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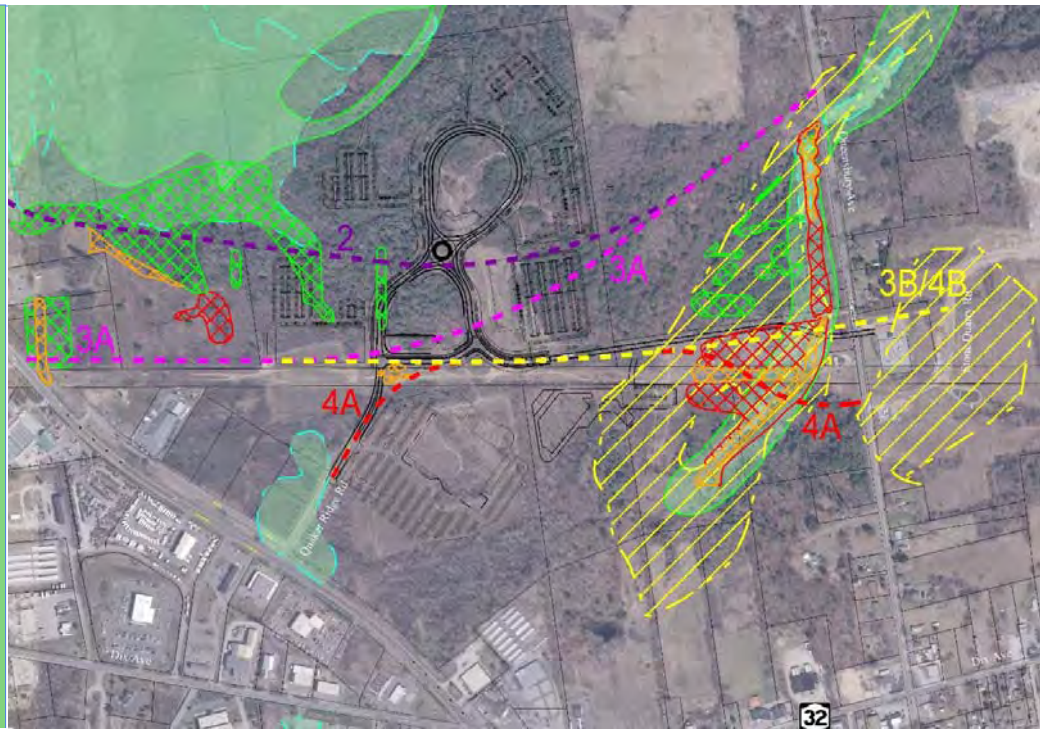

Quaker Road to Queensbury Avenue Connector Road Study

Town of Queensbury, Warren County, NY

Adirondack/ Glens Falls Transportation Council

March, 2012

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Executive Summary

The Adirondack/Glens Falls Transportation Council (A/GFTC) initiated this *Queensbury Connector Road Study* to study the feasibility, costs, and benefits of a proposed connector road between Quaker Road and Queensbury Avenue. Access to several existing facilities including the Floyd Bennett Memorial Airport, Queensbury Business Park, and Airport Industrial Park, is constrained by a lack of direct routing to and from these facilities on the existing two-lane roadway network. In addition, several development projects are under consideration in the area, including an Emergency Services Training Center for Warren and Washington Counties on the west side of Queensbury Avenue, a runway expansion at the airport, and the Quaker Ridge Technology Park (QRTP) proposed on lands north of Walmart at an extension of Quaker Ridge Boulevard. There is also potential for the traveling public to benefit from a roadway connection between Quaker Road and Queensbury Avenue to improve access and mobility. A/GFTC sponsored this study to evaluate the public investment in this potential expansion of the transportation system with respect to the overall public benefit that could be gained when evaluated against the social, environmental, and economic impacts associated with the project.

The study area is located within the southeastern portion of the Town of Queensbury in Warren County. The overall study area is bounded by Hicks Road to the north, Dix Avenue (NY Route 32) to the south, Quaker Road (NY Route 254) to the southwest, Queensbury Avenue to the east, and Ridge Road (NY Route 9L) to the west.

To provide a baseline condition to measure the potential benefit of the connector roadway, existing, short-term (2015), and long-term (2035) traffic conditions were analyzed. The evaluation of existing conditions identified deficiencies in the transportation network independent of the future needs caused by growth in the area. Evaluation and field observations of the existing transportation network (including the new Walmart) show that the study area intersections generally operate at acceptable levels of service during the AM and PM peak hours with one exception: the southbound Quaker Road approach to Dix Avenue, which backs up through the Quaker Ridge Road intersection during the PM peak hour. Modifying the signal phasing at the Quaker Road/Dix Avenue intersection is recommended to improve existing traffic operations so that vehicle queues no longer interfere with operations at the Quaker Road/Quaker Ridge Boulevard intersection.

The crash rate on Dix Avenue between Quaker Road and Queensbury Avenue, which includes the Highland Avenue intersection, is above the statewide average. The NYSDOT is aware of the condition and recently designed pavement marking channelization improvements which will be implemented and may be beneficial.

The short term forecasts (2015) assumed general background traffic growth, development of the Emergency Services Training Center, and Phase 1 of the QRTP. The long range forecasts (2035) add Phase 2 of QRTP, partial build-out of the Queensbury Business Park, and substantial build-out of the Airport Industrial Park. The resulting overall traffic growth equates to approximately 8% at 2015 and 35% at 2035.

Evaluation of the 2015 conditions shows that signal phasing and timing changes are sufficient to address existing operational deficiencies and to provide good operations.

Assuming only Phase 1 of the QRTP is completed, the 2035 traffic volumes can also be accommodated with this same system optimization.

If Phase 2 (full-build) of the QRTP is completed, the evaluation of the 2035 conditions shows that traffic operations will break down and considerable transportation improvements would be needed (consistent with the traffic study for the QRTP). These improvements include:

- widening Quaker Road to include two full through lanes in each direction from approximately 500 feet north of Quaker Ridge Boulevard to approximately 500 feet south of Dix Avenue
- constructing a second eastbound left-turn lane on Quaker Road at Quaker Ridge Boulevard
- constructing a second southbound left-turn lane on Quaker Ridge Boulevard at Quaker Road
- constructing a second southbound left-turn lane on Quaker Road at Dix Avenue
- widening Dix Avenue to include two lanes eastbound leaving the Quaker Road intersection to receive the dual lane southbound left-turn movement and taper back to one lane after approximately 500 feet
- constructing a 150 foot eastbound left-turn lane on Dix Avenue at Queensbury Avenue
- modifying the traffic signal at the Quaker Road intersections with Quaker Ridge Boulevard and Dix Avenue as necessary to accommodate the roadway widening
- implementing signal timing adjustments throughout the study area to maximize operations

A sensitivity analysis indicated that regardless of the timing of QRTP Phase 2, and regardless of whether a connector road is built, the transportation improvements proposed by the QRTP traffic study would be necessary; therefore, these improvements are considered project related mitigation and are referred to in this document as "Improvements by Others". In addition to these improvements, this study also recommends a westbound left turn lane on Dix Avenue at Queensbury Avenue opposite the eastbound left turn lane identified in the QRTP study.

Although this study indicates that the connector road would improve access to adjacent land uses (Emergency Services Training Center, Quaker Ridge Technology Park, and Queensbury Business Park) and provide a small overall mobility benefit, the connector road would not ameliorate the need for improvements to the existing system. In addition, the estimated cost to construct a connector roadway as a public project ranges from $6.1 to $10.4 million, while the potential travel time savings is small (on the order of 15 to 90 seconds depending on the location). Based on the estimated costs and minor public benefits (in terms of regional transportation access and mobility), there does not appear to be sufficient justification to warrant public construction of the connector road.

During December 2011, the Warren County Department of Public Works Committee agreed to pursue a Letter of Intent with the QRTP developer that would in essence allow the developer to construct an access road along County property to his parcel in exchange for an aviation easement along the private property, while enabling the

County to expand the southern runway at the airport. Design, construction, and funding of a connector road have not yet begun and this study is in a position to inform those processes.

While public transportation benefits do not necessitate the construction of a new connector roadway, Warren County and the Town of Queensbury may decide that the economic benefits associated with the runway expansion and access to the Queensbury Business Park, Quaker Ridge Technology Park, Emergency Services Training Center, and Airport Industrial Park warrant some level of public funding for the connector road. Future ownership of the connector roadway was not determined as part of this study, however, it is recommended that if this connector roadway is built as part of a private development, it should meet the design criteria identified in this report including wide shoulders to accommodate bicycles and pedestrians.

I. Introduction

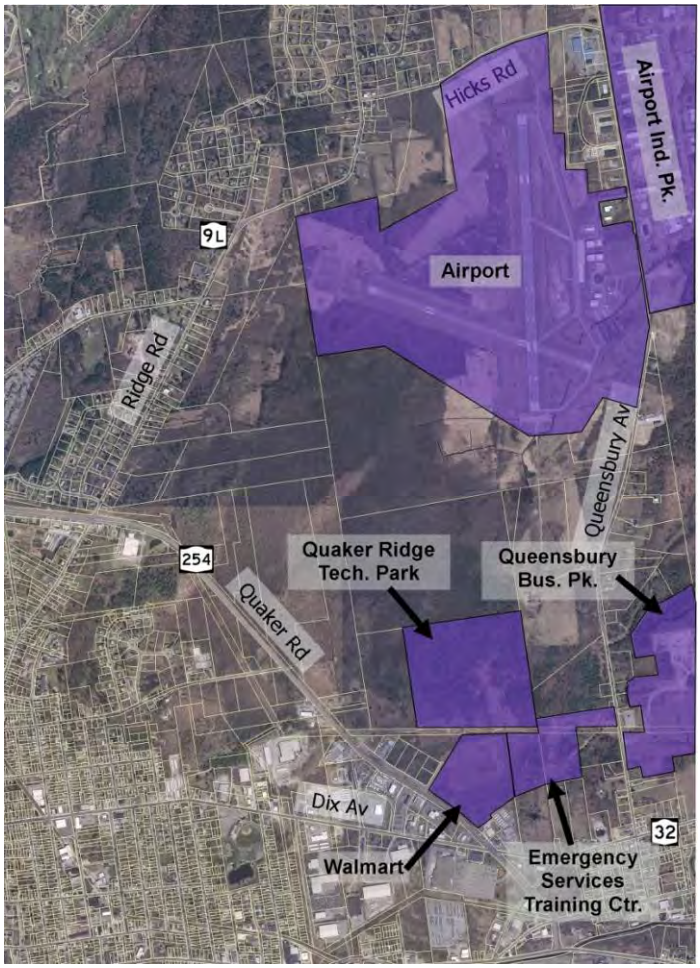
A) Study Background, Overview, and Purpose

The Adirondack/Glens Falls Transportation Council (A/GFTC) initiated this *Queensbury Connector Road Study* to evaluate the potential feasibility, benefits and costs of a proposed new roadway that would connect Quaker Road and Queensbury Avenue in the Town of Queensbury. The study seeks to identify existing deficiencies with the surface transportation system that serves the immediate area, quantify the impacts to the system that result from future growth and development, and analyze various conceptual layouts of the proposed connector road. The study provides and documents:

- an analysis of existing conditions of major components of the surface transportation system, including both operational and safety related measures
- the immediate and longer term benefits and impacts of establishing a roadway connection between Quaker Road and Queensbury Avenue
- a conceptual layout and cross-section of the proposed roadway based upon standard design criteria, known constrains, and comparative benefits and costs
- construction cost estimates for various transportation alternatives

A new connector road between Quaker Road and Queensbury Avenue would potentially improve access to the existing Floyd Bennett Memorial Airport, the Airport Industrial Park, and Queensbury Business Park while also facilitating direct access to planned developments such as the Emergency Services Training Center, the Quaker Ridge Technology Park and the recently completed Walmart.

This study evaluates the necessity, feasibility, and viability of a connector road between Quaker Road and Queensbury Avenue in the context of the regional transportation system. In general, any publicly funded expansion of the transportation system should provide an overall benefit when evaluated against environmental impacts and the capital and maintenance costs associated with a new roadway.



B) Study Area

The study area is located within the southeastern portion of the Town of Queensbury in Warren County. The overall study area is bounded by Hicks Road to the north, Dix Avenue (NY Route 32) to the south, Quaker Road (NY Route 254) to the southwest, Queensbury Avenue to the east, and Ridge Road (NY Route 9L) to the west as shown in the adjacent image. The study boundaries include the following intersections:

- Quaker Road/Ridge Road
- Quaker Road/Quaker Ridge Boulevard
- Quaker Road/Dix Avenue
- Lower Dix Avenue/Highland Avenue
- Queensbury Avenue/Dix Avenue
- Queensbury Avenue/Stone Quarry Road
- Queensbury Avenue/Airport Driveway
- Queensbury Avenue/Hicks Road/Casey Road
- Ridge Road/Hicks Road

In addition to the overall study area, a more narrowly focused area was identified for preliminary environmental screenings where new roadway alignments could be considered. This environmental screening area is located south of the airport, as shown on Figure 1.1, and also includes the study intersections located north and west of the airport.

C) Study Objectives

The Study Advisory Committee defined several objectives for this planning study. They are:

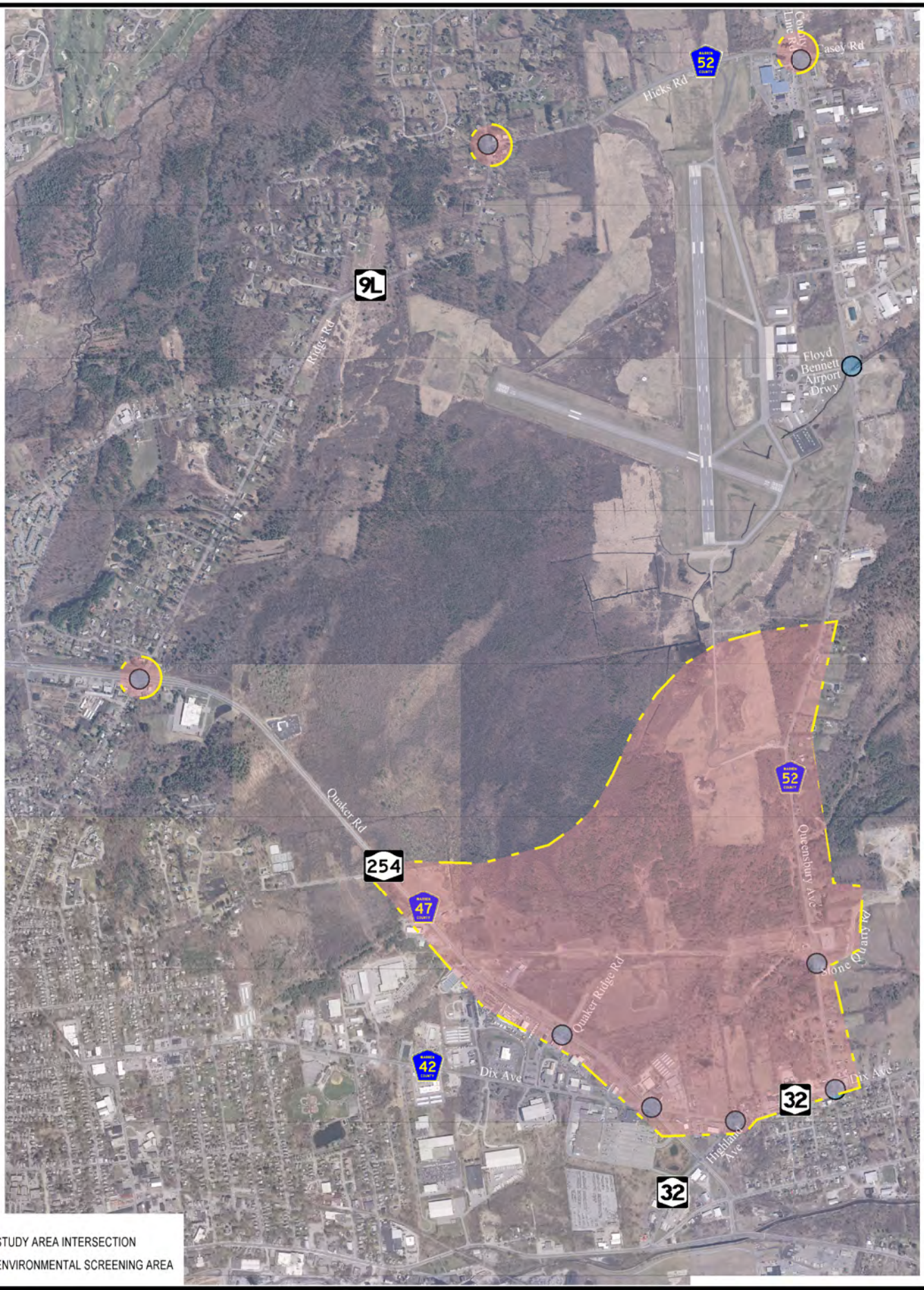
- Evaluate the study area transportation network to determine feasible improvement alternatives that optimize land use access, traffic operations, safety, and multimodal accommodations for existing, planned and potential land use development over the next 20-30 years.
- Evaluate potential significant environmental impacts of feasible alternatives and the means to avoid or mitigate them.
- Determine current cost estimates for feasible improvement alternatives given the probable development parameters and budget and implementation phasing.

D) Approach

To accomplish the study objectives, the study involved several major tasks including:

- inventory existing conditions and environmental constraints
- development of future transportation and land use conditions based upon planned and approved projects surrounding the study area
- evaluation of several transportation improvement conceptual alternatives, including upgrading the existing system and construction of a connector roadway
- comparison of the conceptual alternatives through the development of an evaluation matrix
- public involvement through agency coordination and public meetings

The alternatives are evaluated in accordance with A/GFTC's Twelve Principles, adopted by the Metropolitan Planning Organization (MPO) to guide future transportation planning and programming activities. In general, these principles acknowledge the importance of coordinating land use and transportation planning, maintenance and maximum utilization of the existing transportation system, accommodating all modes of travel for viable transportation options, and providing and operating a safe transportation system for all users.



STUDY AREA

QUEENSBURY CONNECTOR ROAD
TOWN OF QUEENSBURY
WARREN COUNTY, NY

Creighton Manning

PROJECT: 111-075	DATE: 12/2011	FIGURE: 1.1

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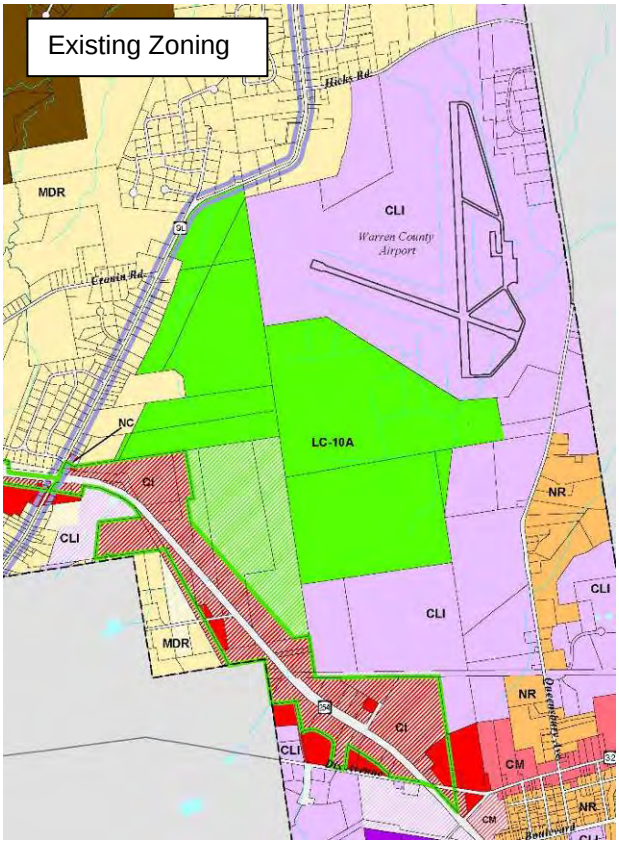
II. Existing Conditions

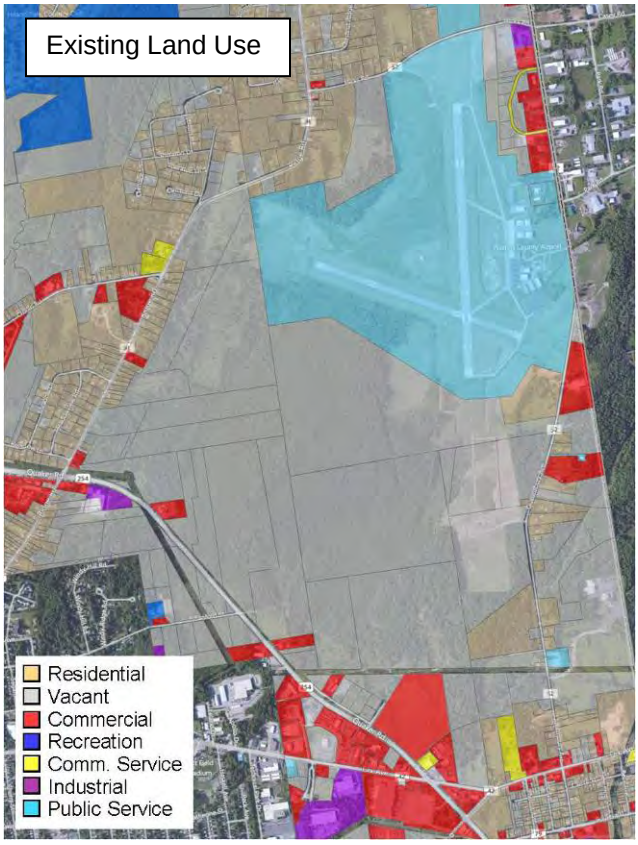
A) General Environment

1. Zoning and Existing Land Use

A mix of zoning types exist within the study area as shown in the below (left). The area is zoned with the following:

- Commercial Light Industrial (CLI, purple)
- Land Conservation 10 Acre (LC-10A, green)
- Commercial Intensive and Commercial Moderate (CI and CM, red)
- Neighborhood Residential (NR, orange)
- Moderate Density Residential (MDR, beige)





Along Quaker Road, the properties are zoned as Commercial Intensive. Commercial Moderate zoning extends along Dix Avenue toward the Washington County line. The airport and surrounding area are primarily zoned Commercial Light Industrial. South and west of the airport, the land is zoned for land conservation. Residential uses are designated on the east side of Queensbury Avenue south of the airport and along Ridge Road and Hicks Road.

The above right image illustrates the existing land uses and the large amount of vacant land available in the study area. The image generally shows good correlation between existing land use and existing zoning with a few exceptions at the parcel level. Vacant developable land includes commercial opportunities along Quaker Road and Dix

Avenue and industrial development along Queensbury Avenue, including build-out of the Airport Industrial Park and Queensbury Business Park. As these areas are developed, driveway spacing and location will be important considerations to preserve corridor operations and mobility.

One notable land use in the study area is the Floyd Bennett Memorial Airport. While daily operations at the airport produce relatively little vehicular traffic, the annual Balloon Festival brings a large amount of traffic to the airport and can cause traffic congestion during peak arrival and departure time periods. Providing additional access to event parking and coordinating parking in multiple areas at once could relieve some of the congestion associated with the festival. The South Queensbury Fire Station is also located in the study area. Alternative route options and increased access to nearby parcels has the potential to benefit emergency response service, primarily to the directly accessed parcels.

2. Hazardous Waste and Contaminated Materials

A search of federal and state environmental databases was conducted by Environmental Data Resources Inc (EDR). The results of the search were provided in an EDR Radius Map Report dated September 7, 2011 (Appendix A). The EDR Report incorporated listed facilities, with environmental records, on several environmental databases in and surrounding the project corridor. The EDR Report included a review of the available federal and state environmental databases and was compiled in general accordance with American Standard Test Method (ASTM) standards for a government records review. The EDR Report included (but was not limited to) a review of the following databases:

Federal Databases

- National Priorities List (NPL), Proposed NPL, and Delisted NPL
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLA Active and Archive)
- Resource Conservation and Recovery Act Information System – Treatment, Storage, and Disposal Facilities (RCRATSD)
- RCRA Generator – Small and Large Quantity Generators
- RCRA Information System – Corrective Action Sites (CORRACTS)
- Emergency Response Notification System (ERNS)
- Land Use Control Information System (LUCIS)
- PCB Activity Database System (PADS)
- Toxic Chemical Release Inventory System (TRIS)
- Section Seven Tracking System (SSTS)
- Civil Enforcement Docket (DOCKET)
- Toxic Substance Control Act Inventory (TSCA)

New York State Databases

- New York State Inactive Hazardous Waste Disposal Site Registry (HSWDS)
- New York State Solid Waste Facilities List (SWF)
- New York State Leaking Storage Tank Data (LTANKS)
- New York State Major Oil Storage Facilities List (MOSF)
- New York State Chemical Bulk Storage Tanks List (CBS)
- New York State Petroleum Bulk Storage Tank List (PBS)

- New York Spills List (SPILLS)

Tribal Records and EDR proprietary databases were also queried. A review of specific case files maintained by the NYSDEC was not included in this scope of work.

Government Records Review Results
The environmental database review identified 39 listed incidents with known addresses/locations within the standard approximate minimum search distance (AMSD) of the project corridor. Multiple incidents occurred at some facilities. Many additional sites in the area did not have numbered street addresses or were not plotted on the EDR Map. Instead, these sites were listed as Orphan Sites. Database information for the Orphan Sites was reviewed on EDR's website. Pertinent sites listed within the AMSD or Orphan Sites that reference features/locations along the project corridor are discussed below.

National Priorities List (NPL) Sites or State Hazardous Waste Sites (SHWS) were not listed in the EDR Report as being present within or adjoining to the project study area. Several petroleum releases have occurred along Quaker Road and Dix Avenue. The majority of these releases are located west of Quaker Road and south of Dix Avenue.

Soils containing petroleum compounds exceeding cleanup objectives appear to remain at 108 Lower Dix Avenue (located at the northwest corner of the Dix Avenue/ Queensbury Avenue intersection). Past releases at 756 Quaker Road (Hess Station) and 777 Quaker Road (Stewarts Shops/Former King Fuels) may have also impacted soil and/or groundwater at these locations along the Dix Avenue/Quaker Road intersection.

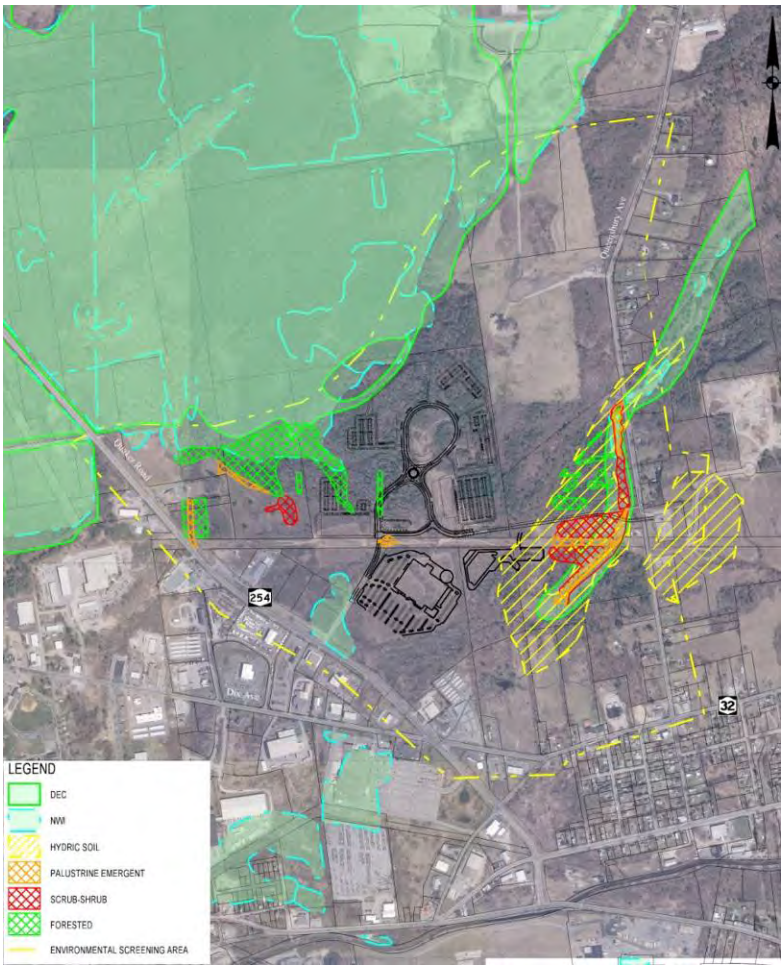
Field Observations
No visual evidence of contamination was observed in areas that were traversed during the screening of the connector road corridor. No visible air emissions were observed, and no odors were detected.

Two features at two different locations were discovered that may warrant further investigation regarding the potential to represent a concern for Hazardous Waste/ Contaminated Materials relative to the connector road corridor project. One feature consists of a capped steel well casing inside of an open-top plywood box. There is a utility pole within several feet of the well, but it did not appear to be in service. The well is located in a field that is bounded to the north by the unpaved part of East Sanford Road (on east side of Quaker Road) and to the west by Quaker Road. It is unknown whether this well is an abandoned private well or a monitoring well. A Freedom of Information Act (FOIA) request was submitted to the Town of Queensbury in an attempt to obtain additional information regarding this well. The second feature is located next to Stone Quarry Road, behind the substation with frontage along the east side of Queensbury Avenue. The feature contains pieces of equipment and a small building and could be a pump station or some type of abatement or treatment system. A FOIA request was submitted to the Town in an attempt to obtain additional information regarding this site.

3. Wetlands Screening

National Wetland Inventory (NWI), New York State Department of Environmental Conservation (NYSDEC) Freshwater wetlands maps, topographic mapping, the County Soil Survey, and hydric soils lists have been reviewed to assist with identifying potential wetland locations. Mapped wetland locations exist within the project study area.

A wetland field screening was completed November 2 through November 4, 2011. During that visit, several areas of wetland were observed and consisted of palustrine emergent, scrub-shrub, and forested wetlands. The general locations of the observed wetland areas are shown in the image to the right in the orange, red, and green cross-hatch pattern, and can be referenced on Figure A.1 in Appendix A. The image shows the existing Walmart and the proposed Emergency Services Training Center and QRTP. The wetland locations are approximate and for planning purposes only; a formal delineation would be required during the design phase of a connector road.



Two of the identified wetland areas are mapped as state-regulated freshwater wetlands, which also correspond with mapped NWI areas (reference Figure A.1). New York State Freshwater Wetland HF-3 (left side of the image), is an extensive wetland complex occupying an area of over 700-acres. The majority of the wetland area is comprised of swamp, and consists of cedar and hardwoods. A smaller portion of this wetland, as described further in the following section, *Ecology and Endangered/Threatened Species*, has been classified as a marl fen, but is located between HF-3 proper and the end of one of the runways at the Floyd Bennett Memorial Airport. The other state-regulated wetland is HF-8, which is located in the eastern most part of the study area (right side of the image) and is transected by Queensbury Avenue.

Lastly, there are three to four small wetlands that have developed in topographic depressions near the utility easement at the end of Quaker Ridge Boulevard. These areas support emergent wetland habitats. Although small in area and at first observation not ecologically significant, a great blue heron took to flight out of one the areas as it was approached by the screener. If any of the alternatives, with the

potential for wetland impacts, are progressed for further consideration and design, the wetland boundaries would have to be delineated to determine impacts and identify permit requirements.

4. Ecology and Endangered/Threatened Species

A review of the United States Fish and Wildlife Service (USFWS) County List of Threatened/Endangered Species was completed. The Indiana bat (*Myotis sodalis*) and karner blue butterfly (*Lycaeides Melissa samuelis*) are listed as occurring in Warren County (reference the USFWS list in Appendix A). The list indicates that the Indiana bat is present in Warren County in winter and summer-winter, which suggests that there is at least one hibernacula located in the County. Bog turtle (*Clemmys muhlenbergii*) is also on the list, but is denoted as an historic account.

Based on a preliminary field review, it appears that the study area contains summertime Indiana bat habitat. More specifically, suitable habitat was observed in field and wetland forest areas that abut the east side of Quaker Road where it intersects East Sanford Road. The habitat consists of a predominately forested wetland with scrub-shrub and emergent plant communities mixed-in, particularly where there is an existent drainage channel. Included in the wetland forest area are dead or dying trees with exfoliating bark, which could be used by male and female Indiana bats for roosting in the summertime. A large-diameter dead tree with exfoliating bark openly stands in a field adjacent to the forested wetland area; since this tree is large in diameter, is dead with large pieces of loose bark, and is exposed to the appropriate solar gain, this tree has the potential to be used by female Indiana bats as a maternity roost.

Karner blue butterflies inhabit extensive pine barrens, oak savannas or openings in oak woodlands, and open areas, such as airports and right-of-ways, that support the growth of lupine (*Lupinus perennis*), the only food source consumed by the species larval stage. The origin of remnant populations in Saratoga and Warren Counties are not certain since there is little evidence for former pine barrens occurring in these areas. Some recent populations have occupied sandy successional old fields.

In New York State, bog turtles inhabit open-canopy wet meadows, sedge meadows, and calcareous fens. In the Hudson River Valley, bog turtle habitats may be isolated from other wetlands or they may exist as part of larger wetland complexes. Bog turtle habitat is often fed by groundwater and the vegetation always includes various species of sedges that form hummocks and the soil is mucky.

None of the wetlands identified during the field screening of the project area contained any features typical of suitable bog turtle habitat (e.g., spring fed water and hummock forming vegetation); further study regarding the effects of the connector road on the bog turtle is not necessary.

NYSDEC National Heritage Program (NHP) responded in a letter, dated November 18, 2011, regarding state-listed threatened/endangered species, significant natural communities, and other significant habitats. The Natural Heritage Report on Rare Species and Ecological Communities contained one record (reference Appendix A). The record shows the occurrence of a significant ecological community. The community is

a marl fen located at the Floyd Bennett Memorial Airport marsh, which is in the study area. The marl fen is contiguous with NYS Freshwater Wetland HF-3 and is adjacent to the southern end of the north-south runway (Runway 1 end of Runway 1-19). Open marl flats and marl pools formerly occurred between the runway and HF-3, a rich swamp comprised of a Cedar swamp and hardwood swamp, prior to being ditched for agricultural purposes and extensive pumping of the ground water.

5. Farmland/Agricultural Property

A review of the County soil survey has determined that prime/unique soils exist within the project area (Appendix A, Figure A.5). Although the project study area contains soils mapped as prime/unique, the area is zoned as industrial. As such, no further involvement is necessary with respect to the Farmland Protection Policy Act. The project area is not within a designated agricultural district; therefore, the provisions of the Agriculture and Markets Law do not apply.

6. Floodplains, Surface Waters and Critical Environmental Areas

Based on review of Federal Emergency Management Agency (FEMA) Flood Maps for Community Panels 3608790029B and 3608790027B, the project study area is not within an area designated as a 100 or 500-year flood zone although there is a 500-year floodplain located to the northwest of the screening area. As such, advancement of any of the proposed alternatives would not require further study with regard to the NYS Flood Insurance Compliance Program or Executive Order 11988 Floodplain Management.

No surface water bodies were observed within the project study area.

There are three (3) Critical Environmental Areas listed for Warren County (Round Pond, Rush Pond, and Glen Lake/Surrounding area). None of these areas fall within the bounds of the project study area.

7. Historic/Archeological Resources

A review of the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) GIS mapping has determined that the entire project study area is mapped as potentially archeologically sensitive. Specifically known is the J. Cross Historic Site which includes the remains of a 19th century school house on the southeast quadrant of the Ridge Road/Hicks Road intersection. According to work completed for Warren County, this site is likely Historic Register eligible. For any areas where new disturbance is proposed, the NYSOPRHP may require more detailed investigations. A project review request will need to be submitted to SHPO regarding the potential for historic/cultural impacts.

B) Transportation

1. Study Area Roadways

- Quaker Road – Quaker Road provides northwest/southeast travel through the study area and is designated County Route 70 (CR 70) and NY Route 254. Within the study limits Quaker Road has one 12-foot travel lane in each direction with 8-foot paved shoulders. According to the 2010 Pavement Data Report published by the NYSDOT, Quaker Road is an urban principal arterial with good

pavement condition. Quaker Road is also part of the National Highway System. The posted speed limit is 40 mph.

- Dix Avenue – Dix Avenue provides east/west travel through the study area and is designated CR 42 from the Glens Falls City line to the intersection with Highland Avenue. From Highland Avenue east, Dix Avenue is designated NY Route 32 and is part of the National Highway System. Dix Avenue has one 12-foot travel lane in each direction with 2 to 5 foot paved shoulders. Dix Avenue is classified as an urban principal arterial with good pavement condition. The posted speed limit is 35-mph.

- Queensbury Avenue – Queensbury Avenue provides north/south travel through the study area, is classified as an urban minor arterial, and designated CR 52. Queensbury Avenue has one 12-foot travel lane in each direction with 4 foot paved shoulders. The posted speed limit is 55-mph.

- Ridge Road – Ridge Road generally provides north/south travel through the study area and is designated NY Route 9L. Ridge Road has one 11-foot travel lane in each direction with 3 to 6 foot paved shoulders. According to the 2010 Pavement Data Report, Quaker Road is an urban minor arterial with fair to good pavement condition. The posted speed limit is 45 mph.

- Hicks Road – Hicks Road, classified as an urban minor arterial, provides east/west travel through the study area and is designated CR 52. Hicks Road has one 10 to 11-foot travel lane in each direction with 2 to 4-foot paved shoulders. There is no posted speed limit on Hicks Road. This roadway is currently being designed for rehabilitation/reconstruction.

2. Study Intersections

The traffic control and geometry of the primary study area intersections are as follows:

- Quaker Road/Ridge Road – This is a four-way intersection operating under actuated traffic signal control. This traffic signal is part of a time-based coordinated system with other traffic signals located to the west on Quaker Road. The eastbound and westbound Quaker Road approaches each provide a left-turn lane, a through lane, and a shared through/right-turn lane. The northbound and southbound Ridge Road approaches each provide a left-turn lane and a shared through/right-turn lane. There are no pedestrian accommodations at the intersection.

- Quaker Road/Quaker Ridge Boulevard – This is a four-way intersection operating under actuated traffic signal control. The Quaker Road northbound approach provides individual left-turn, through, and right-turn lanes, the southbound approach provides a left-turn lane and a through lane. The eastbound Garvey Auto Body driveway approach provides a single lane for shared travel movements. The westbound Quaker Ridge Boulevard approach to the intersection which provides access to the new Walmart includes a left-turn lane and a shared through/right-turn lane. There are no pedestrian accommodations at the intersection.

- Quaker Road/Dix Avenue – This is a four-way intersection operating under actuated traffic signal control. The intersection is part of a time-based coordinated system with traffic signals located to the south on Quaker Road. These two roadways intersect at an approximate 45 degree angle creating obtuse and acute turning maneuvers. The eastbound Dix Avenue approach provides individual left-turn, through, and right-turn lanes. The westbound Dix Avenue approach provides a shared left-turn/through lane and a right-turn lane. The northbound and southbound Quaker Avenue approaches to the intersection each provide an individual left-turn lane and a shared through/right-turn lane with painted divisional islands for the right turns. There are no pedestrian accommodations at the intersection.

- Lower Dix Avenue/Highland Avenue – This is a Y-shaped intersection operating under stop sign control on the northbound Highland Avenue approach. All approaches to the intersection provide a single lane for shared travel movements. There are no pedestrian accommodations at the intersection.

- Queensbury Avenue/Dix Avenue – This is a four-way intersection operating under actuated traffic signal control. Each approach to the intersection provides a single lane for shared travel movements. There are no pedestrian accommodations at the intersection.

- Queensbury Avenue/Stone Quarry Road – This is a three-way intersection operating under stop sign control on the westbound Stone Quarry Road approach. Each approach to the intersection provides a single lane for shared travel movements. There are no pedestrian accommodations at the intersection.

- Queensbury Avenue/Hicks Road/Casey Road – This is a four-way intersection operating under all-way stop sign control. The eastbound Hicks Road and westbound Casey Road approaches roads have larger stop signs located on both sides of the roadway approaching the intersection calling greater attention to the traffic control. All intersection approaches provide a single lane for shared travel movements. There are no pedestrian accommodations at the intersection.

- Ridge Road/Hicks Road – This is a three-way intersection operating under stop sign control on the westbound Hicks Road approach. Each approach to the intersection provides a single lane for shared travel movements. There are no pedestrian accommodations at the intersection.

3. Existing Traffic Characteristics

Available traffic volumes data was researched and utilized for this study. Additional counts were conducted in September at the recently opened Walmart, and the airport driveway and Stone Quarry Road intersections with Queensbury Avenue. The additional data was used to supplement the existing data and to confirm growth in the study area. The 2011 Existing Traffic Volumes are summarized on Figures 2.1 and 2.2.

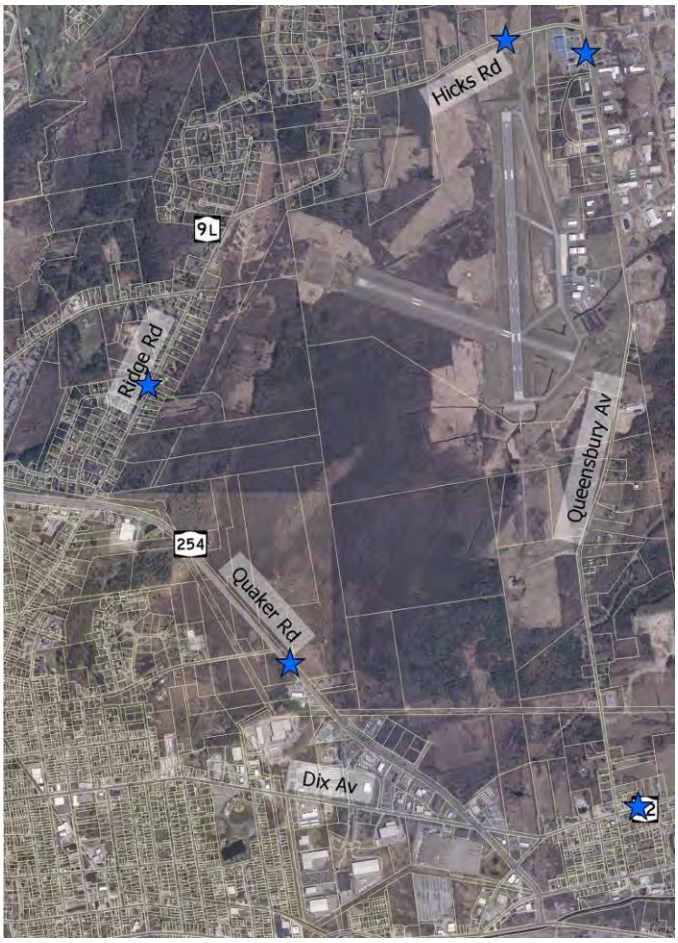


Table II.1 summarizes the traffic volume data corresponding to the daily traffic volume data available for the count locations shown on the aerial image to the right. It is noted that the afternoon peak hour volumes are higher than the morning peak hour volumes. Therefore, the afternoon peak hour is considered the critical peak hour and is represented in Table II.1.

The table shows that daily traffic volumes in the study area vary by location. Design Hour Volumes (PM peak hour) represent between 9% and 10% of daily traffic volumes. The peak direction of travel is only slightly higher than the off-peak direction, and truck percentages range from 3% to 9% of two-way traffic volumes.

Table II.1 – Traffic Volume Summary

Roadway	AADT	DHV	K	DDHV	D	Trucks
Quaker Road	17,925*	1,735	9.7%	900	52% SEB	7%
Dix Avenue	14,850*	1,390	9.4%	705	51% EB	9%
Queensbury Avenue	3,025**	295	9.8%	175	59% SB	3%
Hicks Road	3,825**	345	9.0%	175	51% WB	3%
Ridge Road	6,425*	620	9.6%	355	57% NB	5%

* AADT from NYSDOT traffic volume data
** AADT estimate from non-NYSDOT automatic traffic recorder count
K = Peak hour volume as a percent of daily volume
DDHV = Directional design hour volume
D = Percent of traffic in predominant direction during PM Peak

4. Traffic Operations

Intersection Level of Service (LOS) and capacity analysis relate traffic volumes to the physical characteristics of an intersection. Intersection evaluations were made using

Synchro7 software which automates the procedures contained in the 2000 Highway Capacity Manual. Evaluations were also completed using SimTraffic7 simulation software. Levels of service range from A to F with level of service A conditions considered excellent with very little delay while level of service F generally represents conditions with very long delays. Table II.2 summarizes levels of service and the corresponding delay range for unsignalized and signalized intersections.

Table II.2 – 2011 Level of Service Ranges

Level of Service	Control Delay (sec/veh)	
	Unsignalized Intersection	Signalized Intersection
A	≤ 10.0	≤ 10.0
B	>10.0 and ≤ 15.0	>10.0 and ≤ 20.0
C	>15.0 and ≤ 25.0	>20.0 and ≤ 35.0
D	>25.0 and ≤ 35.0	>35.0 and ≤ 55.0
E	>35.0 and ≤ 50.0	>55.0 and ≤ 80.0
F	>50.0	>80.0

Table II.3 summarizes the existing overall levels of service at the study intersections during the morning and afternoon peak periods.

Table II.3 – 2011 Existing Levels of Service

Intersection	Control	AM Peak Hour	PM Peak Hour
Quaker Rd/Ridge Rd	Signal	B (18.7)	C (21.0)
Quaker Rd/Quaker Ridge Rd	Signal	B (14.9)	B (19.1)
Quaker Rd/Dix Ave	Signal	C (30.8)	D (49.7)
Lower Dix Ave/Highland Ave	TW stop	C (16.1)	C (19.2)
Lower Dix Ave/Queensbury Ave	Signal	A (9.4)	B (11.7)
Queensbury Ave/Stone Quarry Rd	TW stop	B (10.5)	B (10.8)
Queensbury Ave/Airport Driveway	TW stop	A (9.4)	B (10.9)
Queensbury Ave/Hicks Rd/Casey Rd	AW stop	A (8.3)	A (9.1)
Hicks Rd/Ridge Rd	TW stop	B (13.7)	C (17.2)

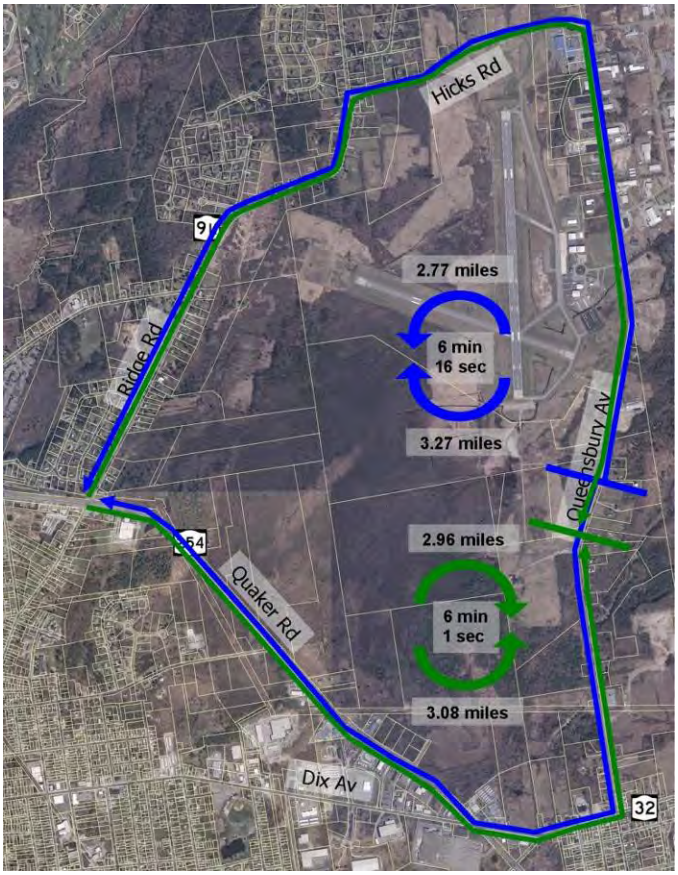
TW, AW = Two-way or All-way stop controlled intersection
X (Y.Y) = Level of Service (average delay in seconds per vehicle)

Table II.3 shows that the intersections operate at level of service C or better during the AM peak hour and level of service D or better during the PM peak hour, indicating that all intersections operate at acceptable levels of service under existing conditions. The results of the existing conditions capacity and levels of service analysis confirm that the PM peak hour is the critical design hour in the study area. Therefore, future conditions analysis will be completed only for the PM peak hour.

Field observations noted that the southbound Quaker Road approach to Dix Avenue backs up through Quaker Ridge Road during the PM peak hour. Although the intersection operates at LOS D overall, long delays occur daily on this southbound approach and improvements should be considered.

5. Existing Travel Times

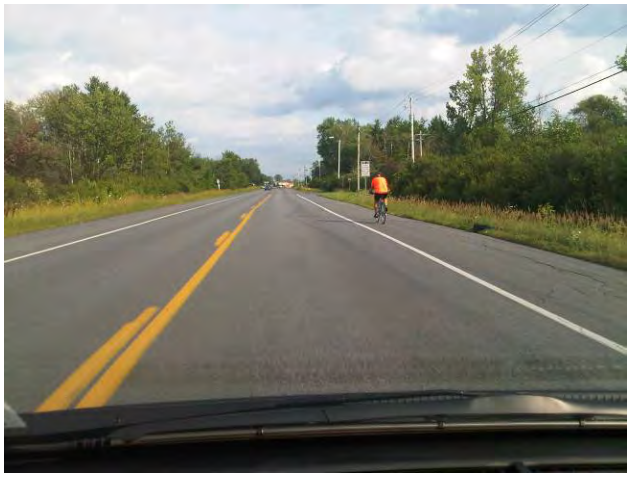
Several travel times were documented during the PM peak hour for use in the alternatives analysis to determine accessibility in the study area. The image to the right shows the approximate point of equal travel time on Queensbury Avenue when travelling to the Ridge Road/Quaker Road intersection (blue) and travelling from the Ridge Road/Quaker Road intersection (green). The horizontal lines crossing Queensbury Avenue represent the point of equal travel time. For example, when travelling from the "equal" point on Queensbury Avenue, it takes 6 minutes and 16 seconds to reach the Ridge Road/Quaker Road intersection. Since the "equal" point on Queensbury Avenue is located south of the entrance to the airport, the data shows that it is quicker to travel to and from the airport by utilizing Hicks and Ridge Roads around the north side of the airport, which is the signed route to the airport. The data also shows that it is quicker to travel to and from the Queensbury Business Park by traveling around the south side of the airport. The change to this accessibility as a result of the connector road alternatives is discussed in Section IV.C.3.



6. Bike and Pedestrian Accommodations

Pedestrians and cyclists in the study area face multiple issues, including a lack of sidewalks, crosswalks, and buffering from traffic. Wide intersections that lack crosswalks, sidewalks, and pedestrian signals make it difficult for pedestrians to cross roadways. In addition, while Quaker Road generally has wide shoulders that accommodate bicycles, the remainder of the study roadways generally have narrow shoulders making navigating the area difficult for bicyclists.

Narrow shoulders on Dix Avenue at Highland Avenue make bicycle and pedestrian travel difficult.



Wide shoulders on Quaker Road allowing for bicycle travel along the roadway.

7. Crash History

Crash data was obtained to determine crash trends along the study area roadways. Crash data was provided by NYSDOT for the latest three years of available data. The Accident Location Information System (ALIS) data is available for the period from January 1, 2008 through January 31, 2011 for all of the roadways in the study area. Table II.4 summarizes the crash history in the area.

Table II.4 – Crash History from January 1, 2008 through January 31, 2011

Roadway Segment*	Number of Crashes	Crash Rate (Crashes/MEV)	Statewide Average Crash Rate
Quaker Road: Ridge Road to Dix Avenue	30	1.80	2.88
Dix Avenue: Quaker Road to Queensbury Avenue	64	7.87	2.88
Queensbury Avenue*: Dix Avenue to Hicks Road	31	3.92	2.47
Hicks Road*: Ridge Road to Queensbury Avenue	4	2.30	2.47
Ridge Road*: Hicks Road to Quaker Road	27	2.30	2.88

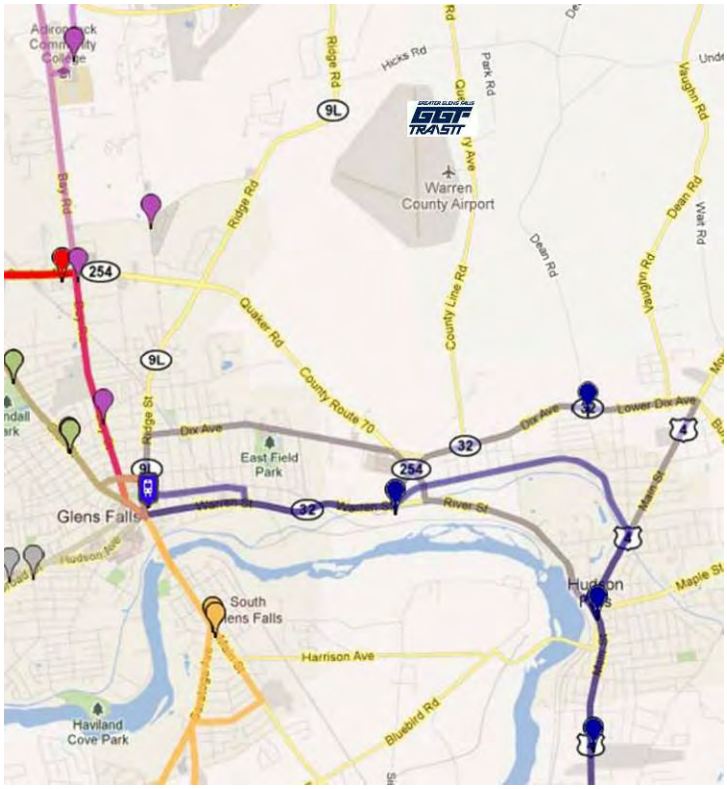
*It is noted that the character of county and town highways may be different than state highways. Therefore, the comparison to the statewide average crash rate may not be as applicable for county and town highways.

The table shows that two segments have crash rates higher than the statewide average: Queensbury Avenue from Dix Avenue to Hicks Road and Dix Avenue from Quaker Road to Queensbury Avenue. Typically, only areas with crash rates exceeding the statewide average by a statistically significant margin are selected for further analysis. For this planning study, it is noted that the Dix Avenue roadway segment experienced a crash rate more than 2.5 times the statewide average. The NYSDOT is aware of the condition and has designed pavement marking channelization improvements which will be installed to align northbound Highland Ave motorists at a 90 degree angle to Dix Avenue which may be beneficial. Should the NYSDOT reconstruct Route 32 in this area

sometime in the future, additional improvements such as a left turn lane on Dix Avenue should be considered at that time.

8. Existing Transit Service

Greater Glens Falls Transit (GGFT) provides year-round fixed route public transit, and ADA complementary paratransit services in the study area. The image to the right shows the fixed route service in the area. Transit Route 4, identified by the blue pins and route, travels through the study area. In addition, the GGFT base of operations facility is located on Queensbury Avenue near the Floyd Bennett Memorial Airport.

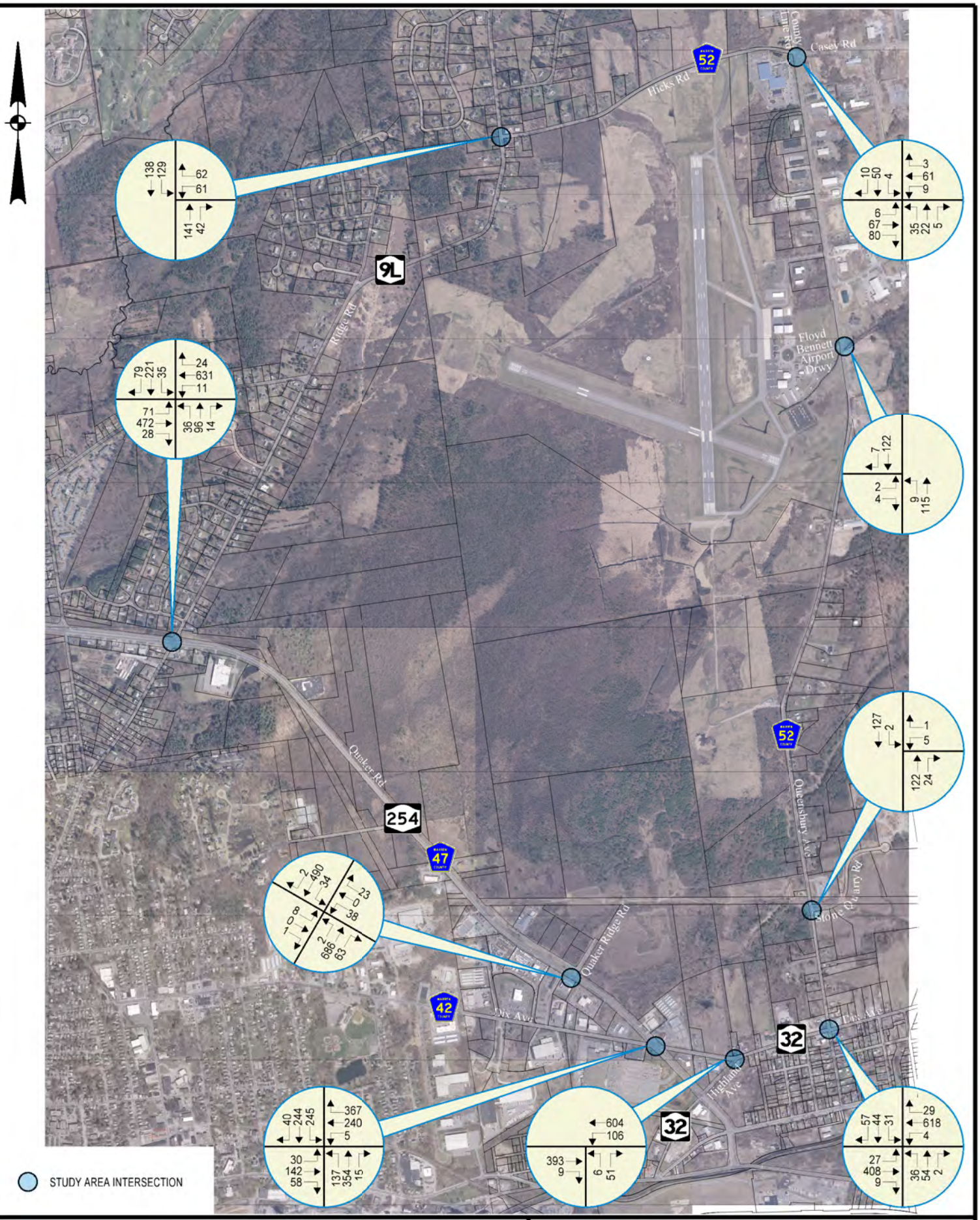


C) Public Meeting and Workshop #1

A public meeting and workshop for the *Quaker Road to Queensbury Avenue Connector Road Study* was held on September 29, 2011 at the South Queensbury Fire Department. The purpose of the meeting was to introduce the study to the public, outline project goals, existing conditions and growth potential in the study area, and receive input from the public regarding issues and opportunities in the study area.

The workshop began with a PowerPoint presentation after which community members were divided into facilitated groups. Participants were specifically asked to identify problems and opportunities for multimodal transportation improvements. Each facilitator then summarized the problems and opportunities identified by the small groups. In general, there was strong support for fixing existing deficiencies including optimizing the existing system at the Quaker Road/Dix Avenue signalized intersection and mitigating the left turn congestion at the lower Dix Avenue/Highland Avenue intersection. There was neither strong support nor opposition to the connector road concept. Several trade-offs, benefits and impacts were mentioned. Some participants noted the potential for increased traffic through the neighborhood on lower Queensbury Avenue, while others noted it could reduce truck traffic in the same area. Meeting attendees also voiced little support for pedestrian-specific improvements like sidewalks, crosswalks, and pedestrian signals citing low density, few users, and scarce resources that could be better used elsewhere.

The results from the first public workshop were considered when developing the improvement alternatives discussed in the following section. Appendix B contains a detailed summary of Public Workshop #1.



2011 AM PEAK HOUR
TRAFFIC VOLUMES

QUEENSBURY CONNECTOR ROAD
TOWN OF QUEENSBURY
WARREN COUNTY, NY

Creighton Manning

PROJECT: 111-075 | DATE: 12/2011 | FIGURE: 2.1

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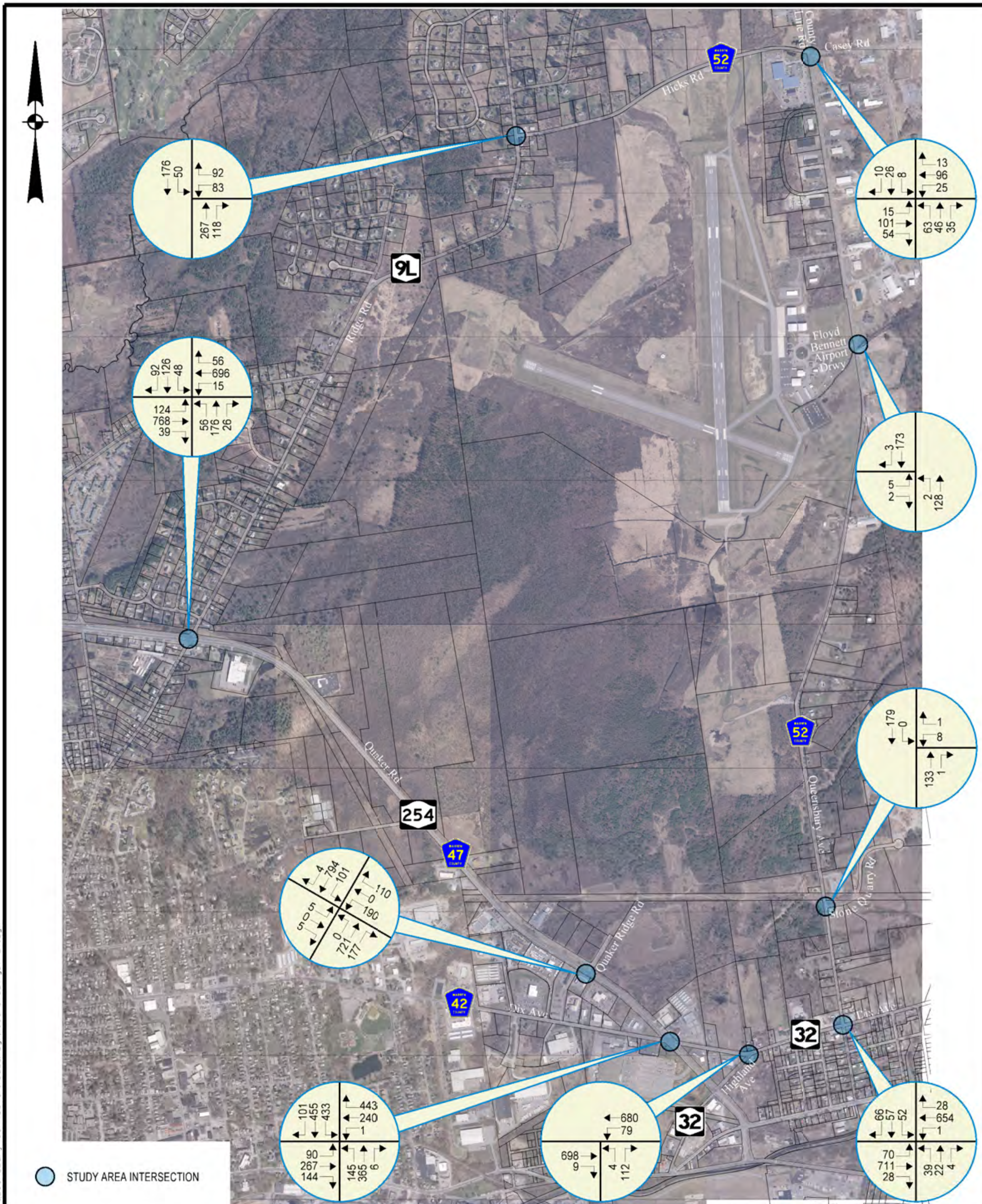


2011 PM PEAK HOUR
TRAFFIC VOLUMES

QUEENSBURY CONNECTOR ROAD
TOWN OF QUEENSBURY
WARREN COUNTY, NY

Creighton Manning

PROJECT: 111-075 | DATE: 12/2011 | FIGURE: 2.2

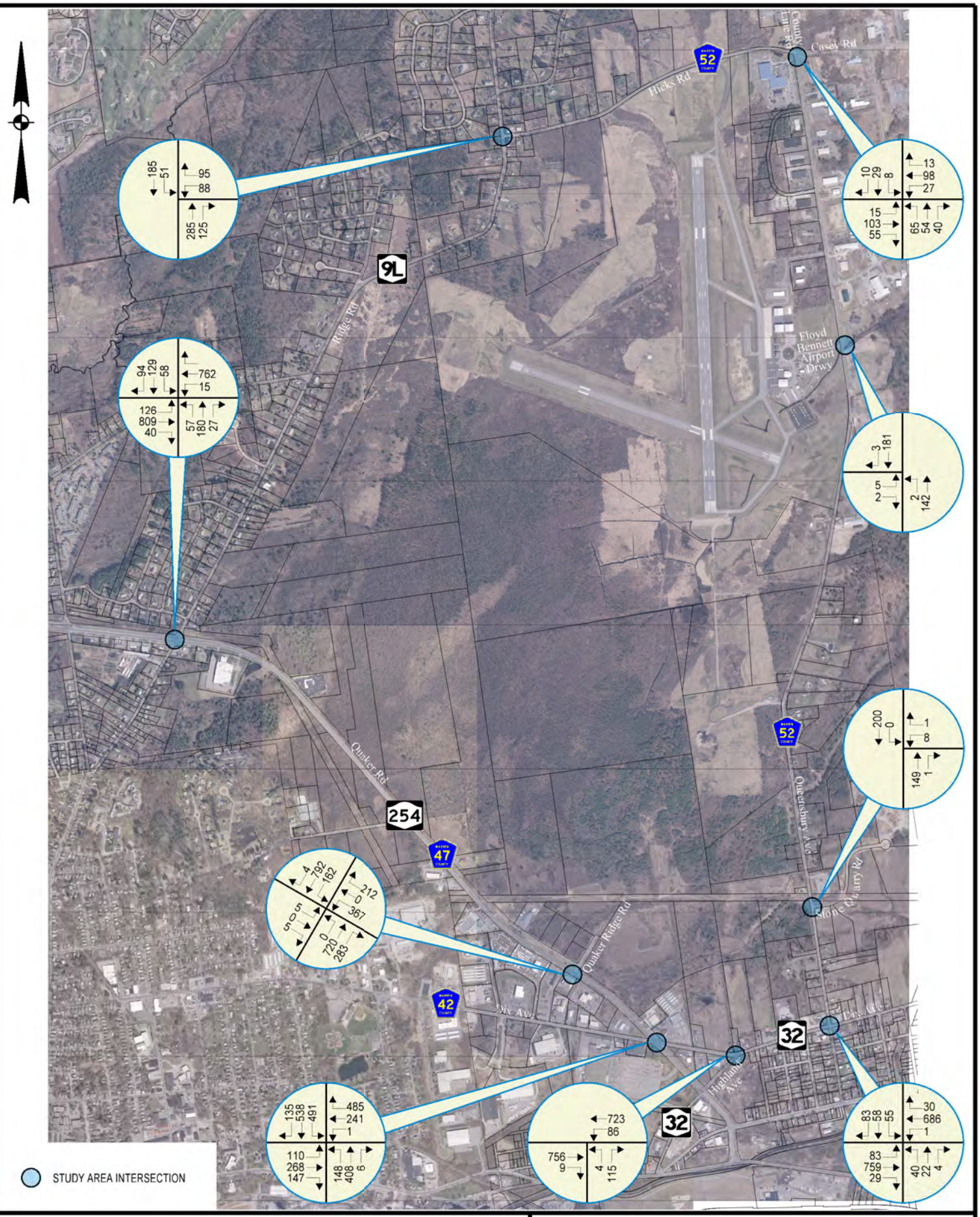
III.Future Conditions

Future traffic volume conditions in the study area were estimated based upon information provided by the Study Advisory Committee. Two future conditions were developed: a short-term growth scenario (2015) and a long-term growth scenario (2035). Those scenarios are identified below:

- Short-term growth scenario (2015)
  - 0.5% background growth per year from 2011 to 2015
  - construction of the Emergency Services Training Center
  - construction of the Quaker Ridge Technology Park (Phase 1 only)
- Long-term growth scenario (2035)
  - all components from the short-term growth scenario
  - 0.5% background growth per year from 2015 to 2035
  - modest growth at the airport
  - construction of the Quaker Ridge Technology Park (Phase 2)
  - construction at the Queensbury Business Park (50% build-out)
  - construction at the Airport Industrial Park (70% build-out)

These growth scenarios result in annual growth rates of approximately 2% per year for the short-term growth scenario and between 1.5% and 2% per year for the long-term growth scenario. That equates to general traffic increases on study area roadways of 8% over the next four years and an additional 35% by 2035.

As noted previously, the PM peak hour was identified as the critical design hour. As such, future traffic volumes were developed for the PM peak hour for the 2015 and 2035 design conditions and are shown on Figures 3.1 and 3.2.

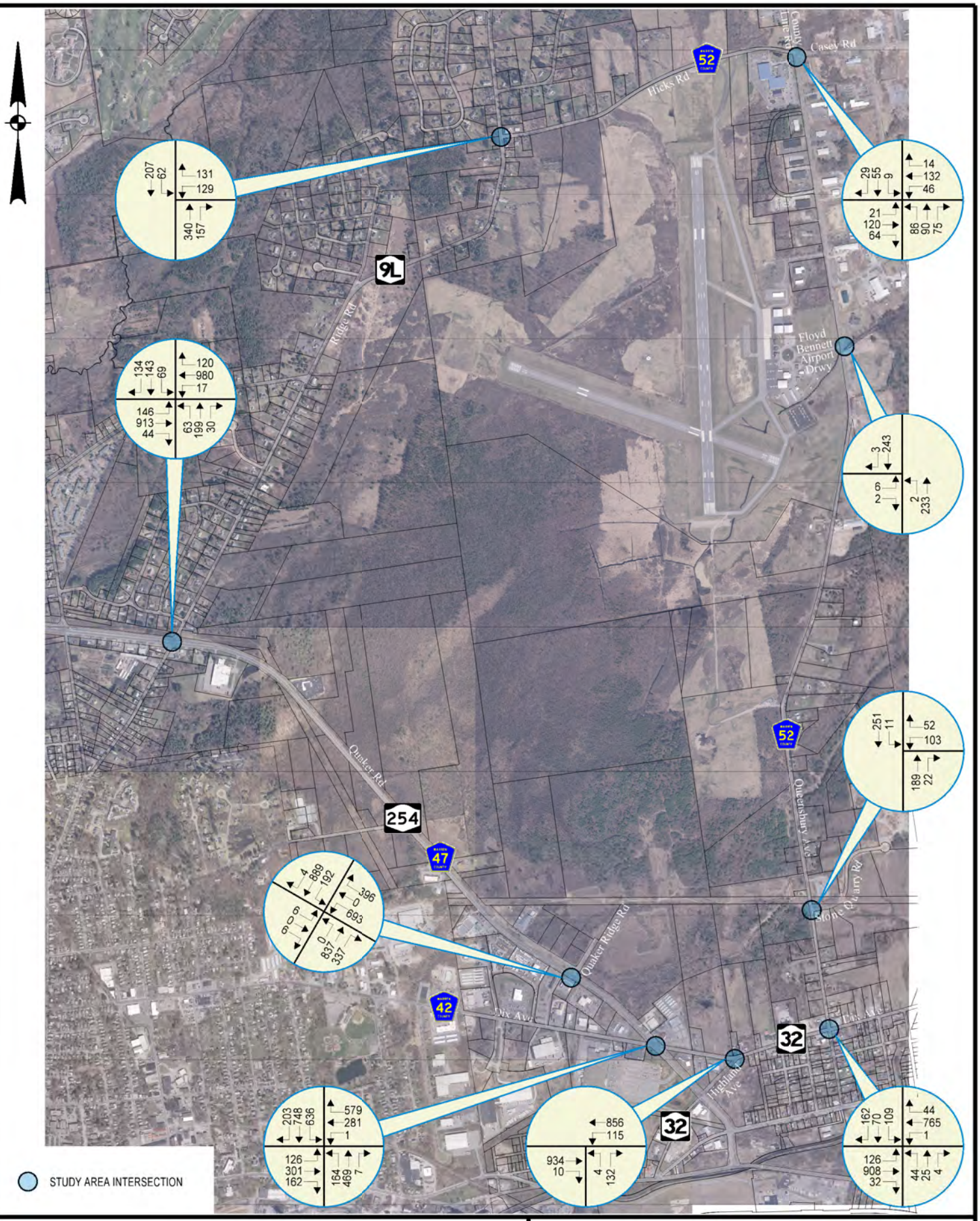


2015 PM PEAK HOUR
TRAFFIC VOLUMES

QUEENSBURY CONNECTOR ROAD
TOWN OF QUEENSBURY
WARREN COUNTY, NY

Creighton Manning

PROJECT: 111-075	DATE: 12/2011	FIGURE: 3.1



2035 PM PEAK HOUR
TRAFFIC VOLUMES

QUEENSBURY CONNECTOR ROAD
TOWN OF QUEENSBURY
WARREN COUNTY, NY

Creighton Manning

PROJECT: 111-075 | DATE: 12/2011 | FIGURE: 3.2

IV.Alternatives Evaluation

A) Future Conditions

As noted in Section II.B.4, the Quaker Road/Dix Avenue intersection currently operates with significant vehicle queuing and delay on the southbound Quaker Road approach to Dix Avenue during the typical PM peak hour. Traffic extends from that intersection through the adjacent Quaker Road/Quaker Ridge Boulevard, causing additional disruptions. Evaluations show that modifying the left-turn signal phasing at the Quaker Road/Dix Avenue intersection would improve overall traffic operations. The intersection currently operates with lagging left-turns (the left-turn movement happens after the through movement) on the Quaker Road approaches. Analysis shows that changing the phasing to provide leading left-turns (the left-turn movement happens before the through movement) would improve operations. With the signal phasing change, vehicle queues would no longer interfere with operations at the Quaker Road/Quaker Ridge Boulevard intersection.

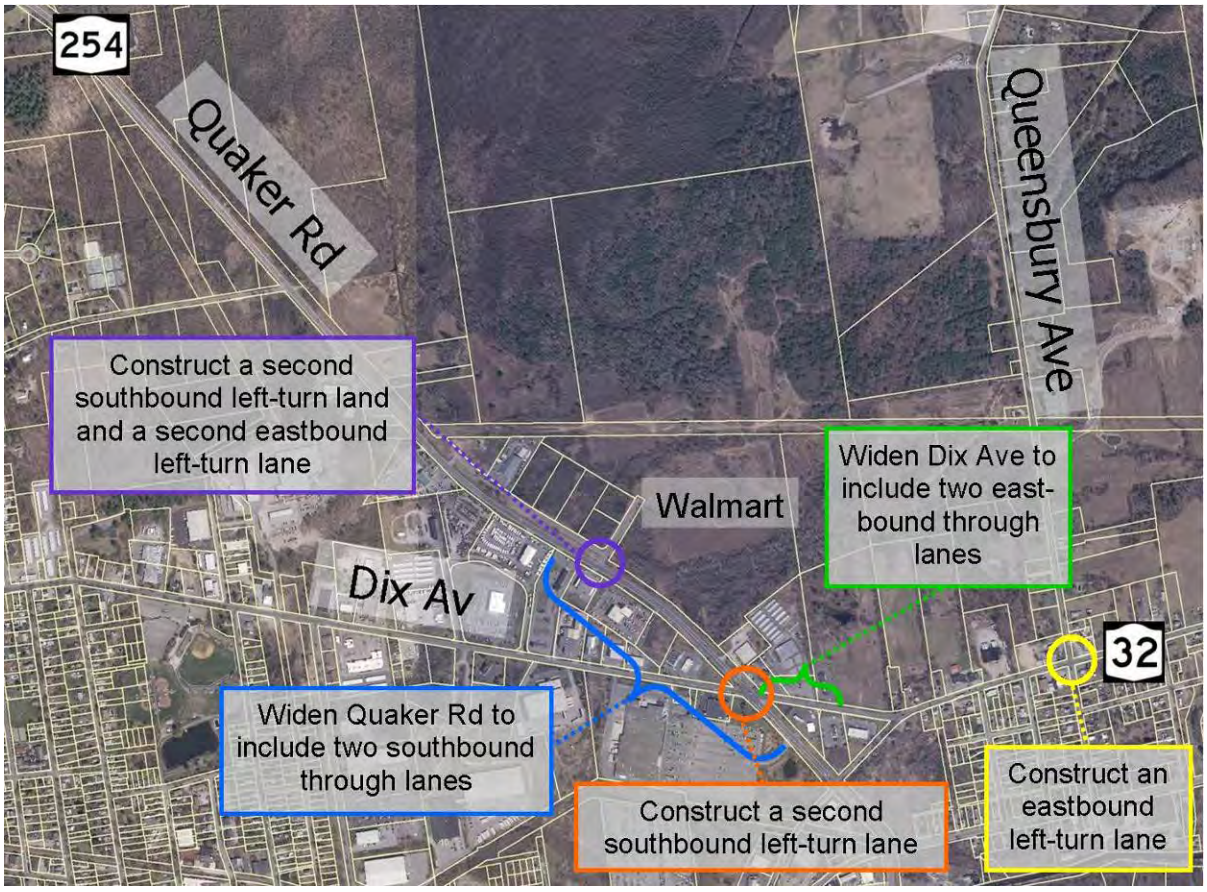
Implementation of the signal timing improvements that are necessary to correct existing traffic deficiencies at this intersection would also provide for acceptable operations through the 2015 conditions that include construction of Phase 1 of the Quaker Ridge Technology Park and the Emergency Service Training Center. No additional capacity-related improvements are needed for this timeframe.

Additional study of 2035 conditions shows that this same recommendation to optimize the existing signal will provide adequate traffic operations through 2035 if only Phase 1 of the Quaker Ridge Technology Park is developed. Full build of the QRTC would necessitate substantial improvements to the nearby surface transportation system.

The traffic impact study (TIS) prepared for the Quaker Ridge Technology Park identified several study area roadway improvements associated with construction of Phase 2 of the tech park. These improvements are project-related mitigation and, therefore, are included in the future 2035 analysis and are referred to in this document as "Improvements by Others". These Improvements by Others, as identified in the TIS prepared for the tech park, include:

- widening Quaker Road to include two full through lanes in each direction for about ½ mile from approximately 500 feet north of Quaker Ridge Boulevard to approximately 500 feet south of Dix Avenue
- construction of a second eastbound left-turn lane on Quaker Road at Quaker Ridge Boulevard
- construction of a second southbound left-turn lane on Quaker Ridge Boulevard at Quaker Road
- construction of a second southbound left-turn lane on Quaker Road at Dix Avenue
- widening Dix Avenue to include two lanes eastbound leaving the Quaker Road intersection to receive the dual lane southbound left-turn movement and taper back to one lane after approximately 500 feet
- construction of a 150 foot eastbound left-turn lane on Dix Avenue at Queensbury Avenue

- modifying the traffic signal at the Quaker Road intersections with Quaker Ridge Boulevard and Dix Avenue as necessary to accommodate the roadway widening
- implementation of signal timing adjustments throughout the study area to maximize operations



While specific roadway improvements were identified in the QRTP TIS to mitigate project impacts, the project has not received site plan approval. This means that the improvements identified in the QRTP TIS are not finalized and additional improvements may be required for mitigation. The connector road study assumes that only those improvements identified in the QRTP study would be required for site mitigation.

B) Description of Alternatives

This study evaluates two primary alternatives to accommodate future transportation conditions in the study area; (1) upgrade the existing transportation network and (2) construct an additional vehicle connection between Quaker Road and Queensbury Avenue. Several options for that conceptual connection were identified along various alignments as shown on Figure 4.1. Based on discussions with the Advisory Committee, anticipated traffic volumes and the setting of the new roadway, the following design criteria were established for the conceptual roadway alignments.

- Rural – generally open drainage (not curbed)

- Design Speed – 45 mph (posted speed 40 mph)
- 12 foot wide travel lanes – based on anticipated truck use and higher site traffic volumes
- 6 foot wide paved shoulder (bike accommodations require 4 ft shoulder (min); pedestrian accommodations on shoulder require 5 ft (min))

The following alternatives are included for further evaluation to accommodate the 2035 future condition including full development of QRTP. These improvements are only needed with construction of Phase 2 of the Quaker Ridge Technology Park. Preliminary analysis of the connector road showed that the construction of a connector road without improvements to the existing roadway network resulted in poor operations at many of the study area intersections as shown in the level of service table in Section IV.C.2. Therefore, the connector road alternatives include improvements to the existing roadway network to provide acceptable intersection operations.

1. Alternative 1: Upgrade Improvements by Others

This alternative involves upgrades to the existing network beyond those identified in the QRTP study. The additional improvements include:

- construct a northbound left-turn lane on Quaker Road at Sanford Street
- construct a westbound left-turn lane on Dix Avenue at Highland Avenue
- construct a westbound left-turn lane on Dix Avenue at Queensbury Avenue opposite the eastbound left-turn lane proposed in the QRTP study.

2. Alternative 2: Construction on Northern Alignment

In addition to the implementation of the Improvements by Others, this alternative involves the construction of a two-lane roadway from an extension of Sanford Street at Quaker Road intersecting Queensbury Avenue about 1/3 mile (1,650 feet) north of Stone Quarry Road. This alignment would require these additional improvements:

- install a traffic signal at the Quaker Road/Sanford Street/Connector Road intersection
- construct northbound and southbound left-turn lanes on Quaker Road at the connector road intersection
- construct a westbound left-turn lane on Dix Avenue at Highland Avenue
- construct a westbound left-turn lane on Dix Avenue at Queensbury Avenue to mirror the eastbound left-turn lane
- construct a southbound left-turn lane on Queensbury Avenue at Dix Avenue

It is noted that with this alternative, the second southbound left-turn lane on Quaker Road at Quaker Ridge Boulevard identified in the QRTP study is not needed.

3. Alternative 3A: Construction on Central Alignment

In addition to the implementation of the Improvements by Others, this alternative involves the construction of a two-lane roadway intersecting Quaker Road near the National Grid driveway and intersecting Queensbury Avenue about 1/3 mile (1,650 feet) north of Stone Quarry Road. This alignment would require these additional improvements:

- install a traffic signal at the Quaker Road/National Grid Driveway/Connector Road intersection
- construct northbound and southbound left-turn lanes on Quaker Road at the connector road intersection
- construct a northbound left-turn lane on Quaker Road at Sanford Street
- construct a westbound left-turn lane on Dix Avenue at Highland Avenue
- construct a westbound left-turn lane on Dix Avenue at Queensbury Avenue to mirror the eastbound left-turn lane
- construct a southbound left-turn lane on Queensbury Avenue at Dix Avenue

It is noted that with this alternative, the second southbound left-turn lane on Quaker Road at Quaker Ridge Boulevard identified in the QRTP study is not needed.

4. Alternative 3B: Construction on Central Alignment with Relocated Stone Quarry Road

In addition to the implementation of the Improvements by Others, this alternative involves the construction of a two-lane roadway intersecting Quaker Road near the National Grid driveway and intersecting Queensbury Avenue at a relocated Stone Quarry Road intersection. This alignment would require these additional improvements:

- install a traffic signal at the Quaker Road/National Grid Driveway/Connector Road intersection
- construct northbound and southbound left-turn lanes on Quaker Road at the connector road intersection
- construct a northbound left-turn lane on Quaker Road at Sanford Street
- construct a westbound left-turn lane on Dix Avenue at Highland Avenue
- construct a westbound left-turn lane on Dix Avenue at Queensbury Avenue to mirror the eastbound left-turn lane
- construct a southbound left-turn lane on Queensbury Avenue at Dix Avenue
- Relocate the Stone Quarry Road intersection with Queensbury Avenue approximately 525 feet north of the existing intersection

It is noted that with this alternative, the second southbound left-turn lane on Quaker Road at Quaker Ridge Boulevard identified in the QRTP study is not needed.

5. Alternative 4A: Construction on Southern Alignment

In addition to the implementation of the Improvements by Others, this alternative involves the construction of a two-lane roadway extending from Quaker Ridge Boulevard and intersecting Queensbury Avenue at the existing Stone Quarry Road intersection. This alignment would require these additional improvements:

- construct a northbound left-turn lane on Quaker Road at Sanford Street
- construct a westbound left-turn lane on Dix Avenue at Highland Avenue
- construct a westbound left-turn lane on Dix Avenue at Queensbury Avenue to mirror the eastbound left-turn lane
- construct a southbound left-turn lane on Queensbury Avenue at Dix Avenue

6. Alternative 4B: Construction on Southern Alignment with Relocated Stone Quarry Road

In addition to the implementation of the Improvements by Others, this alternative involves the construction of a two-lane roadway extending from Quaker Ridge Boulevard and intersecting Queensbury Avenue at a relocated Stone Quarry Road intersection. This alignment would require these additional improvements:

- construct a northbound left-turn lane on Quaker Road at Sanford Street
- construct a westbound left-turn lane on Dix Avenue at Highland Avenue
- construct a westbound left-turn lane on Dix Avenue at Queensbury Avenue to mirror the eastbound left-turn lane
- construct a southbound left-turn lane on Queensbury Avenue at Dix Avenue
- relocate the Stone Quarry Road intersection with Queensbury Avenue approximately 525 feet north of the existing intersection

C) Alternatives Evaluation

The alternatives were evaluated based on 2035 levels of service, travel time comparisons, environmental impacts, and an overall impacts comparison. These criteria, in addition to overall cost, provide a thorough gauge of potential benefits and impacts associated with each of the improvement alternatives.

1. Environmental Impacts

Hazardous Waste and Contaminated Materials

As noted previously, petroleum compounds exceeding cleanup objectives appear to remain near the Dix Avenue/Queensbury Avenue intersection. In addition, petroleum releases have occurred near the Dix Avenue/Quaker Road intersection. Many of the businesses in this section of the study area, particularly the Hess Gas Station and Stewart's, which are still in operation, involve the sale or use of petroleum products and have a history of spills or leaks. As a result, it is highly probable that petroleum contaminated soils exist in this area. If additional right-of-way will be acquired or deep excavations are necessary to improve the roadway network near these businesses, additional investigations/studies should be performed to determine the potential to encounter contaminated materials.

Two incidents were identified in the EDR Report that occurred at locations that could impact construction of a connector road. The location of the first incident occurred at Garden Time, a landscape/nursery business (Site 20 on the EDR map in Appendix A). Garden Time is located on the west side of Quaker Road, near the Alternative 3A intersection terminus with Quaker Road. The incident involved repeated spilling of petroleum fuel on the bare ground (no pad) at a storage tank where equipment is fueled. Since the gradient in this area slopes in the direction opposite of the Alternative 3A western terminus of the connector road, this incident is not expected to represent a concern. The second incident occurred midpoint between Quaker Road and Queensbury Avenue within or south of the overhead utility line right-of-way, which is present within the study area. This incident involved the discharge of a fire suppression system; the fire suppression material was determined to be a non-petroleum, non-hazardous substance. As a result, this incident is not expected to represent a concern relative to the connector road project.

Wetlands

All of the connector road alternatives have the potential to impact NYSDEC, NWI or field observed wetlands. Therefore, wetland boundaries would have to be delineated to determine impacts and identify permit requirements. It is important to note that the portions of HF-3 that would be affected by a connector road do not contain the cedar swamp or marl fen wetland habitat types, just hardwood swamp (i.e., palustrine forest broad-leaved deciduous (Cowardin et al. 1979)).

Measures should be taken during subsequent design phases to avoid and minimize wetland impacts to the extent practicable. Impacts to federally-regulated wetlands will require authorization under Section 404 of the Clean Water Act in the form of a USACE permit. Impacts to areas mapped as state wetlands (or within the 100-ft buffer) also require authorization under Article 24 of the Environmental Conservation Law and Section 401 of the Clean Water Act. Compensatory mitigation is required by the USACE for wetland impacts that exceed 0.10 of an acre; it is anticipated that some form of mitigation would be required by the NYSDEC for any impact to Wetlands HF-8 or HF-3.

Ecology and Endangered/Threatened Species

The only alternative that will affect the noted Indiana bat habitat is Alternative 2. If Alternative 2 is progressed as a feasible alternative, further study of its effects on Indiana bat habitat is recommended, specifically at and near its western terminus (Quaker Road/East Sanford Street Intersection).

As noted previously, karner blue butterflies inhabit extensive pine barrens, oak savannas or openings in oak woodlands, and open areas, such as airports and right-of-ways, that the support eh growth of lupine. The areas that would be affected by a proposed connector road do not have pine barrens, oak savannas, or oak openings present. An open right-of-way and successional old fields do exist; however, evidence of lupine growing in either type of area was not observed. Additionally, the right-of-way and adjacent successional old fields showed signs of frequent on-going disturbance from the operation of all-terrain vehicles and automobiles capable of being driven off-road. Since a segment of Alternative 3A and all of Alternative 3B/4B have been sited adjacent to the right-of-way, further study regarding the effects of the project on karner blue butterflies is not necessary. Certain segments of Alternative 4A cross the right-of-way, connecting to Alternative 3B/4B; based on the disturbed state of the habitat and the lack of lupine, further study with regard to the karner butterfly is not anticipated to be necessary.

The marl fen, identified by NYSDEC as a significant ecological community, is contiguous with New York State Freshwater Wetland HF-3, parts of which would be transected by Alternative 2. However, the marl fen is adjacent to the Runway 1 End of Runway 1-19. Open marl flats and marl pools formerly occurred between the runway and HF-3, a rich swamp comprised of a Cedar swamp and hardwood swamp, prior to being ditched for agricultural purposes and extensive pumping of the ground water. Alternative 2 would transect portions of HF-3 that only contain the hardwood swamp plant community and not the cedar swamp or marl fen communities. As such, further coordination with the NYSDEC regarding the identified significant ecology community is anticipated to be minimal.

Historic/Archaeological Resources

As noted previously, a review of the NYSOPRHP GIS mapping has determined that the entire project study area is mapped as potentially archeologically sensitive. As such, for any areas where new disturbance is proposed, their office may require more detailed investigations. A project review request will need to be submitted to SHPO regarding the potential for historic/cultural impacts.

2. Levels of Service

Table IV.1 summarizes the PM peak hour levels of service for the various alternatives at each of the study intersections. The "No Improvements" column represents conditions in the study area that would occur with the volumes associated with the full build 2035 conditions, but not the improvements associated with the QRTP. The results in this column are intended to provide a base comparison of the impact that the Quaker Ridge Technology Park will have on study area operations. The levels of service and delay identified in *italics* are those intersections or approaches that are expected to operate at level of service E conditions. The levels of service and delay identified in **bold** are those intersections or approaches that are expected to operate at level of service F conditions.

Table IV.1 – 2035 PM Peak Hour Levels of Service

Intersection	Control	No Improvements	Construct Connector Road	Improvements by Others	Alternative 1 Upgrade Improvements By Others	Alternative 2 Northern Alignment	Alternative 3A Central Alignment	Alternative 3B Central Alignment	Alternative 4A Southern Alignment	Alternative 4B Southern Alignment
Quaker Rd/Ridge Rd	S	C (24.9)	B (17.5)	B (18.4)	B (18.3)	B (19.4)	B (17.9)	B (18.0)	B (18.6)	B (18.6)
Quaker Rd/Sanford St	TW	**F (104)**	**F (92.9)**	**F (104)**	**F (104)**	--	**F (424)**	**F (424)**	**F (92.9)**	**F (92.9)**
Quaker Rd/Sanford St/ Connector Rd	S	--	--	--	--	B (19.0)	--	--	--	--
Quaker Rd/National Grid Driveway/Connector Rd	TW	--	--	--	--	--	B (19.1)	B (18.1)	--	--
Quaker Rd/Quaker Ridge Blvd	S	**F (106)**	**F (88.9)**	C (23.4)	C (23.5)	B (19.0)	B (19.9)	C (20.3)	C (23.4)	C (23.5)
Quaker Rd/Dix Ave	S	**F (188)**	**F (86.4)**	C (29.8)	C (27.9)	C (29.6)	C (27.7)	C (27.8)	C (28.0)	C (28.0)
Lower Dix Ave/Highland Ave	TW	**F (70)**	C (21.9)	*E (40.9)*	*E (40.9)*	C (22.3)	C (22.3)	C (22.3)	C (21.9)	C (21.9)
Lower Dix Ave/ Queensbury Ave	S	**F (82.8)**	D (45.4)	B (18.7)	B (19.7)	C (20.6)	C (34.5)	C (20.6)	C (21.0)	C (21.0)
Queensbury Ave/Stone Quarry Rd	TW	C (15.5)	--	C (15.5)	C (15.5)	C (17.4)	C (17.4)	--	--	--
Queensbury Ave/Stone Quarry Rd/Connector Rd	TW	--	**F (57.4)**	--	--	--	--	**F (57.6)**	**F (57.4)**	**F (57.4)**
Queensbury Ave/ Connector Rd	TW	--	--	--	--	**F (55.0)**	**F (55.0)**	--	--	--
Queensbury Ave/Airport Driveway	TW	B (12.7)	B (14.2)	B (12.7)	B (12.7)	B (14.7)	B (14.7)	B (14.7)	B (14.2)	B (14.2)
Queensbury Ave/Hicks Rd/ Casey Rd	AW	B (11.7)	B (13.5)	B (11.7)	B (11.7)	B (13.0)	B (13.0)	B (13.0)	B (13.5)	B (13.5)
Hicks Rd/Ridge Rd	TW	*E (41.0)*	*E (49.9)*	*E (41.0)*	*E (41.0)*	*E (39.4)*	*E (39.4)*	*E (39.4)*	*E (49.9)*	*E (49.9)*

S, TW, AW = Signal, Two-way or All-way stop controlled intersection
X (Y.Y) = Level of Service (average delay in seconds per vehicle)
-- = Not Applicable for this condition
The level of service and delay at two-way stop controlled intersections is shown for the controlled approach with the longest delay

The analysis shows that without construction of roadway improvements, five of the nine study intersections will operate at level of service F conditions. That indicates that area-wide improvements are needed to accommodate the future 2035 conditions ("No Imps" column). As noted previously, these improvements are only needed with construction of the QRTP Phase 2. The "Construct Connector Road" column shows levels of service at the study intersections with construction of the connector road, but no other improvements. With construction of the connector road, three of the nine study intersections will operate at level of service F conditions. That indicates the connector road would provide some operational benefit to the transportation network, but that operational deficiencies would still exist and further improvements to the transportation network are needed to accommodate the future 2035 conditions.

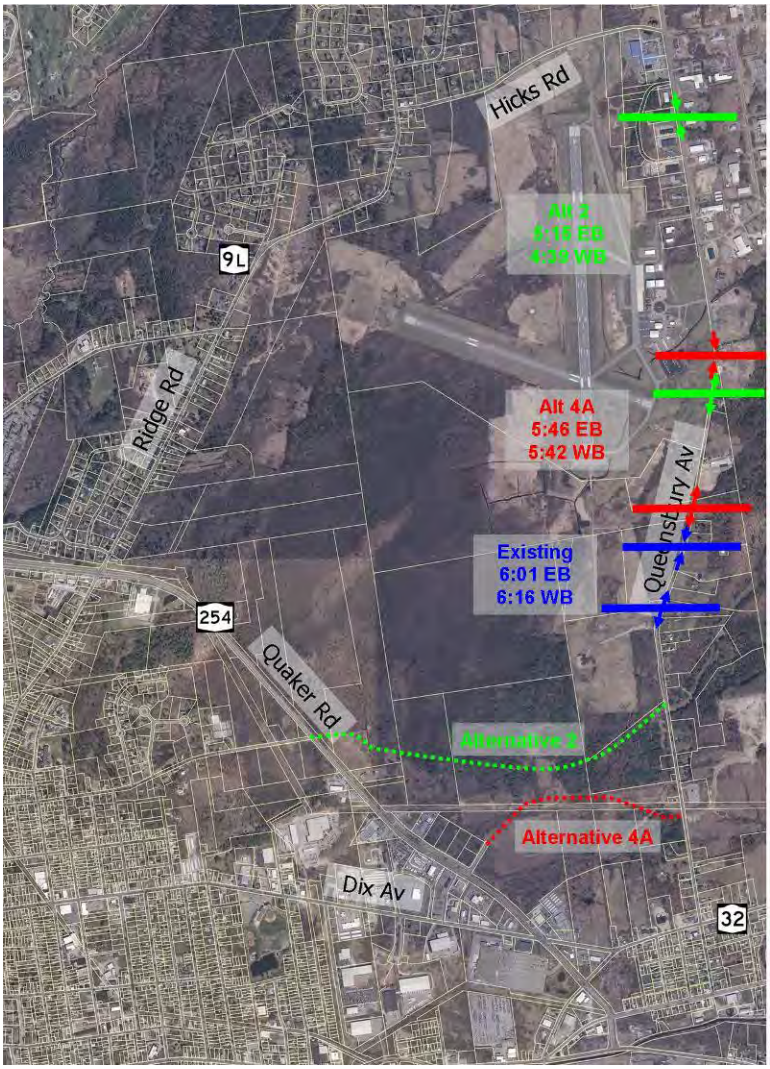
With construction of the "Improvements by Others" the study area intersections generally operate with good levels of service at all intersections. As noted previously, the "Improvements by Others" does not include construction of a connector road. Alternative 1 expands slightly on the "Improvements by Others" resulting in very similar levels of service.

Comparison of Alternatives 2 through 4B show that the study area intersections will generally operate under comparable levels of service regardless of which new roadway

alternative is implemented. In addition, the levels of service for the connector road alternatives are similar to the levels of service for Alternative 1 which does not include a connector road. Typically, to warrant the investment of public transportation funds, there should be a marked improvement to operations with construction of a connector road rather than the comparable levels of service noted in Table IV.1. It is worth noting that the Quaker Road/Quaker Ridge Boulevard intersection operates with comparable levels of delay (about 20 seconds) whether the Connector Road intersects Quaker Road through Quaker Ridge Boulevard or through another location (Alt 2 or Alt 3). This is because the double left turn lane is not needed at Quaker Ridge Boulevard for Alternatives 2 and 3.

3. Travel Time Comparisons

Travel time is a measure of accessibility and was used to determine the access benefits associated with the proposed connection. Regional travelers will only use the new connection if it provides a time savings benefit. The existing travel time data and SimTraffic simulation models were used to determine whether any of the proposed alignments will provide a time savings for individuals travelling to and from the west on Quaker Road.



Travel time comparisons were completed for the shortest and longest roadway alignment alternatives, Alternative 4A (0.59 miles) and Alternative 2 (1.12 miles). The image to the right shows that as the alignment of the Connector Road moves north, the point of equal travel time moves north. For example, Alternative 2 (shown in green) would improve travel times (access) to the airport because the point of equal travel time is north of the airport, whereas Alternative 4A would not improve travel times to the airport as it would still be faster to travel around the north side of the airport along Hicks Road.

Overall, the access benefits of the new connector road are small. There would be some improved access to the Queensbury Business Park (on the order of 15 to 90 seconds) depending on the specific alternative.

4. Overall Evaluation

Table IV.2 provides additional comparison criteria and a more complete evaluation of potential benefits and impacts. The summary includes potential environmental and right-of-way impacts as well as overall estimated costs which account for contingency, engineering, acquisition, inspection, administration, permitting, and construction.

Table IV.2 – Alternatives Comparison Summary

Criteria	Improvements by Others	Alt 1 Upgrade IBO	Alt 2 Northern	Alt 3A	Alt 3B	Alt 4A	Alt 4B
				Central		Southern	
Overall Length of Improvements	NA		1.12 Miles 2.24 Lane-Miles	0.95 Miles 1.9 Lane-Miles	1 Mile 2 Lane-Miles	0.59 Miles 1.18 Lane-Miles	0.66 Miles 1.32 Lane-Miles
Existing and Forecasted Operating Conditions							
Capacity and delay (ETC+20)	96 hours 29 mph PI = 133.5	87 hours 30 mph PI = 115.9	95 hours 29 mph PI = 124.7	112 hours 28 mph PI = 144.3	105 hours 28 mph PI = 136.2	90 hours 30 mph PI = 119.3	90 hours 30 mph PI =119.4
Safety benefit	NA	Yes	Neutral	Neutral	Neutral	Neutral	Neutral
Improve emergency access	NA	No	Yes	Yes	Yes	Yes	Yes
Improve area access (Airport and Business Parks)	NA	No	Medium	Medium	Medium	Low	Low
Improve multi-modal access	No	No	Low	No	No	High	High
Improve balloon festival circulation	NA	No	Medium	Medium	Medium	Low	Low
Impacts to Natural Resources							
Wetland impacts (approximate)	None	Low	2.5 acres	0.75 acres	1.0 acres	1.5 acres	1.75 acres
100-year floodplain impacts	None	None	None	None	None	None	None
Potential to impact archeological sites	None	Low	High	Medium	Low	Low	Low
Impact to forested areas	None	Low	High	High	Medium	Medium	Medium
Impact to protected farmland	None	None	None	None	None	None	None
Costs/Benefits							
Maintenance cost ranking (1=lowest)	--	1	6	5	4	2	3
Property impacts (ROW implications)	None	Unknown	6 prop. (15.1 acres)	5 prop. (13.6 acres)	4 prop. (15.4 acres)*	5 prop. (10.3 acres)	4 prop (12 acres)*
Fuel consumption & emissions	531 gal 37.1 kg CO	495 gal 34.6 kg CO	517 gal 36.1 kg CO	541 gal 37.8 kg CO	529 gal 37.0 kg CO	526 gal 36.8 kg CO	525 gal 36.7 kg CO
Consistent with local plans	Yes – Development Mitigation	Yes – Maintain / Enhance Existing Infrastructure	Low	Low	Low	Moderate	Low
Construction cost (includes ROW)	$11.4 M	$2.9 M	$10.4 M	$10.2 M	$8.9 M	$6.1 M	$6.7 M

* Assumes a land swap for realignment of Stone Quarry Road rather than right-of-way acquisition

Several conclusions are evident from this alternatives comparison:

- Of the six alternatives, Alternative 1 (Upgrade Improvements by Others) has the fewest impacts, best operations, and lowest cost. The PI value in the "Capacity and Delay" row of the table refers to the "Performance Index" from the traffic simulation model and represents a combination of delay, stops and queuing penalty. A lower PI indicates better overall operations. Alternative 1 has the lowest overall PI.
- Of the five Connector Road alternatives, Alternative 4A appears to have the best balance of good operations, fewer impacts, and lower costs.
- Alternatives 4A and 4B are shown as having better multi-modal access because of feedback from Greater Glens Falls Transit that indicated that those alignments could provide a potential benefit for bus operations and the ability to serve both Walmart and the Queensbury Business Park.
- As the shortest alternative (0.59 miles), Alternative 4A is expected to have the lowest maintenance costs and is shown to be somewhat consistent with local plans because is shares part of its alignment with the proposed Emergency Services Training Center access, and the County is pursuing a letter of intent with the QRTP to pursue a road connection.

Based upon the results of the analysis, construction of a connector road is not needed to mitigate existing or future transportation conditions in the study area. However, if a connector road is progressed, construction of Alternative 4A provides the greatest benefit for the lowest cost. Figure 4.2 illustrates a concept plan for Alternative 4A showing a typical two-lane roadway with wide shoulders to accommodate pedestrians and bicyclists.

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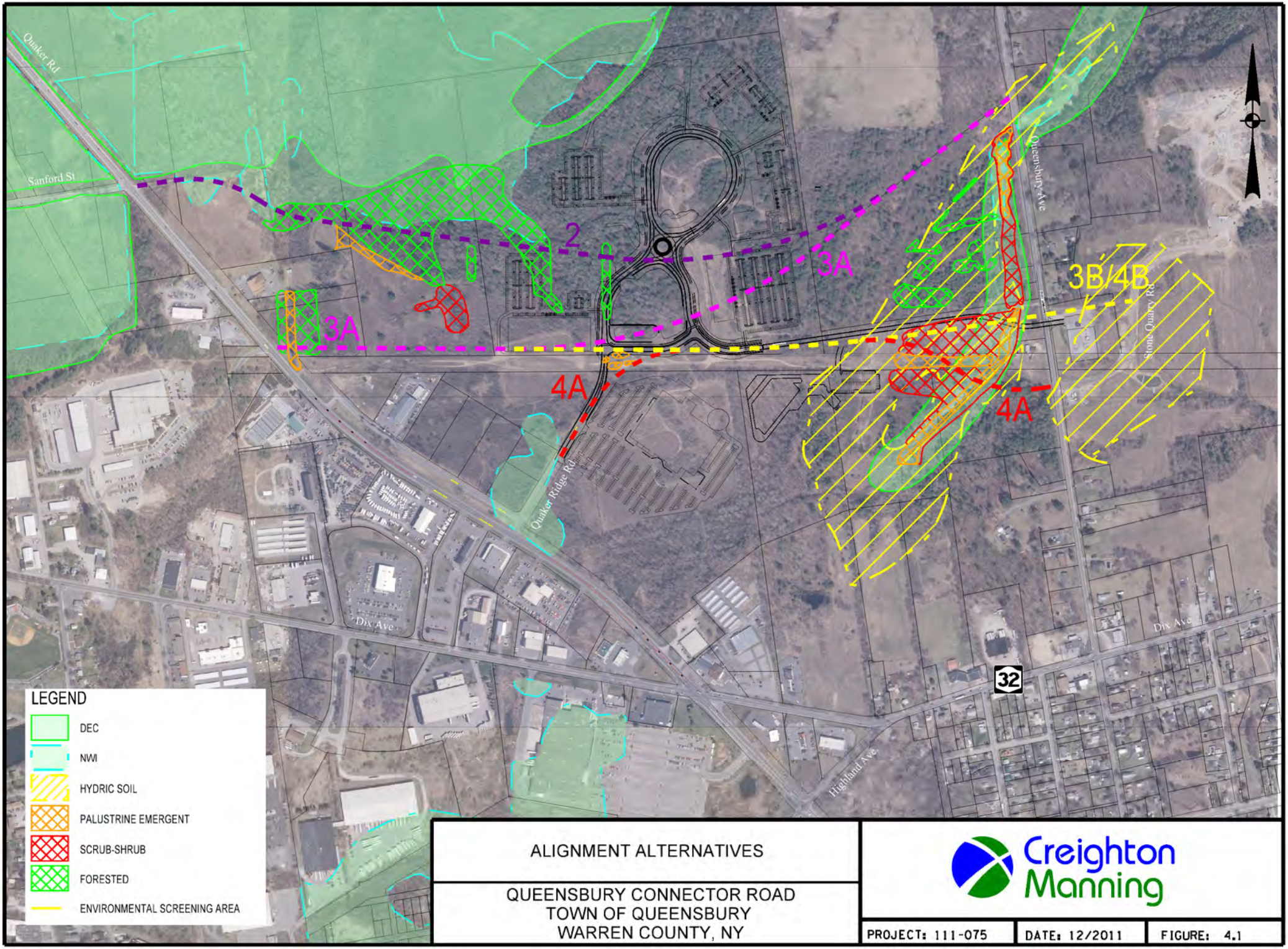

ALIGNMENT ALTERNATIVES

QUEENSBURY CONNECTOR ROAD
TOWN OF QUEENSBURY
WARREN COUNTY, NY

Creighton Manning

PROJECT: 111-075	DATE: 12/2011	FIGURE: 4.1

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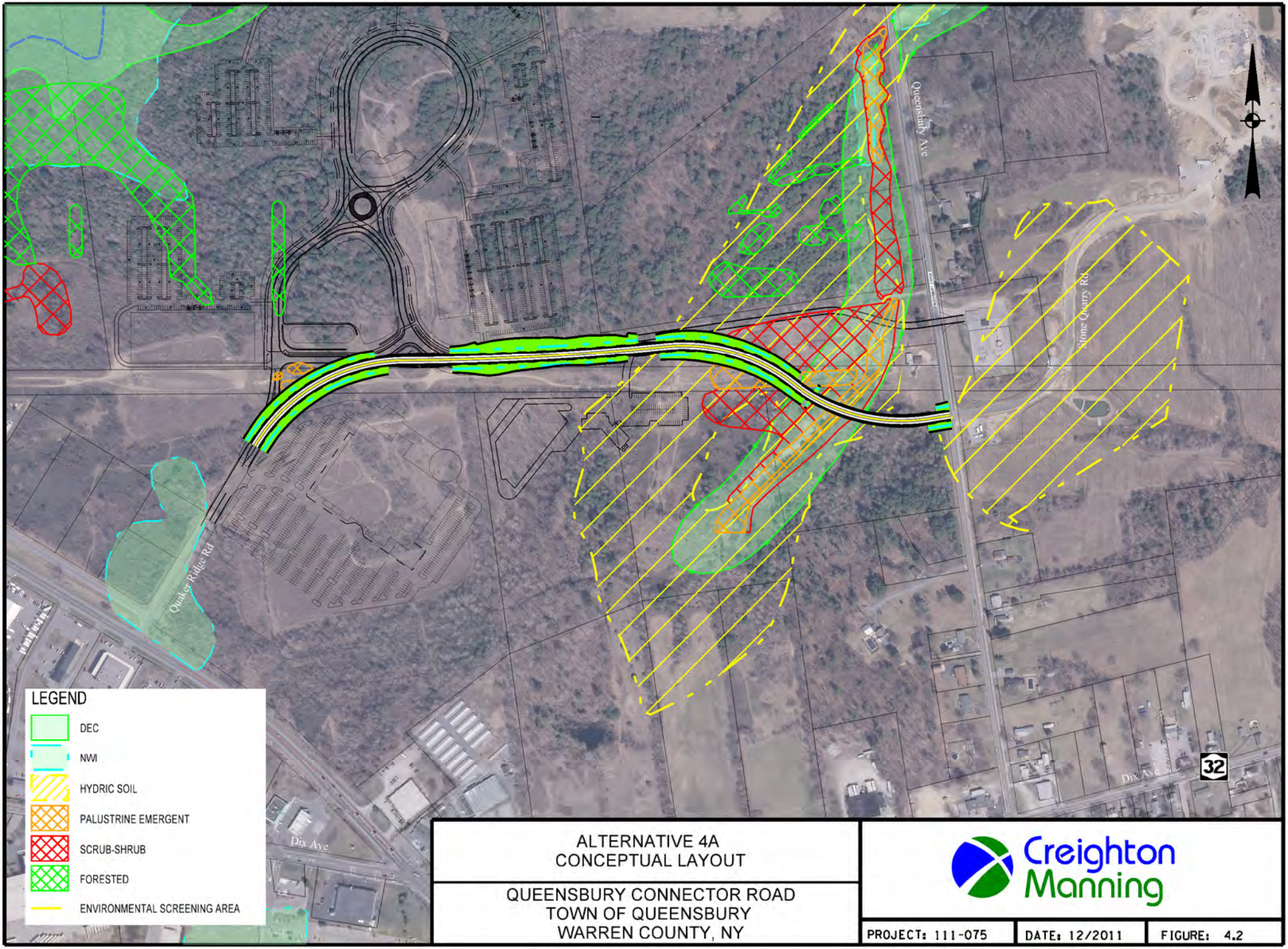


ALTERNATIVE 4A
CONCEPTUAL LAYOUT

QUEENSBURY CONNECTOR ROAD
TOWN OF QUEENSBURY
WARREN COUNTY, NY

Creighton Manning

PROJECT: 111-075	DATE: 12/2011	FIGURE: 4.2

V. Conclusions, Recommendations, and Implementation

A) Conclusions

The primary conclusion from the connector road evaluation is that a new roadway connection is not needed to serve current or short-term traffic in the study area. By modifying the existing traffic signal phasing and timing at the Quaker Road/Dix Avenue intersection, the anticipated 2015 traffic volumes can be accommodated with acceptable levels of service. The 2035 traffic volumes can also be accommodated with this same system optimization, assuming only Phase 1 of the Quaker Ridge Technology Park is developed.

With full build out of the QRTP by 2035, substantial off-site traffic mitigation will be needed as identified in the Quaker Ridge Technology Park TIS. These are large-scale improvements requiring roadway and intersection widening at multiple locations. This mitigation is referred to as "Improvements by Others" in this study. In addition, the following "upgrade" to the Improvements by Others will also be needed:

- construction of a northbound left-turn lane on Quaker Road at Sanford Street
- construction of a westbound left-turn lane on Dix Avenue at Highland Avenue
- construction of a westbound left-turn lane on Dix Avenue at Queensbury Avenue opposite the proposed eastbound left-turn lane recommended in the QRTP study.

Construction of a connector road would improve access to land along the connector road, and would provide an overall mobility benefit, but it would not ameliorate the need for most of the off-site transportation improvements above. The costs of the roadway appear to outweigh the benefit in terms of a regional transportation improvement. However, there is a local benefit to having improved access and the roadway could be pursued as part of site development mitigation. These local benefits include a small reduction (about 15 to 90 seconds) in travel time to and from land uses along Queensbury Avenue and the connector road, the potential for improved access to the airport, and additional route options for emergency vehicles and the travelling public. If a connector road is progressed, construction of Alternative 4A provides the greatest benefit for the lowest cost. This alternative avoids or minimizes environmental impacts while providing the greatest multi-modal transportation benefit. Again, it is noted that the costs of the roadway outweigh the local and regional transportation benefits associated with the connector road.

During December 2011, the Warren County Department of Public Works Committee agreed to pursue a Letter of Intent with the QRTP developer that would in essence allow the developer to construct an access road along County property to his parcel in exchange for a navigation easement along the private property, enabling the County to expand the southern runway at the airport. This study has concluded that public transportation benefits do not necessitate the need for a connector roadway. However, Warren County and the Town of Queensbury may decide that the economic benefits associated with the runway expansion and local access improvements warrant some level of public funding for the connector road.

B) Pedestrian, Bicycle, and Transit Accommodations

Transportation improvement projects should consider the needs of all modes and all users. Although specific improvements for pedestrians were not noted as a priority by the public, multi-modal planning is consistent with A/GFTC's Twelve Principles and is a requirement of all publicly funded projects. The logical priorities within the study area include adding pedestrian crossing accommodations to traffic signal controlled intersections, extending the sidewalk from East Field (Haskell Avenue) in the City of Glens Falls along Dix Avenue to Queensbury Avenue, and insuring the site development projects are walkable with linkages to logical termini.

Residents could benefit from the construction of sidewalks on Dix Avenue east of Quaker Road to connect residential uses with commercial uses. East of Highland Avenue, parcel frontages on Dix Avenue are smaller, front yard setbacks are shorter, and the existing right-of-way width is narrower. When combined, these can create major impediments to the construction of sidewalk projects. Although difficult to complete, sidewalk construction is preferred, over wide shoulders, along Dix Avenue east of Quaker Road due to the number of residences in the area. As such, sidewalks should be pursued as part of any project along Dix Avenue east of Quaker Road.

In areas of low pedestrian and vehicle volume, both pedestrians and bicyclists can be accommodated through wide shoulders. This type of treatment increases the potential that pedestrian and bicycle accommodations will be maintained through inclement weather. If a connector road is pursued, the roadway shoulder should be 6-feet wide to accommodate pedestrians and bicycles. The roadway should also provide sufficient lighting to maximize the visibility of these users at night and during other limited visibility conditions. Any widening of the existing roadway network should also include shoulders of sufficient width to accommodate pedestrians and bicyclists or construction of a sidewalk.

Discussions with representatives with GGFT revealed that a connector road between Quaker Road and Queensbury Avenue would provide limited benefit to transit service in the area. To maximize transit potential, development projects should consider transit needs through the site design and approval process. For example, providing direct pedestrian connections from the traveled way to the facility, minimizing front parking, and providing well lit and comfortable transit stops should be considered.

C) Public Meeting and Workshop #2

The second Public Workshop was held on February 7, 2012. The purpose of the meeting was to outline the conclusions and recommendations from the study and answer questions from the public regarding those recommendations. The workshop began with a PowerPoint presentation after which community members were asked to comment on the study conclusions and recommendations.

There continued to be strong support for implementing short-term traffic signal timing improvements at the Quaker Road/Dicks Avenue intersection. This report encourages governing agencies to implement the recommended signal phasing and timing changes especially since the signal phasing changes are a cost effective short-term

improvement that are sufficient to accommodate existing traffic conditions and background growth in the study area.

Attendees raised concerns regarding wetlands impacts and any correlating impacts on individual properties like water in basements, standing water, etc associated with construction of a connector road. A detailed summary of Public Workshop #2 is included in Appendix B.

D) Study Recommendations

The *Quaker Road to Queensbury Avenue Connector Road Study* resulted in several recommendations for short-term and long-term implementation. Short-term recommendations are intended to address existing deficiencies and improve overall operations in the transportation network.

1. Short-term Recommendations
    1. The signal phasing and timing at the Quaker Road/Dix Avenue intersection should be modified to maximize intersection capacity and reduce southbound vehicle queuing. This recommendation should be pursued in the short-term to address existing traffic operations. With this change, the intersection will operate with good levels of service and southbound vehicle queues will not impact operations at the Quaker Road/Quaker Ridge Boulevard intersection.

    2. Optimizing traffic signal timing is considered a low-cost, high benefit approach to reducing congestion by the U.S. Department of Transportation. As such, the existing time-based coordination plan of the traffic signals on Quaker Road from Quaker Ridge Boulevard to River Street should be updated and maintained. While this improvement will not provide a significant level of service benefit to the minor approaches at the individual intersections, it will provide greater progression of high volume movements through the corridor which reduce the number of stopped vehicles, in turn improving air quality and the overall driver experience. This improvement should be addressed in the short-term.

    3. The land use map showed large portions of undeveloped land in the study area. As commercial and industrial growth occurs on Quaker Road, Dix Avenue, and Queensbury Avenue, development plans should minimize the number of access points per parcel and maximize shared driveways and service roads. Minimizing the number of driveways will help to maximize mobility on area roadways while still allowing for economic growth and development.

    4. The potential to construct a westbound left-turn lane on Dix Avenue at Highland Avenue should be investigated for feasibility. Due to the narrow right-of-way on this section of Dix Avenue, implementation of this improvement may involve property acquisition. This improvement would remove westbound traffic waiting to turn left onto Highland Avenue from through moving traffic reducing vehicle delays.

2. Long-term Recommendations

1. Major roadway expansions are needed only with Phase 2 construction of the Quaker Ridge Technology Park. The "Improvements by Others" should be constructed with the proposed site development, specifically the QRTP. Additional roadway improvements identified with future build-out of the study area include construction of a northbound left-turn lane on Quaker Road at Sanford Street and a westbound left-turn lane on Dix Avenue at Queensbury Avenue to mirror the proposed eastbound left-turn lane. These improvements should be constructed as needed with site development. Specifically, the left-turn lane at Sanford Street should be constructed before vehicle queues associated with left-turning traffic significantly impact through travel movements. This will most likely occur as traffic volumes on Quaker Road increase with construction of the QRTP. The westbound left-turn lane on Dix Avenue at Queensbury Avenue should be constructed with development of the QRTP and the construction of the eastbound left-turn lane identified in the QRTP TIS.

2. A connector road would primarily benefit the QRTP and is considered here as a private developer responsibility. However, as noted previously, Warren County and the Town of Queensbury may determine that a connector road would provide sufficient economic benefits to allocate some public support for construction. Should an agreement between Warren County and the developer of the QRTP result in a new connector road being construction, the roadway should reflect the design criteria specified in this study. In addition, the alignment of the roadway should take into account the impacts and benefits outline herein. In addition, if a connector road is constructed, a southbound left-turn lane should be constructed on Queensbury Avenue at Dix Avenue. This is a long-term improvement that is only needed with construction of a connector road and Phase 2 of the QRTP.

Appendix A – Environmental Documentation

Quaker Road to Queensbury Avenue Connector Road Study
Town of Queensbury, New York

SHUMAKER
Consulting Engineering & Land Surveying, P.C.

December 8, 2011

Mr. Mark Sargent, P.E.
Creighton Manning Engineering
2 Winners Circle
Albany, NY 12205

Re: Planning Study – Environmental Documentation
Analysis of Proposed Connector Road between Quaker Road and Queensbury Avenue
Queensbury, Warren County, New York

Dear Mr. Sargent:

This letter contains documentation of environmental work completed to date, as well as a discussion of how the findings affect the subject project.

Hazardous Waste and Contaminated Materials
A search of federal and state environmental databases was conducted by Environmental Data Resources Inc (EDR). The results of the search were provided in an EDR Radius Map Report dated September 7, 2011. The EDR Report incorporated listed facilities on several environmental databases in and surrounding the project corridor. The EDR Report included a review of the available federal and state environmental databases and was compiled in general accordance with ASTM standards for a government records review. The EDR Report included (but was not limited to) a review of the following databases:

FEDERAL DATABASES

- National Priorities List (NPL), Proposed NPL, and Delisted NPL.
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLA Active and Archive).
- Resource Conservation and Recovery Act Information System – Treatment, Storage, and Disposal Facilities (RCRATSD).
- RCRA Generator – Small and Large Quantity Generators.
- RCRA Information System – Corrective Action Sites (CORRACTS).
- Emergency Response Notification System (ERNS).
- Land Use Control Information System (LUCIS).
- PCB Activity Database System (PADS).
- Toxic Chemical Release Inventory System (TRIS).
- Section Seven Tracking System (SSTS).
- Civil Enforcement Docket (DOCKET).
- Toxic Substance Control Act Inventory (TSCA).

NEW YORK STATE DATABASES

- New York State Inactive Hazardous Waste Disposal Site Registry (HSWDS).
- New York State Solid Waste Facilities List (SWF).

- New York State Leaking Storage Tank Data (LTANKS).
- New York State Major Oil Storage Facilities List (MOSF).
- New York State Chemical Bulk Storage Tanks List (CBS).
- New York State Petroleum Bulk Storage Tank List (PBS).
- New York Spills List (SPILLS).

Tribal Records and EDR proprietary databases were also queried. A review of specific case files maintained by the NYSDEC was not included in this scope of work.

Government Records Review Results

The environmental database review identified 39 listed incidents with known addresses/locations within the standard approximate minimum search distance (AMSD) of the project corridor. Multiple incidents occurred at some facilities. Many additional sites in the area did not have numbered street addresses or were not plotted on the EDR Map. Instead, these sites were listed as Orphan Sites. Database information for the Orphan Sites was reviewed on EDR's website. Pertinent sites listed within the AMSD or Orphan Sites that reference features/locations along the project corridor are discussed below.

Federal National Priorities List (NPL) Sites or State Hazardous Waste Sites (SHWS) were not listed in the EDR Report as being present within or adjoining to the project study area. Several petroleum releases have occurred along State Route 254 (Quaker Road) and County Route 42 (Dix Avenue). The majority of these releases are located west of Quaker Road and south of Dix Avenue at the borders of the project study area.

Specific petroleum releases that may affect construction phase activities are located at the Dix Avenue and Queensbury Avenue intersection. Soils containing petroleum compounds exceeding cleanup objectives appear to remain at 108 Lower Dix Avenue (located at the northwest corner of this intersection). Past releases at 756 Quaker Road (Hess Station) and 777 Quaker Road (Stewarts Shops / Former King Fuels) may have also impacted soil and/or groundwater at these locations along the Dix Avenue and Quaker Road intersection.

Field Observations

No visual evidence of contamination was observed in areas that were traversed during the screening of the connector road corridor. No visible air emissions were observed, and no odors were detected.

Two features at two different locations were discovered that may warrant further investigation regarding the potential to represent a concern for HW/CM relative to the connector road corridor project. One feature consists of a capped steel well casing inside of an open-top plywood box. There is a utility pole within several feet of the well, but did not appear to be in service. The well is located in a field that is bounded to the north by the unpaved part of East Sanford Road (on east side of Quaker) and to the west by Quaker Road. It is unknown whether this well is an abandoned private well or a monitoring well. A FOIA request was submitted to the Town of Queensbury in an attempt to obtain additional information regarding this well. The second feature is located next to Stone Quarry Road, behind the substation with frontage along the east side of Queensbury Avenue. The feature contains pieces of equipment and a small building and could be a pump station or some type of abatement or treatment system. A FOIA request was submitted to the Town in an attempt to obtain additional information regarding this site.

None of the incidents documented in the EDR Report occurred within the connector road corridor proper; all are located to its south. The location of the closest incident is at Garden Time, a landscape/nursery business (Site 20 on the Overview Map in the EDR Report). Garden Time is located on the west side of Quaker Road, immediately south of where the western terminus of Alternative 3A connects to Quaker Road. The incident involved repeated spilling of petroleum fuel on the bare ground (no pad) at a storage tank where equipment is fueled. Since the gradient in this area slopes in the direction opposite of the western terminus of the connector road corridor, this incident is not expected to represent a concern. The next closest incident occurred midpoint between Quaker Road and Queensbury Avenue within or south of the overhead utility line right-of-way, which is present within the study area. This incident involved the discharge of a fire suppression system; the fire suppression material was determined to be a non-petroleum, non-hazardous substance. As a result, this incident is not expected to represent a concern relative to the connector road corridor project.

Improvements to the existing roadway network are also being considered as part of this study. Relative to the proposed rehabilitation work on Quaker Road and Dix Avenue, many of the businesses, particularly the Hess Gas Station and Stewart's, which are still in operation, involve the sale or use of petroleum products and have a history of spills or leaks. As a result, it is highly probable that petroleum contaminated soils exist in this area. If additional right-of-way will be acquired or deep excavations are necessary to improve the existing roadway network, in the vicinity of these businesses, additional investigations/studies should be performed to determine the potential to encounter contaminated materials.

Wetlands Screening

National Wetland Inventory (NWI), New York State Department of Environmental Conservation (NYSDEC) Freshwater wetlands maps, topographic mapping, the County Soil Survey, and hydric soils lists have been reviewed to assist with identifying potential wetland locations. Mapped wetland locations exist within the project study area.

SCE performed a wetland field screening on November 2 through November 4, 2011. During that visit, several areas of wetland were observed and consisted of palustrine emergent, scrub-shrub, and forested wetlands. The wetland locations are approximate and for planning purposes only; a formal delineation would be required during the design phase.

Two of the identified wetland areas are mapped as state-regulated freshwater wetlands, which also correspond with mapped NWI areas. New York State Freshwater Wetland HF-3 is an extensive wetland complex occupying an area of over 700-acres. The majority of the wetland area is comprised of swamp, and consists of cedar and hardwoods. A smaller portion of this wetland, as described further in the following section, *Ecology and Endangered/Threatened Species*, has been classified as a marl fen, but is located between HF-3 proper and the end of one of the runways at Warren County Municipal Airport (a.k.a, Floyd Bennett Memorial Airport). Alternatives 2 and 3 would impact portions of HF-3. In the event these alternatives are progressed for further consideration and design, the wetland boundary would have to be delineated to determine impacts and identify permit requirements. It is important to note; however, that the portions of HF-3 that would be transected by Alternative 3 do not contain the cedar swamp or marl fen wetland habitat types, just hardwood swamp (i.e., palustrine forest broad-leaved deciduous (Cowardin et al. 1979)).

The other state-regulated wetland is HF-8, which is located in the eastern most part of the connector road corridor. HF-8 is transected by Queensbury Avenue due south of where Alternative 3A is sited to

connect with it. The eastern segments of Alternative 4A and Alternative 3B/4B would transect the southerly portion of HF-8.

The western terminus of Alternative 3A, where it is sited to connect with Quaker Road, transects a forested area that is mostly, if not all, wetland. This area includes part of a drainage ditch associated with HF-3, which is comprised of emergent and scrub-shrub wetland habitats.

Lastly, there are three to four small wetlands that have developed in topographic depressions along the right-of-way in proximity to where Alternative 4A (west) connects with Alternative 3B/4B. These areas support emergent wetland habitats. Although small in area and at first observation not ecologically significant, a great blue heron took to flight out of one the areas as it was approached by the screener. If any of the alternatives, with the potential for wetland impacts, are progressed for further consideration and design, the wetland boundaries would have to be delineated to determine impacts and identify permit requirements.

A few additional wetlands are shown on the mapping; however, based on the proposed conceptual alignments, would not be directly affected by the project.

Measures should be taken during subsequent design phases to avoid and minimize wetland impacts to the extent practicable. Impacts to federally-regulated wetlands will require authorization under Section 404 of the Clean Water Act in the form of a USACE permit. Impacts to areas mapped as state wetlands (or within the 100-ft buffer) also require authorization under Article 24 of the Environmental Conservation Law and Section 401 of the Clean Water Act. Compensatory mitigation is required by the USACE for wetland impacts that exceed 0.10 of an acre; it is anticipated that some form of mitigation would be required by the NYSDEC for any impact to Wetlands HF-8 or HF-3.

Ecology and Endangered/Threatened Species

SCE reviewed the USFWS County List of Threatened/Endangered Species. The Indiana bat (*Myotis sodalis*) and karner blue butterfly (*Lycaeides Melissa samuelis*) are listed as occurring in Warren County (Reference the USFWS list). The list indicates that the Indiana bat is present in Warren County in winter and summer-winter, which suggests that there is at least one hibernacula located in the County. Bog turtle (*Clemmys muhlenbergii*) is also on the list, but is denoted as an historic account.

Based on a preliminary field review, it appears that the area affected by the proposed connector road, contains summertime Indiana bat habitat. More specifically, suitable habitat was observed in field and wetland forest areas that abut the east side of Quaker Road where it intersects East Sanford Road. The habitat consists of a predominately forested wetland with scrub-shrub and emergent plant communities mixed-in, particularly where there is an existent drainage channel. Included in the wetland forest area are dead or dying trees with exfoliating bark, which could be used by male and female Indiana bats for roosting in the summertime. A large-diameter dead tree with exfoliating bark openly stands in a field adjacent to the forested wetland area; since this tree is large in diameter, is dead with large pieces of loose bark, and is exposed to the appropriate solar gain, this tree has the potential to be used by female Indiana bats as a maternity roost. If Alternative 2 is progressed as a feasible alternative, further study of its effects on Indiana bat habitat is recommended, specifically at and near its western terminus (Quaker Road/East Sanford Street Intersection).

Karner blue butterflies inhabit extensive pine barrens, oak savannas or openings in oak woodlands, and open areas, such as airports and right-of-ways, that support the growth of lupine (Lupinus perennis), the only food source consumed by the species larval stage. The origin of remnant populations in Saratoga and Warren Counties are not certain since there is little evidence for former pine barrens occurring in these areas. Some recent populations have occupied sandy successional old fields.

The areas that would be affected by the connector road project and its various alternatives do not have pine barrens, oak savannas, or oak openings present. An open right-of-way and successional old fields do exist; however, evidence of lupine growing in either type of area was not observed. Additionally, the right-of-way and adjacent successional old fields showed signs of frequent on-going disturbance from the operation of all-terrain vehicles and automobiles capable of being driven off-road. Since a segment of Alternative 3A and all of Alternative 3B/4B have been sited adjacent to the right-of-way, further study regarding the effects of the project on karner blue butterflies is not necessary. Certain segments of Alternative 4A cross the right-of-way, connecting to Alternative 3B/4B; based on the disturbed state of the habitat and the lack of lupine, further study with regard to the karner butterfly is not necessary.

In New York State, bog turtles inhabit open-canopy wet meadows, sedge meadows, and calcareous fens. In the Hudson River Valley, bog turtle habitats may be isolated from other wetlands or they may exist as part of larger wetland complexes. Bog turtle habitat is often fed by groundwater and the vegetation always includes various species of sedges that form hummocks and the soil is mucky.

None of the wetlands identified during the field screening of the project area contained any features typical of suitable bog turtle habitat (e.g., spring fed water and hummock forming vegetation); further study regarding the effects of the connector road on the bog turtle is not necessary.

NYSDEC NHP responded in a letter, dated November 18, 2011, regarding state-listed threatened/endangered species, significant natural communities, and other significant habitats. The Natural Heritage Report on Rare Species and Ecological Communities contained one record. The record shows the occurrence of a significant ecological community. The community is a marl fen located at the Glens Falls Airport marsh, which is in proximity to the proposed connector road corridor. The marl fen is contiguous with New York State Freshwater Wetland HF-3, parts of which would be transected by Alternative 2. However, the marl fen is adjacent to the Runway 1 End of Runway 1-19. Open marl flats and marl pools formerly occurred between the runway and HF-3, a rich swamp comprised of a Cedar swamp and hardwood swamp, prior to being ditched for agricultural purposes and extensive pumping of the ground water. Alternative 2 would transect portions of HF-3 that only contain the hardwood swamp plant community and not the cedar swamp or marl fen communities. As such, further coordination with the NYSDEC regarding the identified significant ecology community is not necessary.

Farmland/Agricultural Property

SCE reviewed the County soil survey and has determined that prime/unique soils exist within the project area.

Although the project study area contains soils mapped as prime/unique, the area is zoned as industrial. As such, no further involvement is necessary with respect to the Farmland Protection Policy Act. The project area is not within a designated agricultural district; therefore, the provisions of the Agriculture and Markets Law do not apply.

Floodplains, Surface Waters and Critical Environmental Areas
There are three (3) Critical Environmental Areas listed for Warren County (Round Pond, Rush Pond, and Glen Lake/Surrounding area). None of these areas fall within the bounds of the project study area.

No surface water bodies were observed within the project study area.

Floodplains
Based on review of FEMA Flood Maps for Community Panels 3608790029B and 3608790027B, the project study area is not within an area designated as a 100 or 500-year flood zone. As such, advancement of any of the proposed alternatives would not require further study with regard to the NYS Flood Insurance Compliance Program or Executive Order 11988 Floodplain Management.

Historic/Archeological Resources
SCE has reviewed the NYSOPRHP GIS mapping and determined that the entire project study area is mapped as potentially archeologically sensitive. As such, for any areas where new disturbance is proposed, their office may require more detailed investigations. A project review request will need to be submitted to SHPO regarding the potential for historic/cultural impacts. It is anticipated that their office will require more detailed plans to make a decision; however, their response will provide direction for future work.

If you have any questions or need anything else at this time please let me know.

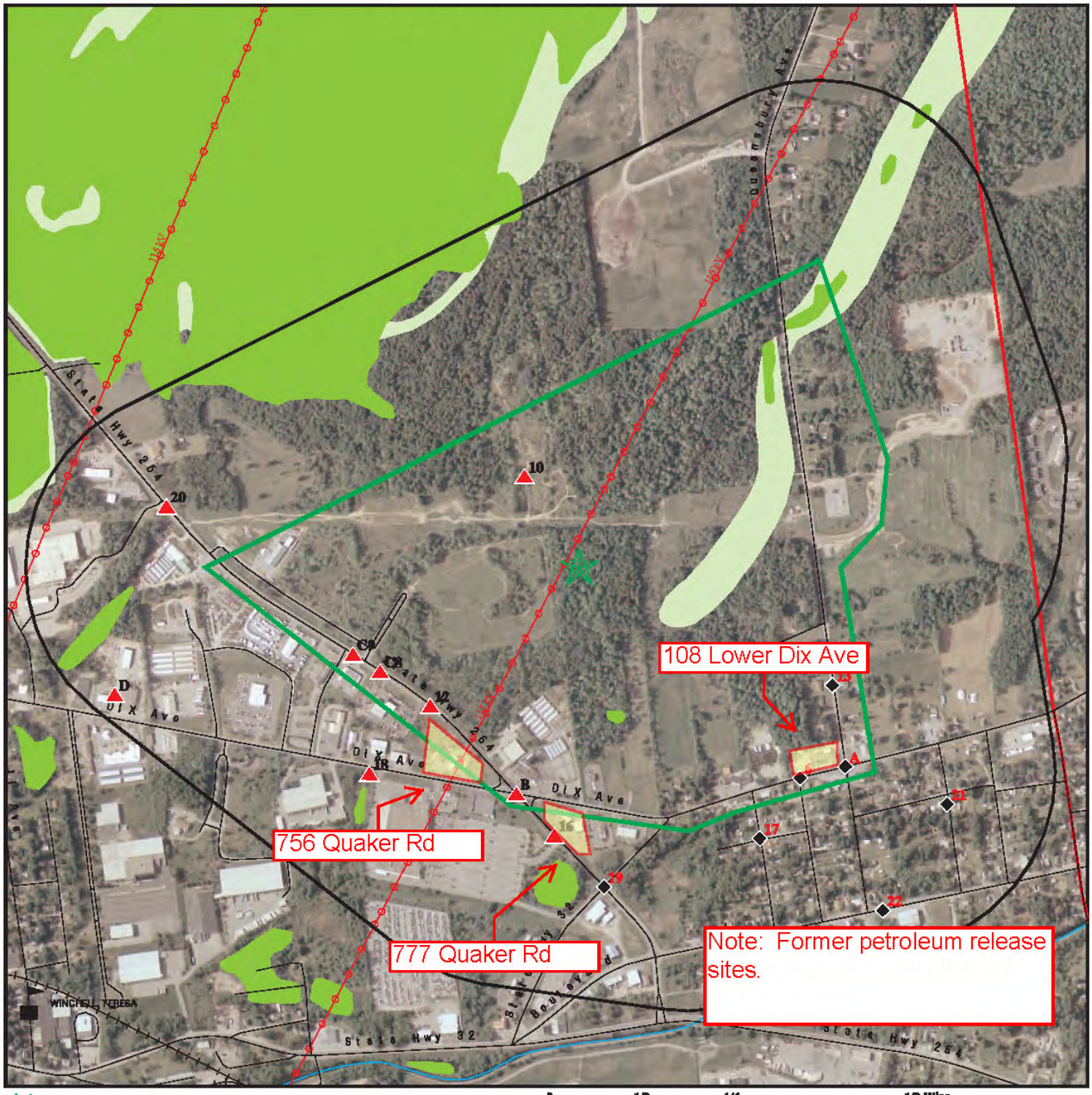
Very truly yours,

SHUMAKER CONSULTING ENGINEERING
& LAND SURVEYING, P.C.

Kelly J. Saladis
Environmental Scientist IV

KJS/jmp

DETAIL MAP - 3161467.1s



Target Property
Sites at elevations higher than or equal to the target property
Sites at elevations lower than the target property
Manufactured Gas Plants
Sensitive Receptors
National Priority List Sites
Dept. Defense Sites

0 1/8 1/4 1/2 Miles

Indian Reservations BIA
County Boundary
Power transmission lines
Oil & Gas pipelines from USGS
National Wetland Inventory
State Wetlands

Environmental Data Resources, Inc (EDR) Radius Map

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Connector Road - Quaker Rd & Queensbury Ave	CLIENT:	Shumaker Cons. Engineering
ADDRESS:	720-711 QUAKER RD Queensbury NY 12804	CONTACT:	Greg Lesniak
LAT/LONG:	43.3201 / 73.6101	INQUIRY #:	3161467.1s
		DATE:	September 07, 2011 10:50 am

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

Joe Martens
Commissioner

November 18, 2011

Kelly J. Saladis
Shumaker Engineering
143 Court Street
Binghamton, NY 13901

Dear Ms. Saladis:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the proposed Connector Road between Quaker Road and Queensbury Avenue, site as indicated on the map you provided, located in the Town of Queensbury, Warren County.

Enclosed is a report of rare or state-listed animals and plants, significant natural communities, and other significant habitats, which our databases indicate occur, or may occur, on your site or in the immediate vicinity of your site. For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.

The enclosed report may be included in documents that will be available to the public. However, any enclosed maps displaying locations of rare species are considered sensitive information, and are intended only for the internal use of the recipient; they should not be included in any document that will be made available to the public, without permission from the New York Natural Heritage Program.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.ht ml.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

Sincerely,

Jean Pietrusiak

Jean Pietrusiak, Information Services
NYS Department Environmental Conservation

Enc.
cc: Region 5

1120

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New York Field Office
3817 Luker Road, Cortland, NY 13045
Phone: (607) 753-9334
Fax: (607) 753-9699

Long Island Field Office
3 Old Barto Rd., Brookhaven, NY 11719
Phone: (631) 776-1401
Fax: (631) 776-1405

Endangered Species Act List Request Response Cover Sheet

This cover sheet is provided in response to a search of our website* for information regarding the potential presence of species under jurisdiction of the U.S. Fish and Wildlife Service (Service) within a proposed project area.

Attached is a copy of the New York State County List of Threatened, Endangered, and Candidate Species for the appropriate county(ies). The database that we use to respond to list requests was developed primarily to assist Federal agencies that are consulting with us under Section 7(a)(2) of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*). Our lists include all Federally-listed, proposed, and candidate species known to occur, as well as those likely to occur, in specific counties.

The attached information is designed to assist project sponsors or applicants through the process of determining whether a Federally-listed, proposed, or candidate species and/or "critical habitat" may occur within their proposed project area and when it is appropriate to contact our offices for additional coordination or consultation. You may be aware that our offices have provided much of this information in the past in project-specific letters. However, due to increasing project review workloads and decreasing staff, we are now providing as much information as possible through our website. We encourage anyone requesting species list information to print out all materials used in any analyses of effects on listed, proposed, or candidate species.

The Service routinely updates this database as species are proposed, listed, and delisted, or as we obtain new biological information or specific presence/absence information for listed species. If project proponents coordinate with the Service to address proposed and candidate species in early stages of planning, this should not be a problem if these species are eventually listed. However, we recommend that both project proponents and reviewing agencies retrieve from our online database an *updated* list every 90 days to append to this document to ensure that listed species presence/absence information for the proposed project is *current.*

Reminder: Section 9 of the ESA prohibits unauthorized taking** of listed species and applies to Federal and non-Federal activities. For projects not authorized, funded, or carried out by a Federal agency, consultation with the Service pursuant to Section 7(a)(2) of the ESA is not required. However, no person is authorized to "take**" any listed species without appropriate authorizations from the Service. Therefore, we provide technical assistance to individuals and agencies to assist with project planning to avoid the potential for "take**," or when appropriate, to provide assistance with their application for an incidental take permit pursuant to Section 10(a)(1)(B) of the ESA.

Additionally, endangered species and their habitats are protected by Section 7(a)(2) of the ESA, which requires Federal agencies, in consultation with the Service, to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. An assessment of the potential direct, indirect, and cumulative impacts is required for all Federal actions that may affect listed species.

For instance, work in certain waters of the United States, including wetlands and streams, may require a permit from the U.S. Army Corps of Engineers (Corps). If a permit is required, in reviewing the application pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401, as amended;16 U.S.C. 661 *et seq.*), the Service may concur, with or without recommending additional permit conditions, or recommend denial of the permit depending upon potential adverse impacts on fish and wildlife resources associated with project construction or implementation. The need for a Corps permit may be determined by contacting the appropriate Corps office(s).*

For additional information on fish and wildlife resources or State-listed species, we suggest contacting the appropriate New York State Department of Environmental Conservation regional office(s) and the New York Natural Heritage Program Information Services.*

Since wetlands, ponds, streams, or open or sheltered coastal waters may be present in the project area, it may be helpful to utilize the National Wetlands Inventory (NWI) maps as an initial screening tool. However, they may or may not be available for the project area. Please note that while the NWI maps are reasonably accurate, they should not be used in lieu of field surveys for determining the presence of wetlands or delineating wetland boundaries for Federal regulatory purposes. Online information on the NWI program and digital data can be downloaded from Wetlands Mapper, http://wetlands.fws.gov/mapper_tool.htm.

Project construction or implementation should not commence until all requirements of the ESA have been fulfilled. After reviewing our website and following the steps outlined, we encourage both project proponents and reviewing agencies to contact our office to determine whether an accurate determination of species impacts has been made. If there are any questions about our county lists or agency or project proponent responsibilities under the ESA, please contact the New York or Long Island Field Office Endangered Species Program at the numbers listed above.

Attachment (county list of species)

*Additional information referred to above may be found on our website at: http://www.fws.gov/northeast/nyfo/es/section7.htm

** Under the Act and regulations, it is illegal for any person subject to the jurisdiction of the United States to ***take*** (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import or export, ship in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any endangered fish or wildlife species and most threatened fish and wildlife species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. “Harm” includes any act which actually kills or injures fish or wildlife, and case law has clarified that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife.

Warren County

Federally Listed Endangered and Threatened Species and Candidate Species

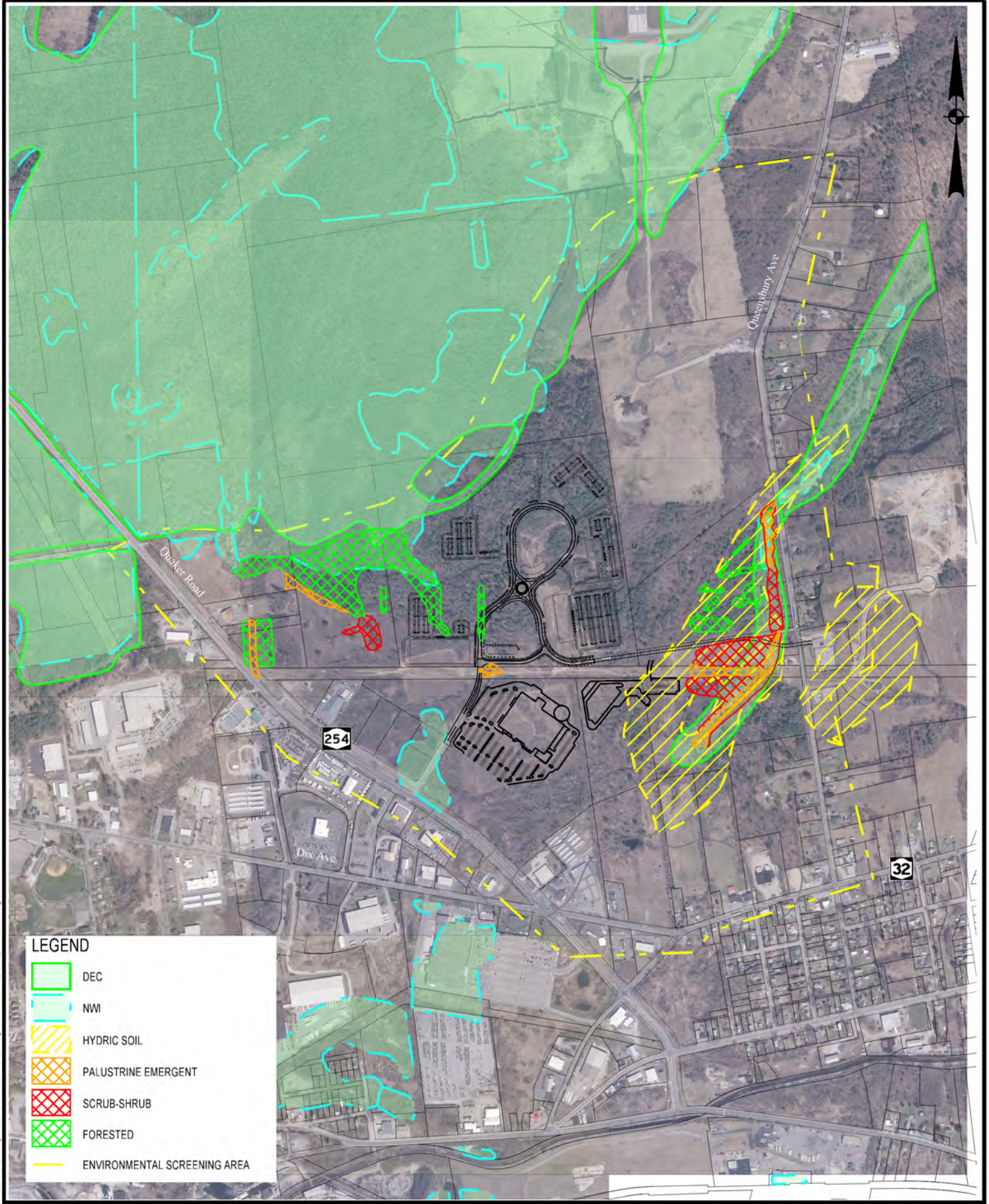
This list represents the best available information regarding known or likely County occurrences of Federally-listed and candidate species and is subject to change as new information becomes available.

Common Name	Scientific Name	Status
Bog turtle *(Historic)*	*Clemmys [=Glyptemys] muhlenbergii*	T
Indiana bat (W/S)	*Myotis sodalis*	E
Karner blue butterfly	*Lycaeides melissa samuelis*	E

Status Codes: E=Endangered, T=Threatened, P=Proposed, C=Candidate, D=Delisted.

W=Winter S=Summer

Information current as of: 11/22/2011

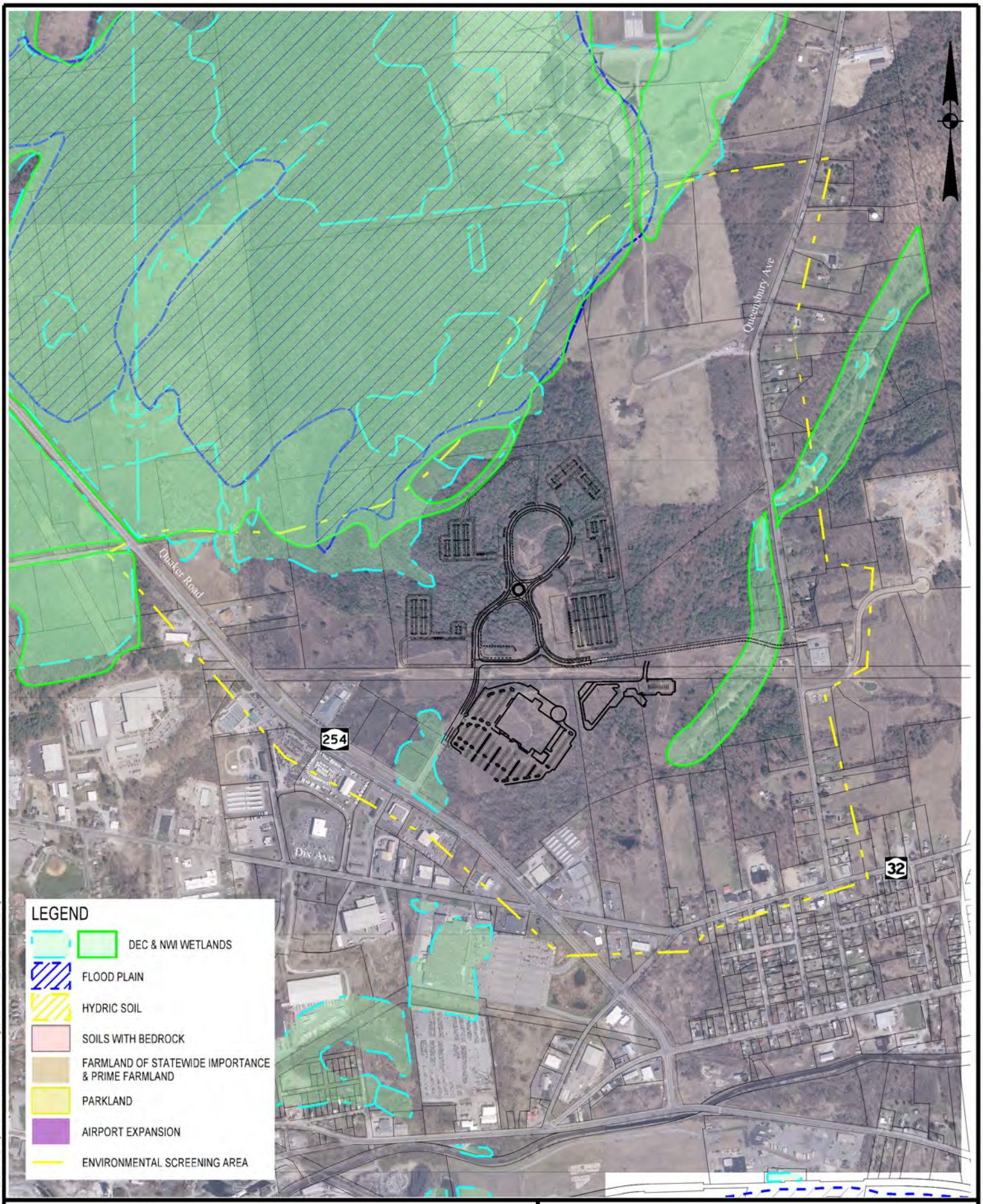


WETLANDS

QUEENSBURY CONNECTOR ROAD
TOWN OF QUEENSBURY
WARREN COUNTY, NY

Creighton Manning

PROJECT: 111-075	DATE: 12/2011	FIGURE: A.1

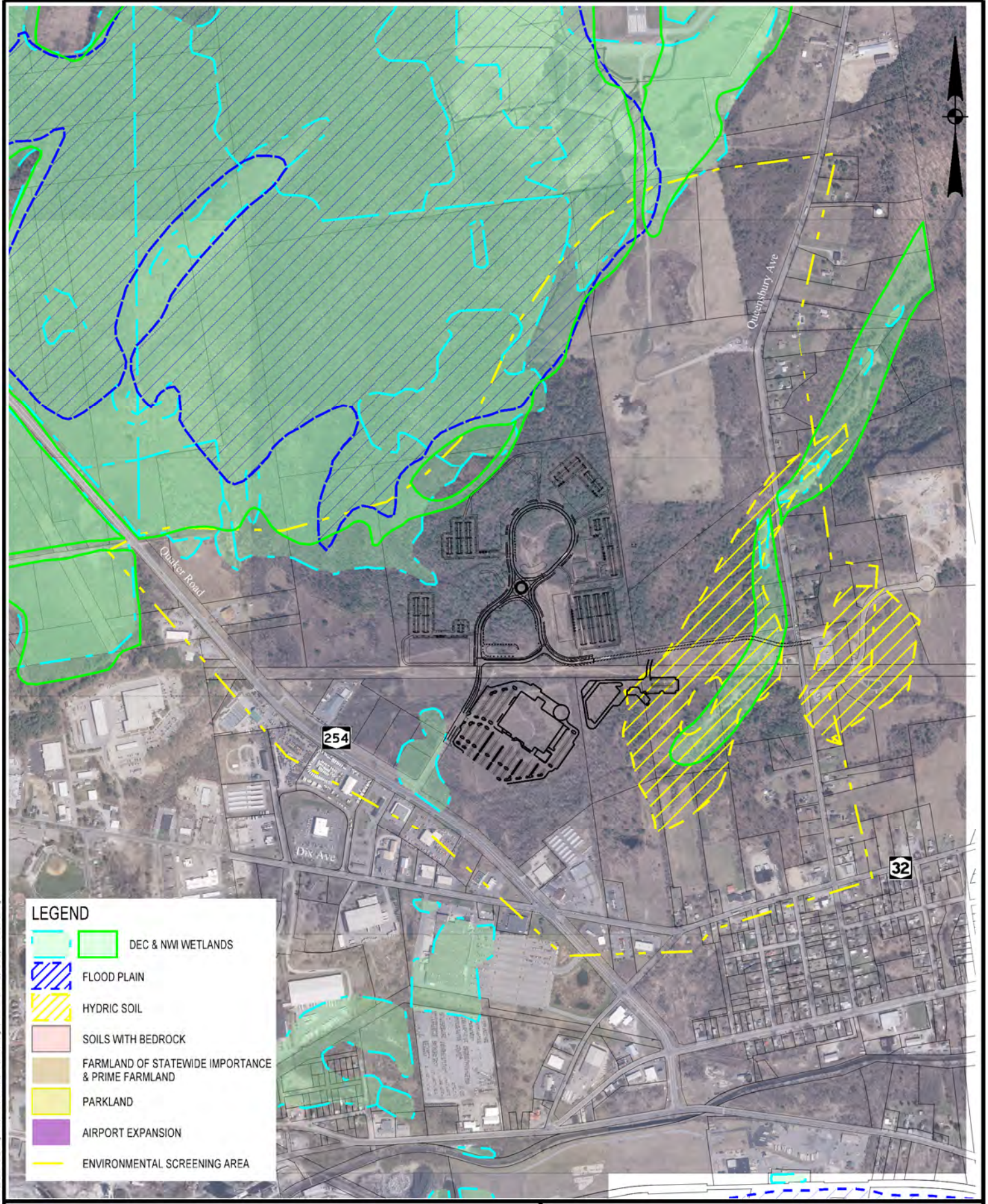


ENVIRONMENTAL CONSTRAINTS WETLANDS AND FLOODPLAINS

QUEENSBURY CONNECTOR ROAD
TOWN OF QUEENSBURY
WARREN COUNTY, NY

Creighton Manning

PROJECT: 111-075 | DATE: 12/2011 | FIGURE: A.2

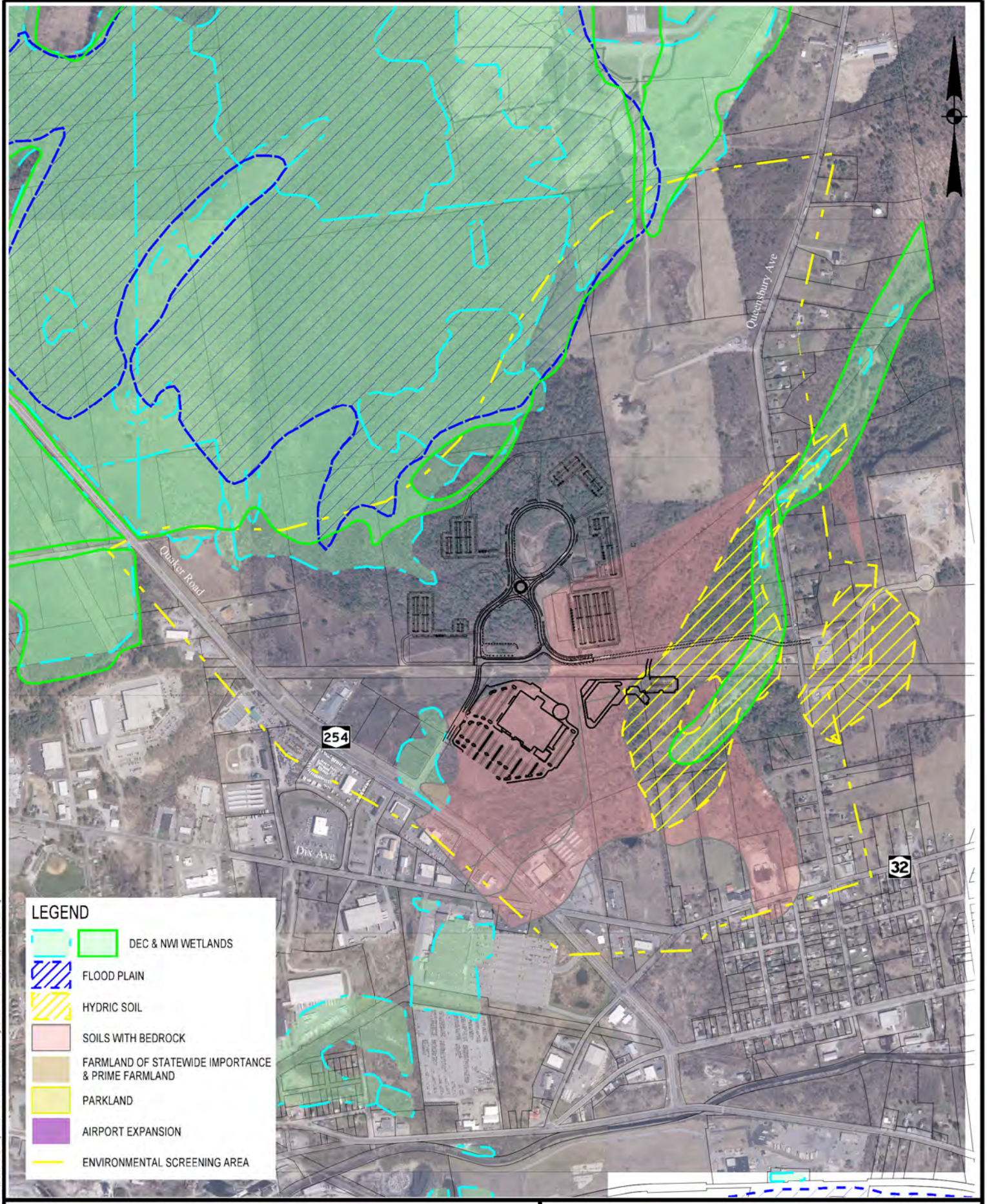


ENVIRONMENTAL CONSTRAINTS
HYDRIC SOILS

QUEENSBURY CONNECTOR ROAD
TOWN OF QUEENSBURY
WARREN COUNTY, NY

Creighton Manning

PROJECT: 111-075	DATE: 12/2011	FIGURE: A.3

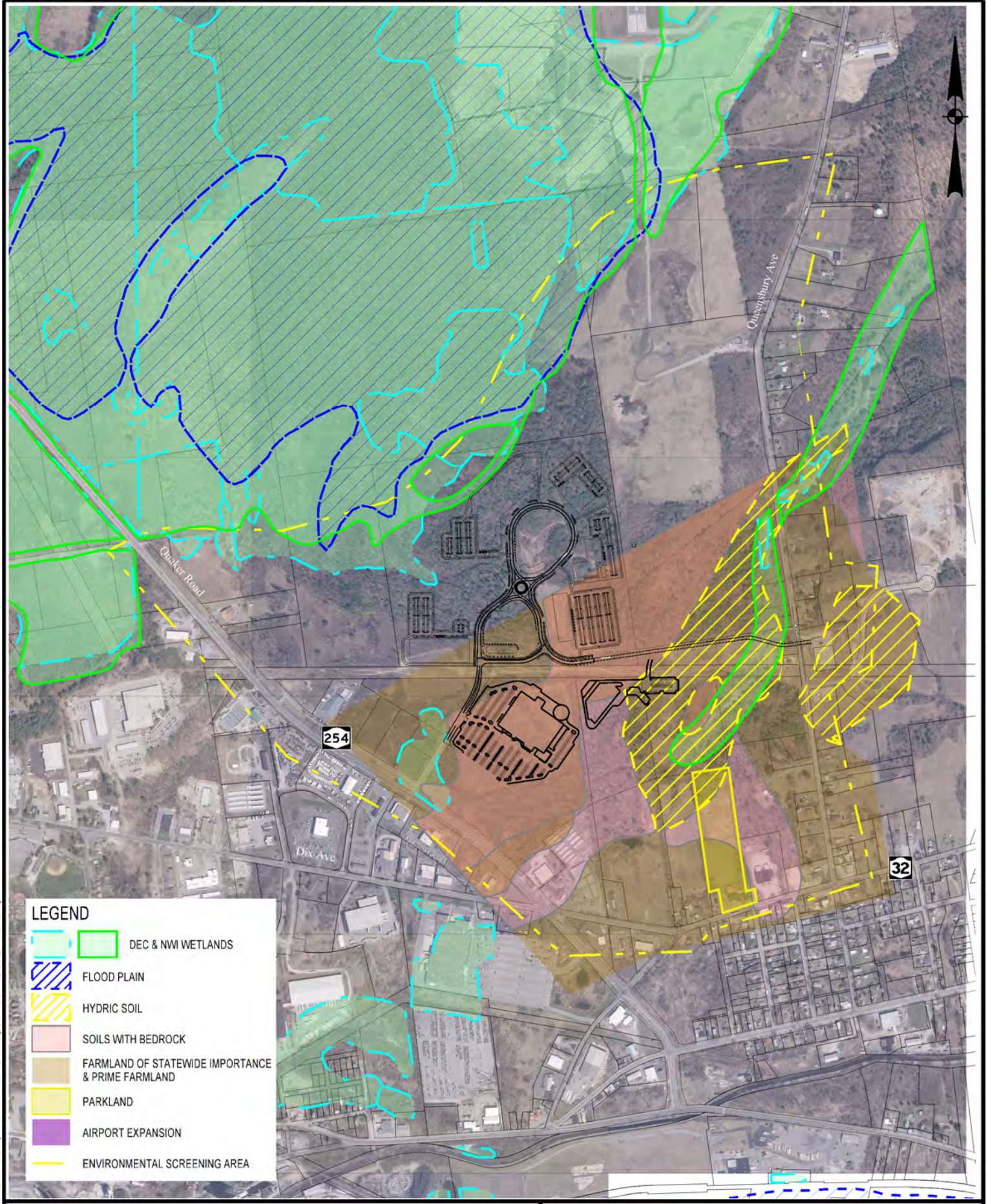


ENVIRONMENTAL CONSTRAINTS
SOILS WITH BEDROCK

QUEENSBURY CONNECTOR ROAD
TOWN OF QUEENSBURY
WARREN COUNTY, NY

Creighton Manning

PROJECT: 111-075	DATE: 12/2011	FIGURE: A.4

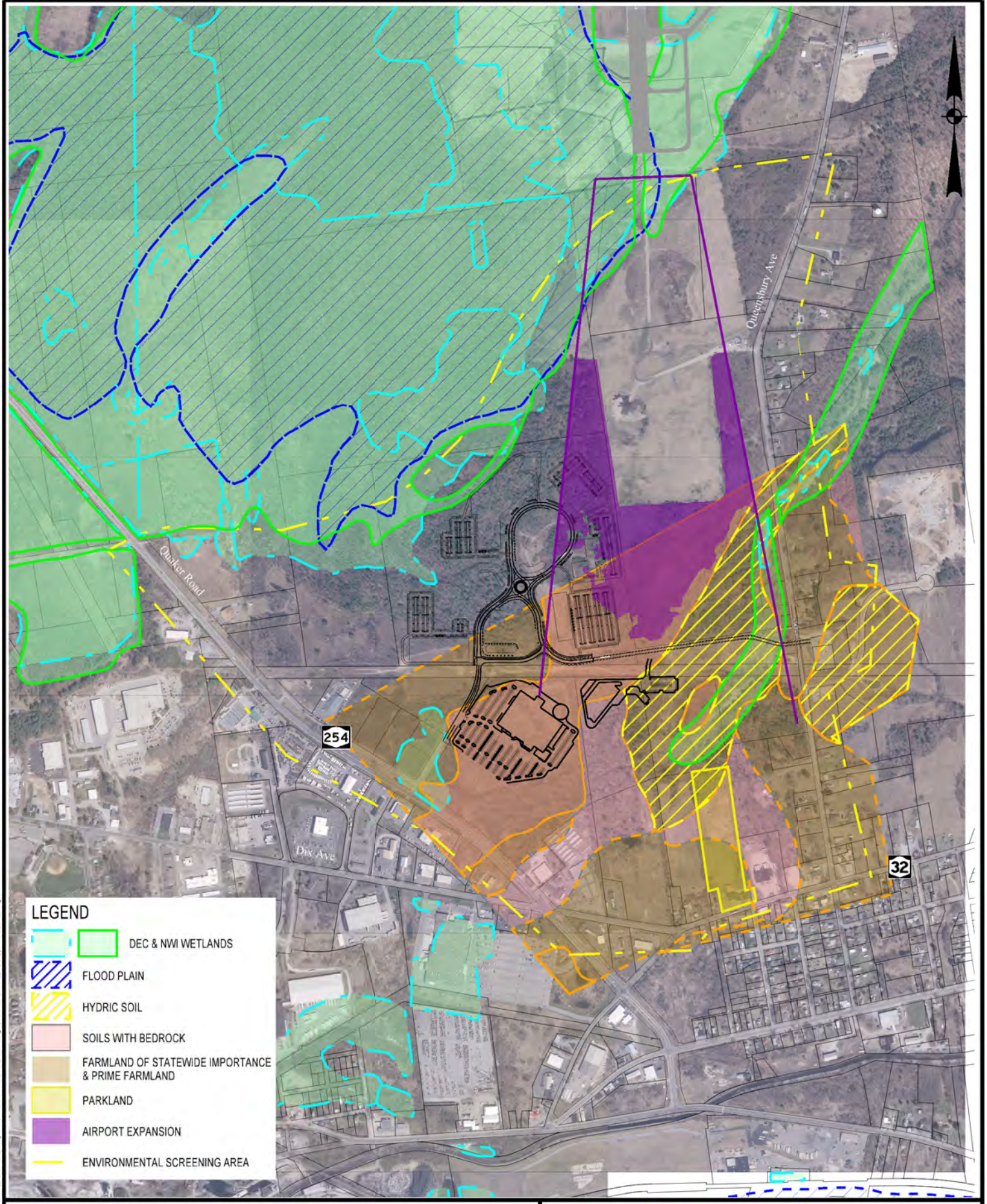


ENVIRONMENTAL CONSTRAINTS
FARMLAND AND PARKLAND

QUEENSBURY CONNECTOR ROAD
TOWN OF QUEENSBURY
WARREN COUNTY, NY

Creighton Manning

PROJECT: 111-075 | DATE: 12/2011 | FIGURE: A.5



ENVIRONMENTAL CONSTRAINTS
AIRPORT RUNWAY EXPANSION

QUEENSBURY CONNECTOR ROAD
TOWN OF QUEENSBURY
WARREN COUNTY, NY

Creighton Manning

PROJECT: 111-075	DATE: 12/2011	FIGURE: A.6

Appendix B – Public Meeting Summaries

Quaker Road to Queensbury Avenue Connector Road Study
Town of Queensbury, New York

Quaker Road to Queensbury Avenue Connector Road Study
Public Meeting and Workshop
Thursday, September 29, 2011 at 7:00
South Queensbury Fire Department
Meeting Summary

The workshop began with an introduction by Aaron Frankenfeld to introduce the project and explain the MPO's role in planning and programming transportation projects in the region. The Adirondack/Glens Falls Transportation Council (A/GFTC) has initiated this study to evaluate the viability of a potential roadway connection between Quaker Road and Queensbury Avenue, along with other transportation needs in the area. This study will evaluate conditions in the study area with and without the potential connector road. The need for a connector road has not been determined yet and is being evaluated as part of the study.

Creighton Manning outlined the project goals; existing conditions with respect to transportation and land use; and environmental features. An area-wide constraints map was also presented.

After the presentation, attendees met in smaller groups with one facilitator at each of three tables to discuss study area issues. Within the groups, participants were specifically asked to identify problems and opportunities for multimodal transportation improvements. Each facilitator then summarized the problems and opportunities identified by the small groups. The maps used at the meeting to take notes and the meeting sign-in sheet are included with this meeting summary.

Overall, the meeting was successful in that many people attended and provided valuable input. Attendees raised valid questions about whether a connector road is necessary and if it would help general traffic conditions in the study area. These are important questions that the Study Advisory Committee will work to answer through the study period. It was noted that at the conclusion of this planning study, a set of transportation recommendations will be put forth that will require engineering and further evaluation.

Workshop Results

Problems:

- Delays and lots of trucks at the Hicks Rd/Ridge Rd intersection
- Delays on Cronin Rd at Ridge Rd
- High speeds on Queensbury Ave from Courtney Ln to Hicks Rd
- Excessive delays at the Dix Ave/Quaker Rd intersection
- Delays at driveways and side streets on Quaker Rd from Dix Ave to Sanford St
- Sight distance concerns for Ridge Rd southbound to turn left onto Hicks Rd
- A new connector road could impact residential areas by increasing traffic on some sections of Queensbury Ave
- Truck traffic on Queensbury Ave is heavy
- Wal-Mart signal (Quaker Ridge Blvd) creates back-ups along Quaker Rd
- Pedestrians use Dix Ave more than other area roads and there are limited pedestrian accommodations for those pedestrians
- No room for walking or biking on Dix Ave and Queensbury Ave

Suggested Improvements:

- Wider shoulders on area roadways, specifically Quaker Rd and Dix Ave
- Four-lane segment on Quaker Rd between utility easement and Dix Ave
- Four-lane segment on Dix Ave approaching Quaker Rd through to Route 4
- Use context sensitive widening (i.e. use the existing shoulder width)

- Modify the timing at the Quaker Rd/Dix Ave intersection
- Add a turn lane on Dix Ave eastbound approaching Queensbury Ave
- Extension of Sanford Street east? This was an improvement put forth in the past as part of previous development proposal.
- Upgrade Dix Ave near Highland Ave
- New connector might remove some trucks from residential areas

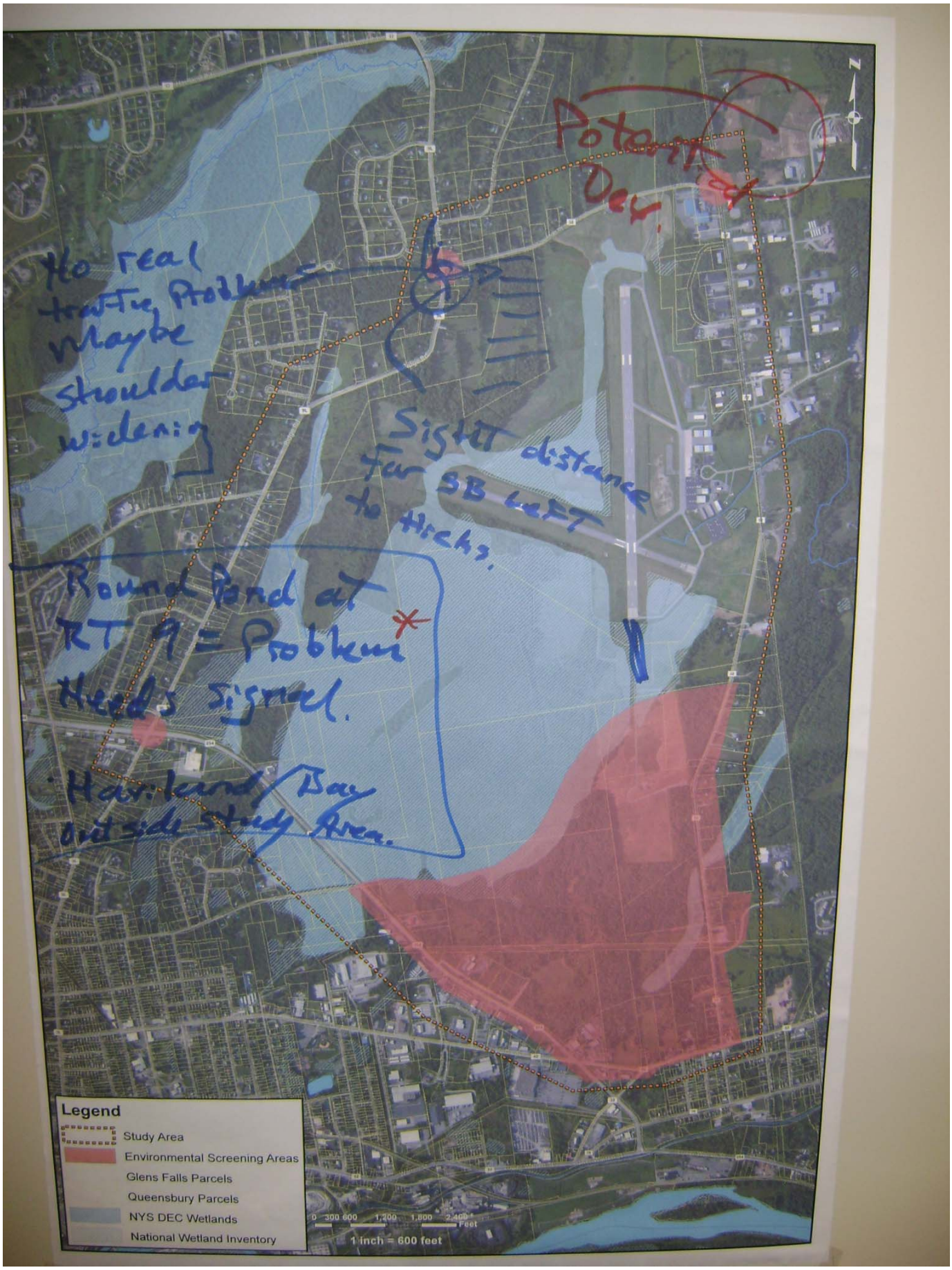
Questions/Comments/Concerns:

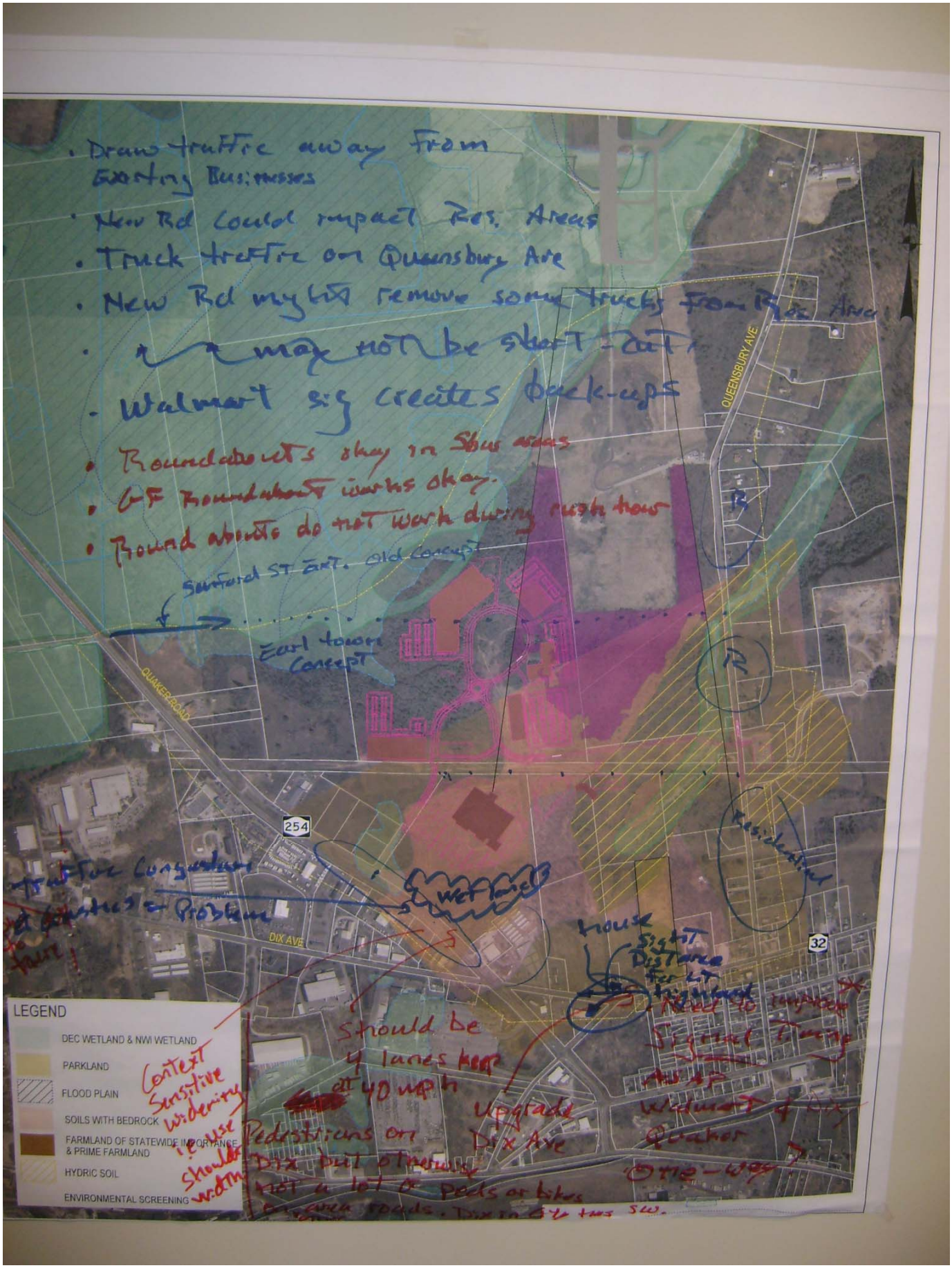
- Right-of-way needs for roadway expansions
- Who would a connector road benefit?
- Would a connector road draw traffic and therefore customers away from existing businesses?
- Maintain 40 mph on Quaker Rd
- A new connector road could hurt existing industrial parks by causing growth
- A connector road could be too close to airplanes and the southern runway

The information provided by the meeting attendees will be considered through the remainder of the feasibility study as alternatives are identified and analyzed. The next public meeting will occur in early December.


delays w/ lots of trucks
delays
speeds are too fast 55 mph
delay for
lots of delays
bad timing
no need for sidewalks
Legend
Study Area
Environmental Screening Areas
Glens Falls Parcels
Queensbury Parcels
NYS DEC Wetlands
National Wetland Inventory
0 300 600 1,200 1,800 2,400
Feet
1 inch = 600 feet


QUEENSBURY AVE
QUAKER ROAD
254
DIX AVE
32
No Connector
2 lanes
modify the light
oldest house
turn lanes
busy to Rt 4
2 lanes to Rt 4?
-no need for sidewalks but maybe wider shoulders
-no roundabouts?
-who does it (the road) benefit?
-no
-ROW concerns - historic house?
LEGEND
DEC WETLAND & NWI WETLAND
PARKLAND
FLOOD PLAIN
SOILS WITH BEDROCK
FARMLAND OF STATEWIDE IMPORTANCE & PRIME FARMLAND
HYDRIC SOIL
ENVIRONMENTAL SCREENING


Potential Deer
No real traffic Problems maybe shoulder widening
Sight distance for SB left to Hicks.
Round Pond at RT 9 = Problem Needs signal.
Hartland Bay Outside study Area.
Legend
Study Area
Environmental Screening Areas
Glens Falls Parcels
Queensbury Parcels
NYS DEC Wetlands
National Wetland Inventory
0 300 600 1,200 1,800 2,400 Feet
1 inch = 600 feet


• Draw traffic away from Existing Businesses
• New Rd Could impact Res. Areas
• Truck traffic on Queensbury Ave
• New Rd might remove some trucks from Ridge Ave
• may not be short-cut
• Walmart sig creates back-ups
• Roundabouts okay in Show areas
• CF Roundabout works okay.
• Round abouts do not work during rush hour
Sanford ST Ext. Old Concept
Earl tower Concept
QUAKER ROAD
QUEENSBURY AVE
254
DIX AVE
32
wetland
House
Sight Distance for LT turning
Should be 4 lanes keep at 40 mph
Upgrade Dix Ave
Pedestrians on Dix but others not a lot of Peds or bikes
One-way?
LEGEND
DEC WETLAND & NWI WETLAND
PARKLAND
FLOOD PLAIN
SOILS WITH BEDROCK
FARMLAND OF STATEWIDE IMPORTANCE & PRIME FARMLAND
HYDRIC SOIL
ENVIRONMENTAL SCREENING
Context Sensitive Widening
Shoulder width


QUEENSBURY AVE
QUAKER ROAD
254
DIX AVE
32
should be 4-way
Pinch-point spot Study - sim looks right
STORM H2O
→ will hurt exis. ind parks by causing growth
→ airplanes coming down (has happened in north)
BOCES? WHAT ARE THEY DOING
LEGEND
DEC WETLAND & NWI WETLAND
PARKLAND
FLOOD PLAIN
SOILS WITH BEDROCK
FARMLAND OF STATEWIDE IMPORTANCE & PRIME FARMLAND
HYDRIC SOIL
ENVIRONMENTAL SCREENING

Quaker Road to Queensbury Avenue Connector Road Study
Public Meeting
Tuesday, February 7, 2012 at 6:30
South Queensbury Fire Department
Meeting Summary

The workshop began with a project update by Aaron Frankenfeld. The Adirondack/Glens Falls Transportation Council (A/GFTC) initiated this study to evaluate the viability of a potential roadway connection between Quaker Road and Queensbury Avenue. Several alternatives had been evaluated since the last public meeting and the purpose of this second public meeting was to present the draft findings and solicit comments. The DRAFT report is available for review and comment through February 21, 2012 on the A/GFTC website at http://www.agftc.org/whats_new.asp.

Creighton Manning outlined the project goals, summarized existing conditions, discussed work completed since the first public meeting, and detailed the study conclusions:

- Considerable improvements would be needed to mitigate the full build out of the Quaker Ridge Technology Park
- A connector road would not ameliorate the need for most of the off-site transportation improvements
- As a regional transportation improvement, the cost of a connector road would outweigh the benefits
- A connector road would provide increased development potential, improved local access, and emergency services access
- Alternative 4A, extending from Quaker Ridge Blvd to Stone Quarry Rd, is the preferred connector road alternative

The study provided a number of multi-modal (pedestrian, bicycle, bus), short-term, and long-term recommendations including:

- Multi-modal Recommendations
  - Add pedestrian crossing accommodations to traffic signals
  - Extend a sidewalk along Dix Ave from East Field in Glens Falls to Queensbury Ave
  - Provide wider shoulders for bicyclists and pedestrians on Ridge Rd and Queensbury Ave where feasible
  - Consider transit access in the site approval process (pedestrian linkages to stops, safe places to wait, etc.)
- Short-term Improvements
  - Adjust the signal phasing at the Quaker Rd/Dix Ave intersection
  - Update and maintain the time-based signal coordination along Quaker Rd from Quaker Ridge Blvd to River St
  - Implement access management best practices like shared driveways, frontage roads, and channelization during site approval and development
  - Investigate the feasibility of a westbound left-turn lane on Dix Ave and Highland Ave
- Long-term Improvements
  - Implement development mitigation from Quaker Ridge Technology Park identified in the traffic impact study
  - Construct additional roadway improvements (left-turn lane on Quaker Rd at Sanford St and a westbound left-turn lane on Dix Ave and Queensbury Ave)

A commenter asked for clarification of the phrase “Improvements by Others”. It was explained that the “improvements by others” is the Quaker Ridge Technology Park development mitigation outlined in that project’s traffic impact study. The same commenter believed that if the connector road was built by the developer, then the Quaker Ridge Tech Park would not need to make improvements to the existing

system. It was explained that the connector road alone does not mitigate the Quaker Ridge Tech Park traffic, and that additional developer mitigation to the existing system would be needed.

The timing for implementation of short-term improvements, specifically signal phasing changes at the Dix Ave/Quaker Rd was questioned. Aaron noted that A/GFTC is a non-regulatory agency and can't complete implementation, but that A/GFTC would encourage the governing agencies to make the phasing improvements. Aaron also noted that implementing signal phasing changes is surprisingly difficult due to the few people in the region that can perform the work, and that the signal phasing changes are a cost effective short-term improvement that are sufficient to accommodate existing traffic conditions and background growth in the study area.

Attendees raised concerns regarding wetlands impacts and any correlating impacts on individual properties like water in basements, standing water, etc associated with construction of a connector road. Concerns were also raised about the amount of potential light industrial space in the area.

The information provided by the meeting attendees will be addressed through finalization of the study report.