

Route Evaluation Study
Clayton Wind Farm
Towns of Clayton and Orleans, NY
CME Project No. 06-216d

Prepared for:



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1. Introduction, Purpose and Proposed Project:

Atlantic Wind, LLC is proposing to construct a wind-powered, electric generating project in the southern portions of Clayton and Orleans Township (Jefferson County, New York) between April 2008 and December 2008. The project will include approximately 62 wind towers, 54 located in the Town of Clayton and 8 in the Town of Orleans, a system of gravel access roads, a buried electrical collection system, substation, and a temporary 5 acre construction staging area. The wind turbines will generate approximately 2.1 megawatts (MW) of power each, equating to a maximum capacity of approximately 130 MW. Access to the proposed tower sites and temporary staging area are located off of Woodard Road, Lowe Road, Depauville Road, Sternberg Road, Hart Road, Miller Road, Tubolino Road, Wilder Road, and County Route 12. Approximately 16 miles of gravel access roads will be constructed to access the sites. Refer to Figures 1 and 2 for the regional location map and proposed tower locations.

During construction there will be temporary increases in truck traffic on area roadways served by the project. The purpose of this evaluation is to document the existing transportation conditions in the area and identify probable travel routes, constraints, and proposed improvements.

2. Methodology

A field inventory, photo log, and visual assessment was conducted to evaluate possible travel routes. Sample roadway characteristics and conditions were documented. Meetings were held with the New York State Department of Transportation (NYSDOT) Main Office of Safety and Security Services, the Assistant Regional Traffic Engineer from (NYSDOT) Region 7, the Jefferson County Highway Superintendent, the Town of Clayton Highway Superintendent, and the Town of Orleans Highway Superintendent to understand jurisdictional concerns and permit requirements. Research was conducted on wind turbine transportation requirements, and a potential worst-case design vehicle was evaluated to identify possible intersection improvements.

3. Vehicle Types

The number, size and type of trucks depend on the specific project and the equipment being hauled. Turbine components and associated truck trips can generally be classified as follows:

Wind Turbine Equipment

- Blade Sections – Blades are transported on trailers with one to three blades per vehicle. Blades typically control the length of the design vehicle, and the radius of the curves along the travel route to the site. Specialized transport vehicles are designed with articulating (manual or self steering) rear axles to allow maneuverability through curves.
- Tower Sections – Typically transported in three or four sections depending on the supplier. Towers generally do not control design vehicle dimensions.
- Nacelle – The turbine and related elements are typically the heaviest component transported.
- Hub and Nose Cone – Typically transported with one or more of the same element on a vehicle. These elements are not critical elements related to design vehicle dimensions.
- Escort Vehicles

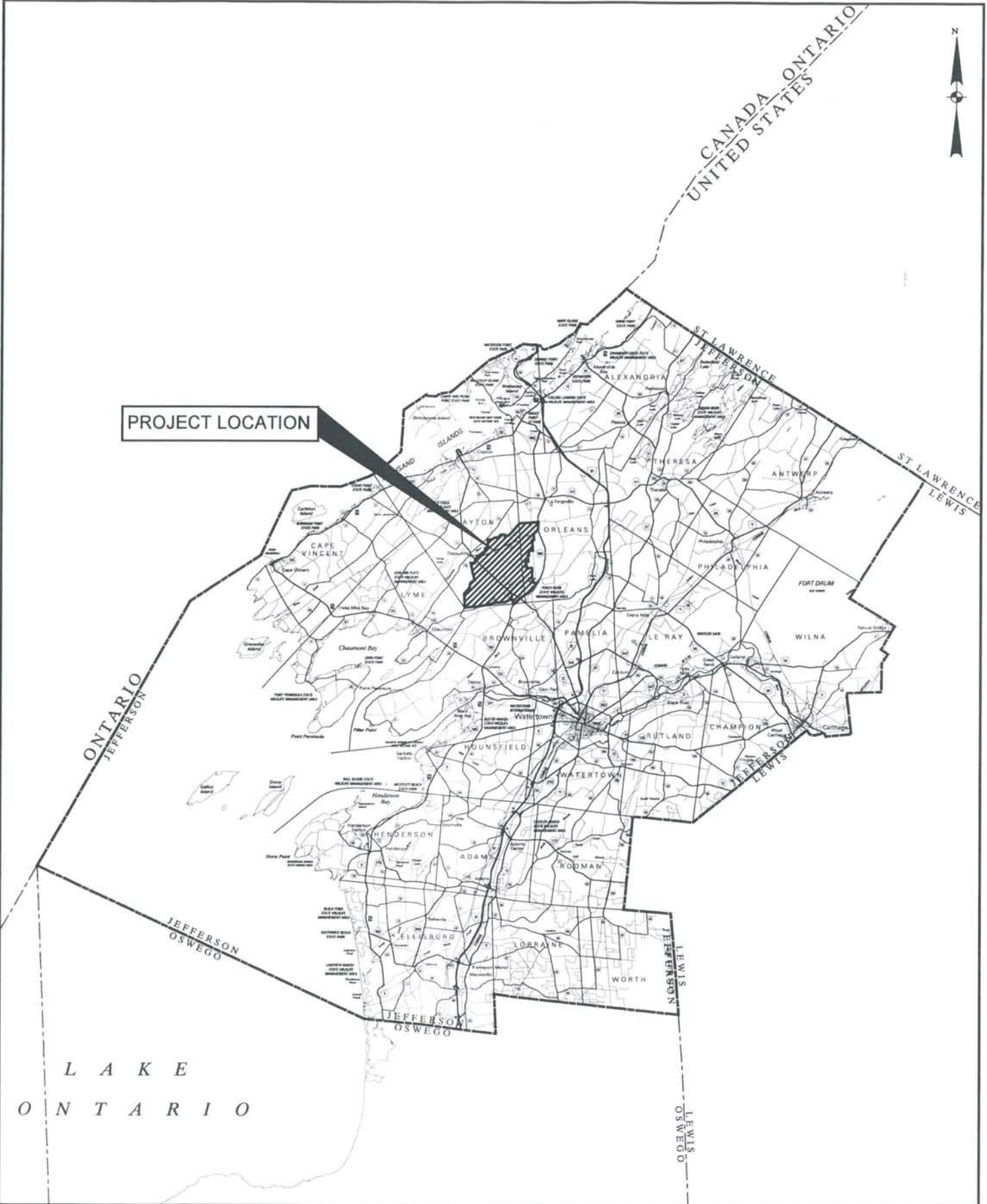
Construction Equipment and Materials

- Construction of Site Roads – Conventional trucks carrying stone, gravel and miscellaneous construction equipment.
- Crane – For assembly of the wind towers, cranes are transported in sections over numerous trips to the site. Assembled cranes may be crawled between tower sites.
- Concrete trucks for tower foundations.
- Construction staff and other incidental truck trips.



CANADA ONTARIO
UNITED STATES

PROJECT LOCATION



REGIONAL LOCATION MAP

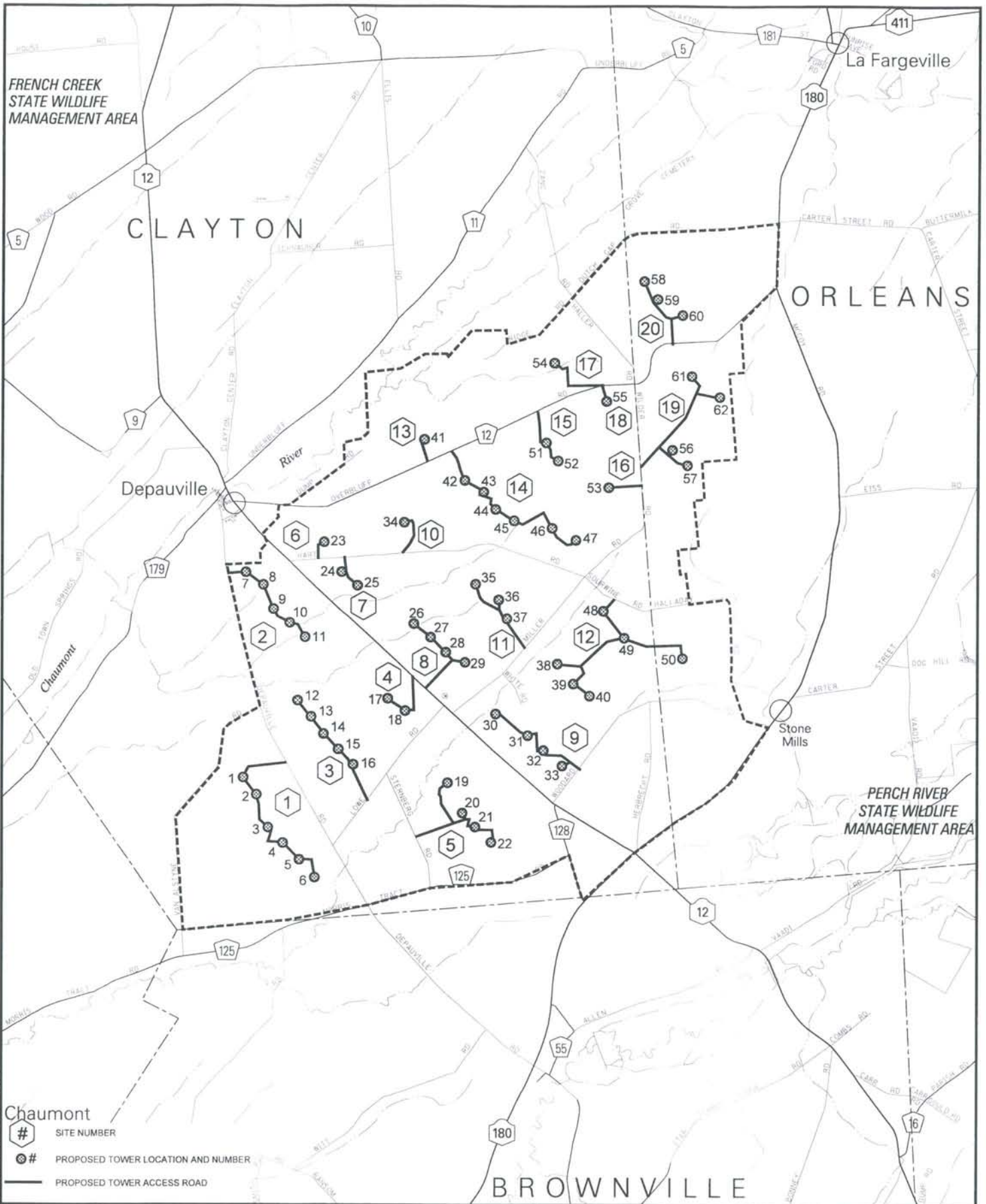
CLAYTON WIND PROJECT
JEFFERSON COUNTY, NEW YORK



PROJECT: 06-216d

DATE: 1/07

FIGURE: 1



- Chamont
- # SITE NUMBER
 - ⊗# PROPOSED TOWER LOCATION AND NUMBER
 - PROPOSED TOWER ACCESS ROAD

PROPOSED TOWER LOCATIONS

CLAYTON WIND PROJECT
JEFFERSON COUNTY, NEW YORK



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4. Trip Generation

The following table represents an order-of-magnitude estimate of the total number of loaded truck trips entering the project site associated with construction of the towers. This trip generation estimate does not include the trips associated with the construction of the access roads.

Table 1 – Preliminary Trip Generation Estimate (loaded trucks entering)

Component/Truck Type	Assumption	Trips
Blades	One blade per truck	186
Towers	4 tower sections per tower	248
Nacelle	One nacelle per truck	62
Hub, Nose Cone, and other components	7 truck trips per tower	434
Road Construction	Gravel trucks 10 cubic yards per truck, plus other construction equipment.	unk
Crane	Several trips per access point depending on the degree of disassembly.	unk
Concrete	250 to 450 cubic yards per foundation, 8 cubic yards per truck. Assume 50 trips per tower.	3100
Total Heavy Vehicle Trips		4030

unk = unknown

Note: trips should be doubled to account for exiting.

5. Design Vehicle Research

Transportation of turbine components and associated construction material involves numerous conventional and specialized transportation vehicles. Wind turbine components (such as the tower sections, blade sections and nacelle) are transported separately. The actual dimensions and specifications of the design vehicles may vary, depending on the specific type of truck and trailer arrangement used for transport. For planning purposes, worst-case transport requirements are based on the Suzlon S88 2.1 MW Turbine. The following table summarizes the blade length for the Suzlon S88 turbine.

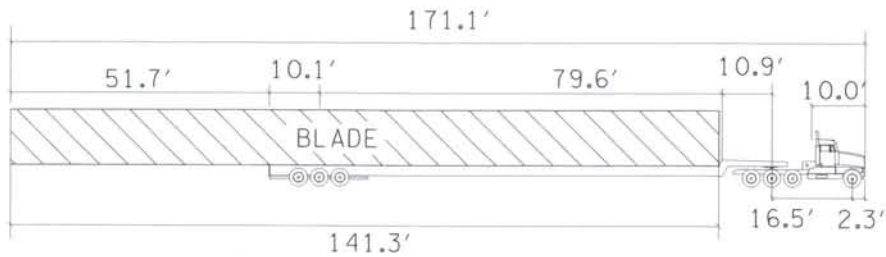
Table 2 – Suzlon Turbine Blade Lengths

Turbine Supplier	Turbine Size (MW)	Blade length	
		Metric	English
Suzlon	2.1	42.5 m	139 ft
		2-blade transport cage is 43.1 m	
			141 ft

NA – Not available

This table shows that the blade length for the Suzlon 2.1 MW is 139 feet for the single blade, and 141 feet for a 2-blade transport cage. For the purpose of this route analysis, two design vehicles were developed to account for two different potential hauling scenarios. The first being a 3-axle truck hauling a manually controlled articulated rear axle dolly and the second hauling a trailer bed without the articulated rear axles. Both design vehicles were used to determine the worst-case scenario for each intersection.

Design Vehicle 1 *without* Manually Controlled Articulated Rear Axle



Design Vehicle 2 *with* Manually Controlled Articulated Rear Axle



Design vehicle dimensions for route planning purposes. Actual dimensions will vary

6. Route Evaluation

A preliminary regional and local routing plan was identified and evaluated for the transport of the wind turbine components based on research and discussions with the NYSDOT. It is expected that the wind turbine components will travel by ship to the Port of Oswego located in Oswego, NY. The regional routing plan evaluated the entire route for bridge restrictions from the port of Oswego to the temporary construction staging area. There are four (4) height restricted bridges along Interstate 81 near the City of Watertown. Due to these bridge restrictions and preliminary discussions with the NYSDOT, the probable travel route consists of the following roads.

- NY Route 3
- NY Route 180
- NY Route 12F
- Interstate 81 (from Exit 46 to Exit 48)
- NY Route 342
- NY Route 12

A list of bridge restrictions along these routes is shown in Appendix A.

An initial evaluation of the potential local routing plan was conducted by traveling area roadways and documenting existing conditions. Probable travel routes, constraints, and potential improvements were then identified. The following table summarizes the results of the existing conditions inventory. Refer to Figure 3 for roadway grades on the probable travel routes.

Table 3 – Road Characteristics

Road	From	To	Lane Width	Pavement Condition	Surface Type	Speed Limit
State Roads						
NY Route 3	Oswego	NY Route 180	24	Good	Asphalt	55-mph
NY Route 12	I-81 Exit 47	County Route 12	24	Good	Asphalt	55-mph
NY Route 12F	NY Route 180	I-81 Exit 46	24	Good	Asphalt	55-mph
NY Route 180	Depauville Rd.	Dutch Gap Rd.	22	Good	Asphalt	55-mph
NY Route 180	NY Route 3	NY Route 12F	24	Good	Asphalt	55-mph
NY Route 342	I-81 Exit 48	NY Route 12	24	Good	Asphalt	55-mph
County Roads						
Route 12	NY Route 12	NY Route 180	20	Fair	Asphalt	Not Posted
Route 125	Depauville Rd.	County Route 128	18	Fair	Gravel/Asphalt	Not Posted
Route 128	NY Route 12	NY Route 180	20	Fair to Good	Asphalt	Not Posted
Local Roads						
Herbretch Rd.	NY Route 180	Woodard Rd.	14	Poor	Asphalt	Not Posted
Woodard Rd.	NY Route 12	NY Route 180	16	Fair	Asphalt	Not Posted
Tubolino Rd.	Miller Rd.	Woodard Rd.	16	Fair	Asphalt	Not Posted
Miller Rd.	NY Route 12	Hart Rd.	16	Fair	Asphalt	Not Posted
Lowe Rd.	Depauville rd.	NY Route 12	17	Poor	Asphalt	Not Posted
Sternberg Rd.	Lowe Rd.	County Route 125	16	Fair to Poor	Asphalt	Not Posted
Hart Rd.	NY Route 12	Miller Rd.	16	Fair	Asphalt	Not Posted
Depauville Rd.	NY Route 180	Factory St.	20	Fair to Good	Asphalt	Not Posted
Haller Rd.	Dutch Gap Rd.	County Route 12	17	Fair to Good	Asphalt	Not Posted
Wilder Rd.	County Route 12	Hart Rd.	17	Poor	Asphalt	Not Posted

Based on this assessment, there are several route options traveling north from NY Route 12 to each of the proposed wind tower access roads. Refer to Figures 4.1 and 4.2 which show the probable travel route, as well as potential alternate routes for each site. These route options are described below beginning with a specified route to reach NY Route 12, followed by the options to access each site from NY Route 12. Option 1 is considered the most probable route for access to each site.

6A. Access from Oswego to NY Route 12

Option 1: Travel north on NY Route 3 from Oswego to the Baggs Corner intersection. Turn left onto NY Route 180 and continue north until it intersects NY Route 12F. Turn right onto NY Route 12F and travel east toward the City of Watertown. Turn left at the I-81 Exit 46 Northbound Ramp and travel north until Exit 48. Get off I-81 at Exit 48 and bear to the right onto NY Route 342. Travel eastbound on NY Route 342 for approximately 0.15-miles and turn right into “turn around” lot on the south side of NY Route 342. Make a left turn onto NY Route 342 and travel westbound. Make a right turn onto NY Route 12 and continue northbound toward the wind farm.

Option 2: Improve the Exit 48/NY Route 342 intersection to allow a left turn by large dimensioned vehicles.

6B. Access from NY Route 12 to Site #1 (Wind Turbines 1-6)

Option 1: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn left onto Lowe Road. Travel west to the Depauville Road/Lowe Road intersection and turn right. Travel north on Depauville Road and turn into Site #1.

Alternative Option 2: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn left onto NY Route 180. Travel southwest to the NY Route 180/Depauville Road intersection and turn right. Travel north on Depauville Road and turn left into Site #1.

6C. Access from NY Route 12 to Site #2 (Wind Turbines 7-11)

Same as Site #1.

6D. Access from NY Route 12 to Site #3 (Wind Turbines 12-16)

Option 1: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn left onto Lowe Road. Travel west and turn into Site #3.

Alternative Option 2: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn left onto NY Route 180. Travel southwest to the NY Route 180/Depauville Road intersection and turn right. Travel north to the Depauville Road/Lowe Road intersection and turn right. Travel east on Lowe Road and turn into Site #3.

6E. Access from NY Route 12 to Site #4 (Wind Turbines 17-18)

Option 1: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn into Site #4.

6F. Access from NY Route 12 to Site #5 (Wind Turbines 19-22)

Option 1: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn left onto Lowe Road. Travel west to the Lowe Road/Sternberg Road intersection and turn left. Travel south on Sternberg Road and turn into Site #5.

Alternative Option 2: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn left onto NY Route 180. Travel southwest to the NY Route 180/Depauville Road intersection and turn right. Travel north to the Depauville Road/Lowe Road intersection and turn right. Travel east to the Lowe Road/Sternberg Road intersection and turn right. Travel south on Sternberg Road and turn into Site #5.

Alternative Option 3: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn left onto NY Route 180. Travel southwest to the NY Route 180/Depauville Road intersection and turn right. Travel north to the Depauville Road/County Route 125 intersection and turn right. Travel east to the County Route 125/Sternberg Road intersection and turn left. Travel north on Sternberg Road and turn into Site #5.

6G. Access from NY Route 12 to Site #6 (Wind Turbine 23)

Option 1: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn right onto Hart Road. Travel east on Hart Road and turn into Site #6.

Alternative Option 2: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn right onto Miller Road. Travel northeast to the Miller Road/Hart Road intersection and turn left. Travel west on Hart Road and turn into Site #6.

6H. Access from NY Route 12 to Site #7 (Wind Turbines 24-25)

Same as Site #6.

6I. Access from NY Route 12 to Site #8 (Wind Turbines 26-29)

Option 1: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn into Site #8.

6J. Access from NY Route 12 to Site #9 (Wind Turbines 30-33)

Option 1: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn right onto Woodard Road. Travel east on Woodard Road and turn into Site #9.

6K. Access from NY Route 12 to Site #10 (Wind Turbine 34)

Same as Site #6.

6L. Access from NY Route 12 to Site #11 (Wind Turbines 35-37)

Option 1: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn right onto Miller Road. Travel east on Miller Road and turn into Site #11.

6M. Access from NY Route 12 to Site #12 (Wind Turbines 38-40, 48-50)

Option 1: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn right on Miller Road. Travel east to the Miller Road/Tubolino Road intersection and turn right. Travel east on Tubolino Road and turn into Site #12.

Alternative Option 2: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn right onto NY Route 180. Travel northeast to the NY Route 180/Woodard Road intersection and turn left. Travel west to the Woodard Road/Tubolino Road intersection and turn right. Travel north and west on Tubolino Road and turn into Site #12.

6N. Access from NY Route 12 to Site #13 (Wind Turbine 41)

Option 1: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn right on Miller Road. Travel northeast and continue through the Miller Road/Tubolino Road intersection where Miller Road becomes Wilder Road. Travel north on Wilder Road and turn left at the County Route 12/Wilder Road intersection. Travel west on County Route 12 and turn into Site #13.

Alternative Option 2: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn right onto NY Route 180. Travel north to the NY Route 180/County Route 12 intersection and turn left. Travel west through the County Route 12/Wilder Road intersection and turn into Site #13.

Alternative Option 3: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn right onto NY Route 180. Travel north to Dutch Gap Road then turn left. Take Dutch Gap Road west to Heller Road then turn left on Heller Road. Travel west on Heller and turn into Site #13.

6O. Access from NY Route 12 to Site #14 (Wind Turbines 42-47)

Same as Site #13.

6P. Access from NY Route 12 to Site #15 (Wind Turbines 51-52)

Same as Site #13.

6Q. Access from NY Route 12 to Site #16 (Wind Turbine 53)

Option 1: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn right on Miller Road. Travel northeast and continue through the Miller Road/Tubolino Road intersection where Miller Road becomes Wilder Road. Travel north on Wilder Road and turn into Site #16.

Alternative Option 2: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn right onto NY Route 180. Travel northeast to the NY Route 180/County Route 12 intersection and turn left. Travel west to the County Route 12/Wilder Road intersection and turn left. Travel south on Wilder Road and turn into Site #16.

6R. Access from NY Route 12 to Site #17 (Wind Turbine 54)

Same as Site #13.

6S. Access from NY Route 12 to Site #18 (Wind Turbine 55)

Same as Site #13.

6T. Access from NY Route 12 to Site #19 (Wind Turbines 56-57, 61-62)

Same as Site #16.

6U. Access from NY Route 12 to Site #20 (Wind Turbines 58-60)

Option 1: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn right on Miller Road. Travel northeast and continue through the Miller Road/Tubolino Road intersection where Miller Road becomes Wilder Road. Travel north on Wilder Road and turn right at the County Route 12/Wilder Road intersection. Travel east on County Route 12 and turn into Site #20.

Alternative Option 2: From Option 1 identified in section 6.A., travel north on NY Route 12 and turn right onto NY Route 180. Travel northeast to the NY Route 180/County Route 12 intersection and turn left. Travel west on County Route 12 and turn into Site #20.

7. Constraints and Conceptual Improvements.

Each of the routes described above and shown on Figures 4.1 and 4.2 have a number of constraining features, particularly intersection turning radii. The path of the worst-case design vehicle was evaluated along each of the probable travel routes and select alternative routes to identify conceptual intersection improvements required. Figures 5.1 and 5.2 show the locations of the constraining intersections. Individual diagrams were developed to show potential improvement areas for each of the constraints along the probable travel routes as shown on Figures 6.1 through 6.18. These diagrams show approximate right-of-way and generally include two improvement options for each of the intersections:

- Path Option A – Widening on the inside of the curve – This option should be selected when a significant physical constraint or unwilling property owner will not allow encroachment on the outside of the curve.
- Path Option B – Widening on the outside of the curve – Similarly, this option may be necessary when a constraint or unwilling property owner will not allow widening on the inside of the curve.

The approximate right-of-way shown on the maps was obtained from County tax map files.

The final limit of improvements may be a combination of widening on the inside and the outside of the curve and is expected to be within the areas shown on Figures 6.1 through 6.18. These limits will be confirmed with the final wind turbine supplier and transportation provider.

8. Loads and Permits

Special hauling permits are required when loads exceed legal dimensions or weights. The following table summarizes these maximum legal dimensions for State Highways. Transport of the blades, nacelles, tower sections and crane will require a variety of special hauling permits. Actual loads will depend on the specific turbine supplier, crane equipment chosen, and degree of disassembly of the crane.

Table 4 – Dimensional Criteria for Special Hauling Permits

Vehicle Characteristic	State Highway Limit	Problematic Element and Approximate Dimension			
		Blade	Nacelle	Tower Sections	Crane
Width of vehicle, inclusive of load	8 feet ¹	No 7.2'	Yes 13.1'	Yes 14.1'	Yes Unk
Height of vehicle from underside of tire to top of vehicle, inclusive of load	13 feet 6 inches	Yes 15.3'	Yes 15.5'	Yes 16.2'	Yes Unk
Length of combination of vehicles inclusive of load and bumpers	65 feet ¹	Yes > 160'	Yes < 160'	Yes < 160'	Yes < 160'
Weight of component excluding vehicle	80,000 pounds	No	Yes 165,500 lbs	Yes 144,500 lbs	Yes >500,000 lbs

Source: adapted from NYSDOT PERM 30 Information Concerning Special Hauling Permits

1) Qualifying or Access Highways allow 8.5 foot width, unlimited length,

The types of permits depend on the characteristics of the vehicle and its cargo, number of trips, distance traveled, and duration. Nacelles can weigh approximately 165,500 lbs, and when combined with the transport vehicle, the total weight can exceed 200,000 pounds. When any vehicle exceeds 200,000 pounds, exceeds 16 feet in width or height, or exceeds 160 feet in length, special super load permits (PERMIT Type 1S) are required from the NYSDOT. The following list summarizes the driveway permits and special hauling permits that may be required for this project. Atlantic Wind LLC will coordinate with the affected agencies and transportation providers to insure the all required permits are obtained.

Roadway Improvement/Driveway Permits

- NYSDOT – A Highway Work Permit (PERM 33) will be required for any physical improvements within the NYSDOT right-of-way. This will apply for improvements on NY Route 12 at the proposed tower site access road locations and any state highway intersection or road improvements.
- Jefferson County – A work permit will be required for any improvements on County roads.
- Town of Clayton and Town of Orleans – Based on meetings with the Highway Superintendents, no permits are required.

Overload Permits

- NYSDOT – NYSDOT permit package outlines the guidelines, types and fees for various special hauling permits. Based on this outline and a discussion with NYSDOT special hauling permit representatives, it is expected that the project will require the Type 13 Jobsite permit to cover most of the special hauling trips (not including super loads). Type 13 permits are issued at 6 month intervals and can be extended for up to a maximum of one year. Several Type 1 permits for individual convoys may also be required such as the following:
 - PERM 85 – Special Hauling Route Survey for Over Dimensional Vehicles
 - PERM 12 – Special Hauling Pre-Approval Application Form for Future Permit
 - PERM 80 – Special Hauling Pre-Approval Application Form for a Future Crane Permit

- PERM 39-1 – Special Hauling Trip & Building Movement Permit
- PERM 39-2k – Special Hauling Monthly, Annual & Blanket Permit
- PERM 39-3g – Special Hauling Permit Amendment
- PERM 99 – Special Hauling Permit Additional Trailer Attachment Form
- PERM 39-4 – Special Hauling Permit Vehicle Configuration Attachment Sheet
- Jefferson County – A Divisible Load Permit will be required for this project (see Appendix B).

9. Remediation Plan

Specialized transport vehicles with numerous axles are designed to distribute the weight and minimize roadway impacts, nevertheless roadway impacts might occur. The condition of the transportation infrastructure should be left as good, or better than it was found at the beginning of the project. The basis for the remediation plan is a preconstruction photo log (see Appendix C), that establishes the pre-existing conditions. Atlantic Wind, LLC is committed to working with the Town, County, and State agencies to confirm necessary transportation improvements before and after completion of the project, and that such improvements will be stipulated in the project approval. This could include:

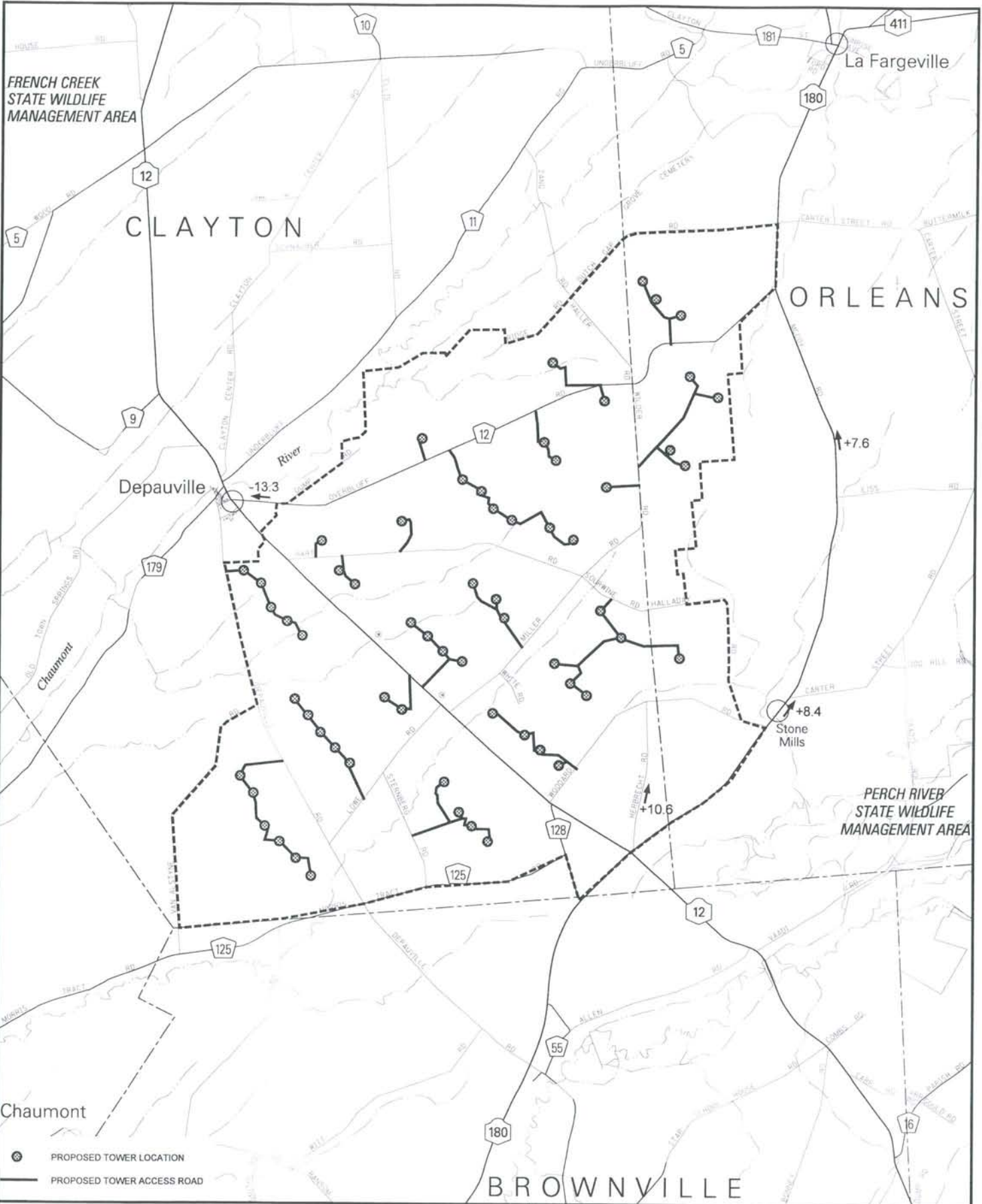


- Additional route and condition surveys.
- Bonding of improvements.
- Temporary removal of obstacles and replacement in kind.
- Completion of improvements before the project.
- Restoration after the project.

10. Conclusions

The purpose of this assessment is to determine the probable travel routes and potential improvements required for delivery of major wind turbine components during the construction of the Clayton Wind project for the purpose of determining potential environmental impacts. A number of intersection improvements have been identified. A logistics firm and/or transportation provider experienced with oversized loads will be engaged in the final route assessment and permit process. Confirmation of improvements, construction details, traffic control plans, escort vehicles, scheduling, etc. will be necessary.

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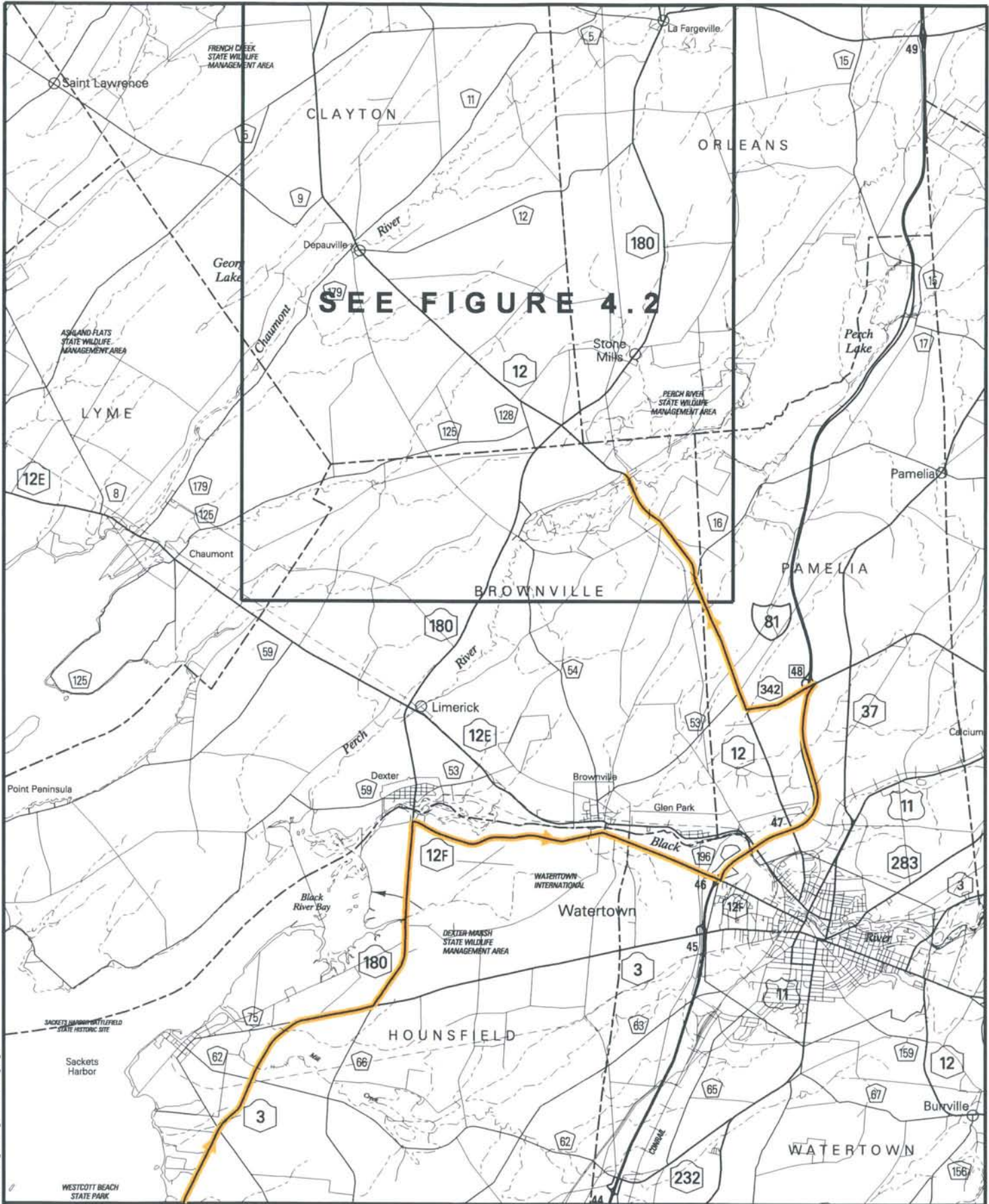


 PROPOSED TOWER LOCATION
 PROPOSED TOWER ACCESS ROAD

ROADWAY GRADES

CLAYTON WIND PROJECT
JEFFERSON COUNTY, NEW YORK





SEE FIGURE 4.2

PROBABLE TRAVEL ROUTE FROM
PORT OF OSWEGO

CLAYTON WIND PROJECT
JEFFERSON COUNTY, NEW YORK

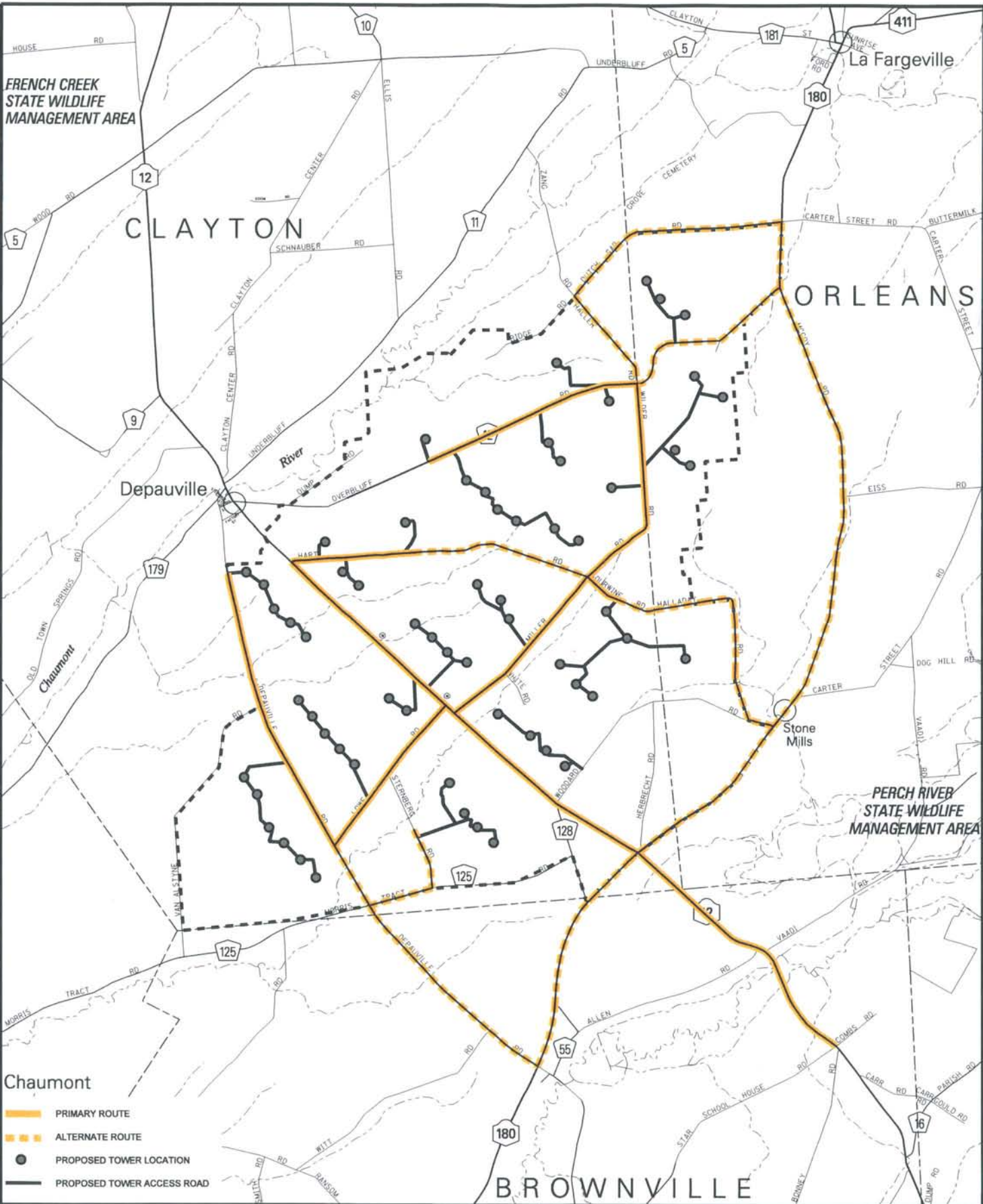


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FIGURE: 4.1

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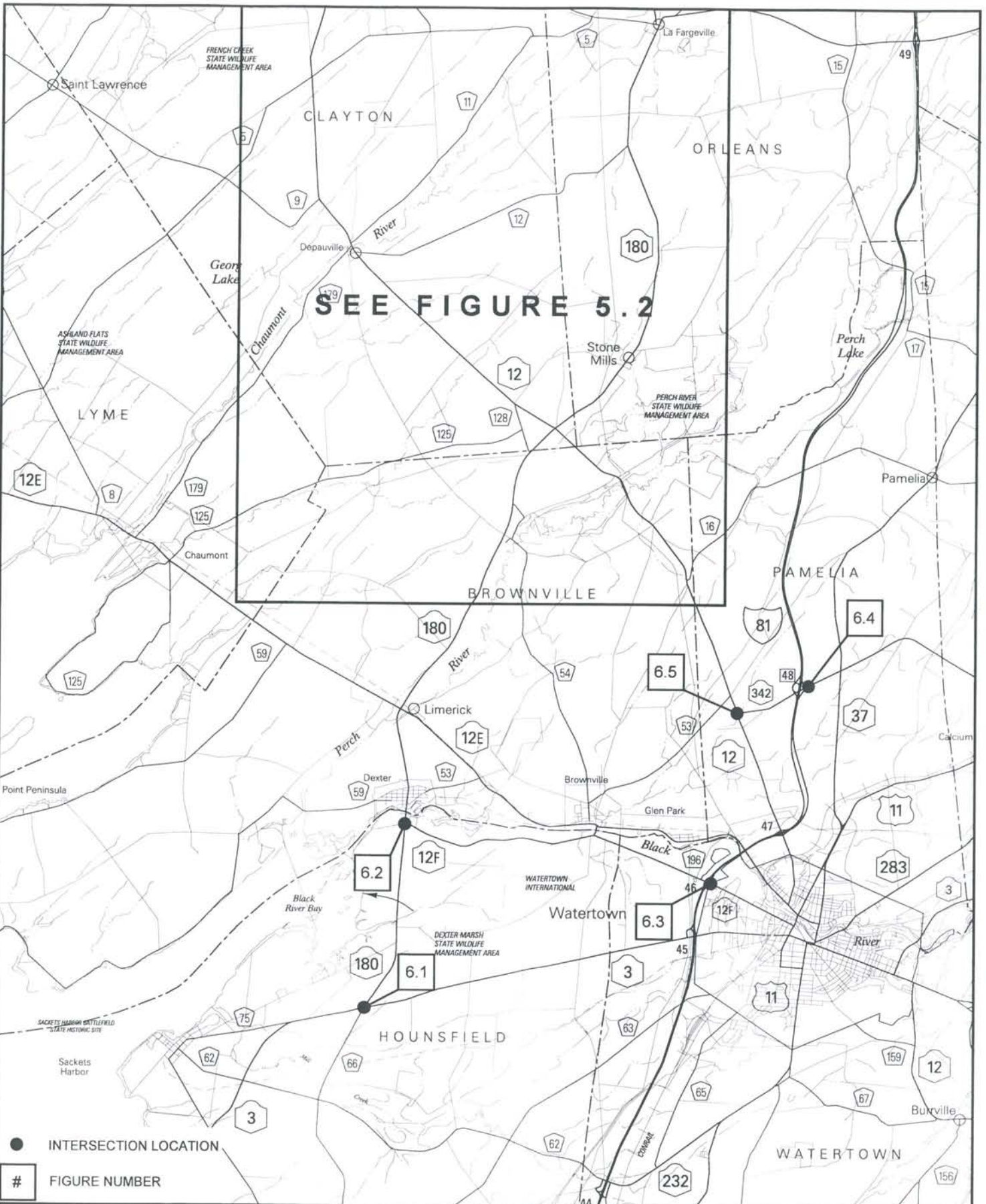


POSSIBLE TRAVEL ROUTES

CLAYTON WIND PROJECT
JEFFERSON COUNTY, NEW YORK



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REGIONALLY CONSTRAINED INTERSECTIONS

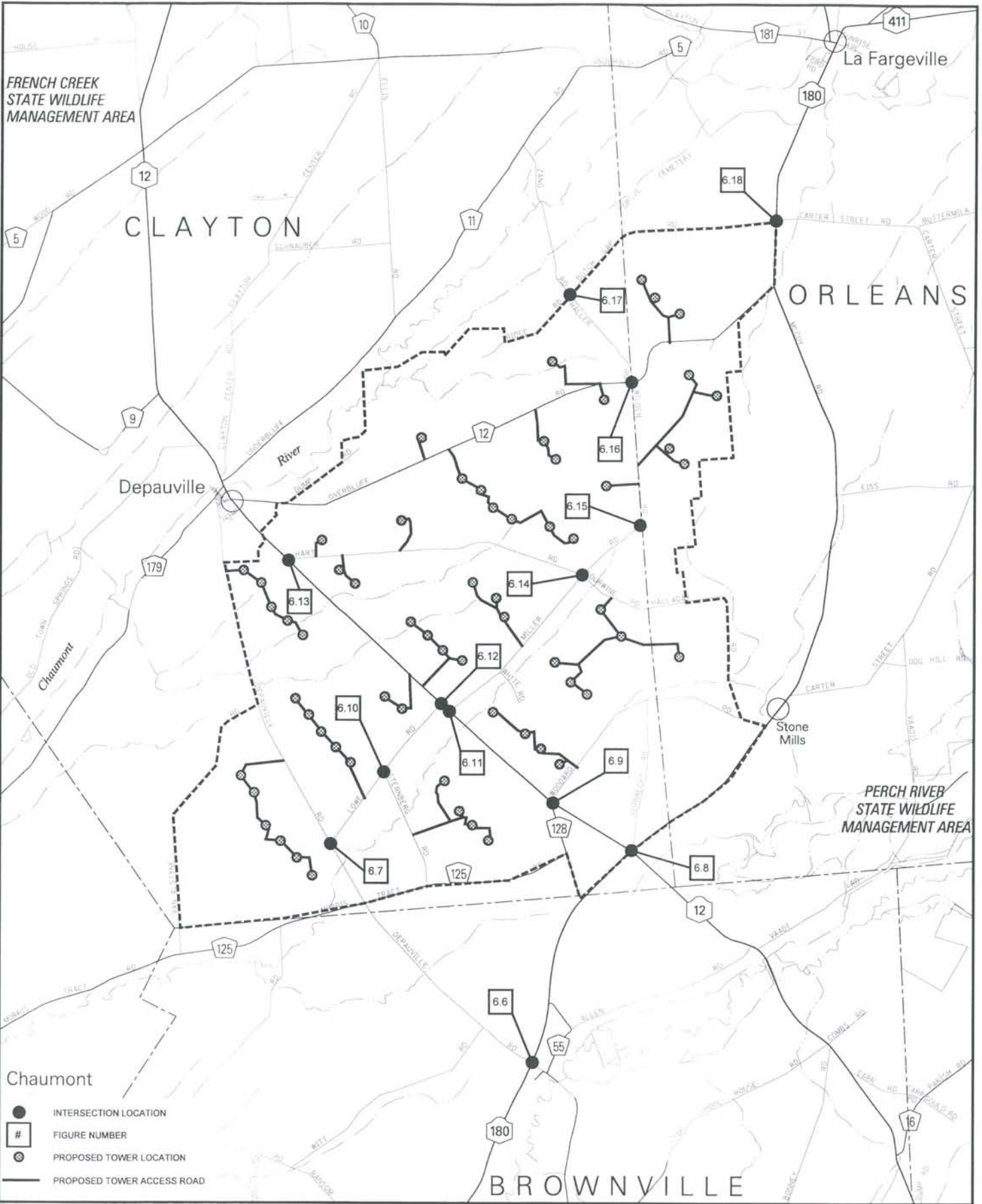
CLAYTON WIND PROJECT
JEFFERSON COUNTY, NEW YORK



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FIGURE: 5.1



- Chaumont
- INTERSECTION LOCATION
 - # FIGURE NUMBER
 - ⊗ PROPOSED TOWER LOCATION
 - PROPOSED TOWER ACCESS ROAD

LOCALLY CONSTRAINED INTERSECTIONS

CLAYTON WIND PROJECT
JEFFERSON COUNTY, NEW YORK





LEGEND:

— VEHICLE PATH

STATE ROUTE 180 / STATE ROUTE 3 / COUNTRY ROUTE 66

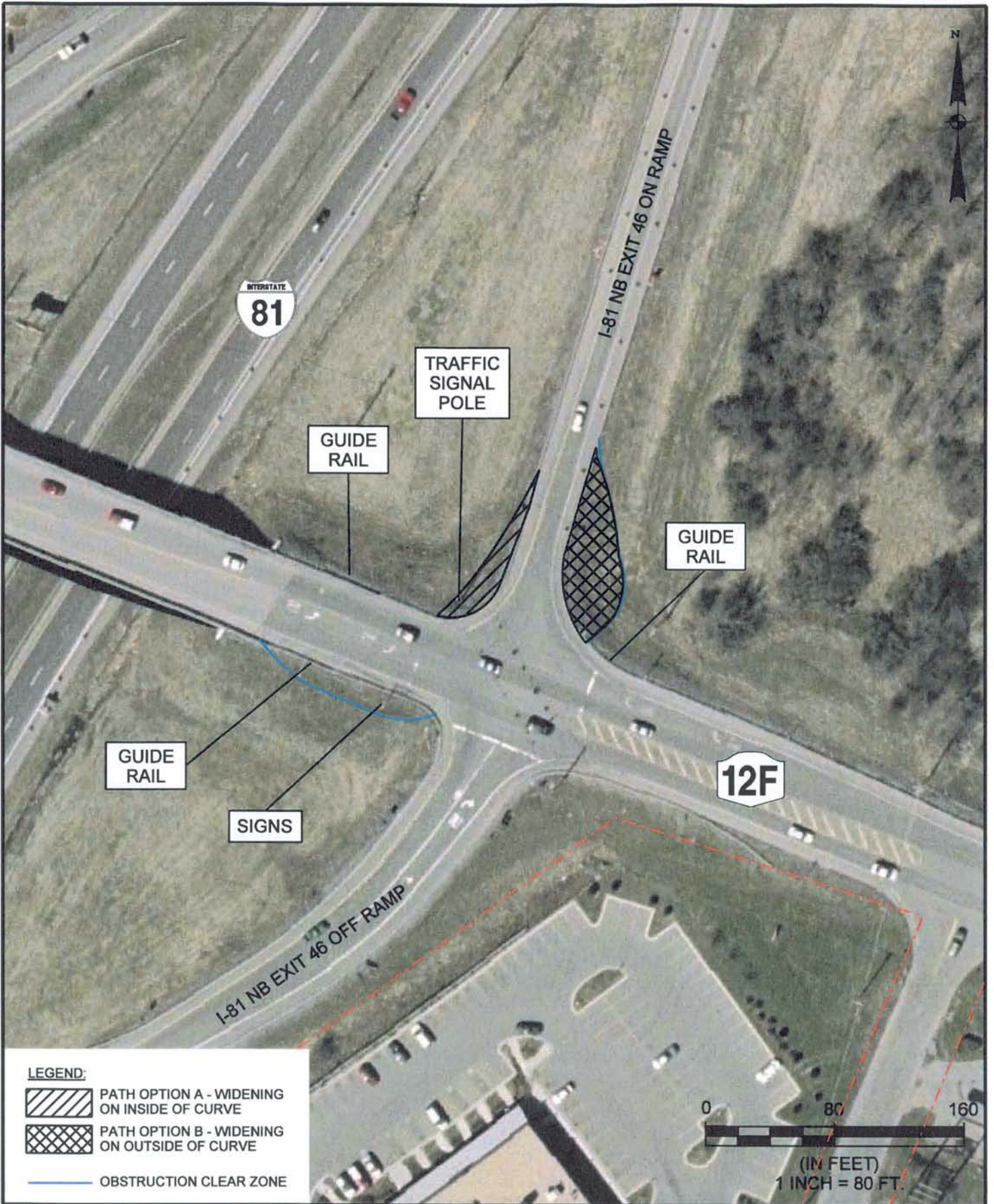
CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK



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DATE: 1/07

FIGURE: 6.1



LEGEND:

- PATH OPTION A - WIDENING ON INSIDE OF CURVE
- PATH OPTION B - WIDENING ON OUTSIDE OF CURVE
- OBSTRUCTION CLEAR ZONE

NY ROUTE 12F / I-81 EXIT 46 RAMPS

CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK



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DATE: 1/07

FIGURE: 6.3

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NY ROUTE 342 / I-81 EXIT 48 RAMPS

CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK



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FIGURE: 6.4

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LEGEND:
—— VEHICLE PATH

NY ROUTE 12 / NY ROUTE 342

CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK

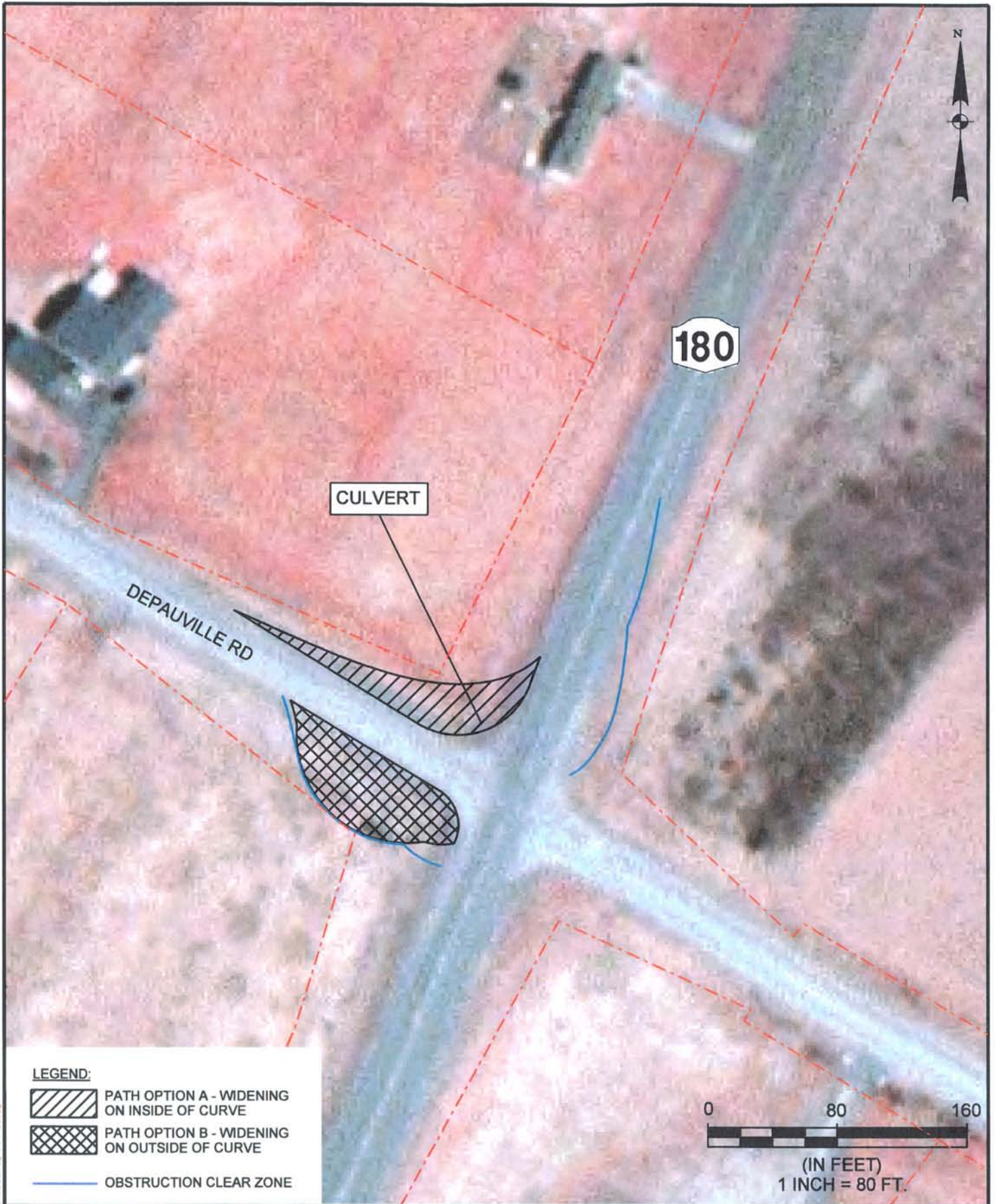


PROJECT: 06-216d

DATE: 1/07

FIGURE: 6.5

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180

CULVERT

DEPAUVILLE RD

LEGEND:

- PATH OPTION A - WIDENING ON INSIDE OF CURVE
- PATH OPTION B - WIDENING ON OUTSIDE OF CURVE
- OBSTRUCTION CLEAR ZONE



(IN FEET)
1 INCH = 80 FT.

NY ROUTE 180 / DEPAUVILLE RD

CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK



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DATE: 1/07

FIGURE: 6.6

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LEGEND:

-  PATH OPTION A - WIDENING ON INSIDE OF CURVE
-  PATH OPTION B - WIDENING ON OUTSIDE OF CURVE
-  OBSTRUCTION CLEAR ZONE

DEPAUVILLE RD / LOWE RD

CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK



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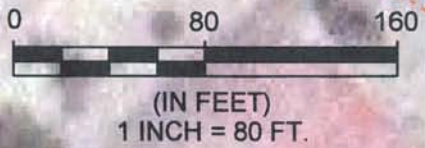
FIGURE: 6.7

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LEGEND:

-  PATH OPTION A - WIDENING ON INSIDE OF CURVE
-  PATH OPTION B - WIDENING ON OUTSIDE OF CURVE
-  OBSTRUCTION CLEAR ZONE
-  VEHICLE PATH

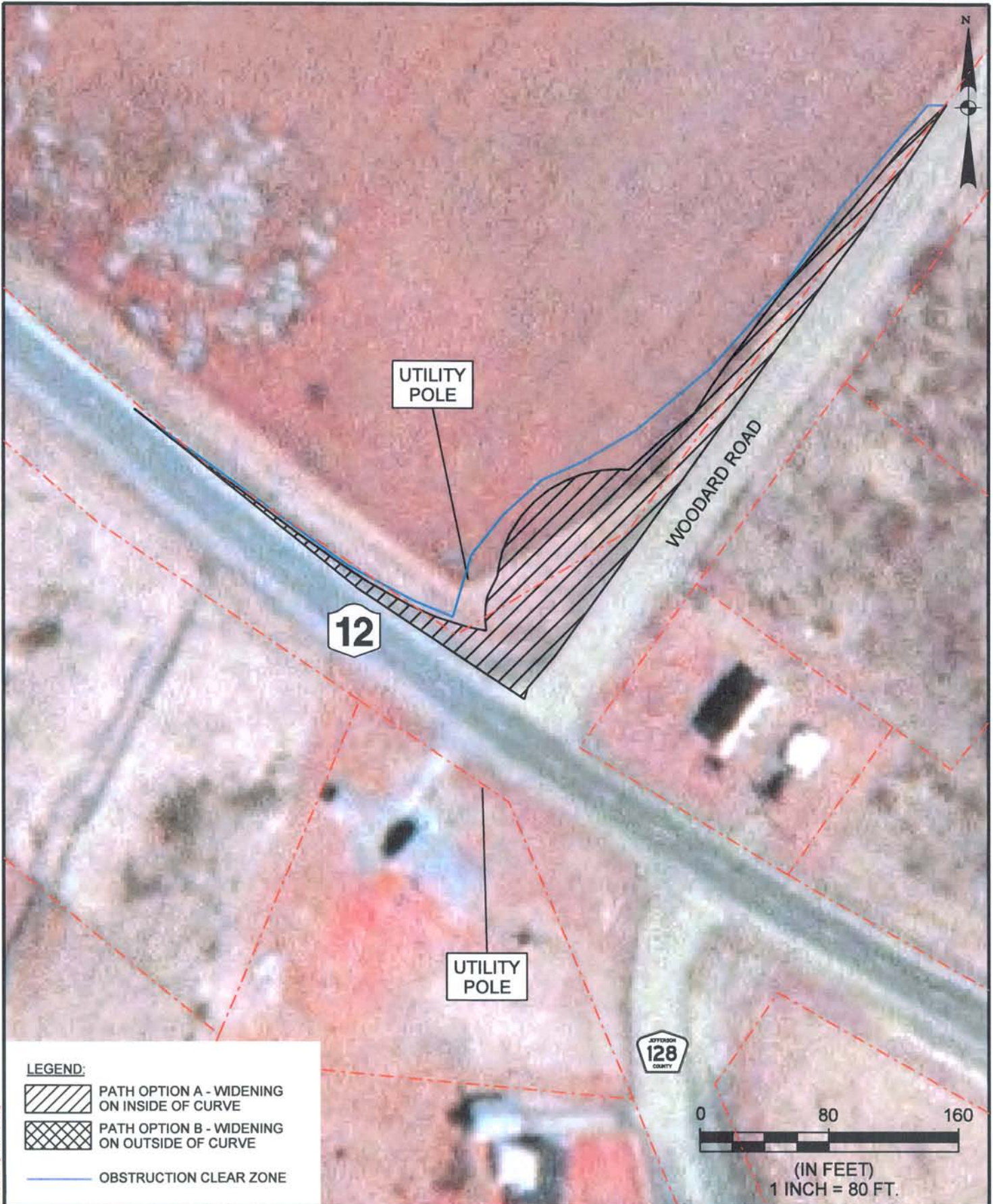


NY ROUTE 180 / NY ROUTE 12




CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK



Figure 6.8: 1/07/07 10:00 AM 21 10/10/07 10:00 AM 21 10/10/07 10:00 AM 21



LEGEND:

-  PATH OPTION A - WIDENING ON INSIDE OF CURVE
-  PATH OPTION B - WIDENING ON OUTSIDE OF CURVE
-  OBSTRUCTION CLEAR ZONE

NY ROUTE 12/WOODARD ROAD

CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK

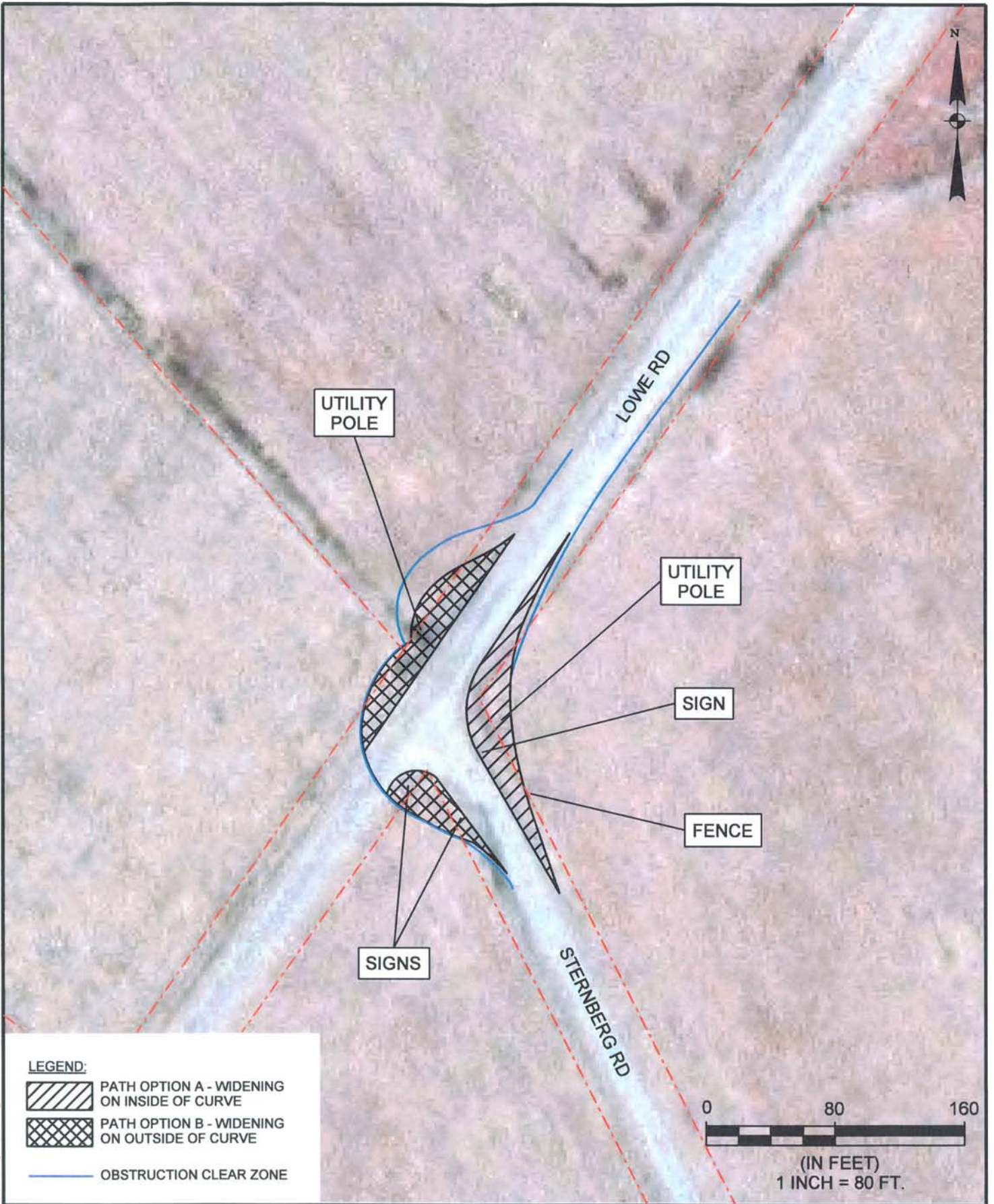


PROJECT: 06-216d




DATE: 1/07

FIGURE: 6.9

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LEGEND:

-  PATH OPTION A - WIDENING ON INSIDE OF CURVE
-  PATH OPTION B - WIDENING ON OUTSIDE OF CURVE
-  OBSTRUCTION CLEAR ZONE

LOWE RD / STERNBERG RD

CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK



PROJECT: 06-216d




DATE: 1/07

FIGURE: 6.10

Filepath: \\server\as0006\enb\c-11\6461\060806\signal\111231.dgn



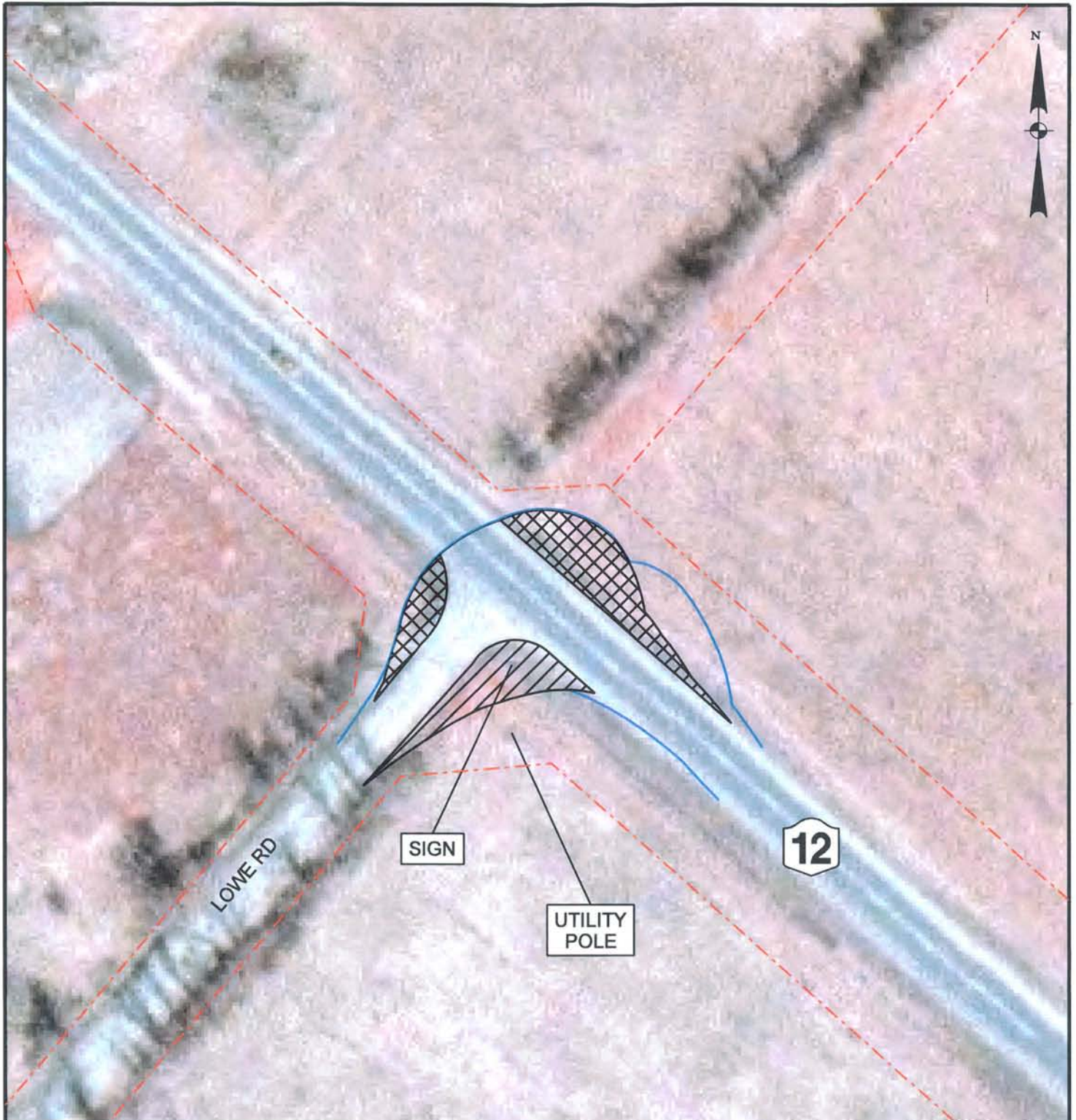
LEGEND:

-  PATH OPTION A - WIDENING ON INSIDE OF CURVE
-  PATH OPTION B - WIDENING ON OUTSIDE OF CURVE
-  OBSTRUCTION CLEAR ZONE




NY ROUTE 12 / MILLER RD

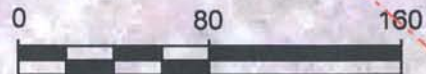
CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK





LEGEND:

-  PATH OPTION A - WIDENING ON INSIDE OF CURVE
-  PATH OPTION B - WIDENING ON OUTSIDE OF CURVE
-  OBSTRUCTION CLEAR ZONE



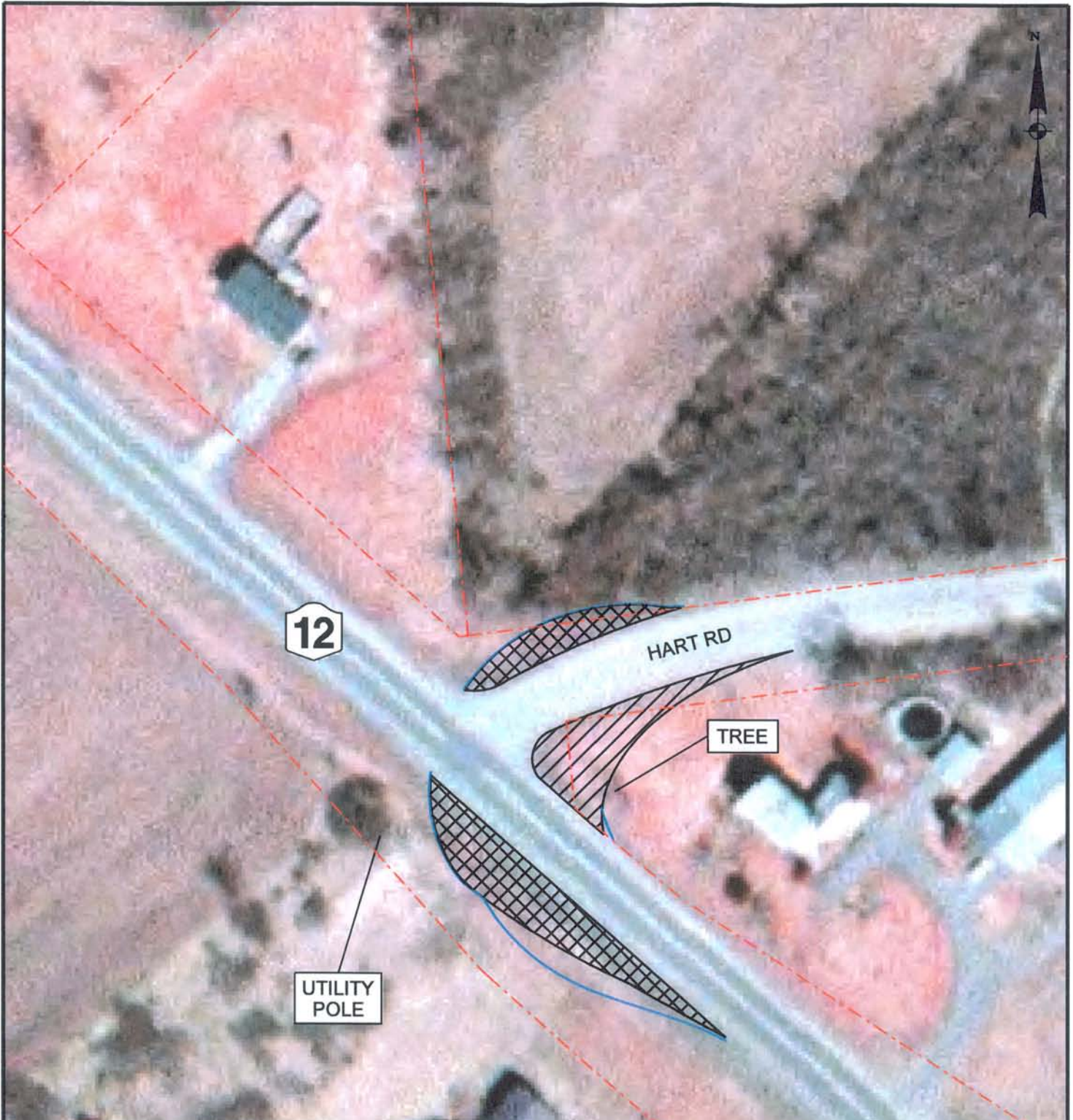
(IN FEET)
1 INCH = 80 FT.

NY ROUTE 12 / LOWE RD

CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK



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LEGEND:

- ▨ PATH OPTION A - WIDENING ON INSIDE OF CURVE
- ▣ PATH OPTION B - WIDENING ON OUTSIDE OF CURVE
- OBSTRUCTION CLEAR ZONE

0 80 160
 (IN FEET)
 1 INCH = 80 FT.

NY ROUTE 12 / HART RD

CLAYTON WIND TRANSPORTATION STUDY
 JEFFERSON COUNTY, NEW YORK

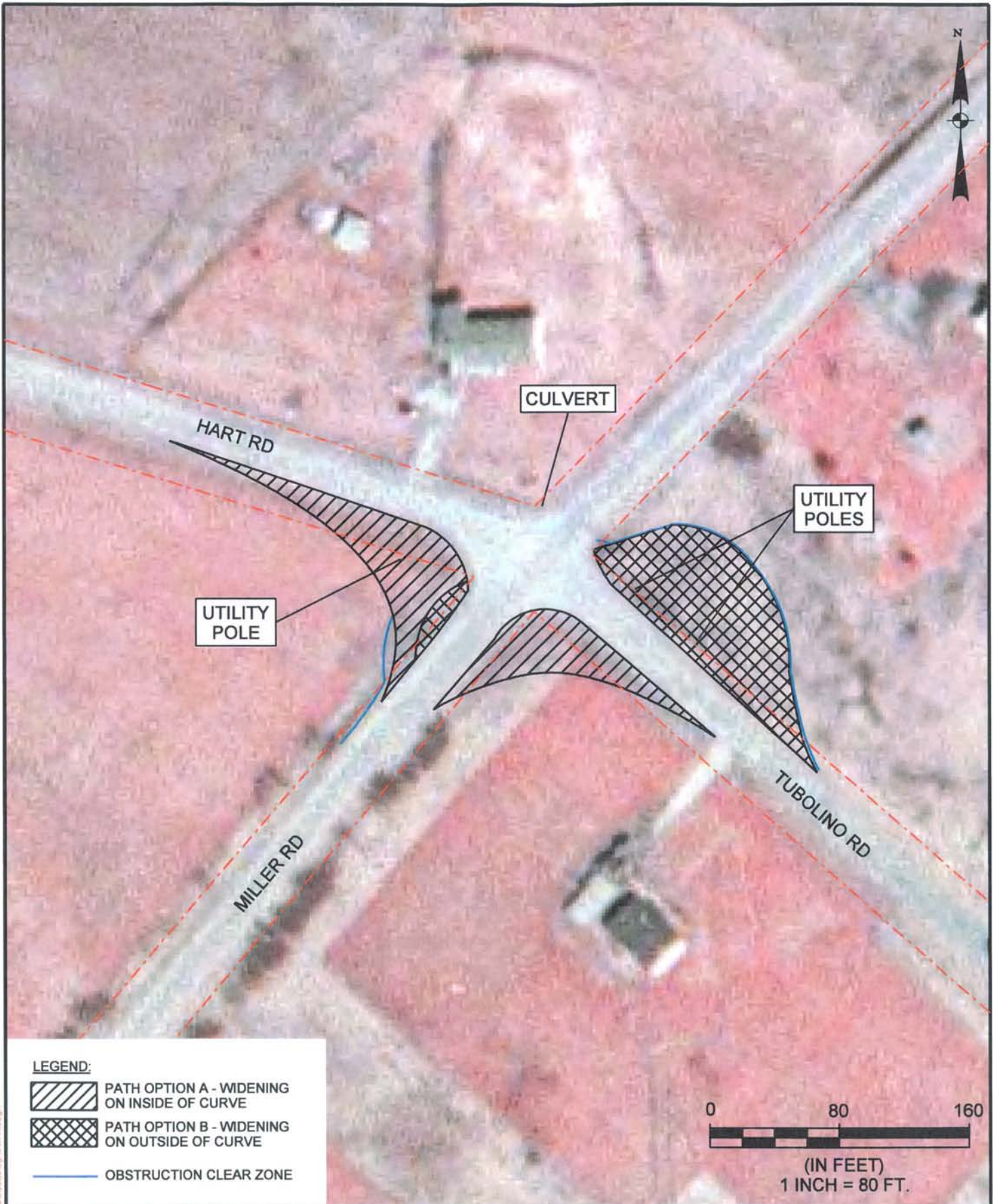
CME
 CREIGHTON MANNING ENGINEERING, LLP

PROJECT: 06-216d




DATE: 1/07

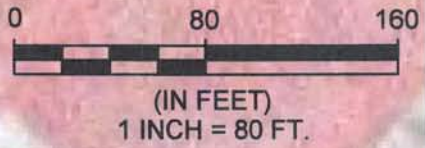
FIGURE: 6.13

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LEGEND:

-  PATH OPTION A - WIDENING ON INSIDE OF CURVE
-  PATH OPTION B - WIDENING ON OUTSIDE OF CURVE
-  OBSTRUCTION CLEAR ZONE



MILLER RD / HART RD / TUBOLINO RD

CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK



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UTILITY
POLE

MILLER RD

WILDER RD

LEGEND:

—— VEHICLE PATH



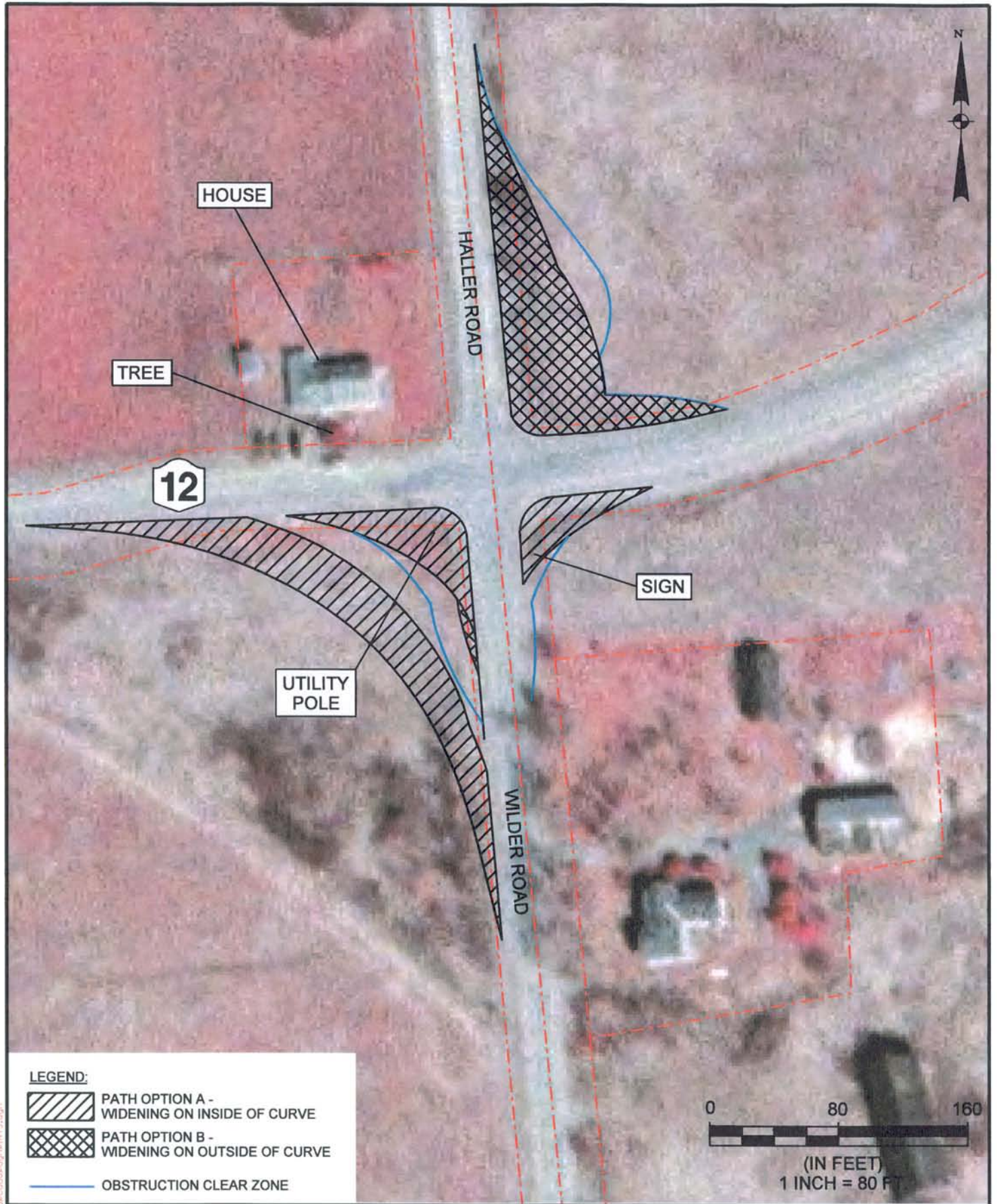
(IN FEET)
1 INCH = 80 FT.

MILLER RD / WILDER RD




CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK



<http://www.cmc.com>



LEGEND:

-  PATH OPTION A - WIDENING ON INSIDE OF CURVE
-  PATH OPTION B - WIDENING ON OUTSIDE OF CURVE
-  OBSTRUCTION CLEAR ZONE

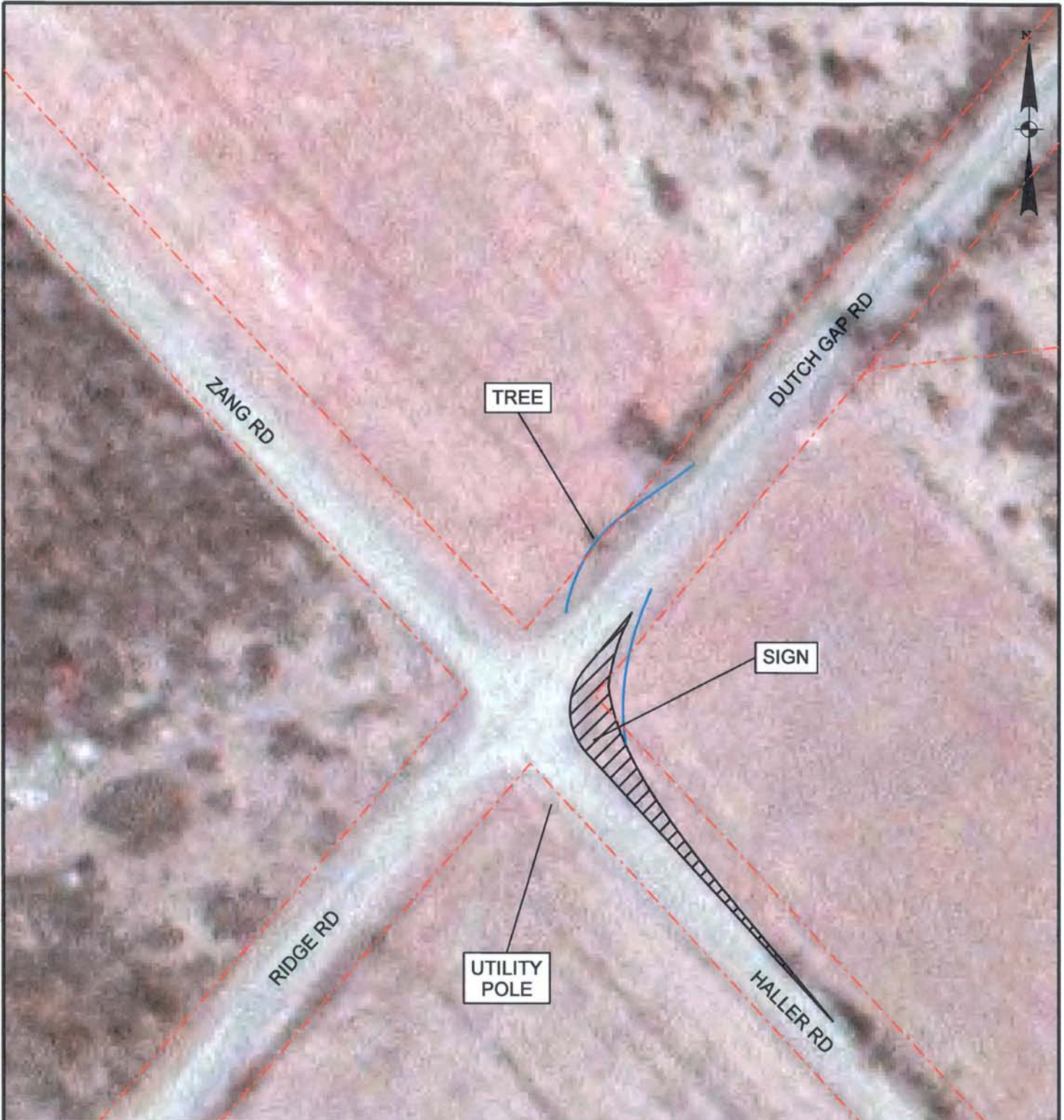


OVERBLUFF RD (CR 12) / WILDER RD / HALLER RD




CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK



Figure Object: 06201606-216cfcc00d09091115.jpg



LEGEND:

-  PATH OPTION A - WIDENING ON INSIDE OF CURVE
-  PATH OPTION B - WIDENING ON OUTSIDE OF CURVE
-  OBSTRUCTION CLEAR ZONE

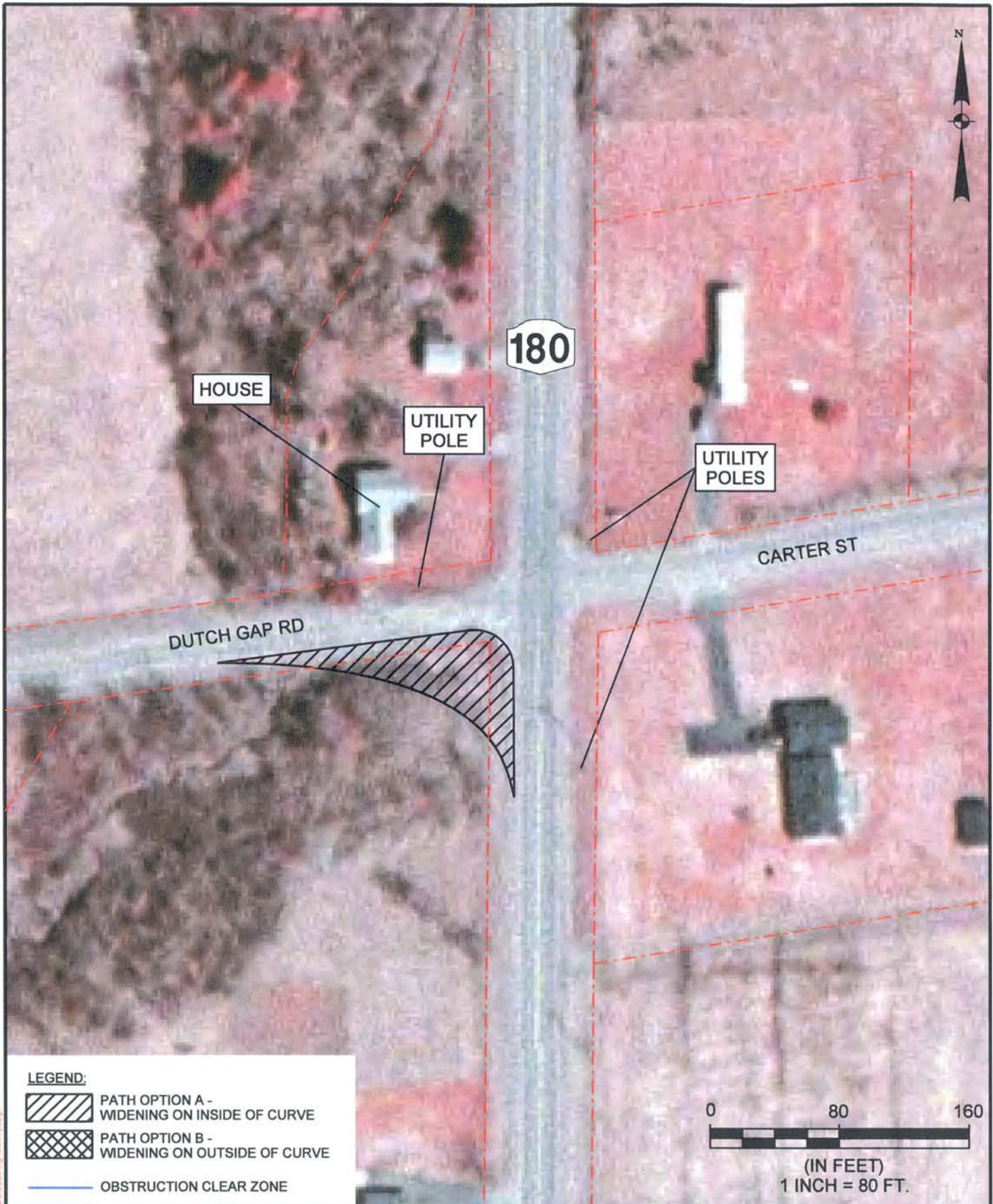


DUTCH GAP RD / HALLER RD / ZANG RD / RIDGE RD

CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK



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NY ROUTE 180 / DUTCH GAP RD / CARTER ST

CLAYTON WIND TRANSPORTATION STUDY
JEFFERSON COUNTY, NEW YORK



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Appendix A
Bridge Restrictions Inventory

Bridge Restrictions Inventory

Route	BIN	Location	Carried	Crossed	Restriction	Dimension	Political Unit
NY Route 104	1036600	1.0 Mile East JCT 104/57	104 104 34062027	CSX Transportation	Width	50' 2" ON	City of Oswego
					Posted Load	R-Posted (NO)	
					Height	Special Permit	
NY Route 104	1036610	0.3 Mile East JCT 104/104B	104 104 34063076	Catfish Creek	Width	24' 0" ON	Town of New Haven
					Posted Load	R-Posted (NO)	
NY Route 104	1036620	0.2 Mile East JCT 104/3	104 104 34063128	Little Salmon River	Width	36' 0" ON	Village of Mexico
					Posted Load	R-Posted (NO)	
NY Route 3	1000480	1.1 Mile S. JCT Rt. 3/180	3 3 73021213	Mill Creek	Width	24' 5" UNDER	Town of Hounsfield
					Posted Load	R-Posted (NO)	
NY Route 3	1071950	0.7 Mile SW Jct Rt. 3/CR 75	3 3 73021220	No Name Creek	Width	34' 0" ON	Town of Hounsfield
					Posted Load	R-Posted (NO)	
NY Route 180	1039470	1.5 Mile N. JCT 180/3	180 180 73011016	Muskalonge Creek	Width	38' 0" ON	Town of Watertown
					Posted Load	R-Posted (NO)	
NY Route 12F	1010170	12F/I-81	12F 12F73011054	81I 81I73051235	Width	50' 0" ON	Town of Watertown
					Posted Load	R-Posted (NO)	
					Height	Special Permit	
Interstate 81	1043262	1.1 Mile S JCT 342/I-81	81I 81I73051266	Philomel Creek	Width	35' 0" ON	Town of Pamela
					Posted Load	R-Posted (NO)	

Bridge Restrictions Inventory (Continued)

Route	BIN	Location	Carried	Crossed	Restriction	Dimension	Political Unit
Interstate 81	1032182	JCT I-81 NB/Black Riv.	81I 81I73051241	Black River	Width	28' 0" ON	Town of Watertown
Interstate 81	1032062	JCT 12E/I-81 NB	81I 81I73051243	12E 12E73012003	Posted Load Width	R-Posted (NO) 40' 0" ON	Town of Watertown
Interstate 81	1009682	JCT 12/I-81	81I 81I73051250	12 12 73063004	Posted Load Height Width	R-Posted (NO) Special Permit 36' 5" ON	Town of Pamelia
Interstate 81	1043262	1.1 Mile S JCT 342/I-81	81I 81I73051266	Philomel Creek	Posted Load Height Width	R-Posted (NO) Special Permit 35' 0" ON	Town of Pamelia
Interstate 81	1043262	1.1 Mile S JCT 342/I-81	81I 81I73051266	Philomel Creek	Posted Load Height Width	R-Posted (NO) Special Permit 35' 0" ON	Town of Pamelia
Interstate 81	1043270	JCT 342/I-81	342 342 73011011	81I 81I73051276	Posted Load Width	R-Posted (NO) 28' 0" ON	Town of Pamelia
NY Route 12	1009700	3.9 Mile N JCT 12/342	12 12 73063067	Perch River	Posted Load Height Width	R-Posted (NO) Special Permit 38' 0" ON	Town of Brownville
NY Route 12	1009690	.6 Mile N. JCT 12/I-81	12 12 73063010	Philomel Creek	Posted Load Width	R-Posted (NO) 38' 0" ON	Town of Pamelia
					Posted Load	R-Posted (NO)	

Bridge Restrictions Inventory (Continued)

Route	BIN	Location	Carried	Crossed	Restriction	Dimension	Political Unit
Interstate 81	1010081	JCT 12E/I-81 SB	81I 81I73051243	12E 12E73012003	Width	28' 0" ON	Town of Pamelia
					Posted Load	R-Posted (NO)	
					Height	Special Permit	
Interstate 81	1032181	JCT I-81 SB/Black Riv.	81I 81I73051242	Black River	Width	28' 0" ON	Town of Watertown
					Posted Load	R-Posted (NO)	

Appendix B
Jefferson County Permit

JEFFERSON COUNTY DEPARTMENT OF HIGHWAYS

DIVISIBLE LOAD WEIGHT PERMIT

To move a vehicle or combination of vehicles on highway under the jurisdiction of the Jefferson County Department of Highways exceeding the weight as specified in Section 385 of the Vehicle and Traffic Law.

Original Permit must be carried in vehicle at all times.

Permit issued to:

Permit Number: _____
Date Issued: _____
Expiration Date: _____

VEHICLES and FEES

- (1) Permit Fee: \$10.00
(2) Year & Make of Tractor: _____
(3) Tractor License No: _____
- (4) Tractor Veh. Iden. No: _____
(5) Trailer License No: _____
(6) Trailer Veh. Iden. No: _____

This permit allows the vehicle or combination of vehicles to carry a maximum gross weight of _____ pounds, not to exceed the following axle group weight restrictions.

AXLE GROUP AXLE SPACING LEGAL WEIGHT PERMITTED WEIGHT

Following County Routes or Route Sections NOT PERMITTED:

<u>Route No.</u>	<u>Section</u>	<u>Route No.</u>	<u>Section</u>
CR 6	Broadway Ave. to Lighthouse	CR 59	Middle Rd. to Moffett Rd.
CR 18	CR 46 to NY 37	CR 69	US 11 to NY 177
CR 21	Joyner Rd. To Cottage Hill Rd	CR 90	Brown Rd. to CR 92
CR 26	Dickson Rd to Village of Antwerp	CR 95	NY 177 to CR 189
CR 47	CR 143 to Railroad St Great Bend	CR 97	NY 177 to CR 189
CR 49	NY 126 to CR 144	CR 123	NY 3 to CR 178
		CR 125	NY12E to NY12E

This permit does not authorize operation at permit weights over roads not under the jurisdiction of Jefferson County.

Approved by:

Peter J. Rogers
Right-of-Way Agent

Appendix C

Existing Conditions Photographs

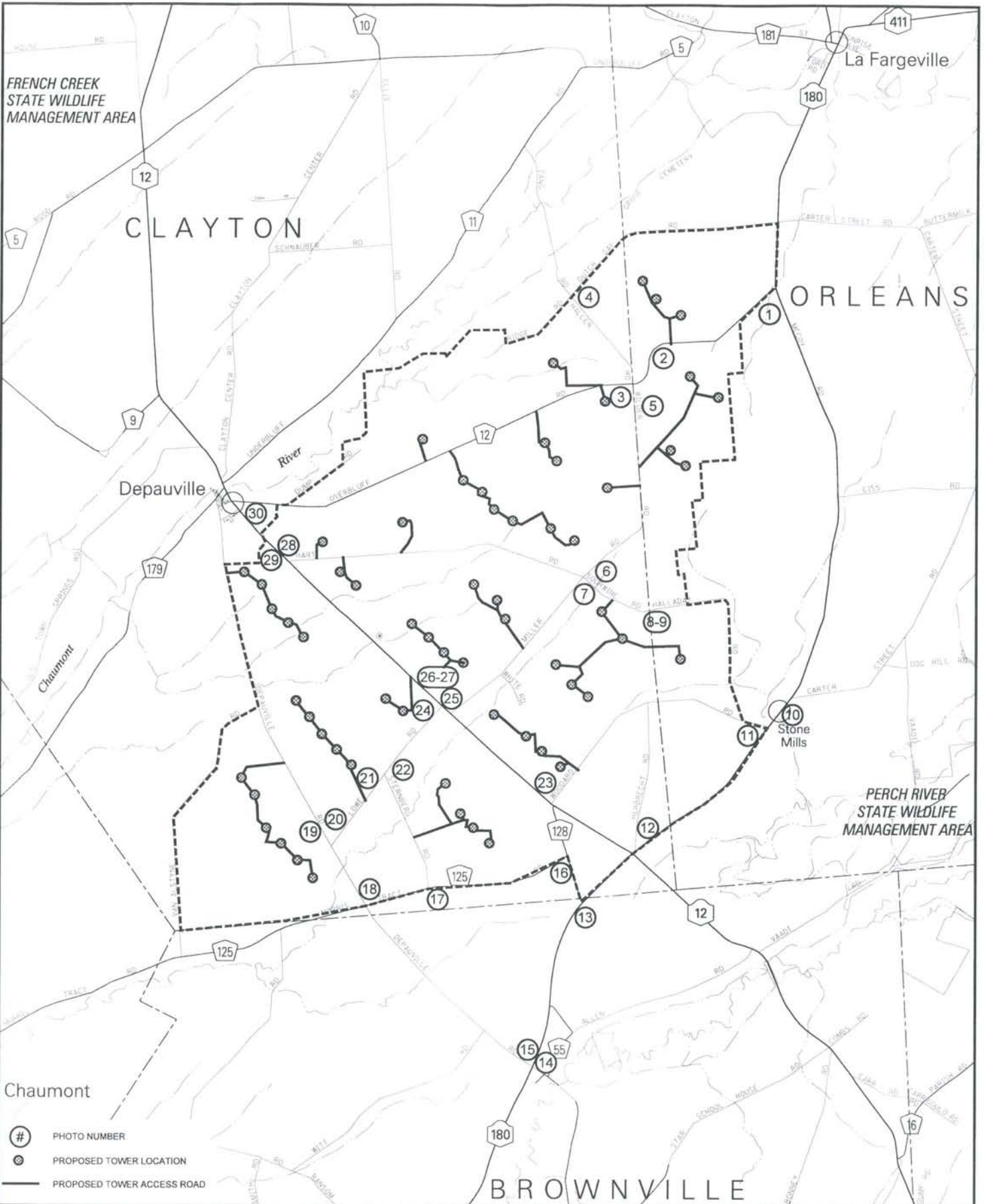


PHOTO LOCATIONS

CLAYTON WIND PROJECT
JEFFERSON COUNTY, NEW YORK



Road Condition Picture Inventory



Photograph 1 - NY Route 180 south of County Road 12



Photograph 2 - County Road 12 on curve



Photograph 3 - County Road 12 west of Wilder Road



Photograph 4 - Haller Road south of Dutch Gap Road



Photograph 5 - Wilder Road south of County Road 12



Photograph 6 - Tubolino Road east of Miller Road

Road Condition Picture Inventory (Continued)



Photograph 7 - Miller Road west of Wilder Road



Photograph 8 - Tubolino Road eastbound curve



Photograph 9 - Tubolino Road westbound curve



Photograph 10 - NY Route 180 north of Woodard Road



Photograph 11 - Woodard Road west of NY Route 180



Photograph 12 - NY Route 12 north of NY Route 180

Road Condition Picture Inventory (Continued)



Photograph 13 - NY Route 180 south of County Road 128



Photograph 14 - DePaulvill Road south of NY Route 180



Photograph 15 - DePaulville Road north of NY Route 180



Photograph 16 - County Road 125 west of County Road 128



Photograph 17 - County Road 125 east of Sternberg Road



Photograph 16 - DePaulville Road north of County Road 125

Road Condition Picture Inventory (Continued)



Photograph 19 - DePaulville Road north of Lowe Road



Photograph 20 - Lowe Road east of DePaulville Road



Photograph 21 - Lowe Road west of Sternberg Road



Photograph 22 - Sternberg Road south of Lowe Road



Photograph 23 - NY Route 12 north of Woodard Road



Photograph 24 - Lowe Road west of NY Route 12

Road Condition Picture Inventory (Continued)



Photograph 25 - Miller Road east of NY Route 12



Photograph 26 - NY Route 12 North of Miller Road



Photograph 27 - NY Route 12 north of Lowe Road



Photograph 28 - Hart Road east of NY Route 12



Photograph 29 - NY Route 12 north of Hart Road



Photograph 30 - NY Route 12 south of County Road 12