FINAL

Route 17
Transportation Corridor Study

Sullivan County & Orange County

May 2013

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EXECUTIVE SUMMARY

The New York State Department of Transportation has conducted a Transportation Corridor Study for an approximately 47-mile segment of New York State Route 17 between Monticello, Sullivan County, and Interstate 87 in Harriman, Orange County.

The objective of the Study was to examine the need for capacity improvements along the Route 17 corridor in Orange and Sullivan Counties. The principal result of the Study, as documented in the attached Transportation Corridor Study, was the recommendation of a corridor preferred alternative for improving existing and future capacity needs.

As part of the Study's development, a public outreach process was used to help gather input from affected stakeholders and provide an opportunity for the Department to provide stakeholders with valuable information about the corridor. The outreach process included:

- **Elected Officials Meeting** - A meeting with elected officials was held on April 24, 2012 where the Study's objectives and public involvement process was presented for discussion.
- **Public Workshops** - A series of public workshops were held to provide Study stakeholders with information on the Study's development and to receive valuable input.
- **Transportation Partnering Committee (TPC) Meetings** - The TPC was a working committee formed of volunteers to help provide direction and guidance in the development of the Study. The committee was comprised of local and State government officials with a direct transportation link to the Route 17 corridor. Members included representatives from the Town of Mamakating, Town of Thompson, Orange County Planning, Orange County Department of Public Works, Sullivan County Department of Public Works, Town of Goshen, Town of Blooming Grove, Village of Monroe, Town of Woodbury, MTA Metro-North Railroad and NYS Thruway Authority.

The Study was developed in a four step process. Step I included the development of corridor goal statements, a corridor vision statement, and collecting existing conditions data regarding the traffic, environment and land use.

During Step II of the Study's development, *corridor concepts* were evaluated that included:

- Taking no action;
- An additional General Use Third Lane;
- An additional High Occupancy Vehicle (HOV) Lane;
- An additional lane dedicated to bus rapid transit and;

- Light rail transit.

During Step III of the Study's development, the following concepts were progressed as *corridor feasible alternatives* and evaluated more closely:

- General Use Third Lane from I-87 to just west of Middletown and;
- High Occupancy Vehicle Lane from I-87 to just west of Middletown.

Ultimately, the *Corridor Preferred Alternative*, to addressing existing and future capacity needs, was determined during Step IV of the Study's development as follows:

- General Use Third Lane from I-87 to just west of Middletown.

The Study also considered, at a planning level of analysis, improvements to key interchanges in both Orange and Sullivan Counties, future locations for park-and-ride facilities, and provisions for future transit.

REPORT SUMMARY

RS-1 Introduction

The New York State Department of Transportation (NYSDOT) has conducted a Transportation Corridor Study (the Study) for an approximately 47-mile segment of New York State Route 17 (Route 17/Future I-86) extending between Exit 103 (Rapp Road) in Sullivan County and Exit 131 (I-87 – Harriman) in Orange County. The Study was completed under Congressional Earmark #4615 sponsored by Senator Charles Schumer, (D-NY), the stated intent of which was to examine the need for capacity improvements in the Route 17/I-86 corridor in Orange and Sullivan Counties. As documented in this Transportation Corridor Study Report (the Report), the principal result of the Study is the identification of a preferred transportation alternative that addresses the identified capacity needs of the corridor for future development by NYSDOT.

RS-2 Background

Route 17 within the Study corridor is generally a four-lane expressway, with two travel lanes in each direction, with the exception of portions of the roadway between Exit 112 (Masten Lake/Yankee Lake/Mountaindale) and Exit 115 (Burlingham Road) in Sullivan County, and between Exit 122A (Fletcher Street/Goshen) and Exit 125 (NY Route 17M/South Street) in Orange County, where segments of the roadway include three travel lanes. The distance between interchanges in the corridor ranges between 0.5 and 3 miles.

Route 17 serves as both a major commuter route and a primary recreational route. Commuter use results in significant levels of traffic congestion on weekdays, while recreational use results in significant levels of congestion on Friday and Sunday evenings. Traffic congestion is particularly severe between Exit 121 (I-84 – Newburgh/Port Jervis) and Exit 131 (Harriman) at the eastern end of the corridor. Congestion and delay on Route 17 causes a significant amount of traffic to divert to other state highways and local roads, and results in traffic congestion within the larger Route 17 Study corridor.

It is projected that traffic congestion on Route 17 will worsen over the near-term and long-term planning horizons as a consequence of projected population growth and development within the corridor. Projections by the Cornell Program of Applied Demographics indicate that the population of Sullivan County will surpass 79,300 people in 2020, a 2.3% increase over the population of the County in 2010. Estimates of projected growth in population developed by the Orange County Planning Department indicate that the population of Orange County will reach 400,000 by the end of 2013 and will exceed 430,500 in 2020, a 7.6% increase over the seven intervening years. Congestion is also anticipated to worsen in the future as a consequence of new development in both Orange and Sullivan Counties, including the expansion of the Center for Discovery and EPT Concord Projects in Sullivan County, both of which have been supported by the Mid-Hudson Economic Development Council.

The Route 17 Corridor is served by a number of transit services, including commuter rail, commuter and intercity bus, and local bus transit. Despite the increasing use of these services, traffic volumes and levels of congestion on Route 17 continue to increase. Consequently, additional transportation capacity is needed to address existing and projected levels of congestion in the corridor, provide for enhanced mobility, and allow for future economic growth in both Sullivan and Orange Counties.

Currently planned improvements to Route 17 in the corridor are limited to the needed reconstruction of the Exit 122 (Crystal Run Road) Interchange starting in 2013 and the reconstruction of Exit 131 (Harriman) Interchange to be completed by 2022. While these improvements address local operational needs they do not provide for overall needed corridor capacity needs.

In addition to the need for additional transportation system capacity, there is also the need for improvements at selected interchanges to address existing high accident locations, to support existing and projected development, and to provide new and expanded park-and-ride facilities in the corridor. Existing park-and-ride facilities are substantially limited to a number of park-and-ride facilities in eastern Orange County.

RS-3 Purpose of Study

Based on the identified need for increased transportation capacity described above, the purpose of the Study is to identify one or more transportation improvements that will address projected increases in population in the corridor and provide for anticipated levels of development through the year 2045.

RS-4 Vision for the Route 17 Corridor and Corridor Goals

Based on the identified need for the Study, and public input garnered through completion of the Study public participation process, the following vision statement has been developed for the NYS Route 17 corridor:

> *The Route 17 corridor in Orange and Sullivan Counties will support a robust, economic future with safe, efficient access for all users while preserving its scenic beauty and natural resources. Freight commerce, recreational travelers, and daily commuters will travel between New York City and the Hudson Valley-Catskill Mountain region along a well managed and maintained, modern facility that simultaneously supports long distance access to the southern tier of New York State and provides enhanced mobility for local trips among adjoining communities.*

Based on the identified vision for the corridor and public input obtained through the Study public participation process, the following goal statements were established for the corridor:

- Improve corridor safety for all users and stakeholders.

- Provide a reliable transportation corridor that accommodates public transit, minimizes delay and accommodates current and future travel demand for all.
- Preserve corridor infrastructure investments in a fiscally sustainable manner.
- Modernize corridor roadway and interchanges while maintaining the quality of life and preserving the scenic beauty and natural resources.
- Provide a transportation corridor that supports and enhances the opportunity for continued economic development.

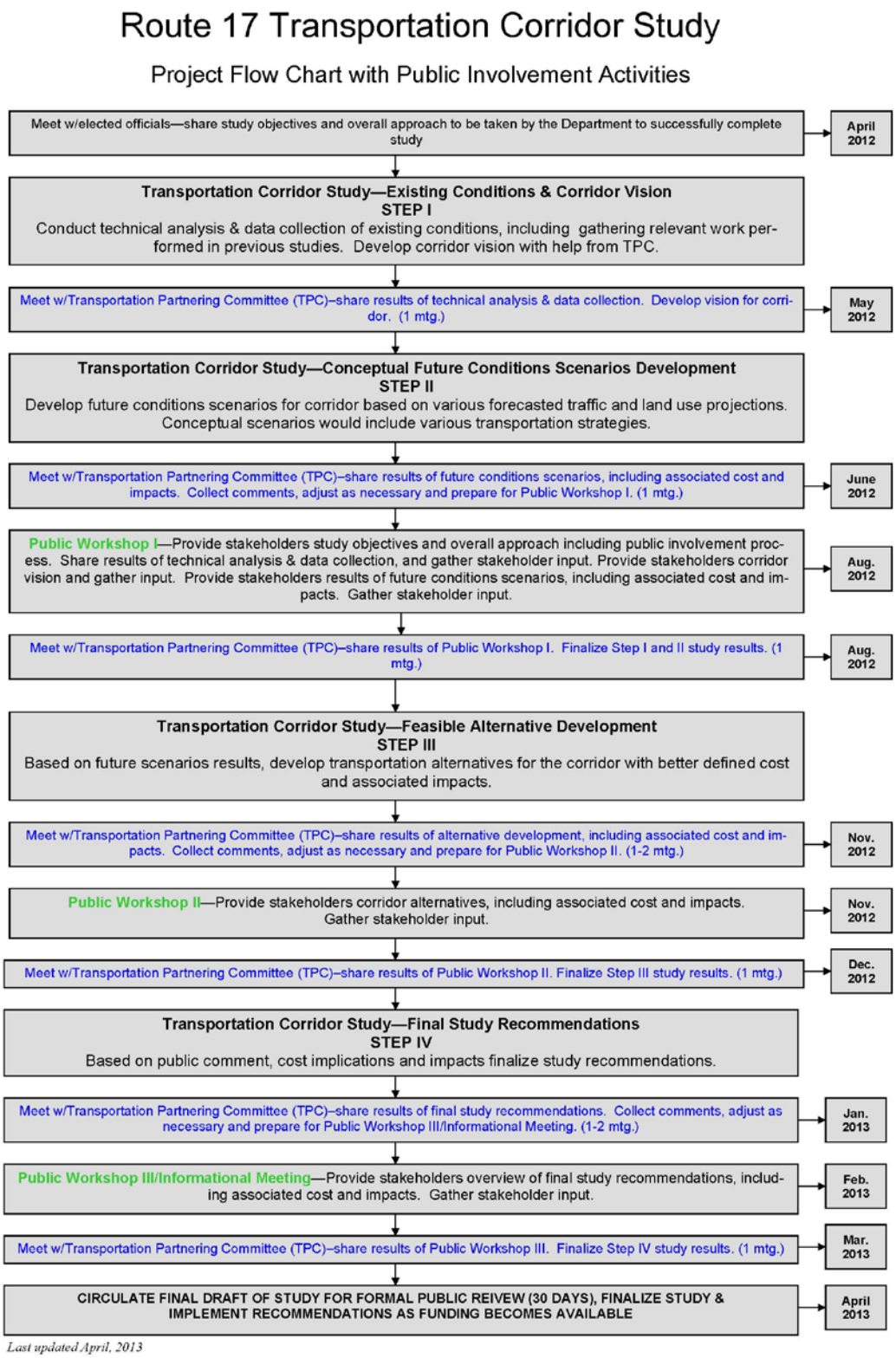
These goal statements were developed to help guide the Department in its planning and programming of future projects for the Route 17/Future I-86 corridor.

RS-5 Study Development Process

As shown in Figure RS-1, the Study was completed through the following four-step process:

- **Step I "Existing Conditions and Corridor Vision"** included collection of data on existing (Year 2010) transportation, land use, demographic, and environmental conditions in the Study corridor for Sullivan and Orange Counties, and the development of the vision statement and goal statements for the corridor.
- **Step II "Conceptual Future Conditions Scenarios Development"** included the development of a description of future (Year 2045) "baseline" conditions, which incorporated projected growth in the corridor, including anticipated major development projects and planned and programmed improvements to the regional transportation system. Transportation concepts were then identified to address the anticipated travel demand that would be generated in the Route 17 corridor by projected growth. These transportation concepts were screened to identify those solutions that had the greatest potential to meet corridor vision and goals, and warranted further development and evaluation.
- **Step III "Feasible Alternative Development and Analysis"** included the further development of the "shortlist" of transportation alternatives that survived the screening evaluation in Step II to better define their costs and their relative ability to address corridor transportation goals and development needs.
- **Step IV "Final Study Recommendations"** included the development of final Study recommendations based on the ability of each solution to satisfy the vision and goals for the corridor, public comment on each solution, the capital costs of each solution, and the impact of each solution on traffic, land use, economics and the environment.

Figure RS-1: Project Flow Chart



RS-6 Public Participation Process

Each step in the study development process was supported by the results of a robust public participation process that involved key stakeholders in Sullivan and Orange Counties. This process included four major elements:

- **Elected Officials Meeting.** A kickoff meeting was held with key elected officials to provide an overview of the Study, and to provide opportunity for officials to identify the critical concerns that warranted evaluation in the Study.
- **Public Workshops**. A total of six public workshops were held in Sullivan and Orange Counties to provide information on the Study to the general public and to provide an opportunity for the general public to comment on all aspects of the Study. Workshops were scheduled to coincide with the completion of the major milestones of the Study.
- **Transportation Partnering Committee (TPC) Meetings.** The TPC was a working committee comprised of government volunteers from the Town of Mamakating, Orange County Planning, Orange County Department of Public Works, Sullivan County Department of Public Works, Town of Goshen, Town of Blooming Grove, Village of Monroe, NYS Thruway, Town of Woodbury, and MTA Metro-North Railroad that provided direction and guidance in the development of the Study. As with the public workshops, TPC meetings were scheduled to coincide with completion of the major milestones of the Study.
- **Direct Meetings with Key Stakeholders**. In addition to the public workshops and TPC meetings, meetings were held with local government representatives and business leaders in the corridor to discuss future development plans, local zoning, growth issues, and possible impacts that may result from the proposed transportation improvements.

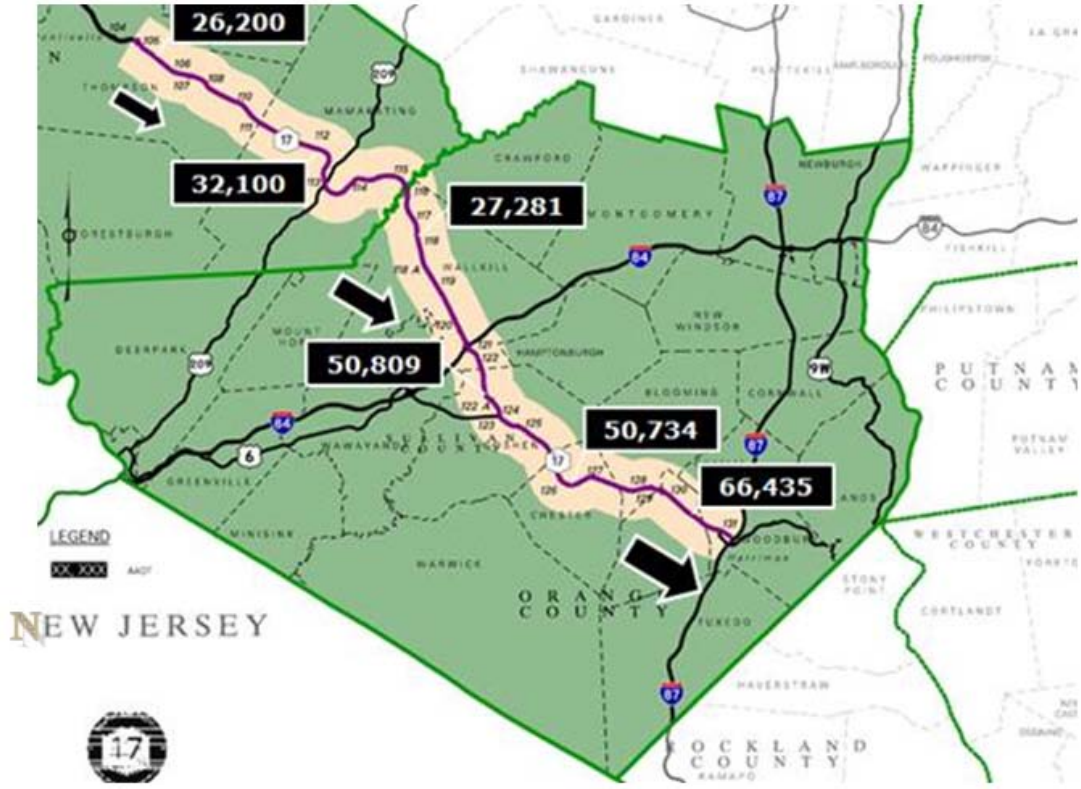
RS-7 Existing (Year 2010) Conditions in the Study Corridor

As summarized below, a key element of the initial step of the Study was the development of a description of existing transportation, land use, demographics, and environmental conditions in the corridor.

RS-7.1 Transportation Conditions

- **Traffic Volumes**. As depicted in Figure RS-2, current (2010) Average Annual Daily Traffic (AADT) traffic volumes in the Study corridor range from approximately 26,000 vehicles per day (VPD) at the western end of the corridor to over 66,000 VPD at the eastern end of the corridor.

Figure RS-2: Existing AADT



- **Level of Service (LOS).** Level of Service is a qualitative measure of operational conditions that is used to describe the degree of congestion on a roadway. Level of Service ratings range from LOS A (free flow condition) to LOS F (breakdown conditions). Existing (2010) LOS on Route 17 during the peak AM commuting period in the eastbound direction range between LOS A and B throughout Sullivan County and the western portions of Orange County, to LOS C and D near the I-84 interchange at Exit 122 (Crystal Run Road/East Main Street) in Orange County, to LOS E and F at the eastern end of the Study corridor between Exit 130 (NY Route 208 – Monroe/Washingtonville) and 131 (Harriman). Similar conditions to those in the AM peak commuting period occur in the westbound direction during the PM peak commuting period.
- **Frequency of Accidents in the Study Corridor.** High Accident Locations (HALs) are defined by NYSDOT as areas with an unusually high rate of accidents and/or fatalities compared to the rates of accidents and fatalities on other roadways in New York State with the same functional classification. A number of HALs exist along the study corridor at locations near major interchanges at " traffic weaving" sections, in which there are high levels of merging and diverging traffic.
- **Rail and Bus Transit Services.** Sullivan County is served by the Sullivan County Transportation Department, which provides two round-trip routes, one of which operates on Thursdays from Lumberland/Bethel to Monticello, and the other operates

on Fridays from Callicoon to Monticello. The ShortLine bus service operates local routes from the Village of Monticello, and regional commuter bus service to the Port Authority Bus Terminal in Manhattan.

- Orange County is served by the MTA Metro-North Port Jervis commuter rail line, and a number of regional, local, para-transit, and dial-a-bus services. Data collected by Metro-North in the spring of 2010 showed a total of 1,880 riders during the AM peak period on the Port Jervis Line. The regional bus routes generally provide commuter service by ShortLine/Coach to New York City. Local bus routes are largely limited to service to commercial and retail areas in the cities of Newburgh and Middletown and the Villages of Monroe and Kiryas Joel. Approximately 5.3% of Orange County residents use public transit to commute to work.
- **Commuting Patterns.** Based on available U.S. Census Bureau journey-to-work data for Orange County for the period 2005 through 2009, approximately 55.5% of daily work trips have both origin and destination within the county borders, and 29.6% of daily work trips are by county residents to locations outside county borders. Of all workers commuting out of Orange County, 19% were headed to Manhattan, 17% to Rockland County, 14% to Bergen County, and 11% each to Westchester and Dutchess Counties. In Sullivan County, nearly 72% of commuters work within the County. Of all workers commuting out of Sullivan County, approximately 57% were headed to Orange County, 9% to Ulster County, 8% to Manhattan, 4% to Rockland County, and significantly lower percentages to all other destinations.
- **Freight**. Interstates I-87 and I-84 are the primary freight roadways linking the Mid-Hudson region to locations in the Northeast, Canada, the Midwest, and South. I-84 connects the region with New England to the east and Pennsylvania to the west, while I-87 connects the region with New York City and the Capital Region. Route 17 connects the region with the Southern Tier of New York State and carries substantially less freight than either I-84 or I-87. There are no truck rest areas along the Route 17 Study corridor.

RS-7.2 Land Use

The approximately 47-mile corridor passes through eight towns and a number of additional municipalities. The large geographic extent of the Study corridor is reflected in a diverse range of land uses in the corridor. Overall, land uses in the area are predominantly suburban residential and rural, with higher densities in village, town and city centers. Mixed commercial uses are primarily concentrated around municipal centers. Woodbury Common Premium Outlets, located off of Exit 131 (Harriman) at the eastern end of the Study corridor, is a major destination retail center drawing consumers from the New York Metropolitan Region. Land uses of regional significance in Sullivan County include the Center for Discovery, the largest employer in the county, and Bethel Woods Center for the Arts.

RS-7.3 Demographics

- **Orange and Sullivan County Population.** The U.S. Census Bureau reports that the population of Sullivan County was 77,547 individuals in 2010, a 4.8% increase from the year 2000, and the population of Orange County was 372,813 individuals in 2010, a 9.2% increase from the year 2000.
- **Environmental Justice Populations.** Minority and low-income populations ("Environmental Justice" populations) are protected against disproportionately high and adverse impacts from public actions by both federal and state orders and related regulations. In New York State, "Potential Environmental Justice" (PEJ) Areas have been identified by the New York State Department of Environmental Conservation (NYSDEC). Within the Study corridor in Sullivan County PEJ areas have been designated in the Village of Monticello and the Town of Thompson, while in Orange County, PEJ areas have been designated by NYSDEC in the Town of Monroe, the Village and Town of Chester, the Village and Town of Goshen, the Town of Wallkill, and the City of Middletown.

RS-7.4 Environmental Conditions

- **Noise & Air Quality.** A review of land uses in the Study corridor indicates that there are numerous noise- and air quality-sensitive land uses in the corridor. In addition, Orange County has been named as part of a non-attainment area for fine particulate matter ($PM_{2.5}$) and ozone. Effective December 14, 2009, the New York-New Jersey-Connecticut metropolitan area was classified non-attainment by the U.S. Environmental Protection Agency (USEPA) for the 24-hour $PM_{2.5}$ standard.
- **General Ecology and Endangered Species**. A number of threatened and endangered species have been identified by the U.S. Fish and Wildlife to be present in Sullivan and Orange Counties and are identified in the main body of this report.
- **Wetlands.** National Wetland Inventory (NWI) freshwater wetlands and NYSDEC wetlands are present along major portions of the Study corridor, including the Basha Kill Wildlife Management Area south of Exit 113 (NY Route 209 – Wurtsboro/Ellenville). NWI wetlands are under the jurisdiction of the U.S. Army Corps of Engineers (USACE). Additional jurisdictional wetlands may potentially be located within the Study corridor, but would require site reconnaissance for their identification.
- **Navigable Waters and Wild, Scenic, and Recreational Rivers.** Watercourses located within the Study corridor are generally classified by the NYSDEC as either Class B (indicating waters supporting contact recreation) or Class C (indicating waters supporting fisheries and suitable for non-contact activities). There are no Wild, Scenic, or Recreational river segments within one mile of the Study corridor.
- **Parks, Cultural Resources and Farmland.** Several historic sites listed on or eligible for listing on the State or National Registers of Historic Places are located in proximity to the Study corridor. In addition, a review of the New York State Office of Parks,

Recreation and Historic Preservation (OPRHP) online database indicates the potential presence of archaeologically significant areas throughout the Study corridor. A substantial portion of the Study corridor is in agricultural use. Prime farmland soils exist in several parts of this area.

RS-8 Corridor Conceptual Future (Year 2045) Conditions

Conditions in the future (year 2045) were identified to establish the traffic, transit and land use conditions that would be present in the corridor without any corridor-level improvements to Route 17.

- **Future (Year 2045) Traffic Conditions.** Future (Year 2045) traffic conditions within the Study Corridor in Orange County were estimated through the use of a regional transportation model maintained by the Orange County Planning Department. Since this regional transportation model does not extend into the Sullivan County portion of the corridor, future year estimates of travel for the segment of the corridor in Sullivan County were taken from Route 17/I-86 Conversion Design Study Reports.
- These projections indicate that traffic volumes on Route 17 in Sullivan County will increase from 0.3% to almost 2% per year throughout the section of corridor between Exits 103 (Rapp Road) and 115 (Burlingham Road), and that traffic volumes in Orange County will increase between 22% and 200% over the 35-year 2010-2045 period depending on the section of the corridor. This is equivalent to an increase of 0.5% to almost 3% per year throughout the corridor. The results of the assessment further indicate that congestion along the easternmost segment of Route 17 in Orange County will operate at unacceptable levels of congestion (LOS E and F), and that eastbound and westbound segments of Route 17 between Exit 120 (NY Route 211/Middletown) and Exit 121 (I-84 –Newburgh/Port Jervis) will worsen to LOS E and F.
- **Future (Year 2045) Transit Improvements.** The West of Hudson Regional Transit Access Study (WHRTAS), currently underway, is expected to recommend long-term improvements to transit service along the I-87 and Route 17 corridors. In the near term, a number of transit projects are listed in the 2011-2015 *Transportation Improvement Program (TIP)* for Orange County, including park-and-ride facilities at the Village of Kiryas Joel and the Village of Monroe, rehabilitation of existing transit facilities in the City of Middletown, operational improvements to the MTA Metro-North Port Jervis Line, travel demand management program activities in Orange County, and enhancements to existing bus service.
- **Future (Year 2045) Land Use.** By 2045, much of Orange County will be substantially "built out" as allowed under existing zoning controls of the jurisdictions within the County. Major planned development projects in Orange County include a three-story 1,000 space parking garage at Woodbury Common, and a 45-acre warehouse development on NY Route 17M. Major proposed development projects along the Study corridor in Sullivan County include expansion of the Center for Discovery, the EPT Concord Resort, and the Shawaga Lodge Road Development project.

RS-9 Transportation Corridor Concepts and Identification of Corridor Feasible Alternatives

Five transportation concepts have been identified as having the potential to meet the vision and goals of the Study and to serve projected future (Year 2045) traffic levels. The concepts were developed to a schematic level of design, including the preparation of typical plans and cross sections identifying the nominal number of lanes, lane and shoulder widths, and other geometric characteristics. Cost estimates for each concept were based on per lane mile costs for similar types of facilities in the nation with similar cross sections. The "per lane mile" costs were consistently applied to the full project limits to provide comparable cost estimates for each of the five transportation concepts.

The five transportation concepts with the potential to meet the study's vision and goals and to address projected future (Year 2045) traffic needs were evaluated on the basis of their relative cost, operational and design features, right-of-way requirements, support to economic development, and environmental effects. In addition, the concepts were reviewed by the TPC and in public workshops in Sullivan and Orange Counties, during which the general public was given the opportunity to comment on each of the competing concepts.

Provided below is a description of each concept and the results of this evaluation process.

- **No Build**. Under this concept, there would be no significant improvements beyond those currently planned and programmed in the corridor. These currently planned and programmed improvements include enhancements to Exits 122 (US Route 6– Middletown/Port Jervis) and 131 (Harriman), and standard maintenance activities. The No Build concept would require relatively minor capital investment, but would not result in needed corridor capacity or safety improvements or provide adequate support to economic development in the region. As a consequence, it was eliminated from further consideration, but was used as the baseline against which other identified concepts were evaluated.
- **General Use Third Lane.** Under this concept a third lane would be added in the median of Route 17. Since the design of the existing Route 17 provides sufficient room for the development of a third lane in the median of the roadway, a third lane has already been developed in certain segments of Route 17 within the corridor. This concept would include the introduction of a median barrier and the development of new storm water infrastructure. Widening of the roadway would be required in certain areas where there are sight distance obstructions or to correct existing safety or operational problems that would be exacerbated by the addition of a new lane. The General Use Third Lane would be developed between Exits 120 (NY Route 211 – Middletown) and 131 (Harriman), a distance of approximately 22 miles, and the segment of the corridor that is projected to experience the highest levels of congestion in the year 2045.

  The widened roadway would improve capacity, address identified HALs, and support regional economic development through improved access to the corridor. It would also provide additional capacity for use by trucks carrying freight within and through the

corridor. Potential environmental effects of this concept would be minimal compared to other concepts since it would generally not require construction beyond that of the existing roadway alignment. Therefore, this concept was advanced for further evaluation since it would have the potential to achieve the Study vision and goals.

- **High Occupancy Vehicle Lane.** High Occupancy Vehicle (HOV) lanes are managed lanes that provide a dedicated lane that separates high occupancy vehicles (i.e., busses and private automobiles occupied by more than one person) from general use traffic. For the Route 17 corridor, an HOV lane would be developed on each side of the roadway in the existing median area. Similar to the General Use Third Lane concept, the HOV lane would be developed between Exits 120 (NY Route 211 – Middletown) and 131 (Harriman), a distance of approximately 22 miles and the segment of Route 17 projected to experience the highest levels of congestion in the year 2045. The HOV lane would be separated from general use traffic by a painted buffer. Widening would be required at the access points so that an auxiliary lane could be provided to allow vehicles to safely transition between the HOV lane and general use lanes. The HOV lane concept would have the potential to provide needed additional capacity, address identified safety concerns and could encourage regional economic development in Sullivan and Orange Counties. Implementation of this concept could potentially result in some adverse environmental effects since its footprint would extend outside the existing roadway alignment. This concept was advanced for further evaluation since it had the potential to achieve the Study vision and goals.

- **Bus Rapid Transit.** Bus Rapid Transit (BRT) is a public transportation mode that uses buses to provide faster and more efficient service than ordinary bus service. For the Route 17 corridor, barrier separated BRT lanes with eight feet wide shoulders would be placed in the median of the highway between Exit 120 (NY Route 211 – Middletown) and Exit 131 (Harriman). The BRT concept in the western part of the corridor could be implemented as a future initiative since, in the 2045 planning year, it would be significantly faster to travel by automobile on the existing general purpose lanes through this uncongested segment of Route 17 rather than on BRT. Stations would also be developed in the median and would require additional widening and the installation of overhead walkways to provide pedestrian access. This concept would have the potential to result in improved capacity, address safety concerns, and could encourage regional economic development through improved access to Route 17 in the vicinity of planned development projects. Implementation of this concept could potentially result in adverse environmental effects since its footprint would extend outside the existing roadway alignment. However, it is projected that existing and projected population densities in Sullivan and Orange Counties would not be sufficient to support cost-effective investment in the BRT concept. In addition, the BRT concept would not connect with a supporting regional transit system at its eastern limit. As a consequence, this concept was eliminated from further consideration since it would not achieve the Study vision and goals.

- **Light Rail Transit.** Light rail transit (LRT) is a form of public transit that utilizes electric train cars operating on fixed guide rails. For the Study corridor, an LRT system would be developed between Exit 120 (NY Route 211 – Middletown) and Exit 131 (Harriman). The LRT concept in the western part of the corridor could be implemented as a future initiative since it would be significantly faster to travel by automobile on the existing general purpose lanes through this uncongested segment of Route 17 rather than on LRT. The LRT concept would be developed outside the highway right-of-way rather than within the median of the roadway, to provide convenient access to nearby city, town and village centers. However, it is projected that existing and projected population densities in Sullivan and Orange Counties would not be sufficient to support cost-effective investment in the LRT concept. In addition, the system would not connect with a supporting regional transit system at its eastern limit. As a consequence, this concept was eliminated from further consideration since it would not achieve the Study vision and goals.

The results of these assessments indicate that the General Use Third Lane and HOV Lane Alternatives are feasible alternatives with the potential to address future corridor capacity needs and warrant further detailed evaluation.

Travel Demand Management (TDM) and Transportation Systems Management (TSM) Measures In addition to the five identified concepts described previously, there are a range of Travel Demand Management and Transportation System Management strategies that could be potentially applied to the Study corridor, either alone or in conjunction with one or more of the transportation concepts identified above, to improve corridor traffic operational conditions. These include the following concepts:

- **TDM** programs focus on changing or reducing travel demand, particularly at peak commuting hours, instead of increasing roadway capacity. Some of the most promising TDM programs emphasize coordination with local employers on measures such as car or vanpooling programs, bus pass subsidies, alternative work schedules, telecommuting options, parking management, and providing financial incentives for the use of public transit.
- **TSM** programs constitute a separate but closely related set of strategies to TDM programs. TSM strategies are low-cost in nature, and include such measures as intersection and signal improvements, freeway bottleneck removal programs, and real-time transportation system monitoring and response systems.

TDM and TSM programs are most effective when linked to regional land use and growth strategies that focus growth near available transit facilities, and would require close coordination with municipal jurisdictions within Sullivan and Orange Counties.

Park-and-Ride Facilities and Improvements to Existing Corridor Interchanges In addition to the identified corridor concepts, potential locations for additional park-and-ride facilities were

identified, as were potential modifications to interchanges in Sullivan and Orange Counties to address HALs and to support existing and anticipated new development in the counties.

RS-10 Feasible Corridor Alternative Development and Evaluation

The General Use Third Lane and HOV Alternatives were evaluated in greater detail based on transportation modeling studies using the Orange County Regional Travel Demand Model, I-86 traffic projections, and available mapping from previous Route 17/I-86 Conversion studies. The results of this assessment are provided below.

RS-10.1 Transportation System Impacts

- **General Use Third Lane.** The results of the detailed transportation modeling indicate that the General Use Third Lane Alternative would provide the capacity needed on Route 17 between Exit 120 (NY Route 211/Middletown) and 131 (Harriman) to operate at acceptable LOS, and would eliminate all of the segments that were projected to operated at LOS E/F in the year 2045. Overall, the General Use Third Lane Alternative would provide sufficient capacity to address projected traffic volumes in the corridor, however, it would not encourage transit use or support other regional smart growth initiatives.
    - The capital cost of the General Use Third Lane was estimated to be approximately $291 million (2013 dollars).
- **High Occupancy Vehicle Lane**. It is projected that introducing an HOV lane would result in a modest shift of approximately 10-15% of vehicles from the general use lanes to the HOV lane. (A greater shift to the HOV Lane could potentially occur if the HOV Lane was linked to a regional system of HOV lanes along the I-87 and I-287 corridor in Orange, Rockland and Westchester Counties.) Based on the projected modest shift from the existing general purpose lanes to the new HOV Lane, an assessment was completed of the degree of congestion that would occur in the future (2045) with the HOV Lane alternative. The detailed modeling studies indicate that, although the HOV Lane would operate at free flow conditions (i.e., LOS A/B), the existing general use lanes would operate at congested LOS along the corridor in peak travel directions during both the AM and PM peak commuting periods.
    - The capital cost of the HOV Lane Alternative was estimated to be approximately $366 million (2013 dollars).

RS 10.2 Potential for Significant Environmental Impacts

- The General Use Third Lane Alternative would have little potential to result in significant environmental impacts since it would be substantially located within the existing right-of-way of Route 17, while the HOV Lane alternative would have a greater potential to result in impacts since it would require the use of land outside of the existing right-of-way.

RS 10.3 Right-of-Way Impacts

- It is anticipated that the General Use Third Lane Alternative would require minimal additional right-of-way since the average widening would be approximately six feet, while the greatest widening would be approximately eleven feet on the westbound roadway near Exit 121 (I-84 Newburgh/Port Jervis). The HOV Lane Alternative would require additional right-of-way and extend outside the existing alignment along some portions of Route 17 by approximately 13 feet, and, up to approximately 18 feet on the eastbound roadway near Exit 122 (Crystal Run Road/East Main Street).

RS 10.4 Impact on Land Use and Support to Economic Development

- Both the General Use Third Lane Alternative and the HOV Lane Alternative would support existing and projected land use in the corridor and related economic development by providing additional transportation capacity. However, the General Use Third Lane Alternative, as a consequence of its greater improvement in project congestion levels in the corridor, would have the ability to have a greater overall benefit to the transfer of goods and commute time to a larger segment of the population than with the HOV Lane Alternative.

RS 10.5 Provision for Park-and-Ride Facilities

- In addition to the development of additional corridor capacity through the development of a General Use Third Lane or HOV Lane, consideration was given to the provision of additional park-and-ride facilities throughout the corridor since the majority of existing park-and-ride facilities are located at the eastern end of the study corridor in Orange County. Based on a review of the location of existing facilities and the locations of existing and planned development projects in the corridor, additional park-and-ride locations were identified to be needed in the vicinity of Exits 104 (17B - Raceway/Monticello), 106 (Rt. 173 – East Broadway), 109 (Rock Hill/Woodridge), 113 (Rt. 209 – Wurtsboro/Ellenville), and 118 (Fair Oaks).

RS 10.6 Conceptual Interchange Planning Scenarios

- Potential modifications to existing interchanges along the corridor were considered in addition to the General Use Third Lane and HOV Lane Alternatives. The development of interchange scenarios focused on providing surrounding communities with better access to the corridor, while taking into consideration optimal interchange spacing and geometric requirements that would be associated with a future conversion Route 17 to Interstate I-86 and known development projects along the study corridor. Modifications to or elimination of existing interchanges in the corridor were identified for three scenarios:
    - Address existing safety concerns;
    - Maintain the quality of life and preserve the scenic beauty of the corridor; or
    - Support to existing and planned development.

Identified conceptual interchange planning scenarios were evaluated by the TPC and at public workshops in both Sullivan and Orange Counties.

As detailed in the main body of this study, a total of 15 conceptual interchange planning scenarios were considered for interchanges in Sullivan and Orange Counties. Based on these reviews and comments received from the TPC and the public, it is recommended that scenarios be developed that would accommodate future development and preserve the quality of life in both Sullivan and Orange Counties. In Sullivan County, the following three areas were identified as candidates for future interchange improvements:

- Exit 103 (Rapp Road) - Full interchange in the vicinity of the Center for Discovery.
- Exit 104 (NY Route 17B, Monticello Raceway) – Additional capacity to accommodate peak demand during special events.
- Exit 107 (South Fallsburg, Bridgeville) to Exit 109 (Rock Hill, Woodridge) – Full interchange at Exit 107 with closure of ramps at Exit 108 (Bridgeville). Improve local roads to enhance connectivity to interchanges with Route 17.

It is recognized that additional outreach and planning are needed to address the access and traffic operational issues between Exit 110 (Lake Louise Marie; Wanaksink Lake) and Exit 111 (Wolf Lake) and between Exit 114 (Highview, Wurtsboro) and Exit 116 (NY Route 17K, Bloomingburg, Newburgh).

Two areas were identified in Orange County for future interchange improvements: the area between Exit 130 in the Village of Monroe and Exit 127 in the Village of Chester, an area in which there are currently four interchanges within a 3.5 mile section of highway, and the area between Exits 125 and 123 in Goshen, an area in which there are three sets of eastbound and westbound ramps within a 1.25 mile section of Route 17. The solutions developed for these areas would consolidate access to the highway and enhance local connections to the areas that are currently serviced by ramps that could be affected by future I-86 conversion projects.

RS-11 Final Study Recommendations

Based on the results of the study technical analyses, and the overwhelming support of the TPC and the general public as enunciated at the project public workshops in Sullivan and Orange Counties, it is recommended that a new General Use Third Lane be developed along the 22-mile segment of Route 17 between just west of NY Route 211 at Exit 120 (Middletown), and Exit 131 (Harriman). While the traffic projections do not indicate the need to extend the third lane further west, future projects initiated in the western part of Orange County or in Sullivan County should not preclude the future extension of the third lane should travel patterns or demand change in the future. The future extension of the third lane provides opportunities for

partnerships with private organizations and individuals that may want to invest in development of property in this portion of the corridor.

As more fully described in the main body of this study, and based on guidance from the TPC and comments provided at project public workshops in Sullivan and Orange Counties, it is recommended that:

- Interchange modifications identified in "Scenario II - Accommodate Future Development and Preserve Quality of Life" be used to guide future projects in Orange County.
- Interchange modifications identified in "Scenario III: Accommodate Future Development and Preserve Quality of Life" be used to guide future projects in Sullivan County.

It is recommended that additional park-and-ride facilities in Sullivan and Orange Counties should be explored, including potential new park-and-ride facilities in the vicinity of Exits 104 (NY Route 17B – Raceway/Monticello), 106 (NY Route 173/East Broadway), 109 (Rock Hill/Woodridge), 113 (NY Route 209 – Wurtsboro/Ellenville), and 118 (Fair Oaks).

It is recommended that continued coordination be progressed with the ongoing West of Hudson Regional Transit Study being undertaken by MTA Metro-North and the New York State Thruway Authority, in cooperation with the Port Authority of New York & New Jersey, New Jersey Transit, and NYSDOT, to identify additional opportunities to provide improved transit service on the Port Jervis Line and to develop a regional HOV Lane system, of which an HOV Lane on Route 17 could potentially be an element.

A recurring theme throughout the public outreach process was the need for rest areas and commercial traffic amenities along the Route 17 corridor. The provision of these services would help to modernize the corridor and enhance economic development opportunities by attracting more commercial traffic to the Route 17 corridor. The location of these areas would need to be coordinated with surrounding communities so as not to adversely impact businesses that currently rely on providing these services. Identification of future projects throughout the corridor should include participation by the public and surrounding businesses.

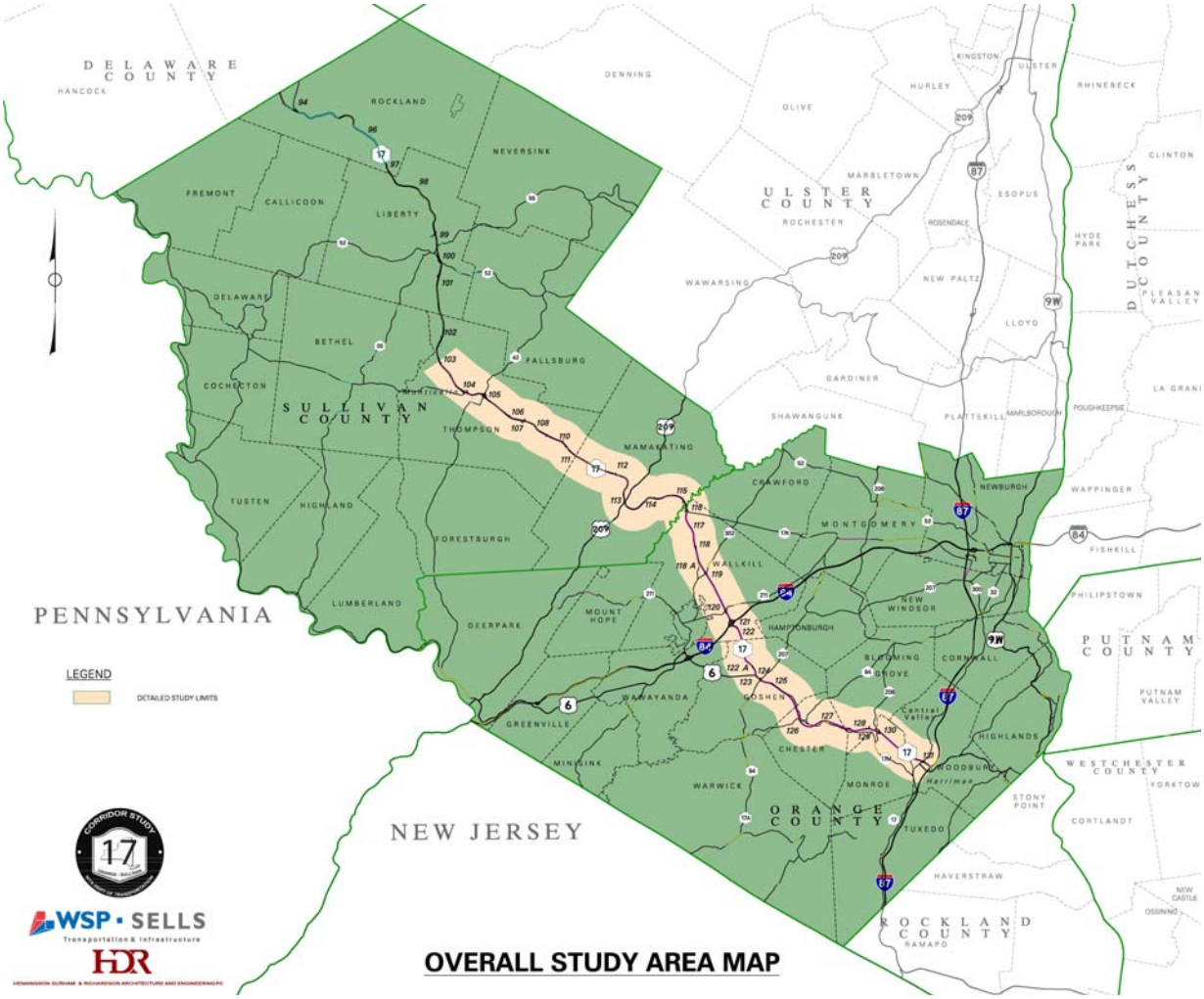
RS-12 Next Steps and Project Development and Environmental Review Process

NYSDOT will pursue the recommended improvements either individually or collectively as funding becomes available, at which time the proposed capital improvements will undergo required environmental reviews in accordance with State Environmental Quality Review Act (SEQRA) and/or National Environmental Policy Act (NEPA) depending on the source of necessary funding. Additionally, any future corridor projects will be coordinated with FHWA and implemented such that the improvements meet Interstate standards.

1 INTRODUCTION

The New York State Department of Transportation (NYSDOT) has conducted a Transportation Corridor Study (the Study) for an approximately 47-mile segment of New York State Route 17 (Route 17/Future I-86) extending between Exit 103 (Rapp Road) in Sullivan County and Exit 131 (I-87 – Harriman) in Orange County. Figure 1-1 illustrates the overall study area. The Study was completed under Congressional Earmark #4615 sponsored by Senator Charles Schumer (D-NY), the stated intent of which was to examine the need for capacity improvements in the Route 17/I-86 corridor in Orange and Sullivan Counties. As documented in this Transportation Corridor Study Report (the Report), the principal result of the Study is the identification of a preferred transportation alternative that addresses the identified capacity needs of the corridor for future development by NYSDOT.

Figure 1-1 Overall Study Area Map



2 BACKGROUND

Route 17 within the Study corridor is generally a four-lane expressway, with two travel lanes in each direction, with the exception of portions of the roadway between Exit 112 (Masten Lake/Yankee Lake/Mountaindale) and Exit 115 (Burlingham Road) in Sullivan County, and between Exit 122A (Fletcher Street/Goshen) and Exit 125 (NY Route 17M/South Street) in Orange County, where segments of the roadway include three travel lanes. The distance between interchanges in the corridor ranges between 0.5 miles and 3 miles.

Route 17 serves as both a major commuter route and a primary recreational route. Commuter use results in significant levels of traffic congestion on weekdays, while recreational use results in significant levels of congestion on Friday and Sunday evenings. Traffic congestion is particularly severe between Exit 121 (I-84 – Newburgh/Port Jervis) and Exit 131 (Harriman/I-87) at the eastern end of the corridor. Congestion and delay on Route 17 causes a significant amount of traffic to divert to other state highways and local roads, and results in traffic congestion within the larger Route 17 Study corridor.

It is projected that traffic congestion on Route 17 will worsen over the near-term and long-term planning horizons as a consequence of projected population growth and development within the corridor. Projections by the Cornell Program of Applied Demographics indicate that the population of Sullivan County will surpass 79,300 people in 2020, a 2.3% increase over the population of the County in 2010. Estimates of projected growth in population developed by the Orange County Planning Department indicate that the population of Orange County will reach 400,000 by the end of 2013 and will exceed 430,500 in 2020, a 7.6% increase over the seven intervening years. Congestion is also anticipated to worsen in the future as a consequence of new development in both Orange and Sullivan Counties, including the expansion of the Center for Discovery and EPT Concord Projects in Sullivan County, both of which have been supported by the Mid-Hudson Economic Development Council.

The Route 17 Corridor is served by a number of transit services, including commuter rail, commuter and intercity bus, and local bus transit. Despite the increasing use of these services, traffic volumes and levels of congestion on Route 17 continue to increase. Consequently, additional transportation capacity is needed to address existing and projected levels of congestion in the corridor, provide for enhanced mobility, and allow for future economic growth in both Sullivan and Orange Counties.

Currently planned improvements to Route 17 in the corridor are limited to the needed reconstruction of the Exit 122 (Crystal Run Road) Interchange starting in 2013 and the reconstruction of Exit 131 (Harriman/I-87) Interchange to be completed by 2022. While these improvements address local operational needs they do not provide for overall needed corridor capacity needs.

In addition to the need for additional transportation system capacity, there is also the need for improvements at selected interchanges to address existing high accident locations, to support

existing and projected development, and to provide new and expanded park-and-ride facilities in the corridor. Existing park-and-ride facilities are substantially limited to a number of park-and-ride facilities in eastern Orange County.

2.1 Study Development Process

As depicted in Figure 3-1, the Study was advanced through the following **four step study development process**:[1]

Step I: "Existing Conditions and Corridor Vision" involved collection of data on existing (Year 2010) transportation, land use, demographic, and environmental conditions in the Study corridor, including land use and environmental information available in the NYSDOT Geographic Information System (GIS) for Sullivan and Orange Counties, land use and transportation data available from the Orange County Planning Department, demographic data available from the U.S. Census Bureau, a broad range of data available from regional planning studies and State Environmental Quality Review Act (SEQRA) mandated reviews of proposed development in Orange and Sullivan Counties, and coordination with the Sullivan County Partnership and other economic development entities in the affected region.

Step II: "Conceptual Future Conditions Scenarios Development" involved the development of a description of future (Year 2045) "baseline" conditions, which incorporated projected population and development growth in the corridor, including anticipated major development projects and planned and programmed improvements to the regional transportation system. Transportation concepts were then identified to address the anticipated travel demand that would be generated in the Route 17 corridor by anticipated growth. The list of transportation concepts was evaluated to identify those concepts that have the greatest potential to address corridor vision and goals and warrant additional development.

Step III: "Feasible Alternative Development" involved the development of a "shortlist" of transportation concepts that advanced through the screening evaluation in Step II, to better define their costs and ability to address corridor transportation and development needs.

Step IV: "Final Study Recommendations" included the development of final study recommendations based on a final review of the shortlist of alternatives, including public comment, relative costs, environmental impacts and their ability to support existing and future economic development in the two counties.

[1] See Project Flow Chart: https://www.dot.ny.gov/content/delivery/region8/projects/800695-Home/800695-Repository/800695_pub_pi%20flow%20chart.pdf

3 PUBLIC OUTREACH PROCESS AND PROJECT FLOW CHART

The public outreach process conducted for this study engaged key stakeholders and the public in Sullivan and Orange Counties as outlined in Figure 3-1, Project Flow Chart. The outreach effort focused on tasks including identifying a vision and supportive goals for the Study corridor, reviewing transportation concepts, evaluating feasible alternatives, and review of the corridor preferred alternatives.

The public outreach program extended throughout the study process, and included four major elements:

- **Elected Officials Meeting.** A meeting was held at the outside of the study process to inform elected officials in Sullivan and Orange Counties of the study process and goals, and to provide an opportunity for them to identify key issues of concern that should be addressed during the study. Attendees were invited to share ideas on the study and join the Transportation Partnering Committee (TPC) described below.

- **Transportation Partnering Committee Meetings.** The TPC was created as part of the project's public outreach program to establish a working committee comprising representatives from the Town of Mamakating, Town of Thompson, Orange County Planning Department, Orange County Department of Public Works, Sullivan County Department of Public Works, Town of Goshen, Town of Blooming Grove, Village of Monroe, New York State Thruway Authority, Town of Woodbury, and MTA Metro-North Railroad. Members provided direction and guidance on all major decisions necessary to complete the Study. TPC meetings were scheduled to coincide with the major milestones of the Study.

- **Public Workshops.** A series of three rounds of public workshops was conducted to provide information on the Study to the general public and to provide an opportunity for stakeholders to provide input on all aspects of the Study. Public workshops were announced to the public via advertisements placed in the Times Herald-Record, e-blasts, and flyers placed in libraries and municipal buildings along the corridor. Workshops were held in both Sullivan and Orange Counties and, as with the TPC meetings, were scheduled to coincide with the completion of the major milestones of the Study, including:

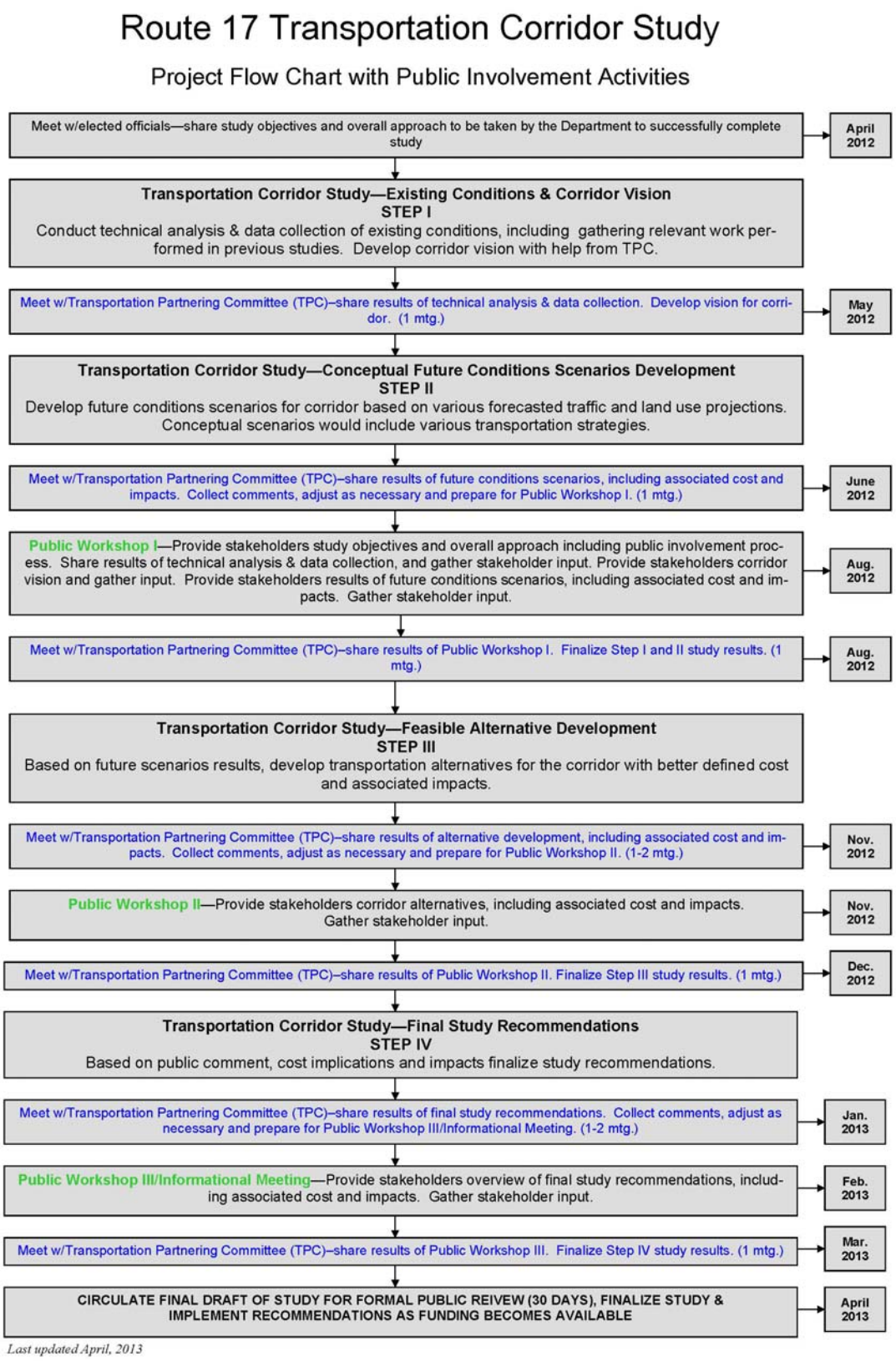
    1. Development and finalization of corridor vision statement and corridor goals, review of existing conditions in the corridor and future baseline conditions, and transportation concepts.

    2. Screening of the transportation concepts and the development of corridor feasible alternatives that advanced through the transportation concepts screening process.

3. Review and finalization of the Corridor Preferred Alternative and Sullivan and Orange County interchange planning scenarios.

- **Direct Meetings with Key Stakeholders.** In addition to the public workshops and TPC meetings, direct meetings were held as needed with local government representatives and business leaders in the corridor to discuss future development plans, review local zoning, and identify growth issues and possible impacts as a result of proposed geometric and/or transit improvements.

Figure 3-1: Project Flow Chart



4 STEP I – EXISTING CONDITIONS AND CORRIDOR VISION & GOALS

4.1 Traffic

Existing traffic volumes vary throughout the Route 17 corridor between Exit 103 (Rapp Road) and 131 (Harriman/I-87). Figure 4-1 depicts the Average Annual Daily Traffic (AADT) traffic volumes for selected locations along Route 17 in the Study corridor. AADT volumes were obtained from the NYSDOT on-line Traffic Viewer and from traffic data included in Design Reports throughout Sullivan and Orange Counties for Route 17/Interstate I-86 Conversion Projects. AADT volumes within the corridor range from 26,000 vehicles per day (VPD) at the western end of the corridor and generally increase to more than 66,000 VPD as you move east toward the interchange with the NYS Thruway at Exit 131 (Harriman/I-87).

Some of the major traffic generators in the study corridor include The Center for Discovery, Bethel Woods, Orange Regional Medical Center and Woodbury Common. The limited capacity of Route 17 results in high levels of congestion, particularly in the easternmost segment of the corridor between Exit 121 (I-84 – Newburgh/Port Jervis) and Exit 131 (Harriman/I-87). Smaller county and state routes feeding the Route 17 corridor vary between 2,000 VPD to more than 25,000 VPD. There has been a consistent trend of increased traffic in this section of the Route 17 corridor over the last 30 to 35 years. It is expected that this trend will continue, resulting in the deterioration of existing services levels in the Study corridor. AM and PM peak hour volumes are used to provide estimates of the peak levels of congestion and the ability of a facility to accommodate additional volumes of traffic. Table 4-1 summarizes existing peak hour volumes on Route 17 in Orange County in the eastbound (EB) and westbound (WB) directions during the AM (8:00-9:00) and PM (5:00-6:00) weekday peak travel periods, respectively.

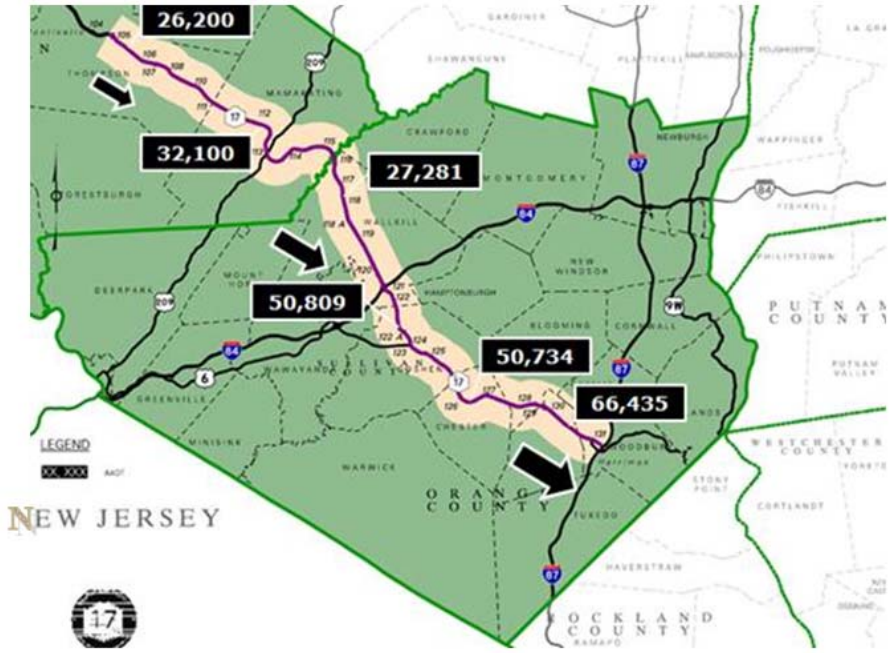


Figure 4-1: Existing AADT

Table 4-1: Existing (2010) Peak Hour Traffic Volumes on Route 17 in Orange County

Exit Number	Existing 2010 Peak Hour Volumes			
	AM		PM	
	EB	WB	EB	WB
131	3354	1188	933	3217
130A	3537	1702	1890	3719
130	2888	1674	1692	3463
129	3160	1647	1871	3280
128	3160	1640	1871	3270
127	2868	1514	1700	2928
126	2776	1936	1890	2889
125	2865	1904	1933	2868
124	3514	2068	2299	3435
123	2741	1593	1767	2743
122A	2838	1660	1848	2816
122	2075	1975	1276	2935
121	2277	2239	1932	2902
120	1325	943	1041	1366
119	543	415	361	623
118	479	335	351	503
116	149	93	78	135

Source: Year 2010 Peak Hour Estimates Based on Regional Traffic Modeling Results Using the Orange County Transportation Council Traffic Model.

AM and PM peak travel period volumes on Route 17 in Sullivan County are not available. Consequently, peak travel period volumes for Route 17 in Sullivan County were estimated on the basis of available AADT volumes and standard "peak hour factors." Resulting "directional design hour volume" (DDHV) estimates are provided in Table 4-2.

Existing (Year 2010) Level of Service on Route 17

Level of Service (LOS) is a qualitative measure of operational conditions that is used to rate traffic operations and level of congestion during the peak hours of travel. The ratings range from LOS A (free flow condition) to LOS F (breakdown in vehicular flow). LOS on Route 17 during the peak morning commuting period range between LOS A and B throughout Sullivan County and the western portions of Orange County. LOS levels start to degrade near the I-84 interchange at Exit 122 (Crystal Run Rd./Main Street) in Orange County each of which the LOS degrades to LOS C and D. LOS becomes progressively worse along Route 17 east of Exit 122 (Crystal Run Rd./Main Street), and the roadway nears its capacity in the Monroe area where there are LOS E and F conditions eastbound between Exit 130 (Rt. 208 – Monroe/Washingtonville) and Exit 131 (Harriman/I-87) during the peak AM travel period. Figure 4-2 provides a graphic depiction of the corridor LOS during the AM peak travel hour.

Table 4-2: Existing (2010) Directional Design Hour Volumes for Sullivan County

Exit Number	AM	PM
	EB	WB
115	900	900
114	900	900
113	900	1200
112	800	900
111	900	900
110	800	900
109	900	900
108	2970	
107	2690	
106	-	
105	2900	
104	2120	
103	-	

Source: NYSDOT I-86 Conversion Reports

Similar operating conditions to those during the AM peak travel hour occur during the PM peak travel hour along westbound Route 17, during which Level of Service (LOS) E and F conditions occur between Exit 130 (NY Route 208 – Monroe/Washingtonville) and Exit 131 (Harriman/I-87), and LOS C and D conditions occur between Exit 129 (Museum Village Road), and Goshen Exit 123 (US Route 6 / NY Route 17M West). Conditions along westbound Route 17 improve to LOS A and B in the western portion of Orange County and Sullivan County. See Figure 4-3 for LOS along Route 17 during the PM peak hour.

In addition to high levels of congestion during weekday AM and PM peak commuting periods, Route 17 also experiences high levels of congestion during Friday evenings and weekends as a consequence of recreation-related travel to and from the Catskill region, and as a consequence of shopping at Woodbury Common and NY Route 211/Galleria at Crystal Run locations.

Figure 4-2: Existing (Year 2010) AM LOS

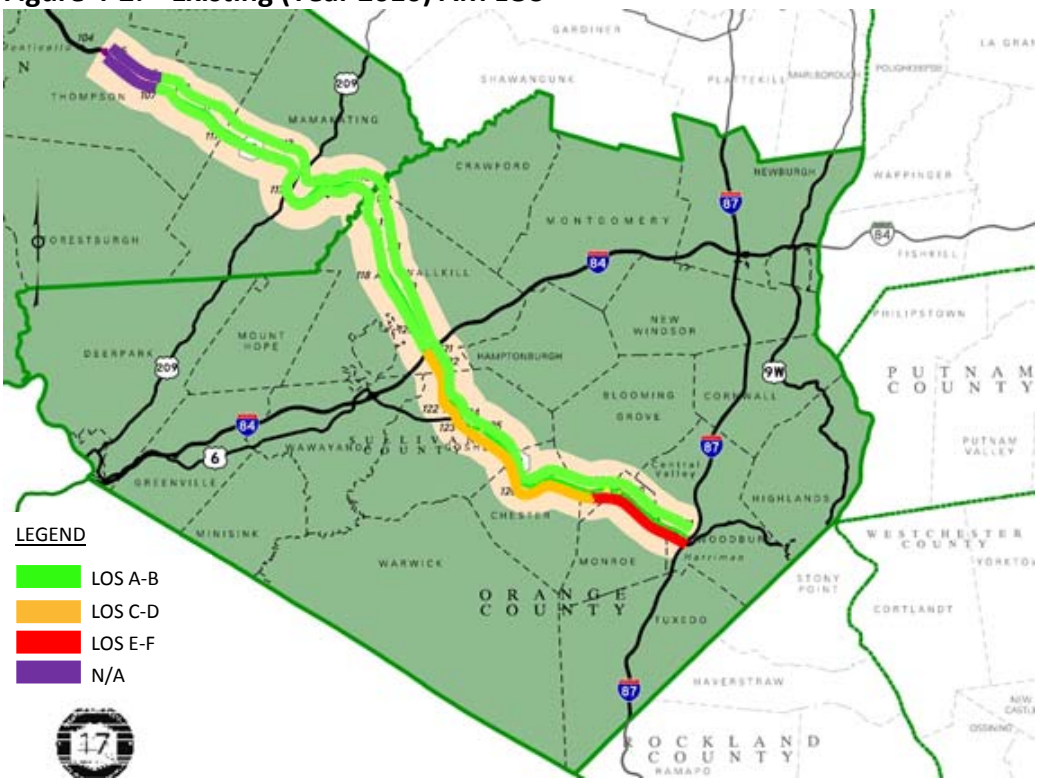
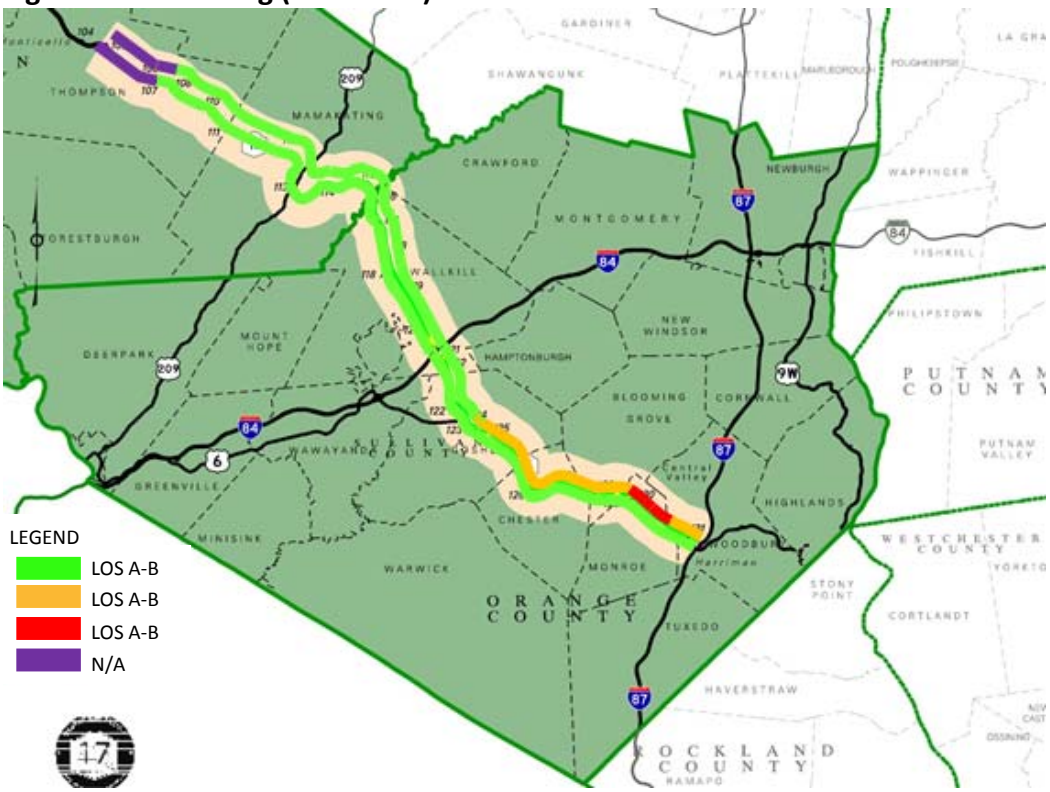


Figure 4-3: Existing (Year 2010) PM LOS



Frequency of Accidents in the Route 17 Corridor

High Accident Locations (HALs) have been defined by NYSDOT as areas with an unusually high rate of accidents and/or fatalities compared to the rates of accidents and fatalities on other roadways in New York State with the same functional classification. Figure 4-4 and Table 4-3 identify segments of Route 17 where HALs have been identified.

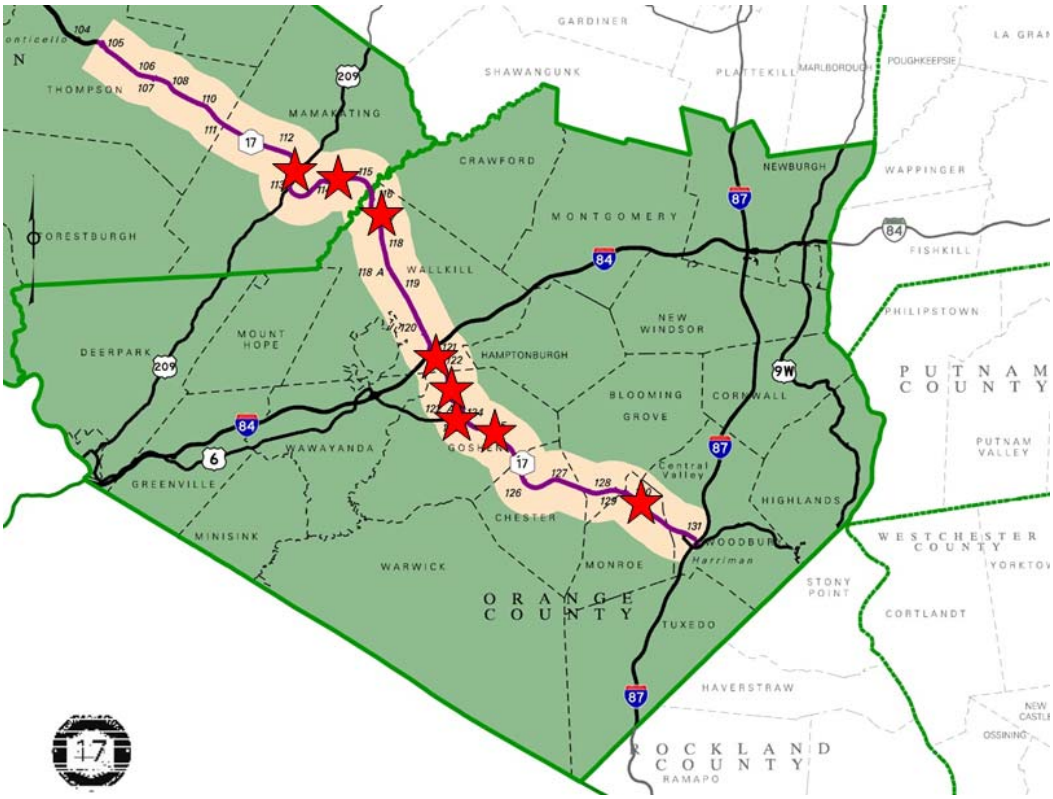


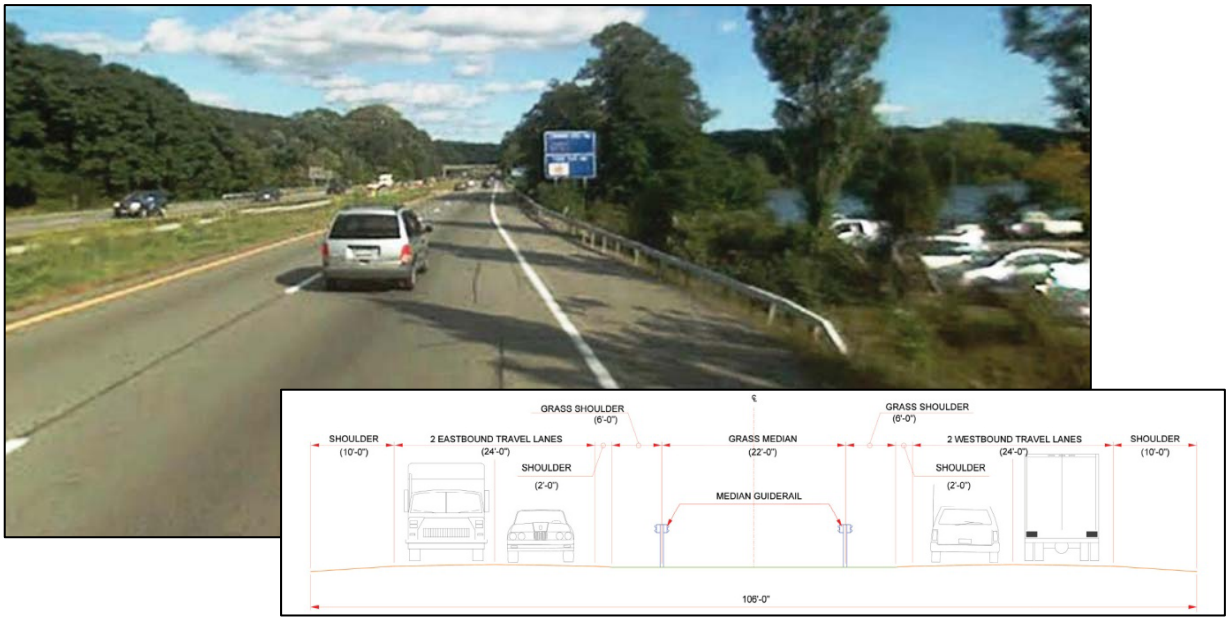
Figure 4-4: High Accident Locations on Route 17 in Orange and Sullivan Counties

Table 4-3: High Accident Locations on Route 17 in Orange and Sullivan Counties

	Location
1.	Exit 104 Raceway/Monticello
2.	Exit 105 Monticello/Kiamesha
3.	Exit 108 Bridgeville
4.	Exit 109 Rock Hill/Woodridge
5.	Exit 111 Wolf Lake
6.	Exit 123 US Route 6/NY Route 17M W Middletown/Port Jervis
7.	Exit 124 NY Route 17A/NY Route 207 Florida/Goshen
8.	Exit 125 NY Route 17M East South St
9.	Exit 129 Museum Village Road
10.	Exit 130 NY Route 208 Monroe/Washingtonville

Figure 4-5 presents a picture of Route 17 taken near Exit 129 (Museum Village Road) along with a typical section for Route 17. This figure illustrates the typical highway geometry in the Route 17 corridor. There are two lanes in each direction separated by a grass median with guiderail located along specific sections of the roads.

Figure 4-5: Existing Conditions Typical



4.2 Land Use

Land uses along the Study corridor were identified and mapped based on parcel-level real property data obtained from Orange and Sullivan Counties (see Appendix B "Environmental Figures). The approximately 47-mile corridor passes through eight towns—Woodbury, Monroe, Blooming Grove, Chester, Goshen, Wallkill, Mamakating and Thompson—and is in the immediate proximity of several local municipalities, including Harriman, Kiryas Joel, Monroe, Chester, Goshen, Middletown, Bloomingburg, Wurtsboro, Mamakating and Monticello. The large geographic extent of the Study corridor is reflected in the diverse range of land uses in the corridor. Overall, land uses in the area are predominantly suburban residential and rural, with higher densities in village centers, especially those identified above. Mixed commercial uses are primarily concentrated around village centers. Woodbury Common Premium Outlets, located off Exit 131 (Harriman/I-87) at the Study corridor's eastern terminus, is a regional retail center. Land uses of regional significance in Sullivan County include the Center for Discovery at Exit 103 (Rapp Road) and Bethel Woods Center for the Arts at Exit 104 (Raceway/Monticello). Bethel Woods Center for the Arts is located at the site of the 1969 Woodstock festival in Bethel, NY with a capacity to host 15,000 concert attendees, and 30,000 guests at its Harvest Festival held on Sundays, from Labor Day to Columbus Day. The Center of Discovery is the largest employer in Sullivan County, with more than 2,000 employees.

4.3 Transit

4.3.1 Existing Rail and Bus Transit Services

Transit service in Sullivan County is provided by the Sullivan County Transportation Department, which provides two round-trip routes, one of which operates on Thursdays from Lumberland/Bethel to Monticello, and the other operates on Fridays from Callicoon to Monticello. The ShortLine bus service operates local routes from Monticello, and regional commuter bus service to the Port Authority Bus Terminal in Manhattan.

Orange County is served by MTA Metro-North commuter rail service, and commuter and local bus service. The MTA Metro-North Port Jervis Line serves Orange County through a service contract with New Jersey Transit. Commuter rail stations in the vicinity of the Study corridor are located in Harrison and Middletown. Bus transit service is provided in and for Orange County through regional, local, para-transit and dial-a-bus services. Fixed route bus service is of three main types: a) regional inter-county service including commuter service, b) intra-county transportation, and c) local services in major population centers. The local routes are largely limited to service within commercial and retail areas in the cities of Newburgh and Middletown and the Villages of Monroe and Kiryas Joel. Several park-and-ride lots are located in the vicinity of the Study corridor, including at Central Valley, Chester and Monroe.

4.3.2 Existing Commuting Patterns

Based on available U.S. Census Bureau journey-to-work data for Orange County for the period 2005 thru 2009, approximately 55.5% of daily work trips have both origin and destination within the county borders, and 29.6% of daily work trips are by county residents to locations outside county borders. Of all workers commuting out of Orange County, 19% were headed to Manhattan, 17% to Rockland County, 14% to Bergen County, and 11% each to Westchester and Dutchess Counties. Areas in the Study corridor in which more than 10% of the work trips made by residents are to New York City include the Towns of Blooming Grove, Chester, Monroe and Woodbury. Overall in Orange County, approximately 5.3% of residents commute to work using public transit. Of all workers commuting out of Sullivan County, approximately 57% were headed to Orange County, 9% to Ulster County, 8% to Manhattan, 4% to Rockland County, and significantly lower percentages to all other destinations.

Within the Study corridor, the highest public transit use is in the Town of Monroe where approximately 12.2% of residents commute to work using public transit.

Rail ridership on the Port Jervis Line comprises a relatively small portion of the 81 million commuters served annually in the New York Metropolitan area by Metro-North. Data collected by Metro-North in the spring of 2010 showed a total of 1,880 riders during the AM peak period on the Port Jervis Line. The Middletown railroad station provides 750 parking spaces of which 44% are utilized, and the Harrison railroad station provides 985 parking spaces of which 69% are utilized.

Coach USA/ShortLine (Hudson Transit) is the largest provider of bus service in and through Orange County, and serves more than 1,280,000 Orange County passengers annually. County-wide service is provided for intercity travelers and commuters. Most of the service is provided along the I-84, Route 17, and NY Route 32/I-87/Route 9W corridors. Coach USA also serves a number of major trip generators including the Galleria at Crystal Run (Middletown), Playtogs Plaza (Middletown), and Woodbury Common Premium Outlets. Coach USA provides major commuter service to New York City running 76 trips per day to and from Orange County during the morning and evening peak hours.

Monroe Bus Corporation provides commuter and off-peak service to Manhattan and Brooklyn to and from the Village of Kiryas Joel. In 2010, Monroe Bus recorded more than 280,000 trips. Monsey Trails connects Kiryas Joel and Monsey in Rockland County with five daily round trips. Ridership on this route has been steadily increasing with an average of 200 riders per day in 2010.

As summarized in Table 4-4, there are five major park-and-ride lots within the corridor, with a total of 1,161 parking spaces.

Table 4-4: Study Corridor Park-and-Ride Lots

Location	Capacity (spaces)
Central Valley: Intersection of Routes 6, 17, 32	296
Central Valley (near Exxon): Intersection of Routes 6, 17, 32	84
Chester: Off Route 17 (Exit 126)/NY Routes 12, 17M, 94	97
Goshen: Matthews St. and Route 207	94
Monroe: NY Route 17/17M, Museum Village	590

Source: Transit Orange, 2012.

4.4 Freight

Interstates 87 and 84 are the primary freight roadways linking the Mid-Hudson region to locations in the Northeast, Canada, the Midwest and South. I-84 connects the region with New England to the east and Pennsylvania to the west; Route 17 connects the region with the Southern Tier; I-87 connects the region with New York City and the Capital Region; I-95 connects the region to Connecticut and New Jersey; and I-287 is a major east-west corridor connecting Interstates 87 and 95. Stewart International Airport handles air cargo. According to a report by Empire State Development, the region employs more than 24,000 people in the Distribution cluster at 5,245 establishments.[2] Employment is concentrated in Wholesale Durables, Trucking and Warehousing, and Wholesale Non-Durables. Growing Distribution component industries included trucking and Wholesale Durables, and Wholesale Non Durables.

[2] Empire State Development, *The Distribution Industry in New York State*, November 2003.

NYSDOT maintains 38 truck rest areas throughout New York State. There are no rest areas or commercial truck stops within the Study corridor.[3]

4.5 Environmental Conditions

The U.S. Census Bureau reports that the population of Orange County increased from 341,367 individuals in 2000 to 372,813 individuals in 2010, a 9.2% increase, while the population of Sullivan County increased from 73,966 individuals in 2000 to 77,547 individuals in 2010, a 4.8% increase. The estimated population of Orange County in 2011 was 374,872, a 0.8% increase from 2010 levels, while the estimated population of Sullivan County in 2011 was 76,900 individuals, a 0.8% decrease from 2010 levels. The estimated combined population of Orange and Sullivan Counties in 2011 was 451,772 individuals.

4.5.1 Demographics and Environmental Justice Populations

The U.S. Census Bureau reports that the population of Sullivan County was 77,547 individuals in 2010, a 4.8% increase from the year 2000, and the population of Orange County was 372,813 individuals in 2010, a 9.2% increase from the year 2000.

Title VI of the Civil Rights Act of 1964 specifies that no person in the United States shall, on the grounds of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, issued in 1998, states that each federal agency shall make achieving environmental justice (EJ) part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

In New York State, "Potential" EJ Areas have been identified by the New York State Department of Environmental Conservation (NYSDEC) (see Appendix B "Environmental Figures.") As established in NYSDEC Commissioner Policy 29 on Environmental Justice and Permitting (CP-29), Potential EJ Areas are 2000 U.S. Census block groups of 250 to 500 households each that, in the 2000 Census, had populations that met or exceeded at least one of the following statistical thresholds:

- At least 51.1% of the population in an urban area reported themselves to be members of minority groups; or
- At least 33.8% of the population in a rural area reported themselves to be members of minority groups; or
- At least 23.59% of the population in an urban or rural area had household incomes below the federal poverty level.

[3] Source: https://www.dot.ny.gov/regional-offices/statewide-rest-areas

In Orange County, Potential EJ Areas in the vicinity of the Study corridor are located in the Town of Monroe, Village and Town of Chester, Village and Town of Goshen, Town of Wallkill, and the City of Middletown.[4] In Sullivan County, Potential EJ Areas in the vicinity of the Study corridor are located in the Village of Monticello and the Town of Thompson.[5]

4.5.2 Noise

Noise-sensitive receptors in the vicinity of Route 17 were identified based on guidance in the NYSDOT *Environmental Procedures Manual.* Identified receptors included residential land uses; educational facilities; health facilities; theaters, auditoriums and cultural facilities; religious institutions; playgrounds, athletic fields, and outdoor sports facilities; recreational facilities such as nature trails and bike paths; State-owned forest lands; and public parks. Land use categories comprising noise-sensitive receptors are identified in Appendix B "Environmental Figures."

A detailed assessment of the potential impact of the identified alternatives will be included in subsequent project phases. The first step in that assessment will be to identify the specific areas and associated land uses that would potentially be affected by highway noise. The areas on both sides of the entire length of Route 17 in the project corridor will be considered. These areas will then be assigned to one of seven land uses ("Activity Categories") identified in NYSDOT TEM 4.4.18, *Noise Analysis Policy and Procedures* (April 2011). In general, the potentially affected areas will be assigned on an aggregated area basis rather than site-by-site. In addition, undeveloped lands adjacent to Route 17 that have been granted a building permit prior to the date of public knowledge (or Design Approval if the project does not include FHWA involvement) of the project will be considered as developed, and be assigned an Activity Category consistent with the use of the approved development.

4.5.3 Air Quality

According to NYSDOT *Environmental Procedures Manual,* public open spaces, including sidewalks, playgrounds, athletic fields, outdoor sports facilities and public parks; residential buildings; educational facilities; and health facilities are considered especially sensitive to air quality. Land use categories comprising uses sensitive to air quality are identified in Appendix B "Environmental Figures."

In recognition of the close relationship between air quality and transportation, federal legislation requires that transportation activities conform to State air quality implementation plans before receiving federal transportation funding. Specifically, the Clean Air Act Amendments of 1990 (CAAA) establishes air quality standards through the designation of National Ambient Air Quality Standards (NAAQS). These standards set limits on the levels of air pollution (e.g., ozone, particulate matter, carbon monoxide and nitrogen dioxide) that can exist in a region. In regions where these standards are not met (i.e., in non-attainment), it must be demonstrated that all future transportation plans and projects do not produce new air quality

[4] Source: http://www.dec.ny.gov/docs/permits_ej_operations_pdf/orangeej.pdf
[5] Source: http://www.dec.ny.gov/docs/permits_ej_operations_pdf/sullivanej.pdf

violations, worsen existing conditions, or delay timely attainment of the NAAQS. Orange County is part of a non-attainment area for fine particulate matter ($PM_{2.5}$) and ozone.

Effective December 14, 2009, the New York–New Jersey–Connecticut metropolitan area was classified non-attainment by the U.S. Environmental Protection Agency (USEPA) for the new 2006 24-hour $PM_{2.5}$ standard.[6]

4.5.4 General Ecology and Endangered Species

Threatened and endangered species identified in the U.S. Fish and Wildlife data for Sullivan and Orange Counties are listed in Table 4-5.

Table 4-5: Threatened and Endangered Species

Group	Name	Status
Orange County		
Clams	Dwarf wedgemussel (Alasmidonta heterodon)	Endangered
Flowering Plants	Small whorled pogonia (Isotria medeoloides)	Threatened
Mammals	Indiana bat (Myotis sodalis)	Endangered
Reptiles	Bog (=Muhlenberg) turtle (Clemmys muhlenbergii)	Threatened
Sullivan County		
Clams	Dwarf wedgemussel (Alasmidonta heterodon)	Endangered
Flowering Plants	Northern wild monkshood (Aconitum noveboracense)	Threatened
Reptiles	Bog (=Muhlenberg) turtle (Clemmys muhlenbergii)	Threatened

Source: U.S. Fish and Wildlife Service, 2012.

4.5.5 Wetlands

National Wetland Inventory (NWI) freshwater wetlands and NYSDEC wetlands are mapped in Appendix B "Environmental Figures," which indicates the presence of large NWI and NYSDEC wetlands along major portions of the Study corridor, including the Basha Kill Wildlife Management Area south of Exit 113 (NY Route 209 – Wurtsboro/Ellenville). NWI wetlands would likely be under the jurisdiction of the U.S. Army Corps of Engineers (USACE). Although NWI maps are a good indicator of whether wetlands may be present, they do not provide a full delineation of wetlands that are jurisdictional under Section 404 of the Clean Water Act (33 U.S.C. 1344). The current method for delineating USACE jurisdictional wetlands is detailed in *"Corps of Engineers Wetlands Delineation Manual"* Technical Report Y-87-1, and the *"Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region"* (Version 2.0) date January 2012. Additional potential jurisdictional wetlands would be delineated through the procedures delineated in this guidance during subsequent project development phases. Relevant wetland boundaries would be field-verified after feasible

[6] Orange County Transportation Council, *Final Transportation/Air Quality Conformity Determination for the Orange County Portion of the NY-NJ-CT $PM_{2.5}$ Non-Attainment Area*, December 8, 2011.

transportation concepts are identified for further development and evaluation. Project plans will be designed in such a manner as to avoid as much as possible the discharge of dredged or fill material into the delineated waters of the United States.

4.5.6 Navigable Waters

Water bodies and watercourses in the Study corridor's vicinity were identified based on data from NYSDEC. Most of the currently identified watercourses located within the Study corridor are classified by the NYSDEC as either Class B (indicating waters supporting contact recreation) or Class C (indicating waters supporting fisheries and suitable for non-contact activities) streams.

4.5.7 Wild, Scenic and Recreational Rivers

There are no state Wild, Scenic or Recreational river segments within a 1-mile buffer of the Study corridor.

4.5.8 Parks and Cultural Resources

Several historic sites listed on or eligible for listing on the State or National Registers of Historic Places are located in proximity to the Study corridor. These resources are listed in Table 4-6 and mapped in Appendix B "Environmental Figures." A review of the New York State Office of Parks, Recreation and Historic Preservation online database indicated the potential presence of archaeologically significant areas throughout the Study corridor.

4.5.9 Farmland

As noted in Section 4.2 "Land Use," a substantial portion of the Study corridor is identified in agricultural use (see Appendix B "Environmental Figures.") Prime farmland soils exist in several of these areas (see Appendix B "Environmental Figures.)"

4.5.10 Section 4(f) Resources

Section 4(f) of the United States Department of Transportation Act of 1966 prohibits the Federal Highway Administration (FHWA) and other U.S. Department of Transportation agencies from approving the use of publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless:

- There is no prudent and feasible alternative to the use of such resources; and
- The program or project includes all possible planning to minimize harm to the affected resources.
- The use, including any measures to minimize harm (such as any avoidance, minimization, mitigation or enhancement measures) will have a de minimis impact on the property.

Table 4-6: Cultural Resources

Resource Name	Sphinx Number	Address/Street	Municipality	County
Arden	90NR02313	Route 17	Harriman	Orange
Monroe Village Historic District	98NR01380		Monroe	Orange
Yelverton Inn and Store	90NR02348	112-116 Main St.	Chester	Orange
First Presbyterian Church of Chester	97NR01267	Main Street	Chester	Orange
Historic Track	90NR02337	Main Street	Goshen	Orange
1841 Goshen Courthouse	90NR02338	101 Main St.	Goshen	Orange
US Post Office—Goshen	90NR02340	Grand Street	Goshen	Orange
Church Park Historic District	03NR05045	Main St. Church St., South St.	Goshen	Orange
Everett-Bradner House	04NR05226	156 South St.	Goshen	Orange
W.M. Sayer House	04NR05230	112 Greenwich Ave.	Goshen	Orange
George T. Wisner House	04NR05387	145 South St.	Goshen	Orange
Mamakating Park Historic District	98NR01421	Fairview Ave., Columbian Rd.	Mamakating Park	Sullivan
Bloomingburg Reformed Protestant Dutch Church	90NR01054	Route 17M	Bloomingburg	Sullivan
Rialto Theatre	00NR01697	Broadway	Monticello	Sullivan
Bennett Family Residence	01NR01844	11 Hamilton Ave.	Monticello	Sullivan
St. John's Episcopal Church and Rectory	02NR04908	15 St. John's St.	Monticello	Sullivan
Masten-Quinn Residence	02NR04991	59 First St.	Monticello	Sullivan

An evaluation in conformance with the requirements of Section 4(f) will be completed subsequent to the completion of this study to (a) identify prudent and feasible alternative to activities that may affect identified resources; (b) document planning measures undertaken to minimize harm to historic sites resulting from the use; or (c) identify any measures to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) that will result in a de minimis impact on the property.

4.5.11 Section 6(f) Resources

The Land and Water Conservation Fund (LWCF) State Assistance Program was established by the LWCF Act of 1965 (Section 6, Land and Water Conservation Fund Act of 1965, as amended; Public Law 88-578; 16 U.S.C. 4601-4 et seq.) to stimulate a nationwide action program to assist in preserving, developing, and assuring to all citizens of the United States of present and future

generations such quality and quantity of outdoor recreation resources as may be available and are necessary and desirable for individual active participation. The program provides matching grants to States and through States to local units of government, for the acquisition and development of public outdoor recreation sites and facilities. Section 6(f) of the LWCF requires that the conversion of lands or facilities acquired with Land and Water Conservation Act funds be coordinated with the Department of Interior. Replacement in kind is usually required for the land that is proposed to be converted to other purposes, including for transportation uses.

A review of the LWCF database does not indicate the presence of LWCF-funded lands in the Study corridor.

4.6 Vision for the Route 17 Corridor and Corridor Goals

Route 17 Study Corridor Vision. Based on the identified purpose and need for the Study, and public input garnered through completion of the Study public participation process, the following vision statement has been identified for the NYS Route 17 corridor:

> *The Route 17 corridor in Orange and Sullivan Counties will support a robust, economic future with safe, efficient access for all users while preserving its scenic beauty and natural resources. Freight commerce, recreational travelers, and daily commuters will travel between New York City and the Hudson Valley-Catskill Mountain region along a well managed and maintained, modern facility that simultaneously supports long distance access to the southern tier of New York State and provides enhanced mobility for local trips among adjoining communities.*

Corridor Goals. Based on the corridor vision statement and stated purpose and need for the Study, *the overall goal of this Study is to develop an overall transportation strategy to guide future capital investments in the corridor.* Supporting goals include:

- Improve corridor safety for all users and stakeholders.
- Provide a reliable transportation corridor that accommodates public transit, minimizes delay, and accommodates current and future travel demand for all.
- Preserve corridor infrastructure investments in a fiscally sustainable manner.
- Modernize corridor roadway and interchanges while maintaining the quality of life and preserving the scenic beauty and natural resources.
- Provide a transportation corridor that supports and enhances the opportunity for continued economic development.

4.7 Public Outreach Process

In Step I of the Study, Existing Conditions & Corridor Vision & Goals, two meetings were conducted to inform the public of the study process as follows:

- **Elected Officials Meeting.** A meeting with elected officials was held on April 24, 2012. Meeting attendees reviewed Study information and materials, including draft goals and objectives, public involvement process, anticipated study elements, and a status update of I-86 conversion projects within the Study corridor. (See Appendix A "Public Outreach" for meeting summary).

- **TPC Meeting #1.** The first TPC meeting was held on May 15, 2012, during which the TPC reviewed existing corridor conditions, provided guidance on a vision statement for the corridor, and assisted with the development of draft corridor goals. (See Appendix A "Public Outreach" for meeting summary).

5 STEP II – CORRIDOR CONCEPTUAL FUTURE CONDITIONS AND DEVELOPMENT OF INTERCHANGE PLANNING SCENARIOS

5.1 No Build (2045) Traffic Conditions

5.1.1 Traffic Growth

As indicated by permanent count stations in Sullivan County near Exit 107 (Fallsburg/Bridgeville) in South Fallsburg and in Orange County at Exit 129 (Museum Village Road), there has been a significant increase in the volume of traffic on Route 17 in the corridor over the past 35 years, with both locations showing significant increases between the late 1970s and 1990s, with a more recent leveling off of traffic volume growth. Figure 5-1 shows the Route 17 traffic counts at these stations.

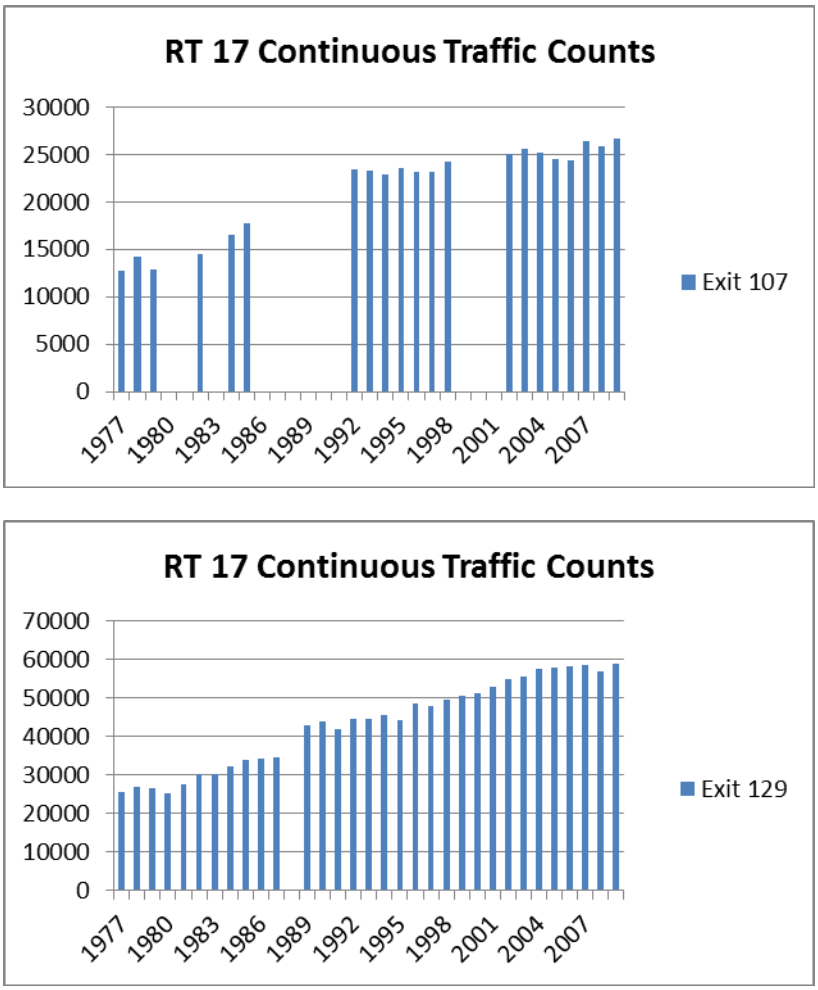


Figure 5-1: Route 17 Continuous Traffic Counts

5.1.2 Projected Traffic

Future trip generation and traffic flow estimates have been developed based on the projected land-use growth in the corridor. Figures 5-2 and 5-3 highlight the AM and PM peak hour trip growth expected in Orange County over the next 30 to 35 years. As shown, much of the county will see a doubling of the trips in 2045 from the existing 2010 conditions. A high percentage of these new trips will be generated in central business districts and major transportation corridors, such as Route 17. The regional demand model predicts significant growth during the peak hour periods, resulting in conservative estimates of future traffic demand on the Route 17 corridor during the design year.

Figure 5-2: AM Peak Trip Production Growth

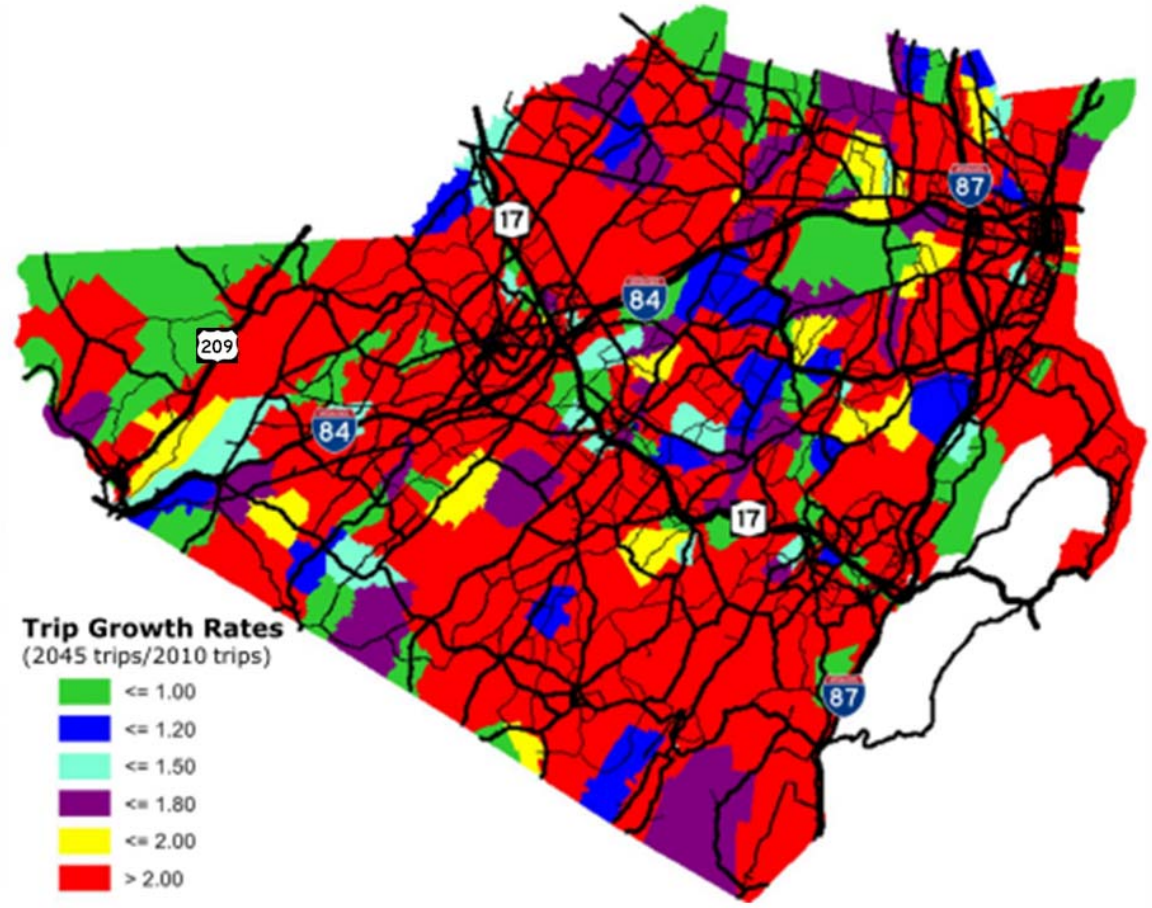
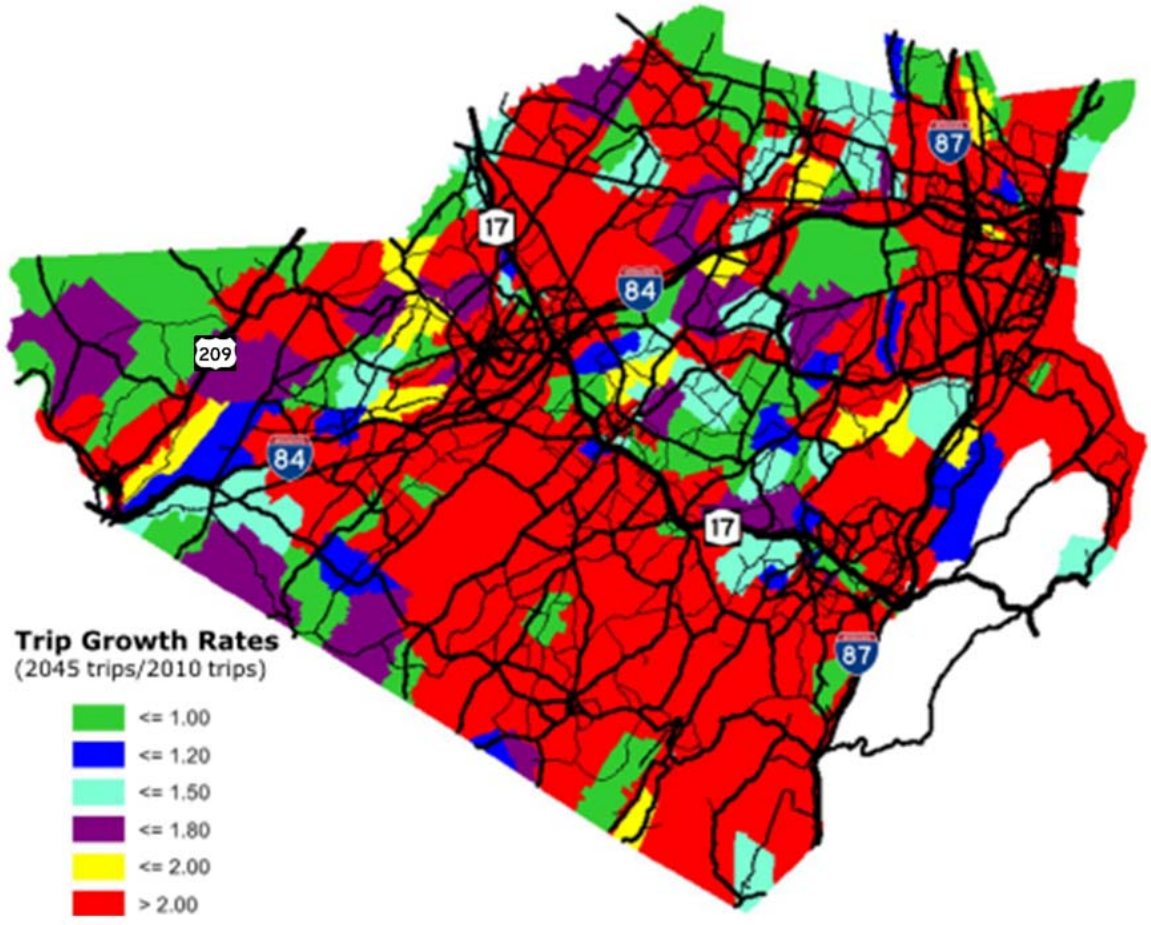


Figure 5-3: PM Peak Trip Production Growth



Without a regional model for Sullivan County, future traffic volumes in the western portion of the corridor were estimated on the basis of a 2% per year background growth rate developed for the I-86 studies as well as information that was obtained from discussions with local officials and planners. According to the Sullivan County Partnership, the largest anticipated developments in the county are located near the western portion of the corridor Study limits. Two major projects in different stages of development are located between Exits 106 (East Broadway) and 103 (Rapp Road). Figure 5-4 shows the project limits in Sullivan County and the previously discussed proposed projects.

Peak hour traffic volumes for the Design Year 2045 in the Orange County portion of the corridor were taken from outputs generated by the VISUM regional travel demand model and are shown in Table 5-1. The regional model does not extend into the Sullivan County portion of the corridor. Future year estimates of travel demand for this segment of the corridor were taken from the I-86 Conversion Design Reports and are shown in Table 5-2. The volumes shown in Table 5-2 are projected to 2033, which reflects the design year for the I-86 program. Projections to 2045 for this segment of corridor were developed and are presented in Table 5-1.

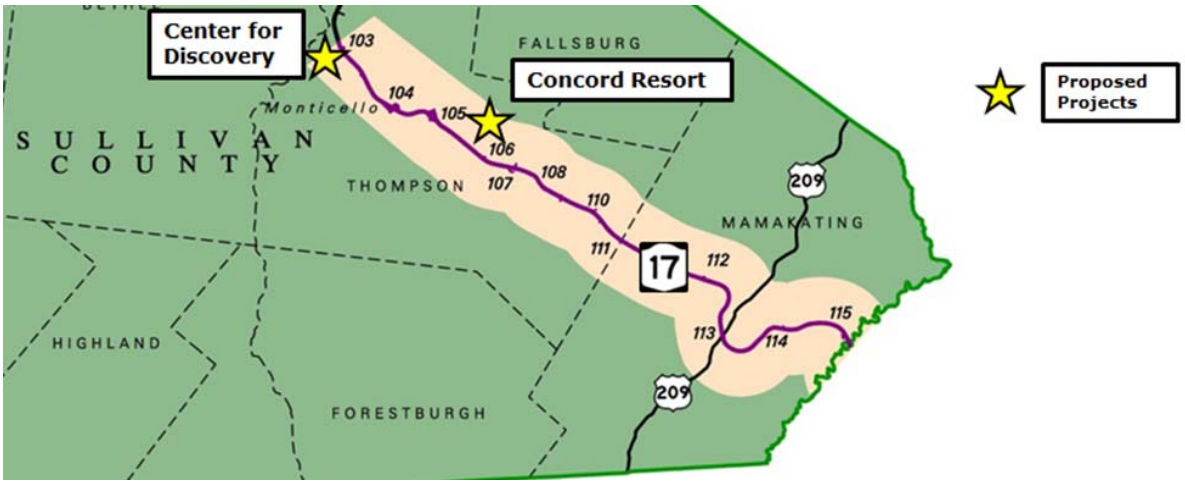


Figure 5-4: Sullivan County Major Development Projects

Table 5-1: 2045 Peak Hour Volumes

Exit Number	Future 2045 No Build Peak Hour Volumes			
	AM		PM	
	EB	WB	EB	WB
131	4446	3009	2882	4813
130A	4369	3591	3532	4536
130	4134	3541	3328	4256
129	4031	3262	3529	4021
128	4031	3221	3529	3840
127	3820	2913	3205	3769
126	3800	3284	3301	3788
125	4099	3570	3310	4453
124	4990	3878	4040	4920
123	4025	3196	3202	4059
122A	3701	3346	3210	3720
122	3140	3237	2098	4516
121	3914	3993	2891	4789
120	3487	2238	2370	3363
119	2505	1431	1651	2466
118	2353	1289	1495	2209
116	2403	1287	1287	2403

Source: Year 2045 Peak Hour Estimates Based on Regional Traffic Modeling Results Using the Orange County Transportation Council Traffic Model

Table 5-2: 2033 Directional Design Hour Volume for Sullivan County

Exit Number	AM	PM
	EB	WB
115	1500	1400
114	1500	1400
113	1400	1800
112	1300	1400
111	1400	1400
110	1200	1500
109	1400	1500
108	3750	
107	2910	
106	-	
105	3160	
104	2300	
103	-	

Source: NYSDOT I-86 Conversion Design Reports

Tables 5-3 and 5-4 compare the projected Year 2045 (Year 2033 for Sullivan County) to the 2010 existing volumes on Route 17, and provide an overall growth percentage for each section of Route 17. As indicated in Table 5-3, overall growth rates in Orange County vary from 0.5% to almost 3% per year throughout the corridor. As indicated in Table 5-4, overall growth rates in Sullivan County vary from 0.3% to almost 2% per year throughout the section of corridor from Exit 115 (Burlingham Road) to Exit 103 (Rapp Road).

Using the output from the Orange County Regional demand model and the assumed 2% per year growth rate for Sullivan County, a projection of 2045 peak hour volumes for the corridor was developed as illustrated in Figure 5-5 and Figure 5-6. During the AM peak hour traffic volumes are expected to grow significantly throughout Orange County, approximately 30-50% and even higher, 60% in Sullivan County. Even with this increased growth, the projected volumes in the western portion of the corridor are expected to be considerably lower than in the eastern portion of Orange County. Of particular concern is the segment of Route 17 between Exists 124 (Florida/Goshen) and 120 (NY Route 211/Middletown) in the westbound direction in the AM time period. In addition, there is significant amount of off peak growth with some sections having more than 70% growth. The PM peak hour has similar results to the projections for the AM period, with the peak direction, westbound, expected to increase by approximately 40% in Orange County and more than 60% in Sullivan County. As with the AM peak hour, the PM peak hour 2045 projections show a significant drop-off in traffic volumes in the western end of the corridor.

Table 5-3: Overall Peak Hour Vehicular Volume Growth for Orange County

Exit Number	Overall Growth % from 2010 to 2045			
	AM		PM	
	EB	WB	EB	WB
131	32.56	153.28	208.90	49.61
130A	23.52	110.99	86.88	21.97
130	43.14	111.53	96.69	22.90
129	27.56	98.06	88.62	22.59
128	27.56	96.40	88.62	17.43
127	33.19	92.40	88.53	28.72
126	36.89	69.63	74.66	31.12
125	43.07	87.50	71.24	55.26
124	42.00	87.52	75.73	43.23
123	46.84	100.63	81.21	47.98
122A	30.41	101.57	73.70	32.10
122	51.33	63.90	64.42	53.87
121	71.89	78.34	49.64	65.02
120	163.17	137.33	127.67	146.19
119	361.33	244.82	357.34	295.83
118	391.23	284.78	325.93	339.17
116	1512.75	1283.87	1550.00	1680.00

Table 5-4: Overall Directional Design Hour Volume Growth for Sullivan County

Exit Number	Overall Growth % from 2010 to 2033	
	AM	PM
	EB	WB
115	66.67	55.56
114	66.67	55.56
113	55.56	50.00
112	62.50	55.56
111	55.56	55.56
110	50.00	66.67
109	55.56	66.67
108	26.26	
107	8.18	
106	-	
105	8.97	
104	8.49	
103	-	

Figure 5-5: Projected Traffic Comparison AM Existing vs 2045

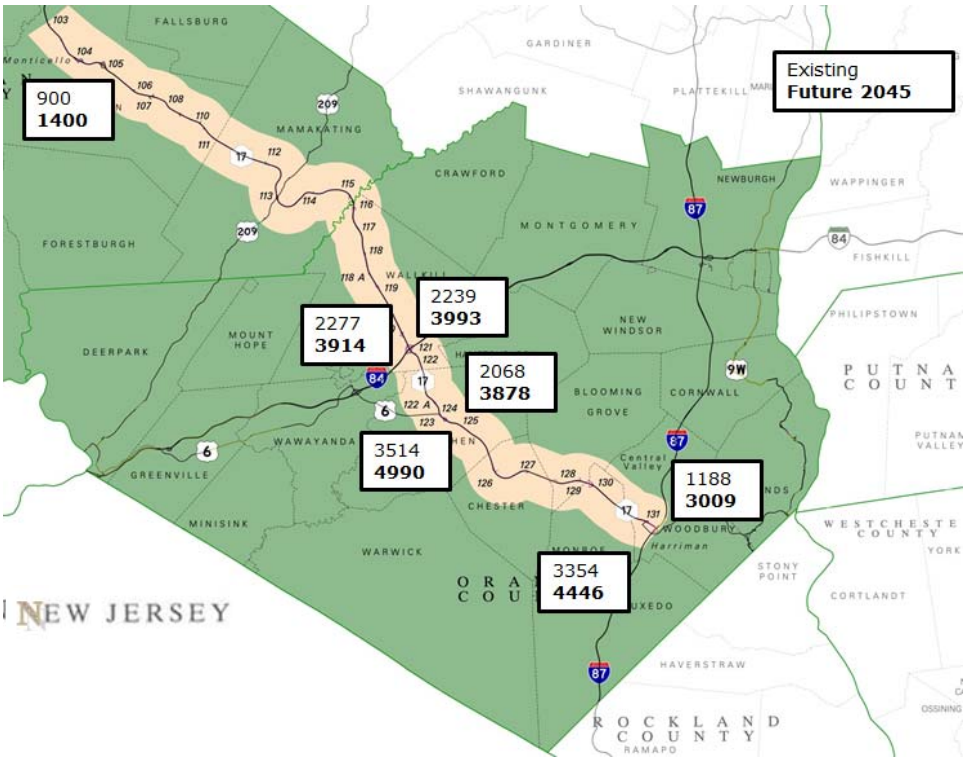
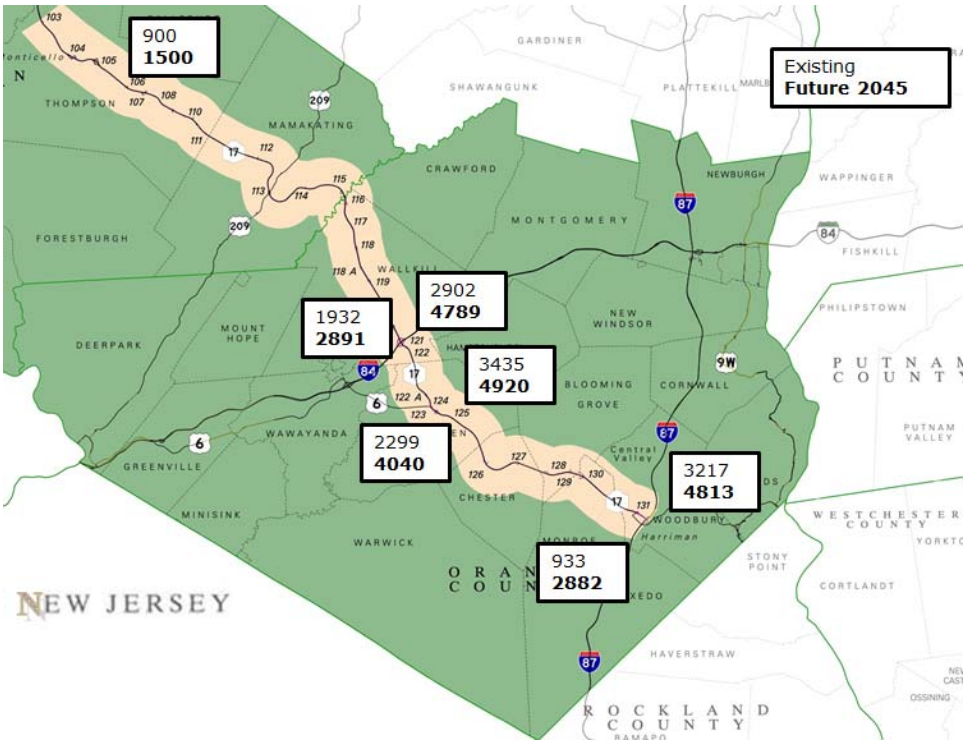


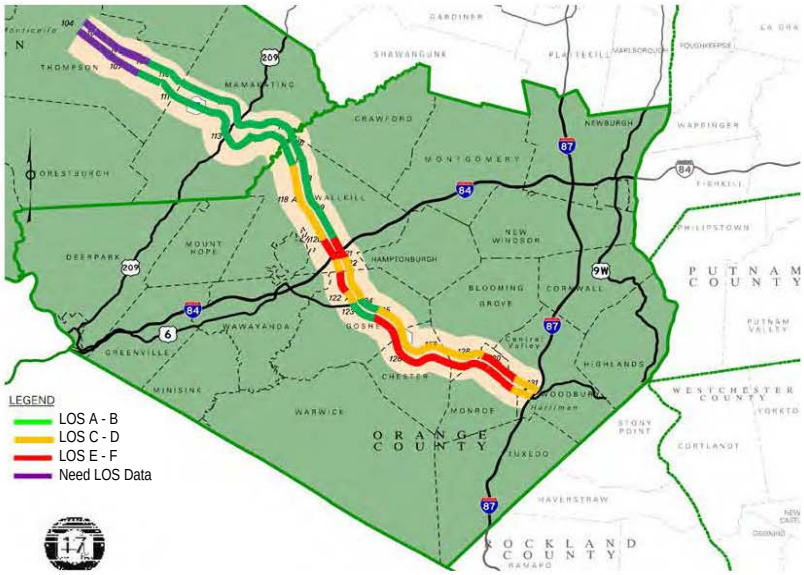
Figure 5-6: Projected Traffic Comparison PM Existing vs 2045



5.1.3 Traffic Conditions

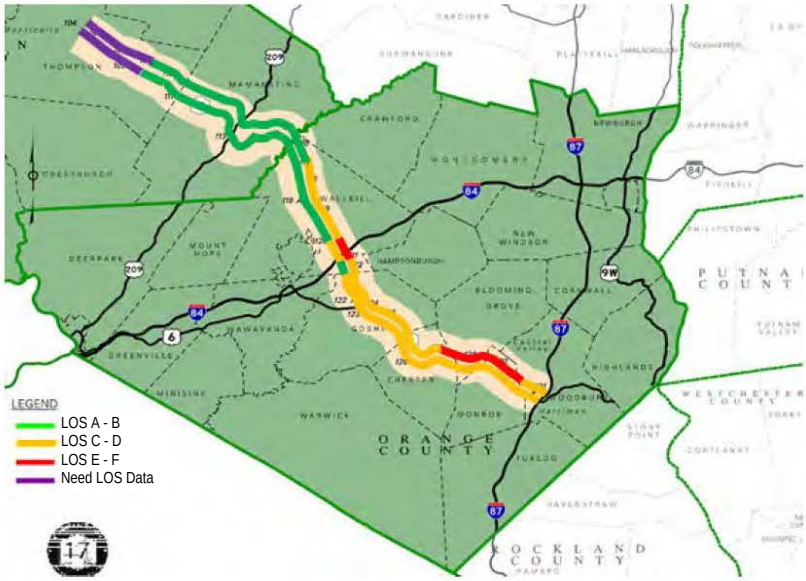
By 2045, growth in traffic volumes will result in worsening congestion in both directions on Route 17 during peak traffic hours. The 2045 AM and PM peak hour LOS are illustrated in Figure 5-7 and Figure 5-8.

Figure 5-7: Future (Year 2045) AM Level of Service



During the AM peak hour, Route 17 eastbound is forecasted to continue to operate at LOS A/B in Sullivan County. However, in Orange County much of Route 17 eastbound is predicted to operate at LOS E/F, with most of the rest operating at LOS C/D. Due to the increase in off-peak direction travel, westbound Route 17, during the AM peak hour, has segments that would degrade to LOS E/F and LOS C/D. However, the western portion of the corridor would remain LOS A/B.

Figure 5-8: Future (Year 2045) PM Level of Service



During the PM peak hour the westbound direction is predicted to operate at LOS E/F in the east and near I-84. The remainder of Route 17 in Orange County is forecasted to operate at LOS C/D, with a small segment of LOS A/B near Sullivan County. All of Sullivan County in both directions is predicted to operate at LOS A/B in 2045. Again, due to the increase in off-peak direction travel, eastbound Route 17 in Orange County during the PM peak hour is mainly forecasted to operate at LOS C/D.

The West of Hudson Regional Transit Access Study (WHRTAS) is currently under way and is expected to make recommendations for long-term improvements to transit service in the

Route 17 Corridor. In the near term, the 2011-2015 *Transportation Improvement Program (TIP)* of the Orange County Transportation Council includes the following transit projects:

- Kiryas Joel: Construction of a park-and-ride lot and parking facilities for buses.
- Monroe: Park-and-ride improvements and upgrades to an existing multi-modal facility.
- Middletown Transit Facility: Rehabilitation/improvement to the existing bus/transit hub facility.
- Operational improvements to MTA Metro-North transit system, including the Port Jervis Line.
- Travel Demand Management/511 Program activities in Orange County.
- Orange-Westchester Link (OWL): Peak-hour commuter bus primarily connecting Orange County residents of the Route 17 corridor to Westchester County with connections to other services.
- Route 17 NYC Enhanced Service: Additional frequency between Orange County and Manhattan.

5.2 Significant Planned Future Land Use

By the year 2045, much of Orange County will be substantially "built out" as allowed by existing zoning controls of the jurisdictions within the County. Figures 5-9A and 5-9B depict the level of travel demand generated by development in Orange County for the years 2010 and 2045. Areas depicted in bright red shade on the figures identify zones in Orange County that will see more than double the number of trips generated by land use development in 2045 than in 2010. Planned development projects in Orange County include a three-story 1,000 space parking garage at Woodbury Common, and a 45-acre warehouse development on NY Route 17M.[7]

In addition to the overall 2% per year growth in traffic levels in Sullivan County, major proposed development in the Study corridor in Sullivan County includes the following projects.

5.2.1 Center for Discovery

The Center for Discovery is developing a new 60-bed specialty facility for the treatment of patients with autism that will require an additional staff of 300 to 400 employees. The entrance of the new facility would be located immediately across from Exit 102 (Harris/Bushville) of Route 17. The project will create 300 jobs for the region as well as provide a service for children with autism that is not currently offered in New York State. Anticipated schedule for development of new facility is approximately 1.5 to two years. This project is identified by the Mid-Hudson Regional Economic Development Council as a priority project.

[7] Source: Transportation Partnering Committee meeting, November 14, 2012.

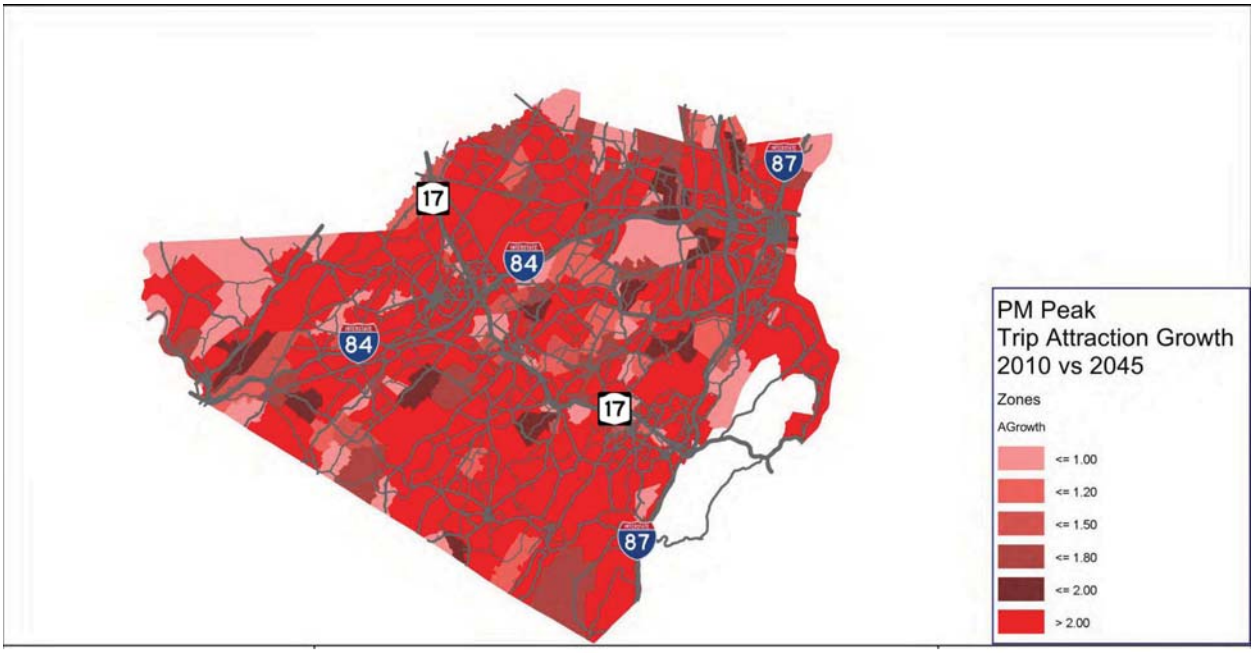


Figure 5-9A: PM Peak Hour Trip Attraction Growth in Orange County

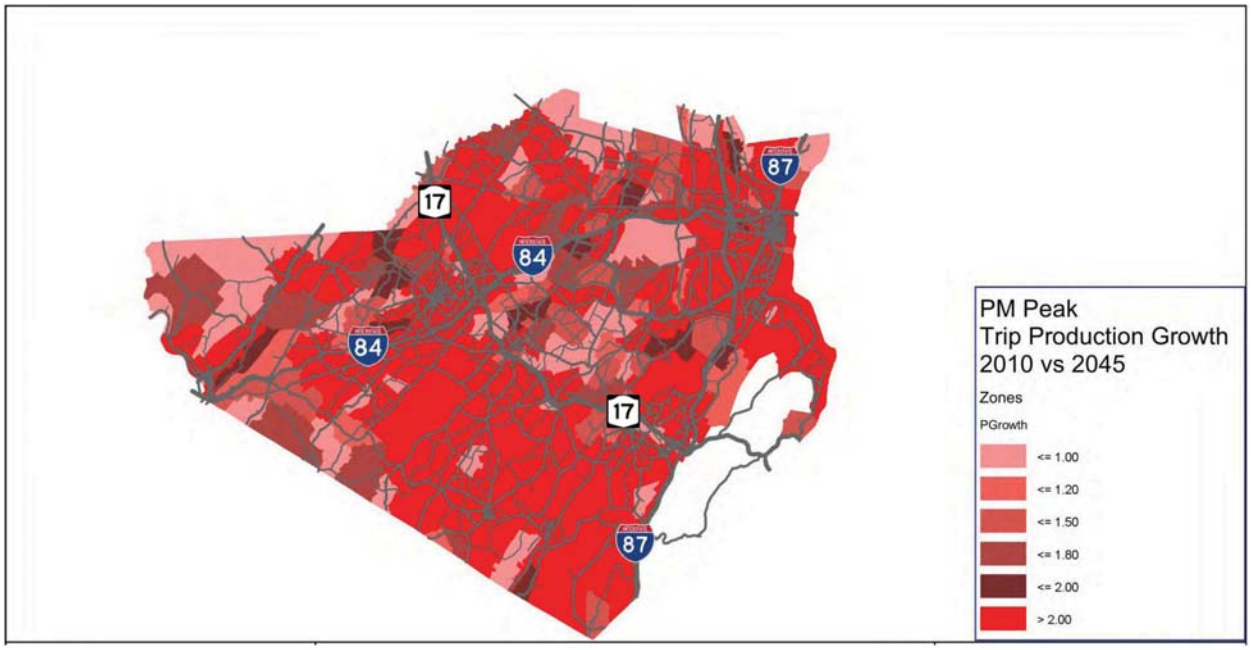


Figure 5-9B: PM Peak Hour Trip Production Growth in Orange County

5.2.1 EPT Concord Resort

This proposed destination resort community would redevelop the lands of the former Concord Hotel and other related parcels consisting of a total of approximately 1,735 acres within the Town of Thompson. The site is bordered on the south by Route 17, on the west by NY Route 42, on the north by County Route 109 (Kiamesha Lake Road), and on the east by County Route 161 (Heiden Road). The project would include 3,000 residential units, a 1.5 million square-foot (SF) hotel, a 148,300 SF lodge/spa, a 60,000 SF Gold Clubhouse, a 210,000 SF casino, a 200,000 SF convention center, and 625,000 SF of retail space.[8] The anticipated year of completion of Phase I of the project is 2014 and ultimate build out is 2022. This project is identified by the Mid-Hudson Regional Economic Development Council as a priority project.

5.2.2 Shawaga Lodge Road Development

This proposed project near Exit 114 (Highview/Wurtsboro) of Route 17 would include a 400,000 SF conference center and a 60,000 SF hotel with 4,300 parking spaces off County Road 171. The project is currently in its early planning stage.

5.3 Transit

The 2011-2015 *Transportation Improvement Program (TIP)* of the Orange County Transportation Council, the designated regional Metropolitan Planning Organization (MPO) responsible for carrying out the metropolitan transportation planning process in Orange County, as defined in Federal Transportation Legislation (23 USC 134(b) and 49 USC 5303(c))—includes the following transit projects:

- Kiryas Joel: Construction of a park-and-ride lot and parking facilities for buses.
- Monroe: Park-and-ride improvements; modernization and reconstruction/ refurbishment of an existing multi-modal facility that will include replacement of bus shelter(s), and improve/optimize bus loading and parking areas.
- Middletown Transit Facility: Rehabilitation/improvement to the existing bus/transit hub facility, including dedicated bus areas and parking reconstruction.
- Operational improvements to the MTA Metro-North transit system, including the Port Jervis Line.
- Travel Demand Management/511 Program activities in Orange County.
- Orange-Westchester Link (OWL): Peak-hour commuter bus primarily connecting Orange County residents of the Route 17 corridor to Westchester County with connections to other services (Tappan Zee Express, I-Bus, and local service).

[8] Source: AKRF. *Concord Resort Draft Generic Environmental Impact Statement*, August 2006.

- Route 17 NYC Enhanced Service: This service will provide added trips to an existing service between Route 17 in Orange County and Manhattan.

As described in Section 5.1, Metro-North and the NYSTA, in cooperation with the PANYNJ, New Jersey Transit (NJT), and NYSDOT, have initiated the West of Hudson Regional Transit Access Study (WHRTAS). The Phase I screening report issued in May 2012 as part of that study identified five alternative groups for further analysis under Phase II.[9] During Phase II, Metro-North will continue to coordinate with the PANYNJ, NJT, NYSDOT and other agencies. Specifically, Metro-North will coordinate with NJT in developing commuter rail services plans that reflect the cancellation of the Access to the Region's Core Project. Both Metro-North and the PANYNJ will continue to work with partner agencies and local jurisdictions on road access and incorporation of provisions in town and county plans to provide for future Stewart International Airport (SWF) commuter transit connections based on right-of-way needs identified in the Phase I Report. Alternatives in proximity of the Study corridor recommended for further Phase II analysis under WHRTAS include:

- Alternative Group 3 would provide direct commuter rail from Port Jervis Line (PJL) for commuter and SWF users. These alternatives would provide direct commuter rail service to both commuter and airport markets using an extension of the existing PJL. Alternatives R-C1 and R-C3 would use the Salisbury Mills-Cornwall alignment along the PJL. The Salisbury Mills-Cornwall alignment starts from a point one-half mile north of Salisbury Mills-Cornwall Station via new right-of-way and 2nd Street to the south side of SWF.

- Alternative Group 4 (RB-C1) would provide commuter rail service to both the commuter and airport markets from the south by using the Metro-North PJL to one of the existing commuter rail station locations where passengers would then transfer to another transit mode for connecting services to SWF and/or a commuter park-and-ride, with BRT connecting service.

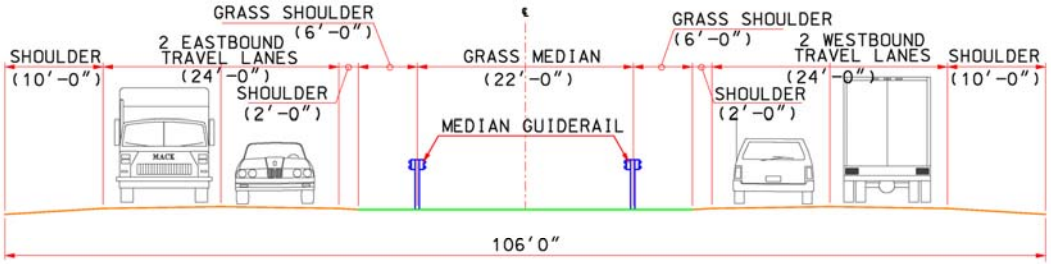
5.4 Transportation Corridor Concepts

Five transportation concepts were identified as having the potential to address the corridor goals (see Figure 5-10). As described, these concepts were developed by the project team based on guidance provided by the TPC and the public as part of the Study public outreach process. Each concept will incorporate improvements to the roadways and intersections that feed Route 17 or would be affected by additional traffic generated by this project.

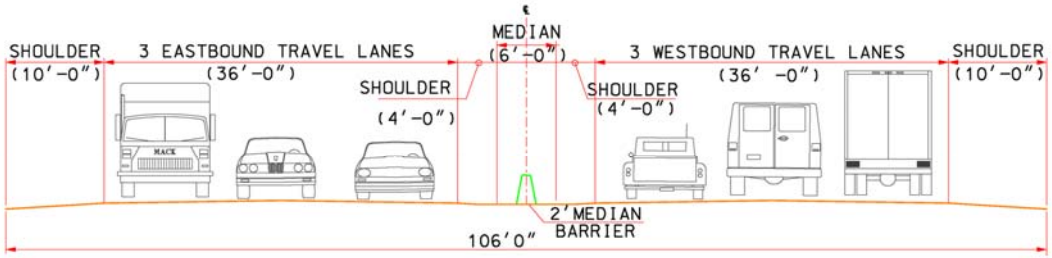
These concepts were evaluated on the basis of relative degree to meet the goals of the corridor. The transportation concepts were developed to a schematic level of design, including the preparation of typical plans and cross sections identifying the nominal number of lanes, lane and shoulder widths, and other geometric characteristics.

[9] Source: Metro-North Railroad, *West of Hudson Regional Transit Access Study Alternative Analysis Phase I Screening Report*, May 2012.

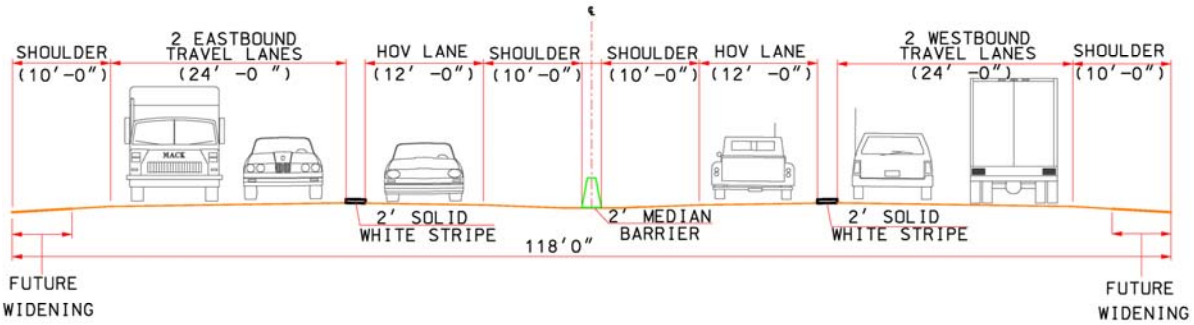
Figure 5-10: Transportation Concepts



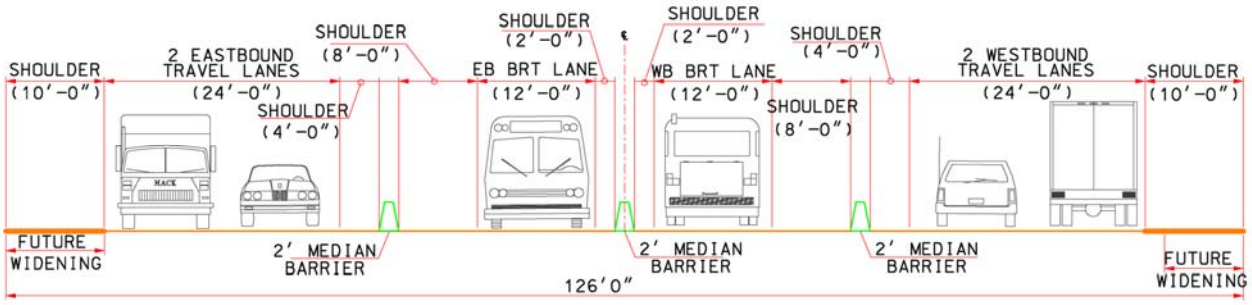
MAINTAIN EXISTING ROADWAY/NO BUILD



GENERAL USE THIRD LANE

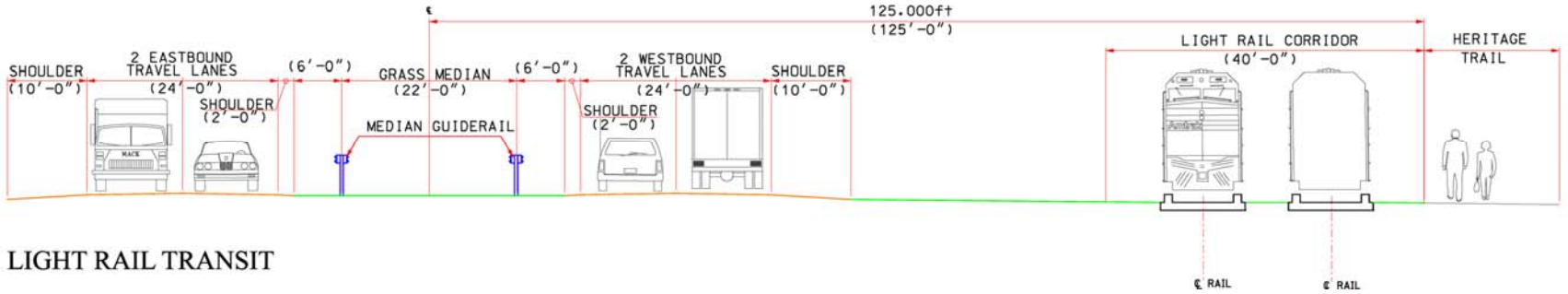


HIGH OCCUPANCY VEHICLE LANE



BUS RAPID TRANSIT

Figure 5-10: Transportation Concepts (continued)



Cost estimates for each concept were based on the assumed cross section for each concept and an assumed cost of a lane mile based on the cost of similar types of facilities in the nation. Based on estimated future baseline traffic conditions described in Section 5.1, a range of capital costs were developed for each concept based on the assumption that it would be constructed along the entire approximately 47-mile corridor between Monticello and Harriman.

5.4.1 No Build Concept

Under the No Build option, the roadway would continue to maintain the same number of lanes as the existing roadway, and would not require a substantial capital investment other than that required to maintain its existing infrastructure. This concept serves as the baseline against which other transportation concepts are measured.

5.4.2 General Use Third Lane Concept

Under this concept a third lane would be added in the median of the highway. As described in Section 5.7 of this report, the design of Route 17 provides sufficient room for the development of a third lane in the median of the roadway, and a third lane has already been developed in certain segments of Route 17 within the corridor. This concept would include the introduction of a median barrier and create the need for additional stormwater management. Widening would also be required in areas with potential sight distance obstructions or to correct existing safety or operational problems that would be exacerbated by the addition of a new lane. This is the lowest cost build concept that would significantly reduce congestion. The capital cost of a third lane would range between $200 and $700 million.

5.4.3 High Occupancy Vehicle Lane Concept

High Occupancy Vehicle (HOV) lanes are managed lanes that are separated from general use traffic and are reserved for passenger vehicles with two or more people, buses and motorcycles. The central concept of HOV lanes is to move more people rather than move more cars. They have been used in the United States for more than 40 years and there are over one hundred HOV systems on freeways across the Unites States with California having the most in operation.

For the Route 17 corridor, an HOV lane would be placed on each side of the roadway. Similar to the General Use Third Lane concept, the lane would be added in the median and would be separated from general use traffic by a 2’-4” painted buffer. Widening would be required at the access points so that an auxiliary lane could be provided to allow vehicles to safely transition safely between HOV and general use lanes. The capital cost of an HOV lane between Monticello and Harriman would range between $800 million and $3 billion.

5.4.4 Bus Rapid Transit Concept

The Bus Rapid Transit (BRT) concept is a public transportation mode that uses buses to provide faster and more efficient service than ordinary buses. BRT systems can range from inexpensive bus lanes that utilize a shoulder or parking lane to full barrier separated systems with state-of-the-art amenities. BRT systems can be implemented incrementally and typically include common elements such as: bus lanes, custom vehicles (with low boarding access), enhanced stations, intersection priority systems, real-time passenger information, and fare collection systems that minimize boarding delays.

For the Route 17 corridor, barrier separated BRT lanes with eight-feet-wide shoulders would be placed in the median of the highway. Stations would also be in the median and would require additional widening and the installation of overhead walkways to provide pedestrian access. BRT in the western part of the corridor could be implemented as a future initiative since it would be significantly faster to travel by car through this uncongested section rather than on BRT. The capital cost of a BRT concept between Monticello and Harriman would range between $1 billion to $6 billion.

5.4.5 Light Rail Concept

Light rail transit is a form of public transit that utilizes electric train cars operating on fixed guide rails. Its role and performance lies between conventional bus service and urban heavy rail or underground metropolitan railway. Light rail systems are flexible and expandable. They can be installed in a downtown urban area like the Hudson-Bergen Light Rail in Jersey City or in the highway right-of-way that provides access to an area like the Regional Transportation District (RTD) system in Denver, CO.

For the Study corridor, a light rail system would utilize the Route 17 corridor and also track outside the highway right-of-way to provide more convenient access to the village centers. For this reason the light rail tracks would be located at the edge of the right-of-way instead of in the median. Similar to the BRT concept, light rail in the western part of the corridor could be installed as a future initiative since it would be significantly faster to travel by car through this uncongested section rather than light rail. The capital cost for development of a light rail transit system between Monticello and Harriman would range between $4 billion and $12 billion.

5.4.6 TSM/TDM Options

A range of Travel Demand Management (TDM) and Transportation System Management (TSM) strategies could be potentially applied to the Study corridor, either alone or in conjunction with one or more of the transportation concepts identified in this section.

TDM programs focus on changing or reducing travel demand, particularly at peak commute hours, instead of increasing roadway capacity. TDM makes more efficient use of the current

roadway system. Research around the country indicates that well-designed TDM programs can significantly reduce vehicle trips on the regional roadway system. Some of the most promising TDM programs emphasize coordination with local employers on measures such as car or vanpooling programs, bus pass subsidies, alternative work schedules, telecommuting options, parking management, and providing financial incentives for the use of public transit. In some areas congestion pricing strategies, including the use of tolling, have been shown to reduce demand on a system.

TSM programs constitute a separate but closely related set of strategies to TDM programs. Rather than address demand, TSM programs focus on making transportation systems more efficient, reducing the need for expensive new facilities. TSM strategies are low-cost in nature, and include such measures as:

- Intersection and signal improvements, including signal timing optimization, turning lanes, grade separations, pavement striping, signage and lighting;
- Freeway bottleneck removal programs, including providing sufficient acceleration/ deceleration lanes and ramps, improved signage and pavement striping;
- Real-time transportation system monitoring and response systems, including the application of intelligent transportation system technology, variable message signage and incident detection and response programs.

TDM and TSM programs are most effective when linked to regional land use and growth strategies that focus growth near available transit facilities. This would require close coordination with municipal jurisdictions within Orange and Sullivan Counties.

5.5 Screening of Transportation Corridor Concepts

The five transportation concepts described in Section 5.4 were evaluated on their ability to achieve the corridor vision and goals described in Section 4.6, including consideration of the comments received on the competing concepts provided by the TPC and by the general public during Public Workshop I. The performance of each transportation concept is provided in Table 5-5 “Screening of Transportation Concepts”, for the following criteria:

- Cost
- Public input/participation
- Operational and design features, including sustainability
- Right-of-way requirements
- Economic development
- Environmental effects

Table 5-5: Screening of Transportation Concepts

Criteria	Minor / Moderate / Major Threshold	Maintain Existing Roadway/ No Build	General Use Third Lane	HOV lane	Bus Rapid Transit	Light Rail Transit
COST						
Capital Cost ($)	Minor- Less than $100 million	Yes	No	No	No	No
	Moderate- Between $100 and $500 million	No	Yes	No	No	No
	Major- More than $500 million	No	Yes	Yes	Yes	Yes
PUBLIC INPUT/ PARTICIPATION						
		Least desirable	Most desirable	Most desirable	Somewhat desirable	Least desirable
OPERATIONAL AND DESIGN FEATURES						
Corridor Safety	Minor- Exceed AASHTO standard	No	No	No	No	No
	Moderate- Conform to AASHTO standards	No	Yes	Yes	Yes	Yes
	Major- Would not meet AASHTO standards	Yes	No	No	No	No
Corridor Capacity During Commuter and Other Peak Periods	Minor – N/A					
	Moderate- LOS C or better corridor-wide traffic conditions	No	Yes	Yes	Yes	Yes
	Major- LOS D or worse corridor-wide traffic conditions	LOS D or worse anticipated in sections of the corridor	No	No	No	No

Table 5-5: Screening of Transportation Concepts

Criteria	Minor / Moderate / Major Threshold	Maintain Existing Roadway/ No Build	General Use Third Lane	HOV lane	Bus Rapid Transit	Light Rail Transit
Transit	Minor - Current levels of population, employment, and other trip generators in station areas are sufficient to support a major transit investment. Most potential station areas are pedestrian-friendly and fully accessible.	N/A	N/A	N/A	No—Density in Orange County is 0.92 persons (residents and employees) per gross acres, an 0.15 persons (residents and employees) per gross acres in Sullivan County[10]	No—Density in Orange County is 0.92 persons (residents and employees) per gross acres, an 0.15 persons (residents and employees) per gross acres in Sullivan County
	Moderate- Current levels of population, employment, and other trip generators in potential station areas marginally support a major transit investment. Some potential station areas are pedestrian-friendly and accessible. Significant growth must be realized.	N/A	N/A	N/A	Yes	No

[10] According to Transit and the "D" Word (Cervero and Guerra, Spring 2012; ACCESS, University of California Transportation Center) average-cost, average-performance heavy-rail investments need surrounding densities of approximately 45 residents per gross acre within a half mile of stations to meet the cost-effectiveness threshold. Light rail needs about 30 residents per gross acre. In terms of density, increasing the number of jobs around stations appears to have a stronger impact on ridership than increasing the number of residents. Since jobs tend to be concentrated around existing downtown stations, however, few system expansions are likely to capture significant job concentrations. This means that rail expansions in residential areas need to be coordinated with proactive policies to facilitate job growth in other areas.

Table 5-5: Screening of Transportation Concepts

Criteria	Minor / Moderate / Major Threshold	Maintain Existing Roadway/ No Build	General Use Third Lane	HOV lane	Bus Rapid Transit	Light Rail Transit
	Major- Current levels of population, employment, and other trip generators in station areas are inadequate to support a major transit investment. Station areas are not pedestrian-friendly.	N/A	N/A	N/A	Yes	Yes
RIGHT OF WAY REQUIREMENTS						
Number of Private Property Acquisitions (# or Owners)	Minor- No acquisition	No acquisition anticipated since alignment would be within existing ROW	No acquisition anticipated since alignment would be within existing ROW	Some acquisition anticipated since alignment would extend outside existing ROW	Some acquisition anticipated since alignment would extend outside existing ROW	Some acquisition anticipated since alignment would extend outside existing ROW
	Moderate- Less than 10 property owners	N/A	N/A	N/A	N/A	N/A
	Major- More than 10 property owners	N/A	N/A	N/A	N/A	N/A
ECONOMIC DEVELOPMENT						
Economic Development	Minor- N/A					
	Moderate- Project would provide conditions that optimize development opportunities by providing improved access	Would maintain existing conditions	May provide opportunities for improved access	May provide opportunities for improved access	May provide opportunities for improved access	May provide opportunities for improved access

Table 5-5: Screening of Transportation Concepts

Criteria	Minor / Moderate / Major Threshold	Maintain Existing Roadway/ No Build	General Use Third Lane	HOV lane	Bus Rapid Transit	Light Rail Transit
	Major- Project would preclude planned development projects	Would not preclude planned development projects	Would not preclude planned development projects	Would not preclude planned development projects	Would not preclude planned development projects	Would not preclude planned development projects
ENVIRONMENTAL EFFECTS						
Land Use						
Direct Impacts on Land Use	Minor- No change in existing land use	No change in land use anticipated	No change in land use anticipated	Some change in land use anticipated due to ROW acquisition	Some change in land use anticipated due to ROW acquisition	Some change in land use anticipated due to ROW acquisition
	Moderate- Project would convert land use of less than 5 parcels to transportation use	No	No	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design
	Major- Project would convert land use of 5 or more parcels to transportation use	No	No	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design
Socioeconomic Conditions						
Adverse Effects on Environmental Justice Groups	Minor- No foreseeable change in environmental conditions within EJ area	Yes	Yes	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design
	Moderate- Project would result in new travel patterns adjacent to EJ qualified communities	No	No	Maybe	Yes	Yes

Table 5-5: Screening of Transportation Concepts

Criteria	Minor / Moderate / Major Threshold	Maintain Existing Roadway/ No Build	General Use Third Lane	HOV lane	Bus Rapid Transit	Light Rail Transit
	Major- Project would physically encroach into EJ area	No	No	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design
Displacement of Residents	Minor- No residential units would be displaced	No displacement of dwelling units anticipated	No displacement of dwelling units anticipated	No displacement of dwelling units anticipated	No displacement of dwelling units anticipated	No displacement of dwelling units anticipated
	Moderate- Less than 20 residential units would be displaced	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above
	Major- 20 or more residential units would be displaced	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above
Direct Impacts to Business Establishments	Minor- No displacement or disruption of businesses during construction	Yes – daytime traffic disruption not anticipated	Yes – daytime traffic disruption not anticipated	Yes – daytime traffic disruption not anticipated	Yes – daytime traffic disruption not anticipated	Yes – daytime traffic disruption not anticipated
	Moderate- Displacement or construction-period disruption of businesses totaling less than 30 employees	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above
	Major- Displacement or construction-period disruption of businesses totaling 30 or more employees	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above

Table 5-5: Screening of Transportation Concepts

Criteria	Minor / Moderate / Major Threshold	Maintain Existing Roadway/ No Build	General Use Third Lane	HOV lane	Bus Rapid Transit	Light Rail Transit
Noise & Air Quality						
Increased Noise Levels At Sensitive Locations within 200 feet of Existing ROW	Minor- No increase in traffic volume near identified receptors	No increase in traffic volume due to this concept	Some increase in traffic volume anticipated	Some increase in traffic volume anticipated	Some decrease in traffic volume anticipated	Some decrease in traffic volume anticipated
	Moderate- less than two-fold increase in traffic volume near identified receptors	See immediately above	To be determined	To be determined	See immediately above	See immediately above
	Major- two-fold or greater increase in traffic volume near identified receptors	See immediately above	To be determined	To be determined	See immediately above	See immediately above
Alters Regional Air Quality due to Changes in VMT	Minor- No change in VMT	No change in VMT anticipated	To be determined	To be determined	Some decrease in VMT anticipated	Some decrease in VMT anticipated
	Moderate- 10% or less increase in VMT	See immediately above	To be determined	To be determined	See immediately above	See immediately above
	Major- More than 10% increase in VMT	See immediately above	To be determined	To be determined	See immediately above	See immediately above
Alters Regional Air Quality due to Changes in Average Travel Speed in the Network	Minor - Increases average travel speed	No significant increase in average travel speed anticipated	Some increase in average travel speed anticipated	Some increase in average travel speed anticipated	Some increase in average travel speed anticipated	Some increase in average travel speed anticipated
	Moderate- Maintains average travel speed	To be determined	To be determined	To be determined	To be determined	To be determined
	Major- Decreases average travel speed	No decrease in average travel speed anticipated	No decrease in average travel speed anticipated	No decrease in average travel speed anticipated	No decrease in average travel speed anticipated	No decrease in average travel speed anticipated

Table 5-5: Screening of Transportation Concepts

Criteria	Minor / Moderate / Major Threshold	Maintain Existing Roadway/ No Build	General Use Third Lane	HOV lane	Bus Rapid Transit	Light Rail Transit
Ecological/Natural Resources						
Requires Use of Wetlands	Minor- No temporary or permanent use of Wetlands	No temporary or permanent use of wetlands anticipated	No temporary or permanent use of wetlands anticipated	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design
	Moderate- Temporary use of Wetlands or less than 0.10 acre or permanent impact to wetlands (no mitigation required)	See immediately above	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design
	Major- Permanent use of Wetlands greater than 0.10 acres	See immediately above	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design
Surface/Groundwater						
Potential Adverse Effect on Surface Water Quality	Minor- No Increase in Impervious surfaces, No increase in Stormwater run-off or decrease in treatment	No increase in impervious surfaces	Impervious surface area would increase	Impervious surface area would increase	Impervious surface area would increase	N/A – cannot be determined at concept-level design
	Moderate- Increase in Impervious surface with treatment provided	See immediately above	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design	See immediately above
	Major- Increase in Impervious surface with limited/no treatment or connection to Combined Sewer	See immediately above	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design	N/A – cannot be determined at concept-level design	See immediately above

Table 5-5: Screening of Transportation Concepts

Criteria	Minor / Moderate / Major Threshold	Maintain Existing Roadway/ No Build	General Use Third Lane	HOV lane	Bus Rapid Transit	Light Rail Transit
Potential Adverse Effect on Ground Water Quality	Minor- Action would not occur near a sole source aquifer	The Study Corridor is not located within a sole source aquifer. The Ramapo River Basin Aquifer Systems located south of the Study Corridor is the nearest designated sole source aquifer.	The Study Corridor is not located within a sole source aquifer. The Ramapo River Basin Aquifer Systems located south of the Study Corridor is the nearest designated sole source aquifer.	The Study Corridor is not located within a sole source aquifer. The Ramapo River Basin Aquifer Systems located south of the Study Corridor is the nearest designated sole source aquifer.	The Study Corridor is not located within a sole source aquifer. The Ramapo River Basin Aquifer Systems located south of the Study Corridor is the nearest designated sole source aquifer.	The Study Corridor is not located within a sole source aquifer. The Ramapo River Basin Aquifer Systems located south of the Study Corridor is the nearest designated sole source aquifer.
	Moderate- Action would occur near a sole source aquifer	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above
	Major- Action would occur over a sole source aquifer	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above
Soils & Topography						
Requires Use of Agricultural Land	Minor- No use of agricultural land with prime soils	No use of agricultural land with prime soils would occur	Use of agricultural land with prime soils unlikely	Use of agricultural land with prime soils unlikely	Use of agricultural land with prime soils unlikely	Use of agricultural land with prime soils unlikely
	Moderate- Use of less than 15 acres of agricultural land with prime soils	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above

Table 5-5: Screening of Transportation Concepts

Criteria	Minor / Moderate / Major Threshold	Maintain Existing Roadway/ No Build	General Use Third Lane	HOV lane	Bus Rapid Transit	Light Rail Transit
Requires Use of Agricultural Land (cont.)	Major- Use of 15 or more acres of agricultural land with prime soils	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above
Visual Resources, Cultural Resources, and Parks						
Potential Adverse Effect on Visual Resources	Minor- No adverse effects on protected or locally important views	No new structures that would obstruct existing views anticipated	No new structures that would obstruct existing views anticipated	No new structures that would obstruct existing views anticipated	No new structures that would obstruct existing views anticipated	No new structures that would obstruct existing views anticipated
	Moderate- Partial obstruction of protected or locally important views	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above
Potential Adverse Effect on Visual Resources (continued)	Major- Elimination of protected or locally important views	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above
Potential Adverse Effect on Designated Historic Resource(s)	Minor- No direct effect on designated resources and no increase in proximity of roadway alignment to designated resources	No direct use of historic resources or increase in proximity of roadway alignment to designated resources anticipated	No direct use of historic resources or increase in proximity of roadway alignment to designated resources anticipated	No direct use of historic resources. Increase in proximity of alignment to one or more designated resources may occur.	No direct use of historic resources. Increase in proximity of alignment to one or more designated resources may occur.	No direct use of historic resources. Increase in proximity of alignment to one or more designated resources may occur.

Table 5-5: Screening of Transportation Concepts

Criteria	Minor / Moderate / Major Threshold	Maintain Existing Roadway/ No Build	General Use Third Lane	HOV lane	Bus Rapid Transit	Light Rail Transit
Potential Adverse Effect on Designated Historic Resource(s)	Moderate- Temporary effect on designated resources or increased proximity of roadway alignment to designated resources	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above
	Major- Direct taking or modification of designated resources	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above
Potential Adverse Effect on Archaeologically Sensitive Sites	Minor- No effect on archaeologically sensitive sites	To be determined – Potential areas of archaeological sensitivity occur throughout the Study Corridor	To be determined – Potential areas of archaeological sensitivity occur throughout the Study Corridor	To be determined –Potential areas of archaeological sensitivity occur throughout the Study Corridor	To be determined – Potential areas of archaeological sensitivity occur throughout the Study Corridor	To be determined – Potential areas of archaeological sensitivity occur throughout the Study Corridor
	Moderate- Effect on archaeologically sensitive sites with ability to be mitigated	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above
	Major- Direct disturbance or modification of Archaeologically Sensitive Sites	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above

Table 5-5: Screening of Transportation Concepts

Criteria	Minor / Moderate / Major Threshold	Maintain Existing Roadway/ No Build	General Use Third Lane	HOV lane	Bus Rapid Transit	Light Rail Transit
Potential Adverse Effect on Parks	Minor- No direct effect on parkland and no increase in proximity of roadway alignment to parkland	No direct use of parkland or increase in proximity of roadway alignment to parkland anticipated	No direct use of parkland or increase in proximity of roadway alignment to parkland anticipated	No direct use of parkland or increase in proximity of roadway alignment to parkland anticipated	No direct use of parkland or increase in proximity of roadway alignment to parkland anticipated	No direct use of parkland or increase in proximity of roadway alignment to parkland anticipated
	Moderate- Temporary effect on parkland or increased proximity of roadway alignment to parkland	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above
	Major- Direct taking or modification of parkland	See immediately above	See immediately above	See immediately above	See immediately above	See immediately above

As summarized in 5.5.4, in addition to the results of the concept screening summarized in Table 5-5, comments received during public workshops held on August 1, 2012 in Orange County and August 22, 2012 in Sullivan County, indicated that the General Use Third Lane concept and the HOV Lane concept had the greatest potential to achieve the corridor vision and goals and should be evaluated in greater detail in subsequent Study steps.

5.5.1 Traffic

With the exception of the No Build, all of the transportation concepts would provide some level of congestion relief due to the increased capacity that would be provided to the Route 17 corridor. The HOV, BRT, and Light Rail concepts would all require a mode shift from single occupant vehicle use for these options to be successful. The additional lane that is part of the General Use Third Lane concept would be open to all vehicles. In addition, the BRT and Light Rail concepts could benefit from more densely populated land use patterns in the vicinity of the future transit stations to enhance pedestrian access and improve ridership levels.

5.5.2 Environmental

Each concept was screened on the basis of its potential impact on environmental resources in the Study corridor, including potential impacts on noise and air quality sensitive land uses, wetlands and threatened and endangered species, farmland, historic and archaeological resources, and minority and low-income populations protected under Environmental Justice Executive Orders and related guidance and regulations. The results of this screening indicated that:

- Construction of all concepts would have the potential to result in short-term construction-related air quality and noise impacts on potential Environmental Justice populations along the corridor identified by NYSDEC, although these populations would not be disproportionately adversely affected by these impacts and that these impacts could be substantially reduced through available noise and air quality impact mitigation measures.
- The General Use Third Lane concept would have the lowest potential to affect wetlands, threatened and endangered species, farmland, and historic and archaeological resources since it would be substantially constructed within the existing right-of-way of Route 17 in the corridor.
- The HOV Lane, BRT and Light Rail Transit concepts would have the potential to affect wetlands, threatened and endangered species, farmland, and historic and archaeological resources since they would require construction outside of the existing right-of-way of Route 17 in the corridor.
- The General Use Third Lane concept would have the potential result in the greatest long-term noise and air quality effects since it would carry the greatest number of motor vehicles than the other options, although noise impacts could be substantially

reduced through a number of available noise mitigation measures, including the use of noise barriers, and air quality impacts would not have the potential to result in violations of the NAAQS due to the projected replacement of older more polluting vehicles with cleaner less polluting vehicles.

- The HOV Lane and BRT concepts would have lesser potential to result in air quality impacts compared to the General Use Third Lane concept, since there would be a reduction in the total number of single occupancy vehicles on Route 17, but would have the potential to result in somewhat greater noise effects due to the presence of a greater number of bus and BRT vehicles.
- The LRT concept would have the potential to result in the least air quality and noise impacts than the other concepts since it would divert passengers from single occupancy vehicles to less polluting and quieter LRT vehicles.
- The Travel Demand Management and Transportation System Management measures would have the greatest overall potential to result in improved environmental conditions of the proposed concepts.

5.5.3 Economic

All of the concepts, except the No Build option, would provide support to economic development in Sullivan and Orange Counties since they would provide additional capacity in the Route 17 corridor, reducing travel time, providing improved access to major development sites, and improving the free flow of goods. Of the competing options, the General Use Third Lane concept would have the greatest potential to support economic development since it would provide the greatest additional capacity in the corridor, and would have the potential to result in the greatest improvement in LOS along all lanes of Route 17, including in the most congested segment of the roadway between Exit 120 (NY Route 211/Middletown) and Exit 131 (Harriman/I-87).

5.5.4 Public Input

The proposed concepts were reviewed by both the TPC and at public workshops in both Sullivan and Orange Counties in August 2012. As detailed in Appendix A "Public Outreach," comments made at the TPC and during the public workshops indicated that neither the BRT nor LRT concepts were considered to be feasible due to the relatively high costs of the two concepts compared to the General Use Third Lane and HOV Lane concepts, would have the potential to result in greater environmental impacts than the General Use Third Lane and HOV Lane concepts since they would require construction outside of the existing right-of-way of Route 17 in the corridor, and would not result in the needed reduction in the existing and future levels of congestion in the corridor. Although public comment indicated that the HOV Lane concept would be more costly than the General Use Third Lane concept, it was indicated that the HOV Lane concept, and the General Use Third Lane concept should be further considered in subsequent stages of the Study.

5.6 Public Outreach Process

In Step II of the Study, the first Public Workshop was conducted, with a follow-up TPC meeting after the workshop:

- **Public Workshop I.** Public Workshop I was conducted on August 1, 2012, in Orange County, attended by approximately 90 community members and on August 22, 2012, in Sullivan County, which was attended by approximately 80 community members. Through group participation exercises during both workshops, stakeholders were given opportunity to offer input on development of an overall vision statement for the Route 17 corridor and to provide input on the major transportation corridor goals addressed in the Study. An additional outcome of Public Workshop I was the suggestion that the western limit of the study corridor for extended to Exit 103 (Rapp Road). (See Appendix A "Public Outreach" for a detailed description of the public comments and results of the workshops).
- **TPC Meeting #3.** The third TPC meeting was held on August 29, 2012, during which the TPC reviewed the results and comments on the transportation concepts and the corridor vision and goals from Public Workshop I. The TPC reached consensus on Corridor Vision Statement and Corridor Goals Statements, and agreed that the western limit of the study corridor be extended to Exit 103 (Rapp Road). (See Appendix A "Public Outreach" for meeting summary). And, the committee reached consensus on concepts that should be progressed to feasible alternative for more in depth analysis.

5.7 Identification of Corridor Feasible Alternatives From Transportation Concepts

A summary of the relative performance of competing concepts based on the evaluation is presented in Table 5-5. Based on the evaluation provided in Section 5.5 and guidance provided by the TPC, it is proposed that the "Maintain Existing Roadway," "Bus Rapid Transit" system as defined in Section 5.4, and "Light Rail Transit" concepts be eliminated from further consideration. Specifically, as noted in Section 5.5 under "Operational and Design Features," the "Maintain Existing Roadway" concept would result in LOS D or worse in sections of the Study corridor, and therefore would not meet the Study purpose to meet future demands placed on the corridor. Also as noted under "Operational and Design Features," existing population densities and level of commercial development in Orange and Sullivan Counties are not sufficient to support cost-effective investment in a light rail transit system.

Therefore, the two remaining concepts (General Use Third Lane and HOV Lane) are proposed to be advanced for further development in Step III of this Study. As noted previously, these concepts could be developed independently or as a new transportation concept that incorporates the most beneficial aspects of other concepts, including the long-term potential for development of some version of a BRT system in the Route 17 corridor. In addition, TDM and TSM strategies will be considered as standalone options and in conjunction with both the General Use Third Lane and HOV Lane concepts to reduce the demand on these facilities and maximize the efficiency of their use.

Costs of identified feasible concepts would vary depending on the actual length over which each concept would be constructed. As the feasible concepts are refined, more precise estimates will be developed in subsequent higher levels of development. Opportunities will be sought to minimize the capital cost of each concept and to identify additional concepts that incorporate the most beneficial attributes of each concept. In addition, potential modifications to intersections in Sullivan County will be considered in support of anticipated new development and to address non-standard features of existing interchanges.

5.7.1 Maintain Existing Roadway/No Build

Relative to other concepts, this concept would require minor capital investment. However, based on the evaluation presented in Table 5-5, this concept would not result in needed capacity or safety improvements to the Study corridor, or adequate support economic development in the region. Therefore, this concept was eliminated from further consideration since it would not meet the stated purpose of this Study.

5.7.2 General Use Third Lane

Based on the evaluation presented in Table 5-5, new general use third lanes in the east and westbound directions on Route 17 between Exits 120 (NY Route 211/Middletown) and 131 (Harriman/I-87) would result in improved capacity and safety, and could allow for regional economic development through improved access and providing for planned development projects. It would also provide additional capacity for use by trucks carrying freight within and through the corridor. Relative to other build concepts, potential environmental effects of this concept are expected to be minimal since its footprint in general would not expand beyond that of the existing roadway alignment. Therefore, this concept will be advanced for further evaluation since it would meet the Study purpose and could achieve the stated supporting goals.

5.7.3 High Occupancy Vehicle Lane

Based on the evaluation presented in Table 5-5, new HOV lanes in the east and westbound directions on Route 17 between Exit 120 (NY Route 211/Middletown) and Exit 131 (Harriman/I-87) would result in needed capacity and safety, and could encourage regional economic development through improved access and provide for increased economic development in Orange and Sullivan Counties. The implementation of this concept could potentially result in some adverse environmental effects since its footprint would extend outside the existing roadway alignment generally between Exit 120 (NY Route 211/Middletown) and Exit 131 (Harriman/I-87) to meet design standards. This concept will be advanced for further evaluation since it would meet the Study purpose and could achieve the stated supporting goals. Depending on the results of the WHRTAS, an HOV lane would also have the potential to be integrated with enhanced bus service or an HOV lane option along Interstate I-87/New York State Thruway. The design of this concept would allow for the potential long-term development of a BRT system in the future.

5.7.4 Bus Rapid Transit

Based on the evaluation presented in Table 5-5, this concept would result in improved capacity and safety, and could encourage regional economic development through improved access and providing for planned development projects. The implementation of this concept could potentially result in some adverse environmental effects since its footprint would extend outside the existing roadway alignment generally between Exit 120 (NY Route 211/Middletown) and Exit 131 (Harriman/I-87) to meet design standards. As described in Table 5-5 under "Operational and Design Features," existing population densities in Orange and Sullivan Counties are not sufficient to support cost-effective investment in the BRT system described in Section 5.5, and the system would lack connectivity with existing or proposed rail transit system at the eastern limit of the concept. Therefore, this concept was eliminated from further consideration since it would not meet the stated purpose of this Study.

5.7.5 Light Rail Transit

As described in Table 5-5 under "Operational and Design Features," existing population densities in Sullivan and Orange Counties are not sufficient to support cost-effective investment in a light rail transit system, and the system would lack connectivity with existing or proposed rail transit system at the eastern limit of the concept. Therefore, this concept was eliminated from further consideration since it would not meet the stated purpose of this Study.

The results of this assessment indicated that the General Use Third Lane and HOV Lane Alternatives are feasible alternatives with the potential to address future corridor capacity vision and goals and warrant further detailed evaluation.

Travel Demand Management (TDM) and Transportation Systems Management (TSM) Measures. In addition to the five identified concepts described previously, there are a range of TDM and TSM strategies that could be potentially applied to the Study corridor, either alone or in conjunction with one or more of the transportation concepts identified above, to improve corridor traffic operational conditions. These include the following concepts:

- **TDM** programs focus on changing or reducing travel demand, particularly at peak commuting hours, instead of increasing roadway capacity. Some of the most promising TDM programs emphasize coordination with local employers on measures such as car or vanpooling programs, bus pass subsidies, alternative work schedules, telecommuting options, parking management, and providing financial incentives for the use of public transit.
- **TSM** programs constitute a separate but closely related set of strategies to TDM programs. TSM strategies are low-cost in nature, and include such measures as intersection and signal improvements, freeway bottleneck removal programs, and real-time transportation system monitoring and response systems.

TDM and TSM programs are most effective when linked to regional land use and growth strategies that focus growth near available transit facilities, and would require close coordination with municipal jurisdictions within Sullivan and Orange Counties.

Park-and-Ride Facilities and Improvements to Existing Corridor Interchanges. In addition to the identified corridor concepts, potential locations for additional park-and-ride facilities were identified, as were potential modifications to interchanges in Sullivan and Orange Counties to address HALs and to support existing and anticipated new development in the Counties.

6 STEP III – CORRIDOR FEASIBLE ALTERNATIVE DEVELOPMENT

6.1 Corridor Feasible Alternatives Development

The General Use Third Lane and HOV Alternatives were evaluated in greater detail based on transportation modeling studies using the Orange County Regional Travel Demand Model, I-86 traffic projections, and available mapping from previous Route 17/I-86 Conversion studies. The results of this assessment are provided below.

6.1.1 General Use Third Lane

The results of the detailed transportation modeling indicate that the General Use Third Lane Alternative would provide the capacity needed on Route 17 between Exit 120 (NY Route 211/Middletown) and 131 (Harriman/I-87) to operate at acceptable LOS, and would eliminate all of the segments that were projected to operate at LOS E/F in the year 2045. The forecasted traffic conditions for the third lane alternative during the AM Peak Hour are shown in Figure 6-2. The forecasted traffic conditions for the third lane alternative during the PM Peak Hour, shown in Figure 6-3, yield similar results, with all segments of the corridor operating at LOS C/D or better. Both AM and PM Peak Hour model results were similar showing LOS A/B conditions in the Sullivan County portion of the Study area. Overall, the General Use Third Lane Alternative would provide sufficient capacity to address projected traffic volumes in the corridor however, it would not encourage transit use or support other regional smart growth initiatives.

The capital cost of the General Use Third Lane was estimated to be approximately $291 Million (2013 dollars).

Figure 6-1: General Use Third Lane

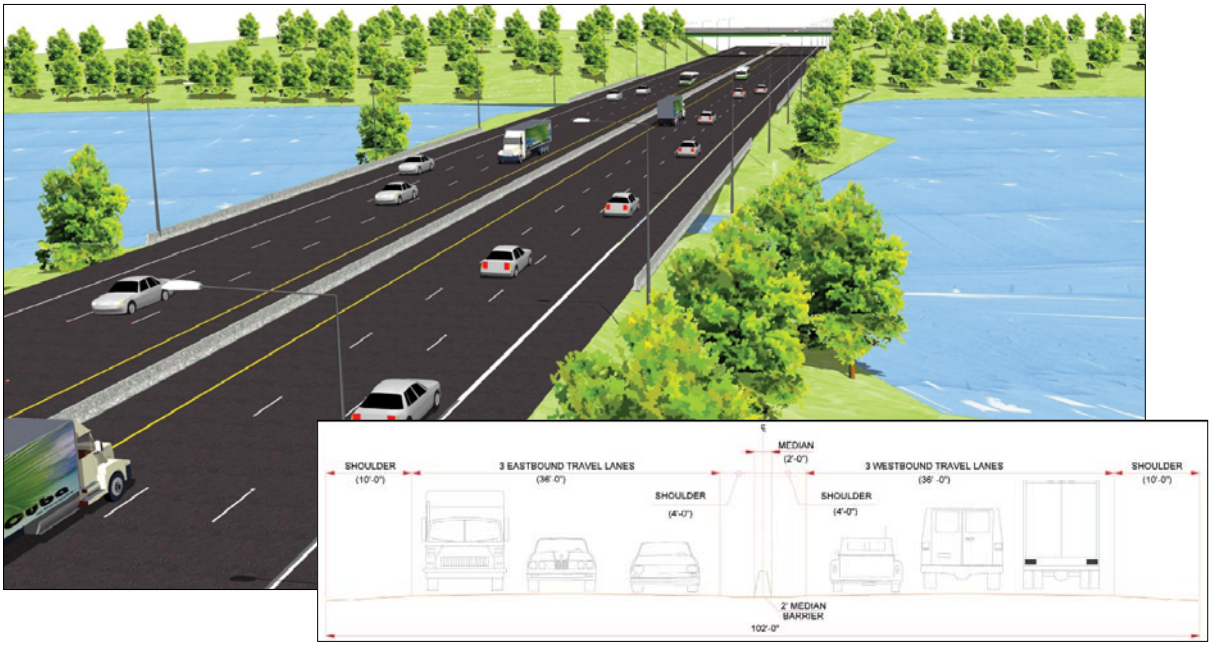


Figure 6-2: Forecasted 2045 AM Peak Hour Traffic Conditions With Third Lane Alternative

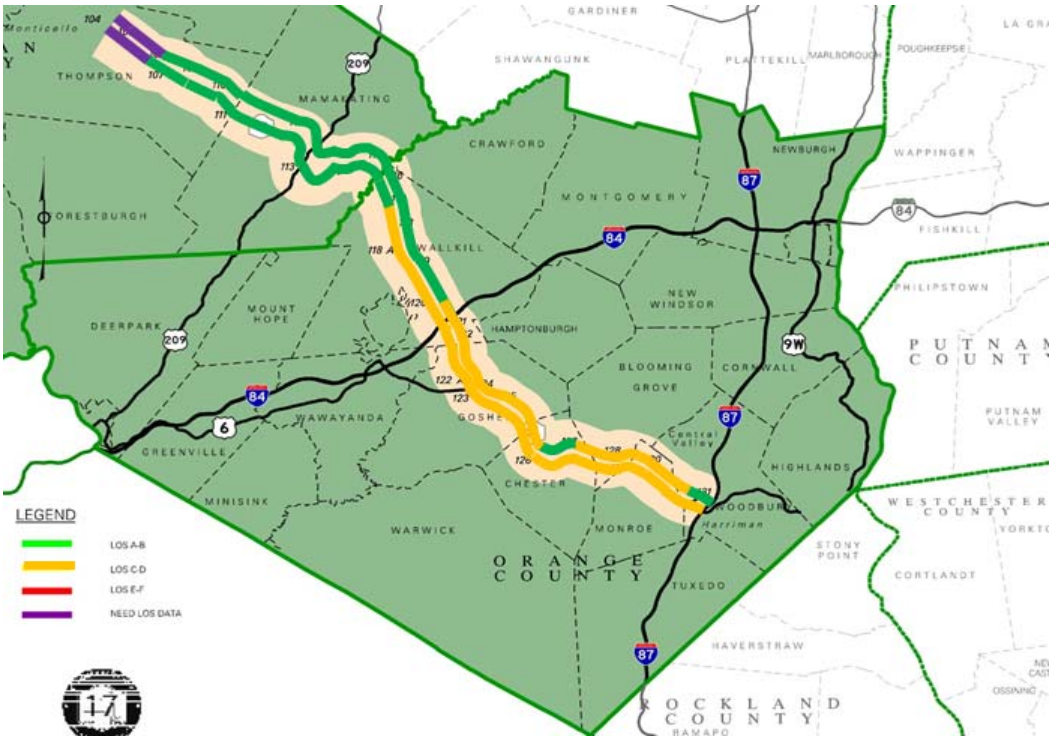
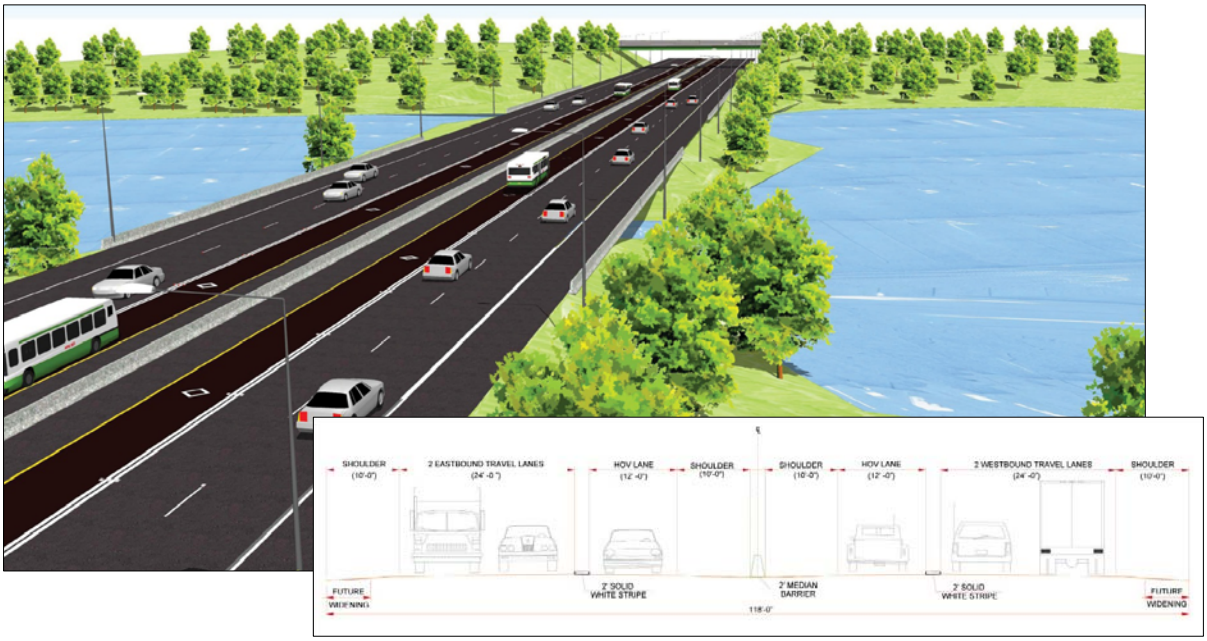


Figure 6-3: Forecasted 2045 PM Peak Hour Traffic Conditions With Third Lane Alternative

6.1.2 High Occupancy Vehicle Lane

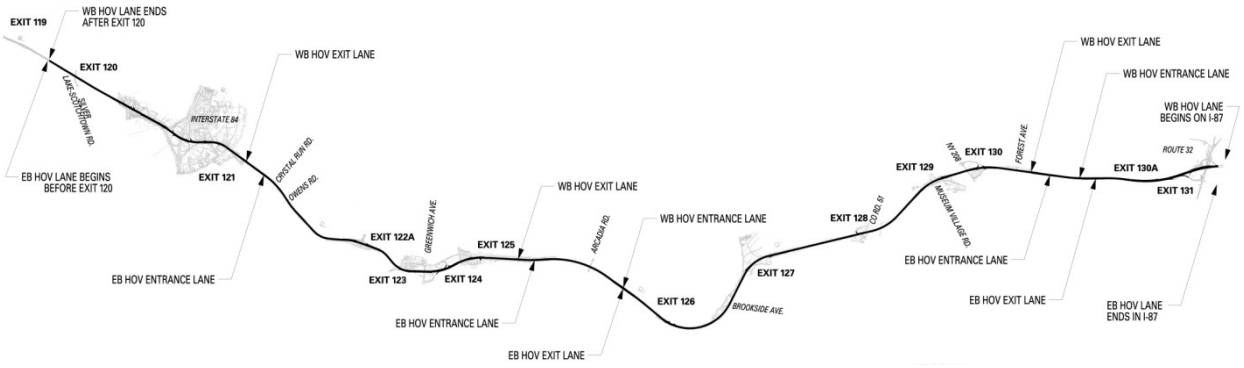
Figure 6-4 depicts how an HOV Lane might look at the same location shown for the General Use Third Lane near the Museum Village Road Exit in Monroe, NY (see Figure 4-5).

Figure 6-4: HOV Lane Alternative



Access to the HOV lane would be restricted to specific points where acceleration and deceleration lanes are provided to make a safe transition between the free-flow conditions on the HOV lane and the congested general use lanes as shown in Figure 6-5 below.

Figure 6-5: HOV Lane Entrances/Exits



Moving from west to east, the HOV Lane would begin just west of the Silver Lake Scotchtown Road Bridge between Exit 119 (NY Route 32) and Exit 120 (NY Route 211/Middletown). The first entrance point after that would be just east of I-84. The next entrance lane would be right after Exit 124 (NY Route 17A / NY Route 207) in Goshen. The first exit access would be between

Exit 125 (NY Route 17M/South Street) and Exit 126 (Chester/NY Routes 12, 17M, 94). The last entrance to the HOV Lane would happen after Exit 130 (NY Route 208 – Monroe/Washingtonville) with the last exit from the HOV lane being right before the Route 17 Exit 130A (NY Route 208 – Monroe/Washingtonville). The HOV lane would continue through the toll booths in Harriman and provide an exclusive ramp to I-87. With similar conditions traveling from east to west, the HOV Lane would start on I-87 and continue to Route 17. The first entrance to the HOV Lane as well as an HOV Exit would be after Exit 130A (NY Route 208 – Monroe/Washingtonville). The next HOV entrance ramp would be between Exits 126 (Chester/NY Routes 12, 17M, 94) and 125 (NY Route 17M/South Street). The next HOV exit ramp would be in Goshen right before Exit 125 (NY Route 17M/South Street). The next exit point would be right before the I-84 Exit in Middletown. The westbound HOV Lane would end between Exits 120 (NY Route 211/Middletown) and 119 (NY Route 32) just west of the Silver Lake Scotchtown Road Bridge.

6.1.2.1 Mode Shift

In order for the HOV Lane to be successful, a certain portion of the commuting population that drives alone would need to divert to either a carpool or bus. This diversion is referred to as a mode shift.

A mode shift analysis was performed to estimate the degree of diversion from autos to other forms of transit between Exit 131 (Harriman/I-87) and Exit 120 (NY Route 211/Middletown) based on a "pivot point" mode choice method, included in the "*Transportation Air Quality Analysis Sketch* Planning *Methods*[11]" report prepared by Cambridge Systematics, Inc. for the Environmental Protection Agency to estimate travel demand impacts. As described in this, the pivot-point method is based on the "multinomial logit" formulation and predicts the incremental changes in mode choice compared to a "base case" level. The "base case" in this analysis reflects the existing conditions. This method was applied to estimate the incremental changes in modal shares for drive alone, shared ride/carpool, and transit modes of travel. Modal shares were predicted as a function of relative "utility" of the three modes included in the analysis.

6.1.2.2 Base Work Trip Modal Shares

- The mode shift analysis performed follows the methodology described in Case Study I: Freeway Facility Reserved for Carpools and Buses (Volume II) of the Transportation Air Quality Analysis Report. The population considered for this analysis was divided into two segments to obtain groups which face approximately the same changes in travel demands and which have the same set of travel opportunities available to them. Since individuals not owning automobiles are likely to respond very differently to the addition of an HOV lane than those who have one or more vehicles available for their use, the

[11] Transportation Air Quality Analysis Sketch Planning Methods – Volume 1, Prepared for Environmental Protection Agency, December 1979.

population considered for this study was divided into two segments with auto-owning households being considered independently from those without autos available for their use. As in Case Study I: Freeway Facility Reserved for Carpools and Buses, those not owning autos were assumed not to have the drive alone mode available, but may use the transit or carpool modes. Ninety percent of the driving aged population is assumed to own one or more automobile(s) while the remaining 10% who do not own an automobile would have to use transit or carpool as their mode of travel. The population of the corridor was assumed to be relatively homogeneous with respect to other characteristics and no further segmentation of the population was done for this analysis.

- Trip data for Orange County residents - journey to work by mode of travel included in the approved OCTC Long Range Transportation Plan[12] was used for this analysis. The total trips from towns Blooming Grove, Chester, Goshen, Hamptonburgh, Monroe, Wallkill, Wawayanda and Woodbury excluding the number of people who worked at home, walked or bicycled to work were used to calculate the average mode shares for the two segments. Vehicles using the HOV lane were assumed to travel the complete stretch of 22 miles on the proposed HOV to get to work. The other category in the OCTC Transportation Plan that includes taxicabs and motorcycles was included under transit mode as the number of motorcycles in the total and was assumed to be extremely small.

- The average mode shares in the corridor were found to be:

  Drive Alone 76.76%

  Carpool 11.15%

  Transit 9.08%

- Using the average mode shares above the base work trip, modal shares for the corridor were found as shown in Table 6-1.

Table 6-1: Base Work Trip Modal Shares

Population Subgroup	Fraction of Total Population	Base Work Trip Modal Shares		
		Drive Alone	Carpool	Transit
1	0.9	0.898	0.060	0.042
2	0.1	0	0.588	0.412

The remainder of the analysis will exclude population segment 2 (without drive-alone mode) since the primary aim of this analysis is to identify the change in the share for the drive-alone mode due to the addition of the 22 mile long HOV lane.

[12] Orange County Transportation Council Long Range Transportation Plan (2011-2040), December 2011

6.1.2.3 Change in Utility of Each Mode (Population Segment 1 – All modes Available)

Vehicles using the HOV lane were assumed to travel the complete stretch of 22 miles on the proposed HOV lane to get to work. Due to congestion within the corridor the vehicles travel at a base free flow speed of 30 mph. The addition of the 22 mile HOV lane would potentially have the following impacts:

- Drive Alone: The travel time for the population choosing to drive alone would be expected to decrease by an average of 22 minutes.
- Carpool: The travel time for the population that chooses to carpool and use the HOV lane would be expected to decrease by an average of 40 minutes due to the higher base free flow speed on the HOV lane.
- Transit: As in the case of carpool, the travel time for the population that chooses the transit mode would be expected to decrease by an average of 40 minutes due to the higher base free flow speed on the HOV lane.

Based on the impacts described above to the in vehicle travel time (IVTT) for the three modes, the change in utility for the modal shares were calculated using the pivot-point model coefficients and are shown in Table 6-2.

Table 6-2: Change in Utility for Each Share

Population Subgroup - 1	
Drive Alone	0.33
Carpool	0.60
Transit	0.60

6.1.2.4 Revised Modal Shares (Population Segment 1 – All modes Available)

The revised modal shares were calculated as a function of relative “utility” of the three modes included in the analysis and are shown in Table 6-3:

Table 6-3: Revised Modal Shares

Population Subgroup - 1	
Drive Alone	1.233
Carpool	0.114
Transit	0.093

The changes in the shares for three modes (i.e., drive alone, carpool and transit) with the addition of the 22 mile HOV lane were estimated to be approximately 3.02%, 1.66% and 1.35% respectively, a low to medium mode shift.

One of the biggest challenges in evaluating the effectiveness of the HOV lane alternative is predicting how many people would use the lane. It is assumed that the first group of people who would take advantage of the time savings of using the lane would be people who already carpool or use transit. Based on Census Data, this represents approximately 15% of the commuting population in Orange County. Fifteen percent of the commuting traffic in the forecasted 2045 traffic volumes would correspond to approximately 450 vehicles per hour that would carpool or use transit. However, not all of these vehicles would benefit from the HOV Lane. Studies have shown that approximately only 80% of this existing population (or roughly 360 vehicles per hour of the forecasted 2045 traffic volumes) would take advantage of the HOV Lane. It is anticipated that the next group of people that would be expected to use the lane would have to undergo a mode shift to be eligible to use the HOV lane. A mode shift as it relates to this project simply means that the time savings or cost savings of using the lane would be significant enough for a driver in a single-occupant vehicle (SOV) to change her/his behavior and either travel in a carpool or use transit. In order for the HOV Lane to be considered successful it should carry at least as many and preferably more people than the adjacent general use lanes, which amount to approximately 2,200 people or about 1,000 vehicles. This means that 638 additional vehicles would have to use the lane, which would represent a 13% mode shift. Based on nationwide studies this is considered a moderate mode shift compared with other HOV projects and slightly greater than the 5-10% shift calculated for this project. The table below summarizes the results of the modal shift analysis.

Table 6-4: Mode Shift Estimates with the HOV Lane Alternative

	Vehicles Per Hour	People Per Hour
Peak Hour Volume (2045 No Build)	4920	6642
Qualified HOVs (15% of Users)	453	996
HOV Lane Users (max 80% of qualified vehicles)	362	730
Total Needed For Effective Lane	1000	2200
Mode Shift Gap %	638 13%	1404

- Mode Shift
  - 5% minimal
  - 15% modest
  - 50% high

6.1.2.5 Traffic Conditions

Based on an assumed modest modal shift of 10-15%, an assessment was completed of the degree of congestion that would occur in the future (2045) with the HOV Lane alternative. As depicted in Figure 6-6, the HOV Lane alternative would have 4 lines between Exit 120 (NY Route 211/Middletown) and Exit 131 (Harriman/I-87). The middle two lanes represent the HOV Lane alternative which would operate at free flow conditions (i.e., LOS A/B). However, as depicted in Figure 6-7 the outside general use lanes would operate at congested LOS along the corridor in peak directions in both the AM and PM time periods.

Figure 6-6: HOV Lane Alternative 2045 AM Level of Service

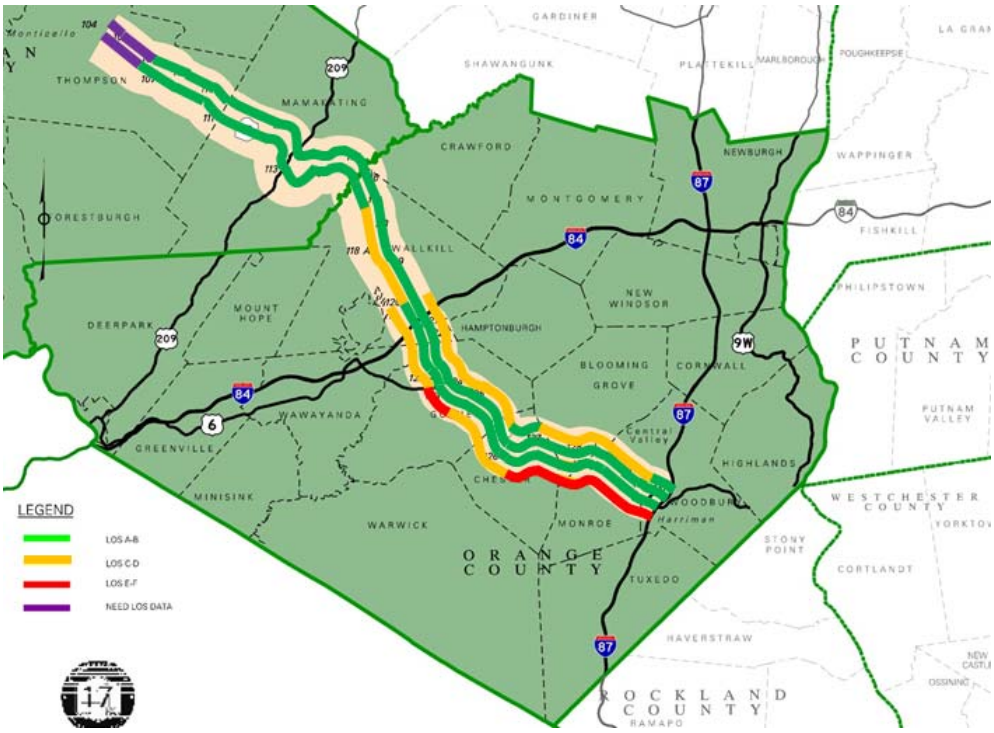
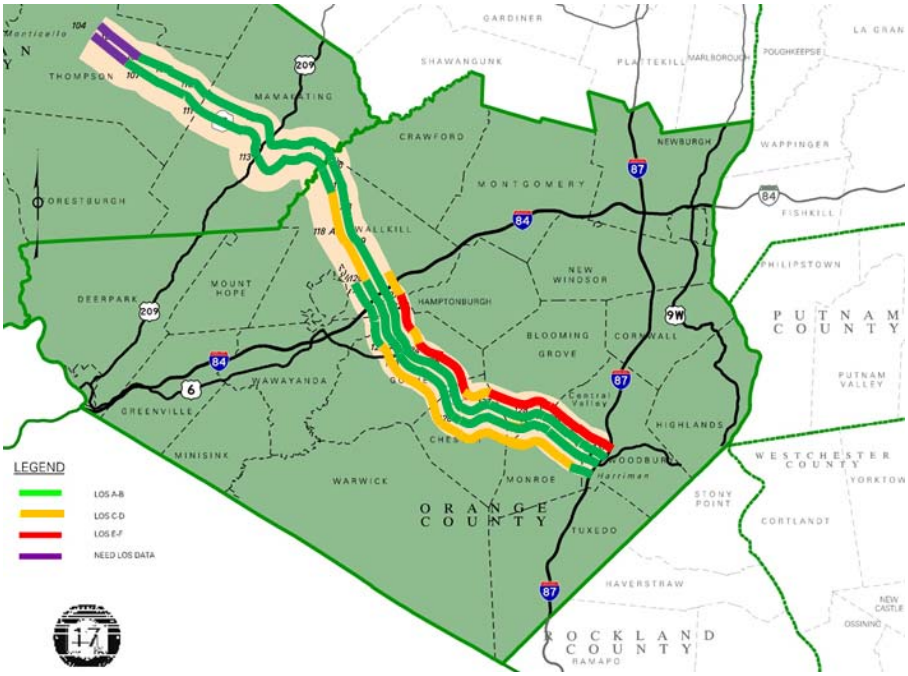


Figure 6-7: HOV Lane Alternative 2045 PM Level of Service



Some of the features that are limiting the effectiveness of the HOV Lane and its ability to product more aggressive mode shift are:

- Bottleneck conditions that would still exist at the eastern end of the project limits.
- The HOV Lane is limited to just Route 17. A larger mode shift would be expected if it were part of a regional HOV system, including the development of HOV Lanes on the New York State Thruway (I-87) under consideration in the West of Hudson Regional Transit Access Study.

6.1.3 Provisions for Park-and-Rides and Supporting Facilities

As described in Section 5.3, new park-and-ride facilities have been recommended for various locations throughout the Study corridor. AASHTO provides guidelines for locating park-and-ride lots in its *Guide for Park-and-Ride Facilities (AASHTO, 2004)*. Some of the key location factors used to identify potential additional park-and-ride facilities provided in the AASHTO guide are summarized in Table 6-5.

Table 6-5: Contributing Factors to Proposed Park-and-Ride Locations

Lot Attributes	Relational Characteristic
1. Proximity to regional freeway system	Lots immediately adjacent to a regional freeway have been found to demonstrate higher park-and-ride demand.
2. Total population within the 50 percent service area of lot	The denser the population within 2.5 mile radius, the larger potential park-and-ride market.
3. Location within the region	Lots located within productive transit corridors will tend to generate higher park-and-ride demand.
4. Peak traffic on adjacent time facility	Increasing traffic volumes on adjacent roadways may increase parking demand.
5. Number of home-based work trips between market area and specific destinations	Increased trip interchange characteristics between two locations increase the potential share of the modal split for the park-and-ride mode.
6. Park-and-ride lot access attributes	Lots that are difficult to access, even though they may be highly visible, may demonstrate reduce demand characteristics.

Source: *Guide for Park-and-Ride Facilities, AASHTO, Table 3-1, Nov. 2004.*

In addition to the guidelines provided above other planning factors for locating and designing park-and-ride facilities include land use compatibility, consistency with local codes, security, available right-of-way, and relationship to other proposed transit-related improvements (e.g., additional park-and-ride facilities to support a proposed HOV Lane facility).

In light of the above factors, the following considerations were applied in the selection of proposed new park-and-ride facilities in the Route 17 corridor:

1. **Potential for lot competition:** When implementing a new park-and-ride facility, the influence of nearby park-and-ride lots should be evaluated. Park-and-ride lots placed too close together given the local demand may actually create negative competition between the facilities. *The park-and-ride lots proposed in this plan are spaced to limit competition between facilities.*

2. **Locate to maximize service area population:** Park-and-ride facilities should be placed so as to serve the greatest possible population base. Research has shown that 50 percent of a park-and-ride facility's demand is typically generated within a 2.5 mile radius of the facility. *The potential park-and-ride lots are located near population clusters in the corridor. Furthermore, the population in the corridor has been growing (as outlined elsewhere in this report) and it is expected that these population clusters are going to continue to grow.*

3. **Locate with geographic affinity to activity center(s) to be served**: The geographic area immediately upstream of the lot should demonstrate sufficient suburban and urban residential densities to supply acceptable level of demand for the facility. *The location and spacing of the potential park-and-ride lots is such that they serve important commuter sheds. Additionally, some of the areas along Route 17 display strong origin-destination trip interchange characteristics with the primary activity center served.*

4. **Locate to minimize auto access time:** Auto access to the park-and-ride facility should be made as convenient and as least time consuming to the user as possible. Locate the facility so that commuters do not have to backtrack to reach the lot. *The Route 17 corridor planned improvements (including interchange improvements) would provide an increase in accessibility to commuters entering and exiting the interchanges. Thus, proposed park-and-ride locations should be easy to access. Commuters would not have to backtrack to reach the lot.*

5. **Locate to maximize regional destinations**: Park-and-ride lots should generally be located no closer than 4 to 5 miles and preferably 10 miles or more from the primary activity center being served. *All of the potential lots meet these criteria.*

6. **Locate to maximize visibility of the facility**: Locate park-and-ride lots to maximize their visibility to potential patrons using the primary travel corridor. Locate facilities on the

inbound side of a freeway interchange to enhance accessibility and visibility. *The park-and-ride facilities would be located on the inbound side of a freeway interchange to further enhance accessibility and visibility.*

7. **Locate to support existing transit facilities and corridors.** New park-and-ride facilities should be located adjacent to existing major transit corridors, where peak transit service can be provided with headways on the order of 15 minutes or less, or, optimally, 10 minutes or less. *The park-and-ride lots would be serviced by public transportation; however, with one HOV alternative, there would be a larger potential increase in the number of potential park-and-ride users.*

The potential park-and-ride lots included in the improvement scenarios in the two counties are illustrated in Figure 6-8 and Figure 6-9.

Figure 6-8: Proposed & Expanded Park-and-Ride Locations for Sullivan County

Exit 104—Raceway/Monticello

Exit 109—Rock Hill/Woodridge

Exit 106—East Broadway

Exit 113—NY Route 209/Wurstboro/Ellenville

Figure 6-9: Proposed & Expanded Park-and-Ride Location for Orange County

Exit 118—Fair Oaks

6.2 Evaluation and Screening of Feasible Corridor Alternatives

Environmental conditions in the vicinity of the Study corridor were identified and mapped above. This evaluation assesses the degree to which feasible alternatives identified above would affect an environmental resource. As noted above, there are no designated Wild, Scenic and Recreational rivers in the immediate vicinity of the Study corridor. A review of the Land and Water Conservation Fund (LWCF), pursuant to Section 6(f) of the LWCF Act, database did not indicate the presence of LWCF-funded lands in the Study corridor. An evaluation in conformance with the requirements of Section 4(f) the United States Department of Transportation Act of 1966 would be completed upon further development of the feasible transportation alternative(s) identified as one or more preferred alternatives. Therefore, the evaluation provided in this section is limited to the following categories:

- Traffic;
- Public Input;
- Land use;
- Noise;
- Air quality;
- Ecology and endangered species;
- Wetlands;
- Navigable waters;
- Parks and cultural resources; and
- Farmland.

Subsequent to the completion of this Study, and prior to implementation of a preferred alternative, potential environmental and socioeconomic impacts resulting from the preferred alternative(s) will be evaluated pursuant to the National Environmental Policy Act (NEPA) and the State Environmental Quality Review Act (SEQRA).

Based on the evaluation of the five transportation concepts developed for the Route 17 Study corridor, the following two feasible alternatives were identified: 1) General Use Third Lane; and 2) High Occupancy Vehicle Lane. In addition, interchange improvement scenarios have also been developed for the Study corridor, as described in Chapter 6, "Conceptual Interchange Improvement Scenarios," of this report.

General Use Third Lane Alternative:

Widening of the right-of-way outside of the existing Route 17 alignment to implement the General Use Third Lane Alternative would be limited to:

- Both eastbound and westbound Route 17 between Exits 121 (I-84 – Newburgh/Port Jervis) and 122 (Crystal Run Rd./Main Street) including their ramps; and
- Westbound Route 17 between Exits 130A and 130 (NY Route 208 – Monroe/Washingtonville).

In these areas, the General Use Third Lane Alternative would generally extend outside the existing Route 17 alignment by up to approximately six feet, with the greatest widening of approximately 11 feet occurring on the westbound roadway near Exit 121 (I-84 – Newburgh/Port Jervis). Otherwise, this alternative would be located entirely within the existing Route 17 median.

HOV Lane Alternative:

On average, the HOV Alternative would extend outside the existing Route 17 alignment by up to approximately 13 feet, with the greatest widening of approximately 18 feet occurring on the eastbound roadway near Exit 122 (Crystal Run Road/Main Street). In general, continuous widening along the length of the Study corridor would be required to implement the HOV alternative. Similar to the General Use Third Lane Alternative, this alternative would utilize the entire existing median on Route 17.

6.2.1 Traffic

Based on the capacity of the feasible alternatives the General Use Third Lane Alternative best accommodates Route 17 for the future growth using the modeling analysis. The General Use Third Lane will provide the capacity for the future that the roadway needs with acceptable levels of service. The HOV Lane alternative while providing acceptable Levels of Services A/B for the newly constructed HOV lanes does not provide enough capacity for the general use

lanes. The general use lanes will still have unacceptable Levels of Service E/F. This is due to the lack of mode shift from single occupant vehicles.

6.2.1 Public Input

The feasible alternatives were reviewed by both the TPC and at Public Workshops II in both Sullivan and Orange Counties. As detailed in Appendix A "Public Outreach," comments made during the Public Workshops II Transportation Alternative exercises indicate that given the HOV Lane Alternative vs. the General Use Third Lane Alternative, the public preferred the General Use Third Lane Alternative. Public comments and information gleaned from the Planning Scenario Exercises demonstrated that In Sullivan County, attendees placed greater priority on access to Route 17 than congestion levels on the corridor. Overall, there were comments indicating the need for additional park-and-ride lots along Route 17, and needed modifications to existing interchanges.

6.2.2 Land Use and Economic Development

Potential direct land use changes as a consequence of the General Use Third Lane Alternative would be limited to Route 17 between Exit 121 (I-84 – Newburgh/Port Jervis), at the interchange with I-84, and Exit 122 (Crystal Run Road/Main Street), including ramp areas, and westbound Route 17 between Exit 130A (US Route 6/Bear Mountain) and Exit 130 (NY Route 208 – Monroe/Washingtonville). Existing land uses, as identified above, in the immediate vicinity of the I-84 interchange include commercial, community/public service, and agricultural land uses, and vacant land. These include facilities affiliated with the Orange County Regional Medical Center, hotels, and big box retail including the Galleria at Crystal Run shopping center. Existing land uses adjacent to the Study corridor between Exit 130A (US Route 6/Bear Mountain) and 130 (NY Route 208 – Monroe/Washingtonville) include residential, commercial, and community/public service uses and vacant land. These include suburban residential areas, freight services, and regional retail near Exit 130A (NY Route 208 – Monroe/Washingtonville).

Potential effects on existing land uses due to the General Use Third Lane Alternative are expected to be minimal given the average widening in these areas would be approximately six feet, with the greatest widening of approximately 11 feet occurring on the westbound roadway near Exit 121 (I-84 – Newburgh/Port Jervis). Since this alternative involves the improvement of an existing roadway, it is unlikely that it would introduce new land use or alter existing land use trends.

The HOV lane alternative would extend outside the existing Route 17 alignment by up to approximately 13 feet, with the greatest widening of approximately 18 feet occurring on the eastbound roadway near Exit 122 (Crystal Run Road/Main Street). Therefore, some direct change in land use due to right-of-way (ROW) acquisitions is anticipated.

Physical improvements related to the proposed conceptual interchange improvement scenarios can result in some direct effects on existing land use at Exits 103 (Rapp Road) WB, 103 (Rapp

Road) EB, 104 (Raceway/Monticello), 107 (Fallsburg/Bridgeville), 116 (NY Route 17K), 123 (US Route 6 / NY Route 17M West), 124 (NY Route 17A / NY Route 207), 125 (Route 17M/South Street), 128 (Oxford Depot), and 130 (NY Route 208 – Monroe/Washingtonville) due to ROW takings related to access improvements. Direct effects on land use would especially occur in the vicinity of Exits 104 (Raceway/Monticello), 107 (Fallsburg/Bridgeville), 124 (NY Route 17A / NY Route 207), 125 (NY Route 17M/South Street), 128 (Oxford Depot) due to the creation of new access roadways and ramps. Since the conceptual interchange improvements consider baseline traffic conditions, these alone are unlikely to introduce new land uses or alter ongoing land use trends.

6.2.3 Environmental

6.2.3.1 Noise

Noise receptors identified in the vicinity of the Study corridor, as above, include residential land uses; educational facilities; health facilities; theaters, auditoriums, and cultural facilities; religious facilities; playgrounds, athletic fields, and outdoor sports facilities; recreational facilities such as nature trails and bike paths; state-owned forest lands; and public parks. Significant adverse noise impacts on sensitive receptors are unlikely since, in general, traffic volumes in their vicinity would not double due to the implementation of either of the feasible alternatives. However, some noise-related effects could occur in areas adjacent to new or existing roadways improved as part of the proposed interchange improvements. Some construction-related noise effects could occur on receptors in proximity of the construction sites and staging areas.

6.2.3.2 Air Quality

According to NYSDOT *Environmental Procedures Manual,* public open spaces, including sidewalks, playgrounds, athletic fields, outdoor sports facilities, and public parks; residential buildings; educational facilities; and health facilities are considered especially sensitive to air quality. Land use categories comprising uses sensitive to air quality were identified above. During the operational period, some effects on air quality are likely under both General Use Third Lane and HOV Lane Alternatives since both these alternatives would increase roadway capacity, and therefore result in increased traffic volumes. Construction-related effects on air quality could occur in areas in proximity to construction sites and staging areas.

6.2.3.3 Ecology and Endangered Species

The U.S. Fish and Wildlife Service has noted the presence of threatened or endangered species in Orange and Sullivan Counties, as described above. Species with habitat needs that can be met in the immediate vicinity of the work activity under proposed roadway alternatives and interchange improvements are assumed to be an environmental constraint. The potential effects on such species due to the preferred alternative(s) will be evaluated pursuant to NEPA and SEQRA.

6.2.3.4 Wetlands

Wetland areas are located in proximity of the Study corridor. At the current level of design development, it is unclear whether the final design for the preferred alternative(s) or proposed interchange improvements would affect these areas. The use of wetlands for staging activities during the construction period would not occur since restrictions and permit requirements would prevent their use.

6.2.3.5 Navigable Waters

Water bodies and watercourses in the Study corridor's vicinity were identified based on data from NYSDEC. Most of the currently identified watercourses located within the Study corridor are classified by the NYSDEC as either Class B (indicating waters supporting contact recreation) or Class C (indicating waters supporting fisheries and suitable for non-contact activities) streams. At the current level of design development, it is unclear whether the final design for the roadway alternatives or proposed interchange improvements would affect these resources.

6.2.3.6 Parks and Cultural Resources

Several historic sites listed on or eligible for listing on the State or National Registers of Historic Places are located in proximity to the Study corridor. These resources were identified above. A review of the New York State Office of Parks, Recreation and Historic Preservation online database indicated the potential presence of archaeologically significant areas throughout the Study corridor. No direct use of historic resources or publics due to the roadway alternatives or proposed interchange improvements is anticipated. The potential for effects of the preferred alternative(s) on cultural resources will be determined in consultation with the State Historic Preservation Office (SHPO) pursuant to Section 106 of the National Historic Preservation Act.

6.2.3.7 Farmland

As described above, a substantial portion of the Study corridor is identified in agricultural use and prime farmland soils exist in several of these areas. The HOV Lane alternative could result in the direct displacement of some of these areas. Proposed interchange improvements at Exit 128 (Oxford Depot) could also affect agricultural land with prime farmland soils.

6.3 Conceptual Interchange Planning Scenarios

The development of interchange scenarios focused on providing the surrounding communities with better access to the corridor, while also taking into consideration the interchange spacing and geometric requirements that would be associated with a future conversion to Interstate I-86 and any known projects along the Route 17 corridor. The following two project goals were used to guide the overall design and evaluation of the interchange improvement strategies:

1. Modernize corridor roadway and interchanges while maintaining the quality of life and preserving the scenic beauty and natural resources.

2. Provide a transportation corridor that supports and enhances the opportunity for continued economic development.

The interchange development concepts were divided to reflect the different needs and concerns in the Orange and Sullivan County portions of the corridor. A staged approach has been used to identify a range of options starting with the improvements needed to address existing safety and operational concerns and building to options that would accommodate future development and preserve the quality of life for the residents in the surrounding communities.

Additionally, the project team considered the input from the public, stakeholders and the TPC. This information helped to further define the goals for the various improvement scenarios as well as to identify the locations that might be improved.

Table 6-6 below summarizes the interchange improvements scenarios and approximate cost associated with each improvement at Orange and Sullivan County. It is important to note that the approximate costs do not include right-of-way takings.

Table 6-6: Summary of Conceptual Interchange Improvement Scenarios

COUNTY	PROPOSED IMPROVEMENTS	COST ($)	TITLE	DESCRIPTION
Orange County	Scenario I	35M	Safety Improvements (Maintain Current Access)	• safety improvements at Exit 123, 124, 125, 129, 130 and 131 • proposed park-and-ride location at Exit 118
	Scenario II	350M	Accommodate Future Development & Preserve Quality of Life	• interchange closures at Exit 125, 127 and 129 • access improvements at Exit 121, 123, 124, 128, 130, 130A and 131 • proposed park-and-ride locations at Exit 118
	Area 1		Exit 127 to 130	
	Option 1			• convert Exit 128 to a full-access interchange • remove and improve roadways at Exit 127 and 130 • improve roadway connectivity between Exit 127 and Exit 128 • widening of Route 208 at Exit 130 • safety/geometric improvements at Museum Village Road
	Option 2			• include a partial cloverleaf configuration for Exit 128 • remove and improve roadways at Exit 127 and 129 • widening of Route 208 at Exit 130 • safety/geometric improvements at Museum Village Road
	Area 2		Exit 123 to Exit 125	• reconfigure Exit 123 to a half-diamond configuration • shift ramps of Exit 124 to the east north of Route 17 • reconstruct a roundabout at Exit 125

Table 6-6: Summary of Conceptual Interchange Improvement Scenarios (continued)

COUNTY	PROPOSED IMPROVEMENTS	COST ($)	TITLE	DESCRIPTION
Sullivan County	Scenario I	25M	Safety Improvements (Maintain Current Access)	• safety improvements at Exit 104, 105, 108 ,109, and 111
	Scenario II	125M	Accommodate Existing and Known Development	• safety improvements at Exit 105, 108, 109, and 111 • access improvements at Exit 103 EB & WB, 104 • proposed park-and-ride locations at Exit 104, 106, and 109
	Scenario III	300M	Accommodate Future Development & Preserve Quality of Life	• interchange closure at Exit 108 • potential interchange closure and access improvements at Exit 110, 111, 114 and 115 • safety improvements at Exit 105 and 109 • access improvements at Exit 103 EB & WB, 104, 107, and 116 • proposed park-and-ride locations at Exit 104, 106, and 109
	Area 1		Exit 103 EB & WB	• improve interchange configuration at Exit 103 WB • improve roadway connectivity between Exit 103 WB & Exit 103 EB • remove ramps at Exit 103 WB & EB • improve roadway at Benmosche Road
	Area 2		Exit 104	• access improvements at Exit 104 • proposed a park-and-ride location
	Area 3		Exit 107 to 108	• access improvements at Exit 107 • interchange closure at Exit 108

Table 6-6: Summary of Conceptual Interchange Improvement Scenarios (continued)

COUNTY	PROPOSED IMPROVEMENTS	COST ($)	TITLE	DESCRIPTION
Sullivan County (cont.)	Area 4		Exit 110 to Exit 111	
	Option 1			• improve roadway connectivity between Exit 110 and Exit 111 • potential interchange closure and access improvement at Exit 110 and 111 • improve roadway at Wurtsboro Mountain Road, Trailer Park, and Lake Louise Marie Road
	Area 5		Exit 114 to Exit 116	
	Option 1			• potential interchange closure and access improvements at Exit 114 and 115 • improve roadway connectivity between Exit 114 and Exit 116 • improve roadway at Mamakating Road • add new bridge south of Burlingham Road
	Option 2			• potential interchange closure and access at Exit 114 and 115 • improve roadway connectivity between Exit 114 and 116 • improve roadway at Roosa Gap Road, Burlingham Road, Stone School House Road, Petticoate Lane, and State Road 17K • add new bridge east of Burlingham Road

6.3.1 Orange County

6.3.1.1 Scenario I—Safety Improvements (Maintain Current Access)

With this scenario, illustrated in Appendix C "Planning Exercises" Figure C-1, all existing access points in the corridor would remain open, but improvements would be made at six of the Study interchanges to provide safer and better access to and from the local street network. This scenario is intended to support existing businesses and attract some new business activity, but it is not designed to attract large new developments. The interchanges recommended for safety improvements under this scenario are:

- Exit 123: US Rte 6/NY Rte 17M West
- Exit 124: NY Rte 17A/NY Rte 207
- Exit 125: NY Rte 17M East
- Exit 129: Museum Village Road
- Exit 130: NY Rte 208
- Exit 131: NY Rte 17S/NY Rte 32

There is a safety project already being planned that would address the Exit 131 (NY Route 32) interchange. In addition, there is an existing project to reconstruct Exit 122 (Crystal Run Road/Main Street) that would address the safety and operational problems associated with the close spacing of interchanges between Crystal Run Road and I-84. This project is scheduled to start construction in 2013 and is not contingent upon the findings of this Study. Scenario I also includes the addition of a new park-and-ride location near Exit 118, Fair Oaks. The planning level cost estimate for Scenario I is approximately $35 million.

6.3.1.2 Scenario II—Accommodate Development/Preserve Quality of Life

Appendix C "Planning Exercises" Figure C-2 provides a depiction of proposed improvements with Scenario II. This scenario would marry the transportation needs of the corridor that were identified as part of this Study with the interchange spacing and geometric requirements associated with the I-86 conversion. In addition to the interchange modifications included in the existing Exit 122 (Crystal Run Road/Main Street) project and the improvements planned for the future reconstruction of Exit 131 (NY Route 32), this scenario includes two specific areas as candidates for significant access improvements. These improvements would encompass closing select interchange ramps, and modifications to other ramps to enhance the overall traffic operations, safety, and access in the corridor. Both of these areas are located in portions of the county that have large tracts of undeveloped property. The primary goal for each of these improvements would be to direct both existing and projected traffic to the feeder routes that are best suited to accommodating increased levels of traffic. Scenario II includes two improvement projects for Area 1 and one improvement project for Area 2. As with Scenario I, Scenario II includes a new park-and-ride facility at Exit 118, Fair Oaks. The total planning level

cost estimate for Scenario II is approximately $350 million for either Area 1 option. The improvements at the two Areas are described below.

6.3.1.2.1 *Area 1: Exit 127 to Exit 130*

Area 1 extends from Exit 127: Greycourt Road to Exit 130: NY Route 208. Within that area, it is proposed that the partial interchanges at Exit 127: Greycourt Road and Exit 129: Museum Village Road be closed. At Exit 130: NY Route 208, it is proposed that NY Route 208 be widened to four lanes between Museum Village Road and the intersection with Schunemunk Road and North Main Street. Traffic signals and turning lanes would be included at all of the major intersections. Museum Village Road would also be improved with respect to safety and roadway/intersection geometry. There would be a new roadway parallel to Route 17 which would connect NY Route 208. The current partial interchange at Exit 128: Oxford Depot, which has only one westbound off-ramp with a tight curve radius, would be converted to a full-access interchange by adding a new westbound entrance ramp and eastbound entrance and exit ramps. Access between the interchange Exit 127 area and the new interchange at Exit 128 (Oxford Depot) would be via NY Route 17M and would include improvements to the alignment and geometry at the Kings Highway intersection. There are two options for the Exit 128 (Oxford Depot) interchange upgrade, both of which are discussed below.

6.3.1.2.1.1 *Option 1*

Appendix C "Planning Exercises" Figure C-3 depicts the recommended Option 1 improvements at Exit 128 (Oxford Depot), and the recommended improvements for both options at the other three interchanges in Area 1. The first option would convert Exit 128 (Oxford Depot) to a full-access interchange by adding new eastbound off- and on-ramps in a tight diamond configuration. On the north side of the interchange the current loop ramp would be reconstructed with a substantially larger radius (meeting current design standards). A complementary westbound on-ramp would also be constructed. Option 1 recommends making improvements to NY Route 17M, along its existing alignment, which runs parallel to Route 17 to the south and at the intersection of NY Route 17M and Kings Highway.

6.3.1.2.1.2 *Option 2*

Appendix C "Planning Exercises" Figure C-4 depicts the recommended Option 2 improvements at Exit 128 (Oxford Depot), and the recommended improvements for both options at the other three interchanges within Area 1. Option 2 would be identical to Option 1 on the north side of Route 17. However, on the south side, this option would include a partial cloverleaf configuration, rather than a diamond. This option would require the realignment of NY Route 17M farther to the south.

6.3.1.2.1 *Area 2: Exit 123 to Exit 125*

The second area for potential improvements includes three existing interchanges: Exit 123: US Route 6 / NY Route 17M West, Exit 124: NY Route 17A / NY Route 207, and Exit 125: NY Route 17M / South Street. Appendix C "Planning Exercises" Figure C-5 illustrates the changes recommended for Area 2. Exit 123 (US Route 6 /NY Route 17M West), at the western end of this area, would be reconfigured to a half-diamond configuration. To accommodate this option, US Route 6 would be realigned to connect with Mathews Street and West Main Street on the northeast side of Route 17, rather than directly connecting to Route 17 as it does currently. New ramps to and from the east would be built to connect Route 17 to the newly realigned US Route 6 / Mathews Street. The short segment of Police Highway between Hatfield Lane and US Route 6 would be eliminated and replaced by an extension of Hatfield Lane. This would require the relocation of this street access to a point further from the new Route 17 eastbound on-ramp terminus.

Within Area 2, the current Exit 124 (NY Route 17A /NY Route 207) westbound on- and off-ramps would be shifted to the east, closer to South St. As part of this modification, the Exit 125 (NY Route 17M/South Street) westbound on- and off-ramps would be eliminated. The eastbound on- and off-ramps at Exit 124 (NY Route 17A /NY Route 207) would remain unchanged, but their terminus would be redesigned to connect with an extension of Hatfield Lane, built as part of a public-private partnership, that would run from Route 207 to South St. The Exit 125 (NY Route 17M/South Street) eastbound ramps would be reconstructed to terminate in a roundabout. This would also require the redesign of the intersecting access roadways.

6.3.2 Sullivan County

6.3.2.1 Interchanges Under Development

NYSDOT has been developing and/or completed interchange improvements in Sullivan County as part of the Statewide Transportation Improvement Program (STIP). Below is a brief summary of NYSDOT ongoing or completed projects within Sullivan County along the Route 17 corridor.

6.3.2.1.1 *Exit 106*

This project is an interchange reconstruction/bridge replacement project to bring Exit 106 (East Broadway) on Route 17 in the Town of Thompson to Interstate Standards (BIN #1013770). This project has been completed.

6.3.2.2 Scenario I—Safety Improvements (Maintain Current Access)

As depicted in Appendix C "Planning Exercises" Figure C-6, Scenario I for Sullivan County is similar to Scenario I for Orange County, in that it would maintain all existing access points in the corridor, while improving five specific interchanges in order to provide safer and better access. The objective of this scenario would be to improve safety, but not encourage substantial new

land-uses or transportation system changes. Select interchanges have been identified in the past as potential upgrade locations. The interchanges proposed for safety improvements with this scenario are listed below. The planning level cost estimate for Scenario I in Sullivan County is approximately $25 million.

- Exit 104: Raceway/Monticello
- Exit 105: Monticello/Kiamesha
- Exit 108: Bridgeville
- Exit 109: Rock Hill/Woodridge
- Exit 111: Wolf Lake

6.3.2.3 Scenario II—Accommodate Existing and Known Developments

Scenario II (illustrated in Appendix C "Planning Exercises" Figure C-7) would improve all of the same locations as Scenario I, but would also include access improvements at Exit 103 EB & WB: Rapp Road, and Exit 104: Raceway/Monticello. This scenario would both improve safety and provide enhanced land and development access at the western end of the corridor.

In addition to the interchange improvements, Scenario II would provide improved and/or new park-and-ride facilities at the following locations: Exit 104: Raceway/Monticello, Exit 106: East Broadway, and Exit 109: Rock Hill/Woodridge. The planning level cost estimate for all of Scenario II is approximately $125 million.

6.3.2.4 Scenario III—Accommodate Future Development and Preserve Quality of Life

This scenario would result in substantial improvements at five specific areas and a number of additional separate improvements. As depicted in Appendix C "Planning Exercises" Figure C-8, the major improvements under this scenario would include closing select interchanges, and modifications to other interchanges to enhance the overall traffic operations, safety, and access in the corridor. Each of the improvement areas is described below. The same park-and-ride improvements described in Scenario II would be included in all cases. The planning level cost estimate for all of Scenario III is approximately $300 million.

6.3.2.4.1 *Area 1: Exit 103 EB & Exit 103 WB*

The improvements proposed for Area 1 would include the removal of the two existing ramps at the Exit 103 (Rapp Road) interchange pair; the westbound off-ramp and the eastbound on-ramp as shown in Appendix C "Planning Exercises" Figure C-9. Improvements to this area could give local residents and businesses full direction access. Area 1 upgrades would also include improving Rapp Road (at the interchange) and Benmosche Road between the two existing exits (parallel to Route 17). The Benmosche Road improvement would provide better connectivity to Route 17 for residents located near Exit 103 (Rapp Road) EB.

6.3.2.4.2 *Area 2: Exit 104*

Appendix C "Planning Exercises" Figure C-10 illustrates potential access improvements at Exit 104 (Raceway/Monticello) to accommodate existing and future demand. Potential improvements may include the removal of all the existing ramps and conversion of the interchange to a full-access tight-diamond interchange or a diverging diamond interchange. The existing bridge may require improvements to accommodate this new configuration. A new park-and-ride lot at this interchange is also proposed.

6.3.2.4.3 *Area 3: Exit 107 to Exit 108*

Potential access improvements are proposed at Exit 107 (Fallsburg/Bridgeville) to accommodate existing and future demand. Potential improvements may include removal and replacement of existing ramps with a standard diamond interchange. This scenario would also result in the closure of the Exit 108 (Bridgeville) partial interchange. Appendix C "Planning Exercises" Figure C-11 displays the proposals at these two exits.

6.3.2.4.4 *Area 4: Exit 110 to Exit 111*

6.3.2.4.4.1 *Option*

As shown in Appendix C "Planning Exercises" Figure C-12, Area 4 Option improvements would include the closure of the partial interchange at Exit 111 (Wolf Lake). Wurtsboro Mountain Road, which runs parallel to and north of Route 17, would be improved between the two existing interchanges. Additionally, Lake Louise Marie Road, which runs parallel to the south of Route 17, would also be improved.

6.3.2.4.5 *Area 5: Exit 114 to Exit 116*

The Area 5 proposals include potential closure and access improvements at Exit 114 and Exit 115. The current traffic using those ramps would be diverted to Exit 116 (NY Route 17K) in one of two ways, as described below.

6.3.2.4.5.1 *Option 1*

As shown in Appendix C "Planning Exercises" Figure C-13, the first option calls for an improved outer road facility to the north of Route 17. This outer road would extend from Mamakating Road to NY Route 17K (Exit 116), and would follow the existing Roosa Gap Road alignment for some distance. A new bridge would be required along the new roadway extension.

6.3.2.4.5.2 *Option 2*

As illustrated in Appendix C "Planning Exercises" Figure C-14, Option 2 would be an improved facility along the existing Mamakating Road/Main Street alignment running south of Route 17 through Bloomingburg. A new bridge would be required along that improved alignment. This option also would involve improvements to Burlingham Road (County Road 61) from Main Street in Bloomingburg Village north past Route 17 to Petticoat Lane as well as improvements to Petticoat Lane, Stone School House Road, and NY Route 17K. This option would upgrade the local circulation system, improving safety and access.

6.4 Public Outreach Process

Six meetings were held during Step III, Feasible Alternative Development, of the study as described below.

- **TPC Meeting #4.** The purpose of the fourth TPC meeting, held on November 14, 2012, was to present an update of Study activities to the TPC, discuss and obtain feedback on the Feasible Transportation Concepts prior to their presentation at Public Workshop II. (See Appendix A "Public Outreach" for meeting summary.)
- **Public Workshop II.** Public Workshop II was held on November 29, 2012 in Orange County, attended by 23 community members and on December 4, 2012, in Sullivan County, attended by 26 community members. During both workshops, attendees reviewed the results of the Study to date and the exercises utilized in Public Workshop I to develop the Corridor Vision and Goals Statements, five initial transportation concepts and the screening criteria which led to the development of the Feasible Alternatives. In Sullivan County, further discussion and additional exercises were conducted to obtain stakeholder input on three interchange planning scenario exercises. During the workshops, the public was given an opportunity to comment on the Feasible Alternatives and interchange scenarios under consideration. (See Appendix A "Public Outreach" for a detailed description of the results of each workshop.)

  At the end of the series of public workshops, given the HOV Lane Alternative vs. the General Use Third Lane Alternative, the public preferred the General Use Third Lane Alternative (and it could eventually become an HOV lane, if warranted). In Sullivan County, attendees placed greater priority on access to Route 17 than congestion levels on the corridor. Overall, there were comments indicating the need for additional park-and-ride lots along Route 17, and needed modifications to existing interchanges as well.
- **TPC Meeting #5.** The purpose of the fifth TPC meeting, on December 19, 2012, was to present the TPC with the results and public comments from the Public Workshop II sessions in Orange and Sullivan Counties and to obtain feedback from the TPC on the Feasible Alternatives, Planning Scenarios, and public comments. (See Appendix A "Public Outreach" for meeting summary.) The TPC reached consensus of corridor preferred alternatives to be progressed to Step IV.

- **Direct Meetings with Key Stakeholders.** In addition to the Public Workshop and TPC meetings, meetings were held with the Orange County Legislature Technical Committee and Orange County Planning Department on January 15, 2013 to present the findings of the study to date. A meeting was also held with Sullivan County Partnership October 18, 2012.

7 STEP IV – FINAL STUDY RECOMMENDATIONS

7.1 Public Outreach Process

In Step IV of the Study, Final Study Recommendations, the Preferred Corridor Alternative, Interchange Scenarios, and potential park-and-ride locations were presented to the TPC and to the public as follows:

- **TPC Meeting #6.** The purpose of the sixth TPC meeting, on January 30, 2013, was to present an update of the Study activities and schedule to the TPC, discuss and obtain feedback on Technical Memorandum #2, and review and receive feedback on the Preferred Corridor Alternative, Interchange Scenarios, and potential park-and-ride locations prior to their presentation at Public Workshop III. (See Appendix A "Public Outreach" for meeting summary.)
- **Public Workshop III.** Public Workshop III was held on February 26, 2013, in Sullivan County, attended by approximately 25 community members and on March 19, 2013, in Orange County, attended by approximately 16 community members. During both workshops, attendees reviewed the Preferred Corridor Alternative, Orange County and Sullivan County Interchange Planning Scenarios, and potential park-and-ride locations, along with associated costs and impacts. With the information gleaned from group exercises, stakeholders had the opportunity to offer input on the recommendations. (See Appendix A "Public Outreach" for a detailed description of the results of each workshop.)
- **TPC Meeting #7.** The seventh and final TPC meeting was held on March 27, 2013. The purpose of the meeting was to review and discuss the public comments received during the third round of Public Workshops. The TPC specifically addressed comments received on the Corridor Preferred Alternative and Orange County and Sullivan County Planning Scenarios. Consensus on study conclusions was reached by the TPC, and next steps for submitting the Study for public review and finalizing the document were discussed. (See Appendix A "Public Outreach" for meeting summaries.)

7.2 Study Recommendations

Public comments received during the initial phase of the study process indicated that the NYS Route 17 corridor needed two levels of improvements: corridor-wide improvements such as a General Use Third Lane or HOV Lane, and localized improvements to selected interchanges. In addition, evaluation of improvements to individual interchanges would not meet the minimum interchange spacing requirements or address other operational issue such as weaving lengths and environmental factors. As a consequence, proposed interchange improvements were grouped into interchange "Areas," in which modifications or consolidations to multiple interchanges were identified to meet future Interstate 86 requirements. Provided below is a summary of recommendations for the corridor and the various Interchange Planning Scenarios areas in Sullivan and Orange Counties.

7.2.1 Corridor Improvements

The results of the evaluations included in this study indicate that the General Use Third Lane Alternative would be the most effective at satisfying the goals of the corridor. By constructing a third lane in the median of the existing roadway between Middletown and Harriman, the widened roadway would accommodate both the existing traffic volumes and the future demand that is projected for this corridor with the least impact and most cost effective. Based on the traffic modeling conducted for this study, the third lane would extend a distance of 22 miles between extending just to the west of Exit 120 (NY Route 211/Middletown) and Exit 131 (Harriman/I-87). While the traffic projections do not show a need to extend the third lane west of Exit 120 (NY Route 211/Middletown), any future projects initiated in the western part of Orange County or in Sullivan County should not preclude the future extension of the third lane should travel patterns change in the future. The future extension of the third lane provides opportunities for public-private partnerships with organizations and individuals that may want to invest in the future development of property in this portion of the corridor.

In addition to the traffic benefits associated with the General Use Third Lane Alternative and lack of significant adverse environmental impacts, this option received overwhelming support from the public at the outreach meetings by supporting corridor goals that would improve safety, provide reliable transportation in the corridor, preserve the corridor infrastructure, modernize the corridor, and enhance the opportunities for continued economic development. The development of a General Use Third Lane should not preclude the potential future development of an HOV Lane should ongoing and future regional planning for transportation improvements in the I-87 and I-287 corridors support its development.

7.2.2 Interchange Planning Scenarios - Orange County

Public input for the interchange planning scenarios in the Orange County portion of the corridor, confirmed the need to progress solutions that will accommodate future development. These solutions would preserve the quality of life by directing increased levels of traffic to the feeder roadways best suited to process a level of increased traffic demand. These future interchange improvements should be designed using a holistic approach that includes the needs of both the downstream and upstream interchanges. For the Orange County portion of the corridor two distinct areas have been identified for interchange improvements that would facilitate future growth while also meeting the Interstate design standards associated with the future conversion of NYS Route 17 to I-86.

7.2.2.1 Area 1

Area 1 encompasses the segment of Route 17 between Exit 130 (NY Route 208 – Monroe/Washingtonville) and Exit 127 (Greycourt Road/Sugar Loaf/Warwick) in Chester. There are currently four interchanges within this 3.5 mile section of highway, with the only full interchange located at Exit 130 (NY Route 208 – Monroe/Washingtonville). Exits 129 (Museum Village Road), 128 (Oxford Depot), and 127 (Greycourt Road/Sugar Loaf/Warwick) are all partial

interchanges. The following recommendations within Area 1 reached a general level of consensus during the public outreach process:

- Maintain Exit 130 (NY Route 208) as a full interchange;
- Close the Exit 129 (Museum Village Road) ramps while enhancing the connection to the 130 (NY Route 208 – Monroe/Washingtonville) ramps by widening and improving NY Route 208, Museum Village Road and the associated intersection approaches;
- Convert Exit 128 (CR 51) to a full interchange ;
- Close the Exit 127 (Lehigh Avenue/NY Route 17M) ramps while enhancing connections to the interchange 128 (Oxford Depot) ramps by widening and improving NY Route 17M and the intersection with Kings Highway.

7.2.2.2 Area 2

Area 2 addresses safety and access control issues between Exits 125 (NY Route 17M/South Street) and 123 (US Route 6 /NY Route 17M West) in Goshen. There are three sets of eastbound and westbound ramps within this 1.25 mile section of Route 17. The solution presented to the public was developed as part of the I-86 conversion project to minimize mainline weaving while improving access to the downtown Goshen area. The following recommendations within Area 2 reached a general level of consensus during the public outreach process:

- Close the westbound 125 (NY Route 17M/South Street) off-ramp;
- Maximize weaving length between westbound on- and off-ramps by relocating the westbound 124 (NY Route 17A /NY Route 207) ramp further east;
- Construct diamond style westbound off-ramp at Exit 123 (US Route 6 /NY Route 17M West) to intersect with NY Route 17M;
- Extend two-way operations on NY Route 17M to intersect with West Main Street Extension and Matthews Street;
- Provide connection between NY Route 17M and Hatfield Lane;
- Improve alignment and access control of Exit 125 (NY Route 17M/South Street) eastbound off-ramp.

In addition to the future interchange improvements identified for Areas 1 and 2, there are two interchange reconstruction contracts located within the Orange County portion of the corridor that are at different stages in the project development process. At Exit 122 (Crystal Run Road/Main Street) in Wallkill there is an on-going project to provide better access to I-84 and

improve operations on the Route 17 mainline. A future interchange reconstruction project is being proposed at Exit 131 (NY Route 32) that would improve operations for traffic entering and exiting Woodbury Common and minimize recurring delays on NY Route 32 and the surrounding local roadways. Both of these projects have strong support from the community, complement the improvements being considered as part of this study, and satisfy I-86 conversion requirements.

7.2.3 Interchange Planning Scenario - Sullivan County

The analysis and stakeholder consensus results indicate that the preferred planning scenario for Sullivan County is Scenario III: Accommodate Future Development and Preserve Quality of Life. Under Scenario III, NY Route 17 in Sullivan County would be substantially improved at a number of interchange areas that can improve local access and help spur economic development within the County. As part of the proposed improvements select interchanges in Sullivan County would potentially be closed and/or modified to enhance the overall traffic operations, safety and improve access for local travelling public. It is also recommended that in the future, community outreach meetings should be held to receive input from the residents.

7.2.3.1 Area 1: Exit 103 EB & Exit WB.

The recommended Option would close the Exit 103 (Rapp Road) Eastbound Ramp and construct a full interchange at Exit 103 Westbound in the vicinity of the Discovery Center. Traffic from Exit 103 (Rapp Road) Eastbound would be redirected along Benmoshe Road to the new interchange.

7.2.3.2 Area 2: Exit 104

The recommended Option in Area 2 would require interchange improvements. It is recommended that Interchange 104 (Raceway/Monticello) should be further studied with a focus to on improving the interchange to accommodate existing and future demand. A new park-and-ride lot at this interchange should also be considered.

7.2.3.3 Area 3: Exit 107 to Exit 109

The recommended Option for Area 3 would be to remove or reconfigure all existing ramps at Exit 107 (Fallsburg/Bridgeville).

7.2.3.4 Area 4: Exit 110 to Exit 111

The recommended Option in Area 4 would be to close the partial interchange at Exit 111. Parallel roadways (Lake Louise Marie Road and Wurtsboro Mountain Road) to the north and south of Route 17, would be improved between the two existing interchanges.

7.2.3.5 Area 5: Exit 114 to Exit 116

Consensus was not reached for options identified for Area 5. It is recommended that Exit 114 (Highview/Wurtsboro) and Exit 115 (Burlingham Road) should be further studied with a focus to on improving the interchange to accommodate existing and future demand.

7.2.4 Park-and-Ride Locations

In addition to the development of additional corridor capacity through the development of a General Use Third Lane or HOV Lane, consideration was given to the provision of additional park-and-ride facilities throughout the corridor. As discussed previously, existing park-and-ride facilities are currently substantially limited to the eastern end of the study corridor in Orange County.

It is recommended that additional park-and-ride facilities in Sullivan and Orange Counties should be further explored which may include potential new locations in the vicinity of Exits 104 (Raceway/Monticello), 106 (East Broadway), 109 (Rock Hill/Woodridge), 113 (NY Route 209 – Wurtsboro/Ellenville), and 118 (Fair Oaks).

7.2.5 Provisions for Future Transit

As described in Section 6.1, Metro-North and the NYSTA, in cooperation with the PANYNJ, New Jersey Transit (NJT), and NYSDOT, have initiated the West of Hudson Regional Transit Access Study (WHRTAS). The Phase I screening report issued in May 2012 as part of that study identified five alternative groups for further analysis under Phase II.[13] During Phase II, Metro-North will continue to coordinate with the PANYNJ, NJT, NYSDOT and other agencies. Specifically, Metro-North will coordinate with NJT in developing commuter rail services plans that reflect the cancellation of the Access to the Region's Core Project. Alternatives in proximity of the Study corridor recommended for further Phase II analysis under WHRTAS include:

- Alternative Group 3 would provide direct commuter rail from Port Jervis Line (PJL) for commuter and SWF users. These alternatives would provide direct commuter rail service to both commuter and airport markets using an extension of the existing PJL. Alternatives R-C1 and R-C3 would use the Salisbury Mills-Cornwall alignment along the PJL. The Salisbury Mills-Cornwall alignment starts from a point one-half mile north of Salisbury Mills-Cornwall Station via new right-of-way and 2nd Street to the south side of SWF.
- Alternative Group 4 (RB-C1) would provide commuter rail service to both the commuter and airport markets from the south by using the Metro-North PJL to one of the existing commuter rail station locations where passengers would then transfer to another transit

[13] Source: Metro-North Railroad, *West of Hudson Regional Transit Access Study Alternative Analysis Phase I Screening Report*, May 2012.

mode for connecting services to Stewart International Airport (SWF) and/or a commuter park-and-ride, with BRT connecting service.

7.2.6 Trucking Services and Rest Areas

A recurring theme throughout the public outreach process was the need for rest areas and commercial traffic amenities along the Route 17 corridor. Currently the Route 17 corridor does not have any rest stops or service areas in the 40+-mile corridor limits. The provision of these services would help to modernize the corridor and enhance economic development opportunities by attracting more commercial traffic to the Route 17 corridor. The location of these service areas needs to be coordinated with surrounding communities so as not to adversely impact businesses that currently rely on providing these services. Future projects throughout the corridor should identify potential locations and along with an evaluation of potential locations that includes input from the public and surrounding businesses.

7.2.7 Next Steps and Project/Environmental Process

NYSDOT will pursue the recommended improvements either individually or collectively as funding becomes available, at which time the proposed capital improvements will undergo required environmental reviews in accordance with SEQRA and/or NEPA depending on the source of necessary funding. Additionally, any future corridor projects will be coordinated with FHWA and implemented such that the improvements meet Interstate standards.

APPENDIX A
PUBLIC OUTREACH

New York State Department of Transportation
Route 17 Corridor Study

Transportation Partnering Committee (TPC)

Last Updated July 9, 2012

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Route 17 Transportation Corridor Study

Project Flow Chart with Public Involvement Activities

Meet w/elected officials—share study objectives and overall approach to be taken by the Department to successfully complete study → **April 2012**

↓

Transportation Corridor Study—Existing Conditions & Corridor Vision
STEP I
Conduct technical analysis & data collection of existing conditions, including gathering relevant work performed in previous studies. Develop corridor vision with help from TPC.

↓

Meet w/Transportation Partnering Committee (TPC)–share results of technical analysis & data collection. Develop vision for corridor. (1 mtg.) → **May 2012**

↓

Transportation Corridor Study—Conceptual Future Conditions Scenarios Development
STEP II
Develop future conditions scenarios for corridor based on various forecasted traffic and land use projections. Conceptual scenarios would include various transportation strategies.

↓

Meet w/Transportation Partnering Committee (TPC)–share results of future conditions scenarios, including associated cost and impacts. Collect comments, adjust as necessary and prepare for Public Workshop I. (1 mtg.) → **June 2012**

↓

Public Workshop I—Provide stakeholders study objectives and overall approach including public involvement process. Share results of technical analysis & data collection, and gather stakeholder input. Provide stakeholders corridor vision and gather input. Provide stakeholders results of future conditions scenarios, including associated cost and impacts. Gather stakeholder input. → **Aug. 2012**

↓

Meet w/Transportation Partnering Committee (TPC)–share results of Public Workshop I. Finalize Step I and II study results. (1 mtg.) → **Aug. 2012**

↓

Transportation Corridor Study—Feasible Alternative Development
STEP III
Based on future scenarios results, develop transportation alternatives for the corridor with better defined cost and associated impacts.

↓

Meet w/Transportation Partnering Committee (TPC)–share results of alternative development, including associated cost and impacts. Collect comments, adjust as necessary and prepare for Public Workshop II. (1-2 mtg.) → **Nov. 2012**

↓

Public Workshop II—Provide stakeholders corridor alternatives, including associated cost and impacts. Gather stakeholder input. → **Nov. 2012**

↓

Meet w/Transportation Partnering Committee (TPC)–share results of Public Workshop II. Finalize Step III study results. (1 mtg.) → **Dec. 2012**

↓

Transportation Corridor Study—Final Study Recommendations
STEP IV
Based on public comment, cost implications and impacts finalize study recommendations.

↓

Meet w/Transportation Partnering Committee (TPC)–share results of final study recommendations. Collect comments, adjust as necessary and prepare for Public Workshop III/Informational Meeting. (1-2 mtg.) → **Jan. 2013**

↓

Public Workshop III/Informational Meeting—Provide stakeholders overview of final study recommendations, including associated cost and impacts. Gather stakeholder input. → **Feb. 2013**

↓

Meet w/Transportation Partnering Committee (TPC)–share results of Public Workshop III. Finalize Step IV study results. (1 mtg.) → **Mar. 2013**

↓

CIRCULATE FINAL DRAFT OF STUDY FOR FORMAL PUBLIC REIVEW (30 DAYS), FINALIZE STUDY & IMPLEMENT RECOMMENDATIONS AS FUNDING BECOMES AVAILABLE → **April 2013**

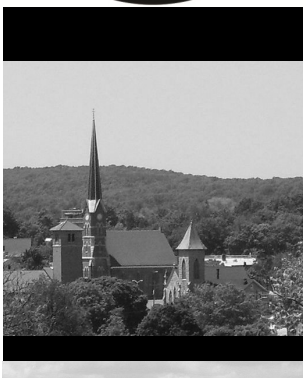
Last updated April, 2013

STEP 1

Elected Officials Meeting

4-24-2012

Agenda



Route 17 Transportation Corridor Study

Elected Officials' Meeting

Carl P. Onken Conference Center
Orange/Ulster BOCES
Goshen, New York
Tuesday, April 24, 2012
6:00 PM – 7:00 PM

- Welcome and Introductions — 5 minutes
  Bill Gorton, Hudson Valley Regional Director — *6:00 – 6:05 PM*
- Project Overview — 25 minutes
  Dan Coots, Route 17 Corridor Study Manager — *6:05 – 6:30 PM*
- Public Involvement
  Sandra Jobson, RA, RLA, AICP, PI Coordinator
- Anticipated Study Elements
  Dan Coots, Route 17 Corridor Study Manager
  Scott Geiger, PE, Route 17 Corridor Manager
- Route 17 Corridor Status Update
  Scott Geiger, PE, Route 17 Corridor Manager
- Questions & Answers — 25 minutes
  Dan Coots, Route 17 Corridor Study Manager — *6:30 – 6:55 PM*
- Next Steps — 5 minutes
  Sandra Jobson, RA, RLA, AICP, PI Coordinator — *6:55 – 7:00 PM*

www.dot.ny.gov/rt17corridor

Meeting Notes

Subject: Public Officials Meeting Minutes

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 4/24/2012

Meeting Location: Carl P. Onken Center
Orange-Ulster BOCES
53 Gibson Rd.
Goshen, NY

Notes by: Arch Street Communications

Attendees:

- NYSDOT: Daniel Coots, Scott Geiger, Bill Gorton, Sandra Jobson, Mary McCullough
- HDR: Elena Barnett, Joseph Izzo
- WSP Sells: Bernie Kalus, Rebecca Novak
- Arch Street Communications: Cyd Averill, Ginger Mold

Attachments: Agenda, Handout with study area map project flow chart; list of attendees.

Welcome and Introductions

Bill Gorton opened the meeting stating that this study will develop a blueprint for Route 17, looking at the operational issues and targeted improvement areas. He introduced the Region 8 NYSDOT staff working on the project and the Consultant Team.

Project Overview

Dan Coots reviewed the agenda for the evening. He said that thanks to the efforts of Sen. Schumer the project has been awarded federal funds and has been identified as a high priority project in the last transportation act, SAFETEA-LU. The study purpose is to identify one or more transportation improvements that will meet future demands placed on the corridor.

While this study will help inform decision making on future work in the corridor, it is independent of the I-86 project, and focuses on the transportation needs of the current Route 17 corridor.
He outlined the Draft Goals and Objectives:

- Overall Goal: Develop a corridor transportation strategy to guide future capital investments
- Supporting Objectives
  - Improve mobility and safety of the corridor
  - Provide for regional economic growth
  - Minimize environmental impacts

Public Involvement

Sandra Jobson distributed the Project Flow Chart and study area map handout for discussion. She described the Public Involvement Plan as a four-step process:

- Step 1:Existing conditions/Goals & Objectives
- Step 2: Conceptual future conditions scenarios development
- Step 3: Feasible alternative development
- Step 4: Final study recommendations to guide future capital improvements along the corridor
- Ultimate Deliverable – Project Scoping Document

As part of process the study will stay on course with the public and stakeholders as follows:

- The Study will include participation from a Transportation Partnering Committee (TPC), 12 to 15 members comprised of agencies with a direct transportation connection to Route 17 -- with representation from towns, villages and municipalities, MTA, Thruway Authority, Orange County and Sullivan County – (there will be about 11 TPC meetings during the Study.)
  Ms. Jobson asked for volunteers to sign up and join the committee.
- For stakeholders outside the world of transportation such as environmental, business and the general public there will be three public workshops.
  - The first workshop will be after steps 1 & 2.
  - Second one will be after development of feasible alternatives.
  - The third will be the presentation of the final study recommendations in Feb. 2013.

The study is anticipated to conclude in Feb. 2013, as noted on the flow chart.

Senator Larkin asked if he could ask a question at that time, which was: "What do we do with Woodbury Commons?" We have talked with Woodbury Commons – There is a $400 million project when you add the loop at 17 and inside the Commons with the extra land they have. It would be a good thing to take a look at that and speak with someone at the Thruway Authority to escape Woodbury Commons on to the Thruway.

You are talking about 1,000 new employees (that's what Woodbury Commons told us). Simon is the corporation that owns it all – and if we don't do it, they are going to pick up those 1,000 jobs and take them to New Jersey. The question that people are still asking is "what is the timetable for this?" I understand what you are saying about 2012, but how much faith will people have if this goes to 2015, 16 or 17?"

Bill Gorton responded to Senator Larkin noting that the interchanges at Woodbury Commons (131 project) and 122 are independent of this study. We are fully aware of the financial issues associated with it. Our commissioners are looking at alternatives to advance on the 131 project. This study will add support to the 131 project.

Sen. Larkin added: "This may be a solution to get everybody on board to do 131 and 122 – but I am scared. I have faith in what you have told us as you had an opportunity to talk to the owners and you've talked to the Senate. This could have a big impact on the Monroe-Woodbury school district -- if they put

$170 million inside that, it will have a significant impact on sales tax distribution. If not moving forward by 2013, Woodbury Commons could take their businesses and jobs to New Jersey."

Al Fusco – Town of Woodbury Engineer expressed concerned because federal monies for Rte. 17 & exit 131 have been slim.

Sandra Jobson stated that the first step will be to look at existing conditions and what construction plans are in the pipeline. There is a large construction plan at Exit 131 that has been deferred due to lack of funds. That is an important project, and we all would like to see it built.

Anticipated Study Elements
Dan Coots discussed the Study Elements as follows:

- Address Congestion/Capacity in the Route 17 Corridor
- Consider Effects of a Range of Land Use Scenarios
- Evaluate Impacts on
    - Safety
    - Regional Growth
    - Environmental
    - Socioeconomic

Corridor Status Update
Scott Geiger presented the Corridor Status Update with a map of the I-86 to illustrate of what has been previously done, what is going to be done in the future, and how it relates to the corridor study today.

There are a series of large main line interchange projects along the corridor that have been progressing as follows:

- Orange County
    - Middletown to Chester
    - Chester to Harriman
    - Middletown to County line
- In Sullivan County:
    - Sullivan County line to east of Monticello
    - Monticello west, past Liberty, to Parksville

He continued to outline the reasons for upgrading the Route 17 corridor:

- Safety
- Interchange functionality
- Relation to future growth

The Route 17 Corridor Study results will benefit these projects along the entire corridor – even beyond the study points, when money becomes available.

Three major interchange project status:

- 131 - NYSDOT has worked closely with Simon Corp throughout development of the project – it is a funding issue at this point.

- 126 – Chester completed
- 122 – on hold for now – hope to get funding and complete soon

Scoping done on projects already is the basis for moving forward.

Next Steps
Sandra Jobson asked for volunteers to sign up to be on the Transportation Partner Committee (TPC).The first committee meeting will be May 15 and the members of the of the TPC will be encouraged to become advocates for the project and get additional participation from the general public. It is extremely important to the success of the project that the participants in the TPC are engaged!

First workshop will be in July – summarizing Steps 1 and 2 – existing conditions and future growth scenarios.

Senator Larkin suggested that the study include Woodbury Commons stakeholders; they may be able to contact their federal representatives and he also mentioned the need to get commitments from Albany. He suggested public service announcements and to get the media to attend meetings.

Sandra Jobson agreed, indicating NYSDOT will be reaching out to them as well as other major stakeholders.

Meeting minutes and project materials and updates will be posted on the website: www.dot.ny.gov/rt17corridor

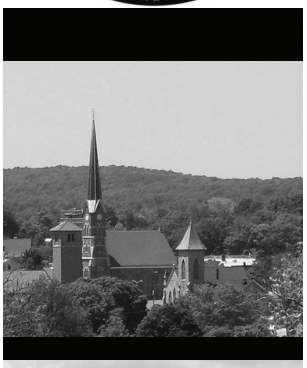
cc: Attendees
Project File: Meeting Minutes

STEP 1

TPC Meeting #1

5-15-2012

Agenda



Route 17 Transportation Corridor Study

Transportation Partnering Committee (TPC)

Orange-Ulster BOCES Carl P. Onken Conference Center
53 Gibson Road, Goshen, New York
Tuesday, May 15, 2012
6:00—8:00 PM

- Welcome and Introductions — 10 minutes
  Dan Coots, NYSDOT — *6:00 – 6:10 PM*
- Study Background — 10 minutes
  Dan Coots, NYSDOT — *6:10 – 6:20 PM*
- Project Flowchart, Public Involvement Process & TPC Framework — 10 minutes
  Sandra Jobson, RA, RLA, AICP, NYSDOT — *6:20—6:30 PM*
- Corridor Existing Conditions — 30 minutes
  Bernie Kalus, P.E., WSP Sells Consulting — *6:30 – 7:00 PM*
- Visioning Exercise — 15 minutes
  Group Exercise — *7:00 – 7:15 PM*
- Goals & Objectives Exercise — 40 minutes
  Group Exercise — *7:15 – 7:55 PM*
- Next Steps — 5 minutes
  Dan Coots, NYSDOT — *7:55 – 8:00 PM*
  Sandra Jobson, RA, RLA, AICP, NYSDOT

Meeting Notes

Subject: TPC Meeting Minutes

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 5/15/2012

Meeting Location: Carl P. Onken Center
Orange-Ulster BOCES
53 Gibson Rd.
Goshen, NY

Notes by: HDR/WSP SELLS JV

Attendees:

- **NYSDOT:** Daniel Coots, Scott Geiger, Sandra Jobson, Mary McCullough
- Harold Baird, Town of Mamakating
- John Czamanske, Orange County Planning Department
- Neal Halloran, Town of Goshen
- Charles Lee, Orange County Department of Public Works
- Angel Medina, New York State Thruway Authority
- Robert Meyer, Sullivan County Department of Public Works
- Brandon Nielsen, Town of Blooming Grove
- Brian T. Smith, Village of Monroe
- Chris Viebrock, Orange County Department of Public Works
- **HDR:** Elena Barnett, Kovid Saxena
- **WSP Sells:** Bernie Kalus, Katie Craig
- **Arch Street Communications:** Cyd Averill, Ginger Mold

Attachments:

- Visioning & Goals and Objectives Exercise Results
- Meeting Sign-In Sheet

Topics Discussed:

Introduction/Study Background

- Dan Coots welcomed the Transportation Partnering Committee (TPC) members, and introduced the project team.
- A background of the Route 17 study was provided to the TPC.

Project Flowchart, Public Involvement Process, and TPC Framework

- An introduction to the public involvement process and participation was provided to TPC members, along with informational handouts.

Corridor Existing Conditions

- Bernie Kalus presented an overview of existing traffic conditions along the study corridor.
- Elena Barnett provided an overview of the consideration of environmental conditions in the Route 17 study.

Goals and Objectives/Visioning Exercise

- TPC members were asked to fill put a Visioning Exercise Worksheet (see attached).
- Priorities related to goals and objectives for the Route 17 corridors were solicited from TPC members in a participatory exercise led by Sandra Jobson.
- TPC members worked in groups to prepare goals and objectives statements (see attached).
- Goals and objectives prioritized by TPC members greatly overlapped with the results of a similar exercise previously conducted with NYSDOT Region 8 staff associated with Route 17.

Next Steps

- TPC members were encouraged to actively participate in the upcoming Public Workshop. The date will be announced.

New York State Department of Transportation
Route 17 Transportation Corridor Study

VISIONING EXERCISE RESULTS

Transportation Partnering Committee Meeting
Tuesday, May 15, 2012
Orange-Ulster BOCES, Carl P. Onken Conference Center

1. What makes Route 17 transportation corridor important to the region?

Southern Tier – East/West Connector	(5x)	Two lanes	(1x)
Recreational Access to Catskills	(4x)	Many Exits	(1x)
Used for Local Trips	(4x)	Commercial Truck Route	(1x)
Major Commuter Route	(3x)	Dangerous Medians	(1x)
Important for Future Economic Development	(3x)	More accessibility than I-84 and Thruway	(1x)
Thruway Connection	(2x)	Close Abutments on X-over roads	(1x)
Links Rural Area to Urban Areas	(2x)	Predates the Interstate	(1x)
Scenic	(1x)	One of 3 High Speed Roadways	(1x)
Ability for Future Interface with Transit	(1x)	Can Provide Increase in Population Density	(1x)

2. How do you envision Route 17 fifteen years from now?

Congested (3x)
More Lanes (3x)
Increased Residential & Commercial Development (3x)
Increased Traffic Flow North of Exit 119 (2x)
Larger Infrastructure for Higher Volumes (2x)
More Traffic (1x)
Barriers Gone (1x)
Increased Capacity (1x)
Public Transportation Lanes (1x)
Increased Commercial/ Industrial Development (1x)
Safer Median Barriers (1x)
Less Weave Movements (1x)
No Passing on the Right (1x)
Exits On and Off (1x)
Development will Spread Westward (1x)
Bad Summer and Weekend Conditions (1x)
Increased Public Transportation (1x)
Negative Changes for Communities Isolated Due to Exit Elimination (1x)
Eliminate Vertical and Horizontal Problems (1x)
Merge Lanes Ample (1x)

No Litter (1x)
Courteous Drivers (1x)
Please Review I-495 Study on Long Island (1x)
Read Dr. Butlers Books on Economic & Geographic Distribution (1x)

3. What are you hoping is achieved through the development of a Route 17 Transportation Corridor Study?

Mobility/Capacity Improvements (3x)
Improved Mass Transit System (2x)
Consensus on a Recommended Plan (1x)
To Help with Ideas for 17/86 (1x)
Safer Access Points (1x)
More Economic Development at the Exits (1x)
Capacity East- and West –Bound at Thruway Connections (1x)
Managed Population Growth (1x)
Protect the Economy Viability of the Region (1x)
Figure Out if a Third Lane is Warranted/Needed (1x)
Integrate Transit/Park & Rides in Planning (1x)
Positive Development (1x)
"The Goal is to pick the easier/.less costly improvements to keep the LOS to the existing further into the future. Tourism will decline, economic development will increase, so will mass transit. Air quality will get worse." (1x)

VISION STATEMENT

Route 17 Transportation Corridor Study

Transportation Partner Committee Meeting

Group Exercise – Corridor Goals & Objectives

20 Minutes - **Results**

Team Member Names: E. Barnett, HDR/WSP SELLS JV
J. Czamanske, Orange County Planning Dept.
R. Meyer, Sullivan County DPW
K. Saxena, HDR/WSP SELLS JV
C. Viebrock, Orange County DPW

Addresses Transportation Priority: **SAFETY**

Goal Statement:

Provide a safer transportation corridor for all stakeholders utilizing a series of measurable objectives

Objectives for Goal Statement:

- **Establish standards for design; ensure that designs meet or exceed any and all federal interstate and AASHTO standards**
- **Eliminate high accident locations**
- **Reduce the level of accidents by ___% by _____ year**
- **Reduce the level of severe accidents, especially fatalities**
- **Develop a plan for emergency diversions and response to accidents (emergency action plan)**
- **Examine alternative practices/best practices for snow and ice management (e.g. Wurtsboro Hill)**
- **Safer Median**

Route 17 Transportation Corridor Study

Transportation Partner Committee Meeting

Group Exercise – Corridor Goals & Objectives

20 Minutes - **Results**

NYSDOT Team Member Names: B. Kalus, HDR/WSP SELLS JV
C. Lee, Orange County DPW
A. Medina, NYSTA

Addresses Transportation Priority: CAPACITY

Goal Statement:

Provide a reliable transportation corridor that minimizes user delay and accommodates current traffic and future demand.

Objectives for Goal Statement:

- **Increase throughput considering all modes of transportation**
- **Consistent with long term plans for area**
- **Sustainable solution**
- **Improve merging, diverging, weaving movements**
- **Increase mobility at interchanges and receiving roadways**
- **Accommodations for commercial traffic and trucks service areas**

Route 17 Transportation Corridor Study

Transportation Partner Committee Meeting

Group Exercise – Corridor Goals & Objectives

20 Minutes - **Results**

NYSDOT Team Member Names:

C. Averill, ASC
S. Geiger, NYSDOT
N. Halloran, Village of Goshen
B. Smith, Village of Monroe

Addresses Transportation Priority: **ECONOMIC DEVELOPMENT**

Goal Statement:

Route 17 will compliment, aid, assist and enhance economic development with communities.

Objectives for Goal Statement:

- **Improve mobility through and within the area**
- **Minimize traffic impacts to municipalities**
- **Increase mass transit options**
- **Aesthetics should be considered.**

Route 17 Transportation Corridor Study

Transportation Partner Committee Meeting

Group Exercise – Corridor Goals & Objectives

20 Minutes - **Results**

NYSDOT Team Member Names:

H. Baird, Town of Mamakating, Supervisor
D. Coots, NYSDOT
K. Craig, HDR/WSP SELLS JV
B. Nielsen, Town of Blooming Grove

Addresses Transportation Priority: **HIGHWAY GEOMETRICS - INADEQUATE RAMPS**

Goal Statement:

Improve highway geometry and ramp facilities to meet interstate standards and not discourage economic development.

Objectives for Goal Statement:

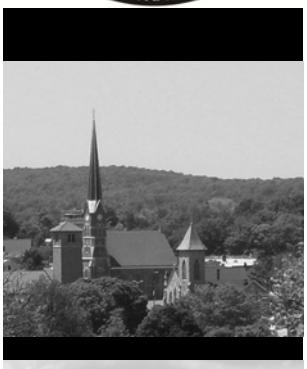
- **Evaluate interchanging spacing/access**
- **Initiate projects**
- **Advocate for funding**

STEP 2

TPC Meeting #2

6-27-2012

Agenda



Route 17 Transportation Corridor Study

Transportation Partnering Committee (TPC)

Orange-Ulster BOCES Carl P. Onken Conference Center
53 Gibson Road, Goshen, New York
Wednesday, June 27, 2012
6:00—8:00 PM

- Welcome and Meeting Purpose — 5 minutes
  Dan Coots, NYSDOT — *6:00 – 6:05 PM*
- Corridor Vision, Goals and Objectives — 10 minutes
  Sandra Jobson, RA, RLA, AICP, NYSDOT — *6:05– 6:15 PM*
- Environmental Existing Conditions — 15 minutes
  Elena Barnett, HDR/WSP SELLS JV — *6:15—6:30 PM*
- Forecasted Transportation/ Land Use Model Results — 20 minutes
  Bernie Kalus, P.E., HDR/WSP SELLS JV — *6:30 – 6:50 PM*
- Transportation Concepts — 20 minutes
  Bernie Kalus, P.E., HDR/WSP SELLS JV — *6:50 – 7:10 PM*
- Break Out Session — 40 minutes
  Group Exercise — *7:10 – 7:50 PM*
- Next Steps — 10 minutes
  Sandra Jobson, RA, RLA, AICP, NYSDOT — *7:50 – 8:00 PM*

Meeting Notes

Subject: TPC Meeting Minutes

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 6/27/2012

Meeting Location: Carl P. Onken Center
Orange-Ulster BOCES
53 Gibson Rd.
Goshen, NY

Notes by: Arch Street Communications

Attendees:

- NYSDOT: Daniel Coots, Sandra Jobson, Mary McCullough
- HDR: Elena Barnett, Kovid Saxena
- WSP Sells: Bernie Kalus, Katie Craig, Rebecca Novak
- Arch Street Communications: Ginger Mold
- TPC:
    - Harold Baird, Town of Mamakating
    - John Barre, Town of Woodbury
    - David Church, Orange County Planning Department
    - Neal Halloran, Town of Goshen
    - James Hoegler, MTA Metro-North Railroad
    - Angel Medina, New York State Thruway Authority
    - Robert Meyer, Sullivan County Department of Public Works
    - Kristen Resnikoff, New York State Thruway Authority
    - Brian T. Smith, Village of Monroe
    - Alan Sorenson, Sullivan County Legislature
    - Chris Viebrock, Orange County Department of Public Works

Project File: Meeting Minutes

Appendix: Corridor Vision Statement and Goal Statements

Topics Discussed:

Meeting Purpose

- Dan Coots welcomed the Transportation Partnering Committee (TPC) members. He stated the purpose of the meeting was to present the results from the exercises of the previous TPC meeting and to gain a consensus on the materials for presentation during the upcoming public workshop.

Corridor Vision and Goal Statements

- Sandra Jobson presented the public involvement flow chart and described where we are in the process.
- She asked the TPC to provide groups and stakeholders (environmentalists and businesses) who would benefit from being part of the public workshops. She also asked for volunteers to assist in facilitating during the public workshop.
- She presented the draft Corridor Vision and Goal Statements to the TPC for their comments. Mr. Sorenson asked that the word "scenic" be incorporated into the goals. With further group input, the goal statements were finalized and will be distributed at the public workshop.

Environmental Existing Conditions

- Elena Barnett provided an overview of the environmental existing conditions in the Route 17 study area.

Forecasted Transportation and Land Use Model Results

- Bernie Kalus presented the mainline level of service map for existing conditions and the mainline level of service map for future conditions.

Transportation Concepts

- Bernie Kalus presented an explanation of, and graphics for, each of the following transportation concepts, along with advantages and disadvantages of each:
    - No Build - Baseline
    - General Use Third Lane
    - High Occupancy Vehicle (HOV) Lanes
    - Bus Rapid Transit (BRT)
    - Light Rail

Guest reports

- Sandra Jobson asked David Church to briefly describe the current status of The Mid Hudson Regional Sustainability Plan.
- James Hoegler was asked to update the TPC on the West of Hudson Regional Transit Access Study (WHRTAS).

Discussion session

- After the PowerPoint presentation, the TPC members viewed the transportation concepts on large display boards and made recommendations to be included for the public workshop.
- Comments were recorded directly on each board.
- Discussion included:
    - David Church referenced the Larkin Drive study and suggested the idea of access roads to get local traffic off of Route 17. He said that people will want to know about the I-86 conversion and how the real world conversion issues will be fixed.
    - A new alternative was recommended to include a hybrid of the General Use Third Lane concept and the HOV Lane concept for express traffic skipping multiple exits. Ms. Jobson will distribute the new alternative to the TPC, once written.

- Mr. Kalus was asked to calculate an approximate cost differential for the transportation concepts for the public workshop.
- Issues discussed (advantages/disadvantages) to be included on the new boards included:
  - Sprawl
  - A Jersey barrier may have to take the place of the grass median in some of the concepts
  - Run-off issues
  - Incident management

Next Steps

- Public Workshop August 1, 2012
  - The consultant team will revise the materials as per the TPC's recommendations for the public workshop presentation and boards.
  - Increase stakeholder list for invitation
  - Ms. Jobson will contact Judy Rife from the Times Herald Record to secure coverage.
  - TPC volunteers to assist in facilitation:
    - Neal Halloran (welcome and introductions)
    - John Burke

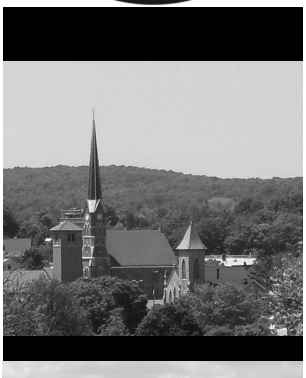
STEP 2

Public Workshop I

Orange County

8-1-12

Agenda



Route 17 Transportation Corridor Study

Public Workshop I

Orange-Ulster BOCES, Emmanuel Axelrod Education Center
53 Gibson Road, Goshen, New York
Wednesday, August 1, 2012
6:00—8:00 PM

• Welcome and Introductions *Dan Coots, NYSDOT* *Neal Halloran, Town of Goshen*	10 minutes *6:00 – 6:10 PM*
• Draft Vision Statement *Sandra Jobson, RA, RLA, AICP, NYSDOT*	5 minutes *6:10– 6:15 PM*
• Study Schedule & Public Involvement Process *Sandra Jobson, RA, RLA, AICP, NYSDOT*	10 minutes *6:15—6:25 PM*
• Corridor Needs/Issues & Goals *Group Exercise*	20 minutes *6:25 – 6:45 PM*
• Existing Conditions Overview *Elena Barnett, HDR/WSP SELLS JV* *Bernie Kalus, P.E., HDR/WSP SELLS JV*	15 minutes *6:45 – 7:00 PM*
• Forecasted Traffic Conditions Overview *Bernie Kalus, P.E., HDR/WSP SELLS JV*	5 minutes *7:00 – 7:05 PM*
• Transportation Concepts *Bernie Kalus, P.E., HDR/WSP SELLS JV*	20 minutes *7:05 – 7:25 PM*
• Evaluation of Concepts *Group Exercise*	25 minutes *7:25– 7:50 PM*
• Next Steps *Sandra Jobson, RA, RLA, AICP, NYSDOT*	10 minutes *7:50 – 8:00 PM*

ROUTE 17 CORRIDOR STUDY
Public Workshop I
YOUR IDEAS COUNT!

Wednesday, August 1st, 6:00 PM to 8:00 PM

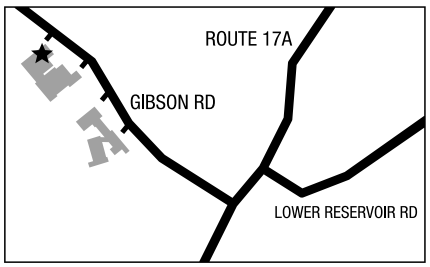
Emmanuel Axelrod Education Center, Orange/Ulster BOCES
53 Gibson Road, Goshen, NY

THE PROJECT TEAM FROM THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) INVITES YOU TO:

- Provide input on the corridor vision statement
- Contribute thoughts on corridor needs, issues and goals
- Learn about existing and forecasted traffic conditions
- Provide feedback on transportation concepts

The Route 17 Corridor Study will examine the corridor between Monticello, Exit 105 (Route 42), and Harriman, Exit 131 (New York State Thruway), to address transportation demands brought about by economic growth in the region – and to help accommodate future growth.

For more information visit: **www.dot.ny.gov/rt17corridor**



Directions: From Route 17A, access Gibson Road. Take the fourth entrance on the left to the Orange/Ulster BOCES campus. Parking is available in front of the Emmanuel Axelrod Education Center.

If you have any questions, or are unable to attend but wish to provide input, please contact Ms. Sandra Jobson, Public Involvement Coordinator, at **(845) 431-5853** or email **sandra.jobson@dot.ny.gov.**

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
REGION EIGHT
4 BURNETT BOULEVARD
POUGHKEEPSIE, NEW YORK 12603
www.dot.ny.gov

WILLIAM J. GORTON, P.E.
REGIONAL DIRECTOR

JOAN MCDONALD ACTING
COMMISSIONER

July 19, 2012

RE: PUBLIC WORKSHOP I
ROUTE 17 TRANSPORTATION CORRIDOR STUDY
SULLIVAN & ORANGE COUNTIES

To Whom it May Concern:

Enclosed are flyers publicizing the Route 17 Corridor Study Public Workshop I to be held on August 1st. We ask that you post one in public view, and make additional copies available to the public.

The Route 17 Corridor Study will examine the Route 17 corridor between Monticello, Exit 105 (Route 42) and Harriman, Exit 131 (New York State Thruway) to help accommodate transportation demands brought about by economic growth in the region – and to help accommodate future growth.

The study's Transportation Partnering Committee (TPC) together with the New York State Department of Transportation (NYSDOT) is holding this public workshop to discuss the future of Route 17 in Sullivan and Orange counties, and we encourage all interested stakeholders to attend. Participants will have the opportunity to help define the corridor vision, develop corridor transportation goals, and provide valuable feedback on transportation concepts to both the TPC and NYSDOT.

We thank you in advance for assisting us to get the word out about this important workshop.

Sincerely,

Sandra D. Jobson, RA, RLA, AICP
Public Involvement Coordinator

ROUTE 17 CORRIDOR STUDY
Public Workshop I
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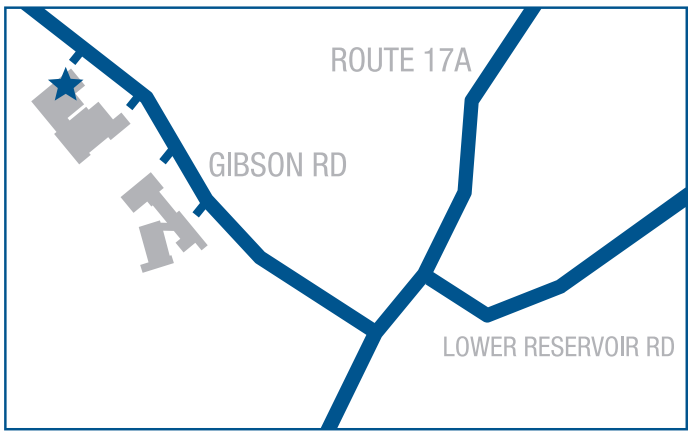

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Meeting Notes

Subject: Public Workshop I Meeting Summary

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 8/1/2012

Meeting Location: Emmanuel Axelrod Education Center
Orange-Ulster BOCES
53 Gibson Rd.
Goshen, NY

Notes by: Arch Street Communications

Attendees:

- NYSDOT: Daniel Coots, Sandra Jobson, Scott Geiger, Mary McCullough, Paul LoGallo,
- HDR: Elena Barnett, James Brown, Kovid Saxena
- WSP Sells: Bernie Kalus, Katie Craig
- Arch Street Communications: Cyd Averill, Ginger Mold
- TPC representative: Neal Halloran

Project File: Meeting Minutes

Appendix:
List of attendees as sign-in sheet
Visioning - Individual Exercise sheets
Corridor Needs/Issues & Goals – Group Exercise sheets

Press at the event:

- Hudson Valley YNN
- Times Herald Record
- Mid Hudson News

Sign-in/Meeting Materials:
At the sign-in table each attendee was given an agenda, an *Individual Exercise -- Visioning* sheet and a red dot. They were asked to:

- Fill out the visioning exercise sheet for before the presentation;
- Place the red dot on the green corridor map to denote where they live (or work).

Welcome and Introductions:
Dan Coots and Neal Halloran welcomed stakeholders and introduced the study team.
The study area was shown on the map and the study purpose was described:

- To identify one or more transportation improvements that will meet future demands placed on the corridor.

Draft Vision Statement
Sandra Jobson discussed the vision for the corridor and asked participants to refer to the *Individual Exercise -- Visioning* they were asked to fill out at sign-in.

- Ms. Jobson presented the draft vision statement developed with the Transportation Partnering Committee (TPC), and participants could see if their opinions were represented in this statement.
- Completed *Individual Exercise – Visioning* sheets were collected after the meeting.

Study Schedule & Public Involvement Process
Sandra Jobson presented the public involvement process:

- Role of the TPC
- Four-step process and deliverables
- Three public workshops

Existing Conditions Overview
Bernie Kalus presented corridor status update highlighting projects that were constructed or under construction, under development and future projects.
Additionally presented were:

- Existing traffic volumes
- Trends
- Mainline Level of Service (LOS) definition
- Mainline LOS maps for morning and evening commutes
- High crash locations
- Existing transit service

Corridor Issues/Needs & Goals (Group Exercise)
Sandra Jobson led an exercise in which each table was given a map of the corridor and a *Corridor Issues/Needs & Goals – Group Exercise* sheet:

- Each table was asked to brainstorm, as a group, the corridor issues and needs;
- Next, prioritize the top three issues and needs;
- Report their consensus at the end of the time period.

Ms. Jobson revealed the draft Goals Statement developed by the TPC.

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Bernie Kalus presented an overview of existing traffic conditions and forecasted traffic conditions.

Transportation Concepts
Bernie Kalus presented transportation concepts with accompanying graphics, noting advantages, disadvantages and cost ranges for each:

- No Build - Baseline
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- Bus Rapid Transit (BRT) with transit oriented development
- Light Rail with transit oriented development

Social, economic and environmental considerations were presented.

Evaluation of Concepts (Group exercise)
Sandra Jobson led an exercise in which each table was given a set of the five transportation concepts. Participants were asked to review each transportation concept and write group opinion notes on them.

- Each group reported their findings.
- The *Corridor Issues/Needs & Goals – Group Exercise* sheets were collected and paired with the transportation concepts notes for evaluation by the study team.

Next Steps

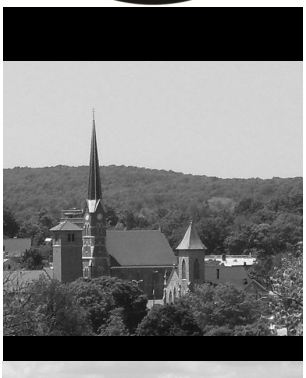
- Sandra Jobson said that the findings from this meeting will be presented at the next TPC meeting for consideration and will inform the direction of the next public meeting.
- Ms. Jobson opened the floor to questions from stakeholders.

STEP 2

Public Workshop I

8-22-13

Agenda



Route 17 Transportation Corridor Study

Public Workshop I

Rock Hill Fire Department
61 Glen Wild Road, Rock Hill, New York
Wednesday, August 22, 2012
6:00—8:00 PM

• Welcome and Introductions *Dan Coots, NYSDOT* *Sharon Jankiewicz, Town of Thompson*	10 minutes *6:00 – 6:10 PM*
• Draft Vision Statement *Sandra Jobson, RA, RLA, AICP, NYSDOT*	5 minutes *6:10– 6:15 PM*
• Study Schedule & Public Involvement Process *Sandra Jobson, RA, RLA, AICP, NYSDOT*	10 minutes *6:15—6:25 PM*
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Www.dot.ny.gov/rt17corridor

ROUTE 17 CORRIDOR STUDY
Public Workshop I
YOUR IDEAS COUNT!

Wednesday, August 22st, 6:00 PM to 8:00 PM

Rock Hill Fire Department

61 Glen Wild Road, Rock Hill, NY

THE PROJECT TEAM FROM THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) INVITES YOU TO:

- Provide input on the corridor vision statement
- Contribute thoughts on corridor needs, issues and goals
- Learn about existing and forecasted traffic conditions
- Provide feedback on transportation concepts

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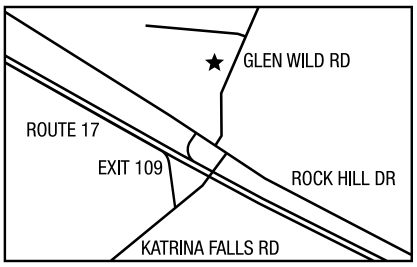

Directions: Rt 17 westbound—Right off exit 109 then first left onto Glen Wild Road. Eastbound—Left off exit onto Katrina Falls Road then left at stop sign and a quick right onto Glen Wild Road.

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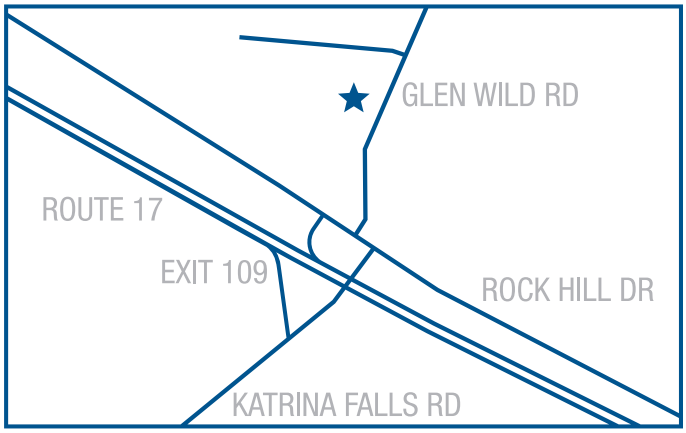

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Contract No: D030845

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Next Steps

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- Ms. Jobson opened the floor to questions from stakeholders.

Route 17 Corridor Study - Public Workshop I		
Table Priority	**Corridor Needs/Issues & Goals - Group Exercise Results Priority Order - Table 1-11 Orange County, Table 12-20 Sullivan County**	**Table Number**
1	Congestion/Lack of Capacity	1
1	Congestion/Lack of Capacity	3
1	Congestion/Lack of Capacity	5
1	Congestion/Lack of Capacity	6
1	Congestion/Lack of Capacity	10
1	Congestion/Lack of Capacity	11
1	Congestion/Lack of Capacity	12
1	Congestion/Lack of Capacity	14
1	Congestion/Lack of Capacity	18
1	Safety	2
1	Safety	13
1	Interchange Geometrics Substandard	19
1	Don't Close Exits/Partial Exits Impeding Economic Development	17
1	Economic Development	20
1	Extend Study Limits to Exit 104	15
1	Impact on secondary roads	16
1	Ability to Complete Projects in a Logical and Timely Manner	8
1	Lack of Information - Transparency of Future Plans	4
2	Congestion/Weekends/Special Events	2
2	Congestion/Lack of Capacity	8
2	Congestion/Lack of Capacity	19
2	Interchange Geometrics Substandard	1
2	Interchange Geometrics Substandard	3
2	Interchange Geometrics Substandard	11
2	Interchange Geometrics Substandard and Imcomplete	15
2	Quality of Life/Noise/Truck Traffic	13
2	Quality of Life/Noise/Truck Traffic	20
2	Quality of Life/Noise/Truck Traffic	16
2	Economic Development	12
2	Safety	14
2	Impcat on Secondary Roads	4
2	Lack of Service Roads	10
2	Ability to Complete Projects in a Logical and Timely Manner	5
2	Exit 105 Operational Problems	18
2	Woodbury Commons Traffic - Need for Direct Access from NYS Thruway	6
2	Extend Study Limits to Exit 102	17
3	Congestion/Lack of Capacity	13
3	Safety	3
3	Safety	10
3	Interchange Geometrics Substandard	14
3	Signage/ITS	1
3	Signage/ITS	6
3	Don't Close Exits/Partial Exits Impeding Economic Development	2
3	Don't Close Exits/Partial Exits Impeding Economic Development	5
3	Don't Close Exits/Partial Exits Impeding Economic Development	8
3	Improve Access for Commuters	20
3	Exit 109-111 Close	16
3	Quality of Life/Noise/Truck Traffic	15
3	Increase Public Transit	17
3	Increase Speed Limit to 65 Consistently	12
3	Aesthetics	19
3	Future Maintenace	4
3	Construction Timing Impacts	18
3	Interchange Spacing Too Close	11

Route 17 Corridor Study - Public Workshop 1	
Number of times Mentioned	**Corridor Needs/Issues & Goals -- Group Exercise - Step 1**
7	Interchanges: Too closely together placed interchanges - bottlenecks
6	Congestion- capacity - commuter, weekend and holiday period
5	17M issues - empties on 17 in to Goshen: gridlock, capacity issue
5	Smart signs - ITS needed
4	Woodbury Commons traffic bypass Rt 17 (exit off Thruway)
4	Safety concerns (overall) - frequent crashes
4	Emergency access services - service roads
3	Increasing traffic volumes including heavy vehicles
3	Increased law enforcement of keeping left lane fo passing only
3	Need an extra lane -- maybe 2
2	Guard rail and general maintenance, over growth
2	Not enough toll booths at Harriman
2	Poor signage for road conditions and amenities
2	Retail development hindered to poor traffic flow
1	Three partial exits 114, 111, 108
1	Concerns about I-86 limiting #'s of interchanges when we need more access
1	Traffic for Bethel Woods events
1	Do a health impact assessment
1	Credibility w/ completing projects
1	HOV lanes
1	Better connection to off highway communities
1	Phasing improvements more logically (x131!)
1	Lack of mass transit in Sullivan
1	DOT-> protection of maintenance workers
1	Needs -must be aesthetically pleasing
1	At Exit 120 Wallkill tunnel (proposed) need to do it
1	More lanes
1	Rt 32 traffic signals need sync. using timers immediately
1	On/off ramps onto Rt 32 must be wide enough to allow for turning
1	Exit for Kiryas Joel
1	HOV lanes
1	Improve line of sight
1	Bike lanes on 17M and Rt 32
1	Secondary Routes are congested on Rt 17
1	Raise road level Chester Flats
1	Additional park and ride locations
1	Rt 211/17 interchange
1	Rt 17/ I-84 interchange
1	Larkin Drive extension (Harriman Commons to 208- when?)
1	History and tourism related to area and route history
1	Exit 105- pedestrian vehicular conflicts
1	Exit 123 vicinity- bottleneck Goshen due to lane changes roadway geometry
1	Exit 107 over pass accommodate 2 lanes new bridge over Alversink River 3 lanes
1	More park and rides needed
1	Moving from 2 to 3 to 2 lanes for accidents between Chester & Goshen
1	Hill to Monroe exit slowdown; trucks slow down to get up hill
1	Toll booths at end of Quickway
1	Put signs on NYS Thruway with average travel time to Middletown on Rt 17 posted at Harriman
1	More law enforcement of left hand lane usage.
1	No trucks or busses in left lane - stiff fines
1	Revisit the drop in speed limit around Monticello
1	All bridges and overpasses should be expanded first

Route 17 Transportation Corridor Study

Public Workshop I Combined Results
August 1st, Orange County
August 22nd, Sullivan County

Concept Evaluation Results

Maintain Existing
General Use Third Lane
HOV Lane
Bus Rapid Transit
Light Rail

Maintain Existing - Baseline	
Number of tables mentioned—20 tables	**Comments**
7	Not an option
2	Upgrades to signage, striping, lighting, traffic patterns and minor road improvements required at the very least
1	West and North of Middletown is sufficient for the near future especially if improvements in pairing lighting and signage are made. This will make a world of difference in how much capacity the "baseline can handle. ("Enhanced baseline")
1	Improvements in technology may allow us to live with this capacity-constrained option (i.e. radar-adaptive cruise control, automatic braking.)
1	No trucks or busses in left lanes - enforced by stiff fines.
1	Should remain a two-lane highway each way from Monticello to Harriman (with the exception of the Goshen area)
1	Enforcement - Fracking waste
1	Address interchange problems at exits 104, 105, 109 and 109 - Memorial day to Labor Day
1	What is going on with I-86 projects?
1	Noise
1	Winter maintenance
1	Quality of life

General Use Third Lane	
Number of tables mentioned—20 tables	**Comments**
13	Most feasible, best balance of cost and capacity expansion
4	Could be used as HOV lane during commute hours and weekends; reversible flow - flexible medians and express lane would be good here
2	Noise impact - need for noise barrier
2	Improve ramp systems at intersections to handle increased capacity. Nee full interchanges.
1	Not yet needed west of Middletown, maybe not even 20 years from now
1	Median barrier should be higher - perhaps with landscaping like German Autobahns - guardrail, 2 meters of shrubbery-guardrail (to avoid rubber-necking during crashes)
1	Consider multi-lane interchanges at busy spots like Suffern Interchange of 87 - 287 (exit 5)
1	This concept would benefit the growth of Sullivan Co. for economic development and tourism needs.
1	Should be extended to Binghamton
1	Disadvantage: construction period impacts - congestion
1	Good for increased volume and emergency services (but does not improve quality of life).
1	This will decrease the push for improved mass transit
1	This will increase population, reducing the characteristics of the area.
1	Add electronic messaging system with traffic delays and alternate route info
1	All bridges and overpasses should be expanded first.
1	Need to address community and health impacts on all options - look for long-term benefits
1	Bus transit lane
1	Begin third lane EB in Bloomingburg

HOV Lane	
Number of tables mentioned – 20 tables	**Comments**
8	Too expensive for limited benefit, subject to underuse
3	Will require enforcement from police department and cameras
3	Possible for Middletown, Woodbury, most dense areas (Orange County)
2	Will this approach make interchanges more complex? - need more info on how this works - ramp metering?
2	Consider express lane instead of HOV lane
2	Should be a general purpose lane on weekends, summer peak HOV, general use off peak
1	Trucks and trailers will need to keep away from inner lanes
1	The congestion we have at rush hours pales to congestion we have summer weekends and shopping holidays
1	Concerning the "Future Widening" graphic: Hope we don't need 4 lanes any time soon.
1	ROW Impacts: Maybe too precious at East end toward Harriman? --May have to be taken from median.
1	HOV entrance to Thruway is a great idea
1	Are there moveable barriers between EB & WB lanes in any of these concepts?
1	Would be advantageous as emergency use lane
1	Maximum capacity of whole roadway based upon flexible median (like on TZ Bridge)

Bus Rapid Transit	
Number of tables mentioned – 20 tables	**Comments**
10	Not feasible, too costly and density not here yet, especially beyond Middletown
3	Concept could be expanded in future
1	More infrastructures needed (bus stops, overhead walkways, parking lots, etc.)
1	Where are the busses actually going?
1	Only would benefit Sullivan to Middletown users, and casinos
1	Would provide reasonable mass transit options for Sullivan Co.
1	Consider central city/village hubs instead of on highway
1	Consider public/private partnerships (Coach USA, Shortline, etc.).

Light Rail	
Number of tables mentioned – 20 tables	**Comments**
15	Not viable, too many environmental constraints, no demand, too costly, not enough flexibility
6	Rail's prosperity, depends on where it starts, ends and what it connects to - would need to broaden to get to Penn Station or the Tappan Zee Bridge. - Going to an airport - could be interesting to study
2	Possible in Orange County, would maintain Route 17 as-is in Sullivan County
1	Light Rail from Monticello to Middletown, then hook up to NJ Transit in Middletown; hook up to BRT Middletown to Woodbury
1	Do a health impact assessment to determine which would maximize positive health outcomes and minimize negative impacts.
1	We like turning the Heritage Trail into a pedestrian trail.
1	Cleaner, since electric
1	Would maintain the aesthetic quality of the roadway
1	Less expensive than existing bus transportations to NYC
1	Would reduce bus traffic
1	Reduce traffic by connections to existing MTA commuter rail line
1	Would introduce rail transit to the area
1	Aesthetic impacts

New York State Department of Transportation
Route 17 Transportation Corridor Study

Corridor Vision Statement

The Route 17 corridor in Orange and Sullivan counties will support a robust, economic future with safe, efficient access for all users while preserving its scenic beauty and natural resources. Freight commerce, recreational travelers, and daily commuters will travel between New York City and the Hudson Valley-Catskill Mountain region along a well managed and maintained, modern facility that simultaneously supports long distance access to the southern tier of New York State and provides enhanced mobility for local trips among adjoining communities.

Corridor Goal Statements

- Improve corridor safety for all users and stakeholders.
- Provide a reliable transportation corridor that accommodates public transit, minimizes delay, and accommodates current and future travel demand for all.
- Preserve corridor infrastructure investments in a fiscally, sustainable manner.
- Modernize corridor roadway and interchanges while maintaining the quality of life and preserving the scenic beauty and natural resources.
- Provide a transportation corridor that supports and enhances the opportunity for continued economic development.

STEP 2

TPC Meeting #3

8-29-2012

Agenda

Route 17 Transportation Corridor Study

Transportation Partnering Committee (TPC)

Orange-Ulster BOCES Carl P. Onken Conference Center
53 Gibson Road, Goshen, New York
Wednesday, August 29, 2012
6:00—7:30 PM

- Welcome and Meeting Purpose — 5 minutes
  Sandra Jobson, RA, RLA, AICP, NYSDOT — *6:00 – 6:05 PM*

- Finalize Corridor Vision Statement — 10 minutes
  Group Discussion — *6:05 – 6:15 PM*

- Finalize Corridor Goals — 15 minutes
  Group Discussion — *6:15—6:30 PM*

- Review Public Comment on Transportation Concepts — 30 minutes
  Group Discussion — *6:30 – 7:00 PM*

- Study Next Steps — 30 minutes
  Group Discussion — *7:00 – 7:30 PM*

Meeting Notes

Subject: TPC Meeting Summary

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 8/29/2012

Meeting Location: Carl P. Onken Center
Orange-Ulster BOCES
53 Gibson Rd.
Goshen, NY

Notes by: Arch Street Communications

Attendees:

- NYSDOT: Daniel Coots, Sandra Jobson, Mary McCullough
- HDR: Kovid Saxena, James Brown
- WSP Sells: Bernie Kalus, Katie Craig
- Arch Street Communications: Cyd Averill, Ginger Mold
- TPC:
    - Harold Baird, Town of Mamakating
    - John Burke, Town of Woodbury
    - John Czamanske, Orange County Planning Department
    - Neal Halloran, Town of Goshen
    - Sharon Jankiewicz, Town of Thompson
    - Angel Medina, New York State Thruway Authority
    - Kristen Resnikoff, New York State Thruway Authority
    - Chris Viebrock, Orange County Department of Public Works

Project File: Meeting Minutes

Handouts:
Visioning Exercise Results from the TPC meeting (5/1/12) and Public Workshop I (Orange & Sullivan)
Corridor Vision Statement and Corridor Goal Statements
Corridor Needs/Issues & Goals Group Exercise Results in Priority Order
Concept Evaluation Results from the TPC meeting (5/1/12) and Public Workshop I (Orange & Sullivan)

Topics Discussed:
Meeting Purpose

- Sandra Jobson welcomed the Transportation Partnering Committee (TPC) members. She stated the purpose of the meeting was to present the results from the exercises of the Public

Workshop I in Orange and Sullivan Counties. With guidance from the public input, the TPC will finalize the Corridor Vision and Goal Statements and decide which of the Transportation Concepts will be considered as the study progresses.

Finalize Corridor Vision Statements

- Sandra Jobson presented the Visioning Exercise Results from the TPC meeting (May 1, 2012) and the two Public Workshops I (August 1 and August 22, 2012).
    - She highlighted the most frequent responses and used these to inform the final vision statement.
    - The TPC reviewed the report.
- Ms. Jobson presented the Corridor Vision Statement crafted with the feedback from the Visioning Exercises.
- Since the last revision, stakeholder Alan Sorenson asked that the word "scenic" be incorporated; the statement now includes the clause "…while preserving its scenic beauty and natural resources."
- The Corridor Vision Statement presented was approved as final by the TPC.

Finalize Corridor Goals

- Sandra Jobson presented the results of the Corridor Needs/Issues & Goals exercise from the two Public Workshops with the top three priorities from each group.
- She presented the Corridor Goals Statement, which incorporates these priorities, for consideration by the TPC.
- Based on the results of the August 1st and August 22nd workshops, the phrase "while preserving scenic beauty and natural resources" was incorporated in the goals statements
- Chris Viebrock suggested that the wording "accommodates current and future demand for all" be changed, possibly switching the word "supports" for "accommodates".
    - Ms. Jobson will revise with consideration to the request.
- The Corridor Goal Statements presented were approved as final by the TPC.

Review public comment on Transportation Concepts

- Sandra Jobson presented the Concept Evaluation Results from Public Workshop I (Orange & Sullivan).
    - All comments were listed, with the most frequently mentioned comments highlighted.
- It was indicated that neither the BRT or Light Rail Transit (LRT) options were likely to be found viable given their relatively high costs compared to other competing options, lack of potential patronage and lack of connectivity with transit outside of the corridor under study
- John Czamanske discussed David Church's suggestion from the last TPC meeting concerning improving local adjoining roads/building new parallel roads for access with improvements at key locations. This would be a transportation concept between the Baseline concept and the General Use Third Lane concept.
    - Sandra Jobson replied that while Mr. Church's proposal will take capacity off of Route 17, it does not address other corridor goals, such as safety. His proposal was considered and will be addressed as part of each concept.
    - Sandra Jobson will call Mr. Church to discuss how his ideas are being incorporated into the Transportation Concepts.

- John Burke suggested that the DOT consider a corridor preservation option in which DOT would purchase land along Route 17 for future transportation needs.
- John Czamanske suggested that the study recommend short-term improvements.
    - Ms. Jobson said they will consider short-term recommendations such as variable message signage and other localized improvements.

- After review and discussion of the Concept Evaluation Results, it was agreed that:
    - HDR/SELLS will complete a modeling analysis using the VISSUM model on the BRT and Light Rail and concepts for the year 2045 to confirm the lack of viability of these options
    - The study will continue to consider the remaining concepts: Baseline, General Use Third Lane and HOV Lane

Study Next Steps

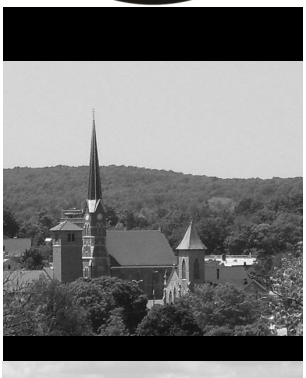
- The results of this meeting will be distributed to the TPC. Please contact Sandra Jobson with additional ideas or comments.
- The consultant team will work on the Technical Memorandum #1.
- Meet with TPC in October to share the results of alternative development, including costs and impacts.
- Public outreach materials will be posted on the project website.

STEP 3

TPC Meeting #4

11-14-2012

Agenda



Route 17 Transportation Corridor Study

Transportation Partnering Committee (TPC)

Orange-Ulster BOCES
Administration Conference Room
53 Gibson Road, Goshen, New York
Wednesday, November 14, 2012
6:00—7:30 PM

- Welcome and Meeting Purpose — 5 minutes
  Sandra Jobson, RA, RLA, AICP, NYSDOT — *6:00 – 6:05 PM*

- Update of Study Activities — 10 minutes
  Bernie Kalus, P.E., HDR/WSP SELLS JV — *6:05 – 6:15 PM*
  Kovid Saxena, AICP, HDR/WSP SELLS JV

- Technical Memorandum #1 — 15 minutes
  Group Discussion — *6:15—6:30 PM*

- Review of Feasible Concepts — 45 minutes
  Group Discussion — *6:30 – 7:15 PM*

- Next Steps - Public Workshop II — 15 minutes
  Group Discussion — *7:15 – 7:30 PM*

Meeting Notes

Subject: TPC Meeting Summary

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 11/14/2012

Meeting Location: Administrative Conference Room
Orange-Ulster BOCES
53 Gibson Rd.
Goshen, NY

Notes by: Arch Street Communications

Attendees:

- NYSDOT: Daniel Coots, Sandra Jobson, Scott Geiger
- HDR: Joe Izzo, Kovid Saxena, Luigi Casinelli
- WSP SELLS: Bernie Kalus, Katie Craig
- Arch Street Communications: Cyd Averill, Ginger Mold
- TPC:
    - John Burke, Town of Woodbury
    - John Czamanske, Orange County Planning Department
    - Neal Halloran, Town of Goshen
    - Sharon Jankiewicz, Town of Thompson
    - Brandon Nielsen, Town of Blooming Grove
    - Chris Viebrock, Orange County Department of Public Works

Project File: Meeting Minutes

Topics Discussed:

Welcome and Meeting Purpose

- Sandra Jobson welcomed the Transportation Partnering Committee (TPC) members. She stated the purpose of the meeting was to present an update of study activities to the TPC, discuss the Technical Memorandum #1, review and get feedback on the Feasible Transportation Concepts and discuss plans for the Public Workshop II.
- Ms. Jobson shared the results of Steps I and II of the study process, noting the Study was extended to Exit 103. It was agreed that with the reduction of Transportation *Concepts* resulting from the screening process the remaining concepts would now be referred to as the Feasible Alternatives.

Update of Study Activities

- Bernie Kalus presented slides with projections of growth along the corridor in Orange County with AM and PM Peak Trip Production Growth 2010 vs. 2045. Forecasted traffic conditions for Orange County AM and PM were presented along with Sullivan County growth.
    - John Czamanske asked that points in Orange County be included in the model as well, such as Camp LaGuardia.
- Kovid Saxena presented an outline of Technical Memorandum #1, including the screening process and matrix which was used to identify Feasible Transportation Alternatives for the corridor.

Discussion of Technical Memorandum #1

- Edits/comments from John Czamanske included:
    - Update the air quality language to note that Orange County is in attainment for ozone
    - The growth projections were questioned as they appeared to be based on old trends which may no longer be appropriate.
    - Should preservation be mentioned in the Technical Memorandum as it is the noted focus of the federal and state governments?
    - Lower case corridor vs. upper case corridor
    - Terminology changes on the screening matrix regarding the "Sustainability" and "Conflicting Land Use" criteria.
        - Ms. Jobson welcomed his input and asked that he, and all TPC members, email comments and edits to her so they can be incorporated into the final version of the Technical Memorandum.
- Regarding the screening matrix, it was agreed that "Conflicting Land Use" will be changed to "Direct Impacts on Land Use," terminology for the current "Sustainability" criteria will be modified, and the column title "Minor/Moderate/Major Threshold" would be modified to "Minor/Moderate/Major Impact Threshold." The term "Sustainability" should be used in conformance to the established NYSDOT definition.
- Neal Halloran suggested noting a proposed 45-acre warehouse development project on Route 17M as a planned development in Orange County. He suggested contacting the Orange County Partnership for details on the development. He also noted that Florida and Warwick should be identified as municipalities within the study corridor; possibly others.
- John Burke added that Woodbury Commons is expanding, adding a 1,000-space parking garage (increasing parking from 5,700 spaces to 6,700 spaces), which will result in increased traffic
- Discussion on interchange work from Interchange 131 to Interchange 120.

Review of Feasible Alternatives

- The Maintain Existing Roadway/No Build concept will have cost impacts with improvements and maintenance costs.
- Sections of the General Use Third Lane and HOV lane concept alignments were presented on boards for review.
- Changes to the boards to facilitate public understanding for the public workshops were discussed as follows:
    - The new area/footprint of the corridor will be in a more prominent color, such as red.
    - Sections will be larger and wider.
- Luigi Casinelli discussed the ten interchange study locations in the study corridor using a map and aerial images.

- After review, the TPC agreed that some of the interchanges will change; the map will be revised accordingly. The revised map will include the removal of Interchanges 113 and 122A and the inclusion of Interchanges 103 and 121. Additionally, a map will be created to illustrate high level interchange alternatives in Sullivan County.
- Instead of "locations," they will be called "interchange analysis points"

Next Steps – Public Workshop II

- Dates:
  - Orange County: Nov. 29, Orange Ulster BOCES, Emmanuel Axelrod Education Center
  - Sullivan County: Dec. 4, Rock Hill Fire Department
- Time: 6:00 PM to 8:00 PM
- Volunteers to assist with the introduction at the meetings:
  - Orange County Meeting – Orange County Planning Department
  - Sullivan County Meeting – Sharon Jankiewicz
- Draft Agenda:
  - Introductions
  - Presentation of Study Vision and Goals statement
  - Review of Steps I and II; five concepts were studied and the General Use Third Lane and HOV Lane concepts were determined to be feasible, and will be studied in more detail.
  - Presentation of projected traffic volumes
  - Presentation of Feasible Alternatives (for both meetings)
    - In Orange County the concentration will be on the General Use Third and HOV Lanes
  - In Sullivan County the concentration will be on the Interchange alternatives.
  - Break out groups:
    - Copies of the boards showing in plan view the Feasible Alternatives (with cost ranges) will be at the tables for attendees to review and discuss in small groups. ROW impacts will be noted for discussion as well.
      - A member from the TPC and/or consultant team will be at each table to facilitate the discussion.
      - Public input will be reported back to group and collected.

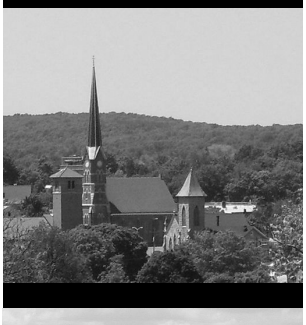
STEP 3

Public Workshop II

Orange County

11-29-12

Agenda



Route 17 Transportation Corridor Study

Public Workshop II

Orange-Ulster BOCES Emmanuel Axelrod Education Center
53 Gibson Road, Goshen, New York
Thursday, November 29, 2012
6:00—7:30 PM

- Welcome and Introductions — 10 minutes
  Dan Coots, NYSDOT — *6:00 – 6:10 PM*
  John Czamanske, AICP,
  Deputy County Planning Commissioner
- Study Schedule & Public Involvement Process — 10 minutes
  6:10 – 6:20 PM
  Sandra Jobson, RA, RLA, AICP, NYSDOT
- Public Workshop Purpose & Study Update — 10 minutes
  6:20—6:30 PM
  Sandra Jobson, RA, RLA, AICP, NYSDOT
- Review of Feasible Alternatives — 20 minutes
  Bernie Kalus, P.E., HDR/WSP SELLS JV — *6:30 – 6:50 PM*
  Kovid Saxena, AICP, HDR/WSP SELLS JV
  Luigi Casinelli, PE, PTOE, HDR/WSP SELLS JV
- Evaluation of Alternatives & Report Back — 30 minutes
  6:50 – 7:20 PM
  Group Exercise
- Next Steps — 10 minutes
  Sandra Jobson, RA, RLA, AICP, NYSDOT — *7:20 – 7:30 PM*

www.dot.ny.gov/rt17corridor

Route 17 Corridor Study
Public Workshop II

YOUR IDEAS COUNT!

Please join the New York State Department of Transportation (NYSDOT) to discuss the future of Route 17 in Orange and Sullivan counties.

Two opportunities to attend:

Orange County:

Thursday, November 29, 2012
6:00 to 8:00 PM
Orange/Ulster BOCES
Emmanuel Axelrod Education Center
53 Gibson Road, Goshen, NY

Sullivan County:

Tuesday, December 4, 2012
6:00 PM to 8:00 PM
Rock Hill Fire Department
61 Glen Wild Road, Rock Hill, NY

Participants will have the opportunity to:

- Be updated on the status of the study since the last workshop.
- Provide valuable feedback on the feasible transportation alternatives.
- Share ideas on the study with the NYSDOT project team.

The study has been examining the Route 17 corridor between Monticello, Exit 103 (Rapp Road) and Harriman, Exit 131 (New York State Thruway) to identify one or more transportation improvements that will address projected increases in population in the corridor and provide for anticipated levels of development.

If you have any questions, or are unable to attend but wish to provide input, please contact Ms. Sandra Jobson, Public Involvement Coordinator, at (845) 431-5853 or email **sandra.jobson@dot.ny.gov**

For more information visit: www.dot.ny.gov/rt17corridor

Route 17 Corridor Study
Public Workshop II

YOUR IDEAS COUNT!

Please join the New York State Department of Transportation (NYSDOT) to discuss the future of Route 17 in Orange and Sullivan counties.

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The study has been examining the Route 17 corridor between Monticello, Exit 103 (Rapp Road) and Harriman, Exit 131 (New York State Thruway) to identify one or more transportation improvements that will address projected increases in population in the corridor and provide for anticipated levels of development.

If you have any questions, or are unable to attend but wish to provide input, please contact Ms. Sandra Jobson, Public Involvement Coordinator, at (845) 431-5853 or email **sandra.jobson@dot.ny.gov**

For more information visit: www.dot.ny.gov/rt17corridor

Meeting Notes

Subject: Public Workshop II Meeting Summary

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 11/29/2012

Meeting Location: Orange Ulster BOCES
Emmanuel Axelrod Education Center
53 Gibson Road
Goshen, New York

Notes by: Arch Street Communications

Attendees:

- NYSDOT: Daniel Coots, Sandra Jobson, Scott Geiger, Paul LoGallo, Mary McCullough
- HDR: Kovid Saxena, Luigi Casinelli, Einah Pelaez
- WSP Sells: Bernie Kalus, Katie Craig
- Arch Street Communications: Cyd Averill, Ginger Mold
- TPC representative: John Czamanske

Project File: Meeting Minutes
Appendix:
List of attendees
Public Comments

Press at the event:

- Times Herald Record
- Mid Hudson News

Sign-in/Meeting Materials:
At the sign-in table each attendee was given an agenda, a copy of the *Corridor Vision and Goal Statements*, a Project Flow Chart and a red dot.

- Attendees were asked to place the red dot on the green corridor map to denote where they live (or work).

There were boards in the room for public viewing before and after the meeting including:

- Five boards with Transportation Concepts from Public Workshop I (for review purposes):
    - No Build - Baseline
    - General Use Third Lane
    - High Occupancy Vehicle (HOV) Lanes
    - Bus Rapid Transit (BRT) with transit oriented development
    - Light Rail with transit oriented development

- Three boards with Existing Conditions and Feasible Alternatives:
    - Sections of the Corridor with the General Use Third Lane
    - Sections of the Corridor with the HOV Lane
- Project Flow Chart and Public Involvement Activities

Welcome and Introductions:
Dan Coots and John Czamanske welcomed stakeholders and introduced the study team.

Study Schedule & Public Involvement Process
Using the Corridor Study Flow Chart, Sandra Jobson presented the public involvement process, the role of the TPC, the four-step process, and deliverables and three public workshops.

Public Workshop Purpose and Study Update
Sandra Jobson reviewed what has been done on the Study to date and described the exercises utilized in Public Workshop I to develop the Corridor Vision and Goals Statements. She described the five transportation concepts and the screening criteria which led to the development of the feasible alternatives.

Review of Feasible Alternatives
Bernie Kalus explained the feasible alternatives:

- General Purpose Third Lane – (from Exit 120 in Middletown to Exit 131)
- HOV Lane – (from Exit 120 in Middletown to Exit 131 with long-term potential for development of some version of BRT)
- Sullivan County – focus on access to corridor

Mr. Kalus presented:

- Projected Orange County Trip Growth Rate AM and PM – 2010 vs. 2045
- Projected Sullivan County Growth – 2045
- Projected traffic comparisons AM and PM – existing vs. 2045
- Projected traffic conditions AM and PM – 2045
- Projected traffic conditions Third Lane Alternative AM and PM – 2045
- Projected traffic conditions HOV Lane AM and PM – 2045 (with modest mode shift)
    - HOV lane entrances and exits (from Exit 119 to Exit 131)

Evaluation of Alternatives (Group Exercise) and Report Back
Sandra Jobson led an exercise in which each table was given a set of the five handouts:

- Four handouts had sections of the corridor with diagrams of sections of the corridor with the General Use Third Lane Alternative and as the HOV Peak Hour Lane Alternative, with advantages, disadvantages and preliminary cost estimates of each.
- The fifth handout was a map of the corridor from Exit 119 to Exit 131 with HOV Peak Hour Lane Alternative entrance and exit locations.

Attendees were invited to review the handouts and participate in the discussion at one for the four group tables. A member of the consultant/NYSDOT team was at each table to facilitate discussions.

Participants were asked to review each transportation alternative and write group opinion notes on them. A member from each table reported their findings back to the entire group. Comments received from attendees are attached.

Next Steps

- Sandra Jobson said that the findings from this meeting will be presented at the next TPC meeting for consideration and will inform the direction of the study and the next public meeting.
- Ms. Jobson opened the floor to questions from stakeholders.
- She said there will be another Public Workshop II on December 4th in Sullivan County.

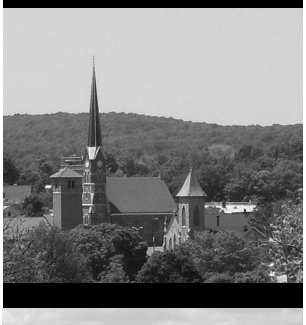
STEP 3

Public Workshop II

Sullivan County

12-4-12

Agenda



Route 17 Transportation Corridor Study

Public Workshop II

Rock Hill Fire Department
61 Glen Wild Road, Rock Hill, New York
Tuesday, December 4, 2012
6:00—7:30 PM

- Welcome and Introductions — 10 minutes
  Dan Coots, NYSDOT — *6:00 – 6:10 PM*
  Harold Baird, Town of Mamakating Supervisor, TPC Member
- Study Schedule & Public Involvement Process — 5 minutes
  6:10 – 6:15 PM
  Scott Geiger, PE, NYSDOT
- Public Workshop Purpose & Study Update — 5 minutes
  6:15—6:20 PM
  Scott Geiger, PE, NYSDOT
- Review of Feasible Alternatives — 15 minutes
  Bernie Kalus, P.E., HDR/WSP SELLS JV — *6:20 – 6:35 PM*
- Review of Interchange Scenarios — 15 minutes
  Scott Geiger, PE, NYSDOT — *6:35 – 6:50 PM*
  Luigi Casinelli, PE, PTOE, HDR/WSP SELLS JV
- Evaluation of Alternatives/ Scenarios & Report Back — 30 minutes
  Group Exercise — *6:50 – 7:20 PM*
- Next Steps — 10 minutes
  Scott Geiger, PE, NYSDOT — *7:20 – 7:30*

wwwwww.dot.ny.gov/rt17corridor

Route 17 Corridor Study
Public Workshop II

YOUR IDEAS COUNT!

Please join the New York State Department of Transportation (NYSDOT) to discuss the future of Route 17 in Orange and Sullivan counties.

Tuesday,
December 4, 2012
6:00 PM to 8:00 PM

Rock Hill Fire Department
61 Glen Wild Road
Rock Hill, NY

Participants will have the opportunity to:

- **Be updated on the status of the study since the last workshop.**
- **Provide valuable feedback on the feasible transportation alternatives.**
- **Share ideas on the study with the NYSDOT project team.**

The study has been examining the Route 17 corridor between Monticello, Exit 103 (Rapp Road) and Harriman, Exit 131 (New York State Thruway) to identify one or more transportation improvements that will address projected increases in population in the corridor and provide for anticipated levels of development.

If you have any questions, or are unable to attend but wish to provide input, please contact Ms. Sandra Jobson, Public Involvement Coordinator, at (845) 431-5853 or email sandra.jobson@dot.ny.gov

For more information visit: **www.dot.ny.gov/rt17corridor**

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For more information visit: www.dot.ny.gov/rt17corridor

Meeting Notes

Subject: Public Workshop II Meeting Summary

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 12/4/2012

Meeting Location: Rock Hill Fire Department
61 Glen Wild Road
Rock Hill, New York

Notes by: Arch Street Communications

Attendees:

- NYSDOT: Daniel Coots, Scott Geiger, Paul LoGallo, Mary McCullough, Bill Naylor
- HDR: Joe Izzo, Kovid Saxena, Luigi Casinelli
- WSP Sells: Bernie Kalus, Katie Craig
- Arch Street Communications: Nora Madonick, Ginger Mold
- TPC representative: Harold Baird

Project File: Meeting Minutes
Appendix:
List of attendees
Public Comments

Press at the event:

- YNN

Sign-in/Meeting Materials:

At the sign-in table each attendee was given an agenda, a copy of the *Corridor Vision and Goal Statements*, a Project Flow Chart and a yellow dot.

- Attendees were asked to place the yellow dot on the green corridor map to denote where they live (or work). (This map was the same as the one used in the Public Workshop II in Orange County, where attendees marked their locations in red.)

There were boards in the room for public viewing before and after the meeting including:

- Five boards with Transportation Concepts from Public Workshop I (for review purposes):
  - No Build - Baseline
  - General Use Third Lane
  - High Occupancy Vehicle (HOV) Lanes
  - Bus Rapid Transit (BRT) with transit oriented development
  - Light Rail with transit oriented development

- Three boards with Existing Conditions and Feasible Alternatives:
    - Sections of the Corridor with the General Use Third Lane
    - Sections of the Corridor with the HOV Lane
- Project Flow Chart and Public Involvement Activities

Welcome and Introductions:
Dan Coots welcomed stakeholders and introduced the study team.

Study Schedule & Public Involvement Process
Using the Corridor Study Flow Chart, Scott Geiger presented the public involvement process, the role of the TPC, the four-step process, deliverables and three public workshops.

Public Workshop Purpose and Study Update
Scott Geiger reviewed what has been done on the Study to date and described the exercises utilized in Public Workshop I to develop the Corridor Vision and Goals Statements. He described the five transportation concepts and the screening criteria which led to the development of the feasible alternatives.

Review of Feasible Alternatives
Bernie Kalus explained the feasible alternatives:

- General Purpose Third Lane – (from Exit 120 in Middletown to Exit 131)
- HOV Lane – (from Exit 120 in Middletown to Exit 131 with long-term potential for development of some version of BRT)
- Sullivan County – focus on access to corridor

Mr. Kalus presented:

- Projected Orange County Trip Growth Rate AM and PM – 2010 vs. 2045
- Projected Sullivan County Growth – 2045
- Projected traffic comparisons AM and PM – existing vs. 2045
- Projected traffic conditions AM and PM – 2045
- Projected traffic conditions Third Lane Alternative AM and PM – 2045
- Projected traffic conditions HOV Lane AM and PM – 2045 (with modest mode shift)
    - HOV lane entrances and exits (from Exit 119 to Exit 131)

Review of Interchange Scenarios
Scott Geiger presented three Interchange Scenarios in Sullivan County and explained the details of each. Large boards were available for public viewing and each table received a set of the scenarios.

- Scenario I; Safety Improvements (Maintain Current Access)
- Scenario II; Accommodate Existing and Known Development
- Scenario III; Accommodate Future Development and Preserve Quality of Life

Each scenario highlighted the interchanges and noted existing exits, with scenarios for safety improvements, exit closures and access improvements.

Evaluation of Feasible Alternatives/Scenarios (Group Exercise) and Report Back

Scott Geiger led an exercise in which attendees were invited to review the handouts and participate in the discussion at one of the group tables.
Each group was given a set of the five (5) handouts.

- There was a handout for each of the three scenarios (3)
- Diagrams of the corridor with the General Use Third Lane Alternative and as the HOV Peak Hour Lane Alternative, with advantages, disadvantages and preliminary cost estimates of each (1)
- A map of the corridor from Exit 119 to Exit 131 with HOV Peak Hour Lane Alternative entrance and exit locations (1)

A member of the consultant/NYSDOT team was at each table to facilitate discussions. Participants were asked to review each transportation alternative and write group opinion notes on them. A member from each table reported their findings back to the entire group. Comments received from attendees are attached.

Next Steps

- Dan Coots opened the floor to questions from stakeholders.
- Mr. Coots said that the findings from this meeting will be presented at the next TPC meeting for consideration and will inform the direction of the study and the next public meeting.

Route 17 Transportation Corridor Study
Public Workshop II Combined Results

Public Workshop II -- Nov. 29, 2012 Orange County and Dec. 4, 2012 Sullivan County Transportation Alternatives Exercise		
Alternatives:	**Number of times mentioned**	**Comments**
HOV Peak Hour Lane Alternative	**3**	Concerns on underutilized HOV lanes
	3	Funding Constraints
	3	Regional Connectivity; HOV needs to be connected to a regional network to be successful
	2	HOV does not seem to be warranted or beneficial.
	2	Need expansion of Park & Ride Lots. No parking available to encourage more users of HOV lanes.
	2	At Woodbury Outlets - Build improvements to fit HOV.
	1	Speed concerns with HOV and General use lane
	1	Consolidate interchanges at Goshen; eliminate 124 or 125. Goshen concerns are access to Hatfield Lane and West Main Street.
	1	HOV mode shift—may be advantageous to collect tolls - Opportunity for High Occupancy Toll (HOT) Lane
	1	Exit 120: Underpass between Galleria Mall & Orange Plaza is unpaved and underutilized. Improving this underpass would alleviate congestion on Route 211 and Route 17.
	1	Enforcement concerns
	1	Reducing congestion
General Use Third Lane Alternative	**5**	General use lane is more cost effective; preferred
	3	Interchanges & Connectivity to Local System. Priority of Exit 131 reconstruction and status. Are we fixing local connections? Interchange issues/improvements; coordinate with proposed projects, especially at Exit 131. Other concerns include questions about changes to intechange 125 and 127, safety issues at 126, and connectivity to Goshen at Exits 123 through 125. Have a general approach and need to improve roadway collectors/distribution system; consideration to trips and travel time. Concerns with underpass on Matthews Street on the north end.
	2	Funding constraints
	1	Need expansion of park & ride lots with express bus service station at Harriman and through bus service beyond Harriman
	1	Potential widening of bridges would be required to accommodate third lane and Right-of-Way cases.
	1	Origin and destination survey with travel times should be associated with trips between interchanges.
	1	Take additional R.O.W. for future 3rd and/or HOV alternative.
	1	Build third lane and make provision for future HOV.
	1	Benefit - more flexible utilization, i.e. can leave lane around slow traffic.
	1	Supports requirements for Interstate
	1	Eliminating toll booths would dramatically increase/improve traffic flow.
	1	General approach to improvements
	1	Look to the future of economic development in Sullivan County, making commuting to Rockland and Westchester county a viable possibility.
	1	Want three multi-use lanes from Harriman to Exit 103 - even if Sullivan's third lane comes years after Orange County's

Route 17 Corridor Study Public Workshop II -- December 4, 2012 Planning Scenario Exercise	
Planning Scenario I - Safety Improvements (Maintain Current Access)	Exit 104 should be expanded two lanes in each direction, to avoid backup along 86 & 17B
	Keep most exits open and repair as needed. Keep all open when under repair
	To maintain existing business and bring new business, we would need to upgrade exits for safer and better access.
	Don't want huge development - keep the area rural
Planning Scenario II - Accommodate Existing and Known Development	Liked the middle of the road approach presented in scenario two. Closing exits 108 and 110… leaving exit 111 open to serve those currently using exits 110 and 111.
	Improve 110 access
	Keep exits open when under construction
	Interchange 115 - Full use for development
	Better access to this part of Sullivan County will promote better economic opportunity and increase in property values whereby creating more tax revenue for the town and schools. Other benefits could be better access for safety personnel and also further economic enhancements for Bloomingburg.
	We anticipate development along route 17-B to run parallel to the timeframe of this study.
Planning Scenario III - Accommodate Future Development & Preserve Quality of Life	May not be space for interchange improvement at 109.
	Don't close any interchanges or combine 110 and 111 in a new location if they can be improved.
	Focus on density of housing in this area before closing 110 or 111; Perhaps improve or combine these.
	Exit 111 could close if we keep Exit 109 and 110 in place. Modify Exit 110 to handle Exit 111 traffic.
	Exits 110, 111 both needed for local traffic to get around, also for local business
	Exit 104 on-off capacity to Rte. 17B needs to be increased (capacity on 17 B needs to be increased.)
	Scenario III seems most fiscally responsible: 1-Less maintenance 2-Safety - it is important to close un-engineerable exits that pose redundancy 3- Good news for the impact on the environment, there are rare rhododendrons indigenous to Exit 111 - close it!
	Close Exit 108 - There are many lakes in the area that will benefit from less traffic - 108 is a redundant exit which poses no significant purpose other than to introduce slow moving traffic to a high-speed environment
	Closing of the exits through Rock Hill would have a negative effect on the county.
	Exits 110 and 105 should remain the same
	Exit 115 could use additional growth
	Exit 114 needs to have a full interchange.
	Keep Exit 111 open, as it is access to many different roads such as Emerald Green residents, and people on Wolf Lake and Yankee Lake.
	Exit 110 people can use either 109 or 111 as it is in the middle of both.

STEP 3

TPC Meeting #5

12-19-2012

Agenda

Route 17 Transportation Corridor Study

Transportation Partnering Committee (TPC)

Orange-Ulster BOCES Carl P. Onken Conference Center
53 Gibson Road, Goshen, New York
Wednesday, December 19, 2012
6:00—7:00 PM

- Welcome and Meeting Purpose — 5 minutes
  Sandra Jobson, RA, RLA, AICP, NYSDOT — *6:00 – 6:05 PM*
- Review Public Comment on Transportation Alternatives — 10 minutes
  Group Discussion — *6:05 – 6:15 PM*
- Review Public Comment on Sullivan County Corridor Access Scenarios — 15 minutes
  Group Discussion — *6:15 – 6:30 PM*
- Review of Orange County Corridor Access Scenarios — 25 minutes
  Group Discussion — *6:30 – 6:55 PM*
- Study Next Steps — 5 minutes
  Sandra Jobson, RA, RLA, AICP, NYSDOT — *6:55 – 7:00 PM*

Meeting Notes

Subject: TPC Meeting Summary

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 12/19/2012

Meeting Location: Administrative Conference Room
Orange-Ulster BOCES
53 Gibson Rd.
Goshen, NY

Notes by: Arch Street Communications

Attendees:

- NYSDOT: Daniel Coots, Sandra Jobson, Scott Geiger
- HDR: Kovid Saxena, James Brown, Luigi Casinelli
- WSP SELLS: Bernie Kalus
- Arch Street Communications: Nora Madonick
- TPC:
    - Harold Baird, Town of Mamakating
    - John Burke, Town of Woodbury
    - John Czamanske, Orange County Planning Department
    - Neal Halloran, Town of Goshen
    - Kristen Resnikoff, New York State Thruway Authority
    - Brian Smith, Village of Monroe

Project File: Meeting Minutes

Topics Discussed:

Welcome and Meeting Purpose

Sandra Jobson welcomed the Transportation Partnering Committee (TPC) members. She stated the purpose of the meeting was to present the summary of Public Workshop II Orange and Sullivan County and get feedback from the TPC on the alternatives and scenarios presented and on public comments.

- Ms. Jobson shared the results of the Sullivan County workshop saying attendees there placed greater priority on access to Route 17 than congestion levels on the facility. The team wanted to encourage workshop attendees to think corridor–wide rather than focusing only on their own interchanges.
- John Czamanske – commented on the meeting notes from the previous TPC meeting:
    - His comments regarding “Lower case” corridor vs. “upper case” corridor were meant figuratively.

- Asked that NYSDOT share comments received on Technical Memorandum #1 before posting. Ms. Jobson said she will share those on December 20.
- Requested time for Orange County Planning Department to review growth projections and compare with their model.

Review Public Comments on Transportation Alternatives
Ms. Jobson said that given the HOV Lane Alternative vs. the General Use Third Lane Alternative, the public preferred the General Use Third Lane Alternative (and it could eventually become an HOV lane , if warranted). She noted that there were comments indicating the need for additional park-and-ride lots along Route 17, and that a "hard look" should be given for the spacing and needed modifications to existing interchanges.

Review Public Comments on Sullivan County Corridor Access Scenarios
Ms. Jobson reviewed the Sullivan County Public Workshop II presentation and planning exercise.

- Ms. Jobson described three planning scenarios for the modification of interchanges in Sullivan County that were reviewed during Public Workshop II:
  - Scenario I – Safety improvements (maintain current access)
  - Scenario II – Accommodate existing and known development
  - Scenario III – Accommodate future development and preserve quality of life (closing some exits and preserving others)
- It was indicated that each Sullivan County scenario needed to be developed to the same level as the scenarios in Orange County described below.
- The study team will incorporate comments and refine to one or two scenarios.
- Ms. Jobson asked Mr. Baird to send her the thinking of the participants who were at his table during the Sullivan County workshop.
- Ms. Jobson asked the team to distribute their comments to Scott Geiger.
- Mr. Czamanske recommended emailing the scenarios to other TPC members; Ms. Jobson said she would do so.

Review Orange County Corridor Access Scenarios
Bernie Kalus and Luigi Casinelli described the two interchange modification scenarios for Route 17 in Orange County using handouts disseminated to the TPC members. One option was presented for Scenario 1. For Scenario 2, Route 17 was divided into two "Areas": "Area 1" that involved modifications to interchanges 127, 127, 128, and 130, and "Area 2" which involved modifications to Interchanges 124, 125 and 126. The two planning scenarios for modifications to interchanges in Orange County, based, in part, on scoping activities previously completed for the I-86 conversion project, and which included adding existing park and ride within Orange County were introduced.

  - Scenario I – Safety improvements (maintain current access)
  - Scenario II – Accommodate existing and known development
- Scenario I - Safety improvements (maintain current access) – discussion included:
  - Exit 131 – there is currently a project planned that will address safety issues at this interchange
  - Exit 130/129 – has crash issues
  - Goshen – multiple ramps contribute to crash issues
  - I-84 area – The Exit 122 project is already planned to address safety issues

- Scenario II – Accommodate existing and known development – discussion included:
    - The two areas with significant potential, both with crash issues:
        - Blooming Road, Chester, Camp LaGuardia parcel, and others
        - Goshen area:
            - Better access to downtown
            - Close portion of Exit 125 and improve Exit 124

Mr. Kalus presented the three options for interchange modifications in Area 1, all three of which included the elimination of Exit 129 and the same improvements to Exit 130, but each included different proposed modifications for Exits 127 and 128.

- Option 1 – discussion included:
    - Exit 128
        - Full interchange
        - Bring the cloverleaf to standards heading west; diamond interchange
        - Right-of-way access issue (thru building)
    - Close Exit 129
        - Improved alignment of Museum Village Road
        - Major improvements of road; signalize
        - Museum Village Road; fixing Orange and Rockland Road angle
        - Tie-in with improvements planned for Larkin Drive West
        - Kings Highway introduction of major problems
        - Focusing everything onto Exit 130; when making changes, need to focus on areas and look at related impacts.
    - Mr. Czamanske commented that a full interchange at 128 was always questioned. He asked if Exit 128 the right one for expansion. Ms. Jobson asked why not expand Exit 127. Mr. Geiger stated connectivity is better at Exit 128. Mr. Czamanske said that this would promote development where there is none.
- Option 2 – discussion included:
    - At Exit 128 instead of a diamond interchange there would be another loop. This would require relocation of 17M (and eliminate right-of-way issue).
- Option 3 – discussion included:
    - Exit 128 would be a diamond interchange with some relocation of 17M
    - Connects County Route 51 and Lehigh Road
    - Creates opportunity for public/private partnership to build a connector to incoming development
    - Mr. Czamanske expressed concern about promoting growth at all.
        - Mr. Kalus said that growth can happen anyway, with negative impact if something is not done with Kings Highway.
        - Ms. Jobson stated that the scenarios can make it smarter development
        - Mr. Halloran stated that from the corridor perspective, future growth addresses wider issues.
        - Mr. Czamanske asked Ms. Jobson if she would attend an Orange County technical meeting; she agreed to attend.
    - Mr. Geiger said the idea is to create a road map for the future, to know where we are going.

  - Ms. Jobson clarified that she wanted to make sure everyone was on the same page at this time; the environmental work still has to be done.

Mr. Casinelli stated that public input contributed human use issues and the base maps were revised accordingly. He presented the option offered for Area 2: Exit 123 to 125 which came out of the I-86 and Orange County workshops. Discussion included:

- Mr. Kalus explained the option for Goshen – the public wants better access to downtown. The ramps predate development and were never updated.
- Westbound – close Exit 125 and relocate Exit 124
- Eliminate weave completely
- Lengthen weave at Exits 123 and 124 – connects Route 17M into Matthew Street
- Mr. Czamanske asked if these could be alternatives. Ms. Jobson said no, they are scenarios – it is a study, not a project.
- Mr. Casinelli said that the cost of the proposed improvements would vary depending on whether or not they are included in the development of a new general purpose or HOV lane
- Westbound ramps at Exit 124 have been moved to match up with existing environmental considerations, such as wetlands.
- Dan Coots said that the public has been very realistic, in line and consistent with the scenarios.
- Discussion on park and ride lots included:
  - Ms. Jobson said the team should be looking at closed businesses as sites for new or expanded park and ride facilities
  - Mr. Coots indicated that new or expanded park-and-ride facilities could be developed at parking facilities at churches or other uses that are currently underutilized during weekdays
  - It was indicated that individual interchange improvements and new or enhanced park-and-ride facilities could have separate utility allowing one or more of the proposed improvements to be developed separately from overall corridor concepts
  - It was noted that transit ridership is up across the board since Irene
  - Mr. Casinelli said the team is identifying park and ride lots across the corridor and was seeking spacing approximately every two to three miles.
  - Ms. Jobson requested that Jim Brown should provide guidance from available literature on locating park-and-ride facilities
  - Mr. Czamanske asked about looking at where interchanges are now – (no access). The county governing body wants traffic coming into them; it does not want traffic going out.
  - Ms. Jobson indicated that the spacing of park-and-ride lots would be a topic of discussion at the next public workshops in Orange and Sullivan counties
  - Mr. Casinelli said the team may want to locate the park and ride lots at an underutilized interchange to manage traffic.
  - Mr. Czamanske suggested looking at where Village of Goshen puts fill.
  - Mr. Geiger said that once the locations of the interchanges and link-ups are figured out, it will be clearer where to put the park and ride lots.
  - Mr. Coots said that he had worked with a bus company to drive demand at Exit 119, redesigning service to redirect demand.
  - Mr. Geiger said there are no park and ride lots at 17K – a park and ride may move a little traffic off the interchange and relieve congestion around it.

Study Next Steps

Ms. Jobson concluded saying the study is advancing into Step IV with the final recommendation, interchange concepts and General Use Third Lane as the preferred alternative.

- TPC meeting January 30, 2013
    - Time: 6:00 PM to 7:30 PM
    - Place – O/U BOCES, Carl P. Onken Conference Center, 53 Gibson Rd., Goshen, NY

STEP 3

Meetings with

Orange County Legislature Technical Committee

and

Orange County

Department of Planning

1-15-13

Meeting Notes

Subject: Meeting Summary for Meeting with Orange County Planning Department

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 1/15/2013

Meeting Location: Orange County

Notes by: WSP SELLS

Attendees:

- NYSDOT: Daniel Coots
- WSP SELLS: Bernie Kalus

Project File: Meeting Minutes

Topics Discussed:

The focus of this meeting was on the improvements we showed at Exit 128.

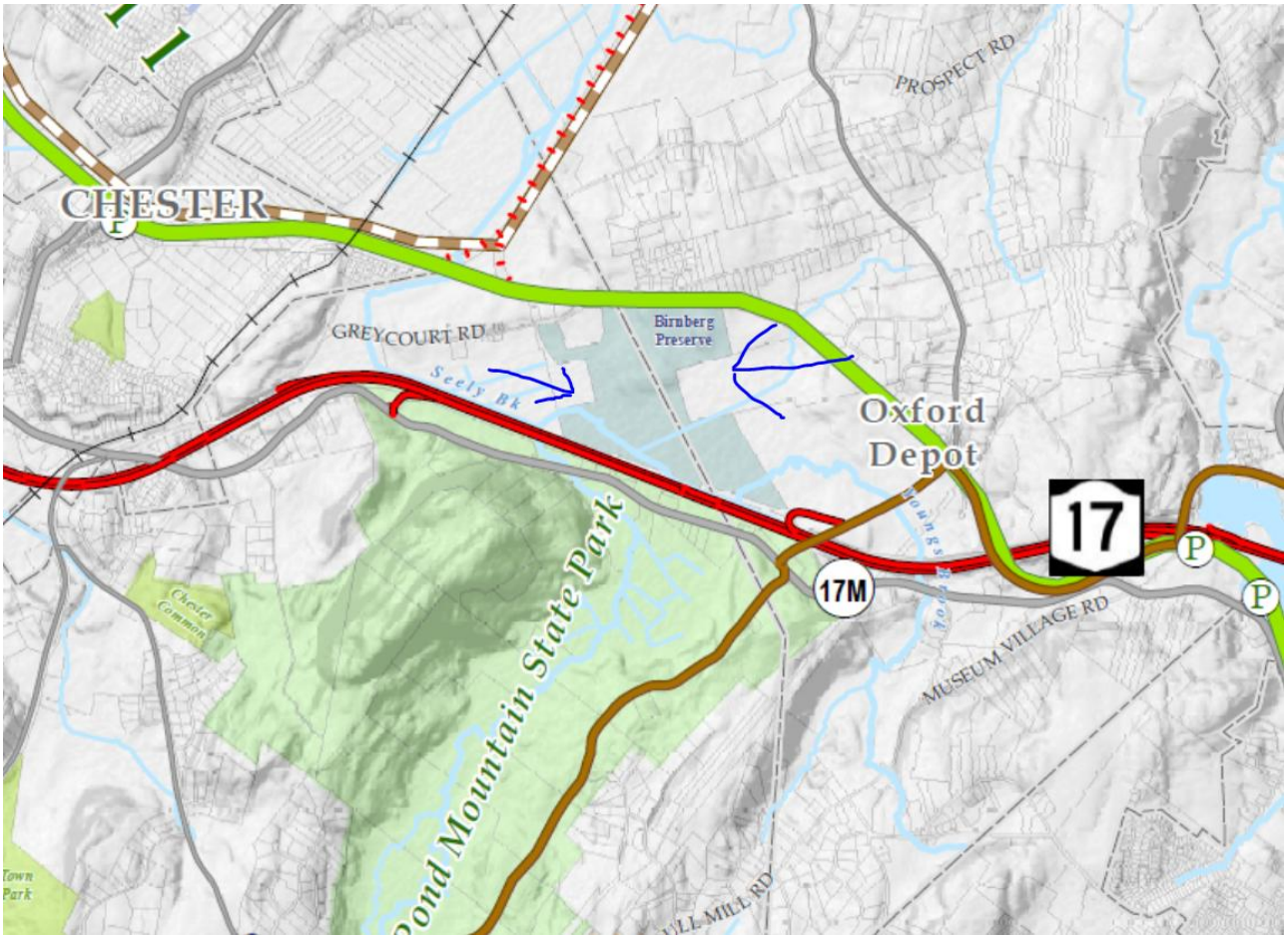
Attendees felt that the interchange should be at 127 since there is a state park and a newly formed bird preserve right around Exit 128 (see figure below).

They mentioned that County Route 51 was a designated scenic route and that the original I-86 study showed the full interchange at Exit 127.

Some of the group felt that interchanges should be located at both 127 and 128 since it is similar spacing to the ramp configuration shown in Area 2. Other items that were discussed included:

- Lack of ITS Infrastructure being a major disadvantage for the corridor
- Need for truck facilities in the corridor
- Access management provisions should be included with the improvements planned at Exit 130.

We are drawing up some options for making a full interchange at Exit 127 and also what an improved Kings Highway intersection could look like.


CHESTER
PROSPECT RD
GREYCOURT RD
Seely Bk
Birnberg Preserve
Oxford Depot
17
17M
P
P
Chester Common
Town Park
Pond Mountain State Park
MUSEUM VILLAGE RD
MILL RD

Meeting Notes

Subject: Meeting Summary for Meeting with Orange County Technical Committee

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 1/15/2013

Meeting Location: Orange County

Notes by: WSP SELLS

Attendees:

- NYSDOT: Daniel Coots
- WSP SELLS: Bernie Kalus

Project File: Meeting Minutes

Topics Discussed:

Below is a summary of the major issues discussed at the presentation to the Orange County Technical Committee. There were no issues raised about the location or configuration of the interchange improvements that were presented.

The following were suggestions and comments made by the members after the presentation:

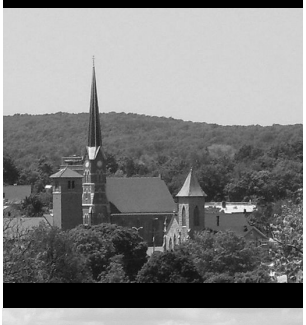
- Consider using stamped concrete or other materials for the median barrier to try and improve the visual aesthetics of the corridor.
- The corridor should include scenic rest areas and truck facilities.
- The truck facilities should be carefully located since some of the businesses in the village centers rely on the existing truck traffic. Suggestions were made for better signing to direct truckers to the existing businesses that can serve their needs.
- A policy on digital billboards should be developed since Wallkill is going to start using them this year.
- ITS infrastructure is needed in the corridor.

STEP 4

TPC Meeting #6

1-30-2013

Agenda



Route 17 Transportation Corridor Study

Transportation Partnering Committee (TPC)

Orange-Ulster BOCES Carl P. Onken Conference Center
53 Gibson Road, Goshen, New York
Wednesday, January 30, 2013
6:00—7:00 PM

- Welcome and Meeting Purpose — 5 minutes
  Sandra Jobson, RA, RLA, AICP, NYSDOT — *6:00 – 6:05 PM*
- Update on Study Activities And Study Schedule — 5 minutes
  Sandra Jobson, RA, RLA, AICP, NYSDOT — *6:05 – 6:10 PM*
- Review of Tech. Memo. #2 — 15 minutes
  Group Discussion — *6:10 – 6:25 PM*
- Review of:
  Preferred Corridor Alternative — 30 minutes
  Interchange Scenarios
  Potential Park & Ride Locations
  Group Discussion — *6:25 – 6:55 PM*
- Next Step - Public Workshop III — 5 minutes
  Sandra Jobson, RA, RLA, AICP, NYSDOT — *6:55 – 7:00 PM*

Meeting Notes

Subject: TPC Meeting Summary

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 1/30/2013

Meeting Location: Carl P. Onken Center Conference Room
Orange-Ulster BOCES
53 Gibson Rd.
Goshen, NY

Notes by: Arch Street Communications

Attendees:

- NYSDOT: Daniel Coots, Sandra Jobson, Scott Geiger
- HDR: Joe Izzo, James Brown, Luigi Casinelli, Einah Pelaez
- WSP SELLS: Bernie Kalus
- Arch Street Communications: Ginger Mold
- TPC:
    - Harold Baird, Town of Mamakating
    - John Burke, Town of Woodbury
    - John Czamanske, Orange County Planning Department
    - Sharon Jankiewicz, Town of Thompson
    - Kristen Resnikoff, New York State Thruway Authority
    - Brian Smith, Village of Monroe
    - Chris Viebrock, Orange County Planning Department

Project File: Meeting Minutes

Welcome and Meeting Purpose

Sandra Jobson welcomed the Transportation Partnering Committee (TPC) members. She stated the purpose of the meeting was to present new information on the planning scenarios for Orange and Sullivan Counties and to get feedback from the TPC on the scenarios presented as well as on Technical Memorandum #2.

- Ms. Jobson asked for TPC member volunteers to assist in the welcome and introductions at the upcoming public workshops.
- John Czamanske thanked Dan Coots and Bernie Kalus for their January 15th presentations to the Orange County Technical Committee and the Orange County Planning Department.
- Ms. Jobson said that the comments collected at the January 15th meetings will be treated as one of the tables at Public Workshop III and incorporated into the meeting summary report.

Update on Study Activities and Study Schedule
Ms. Jobson stated that the progress on the interchange scenarios will be discussed in detail tonight. The study is on schedule. Public Workshop III will be held at the end of February/beginning of March. A TPC meeting will follow to discuss the results of the Public Workshop III. The Project Study Report (PSR) will have a review period of 30 days before the study is finalized.

Review of Technical Memorandum #2
Ms. Jobson gave a synopsis of Technical Memorandum #2 stating that it was a narrative report of study activities at the public workshop and TPC levels. It does not cover environmental impacts. The graphics and narrative are directly from the presentations and handouts from the meetings.

Review of Preferred Corridor Alternative
Ms. Jobson said that the study is advancing with the final recommendation, interchange concepts and General Use Third Lane as the preferred alternative.

Review Interchange Scenarios – Sullivan County
Mr. Casinelli reviewed the planning scenarios for the Sullivan County Public Workshop III presentation and planning exercise. He described the three interchange modification scenarios for Route 17 in Sullivan County using handouts disseminated to the TPC members.

- Planning Scenario I – Safety improvements (maintain current access) - identifies:
  - Safety improvements
  - Existing interchanges
- Scenario II – Accommodate existing and known development - identifies:
  - Safety improvements
  - Access improvements
  - Existing interchanges
  - Proposed park & ride locations
- Scenario III – Accommodate future development and preserve quality of life (closing some exits and preserving others) - identifies:
  - Proposed interchanges to be closed
  - Access improvements
  - Existing interchanges
  - Proposed park & ride locations

  Discussion: Ms. Jankiewicz said that residents may object if Exit 111 is closed and Exit 110 remains open. The lake communities do not like the exits there.
- Area 1: 103 EB & WB – identifies:
  - Potential new and improved roadways, and removal of roadways and combine the interchange
  - Improvements on local roadways and at the interchange
- Area 2 Exit 104 – identifies:
  - New and improved roadways and removal of roadways
  - Proposed park & ride locations

  Discussion included:
    - Simplify this interchange and minimize impacts to local business.
    - The possibility of creating a reversible lane on the bridge during event arrival and departure times to remove the bottleneck at the bridge.

- Area 3: Exit 107 to Exit 108 – identifies:
    - Removal of Exit 108 and add new roadway

  Discussion: Mr. Baird recommended leaving the local road at exit 108; 108 could still be considered for emergency access
- Area 4: Exit 110 to 111 – identifies:
    - Removal of roadway at Exit 11 to close the exit
    - Improvement to local roads (including Wurtsboro Mountain Rd., Lake Louise Marie Rd. and Trailer Park)

  Discussion included:
        - Ms. Jankiewicz said that the lake communities may want Exit 111 to have a full interchange – they want to close 110; residents don't want exits in their back yards.
        - Mr. Geiger said that this recommendation came from the public comments during the Sullivan County Public Workshop II.
        - Ms. Jobson said that for Area 4 there need to be two options. On the key map both exits should be shown as red (closing both Exit 110 and Exit 111). This can be presented at the public workshop and more feedback will come from stakeholders.
- Area 5: Exit 114 to Exit 116 Option 1 – identifies:
    - Improved roadways (Mamakating Rd. to Stone School House Rd., to Petticoate Lane to Rd. to Burlingham Rd.), and a new bridge on Mamakating Rd.
    - Removal of some roadways as exits close

  Discussion: Mr. Baird noted that this option would direct traffic through the village.
- Area 5: Exit 114 to Exit 116 Option 2 – identifies:
    - Improved roadway: Roosa Gap Rd.
    - Removal of some roadways as exits close

  Discussion included:
        - This option would minimize growth in town and redirect traffic on service road.
        - Ms. Jobson said that for the workshop, the names of the two options will be switched. This option will be Option 1 and the previous one will be Option 2.

Review Interchange Scenarios – Orange County

Mr. Kalus reviewed the planning scenarios for the Orange County Public Workshop III presentation and planning exercise. He described the two interchange modification scenarios for Route 17 in Orange County using handouts disseminated to the TPC members. One option was presented for Scenario 1. For Scenario 2, Route 17 was divided into two "Areas": "Area 1" that involved modifications to interchanges 127, 128, 129 and 130, and "Area 2" which involved modifications to Interchanges 123, 124 and 125.

- Planning Scenario I – Safety improvements (maintain current access). Identifies locations for:
    - Safety improvements
    - Existing interchanges
    - Existing park & ride locations
    - Proposed park & ride locations
    - Bus depot
- Scenario II – Accommodate future development and preserve quality of life (closing some exits and preserving others). Identified locations for:

- Proposed interchanges to be closed
- Access improvements
- Existing interchanges
- Proposed park & ride locations
- Proposed park & ride locations
- Bus depot

Mr. Kalus presented the two options for interchange modifications in Area 1, both of which included the elimination of Exit 127 and Exit 129, but each included different proposed modifications for Exit 128. He also presented revisions to Area 2; Exits 123, 124 and 125.

- Area 1: Exit 127 to Exit 130; Option 1 – identifies:
  - New roadway
  - Improve roadway (17 M)
  - Remove roadway
  - Improve Geometry /safety

  Discussion included:
    - Local roadway improvements are for connectivity
    - Ms. Jobson asked that the call-out bubble (with the enlargement of the improvement area) be removed
    - She asked that the black lines around the "Improve Geometry Safety" be removed
    - She asked that the roads for improvement be in a color that will stand out more than the present green color; use orange or yellow.
    - "Widen Route 208 to two lanes" should come off
    - The above revisions are the same for Area A, Option 2 as well.
- Area 1: Exit 127 to Exit 130; Option 2 – identifies:
  - New roadway
  - Improve roadway
  - Remove roadway
  - Improve Geometry /safety (museum Village Rd. and Route 208)
- Area 2: Exit 123 to Exit 130; Option – identifies:
  - New roadway
  - Remove roadway

Review Potential Park & Ride Locations

Potential park & ride locations are identified on the maps and will be an item for discussion from which to glean feedback from stakeholders at the Public Workshop III.

Study Next Steps

Ms. Jobson concluded saying the information from tonight's discussion will be presented to stakeholders during the Public Workshop III.

- TPC volunteers for the Public Workshop III are as follows:
  - Sullivan County - Sharon Jankiewicz and Harold Baird
  - Orange County - Brian Smith and Chris Viebrock
- Revised dates for the meetings were discussed and will be decided upon further input from TPC members.

STEP 4

Public Workshop III

Sullivan County

2-26-13

Agenda

Route 17 Transportation Corridor Study

Public Workshop III

Rock Hill Fire Department
61 Glen Wild Road, Rock Hill, New York
Tuesday, February 26, 2013
6:30—8:00 PM

- Welcome and Introductions — 10 minutes
  Dan Coots, NYSDOT — *6:30 – 6:40 PM*
  Sharon Jankiewicz, Town of Thompson Councilwoman
  Harold Baird, Town of Mamakating Supervisor

- Study Update & Purpose of Workshop — 5 minutes
  6:40 – 6:45 PM
  Scott Geiger, P.E., NYSDOT

- Overview of Preferred Alternative — 10 minutes
  Scott Geiger, P.E., NYSDOT — *6:45 – 6:55 PM*

- Overview of Sullivan County Interchange Planning Scenarios — 10 minutes
  6:55 – 7:05 PM
  Luigi Casinelli, P.E., HDR/WSP SELLS JV

- Overview of Orange County Interchange Planning Scenarios — 10 minutes
  7:05 – 7;15 PM
  Luigi Casinelli, P.E., HDR/WSP SELLS JV

- Evaluation of Preferred Alternative & Interchange Scenarios — 40 minutes
  7:15 – 7:55 PM
  Group Exercise & Report Back

- Next Steps — 5 minutes
  Scott Geiger, P.E., NYSDOT — *7:55– 8:00 PM*

www.dot.ny.gov/rt17corridor

Route 17 Corridor Study
Public Workshop III

YOUR IDEAS COUNT!

Please join the New York State Department of Transportation (NYSDOT) for the final public workshops of the study to discuss the future of Route 17 in Orange and Sullivan counties.

There will be two opportunities to attend:

Sullivan County:
Tuesday, February 26, 2013
6:30 PM to 8:00 PM
Rock Hill Fire Department
61 Glen Wild Road, Rock Hill, NY

Orange County:
Thursday, March 7, 2013
6:30 to 8:00 PM
Orange/Ulster BOCES
Emmanuel Axelrod Education Center
53 Gibson Road, Goshen, NY

Participants will be updated on the status of the study since the last workshop and will have the opportunity to:

- Continue to share ideas on the study with the TPC and the NYSDOT project team
- Provide valuable feedback on the study findings
  - ➔ Corridor preferred alternative
  - ➔ Potential interchange improvements

The study has been examining the Route 17 corridor between Monticello, Exit 103 (Rapp Road) and Harriman, Exit 131 (New York State Thruway) to identify transportation improvements that will address projected increases in population in the corridor and provide for anticipated levels of development.

If you have any questions, or are unable to attend but wish to provide input, please contact **Ms. Sandra Jobson**, Public Involvement Coordinator, at (845) 431-5853, or email **sandra.jobson@dot.ny.gov**

For more information visit: **www.dot.ny.gov/rt17corridor**

Route 17 Corridor Study Public Workshop III

YOUR IDEAS COUNT!

Please join the New York State Department of Transportation (NYSDOT) for the final public workshops of the study to discuss the future of Route 17 in Orange and Sullivan counties.

Participants will be updated on the status of the study since the last workshop and will have the opportunity to:

- ⇨ Continue to share ideas on the study with the TPC and the NYSDOT project team
- ⇨ Provide valuable feedback on the study findings
  - → *Corridor preferred alternative*
  - → *Potential interchange improvements*

There will be two opportunities to attend:

SULLIVAN COUNTY:
TUESDAY, FEBRUARY 26, 2013
6:30 PM to 8:00 PM
Rock Hill Fire Department
61 Glen Wild Road, Rock Hill, NY

Orange County:
Thursday, March 7, 2013
6:30 to 8:00 PM
Orange/Ulster BOCES
Emmanuel Axelrod Education Center
53 Gibson Road, Goshen, NY

The study has been examining the Route 17 corridor between Monticello, Exit 103 (Rapp Road) and Harriman, Exit 131 (New York State Thruway) to identify transportation improvements that will address projected increases in population in the corridor and provide for anticipated levels of development.

If you have any questions, or are unable to attend but wish to provide input, please contact Ms. Sandra Jobson, Public Involvement Coordinator, at (845) 431-5853, or email sandra.jobson@dot.ny.gov

For more information visit: www.dot.ny.gov/rt17corridor

Meeting Notes

Subject: Public Workshop III Meeting Summary

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 2/26/2013

Meeting Location: Rock Hill Fire Department
61 Glen Wild Road
Rock Hill, New York

Notes by: Arch Street Communications

Attendees:

- NYSDOT: Daniel Coots, Scott Geiger, Paul LoGallo
- HDR: Joe Izzo, James Brown, Einah Pelaez, Luigi Casinelli
- WSP Sells: Rebecca Novak
- Arch Street Communications: Ginger Mold, Anne Marie Corbalis
- TPC representative: Harold Baird and Sharon Jankiewicz

Project File: Meeting Minutes

Appendix:
Public comment summary report

Press at the event:

- Mid Hudson News

Sign-in/Meeting Materials:
At the sign-in table each attendee was given an agenda, a copy of the *Corridor Vision and Goal Statements*, a Project Flow Chart and a yellow dot. Attendees were asked to place a yellow dot on the Study Corridor Map to denote where they live (or work).

There were boards in the room for public viewing before and after the meeting including:

- Preferred Corridor Alternative
- Set of Sullivan County Planning Scenarios & Concepts
- Set of Orange County Planning Scenarios & Concepts
- Existing Conditions and Feasible Alternatives:
    - Section of the corridor with existing conditions
    - Section of the corridor with the General Use Third Lane
    - Section of the corridor with the HOV Lane

- Transportation Concepts from Public Workshop I (for review purposes):
  - No Build - Baseline
  - General Use Third Lane
  - High Occupancy Vehicle (HOV) Lanes
  - Bus Rapid Transit (BRT) with transit oriented development
  - Light Rail with transit oriented development
- Project Flow Chart and Public Involvement Activities

Welcome and Introductions:
Dan Coots welcomed stakeholders and introduced the study team and TPC representatives.

Study Update and Purpose of Public Workshop
Scott Geiger reviewed what has been done on the Study to date and described the exercises utilized in Public Workshops I and II to develop the Corridor Vision and Goals Statements, the five transportation concepts, the development of the feasible alternatives, and finally the preferred corridor alternative.

Overview of Preferred Alternative
Scott Geiger explained the preferred alternative – the General Use Third lane.

Overview of Sullivan County Interchange Planning Scenarios
Using maps as visuals, Scott Geiger explained the following for later group exercise and discussion:

- Planning Scenario I: Safety Improvements (Maintain Current Access)
- Planning Scenario II: Accommodate Existing and Known Development
- Planning Scenario III: Accommodate Future Development & Preserve Quality of Life
- Planning Exercise - Area 1: Exit 103 EB & WB Option
- Planning Exercise - Area 3: Exit 107 to Exit 108 Option
- Planning Exercise - Area 4: Exit 110 to Exit 111 Option
- Planning Exercise - Area 5: Exit 114 to Exit 116 Option I of 2
- Planning Exercise - Area 5: Exit 114 to Exit 116 Option 2 of 2

Overview of Orange County Interchange Planning Scenarios
Using maps as visuals, Scott Geiger explained the following for later group exercise and discussion:

- Planning Scenario I: Safety Improvements (Maintain Current Access)
- Planning Scenario II: Accommodate Existing and Known Development
- Planning Exercise - Area 1: Exit 127 to Exit 130 Option 1 of 2
- Planning Exercise - Area 1: Exit 127 to Exit 130 Option 2 of 2
- Planning Exercise - Area 2: Exit 123 to Exit 125 Option

Evaluation of Preferred Alternative & Interchange Scenarios (Group Exercise)
Scott Geiger led an exercise in which participants were asked to participate in the discussion and review the preferred alternative and each of the Sullivan and Orange County Interchange Planning Scenarios & Concepts (listed above) and answer group opinion questions on each. A member of the

consultant/NYSDOT team was at each table to facilitate discussions. A representative from each table reported their table's consensus back to the entire group.

Comments received from attendees will be made an appendix to this report.

Next Steps

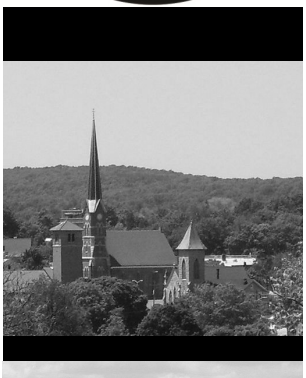
- Final Public Workshop III in Orange County will be held in March, 2013.
- Final TPC meeting will be held March 27, 2013

STEP 4

Public Workshop III

Orange County

3-19-13



Agenda

Route 17 Transportation Corridor Study

Public Workshop III

Orange-Ulster BOCES Emanuel Axelrod Education Center
53 Gibson Road, Goshen, New York
Tuesday, March 19, 2013
6:30—8:00 PM

- Welcome and Introductions — 10 minutes
  Dan Coots, NYSDOT — *6:30 – 6:40 PM*
  Brain Smith, Village of Monroe Highway Superintendent
  Chris Viebrock, P.E., Orange County Deputy Commissioner Engineering

- Study Update & Purpose of Workshop — 5 minutes
  6:40 – 6:45 PM
  Scott Geiger, P.E., NYSDOT

- Overview of Preferred Alternative — 10 minutes
  Bernie Kalus, P.E., HDR/WSP SELLS JV — *6:45 – 6:55 PM*

- Overview of Orange County Interchange Planning Scenarios — 10 minutes
  6:55 – 7:05 PM
  Bernie Kalus, P.E., HDR/WSP SELLS JV

- Overview of Sullivan County Interchange Planning Scenarios — 10 minutes
  7:05 – 7:15 PM
  Luigi Casinelli, P.E., HDR/WSP SELLS JV

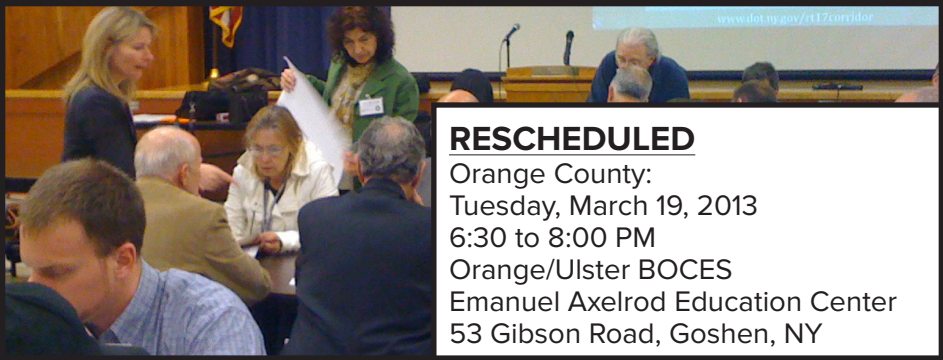
- Evaluation of Preferred Alternative & Interchange Scenarios — 40 minutes
  7:15 – 7:55 PM
  Group Exercise & Report Back

- Next Steps — 5 minutes
  Scott Geiger, P.E., NYSDOT — *7:55– 8:00 PM*

Route 17 Corridor Study
Public Workshop III

YOUR IDEAS COUNT!

Please join the New York State Department of Transportation (NYSDOT) for the final public workshop of the study to discuss the future of Route 17 in Orange and Sullivan counties.



RESCHEDULED
Orange County:
Tuesday, March 19, 2013
6:30 to 8:00 PM
Orange/Ulster BOCES
Emanuel Axelrod Education Center
53 Gibson Road, Goshen, NY

Participants will be updated on the status of the study since the last workshop and will have the opportunity to:

- Continue to share ideas on the study with the TPC and the NYSDOT project team
- Provide valuable feedback on the study findings
  - ➔ Corridor preferred alternative
  - ➔ Potential interchange improvements

The study has been examining the Route 17 corridor between Monticello, Exit 103 (Rapp Road) and Harriman, Exit 131 (New York State Thruway) to identify transportation improvements that will address projected increases in population in the corridor and provide for anticipated levels of development.

If you have any questions, or are unable to attend but wish to provide input, please contact **Ms. Sandra Jobson**, Public Involvement Coordinator, at (845) 431-5853, or email **sandra.jobson@dot.ny.gov**

For more information visit: **www.dot.ny.gov/rt17corridor**

Route 17 Corridor Study Public Workshop III

YOUR IDEAS COUNT!

Please join the New York State Department of Transportation (NYSDOT) for the final public workshop of the study to discuss the future of Route 17 in Orange and Sullivan counties.

Participants will be updated on the status of the study since the last workshop and will have the opportunity to:

- ⇨ Continue to share ideas on the study with the TPC and the NYSDOT project team
- ⇨ Provide valuable feedback on the study findings
  - → *Corridor preferred alternative*
  - → *Potential interchange improvements*

RESCHEDULED

Orange County:
Tuesday, March 19, 2013
6:30 to 8:00 PM
Orange/Ulster BOCES
Emanuel Axelrod Education Center
53 Gibson Road, Goshen, NY

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For more information visit: **www.dot.ny.gov/rt17corridor**

Meeting Notes

Subject: Public Workshop III Meeting Summary

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 3/19/2013

Meeting Location: Emanuel Axelrod Education Center
Orange Ulster BOCES
53 Gibson Road
Goshen, New York

Notes by: Arch Street Communications

Attendees:

- NYSDOT: William Gorton, Scott Geiger, Paul LoGallo
- HDR: Joe Izzo, James Brown, Luigi Casinelli
- WSP Sells: Bernie Kalus, Katherine Craig
- Arch Street Communications: Ginger Mold, Anne Marie Corbalis
- TPC members present: John Burke, Neal Halloran, Angel Medina

Project File: Meeting Minutes

Appendix:
Public comment summary report

Press at the event:

- YNN-TV

Sign-in/Meeting Materials:
At the sign-in table each attendee was given an agenda, a copy of the *Corridor Vision and Goal Statements*, a Project Flow Chart and a red dot. Attendees were asked to place the dot on the Study Corridor Map to denote where they live (or work). This was the same map used during the Sullivan County Public Workshop III and had the yellow dots from that meeting on it as well.

There were boards in the room for public viewing before and after the meeting including:

- Preferred Corridor Alternative
- Set of Sullivan County Planning Scenarios & Concepts
- Set of Orange County Planning Scenarios & Concepts
- Existing Conditions and Feasible Alternatives:
    - Section of the corridor with existing conditions
    - Section of the corridor with the General Use Third Lane
    - Section of the corridor with the HOV Lane

- Project Flow Chart and Public Involvement Activities

Welcome and Introductions:
Scott Geiger welcomed stakeholders and introduced the study team.

Study Update and Purpose of Public Workshop
Scott Geiger reviewed what has been done on the Study to date and described the exercises utilized in Public Workshops I and II to develop the Corridor Vision and Goals Statements, the five transportation concepts, the development of the feasible alternatives, and finally the preferred corridor alternative.

Overview of Preferred Alternative
Scott Geiger explained the preferred alternative – the General Use Third lane.

Overview of Sullivan County Interchange Planning Scenarios
Using maps as visuals, Bernie Kalus explained the following for later group exercise and discussion:

- Planning Scenario I: Safety Improvements (Maintain Current Access)
- Planning Scenario II: Accommodate Existing and Known Development
- Planning Scenario III: Accommodate Future Development & Preserve Quality of Life
- Planning Exercise - Area 1: Exit 103 EB & WB Option
- Planning Exercise - Area 3: Exit 107 to Exit 108 Option
- Planning Exercise - Area 4: Exit 110 to Exit 111 Option
- Planning Exercise - Area 5: Exit 114 to Exit 116 Option I of 2
- Planning Exercise - Area 5: Exit 114 to Exit 116 Option 2 of 2

Overview of Orange County Interchange Planning Scenarios
Using maps as visuals, Bernie Kalus explained the following for later group exercise and discussion:

- Planning Scenario I: Safety Improvements (Maintain Current Access)
- Planning Scenario II: Accommodate Existing and Known Development
- Planning Exercise - Area 1: Exit 127 to Exit 130 Option 1 of 2
- Planning Exercise - Area 1: Exit 127 to Exit 130 Option 2 of 2
- Planning Exercise - Area 2: Exit 123 to Exit 125 Option

Evaluation of Preferred Alternative & Interchange Scenarios (Group Exercise)
Scott Geiger led an exercise in which participants were asked to participate in the discussion and review the preferred alternative and each of the Orange and Sullivan County Interchange Planning Scenarios & Concepts (listed above) and answer group opinion questions on each. A member of the consultant/NYSDOT team was at each table to facilitate discussions. A representative from each table reported their table's consensus back to the entire group.

Comments received from attendees will be made an appendix to this report.

Next Steps

- Final TPC meeting will be held March 27, 2013

Route 17 Transportation Corridor Study
Public Workshop III – Participant Group Exercise Results

Corridor Preferred Alternative – An additional, general use, third lane, each direction, between the NYS Thruway and Middletown built within the existing highway right-of-way.

Table Number & Workshop Location	Good Plan	Unacceptable Plan
1 – Sullivan County Workshop	X	
2 – Sullivan County Workshop	X	
3 – Sullivan County Workshop	X	
4 – Sullivan County Workshop	X	
5 – Sullivan County Workshop	X	
6 – Orange County Workshop	X	
7 – Orange County Workshop	X	
8 – Orange County Workshop	X	

Route 17 Transportation Corridor Study
Public Workshop III – Participant Group Exercise Results

Orange County Interchange Planning Scenarios

Table Number & Workshop Location	Our table preferred: **Planning Scenario I – Safety Improvements, Maintain Current Access**	Our table preferred: **Planning Scenario II – Accommodate Future Development & Preserve Quality of Life**
1 – Sullivan County		
2 – Sullivan County	X	
3 – Sullivan County	X	
4 – Sullivan County		X
5 – Sullivan County	X	
6 – Orange County		X
7 – Orange County		X
8 – Orange County		X

Orange County Interchange Planning Scenario II – Area 1

Table Number & Workshop Location	Our table preferred: **OPTION 1**	Our table preferred: **OPTION 2**	Our table preferred: **NEITHER**
1 – Sullivan County			
2 – Sullivan County			
3 – Sullivan County	X		
4 – Sullivan County	X		
5 – Sullivan County		X	
6 – Orange County	X		
7 – Orange County		X	
8 – Orange County	X		

Orange County Interchange Planning Scenario II – Area 2

Table Number & Workshop Location	**Good Plan**	**Acceptable Plan, but Needs Improvement**	**Unacceptable Plan**
1 – Sullivan County			
2 – Sullivan County			
3 – Sullivan County		X	
4 – Sullivan County		X	
5 – Sullivan County	X		
6 – Orange County	X		
7 – Orange County		X	
8 – Orange County	X		

Route 17 Transportation Corridor Study
Public Workshop III – Participant Group Exercise Results

Sullivan County Interchange Planning Scenarios

Table Number & Workshop Location	Our table preferred: **Planning Scenario I – Safety Improvements, Maintain Current Access**	Our table preferred: **Planning Scenario II – Accommodate Existing and Known Development**	Our table preferred: **Planning Scenario III – Accommodate Future Development & Preserve Quality of Life**
1 – Sullivan County		X	
2 – Sullivan County		X	
3 – Sullivan County		X	
4 – Sullivan County			X
5 – Sullivan County			X
6 – Orange County			X
7 – Orange County			
8 – Orange County			

Sullivan County Interchange Planning Scenario III – Area 1

Table Number & Workshop Location	**Good Plan**	**Acceptable Plan, but Needs Improvement**	**Unacceptable Plan**
1 – Sullivan County	X		
2 – Sullivan County		X	
3 – Sullivan County	X		
4 – Sullivan County	X		
5 – Sullivan County	X		
6 – Orange County	X		
7 – Orange County			
8 – Orange County			

Sullivan County Interchange Planning Scenario III – Area 3

Table Number & Workshop Location	**Good Plan**	**Acceptable Plan, but Needs Improvement**	**Unacceptable Plan**
1 – Sullivan County		X	
2 – Sullivan County		X	
3 – Sullivan County	X		
4 – Sullivan County	X		
5 – Sullivan County	X		
6 – Orange County	X		
7 – Orange County			
8 – Orange County			

Sullivan County Interchange Planning Scenario III – Area 4

Table Number & Workshop Location	**Good Plan**	**Acceptable Plan, but Needs Improvement**	**Unacceptable Plan**
1 – Sullivan County		**X**	
2 – Sullivan County		**X**	
3 – Sullivan County		**X**	
4 – Sullivan County		**X**	
5 – Sullivan County		**X**	
6 – Orange County		**X**	
7 – Orange County			
8 – Orange County			

Sullivan County Interchange Planning Scenario III – Area 5

Table Number & Workshop Location	Our table preferred: **OPTION 1**	Our table preferred: **OPTION 2**	Our table preferred: **NEITHER**
1 – Sullivan County			**X**
2 – Sullivan County			**X**
3 – Sullivan County	**X**		
4 – Sullivan County		**X**	
5 – Sullivan County		**X**	
6 – Orange County			X
7 – Orange County			
8 – Orange County			

STEP 4

TPC Meeting #7

3-27-2013

Agenda

Route 17 Transportation Corridor Study

Transportation Partnering Committee (TPC)

Orange-Ulster BOCES Carl P. Onken Conference Center
53 Gibson Road, Goshen, New York
Wednesday, March 27, 2013
6:00—7:00 PM

- Welcome and Meeting Purpose — 5 minutes
  Sandra Jobson, RA, RLA, AICP, NYSDOT — *6:00 – 6:05 PM*
- Review Public Comment on Preferred Corridor Alternative — 5 minutes
  Group Discussion — *6:05 – 6:10 PM*
- Review Public Comment on Orange Cnty. Planning Scenarios — 20 minutes
  Group Discussion — *6:10 – 6:30 PM*
- Review Public Comment on Sullivan Cnty. Planning Scenarios — 20 minutes
  Group Discussion — *6:30 – 6:50 PM*
- Study Next Steps & Wrap Up — 10 minutes
  Sandra Jobson, RA, RLA, AICP, NYSDOT — *6:50 – 7:00 PM*

Meeting Notes

Subject: TPC Meeting Summary

Client: NYSDOT

Project: **Transportation Corridor Study for NY State Route 17**

Contract No: D030845

Meeting Date: 3/27/2013

Meeting Location: Carl P. Onken Center Conference Room
Orange-Ulster BOCES
53 Gibson Rd.
Goshen, NY

Notes by: Arch Street Communications

Attendees:

- NYSDOT: Daniel Coots, Sandra Jobson, Scott Geiger
- HDR: Joe Izzo, Luigi Casinelli
- WSP SELLS: Bernie Kalus
- Arch Street Communications: Ginger Mold, Anne Marie Corbalis
- TPC:
    - Harold Baird, Town of Mamakating
    - John Burke, Town of Woodbury
    - Neal Halloran, Town of Goshen
    - Sharon Jankiewicz, Town of Thompson
    - Kristen Resnikoff, New York State Thruway Authority
    - Brian Smith, Village of Monroe

Project File: Meeting Minutes

Welcome and Meeting Purpose

Sandra Jobson welcomed the Transportation Partnering Committee (TPC) members. She stated the purpose of the meeting was to present results/conclusions from Public Workshop III and to discuss the general recommendations of the study. She asked that the comments made during this meeting be steered toward what the final report should present.

Review of Public Comment on Preferred Corridor Alternative

Ms. Jobson distributed the participant group exercise results from Public Workshop III handout for the Corridor Preferred Alternative. All eight tables of participants reported that the consensus of their table was that the Corridor Preferred Alternative was a good plan.

Review Public Comment on Orange County Planning Scenarios

Ms. Jobson distributed the participant group exercise results from Public Workshop III handout for the Orange County Planning Scenarios. One option was presented for Scenario 1. For Scenario 2, Route 17 was divided into two "Areas": "Area 1" that involved modifications to interchanges 127, 128, 129 and 130, and "Area 2" which involved modifications to Interchanges 123, 124 and 125.

- Of the eight tables, seven tables responded. Three tables preferred Planning Scenario I – Safety improvements (maintain current access). Four tables preferred Scenario II – Accommodate future development and preserve quality of life (closing some exits and preserving others). None of the tables said that they did not like either of the plans. Based on feedback and public comments, Ms. Jobson said she leans toward recommending Planning Scenario II.

- There were two options for interchange modifications in Area 1, both of which included the elimination of Exit 127 and Exit 129, but each included different proposed modifications for Exit 128. For Areas 1 and 2, six of the eight tables responded.
    - For Area 1: Exit 127 to Exit 130, four tables preferred Option 1 over Option 2 while two tables preferred Option 2 over Option 1. Ms. Jobson said that it makes sense to keep these four exits as a study area for a future project. The idea of closing Exit 129 was well-received, and how to consolidate Exits 127 and 128 would be a project to look at in scoping and the preliminary engineering process.

    - For Area 2: Exit 123 to 125, three of the six tables responding thought this was a good plan, three thought it was an acceptable plan, but needs improvement. None of the tables said that it was an unacceptable plan. Ms. Jobson said that the plan was well-received, but needs adjustments. She would recommend that this be improved as a three-exit project. She said that there was support for Exit 131, Woodbury, being part of the study. It is the closest to being realized, designated as a priority, and has gone through the environmental process.
      Phase II Exits 122 and 131 are being progressed; add narrative for it in the report.

Review Public Comment on Sullivan County Planning Scenarios

Ms. Jobson distributed the participant group exercise results from Public Workshop III handout for the Sullivan County Planning Scenarios. Six of the eight tables responded to the survey. Three of the six tables that replied to the survey said that they preferred Planning Scenario II – Accommodate existing and known development. Three of the six tables preferred Planning Scenario III – Accommodate future development and preserve quality of life. No table said that Planning Scenario I – Safety improvements (maintain current access) – was their preference.

- For Planning Scenario III – Area 1, five of the six tables said that it was a good plan and one of the six tables said that it was an acceptable plan, but needs improvement. None of the tables responded that it was an unacceptable plan. TPC members and the study team agreed that this scenario would be the recommendation.

- For Planning Scenario III – Area 3, four of the six tables responded that it was a good plan and two of the six tables said that it was an acceptable plan, but needs improvement. None of the tables responded that it was an unacceptable plan. Ms. Jobson said that the team could recommend that if improvements are made at Exit 107, it would be a good idea to close Exit 108 as long as there is access for emergency services.

- For Planning Scenario III – Area 4, all six of the tables said that it was an acceptable plan, but needs improvement; none of the tables responded that it was a good plan or an unacceptable plan. Ms. Jobson said that the study recommendation is that Exits 110 and 111 have to be looked at simultaneously, and that they have to be studied more closely. Although the plan seems to be favorable, it is a concern that seasonal residents compose a large part of the population and therefore were not available to attend Public Workshops II and III. The group recommends that future studies be conducted during the summer months to include these residents.

- For Planning Scenario III – Area 5, one of the six tables responded that it was a good plan and two of the six tables said that it was an acceptable plan, but needs improvement. Three of the tables responded that it was an unacceptable plan. The team reported that there was strong and differentiated opinion on this area because of the I-86 study. Terrain is an issue and there are a lot of constraints in building. Many at the workshops thought it was fine to close Exit 115 and modify Exit 114 and improve Exit 116. Ms. Jobson concluded that the recommendation would be to look at this as an area, and on the planning level.

- Discussion included:
    - Would like to keep Exit 114 open – it is the hardest one to keep open and make a full exit.
    - Sullivan County wants something that promotes growth – economic development, and future of county planning. Ms. Jobson said that one of the goals of the study was to guide future development.
    - As we get development, I-86 will be raised.
    - Public-private partnerships were mentioned in Goshen.
    - Depending on legislation, public-private partnerships may steer the advancement of projects.

Study Next Steps

The Preferred Corridor Alternative with a third lane from the Thruway to West of Middletown will be the recommendation.

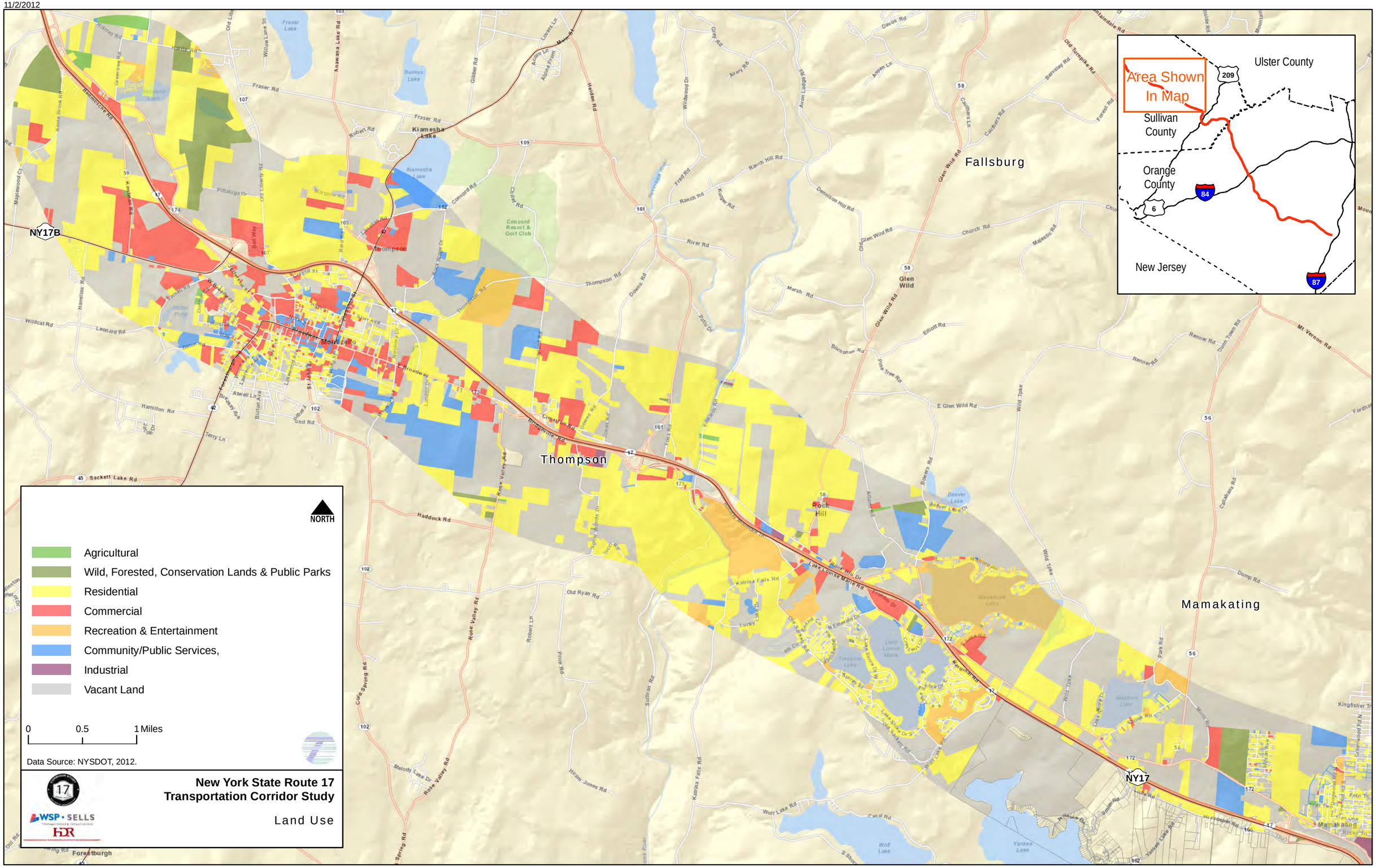
Next steps will be:

1. Draft the final study
2. Internal review
3. Three-week public review period (from around April 8)
    - An online link to the study will be sent to all stakeholders, TPC members, municipalities, elected officials, and sister agencies via email.
    - The study will also be available to the public at town halls and the Orange and Sullivan County Centers.

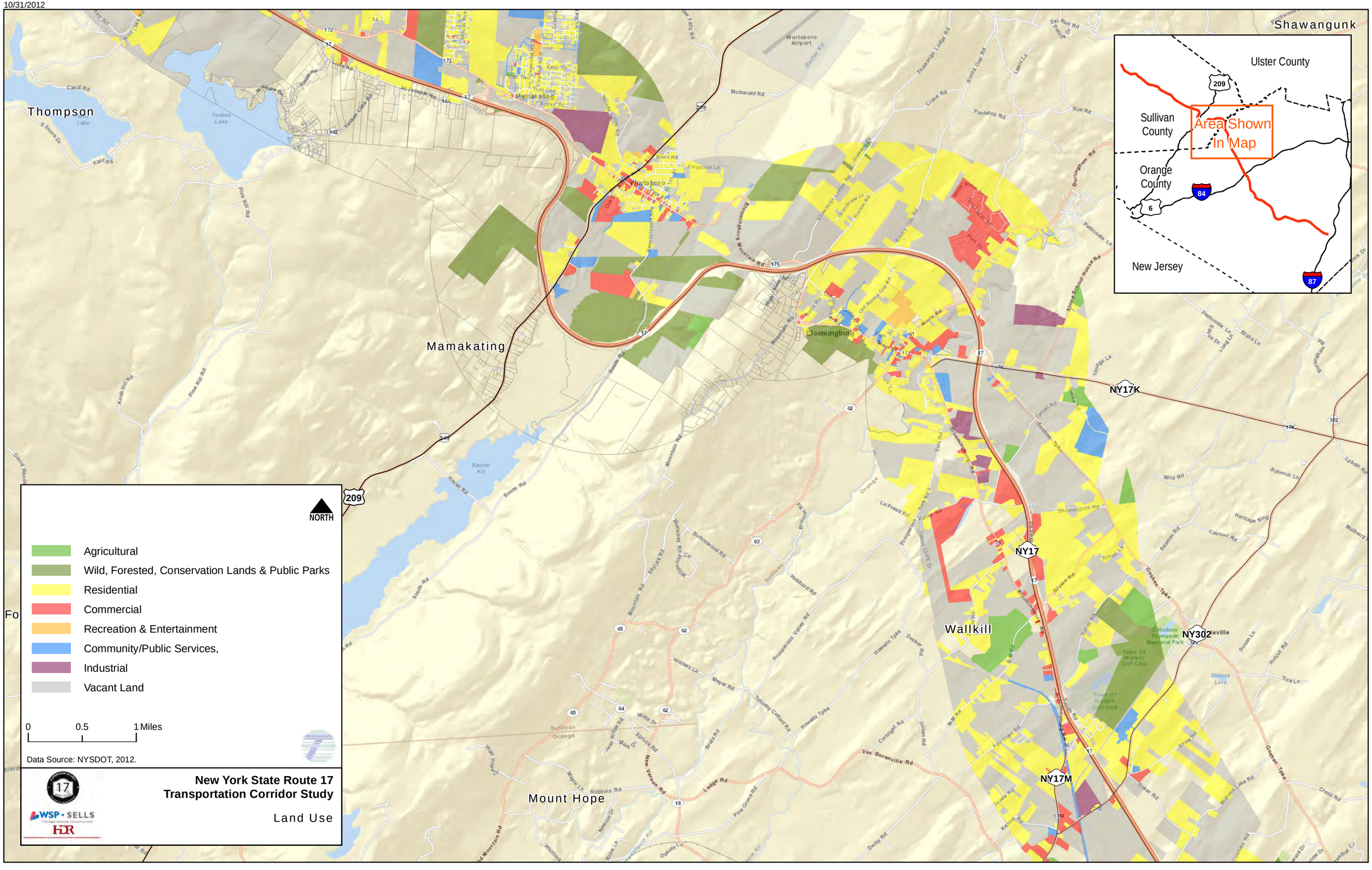
Ms. Jobson concluded by thanking the TPC members and study team for their time and input devoted to benefit the study.

APPENDIX B
ENVIRONMENTAL FIGURES

11/2/2012


Area Shown In Map
Ulster County
Sullivan County
Orange County
New Jersey
209
84
6
87
Fallsburg
Thompson
Mamakating
Rock Hill
Monticello
Glen Wild
NY17B
NY17
NORTH
Agricultural
Wild, Forested, Conservation Lands & Public Parks
Residential
Commercial
Recreation & Entertainment
Community/Public Services,
Industrial
Vacant Land
0
0.5
1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17
Transportation Corridor Study
Land Use
WSP • SELLS
HDR

10/31/2012


Thompson
Mamakating
Wurtsboro
Bloomingburg
Wallkill
Mount Hope
Shawangunk
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Ulster County
Sullivan County
Orange County
New Jersey
Area Shown In Map
NY17K
NY17
NY17M
NY302
209
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87
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NORTH
Agricultural
Wild, Forested, Conservation Lands & Public Parks
Residential
Commercial
Recreation & Entertainment
Community/Public Services,
Industrial
Vacant Land
0
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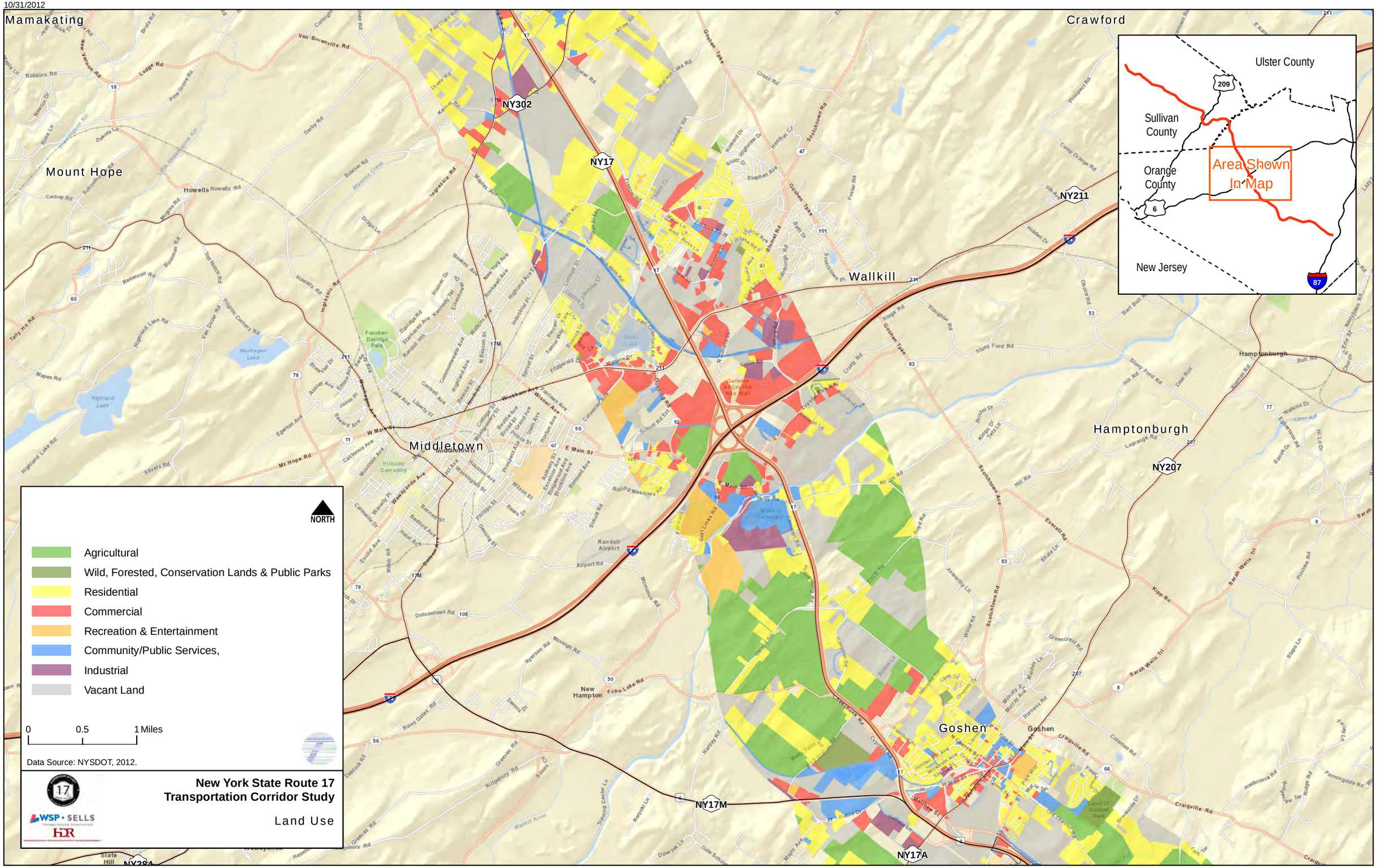
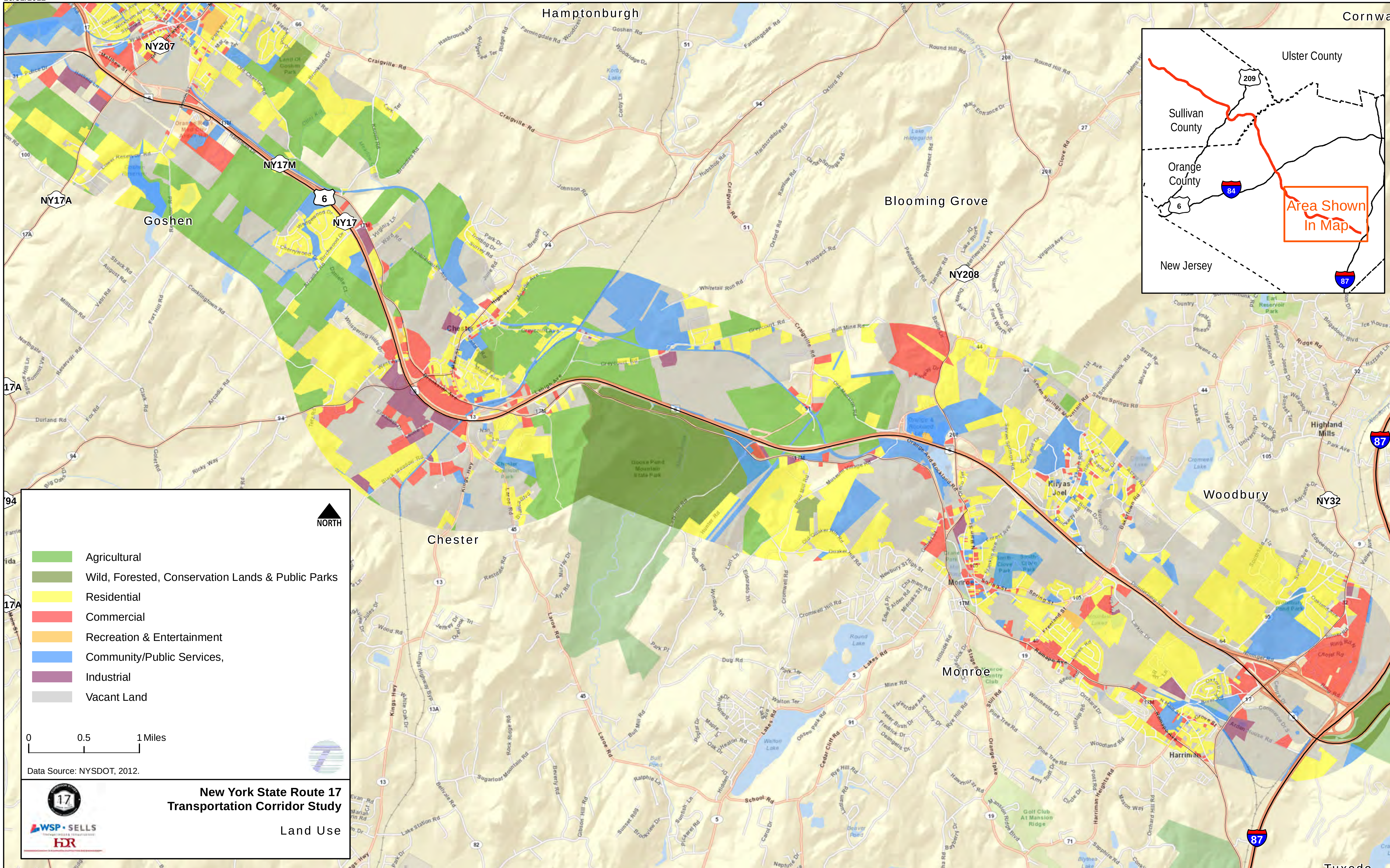
1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17
Transportation Corridor Study
Land Use
WSP • SELLS
HDR

10/31/2012


Mamakating
Crawford
Mount Hope
Wallkill
Middletown
Hamptonburgh
Goshen
New Hampton
NY302
NY17
NY211
NY17M
NY17A
NY207
NY284
Ulster County
Sullivan County
Orange County
New Jersey
Area Shown In Map
NORTH
Agricultural
Wild, Forested, Conservation Lands & Public Parks
Residential
Commercial
Recreation & Entertainment
Community/Public Services,
Industrial
Vacant Land
0
0.5
1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17
Transportation Corridor Study
Land Use
WSP • SELLS
HDR

10/31/2012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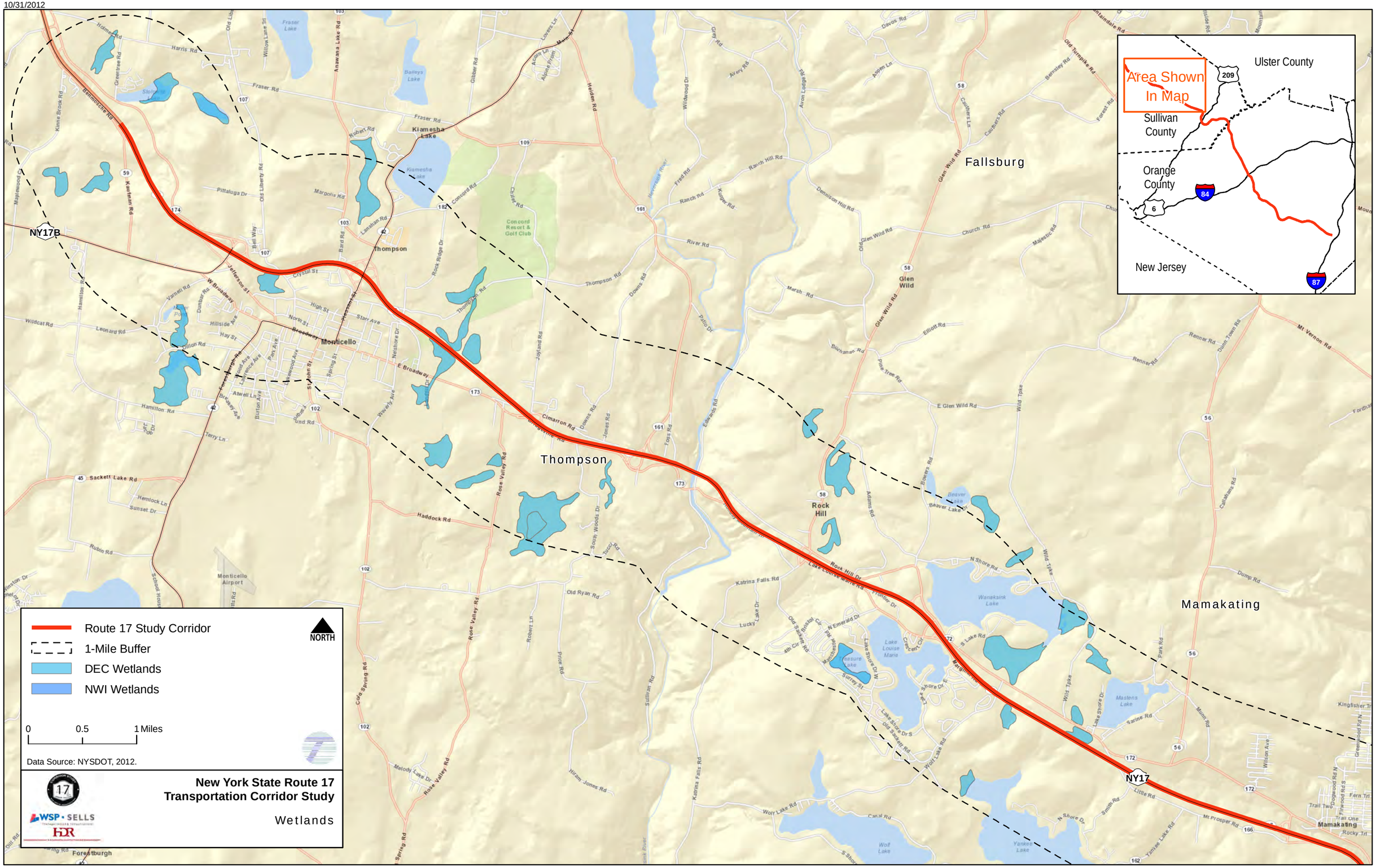
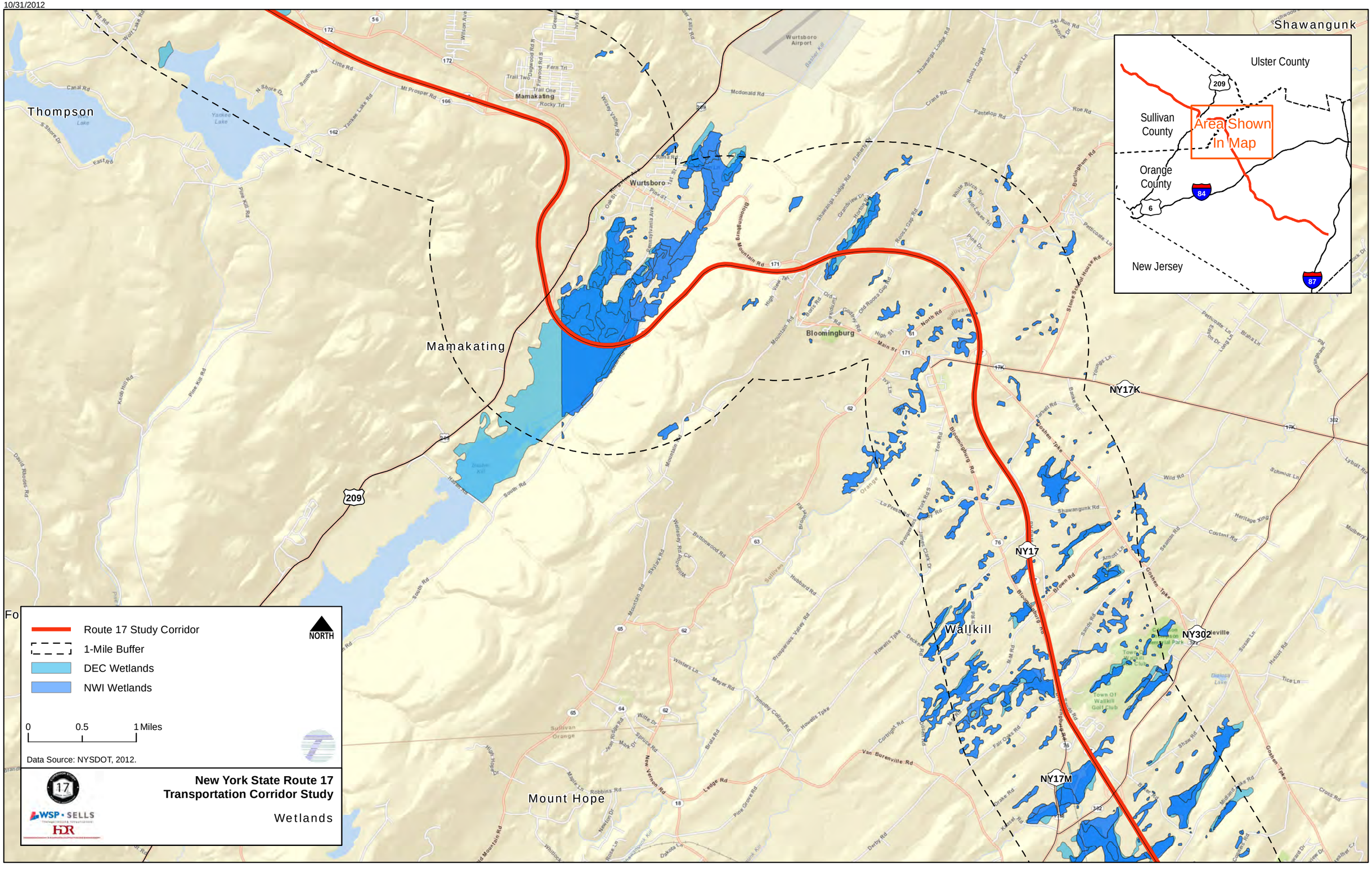
Cornwall
Goshen
Blooming Grove
Chester
Woodbury
Monroe
Harriman
Tuxedo
Kiryas Joel
Highland Mills
NY207
NY17M
NY17A
NY17
NY208
NY32
6
87
Ulster County
Sullivan County
Orange County
New Jersey
209
84
6
87
Area Shown In Map
NORTH
Agricultural
Wild, Forested, Conservation Lands & Public Parks
Residential
Commercial
Recreation & Entertainment
Community/Public Services,
Industrial
Vacant Land
0
0.5
1 Miles
Data Source: NYSDOT, 2012.
17
WSP • SELLS
HDR
New York State Route 17
Transportation Corridor Study
Land Use

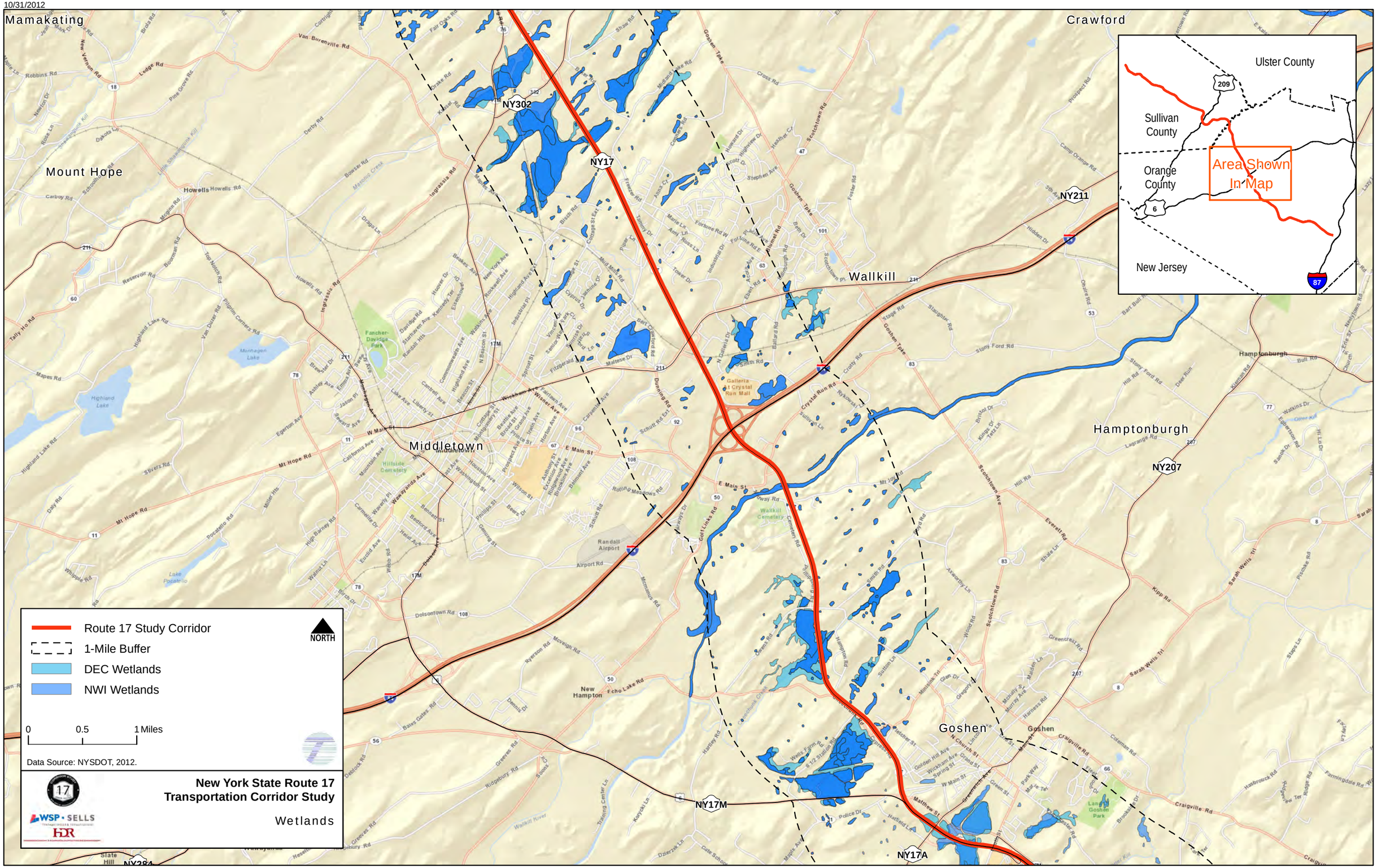
10/31/2012


Area Shown In Map
Ulster County
Sullivan County
Orange County
New Jersey
209
84
6
87
Fallsburg
Thompson
Mamakating
Rock Hill
Monticello
Forestburgh
NY17B
NY17
Kiamesha Lake
Concord Resort & Golf Club
Monticello Airport
Route 17 Study Corridor
1-Mile Buffer
DEC Wetlands
NWI Wetlands
NORTH
0
0.5
1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17 Transportation Corridor Study
Wetlands
WSP • SELLS
HDR

10/31/2012


Thompson
Mamakating
Wurtsboro
Bloomingburg
Wallkill
Mount Hope
Shawangunk
Ulster County
Sullivan County
Orange County
New Jersey
Area Shown In Map
NY17
NY17K
NY17M
NY302
209
84
87
Route 17 Study Corridor
1-Mile Buffer
DEC Wetlands
NWI Wetlands
NORTH
0 0.5 1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17
Transportation Corridor Study
Wetlands
WSP • SELLS
HDR

10/31/2012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Crawford
Mount Hope
Howells
Middletown
Wallkill
Hamptonburgh
New Hampton
Goshen
Randall Airport
Fancher-Davidge Park
Galleria at Crystal Run Mall
Lake Procatello
Highland Lake
Monhagen Lake
Hillside Cemetery
Walkill Cemetery
Walkill River
NY302
NY17
NY211
NY207
NY17M
NY17A
NY284
Van Burenville Rd
Ingrassia Rd
Howells Rd
Reservoir Rd
Mapes Rd
Mt Hope Rd
Dolsontown Rd
Echo Lake Rd
Goshen Turnpike
Scotchtown Rd
Stony Ford Rd
Craigville Rd
Sarah Wells Trl
Kipp Rd
Ulster County
Sullivan County
Orange County
New Jersey
Area Shown In Map
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6
87
Route 17 Study Corridor
1-Mile Buffer
DEC Wetlands
NWI Wetlands
NORTH
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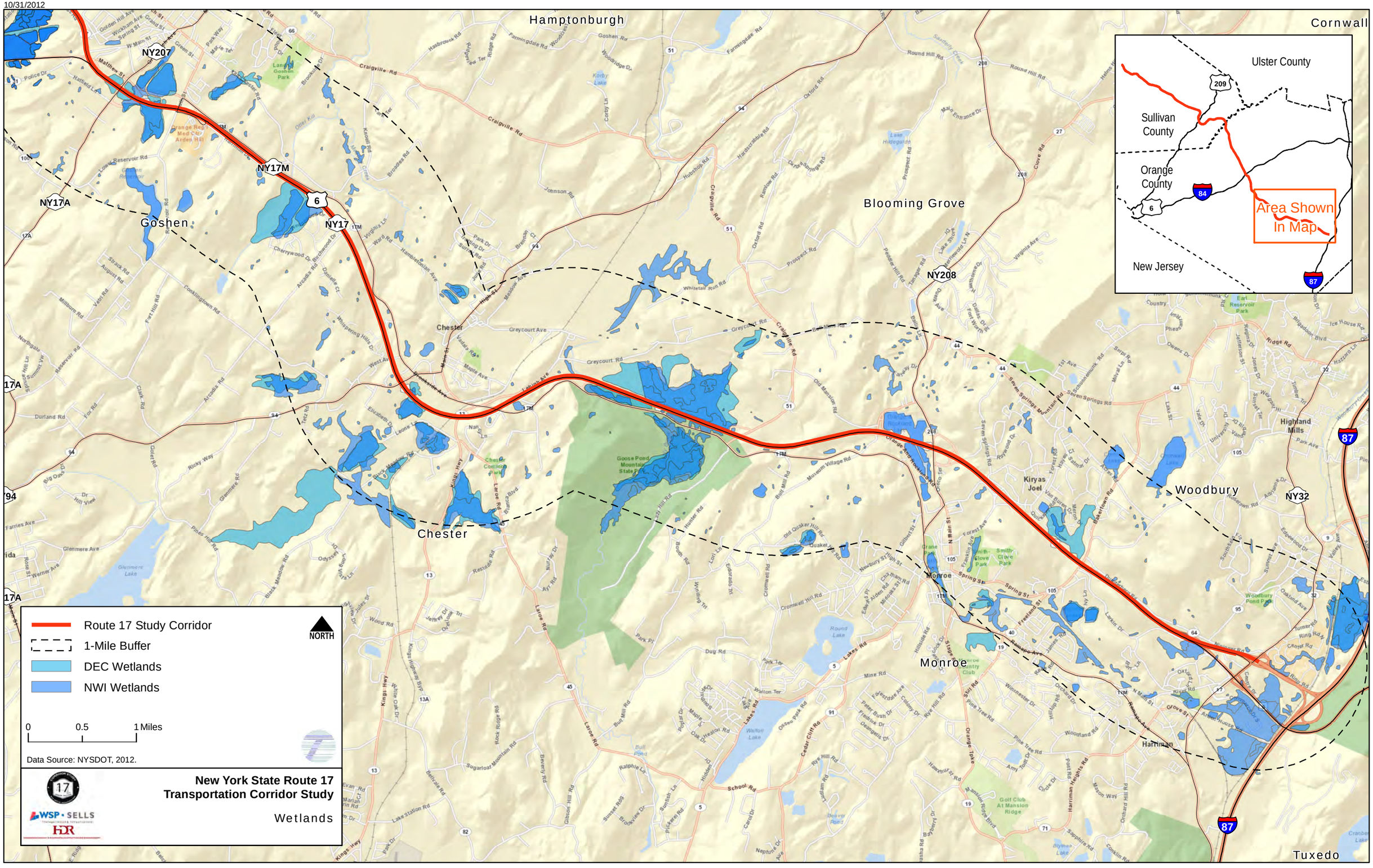
1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17
Transportation Corridor Study
Wetlands
WSP • SELLS
HDR

10/31/2012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Cornwall
Blooming Grove
Goshen
Chester
Monroe
Woodbury
Harriman
Highland Mills
Tuxedo
Kiryas Joel
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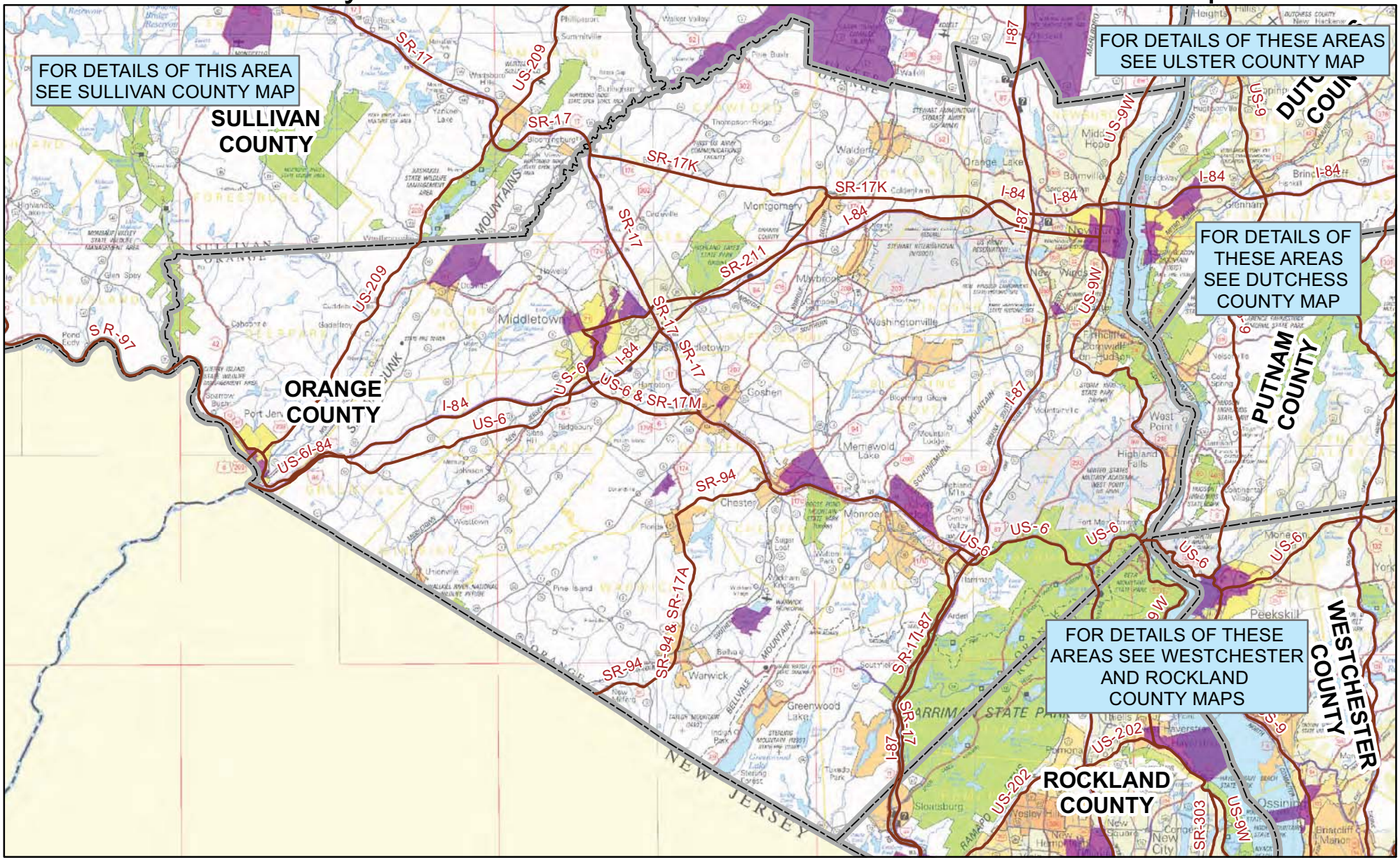
Ulster County
Sullivan County
Orange County
New Jersey
209
84
Area Shown In Map
Route 17 Study Corridor
1-Mile Buffer
DEC Wetlands
NWI Wetlands
NORTH
0
0.5
1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17
Transportation Corridor Study
Wetlands
WSP • SELLS
HDR

Potential Environmental Justice Areas in Orange County, New York

Click on any Potential EJ Area outlined in blue for a detailed map



N

This computer representation has been compiled from supplied data or information that has not been verified by EPA or NYSDEC. The data is offered here as a general representation only and is not to be used for commercial purposes without verification by an independent professional qualified to verify such data or information.

Neither EPA nor NYSDEC guarantee the accuracy, completeness, or timeliness of the information shown and shall not be liable for any loss or injury resulting from reliance.

Data Source for Potential Environmental Justice Areas: U.S. Census Bureau, 2000 U.S. Census

Legend

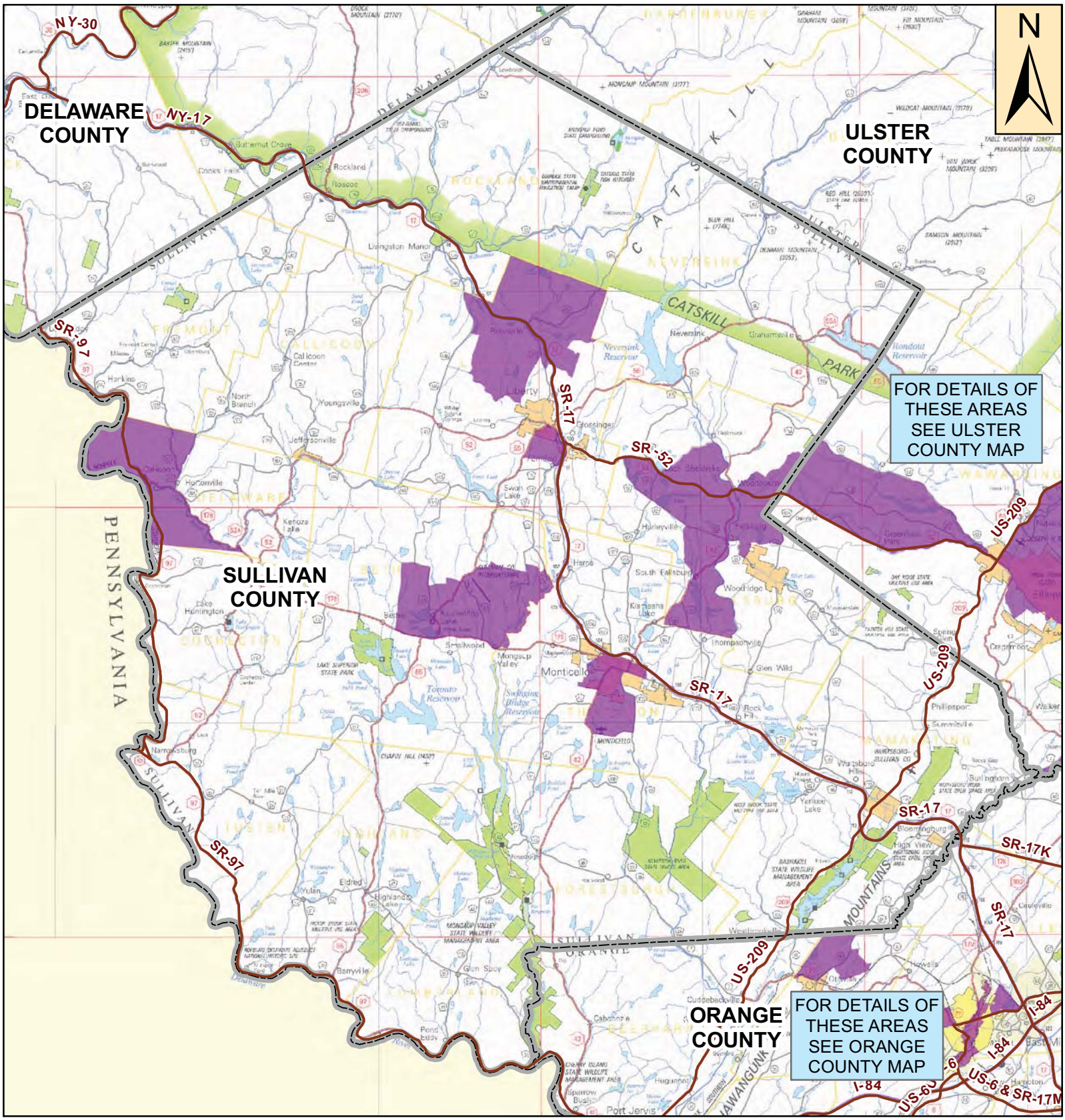
- Potential EJ Area
- County Boundary

Miles
0 2 4 6 8 10
SCALE:1:350,000

For questions about this map contact:
New York State Department of Environmental Conservation
Office of Environmental Justice
625 Broadway, 14th Floor
Albany, New York 12233-1500
(518) 402-8556
ej@gw.dec.state.ny.us

Potential Environmental Justice Areas in Sullivan County, New York

Click on any Potential EJ Area outlined in blue for a detailed map



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Data Source for Potential Environmental Justice Areas:
U.S. Census Bureau, 2000 U.S. Census

Legend

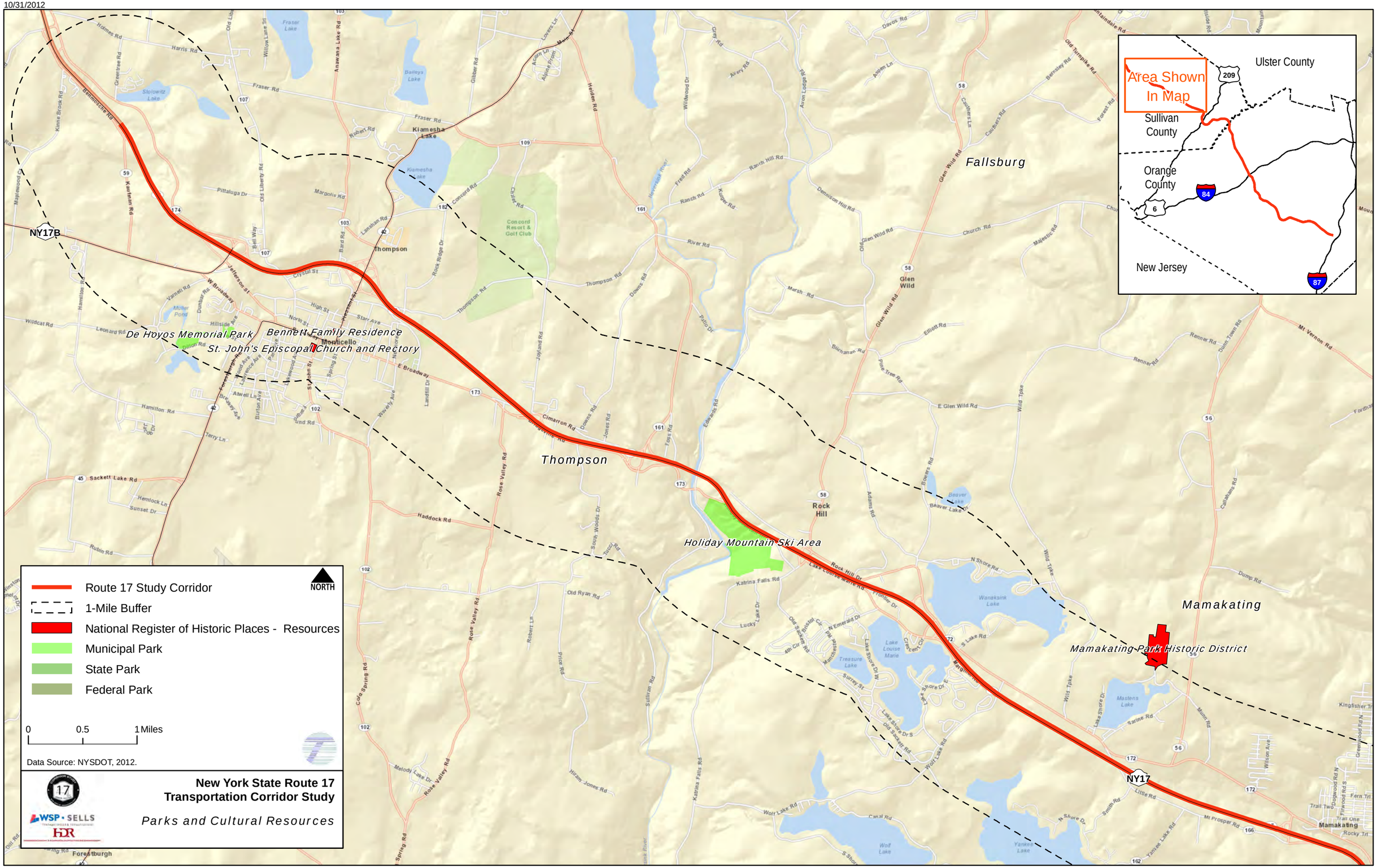
- Potential EJ Area
- County Boundary

0 2 4 6 8 10 Miles

SCALE: 1:325,000

For questions about this map contact:
New York State Department of Environmental Conservation
Office of Environmental Justice
625 Broadway, 14th Floor
Albany, New York 12233-1500
(518) 402-8556
ej@gw.dec.state.ny.us

10/31/2012


Area Shown In Map
Ulster County
Sullivan County
Orange County
New Jersey
209
84
6
87
Fallsburg
Thompson
Rock Hill
Mamakating
Mamakating Park Historic District
De Hoyos Memorial Park
Bennett Family Residence
St. John's Episcopal Church and Rectory
Holiday Mountain Ski Area
Kiamesha Lake
Concord Resort & Golf Club
Monticello
Glen Wild
NY17B
NY17
Route 17 Study Corridor
1-Mile Buffer
National Register of Historic Places - Resources
Municipal Park
State Park
Federal Park
NORTH
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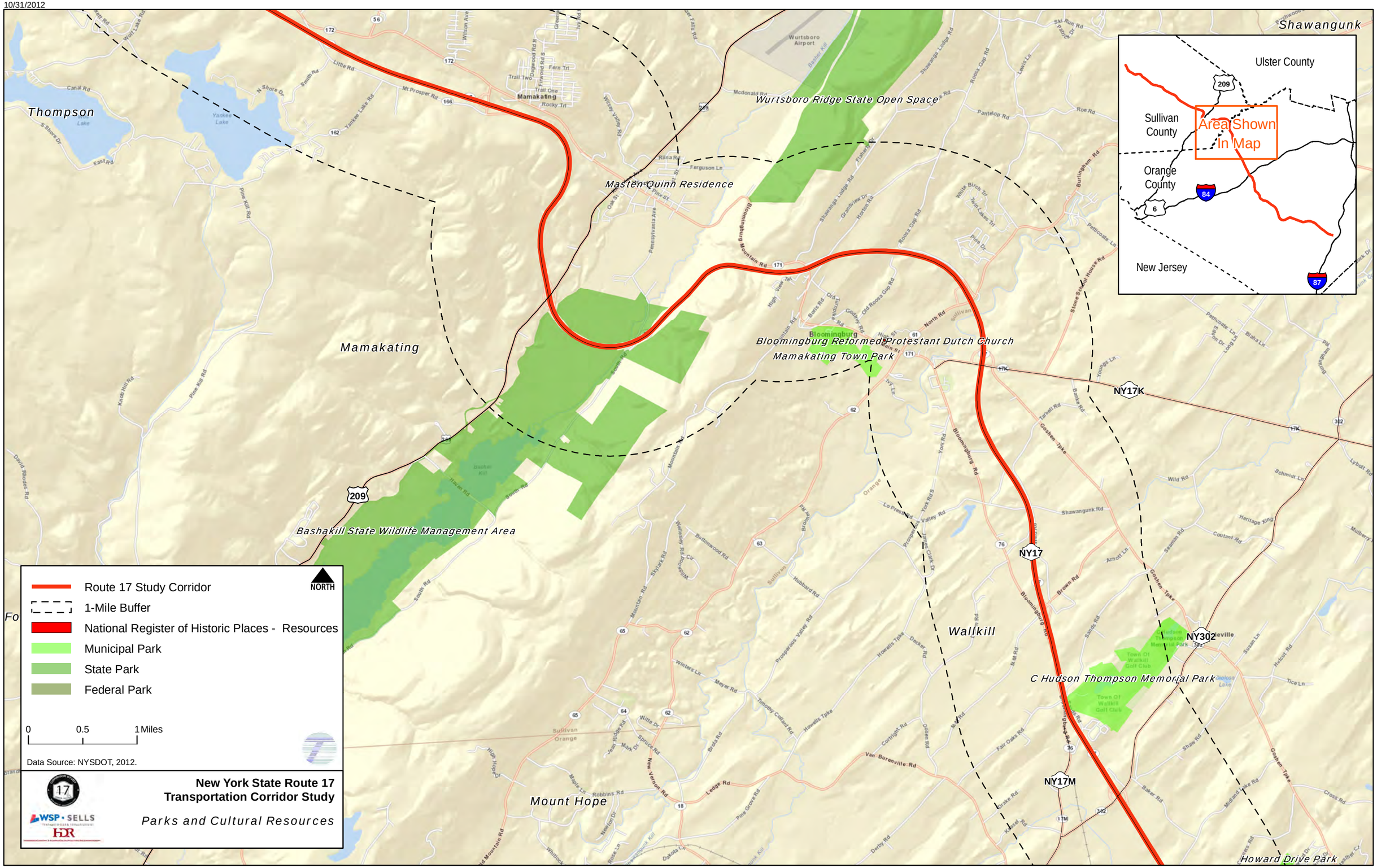
0.5
1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17
Transportation Corridor Study
Parks and Cultural Resources
WSP • SELLS
HDR

10/31/2012


Thompson
Mamakating
Wurtsboro Ridge State Open Space
Masten-Quinn Residence
Bloomingburg Reformed Protestant Dutch Church
Mamakating Town Park
Bashakill State Wildlife Management Area
Mount Hope
Wallkill
C Hudson Thompson Memorial Park
Howard Drive Park
Shawangunk
Ulster County
Sullivan County
Orange County
New Jersey
Area Shown In Map
NY17K
NY17
NY17M
NY302
209
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87
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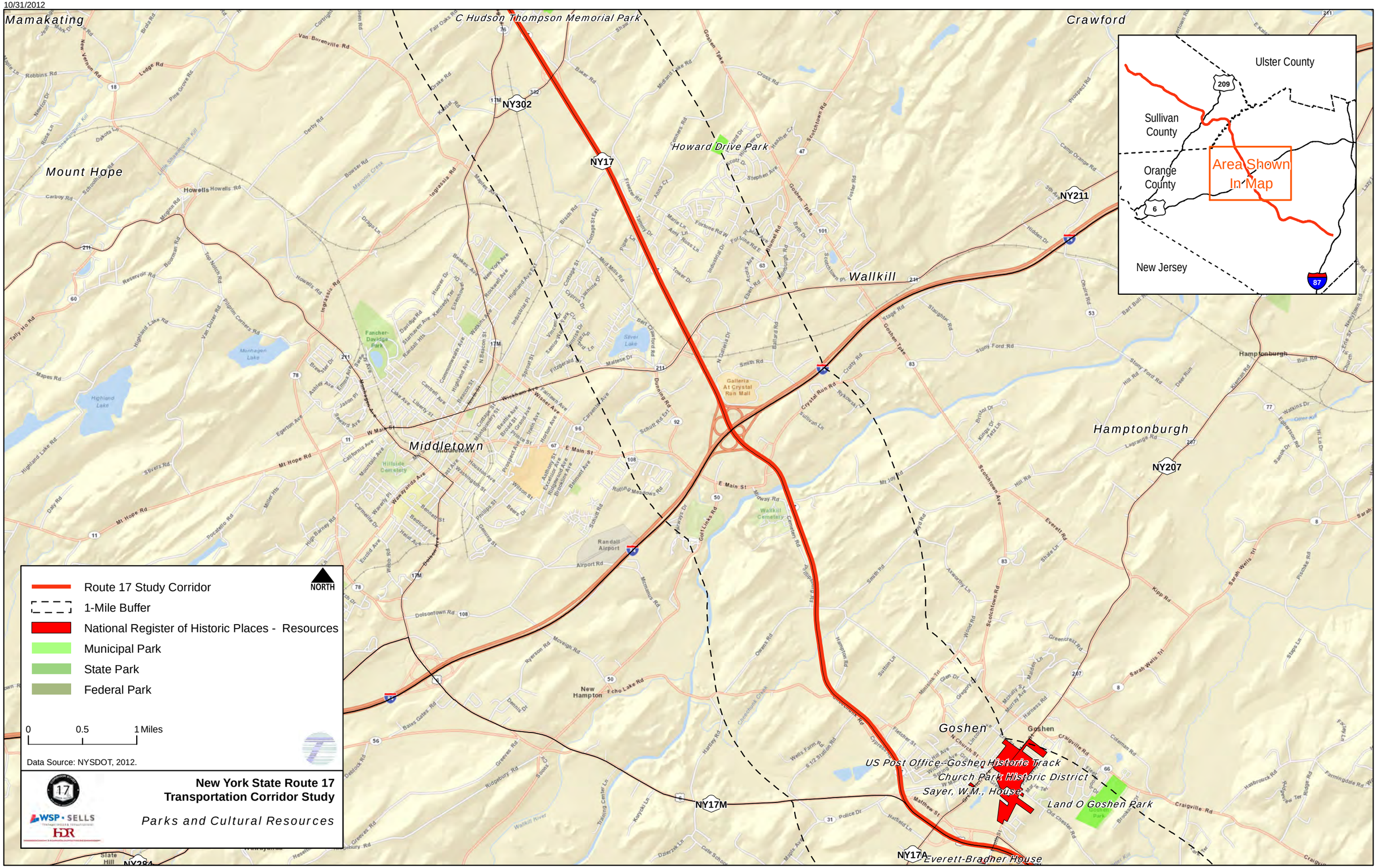
Route 17 Study Corridor
1-Mile Buffer
National Register of Historic Places - Resources
Municipal Park
State Park
Federal Park
NORTH
0 0.5 1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17
Transportation Corridor Study
Parks and Cultural Resources

10/31/2012


Mamakating
C Hudson Thompson Memorial Park
Crawford
Mount Hope
Howard Drive Park
Wallkill
Middletown
Hamptonburgh
New Hampton
Goshen
Ulster County
Sullivan County
Orange County
Area Shown In Map
New Jersey
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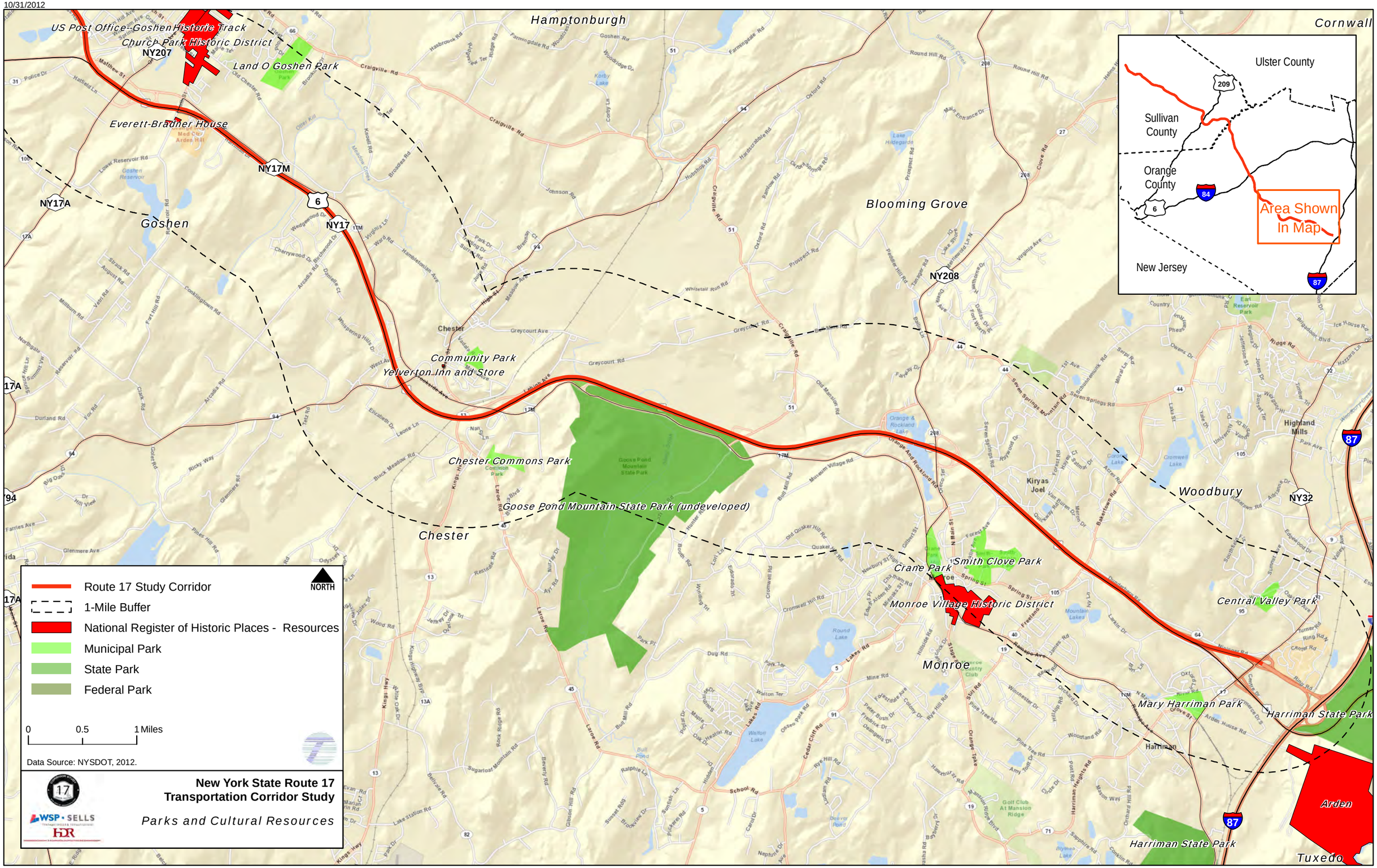
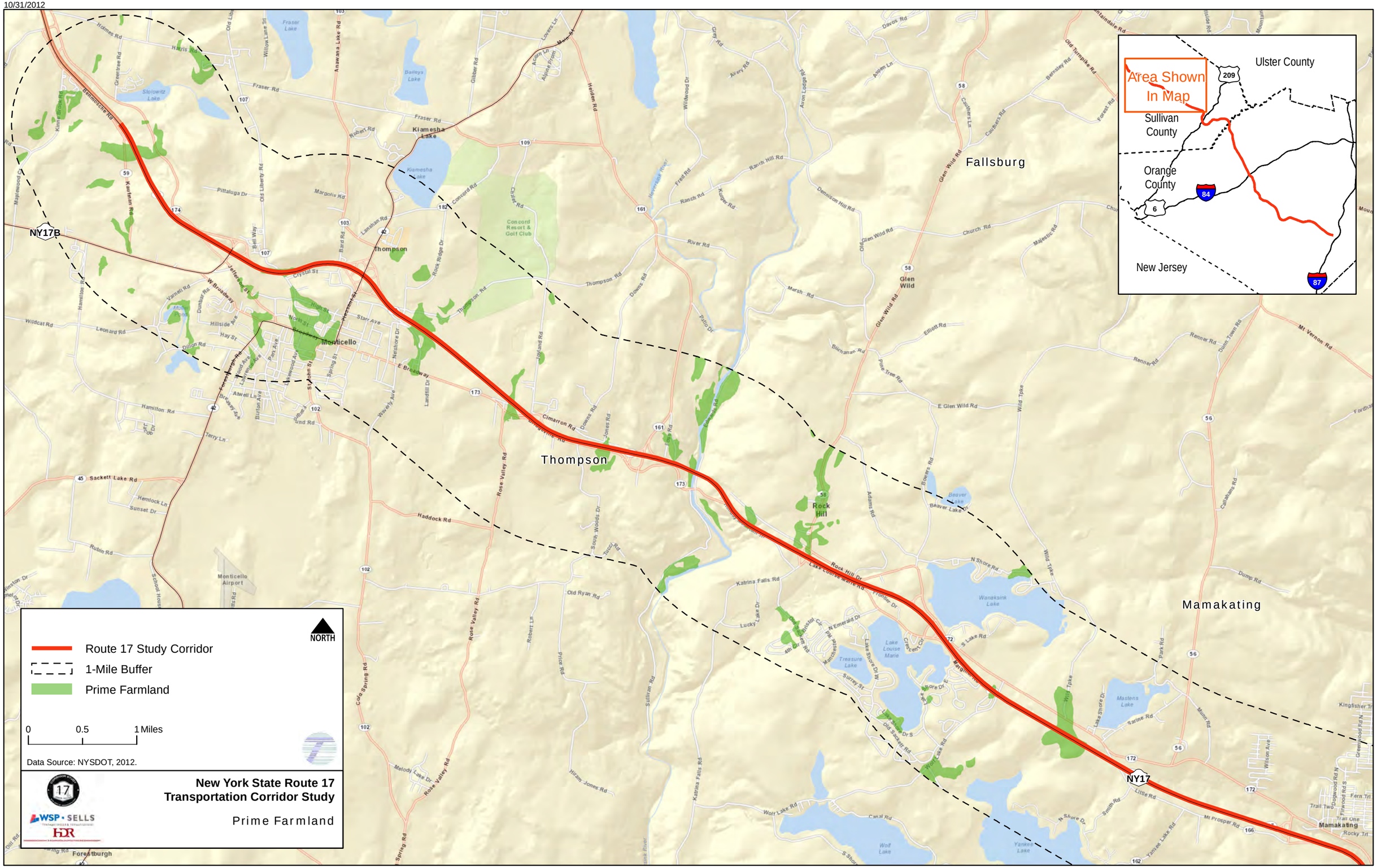
NY17M
NY17A
NY207
Route 17 Study Corridor
1-Mile Buffer
National Register of Historic Places - Resources
Municipal Park
State Park
Federal Park
NORTH
0 0.5 1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17
Transportation Corridor Study
Parks and Cultural Resources
US Post Office--Goshen Historic Track
Church Park Historic District
Sayer, W.M., House
Land O Goshen Park
Everett-Bradner House

10/31/2012


US Post Office-Goshen Historic Track
Church Park Historic District
Land O Goshen Park
Everett-Bradner House
Hamptonburgh
Cornwall
Blooming Grove
Goshen
Chester
Community Park
Yelverton Inn and Store
Chester Commons Park
Goose Pond Mountain State Park (undeveloped)
Monroe
Monroe Village Historic District
Crane Park
Smith Clove Park
Central Valley Park
Mary Harriman Park
Harriman State Park
Arden
Tuxedo
Woodbury
Highland Mills
Kiryas Joel
Harriman
NY207
NY17M
NY17A
NY17
NY208
NY32
Ulster County
Sullivan County
Orange County
New Jersey
Area Shown In Map
Route 17 Study Corridor
1-Mile Buffer
National Register of Historic Places - Resources
Municipal Park
State Park
Federal Park
NORTH
0
0.5
1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17
Transportation Corridor Study
Parks and Cultural Resources
WSP • SELLS
HDR

10/31/2012


Area Shown In Map
Ulster County
Sullivan County
Orange County
New Jersey
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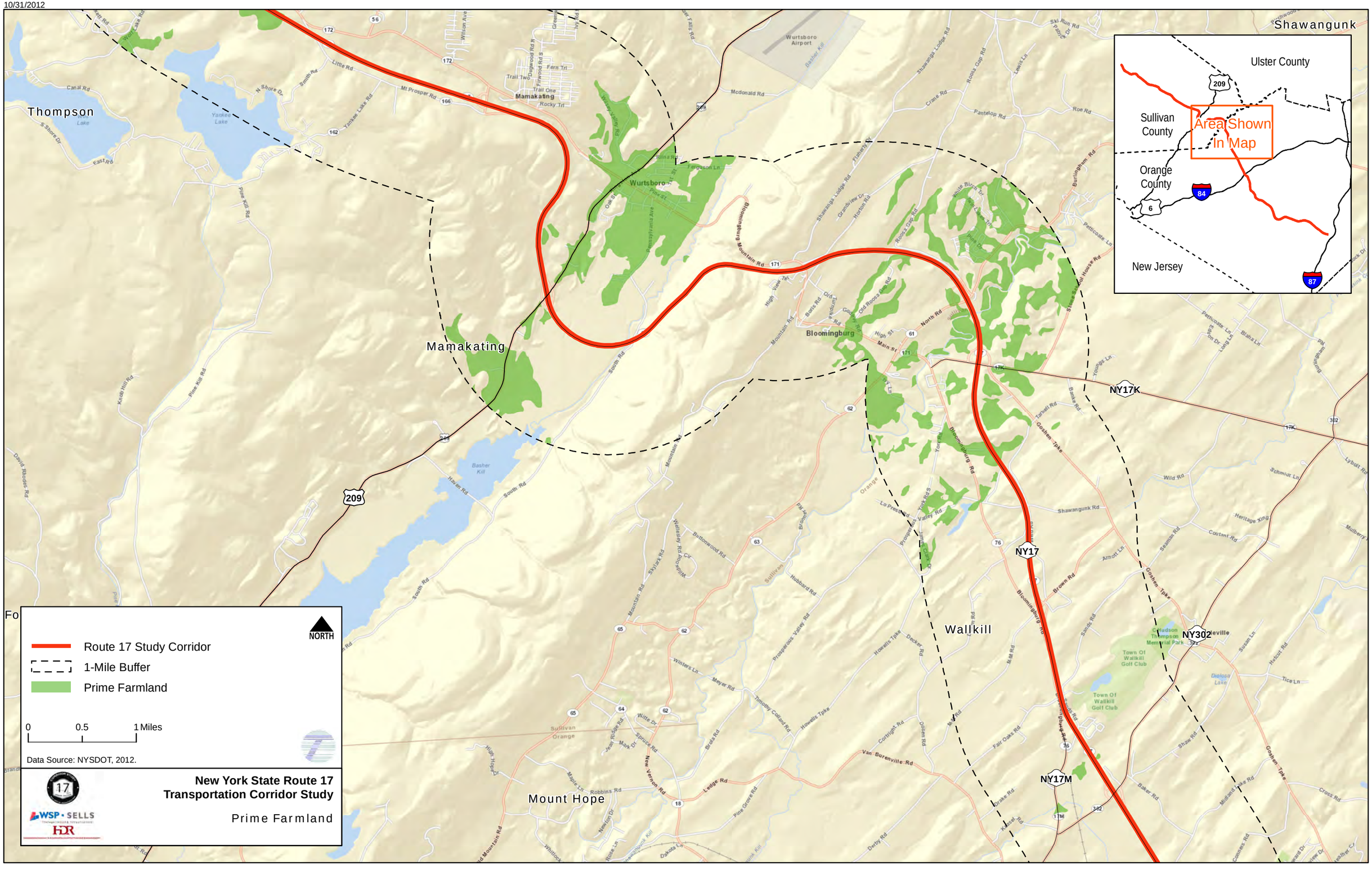
87
Fallsburg
Thompson
Mamakating
Monticello
Rock Hill
Kiamesha Lake
Concord Resort & Golf Club
Glen Wild
NY17B
NY17
Route 17 Study Corridor
1-Mile Buffer
Prime Farmland
NORTH
0
0.5
1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17 Transportation Corridor Study
Prime Farmland
WSP • SELLS
HDR

10/31/2012


Thompson
Mamakating
Wurtsboro
Wurtsboro Airport
Bloomingburg
Wallkill
Mount Hope
Shawangunk
Ulster County
Sullivan County
Orange County
New Jersey
Area Shown In Map
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NY17M
NY302
Route 17 Study Corridor
1-Mile Buffer
Prime Farmland
NORTH
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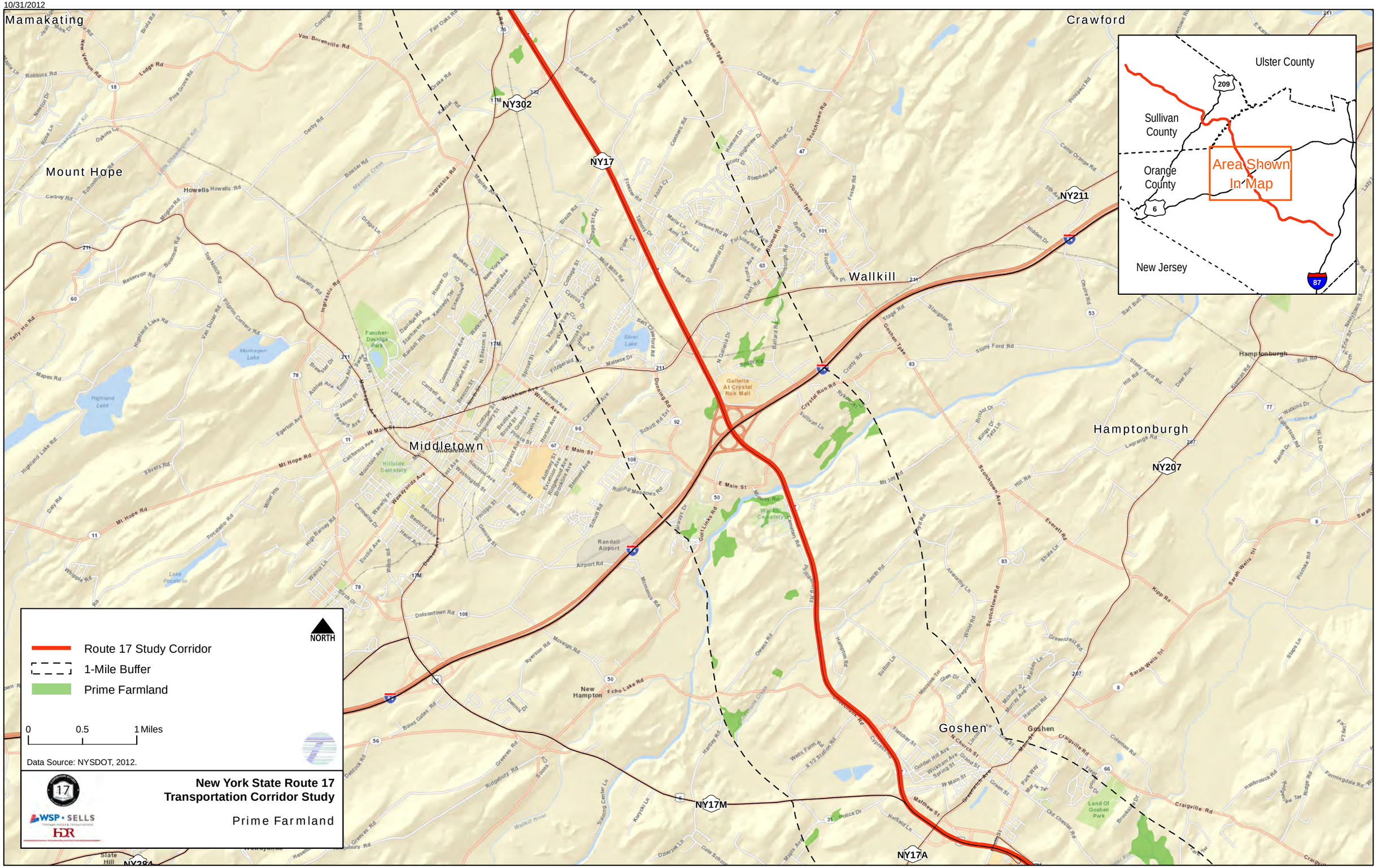
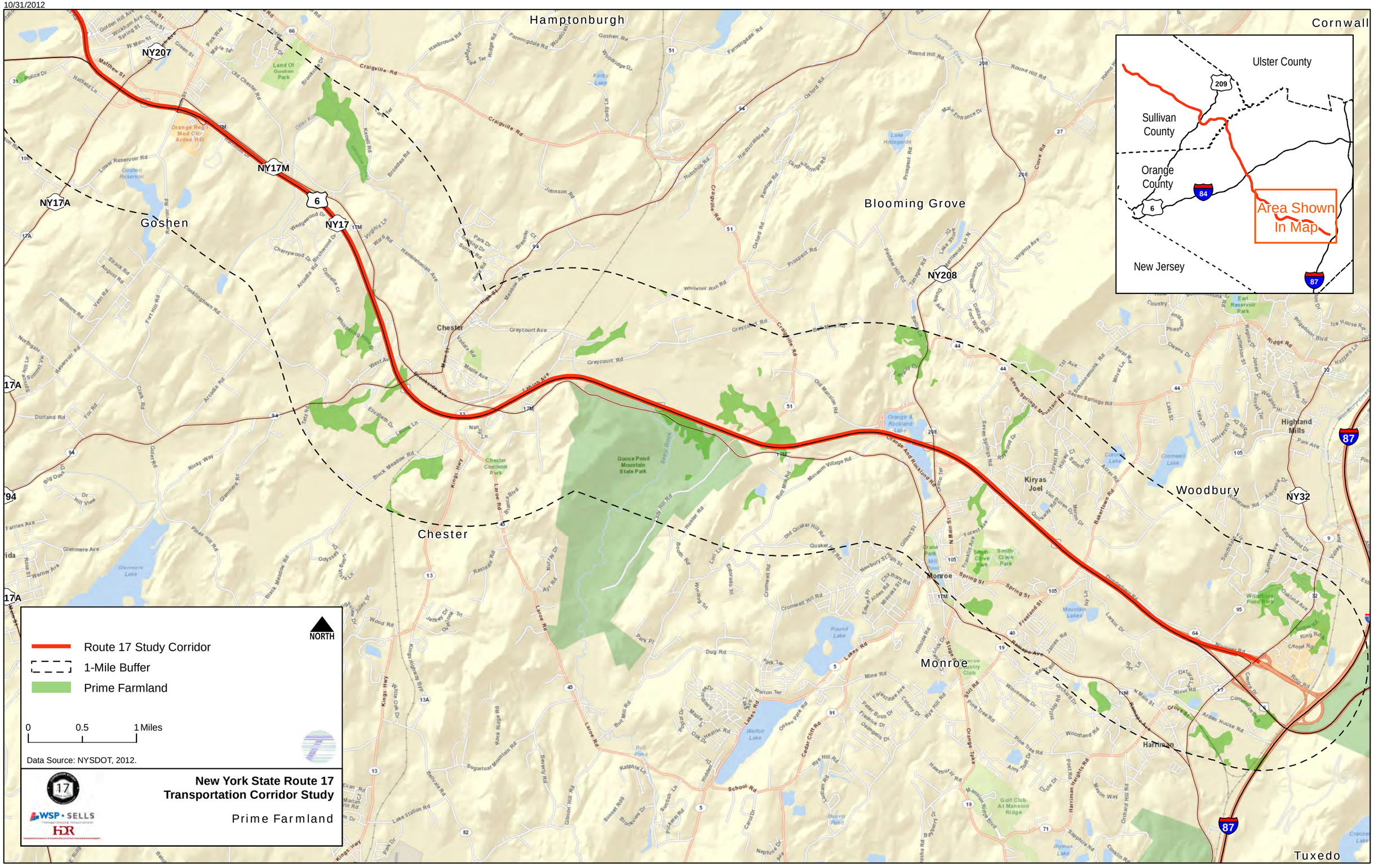
Data Source: NYSDOT, 2012.
New York State Route 17 Transportation Corridor Study
Prime Farmland

10/31/2012


Mamakating
Crawford
Mount Hope
Howells
Middletown
Wallkill
Hamptonburgh
New Hampton
Goshen
Randall Airport
Lake Pocatello
Highland Lake
Monhagen Lake
Silver Lake
Galleria At Crystal Run Mall
Fancher-Davidge Park
Hillside Cemetery
Walkill Cemetery
Land Of Goshen Park
NY302
NY17
NY211
NY207
NY17M
NY17A
NY284
Ulster County
Sullivan County
Orange County
New Jersey
Area Shown In Map
Route 17 Study Corridor
1-Mile Buffer
Prime Farmland
NORTH
0
0.5
1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17
Transportation Corridor Study
Prime Farmland
WSP • SELLS
HDR

10/31/2012


Hamptonburgh
Cornwall
Blooming Grove
Goshen
Chester
Monroe
Woodbury
Harriman
Tuxedo
Highland Mills
Kiryas Joel
NY207
NY17M
NY17A
NY17
NY208
NY32
6
17A
17M
84
87
Ulster County
Sullivan County
Orange County
New Jersey
Area Shown In Map
Route 17 Study Corridor
1-Mile Buffer
Prime Farmland
NORTH
0
0.5
1 Miles
Data Source: NYSDOT, 2012.
New York State Route 17
Transportation Corridor Study
Prime Farmland
WSP • SELLS
HDR

APPENDIX C
PLANNING EXERCISES

Figure C-1

PLANNING EXERCISE

Safety Improvements *(Maintain Current Access)*

Route 17 Corridor Study
Orange County

Planning Scenario I

116
NY Rte 17K
Bloomingburg/Newburgh
Full

118
Fair Oaks
Full

120 E-W
NY Rte 211
Middletown/Montgomery
Full

119
NY Rte 302
Pine Bush
Full

121 E-W
I-84
Newburgh/Port Jervis
Full

123
US Rte 6/NY Rte 17M W
Middletown/Port Jervis
Partial

124
NY Rte 17A/NY Rte 207
Florida/Goshen
Full

128
Oxford Depot
Partial

129
Museum Village Road
Partial

122
Crystal Run Rd/E. Main St
Full

122A
Fletcher St/Goshen
Full

126
NY Rte 94
Chester
Full

125
NY Rte 17M East
South St
Partial

127
Greycourt Rd/
Sugar Loaf/Warwick
Partial

130A
US Route 6 East
Bear Mountain
Partial

130
NY Rte 208
Monroe/Washingtonville
Full

131
NY Rte. 17 S/NY Rte. 32
Newburgh/Suffern
US Rte. 6 East/Harriman
Full

17

P

B

LEGEND

- Safety Improvement
- Existing Interchange
- P — Existing Park & Ride Locations
- B — Bus Depot
- P — Proposed Park & Ride Locations

N

n.t.s.

Approximate Cost: $35M

Figure C-2

PLANNING EXERCISE

Accommodate Future Development & Preserve Quality of Life

Route 17 Corridor Study
Orange County

Planning Scenario II

116
NY Rte 17K
Bloomingburg/Newburgh
Full

118
Fair Oaks
Full

120 E-W
NY Rte 211
Middletown/Montgomery
Full

119
NY Rte 302
Pine Bush
Full

121 E-W
I-84
Newburgh/Port Jervis
Full

123
US Rte 6/NY Rte 17M W
Middletown/Port Jervis
Partial

124
NY Rte 17A/NY Rte 207
Florida/Goshen
Full

128
Oxford Depot
Partial

129
Museum Village Road
Partial

125
NY Rte 17M East
South St
Partial

130A
US Route 6 East
Bear Mountain
Partial

130
NY Rte 208
Monroe/Washingtonville
Full

122
Crystal Run Rd/E. Main St
Full

122A
Fletcher St/Goshen
Full

126
NY Rte 94
Chester
Full

127
Greycourt Rd/
Sugar Loaf/Warwick
Partial

131
NY Rte. 17 S/NY Rte. 32
Newburgh/Suffern
US Rte. 6 East/Harriman
Full

AREA 1

AREA 2

17

P

B

LEGEND

- Close Interchange
- Access Improvement
- Existing Interchange
- P — Existing Park & Ride Locations
- B — Bus Depot
- P — Proposed Park & Ride Locations

Approximate Cost: $350M

N

n.t.s.

FIGURE C-3

PLANNING EXERCISE

AREA 1: Exit 127 to Exit 130

Route 17 Corridor Study
Orange County

Area 1, Option 1 of 2

Exit 127
Greycourt Rd/
Sugar Loaf/
Warwick

LEHIGH AVE

GREYCOURT RD

17M

17M

Exit 128
Oxford Depot

CR 51

CRAIGVILLE RD

OLD MANSION RD

MUSEUM VILLAGE RD

17

Exit 129
Museum
Village
Road

ORANGE AND ROCKLAND RD

Exit 130
NY Rte 208
Monroe/
Washingtonville

KINGS HWY

LEROE RD

LEGEND

- New Roadway
- Improve Roadway
- XXXXXX Remove Roadway

N

n.t.s.

Figure C-4

PLANNING EXERCISE

AREA 1: Exit 127 to Exit 130

Route 17 Corridor Study
Orange County

Area 1, Option 2 of 2

LEGEND

- New Roadway
- Improve Roadway
- XXXXXX Remove Roadway

N

n.t.s.

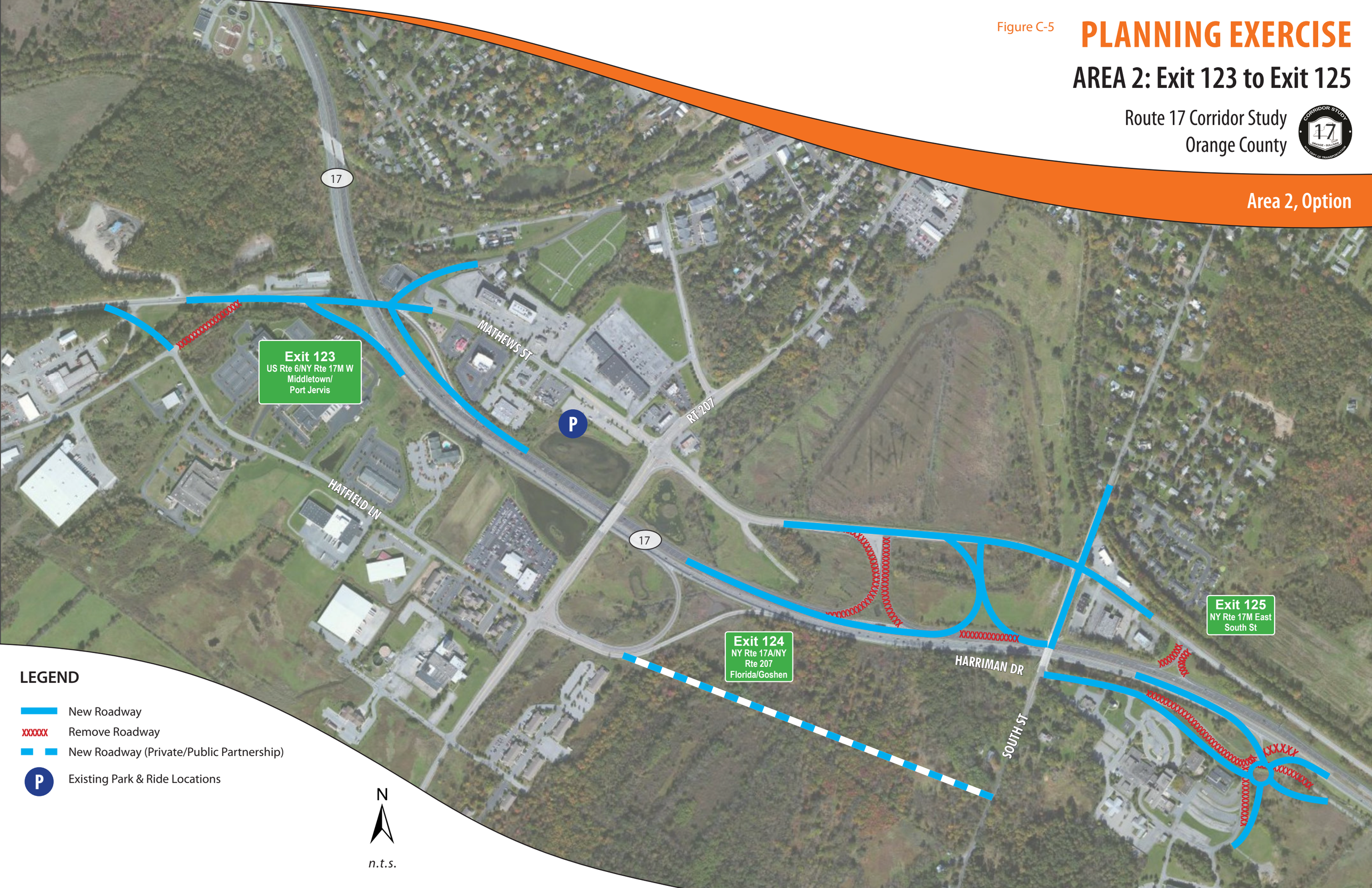
Figure C-5

PLANNING EXERCISE

AREA 2: Exit 123 to Exit 125

Route 17 Corridor Study
Orange County

Area 2, Option



LEGEND

- New Roadway
- XXXXX Remove Roadway
- New Roadway (Private/Public Partnership)
- P Existing Park & Ride Locations

N

n.t.s.

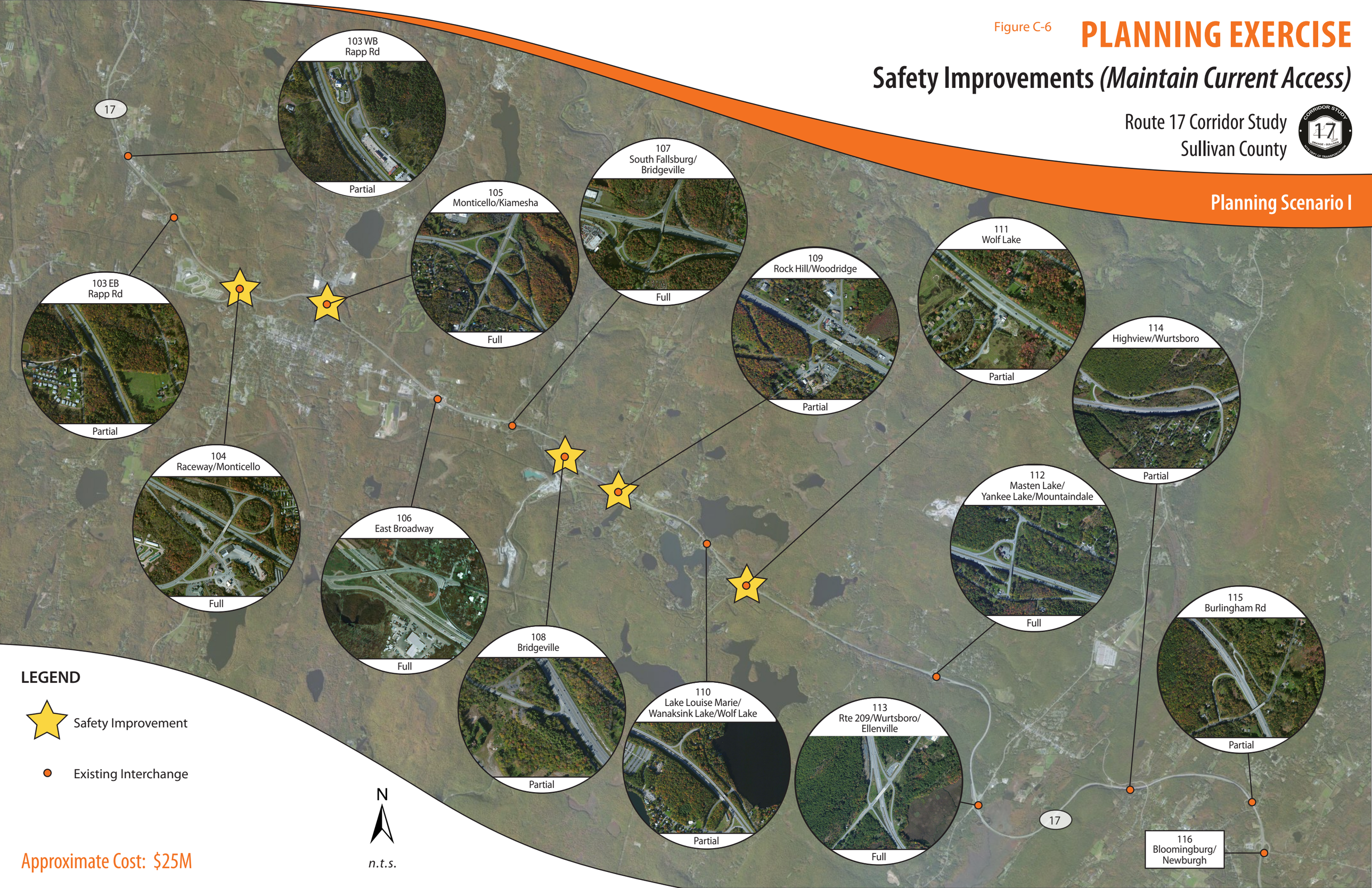
Figure C-6

PLANNING EXERCISE

Safety Improvements *(Maintain Current Access)*

Route 17 Corridor Study
Sullivan County

Planning Scenario I



Approximate Cost: $25M

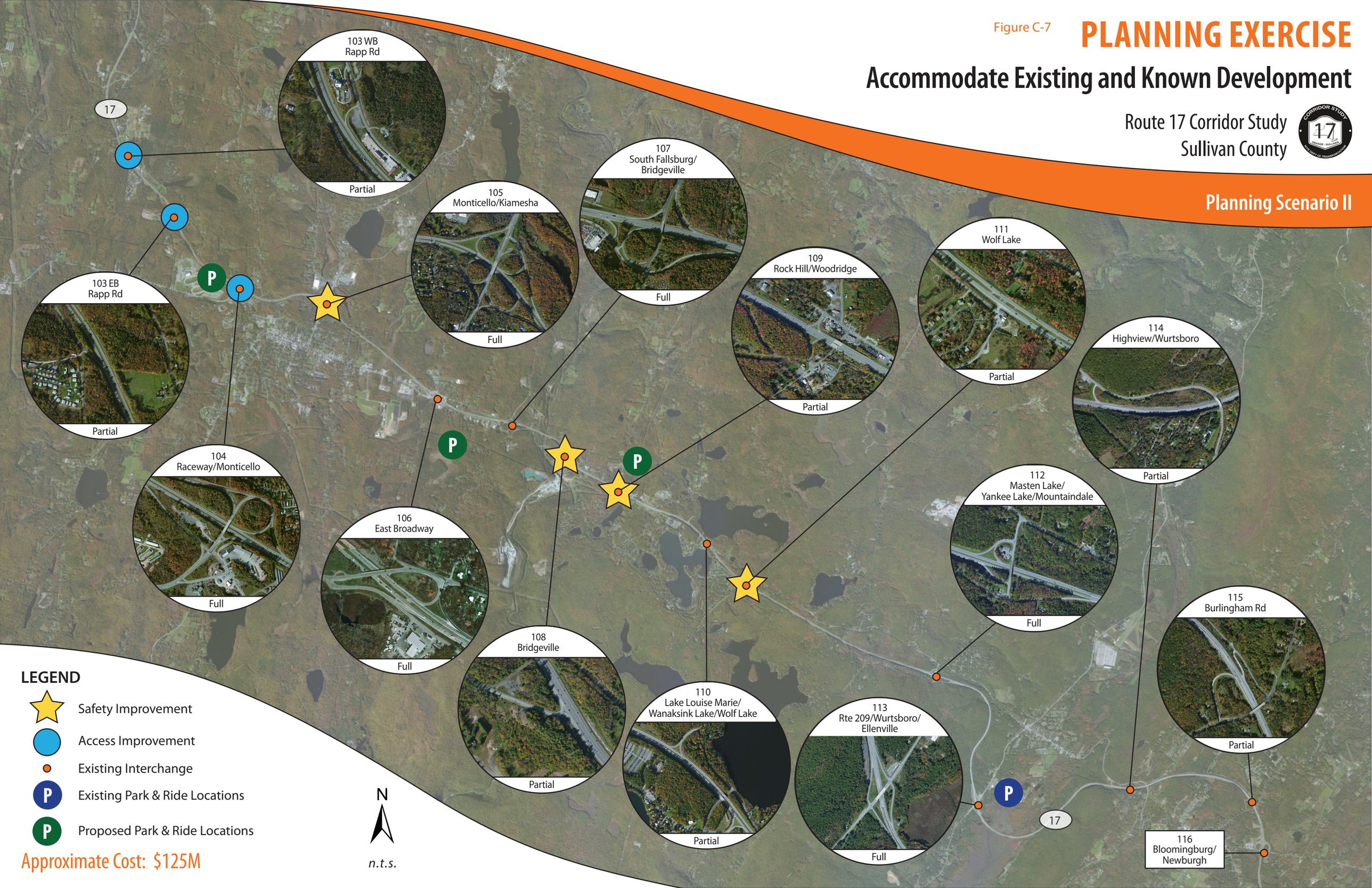
Figure C-7

PLANNING EXERCISE

Accommodate Existing and Known Development

Route 17 Corridor Study
Sullivan County

Planning Scenario II



Approximate Cost: $125M

Figure C-8

PLANNING EXERCISE

Accommodate Future Development & Preserve Quality of Life

Route 17 Corridor Study

Sullivan County

Planning Scenario III

17

AREA 1

103 WB
Rapp Rd
Partial

103 EB
Rapp Rd
Partial

AREA 2

105
Monticello/Kiamesha
Full

107
South Fallsburg/
Bridgeville
Full

109
Rock Hill/Woodridge
Partial

111
Wolf Lake
Partial

114
Highview/Wurtsboro
Partial

AREA 3

104
Raceway/Monticello
Full

106
East Broadway
Full

AREA 4

108
Bridgeville
Partial

110
Lake Louise Marie/
Wanaksink Lake/Wolf Lake
Partial

112
Masten Lake/
Yankee Lake/Mountaindale
Full

113
Rte 209/Wurtsboro/
Ellenville
Full

115
Burlingham Rd
Partial

AREA 5

116
Bloomingburg/
Newburgh

17

LEGEND

- Close Interchange
- Access Improvement
- Existing Interchange
- Existing Park & Ride Locations
- Proposed Park & Ride Locations
- Access/ Close Interchange
- Safety Improvement

Approximate Cost: $300M

N

n.t.s.

Figure C-9

PLANNING EXERCISE

Area 1: Exit 103 EB & WB

Route 17 Corridor Study
Sullivan County

Area 1 , Option

IMPROVED

RAPP RD

Exit 103 WB
Rapp Rd

COUNTY ROAD 174

BENMOSCHE RD

KINNEBROSK RD

17

Exit 103 EB
Rapp Rd

LEGEND

- New Roadway
- XXXXXXXX Remove Roadway
- Improve Roadway

N

n.t.s.

Figure C-10

PLANNING EXERCISE

Area 2: Exit 104

Route 17 Corridor Study
Sullivan County

Area 2, Option

LEGEND

P Proposed Park & Ride Location

N

n.t.s.

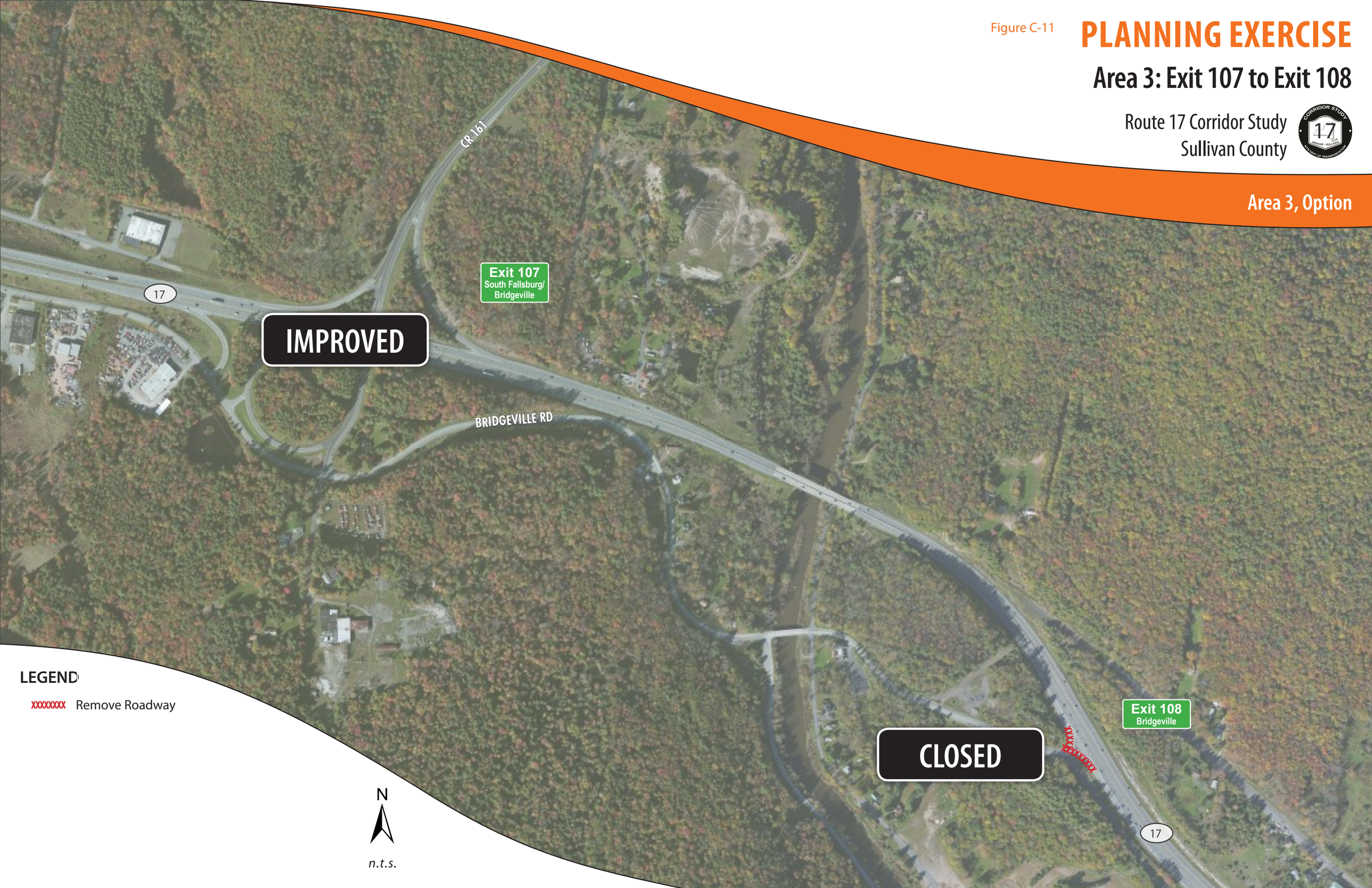
Figure C-11

PLANNING EXERCISE

Area 3: Exit 107 to Exit 108

Route 17 Corridor Study
Sullivan County

Area 3, Option



LEGEND

xxxxxxxx Remove Roadway

N

n.t.s.

Figure C-12

PLANNING EXERCISE

Area 4: Exit 110 to Exit 111

Route 17 Corridor Study
Sullivan County

Area 4, Option

LEGEND

- xxxxxxxx Remove Roadway
- Improve Roadway

N

n.t.s.

Figure C-13

PLANNING EXERCISE

Area 5: Exit 114 to Exit 116

Route 17 Corridor Study
Sullivan County

Area 5, Option 1 of 2

Exit 114
Highview/
Wurtsboro

IMPROVED

17

ROOSA GAP RD

BURLINGHAM RD

PETTICOATE LN

MAMAKATING RD

BURLINGHAM RD

Exit 115
Burlingham Rd

STONE SCHOOL HOUSE RD

Exit 116
Bloomingburg/
Newburgh

17

STATE ROAD 17K

LEGEND

- New Roadway
- Improve Roadway
- xxxxxxx Remove Roadway
- New Bridge

N

n.t.s.

Figure C-14

PLANNING EXERCISE

Area 5: Exit 114 to Exit 116

Route 17 Corridor Study
Sullivan County

Area 5, Option 2 of 2

Exit 114
Highview/
Wurtsboro

IMPROVED

17

ROOSA GAP RD

BURLINGHAM RD

PETTICOATE LN

Exit 115
Burlingham Rd

MAMAKATING RD

BURLINGHAM RD

STONE SCHOOL HOUSE RD

Exit 116
Bloomingburg/
Newburgh

17

STATE ROAD 17K

LEGEND

- Improve Roadway
- xxxxxxxx Remove Roadway
- New Bridge

N

n.t.s.