Road to Access Route 1 or continue as it transitions into NY-83 and arrive at Access Point 2.

Route Alternative 3 (Blue Route) – Access Point 1 Only: This route alternative would match Route Alternative 1 between I-86 and the intersection with US-62. Delivery vehicles utilizing this route would turn right onto eastbound US-62, then turning left to continue on US-62 as it transitions northbound. Delivery vehicles would continue north as US-62 transitions to NY-83/S Road. Vehicles would continue by turning left onto westbound Weaver Road. Finally, delivery vehicles will turn right onto northbound Plank Road/S Hill Road to arrive at Access Point 1.

Field Visit Findings

Prior to the field visit, figures of each intersection along the proposed delivery route were created which overlaid the inside and outside turn radii of the large turbine delivery vehicles. These figures were then referenced by staff engineers in the field to identify potential improvements necessary to accommodate large vehicles and/or physical obstructions that would need to be temporarily or permanently relocated or removed, such as utility poles, roadway signage, trees, and vegetation. The general roadway condition along each route was also evaluated to identify and avoid segments with significant asphalt deterioration, culverts, or other conditions that may be unfavorable to oversized and overheight vehicles. Existing utilities, roadside drainage, and other potential conflicts visible during the field visit were noted.

As shown in the attached delivery route map and described below, some physical roadway modifications and temporary or permanent removals of obstructions will be required at several intersections. The field observations collected and the results of the turning movement analysis at intersections along all three delivery routes are shown in the attached figures. Roadway improvements and temporary street furniture to be relocated to facilitate the route alternatives are described as follows:

Route Alternative 1 (Green) – Access Point 1 Only:

Route Alternative 1 is compatible with all construction vehicle types was analyzed for compatibility using the turbine blade delivery vehicles as the design vehicle. As mentioned, it can only be used for Access Point 1. Access to the other two access points was determined to be cost prohibitive and/or too challenging.

- **Intersection of NY-394 and School House Road – (Figure R1/G1/B1)** – The southwest corner of the intersection with NY-394 will require temporary widening to accommodate left turns made by turbine blade delivery vehicles. Additionally, this intersection will require clearance of above grade obstructions along both the east and west sides of School House Road. Elements within the clearance area include guiderails along both sides of School House Road and the south side of NY-394, several roadway signs, and a utility pole. There is also an overhead electrical wire spanning across the turning path of the vehicle. These overhead wires will likely need to be modified to provide sufficient vertical clearance for vehicles.
- **Intersection of NY-394 and Leach Hill Road – (Figure R2/G2/B2)** - Turbine delivery vehicles will make a right turn from NY-394 onto Leach Hill Road. The northeast corner of the intersection will require

MEMORANDUM

S Hill Road, Cherry Creek, NY – Preferred Delivery Routes and Temporary Roadway Improvements

August 29, 2023

temporary roadway widening to accommodate the turning radii of delivery vehicles as well as above ground clearance of trees and obstructions to accommodate the path of overhanging turbine blades. There are currently two utility poles with overhead wires within the path of proposed roadway widening. These poles will require temporary relocation to allow traversal of delivery vehicles. There is also an area of potential ground clearance on the southern side of NY-394, east of the entrance to Leach Hill Road. While there are no apparent obstacles in this area, clearance should be confirmed. Any removal or modification of roadway furniture or utility poles will be subject to NYSDOT approval and permitting. There are several coniferous trees within the clearance area for the turbine overhang on the northeast corner of this intersection that will likely require removal. Alternatively, it may be possible to avoid removing these trees if vehicles oversteer this intersection by construction of a temporary roadway within the fields to the south and west of the intersection.

- **Intersection of North Hill Road and Bentley Hill Road – (Figure R3/G3)** – At this intersection, turbine blade delivery vehicles will turn left from North Hill Road to travel westbound on Bentley Hill Road. Both temporary roadway widening, and above ground clearance are required to accommodate delivery vehicles making this turn. There exists a drainage ditch off the south side of Bentley Hill Road as well as an elevation change in the landscaped area to the south of the ditch. Additionally, a mature growth tree exists within the area and would need to be removed during clearance of vertical obstructions to accommodate the inside radius of the turbine delivery vehicles. Two alternative turn plans are developed for this intersection and are reflected in the attached figures.

The first plan assumes a typical left turn from North Hill Road onto Bentley Hill Road. Roadway widening is required on the inner radius of the western side of the intersection, requiring temporary infill of the open-air drainage ditch. There is an existing utility pole and electric meter box within this area. These items will need to be temporarily relocated to accommodate the widening of the roadway. The guiderail along the eastern side of North Hill Road (approximately 100' south of the intersection) may require temporary removal or relocation to accommodate the overhanging turbine blade.

The second plan assumes that turbine delivery vehicles will oversteer the intersection by constructing a temporary roadway on private property on the north side of the intersection of North Hill Road and Bentley Hill Road. As shown in the attached intersection figures, this plan does not significantly reduce the temporary roadway widening or private property impacts detailed above. However, if the removal of the existing wooden outbuilding on the north side of Bentley Hill Road could be negotiated with the owner, a temporary roadway could be constructed that avoids all impacts on the south side of the road described above. This may end up being a more acceptable and less costly option, but will depend on future negotiations with the landowners.

MEMORANDUM

S Hill Road, Cherry Creek, NY – Preferred Delivery Routes and Temporary Roadway Improvements

August 29, 2023

- **Intersection of Bentley Hill Road and County Touring Rte. 66/CR-33 – (Figure R4/G4)** – Turbine blade delivery vehicles approaching this intersection from the east will require construction of a temporary turn lane to accommodate the right turn onto northbound CR-33. Additionally, removal of vertical obstructions on both the south side of Bentley Hill Road and northeast corner of the intersection will be required. This will include temporary relocation or removal of a utility pole and accompanying overhead



Figure 3 - Existing Structure/Box Culvert on Bentley Hill Road, 150' east of County Touring Route 66

wires, a roadway sign, and a section of private fencing along both Bentley Hill Road and CR-33 and at least three trees on the south side of Bentley Hill Road. Finally, delivery vehicles must cross a small bridge/box culvert approximately 150' east of the intersection. As this is a local road, no information about the structure was available via publicly available sources. The structural integrity of this bridge must be confirmed by a Structural Engineer prior to vehicle traversal and may require installation of temporary reinforcement. A photo of this crossing is provided in Figure 3.

- **Intersection of County Touring Rte. 66/CR-33 and County Touring Rte. 85 – (Figure R5/G5)** – At this intersection, turbine blade delivery vehicles will make a slight right turn from CR-33 onto eastbound County Touring Route 85. Due to the existing channelized right turn, no roadway widening is required to accommodate the turbine delivery vehicles. The clearance of vertical and above ground obstructions will be required along the west side of CR-33 to accommodate the backswing of payloads. There is a roadway sign, a mailbox, and several deciduous trees that will require removal or modification to accommodate the back swing of turbine blades. Additionally, there are overhead wires that span the channelized right turn onto County Touring Route 85, and vertical clearance must be confirmed to accommodate the height of delivery vehicles. Finally, turbine blade delivery vehicles must cross a culvert directly south of the turn onto County Touring Route 85. The structural integrity of this culvert must be confirmed by the project team prior to vehicle traversal.
- **Intersection of County Touring Rte. 85 and Plank Road – (Figure R6/G6)** – Turbine blade delivery vehicles traveling north along County Touring Route 85 will turn slight right onto northbound Plank Road. No roadway widening is required to accommodate this turn. Above ground clearance of vertical obstructions will be required along the west side of County Touring Route 85 and the east side of the intersection as it transitions to Plank Road. There are several deciduous trees and a roadway sign within

MEMORANDUM

S Hill Road, Cherry Creek, NY – Preferred Delivery Routes and Temporary Roadway Improvements

August 29, 2023

the clearance area on the west side of County Touring Route 85 that will require removal or modification. There are also several deciduous and coniferous trees along the inner radius of the intersection that will likely require removal. Vertical clearance must also be confirmed for overhead wires across the entrance to Plank Road. Additionally, the structural integrity of a culvert along Plank Road must be confirmed by the project team prior to vehicle traversal.

Route Alternative 2 (Red) – Access Points 1 and 2:

Route Alternative 2 provides a potential access route to Access Point 1 and Access Point 2 at the expense of a slightly longer delivery route alignment. The route is described above and on the attached route map. The route-specific intersections at which improvements would be necessary for this route are as follows:

- **Intersection of CR-306 and Cassadaga Rd/CR-72 – (Figure R7)** – The right turn onto Cassadaga Rd (CR-72) will require temporary roadway widening at the southeast corner of this intersection. There is currently a telephone pedestal and several roadway signs within the path of roadway widening. Above ground clearance must be confirmed along the east side of CR-306 and the southeast radius of the intersection. There is an existing tree on private property within the backswing clearance area on the east side of CR-306 that will need to be removed. There is also a roadway sign and a utility pole within the inner clearance area that must be removed or relocated to accommodate the overhanging turbine blade. These improvements can be completed with minimal difficulty or complication.
- **Intersection of CR-72 and S Hill Road – (Figure R8)** – No roadway widening or above ground clearance is required for this intersection. An existing channelized right turn from CR-72 to S Hill Road allows traversal of turbine blade delivery vehicles. An overhead wire spans both CR-72 and the channelized turn onto S Hill Road. Vertical clearance should be confirmed for these wires, and modification may be required to accommodate vehicle travel. There is also a culvert pipe running along the southern side of CR-72 that must be assessed for structural integrity prior to project initiation.

Route Alternative 3 (Blue) – Access Points 1 Only:

Route Alternative 3 provides a delivery route that uses mostly different roadways than does Route 1 and 2 and could bypass some of the challenges described along those routes. It would provide access to Access Point 1 only. The route is described above and on the attached route map. The route-specific intersections at which improvements would be necessary for this route are as follows:

- **Intersection of Leach Hill Road and US-62 – (Figure B3)** – Due to the Twentyeighth Creek and crossing that exists just south of US-62, turbine delivery vehicles turning right onto eastbound US-62 would need to oversteer this intersection into the fields on the north side of US-62. This would include constructing a temporary roadway on private property to accommodate the turn. There is not any street furniture or utilities within this area, and this roadway would only require temporary removal of fencing during deliveries. Subject to negotiations with the property owner, it is likely that such a roadway could be constructed without necessitating the removal of the mature growth tree that exists on the northeast corner of the intersection.
- **Intersection of US-62 & Waterboro Road – (Figure B4)** – Temporary roadway widening would be required on the northwest corner of this intersection to accommodate turbine delivery vehicles turning

MEMORANDUM

S Hill Road, Cherry Creek, NY – Preferred Delivery Routes and Temporary Roadway Improvements

August 29, 2023

left to continue on northbound US-62. Clearing of vertical obstructions on the north and south sides of US-62, west of the intersection will be required. This will involve the temporary removal of highway signage and the removal of one tree located on private property.

- **Intersection of NY-83 & Weaver Road – (Figure B5)** – Due to a previously constructed left turn ramp from northbound NY-83 to westbound Weaver Road, on minimal roadway widening is required to accommodate the wheelbase of the assumed design vehicles and the V163 turbine blade delivery payloads. No impacts to private property would be required, and no street furniture would need to be relocated during deliveries.
- **Intersection of Weaver Road & Plank Road/S Hill Road – (Figure B7)** - To serve Access Point 1, turbine delivery vehicles would turn right from Weaver Road onto northbound Plank Road/S Hill Road. A large area of temporary roadway widening would be required to accommodate this turn as well as a large area requiring the clearance of vertical obstructions. Within these areas exists two utility poles and overhead wires that would need to be temporarily relocated and a drainage ditch that will need to be reinforced and spanned to accommodate deliveries. A large area of overgrowth would need to be cleared on the northeast corner of the intersection as well as the south side of Weaver Road to accommodate the turn and the backswing of the payload as it maneuvers through the intersection. However, all trees and overgrowth at this intersection are farther away from residences and buildings, which may make negotiating these removals easier than at the intersection of Weaver Road & Aldrich Road.

Anticipated Traffic Impacts During Construction Operations

Turbine blade deliveries will be the most disruptive to local traffic operations and will necessitate temporary road closures along the route. It is assumed that all turbine blade deliveries will be scheduled to occur outside of traffic peak periods and school opening and closing periods. All oversized loads are assumed to be coordinated with, and be escorted by the Sheriff's department to facilitate road closure and perform traffic control. This is a two turbine, six turbine-blade project which will require six single trip oversized load deliveries for the largest vehicles. All other construction vehicles will be performed by typically-sized, heavy vehicles.

The roadway segment carrying the highest level of Annual Average Daily Traffic (AADT) within the entire delivery route is the segment of NY Route 394 between US-62 and the Chautauqua/Cattaraugus county line in the Town of Poland, just off Interstate 86/NY Route 17. As per the [New York State Department of Transportation Traffic Data Viewer](#), this roadway segment carried an AADT of 2,472 at an 85th percentile speed of 58 miles per hour in 2019. This AADT translates to a LOS of C or better within this segment. Due to the rural nature of land uses proximate to the preferred delivery route, it is anticipated that these generated trips will result in minimal impacts given the relatively small scope of the project. Figure 4 illustrates the thresholds for levels-of-service for a segment of undeveloped 2-lane undivided highway. As shown in Figure 4, a project would need to generate approximately 1,750 additional vehicle trips each day before it would have an appreciable impact on roadway performance and traffic operations.

MEMORANDUM

S Hill Road, Cherry Creek, NY – Preferred Delivery Routes and Temporary Roadway Improvements

August 29, 2023

New York State Route 394 btwn. US-62 & Chautauqua/Cataraugus Co. Line, Town of Poland
FREE FLOW SEGMENT LEVEL OF SERVICE FOR UNDEVELOPED 2 LANE UNDIVIDED HIGHWAY

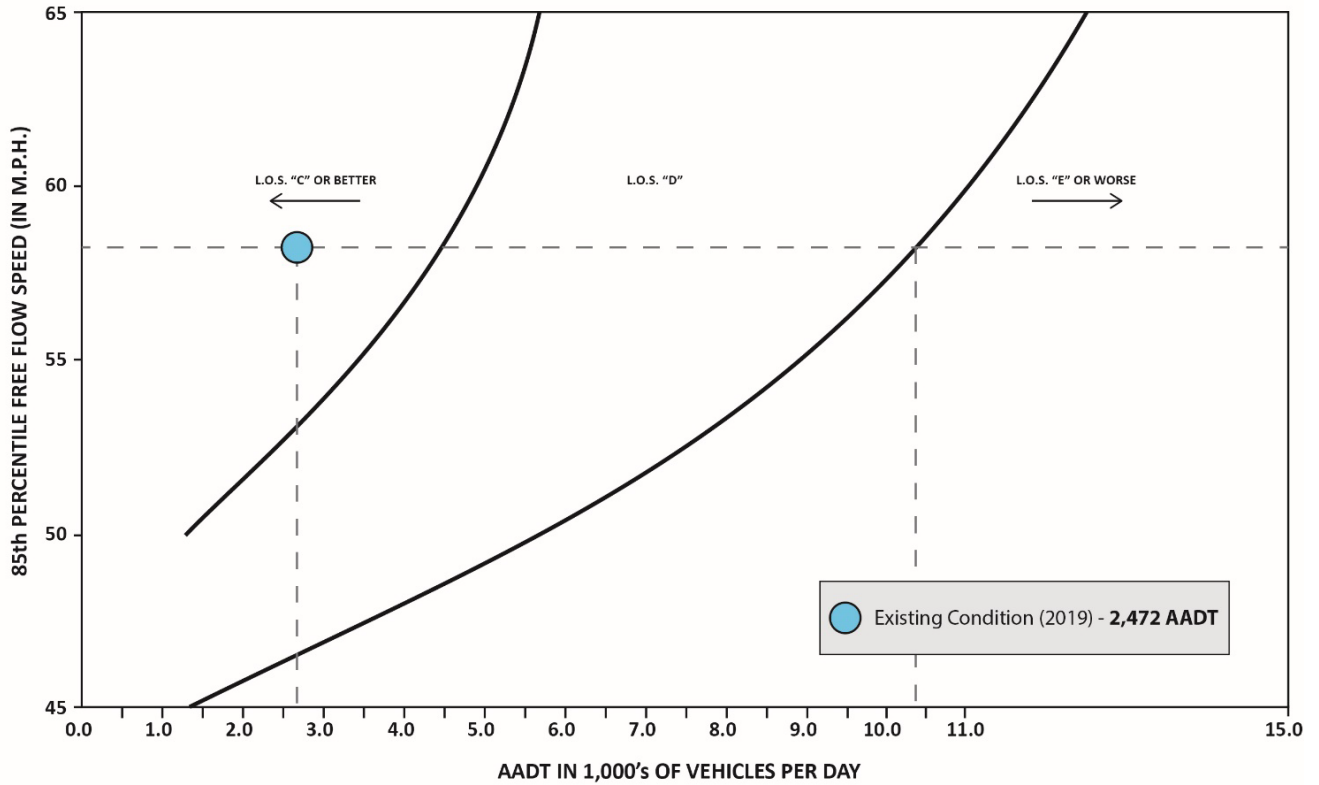


Figure 4 - AADT (2019) of NY-394 in Poland, NY
(Source: NYSDOT Highway Design Manual Appendix 5D)

Due to these findings combined with the assumption that all oversized load deliveries are assumed to occur outside of peak traffic periods, no appreciable impacts to traffic operations are assumed as a result of construction related activity and delivery of materials.

Permitting and Coordination

The proposed delivery vehicle route utilizes roadways owned and maintained by a variety of agencies. The table below provides a summary of roadways utilized for the route and the agencies that own and maintain each roadway segment. The work required to facilitate delivery will require agreements, permitting, and coordination with agencies and public utilities.

MEMORANDUM

S Hill Road, Cherry Creek, NY – Preferred Delivery Routes and Temporary Roadway Improvements

August 29, 2023

<u>Road Name</u>	<u>Start Point</u>	<u>End Point</u>	<u>Maintenance Jurisdiction</u>
<i>Route Alternative 1 (Green Route)</i>			
School House Road	I-86 Exit 15	NY-394	NYS Dept. of Transportation
NY-394	School House Road	Leach Hill Rd	NYS Dept. of Transportation
Leach Hill Rd	NY-394	Milepoint 0.15 (Town Line)	Town of Poland
Leach Hill Rd	Milepoint 0.15 (Town Line)	Bentley Hill Rd	Town of Ellington
Bentley Hill Rd	Leach Hill Rd	County Touring Rte. 66/CR-33	Town of Ellington
County Touring Rte. 66/CR-33	Bentley Hill Rd	CR-62/County Touring Rte. 85/Erwin Rd	Chautauqua County
CR-62/County Touring Rte. 85/Erwin Rd	County Touring Rte. 66/CR-33	Plank Rd	Chautauqua County
Plank Rd/S Hill Rd	CR-62/County Touring Rte. 85/Erwin Rd	Project Access Point 1	Town of Cherry Creek
<i>Route Alternative 2 (Red Route)</i>			
County Touring Rte. 66/CR-33	County Touring Rte. 66/CR-33	Plank Road	Chautauqua County
County Touring Rte. 85/CR-306	Plank Road	Cassadaga Rd	Chautauqua County
Cassadaga Road	County Touring Rte. 85/CR-306	S Hill Road	Chautauqua County
S Hill Road	Cassadaga Road	Project Access Point 1	Town of Cherry Creek
NY-83	S Hill Road	Project Access Point 2	NYS Dept. of Transportation
<i>Route Alternative 3 (Blue Route)</i>			
Main Street/US-62	Leach Hill Road	Waterboro Hill Road/US-62	NYS Dept. of Transportation
US-62	Waterboro Hill Road/US-62	S Road/NY-83	NYS Dept. of Transportation
S Road/NY-83	US-62	Weaver Road	NYS Dept. of Transportation
Weaver Road	N Road/NY-83	Aldrich Hill Road	Town of Cherry Creek
Plank Rd/S Hill Rd	Weaver Road	Project Access Point 1	Town of Cherry Creek

Truck Routing Exhibit

FOR OVERSIZED DELIVERY & CONSTRUCTION VEHICLES

South Hill Rd, Cherry Creek, NY

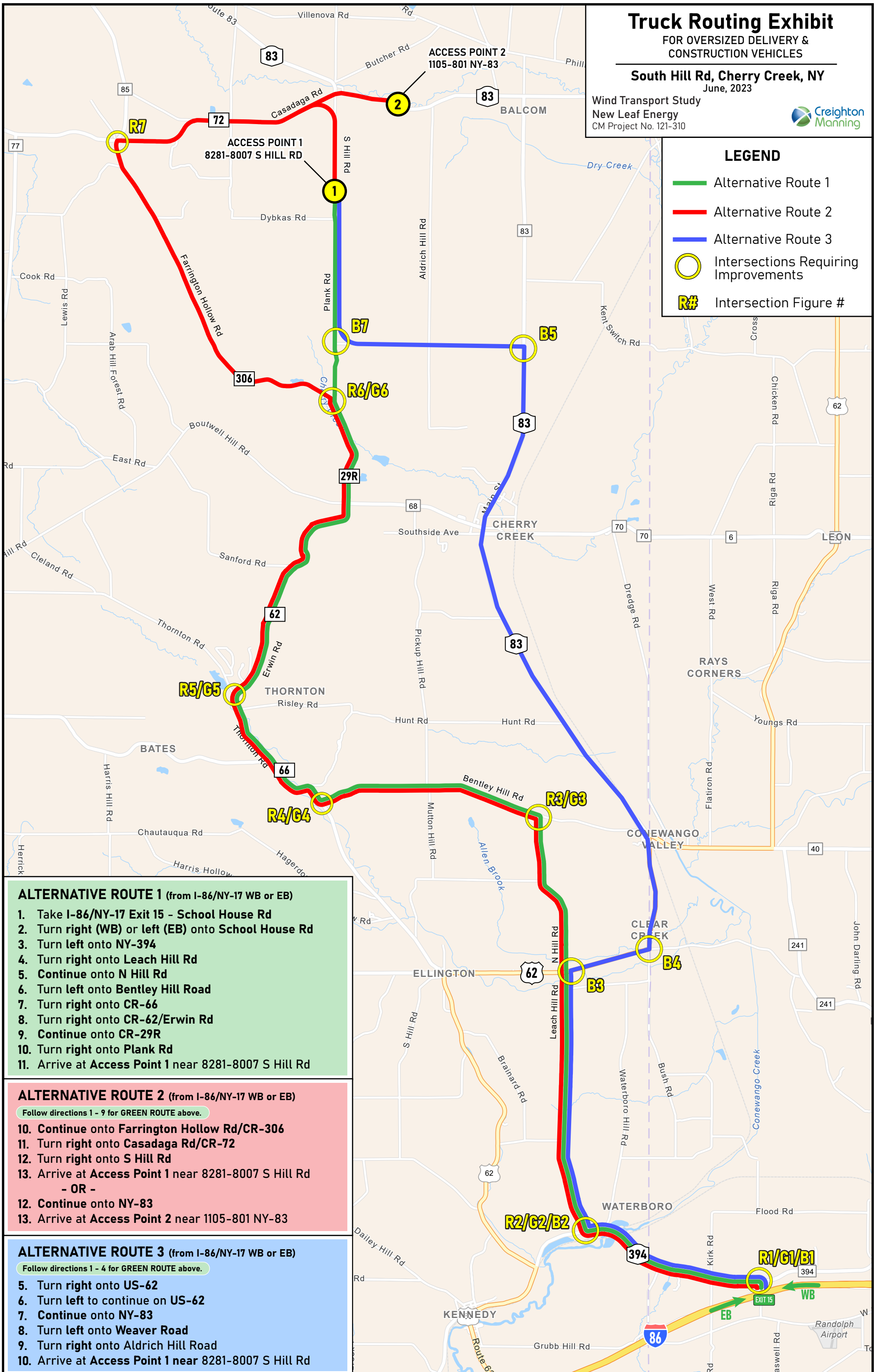
June, 2023

Wind Transport Study
New Leaf Energy
CM Project No. 121-310



LEGEND

- Alternative Route 1
- Alternative Route 2
- Alternative Route 3
- Intersections Requiring Improvements
- R#** Intersection Figure #



ALTERNATIVE ROUTE 1 (from I-86/NY-17 WB or EB)

1. Take I-86/NY-17 Exit 15 - School House Rd
2. Turn right (WB) or left (EB) onto School House Rd
3. Turn left onto NY-394
4. Turn right onto Leach Hill Rd
5. Continue onto N Hill Rd
6. Turn left onto Bentley Hill Road
7. Turn right onto CR-66
8. Turn right onto CR-62/Erwin Rd
9. Continue onto CR-29R
10. Turn right onto Plank Rd
11. Arrive at Access Point 1 near 8281-8007 S Hill Rd

ALTERNATIVE ROUTE 2 (from I-86/NY-17 WB or EB)

Follow directions 1 - 9 for GREEN ROUTE above.

10. Continue onto Farrington Hollow Rd/CR-306
11. Turn right onto Casadaga Rd/CR-72
12. Turn right onto S Hill Rd
13. Arrive at Access Point 1 near 8281-8007 S Hill Rd
- OR -
12. Continue onto NY-83
13. Arrive at Access Point 2 near 1105-801 NY-83

ALTERNATIVE ROUTE 3 (from I-86/NY-17 WB or EB)

Follow directions 1 - 4 for GREEN ROUTE above.






5. Turn right onto US-62
6. Turn left to continue on US-62
7. Continue onto NY-83
8. Turn left onto Weaver Road
9. Turn right onto Aldrich Hill Road
10. Arrive at Access Point 1 near 8281-8007 S Hill Rd

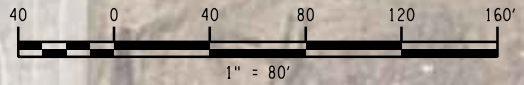


NYS ROUTE 394

SCHOOL HOUSE RD

LEGEND

-  AREA OF ABOVE GROUND CLEARANCE
-  AREA OF ROAD WIDENING
-  VEHICLE PATH
-  DIRECTION OF TRAVEL
-  APPROXIMATE PROPERTY LINE



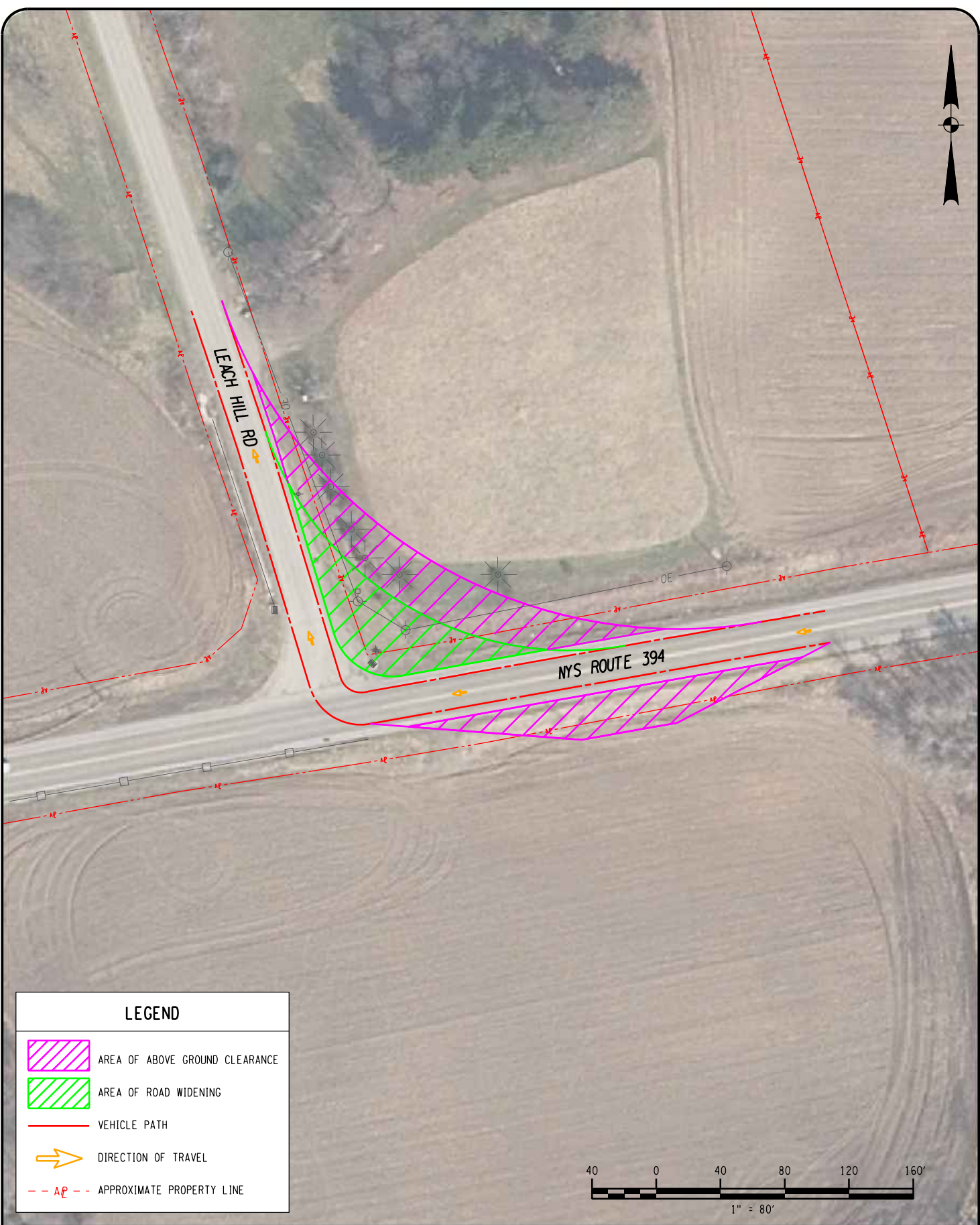
NYS ROUTE 394
AT SCHOOL HOUSE RD






NEW LEAF - WIND TURBINE ROUTING STUDY
S HILL ROAD, CHERRY CREEK, NY 14723

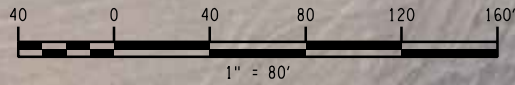


N:\Projects\2021\121-310 Borrego Solar - Wind Transport Studies\Working\CADD\5 Hill Road, Cherry Creek\Figures\121-310_fig_int_R1-G1-B1.dgn

N:\Projects\2021\121-310 Borrego Solar - Wind Transport Studies\Working\CADD\5 Hill Road, Cherry Creek\Figures\121-310-fig-int_R2-G2-B2.dgn



LEGEND	
	AREA OF ABOVE GROUND CLEARANCE
	AREA OF ROAD WIDENING
	VEHICLE PATH
	DIRECTION OF TRAVEL
	AP - APPROXIMATE PROPERTY LINE



NYS ROUTE 394
AT LEACH HILL RD

NEW LEAF - WIND TURBINE ROUTING STUDY
S HILL ROAD, CHERRY CREEK, NY 14723








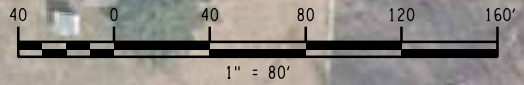


BENTLEY HILL RD

NORTH HILL RD

LEGEND

-  AREA OF ABOVE GROUND CLEARANCE
-  AREA OF ROAD WIDENING
-  VEHICLE PATH
-  DIRECTION OF TRAVEL
-  APPROXIMATE PROPERTY LINE

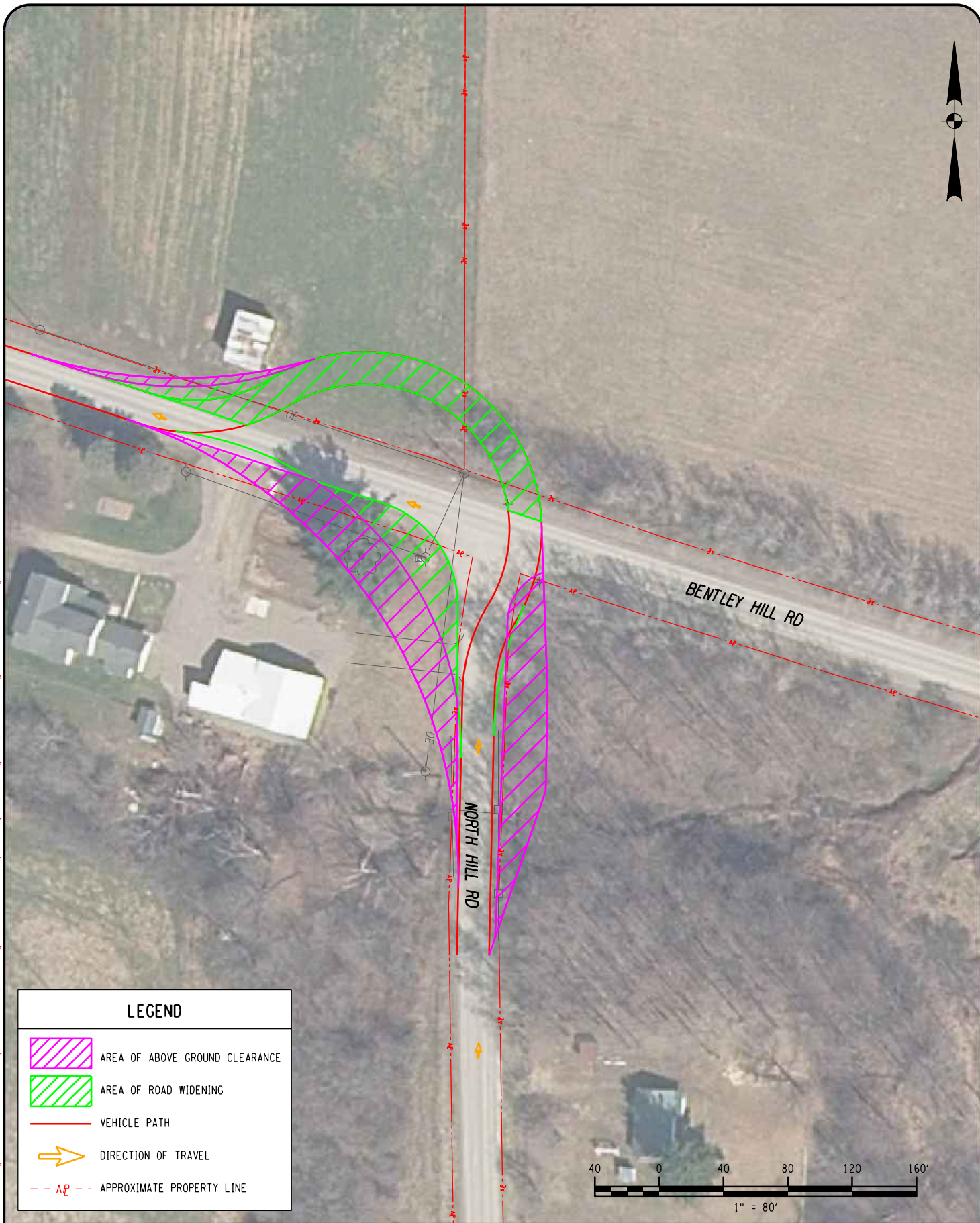


**BENTLEY HILL RD
AT NORTH HILL RD**






**NEW LEAF - WIND TURBINE ROUTING STUDY
S HILL ROAD, CHERRY CREEK, NY 14723**

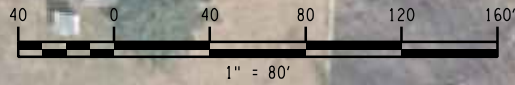


N:\Projects\2021\121-310 Borrego Solar - Wind Transport Studies\Working\CAD\05 Hill Road, Cherry Creek\figures\121-310_fig_int_R3-G3.dgn



LEGEND

-  AREA OF ABOVE GROUND CLEARANCE
-  AREA OF ROAD WIDENING
-  VEHICLE PATH
-  DIRECTION OF TRAVEL
-  - - AP - - APPROXIMATE PROPERTY LINE



**BENTLEY HILL RD
AT NORTH HILL RD**

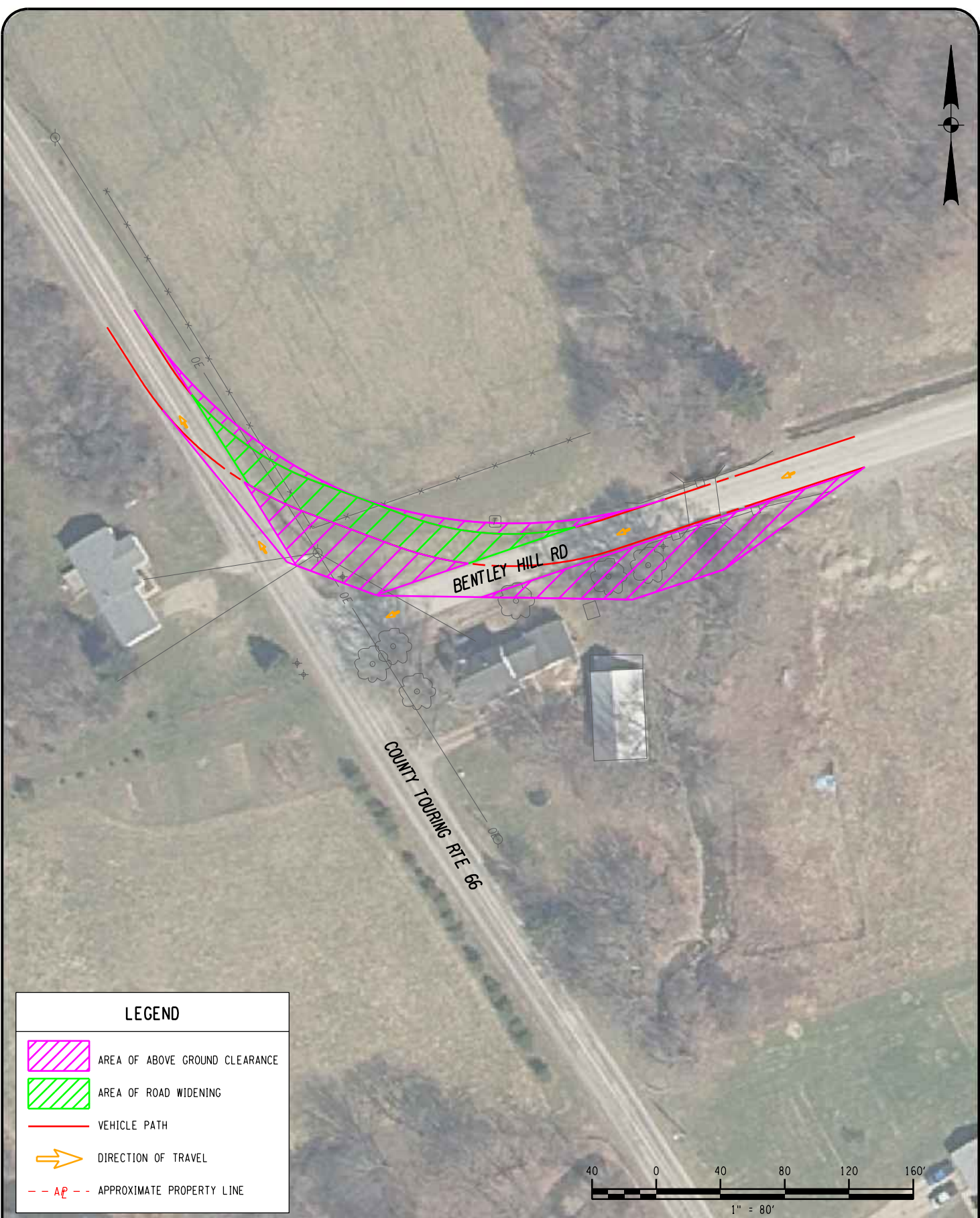
**NEW LEAF - WIND TURBINE ROUTING STUDY
S HILL ROAD, CHERRY CREEK, NY 14723**








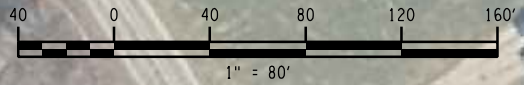
N:\Projects\2021\121-310 Borrego Solar - Wind Transport Studies\Working\CAD\05 Hill Road, Cherry Creek\Figures\121-310_fig_int_R3-G3_Alt_2.dgn



N:\Projects\2021\121-310 Borrego Solar - Wind Transport Studies\Working\CADD\5 Hill Road, Cherry Creek\Figures\121-310_fig_int_R4-G4.dgn



LEGEND	
	AREA OF ABOVE GROUND CLEARANCE
	AREA OF ROAD WIDENING
	VEHICLE PATH
	DIRECTION OF TRAVEL
	APPROXIMATE PROPERTY LINE



COUNTY TOURING ROUTE 66
AT BENTLEY HILL RD

NEW LEAF - WIND TURBINE ROUTING STUDY
S HILL ROAD, CHERRY CREEK, NY 14723



PROJECT: 121-310
DATE: 07/2023
FIGURE: R4 / G4






N:\Projects\2021\121-310 Borrego Solar - Wind Transport Studies\Working\CADD\85 Hill Road, Cherry Creek\Figures\121-310-fig_int_R5-G5.dgn

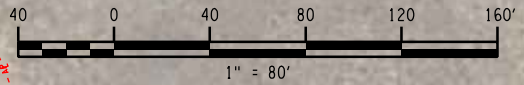


COUNTY TOURING ROUTE 85

COUNTY TOURING RTE 66

LEGEND

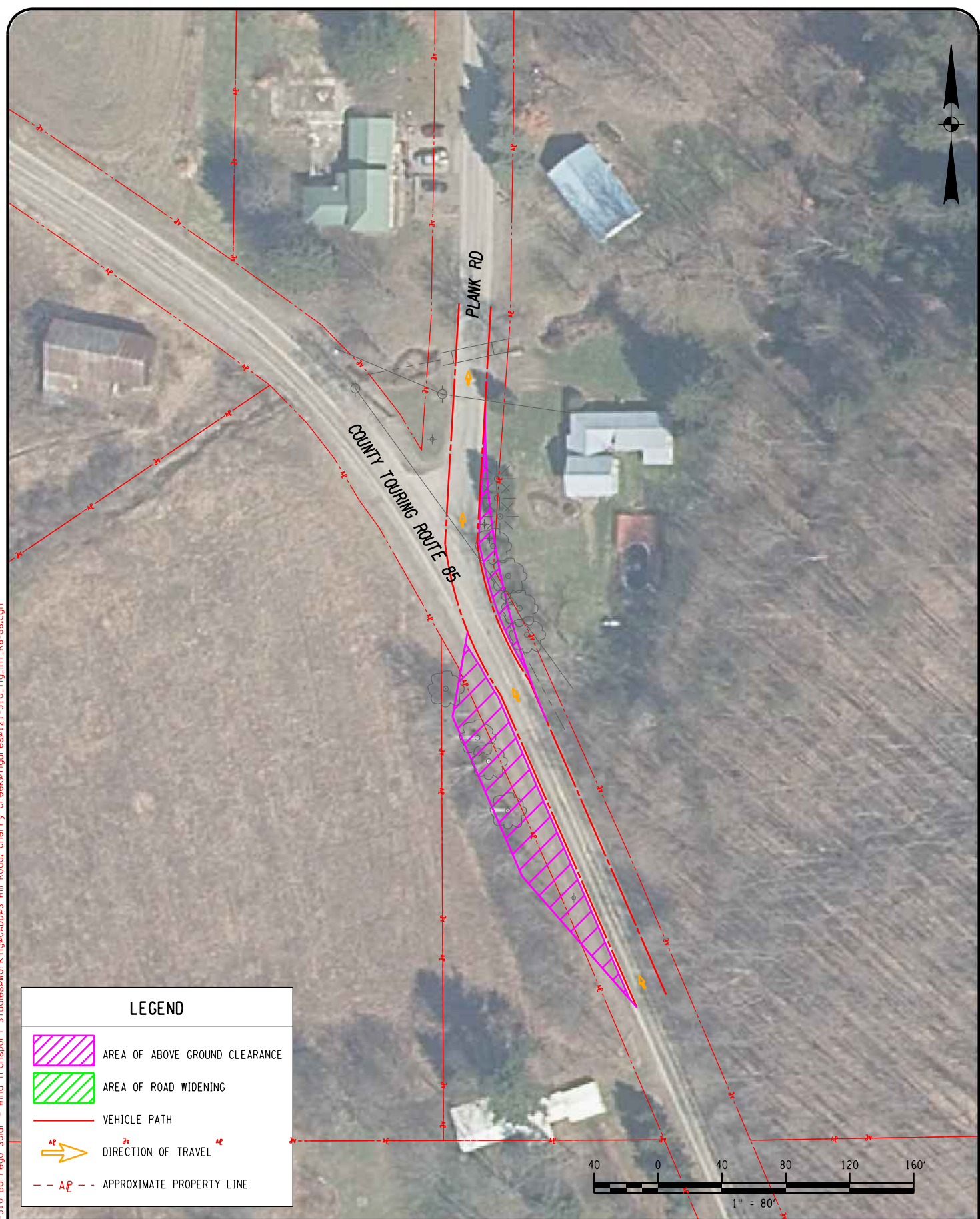
-  AREA OF ABOVE GROUND CLEARANCE
-  AREA OF ROAD WIDENING
-  VEHICLE PATH
-  DIRECTION OF TRAVEL
-  - - AP - - APPROXIMATE PROPERTY LINE








COUNTY TOURING ROUTE 66
AT COUNTY TOURING ROUTE 85

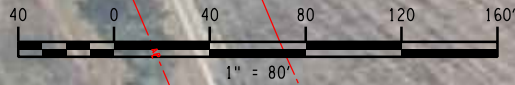
NEW LEAF - WIND TURBINE ROUTING STUDY
S HILL ROAD, CHERRY CREEK, NY 14723





LEGEND

-  AREA OF ABOVE GROUND CLEARANCE
-  AREA OF ROAD WIDENING
-  VEHICLE PATH
-  DIRECTION OF TRAVEL
-  APPROXIMATE PROPERTY LINE



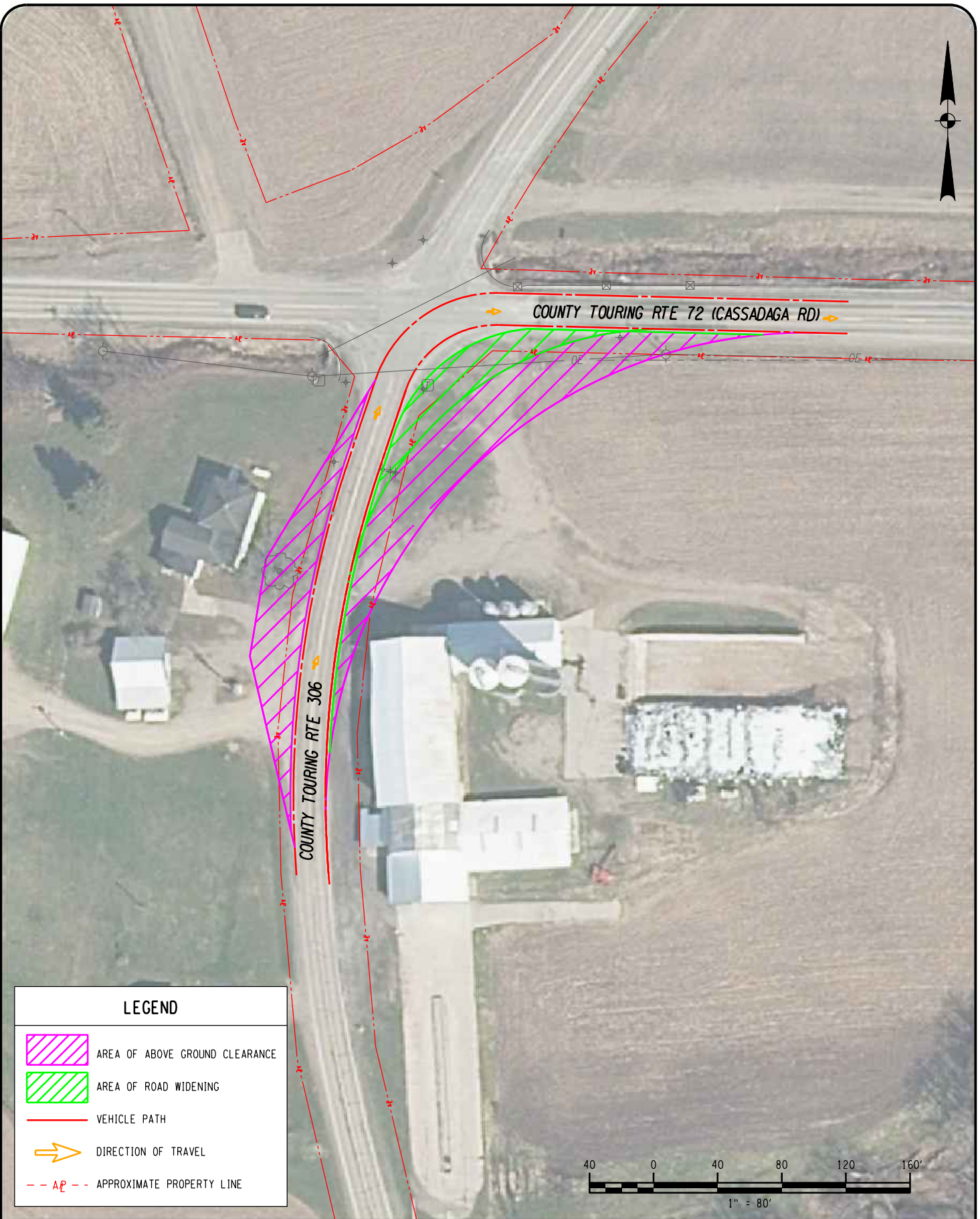
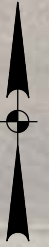
**COUNTY TOURING ROUTE 85
AT PLANK RD**

**NEW LEAF - WIND TURBINE ROUTING STUDY
S HILL ROAD, CHERRY CREEK, NY 14723**








N:\Projects\2021\121-310 Borrego Solar - Wind Transport Studies\Working\CAD\085 Hill Road, Cherry Creek\Figures\121-310-fig_int_R6-G6.dgn

N:\Projects\2021\121-310 Borrego Solar - Wind Transport Studies\Working\CAD\121-310_fig_int_R7.dgn



LEGEND

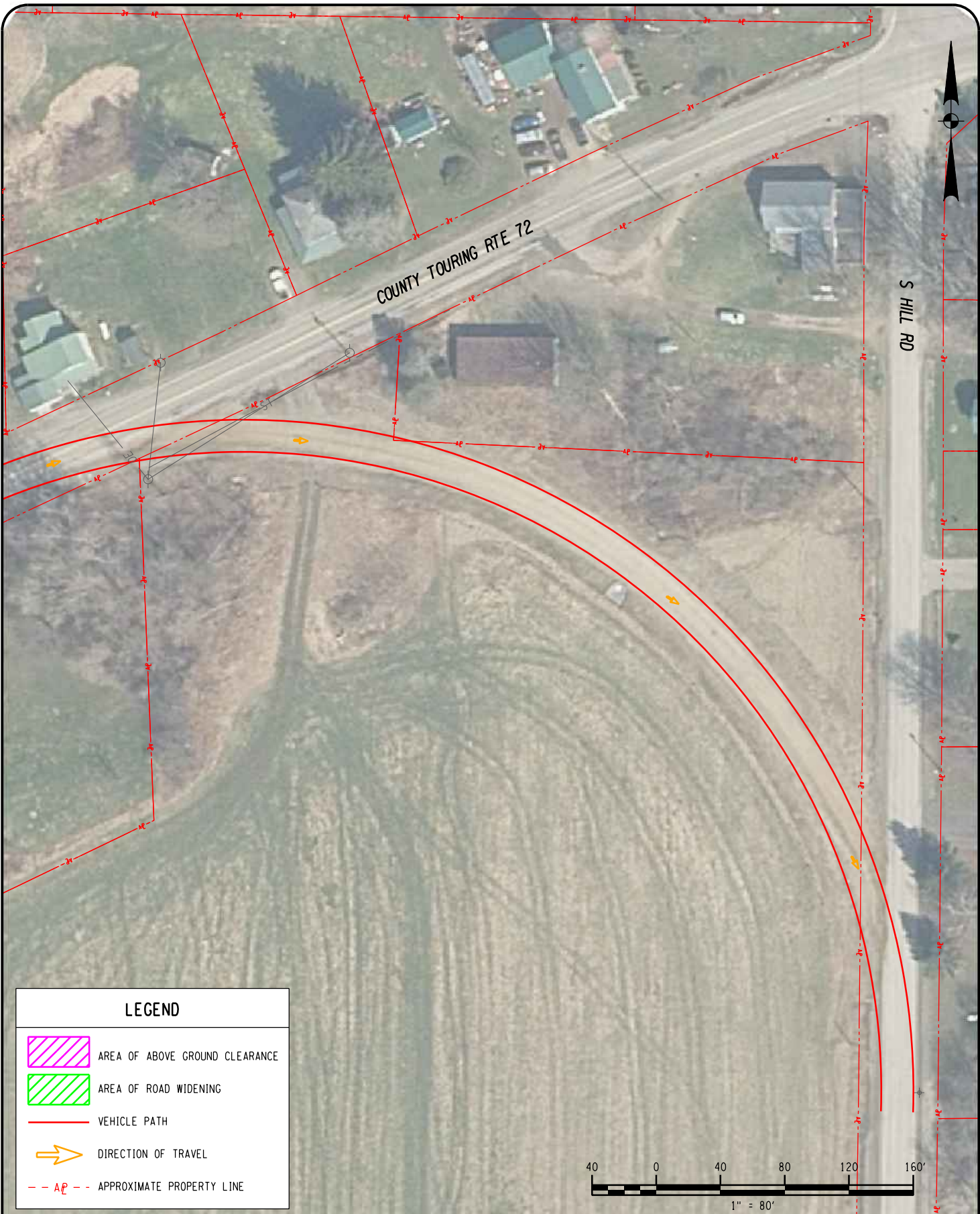
-  AREA OF ABOVE GROUND CLEARANCE
-  AREA OF ROAD WIDENING
-  VEHICLE PATH
-  DIRECTION OF TRAVEL
-  APPROXIMATE PROPERTY LINE






COUNTY TOURING ROUTE 306
AT CASSADAGA ROAD (CR 72)

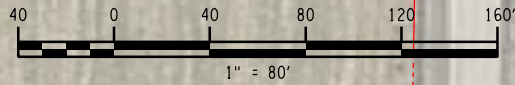
NEW LEAF - WIND TURBINE ROUTING STUDY
S HILL ROAD, CHERRY CREEK, NY 14723



N:\Projects\2021\121-310 Borrego Solar - Wind Transport Studies\Working\CAD\05 Hill Road, Cherry Creek\Figures\121-310_fig_int_R8.dgn



LEGEND	
	AREA OF ABOVE GROUND CLEARANCE
	AREA OF ROAD WIDENING
	VEHICLE PATH
	DIRECTION OF TRAVEL
	APPROXIMATE PROPERTY LINE

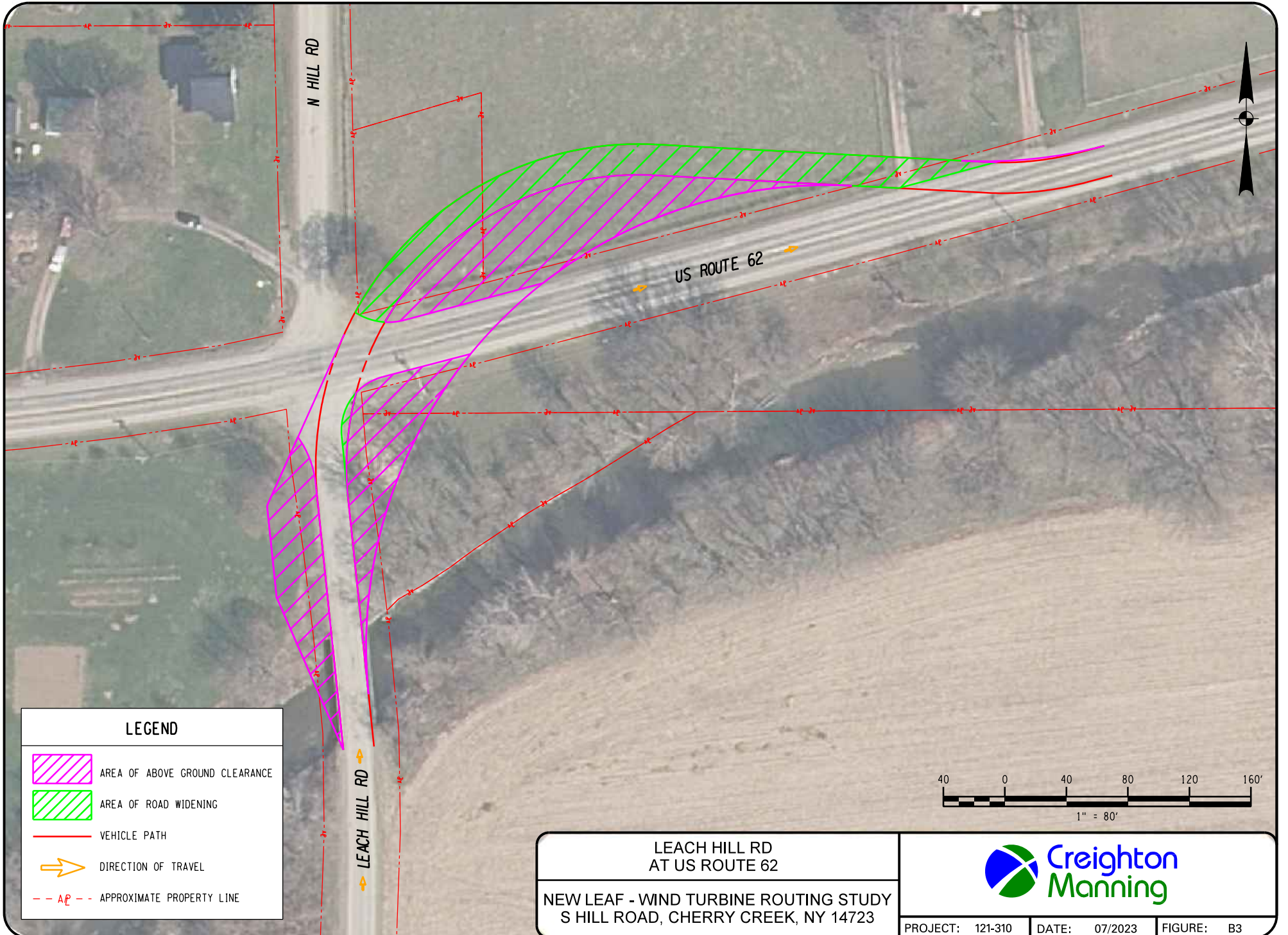


COUNTY TOURING ROUTE 72
AT S HILL ROAD






NEW LEAF - WIND TURBINE ROUTING STUDY
S HILL ROAD, CHERRY CREEK, NY 14723

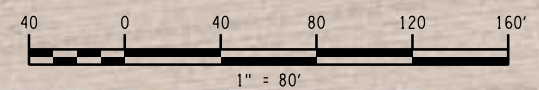



PROJECT:	121-310	DATE:	07/2023	FIGURE:	R8
----------	---------	-------	---------	---------	----

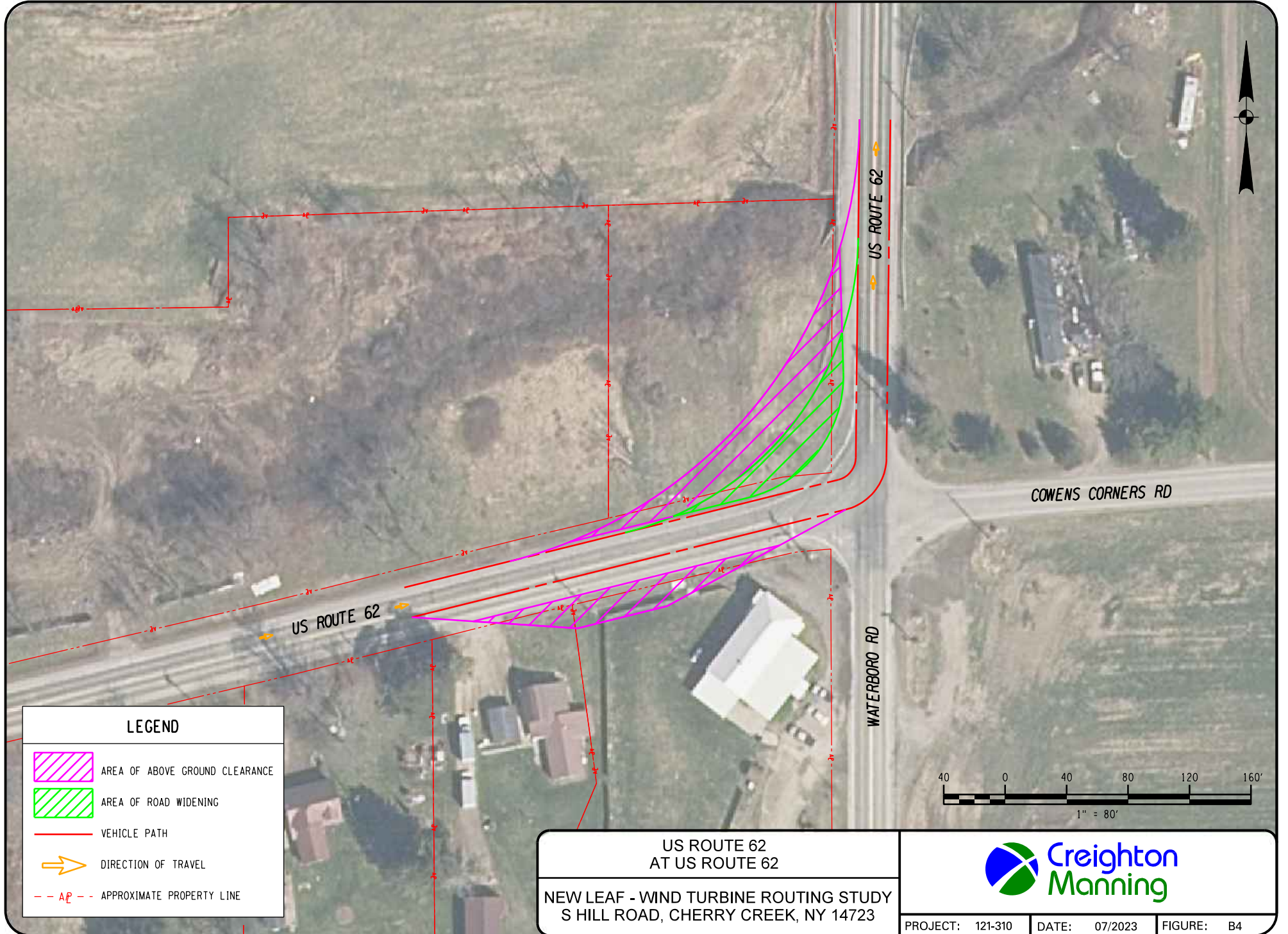


LEGEND






-  AREA OF ABOVE GROUND CLEARANCE
-  AREA OF ROAD WIDENING
-  VEHICLE PATH
-  DIRECTION OF TRAVEL
-  - - AP - - APPROXIMATE PROPERTY LINE



LEACH HILL RD AT US ROUTE 62			 Creighton Manning
NEW LEAF - WIND TURBINE ROUTING STUDY S HILL ROAD, CHERRY CREEK, NY 14723			
PROJECT: 121-310	DATE: 07/2023	FIGURE: B3	



LEGEND

-  AREA OF ABOVE GROUND CLEARANCE
-  AREA OF ROAD WIDENING
-  VEHICLE PATH
-  DIRECTION OF TRAVEL
-  APPROXIMATE PROPERTY LINE

US ROUTE 62
AT US ROUTE 62






NEW LEAF - WIND TURBINE ROUTING STUDY
S HILL ROAD, CHERRY CREEK, NY 14723

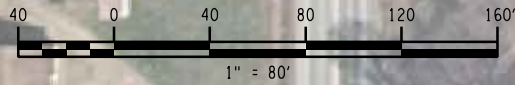
 **Creighton Manning**

PROJECT: 121-310 DATE: 07/2023 FIGURE: B4

N:\Projects\2021\121-310 Borrego Solar - Wind Transport Studies\Working\CADD\5 Hill Road, Cherry Creek\Figures\121-310_fig_int_B5.dgn



LEGEND	
	AREA OF ABOVE GROUND CLEARANCE
	AREA OF ROAD WIDENING
	VEHICLE PATH
	DIRECTION OF TRAVEL
	APPROXIMATE PROPERTY LINE



US ROUTE 62
AT US ROUTE 62

NEW LEAF - WIND TURBINE ROUTING STUDY
S HILL ROAD, CHERRY CREEK, NY 14723








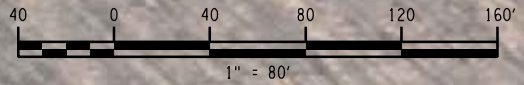


N:\Projects\2021\121-310 Borrego Solar - Wind Transport Studies\Working\CAD\05 Hill Road, Cherry Creek\Figures\121-310_fig_int_B7.dgn



LEGEND

	AREA OF ABOVE GROUND CLEARANCE
	AREA OF ROAD WIDENING
	VEHICLE PATH
	DIRECTION OF TRAVEL
	APPROXIMATE PROPERTY LINE



**WEAVER RD
AT PLANK RD**

**NEW LEAF - WIND TURBINE ROUTING STUDY
S HILL ROAD, CHERRY CREEK, NY 14723**

