Final Environmental Impact Statement
Proposed Stockbridge-Munsee Casino

Town of Thompson, Sullivan County, New York

Bureau of Indian Affairs

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Table of Contents
Volume I

Summary i

1.0 Introduction 1

1.1 Tribal Background 2

1.2 Environmental Permits 4

2.0 Purpose and Need 6

3.0 Project and Alternatives Description 9

3.1 Proposed Project and Preferred Alternative 9

3.1.1 Site Description 9

3.1.2 Casino Project Site Development 10

3.1.3 Public Roadway Improvements 13

3.1.4 Utilities 14

3.2 No Action Alternative 15

3.3 Alternatives Eliminated From Further Discussion 16

3.3.1 Financial Venture Alternatives 16

3.3.2 Location Alternatives 17

3.3.3 Site Plan Alternatives 24

3.3.4 Roadway Improvement Alternatives 28

3.3.5 Water Supply Alternatives 36

3.3.6 Wastewater Treatment Alternatives 38

4.0 Affected Environment 41

4.1 Geology, Topography and Soils 42

4.1.1 Bedrock Geology 42

4.1.2 Surficial Geology 43

4.1.3 Topography 44

4.1.4 Soils 44

4.1.5 Mining Resources 50

4.2 Groundwater and Surface Water 51

4.2.1 Groundwater 51

4.2.2 Surface Water and Drainage 52

4.3 Vegetation 59

4.3.1 Vegetation 59
4.3.2 Wetlands 63
4.3.3 Threatened and Endangered Plant Species 69
4.4 Fish and Wildlife 70
4.4.1 Fisheries 70
4.4.2 Wildlife 71
4.4.3 Threatened and Endangered Wildlife Species 74
4.5 Hazardous Materials 75
4.6 Historical and Archaeological Resources 77
4.7 Traffic 79
4.7.1 Study Area 79
4.7.2 Traffic Volumes 80
4.7.3 Traffic Operations 81
4.7.4 Regional Traffic 82
4.7.5 Public Transportation 83
4.8 Air Quality 83
4.9 Noise 85
4.10 Socioeconomics 87
4.10.1 Tribal Conditions 88
4.10.2 Project Area Conditions 89
4.11 Community Services 100
4.11.1 Criminal Justice System 101
4.11.2 Fire Protection 101
4.11.3 Emergency Services 102
4.11.4 Schools 102
4.11.5 Recreation/Open Space 102
4.12 Utilities 103
4.12.1 Water Supply 103
4.12.2 Wastewater Treatment 103
4.12.3 Electrical 103
4.12.4 Gas 103
4.12.5 Telephone and Cable 104

4.12.6 Solid Waste 104
4.13 Land Use and Community Character 104
4.13.1 Land Use 104
4.13.2 Land Use Planning and Growth Management 105
4.14 Greenhouse Gas Emissions 112
5.0 Environmental Consequences 113
5.1 Topography, Geology and Soils 115
5.1.1 Earthwork 115
5.1.2 Erosion and Sedimentation Control 116
5.1.3 Mining Resources 118
5.1.4 No Action Alternative 118
5.2 Groundwater and Surface Water 118
5.2.1 Tribal Lands 118
5.2.2 Public Roadway Improvements 132
5.2.3 Utilities Connections 134
5.2.4 No Action Alternative 135
5.3 Vegetation and Wetlands 135
5.3.1 Upland Vegetation 135
5.3.2 Wetlands 137
5.3.3 Threatened and Endangered Plant Species 151
5.3.4 No Action Alternative 151
5.4 Fish and Wildlife 152
5.4.1 Fisheries 152
5.4.2 Wildlife 153
5.4.3 Threatened and Endangered Wildlife Species 155
5.4.4 No Action Alternative 157
5.5 Hazardous Materials 157
5.6 Historical and Archaeological 158
5.7 Traffic and Transportation 159
5.7.1 Future No-Build Traffic Volumes 160
5.7.2 Proposed Roadway Improvements by Others 163
5.7.3 Proposed Improvements 165

5.7.4 Project-Generated Traffic....167
5.7.5 Future Build Traffic Volumes....171
5.7.6 Future Build Intersection Operating Conditions....172
5.7.7 Analysis Update....175
5.7.8 Regional Impact....178
5.7.9 Public Transportation....180
5.7.10 Construction Impacts....181
5.7.11 No Action Alternative....181
5.8 Air Quality....181
5.8.1 Microscale Analysis....181
5.8.2 Regional Mesoscale Analysis....186
5.8.3 Stationary Source Emissions....188
5.8.4 Construction Impacts....190
5.8.5 No Action Alternative....190
5.9 Noise....190
5.10 Socioeconomics....192
5.10.1 Tribal Conditions....192
5.10.2 Project Area Conditions....195
5.10.3 No Action Alternative....207
5.11 Community Services....207
5.12 Utilities....213
5.12.1 Water Supply....213
5.12.2 Wastewater....214
5.12.3 Electrical Service....215
5.12.4 Gas and Fuel Oil....215
5.12.5 Telephone and Cable....215
5.12.6 Solid Waste....216
5.12.7 Construction Impacts....216
5.12.8 No Action Alternative....216
5.13 Land Use and Community Character....216
5.13.1 Tribal Lands....216
5.13.2 Public Roadway Improvements....219

5.13.3 Utilities Connections 220
5.13.4 Construction Impact 220
5.13.5 No Action Alternative 220
5.14 Pollution Prevention and Sustainable Design 220
5.14.1 Mechanical Systems 220
5.14.2 Electrical Systems 221
5.14.3 Water Recovery and Conservation 222
5.14.4 Architectural Design of Building Envelope 222
5.14.5 Landscape 222
5.14.6 Construction 222
5.14.7 Recycling 222
5.14.8 No Action Alternative 223
5.15 Greenhouse Gas Emissions Analysis 223
6.0 Cumulative Impacts 228
6.1 Geology, Topography and Soils 233
6.2 Groundwater and Surface Water 233
6.3 Vegetation and Wetlands 234
6.4 Fish and Wildlife 235
6.5 Hazardous Materials 235
6.6 Historical and Archaeological Resources 236
6.7 Traffic 236
6.8 Air Quality 242
6.9 Noise 242
6.10 Socioeconomics 243
6.11 Community Services 246
6.12 Utilities 249
6.13 Land Use and Community Character 250
6.14 Greenhouse Gas Emissions 252
7.0 Induced Growth 254
7.1 Socioeconomic Growth Induced Impacts 254
7.2 Environmental Growth Induced Impacts 257
7.3 Planning for Induced Growth 260

8.0 Mitigation Summary 262
8.1 Erosion and Sedimentation Control 262
8.2 Groundwater 262
8.3 Surface Waters 263
8.4 Wetlands 266
8.5 Traffic 266
8.6 Air Quality 267
8.7 Noise 267
8.8 Community Services 267
8.9 Utilities 267
8.10 Land Use, Vegetation and Wildlife 267
8.11 Greenhouse Gas Emission 268
9.0 Environmental Justice 269
10.0 Abbreviations 270
11.0 References 272
12.0 Consultation and Coordination 278
13.0 List of Preparers 280
14.0 Index 282

List of Tables

Table 3-1 Proposed Stockbridge-Munsee Casino Full Build Program 12
Table 3-2 Summary of Site Alternatives 21
Table 3-3 Site Layout Alternatives Summary 25
Table 3-5 Old County Highway Access Alternatives 31
Table 3-6 State Route 17 Interchange 107 Improvement Alternatives 34
Table 4-1 Soil Series 46
Table 4-2 Tribal Lands Stream Descriptions 54
Table 4-3 Existing Stormwater Flows 57
Table 4-4 Tribal Lands Observed Upland Vegetation 60
Table 4-5 Tribal Lands Observed Wetland Vegetation 64
Table 4-6 Tribal Lands Wetland Descriptions 67
Table 4-8 Wastewater Treatment Connection – Preliminary Wetland Identification 70
Table 4-9 Tribal Lands Representative Wildlife Species List 72
Table 4-10 Daily Traffic Volume Summary 81
Table 4-11 Unsignalized Intersection Level of Service Criteria 81
Table 4-12 Intersection Level of Service Summary – Existing Conditions 82
Table 4-13 Summary of NYSDEC Air Pollutant Monitoring Data Representative of the Site for the Stockbridge-Munsee Casino, Thompson, NY (ug/m^3) 84

Table 4-14 Existing Air Quality Concentrations 85
Table 4-15 Subjective Effect of Changes in Sound Pressure Level For Broadband Sounds 86
Table 4-16 Common Sound Levels 87
Table 4-17 Baseline Sound Level Measurements 87
Table 4-18 Population 2000-2010 91
Table 4-19 Household Trends, 2000 to 2010 91
Table 4-20 Characteristics of 2010 Housing Stock 92
Table 4-21 Median Household Income (in 2011 dollars) 93
Table 4-22 2010 Annual Wages by NAICS Sectors (in 2011 dollars) 95
Table 4-23 Travel Time to Work, as a Percentage of All Workers 97
Table 4-24 Unemployment Rate 2000-2010 (percent) 98
Table 5-1 Stormwater Management System Sizing and Flow Volumes 124
Table 5-2 Stormwater Peak Runoff Rates and Volumes 124
Table 5-3 Water Quality Treatment Volumes 126
Table 5-4 Vegetation Impacts 136
Table 5-5 Wetland Impact Summary 139
Table 5-6 Primary Wetland Mitigation[1] 140
Table 5-7 Water Level Monitoring Data 141
Table 5-8 Wetland Creation Area Flow, Storage Volume, and Detention Time 142
Table 5-9 Reference Wetland Plant Species List 144
Table 5-10 Wetland Creation Area Plant Species[1] 146
Table 5-11 Typical Plant Species for Proposed Aquatic Shelf 153
Table 5-12 Proposed Off-Site Developments 160
Table 5-13 Intersection Level of Service Summary – 2018 No-Build Conditions 161
Table 5-14 State Route 17 Interchange Spacing and Geometrics Study Improvements 164
Table 5-15 Project Trip Generation Summary – Total Trips 168
Table 5-16 Assumed Trip Distribution 170
Table 5-17 2018 Traffic Volume Summary – Build Conditions 171
Table 5-18 Intersection Level of Service Summary – Future Build Conditions (including Proposed Improvements) 173
Table 5-21 Peak Month Average Daily Traffic Volumes on State Route 17 179
Table 5-22 Average Daily Traffic Volumes on Other Regional Roadways, Orange County 180
Table 5-23 Maximum Predicted One-Hour Carbon Monoxide Concentrations at Sensitive Receptors Plus Background (ppm) 183
Table 5-24 Maximum Predicted Eight-Hour Carbon Monoxide Concentrations at Sensitive Receptors Plus Background (ppm) 184
Table 5-25 Maximum Predicted Annual Nitrogen Dioxide (NO_2) Concentrations Sensitive Receptors Plus Background (µg/m^3) 184
Table 5-26 Maximum Predicted 3-Hour Sulfur Dioxide (SO_2) Concentrations at Sensitive Receptors Plus Background (µg/m^3) 184
Table 5-27 Maximum Predicted 24-Hour Sulfur Dioxide (SO_2) Concentrations at Sensitive Receptors Plus Background (µg/m^3) 185
Table 5-28 Maximum Predicted Annual Sulfur Dioxide (SO_2) Concentrations at Sensitive Receptors Plus Background (µg/m^3) 185

Table 5-29 Maximum Predicted 24-Hour Particulate Matter ($PM_{2.5}/PM_{10}$) Concentrations at Sensitive Receptors Plus Background (µg/m^3).....185
Table 5-30 Maximum Predicted Annual Particulate Matter ($PM_{2.5}$) Concentrations at Sensitive Receptors Plus Background (µg/m^3) 186
Table 5-31 Summary of Daily Major Roadway VOC and NO_x Emissions in Orange County, New York (kg/day).....187
Table 5-32 Summary of Daily Total VOC and NO_x Emissions in Orange County, New York (kg/day).....187
Table 5-33 Total Potential Emissions From Stationary Source Fuel Combustion (tons/yr).....189
Table 5-34 Total Potential Emissions For Phases I and II from Stationary Source Fuel Combustion Assuming On-Site Cogeneration (tons/year) 190
Table 5-35 Existing and Future Sound Levels (L_{eq}) In Residential and Recreational Areas For the Peak Hour of Trip Generation (dBA) 191
Table 5-36 Employment and Economic Benefits from Construction of Phase I and Phase II.....196
Table 5-37 Estimated Phase I Permanent Employment (Full-Time Equivalent Jobs)199
Table 5-38 Illustrative Economic Benefits from the Annual Operation of Phase I and II199
Table 5-39 Projected County of Residence: All Project Employees 202
Table 5-40 Projected County or Residence: Indirect Employees.....203
Table 5-41 New Study Area Housing Demand from Project Employees and Indirect Employment 203
Table 5-42 Proposed Residential Development in Casino Project Study Area.....204
Table 5-43 Anticipated School Children and Place of Residence.....210
Table 5-44 Existing Characteristics of Impacted School Districts 211
Table 5-45 Projected Water Demand.....213
Table 5-46 Projected Wastewater Flows.....214
Table 5-47 Greenhouse Gas (CO_2) Emissions Summary Casino Project (Tons/Year)225
Table 6-1 2018 Traffic Volume Summary – Cumulative Build Conditions.....237
Table 6-2 Intersection Level of Service Summary – Future Cumulative Build Conditions (including Proposed Improvements) 238
Table 6-3 2018 Intersection Level of Service Summary.....240
Table 6-4 Merge Analysis – State Route 17 Interchange 107 Ramps – Cumulative Build Conditions.....241

List of Figures

Figure 1-1 Regional Location
Figure 1-2 Site Location
Figure 3-1 Site Features
Figure 3-2 Existing and Proposed Water & Sewer Service
Figure 3-3 Proposed Site Plan
Figure 3-4 Site Plan Cross Sections
Figure 3-5 Proposed Roadway Improvements
Figure 3-6 Alternative Site Locations
Figure 3-7 Site Layout Alternative 1
Figure 3-8 Site Layout Alternative 2
Figure 3-9 Site Layout Alternative 3
Figure 3-10 Site Layout Alternative 4
Figure 3-11 Site Layout Alternative 5
Figure 3-12 Site Layout Alternative 6
Figure 3-13 Site Access Alternatives
Figure 3-14 Old County Highway Access Alternatives
Figure 3-15 State Route 17 Interchange 107 Improvement Alternatives
Figure 3-16 Water Supply Alternatives
Figure 3-17 Wastewater Treatment Alternatives
Figure 4-1 Tribal Lands and Roadways Topography
Figure 4-2 Tribal Lands and Roadways Soils
Figure 4-3 Water and Sewer Connection Routes – Soils
Figure 4-4 Tribal Lands and Roadways Surface Waters
Figure 4-5 Tribal Lands and Roadways Existing Drainage Areas
Figure 4-6 Tribal Lands and Roadways Floodplain and Floodway
Figure 4-7 Water and Sewer Connection Routes – Wetlands and Waterways
Figure 4-8 Tribal Lands and Roadways Vegetation
Figure 4-9 Tribal Lands and Roadways Wetlands
Figure 4-10 Lane Geometries – Existing Conditions
Figure 4-11 2010 Existing Condition Peak Month Traffic Volumes – Friday Afternoon Peak Hour
Figure 4-12 2010 Existing Condition Peak Month Traffic Volumes – Saturday Evening Peak Hour
Figure 4-13 2010 Existing Condition Peak Month Traffic Volumes – Sunday Afternoon Peak Hour
Figure 4-14 Noise Monitoring Locations
Figure 4-15 Socioeconomic Analysis Study Area
Figure 4-16 Land Use
Figure 4-17 Upper Mining Area (2001)
Figure 4-18 Lower Mining Area (2001)

Figure 4-19 Auto Salvage Operations (2001)
Figure 4-20 Auto Salvage Operations (2001)
Figure 4-21 Land Use and Zoning
Figure 5-1 Proposed Stormwater Management Plan – Overview
Figure 5-2 Proposed Stormwater Management Plan – Northern Area
Figure 5-3 Proposed Stormwater Management Plan – Southern Area
Figure 5-4 Proposed Drainage Areas
Figure 5-5 Wetland and Waterway Impacts
Figure 5-6 Wetland and Waterway Mitigation Overview
Figure 5-7 Wetland Creation Area Grading Plan
Figure 5-8 Wetland Creation Area Planting Plan
Figure 5-9 Reference Wetland Locations
Figure 5-10 Supplemental Wetland Mitigation Area 1
Figure 5-11 Supplemental Wetland Mitigation Area 2
Figure 5-12 Supplemental Wetland Mitigation Areas 3 and 4
Figure 5-13 Future (2011) No-Build Condition Peak Month Traffic Volumes –Friday Afternoon Peak Hour
Figure 5-14 Future (2011) No-Build Condition Peak Month Traffic Volumes – Saturday Evening Peak Hour
Figure 5-15 Future (2011) No-Build Condition Peak Month Traffic Volumes – Sunday Afternoon Peak Hour
Figure 5-16 Future (2011) Build Condition Peak Month Traffic Volumes – Friday Afternoon Peak Hour
Figure 5-17 Future (2011) Build Condition Peak Month Traffic Volumes – Saturday Evening Peak Hour
Figure 5-18 Future (2011) No-Build Condition Peak Month Traffic Volumes – Sunday Afternoon Peak Hour
Figure 6-1 Regional Project Locations
Figure 6-2 Future (2011) Cumulative Build Condition Peak Month Traffic Volumes – Friday Afternoon Peak Hour
Figure 6-3 Future (2011) Cumulative Build Condition Peak Month Traffic Volumes – Saturday Evening Peak Hour
Figure 6-4 Future (2011) Cumulative Build Condition Peak Month Traffic Volumes – Sunday Afternoon Peak Hour

Volume II

List of Appendices

Appendix A Scoping Comments
Appendix B Traffic Impact Study
Appendix C Stockbridge – Munsee Casino Market Study
Appendix D Local Government Agreements
Appendix E Farmland Conversion Impact Rating Form
Appendix F Correspondence
Appendix G Neversink River Bank Stability Assessment
Appendix H U.S. Army Corps of Engineers Jurisdictional Determination
Appendix I Air Quality and Noise Report
Appendix J Socioeconomic Report

Volume III

List of Appendices

Appendix K Stormwater Pollution Prevention Plan
Appendix L Stormwater Management Plan Supporting Documentation
Appendix M Breakdown of Estimated Water Demand and Wastewater Flows
Appendix N Visual Impact Analysis
Appendix O DEIS Public Hearing Comments and Response
Appendix P DEIS Written Comments
Appendix Q Stream Impact Area Assessment
Appendix R Wetland Functions and Values
Appendix S Wetland Creation Area Water Budget
Appendix T Greenhouse Gas Analysis
Appendix U Growth Management

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Summary

The Stockbridge-Munsee Community, Band of Mohican Indians of Wisconsin (the Tribe) is proposing the development of the Stockbridge-Munsee Casino Project in the Town of Thompson, New York. The proposed Stockbridge-Munsee Casino would be a destination facility with a Class III gaming complex, as well as such ancillary facilities as a hotel, food and beverage outlets, retail facilities and a service station. The proposed site is located in the Town of Thompson immediately adjacent to State Route 17, a major transportation corridor, and regionally is within 100 miles of New York City.

For this Casino Project to be developed, the U.S. Department of Interior, Bureau of Indian Affairs (BIA) must make a two-part Secretarial determination that the Casino Project is in the best interest of the Tribe and not detrimental to the surrounding community as well as determine that it is appropriate to take off-reservation lands into trust for the Tribe. Because of this action, a Draft Environmental Impact Statement (DEIS) was completed in compliance with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 et seq.) and the Council on Environmental Quality (CEQ) Guidelines for Implementing NEPA (40 CFR Parts 1500-1508). A Public Hearing was held on March 10, 2005. Public comments were received and, together with responses thereto, are incorporated in this Final Environmental Impact Statement (FEIS). This FEIS reflects current information based on updates under taken from 2010 to 2012 that consider relevant changes in conditions or circumstances, new information and /or changes in applicable law or regulations.

Tribal Background

The Tribe is made up of descendants of the Mohican Nation and Munsees of the Delaware Nation. The Western Mohicans occupied the mid-and-upper Hudson River Valley and the Eastern Mohicans occupied the Housatonic River Valley in western Massachusetts. It was the Mohican Indians who greeted Henry Hudson near the site of present-day Albany in 1609. The Munsee occupied lands to the south and east of Mohican territory, including one group that occupied what is today Ulster, Sullivan, and parts of Orange and Delaware Counties. In 1736, the Commonwealth of Massachusetts established the Stockbridge reservation. Shortly thereafter, due to increasing pressure from white settlement, the Mahican Nation moved its council fire (capital) from the Albany area to Stockbridge and thereafter Stockbridge's population steadily grew as more Hudson River Mahicans moved to Stockbridge. By 1751, some Munsees had joined the Mohicans at Stockbridge, Massachusetts, and in 1756, a band of 227 Munsees joined the Mohicans there. (Other Munsees would join the Tribe in New York in 1802 and in Wisconsin later in the 1800s).

The Tribe remained in Stockbridge, Massachusetts until 1785, when high property taxes and the steadily encroaching European population convinced tribal leaders to accept an earlier invitation of the Oneida Nation to settle on a six-mile-square tract within Oneida territory in central New York. The 1788 Treaty of Fort Schuyler between the Oneidas and the State of New York provided that "the Stockbridge Indians and their Posterity forever, are to enjoy their Settlements on the Lands heretofore given to them by the Oneidas." In 1794, the Tribe was signatory to two

federal treaties. The first, the Treaty of Canandaigua, provided that "[t]he United States acknowledge the lands reserved to the Oneida, Onondaga and Cayuga Nations, in their respective treaties with the state of New-York [sic], and called their reservations, to be their property; and the United States will never claim the same, nor disturb them or either of the Six Nations, nor their Indian friends residing thereon and united with them, in the free use and enjoyment thereof." The second, the December 2, 1794 "Treaty between the United States of American and the Oneida, Tuscarora, and Stockbridge Indians dwelling in the country of the Oneidas," acknowledged the tribes' sacrifices in their service to the Colonies during the Revolutionary War and compensated them for losses sustained during the War. For several decades, the Tribe prospered on the six-mile-square tract, but during the period 1818-1842, the State acquired these lands in a series of 15 land-purchase agreements concluded without the United States' consent or participation.

Beginning in about 1820, the Tribe began its relocation to present-day Wisconsin, where it entered into several more treaties with the United States. The Tribe eventually settled on a two-township reservation northwest of Green Bay pursuant to the Treaty of 1856. This reservation was largely unsuitable for farming, and an 1871 act of Congress resulted in the loss of most of the Tribe's valuable timber lands to non-Indian timber companies. Additional federal legislation in 1893 and 1906 resulted in the allotment of the remainder of the 1856 reservation's land to tribal members, such that, by the early 1930s, no tribal lands remained. In 1934, Congress passed the Indian Reorganization Act (IRA) and the Tribe became one of the first to elect to organize under the 1934 IRA. In recognition of its Mohican and Delaware heritages, organized under the name Stockbridge-Munsee Community, Band of Mohican Indians. When the Tribe's reorganization under the IRA was finally completed in 1937, it had adopted the IRA constitution, as amended in 1995, which still governs the Tribe today.

Permits

Several federal and state permits are likely required for the project to proceed. A permit from the U.S. Army Corps of Engineers (USACE) is required pursuant to Section 404 of the Clean Water Act for wetland alterations. This permit application has been filed and is being reviewed. A Section 401 Water Quality Certificate, issued by the State of New York Department of Environmental Conservation (NYSDEC), is generally required for this USACE permit. A National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Construction Activities will be required from the U.S. Environmental Protection Agency (USEPA) to cover work on proposed trust lands. The work off of the trust lands will also require a parallel permit, the State Pollutant Discharge Elimination System (SPDES), from NYSDEC. In addition, if the final design plans include cogeneration, then a permit under the Non-Attainment New Source Review regulations and a Title V Operating Permit would be required from the USEPA. State permits for Mined Lands Reclamation and Soil Remediation have already been issued.

Purpose and Need

The Tribe proposes the action to take land into trust for gaming purposes to address the Tribe's need for economic development and diversification. The Tribe has submitted an application (Part 151 application) for an off-reservation acquisition of land in accordance with the requirements under the IRA. The Tribe is eligible to have land taken into trust on its behalf under the IRA since, as noted in a February 28, 2011 Interior Board of Indian Appeals ("IBIA") decision, "[b]y virtue of holding an election under the IRA for the Stockbridge Indians," the IBIA concluded that "the Secretary necessarily recognized and determined in 1934 that the Tribe was 'under federal jurisdiction.'" (53 IBIA 75-76). The Tribe has also submitted an application (Part 292 application) for two-part Secretarial determination in accordance with the requirements under the Indian Gaming Regulatory Act (IGRA, 25 U.S.C. 2701 *et seq.*).

One of IGRA's purposes is "to provide a statutory basis for the operation of gaming by Indian tribes as a means of promoting tribal economic development, self-sufficiency, and strong tribal governments." 25 U.S.C. 2702 (1). The Tribe's applications are submitted to allow it to use the development tool provided by IGRA. Gaming is a revenue source with relatively high profit margins that maximizes income to development risks and costs when compared to other types of enterprises. It also is a means of economic development that allows the Tribe to exercise tribal sovereignty. Gaming provides a revenue stream that is dependable, can maximize net revenues, and minimizes risk so that the Tribe can protect its members and its ability to fulfill its responsibilities under its governmental and social programs.

In order to realize the Tribe's need for economic development, the Tribe proposes to establish a casino gaming operation of a size that maximizes revenues, is competitive with other existing and proposed establishments, and creates a draw for potential patrons. Such a gaming operation would meet the Tribe's purpose and need. An appropriately sized gaming operation would provide the Tribe with revenue to sustain and expand tribal services and programs (e.g., for health care, education, social services, elderly services, childcare and emergency services, and infrastructure), protect the Tribe's heritage, diversify the Tribe's economy and thus create jobs on and proximate to the reservation, purchase usable lands, and would be a large step towards self-determination and economic self-sufficiency.

Project Description

Project Site and Description. A project program was developed to meet the stated purpose and need. The selected site is 330 acres, with the casino location proposed on the eastern portion of the property. No other development is proposed than the Phase I and Phase II programs described here. The proposed project is centered around the gaming facility, with ancillary features such as a hotel, warehousing and a service station. The project is proposed in two phases. Phase I would consist of the initial gaming facility and supporting operational facilities. Phase II consists of expanded gaming and a 750-room hotel. This FEIS assumes that Phase I would be operational in 2014 and that Phase II would be operational in 2018; to be conservative, the environmental analyses are conducted for 2018. The portions of the site are referred to as the Gildick parcel (east of County Highway 161). The Cooke East parcel (west of County Highway

161), the Cooke West parcel (east of County Highway 161) and the Rossini parcel (west of County Highway 161 and north of Cooke West).

The full build main facility will total approximately 584,000 square feet (sf). The casino will offer 3,000 slot machines and 190 gaming tables. The remainder of the facility will include a wide range of entertainment facilities such as specialty bars and restaurants, retail, children's areas, multi-purpose area, employee area and back of house. Warehousing and storage will be provided in a separate building located at the southern end of the site. A service station and convenience store will be located at the entrance. A water tower will also be located at the high point near the entrance. A 40,000 sf central plant will be located east of the casino.

A total of 8,480 parking spaces will be provided in both surface lots and structured parking. Structured parking has been maximized to reduce land impacts. Only 330 surface parking spaces will be associated with the casino. Phase II will also add a new parking garage for the hotel with 1,020 spaces.

Site runoff will be controlled through a comprehensive stormwater management system including water quality treatment, infiltration and peak flow attenuation. The proposed Stormwater Management Practices have been designed in accordance with the NYSDEC Stormwater Management Design Manual, 2010 edition (NYS Stormwater Manual). Wetland creation areas will be located along the Neversink River, restoring the area that was previously mined. A separate access road for emergency vehicles as well as improved access to local residences will be provided through Cooke East.

Roadway Improvements. Based on the analysis of future traffic volumes with the Casino Project, the proposed project is conservatively assumed to add between 2,060 and 2,264 peak hour vehicles to the roadway network. To mitigate this additional traffic, there will be geometric and operational improvements in the existing roadway network in the vicinity of the project. Site access improvements include widening County Highway 161 to provide two lanes in each direction, between the site driveway and Interchange 107 with State Route 17. Signalization will be provided at the site driveway entrance with exclusive channelized double turn lanes into and out of the site. A gated emergency access driveway connecting the site with Foss Road will be provided. Foss Road will be extended to provide new access for the local residences along Old County Highway and Foss Road. This new access will be signalized. The Tribe will pay for on-site improvements, intersection improvements, and improvements to County Highway 161 and associated work.

The State is already planning to improve Interchange 107, so the Tribe is working with the state to coordinate improvements and has also discussed cost-sharing for the work with New York State Department of Transportation (NYSDOT. Most of the proposed improvements for this project are also being planned by NYSDOT as part of their State Route 17 (future I-86) interchange study. The Tribe will pay the incremental cost of improvements undertaken to address project impacts.

Water Supply. The cumulative water demand for the proposed Phase I and Phase II project is expected to be 209,400 gallons per day (gpd) and 430,000 gpd, average daily demand, respectively. The Tribe has a current intermunicipal Water Services Agreement with the Village

of Monticello and the Town of Thompson to extend the Village water system to supply the potable water demand for the Casino Project. Although the Village water system currently has available excess capacity to service the Casino Project, the Village is desirous of preserving this capacity for future growth within the Village. Therefore, as part of this agreement, a new production well will be installed in the existing Village well field to supply the Casino Project. A new dedicated water line will be constructed from the well location to the Site.

Wastewater Treatment. Projected wastewater flow rates for Phase I and Phase II are 162,000 and 327,000 gpd average daily flow, respectively. Connection to the Town of Thompson's Kiamesha Lake Wastewater Treatment Facility is proposed. The facility has a capacity to treat 2.0 mgd and currently operates at approximately 35 percent of capacity. This facility, therefore, has an excess capacity of 1.3 mgd, which is sufficient to meet the needs of both Phases I and II of the proposed development. The Tribe and the Town of Thompson entered into a Sewer Services Agreement on February 5, 2003, which was mutually extended on August 3, 2010 and which is still current.

No Action Alternative

Under the No Action Alternative, the Stockbridge-Munsee Community would not settle its land claim, nor construct the Casino Project. The Tribe would be impacted by the loss of the anticipated economic benefit. This would impact the Tribe's ability to provide community services. Under the No Action Alternative, the BIA would not approve the Parts 151 and 292 applications.

The proposed project site would most likely revert back to its original site use. On Gildick, this would be sand and gravel operations and auto salvage, and on Cooke and Rossini it would remain open space (as it would be under the build alternative). However, to be conservative, the No Action Alternative assesses leaving the project site vacant as well as the impacts from the resumption of mining and auto salvage operations.

Alternatives Eliminated From Further Discussion

Multiple project alternatives have been considered for the project to meet Tribe's purpose and need. Alternatives that were considered but eliminated are summarized below.

Financial Venture Alternatives. Gaming was considered the only feasible alternative that met the Tribe's basis purpose and need. No other project type, such as manufacturing, light industry, retail or housing could be expected to generate revenues significant enough to be considered a viable alternative for the Tribe to settle its land claim. The revenue source needs to minimize risk so the Tribe can protect its members and its ability to fulfill its governmental and social responsibilities. Gaming is a revenue source with relatively high profit margins that maximizes income to development risks and costs when compared to other types of enterprises. Furthermore, a gaming operation would allow the Tribe to take advantage of the opportunities afforded it under the Indian Gaming Regulatory Act (IGRA, 25 U.S.C. 2701 et seq.). In addition, the casino option allows the Tribe to provide quality employment opportunities in a safe environment. Similarly, the casino option provides the highest economic benefit to the region. It

also creates minimal potential operational environmental impacts, particularly in comparison to manufacturing and industrial alternatives.

Location Alternatives. Site location alternatives began with a regional overview. Sullivan County was selected as the optimal location because the area has historically been economically dependent on tourism. It has, in fact, been considering gaming as an economic revitalization tool for decades. New York legislation in 2001 limited gaming to either Sullivan or Ulster Counties, in addition to the Seneca Indian Nation proposals for Buffalo and Niagara Falls. Based on this, only Sullivan and Ulster Counties were considered. Sullivan County was selected over Ulster County because it is better connected to the New York City metropolitan area, it has a long recognized need for basic economic revitalization, and it has a high level of support for gaming in general. Sullivan County is served by State Route 17, a limited access road that provides 16 interchanges within the County, allowing multiple opportunities for potential sites with excellent access. In addition, NYSDOT is upgrading State Route 17 to become Interstate 86. Ulster County, on the other hand, is served by I-87, a toll road that has only two interchanges within the County.

Within Sullivan County, the Towns of Thompson, Fallsburg and Mamakating and the Village of Monticello were further targeted because of their adjacency to State Route 17 and relative proximity to I-84. The Towns of Thompson and Fallsburg were further considered since those are the areas that supported the majority of the earlier tourist boom that attracted hundreds of thousands of seasonal visitors. The decline in tourism over the last several decades has resulted in these towns being particularly hard hit economically, but it also means that the infrastructure, most particularly sewer and water services created to support this population, is still largely in place.

Several sites within the targeted area were considered for the Casino Project. Key parameters considered during investigations included size, number of parcels, proximity to an exit to State Route 17, adjacent land uses, available utilities and environmental constraints. The State Route 17 corridor that was investigated is approximately 30 miles long and includes 16 interchanges. The areas that were within a one mile radius of a State Route 17 interchange were examined in order to find possible development sites. The proposed site was ultimately selected for its proximity to Interchange 107, disturbance of the site (auto salvage and mining), minimal abutting residences and small number of parcels.

Site Layout Alternatives. Once the proposed site location alternative was identified, on-site planning began. This included definition of the Project program, as well as layout of that program on the site. Several on-site layouts were considered in order to determine what alternative would be most feasible and would present the lowest level of environmental impacts. Criteria that were considered in making the layout decision included the size of the facilities in relation to the parcels and the ability to cluster the main facilities in one area to minimize the impacted area and ease operations. Seven alternatives were considered, and the proposed layout selected because of ability to cluster the facilities, ease of access, and reduced wetland impacts.

Roadway Improvement Alternatives. Several alternatives for roadway improvements were considered. Three access alternatives were analyzed before selecting the proposed access, including consideration of impacts to local and state roads and access to adjacent properties.

Local roadway improvement alternatives considered options for handling existing traffic, especially to Old County Highway and Foss Road. Alternative improvements to Interchange 107 have been reviewed by NYSDOT.

Water Supply Alternatives. Four water supply options were evaluated for the proposed development, with connection to the Village of Monticello System being the proposed alternative. The other alternatives that were considered included connection to the Artesian Water Company (a private water company), the Town of Thompson, or establishment of an on-site supply. Connection to the Artesian Water Company was not pursued because the actual permitted withdrawal capacity of their available surface and groundwater sources and limitations on their treatment and distribution systems are believed to be limiting factors. In addition, their facilities would require major upgrades to be a long-term, reliable source. The Town of Thompson's water service currently has neither the capacity nor a distribution system that is capable of servicing the proposed development. Finally, preliminary testing has not indicated the presence of adequate on-site water supply (other than for landscaping needs).

Wastewater Treatment Alternatives. Four potential wastewater treatment alternatives were evaluated, with connection to the Town of Thompson's Kiamesha Lake Wastewater Treatment Facility selected as the proposed alternative. The other alternatives that were considered included connection to the Village of Monticello wastewater treatment facility, the Town of Thompson's Emerald Green facility, and construction of an on-site facility. Although there is sufficient capacity available, the Monticello wastewater treatment facility has been under a Consent Order from NYSDEC) for inflow and infiltration problems and, as such, the Kiamesha Thompson option was determined to be preferable. The Emerald Green Treatment Facility has a capacity of 410,000 gpd and is currently operating at 50 percent capacity. To increase this capacity, additional infrastructure would be required, as well as an amended discharge permit from NYSDEC. Based on the limited capacity, the need for a substantial upgrade and expansion, and required amendment to the permit, it was determined that this option was not viable. Finally, construction of an on-site wastewater treatment plant was considered and rejected. This option would require either a subsurface disposal system or discharge to the Neversink River. Preliminary subsurface investigations of the site indicate it is unlikely that suitable conditions exist to support a system without having a direct hydraulic connection to the river. It is unlikely that a direct surface discharge to the river could be permitted due to its classification as a cold water fishery and the presence of mussels listed as a species of concern.

Environmental Consequences

Earthwork. The site plan and roadway improvements have been designed to minimize cuts and fills. The site plan situates the majority of the building development on the lower, flatter portion of the Gildick parcel. The area of site disturbance will be minimized by consolidating the building program in a main facility that has two other smaller support buildings. The Phase II, 750-room hotel will contain 15 stories and will be attached to the casino, thereby reducing its footprint on the site. Additionally, approximately 95 percent of all parking spaces are in multi-level parking structures or under the casino, further reducing site cuts and fills and the amount of site disturbance. The water and wastewater treatment connection alignments will be in existing roadways and are not, therefore, expected to require any significant amounts of earthwork.

Erosion and Sedimentation Control. The control of soil erosion and sedimentation from the on- site portion of the work during construction will be based on the regulations, guidelines, and conditions set forth by the USEPA in the National Pollutant Discharge Elimination System (NPDES) General Permit For Stormwater Discharges From Construction Activities. Erosion and sedimentation controls measures for the off-site transportation and utility installation work on non-trust lands will be designed based on the NYSDEC State Pollutant Discharge Elimination System standards set forth in the NYS Stormwater Manual. Design of the proposed facilities also considered erosion and sediment control by maximizing the use of previously disturbed areas, working with site topography to balance cuts and fills, avoiding direct impacts to natural waterbodies, and providing restoration of disturbed areas. Controls during construction will be incorporated in a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP establishes the approach to controlling water pollution during construction and lists structural and non-structural Best Management Practices. The SWPPP also identifies stormwater control measures that are anticipated to remain after the construction is complete. A filtration system or flocculation treatment will be provided as an additional treatment process to remove fine, suspended particles from the stormwater runoff, as needed.

Groundwater. Multiple measures are incorporated to minimize impacts to groundwater. These include treatment of stormwater runoff before release (see below) and construction of infiltration basins to provide groundwater recharge. The existing infiltration volume that is being lost as a result of development during the 2-year, 24-hour storm event is 9.19 acre-feet (based on a total infiltration timed period of 72 hours during and post rainfall event). Proposed infiltration basins will infiltrate a total of 14.51 acre-feet of runoff volume during the equivalent 2-year, 24-hour storm event. Therefore, the proposed drainage system design provides an infiltration volume greater than what occurs naturally under existing conditions. The DEIS used a shorter time period in calculating infiltration (14 hours vs. 72 hours), so the numbers in this FEIS reported above are not comparable to those in that document. The FEIS calculation is consistent with generally accepted current practices. Consequently, groundwater flows to existing (and created) wetlands areas and to the Neversink River, as well as flows available to recharge downstream aquifers, such as the Town's potential well site located south of State Route 17, will be either maintained or enhanced.

Surface Waters. No direct impacts will occur to the Neversink River. The stability of the banks of the Neversink River will not be affected as there will be no work on or adjacent to the banks, and as stormwater flows will be controlled from the site. Neither the roadway improvements nor the utility connections will impact any surface waters. However, direct impacts to surface waters will occur as part of the Casino Project. Phase I and Phase II will cumulatively impact all of Pond 4 (0.07 acres), portions of Basins 1 and 2 (0.37 acres) and 705 linear feet (lf) of three intermittent streams. Mitigation of the impacts to the intermittent streams will be two-fold with a total of approximately 800 lf of new stream habitat created. Mitigation of impacts to the existing ponds and basins will occur through creation of new pond habitat as well as enhancement of existing habitat. In summary, there will be enhancement of approximately 0.5 acres of Basin 1 and creation of approximately 0.5 acres of pond habitat within the wetland creation area. In addition, the condition of Basin 5 will be enhanced by stabilizing surrounding land area and by providing extensive water quality treatment of surface waters upstream of Basin 5. Should Basins 1-5 become jurisdictional under the USACE (see discussion under "Wetlands", below),

impacts to regulated areas will increase by approximately 0.59 acres of basin impacts. These impacts are considered in the supplemental wetland mitigation plans described below.

The Casino Project is not within the New York City water supply watershed. Although some casino-related economic effects may occur in Ulster and Delaware Counties, no impacts to the New York City Watershed are expected. Any growth effects occurring in these counties would be located along the State Route 17 corridor, outside the Watershed, due to the distance between Ulster and Delaware County locations and the location of the casino job centers. Further, the roughly north-south oriented roadway system between the Sullivan County casino area and the Watershed area is comprised of minor local and county roads, some of which are closed during winter season, and it unlikely that casino-related growth would occur along these roadways in the Watershed area. Further, any induced development that may occur in the watershed area would be subject to local zoning and environmental regulation and the rigorous review standards of the New York City Watershed Rules and Regulations, which are designed to ensure the protection of the Watershed and its resources.

Indirect impacts, such as impacts to water quality and water quantity, are discussed in the following sections.

Stormwater Management. Site improvements were designed to ensure no new direct discharges to the Neversink River and to include multiple measures to minimize impacts to the groundwater and surface water resources on and adjacent to the site. The stormwater management design has been modified from the earlier proposal due to a proposed taking of land where a proposed stormwater management basin would have been located by NYSDOT and to meet the standards and criteria in the updated 2010 NYS Stormwater Manual. These stormwater mitigation measures, which are an integral part of the site layout and design, will be incorporated into the construction specifications. The proposed measures will meet or exceed the standards and guidelines as outlined by the NYS Stormwater Manual. In summary, the overall plan includes the following elements:

- Groundwater infiltration basins to reduce storm-related surface water runoff from impervious areas, to recharge groundwater, and to ameliorate thermal impacts
- Floodplain compensatory storage to fully mitigate any loss of floodplain volume
- Attenuation of peak runoff flows for storm events up to and including the 100-year storm event
- Treatment of stormwater runoff to address potential water quality and thermal impacts

An important design feature of the development plan is that there will be no direct discharges of stormwater from developed areas on the site to the groundwater or surface water (including wetland resource areas) without first undergoing water quality treatment as described below.

The proposed stormwater management plan (for the site as well as the roadway improvements) includes catch basins with deep sumps and hoods, a water quality structure to treat roof runoff, vegetated water quality swales, pre-treatment basins, infiltration basins and spill prevention. The

proposed stormwater management system is sized to completely infiltrate the 1-year storm event, detain and pass the 100-year storm event without overtopping. The post development stormwater management system will also meet or exceed the water quality inspection and maintenance performance standards presented in the NYS Stormwater Manual. Potential thermal impacts have been mitigated by infiltrating all runoff from paved areas up to the 1-year storm event, thus eliminating direct discharges to the river during normal annual rainfall conditions.

Floodplain. The 100-year floodplain, as mapped by the Federal Emergency Management Agency (FEMA, 2011), extends partially on the development site. Development impacts to the floodway have been totally avoided. The only activity proposed within the floodway will be wetland mitigation, which will not reduce the flood storage volume within this area. The proposed wetland mitigation area will have a positive effect of vegetating and stabilizing a large, exposed soil area within the floodway that is part of the original mining operation. Impacts to the 100-year floodplain have been avoided to the greatest extent practicable. No buildings or support structures are proposed within the delineated floodplain. Minor impacts to the floodplain are unavoidable in order to construct the eastern access road to the casino building. This roadway has been designed to cross the floodplain at a narrow section to limit the amount of filling.

This minor floodplain encroachment will be fully mitigated by providing a compensatory floodplain volume which is equal to the size of the area which was impacted, such that flood levels associated with the river will not be increased. Consequently, there will be no net loss of floodplain storage over existing conditions.

Roadway improvements and utility connections will not impact floodplains.

Upland Vegetation. The Casino Project has been located, as much as possible, within currently unvegetated areas. Impacts to vegetated areas will, however, occur. Roadway improvements will impact some vegetated areas along the existing rights-of-way. Utility connections will be underground in existing rights-of-way and will not impact vegetation. Overall, the net condition on-site will change from an area that is currently approximately 15 percent unvegetated (but pervious) to a site that is 14 percent unvegetated, but impervious. Softwood areas will be reduced, but successional areas will be increased. None of the vegetation on the site west of County Highway 161 (approximately 170 acres) will be disturbed.

Additional area will be temporarily disturbed as a result of grading. Following construction, however, these temporarily disturbed areas, along with other currently unvegetated areas, will be restored. A landscaping plan will emphasize native plant communities and use of Integrated Pest Management. Landscape buffers will be reestablished in areas along the Neversink River.

Wetlands. Wetlands associated with the project site and the roadway improvement areas were delineated in accordance with federal requirements, and their boundaries surveyed and approved by the USACE. Approximately 63 acres of wetlands and waterways occur in the project site. There are no state regulated wetlands. Wetlands adjacent to the proposed utility connections have also been identified, but not surveyed.

Phase I of the proposed development will impact a total of 1.48 acres of vegetated wetlands in WA-4. Phase I will additionally impact 0.07 acres of Pond 4 and 0.37 acres of Basins 1 and 2.

Phase II will impact 0.05 acres of WA-21. A total of 705 lf of intermittent streams will also be impacted for Phase I and II. Mitigation is proposed so that there will be no net loss of wetland acreage or functions and values. It has been conservatively assumed that, since the original USACE approval of the wetland delineation, the basins created by mining operations, which were reclaimed by the Tribe, may have become jurisdictional (although their basic functions remain unchanged). Under this assumption, basin impacts would increase by 0.59 acres. Supplemental wetland mitigation has been provided for this potential change in impacts. Neither roadway improvements nor water supply or wastewater treatment connections will have wetland impacts.

Creation of new resource areas and enhancement of existing areas is proposed to provide mitigation for direct wetland impacts. The mitigation areas have been designed so that there will be no net loss of wetland functions or values from the Casino Project. The USACE mitigation guidelines were used to guide the design. The wetland creation site is located in the lower mining area, and will reclaim this area. The area will include 4.3 acres of vegetated wetlands and 0.5 acres of open water. In addition, enhancement and restoration of existing basins will occur in 0.6 acres of existing vegetated wetlands and open water. The overall mitigation ratio will be approximately 3:1. Elevations for the creation area were established based on groundwater and surface water level monitoring. Proposed plant species have been selected based on analysis of nearby reference wetlands and were selected for wildlife habitat, aesthetic, and success at stabilizing, colonizing and spreading. Only native, non-invasive plant species will be used. A monitoring plan has been established to provide periodic review of the creation area, reporting to the USACE and USEPA, and to provide remediation if necessary. The supplemental wetland mitigation sites, should they be required, include approximately 1.66 acres near Basins 3 and 4 (SWMA-1), 3.10 acres north of Cooke West (SWMA-2), 1.08 acres on Cooke East (SWMA-3), and 1.02 acres on Cooke West (SWMA-4).

Fisheries. No direct impacts to significant fisheries or fisheries habitat will occur. The Neversink River provides the most valuable fisheries habitat in the area. There will be no direct impacts to the Neversink River, and development will be set back from it. The existing 33 foot NYSDEC fishing easement will remain. In addition, the area adjacent to the river will be restored. Indirect impacts from stormwater runoff will be controlled. Most importantly, thermal impacts have been minimized through a number of means. In addition, the ponds on Cooke West and south of Interchange 107 will be undisturbed.

Four of the basins within the original mining operation provide some limited fisheries habitat. Proposed enhancement of Basin 1 will improve the natural habitat and functions. Existing Basins 2, 3 and 4 will be converted to either stormwater management facilities, vegetated wetlands or naturalized ponds. The condition of existing Basin 5 will be improved by enhancing water quality discharging to that basin and by removing accumulated sediments. The new aquatic habitats will provide improved conditions through the removal of sediments, and inclusion of habitat features including variable bottom conditions and the provision of shade trees and overhang logs. With the protection and increased buffering of the Neversink River, the enhancement of Basins and the provision of the new open water, fisheries habitat impacts will be minimized.

Wildlife. The development of the site and roadway improvements will displace upland forest and forested wetland vegetation, resulting in impacts to wildlife habitat. Impacts have been limited as much as possible by the clustering of the development in one area. Mitigation to minimize unavoidable impacts will include a landscaping plan designed to maximize future wildlife use of the site. It will use plant species with known wildlife food and habitat value and will create additional edge habitat in appropriate areas. The implementation of setbacks from the Neversink River will serve to further minimize the impacts to the riparian zone in general and resident bird, mammal, reptile, and amphibian species in particular. Wetland mitigation will replace lost wetland habitat, and landscaping of the proposed facility and parking areas will allow some species to return to the area. The proposed utility connections have been designed within existing roadways and/or their adjacent unvegetated shoulders. As such, their installation will have no impacts to vegetation or wildlife habitat.

Threatened and Endangered Species. There are no plant species of concern in the project area. There will be no impact to federally listed or proposed endangered or threatened wildlife species. The brook floater (*Alasmidonta varicosa*), classified as a species of concern by the U.S. Fish and Wildlife Service (USFWS), is found in the Neversink River in the vicinity of the Casino Project. The brook floater is listed as threatened by the NYSDEC Natural Heritage Program. Impacts to these populations will be avoided. There will be no direct impacts to the river or its banks. Provision of the stormwater management practices will ensure that indirect impacts are also controlled both during construction and operational phases. Restoration efforts along the river bank, such as for the wetland creation areas, and stabilization of areas that are currently eroding to the river, may actually improve conditions. If the designed erosion and sediment controls and stormwater management controls are implemented, and as adjacent habitats will be protected, enhanced and restored, there should be no impacts to the habitat of the brook floater.

The USFWS had requested information on the federally-listed Indiana bat (*Myotis sodalis*) and whether or not there might be suitable habitat on-site. A habitat evaluation was conducted that concluded that it was not likely that the Indiana bat uses the site. The USFWS concurred with the findings and determined that no further consultation was required.

Bald eagles (*Haliaeetus leuceocephalus*) are reported to use the Neversink River during the winter. The bald eagle has been delisted from the Endangered Species Act, but is still afforded protection under the Migratory Bird Treaty Act and the Bald and Golden Eagle Act. It is also listed as a threatened species by the NYSDEC Natural Heritage Program. Potential roosting sites do occur immediately along the Neversink River. These will be protected by the setbacks the project is observing from the banks of the River. The forested buffer areas are expected to provide adequate shielding to avoid or minimize disturbance to winter roosting or foraging bald eagles.

Hazardous Materials. A review of available federal, state and local regulatory records was conducted in 2002 and updated in 2010 to determine if reports of oil and/or hazardous material releases have been documented at or near the project area. In addition to record review, site visits were conducted to perform site assessments. The purpose of the site visits was to look for visual evidence of the use, storage or release of oil or hazardous material at the site.

The project site is not listed in the reviewed state or federal databases. Some conditions, such as above ground storage tanks (ASTs) and stained soils were found during the pre-DEIS site investigation that warranted subsurface investigations. Subsurface investigations, including the advancement of soil borings, the installation of groundwater monitoring wells, and the excavation of test pits were performed at the site in order to evaluate areas of concern identified in the initial site assessments. Groundwater and soils testing was conducted based on NYSDEC recommendations and under NYSDEC oversight. As a result of the subsurface investigations and testing, soil that had been identified to be contaminated with oil and/or hazardous material was excavated, removed from the site, and properly disposed of. Confirmatory soil sampling indicated that no reportable concentrations remained. NYSDEC issued a No Further Action letter. Extensive housekeeping activities have also occurred, with the removal of all the salvaged cars, car parts, tires and other miscellaneous debris. All ASTs and containers have also been removed and disposed of properly. The Bureau of Indian Affairs (BIA) performed a Level I Contaminant Survey. Verification of acceptability of the site was provided by the federal representative. There have been no operations on the site since the survey. Additionally, prior to the property being placed in federal trust an updated Phase I Environmental Site Assessment conducted in accordance with ASTM 1527 will be completed.

Record review for the roadway improvement area and along the proposed utility alignments indicated that there have been some reportable actions, but that they have all been resolved with two exceptions. A petroleum spill was reported along the water supply connection corridor, at the intersection of Rose Valley Road and Old Route 17. In addition, tank tightness failures (but not necessarily releases) at the Concord Hotel along the wastewater connection corridor have been reported. The status of these will be confirmed once the exact location of the trench is determined, but it is assumed that resolution will occur shortly.

Operationally, no significant impacts resulting from the handling and storage of hazardous materials are anticipated. The use of standard hazardous materials is anticipated subsequent to the development of the casino. Materials will be stored on-site in a secured area in small quantities, and only limited quantities of waste, if any, will be generated. A service station on the site will include the storage of gasoline, oil and waste oil tanks and pumps. All applicable regulations will be followed in the construction and operation of the service station and the associated storage tanks. Construction period activities related to hazardous materials handling and storage will be governed by the SWPPP for all construction packages.

Historical and Archaeological Resources. An intensive survey was completed for the tribal lands, and the New York State Public Preservation Office (NYSPPO) at the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) contacted for information on the project site and areas of roadway improvements and utility connections. The proposed development plan is in an area that has no prehistoric or historic cultural features. The NYSOPRHP issued a determination of No Effect for the project, which was reconfirmed in January 2012. There are two foundations and one structure adjacent to the roadway improvement area that may be potentially significant; however, no impacts are proposed to these areas. The NYSOPRHP has further indicated that there will be no impacts on historical or archaeological resources from the installation of the underground utility connections. NYSOPRHP has indicated that the only potential for impacts on historical structures of significance would arise if a pump station or other aboveground facility were proposed. The final location of the Town's proposed

wastewater pump station in Thompsonville has not been determined. The Town of Thompson will coordinate the pump station with NYSOPRHP once the location is set.

Traffic Analysis. A *Traffic Impact Study* submitted with the DEIS in 2005 analyzed potential traffic impacts associated with the proposed project. This study has been updated to include new baseline traffic counts and current information regarding other proposed development projects in the site vicinity that may also contribute to future traffic growth. Both studies include analyses of sight distance, level of service, safety, and intersection and highway ramp operations. The study area for the traffic impact analysis includes the critical intersections providing access to and from the project site. Specifically, the study area includes County Highway 161 (Heiden Road) intersections with Old Route 17, State Route 17 Interchange 107, Old County Highway, Foss Road, and the main project site driveway. The study area also includes Interchange 107 ramp intersections.

In order to quantify existing peak season traffic conditions in the project study area, daily and peak period traffic volume counts were conducted. Weekend traffic volumes were measured to coincide with the peak hour of traffic generation for the Casino Project and the study area. The highest peak hour traffic volumes recorded on County Highway 161 adjacent to the project site occurred during the Friday afternoon peak hour. Friday afternoon peak hour volumes on County Highway 161 north of Interchange 107 are approximately 600 vehicles per hour (vph) with the predominant flow headed northbound away from State Route 17. The reverse pattern was observed on Sunday night. The recorded volumes represent only a fraction of the roadway capacity.

Operations analyses of the intersections were conducted to determine operating Levels of Service (LOS). LOS is a term used to describe the quality of the traffic flow on a roadway facility at a particular period in time. Ratings range from LOS A operations, which indicate little or no delay, to LOS F operations, which indicate very long delays. The analyses indicate that all critical movements at the study area intersections operate well under capacity, at LOS A or B under existing conditions.

Existing traffic volumes were projected to a future design year (2018) to define No-Build, Build and Cumulative Build conditions (the cumulative impacts are discussed in the next section of this Summary). The No-Build and Build conditions assume full completion of a number of other proposed and/or reasonably anticipated development projects in the site vicinity and partial completion of two proposed projects that are not anticipated to be fully completed until well after 2018. A total of 24 individual projects and their related traffic are considered, including the Concord Hotel and Casino development. For the No-Build scenario, a background growth rate of one percent a year was assumed, which is consistent with the rate used in other recent studies and conservative relative to trending data that shows no traffic growth on State Route 17 since 2001. In addition, the study assumed an “induced growth” rate of 0.5 percent from 2013 to 2018. Phase I of the Casino Project is expected to be operational in 2014, but 2013 was used to be conservative. Phase II is expected to open in 2018.

For the Build analysis, it was assumed that certain improvements planned by the NYSDOT for State Route 17 Interchange 107 would be in place and that other improvements along County Highway 161, considered necessary to support the Casino Project (and to be funded by the Tribe)

would also be in place. The proposed improvements include widening County Highway 161, closing the intersection of Old County Highway and County Highway 161, providing a new connection from Old County Highway to County Highway 161 by extending Foss Road and providing a signal, and reconstructing the Interchange 107 ramps. The Tribe has entered into an Agreement in which the Tribe agrees to pay for improvements to state, county and local roads as required for the Casino Project.

The proposed Casino Project is assumed to generate between 2,060 and 2,264 peak summer, weekend peak hour vehicle trips. These trips were distributed and assigned to the roadway network based on a review of existing peak hour patterns and a market analysis prepared for the project. The trip distribution indicated that over 75 percent of the new patron trips would originate from east of the site and travel on State Route 17, while the remainder were distributed evenly between locations to the north and west. In contrast, employee trips are more heavily oriented to the west. A portion of the Casino Project trips were assumed to be shared trips with the Concord Hotel and Casino project.

Similar to the existing conditions transportation system analysis, anticipated future traffic volumes were evaluated with respect to the roadway system capacity. Comparisons between No-Build and Build conditions help define the specific impacts of the Casino Project. With the proposed roadway improvements and this new traffic on the roadway system, area intersections will for the most part continue to operate at LOS A or B during summer weekend peak hours while a few intersections will operate at LOS C under future Build conditions. Operations along State Route 17, where the Interchange 107 on-ramps merge with the State Route 17 mainline traffic volumes will be at LOS D or better. These levels were achieved despite a series of conservative assumptions, noted in the cumulative impact section, which tended to overstate traffic volumes and thus traffic impacts of the Casino Project and background development in the 2018 Build and Cumulative Impact scenarios.

Regional Traffic. Regionally, the majority of traffic comes to the area on State Route 17, which provides two lanes of traffic in each direction. All improvements for State Route 17 fall under the jurisdiction of NYSDOT, and improvements for the Casino Project have been coordinated with the agency. Independent of this project, NYSDOT has been studying State Route 17 to identify deficiencies with the ultimate goal of upgrading the road to interstate standards in order that it may become the future I-86. Based on discussions with NYSDOT officials, NYSDOT plans to address the potential need for additional capacity along State Route 17 in the future. Consequently, all improvements proposed in NYSDOT's State Route 17 study are designed to accommodate future roadway widenings (an additional lane in each direction) when and where appropriate. NYSDOT plans to provide improvements at Interchange 107. These proposed improvements and Casino Project proposed improvements are similar, with the main exception of adding an extra lane to the bridge over State Route 17.

State Route 17 currently provides two lanes in each direction and has a capacity of up to 4600 vph in each direction. Traffic impacts from the Casino Project on State Route 17 will be most concentrated at Interchange 107. The State Route 17 mainline at this location has adequate capacity, as reflected in the ramp merge analyses, to serve the future traffic volumes with the Casino Project.

Peak month average daily traffic volumes at more remote locations along State Route 17 in Sullivan and Orange Counties were determined for existing and projected future No-Build and Build conditions. To be conservative, these forecasts treated all trips associated with the Casino Project as new trips on the roadway system. (No shared trips between casinos were assumed.) In Sullivan County, east of County Highway 161, project-related daily traffic volumes result in a 26 percent increase to volumes on State Route 17. In Orange County, just east of the Sullivan County border, traffic volume increases by approximately eighteen percent. At the highest volume location in Orange County (between the beginning of Route 6 and 17M overlap to Routes 207 and 17A), the Casino Project results in an eight percent increase in daily traffic volumes on State Route 17. Project-related traffic volumes on other county roads and local streets in surrounding counties are anticipated to disperse to less significant levels.

Public Transportation. Public transportation is available to the general region, with private limousine or taxi service providing connection from the public transportation terminus to the proposed site. In the future, it is expected that public transportation services will be expanded to the Casino and the region.

Air Quality. A microscale analysis has been performed on potential mobile-source air quality impacts. Analyses were conducted at the proposed Casino Project location, where mobile sources would be most concentrated. The analyses showed no exceedances of National Ambient Air Quality Standards (NAAQSs). Concentrations were predicted for the Existing, 2018 No-Build, and 2018 Build conditions. The project is located in an ozone attainment area and will not have significant effect on regional emissions. The modeling results demonstrate that the predicted worst-case concentrations of all modeled air pollutants at all receptor locations will be safely in compliance with the NAAQS. Therefore, the worst case traffic generated by the Casino Project will not cause or contribute to any violations of the NAAQS, and will not adversely affect air quality.

Stationary source emissions were also considered. The Casino Project will use distillate oil for space heating, domestic hot water, and emergency generators, and propane for cooking, since natural gas is not available at the site. Since the site is in the Ozone Transport Region, a federal Non-Attainment New Source Review permit would be required if potential emissions of volatile organic compounds (VOCs) exceeded 50 tons per year or potential emissions of oxides of nitrogen (NO_x) exceeded 100 tons per year. Potential emissions of these pollutants from both Phases I and II are below that threshold. The facility would require a federal Prevention of Significant Deterioration (PSD) permit if potential emissions of any criteria pollutant exceeded 250 tons per year, classifying it as a new major source. Again, potential emissions of all criteria pollutants are below 250 tons per year. Thus, the Casino Project does not require any federal pre-construction air quality permits. During the first year of operation, the Casino Project would not need to apply for a federal Title V operating permit because potential emissions of all criteria pollutants are below 100 tons per year and potential emissions of VOCs are below 50 tons per year.

The Casino Project would consider switching from distillate oil to natural gas if gas becomes available to the site in the future. If fuel burning equipment were switched over to natural gas, emissions of NO_x and VOC would stay about the same, emissions of CO would likely increase somewhat, and emissions of SO_2 and PM would decrease. The actual change in emissions from

the Project's stationary sources with a conversion to natural gas would depend on the equipment manufacturer and the combustion design.

On-site cogeneration is an option being considered for the hotel in Phase II of the Casino Project, either with diesel reciprocating engines or combustion turbines, if pipeline natural gas becomes available at the site by that phase's 2018 build year. The present conceptual design of mechanical systems, because there is no pipeline natural gas, relies on purchase of all electricity from New York State Electric & Gas (NYSEG) and distillate oil-fired boilers to provide space heating and domestic hot water for the buildings. The emission totals with cogeneration reveal that the facility likely would need a federal pre-construction air permit under Non-Attainment New Source Review regulations if cogeneration is included in the design. A federal PSD permit would not be needed, and application for a federal Title V permit would be made in the first year of facility operation.

Noise. Operation of the Casino Project will produce small off-site changes in ambient sound levels. All mechanical equipment, such as boilers and generators, will be housed in sound-insulated structures, and silencers will be used on diesel-powered generator exhausts. The volume of traffic generated by the Project is not expected to perceptibly increase the existing sound levels from traffic on nearby roads including State Route 17. In order to quantify potential noise impact, a noise study was conducted. The Federal Highway Administration (FHWA) Traffic Noise Model (TNM) was used to evaluate the sound level impact from the Project's traffic on sensitive receptors. The analysis was performed using peak traffic volumes for the 2010 existing case, the 2018 No-Build case, and the 2018 Build case and the 2018 Cumulative Build case. The TNM modeling results demonstrate that the highest sound level predicted after the facility is built (63 dBA) will be easily in compliance with the FHWA guideline for sound levels in residential areas (67 dBA). The TNM modeling shows that the sound levels at nearby residences and on the Neversink River will increase by up to 1 dBA between the No-Build and Build scenarios. Because the changes are less than 3 dBA, these results indicate that the potential increase in sound levels will generally not be noticeable near the project area.

Socioeconomics. A review of socioeconomic conditions for the Tribe and for the region was conducted. While economic conditions have improved over the past 30 years for the Tribe and its members' income levels remained below the Wisconsin average by 30 percent (U.S. Census, undated). The 2000 Census showed that the Tribe is now closer to the average Wisconsin income with a median household income level of $36,908 (the Wisconsin average is $43,791) (U.S. Census, undated), but the numbers of tribal members that are below the poverty level are higher than the Wisconsin averages. Tribal member unemployment was at 7 percent in 2000, while the State's average unemployment rate was 3.5 percent in 2000 (Wisconsin Department of Workforce Development, undated). In 2010, the Tribe's unemployment rate was 19 percent, with 10 percent of employed individuals having annual earnings below federal poverty guidelines (BIA American Indian/Alaska Native Population and Labor Force Estimate, 2010).. Currently, 15 percent of reservation housing is substandard and there are at least sixty tribal families on waiting lists for housing.

The Tribe has a shortage of land that can be used for housing and this shortage is compounded by its lack of adequate water supplies and wastewater treatment alternatives. Estimated costs for a new drinking water system are approximately $1.5 million. The Tribe has borrowed money to

make infrastructure improvements in recent years. Approximately $1.7 million of improvements were made to the existing drinking water system, although members residing in the eastern portion of the reservation, where most of the nitrate problems occur, do not have community water service. The Tribe is also currently expanding the wastewater treatment system on its reservation at a cost of approximately $3.1 million. Further expansions and upgrades are also necessary, and costs are projected at approximately $2.5 million. Additional infrastructure development and improvements are needed, such as the construction of new facilities and/or improvement of existing tribal facilities like a long-term medical care facility, day care centers and a new tribal government building but the Tribe does not have funding to do so. The Tribe is also interested in expanding health operations to ensure that all tribal members can receive adequate health care; and in expanding fire prevention and emergency medical services on the reservation.

The Tribe also has road maintenance and repair needs since many roads on the reservation are unpaved and underdeveloped. Transportation improvements costs are projected as being $8.5 million over the next five years. The Tribe is expected to gain substantial socioeconomic benefit from the proposed gaming facility. The tribal government and tribal members will benefit from the anticipated economic resources that will result from the Casino Project. The proposed facility would provide a secure source of income for the Tribe. This income will enable the Tribe to diversify its economy by investing in other forms of economic development, as well as providing revenues to meet community goals, which in turn would create jobs for tribal members on and near the reservation.

In relation to the Casino Project site, a regional analysis was conducted in a study area that was defined by a one hour commuting time from the proposed Casino Project. This study area included all of Sullivan and Orange Counties and portions of Ulster and Delaware Counties in New York, and portions of Wayne and Pike Counties in Pennsylvania. The focus of the study was on Sullivan County, where the effects of the Casino Project would be most concentrated. The economy of Sullivan County has been traditionally based on the tourism industry, and has suffered from the decline that began in the 1960s. The hotel and lodging sector, for example, lost almost 40 percent of its employment base between 1995 and 2000. Per capita incomes in the Town of Thompson and Sullivan County decreased in 2011 real dollar terms between 1999 and the 2005-2009 time period. Per capita income in the Town of Thompson ($20,199) is nearly $12,000 lower than per capita income for New York State as a whole ($32,158). The Study Area and New York State were estimated to have experienced minor decreases in per capita income between 1999 and the 2005-2009 time period (1.2 and 1.8 percent decreases, respectively). Sullivan County's percentage of population with income below the poverty level is slightly higher than the State's. Employment trends in Sullivan County show a 0.3 percent increase between 2000 and 2010, which is comparable to the State's 0.6 percent increase. Housing, population and employment in Sullivan County show a distinct seasonal trend, resulting from summer visitors, as well as a large second home component.

The Casino Project is expected to bring an overall strengthening of the regional economy through construction, direct spending at the casino, and offsite spending by visitors and employees. Direct and indirect effects of construction were modeled using the Regional Input-Output Modeling System (RIMS II). Total estimated construction costs are approximately $800 million. Construction is projected to create 5,307 person years of direct employment over the six

year period between when construction for Phase I begins and construction for Phase II ends. Based on the RIMS II model, the total economic activity from constructing the Casino Project, including indirect expenditures, is estimated at more than $1.5 billion dollars.

Operationally, the Casino Project is expected to create over 5,800 direct and indirect jobs in New York. The completed Casino Project is projected to have a direct effect on the local economy, measured as economic output or demand from the direct spending during operation, equal to approximately $514.96 million annually. This amount includes the direct wages and salaries and other spending associated with annual operation. Based on the RIMS II model for Sullivan County, the total economic activity, including indirect expenditures that would result from the completed proposed Project, is estimated at $740.86 million annually. In the broader New York State economy, the operation of the completed proposed Project is estimated to have a total effect of approximately $958.58 million annually. The annual operation of the proposed Project would also have tax revenues associated with it. The completed proposed Project would continue to provide payments to the county in the amount of $15 million annually. Other tax revenues for the County and State, depending upon negotiations, would also be created by the completed proposed Project.

As indicated, the Casino Project would create a large number of jobs, both directly and indirectly. This would likely result in a migration of workers into the study area. Given the dispersal of project employees throughout a relatively expansive commuter zone, the effects of employee concentration, such as localized commuter congestion, and school over burdens, is expected to be minimal. These new residents in the study area would also create a housing demand, which would be met by filling existing vacant housing stock and new construction.

Casino patrons would also have effects. For the large part, the Casino Project is a destination, and the majority of visitors are expected to arrive and depart without making many other stops. However, there will be a demand for services created by the visitors to the area, such as automobile related services. In addition, Sullivan County is a destination in and of itself, and it is expected that patrons would make other stops within the area. Overall, the effect of casino visitors on the local and regional economy is expected to be positive. Casino visitor spending will be highly concentrated within the confines of the casino operation, on gaming, dining, and lodging (under Phase II), thereby supporting the foundation of the economic activity generated by the casino's operations. Incidental spending by casino visitors is expected to result in direct economic benefits to local businesses and businesses along travel routes serving travelers, such as automobile service sector. Actual visitor spending, and particularly the real potential for increased out-of-casino visitor spending is expected to stimulate entrepreneurial activities and overall business growth as the local economy adapts to provide attractive compliments and alternatives to the casino's attractions. The potential for negative economic activity resulting from the substitution effect of local spending shifts is expected to be offset by newly generated employee spending, as well as by the adaptation of the local business sectors to attract and capture the spending potential of casino employees and patrons.

Community Services. The Casino Project will likely create additional demand for community services, including police, fire, and emergency services, schools, and health and welfare related services. The additional demand would mostly be created by the establishment of new residences

in the study area, but demands on certain community services would also result from the visitors to the casino facility. Although the employees would be dispersed over the six county study area, they would be centrally located in Sullivan County. In addition, this is where the demands on community services would be most felt. To mitigate these impacts, the Tribe has entered into an Agreement with Sullivan County that provides funding in the amount of $15 million per year.

Water Supply. The cumulative water demand (including domestic water usage, cooling and heating needs) is estimated to be 430,000 gpd average daily demand, for both Phase I and Phase II. It is proposed that the Village of Monticello system, which has an available excess capacity of 900,000 gpd, will provide the required water supply. The Tribe has entered into a Water Service Agreement with the Village of Monticello and the Town of Thompson to extend the Village water system to supply the potable water demand for the Casino Project. A new production well will be installed in the existing Village well field to supply the Casino Project. A new dedicated water line will be constructed from the well location to Site.

Irrigation water for landscape maintenance is estimated at 60,000 gpd during the peak seasonal usage. Peak usage would generally occur in the months of July and August, with diminished usage during the previous and following two months. It is proposed that on-site wells will provide this water.

Wastewater Treatment. Cumulative wastewater flow rates estimated for Phase I and Phase II are 327,000 gpd, average daily flow. It is proposed that the Town of Thompson Kiamesha facility, which has an available 1.3 million gpd excess capacity, will provide treatment. There is a Sewer Services Agreement between the Tribe and the Town of Thompson that reserves sufficient capacity in the Kiamesha Sewer Treatment Facility to accommodate the wastewater flows from Phases I and II of the Casino Project. A new sewer force main and pump station will be constructed to transport wastewater from the site to the existing town collection system.

Other Utilities. The electrical demand for the Casino Project is expected to be approximately 10.5 MVA. New York State Electric and Gas (NYSEG) officials have indicated that, with upgrades, they can provide this service.

As there is no natural gas service currently available in Sullivan County, it is proposed that oil be used as the fuel for heating, cooling and emergency generators. This will require the on-site storage of approximately 100,000 gallons of fuel oil (based on a two-week delivery schedule). Conversion to natural gas for these utility needs would be an option if and when gas service becomes available. Propane gas is proposed for cooking needs. This will require approximately 30,000 gallons of on-site storage.

There are two possible providers for telephone service to the site; Verizon and AT&T. Both entities would be able to provide service.

Land Use and Community Character. With the Casino Project, existing land use would change from remediated mining/auto salvage to a gaming entertainment complex. The development will not impact adjacent land uses directly, although additional traffic will be added. The construction of a multi-story hotel under Phase II may provide some moderate visual impacts given its location within the project. Traffic impacts upon the local residents will be

limited since all traffic will be directed into the site within ¼-mile of Interchange 107 off State Route 17. The Casino Project is consistent with Sullivan County's interest in promoting the area as a tourist destination.

The goal of the site planning process was to minimize on-site land use impacts and to maintain a setback from the Neversink River. Outdoor lighting for the project will be designed to facilitate the movement of pedestrians and vehicles, providing a safe and legible environment for nighttime use of the proposed casino while minimizing impacts on adjacent land uses. A landscaping plan will re-establish areas disturbed during construction and provide aesthetic improvements. A visual analysis, based on a three mile radius, showed that the casino and hotel would not have significant visual effects, largely because the Casino Project will be set in a depression.

In regard to potential additional development beyond that which is already proposed to occur, most study area communities, including the Towns of Thompson and Fallsburg and the Village of Monticello, have land use policies to manage future growth in a sound, and a generally environmentally-conscious manner and to discourage growth patterns and suburban sprawl-type development. Thus, these communities have developed a set of clear and deliberate public policies to control growth and develop in a manner consistent with objectives of the community.

Greenhouse Gas Emissions. A greenhouse gas (GHG) emissions analysis was performed consistent with the NYSDEC Policy "Guide for Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements," July 15, 2009 (the "Policy"). Although the Policy does not apply to the Casino Project, it does provide guidance in performing an assessment of GHG emissions for such activities. The Policy recommends a project to quantify its carbon dioxide (CO_2) emissions and to review and assess mitigation measures that reduce such emissions. In addition, the Policy suggests the project proponent quantify the effect of proposed mitigation. This GHG analysis uses the eQUEST energy design software (version 3.63) to quantify energy savings and emissions reduction.

CO_2 emissions were quantified for: (1) the Base Case corresponding to the New York State Energy Code, and (2) the Preferred Alternative, which includes all energy saving measures. Building energy saving measures include high-efficiency boilers, chillers and HVAC units; Demand Control Ventilation (DCV) controls for the Main Facility; building envelope insulation that exceeds Code; lighting efficiency better than Code; high-efficiency refrigeration systems, low-energy design electronic gaming machines (EGMs); and a central energy management system. Solid waste energy mitigation consists of recycling cardboard and consumer beverage containers. Transportation energy mitigation is arranging direct bus service to the Project on a regular basis from urban areas. The Preferred Alternative would reduce total CO_2 emissions by 22.9% as compared to the Base Case.

The draft Council on Environmental Quality Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions (February 2010) suggests that an assessment of GHG emissions may only be warranted when a project would have direct GHG emissions of at least 25,000 metric tons of CO_2-equivalent GHG emissions. Total Casino Project direct emissions (with mitigation) are less than 25,000 metric tons.

Environmental Justice

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) requires that "each Federal agency shall make achieving environmental justice 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." The environmental justice review determines if there is an environmental justice population that could be affected by the project and, if so, whether that population is affected. There is no indication of minority populations or low-income housing near the project area. There will not be, therefore, environmental justice population impacts. The Tribe itself is considered an environmental justice community. Particularly as discussed under "Socioeconomics", there will be a positive impact on the tribal population.

Cumulative Impacts

The cumulative impacts from a possible third casino, as well as other projects proposed in the area, were assessed. Impacts to most of the environmental issues (such as soils, vegetation, wetlands etc.) would not be affected by cumulative impacts. The main considerations would be potential cumulative impacts to traffic, air quality socioeconomics and community facilities (schools.

Traffic. For the Cumulative Build scenario, 2018 was used as the design year, the same year used for the Build scenario. The assessment assumed development of a third casino, together with the full build out of proposed developments in the area.

The assumption of a third casino is conservative as there is currently no such proposed casino, although the State of New York has enacted legislation authorizing up to three casinos.. The location of this assumed casino west of the Casino Project site is also conservative, as it means that traffic going to that casino would need to pass by Interchange 107 from the east, thus maximizing the potential cumulative traffic and related impacts.

Conducting the cumulative impact analysis for 2018 is a very conservative (and unrealistic) assumption because the principal major projects that are part of this scenario – the Concord Resort master plan and the Rock Hill Town Center Phase II – are long-term, phased projects that are not proposed to be constructed and operational until well after 2018. In addition, as there is no proposal for a third casino, it is unlikely to be operational by 2018.

The additional developments considered under Cumulative Build conditions would generate nearly three times the amount of peak hour traffic as the Casino Project. Much of the new traffic is generated by the proposed Concord Resort master plan build out, which is located north of the Casino Project site and will add to volumes along County Route 161 and on State Route 17. Even with the increased volumes, the study area intersections along County Route 161 will operate at LOS D or better, except that the low volume left turn movement from the Route 17 westbound off-ramp to County Route 161 southbound will operate at LOS E. Increased traffic

demands on State Route 17 due to the additional Cumulative Build traffic will result in LOS F operations at the Route 17 eastbound on-ramp during the Sunday evening peak hour. LOS E operations are anticipated if the assumed third casino is removed from the Cumulative Build scenario.

The projected LOS F operations on the State Route 17 eastbound on-ramp on the Sunday afternoon peak hour are a consequence, in part, of very conservative traffic forecasts. In addition to those noted above, there are a series of additional conservative assumptions that tend to overstate traffic impacts.

- Peak hour traffic volumes are based on peak summer weekend conditions, off-season background traffic volumes in the area are much lower, and traffic associated with the three casinos would be lower in the off-season weekends

- The analysis assumes that traffic due to background growth and development increases by a total of one percent per year for background growth and development plus 0.5 percent induced growth resulting from the introduction of the Casino Project; actual background growth has been non-existent on State Route 17, despite significant development in the area

- In addition to overall background traffic growth, anticipated traffic from potential new development has been considered, resulting in an actual growth rate that is much larger than 1.5 percent per year

- The analysis assumes that there are no shared trips made among the various background development projects; since some of these projects are commercial uses and others are residential uses, there is likely to be some double counting of trips as trips made between these uses are counted twice in this analysis

- The analysis assumes no pass-by or diverted trips, and therefore assumes that all project trips are *new* trips; however, it is likely that some percentage of the traffic traveling to and from the Casino Project is already on State Route 17, and would not represent *new* trips for State Route 17

- The analysis assumes traffic volumes generated by the Casino Project that are approximately 60 percent higher than the projected volume from the two other previous casino proposals in the area; in addition, relatively low percentage of project-generated traffic is assumed to be employee-related

- The Cumulative Build analysis assumes a third casino, although there is no active proposal; if the analysis is conducted without the traffic associated with this assumed casino, the LOS F for the eastbound on-ramp to Route 17 during the Sunday evening peak hour where the merge occurs with the mainline improves to LOS E

- The analysis does not incorporate any traffic mitigation measures that might be implemented by the other projects

- The analysis does not account for any NYSDOT's longer range improvements on State Route 17, which are designed to make this roadway into a federal interstate highway with increased capacity.

Because the traffic analysis is so conservative, summer weekend peak hour traffic operations will likely be much better than indicated and midweek traffic operations will also be significantly better than projected weekend conditions. Peak hour traffic volumes are based on peak summer weekend conditions. Off-season background traffic volumes in the area are substantially lower, and project-related traffic volumes will be seven to twelve percent lower on off-season weekends compared to summer weekends.

Should State Route 17 traffic demands reach capacity levels under future summer peak hour conditions motorists traveling to or from the region will experience traffic delays. It is also likely that motorists will choose to change their travel habits choosing to travel before or after the typical peak hours. This will in essence extend the duration of the peak period but allow the highway to operate with less delay and congestion during the peak hour,

NYSDOT has been studying State Route 17 to identify deficiencies with the ultimate goal of upgrading the road to interstate standards allowing it to become the future I-86, including the potential need for additional capacity along State Route 17 in the future. There is ample time before the full cumulative impacts occur – at least a decade after the 2018 Build Year date – for NYSDOT to implement some or all of the improvements that would improve traffic conditions on State Route 17.

Air Quality. The microscale air quality analysis of the 2018 Cumulative Build case shows full compliance with all NAAQS. In addition, a regional mesoscale air quality analysis was performed to calculate the potential regional air quality effects of the traffic generated by the Casino Project and, cumulatively, other proposed projects and the assumed third casino used in the traffic assessment, on Orange County, using as a measure, the total daily emissions of VOCs and NO_x on major highways. Thirty-five roadways were included in the analysis. The analysis shows that motor vehicle traffic in Orange County related to the proposed Casino Project(s) will result in an insignificant (less than one percent) increase in total VOCs and NO_x emissions in Orange County.

Socioeconomics. Socioeconomic cumulative effects were assessed for potential impacts on labor pool, housing market and local and regional economies. Cumulatively, three casinos and other potential projects would generate an estimated 14,164 direct jobs and 2,674 indirect jobs upon full operation of their facilities. The direct casino employment would be expected to be drawn from the same one-hour commuting radius as the study area for the socioeconomic analysis for the Casino Project. The indirect employment would come from a broader area, because the locations where indirect employment is generated would be dispersed throughout Sullivan County and beyond. The existing work force could not accommodate this demand and as a result, there would be more in-migration. This would have the largest effect on housing demand. The estimated demand from both direct and indirect employment would be for 6,168 new housing units in the six county study area. Based on data that were collected, there are plans for over 10,000 housing units in the study area. The extent and location of housing would ultimately

be driven by the future demand, which would be expected to occur over a number of years as the casinos and other projects are developed.

Schools. The infusion of new residents from the two proposed casinos, the assumed third casino, and the full build-outs of the Concord Resort master plan and Rock Hill Town Center Phase II would generate increases in enrollment in local school districts, particularly the Monticello and Fallsburg Central School Districts. The expected incremental cost, based on the cost per student that must be derived from local tax revenues, would be largely offset by the increased revenues from these projects. In addition, impact fees associated with the Casino Project and other casino projects would further reduce those incremental costs. Overall, there could be positive revenue flows to area schools.

Induced Growth

Multiple casinos will induce growth in the area, most specifically through increased population. This increased population will have impacts on socioeconomic conditions as well as environmental impacts through construction of new housing or businesses. Impacts would likely be centered in Sullivan County, but are somewhat modified by the fact that the population growth will be spread over a large area. For the most part, this induced growth will be mitigated by increased tax revenues and by land use planning.

Socioeconomic growth induced impacts would arise from employee, operation and visitor related effects. New employees moving into the study area would be drawn from a wide commuting area and, as such, their effects would be broadcast throughout this overall region, with a concentration in Sullivan County. New residents, the 1,381 direct and indirect employees who settle in Sullivan County for example, would represent new consumers of housing as well as goods and services. The effects of this induced growth would be expansion and new opportunities for businesses and industries that provide these goods and services. Operationally, the purchase of goods and services by the Casino Project would represent a substantial growth inducing effect. The annual operations of the Project would represent $514.96 million per year in new purchases. The secondary or indirect economic benefit would also be substantial. Indirect induced spending would total approximately $443.62 million per year. Additional induced growth effects would arise as visitors spend money in the local and regional economies on transportation, food, lodging and entertainment while traveling to and from their homes to the project area, and while visiting, exploring and partaking in other tourist activities in the local area.

Environmental impacts are difficult to quantify as the specific locations of induced developments are not known. In large measure, these induced impacts will be spread over the region and the impacts similarly diffused. In addition, in-place federal, state and local regulations will guide induced growth and manage environmental impacts. Specifically, Sullivan County has undertaken several studies that focus on the growth potential from multiple casinos and the County has begun planning for growth management.

FEIS and DEIS Comparison

The FEIS includes updated information since the publication of the DEIS. The following summarizes the changes which have occurred since the DEIS. None of the updates of information have caused substantive changes to the findings of the DEIS. As noted above, the overall build program has also not changed since the DEIS. The DEIS had assumed that approximately 333 acres of land would be taken into trust. The acreage is currently approximately 330 acres due to removing one small parcel from both trust applications and to land takings by NYSDOT.

Geology, Topography and Soils. These conditions have not changed since the DEIS, although the NRCS has current (2010) mapping that identifies additional areas of the site as Prime Farmland or Statewide Important Farmland. Many of these soil units are actually in wetlands or areas stripped of topsoil, such as the former mining areas. Completion of the USDA Farmland Conversion Impact rating worksheet based on the current mapping shows that potential impacts would not be significant nor warrant further consideration. The project's draft SWPPP was updated to reflect current requirements and continues to show the project in compliance with the NPDES General Permit for Stormwater Discharges From Construction Activities. Under the Cumulative Impact assessment, the only proposed projects in the site vicinity that could affect topography and soil are the NYSDOT bridge replacement and the Interchange 107 improvement projects. In the DEIS, the only project was the now abandoned Water Park at Holiday Mountain Ski Area. Because NYSDOT will need to comply with applicable requirements (like the Water Park project in the DEIS), no cumulatively significant effects on these resources will occur – this is the same as the conclusion in the DEIS.

Groundwater. Groundwater conditions have not changed since the DEIS. Impacts to groundwater through the loss of impervious area have been re-analyzed for the FEIS, which uses the current accepted methodology for assessing infiltration from a storm event. The DEIS used a methodology that considered a shorter duration of a storm event. In both the DEIS and FEIS, full mitigation is provided that will ensure that infiltration rates on the site will not be decreased. The only relevant proposals for cumulative impacts are the NYSDOT projects. Like the Water Park in the DEIS, these projects will need to comply with any applicable requirements. Thus, as found in the DEIS, there will be no significant cumulative impact on groundwater.

Surface Water. Surface water conditions have not changed since the DEIS. The Basins, which were created by the mining operations, were determined to be non-jurisdictional by the USACE for the DEIS. Since the mined areas have been reclaimed by the Tribe, some or all of these areas may now be considered jurisdictional. This potential USACE jurisdiction is discussed under "Wetlands", below. Since the DEIS, NYSDOT has indicated its plans to use a portion of the site for a Neversink River bridge replacement project. Their taking plans impact Infiltration Basin 2, as was proposed in the DEIS. In addition, NYSDEC has published the 2010 Stormwater Management Design Manual. Infiltration Basin 2 has been redesigned and a new Infiltration Basin 3 has been designed to address the NYSDOT taking and the updated Manual. No other changes have been made to the stormwater management system, and it will continue to meet or exceed the current NYS Stormwater Manual and the USEPA NPDES General Permit for Discharges from Large and Small Construction Activities for on-site construction and the NYSDEC SPDES General Permit requirements for the off-site construction. For cumulative

impacts, the only relevant proposals are the NYSDOT projects, which will need to comply with applicable stormwater management requirements. The NYSDOT improvement to Interchange 107 were considered in the DEIS, together with other proposals that had negligible effect on this resource. Consequently, as in the DEIS, no cumulatively significant effects on surface water will occur.

Vegetation. Vegetative conditions have not changed substantially since the DEIS. The mining and auto salvage operations had ceased, and the areas reclaimed by the Tribe, as reported in the DEIS. These areas have continued to re-vegetate, but are still successional areas as described in the DEIS. The NYSDOT projects would not affect these areas, and will have no cumulatively significant effect on this resource.

Wetlands. Wetland delineations were verified in 2010, and the boundaries confirmed. However, as noted above, the Basins, which were created by the mining operations, were determined to be non-jurisdictional by the USACE for the DEIS. Since the mining operations have been reclaimed by the Tribe, some or all of these areas may now be considered jurisdictional. The DEIS reported 1.60 acres of impact to jurisdictional areas, and the creation of 4.8 acres, for a total creation ratio of 3:1. Assuming the most conservative case in which the USACE takes jurisdiction over all of the basins, the FEIS reports 2.19 acres of impacts, and the creation of 6.86 acres, for a total creation ratio of 3:1. Both the DEIS and FEIS also report the same proposed wetland enhancements. As such, there will be no net loss in either case. For cumulative impacts, the only relevant proposals are the NYSDOT projects, which will need to comply with applicable wetland avoidance, minimization and mitigation requirements. Accordingly, similar to the conclusion in the DEIS, there will be no cumulatively significant effects on this resource.

Fisheries and Wildlife. Fisheries and wildlife conditions have not changed on the site since the DEIS. Impacts from loss of habitat have not changed, nor has proposed mitigation measures, such as minimizing disturbance and replacing habitat disturbed during construction. The NYSDOT bridge replacement project has been designed to minimize disturbance to the Neversink River, and thus, as in the DEIS, there will be no significant cumulative impacts on these resources.

Threatened and Endangered Species. Updated information from NYSDEC shows no change in species of concern since the DEIS. A 2010 survey showed no change in habitat for the brook floater or bald eagle since the DEIS. While the bald eagle has been delisted from the Endangered Species Act, it is still protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Act, and is listed as threatened by the state. The USFWS did request additional information on the federally listed Indiana bat. A habitat analysis was conducted and the USFWS concurred with the findings that the Indiana bat is not likely to use the site and that no further consultation is required.

Hazardous Materials. Conditions on the site are the same as reported in the DEIS, and there have been no new reported spills on or near the tribal lands. Along the utility corridors, the updated 2010 review of applicable data bases showed one petroleum spill listed as Active, at the intersection of Rose Valley Road and Old Route 17 and tank tightness test failures (but not necessarily releases) at the Concord Hotel. These are the only known areas of potential

contamination within the proposed utility corridors, and it is assumed that they will be resolved shortly.

Historical and Archaeological Resources. There have been no changes to historical and archaeological resources and there continues to be no impact. The NYSOPRPH issued a determination of No Effect for the project, which was reconfirmed in January 2012.

Traffic. New traffic counts were taken in July 2010 and other updated traffic information was obtained. Overall roadway conditions were found to be similar to those reported in the DEIS, with essentially no growth in traffic volumes despite a number of developments that were completed since the DEIS. The only exception was traffic on County Route 161 north of Route 17 where there has been a measurable increase in summer Friday evening northbound volumes and Sunday evening southbound volumes. (Saturday volumes were basically unchanged.)

The FEIS carried out the traffic forecasts through the full build year or 2018, as compared to the DEIS assumed full build year of 2011. The FEIS also updated the background project list and now includes, for the Build Year analysis, among other projects, the Concord Hotel and Casino and Phase I of the Rock Hill Town Center project. The assessment used conservative assumptions similar to those employed in the DEIS (although the background growth factor was refined and slightly reduced to account for the lack of change in background traffic noted above). It also assumed, consistent with the DEIS, that a series of improvements, including those at Interchange 107 of State Route 17 and the widening of County Highway 161 between the proposed site driveway and State Route 17, will be undertaken. The level of service (LOS) analysis shows results similar to those in the DEIS; traffic volumes during the Friday, Saturday and Sunday PM peak hours will be at LOS C or better, except for a single location at LOS D. In terms of regional traffic, the Casino Project, as reported in the DEIS, will add approximately 75 percent of its traffic to State Route 17, east of County Highway 161, toward New York City. While project-related daily traffic volumes would increase on State Route 17 in Sullivan and Orange Counties by 26 percent and 18 percent, respectively (which are higher percentages than reported in the DEIS), the capacity of State Route 17 in its current configuration can accommodate this increased volume of traffic.

For the Cumulative Build scenario, the same updated full build year, 2018, was assumed. The assessment assumed development of a third casino, together with the full build out of proposed developments in the area, although there is currently no such proposed casino. This assumed casino was assumed to be located west of the Casino Project site, so that traffic going to that casino would need to pass by Interchange 107 from the east and thus maximize potential cumulative traffic impacts.

The LOS analysis shows results similar to those in the DEIS; during the Friday, Saturday and Sunday PM peak hours most intersections will operate at LOS D or better. In the DEIS, the State Route 17 eastbound off-ramp at the Old Route 17 intersection will operate at LOS E during the Friday PM peak hour, the State route 17 westbound off-ramp at the Route 161 intersection will operate at LOS E during the Saturday and Sunday evening peak hour, and the on-ramp to Route 17 westbound (merge analysis) would operate at LOS E during the Saturday peak hour.

In the FEIS, the County Road 161/State Route 17 westbound off-ramp will operate at LOS E during the Friday and Sunday PM peak hours and the State Route 17 eastbound on-ramp will operate at LOS F during Sunday evening peak hour. A sensitivity analysis showed that operations would improve to LOS E if the assumed third casino was not considered in the study.

Similar to the cumulative intersection analysis in the DEIS, as a consequence of the conservative nature of this analysis, traffic operations will likely be better than shown in the impact statement. Accordingly, implementation of some or all of NYSDOT's planned improvements to State Route 17 in the vicinity of Interchange 107 as part of the proposal to bring the roadway to interstate standards would mitigate these potential impacts.

Air Quality. An updated air quality microscale and mesoscale analysis used the current traffic counts and projections, current ambient air quality data and changes to NAAQS. Similar to the DEIS, the FEIS shows that the Casino Project will not cause or contribute to any violations of the NAAQS. Calculated stationary source emissions have not changed since the DEIS. The cumulative impact assessment yields similar results; the microscale analysis shows that there will be no violation of the NAAQS, and the mesoscale analysis shows that emissions in Orange County would have an insignificant (one percent or less) increase in total VOC and NOx.

Noise. The noise analysis was updated to reflect current traffic information and, consistent with the DEIS, shows no significant impact from the project. Similar to the DEIS, there would be no cumulative noise impacts, either from the cumulative traffic study or from the Casino Project in conjunction with other proposals.

Socioeconomics. The socioeconomics assessments, after being updated to reflect current conditions in the region, reflect similar results as the DEIS. The Casino Project revenue stream will have significant benefits for the Tribe, allowing improvements in both needed programs and infrastructure on the reservation in rural Wisconsin and creating employment for Tribe members on or near the reservation. The overall fiscal benefits of the Casino Project in the region will be positive, similar to those reported in the DEIS, as there will be increased employment and concomitant indirect economic benefits from both construction and operation stages. For example, the updated analysis indicates that the annual economic benefits to the Sullivan County region from project operation will be over $740 million and to the State will be over $950 million. The housing demand generated by the Casino Project, similar to the assessment in the DEIS, will be met by a combination of existing housing stock and units already proposed in Sullivan County.

The results of the Cumulative Impact analysis are also comparable to those of the DEIS. The inclusion of the Concord Resort master plan and Rock Hill Town Center projects will generate increased employment opportunities and revenues for the region, and the new housing associated with these projects will help to meet demand created by the Casino Project, the Concord Hotel and Casino and the assumed third casino. The long time frame for these projects allows ample time for municipalities to manage and control such new development in an environmentally sound and orderly manner, and thus limit any potential indirect cumulative impacts. As in the DEIS, there will be no cumulatively significant socioeconomic impacts.

Community Services. The evaluation of community services was updated based on current data and information. Similar to the DEIS, no significant impacts are expected on these services. The cumulative impact are comparable to those reported in the DEIS. The effects on schools is not expected to be significant, as increased tax revenues from the projects considered in this assessment, the Agreement with Sullivan County for the Casino Project and similar agreements by other projects, and school districts' ability for long-term planning to address increased enrollment will all mitigate the impacts of increased costs. Potential impacts on other community services will be mitigated through similar means.

Utilities. Proposed water supply and wastewater treatment options remain unchanged since the DEIS. Utility capacities were confirmed since the DEIS, and remain available. Similar to the DEIS, no significant cumulative impacts on utilities are expected. The principal new projects – the Concord Resort master plan and Rock Hill Town Center – plan to supply their own water and will not affect the Village of Monticello system, from which the Casino Project will draw. The Town of Thompson's Kiamesha Wastewater Treatment Facility has permitted excess capacity of approximately 1.3 mgd, which could accommodate the Casino Project, the Concord Resort master plan and other proposed developments that would be expected to use that facility.

Land Use and Community Character. Existing land uses and community character as well as potential impacts remain similar to those described in the DEIS. There have been updates in comprehensive planning and zoning in some of the municipalities, but theses serve to allow municipalities to better control growth and development, and thus limit any potential indirect effects of the Casino Project. The cumulative impacts on land use and community character impacts remain similar to those described in the DEIS, particularly in light of the ability of municipalities to control growth and development under land use.

Pollution Prevention and Sustainable Design. There have been no updates to the proposed pollution prevention and sustainable design plans for the Casino Project. The new greenhouse gas assessment (below) does quantify some of these efforts.

Greenhouse Gas Assessment. A greenhouse gas assessment has been added to the FEIS, based on the NYSDEC Policy issued in 2009. The assessment shows that the project will generate less than 25,000 tons per year of carbon dioxide emissions, and that the preferred alternative, which includes the pollution prevention and sustainable design measures reported in the DEIS, will reduce emission from the base case (a project that complies with the New York State Energy Code) by 22.9 percent. The cumulative effects from the Casino Project's GHGs are not significant.

1.0 Introduction

The Stockbridge-Munsee Community, Band of Mohican Indians of Wisconsin (the Tribe), a federally recognized Indian tribe (77 Fed. Reg. 47868, 47873 (2012)), is proposing the development of the Stockbridge-Munsee Casino Project in New York State. The proposed Stockbridge-Munsee Casino would be a destination facility that includes a Class III gaming complex, as well as such ancillary facilities as a hotel, food and beverage outlets, retail facilities and a service station. This multi-phased Casino Project would be developed in the Town of Thompson, Sullivan County, New York. The proposed site is located immediately adjacent to State Route 17, a major transportation corridor, and regionally is within 100 miles of New York City. The site is currently unoccupied and supports a reclaimed mining operation, a former auto salvage yard, and forested lands. Figure 1-1 shows the regional location and Figure 1-2 shows the proposed site. The Tribe would work with Trading Cove New York (TCNY) to develop the Casino Project, but the Tribe would be solely responsible for its management.

For this Casino Project to be developed, the U.S. Department of Interior, Bureau of Indian Affairs (BIA) must make a two-part Secretarial determination that the Casino Project is in the best interest of the Tribe and not detrimental to the surrounding community as well as determine that it is appropriate to take off-reservation lands into trust for the Tribe. The BIA's action would be appropriate since:

- The transaction is in the best interest of the Tribe because it helps the Tribe meet tribal economic needs and provides a measure of compensation for the relocation and the many hardships suffered by the Tribe from the State's alleged illegal purchase of tribal lands in the early 1800s

- The transaction is in the best interest of the surrounding community, including Sullivan County and the Town of Thompson because of the Casino Project's potential economic revitalization of the surrounding area and the Tribe's mitigation of identified environmental impacts

- the Tribe was considered to be under federal jurisdiction in 1934 and is eligible to have land taken into trust on its behalf under the Indian Reorganization Act (IRA, 25 U.S.C. 465)

In addition, the State of New York and all its citizens will benefit from the Casino Project's successful implementation since it would positively impact the State budget while facilitating the release of Stockbridge-Munsee claims on New York lands.

This Final Environmental Impact Statement (FEIS) was developed for these federal actions described above and completed in compliance with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 et seq.) and the Council on Environmental Quality (CEQ) Guidelines for Implementing NEPA (40 CFR Parts 1500-1508). A Draft Environmental Impact Statement (DEIS) was prepared for the Casino Project Prior to the DEIS, a scoping session was held and comments received (Appendix A). The DEIS was subsequently distributed for public comment on January 28, 2005. A public meeting was held on March 10, 2005. A copy of the transcript is provided in Appendix O. Appendix P provides copies of written comments.

Responses are also included and have been integrated into this document. A FEIS which contained updated analyses in response to public comment, was prepared and was ready for circulation to the public in November 2006. That FEIS was not released since both of the Tribe's land-to-trust applications were denied in 2008. However, the land-to-trust application was reinstated by the BIA in 2011.

This current FEIS was updated in 2010-2012 in order to consider any changed conditions, including regulatory changes. As part of this update, all subject areas were considered to ascertain whether there were relevant changes in conditions or circumstances, new information, and/or changes in applicable law or regulations. The updates includes inspections of the Tribal lands and affected offsite areas, (e.g., for vegetation and surface water), conducting traffic counts at relevant intersections, requests for information from relevant agencies (e.g., for cultural resources and threatened and endangered species), review of relevant documents and review of relevant changes in laws and regulations. The entire DEIS was reviewed as part of the 2010-2012 update and any changes have been included in the materials.

1.1 Tribal Background

The Tribe is made up of descendants of the Mohican Nation and Munsee Indians of the Delaware Nation, both of which spoke languages of the Eastern Algonquian speaking group. At the time of European contact, they occupied adjacent areas on the East Coast. The Western Mohicans occupied the mid-and-upper Hudson River Valley, including the Capital Region of New York State. The Eastern Mohicans occupied the Housatonic River Valley in western Massachusetts. It was the Mohican Indians who greeted Henry Hudson near the site of present-day Albany in 1609. The Munsee, a name that came into general use in the 1750s, were not a single political unit, but were communities united by a common language. The Munsee occupied lands to the south and east of Mohican territory, including one group that occupied what is today Ulster, Sullivan, and parts of Orange and Delaware Counties.

In 1736, the Commonwealth of Massachusetts established the Stockbridge reservation, granting a six-mile-square tract to the Housatonic Mahicans in return for their relinquishing all claim to a nearby larger reservation that had been established in 1724. Shortly thereafter, due to increasing pressure from white settlement, the Mahican Nation moved its council fire (capital) from the Albany area to Stockbridge and thereafter Stockbridge's population steadily grew as more Hudson River Mahicans moved to Stockbridge. By 1751, some Munsees had joined the Mohicans at Stockbridge, Massachusetts, and in 1756, a band of 227 Munsees joined the Mohicans there (other Munsees would join the Tribe in New York in 1802 and in Wisconsin late in the 1800s).

The Tribe remained in Stockbridge, Massachusetts until 1785, when high property taxes and the steadily encroaching European population convinced tribal leaders to accept an earlier invitation of the Oneida Nation to settle on a six-mile-square tract within Oneida territory in central New York. The 1788 Treaty of Fort Schuyler between the Oneidas and the State of New York provided that "the Stockbridge Indians and their Posterity forever, are to enjoy their Settlements on the Lands heretofore given to them by the Oneidas." In 1794, the Tribe was signatory to two federal treaties. The first, the Treaty of Canandaigua, provided that '[t]he United States

acknowledge the lands reserved to the Oneida, Onondaga and Cayuga Nations, in their respective treaties with the state of New-York [sic], and called their reservations, to be their property; and the United States will never claim the same, nor disturb them or either of the Six Nations, nor their Indian friends residing thereon and united with them, in the free use and enjoyment thereof." The second, the December 2, 1794 "Treaty between the United States of American and the Oneida, Tuscarora, and Stockbridge Indians dwelling in the country of the Oneidas," acknowledged the tribes' sacrifices in their service to the Colonies during the Revolutionary War and compensated them for losses sustained during the War. For several decades, the Tribe prospered on the six-mile-square tract, but during the period 1818-1842, the State acquired these lands in a series of 15 land-purchase agreements concluded without the United States' consent or participation.

Beginning in about 1820, the Tribe began its relocation to present-day Wisconsin, where it entered into several more treaties with the United States. The Tribe eventually settled on a two-township reservation northwest of Green Bay pursuant to the Treaty of 1856, 11 Stat. 663. This reservation was largely unsuitable for farming, and an 1871 act of Congress resulted in the loss of most of the Tribe's valuable timber lands to non-Indian timber companies. Additional federal legislation in 1893 and 1906 resulted in the allotment of the remainder of the 1856 reservation's land to tribal members, such that, by the early 1930s, no tribal lands remained.

In 1934, Congress passed the Indian Reorganization Act (IRA), which forbade further allotment of tribal land and sought to strengthen tribal self-government and reservation economies by permitting tribes to adopt federally-approved constitutions. In 1934, the Tribe became one of the first to elect to organize under the 1934 IRA and, in recognition of its Mohican and Delaware heritages, organized under the name Stockbridge-Munsee Community, Band of Mohican Indians. When the Tribe's reorganization under the IRA was finally completed in 1937, its total land base within the original boundaries of its 1856 Reservation was 1000 acres. In 1948, 1,200 acres were added to that total and, in 1972, another 13,000 acres were added bringing the Tribe back to a total of only 15,000 of its original 46,080 reservation acres. Stockbridge is still governed pursuant to the IRA constitution, as amended in 1995.

Approximately half of the Tribe's approximately 1,600 members currently reside on the Wisconsin reservation. Also located on the reservation are the Tribe's governmental headquarters and administrative offices that administer over 30 tribal, state and federally funded programs. The Tribe has a health center, a family center, an 8-bed assisted living facility and a small historical library/museum. The reservation also has a centralized housing development with elderly and low-income housing, as well as homeownership homes. The Tribe owns and operates the Mohican North Star Gaming and Resort, which has 1,220 slot machines and 18 table games and 6 poker tables and is situated on the reservation in a very rural, sparsely populated area of Shawano County. It also owns and operates the Pine Hills Golf Course the Little Star Convenience Store and Gas Station, and the Mohican LP Gas Company. Revenues from tribal businesses provide funding to support existing tribal government operations (though revenues have decreased in recent years), but are not enough to support other tribal needs.

The Tribe continues to maintain strong ties with the State of New York, especially in relation to cultural and historical sites and repatriation issues. In 2011, the Tribe purchased a property

along the Hudson River that contains known burials in order to protect those burials from further disruption by farming and development activities. In 2002, the Tribe reacquired 125 acres of farmland in Stockbridge, New York, which is located within the six-mile square tract. Tribal members continue to make pilgrimages to New York lands and seek recognition of their claim against lands in Madison and Oneida Counties in upstate New York.

In 1986, the Tribe formally filed an ejectment action in the United States District Court for the Northern District of New York against the State of New York, then Governor Cuomo, and the counties and towns lying within the six-mile square area (36 square miles or over 23,000 acres) New Stockbridge tract, alleging that the State purchased the land without the consent or approval of Congress as required by the Nonintercourse Act and seeking possession of the land and trespass damages. The claim area is located in Madison and Oneida Counties.

1.2 Environmental Permits

The Casino Project will be developed after the land is taken into trust for the Tribe for gaming purposes. Four federal permits may then be required for the project to proceed, as reviewed below. Land that is taken into trust by the United States on the behalf of the Tribe is no longer subject to New York State environmental jurisdiction. The Tribe intends to obtain federal permits for work performed on trust land as part of the Casino Project since the development will not occur until the land is held in trust for the Tribe. However, to the extent appropriate, the Tribe has used New York State environmental laws as guidance on applicable standards.

U.S. Army Corps of Engineers Section 404 Permit. Section 404 of the Clean Water Act requires a permit for the placement of fill material in waters of the United States. This application was submitted and a Public Notice issued on October 11, 2002. The U.S. Army Corps of Engineers (USACE) will require additional detailed information on wetland mitigation plans, which are developed in this FEIS in Section 5.3.2. All proposed fill in wetlands of the United States will occur on trust lands.

U.S. Environmental Protection Agency National Pollutant Discharge Elimination System General Permit. A National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges From Construction Activities under the Clean Water Act will be required for work performed on the proposed trust lands. The work off of the trust lands will also require a parallel permit from the State of New York (State Pollutant Discharge Elimination System (SPDES; see below)). Information in this regard is developed in this FEIS in Sections 5.1 and 5.2.

U.S. Environmental Protection Agency Pre-Construction Air Permit. If the final design plans include cogeneration, then a permit under the Non-Attainment New Source Review regulations under the Clean Air Act would be required. If cogeneration is not ultimately included, then this permit would not be applicable. Additional information is provided in Section 5.8.

U.S. Environmental Protection Agency Title V Operating Permit. During the first year of operation, the project would need to apply for a Title V Operating permit if cogeneration is

proposed. If cogeneration is not part of the design, then this permit is not necessary. Additional information is provided in Section 5.8.

In addition to these federal permits, the New York State Department of Environmental Conservation (NYSDEC) is involved in the following permits.

NYSDEC Mined Lands Reclamation. The original Gildick property was subject to a mining permit from NYSDEC. When mining ceased, a mined lands reclamation permit was received from NYSDEC in June 2003 (see Section 4.1.5).

NYSDEC Soil Remediation. Soil remediation has been completed under the review of NYSDEC and in accordance with Technical and Administrative Guidance Memorandum #4046. A No Further Action letter was issued by NYSDEC in November 2002. Additional detail is provided in Section 4.5.

NYSDEC SPDES. As indicated above, a parallel SPDES permit for construction will be issued for work outside of the trust lands. Preliminary information is developed in this FEIS in Sections 5.1 and 5.2.

NYSDEC Section 401 Water Quality Certificate. A Water Quality Certificate will be required along with the Section 404 permit. This application was originally submitted to the U.S. Environmental Protection Agency (USEPA) at the same time as the Section 404 application, and a joint Public Notice issued on October 11, 2002. As all proposed fill in wetlands of the United States will occur on land proposed to be taken into trust, it was initially assumed that the USEPA will issue the Certificate. However, it has been determined that the Tribe can receive the Certificate from the NYSDEC. As such, coordination has occurred with NYSDEC to begin this process.

2.0 Purpose and Need

The Tribe proposes the action to take land into trust for gaming purposes to address the Tribe's need for economic development and diversification. The Tribe has submitted an application (under 25 C.F.R. Part 151) for an off-reservation acquisition of land in accordance with the requirements under the IRA. The Tribe is eligible to have land taken into trust on its behalf under the IRA since, as noted in a February 28, 2011 Interior Board of Indian Appeals ("IBIA") decision, "[b]y virtue of holding an election under the IRA for the Stockbridge Indians," the IBIA concluded that "the Secretary necessarily recognized and determined in 1934 that the Tribe was 'under federal jurisdiction.'" (53 IBIA 75-76). The Tribe has also submitted an application (under 25 C.F.R. Part 292) for two-part Secretarial determination that such land can be taken into trust for gaming purposes in accordance with the requirements under the Indian Gaming Regulatory Act (IGRA, 25 U.S.C. 2701 *et seq.*).

One of IGRA's purposes is "to provide a statutory basis for the operation of gaming by Indian tribes as a means of promoting tribal economic development, self-sufficiency, and strong tribal governments." 25 U.S.C. 2702 (1). The Tribe's Part 151 and Part 292 applications are submitted to allow it to use the development tool provided by IGRA. Gaming is a revenue source with relatively high profit margins that maximizes income to development risks and costs when compared to other types of enterprises. It also is a means of economic development that allows the Tribe to exercise tribal sovereignty. Gaming provides a revenue stream that is dependable, can maximize net revenues, and minimizes risk so that the Tribe can protect its members and its ability to fulfill its responsibilities under its governmental and social programs.

Through the economic development provided by the proposed action, the Tribe will be able to diversify its economy and provide for the unmet basic needs of its people, including the growing infrastructure and other demands on its reservation in Wisconsin. The existing Mohican North Star Gaming and Resort in Wisconsin is the Tribe's primary source of income. The income from this Wisconsin casino is used to sustain tribal government operations and tribal programs, such as those for health care, education, social services, elderly services, childcare and emergency services. However, this facility is located in an area that does not support gaming on a level that adequately meets all of the Tribe's economic needs and losses of income and funding have caused the Tribe to cut back on its governmental operations and benefits for tribal members.

Currently there is no income left from revenues to satisfy other tribal needs and goals, such as establishing long-term care facilities for the elderly or other persons with medical needs, infrastructure improvements and increasing the availability of health care and education funding. Additional tribal income would also increase the Tribe's ability to preserve its history and cultural heritage As the Tribe considers much of New York State to be its ancestral homeland, it remains a primary source for information and knowledge about the Tribe's history and culture. More than thirty established, significant tribal archaeological sites are currently recognized in New York. Because of the Tribe's early contact and interaction with Europeans and because of its subsequent relocation, the Tribe has lost much of its original culture and tradition. Tribal members have always and will continue to look toward New York with hope and the belief that

someday the scattered pieces of its culture and tradition can be restored. However, the Tribe needs additional income to fund activities to salvage the Tribe's culture, tradition and language.

The increased income would also allow for increased diversification of the Tribe's economy and expansion of usable land base within its reservation. At present, the Tribe does not have adequate funds to take away from tribal programs and direct it towards purchasing or developing new businesses. It also does not have adequate funds for obtaining needed land within its Wisconsin reservation. In 2009, a decision by the Seventh Circuit Court of Appeals held that portions of the Tribe's Wisconsin reservation had been diminished and disestablished (*Wisconsin v. Stockbridge-Munsee Community*, 554 F.3d 657 (2009)). As the Tribe has a goal of reestablishing its land base within the 1856 reservation boundaries, this means the Tribe must purchase lands and then apply to have those taken into trust under the IRA. The Tribe needs to expand its land base since much of the land currently owned by the Tribe is located in areas that do not support development for housing and other uses. These areas include wetlands and undeveloped areas where the cost of providing services, such as electricity and telephones, is prohibitive. Other Tribal lands have groundwater problems, including difficulty in obtaining adequate flow amounts and high nitrate levels that make the water unsafe for drinking. In addition, the Tribe is trying to protect some contiguous undeveloped areas for its wildlife and forestry projects. The Tribe believes strongly in protecting the earth for future generations, but it needs land to fulfill its goals and needs in the present.

In order to realize the Tribe's need for economic development, the Tribe proposes to establish a casino gaming operation of a size that maximizes revenues, is competitive with other existing and proposed establishments, and creates a draw for potential patrons. Such a gaming operation would meet the Tribe's need and have the added benefit of effectuating the settlement of the Tribe's land claim. An appropriately sized gaming operation would provide the Tribe with revenue to expand tribal services, protect the Tribe's heritage, diversify the Tribe's economy, purchase usable lands, and would be a large step towards self-determination and economic self-sufficiency. The expansion of tribal services and diversification of the Tribal economy would create jobs on the reservation (e.g., construction jobs for infrastructure improvements and social service jobs for the provision of various tribal services). In addition, additional economic development funding and lands would expand private sector business opportunities for tribal members and local development off of the reservation to create needed jobs for tribal members. These local employment opportunities are critical, as the Tribe does not expect members to emigrate to New York to work in the proposed casino.

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3.0 Project and Alternatives Description

This chapter describes the Proposed Project (Section 3.1) and the No Action Alternative (Section 3.2), both of which are carried forward through the analyses. This chapter also reviews alternatives that have been eliminated from further review as either not meeting the Tribe's purpose and need or being infeasible (Section 3.3).

3.1 Proposed Project and Preferred Alternative

A gaming facility located in Sullivan County is the only feasible alternative that satisfies the Tribe's purpose and need. The proposed Casino Project is a gaming facility, with ancillary features such as a hotel, warehousing and a service station that is proposed in two phases. Phase I would consist of the initial phases of the gaming facility and supporting operational facilities. Phase I would also include infrastructure improvements, such as public roadway improvements and utilities, which would support both Phase I and Phase II. Phase II consists of expansion of the gaming facility and a 750-room hotel and a new parking garage. The project site is described below, followed by a description of Phase I and Phase II. No other tribal development is proposed for the project site, and no changes have occurred to the proposed build program since the DEIS.

3.1.1 Site Description

3.1.1.1 Casino Project Site

The proposed site consists of several parcels that comprise approximately 330 acres. For reference, the four main segments of the property are herein called Gildick, Cooke East, Cooke West and Rossini. These parcels, referred to as the tribal lands, are shown on Figure 3-1, along with key site features. It is appropriate to take all of the parcels into trust, even though the proposed development is primarily on the Gildick parcel, since the land is part of a land claim settlement between the Tribe and New York State and it allows the Tribe to better control surrounding development and have more flexibility for the future.

The tribal lands are generally situated north of Interchange 107 on State Route 17. The site occurs on both the east and west sides of County Highway 161 (Heiden Road). The Neversink River forms the eastern property boundary of Gildick. The main features of Gildick are areas of a former mining operation and the auto salvage yard (Figure 3-1). Other than these features, the Gildick parcel is wooded. Cooke East and Cooke West are primarily forested, and include an old hotel site and an old house site. Rossini is entirely forested. The tribal lands are currently unoccupied.

3.1.1.2 Public Roadway Improvement Area

As fully discussed in the *Traffic Impact Study* (TetraTech, 2011; Appendix B) the construction of the Casino Project will require improvements to the local road and highway system to mitigate potential impacts. The roads and highways of concern include State Route 17, County Highway

161, Foss Road and Old County Highway. Figure 3-1 shows the roadways in the project area. Independent of this project, NYSDOT is currently identifying and addressing State Route 17 interchange deficiencies based on capacity and use. The ultimate goal is to provide the necessary improvements to upgrade State Route 17 to interstate standards in order that it may become the future I-86. Details of this proposed work are provided in Section 4.7.

3.1.1.3 Utilities Project Area

The proposed water supply connection will be to the Village of Monticello system. The proposed route of the connection is shown on Figure 3-2. The route will occur within existing roadways.

Wastewater treatment and disposal will be provided by connection to the Town of Thompson's Kiamesha Lake Sewer Treatment Facility. The proposed route of the connection is shown on Figure 3-2. Similar to the water supply connection, the route will occur within existing roadways. See Section 3.1.4 for additional descriptions.

Electric, telephone and cable service will be provided by connecting to existing providers.

3.1.2 Casino Project Site Development

3.1.2.1 Casino Size

In order to fully realize its goals, the Tribe needs to establish a gaming operation of a size that can maximize revenues, compete with other existing and proposed establishments, and create a draw for potential patrons. A market study was conducted to evaluate and characterize the gaming market in the Catskills area in New York State (Appendix C). The study concluded that this is a strong trade area that encompasses the large metropolitan areas of New York City and Philadelphia. About 5.64 million potential gaming participants live within a 2-hour drive of the Town of Thompson in the Catskills.

The scope of the Casino Project was determined based on the need to construct a facility of adequate size to draw patrons from the larger regional area. Due to the importance of slot machines in the surrounding market, it was assumed that the proposed casino would have to offer a proportionate number to be competitive. The Stockbridge-Munsee Casino Project must also be of a size and scope to be competitive with both other potential local casinos as well as regional casinos in New Jersey and Connecticut and in order to be a viable alternative for the Tribe to release its land claim. An examination of more than 100 casinos was done as part of the market study to help confirm the appropriate size for a facility in this market. It found that slot machines are an important part of the mix of gaming options in the Atlantic City and Connecticut markets. The study found that the average number of slot machines in the Northeast (i.e., New Jersey, Pennsylvania, Connecticut and New York) was 2,550 with the two Connecticut casinos providing more than 16,000 slot machines and the three prominent Atlantic City casinos (Bally's Atlantic City, Borgota, and Tropicana Casino & Resort) providing 3,595, 3,447and 3,157 machines, respectively.

Casinos that were previously proposed by other Indian tribes in Sullivan County were of a similar size. For example, as described in the Final Environmental Assessment (Parish Weiner &

Shuster, 1999), the program that was proposed at the Monticello Raceway included 3,000 slot machines and 200 gaming tables, approximately 2,300 restaurant/bar seats, as well as a Bingo Hall, Poker Room, show lounge, OTB facility and other amenities. That program also included the continued operation of the race track. Based on information provided in a Draft Environmental Impact Statement (May 2004), the proposal by the St. Regis Mohawk Tribe included 3,500 slot machines and 100 gaming tables, 2,200 restaurant/bar seats, a 2,000-seat theatre, a 750-room hotel and other amenities.

Therefore, a casino program consisting of 3,000 slot machines, which was determined to be a critical mass, and 190 gaming stations was determined to be minimal for drawing the number of visitors required to make the casino a success and generate the revenues required for tribal self-sufficiency and regional economic benefit.

In addition, the size of the proposed Casino Project is similar to, or smaller than, other Indian gaming facilities that are located outside of densely populated areas and which, therefore, must be large enough to be considered a stand-alone destination. Foxwoods Casino in Connecticut has over 8,500 slot machines, 380 gaming tables, a 3,000-room hotel, 24 restaurants and 17 specialty shops. The Mohegan Sun in Connecticut has 7,600 slots, over 350 gaming tables, a 1,300-room hotel and 23 restaurants. The Mystic Lake Casino outside Minneapolis has more than 4,000 slots and nearly 100 blackjack tables. The casino that was proposed for Kenosha, Wisconsin, within an hour of Chicago, would have had 4,000 slots and 60 blackjack tables.

3.1.2.2 Phase I

Phase I of the proposed Casino Project, which is expected to be operational in 2014 will include gaming facilities and supporting operations (Figure 3-3). Figure 3-4 shows cross sectional plans of the full build. The Casino Project will be developed on the Gildick parcel and there are no plans to develop the remaining parcels.

The Phase I facility will total approximately 350,000 square feet (sf). The casino will offer 2,000 slot machines and 60 gaming tables. The remainder of the facility will include a wide range of entertainment facilities such as specialty bars and restaurants, retail, children's areas, a multi-purpose area, employee area and back of house. Restaurants will provide a wide range of options from brand name franchises to a food court. Twenty-four hour service will be available. The retail area will also include a variety of stores, including potential high end retail. The multi-purpose area will be used for a wide range of events such as conventions and sports venues.

Warehousing and storage will be provided in a separate building located at the southern end of the site. This facility will be approximately 30,000 sf, and will have 150 surface parking spaces adjacent to it. A service station and convenience store will be located at the entrance. This will include up to eight pumps and a small convenience store of approximately 1,500 sf. A water tower will also be located at the high point near the entrance. A 40,000 sf central plant will be located east of the casino.

For Phase I, a total of 3,500 parking spaces will be provided in both surface lots and structured parking..

Site runoff will be controlled through the construction of a comprehensive stormwater management system, including water quality treatment infiltration and peak flow attenuation that will meet or exceed the performance standards identified in the New York State Stormwater Management Design Manual, 2010 edition (NYS Stormwater Manual). Wetland creation areas will be located onsite along the Neversink River, restoring the area that is currently mined. An access road for emergency vehicles as well as improved access to local residences will be provided through Cooke East.

3.1.2.3 Phase II

Table 3-1 shows the full build, Phase II elements. Phase II, which is expected to be operational in 2018 consists of expansion of the gaming facility and the construction of a 750-room hotel and a 1,020-space parking structure. This hotel will be located adjacent to the gaming facility, as shown on Figure 3-3. The hotel will be approximately 500,000 sf and fifteen stories. It will include restaurants and retail space. At the completion of Phase II, there will be a total of 8,480 parking spaces for the gaming facility. Structured parking has been maximized to reduce land impacts. Only 330 surface parking spaces will be associated with the casino

Table 3-1 Proposed Stockbridge-Munsee Casino Full Build Program

	Size (sf)	Size (number)	Comment
Main Facility			
Gaming	150,000		3,000 slots plus 190 Table Games, including circulation (2,000 slots and 60 Table Games from Phase I)
Multi Purpose/Event	30,000		Catering to 2,700 visitors
Racebook	14,000		Lounge, food outlet, brew pub and gaming
Specialty Restaurants (3)	11,500	400 seats	Gourmet food experience
Food Court Outlets (10)	8,000	250 seats	Fast food outlets
Buffet	18,500	600 seats	Moderately priced food
Coffee Shop	7,500	200 seats	Moderately priced food
Deli	4,000	200 seats	Moderately priced food
Employee Restaurant	9,000	300 seats	Employee lounge and cafeteria
Bars (5)	10,000	800 seats	Specialty bars
Miscellaneous Retail	10,500		
Day Care/Arcade	14,500		
Bus Transportation Center	6,500		
Back of House	275,000		Kitchens, circulation, mechanical, hard and soft count, administration, etc
Facilities and Engineering Storage	15,000		
Employee and Patron Parking		6,832 spaces	Surface and structured; includes emergency services vehicle parking
Valet Parking	450,000	1,500 spaces	Underground
Other			

	Size (sf)	Size (number)	Comment
Central Plant	40,000		
Warehouse/storage	30,000		Includes 150 parking spaces
Service Station			Gasoline pump stations, parking, small store

3.1.3 Public Roadway Improvements

Based on the analysis of future traffic volumes with the Casino Project, the proposed project will add between 2,060 and 2,264 peak hour vehicles to the roadway network. Approximately 18 percent of the vehicles will be oriented north of the site on County Highway 161 and remainder will be oriented south of the site on County Highway 161 between the site driveway and State Route 17. To mitigate this additional traffic, the existing roadway network in the vicinity of the project will require geometric and traffic control improvements. The proposed roadway improvements to be implemented with this project are shown on Figure 3-5 and described below. The Tribe will pay for on-site improvements, intersection improvements, and improvements to County Highway 161 and associated work. The State was already planning to improve Interchange 107, so the Tribe is working with the State to coordinate improvements and has also discussed cost-sharing for the work with NYSDOT.

Site Access Improvements. Site access improvements include widening County Highway 161 to provide two lanes in each direction and a landscaped median between State Route 17 Interchange 107 and the proposed project site driveway. An emergency access driveway connecting the south end of the site with Foss Road will be provided. In the vicinity of the site, this access driveway will be used for emergencies only and will be gated when not in use. Foss Road will be extended to provide new access for the local residences along Old County Highway and Foss Road. This new access will be signalized.

State Route 17 Interchange 107 Improvements. Most of the proposed improvements for this project are also being planned by NYSDOT as part of their State Route 17 (future I-86) interchange study. The County Highway 161 bridge over State Route 17 will be reconstructed to meet interstate highway standards and provide additional capacity (a second southbound lane and potentially the space for a second northbound lane in the future if needed). Bridge improvements will be coordinated with NYSDOT plans to raise the height of the bridge to comply with interstate requirements for a minimum of 16 feet of vertical clearance. State Route 17 Interchange 107 westbound ramps will be realigned per NYSDOT plans to improve turning radii and provide additional stacking. An exclusive northbound left-turn lane at the County Highway 161 intersection with the Interchange 107 westbound on-ramp is also recommended. In addition, as planned by NYSDOT, the Interchange 107 eastbound off-ramp will be reconstructed to meet interstate highway standards, and the Interchange 107 eastbound on-ramp connection will be relocated and improved. Finally, the acceleration lane for the eastbound on-ramp at State Route 17 Interchange 107 will be extended.

Intersection Improvements. Signalization will be provided at the site driveway entrance with exclusive channelized double turn lanes into and out of the site. A signal will also be provided at the new access road to Old County Highway and Foss Road. Intersection improvements will

include providing exclusive southbound and eastbound left-turn lanes at County Highway 161/Old Route 17.

On-Site Improvements. On-site improvements focus on providing free-flow around the site to the greatest extent possible. The proposed site driveway will have two lanes in each direction in order to accomplish this goal. Efficient design of bus loading/unloading areas will also minimize on-site bus idling.

3.1.4 Utilities

3.1.4.1 Water Supply

The potable water demand for Phase I of the proposed Casino Project is estimated to be 209,400 gpd, average daily demand, increasing to 430,000 gpd in Phase II This water demand includes water requirements for cooling and heating. This demand will be provided by a connection to the Village of Monticello water system, which is described in Section 3.3.5. The connection alignment, shown in Figure 3-2, will be entirely in existing roadways. A new production well will be developed in the Village well field. An 8-inch main will provide connection to the Casino Project. Fire hydrants will be provided approximately every 1,000 feet of the alignment.

All of the off-site water system improvements required to service the Casino Project will be constructed and paid for by the Tribe. The Tribe has entered into a Water Services Agreement (Appendix D) with the Village of Monticello and the Town of Thompson to extend the Village water system to supply the potable water demand for the Casino Project. The Village's water system currently has an available excess capacity of approximately 900,000 gpd, based on the peak summer demand. Consequently, there is available excess capacity in the Village's water supply and distribution system to service the Casino Project. There is also precedence for the Village to supply water to customers within the Town of Thompson.

Although the Village water system currently has available excess capacity to service the Casino Project, the Village is desirous of preserving this capacity for future growth within the Village, including the future needs at the Monticello Raceway, which could include a new casino. Therefore, as part of this agreement, a new production well will be installed in the existing Village well field to supply the Casino Project. A new dedicated water line will be constructed from the well location to Site. The location of this well and the connection alignment are shown in Figure 3-2.

3.1.4.2 Wastewater Treatment

The wastewater for Phase I of the proposed Casino Project is estimated to be 162,000 gpd, average daily flow, increasing to 327,000 gpd in Phase II. The difference between the water demand and wastewater flow estimates for the project is primarily due to the cooling/heating make-up water requirements, which have been included in the water demand, but which will not enter the wastewater system. Connection to the Town of Thompson's Kiamesha Lake Sewer Treatment Facility will provide treatment for these flows. Existing facilities are described in Section 3.3.6.

The connection alignment, shown in Figure 3-2, is approximately four miles long. This sewer extension would involve the construction of a sewer force main from the site and traversing northerly along County Highway 161. The force main will discharge to a gravity line in the vicinity of the Thompsonville area of the Town. It will then flow to a pump station which will further convey sewage via force main westerly along County Route 109 to the existing Town-owned 24-inch diameter interceptor pipe located in the vicinity of the existing Concord Hotel facility and State Route 42. The connection will consist of approximately 24,000 linear feet of 6 to 8 inch diameter sewer force main, one pump station, and 2,000 linear feet of gravity sewer line along with associated manholes, force main cleanouts, air relief valves and other necessary appurtenances. The Town will provide for an appropriate site for the pump station in the Thompsonville area adjacent to County Highway 161. The Town requested the addition of this pump station, which would otherwise not be required to service the casino site, to provide sewer service to the Thompsonville village area of Thompson. The system would also include an on-site pump station.

All of the off-site sewer system improvements required to service the Casino Project will be constructed and paid for by the Tribe. The Tribe and the Town of Thompson have entered into a Sewer Service Agreement that would allow for the implementation of this proposed alternative (Appendix D. Under that Agreement, the Tribe and Town agreed on design parameters for the system. The Tribe will be responsible for the cost of construction of the pump station and other sewer improvements needed for connection to the facility, which will then be owned by the Town. The Town will then operate and maintain these facilities as public improvements. The Agreement also reserves sufficient capacity in the Kiamesha Lake Wastewater Treatment Facility to accommodate the wastewater flows from Phases I and II of the Casino Project.

3.1.4.3 Electric, Telephone and Cable

The electrical demand for the Casino Project is expected to be approximately 10.5 megavolt-amperes (MVA). New York State Electric and Gas Corporation (NYSEG) has indicated that they can provide this service with upgrades to their distribution system in the area. There are two possible providers for telephone service to the site – Verizon or AT&T, either of which can service the project with system upgrades. This area of Sullivan County is being upgraded with digital cable service by Time Warner, which would be able to provide service to the site.

3.2 No Action Alternative

Under the No Action Alternative, the Stockbridge-Munsee Community would not construct the proposed casino and the BIA would not approve the Parts 151 and 292 applications. The Tribe would not obtain the anticipated economic benefits from the development of the Casino Project. The Tribe would not receive a secure and substantial source of income that would help the Tribe provide essential services to its members and its existing reservation in Wisconsin. Tribal needs would remain unmet and tribal members would be underserved. The Tribe would not have revenue needed to fully address community needs that include repair and construction of safe and sanitary housing; expansion of water and wastewater systems; construction and repair of tribal roads; funding for the tribal health and wellness center; funding for tribal education and scholarship programs; funding for a community child care center; and provision of care for tribal

elders. The lack of revenue would also hurt the Tribe's ability to fulfill other tribal goals such as fully addressing environmental problems on its Wisconsin reservation, expanding its Wisconsin land base and diversifying its economy. The Tribe would not have funding to assist it with the recovery and preservation of its culture and history. The Tribe would not have the resolution provided by settling its longstanding land claim.

The proposed project site could revert to its original use with the No Action Alternative. On the Gildick parcel, sand and gravel mining could begin again, although some of the site conditions would have been stabilized by the Tribe's actions in remediating the site. Although the zoning for this parcel is now HC-2 (Highway Commercial-2), sand and mining operations are permitted uses, subject to site plan approval and a special use permit from the Town of Thompson Planning Board. These operations would also require a permit from NYSDEC. Mining operations would be consistent with other uses in the vicinity; Sullivan County Highway Products lies to the south, in a bend of the Neversink River south of Interchange 107 at State Route 17, and the Monticello Sand and Gravel Company lies to the north at the confluence of the Neversink River and Sheldrake Stream. An asphalt manufacturing facility is adjacent to this parcel on the north. Auto salvage could also resume as it is allowed under the current zoning within an enclosed structure (subject to site plan approval and a special permit from the Town Planning Board), although the historical auto salvage operations have been remediated and auto parts removed from the site. These uses could be undertaken under a lease from the current owner or through a sale of the property. Although the resumption of these uses is reasonable, to be conservative this FEIS will assume no future use of the site as the No Action Alternative, but include in the discussion of the No Action Alternative the resumption of the prior uses.

The Cooke and Rossini parcels would remain as open space parcels, both under the proposed action as well as the No Action Alternative. Interchange 107 would be improved as per the currently proposed NYSDOT project, but County Highway 161 would not be widened. As discussed in Section 5.12.7, the Thompsonville area would not be able to tie in to a public wastewater treatment system. The Village of Monticello public water system would not be expanded and extended along the State Route 17 corridor. Sullivan County would not expand the entertainment infrastructure and experience the economic growth associated with the Casino Project.

3.3 Alternatives Eliminated From Further Discussion

Multiple project alternatives were considered for the project to meet the Tribe's purpose and need, including other financial ventures, other locations, and other site plans. While none of these alternatives met the Tribe's purpose and need and/or were infeasible, they are summarized here.

3.3.1 Financial Venture Alternatives

The Tribe considered various financial venture alternatives as a way of improving its economic self-sufficiency to satisfy tribal needs, as well as providing an economically viable alternative for settling the Tribe's land claim.

A casino resort operation was considered the only feasible alternative that met the Tribe's basic purpose and need. Gaming is a revenue source with relatively high profit margins that maximizes income to development risks and costs when compared to other types of enterprises. Furthermore, a casino operation would allow the Tribe to take advantage of the Class III gaming opportunities afforded it under IGRA. No other project type, such as manufacturing, light industry, retail or housing could be expected to generate revenues significant enough to be considered a viable alternative for the Tribe to settle its land claim. A destination casino resort is also consistent with the historical recreational nature of the Catskills area and would provide the highest economic benefit to the region. It also creates minimal potential operational environmental impacts, particularly in comparison to manufacturing and industrial alternatives. Lastly, a casino allows the Tribe to create quality employment opportunities in a safe environment.

3.3.2 Location Alternatives

The proposed Casino Project was initially proposed to be in New York State because it is a component of a settlement of the Tribe's land claim against New York State. The Tribe's aboriginal homeland is along the Hudson River, and its land claim is for a 6-mile square located in Madison and Oneida Counties. However, in 1996, Governor George Pataki issued an Executive Order that established a Task Force to assess the effects of casino gambling. The Task Force researched the issue and held four public meetings. The Task Force issued the *New York State Task Force on Casino Gambling Report* to the Governor (August 30, 1996). This report and the resolution passed by the Legislature in 1995 identified three general areas for casino gaming: unlimited number in the Catskills (specifically Greene, Sullivan and Ulster Counties); one each in the cities of Buffalo and Niagara Falls; and one in either Saratoga or Warren County. The Seneca Indian Nation has agreements for casinos in Buffalo and Niagara Falls. In keeping with the 1996 Task Force, legislation approved in Albany (Laws of New York, 2001, Chapter 383, Part B) limits gaming to either Sullivan or Ulster Counties, as well as the Seneca Indian Nation proposals for Buffalo and Niagara Falls. Based on this, only Sullivan and Ulster Counties were considered. The following describes the alternatives considered for a casino location.

County Selection. In making the siting decision for the Casino Project, Sullivan County was selected as the optimal location that will provide more than enough visitation to support the proposed facility. Historically, the area has been economically dependent on tourism and has been considering gaming as an economic revitalization tool for decades. Sullivan County was selected over Ulster County as the prime target area for a variety of reasons. Sullivan County provides a natural geographic and demographic location to rebuild the hard hit resort/hotel business with gaming. Geographically, Sullivan County is better connected to the New York City metropolitan area. The County's regional location is ideal as it is within 100 miles of major metropolitan areas, including New York City. The region's population provides a significant patron and employee base that will ensure the success of the Casino Project. Furthermore, a casino development will produce significant traffic. Sullivan County is served by State Route 17, a limited access road that provides 16 interchanges within the County, allowing multiple opportunities for potential sites with excellent access. In addition, NYSDOT is upgrading State Route 17 to become Interstate 86. Ulster County, on the other hand, is served by I-87, a toll road that has only two interchanges within the County.

Demographically, Sullivan County has a long recognized need for basic economic revitalization. According to the U.S. Census, in 2008, the percentage of persons living below the poverty level in Sullivan County was 17.2 percent, while it was 12.2 percent for Ulster County. Similarly, the median income for Sullivan County is $46,553, while it was $54,854 in Ulster County. Ulster County has not been historically as dependent on the resort and tourism business, nor as hard hit economically. Ulster has experienced a growth in tourism, where Sullivan County has experienced a decline. Additionally, Ulster County has other traditional businesses boosting its economy, such as manufacturing and technology. Sullivan County also has a high level of support for gaming in general.

Based on these factors, a site in Ulster County was not considered as being able to meet the Tribe's need for establishing a competitive casino.

Town Selection. Within Sullivan County, the Towns of Thompson, Fallsburg and Mamakating and the Village of Monticello, located in eastern Sullivan County, were further targeted. These towns were targeted because of their adjacency to State Route 17 and because they are the Sullivan County towns closest to I-84. Towns were considered generally less attractive as they got further to the west and away from the State Route 17/I-84 interchange from where the vast majority of patrons would be coming. The other towns in Sullivan County that abut State Route 17 are Liberty and Roscoe. Neither of these towns has actively pursued a casino developer. Liberty has, instead, focused on renovation of the Grossinger Hotel resort and on second home development. This portion of the county would prefer to see the gaming development along the eastern State Route 17 corridor and be in a position to experience the economic benefits that would come from a casino development. For these reasons Liberty and Roscoe were not considered along with the more eastern Towns of Mamakating, Thompson, Fallsburg and the Village of Monticello.

The Towns of Thompson and Fallsburg were further considered since they supported most of the earlier tourist boom associated with the large hotels and bungalow communities that attracted hundreds of thousands of seasonal visitors. The decline in tourism over the last several decades has resulted in these towns being particularly hard hit economically, but it also means that the infrastructure, most particularly sewer and water services created to support this population, is still largely in place. In addition, these towns had begun development of increased infrastructure to meet what was then expected to be an increased demand from the hotels and from second home development.

The eastern section of Sullivan County has also been targeted as an optimal casino development location by other proposed casinos. The St. Regis Mohawks proposed the Mohawk Mountain Resort and Casino at Kutsher's Sports Academy in the Town of Thompson. The Cayuga Indian Nation proposed a casino at the Monticello Raceway (the site formerly selected by the St. Regis Mohawks). A casino is also part of the current Concord Resort master plan.

Site Selection. Several sites within the targeted area were considered for the Casino Project. Key parameters that were considered during investigations for a site are listed below. Although no

one site would necessarily meet all of these parameters, they did provide guidelines for site selection.

Size. The site must be at least 200 acres. This criterion was based on past experience with siting casinos and the need for adequate space to provide room for facilities. As examples, the Monticello Raceway site would have included 230 acres, the proposed St. Regis Mohawk development would have included approximately 180 acres and the Mohegan Sun is located on 240 acres. This acreage limit was not considered optional. These acreages are necessary to provide adequate space for buildings, parking, circulation, accessory uses, stormwater management and appropriate land use planning.

Parcelization. The area must be comprised of as few parcels as possible. Additional parcels increase the risk of not being able to obtain control of a core development area. Especially beneficial is the ability to purchase one or two large parcels that approach the 200 acre minimum limit, with the addition of adjacent parcels as available and/or needed.

Access. The site must be within one mile of a State Route 17 interchange. A casino will generate large amounts of traffic. Easy access with limited disturbance to residential or commercial areas is critical. State Route 17 is the only limited access highway that provides regional access from metropolitan areas to Sullivan County.

Land Use. The site should not be proximate to residential neighborhoods and/or commercial business areas. Locating the project away from residential neighborhoods and/or commercial/business areas would minimize impacts as well as potential opposition to the project. Placement of a casino in a neighborhood or area zoned for residential use would be counter-productive for local and county land use planning purposes. This criterion considered more direct impacts such as traffic impacts, as well as indirect impacts such as views.

Public Utilities. The site should have available public water and wastewater treatment services.

Environmentally Sensitive Areas. The site should have developable area, which would avoid sensitive areas. This includes wetlands, floodplains, prime farmlands, historical or archaeological resources and threatened and endangered species.

Figure 3-6 shows the State Route 17 corridor along which all but one of the potential sites were investigated. The State Route 17 corridor that was investigated is approximately 30 miles long and includes 16 interchanges (Interchanges 102 through 115). Interchanges 103, 108 and 110 were deleted from consideration as they are slated to be closed by NYSDOT as State Route 17 becomes I-86.

The areas that were within a one-mile radius of a State Route 17 interchange were examined in order to find possible development sites. Within these areas, wetlands were mapped based on information from soil surveys, New York state wetland maps, National Wetland Inventory maps, floodplain maps, U.S. Geological Survey (USGS) topographic maps and limited field review. Commercially and residentially developed areas were also identified. Zoning maps were used to

determine zoning information and property size and configuration. Sites that were located outside the target area, but brought to the Tribe's attention, were also examined. A review of potential sites remaining following this screening is presented in Table 3-2. These sites were rejected as they were infeasible for the reasons given in the table and, as such, would further the Tribe's effort to meet their needs.

Table 3-2 Summary of Site Alternatives

Site Number/ Interchange	Size	Parcelization/ Availability	Access	Land Use	Public Utilities	Environmental Sensitive Areas	Status
Site 1 Interchange 102	Adequate	Undetermined	Ineffective interchange for Casino use. Require unfeasible upgrades	Zoned Rural Residential	Available	Wetlands and Mongaup River crossing	Rejected as infeasible (access, land use)
Site 2 Interchange 102	Adequate	Undetermined	Ineffective interchange for Casino use. Require unfeasible upgrades	Zoned Rural Residential and Suburban Residential	Available	Wetlands	Rejected as infeasible (access, land use)
Interchange 103			Interchange is slated to be closed; not pursued further				Rejected as infeasible (access)
Site 3 Interchange 104	Adequate	Undetermined	Interchange capacity already to be used by Monticello Raceway; access would have to go through existing residences	Surrounded by residential areas and zoned Rural Residential	Available		Rejected as infeasible (access, land use)
Site 4 Interchange 104	Bisected by Pittaluga Road	Undetermined	Interchange capacity already to be used by Monticello Raceway; access would have to go through existing residences	Surrounded by residential areas and zoned Rural Residential except for portion immediately along Route 17	Available		Rejected as infeasible (access, land use)
Site 5 Interchange 104		Not available; was site of current Monticello Raceway casino proposal and currently expanded uses					Rejected as infeasible (availability)
Interchange 105	Inadequate	Inadequate		Surrounded by commercial and residential properties to south, north and northwest	Available	Wetlands to the northeast	Rejected as infeasible (size, availability, land use wetlands)
Site 6 Interchange 106	Adequate	Undetermined	Interchange does not have the capacity for the proposed level of traffic. Small local roads.	Surrounded by numerous residences	Available	Wetlands	Rejected as infeasible (access, land use)
Site 7 (Proposed)	Adequate	Adequate	Good access	Minimal abutting	Available	Wetlands adjacent	Accepted

Site Number/ Interchange	Size	Parcelization/ Availability	Access	Land Use	Public Utilities	Environmental Sensitive Areas	Status
Interchange 107				residences; sand and gravel mining and auto salvage uses on main parcel; also various commercial and light industrial uses		to Neversink River	
Site 8 Interchange 107	Adequate	Undetermined	Access is 4 miles from interchange on a two-lane road that would require considerable upgrades on its entire length	Would be a re-use of an existing project; multiple residences and town center along access route; minimal adjacent residences	Undetermined (Fallsburg)		Rejected as infeasible (access, land use)
Interchange 108			Interchange is slated to be closed; not pursued further				Rejected as infeasible (access)
Site 9 Interchange 109	Adequate	Not available; Holiday Mountain Ski Area	Ineffective interchange for Casino use. Small local roads. Require unfeasible upgrade due to current uses	Minimal abutting residences	Available	Almost entirely steep slopes; adjacent to Neversink River	Rejected as infeasible (availability, access, slopes)
Site 10 Interchange 109	Adequate	Undetermined	Ineffective interchange for Casino use. Small local roads. Require unfeasible upgrade due to current uses	Several lakes, open space and recreational uses; inconsistent with casino use; residences along access; zoned Suburban residential	Available	Several adjacent lakes, open space and recreational areas; wetlands; Wolf Brook Multiple Use Area to south	Rejected as infeasible (access, land use, environmentally sensitive areas)
Site 11 Interchange 109	Adequate	Numerous small, linear parcels difficult to assemble	Ineffective interchange for Casino use. Small local roads. Require unfeasible upgrade due to current uses	Many abutting residences; zoned Agricultural-Residential and Rural Residential.	Available	Agricultural lands	Rejected as infeasible (parcelization, access, land use agricultural lands)
Site 12 Interchange 109	Adequate	Numerous small, linear parcels difficult to assemble	Ineffective interchange for Casino use. Small local roads. Require unfeasible upgrade due to current uses	Zoned Agricultural-Residential and Rural Residential.	Available	Agricultural lands	Rejected as infeasible (parcelization, access, land use agricultural lands)
Interchange 110			Interchange is slated to be closed; not pursued further				Rejected as infeasible

Site Number/ Interchange	Size	Parcelization/ Availability	Access	Land Use	Public Utilities	Environmental Sensitive Areas	Status
							(access)
Site 13 Interchange 111	Adequate	Undetermined	Approximately 1 mile from interchange; upgrades on Route 17 westbound may be difficult; access past residential area.	Moratorium on development in Mamakating possible visual impacts to Yankee Lake and adjacent residences; general public opposition to casino in Mamakating	Mamakating does not have sewer/water treatment facility	In watershed to Bashakill Wildlife Management Area	Rejected as infeasible (access, land use utilities watershed issues)
Site 14 Interchange 112	Adequate	Undetermined	Over 1 mile to interchange	Moratorium on development in Mamakating possible visual impacts due to elevated nature of the site; adjacent residential area; general public opposition to casino in Mamakating	Mamakating does not have sewer/water treatment facility	In watershed to Bashakill Wildlife Management Area	Rejected as infeasible (access, land use utilities watershed issues)
Interchange 113	Adequate	Undetermined		Moratorium on development in Mamakating general public opposition to casino in Mamakating	Mamakating does not have sewer/water treatment facility	In watershed to Bashakill Wildlife Management Area	Rejected as infeasible (land use, utilities, watershed issues)
Site 15 Interchange 114	Adequate	Undetermined	Adequate	Moratorium on development in Mamakating; general public opposition to casino in Mamakating	Mamakating does not have sewer/water treatment facility	In watershed to Bashakill Wildlife Management Area; extensive wetlands steep slopes	Rejected as infeasible (land use utilities, watershed issues)
Site 16 Tamarack Resort	Adequate	No longer available since first considered	18 miles from State Route 17	Undetermined	Limited sewer/water treatment facility	Undetermined	Rejected as infeasible (availability, access, utilities)

3.3.3 Site Plan Alternatives

Once the proposed site location alternative was identified, on-site planning began. Several on-site layouts were considered in order to determine what alternative would be most feasible and would present the lowest level of environmental impacts. Criteria that were considered in making the layout decision included the size of the facilities in relation to the parcels, the ability to cluster the main facilities in one area to minimize the impacted area, ease of operations, and ability to avoid environmental impacts to wetlands and the Neversink River. Table 3-3 summarizes the Site Layout Alternatives and why they were rejected as not meeting tribal goals since they were infeasible or substantially inferior to the proposed site plan. The USACE was most interested in layouts that would avoid or minimize impacts to wetlands and waterways, and specifically requested consideration of layouts such as Alternatives 5 and 6, below.

Site Layout Alternative 1. Alternative 1 considered use of the southwestern parcel (Cooke West, Figure 3-7). This alternative was not considered feasible for a variety of reasons. The vast majority of the traffic to a casino on Cooke West would come from the south and would have to make a left hand turn to enter the site. This would require a two-lane turn with traffic light control. This traffic light, and the potential lines of traffic forming at the light, would be unacceptably close to the State Route 17 ramps. This proximity creates the potential for queues forming back to the ramps and creating an unsafe condition. This Alternative would impact approximately 5.2 acres of vegetated wetlands. It would also require two stream crossings, one of which is a perennial stream. The wetland impacts would occur in areas that have not been previously subject to disturbance, such as mining, logging or placement of abandoned cars. The majority of the development would have occurred almost entirely in upland forested areas, with the exception of a small grassy area comprising an old hotel site. Cooke West is also considered to have large areas of high and moderate sensitivity to historical and archaeological resources, all located within the proposed project area on Cooke West. The hotel foundation located at the southeastern corner of the site may be eligible for the National Register of Historic Places. In addition, this alternative would have required significant rock blasting and excavation in order to remove the central hill on the site and provide a suitable buildable area. It is

Table 3-3 Site Layout Alternatives Summary

Alternative Number	Issues					Status
	Access	Layout	Site Preparation	Wetlands	Other	
1	Access road would be too close to interchange and require a left turn entrance	All facilities could be clustered	Substantial cut and blasting	>5 acres wetland impacts	Impact site that may be eligible for the National Register of Historic Places; Impacts to mostly forested areas	Rejected as infeasible (access) and inferior (site prep, wetland historical issues)
2	Good access off County Highway 161 Requires cross traffic over County Highway 161	Some facilities located across road		>14 acres wetland impact	Impacts forested areas of Rossini	Rejected as inferior (access, layout, wetland issues)
3	Good access off County Highway 161 Requires cross traffic over County Highway 161	Facilities on separate lots		>5 acres wetland impact	Impacts forested areas of Rossini and Cooke	Rejected as inferior (access, layout, wetland issues)
4	Good access off County Highway 161	All facilities could be clustered		Approximately 5 acres wetland impact		Rejected as inferior (wetland issues: revised for Layout 7)
5	Good access off County Highway 161	All facilities could be clustered		Approximately 5 acres wetland impact	Additional land not available	Rejected as infeasible (land not available)
6	Good access off County Highway 161	All facilities could be clustered; No practical layout in the area	Would minimize cuts and fills	Approximately 5 acres wetland impact	Visual impacts	Rejected as infeasible (area not large enough; wetland issues)
7	Good access off County Highway 161	All facilities could be clustered	Ability to balance some cuts and fills	1.5 – 2 acres wetland impact		Proposed

estimated that site preparation would require removal of almost 2,000,000 cubic yards (cy) of material; a net cut of over 700,000 cy and rock excavation of over 1,200,000 cy. This is over five times the excess material estimated for the proposed layout alternative. Additionally, there is no available area on Cooke West to dispose of the excavated material, significantly increasing costs.

As Cooke West was considered infeasible, and as the Rossini and Cooke East parcels are too small to support the main development, the remaining layout alternatives focused on the Gildick parcel for the main facilities.

Site Layout Alternative 2. Alternative 2 (Figure 3-8) made use of the relatively flat topography in the northern portion of the Gildick parcel and minimized floodplain encroachment. This alternative made use of the northwestern parcel (Rossini) for supporting facilities such as warehousing. This alternative also allowed for potential separation of incoming and outgoing traffic through the establishment of north and south entrances. While this layout benefits the operations of the facility in terms of traffic control and circulation, it spreads the development over both sides of County Highway 161, increasing cross traffic and other impacts along that stretch of the road. Subsequent to detailed wetland delineation efforts, it was apparent that this alternative had significant vegetated wetland impacts (approximately 14.7 acres). This alternative would have also required five stream crossings. This alternative was rejected as being an inferior alternative for meeting tribal needs due to access impacts across County Highway 161, layout impacts due to spread out facilities, and significant wetland impacts.

Site Layout Alternative 3. Alternative 3 (Figure 3-9) reduces the wetland impacts on Gildick by shifting the proposed casino and hotel toward the river. This alternative encroaches partially into the floodplain, but reduces the vegetated wetland impacts by over 50 percent, to approximately 5.7 acres. The alternative would also have seven stream crossings. Similar to Alternative 2, this alternative spreads the development plan over a large area of land, using both the Rossini and Cooke parcels for supporting facilities such as employee parking and warehousing, and would result in increasing traffic impacts and decreased operational efficiency. This alternative was rejected as being an inferior alternative for meeting tribal needs due to cross traffic over County Highway 161 and impacts to wetlands and large tracts of forested area.

Site Layout Alternative 4. In order to further reduce wetland impacts and bring the development components closer together, Alternative 4 was considered (Figure 3-10). This alternative brings all the components on to the Gildick parcel and minimizes wetland impacts. This alternative also maximizes the use of disturbed areas for development. The sole public entrance to the facility would be at the southern end of County Highway 161, minimizing impacts to the residential area of the road. This alternative was initially estimated to have over five acres of vegetated wetland impacts and three stream crossings. Efforts were made to further minimize wetland impacts, resulting in a reduction of impact to approximately 4.7 acres. These efforts included relocation of the utility yard and Phase 2 structured parking away from Wetland 3, use of a retaining wall and tighter parking requirements in the surface parking lot to reduce impacts to Wetland 4, redesign of stormwater management basins to reduce impacts to existing basins and wetlands, and steeper grading and minor relocation of the western access road to

avoid impacts to Wetland 4. This alternative was ultimately improved to be Site Layout Alternative 7.

Site Layout Alternative 5. In order to reduce the wetland impacts of Alternative 4, purchase of property to the north was considered. This would allow the site plan to be shifted to the north, partially out of the wetlands. Figure 3-11 shows this layout. Due to topographical and wetland constraints, the site plan could only be shifted approximately 600 feet to the north. The property owner was approached to determine the availability of the property. Initially, the owner requested a price that was significantly higher than the price of the other properties. Subsequent conversations indicated that the owner was not, in fact, interested in selling. This property was also problematic due to the presence of a cemetery north of the property line. This alternative was rejected as infeasible because the property was not available.

Site Layout Alternative 6. The southern end of Gildick was considered as an area for the proposed casino. However, steep slopes, wetlands, and other properties made this area infeasible. Figure 3-12 shows how the program could have been laid out in this area. This figure shows the steep slopes that limit development to the east. A total of twelve additional properties would have to be purchased for this option to be viable. This includes a parcel along County Highway 161 whose property owners had been previously approached and who indicated that they were not interested in selling. Because this portion of Gildick is significantly higher than the northern portions, and because it is immediately adjacent to State Route 17, the proposed project in this location would have been highly visible. Finally, this layout would impact approximately 4.6 acres of wetlands, including relocation of approximately ½ mile of an intermittent stream. This alternative was rejected as being infeasible due to size constraints.

Site Layout Alternative 7 (Proposed). The proposed alternative is based on Alternative 4. Discussions with the USACE resulted in reducing the amount of surface parking from the proposed site plan, and increasing structured parking (see Figure 3-3). While this has some negative cost and operational implications, the net reduction to wetland impacts was considered an overriding factor. A combination of surface and structured parking was considered optimal. Surface parking is considerably less expensive than structured parking. Typically, surface parking costs approximately $1,800 to $2,200 per space. Structured parking typically costs $12,000 to $18,000 per space. With the Casino Project, structured parking expense is even higher due to the addition of mechanical ventilation and the need to provide strong integration with the casino.

This alternative also relocated the proposed warehouse to inside the curve of the access road, away from wetlands that were adjacent to its position as shown for Alternative 4. Alternative 7 also provides for widening of County Highway 161 on the east side, thereby avoiding impacts to wetlands that occur on the west side of the road at the toe of slope. Any direct impacts to the Neversink River are avoided, and a buffer is maintained. Impacts to vegetated wetlands are estimated to be approximately 1.5 to 2 acres.

3.3.4 Roadway Improvement Alternatives

3.3.4.1 Site Access Alternatives

Several configurations for the proposed site driveway were considered. Alternative A3 is proposed. These options are discussed in Table 3-4 and shown schematically in Figure 3-13. All three alternatives assume that the main project driveway is signalized. Alternative A1 assumes that the majority of the development occurs on the Cooke West property (on the western side of County Highway 161 just north of Interchange 107). The main site driveway is located approximately 1,400 feet north of the closest interchange ramp and 350 feet south of the intersection of Old County Highway with County Highway 161.

The advantages of Alternative A1 include minimal impacts to County Highway 161 and the Old County Highway/Foss Road neighborhood. However, the size of the Cooke West property is inadequate for the proposed development program, and environmental features of this site are not optimal. In addition, construction of this alternative may require a new ramp and possibly a grade-separated entrance, which would be costly and result in environmental impacts. Because this location is so close to the interchange, traffic entering the site from the south would likely experience queues that could interfere with traffic operations on County Highway 161 and the interchange ramps. Finally, no exclusive right-of-way for emergency vehicles would be available. For these reasons, Alternative A1 is not recommended.

Alternative A2 assumes that the Casino Project is constructed on the Gildick parcel to the east of County Highway 161 (see Figure 3-13). The main entrance to the site is located approximately 600 feet north of the intersection of Old County Highway with County Highway 161. A secondary access driveway would be located approximately 2,800 feet to the north of the main site driveway.

Unlike Alternative A1, Alternative A2 provides an additional driveway that could be used for emergency access (although it would not be an exclusive emergency access road). It is anticipated that Alternative A2 would serve the site better than Alternative A1 because traffic would be divided between two driveways. However, analysis of this alternative indicates that most (92 percent) of the traffic will originate from the south on County Highway 161 (primarily from State Route 17). Traffic originating from the south would likely use the first entrance (the main site driveway). Thus, few vehicles would be expected to use the secondary access driveway. Disadvantages of this alternative include the steep grades that exist on the western side of the Gildick site. Cut and fill for the secondary site driveway would be very costly and result in significant environmental impacts.

Alternative A3 is similar to Alternative A2 (the main site driveway is the same for both alternatives). However, for Alternative A3, the secondary access road on the north side of the site is eliminated and replaced with an exclusive emergency access driveway connecting to the south side of the project site. The northern portions of Old County Highway and Foss Road could be used for the emergency access or a new connection could be constructed between County Highway 161 and Foss Road (as shown in Figure 3-13) south of the intersection of County Highway 161/Old County Highway. East of Old County Highway, the emergency access

driveway would utilize Foss Road to connect with the main site driveway at the south end of the project site.

Alternative A3 is the proposed alternative. The principal advantage of Alternative A3 is that it provides an exclusive emergency access roadway. Alternative A3 is also less expensive and has fewer environmental impacts compared to Alternative A2 because the emergency roadway would be on flatter terrain with fewer wetland impacts. Traffic analyses for future conditions indicate that a single main entrance will adequately accommodate the future traffic volumes at the site. Disadvantages to Alternative A3 include impacts of the emergency access driveway to Foss Road and its residents.

Table 3-4 Site Access Alternatives

Alternative	Advantages	Disadvantages	Conclusions/ Recom-mendations
Alt. A1 – Driveway Entrance (potentially grade-separated) 1,400 feet north of Interchange 107 (assume project development located west of County Hwy 161 on the Cooke West property)	▪ Consolidates buildings in one area. ▪ Minimizes impacts to County Hwy 161. ▪ Minimizes neighborhood impacts for Old County Hwy and Foss Road	▪ Not enough acreage on Cooke West parcel for entire development program. ▪ Over five acres of wetland impacts. ▪ No exclusive roadway provided for emergency vehicles. ▪ Environmental impacts associated with construction of new ramp at site driveway entrance. ▪ Due to close proximity to interchange, queued vehicles from the site driveway could impact traffic operations along County Highway 161 in the vicinity of the entrance. ▪ Potential historical resource impacts. ▪ High cost.	Not recommended
Alt. A2 – Two General Access Site Driveways (assume project development located east of County Hwy 161 on the Gildick property)	▪ Divides project-related traffic between two driveways, reducing traffic impacts at main project site driveway. ▪ Secondary access may also be used for emergency access.	▪ Traffic impacts at the secondary project site driveway. ▪ Impacts a longer stretch of County Highway 161. ▪ Since most project traffic originates from south of the site, use of the secondary access driveway to the north would likely be minimal. ▪ No exclusive roadway provided for emergency vehicles only. ▪ Difficult grades at proposed location of secondary site driveway. ▪ Significant environmental impacts (Extensive cut/fill required for secondary driveway). ▪ High cost.	Not recommended
Alt. A3 – One Site Driveway plus Emergency Access Driveway (assume project development located east of County Hwy 161 on the Gildick property)	▪ Main Project driveway adequately serves projected traffic volumes. ▪ Secondary driveway is provided for emergency access only. ▪ Minimizes impacts to County Hwy 161. ▪ Minimizes impacts to slopes on west side of the Gildick property. ▪ Minimizes wetland impacts. ▪ Lower cost.	▪ Emergency Access Road impacts to Foss Road residents.	Proposed Alternative

3.3.4.2 Old County Highway Access Alternatives

Three alternatives for Old County Highway access were analyzed; Alternative B1 is proposed. Old County Highway, and Foss Road which connects to it, are currently dead end roads with one point of access from County Highway 161. Access to Old County Highway is currently provided

at an intersection approximately 600 feet south of the proposed location for the main project site driveway. Figure 3-14 shows a sketch of this intersection as it exists today. Total peak hour traffic volumes turning into and out of Old County Highway are currently minimal (between 35 and 60 total vehicles during weekend peak hours). However, Old County Highway meets County Highway 161 at a sharp (30 degree) angle. Although no accidents were reported at this location between the three-year period of 1998 and 2000, with the addition of traffic from the proposed project, this intersection may represent safety issues for traffic accessing the neighborhood in the future.

Alternative options for Old County Highway Access are discussed in Table 3-5 and shown schematically on Figure 3-14. Alternative B1 is the proposed alternative. Alternative B1 involves relocating the access from County Highway 161 to Old County Highway and Foss Road. The new access point would be approximately 500 feet to the south. This option includes construction of an extension of the northern portion of Foss Road to connect with County Highway 161 and serve as the emergency access roadway to the site. Access to and from the residences on Old County Highway and Foss Road would be provided via this emergency access roadway. East of the residential neighborhood, the emergency access driveway would be gated and allow emergency access only from the southern boundary of the project site. The northern end of Old County Highway will become a cul-de-sac.

Table 3-5 Old County Highway Access Alternatives

Alternative	Advantages	Disadvantages	Conclusions/ Recom-mendations
B. Old County Highway Access Alternatives			
Alt. B1 – Close off North End of Old County Hwy and Provide Neighborhood Access via New Emergency Access Road with Traffic Signal	▪ Eliminates the thirty degree angle intersection at County Highway 161. ▪ Provides safe geometry, improved operation, and minimizes delays for side street movements to/from Old County Hwy/Foss Road neighborhood. ▪ Improves sight distance.	▪ Traffic delays for side street movements exiting emergency access road if no signal is provided. ▪ High cost alternative.	Proposed Alternative
Alt. B2 – Realign and Provide Operational/ Safety Improvements for Westbound Approach of Old County Hwy at County Hwy 161	▪ Provides safer geometry and improved operation for side street movements to/from Old County Hwy/Foss Road neighborhood. ▪ Improves sight distance. ▪ Signal at proposed site driveway provides additional gaps for side street movements. ▪ Low cost.	▪ Traffic delays for side street movements exiting Old County Hwy if no signal is provided. ▪ Intersection located very close to proposed project driveway.	Not Recommended
Alt. B3 – Close off North End of Old County Hwy, Provide Gated Emergency Access Connection from Foss Road to County Hwy 161, and Provide Neighborhood Access Through the Project Site (Main Project Site Driveway)	▪ Traffic re-routed through the intersection of the project site driveway and County Highway 161 would not significantly impact traffic operations. ▪ Eliminates traffic turning movement delays for side street movements to/from Old County Hwy/Foss Road neighborhood. ▪ Minimizes the number of conflict points along County Hwy 161.	▪ Increased travel time, travel distance, and inconvenience for Old County Hwy/Foss Road neighborhood. ▪ Additional travel time and inconvenience for access to Old County Hwy/Foss Road neighborhood “cancels out” benefits from decreased delays.	Not Recommended

Relocation of the access to Old County Highway would provide improved safety and operations for drivers traveling to and from this neighborhood. Based on the analysis of future conditions, traffic exiting Old County Highway (particularly left turns) could experience delays of up to 90 seconds. The proposed traffic signal at the main project site driveway would create gaps along County Highway 161 (in the southbound direction), which would help decrease delays for vehicles exiting Old County Highway. However, due to the heavy peak hour traffic volumes anticipated on County Highway 161 under future conditions, a traffic light is recommended to minimize delays and provide safe turning movements in and out of the emergency driveway.

Alternative B2 includes realignment of the north end of Old County Highway to meet County Highway 161 at a ninety-degree angle (see Figure 3-14). Compared to existing conditions, Alternative B2 provides improved safety for drivers accessing the Old County Highway/Foss Road neighborhood. Since this alternative would not require construction of a Foss Road extension, it could be completed at a lower cost than Alternative B1. It would also result in fewer environmental impacts compared to Alternative B1.

However, similar to Alternative B1, without a traffic signal, traffic exiting Old County Highway could experience significant delays (up to 90 seconds). Geometric improvements such as separate westbound left and right turn lanes could help improve operations at this intersection, and the proposed traffic signal at the main project site driveway would also help decrease delays by creating gaps in the major street traffic flows. As for Alternative B1, however, a traffic signal may be needed at Old County Highway to minimize delays and provide safe turning movements. Alternative B2 is not recommended.

As mentioned, both Alternatives B1 and B2 could result in significant delays for vehicles exiting the Old County Highway/Foss Road neighborhood at County Highway 161 if traffic signals are not provided. If these delays were considered unmanageable or unacceptable and a traffic signal was not preferred, a third option exists. Option B3 provides the same roadway configuration as Option B1, but the emergency access road would be gated at County Highway 161 and used only during emergencies. Access to and from the residential neighborhood would be provided through the project site (via Foss Road, the emergency access road, and the main project site driveway).

The additional neighborhood traffic re-routed to the project site driveway would not significantly impact traffic operations (delays) at the project site driveway intersection with County Highway 161. The advantage of Alternative B3 is that it eliminates the additional conflict point along County Highway 161, and therefore eliminates associated delays and potential safety concerns at that location. However, this option adds travel time, travel distance, and inconvenience for drivers traveling to and from the neighborhood. It is likely that the additional travel time would offset the potential benefits of decreased delays provided by this alternative. This option would also place public traffic onto a privately maintained road. This option is not recommended.

3.3.4.3 State Route 17 Interchange Improvement Alternatives

Three alternatives for the interchange improvements were considered; Alternative C3 was selected as the proposed alternative. As part of their *Route 17 (Future Interstate 86) Interchange Spacing and Geometrics Study*, NYSDOT is currently in the process of identifying and planning strategies to address safety deficiencies and/or substandard features at all interchanges along State Route 17. The purpose of the study is to upgrade State Route 17 and all of its interchanges to federal highway standards so that it may be converted to a limited access interstate highway (Interstate-86).

The existing configuration of State Route 17 Interchange 107 is shown on Figure 3-15. Under existing conditions, Interchange 107 provides full access for movements in all directions. However, several of the ramps do not meet federal highway standards. For example, the eastbound off-ramp does not provide sufficient length, curve radius, or sight distance. The eastbound on-ramp has two entrances, which is unconventional and creates potential safety issues (particularly for the second connection, which is under STOP-sign control at the ramp). The height of the bridge over State Route 17 is 14.33 feet, which is below the standard height for interstate highways (16 feet). In addition, adequate turning radii are not provided on the westbound slip ramps. NYSDOT will be planning improvements to address each of these issues. In addition to NYSDOT improvements, an additional lane on County Highway 161 will be needed in the vicinity of the interchange to accommodate peak hour Casino Project-related traffic accessing eastbound State Route 17. A northbound left turn pocket to access State Route 17 westbound may require additional widening of County Highway 161 over State Route 17.

Several potential design/improvement alternatives were considered for Interchange 107. These options are presented in Table 3-6 and shown schematically on Figure 3-15. All three alternatives would include widening of the overpass bridge to provide a minimum of three lanes (two southbound lanes and one northbound lane) and possibly four lanes to allow the northbound left turn onto State Route 17 eastbound. Alternative C1 is a full diamond interchange, including reconstruction of the overpass bridge. This option would meet federal requirements and provide a full access interchange. Access to and from the highway would improve for most movements. The exception is the high volume of traffic exiting the development to State Route 17 eastbound, which would have to take a left turn onto the on-ramp. This alternative involves major reconstruction for several new ramps at a substantial cost. It also involves land takings, including one or two homes. In addition, projected traffic volumes under future conditions with the Casino Project do not warrant complete redesign of this interchange. For these reasons, Alternative C1 is not recommended.

Table 3-6 State Route 17 Interchange 107 Improvement Alternatives

Alternative	Advantages	Disadvantages	Conclusions/ Recom-mendations
C. State Route 17 Interchange 107 Alternatives[1]			
Alt. C1 – Diamond Interchange	▪ Provides full access interchange meeting state/federal standards. ▪ Provides improved access for most interchange ramp movements.	▪ Significant land takings (including one or two homes). ▪ Substantial wetland impacts. ▪ High cost.	Not recommended
Alt. C2 – Provide Geometric Improvements to Existing Interchange; Remove Existing Connection to St Rte 17 EB On-Ramp	▪ Provides full access interchange meeting state/federal standards while minimizing impacts to adjacent properties and wetlands. ▪ Eliminates non-standard connection to EB on ramp.	▪ Potential impacts to home on south side of interchange. ▪ Traffic patterns must change, resulting in increased delays for the intersection of County Highway 161/Old Route 17. ▪ Lower cost.	Not recommended
Alt. C3 – Provide Geometric Improvements to Existing Interchange as per NYSDOT recommendations; Move Connection between Old Route 17 and EB On-Ramp 50 feet to the north	▪ Provides full access interchange meeting state/federal standards while minimizing impacts to adjacent properties and wetlands. ▪ Eliminates non-standard connection to EB on ramp. ▪ Improved safety and efficiency for vehicles using Interchange 107 to access Route 17 eastbound. ▪ Minimizes conflicts along Old Route 17. ▪ No change in traffic patterns required, therefore no adverse impacts to traffic operations at intersection of County Hwy 161/Old Route 17. ▪ NYSDOT already planning similar improvements for this interchange within the next several years.	▪ Mid-range cost.	Proposed Alternative

[1] All three interchange alternatives would also include widening of the overpass bridge to provide a minimum of three lanes (two southbound lanes and one northbound lane).

Alternative C2 is an option that minimizes cost by utilizing existing ramps where appropriate (see Figure 3-15). This alternative includes improvements for the westbound slip ramps (improved turning radii), but the eastbound ramp movements remain similar to existing conditions. The major change is that the awkward connection from Old Route 17 (the frontage road) to the eastbound on-ramp is eliminated. Instead, all vehicles accessing eastbound State Route 17 are accommodated at a single ramp entrance off of County Highway 161. Geometric improvements include lengthening and realigning the eastbound off-ramp to meet federal standards. This alternative also includes reconstruction of the overpass bridge.

Alternative C2 minimizes the conflicts that occur today for vehicles accessing the eastbound on-ramp. The principal advantages of Alternative C2 over Alternative C1 include fewer land takings and minor environmental impacts. However, in order to improve State Route 17 eastbound access, County Highway 161 has to be realigned resulting in acquisition of one home. Alternative C2 is preferred over Alternative C1 because it provides an environmentally friendly

alternative at a lower cost. One disadvantage to this option is that it increases delays for left turning movements at the intersection of County Highway 161/Old Route 17 due to additional traffic that would be re-routed through this intersection to access eastbound State Route 17.

Alternative C3 is similar to Alternative C2, but it parallels the improvements proposed by NYSDOT as part of their *Route 17 (Future Interstate 86) Interchange Spacing and Geometrics Study*. As under Alternatives C1 and C2, this alternative includes reconstruction of the overpass bridge. Geometric improvements for the eastbound off-ramp and westbound slip ramps at Interchange 107 are the same as described for Alternative C2. However, the connection between Old Route 17 and the eastbound on-ramp is not removed, but relocated approximately 50 feet to the north of its existing location. Moving this ramp adjacent to the eastbound off-ramp minimizes the conflict points along Old Route 17. The merge provided (rather than STOP control) for vehicles accessing the eastbound on-ramp from Old Route 17 is less than desirable, but an improvement over the existing condition.

Similar to Alternative C2, the principal advantages of Alternative C3 include minimal land takings and relatively minor environmental impacts. Alternative C3 allows traffic to be routed essentially the same as it is today. Thus, unlike Alternative C2, this option would not result in additional traffic volumes and increased delays at County Highway 161/Old Route 17. Implementation of these measures may prove easier and more timely since they can be coordinated with NYSDOT plans to improve this interchange. Although Alternative C3 would be somewhat more expensive than C2, it is preferred over C2 because it addresses the deficiencies of the interchange as identified by NYSDOT, as well as the safety/capacity needs for this project.

3.3.4.4 County Highway 161 North

There has been local concern regarding the safety implications of future traffic growth along County Highway 161 to the north of the proposed project site. The ability of drivers to view obstructions or other vehicles within the traveled way for an adequate distance is of primary importance in the safe and efficient operation of a vehicle on the street. Proper street design requires sight distance of sufficient length so that drivers can control the operation of their vehicles and avoid striking unexpected objects on the traveled way. North of the project site, County Highway 161 experiences several horizontal curves and vertical grade changes that may impact sight lines for vehicles entering and exiting side streets and private driveways along this roadway. However, alterations along County Highway 161 at intersections to the north of the site are not warranted in terms of safety standards, and are not recommended because they would be costly in terms of finances, land takings, and aesthetics.

Per standards described in *A Policy on Geometric Design of Highways and Streets* (American Association of State Highway and Transportation Officials [AASHTO], 1990), field observations by Rizzo Associates in March 2001 indicate that sight lines along County Highway 161 at its intersections with Route 109 (Kiamesha Lake Road), Thompsonville Road/River Road, and Downs Road are adequate (over 250 feet) for vehicle speeds in excess of 35 miles per hour (mph) along County Highway 161. In this vicinity, the posted speed limit along County Highway

161 is 30 mph (both directions). Thus, adequate sight lines are currently available. In addition, alteration of the horizontal or vertical curvature along County Highway 161 would result in land takings and aesthetic impacts. The windy nature of County Highway 161 is consistent with the rural charm and character of the Catskills. Altering this roadway would result in temporary construction impacts as well as long-term impacts to the natural, rural character of the roadway. As an alternative to roadway improvements, additional speed limit signs could be posted and travel speeds along County Highway 161 could be regularly monitored by police to enhance safety for vehicles traveling to and from the north along this roadway.

3.3.5 Water Supply Alternatives

Four water supply options were evaluated for the proposed development, with connection to the Village of Monticello System (Alternative 1) being the proposed alternative. A description of each of these options is provided below. Figure 3-2 shows the locations of existing water supply and wastewater treatment services. Figure 3-16 shows water supply alternatives.

Water Supply Alternative 1. This alternative, which is the proposed action, involves obtaining a new water supply for the Casino Project from the adjacent Village of Monticello and has been selected as the preferred option. A majority of the Village of Monticello is currently serviced by a public water distribution system. The village receives its water supply from Kiamesha Lake (2 million gallons per day (mgd) permitted withdrawal capacity) and a well field (300,000 gpd permitted withdrawal capacity) in the southern portion of the Village. The Village operates a water treatment facility in the vicinity of the lake, which has a capacity of 2.3 mgd. The plant is located at the intersection of Concord Road and Route 42. Currently, the average daily production of water from this treatment facility, from all the sources, is 1.15 mgd, with a peak summer production of 1.4 mgd. The Village of Monticello has four storage tanks with a total capacity of 1.64 million gallons, located at three different sites. The Tribe has entered into a Water Services Agreement (Appendix D) with the Village of Monticello and the Town of Thompson to supply the potable water demand for the Casino Project (see Section 3.1.4).

Water Supply Alternative 2. The Artesian Water Company is a private water company currently servicing approximately 250 customers in the Kiamesha Lake area. Currently, water production averages approximately 150,000 gpd, with a peak summer demand of 200,000 to 250,000 gpd. This demand is primarily met from groundwater wells, which have a capacity of 170,000 gpd. The well water is treated with chlorination only. The remaining demand is met from lake water, which is treated at the company's water treatment plant, in the vicinity of Kiamesha Lake. The treatment process includes sand filtration and disinfection.

A tie-in to this system would be made via an off-site water main extension from the site, northerly along County Route 161 to the intersection of Routes 109 and 161, approximately 2.7 miles north of the site. The water company maintains an 8-inch line at this location which is currently unused. This line is gravity fed from two water storage tanks to the north of Kiamesha Lake. These storage tanks have a combined capacity of 1.64 million gallons. The resultant water pressure at the terminus of the 8-inch line is approximately 162 psi.

The water company indicates that they have a supply and treatment capacity of 1.5 mgd. However, the actual permitted capacity and limitations on their treatment and distribution systems are believed to be limiting factors. In addition to the limitations on their permitted withdrawals, preliminary inspections have indicated that the filtration plant and distribution system would have to undergo major upgrades in order to be a long-term, reliable source for the development. Consequently, this alternative was considered infeasible and not pursued.

Water Supply Alternative 3. The Town of Thompson operates a small water distribution system, which primarily serves the State Route 42 corridor. The source of this water supply is from the Artesian Water Company located adjacent to Kiamesha Lake, approximately 5 miles from the site. Currently, the Town purchases approximately 30,000 gpd from this private water company for distribution. Additionally, the Town of Thompson owns a parcel of land south of the Casino Project site at the intersection of State Route 17 and the Neversink River that was selected as a potential well site for the Town approximately 15 years ago. This site has yet to be developed as a public water supply source. Therefore, the Town of Thompson's water service currently has neither the capacity nor a distribution system that is capable of servicing the proposed development.

Water Supply Alternative 4. The potential for development of on-site water supply wells was evaluated as an alternative based on a review of available soils and groundwater information of the site area and the results of a preliminary test well investigation program. The results are summarized below.

Groundwater supplies can be developed within the three primary units in the project area: till, bedrock, and unconsolidated sand and gravel deposits. Wells completed in the till are expected to consist primarily of shallow, large-diameter, dug wells that yield limited quantities of water, typically suitable only to supply a single residence.

The quantity of water available from wells drilled into the sedimentary bedrock may vary widely depending on the depth of the well; the degree and interconnection of fractures; and the nature of the bedrock at the specific well location. Wells completed in bedrock may be suitable for meeting a portion or all of the water demands of the Casino Project, but would need extensive pump testing to quantify yield and characterize sources of recharge.

Based on the anticipated well yield from till and bedrock, it was surmised that the most productive water-bearing unit in the project area would be the unconsolidated deposits located on the Gildick property, west of the Neversink River. Other locations in the area with similar surficial characteristics have produced yields as high as 700 gallons per minute from wells completed within coarse-grained sand and gravel deposits. Since the volume of groundwater that is available at any specific location in the unconsolidated deposits is a function of the hydraulic conductivity of the sediments, available drawdown, and availability of recharge, a preliminary test well investigation program was implemented in June 2003 to characterize the nature of the unconsolidated deposits in portions of the property and develop preliminary estimates of potential well yield and water quality.

As part of a preliminary testing program, a total of five borings were advanced at locations in the southeast, northeast and central portions of the property. Refusal was encountered at depths ranging from 12 to 98 feet below the ground surface, reflecting the highly variable and steeply sloping bedrock surface in this area, and the presence of relatively deep bedrock valleys. The material encountered in the borings consisted primarily of fine to medium sand with gravel, silt, clay, boulders and till. The testing did not identify the presence of sand and gravel deposits of sufficient thickness to support the development of high-yield production wells, so test pumping of the wells was not performed.

Based on the nature of the proposed development and the required water demand, the preliminary testing discussed above did not identify a location suitable for the construction of permanent production wells. Further, based on the nature of the material observed at the test well locations and the general consistency of the material across the property, it appears unlikely that the water demands of the project can be met through the development of on-site shallow wells. However, the development of on-site wells to meet the landscape irrigation demands of the project is feasible.

3.3.6 Wastewater Treatment Alternatives

Four potential wastewater treatment alternatives were evaluated, with connection to the Town of Thompson's Kiamesha Lake Wastewater Treatment Facility selected as the proposed alternative. Figure 3-2 shows existing wastewater treatment services. Figure 3-17 shows wastewater treatment alternatives.

Wastewater Treatment Alternative 1. Wastewater Treatment Alternative 1, which is the proposed action, involves a connection into the Town of Thompson's Kiamesha Lake Wastewater Treatment Facility (Alternative 1). The facility is located on Town Road 46 between State Route 17 and Kiamesha Lake approximately 4.3 miles from the site (on-site pump station). The facility has a design and permitted capacity to treat and discharge up to 2.0 mgd. The permitted discharge is based on a 30-day average flow and is not subject to seasonal limitations. The current 30-day average flow to the treatment on an annualized basis is approximately 0.5 mgd (25% of plant capacity). The current peak monthly flow (during the peak summer season) is approximately 0.7 mgd (35% of plant capacity).

This facility, therefore, has an excess capacity of 1.3 mgd, which is sufficient to meet the needs of the Casino Project. The treatment plant was upgraded in 1990 to add tertiary treatment, including extended aeration and filtration prior to discharging to Kiamesha Creek, which is a tributary to the Neversink River. The creek has a Water Classification of "C" and is not known to be an impaired water body. The treatment facility currently operates in full compliance with its permit requirements and well within the specified effluent limits. The federal SPDES permit (number NY0030724) to operate the facility was renewed on April 1, 2010 and is valid through March 31, 2015. The corresponding NYDEC permit number 3-4846-00039/00003.

The Tribe and the Town of Thompson entered into a Sewer Services Agreement that would allow for the implementation of this proposed alternative (see Section 3.1.4).

Wastewater Treatment Alternative 2. Wastewater Treatment Alternative 2 involves a connection to the Village of Monticello wastewater treatment facility. This facility has an excess capacity of approximately 1.5 mgd, which is more than sufficient to accommodate the estimated wastewater flow from the Casino Project. To utilize this option, a force main extension of approximately 3.4 miles would be constructed to a tie-in location just south of where Mill Street comes in to Waverly Avenue. This is just north of the existing wastewater treatment facility.

Although there is sufficient capacity available, the Monticello wastewater treatment facility has been under a Consent Order from the New York State Department of Environmental Conservation (NYSDEC) for discharge violations due to stormwater inflow and infiltration problems. The Village has been in the process of making system improvements that would eliminate or improve this condition. However, there are a number of sewer system rehabilitation projects that have yet to be undertaken and no definitive time table is in place for their implementation. Consequently, the availability of this alternative within the time frame of the Casino Project is uncertain. As such, Alternative 2 was considered infeasible and not recommended.

Wastewater Treatment Alternative 3. Wastewater Treatment Alternative 3 considered connection to the Town of Thompson Emerald Green Treatment Facility. This facility is located in Rock Hill, approximately 2.5 miles east of the site and discharges to Davis Lake via McKee Brook. The treatment plant was constructed in 1995 and has a capacity of 410,000 gpd. It has been operating at approximately 50 percent capacity with an occasional peak inflow of 510,000 gpd during wet weather conditions. The facility was originally built by a private entity to serve a large residential development, of which only a small portion has been completed. It has been subsequently taken over by the Town of Thompson to maintain and operate. The facility has an SBR type of treatment process. The Town anticipates additional flow to this facility of approximately 30,000 gpd as a result of the proposed development of a new corporate park, being developed by the County, and other development in the Rock Hill business district.

This facility currently has very limited excess capacity. To increase this capacity, additional infrastructure would be required, as well as an amended discharge permit from NYSDEC for an increase in the effluent discharge to McKee Brook. Based on the limited capacity of this facility, the need for a substantial upgrade and expansion, and required amendment to the State Pollutant Discharge Elimination System (SPDES) permit to increase its effluent discharge, it was determined that this option was not viable.

Wastewater Treatment Alternative 4. Wastewater Treatment Alternative 4 considered the construction of an on-site wastewater treatment plant as an alternative to a tie-in to one of the municipal systems. This would require either a subsurface disposal system or discharge to the Neversink River. Preliminary subsurface investigations of the site (including soils, bedrock and groundwater conditions) indicate it is unlikely that suitable conditions exist on-site to support an in-ground disposal system without having a direct hydraulic connection to the river. It is unlikely that a direct surface discharge to the river could be permitted due to its classification as a cold water fishery and the presence of rare and endangered mussels. Additionally, the construction of an on-site facility would require additional site disturbance, likely in the immediate vicinity of the river. It was determined that this option was not viable to meet the wastewater disposal needs of the project.

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4.0 Affected Environment

The following discussion details local and regional existing conditions as they apply to the proposed Casino Project Alternative and the No Action Alternative. With regards to project area, there are three main components. The proposed tribal lands include the 330 acre site which is the proposed casino location. The roadway improvement area includes the immediately adjacent public roads. The utility connections, specifically the water supply and wastewater treatment connection alignments, include two linear project areas between the proposed casino location and the provider. The environmental features described below consider all three of these components. Features such as bedrock geology are considered on a more regional basis and encompass the entire project area. Features such as wetlands are described on a more focused basis. It should be noted that the project areas are not in the coastal zone and have no known rangeland or paleontological resources.

This section of the FEIS was updated to address changes in conditions or circumstances, new information and/or changes in law or regulations. (As noted in Section 3.0, the Casino Project program has not changed from the DEIS.) The following activities were conducted for this updating: site inspections were conducted of the tribal lands and of off-site non-tribal lands along the roadway improvement area and utility connection alignments to ascertain whether there were changes in conditions relating to topography and soil, groundwater, surface water, vegetation, fish and wildlife, or hazardous materials. Reviews were conducted of available federal, state and local records and relevant agencies were contacted for updates, including updates from NYSDEC, as relevant. Updates with respect to threatened and endangered species were requested from NYSDEC. Conditions remained essentially as described in the DEIS. The principal changes in these subject areas were: the Natural Resources Conservation Service updated the soils mapping (2010), which classified more site soils as Prime Farmland or Statewide Important Farmland, but (as discussed in Section 5.0) this does not change the impact evaluation; the potential for approximately 0.59 acres of former mining basins that were reclaimed by the Tribe to be considered by the USACE as jurisdictional wetlands, thus warranting supplemental wetland mitigation (identified in Section 5.0); and the presence of a petroleum spill offsite along the proposed water main route that has been reported to NYSDEC under the Navigation Law and should be remediated, if necessary, by the responsible party or the State.

Traffic counts were conducted during peak hours of a weekend in July 2010 for the key study area intersections and Average Daily Traffic (ADT) counts were obtained from NYSDOT for 2010 conditions on State Route 17 in Orange and Sullivan Counties; overall roadway conditions were found to be similar to those reported in the DEIS, with essentially flat traffic volumes despite a number of developments that were completed since the DEIS. The discussion of air quality was updated to current ambient air quality data and the addition of an 8-hour ozone and $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS). Similar to the conditions described in the DEIS, Sullivan County is designated to be in attainment or unclassified for all criteria

pollutants and Orange County is either attainment or unclassified except as to ozone. An updated microscale analysis using current EPA-approved modeling and the NYSDOT's Environmental Procedures Manual was conducted for all criteria pollutants except ozone (which is not the subject of such modeling) at the two key intersections relevant to the Casino Project; levels were, as in the DEIS, below the applicable NAAQS. The noise assessment was updated to reflect the updated 2010 traffic counts; overall noise levels are comparable to those reported in the DEIS.

The socioeconomics section was updated to reflect current conditions on the Tribe's reservation in Wisconsin and conditions in the Casino Project area; these conditions remain generally consistent with those reported in the DEIS, although the national recession has, as elsewhere in the state, resulted in depressed market conditions and higher unemployment rates in the study area as compared to conditions in 2004. The community services, utilities and land use/community character sections were updated to reflect current conditions in the Casino Project area. The principal change from the DEIS is the adoption by municipalities in the Casino Project area of more stringent zoning and comprehensive plans, which allow for greater control over growth and development.

4.1 Geology, Topography and Soils

Investigations were conducted to determine current conditions and ascertain whether there were changes from the conditions reported in the DEIS. It was found that there was no change in conditions, although, NRCS has remapped and categorized the soils, as discussed below.

4.1.1 Bedrock Geology

According to the Geologic Map of New York, Lower Hudson Sheet (1970, reprinted 1995), the project is located in an area underlain by bedrock of the Lower Walton formation of the Sonyea Group. The Lower Walton formation is early Upper Devonian and consists of gray and green cross-bedded sandstone, red and green shale, and rounded pebble quartz conglomerates deposited in a continental environment. This unit is approximately 900 feet thick and dips gently to the northwest. This mapping unit underlies the majority of the Neversink River Valley in the project area. Bedrock outcrops are found at numerous locations within the project area. Cooke West has a line of outcrops with a vertical face east of the ponds; Rossini has a short stretch of a north-south trending vertical face near the southern property line; Gildick has vertical faces along the Neversink River as well as a flat face at the northern end of the auto salvage area. According to information provided by Advance Testing Company (2000), the bedrock in the immediate area of the project consists of pale red siltstone, sandstone, and shale dipping approximately 5° to the west, overlying greenish-gray sandstone. Historically, test blasts were done in the rock on Gildick and Rossini.

GZA GeoEnvironmental, Inc. conducted an exploratory program in 2001. This program included the advancement of test pits to evaluate subsurface conditions on the proposed casino site. Field observations during this program identified site conditions consistent with subsurface conditions reported in other documents (GZA, 2001).\

4.1.2 Surficial Geology

Much of the bedrock in Sullivan County, including the project area, is covered by surficial material consisting of glacial till. Glacial outwash is also a common glacial deposit in the County. The discussion below focuses on the tribal land area. The roadway improvement area which, occurs largely between Cooke East and Cooke West, is encompassed in the discussion. Areas of utility connections have similar characteristics but, as the alignments will be in the roadways, they are not discussed in detail.

The surficial geology within the Gildick portion of the project area consists of till, outwash, alluvium, fill and bedrock outcrop. Large areas of this parcel have been substantially altered by either the active gravel mining operations or by activities associated with the auto salvage operation. Additional information regarding the gravel mining operation is provided in Section 4.1.5. The western portion of this parcel, generally areas above elevation 1,120 feet (ft), is located on the eastern slope of a large hill with the surficial material in this area consisting primarily of a thin mantle of glacial till over bedrock. Bedrock is exposed at numerous locations throughout this portion of the property. In contrast, outwash and alluvial deposits, consisting of stratified coarse sand and gravel underlie the east and northeast portions of this parcel.

The Cooke West surficial geology consists of till, outwash, alluvium, fill and bedrock outcrop. The Cooke West property is located on the southern slope of a generally north-south trending hill, possibly a drumlin. The surficial material on this parcel consists primarily of a thin mantle of glacial till over bedrock. Bedrock is exposed at numerous locations throughout this parcel.

The Cooke East property is located on the eastern base of a generally north-south trending hill. The surficial geology consists of till, outwash, alluvium, fill and bedrock outcrop. The parcel has been disturbed by roadway construction and fill activities. Undisturbed surficial material on this parcel consists primarily of a thin mantle of glacial till over bedrock. Bedrock is exposed throughout this parcel.

The Rossini surficial geology consists of till, outwash, alluvium, fill and bedrock outcrop. The Rossini property is located on the eastern flank of a generally north-south trending hill, with a ground surface sloping steeply to the east. The surficial material on this parcel consists primarily of a thin mantle of glacial till over bedrock. Bedrock is exposed at numerous locations throughout this parcel.

4.1.3 Topography

The topography of the tribal lands area and roadway improvement area is shown on Figure 4-1. The project area is situated in the southern foothills of the Catskill Mountains, near the eastern margin of the Appalachian Plateau Physiographic Province.

The highest elevations on Gildick occur along the southern portion of the parcel adjacent County Highway 161 (Heiden Road), at approximately 1,240 ft above Mean Sea Level (MSL). Lowest elevations generally occur along the Neversink River, which flows in a southerly direction along the eastern boundary of the site at approximately 1,100 ft above MSL (United States Geological Survey [USGS], 1966). The slopes range from steep to flat. The southern portion of Gildick and the area adjacent to County Highway 161 have the steepest slopes.

On Cooke West, the highest elevation occurs within the central portion of the parcel, at approximately 1,380 ft above MSL. The area then slopes steeply in three directions: east to County Highway 161, west to an unnamed pond, and south to State Route 17. Lowest elevations occur adjacent to the southwest portion of the pond at approximately 1,280 ft above MSL.

On Cooke East, the highest elevation occurs at the southwest portion at approximately 1,280 ft above MSL. The area slopes gently in an easterly direction toward Old County Highway at approximately 1,200 ft above MSL.

On Rossini, the highest elevation occurs adjacent to the western property boundary at approximately 1,340 ft above MSL. The area then slopes steeply east to County Highway 161. Lowest elevations generally occur adjacent County Highway 161 at approximately 1,200 ft above MSL.

The utility connections will follow the topography of the roads in which they will be installed (refer to Figures 4-7A through 4-7G).

4.1.4 Soils

Soils mapped by the Natural Resources Conservation Service (NRCS) within the proposed tribal lands, roadway improvement area and utility connection alignments are listed and described in Table 4-1. Information from the DEIS was based on the NRCS 1989 information. This FEIS has been updated with the recent information (NRCS, 2010), which has not made substantive changes to conditions. The new information does classify more of the soils as being Prime Farmland or Statewide Important Farmland. However, this does not change the Farmland Conversion Impact Rating, as discussed below. Figure 4-2 shows the mapped soils in the tribal lands and roadway improvement areas. Figure 4-3 shows soils mapped along the proposed water supply and wastewater treatment connection alignments.

Soils on Cooke West consist mainly of the Arnot-Oquaga complex (map symbol AoC), located in the central portion of the parcel. These soils are very rocky and not suited for crops. Depth to bedrock and inclusions of rock outcrop are severe limitations for most uses. Two large areas of Neversink and Alden soils, very stony (map symbol Nf), are also located on Cooke West. This map unit is comprised of very deep, poorly drained and very poorly drained soils that formed in

depressions or nearly level areas of glacial till plains. Large stones on the surface and the seasonal high water table limit opportunities for cultivation and farming operations. Smaller areas of Scriba loam (ScA), Scriba and Morris loams (SeB), Wurtsboro loam (WuA, WuB), Oquaga very channery silt loam (OeB), Oquaga-Arnot complex (OgC), and Wellsboro and Wurtsboro soils (WlC), are also present.

Soils on Cooke East are similar to those on Cooke West. Again, the Arnot-Oquaga complex (AoC) is the most present soil type, with Wellsboro and Wurtsboro soils (WlC), Wurtsboro loam (WuB, WuC), Chenango gravelly loam (ChB) and Raynham silt loam (Ra) also present. Cooke East also contains an area of Udorthents, smoothed (Ud) in the northwestern portion of the parcel. This map unit, commonly near sites for industrial or urban development, consists of disturbed soils and areas of earthy materials. This area of Udorthents corresponds to an area identified as a Successional Area and is discussed further in Section 4.3.

Soils on the Rossini parcel are similar to those on Cooke East and Cooke West and include Arnot-Oquaga complex (AoE), Neversink and Alden soils, very stony (Nf), Oquaga very channery silt loam (OeB), Oquaga-Arnot complex (OgC), Wellsboro and Wurtsboro soils (WlC), and Wurtsboro loam (WuB, WuC). In addition, a large area of Arnot-Lordstown complex (AlC) is located in the western portion of the parcel and an area of Tuller-Rock outcrop complex (TeB) is located on the western boundary of the parcel. Arnot-Lordstown complex soils are very rocky and not suited for crops. Depth to bedrock and inclusions of rock outcrop are severe limitations for most urban uses. Tuller-Rock outcrop complex consists of shallow, somewhat poorly drained and poorly drained Tuller soil and areas of rock outcrop in gently sloping areas on nearly flat hilltops in bedrock-controlled areas.

In addition to those soil types described above, soils on the Gildick parcel include Barbour loam (Bb), Bash silt loam (Bs), Fluvaquents-Udifluvents complex (Fu), Pits, gravel (Pg), Pompton gravelly fine sandy loam (PmA), Red Hook sandy loam (Re), Riverhead sandy loam (RhB), and Swartswood gravelly loam (SrB, SrD). The Pits, gravel map unit consists of excavations mainly in areas of gravelly and sandy glacial outwash and corresponds to the locations of the auto salvage and mining operations on-site.

Table 4-1 Soil Series

Soil Series	Location[1]	Description, Limitations for Construction	Percent Slope	High Water Table	Flooding	Hydric Status	Drainage Class[2]	Depth to Bedrock	Prime/State Farmland	Habitat for Woodland Wildlife	Habitat for Wetland Wildlife
				Depth (inches)	Frequency			(inches)			
Arnot (AlC)	TL, RIA	Very rocky, excessively to moderately drained, covered by layer of decomposed leaves, depth to bedrock rock outcrops	0-15	>80	None	No	SED	10-20	No	Poor	Very Poor
Lordstown (AlC)	TL, RIA	Very rocky, excessively to moderately drained, covered by layer of black organic litter, depth to bedrock rock outcrops	0-15	>80	None	No	WD	20-40	No	Good	Very Poor
Arnot (AoC, AoE)	TL, RIA	Very rocky, not suited for crops, depth to bedrockinclusions of rock outcrop limit use for urban uses.	0-35	>80	None	No	SED	10-20	No	Poor	Very Poor
Oquaga (AoC, AoE)	TL, RIA		0-35	>80	None	No	WD	20-40	No	Fair	Very Poor
Barbour (Bb)	TL	Well-drained, surface is loam, substratum very gravelly loamy sand	0-3	36-72	Rare	No	WD	>8060	Prime	Good	Very Poor
Bash (Bs)	TL	Silt loam, poorly drained	0-3	6-18	Occasional	No	SPD	>60	Prime if drained	Good	Fair
Chenago (ChB)	TL, RIA	Very gravelly loam, well drained, erosion is a hazard	3-8	>80	None	No	WD	>60	Prime	Fair	Very Poor
Chenango (ChD)	TL, RIA	Gravelly loam, excessively drained, slope a severe limitation, erosion a moderate hazard	15-25	>80	None	No	WD	>60	No	Fair	Very Poor

Soil Series	Location[1]	Description, Limitations for Construction	Percent Slope	High Water Table	Flooding	Hydric Status	Drainage Class[2]	Depth to Bedrock	Prime/State Farmland	Habitat for Woodland Wildlife	Habitat for Wetland Wildlife
Fluvaquents-Udifluvents (Fu)	TL, WSC	Frequently flooded	0-5	Surface	Frequent	Partially	PD/MWD	>60	No	NL[3]	NL
Gravel Pit (Pg)	TL	Gravel sandy glacial outwash	NI	NI	NI	Unknown	NI	NI	No	NL	NL
Lordstown (LoB)	TL, RIA	Silt loam, stony, well-drained, surface with black organic litter, erosion a slight hazard	3-8	>80	None	No	WD	20-40	Prime	Good	Very Poor
Neversink (Nf)	TL, RIA, WSC, WTC	Very stony, poorly drained, surface is loam, loam to fine sandy loam	0-3	0-6	None	Hydric	PD	>60	No	Poor	Good
Alden (Nf)	TL, RIA, WSC, WTC	Very stony, silt loam, poorly drained	0-3	Surface	None	No	VPD	>60	No	Poor	Good
Oquaga (OeB)	TL, RIA	Very channery silt loam, well-drained, surface with organic litter	3-8	>80	None	No	SED	20-40	State	Fair	Very Poor
Oquaga (OgC)	TL, RIA	Well-drained, thin layer of organic litter, moderate erosion hazard	8-15	>80	None	No	SED	20-40	State	Fair	Very Poor
Arnot (OgC)	TL, RIA	Excessively drained, covered with thin layer of decomposed leaves, moderate erosion hazard	8-15	>80	None	No	, SED	10-20	No	Poor	Very Poor
Pompton (PmA)	TL	Gravelly fine sandy loam	0-3	6-24	Rare	No	SPD	>60	Yes	Good	Poor
Raynham (Ra)	TL, RIA	Silt loam, poorly drained, seasonal high water table, potential frost action	0-3	6-12	None	Parially	PD	>60	Prime if drained	Fair	Fair
Red Hook (Re)	TL, WTC	Sandy loam, flooding, seasonal high water table, potential frost action	0-3	4-12	None	No	SPD	>60	Prime if drained	Good	Fair
Riverhead (RhB)	TL	Sandy loam, erosion a slight hazard on long slopes	3-8	>80	None	No	WD	>60	Prime	Good	Very Poor

Soil Series	Location[1]	Description, Limitations for Construction	Percent Slope	High Water Table	Flooding	Hydric Status	Drainage Class[2]	Depth to Bedrock	Prime/State Farmland	Habitat for Woodland Wildlife	Habitat for Wetland Wildlife
Scio (SaB)	WTC	Silt loam, very deep, gently sloping, moderately well-drained	2-6	14-22	None	No	MWD	>60	Prime	Good	Very Poor
Scriba (ScA, ScB)	TL, WSC, WTC	Stony loam, poorly drained, surface with layer of decomposed leaves and twigs, seasonal high water table, potential frost action	0-8	6-18	None	No	SPD	>60	State	Poor	Very Poor
Scriba (SeB)	WSC, WTC	Gently sloping, extremely stony, very deep, somewhat poorly drained soils that formed in glacial till	2-8	6-18	None	No	SPD	>60	No	Poor, Fair	Very Poor
Morris (SeB)	WSC, WTC	Gently sloping, extremely stony, very deep, somewhat poorly drained soils that formed in glacial till	2-8	6-18	None	No	SPD	>60	No	Poor, Fair	Very Poor
Swartswood (SrB, SrD)	TL, RIA	Gravelly loam, seasonal high water table, potential frost action, erosion a slight hazard	3-25	18-26	None	No	WD	>60	SrB – State SrD - No	Good	Very Poor
Tuller (TeB)	TL	Poorly drained, shallow soil rock outcrops, seasonal high water table	1-5	6-12	None	Partially	SPD	10-20	No	Very Poor	Very Poor
Rock Outcrop (TeB)	TL		1-5	NI	None	Partially	NI	0	No	Fair	Very Poor
Udorthents (Ud)	TL, RIA, WSC, WTC	Smoothed, very gravelly sand to silt loam, variable	0-15	NI	NI	No	MWD	>60	No	NL	NL
Wellsboro (WIC)	TL, RIA	Extremely stony, moderately well-drained, loam to gravelly loam, seasonal high water table, frost action	3-15	10-28	None	No	MWD	>60	No	Fair	Very Poor

Soil Series	Location[1]	Description, Limitations for Construction	Percent Slope	High Water Table	Flooding	Hydric Status	Drainage Class[2]	Depth to Bedrock	Prime/State Farmland	Habitat for Woodland Wildlife	Habitat for Wetland Wildlife
Wurtsboro (WIC)	TL, RIA	Extremely stony, moderately well-drained, covered with black organic litter, loam, seasonal high water table, frost action	0-15	12-22	None	No	MWD	>60	No	Fair	Very Poor
Wurtsboro (WuA, WuB, WuC)	TL, RIA	Loam, moderately well-drained, surface with decomposed leaf litter, seasonal high water table, frost action	0-15	12-22	None	No	MWD	>60	State	Fair	Poor Very Poor Very Poor

[1] TL – Tribal Lands, RIA – Roadway Improvement Area, WSC – Water Supply Corridor, WTC – Wastewater Treatment Corridor
[2] ED – excessively drained, SED – Somewhat excessively drained, WD – well drained, MWD – moderately well drained, SPD – somewhat poorly drained, PD – poorly drained, VP – poorly drained

There are sixteen soil types that are classified as Prime Farmland or Statewide Important Farmland, as shown on Table 4-1. A U.S. Department of Agriculture Farmland Conversion Impact rating worksheet was filled out for the site. Based upon the findings of the impact rating further consideration for protection of farmland pursuant to the Farmland Protection Policy Act need not be given. A Technical Memo discussing the farmland impact rating assessment is provided in Appendix E.

4.1.5 Mining Resources

Sand and gravel mining operations located on the Gildick parcel have occurred in this area since the 1950s, but have recently ceased. The Al-Dor Sand and Gravel operation operated within three areas in the project site. The upper mining operation included approximately six acres within the auto salvage operation area. In this area, mined material was excavated in the dry. The lower mining area (approximately five acres) included active and inactive mining operations adjacent to the Neversink River in the north-central portion of the site. In this area, the mined material was being removed from below the groundwater table. The material was removed from excavated ponds, stockpiled to dewater, and then removed from the site. A third area at the northern end of the site was also mined.

The upper mining operation had exposed steep slopes of sandy material that were subject to erosion. This erosion, along with erosion from exposed soils within the auto salvage area, had found its way overland to the Neversink River. The lower mining area was in a flat portion of the site. While there were extensive areas of unstabilized soils here, sedimentation was controlled with minor discharge through the created basins into the Neversink River. It was estimated that the upper mining area had an estimated sand and gravel quantity of 330,000 cy or 440,000 tons (Advanced Testing Company, 1997). The lower mining area was estimated to have a reserve of 220,000 cy or 290,000 tons assuming a mining depth of 40 feet. The estimate, if the lower area was expanded and mined to 70 feet, rose to 1,260,000 cy or 1,660,000 tons. Mining proceeded under a permit issued in 1993. This permit estimated that mining would occur for at least 20 years. A new application for more extensive mining was submitted to NYSDEC in 1998. This application was not approved. However, the owner believed it would have ultimately been approved following further conversations with NYSDEC. This application included additional mining in both the upper and lower mining areas as well as modifications to the reclamation plan. This application assumed that mining would continue for approximately 16 to 23 years. In anticipation of the Casino Project, however, mining on the property has ceased and reclamation of the unstabilized areas has been accomplished, with NYSDEC's approval (Appendix F). Unvegetated areas do remain, but erosion and sedimentation from these areas has largely ceased as mining activities have stopped.

Other, larger mining operations occur in the immediate vicinity. Sullivan County Highway Products lies to the south, in a bend of the Neversink River. The Monticello Sand and Gravel Company lies to the north at the confluence of the Neversink River and Sheldrake Stream. Further north and on the east bank of the Neversink River, a large mining operation has been closed.

There are no identified mineral resources in the roadway improvement area or utility connection alignments.

4.2 Groundwater and Surface Water

Investigations were conducted to determine current conditions and ascertain whether there were changes from the conditions reported in the DEIS. Existing conditions have not changed, although the five basins on site may have potentially become jurisdictional under the USACE due to the mine reclamation undertaken by the Tribe.

4.2.1 Groundwater

Groundwater in the project area is present within both the sedimentary bedrock and the unconsolidated sand and gravel in the Neversink River Valley. Recharge to the bedrock unit is entirely from infiltration of precipitation, while both infiltration of precipitation and groundwater flow from bedrock recharge the sand and gravel unit. The depth to groundwater is near the surface during the spring in the wetland areas and is expected to range from approximately ten feet below the ground surface in areas immediately adjacent to the river, to an estimated 40 to 50 feet below the ground surface in the upland areas. Table 4-1 provides depth to groundwater information as related to soil types. Surface and groundwater levels near the lower mining area were monitored for purposes of wetland creation, and are reported in Table 5-8.

Relatively short flow paths are expected for groundwater within the limited sand and gravel deposits adjacent to the river, while longer regional flow patterns likely dominate the groundwater flow system in bedrock. Groundwater flow in bedrock is controlled by both primary porosity within the rock matrix and secondary porosity related to bedrock fractures. Groundwater appears to run at or near the bedrock surface on the site from the hills west of the site towards the Neversink River (GZA, 2001).

Groundwater exists within the three primary units in the project area: till, bedrock and unconsolidated sand and gravel deposits. Groundwater wells located in the till would be expected to yield limited quantities of water. Generally, groundwater in this unit would be extracted by shallow, large-diameter, dug wells that are typically suitable only to supply a single residence. Wells of this type may go dry or provide inadequate yield during dry seasons.

The quantity of water located in the sedimentary bedrock may vary widely depending on the degree and interconnection of fractures and the nature of the bedrock. Groundwater wells developed in sedimentary bedrock in this area have a reported average yield of 21 gpm (USGS, 1982). The highest yields would be obtained at locations with the highest degree of fracturing.

Unconsolidated sand and gravel deposits at the project site are mapped as having potential well yields between 10 and 100 gpm (USGS, 1988). Well yields up to 400 gpm have been documented in wells screened in similar deposits located north of the site in the area between Fallsburg and South Fallsburg (USGS, 1982). The most productive water-bearing unit in the

project area is expected to be the unconsolidated sand and gravel unit located on the Gildick property, west of the Neversink River. Yields as high as 700 GPM have been reported for a 30-foot deep 72-inch diameter gravel-packed well installed in similar deposits for the Wurtsboro Water District (USGS, 1961). The volume of groundwater that is available at any specific location in the unconsolidated deposits will depend on the hydraulic conductivity of the sediments, available drawdown, and availability of recharge.

Public groundwater supplies in the area are described in Section 4.12. The Town of Thompson studied the feasibility of developing a well site in this unit south of State Route 17 and west of the Neversink River. This study, which was completed about 15 years ago, showed the presence of a potentially high-yield, water bearing soil stratum. Because of decreasing water demands within the town, this well site was never developed.

4.2.2 Surface Water and Drainage

4.2.2.1 Tribal Lands

The project site is located entirely within the watershed of the Neversink River. The river forms the eastern boundary of the site for approximately 4,600 feet. At the site, the river is approximately 125 feet wide with a rocky bottom. An assessment of the banks of the Neversink River was performed, and they were found to be stable and well vegetated (Appendix G). A USGS Gauging Station is located at the downstream (southeastern) corner of the site in Bridgeville, NY. The tributary area to this gauging station is 171 square miles. This station has data available from 1993. According to this station, flows for the river over the last three years have ranged between 76 cubic feet per second (cfs) to 5,530 cfs. The Neversink River is within the watershed of the Delaware River and is classified as a fourth-order stream.

In addition to the Neversink River, there are several intermittent streams, ponds and man-made basins on the project site, as described below, as shown on Figure 4-4. Streams are described in Table 4-2 Fisheries habitat of these water bodies is described in Section 4.4.

Gildick includes several intermittent streams, two ponds and five basins formed by the sand and gravel operations. The intermittent streams are typically formed in cuts that are approximately five feet wide at the top. Many of these carry runoff from County Highway 161. One pond (Pond 1) was formed in a wetland by construction of a dirt road, which is acting as a small dam holding back surface water. The second pond (Pond 4) appears to have been excavated in the side of a hill by original mining operations. These ponds have both been undisturbed for at least 20 years and have acquired natural characteristics, including overhanging trees.

The five basins were constructed as part of past mining operations and continue to control runoff from the remaining exposed soil areas. Basin 1 has been in place for a number of years, and the upper portions of the basin have acquired wetland characteristics. There is a culvert at the lower end of Basin 1 that discharges towards Basin 4. However, this culvert is set very high and for most of the year does not discharge.

Basin 2 is a shallow basin that had frequently changed size and shape as mining has progressed. In 2010, Basin 2 consisted of two cells divided by a dirt road. The southern cell has an outlet that discharges towards Basin 4. Similar to Basin 1, this outlet pipe is set high and Basin 2 has been observed to not discharge for most of the growing season. The northern cell of Basin 2 is very shallow and does not have an inlet or outlet. It appears to hold standing water infrequently. Wetland vegetation has become established as mining disturbance has ceased.

Basins 3 and 4 are large basins in a lower plateau from which sand and river rock have been mined. Basin 3 has no inlet or outlet. Basin 4 has a riser pipe at the lower end which discharges into the smaller Basin 5 which, in turn, discharges though an outlet controlled by filter fabric to the Neversink River. This filter fabric was still present in 2010, but largely non-functional. Basin 4 has been observed to have no discharge for most of the growing season, and the standing water in Basin 4 (and Basin 3) becomes stagnant in the summer months. Prior to 2003, Basin 4 was comprised entirely of open water. Since mining ceased in 2003, Basin 4 has come to include some adjacent areas of wetland vegetation that established after mining material was removed and operations ceased.

Cooke West includes two ponds, each of which has been formed by a control structure. The larger of the ponds (Pond 3) has an effective dam at the downstream end. The smaller pond (Pond 2) was created by a weir structure, but the boards that control the water level have been removed. Two small intermittent streams enter these ponds. One intermittent stream leaves Cooke West from the larger pond and passes under State Route 17. This stream then joins the discharge from a pond located south of Interchange 107 and ultimately discharges to the Neversink River.

Cooke East has one intermittent stream that collects runoff from Cooke West and from County Highway 161.

Rossini has five intermittent streams, all of which originate on Rossini. These streams collect runoff at periods of high groundwater and/or snow melt and cross under County Highway 161 onto Gildick.

The site is located outside of the watershed to the New York City public drinking water supply.

Water Quality. At the project site, the Neversink River has been classified by NYSDEC as a type B fresh surface water trout stream, for primary and secondary contact recreation and fishing and fish propagation and survival. Being a trout stream, the temperature in the Neversink River is critical for trout propagation and survival.

Table 4-2 Tribal Lands Stream Descriptions

Parcel	I.D.	Approximate Length (linear feet)	Average Width* (feet)	Description
Gildick	WW-1	5,000	134	Neversink River See Section 4.2.2.1 narrative
Gildick	WW-3	650	4	Intermittent waterway that receives overland flow from adjacent uplands and WA-6. The stream outlets to WA-21 during rain events and periods of seasonally high groundwater. The waterway is relatively steep, well defined and straight with no meanders. Dominant streambed texture is sand and silt. Plant life is limited within streambed and scour is present. Canopy cover is approximately100% upland forest 1st order stream.
Gildick	WW-4	450	13	Intermittent waterway that receives overland flow from adjacent uplands and WA-3 and Pond 1. The stream outlets to WA-4 during rain events and periods of seasonally high groundwater The waterway is generally flat, well defined and straight with no meanders. Dominant streambed texture is sand and silt. Plant life is limited within streambed. Canopy cover is approximately 100% upland forest 1st order stream.
Gildick	WW-5	650	8	Intermittent waterway that receives overland flow from adjacent uplands and road runoff. The stream outlets to WA-3 during rain events and periods of seasonally high groundwater. The waterway is relatively steep, well defined and straight with no meanders. Dominant streambed texture is sand and silt. Plant life is limited within streambed and scour is present. Canopy cover is approximately 100% upland forest. 1st order stream.
Gildick	WW-6	300	6	Intermittent waterway that receives overland flow from adjacent uplands and WA-7. The stream outlets to WA-4 during rain events and periods of seasonally high groundwater. The waterway is relatively steep, well defined and straight with no meanders. Dominant streambed texture is sand and silt. Plant life is limited within streambed and scour is present. Canopy cover is approximately 100% upland forest 1st order stream.
Gildick	WW-7	450	9	Intermittent waterway that receives overland flow from adjacent uplands and road runoff (County Highway 161). The stream outlets to WA-4 during rain events and periods of seasonally high groundwater. The waterway is relatively steep, well defined and straight with no meanders. Dominant streambed texture is sand and silt. Limited plant life within streambed and scour is present. Except for the portion of the streambed adjacent the road, the canopy cover is approximately 100% upland forest 1st order stream.
Gildick	WW-12	50	5	Intermittent waterway that receives overland flow from adjacent uplands and WA-8. The stream outlets to an oxbow of the Neversink River during rain events and periods of seasonally high groundwater The waterway is relatively flat, defined and straight with no meanders. Dominant streambed texture is sand. Plant life is limited within streambed. Canopy cover is approximately 100% upland scrub shrub system. 1st order stream.
Gildick	WW-15	225	4	Intermittent waterway that receives overland flow from adjacent uplands and WA-2. The stream outlets to WA-3 during rain events and periods of seasonally high groundwater. The waterway is relatively steep, well defined, and straight with no meanders. Dominant streambed texture is sand and silt. Plant life is limited within streambed and scour is present. Canopy cover is approximately 100% upland forest 1st order stream.

Parcel	I.D.	Approximate Length (linear feet)	Average Width* (feet)	Description
Gildick	WW-16	150	4	Intermittent waterway that receives overland flow from adjacent uplands and WA-8. The stream outlets to the Neversink River during rain events and periods of seasonally high groundwater The waterway is relatively flat, defined and straight with no meanders. Dominant streambed texture is sand. Plant life is limited within streambed. Canopy cover is approximately100% scrub shrub system. 1st order stream.
Gildick	WW-17	100	9	Intermittent waterway that receives overland flow from adjacent uplands and pond #4. The stream outlets to non-jurisdictional Basin 1 during rain events and periods of seasonally high groundwater. The waterway is relatively flat, defined, and straight with no meanders. Waterway adjacent cartpath. Dominant streambed texture is sand and silt. Plant life is limited within streambed. Canopy cover is approximately 80% upland forest 1st order stream.
Gildick Rossini	WW-8	750	9	Intermittent waterway that receives overland flow from adjacent uplands, road runoff (County Highway 161) and WA-13. The stream outlets to WA-3 during rain events and periods of seasonally high groundwater. Portion of waterway flows within a culvert beneath County Highway 161.The waterway is relatively steep, well defined, and straight with no meanders. Dominant streambed texture is sand and silt. Limited plant life within streambed and scour is present. Except for the portion of the streambed adjacent the road, the canopy cover is approximately 100% upland forest 1st order stream.
Gildick Rossini	WW-9	750	15	Intermittent waterway that receives overland flow from adjacent uplands, road runoff (County Highway 161) and WA-14. The stream outlets to WA-3 during rain events and periods of seasonally high groundwater. Portion of waterway flows within a culvert beneath County Highway 161.The waterway is relatively steep, defined and straight with no meanders. Dominant streambed texture is sand and silt. Plant life is limited within streambed and scour is present. Except for the portion of the streambed adjacent the road, the canopy cover is approximately 100% upland forest 1st order stream.
Cooke East	WW-2	200	3	Intermittent waterway that receives overland flow from adjacent uplands and road runoff (County Highway 161). The stream outlets to WA-9 during rain events and periods of seasonally high groundwater The waterway is relatively flat, well defined and straight with no meanders. Dominant streambed texture is sand and rock. Plant life is limited within streambed. Canopy cover is approximately 100% upland forest 1st order stream.
Cooke West	WW-18	70	3	Intermittent waterway that receives overland flow from adjacent uplands. The stream outlets to WA-12 during rain events and seasonally high groundwater The waterway is short, flat, well defined, and straight with no meanders. Dominant streambed texture is sand and silt. Plant life is limited within streambed. Canopy is cover approximately100% upland forest 1st order stream.
Rossini	WW-10	200	8	Intermittent waterway that receives overland flow from adjacent uplands and WA-13. The stream outlets to WA-14 during rain events and periods of seasonally high groundwater The waterway is relatively flat, defined and straight with no meanders. Dominant streambed texture is sand. Plant life is limited within streambed. Canopy cover is approximately 100% upland forest 1st order stream.

Parcel	I.D.	Approximate Length (linear feet)	Average Width* (feet)	Description
Rossini	WW-11	200	8	Intermittent waterway that receives overland flow from adjacent uplands and WA-22. The stream outlets to WA-13 during rain events and periods of seasonally high groundwater The waterway is relatively is flat, defined, and straight with no meanders. Dominant streambed texture is sand. Plant life is limited within streambed. Canopy cover is approximately 100% upland forest 1st order stream.
Rossini	WW-13	350	10	Intermittent waterway that receives overland flow from adjacent uplands and WA-15. The stream outlets to WA-16 during rain events and periods of seasonally high groundwater The waterway is relatively steep, well defined and straight with no meanders. Dominant streambed texture is sand. Plant life is limited within streambed. Canopy cover is approximately 100% upland forest 1st order stream.
Rossini	WW-14	250	8	Intermittent waterway that receives overland flow from adjacent uplands and WA-18. The stream outlets to downstream uplands during rain events and periods of seasonally high groundwater The waterway is relatively steep, defined and straight with no meanders. Dominant streambed texture is sand. Plant life is limited within streambed. Canopy cover is approximately 100% upland forest 1st order stream.

* Width is as measured from top of carved channel (widest point)

The USGS gauging station records temperature in addition to flow and depth in the river. Data for 2008-2010 shows that the temperature in the river varies from –0.1 °C to 25.4 °C (31.8°F to 77.7°F). Currently, summer temperatures are high enough to be marginal for trout. Minimum flow releases from the Neversink Reservoir, located in the upstream watershed, are sustained during the summer months in an effort to maintain the downstream river temperature below 75°F. Sedimentation is another water quality issue at the site. In the recent past, and as a result of mining operations, some sediment from the disturbed land area had been reaching the river. Sedimentation is particularly evident at the upper mining area and the auto salvage operation. Since the Tribe took control of the site, mining has ceased and the areas have been stabilized.

Stormwater and Drainage. The majority of the site currently drains east towards the Neversink River through a series of intermittent streams. A section of the Cooke West Parcel (Subarea 7 shown in Figure 4-5) drains away from the Neversink River towards an existing pond on the parcel. This unnamed pond discharges to the south under State Route 17. Ponds and wetlands on the site detain, infiltrate and attenuate runoff flow. The five basins shown on Figure 4-4 provide controls for runoff from the lower mining operations. There are no such controls for the upper mining operations.

In order to evaluate existing runoff flows on and tributary to the site, a hydrologic model was developed for the site. Based on the topographic characteristics and flow patterns, the site was divided into 12 drainage areas as shown on Figure 4-5. In order to compare pre- and post-development runoff rates, a common design point (DP-1 shown in Figure 4-5) at the southeast corner of the site was used as the comparison point. All runoff from the site is tributary to this location. Table 4-3 presents the pre-development runoff rates at DP-1 for the 1-, 2-, 10- and 100-year storm events.

Table 4-3 Existing Stormwater Flows

Storm Frequency (Inches of Rainfall)	1-year (3.0”)	2-year (3.5”)	10-year (5.0”)	100-year (8.0”)
Peak Runoff Rate at DP-1	52 cfs	93 cfs	272 cfs	749 cfs

Floodplain. The most current Federal Emergency Management Agency (FEMA, 2011) Flood Insurance Rate Map (FIRM) for the Town of Thompson, New York depicts a 100-year floodplain (Zone A) elevation associated with the Neversink River ranging from approximately 1,083 to 1,085 feet (Figure 4-6) on the Gildick Parcel. A floodway also occurs in this area, as shown on Figure 4-6. The FIRM map indicates that all other portions of the project site are within Zone X, an area determined to be outside the 500-year floodplain.

4.2.2.2 Roadway Improvement Area

Figure 4-4 shows the water resources within the area of the roadway improvements. State Route 17 crosses the Neversink River on a four-lane bridge. A small intermittent stream passes from Cooke West to Cooke East under County Highway 161 and Old County Highway and runs parallel to State Route 17 before discharging into the Neversink River.

Another intermittent stream goes under State Route 17 at the western end of the project area. This stream derives from the series of ponds and wetlands on Cooke West, within Subarea 7 on Figure 4-5. After passing under State Route 17, this intermittent stream joins the discharge from a pond that is located southwest of Interchange 107. These streams then join the outlet of Barnum Lake and ultimately discharge to the Neversink River.

Water Quality. Water quality of area streams was described under the discussion of those streams under the tribal lands section.

Stormwater and Drainage. Figure 4-5 shows the existing runoff patterns and tributary drainage areas associated with the site. The area southwest of Interchange 107 drains south through a series of streams. The area southeast of Interchange 107 drains over land east towards the Neversink River. Areas north of the Gildick parcel discharge to the Neversink River just north of the site by way of Sheldrake Stream. All on-site areas drain toward the Neversink River. Drainage swales along County Highway 161 and State Route 17 carry heavy loads of sediment, especially after winter storms and are currently largely uncontrolled.

Floodplains. The most current FEMA map for the Town of Thompson depicts a floodplain associated with the Neversink River (FEMA, 2011). Figure 4-6 shows this floodplain which is outside the roadway improvement area.

4.2.2.3 Water Supply Connection

Figure 4-7 shows surface water features along the proposed alignment. Tannery Brook (also known as Cold Spring Brook), is the only perennial stream along the alignment (Figure 4-7E). An intermittent stream also occurs under Waverly Road (Figure 4-7E). A pond is located to the north of CR-102 (Figure 4-7D).

Water Quality. Tannery Brook is a Class C water. Pursuant to 6 NYCRR 701.8, Class C waters are to be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes. The best usage of Class C waters is fishing. These waters should be suitable for fish propagation and survival.

Stormwater and Drainage. Roadway drainage along the alignment consists of roadway swales that periodically combine with cross culverts beneath the road surface. A majority of the culverts are 12-inch to 36-inch diameter pipes that are installed with approximately three feet of cover.

Floodplains. There is no FEMA-mapped 100-year floodplain in the water line project area. The floodplain along the Neversink River (see Figure 4-6) is outside of the project area. There is no mapped floodplain associated with Tannery Brook.

4.2.2.4 Wastewater Treatment Connection

Figure 4-7 shows surface water features along the proposed alignment. The alignment requires a stream crossing where County Highway 161 crosses over Kiamesha Creek (Figure 4-7C), a

tributary to Sheldrake Stream, with a 50-foot long steel frame bridge. There is a steep drop from the road surface to the streambed of approximately 20 feet.

Water Quality. Kiamesha Creek, where it passes under the proposed alignment at County Highway 161, is a Class B water, as is Sheldrake Stream. Pursuant to 6 NYCRR 701.7, the best usages of Class B waters are primary and secondary contact recreation and fishing. These waters should be suitable for fish propagation and survival. Farther upstream, Kiamesha Creek is a Class C water. A small tributary to Sheldrake Stream crosses under County Highway 161, identified as NRA-8 on Figure 4-7C, and is classified as C(ts) for trout spawning.

Surface Waters and Drainage. Roadway drainage along the alignment consists of roadway swales that periodically combine with cross culverts beneath the road surface. A majority of the culverts are 12-inch to 36-inch diameter pipes that are installed with approximately three feet of cover. There is a 9-foot steel culvert on County Highway 161 that has adequate cover for pipe installation.

Floodplains. The FEMA-mapped 100-year floodplain (FEMA, 2011 in the wastewater treatment connection project area is limited to Kiamesha Creek as it goes under County Highway 161. The floodplain along the Neversink River (see Figure 4-6) is outside of the project area.

4.3 Vegetation

4.3.1 Vegetation

Tribal Lands. Four vegetative types occur on the tribal lands site: upland softwoods, upland hardwoods, successional areas and wetlands. Figure 4-8 and Table 4-4 summarize site upland vegetation. Wetlands and wetland vegetation are described in Section 4.3.2. Approximately 50 acres of Gildick was unvegetated due to auto salvage and mining operations. These areas are currently being revegetated since the active auto salvage and mining operations have ended. The majority of the Gildick and Rossini parcels have been cleared historically, as evidenced by the rock walls that criss-cross the site. In addition, logging has occurred throughout the second growth forest.

Upland softwoods on the project site consist of approximately 135 acres of hemlock forest dominated by eastern hemlock (*Tsuga canadensis*) and eastern white pine (*Pinus strobus*). Typical pine forest areas include stands on the western portion of Cooke West, and are dominated by pines with a very open understory. Pine areas on Gildick north of the lower mining area have been historically logged. Typical hemlock stands include areas in central Rossini and northern Gildick. These areas have dense canopies again with open understory. The ground in the hemlock areas is typically more stony than the pine areas. These areas correspond to classification systems of the New York Natural Heritage Program (NYNHP; 2002) and The Nature Conservancy (TNC, 1998). Upland softwoods are classified as Hemlock-Northern Hardwood Forest and Pine-Northern Hardwood Forest.

Upland hardwoods comprise approximately 72 acres of mixed northern hardwood forest dominated by maples (*Acer* spp.), oaks (*Quercus* spp.), aspen (*Populus* spp.), and black cherry (*Prunus serotina*). These areas are similar throughout the project site, with the exception of a riverine/floodplain forest along the Neversink River. This area, north of Basins 4 and 5, is dominated by *Populus* with an open, grassy understory. Corresponding NYNHP classifications include Beech-Maple Mesic Forest and Floodplain Forest.

Successional areas, totaling approximately 10 acres include those portions of the site that have been previously disturbed but since abandoned and vegetation has returned. This includes the old hotel site on Cooke West, the fill area on Cooke East and portions of the auto salvage and mining operations that are re-establishing as those operations have ceased. Successional areas are dominated by old field and scrub-shrub habitat. Shrubs, saplings and herbaceous plants are interspersed throughout these areas. Typical common species include maple, meadowsweet (*Spiraea* sp.), pine, goldenrod (*Solidago* spp.) and grasses. The corresponding NYNHP classification is Successional Old Field.

Table 4-4 Tribal Lands Observed Upland Vegetation

Common Name	Scientific Name	Upland Softwood	Upland Hardwood	Successional Areas
Trees				
Red Maple	*Acer rubrum*	X	X	
Sugar Maple	*Acer saccharum*	X	X	
Yellow Birch	*Betula alleghenienis*	X	X	
Black / Sweet Birch	*Betula lenta*	X	X	
Gray Birch	*Betula populifolia*		X	
American Hornbeam	*Carpinus caroliniana*		X	
Shag- Bark Hickory	*Carya ovata*		X	
American Beech	*Fagus grandifolia*	X	X	
White Ash	*Fraxinus americana*		X	
Witch Hazel	*Hamamelis virginiana*	X	X	
Eastern Hop-Hornbeam	*Ostrya virginiana*		X	
White Pine	*Pinus strobus*	X		
American Sycamore	*Platanus occidentalis*		X	
Cottonwood	*Populus deltoides*		X	
Big Tooth Aspen	*Populus grandidentata*		X	
Quaking Aspen	*Populus tremula*		X	
Black Cherry	*Prunus serotina*	X	X	
White Oak	*Quercus alba*		X	
Pin Oak	*Quercus palustris*		X	
Northern Red Oak	*Quercus rubra*	X	X	
Weeping Willow	*Salix babylonica*		X	
Eastern Hemlock	*Tsuga canadensis*	X	X	
Slippery Elm	*Ulmus rubra*		X	
Shrubs				
Speckled Alder	*Alnus incana*		X	

Common Name	Scientific Name	Upland Softwood	Upland Hardwood	Successional Areas
Ironwood	*Carpinus caroliniana*		X	
Coast Pepper-bush	*Clethra alnifolia*		X	
Silky Dogwood	*Cornus amomun*		X	X
American Hazel-Nut	*Corylus americana*		X	
Witch Hazel	*Hamamelis virginiana*	X	X	
Japanese Honeysuckle	*Lonicera japonica*		X	
Honeysuckle	*Lonicera tatarica*		X	
Glossy Buckthorn	*Rhamnus frangula*			X
Buckthorn	*Rhamnus sp*			X
Rhododendron	*Rhododendron maximum*	X		
Winged Sumac	*Rhus copallinum*			X
Multiflora Rose	*Rosa Multiflora*		X	X
Rose sp.	*Rosa sp*			X
Blackberry	*Rubus alleghenienis*			X
Common Greenbrier	*Smilax rotundifolia*	X	X	X
Meadow-sweet	*Spiraea latifolia*		X	X
Lowbush Blueberry	*Vaccinium angustifolium*	X		
Arrowwood	*Viburnum dentatum*	X		
Common Vetch	*Vicia sativa*			X
Fox Grape	*Vitis labrusca*		X	
River-Bank Grape	*Vitis riparia*		X	
Herbaceous				
Common Yarrow	*Achillea millefolium*			
Redtop	*Agrostis alba*			X
Witchgrass	*Agropyron repens*			X
Field Garlic	*Allium vineale*		X	
Meadow Foxtail	*Alopecurus pratensis*			X
Annual Ragweed	*Ambrosia artemislifolia*			X
Wild Columbine	*Aquilegia canadensis*		X	
Poke Milkweed	*Asclepias exaltata*			X
Small White Aster	*Aster vimineus*		X	
Lady Fern	*Athyrium filix-femina*		X	
Partridge Pea	*Cassia fasciculata*		X	
Bittersweet	*Celastrus scandens*		X	
Nightshade	*Circaea lutetiana*		X	
Asiatic Dayflower	*Commelina communis*			X
Deer- Tongue	*Dichanthelium clandestinum*		X	
Woodfern	*Dryopteris spinulosa*	X	X	
Barnyard Grass	*Echinochloa crusgalli*			X
Field Horsetail	*Equisetum arvense*			
Northern Bedstraw	*Galium boreale*			
Yellow Avens	*Geum aleppicum*		X	
White Avens	*Geum canadense*		X	
Rough Avens	*Geum laciniatum*		X	

Common Name	Scientific Name	Upland Softwood	Upland Hardwood	Successional Areas
Cow-Parsnip	*Heracleum lanatum*			X
Spotted Touch-Me-Not	*Impatiens capensis*		X	
Slender Rush	*Juncus tenuis*			X
Round- Head Bushclover	*Lespedeza capitata*			X
Princess Pine	*Lycopodium obscurum*	X	X	
Purple Loosestrife	*Lythrum salicaria*			
Mayflower	*Maianthemum canadensis*	X	X	
Partridge-Berry	*Mitchella repens*	X		
Evening-Primrose	*Oenothera biennis*			X
Cinnamon Fern	*Osmunda cinnamomea*		X	
Interrupted Fern	*Osmunda claytoniana*		X	
Fall Panic Grass	*Panicum dichotomiflorum*			X
Virginia Creeper	*Parthenocissus quinquefolia*		X	
Reed Canary Grass	*Phalaris arundinacea*			X
Timothy	*Phleum pratense*			X
Common Reed	*Phragmites australis*			X
Common Pokeweed	*Phytolacca americana*			X
Common Plantain	*Plantago major*			X
Kentucky Bluegrass	*Poa pratensis*			X
Japanese Knotweed	*Polygonum cuspidatum*			X
Christmas Fern	*Polystichum acrostichoides*	X	X	
Old Field Cinquefoil	*Potentilla simplex*			X
Blackberry	*Rubus allegneniensis*			X
Green Bulrush	*Scirpus atrovirens*			
Common Greenbrier	*Smilax rotundifolia*	X	X	X
Climbing Nightshade	*Solanum dulcamara*		X	
Canada Goldenrod	*Solidago canadensis*		X	X
Wrinkled Goldenrod	*Solidago rugosa*		X	X
Common Dandelion	*Taraxacum officinale*			X
Red Clover	*Trifolium pratense*			X
White Clover	*Trifolium repens*			X
New York Fern	*Thelypteris novaborancensus*		X	
Poison Ivy	*Toxicodendron radicans*		X	X
Common Blue Violet	*Viola papilionacea*	X		
Violet	*Viola sp*	X		
Grape sp.	*Vitis sp*		X	

Roadway Improvement Area. Vegetation within the roadway improvement area includes forest vegetation that borders the mowed grass shoulders of the paved area. There are no unique vegetative communities in, or adjacent to, the project area. Species present are generally the same as those listed in Table 4-4 for the tribal lands. Upland softwoods consist of hemlock forest dominated by eastern hemlock and eastern white pine. Upland hardwoods are comprised of mixed northern hardwood forest dominated by maples, oaks, aspen, and black cherry.

Successional areas include those areas along the right-of-way that are subject to mowing at varying frequencies. These areas are mostly dominated by grasses and other herbaceous species, with some areas of shrubs and saplings.

Utility Connections. The project area for the proposed utility connections is within existing roadways. The existing roadways typically have mowed grass shoulders/upland fields. They are generally bordered by forest vegetation along County Highway 161 and to the north of the proposed casino location, and by developed areas to the south. The mowed grass shoulders/upland fields are dominated by upland grasses and characterized as road shoulder, lawn, abandoned fields, utility easements, and agricultural fields.

Forest cover types located on the perimeter of the project area are typically deciduous and dominated by red maple (*Acer rubrum*) and northern red oak (*Quercus rubra*). Understory species commonly found in this cover type include lowbush blueberry (*Vaccinium angustifolia*), maple-leaved viburnum (*Viburnum acerifolium*), and beaked hazelnut (*Corylus cornuta*). Goundcover species included Canada mayflower (*Maianthemum canandense*), and hayscented fern (*Dennstaedtia punctilobula*). The evergreen forest within the study area is dominated by Eastern white pine (*Pinus strobus*) and Eastern hemlock (*Tsuga candensis*). Understory species include lowbush blueberry, sheep laurel (*Kalmia angustifolia*) and Canada mayflower. Mixed forest cover type is a combination of deciduous and evergreen vegetation generally found adjacent abandoned agricultural land.

No unique vegetative communities are known to occur in or adjacent to the alignments. Investigations were conducted to determine current conditions and ascertain whether there were changes from the conditions reported in the DEIS. Other than the ongoing mine reclamation, vegetation has not changed. The USACE may take jurisdiction over the five basins on the site, which were previously considered non-jurisdictional

4.3.2 Wetlands

The U.S. Army Corps of Engineers (USACE) regulations, at 33 CFR Parts 321-330, that accompany the Federal Clean Water Act define Waters of the United States as aquatic habitats that include open water areas and wetlands. Wetlands are further defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas and can be isolated, under certain conditions, or bordering on a waterbody/waterway. This definition emphasizes a wetland's attributes of hydrophytic vegetation, hydric soils, and hydrology.

The New York State definition, as outlined in the Regulations (6 NYCRR 663) of the New York Freshwater Wetlands Act (Article 24, Environmental Conservation Law), uses primarily the presence of wetland vegetation in making a boundary determination. Wetlands that are larger than 12.4 acres (approximately 5 hectares) are mapped on the New York State Freshwater Wetlands Map. Wetlands of unusual local importance, but smaller than 12.4 acres, are also mapped. The land within 100 feet of Freshwater Wetlands is also subject to state regulation under 6 NYCRR 663.2. No state wetlands occur on the site.

Detailed wetland delineations were performed on the tribal lands site and along the roadway improvement area, including surveyed locations. Wetland delineations have been approximated based on field review for the utility connections. Wetlands are described below.

Tribal Lands. Prior to the detailed wetland delineation, existing information sources were reviewed. These sources included National Wetlands Inventory (NWI) Maps, New York State Freshwater Wetlands Maps, USGS Topographic Maps, FEMA Floodplain Maps, and NRCS Soil Surveys. In order to verify wetlands identified by these sources, field investigations were then conducted.

Using the technical criteria and methodology outlined in the federal wetland delineation manual, the boundaries of the wetlands were identified within the site. The flagged boundary locations of vegetated wetlands were ground-located and are depicted in Figure 4-9. Transects were established within upland and wetland communities. Vegetation, soil, and hydrologic indicators were observed and documented on USACE Wetland Data Forms. Table 4-5 lists the wetland vegetation that was observed during the on-site delineation.

The USACE had confirmed these delineations in a Jurisdictional Determination, provided in Appendix H. At that time, Basins 1 through 5 were considered to not be jurisdictional as they were part of an ongoing mining operation. Since then, however, mining has ceased and the operation reclaimed as of June 2003. As a result of the Tribe's reclamation of the mining areas, it is possible that the USACE may now consider these areas to be jurisdictional, although the functions and values of these basins have not changed materially. Coordination with the USACE is ongoing on this issue. The original impacts and mitigation from the DEIS are still included in this FEIS. However, new impacts and supplemental mitigation are also provided in the event that the USACE does ultimately take jurisdiction over the basins.

Table 4-5 Tribal Lands Observed Wetland Vegetation

Common Name	Scientific Name	Indicator Status
Trees		
Red Maple	*Acer rubrum*	FAC
Yellow Birch	*Betula alleghenienis*	FAC
Gray Birch	*Betula populifolia*	FAC
Tupelo	*Nyssa sylvatica*	FACW+
White Pine	*Pinus strobus*	FACU
Cottonwood	*Populus deltoides*	FAC
Black Cherry	*Prunus serotina*	FACU
White Oak	*Quercus alba*	FACU-
Hemlock	*Tsuga canadensis*	FACW
Slippery Elm	*Ulmus rubra*	FAC
Shrubs		
Speckled Alder	*Alnus rugosa*	FACW+
Ironwood	*Carpinus caroliniana*	FAC
Coast Pepper-bush	*Clethra alnifolia*	FAC+

Common Name	Scientific Name	Indicator Status
Silky Dogwood	*Cornus amomum*	FACW
Red Osier Dogwood	*Cornus stolonifera*	FACW+
Witch Hazel	*Hamamelis virginiana*	FAC-
Common Winterberry	*Ilex verticillata*	FACW+
Spice Bush	*Lindera benzoin*	FACW-
Honeysuckle	*Lonicera tatarica*	FACU
Sweetgale	*Myrica gale*	OBL
Buckthorn	*Rhamnus sp*	FAC
Swamp Azalea	*Rhododendron viscosum*	OBL
Rose sp.	*Rosa sp*	NI
Blackberry	*Rubus allegheniensis*	FACU-
Pussy Willow	*Salix discolor*	FACW
Common Elderberry	*Sambucus canadensis*	FACW-
Meadow-sweet	*Spiraea latifolia*	FAC+
Steeple-bush	*Spiraea tomentosa*	FACW
Highbush Blueberry	*Vaccinium corymbosum*	FACW-
Arrowwood	*Viburnum dentatum*	FAC
Herbaceous		
Swamp Milkweed	*Asclepias incarnata*	OBL
Groundnut	*Apios americana*	FAC
Jack-in-the-Pulpit	*Arisaema triphyllum*	FACW-
Lady Fern	*Athyrium filix-femina*	FAC
Beggar-ticks	*Bidens sp*	FACW
Blue-joint Reedgrass	*Calamagrostis canadensis*	FACW+
Fringed Sedge	*Carex crinata*	OBL
Shallow Sedge	*Carex lurida*	OBL
Tussock Sedge	*Carex stricta*	OBL
Bittersweet	*Celastrus scandens*	FACU-
Nightshade	*Circaea lutetiana*	FACU
Woodfern	*Dryopteris spinulosa*	FAC+
Horsetail	*Equisetum pratense*	FACW
Spotted Joe-pye-weed	*Eupatoriadelphus maculatus*	FACW
Bedstraw	*Gallium sp*	FACW
Canada Manna Grass	*Glyceria canadensis*	OBL
Marsh St. John's wort	*Hyperisum fraseri*	OBL
Jewelweed	*Impatiens capensis*	FACW
Blue Flag	*Iris versicolor*	OBL
Soft Rush	*Juncus effusus*	FACW+
Duckweed	*Lemna sp*	OBL
Princess Pine	*Lycopodium obscurum*	FACU

Common Name	Scientific Name	Indicator Status
Purple Loosestrife	*Lythrum salicaria*	FACW+
Mayflower	*Maianthemum canadensis*	FAC-
Sensitive Fern	*Onoclea sensibilis*	FACW
Cinnamon Fern	*Osmunda cinnamomea*	FACW
Royal Fern	*Osmunda regalis*	OBL
Virginia Creeper	*Parthenocissus quinquefolia*	FACU
Reed Canary Grass	*Phalaris arundinacea*	FACW
Common Reed	*Phragmities australis*	FACW
Arrow-leaf Tearthumb	*Polygonum sagittatum*	OBL
Dewberry	*Rubus hispidus*	FACW
Blackberry	*Rubus allegneniensis*	FACU-
Wool-grass	*Scirpus cyperinus*	FACW+
Common Greenbrier	*Smilax rotundifolia*	FAC
Climbing Nightshade	*Solanum dulcamara*	FAC-
Goldenrod	*Solidago rugosa*	FAC
Skunk Cabbage	*Symplocarpus foetidus*	OBL
New York Fern	*Thelypteris novaborancensus*	FAC
Marsh Fern	*Thelypteris thelypteroides*	FACW+
Poison Ivy	*Toxicodendron radicans*	FAC
Cattail	*Typha latifolia*	OBL
Bladderwort	*Utricularia sp*	OBL
Violet	*Viola sp*	NI
Grape sp.	*Vitis sp*	NI

[1]OBL Obligate occur in wetland with a frequency of 99%
FACW Facultative Wetland occur in wetlands with a frequency of 67% to 99%
FAC Facultative occur in wetlands with a frequency of 34% to 66%
FACU Facultative Upland occur in wetlands with a frequency of 1% to 33%
UPL Upland occur in wetlands with a frequency of <1%

Table 4-6 provides a description of wetland areas. The Gildick property includes Wetland Area (WA) 1 through WA-4, WA-6 through WA-7, WA-20, WA-21 and WA-23, totaling approximately 29.2 acres. The majority of these wetland areas are forested. WA-20 is emergent/scrub-shrub. WA-23 includes wetland areas adjacent to the Neversink River. Ponds 1 and 4 and Basins 1 through 5 (as described in Section 4.2.2.1). are also located on Gildick.

The Cooke West area includes two wetland areas (WA-10 and WA-12) that total approximately 20.2 acres. These wetlands are predominantly forested and include two man made ponded areas (Pond 2 and Pond 3 as described in Section 4.2.2.1).

The Cooke East area includes one wetland area, WA-9. This totals approximately 2.8 acres and is a red maple swamp.

Rossini area includes four wetland areas (WA-13 through WA-16, and WA-22). Again, these areas are predominantly wooded and total approximately 7.9 acres.

Roadway Improvement Area. As described above, a detailed wetland delineation was performed to identify federal wetlands in the roadway improvement project area. No state wetlands occur within the area of proposed roadway improvements. As shown on Figure 4-9, there are no wetlands along Foss Road or State Route 17. Along County Highway 161, there is only one WA within 100 feet of the road. This wetland, WA-10, occurs along the western side of the road, and is set back approximately 20-30 feet from the edge of pavement. It is a forested wetland dominated by eastern hemlock and eastern white pine. The understory consists of highbush blueberry and the ground cover is predominantly sphagnum, cinnamon fern and sedges. It discharges to a culvert that passes under County Highway 161 to the east. Intermittent streams in the roadway improvement area were previously described in Section 4.2.2.

Water Supply Connection. Figures 4-7A through 4-7G show proposed improvements in relation to wetlands along the proposed water supply and wastewater treatment connection corridors. A review of the New York State Freshwater Wetlands Maps for the project area (Monticello and Woodridge, New York Quadrangles) revealed that two regulated freshwater wetlands, MO-58 and MO-69, are associated with the proposed water supply connection route. MO-58 is located on both sides of the Old Route 17 frontage road, northeast of the Village WWTF. MO-69 is located on the south side of State Route 17, just west of Interchange 107.

Table 4-6 Tribal Lands Wetland Descriptions

Wetland I.D.	Description
	Gildick Parcel
WA-1	Forested wetland dominated by red maple and sugar maple. Dominant herb cover in the wetland consists of jewel-weed and sweet-flag. Receives drainage from a culvert under County Highway 161 Water regime ranges from saturated to seasonally flooded. Continues off-site to the east.
WA-2	Forested and scrub shrub. Dominant species include red maple, northern arrowwood and winterberry. Ground cover is dominated by sphagnum moss. Drains to the east and has a saturated/seasonally flooded water regime.
WA-3	Large wetland complex. Primarily a forested wetland with an area of open water (approximately 0.2 ac). Dominant vegetation is eastern hemlock and red maple. Limited herbaceous cover includes sphagnum moss and cinnamon fern. Drainage enters the wetland via a number of intermittent streams that flow from WA-14, WA-15, and WA-16, adjacent to the western side of County Highway 161. Drains primarily to the north where it leaves the parcel but also drains to the southeast where it is connected to WA-4 by an intermittent stream. Water regime ranges from saturated to seasonally flooded. Auto salvage operations, recent forest harvesting, and earthmoving activities have disturbed portions of this wetland complex.
WA-4	Primarily forested with an area of emergent vegetation at the southern end. Forested portions are dominated by eastern hemlock and eastern white pine with an understory of high bush blueberry. Herbaceous species include cinnamon fern and sphagnum. The emergent portion is dominated by assorted hydrophytic grasses, sedges and rushes. Water enters the wetland complex from other wetlands upgradient to the west (WA-3, WA-6, and WA-7) via several intermittent streams Water regime ranges from saturated to seasonally flooded. Portions of this wetland complex have been disturbed by auto salvage operations, recent forest harvesting, and earthmoving activities.
WA-6	Forested wetland is dominated by eastern hemlock with sparse understory or herbaceous cover. System is upgradient from WA-4 and connected by an intermittent stream Water regime is saturated/seasonally flooded.
WA-7	Forested wetland is dominated by eastern hemlock with sparse understory or herbaceous cover. WA-7 is upgradient from WA-3 and connected by an intermittent stream Water regime is saturated/seasonally flooded.
WA-8	Scrub shrub wetland dominated by speckled alder, willow, and fetter-bush. Dominant herbaceous species in

Wetland I.D.	Description
	the wetland include sensitive fern and a monotypic stand of common reed. WA-8 is positioned at the base of a steep slope within the floodplain of the Neversink River. Drainage enters the wetland through a channelized stream, which flows adjacent to Route 17 and down the steep slope defining the western boundary of the wetland and connecting the wetland to the Neversink River. An intermittent stream at the northern end of WA-8 also hydrologically connects the system to the Neversink River. Water regime is seasonally flooded. Has experienced significant disturbance from past auto salvage operations and earthmoving activities.
WA-20	Isolated wetland in a depression within the floodplain of the Neversink River Scrub shrub wetland dominated by speckled alder and willow. Water regime is saturated/seasonally flooded.
WA-21	Forested wetland dominated by eastern hemlock with sparse understory. Situated on an intermittent stream, which hydrologically connects to WA-6 to WA-4. Water regime of this wetland is saturated/seasonally flooded.
WA-23	Bank of the Neversink River predominantly steep and well defined. Vegetation along the river bank is a mixture of forested and scrub shrub dominated by aspen, red maple, eastern hemlock, speckled alder and willow. Water regime is saturated/seasonally flooded.
Cooke Parcel	
WA-9	Forested wetland dominated by eastern hemlock and red maple with sparse understory or herbaceous cover. Drainage enters the wetland from WA-10 via a culvert under County Highway 161 and flows south. Water regime is saturated/seasonally flooded.
WA-10	Forested wetland dominated by eastern hemlock and eastern white pine. Understory of highbush blueberry. Ground cover predominantly sphagnum, cinnamon fern, and Carex sp. Hydrologically connected to WA-9 via a culvert under County Highway 161 Water regime is saturated/seasonally flooded.
WA-12	Wetland complex is primarily forested wetland that includes 2 ponds totaling approximately 92,500 square feet. Areas of emergent vegetation bordering the ponds. Forested portions dominated by eastern white pine and eastern hemlock with a ground cover consisting of cinnamon fern, soft rush, and sphagnum moss. Water regime is saturated/seasonally flooded. Portions of this wetland complex have been disturbed by recent forest harvesting.
Rossini Parcel	
WA-13	Forested wetland complex dominated by eastern hemlock with sparse understory and ground cover of sphagnum moss. Wetland complex occupies intermediate location on the slope, which rises to the west and falls sharply to the east down to the Gildick parcel and WA-3. Water enters the wetland via a stream in its northwest corner and flows east into WA-14, WA-16, and ultimately, WA-3. Water regime is saturated/seasonally flooded.
WA-15	Forested wetland dominated by eastern hemlock with a sparse understory. Collects groundwater and overland flow from adjacent upland areas. Water in this system flows east into WA-16 via an intermittent stream. Water regime is saturated/seasonally flooded.
WA-16	Forested wetland dominated by red maple. Dominant shrub is winterberry. Ground cover consists of sphagnum moss and cinnamon fern. Connected to WA-14 via an intermittent stream. Water regime is saturated/seasonally flooded.
WA-22	Forested wetland dominated by eastern hemlock with a sparse understory. Wetland collects groundwater and overland flow from adjacent upland areas. Water in this system flows east into WA-13 via an intermittent stream. Water regime is saturated/seasonally flooded.

Wetland delineations along County Highway 161 have been approved by the USACE, and are shown on Figure 4-9. Preliminary wetland identification was conducted along the remainder of the proposed water supply connection route during the summer of 2001 and fall of 2003 in order to determine locations of potentially federally regulated wetland resource areas. Identified wetland areas within approximately 100 feet of the proposed alignment are described in Table 4-7.

Wastewater Treatment Connection. Figures 4-7A through 4-7G show proposed improvements in relation to wetlands along the proposed wastewater treatment connection corridor. The water supply connection corridor is also shown. A review of the New York State Freshwater Wetlands

Maps for the project area (Monticello and Woodridge, New York Quadrangles) revealed that one regulated freshwater wetland, MO-45, is associated with the proposed alignment. MO-45 is located north of County Highway 109, just west of its intersection with County Highway 161.

Wetland delineations along County Highway 161 have been approved by the USACE, and are shown on Figure 4-9. Preliminary wetland identification was conducted along the remainder of the proposed wastewater treatment connection route during the summer of 2001 and fall of 2003 in order to determine locations of potentially federally regulated wetland resource areas. Identified wetland areas within approximately 100 feet of the proposed alignment are described in Table 4-8.

Table 4-7 Water Supply Connection – Preliminary Wetland Identification

Natural Resource Area ID Number	Cowardin et al. Type	NYSDEC Mapping	Roadway	Notes
WA-10	PFO	None	County Highway 161	Approx. 20-30 feet from roadway. Discharges under County Highway 161
NRA-17	PSS/PEM	MO-69	Old Route 17 (County Road 173)	Southern wetland systems adjacent to businesses, appear to be finger-like projections. Northern area roadway drainage system. Approx. 20-30 feet from roadway. NYSDEC mapped wetland (MO-69) associated with southern wetland system behind businesses.
NRA-18	PSS PEM OW	None	Old Route 17 (County Road 173)	Large wetland system. Approx. 20-30 feet from roadway.
NRA-19	PEM/PSS	MO-58	Old Route 17 (County Road 173)	Large wetland system associated with Tannery Brook. Approx. 20-30 feet from roadway. NYSDEC mapped wetland (MO-58) associated with Tannery Brook.
NRA-20	Stream	None	Waverly	Intermittent stream with steep banks; culverted under road
NRA-21	Pond	POW	CR 102	Small pond located approximately 50 feet north of the roadway.

4.3.3 Threatened and Endangered Plant Species

According to United States Fish and Wildlife Service (USFWS; Appendix F) correspondence in 2001 and 2005, there are no plant species of concern in the entire project area (tribal lands, roadway improvements area and utility connection alignments). As per the USFWS (2012) communication, the species listing for Sullivan County were double checked and no new plant species have been added to the County lists. Similarly, NYNHP also indicates no records of plant species of concern (Appendix F).

There are no state-designated Critical Environmental Areas in Sullivan County, where the project site is located. Additionally, there are no adjacent sites that are on the Register of National Natural Landmarks.

4.4 Fish and Wildlife

Investigations were conducted to determine current conditions and ascertain whether there were changes from the conditions reported in the DEIS. No substantive changes were observed.

4.4.1 Fisheries

Tribal Lands. Fisheries habitat within the project area occurs in the Neversink River, Ponds 2 and 3 on Cooke West, and Basins 1, 3, 4 and 5 on Gildick. The numerous streams in the project area are intermittent and do not provide fisheries habitat. Ponds 1 and 4 and Basin 2 on Gildick were not observed to support fisheries.

Table 4-8 Wastewater Treatment Connection – Preliminary Wetland Identification

Natural Resource Area ID Number	Cowardin et al. Type	NYSDEC Mapping	Roadway	Notes
NRA-3	PFO	None	County Road 109	Hemlock dominated area with minimal understory. Approx. 20-30 feet from roadway.
NRA-4	PFO	MO-45	County Road 109	Hemlock/Red Maple dominated area with minimal understory. Approx. 20-30 feet from roadway. Southern portion of the wetland system borders Kiamesha Creek NYSDEC wetland (MO-45) associated with northern portion of the system.
NRA-5	PFO PEM PSS	None	County Highway 161	Wetland system adjacent to former farm operation (PFO/PSS/PEM). Approx. 30-40 feet from roadway.
NRA-6	PFO PEM/PSS OW	None	County Highway 161	Confluence of Kiamesha Creek and Sheldrake Stream Ponded area associated with southern wetland system and Kiamesha Creek.
NRA-7	PEM/OW	None	County Highway 161	Disturbed areas adjacent to propane facility and residences. Approx. 20-30 feet from roadway.
NRA-8	PFO/PEM	None	County Highway 161	Tributary to Sheldrake Stream.
NRA-9	PFO	None	County Highway 161	Hemlock/red maple dominated area with minimal understory. Approx. 20-50 feet from roadway. Eastern portion of the wetland system borders Kiamesha Creek
NRA-10	PFO/PEM	None		PFO area 20-30 feet from roadway.
WA-2	PFO/SS	None		Dominant species include red maple, northern arrowwood and winterberry. Ground cover is dominated by sphagnum moss. This area drains to the east and has a saturated/seasonally flooded water regime.
WA-16	PFO	None	County Highway 161	Dominated by red maple. The dominant shrub in this area is winterberry with ground cover consisting of sphagnum moss and cinnamon fern. The water regime of this wetland is saturated/seasonally flooded.

The Neversink River provides the best habitat in the project area. The river flows south along the eastern project area boundary for approximately 5,000 linear feet. At the project site, the Neversink has been classified by NYSDEC as a type B fresh surface water trout stream for primary and secondary contact recreation and fishing, and fish propagation and survival. NYSDEC has a 33 foot fishing easement along the bank of the Neversink River. The Neversink River is, however, somewhat limited as to habitat as a result of controlled releases from the upstream dam. These releases (or lack of releases) have led to warmer summertime temperatures of the Neversink, as well as causing fluctuations (Parasiewicz, 2000). The Neversink River is somewhat buffered from thermal impacts by the extensive presence of shading vegetation along the river banks, as well as diverse morphology.

Ponds 2 and 3 on Cooke West also provide fish habitat. These are created ponds, managed by small water level control structures that do not appear to be operating. These ponds have overhanging vegetation and some emergent vegetation and provide good fish habitat.

Basins 1, 2, 3, 4 and 5 in the former mining area on Gildick have been formed by excavation and diking in association with sand and gravel operations. Basins 2 and 5 generally lack standing water during the summer months. Basins 3 and 4 have steep, gravelly banks, and, for the most part, are devoid of aquatic vegetation. The water in the basins is turbid and becomes stagnant during the summer months. Because of their recent origin, turbidity, and lack of vegetation, these basins provide relatively poor aquatic habitat, although some fish populations are present.

Fish species observed within the project area ponds and basins include bluegill, largemouth bass, pumpkinseed, and chain pickerel. A list of fish species found in the Neversink River, as reported by NYSDEC, can be found in Appendix F. There is no public fishing access on this site. A public access point is located off-site at Bridgeville (south of the site) as noted on the Sullivan County Open Space and Eco-Tourism map (1999).

Roadway Improvement Area. There are no fisheries within the project area, as only intermittent streams are present. Adjacent waterbodies that support fisheries include the Neversink River and the pond south of Interchange 107.

Water Supply Connection. There is fisheries habitat within the perennial waters of Tannery Brook, which crosses the alignment.

Wastewater Treatment Connection. There is fisheries habitat within the perennial waters of Kiamesha Creek and the adjacent Sheldrake Stream.

4.4.2 Wildlife

Tribal Lands. The property is currently habitat for terrestrial wildlife, including birds and animals, typical of the area. The upland forests, wetlands, streams, upland fields, and river frontage provide favorable wildlife habitat. A large portion of the Gildick site, however, has been disturbed due to surface mining and the use of a portion of the site as an auto salvage yard, thereby reducing the project area's potential to provide significant wildlife habitat. This disturbance fragments the area and reduces the value of the riverine corridor as a wildlife

corridor. Indicators of wildlife species have been observed on the project site and other species may be expected to use the area. A list of representative species for this project site is provided in Table 4-9. Hunting appears to have occurred on Cooke West. However, the other properties are posted for no hunting.

Table 4-9 Tribal Lands Representative Wildlife Species List

Common Name	Scientific Name
Mammals	
White-tailed Deer	*Odocoileus virginianus*
Red Fox	*Vulpes fulva*
Raccoon	*Procyon lotor*
Woodchuck	*Marmota monax*
Porcupine	*Erethizon dorsatum*
Striped Skunk	*Mephitis mephitis*
Eastern Cottontail	*Sylvilagus floridanus*
Eastern Gray Squirrel	*Sciurus carolinensis*
Red Squirrel	*Tamiasciurus hudsonicus*
Eastern Chipmunk	*Tamias striatus*
Deer Mouse	*Peromyscus maniculatus*
White-Footed Mouse	*Peromyscus leucopus*
Meadow Vole	*Microtus pennsylvanicus*
House Mouse	*Mus musculus*
Eastern Mole	*Scalopus aquaticus*
Virginia Opossum	*Didelphis virgiana*
Birds	
Red-Tailed Hawk	*Bucephala clangula*
Kestrel	*Falco sparverius*
Mourning Dove	*Zenaidura macroura*
Chimney Swift	*Choetura pelagica*
Flicker	*Colaptes auratus*
Downy Woodpecker	*Picoides pubescens*
Eastern Phoebe	*Sayornis phoebe*
Flycatcher	*Empidonax* sp.
Blue Jay	*Cyanocitta cristata*
American Crow	*Corvus brachyrhynchos*
Black-Capped Chickadee	*Parus atricapillus*
Tufted Titmouse	*Parus bicolor*
White-Breasted Nuthatch	*Sitta carolinensis*
Brown Creeper	*Certhia familiaris*
Robin	*Turdus migratorius*
Wood Thrush	*Hylocichla mustelina*
Northern Mockingbird	*Mimus polyglottos*

Common Name	Scientific Name
Gray Catbird	*Dumetella carolinensis*
Brown Thrasher	*Toxostoma rufum*
Veery	*Catharus fuscescens*
Ruby-Crowned Kinglet	*Regulus calendula*
European Starling	*Sturnus vulgaris*
Vireo	*Vireo* sp.
Blue-Winged Warbler	*Vermivora pinus*
Yellow Warbler	*Dendroica petechia*
Ovenbird	*Seiurus aurocapillus*
Common Yellowthroat	*Geothlypis trichas*
House Sparrow	*Passer domesticus*
Bobolink	*Dolichonix oryzivorus*
Red-Winged Blackbird	*Agelaius phoeniceus*
Common Grackle	*Quiscalus quiscula*
Northern Cardinal	*Cardinalis*
Purple Finch	*Carpodacus purpureus*
American Goldfinch	*Cardulis tistis*
Rufous-Sided Towhee	*Pipilo erythrophthalmus*
Slate-Colored Junco	*Junco hyemalis*
American Tree Sparrow	*Spizella arborea*
Field Sparrow	*Spizella pusilla*
White Throated Sparrow	*Zonotrichia albicollis*
Song Sparrow	*Melospiza melodia*
Wild Turkey	*Meleagris gallopavo*
Reptiles and Amphibians	
Eastern Box Turtle	*Terrapene carolina*
Northern Water Snake	*Natrix sipedon*
Eastern Garter Snake	*Thamnophis sirtalis*
Northern Black Racer	*Coluber constrictor*
Red-Spotted Newt	*Notophthalmus viridescens*
Red-Backed Salamander	*Plethodon cinereus*
American Toad	*Bufo americanus*
Northern Spring Peeper	*Hyla crucifer*
Green Frog	*Rana clamitans*
Bullfrog	*Rana catesbeiana*
Northern Leopard Frog	*Rana pipiens*
Wood Frog	*Rana sylvatica*

Roadway Improvement Area. Wildlife habitat in the roadway improvement area is limited by the presence of the roadways themselves, the associated traffic, and the vegetation management

that occurs on the shoulders. Species expected to be found along the roadway are typical for the area (see Table 4-9). There is no hunting along the roadways.

Utility Connections. These alignments are within existing roadways. The existing roadways typically have mowed grass shoulders. The roads are bordered by forest vegetation (most particularly the wastewater treatment connection alignment), and developed areas. Wildlife habitat is, therefore, minimal. Habitat along the roadways is degraded due to the presence of traffic, paved surfaces and developed areas. There is no hunting along the roadways.

4.4.3 Threatened and Endangered Wildlife Species

Tribal Lands. According to the USFWS (Appendix F), except for occasional transient individuals, no federally listed or proposed endangered or threatened species under their jurisdiction are known to exist in the project area. In addition, no habitat in the project area is currently designated or proposed "critical habitat" in accordance with the provisions of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). In 2001, the USFWS stated that no further consultation is required.

In 2005, the USFWS had requested information on the federally-listed Indiana bat (*Myotis sodalis*) and whether or not there might be suitable habitat on-site. A habitat evaluation was conducted that concluded that it was not likely that the Indiana bat uses the site. The USFWS concurred with the findings and determined that no further consultation was required. These field findings were confirmed in the summer of 2010.

As per the USFWS (2012) communication, the species listing for Sullivan County were double checked and no new wildlife species have been added to the County lists.

Bald eagles (*Haliaeetus leuceocephalus*) are reported to use the Neversink River during the winter. The bald eagle has been delisted from the Endangered Species Act, but are still afforded protection under the Migratory Bird Treaty Act and the Bald and Golden Eagle Act. They are also listed as a threatened species by the NYSDEC Natural Heritage Program. Potential roosting sites (several large sycamores) do occur immediately along the Neversink River. There are no nesting sites on or near the property.

The brook floater (*Alasmidonta varicosa*), classified as a species of concern by the USFWS, is found in the Neversink River in the vicinity of the proposed project. The brook floater, also known as the swollen wedge mussel, is listed as threatened by NYNHP.

In order to determine the potential for impact to the brook floater, a comprehensive field survey was conducted (Hoggarth and Madej, 2001). The survey was completed on July 25, 2001 and covered the area from Sheldrake Stream down to below the State Route 17 bridge, approximately 1.5 miles. This reach of the river was divided into five collecting reaches. Live specimens of *A. varicosa* were observed in three of the surveyed reaches. Additional species of mussels were found, including the alewife floater (*Anodonta implicata*), eastern floater (*Pyganodon cataracta),* creeper (*Strophitus undulatus*), triangle floater (*Alasmidonta undulata*), eastern elliptio (*Elliptio complanata*) and eastern lampmussel (*Lampsilis radiata*). No specimens of the federally

endangered dwarf wedgemussel (*Alasmidonta heterdon*) were found. The triangle floater and eastern elliptio were the two most common species, together representing 94 percent of the total 494 live specimens. The brook floater was the fourth most abundant species, representing 2 percent of the total live specimens. The brook floater was once widespread throughout the state, but is now only abundant in the Neversink River. The results of this study confirm the abundance of the brook floater in the Neversink River. Evidence of recent recruitment into the population (observed young specimens) was also collected. It was estimated that the population of the brook floater had a density of approximately $0.05/m^2$, which would mean a population of approximately 2,300 specimens within the examined reach. This represents a viable population. Recent studies (Nedeau, 2005) done for the NYSDOT State Route 17 Neversink River bridge replacement project also found brook floaters in the same general reach of the Neversink River. Field review carried out in July 2010 indicated no changes in conditions and no evidence of any mortality events.

Roadway Improvement Area. The USFWS has stated that no further consultation is required in the roadway improvement area (Appendix F). As indicated in the previous section, the state-listed brook floater is present in the Neversink River. The bald eagle, listed as threatened by NYNHP, is reported as using the Neversink River as a flyway. The bald eagle may perch in trees along the river. No nesting areas were observed or have been reported. No habitat in the project area is currently designated or proposed "critical habitat" in accordance with the provisions of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). As per the USFWS (2012) communication, the species listing for Sullivan County were double checked and no new wildlife species have been added to the County lists.

Utility Connections. According to the USFWS (2001b) and NYNHP (2010), there are no federally listed or proposed endangered or threatened species in the vicinity of the proposed wastewater treatment connection alignment. In addition, no habitat in the project area is currently designated or proposed "critical habitat" in accordance with the provisions of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). The USFWS stated that no further consultation is required. Similarly, NYNHP also indicates no records of species of concern (NYNHP, 2010) other than transient bald eagles. Copies of these letters can be found in Appendix F. As per the USFWS (2012) communication, the species listing for Sullivan County were double checked and no new wildlife species have been added to the County lists.

4.5 Hazardous Materials

An updated 2010 review of available federal, state and local regulatory records was conducted to determine if reports of oil and/or hazardous material releases have been documented at or near the project area, as summarized below. The federal and state records were reviewed using DataMap Technology's on-line computer database system, as were local municipal records. A minor change along the utility lines is noted below.

Tribal Lands. The site is not listed in the reviewed state or federal databases. Nor were there records of releases of oil or hazardous material from nearby properties that would likely have impacted the subsurface conditions at the site. In addition to record review, site visits were conducted by personnel qualified to perform site assessments. The site was evaluated for

Recognized Environmental Conditions in accordance with the ASTM Standard Practice E 1527-00 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.* The purpose of the site visits was to look for visual evidence of the use, storage or release of oil or hazardous material at the site. Follow up soil and groundwater testing was also conducted with NYSDEC coordination, as outlined below.

On Cooke West, an intact aboveground storage tank (AST) and a 10-gallon automobile fuel tank were found in 2001. No visible staining or petroleum odor was observed. There is no evidence that would indicate spills have occurred. The tank has since been removed. Testing of the soils in the area indicated that there is no contamination. A review of the site and regulatory records in 2010 showed no change in conditions.

On Gildick, a number of containers were identified as storing or potentially storing hazardous waste in 2001. This included a number of ASTs. In addition, numerous salvaged automobiles and automobile parts, including batteries, were also noted. Staining was observed in the buildings and near one of the ASTs. Soil and groundwater testing including the advancement of 34 soil borings, the installation of 6 groundwater monitoring wells, and the excavation of 34 test pits. This work was conducted at the direction of NYSDEC in recognized areas of concern. As a result of the subsurface investigations, a total of approximately 160 tons of soil that had been identified to be contaminated with oil and/or hazardous material was excavated, removed from the site, and properly disposed of. A final report was submitted to NYSDEC, who subsequently issued a letter of No Further Action. A copy of this letter is provided in Appendix F. Two additional areas of soil staining identified by BIA representatives were investigated in October 2003. Approximately 79 tons of soil potentially impacted with oil and/or hazardous materials was excavated, removed from the site, and properly disposed of. Confirmatory soil sampling indicated that no reportable concentrations remained The BIA also performed a Level I Contaminant Survey. Verification of acceptability of the site was provided by this federal representative. A review of the site and regulatory records in 2010 showed no change in conditions. Additionally, prior to the property being placed in federal trust an updated Phase I Environmental Site Assessment conducted in accordance with ASTM 1527 will be completed.

Roadway Improvement Area. The 2001 review identified no releases of oil or hazardous material from nearby properties that would likely have impacted the subsurface conditions in the area, based on consideration of the described release and the location of the identified database releases with respect to the improvement area. A review of the site and regulatory records in 2010 showed no change in conditions. A summary of identified database releases in the area is provided below:

- Two small spills (6,000 gallons of milk and 30 gallons of gas) near the pond south (downgradient) of Interchange 107.
- Fuel spillage from filling of an Underground Storage Tank (UST) at the Marcel Dekker property in 1999, located north and west of the proposed work area. According to the regulatory database, contaminated soil appears to have been removed.

- Spill from a UST overfill in 1994 at the Robert Green Chevrolet Olds property located south and west of Interchange 107. This site is downgradient of the improvement area and the status of the clean up is closed.

- Spill of waste oil in 1998 at the Arthur Glick Truck Sales, Inc. property located south and west of Interchange 107. This site is downgradient of the improvement area and the status of the cleanup is closed. There was a second spill of petroleum in 2000. This spill report is also closed.

Water Supply Connection. The 2001 review for the proposed water supply connection alignment showed only one active spill cleanup site at 2 Nelshore Drive. This is located off the alignment, approximately 100 feet west of the Old Route 17 and Waverly Avenue intersection. The reports indicate that oil was found in the basement of the residential home in 2002. Nine other reports were found dating from 1978 to 2000. All of these have been closed and resolved. The 2010 review showed one petroleum spill listed as Active in the database, at the intersection of Rose Valley Road and Old Route 17.

Wastewater Treatment Connection. The 2001 review for the proposed connection alignment showed active files for five tank tightness test failures at the Concord Hotel, dated 1998. Failure of a tank tightness test does not mean that a spill has occurred. It is assumed that the Concord Hotel has or will resolve these failures as their renovations proceed. Five other reports were found dating from 1990 to 1999. All of these have been closed and resolved. A review of the site and regulatory records in 2010 showed no change in conditions.

4.6 Historical and Archaeological Resources

It was confirmed with the relevant agency in January 2012 that the status of these resources was unchanged since the DEIS.

Tribal Lands. A Phase 1A walkover survey of historical and archaeological resources has been completed for the site by the Public Archaeology Lab. The New York State Public Preservation Office (NYSPPO) at the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) was contacted. Appendix F provides a copy of correspondence. Background research was conducted at the New York State Archives, the New York State Library, the Sullivan County Museum and the Monticello Public Library. In addition, local historian John Conway was consulted. The background research indicated that there are no known archaeological sites within the project area. The only archaeological site that occurs within a three mile radius is the Davos Project Area in Fallsburg. There are no potential National Register historic standing structures within the project area.

A field survey was conducted in May 2001. The methodology for this reconnaissance survey followed the guidelines set forth in NYSOPRHP *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State* (New York Archaeological Council, 1994), the U.S. Department of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation (*48 Fed. Reg. 44716 (1983)) and *National Register Bulletin 24, Guidelines for Local Surveys: A Basis for Preservation Planning* (National Park Service, 1977, revised 1985).

A resource sensitivity map was created as a result of the walkover. Approximately 14 percent of the project area had a high sensitivity rating, 22 percent had a moderate rating, and 64 percent had a low rating.

Because the Phase 1A survey indicated potential areas of cultural resources, an intensive level survey (Phase 1B) was conducted. The Phase 1B survey included intensive field survey of the entire project area. The Phase 1B report was submitted to NYSOPRHP in March 2002. Additional information was requested, as indicated in correspondence provided in Appendix F. This additional information was provided and NYSOPRHP issued a determination of No Effect (Appendix F).

For the report, test pits were excavated within areas of potential archaeological sensitivity. These test pits measure 50 x 50 centimeters. Testing was completed with two, 30 x 30 meter test pit blocks, eleven test pit transects, and 37 judgmental test pits (JTPs). The 30 x 30 meter blocks contained test pits arranged in a staggered grid pattern, while the transects were comprised of between four and ten test pits spaced at 10 meter intervals.

The majority of the Gildick parcel was found to have no prehistoric or historic cultural materials. Three JTPs had some early 20th century historic cultural material, mainly coal and glass. One JTP contained one piece of chert chipping debris. This was found in a disturbed A soil horizon. Three other JTPs were located in the same proximity; these JTPs only contained 20th century material. This chert find is not considered to be potentially significant and no further investigation is required. North of this area, there is a historic 19th century dump that contained mostly rusty metal, bottles and stoneware. There are remnants of a structure, but the structure itself appears to be so altered and disturbed that the property has lost any historic integrity it may have had. No further testing is required.

The Rossini parcel also showed no prehistoric or historic cultural material or features.

Cooke East had one area of burnt rock and charcoal staining on the transect at the northern tip of the parcel. Four test pits were excavated within five meters. No other cultural material was recovered. As there is only one piece of prehistoric material or positive correlation of the feature with human activity, this site does not represent a potentially significant cultural resource.

Cooke East does have a foundation (Foundation 1) at the southern end of the parcel. Test pits around the foundation recovered a low density of cultural material from the late 19th to early 20th century. Much of the area around the foundation is disturbed with modern earth moving and recent dumping.

Cooke West had no potentially significant prehistoric cultural deposits. Four foundations do occur on the parcel. Two of these are mid-20th century cinder block foundations, and one is a mid-20th century poured concrete and stone foundation. These three foundations do not represent potentially significant cultural resources. The fourth foundation on Cooke West (Foundation 2) appears to be the foundation of a large hotel from the late 19th to early 20th century. The hotel seems to have been built over a 19th century farm. This site does represent a potentially significant cultural resource and an evaluation will be needed to determine its eligibility to the National Register of Historic Places should impacts be proposed in the area.

The Stockbridge-Munsee Cultural Preservation Officer has reviewed these reports and concurs with the findings. The Officer has no concerns with the project proceeding. A copy of this correspondence is provided in Appendix F. In addition, the BIA consulted Indian tribes that have known archeological or historical sites in the region (Mohawk, Oneida, Mohican and Delaware tribes) about impacts on sites having potential religious or cultural significance by the various proposed casino developments, including the Casino Project, in August 2003. No concerns were raised as a part of this consultation.

Roadway Improvement Area. The intensive level survey described in Section 4.6 also covered the roadway improvement area. Foundation 1, as reported above, is not considered eligible for the National Register of Historic Places. Foundation 2, also described above, does represent a potentially significant cultural resource. In addition to these foundations, there is a stone house located immediately to the south of State Route 17 (where NYSDOT interchange improvements are proposed), east of County Highway 161. It may be a potentially significant cultural resource and eligible to the National Register of Historic Places. This house, however, is not within lands proposed to be taken into trust.

Utility Connections. NYSOPRHP has indicated that they do not consider an archaeological survey warranted for the proposed route. The only potential for impacts on historical structures of significance would arise if an aboveground facility were proposed. See Appendix F for NYSOPRHP correspondence.

4.7 Traffic

A comprehensive traffic study for Casino Project was first completed in August 2005. The original study, *Traffic Impact Study, Stockbridge-Munsee Casino, Thompson, New York,* was completed by Tetra Tech (then Rizzo Associates) in December 2004 and included in the DEIS as Appendix B. It has since been updated in 2012 and is included as Appendix B in this FEIS.

The update provides a new existing conditions analysis based on current data. Also, the project design year has been extended from 2011 in the original study to 2018 in the current study. A section of the updated study is devoted to comparisons between findings of the 2004 study and findings of the 2012 study. In general, the findings between the two studies are very similar and there are no changes proposed to the traffic mitigation program presented in the DEIS.

Traffic counts were conducted and current volumes were analyzed with respect to peak hour intersection operating levels of service and State Route 17 capacity. Field investigations considered stopping sight distance and traffic safety at proposed driveway locations. Sections from this study describing the Affected Environment are summarized below.

4.7.1 Study Area

The study area for the traffic impact analysis includes the critical intersections providing access to and from the project site. Specifically, the study area includes County Highway 161 (Heiden Road) intersections with Old Route 17, State Route 17 Interchange 107, Old County Highway, Foss Road, and the proposed main project site driveway. The study area also includes

Interchange 107 ramp intersections with Old Route. Figure 4-10 shows the existing study area roadways.

NYSDOT is in the process of converting State Route 17 to Interstate Highway 86 (I-86). As part of this conversion, interchanges will be upgraded and improved to meet interstate highway standards. Preliminary plans for Interchange 107 will reconfigure the ramps and consequently reconfigure some of the existing intersections. The reconfigured intersections are studied under the projected future traffic conditions. All existing and future study intersections are listed below.

- State Route 17 Eastbound Off-Ramp/Old Route 17
- State Route 17 Eastbound On-Ramp Connection/Old Route 17 (Existing and No-Build conditions only)
- State Route 17 Eastbound On-Ramp Connection/State Route 17 Eastbound On-Ramp (Existing and No-Build conditions only)
- County Highway 161/Old Route 17
- County Highway 161/State Route 17 Westbound On-Ramp
- County Highway 161/State Route 17 Westbound Off-Ramp
- County Highway 161/Old County Highway (Existing and No-Build conditions only)
- County Highway 161/Project Site Driveway (future Build conditions only)

Existing lane conditions and deficiencies for these locations are shown on Figure 4-10. Descriptions of each intersection are presented in Appendix B.

4.7.2 Traffic Volumes

In order to quantify existing traffic volume conditions in the project study area, daily and peak period traffic volume counts were conducted on the roadway system. A review of monthly traffic data for State Route 17 indicates that traffic volume levels in this area are at their peak in the summer months. As such, the traffic data collected represent the highest traffic volumes for the entire year.

Peak Hour Traffic Volumes. Figures 4-11, 4-12 and 4-13 show the existing summertime peak hour traffic volumes for Friday afternoon, Saturday evening, and Sunday afternoon, respectively. The highest peak hour traffic volumes on County Highway 161 (adjacent to the proposed site driveway and north of Interchange 107) currently occur during the Friday afternoon peak hour. Friday afternoon peak hour volume on County Highway 161 is approximately 600 vehicles with 72 percent of the flow headed northbound. Traffic conditions are relatively quiet during the Saturday evening peak hour with a volume of approximately 130 vehicles per hour (vph). Sunday afternoon the travel patterns of Friday evening are reversed with nearly 430 vph on County Highway 161 with 66 percent headed southbound toward State Route 17.

Daily Traffic Volumes. Daily traffic volumes recorded for the study area are summarized in Table 4-10. As shown, the heaviest volumes on State Route 17 occur on Sunday when the roadway carries over 46,000 vehicles per day. The volume on County Highway 161 peaks on Friday when the roadway carries approximately 6,250 vehicles per day.

Table 4-10 Daily Traffic Volume Summary

Location	Daily Traffic Volumes (vehicles per day) Friday	Saturday	Sunday
County Highway 161 north of Old County Highway			
Northbound	3,400	1,180	2,450
Southbound	2,850	1,110	3,530
Total	6,250	2,290	5,980
Route 17 under County Route 161			
Eastbound	19,200	16,200	28,300
Westbound	24,600	17,200	17,900
Total	43,800	33,400	46,200

4.7.3 Traffic Operations

Existing peak hour traffic operations in the project study area were quantified by calculating intersection operating levels of service. Level of Service (LOS) is a term used to describe the quality of the traffic flow on a roadway facility at a particular point in time. It is an aggregate measure of travel delay, travel speed, congestion, driver discomfort, convenience, and safety based on a comparison of roadway system capacity to roadway system travel demand. Operating levels of service are reported on a scale of A to F, with A representing the best operating conditions and F representing the worst operating conditions. LOS A represents free-flow or uncongested conditions with little or no delay to motorists, while LOS F represents a forced-flow condition with long delays and traffic demands possibly exceeding roadway capacity. The specific LOS criteria applied for unsignalized intersections are summarized in Table 4-11.

Table 4-11 Unsignalized Intersection Level of Service Criteria

Level of Service	Average Delay per Vehicle (Seconds)
A	≤10
B	>10 and ≤15
C	>15 and ≤25
D	>25 and ≤35
E	>35 and ≤50
F	>50

Source: *Highway Capacity Manual*, Special Report 209, Fourth Edition, Transportation Research Board, National Research Council, Washington, DC, 2000.

Table 4-12 provides the existing project area intersection Levels of Service. As shown, the capacity analysis results indicate that all critical movements at the study area intersections operate well under capacity, at LOS B or better, during Friday and weekend summertime peak hours.

Table 4-12 Intersection Level of Service Summary – Existing Conditions

	Summer Peak Hour Conditions								
	Friday Afternoon (4:45-5:45 p.m.)			Saturday Evening (7:30-8:30 p.m.)			Sunday Afternoon (4:00-5:00 p.m.)		
Intersection/Approach[1]	Avg. Total Delay[2]	V/C[3]	LOS[4]	Avg. Total Delay[2]	V/C[3]	LOS[4]	Avg. Total Delay[2]	V/C[3]	LOS[4]
State Route 17 EB Off-Ramp/Old Route 17									
LR from State Route 17 Off-Ramp	10	0.09	A	9	0.03	A	9	0.11	A
State Route 17 EB On-Ramp Connection/Old Route 17									
LT from EB Old Route 17	2	0.02	A	1	0.00	A	1	0.01	A
State Route 17 EB On-Ramp Connection/Route 17 EB On-Ramp									
L from EB On-Ramp Connection	9	0.04	A	9	0.00	A	10	0.02	A
County Highway 161/Old Route 17									
LTR from EB Old Route 17	5	0.05	A	2	0.01	A	4	0.03	A
LTR from WB Old Route 17	0	0.00	A	0	0.00	A	0	0.00	A
LTR from NB Kroeger Road	10	0.00	A	0	0.00	A	10	0.00	B
LTR from SB County Highway 161	9	0.05	A	9	0.02	A	9	0.03	A
County Highway 161/State Route 17 WB On-Ramp									
LT from NB County Highway 161	2	0.02	A	4	0.01	A	3	0.02	A
County Highway 161/State Route 17 WB Off-Ramp									
LR from WB State Route 17 Off-Ramp	12	0.42	B	9	0.06	A	9	0.12	A
County Highway 161/Old County Highway									
LR from WB Old County Highway	12	0.00	B	9	0.01	A	11	0.01	B
LT from SB County Highway 161	0	0.00	A	0	0.00	A	0	0.00	A

L = Left Turn Movement; T = Through Movement; R = Right Turn Movement; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound
Average delay per vehicle (seconds)
V/C = Volume-to-capacity ratio
LOS = Level of service

4.7.4 Regional Traffic

Regionally access to the project site is provided by way of State Route 17. State Route 17 consists of two travel lanes in each direction and has a capacity in excess of 8,000 vph. (Limited access highways with a design speed of 60 miles per hour have a maximum service flow rate of 2,300 passenger cars per hour per lane.) The average daily traffic (ADT) on State Route 17 in

Sullivan County (for 2010) ranges from 8,300 ADT for the segment between the Delaware County line and Route 206/County Road 124, to 43,100 ADT for the segment between Old Route 17/County Road 173 and County Road 161. Volumes are higher to the east in Orange County, ranging from 16,400 ADT for the segment between I-87 to Route 210/17A to 99,000 ADT for the segment between State Routes 6/17M to Routes 207/17A.

4.7.5 Public Transportation

Although there is currently no public transportation to the site, a variety of public transportation modes, including, rail, bus, taxi, and limousine are provided to and within Sullivan County. The Metro North Railroad provides regional commuter service from the New York Metropolitan Area to Middletown, New York along its Port Jervis line. The Middletown train station represents the closest and most convenient rail stop to the proposed project site, approximately 17 miles to the east. The Shortline Bus Company provides regular service from New York City to Monticello. In addition to its primary hub in New York City, Shortline also serves Long Island, Queens, Northern New Jersey, and Rockland, Orange and Dutchess Counties for commuters and off-peak travel. Presently, Shortline offers 18 local and express trips to the Village of Monticello with scheduled stops in adjoining locations including Fallsburg, Liberty, and Wurtsboro. All of these areas are within close proximity to the project site. Local taxi and limousine companies provide shuttle service for passengers visiting the Sullivan County area.

4.8 Air Quality

An updated (2011) air quality study has been completed for the Casino Project by Tech Environmental, Inc. Air quality in Sullivan and Orange Counties was considered. Orange County was included because the majority of traffic is expected to pass through Orange County. Volume I of this study is provided as Appendix I and summarized here. The analysis focuses on stationary sources on the tribal lands, as well as mobile sources on roadways resulting from traffic generated by the project.

Sullivan County is predominantly rural and is classified by USEPA as an attainment or unclassifiable area for all of the federal criteria pollutants: particulate matter (PM_{10} and $PM_{2.5}$), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and ozone (O_3). Sullivan County is located in the ozone transport region, which spans the entire northeastern United States. There are two 8-hour ozone standards, with the 2008 standard slightly more stringent than the 1997 standard. The 8-hour (1997) standard remains in effect as USEPA undertakes rulemaking to address the transition to the 8-hour (2008) standard. In early 2011, the USEPA reconsidered the level of the 2008 ozone standard, but in September 2011, USEPA decided not to change the 2008 standard. At present, USEPA has classified Sullivan County as attainment for both the 1-hour and 8-hour (1997) ozone standards, and NYSDEC has recommended to USEPA the same attainment classification for Sullivan County for the 8-hour (2008) standard.

National Ambient Air Quality Standards (NAAQS) were established in 40 CFR 50 at a level that protects public health and welfare with an adequate margin of safety. Proposed projects are assessed against these standards to determine level of impacts. Existing air quality for the site has

been estimated using monitoring data reported by NYSDEC to the USEPA Aerometric Information Retrieval System (AIRS) for the three-year period 2008-2010. All monitoring data are summarized in Table 4-13 along with the applicable NAAQS. Following NYSDEC policy, existing air quality for the site was estimated using NYSDEC monitoring stations that are closest to the site and are either located in a similar rural environment (representative) or in a suburban or urban area (conservative estimates since air pollution levels are higher in these areas than in rural areas).

Orange County, which abuts Sullivan County to the east and through which much of the project traffic will travel, is an attainment or unclassified area for all criteria pollutants except ozone, for which it is classified by USEPA as an ozone non-attainment. Air quality has improved significantly in New York State, and in Orange and Sullivan Counties, over the past 3 decades, with roughly a 98 percent reduction in ozone exceedance days statewide from 1976 to present.

Table 4-13 Summary of NYSDEC Air Pollutant Monitoring Data Representative of the Site for the Stockbridge-Munsee Casino, Thompson, NY (ug/m^3)

Pollutant	Monitor Name	Averaging Period	2008	2009	2010	NAAQS
$PM_{2.5}$	55 Broadway Newburgh	24-hour	28	26	24	35
		Annual	10	9	8	15
PM_{10}	Belleayre Mountain Ulster County	24-hour	41	34	37	150
NO_2	Eisenhower Park East Meadow	Annual	32	30	27	100
SO_2	Belleayre Mountain Ulster County	3-hour	29	21	21	1,300
		24-hour	21	16	9	365
		Annual	3	2	1	80
CO	NYSDOT Data	1-hour	NA	NA	NA	35.0
		8-hour	NA	NA	NA	9.0
O_3	Belleayre Mountain Ulster County	1-hour	169	163	161	235
	Valley Central H.S. Orange County	1-hour	227	227	190	235
	Belleayre Mountain Ulster County	8-hour	143	135	134	147 (2008) 157 (1997)
	Valley Central H.S. Orange County	8-hour	158	149	145	147 (2008) 157 (1997)

N.A. = Not Applicable. CO levels are in ppm. See Table 2-1 of Appendix I for additional notes

Microscale Analysis. A microscale analysis was performed for the project area for CO, NO_2, SO_2, and PM_{10} and $PM_{2.5}$ using USEPA's CAL3QHC Version 2 microscale dispersion model and following NYSDOT's Environmental Procedures Manual. A total of 137 receptor points were used for the model. Table 4-14 summarizes existing conditions. The results of these analyses are provided in Section 5.8.1 and Appendix I.

A microscale analysis for ozone was not performed. This air pollutant is not directly emitted by motor vehicles, but is formed in the atmosphere from a series of complex photochemical reactions. These reactions occur over time periods and distances that are too large to represent with microscale air quality modeling; therefore it is not possible to perform a microscale impact analysis for ozone.

Table 4-14 Existing Air Quality Concentrations

Intersection	1-Hour CO (ppm)	8-Hour CO (ppm)	Annual NO_2 ($\mu g/m^3$)	3-Hour SO_2 ($\mu g/m^3$)	24-Hour SO_2 ($\mu g/m^3$)	Annual SO_2 ($\mu g/m^3$)	24-Hour $PM_{2.5}/PM_{10}$ $\mu g/m^3$)	Annual $PM_{2.5}$ ($\mu g/m^3$)
County Highway 161/ Old Route 17	3.3	2.3	31.3	21.9	16.4	2.1	26.4/37.4	9.1
County Highway 161/ Route 17 WB Offramp	3.6	2.6	34.0	21.9	16.4	2.1	26.8/38.2	9.2
NAAQS	35	9	100	1,300	365	80	35/150	15

4.9 Noise

In order to quantify potential noise impact, a noise study was conducted by Tech Environmental, Inc. This study is presented in Appendix I and summarized below. The revised existing traffic volumes presented in this FEIS have been used to update the TNM modeling results of existing and future sound levels that were presented in the DEIS.

Common Measures of Community Sound Levels. Noise is defined as "unwanted sound", which implies sound levels that are annoying or that disrupt activities people are engaged in. Noise regulations and guidelines set quantitative limits to the sound level in order to protect people from sound exposures that most would judge to be annoying or disruptive.

The unit of sound pressure is the decibel (dB). The decibel scale is logarithmic and, as such, a property of the decibel scale is that the sound pressure levels of two separate sounds are not directly additive. For example, if a sound of 70 dB is added to another sound of 70 dB, the total is only a 3-decibel increase (or 73 dB), not a doubling to 140 dB.

In terms of the human perception of sound, a halving or doubling of loudness requires changes in the sound pressure level of about 10 dB and, for broadband sounds, 3 dB is the minimum perceptible change. These levels of human response are summarized in Table 4-15.

Table 4-15 Subjective Effect of Changes in Sound Pressure Level For Broadband Sounds

Change in Sound Pressure Level (dB	Apparent Change in Loudness
3	Just noticeable
5	Noticeable
10	Twice (or half) as loud

Non-steady sound exposure in a community is commonly expressed in terms of the A-weighted sound level (dBA); A-weighting approximates the frequency response of the human ear. Levels of many sounds change from moment to moment. Some are sharp impulses lasting one second or less, while others rise and fall over much longer periods of time. There are various measures of sound pressure designed for different purposes. The following metrics are based on the A-weighted decibel and are typically used when evaluating environmental and source sound level measurement data:

L_{eq}, or Equivalent Level, is the steady-state sound level during a given amount of time that has the same acoustic energy as the fluctuating sound levels during that same period. This metric is commonly referred to as the average sound level.

L_{max}, or Maximum Level, represents the maximum 1 second sound level experienced during a given time period.

L_n, or "n" Percentile Level, is the statistical representation of changing sound levels. Since ambient levels vary with time, the Percentile Level is used to quantify the sound levels. This metric indicates that over a given time period, the fluctuating noise level was equal to or greater than the stated level for "n" percent of the time. Commonly used percentiles include the L_{10} and the L_{90}. An L_{90} of 50 dBA, for example, indicates that sound levels over a given period of time were greater than or equal to 50 dBA for 90 percent of the time. L_{90} is often used to describe the background ambient sound level. The L_{10} defines the peaks of the intermittent sounds and is commonly referred to as the intrusive sound level.

The acoustic environment in an area such as the project site results from numerous sources. The principal contributors are motor vehicle traffic on State Route 17, County Highway 161, and other local roadways. Typical sound levels associated with various activities and environments are presented in Table 4-16.

Table 4-16 Common Sound Levels

Activity	dBA
Threshold of pain	130
Chipping on metal	120
Loud rock band	110
Jack hammer	100
Jet airliner ½ mile away	95
Threshold of hearing damage	90
Freeway traffic – downtown streets	80
Urban residential area	60-70
Normal conversation	60
Suburban area	50-55
Rural area	30-40
Wilderness area	25
Threshold of audibility	0

Sound Level Regulations and Guidelines. Since there are no local, state, or federal noise regulations with decibel limits applicable to the motor vehicles visiting the project site, an appropriate federal sound level criterion for residential areas was used. The Federal Highway Administration (FHWA) has published Noise Abatement Criteria (NAC) for residential areas (23 CFR Part 772) stating that noise barriers are recommended to mitigate peak hour Leq sound levels from a new highway project when they exceed a threshold of 67 A-weighted decibels (dBA). The FHWA guideline, a 1-hour Leq of 67 dBA, was used to judge the effects of the proposed Casino on nearby residential and recreational areas.

Calculated Existing Sound Levels. Results of DEIS noise monitoring are shown in Table 4-17. Monitoring locations are shown in Figure 4-14. Predicted 1-hour Equivalent Sound Levels (L_{eq}) for the 2010 Existing case range from 54 to 60 dBA at nearby residential and recreational areas. Details of the analysis are given in Section 5.9.

Table 4-17 Baseline Sound Level Measurements

Sound Level Measurement	185 Highway 161	34 Foss Road	16 Old County Road	Neversink River (South)	Neversink River (North)
Maximum, L_{max}	87.9	81.8	77.4	67.5	69.8
Intrusive, L_{10}	64.0	54.0	55.0	58.0	57.0
Average, L_{50}	46.0	52.0	48.0	55.0	54.0
Background, L_{90}	39.0	49.0	40.0	51.0	51.0
Equivalent, L_{eq}	64.9	54.7	53.1	55.5	54.7
Existing 2010, L_{eq}	60	58	54	54	54

4.10 Socioeconomics

This section presents a socioeconomic analysis of the areas and people who will be affected by the development of the Casino Project in Sullivan County. Current socioeconomic conditions of the Tribe, as well as affected areas around the project site, are discussed. An updated

socioeconomic assessment was prepared to reflect current conditions; these conditions remain generally consistent with those previously reported in the DEIS.

4.10.1 Tribal Conditions

Although the Tribe is originally from an area that now is in New York State, as described in Section 1.1, the Tribe was removed west and now has a reservation in Wisconsin. Approximately half of the Tribe's 1,600 members currently reside on this reservation in a rural part of east-central Wisconsin (roughly 60 miles west of Green Bay). Economic conditions have improved over the past 20 years for the Tribe and its members, but still remain depressed compared to surrounding areas. In 1990, income levels remain below the Wisconsin average by 30 percent (U.S. Census, undated). However, the 2000 Census showed that the Tribe was closer to the average Wisconsin income with a median household income level of $36,908 (the Wisconsin average is $43,791) (U.S. Census, undated). Nevertheless, the numbers of tribal members that are below the poverty level, particularly children and the elderly, are higher than the Wisconsin averages. The percentage of families below the poverty level with related children under 18 years is 10 percent for the Tribe (8.8 percent for Wisconsin) and 13.8 percent for families with children under 5-years of age (12.2 for Wisconsin). In addition, the percentage of individuals that are 65 and older and have incomes below the poverty level is 14.2 percent for the Tribe, which is almost double Wisconsin's 7.4 percent.

Employment. Tribal member unemployment was at 7 percent in 2000, while average unemployment for Shawano County was 4.1 percent and the State's average unemployment rate was 3.5 percent in 2000 (Wisconsin Department of Workforce Development, undated). In 2010, the average annual unemployment rate in Wisconsin was 8.3 percent while Shawano County was 9.5 percent (Wisconsin Department of Workforce Development, undated). The Tribe's unemployed and underemployed rate for 2010 was 19 percent with 10 percent of employed individuals having annual earnings below federal poverty guidelines (BIA American Indian/Alaska Native Population and Labor Force Estimate, 2010). While the Tribe's unemployment rates have decreased considerably since the Tribe opened its Mohican North Star Casino and Bingo facility in 1992 and was subsequently able to increase government operations, they remain higher than the surrounding area. The Mohican North Star Gaming and Resort currently employs approximately 420 people in full- and part-time positions, while the tribal government has approximately 300 employees. Other than the Tribe, local employers include government operations and school districts, health care, the logging industry, family farms, a few small manufacturing operations, and small businesses.

Housing. Environmental issues on the Tribe's reservation, including radon contamination and problems with groundwater availability, supply and quality, have resulted in a shortage of safe, affordable and sanitary housing. The Tribe has a shortage of land that can be used for housing and this shortage is compounded by its lack of adequate water supplies and wastewater treatment alternatives. As of 2010, 15 percent of reservation housing is substandard and there are at least sixty (60) tribal families on waiting lists for housing.

Education. A total of 446 persons from the Tribe's reservation were enrolled in the local school systems according to the 2000 Census. A majority of the students attended the local public

schools with 79.4 percent graduating from high school and 13.5 percent of persons 25 years of age and older receiving a bachelor's degree or higher. These percentages are lower than Wisconsin's rates of 85.1 percent of people graduating from high school and 22.4 percent received a bachelor's degree or higher. The difference is even more dramatic when the percentages of persons age 25-34 with college degrees are compared since it is 11.9 percent for the Tribe and 27.9 percent for Wisconsin (U.S. Census, undated). In 2010, 100 primary and secondary school students received assistance with academic, truancy and social/behavior needs through the Tribe and the Tribe had a Head Start program that served 22 students.

Community Infrastructure. The Tribe has borrowed funds to make some required infrastructure improvements in recent years, but, additional infrastructure development and improvements are needed to support residents and businesses, as well as to create new growth opportunities. Such development and improvements include improvements to the public water supply system. Currently, individual wells provide drinking water for much of the Tribe's reservation. However, the groundwater supply on the reservation is extremely limited and difficult to access. In addition, there are problems with groundwater quality, particularly from nitrate contamination. This lack of public water supplies continues to limit land development for homes and businesses. In addition, the Tribe is also in the process of expanding its wastewater treatment capacity, but many portions of the reservation currently are served by individual septic systems and other parts are undevelopable since they are not appropriate septic systems and do not have public service.

Other community infrastructure needs include the construction new facilities and/or improvement of existing tribal facilities like a long-term medical care facility, day care centers and a new tribal government building. For example, the Tribe has a community-based residential facility for those elders that do not require nursing care, but this facility only has 8-rooms and currently has only one vacancy. In addition, there are currently no facilities that provide assisted living or nursing support for elders on the reservation. The Tribe is also interested in expanding health operations to ensure that all tribal members can receive adequate health care and in expanding fire prevention and emergency medical services on the reservation. The Tribe also has road maintenance and repair needs since many roads on the reservation are unpaved and underdeveloped. Transportation improvements costs are projected as being $8.5 million over the next five years.

4.10.2 Project Area Conditions

An analysis was done by AKRF, Inc. (2012) on socioeconomic conditions and impacts. That report is provided as Appendix J, and the information on existing conditions is summarized here.

4.10.2.1 Study Area and Methodology

An economic study area was established in which socioeconomic conditions were reviewed. Based on a geographic evaluation of the region and patterns identified through journey-to-work data, it is estimated that approximately 84 percent of the future employees for the Casino Project would be located within a one-hour driving distance. This study area therefore includes the immediate vicinity of the Casino Project, as well as the larger area from which employees would be drawn. The study area encompasses all of Sullivan and Orange Counties and portions of

Ulster and Delaware Counties in New York, and portions of Wayne and Pike Counties in Pennsylvania (Figure 4-15). The baseline economic conditions focus on this study area, with comparative information provided for New York State, as well as for the Town of Thompson, which would be the local municipality most directly affected by the Casino Project.
Source information included the Census Bureau and Bureau of Labor Statistics, 2006-2010 American Community Survey (ACS) data, and a variety of state and municipal sources. Data from ESRI Business Analyst, a demographic and market data provider, were used to provide industry-specific data for Sullivan County. In addition, the analysis relies upon interviews conducted with individuals involved in business operations, housing, employment and employment training, as well as county officials and New York State Department of Labor analysts.

4.10.2.2 Demographic Characteristics

Population Trends. The residential population in the Town of Thompson, as well as in Sullivan County and the study area as a whole, increased from 2000 to 2010 (Table 4-18). The Town of Thompson was the most populous township in Sullivan County. However, Thompson had a faster rate of growth compared to Sullivan County as a whole from 2000 to 2010, meaning that Thompson is growing at a faster rate than other areas within Sullivan County.

As shown in Table 4-18, the study area grew at a rate approximately four-times that of New York State from 2000 to 2010. Orange County contributed heavily to the growth in the study area. Sullivan County had a slower growth rate, but still was higher than the growth rate for New York State.

It is important to note that the population data collected by the U.S. Census Bureau do not include seasonal residents, or those who own second homes in the area. This is a major factor in the Catskill mountain region, which has a high percentage of seasonal/second homes. According to the Sullivan County Division of Planning and Community Development, the County's population increases at least 2.5 times during the summer months due to seasonal residents (not including those staying overnight in hotels).

Table 4-18 Population 2000-2010

Area	2000	2010	2000-2010 % change
Town of Thompson	14,189	15,308	*7.9%*
Sullivan County	73,966	77,547	*4.8%*
Study Area	489,262	529,892	*8.3%*
New York State	18,976,457	19,378,102	*2.1%*

Source: 2000 data from US Census Bureau, Summary File 1; 2010 data 2010 Census Summary File 1

Household Trends. Reflecting growth in the residential population, the number of households in the Town of Thompson, Sullivan County, and the study area increased between 2000 and 2010. As of 2010, the Town of Thompson contained approximately 20 percent of the Sullivan County total (Table 4-19). Similar to the population trends discussed above, growth in the number of households increased at a slower rate in the Town of Thompson compared to Sullivan County as a whole (7.9 percent compared to 9.0 percent). The number of households in the study area in 2010 was 185,439, which was a 9.5 percent increase since 2000, or more than double the growth rate for households in New York State during the same period.

The average size of households has decreased in each area, except for the Town of Thompson. As of 2010, the average household size in the Town of Thompson was 2.45 persons per household, slightly higher than the average household size of 2.44 persons per household in 2000. Sullivan County had the same average household size as the Town of Thompson in 2010, down from 2.50 persons per household in 2000. This decline generally reflects the aging of the population, as older populations generally have fewer children living at home. The household figures include a large proportion of second homes. According to 2010 U.S. Census data, 23.5 percent of the housing units in the Town of Thompson and 29.2 percent of all housing units in Sullivan County were classified as units for seasonal, recreational, or occasional use.

Table 4-19 Household Trends, 2000 to 2010

Area	2000	2010	2000-2010 % Change
Number of Households			
Town of Thompson	5,543	5,982	7.9
Sullivan County	27,661	30,139	9.0
Study Area	169,389	185,439	9.5
New York State	7,056,860	7,317,755	3.7
Average Household Size			
Town of Thompson	2.44	2.45	0.4
Sullivan County	2.50	2.45	-2.0
Study Area	2.75	2.74	-0.5
New York State	2.61	2.57	-1.5

* Average Household Size for the Study Area is a weighted average based on the number of households in each County/Township

Sources: 2000 data from U.S. Census, Summary File 1; 2010 data from 2010 Census, Summary File 1.

The Town of Thompson, Sullivan County, and the study area as a whole all have higher percentages of vacant housing units compared to New York State (Table 4-20). As discussed above, this is primarily due to the relatively high numbers of seasonal and second homes in these areas. In fact, the percentages of vacant housing units for rent or sale are higher for New York State than in the Town of Thompson, Sullivan County, and the study area.

Table 4-20 Characteristics of 2010 Housing Stock

	Town of Thompson	Sullivan County	Study Area	New York State
2010 Housing Units	9,130	49,186	227,782	8,108,103
Occupancy status for all housing units				
Occupied	65.5%	61.3%	81.4%	90.3%
Vacant	34.5%	38.7%	18.6%	9.7%
Tenure of occupied housing units				
Owner occupied	52.5%	67.0%	69.7%	53.3%
Renter occupied	47.5%	33.0%	30.3%	46.7%
Vacancy status of vacant housing units				
For rent	10.8%	7.5%	12.7%	25.3%
For sale only	7.5%	5.4%	8.8%	9.8%
Rented or sold, not occupied	1.8%	1.5%	2.6%	4.3%
For seasonal, recreational, or occasional use	68.1%	75.3%	61.7%	36.6%
Other vacant	11.8%	10.3%	14.1%	24.0%

Source: U.S. Census, 2010 Summary File 1.

Overall, the Town of Thompson, Sullivan County, and the study area all contain relatively young housing stocks compared to New York State, with higher percentages of growth in recent years. According to the 2006-2010 American Community Survey, approximately 36.2 percent of the study area's housing units were built after 1980, compared to 18.7 percent for New York State.

Based on the 2006-2010 ACS, the median housing value in the Town of Thompson and Sullivan County were approximately $171,300 and 186,900, respectively (in 2010 dollars), well below the median housing values for the study area as a whole and New York State. According to the 2006-2010 ACS, the median home value in the Town of Thompson is approximately $177,999 (in 2011 dollars), representing a 46 percent increase since 2000. Sullivan County and New York State experienced larger increases (59 and 58 percent, respectively), while the study area's median housing value grew by 65 percent, to approximately $291,133 over the 2006-2010 time period.

Interviews with local real estate professionals were conducted to obtain information about residential sales and rentals in Sullivan County and the study area more generally. All individuals interviewed perceived a dramatically changed housing market since 2000, when demand for housing was relatively low. In 2004, there was perceived to be a heavy demand for first and second homes, as well as rental units.

Interviews conducted in October of 2007 identified continued heavy demand for first and second homes and substantial increases in housing values. According to Mr. David Knudsen (2007), an associate broker of the Catskills Buyer Agency, the substantial increases in median household values as of 2007 were attributable to improvements to the quality of housing stock, namely the recent construction of lakefront homes. Since 2001, according to Mr. Knudsen, both increased press coverage, and the development of Bethel Woods Center for the Arts have also heightened buyers' interest in the area. Additionally, developments such as Chapin Estates of Bethel, New York have also had an influence on market appreciation.

A followup interview was conducted with Mr. Knudsen in July 2010 to identify changes in Sullivan County residential real estate market conditions since 2007. According to Mr. Knudsen, the national recession has resulted in depressed market conditions in both the primary and second-home markets compared to 2007 market conditions. Primary home buyers that previously considered Sullivan County are now drawn to closer in suburbs, such as those in Orange County, because home prices have decreased in those areas and are more competitive with Sullivan County than in the past. In the second-home market, Sullivan County continues to attract second home buyers, but these buyers are often focused primarily on the lower end of the housing market, with little activity in the mid and upper end. With the national recession, buyers are generally reluctant to make large discretionary purchases, such as for a second home.

Income Trends. The 2005-2009 median household income for the study area is estimated to be $67,619, about $9,800 greater than the New York State median of $57,777. However, there is great variability within the counties that are part of the Study Area; the median household income in Sullivan County is estimated to be $49,984 compared to $72,242 in Orange County.

As shown in Table 4-21, estimates reveal a decrease (in real dollars) in median household income in the Town of Thompson, Sullivan County, and New York State from 1999 to the 2005-2009 time period. During this time period, the Town of Thompson experienced the most dramatic decline, with a 21.8 percent decrease. In 1999, the median household income in Thompson was $49,739, and below the county median. Over the 2005-2009 time period, the median household income in Thompson was $38,880, which was $11,104 lower than the county median, and well below the median of the Study Area and New York State.

Table 4-21 Median Household Income (in 2011 dollars)

Area	1999	2005-2009	% Change
Town of Thompson	$49,739	$38,880	-21.8%
Sullivan County	$51,822	$49,984	-3.5%
Study Area*	$68,156	$67,619	-0.8%
New York State	$60,779	$57,777	-4.9%

Notes: All values reported in 2011 dollars, based on U.S. Department of Labor, Bureau of Labor Statistics Consumer Price Index for all urban consumers in Northeast.
* Median Household Income for the Study Area was estimated based on a weighted average of the number of households in each county/township.
Source: Data from U.S. Census, 2000 Summary File 3 and 2006-2010 American Community Survey

The Town of Thompson has a relatively large percentage of households with incomes less than $25,000, and relatively few households with incomes greater than $100,000 as compared to the Study Area and New York State.

As with median household income, the per capita incomes in both the Town of Thompson and Sullivan County are lower than that for New York State as a whole. However, unlike median household incomes, the per capita income for the Study Area was also lower than that of New York State. Per capita incomes in the Town of Thompson and Sullivan County decreased in real dollar terms between 1999 and the 2005-2009 time period. Per capita income in the Town of Thompson ($20,199) is nearly $12,000 lower than per capita income for New York State as a whole ($32,158). The Study Area and New York State were estimated to have experienced minor decreases in per capita income between 1999 and the 2005-2009 time period (1.2 and 1.8 percent decreases, respectively).

In terms of persons living in poverty, the Town of Thompson had a higher percentage of people with incomes below the poverty level compared to New York State, as reported in the 2006-2010 ACS. The study area had a lower overall percentage of persons below the poverty level compared to New York State, due to the lower poverty rate in Orange County (11.1 percent).

4.10.2.3 Workforce Capacity and Opportunities

Labor Force and Employment. Over the long term, labor force and employment growth have been variable in the six counties in which the study area is located. The counties experienced overall gains in the labor supply between 1980 and 1990, with five of the six counties well above the 10.4 percent growth rate for the state. However, between 1990 and 2000, overall labor force trends shifted compared to the previous decade, with Sullivan County, Ulster County, and Orange County all experiencing far less dramatic increases in their total labor force. Pike County continued to experience substantial growth in its labor force at a rate comparable to the previous decade, due to its large population growth during that period. From 1990 to 2000, Pike County's total labor force grew by 54 percent, the highest percentage among all counties evaluated. The Pennsylvania Department of Labor and Industry indicated that many of the county's new residents were from New York and New Jersey, and moved to the county primarily because of better housing opportunities, lower taxes, and better schools.

Between 2000 and 2010, the labor force in several of the counties in which the study area is located continued to grow, with Pike County maintaining the highest growth rate (31.1 percent). However, the labor force in Delaware County decreased by 0.9 percent from 22,200 in 2000 to 22,000 in 2010. During this 10-year time frame, Ulster County's labor force remained fairly constant, growing by only 0.3 percent from 88,600 in 2000 to 88,900 in 2010.

Similar to labor force trends, employment growth in five of the six study area counties was also well above the State rate during the 1980s, with less substantial increases for those same counties between 1990 and 2000. These counties were hard hit by the recession of the late 1980s and early 1990s, resulting in declines in workforce and residential employment growth. Between 2000 and 2010, the employment growth rates were higher in Wayne and Pike Counties as

compared to the study area counties in New York State. Of the New York counties evaluated, Orange County had the highest growth in employment at 4.8 percent. However, Ulster County and Delaware County experienced declines in employment during this time period (by -4.6 percent and -5.6 percent, respectively). Similar to previous years, Pike County experienced the most dramatic increase in employment between 2000 and 2010 (22.5 percent).

Employment Sectors and Wages. In 2000, the services and retail trade sectors comprised well over half the jobs in the study area. Compared to the state, the study area had a higher proportion of the working population in the agriculture, construction, retail trade, and public administration sectors.

In 2001, within the services sector, all counties in which the study area is located had a higher proportion of employees within the accommodation and food services sub-sectors compared to New York State. On the other hand, the professional and technical services sub-sectors employ a smaller proportion in each of the six counties compared to New York State. As of 2010, New York State Department of Labor data reflect a slightly lower concentration of service sector employment in the accommodation and food services industry within five of the six counties in which the study area is located as compared to 2001. However, within all six counties, there was a greater percentage of sector employment within the health and social assistance industries.

The average annual wages for all industries in the six counties in which the study area is located were below the average annual wage for New York State (Table 4-22).

Table 4-22 2010 Annual Wages by NAICS Sectors (in 2011 dollars)

NAICS Sector	Sullivan County	Orange County	Ulster County	Delaware County	New York State	Wayne County, PA	Pike County, PA
Total, all industries	36,988	41,834	38,496	37,342	62,620	33,642	31,067
Agriculture, Forestry, Fishing & Hunting	$29,591	$23,698	$28,188	$26,858	$30,167	$43,831	NA
Mining	$46,055	$67,695	$47,148	$41,601	$60,857	$34,311	NA
Utilities	NA	$109,322	NA	NA	$101,765	$47,715	$50,605
Construction	$39,416	$47,938	$42,933	$44,210	$62,625	$45,894	$37,655
Manufacturing	$30,988	$47,413	$45,762	$59,082	$61,764	$39,316	$38,213
Wholesale Trade	$41,941	$53,263	$48,780	$52,230	$74,504	$39,734	$43,230
Retail Trade	$27,262	$26,454	$27,048	$27,278	$30,739	$24,853	$23,212
Transportation and Warehousing	$26,906	$41,611	$31,567	$37,943	$45,604	$25,055	$19,712
Information	$46,759	$55,888	$42,913	$38,637	$94,451	$48,135	$43,538
Finance and Insurance	$64,700	$52,460	$51,223	$42,758	$201,811	$47,446	$37,856
Real Estate and Rental and Leasing	$23,109	$34,905	$34,776	$25,448	$56,742	$26,675	$23,892
Professional and Technical Services	$35,527	$59,045	$42,748	$29,583	$94,440	$33,780	$42,785
Management of Companies and Enterprises	$45,287	$67.089	$53,044	$27,110	$145,626	$59,482	$79,489
Administrative and	$30,777	$30,787	$35,927	$30,920	$44,192	$20,018	$31,570

NAICS Sector	Sullivan County	Orange County	Ulster County	Delaware County	New York State	Wayne County, PA	Pike County, PA
Waste Services							
Educational Services	$19,151	$31,699	$26,583	NA	$49,149	$15,604	NA
Health Care and Social Assistance	$37,761	$41,172	$36,751	$30,967	$46,399	$32,864	$31,132
Arts, Entertainment, and Recreation	$26,894	$20,241	$22,115	$15,853	$46,940	$20,188	$21,866
Accommodation and Food Services	$18,594	$16,743	$17,302	$13,058	$23,059	$19,622	$18,403
Other Services	$20,602	$27,190	$25,054	$21,620	$36,054	$21,069	$21,262
Total, All Government	$50,542	$57,484	$53,791	$33,113	$56,318	NA	NA
Unclassified	$24,805	$26,538	$76,061	$31,105	$48,021	NA	NA

Notes: Wages adjusted to 2011 dollars using the U.S. Department of Labor Consumer Price Index for all urban consumers in the Northeast.

Source: New York State Department of Labor, from Quarterly Census of Employment and Wages, accessed December 2011; Pennsylvania Department of Labor and Industry, accessed December 2011.

Between 2001 and 2010, retail wages in Sullivan County increased by 6.6 percent, and by between 2.0 percent and 4.8 percent in Delaware, Ulster, and Wayne Counties. Orange County, Pike County, and New York State as a whole saw a decrease of 5.7 percent, 4.8 percent, and 3.8 percent, respectively. Among the arts, entertainment and recreation services sectors, wages increased by over 48 percent in Sullivan County, while decreasing in all other areas. Wages in the accommodation and food services sector increased in Delaware County by 8.4 percent—approximately four times higher than the 1.9 percent increase in the state. In addition, wages in this sector increased by between 2.8 percent and 3.7 percent in Orange County, Sullivan County, and Wayne County.

Education. Levels of education and income are often used to evaluate the ability of a workforce to meet the challenges of high-value-added occupations. Existing high levels of education and income provide workers with the foundations needed to maintain their competitive edge in the workforce. A review of the demographic composition of the study area reveals a labor force that generally falls slightly below state averages in secondary educational attainment.

While all counties in which the study area is located are about on par with New York State in the proportion of the population over 25 years old with a high school diploma, the Town of Thompson falls below the state percentage. Furthermore, the proportions of the population in the Town of Thompson, the study area, and all counties in which the study area is located, have a lower share of its population with college degree compared with New York State. Approximately 40 percent of all New Yorkers over 25 have a college degree. In Sullivan County, the proportion is only 30.3 percent, while in the study area 34.6 percent of the population over 25 years old have college degrees. Ulster County's high concentration of college graduates is likely due to the presence of a State University of New York (SUNY) four-year institution in New Paltz.

As discussed previously and shown in Table 4-21, the median household income for the Study Area was $67,619 and was higher than the state median ($57,777). However, the estimated 2005-2009 per capita income for the Study Area was $28,800, which was lower than the per capita

income for New York State as a whole ($32,158). The potential problems associated with relatively low levels of education and incomes are exacerbated by labor force dynamics typically associated with rural areas: a geographically dispersed economy; global competitive pressures on manufacturing; and the out-migration of young people to locales where more and diverse employment opportunities are available. Further, this area is subject to the economic downturn resulting from the decline of the hotel and resort industry that formerly characterized the so-called "Borscht Belt" region.

Commuting Patterns. Like many rural areas, the study area is generally one of wide dispersion of activities limiting the informal connections and cross-sectoral contacts that promote economic innovation and growth in more metropolitan areas. As shown in Table 4-23, a comparison of travel times to work for the Town of Thompson, Sullivan County, and the study area shows that there is a substantial labor market that is localized in nature. Compared to New York State, the study area has a larger percentage of workers that travel less than 30 minutes to their place of work.

Table 4-23 Travel Time to Work, as a Percentage of All Workers

Travel Time	Town of Thompson	Sullivan County	Orange County	Ulster County	Delaware County	Study Area	New York State	Pike County	Wayne County
Less than 5 minutes	3.2	3.7	3.7	4.3	10.6	3.9	2.8	3.9	4.6
5 to 14 minutes	43.8	27.4	24.9	27.7	33.5	25.0	19.8	19.5	30.0
15 to 29 minutes	32.5	35.2	27.1	32.8	27.4	28.6	30.1	22.8	32.6
30 to 44 minutes	12.3	17.5	15.7	19.1	16.6	16.8	21.1	17.4	16.1
45 to 89 minutes	4.8	10.0	19.5	11.6	9.7	17.6	21.4	20.3	11.7
90 or more minutes	3.5	6.0	9.1	4.5	2.2	8.2	4.8	16.1	5.0

Notes: Travel time to work statistics are based on the universe of workers 16 years and older.
Source: U.S. Census, 2006-2010 American Community Survey.

Part-Time and Seasonal Employment. According to the Sullivan County Workforce Development Center, Sullivan County has the highest share of part-time workers of all counties in New York State. In 2000, approximately 47 percent of all private sector employees worked part-time. The largest number of part-time workers were employed in service businesses with fewer than 100 employees.

A large percentage of the workforce in Sullivan County and the study area more generally is seasonally employed, due in large part to the Catskill Mountain region's emphasis on tourism and outdoor recreational activity. The Sullivan County Workforce Development Center reported that in 2000, approximately 25 percent of all private sector employment was classified as temporary, which includes seasonal employment, short-term positions, and individuals substituting for workers on leave.

Unemployment. As shown in Table 4-24, in counties in which the study area is located the unemployment rate in 2010 ranged from 7.7 percent in Wayne County to 10.0 percent in Pike County, with Sullivan County at 9.2 percent. In general, between 2000 and 2004, the

unemployment rates increased in all areas and then experienced decreases between 2004 and 2007. Between 2007 and 2010, there was a significant increase in the unemployment rate, reflecting the economic downturn. In all areas, the unemployment rate in 2010 was the highest unemployment rate in the period from 2000 to 2010. In 2010, a monthly average of 50,200 people were unemployed in the six counties. Delaware County had 20,100 unemployed persons, representing 40 percent of the unemployed population in the six-county area. Orange County and Ulster County followed with 14,800 unemployed persons and 7,300 unemployed persons, respectively.

Table 4-24 Unemployment Rate 2000-2010 (percent)

Area	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sullivan County	4.3	4.6	5.0	5.3	5.3	4.9	5.2	5.3	6.4	8.7	9.2
Ulster County	3.6	3.8	4.4	4.6	4.9	4.4	4.2	4.4	5.4	7.7	8.2
Orange County	3.4	3.7	4.4	4.7	4.7	4.3	4.3	4.3	5.3	7.8	8.3
Delaware County	4.2	4.2	4.8	4.9	4.5	4.5	4.4	4.4	5.9	8.5	8.7
New York State	4.5	4.9	6.2	6.4	5.8	5.0	4.6	4.5	5.3	8.4	8.6
Wayne County, PA	4.6	4.9	5.1	5.1	5.2	4.8	4.1	4.1	5.2	7.5	7.7
Pike County, PA	3.8	4.8	5.6	5.8	6.0	5.9	5.6	5.4	5.6	9.1	10.0

Notes: Unemployment rate is annual average, not seasonally adjusted.

Sources: U.S. Census, 2006-2010 American Community Survey

4.10.2.4 Economic Trends and Conditions

This section provides a portrait of the region's business and industrial base, particularly as it relates to the tourism, retail trade and service sectors. These are the sectors most likely to be affected by the Casino Project. This section focuses on Sullivan County, the county for which a majority of the direct spending from Casino Project visitors would take place.

In 2010, there were 2,135 firms that employed 25,088 workers in Sullivan County. Approximately one-quarter of this employment was in the government sector (6,209 employees). The health care and social assistance sector followed with 5,404 employees, representing 21.5 percent of total employment in the county. The average annual wages ranged from $18,594 in the accommodation and food services sector to $64,700 in the finance and insurance sector.

Overall, the total number of jobs in the County increased by approximately 2.4 percent (or about 582 jobs) between 2000 and 2010 (see Table 4-25). Several industries experienced substantial growth over this period, including: health care and social assistance (1,398 new jobs or 34.9 percent growth), manufacturing (344 new jobs or 39.3 percent growth), and arts, entertainment, and recreation (233 new jobs or 76.6 percent growth). The overall growth in Sullivan County was restrained by a 24.1 percent decline in employment in the accommodation and food services sector (or 671 lost jobs) and a 43.3 percent decline in employment in the finance and insurance sector (or 593 lost jobs). The loss of employment in the finance and insurance industry was due

in part to the collapse of Frontier Insurance, which was formerly one of Sullivan County's largest employers.

The economy of Sullivan County has been based traditionally on the tourism industry. Given its natural assets, Sullivan County has been considered an ideal escape from city life. During the mid 1900's, the Catskill Mountain region was considered a major vacation destination for residents of the Greater New York Metropolitan area. Numerous camps, bungalow colonies, and resorts were established over the last century, including such famous hotels as Grossinger's, Brown's, the Concord Hotel, Kutsher's and many others. During the 1940's and 1950's, the Catskills (including Sullivan County), boasted over 1,000 facilities that included resorts, hotels, inns, motels, and bungalow communities. With the rise in air travel and competition from more modern resorts, Sullivan County's tourism sector began to decline in the 1960s. This downward trend persisted through 2000. Between 1995 and 2000, employment in the tourism industry (consisting of food services, lodging, amusement and recreation) decreased by 1,456 jobs, or almost 32 percent. The hotel and lodging sector experienced the largest decline, losing almost 40 percent of its employment base during the 5-year period. Sullivan County currently has fewer than 100 operating resort/hotel-type locations.

Since 2000, Sullivan County appears to be showing signs of reversing the downward trend of previous decades. Between 2000 and 2010, the number of employees in the arts, entertainment, and recreation sector increased by 76.6 percent, from 304 employees in 2000 to 537 employees in 2009. This was likely due in part to the opening of Monticello's Casino and Raceway and the opening of the Bethel Woods Center for the Arts. There was also an 18.4 percent increase in the number of employees at food services and drinking places, from 896 employees in 2000 to 1,061 employees in 2010.

Despite a lack of overall employment growth within the tourism-based industries, those services continue to provide a high percentage of jobs in Sullivan County. In 2010, there were 2,656 jobs in the tourism sectors, employing approximately 10.6 percent of all workers in Sullivan County.

Agriculture is another important foundation of the Sullivan County economy. As of 1997, the latest year for which data are available, farming in Sullivan County generated sales of approximately $23.36 million. This figure grew to a total of $42.11 million in 2007. Agriculture, forestry, fishing and hunting accounted for 284 jobs in 2010.

Table 4-25 Industrial Trends in Sullivan County

Industry by NAICS Codes	No. of Jobs				No. of Firms
	2000	2010	# Change	% Change	2010
Agriculture, Forestry, Fishing & Hunting	249	284	35	14.1%	14
Mining	77	95	18	23.4%	10
Construction	858	784	-74	-8.6%	267
Manufacturing	876	1,220	344	39.3%	51
Wholesale Trade	704	509	-195	-27.7%	65

Industry by NAICS Codes	No. of Jobs				No. of Firms
	2000	2010	# Change	% Change	2010
Retail Trade	3,234	3,119	-115	-3.6%	295
Transportation and Warehousing	518	514	-4	-0.8%	40
Information	269	172	-97	-36.1%	33
Finance and Insurance	1,368	775	-593	-43.3%	89
Real Estate and Rental and Leasing	376	385	9	2.4%	115
Professional and Technical Services	572	486	-86	-15.0%	158
Management of Companies and Enterprises	163	284	121	74.2%	8
Administrative and Waste Services	418	506	88	21.1%	87
Educational Services	132	163	31	23.5%	18
Health Care and Social Assistance	4,006	5,404	1,398	34.9%	203
Arts, Entertainment, and Recreation	304	537	233	76.6%	56
Accommodation and Food Services	2,790	2,119	-671	-24.1%	262
Other Services	1,422	1,378	-44	-3.1%	177
Government	6,033	6,209	176	2.9%	138
Unclassified	137	43	-94	-68.6%	42
Total	24,506	25,088	582	2.4%	2,135

Source: New York State Department of Labor; July 2010 and December 2011.

With regard to the study area as a whole, there are approximately 4,956 retail establishments in the study area, with approximately 41,080 employees. The largest retail sector in terms of employment is eating and drinking establishments, with an estimated 11,415 workers, or approximately 27.8 percent of all retail employees. There are an estimated 7,933 service establishments in the study area, with about 83,105 employees. The largest service sector in terms of employment is the education institutions and the health services sector, with approximately 19,845 and 19,405 workers, respectively.

4.11 Community Services

The following is a description of the local and regional community services that are provided within the overall project area of Sullivan County and the Town of Thompson. A brief outline of emergency services including police, fire, ambulance and the court system will be discussed below. Information on community services was updated for this FEIS. The principal change from the DEIS is the adoption by municipalities in the Project Area of more stringent zoning and comprehensive plans, which allow greater control over growth and development.

4.11.1 Criminal Justice System

4.11.1.1 Sullivan County Sheriff's Department

The Sullivan County Sheriff's Department provides primary police protection for the Town of Thompson. Given its low population density, the Town of Thompson does not have its own police force and relies on the County and other law enforcement agencies for law enforcement services.

4.11.1.2 State Police

The New York State Police Department maintains four police barracks in Sullivan County located in Liberty, Roscoe, Narrowsburg and Wurtsburg. The closest barracks to the project site is in Wurtsburg, located near Interchange 113 off State Route 17. The State Police assign at least one officer to handle calls in the Town of Thompson. When an arrest is made in the Town of Thompson or Village of Monticello, the State Police will transport the individual(s) to the barracks of the arresting officer. The arrested person will be processed and either the justice from the Town or Village will be contacted for scheduling a hearing on the matter.

The New York State Police maintain a close working relationship with all local law enforcement authorities given the rural nature of the county.

4.11.1.3 Village of Monticello Police Department

The Village of Monticello, located within the Town of Thompson, maintains its own police force. Police units will respond to calls outside of their jurisdiction, when necessary.

4.11.1.4 Judicial System

All criminal and civil cases in the county are heard by two county justices within the Sullivan County Courthouse in Monticello. All arrests are processed through the corresponding county or local police barracks. The arresting officer will contact the Village Justice or Town Justice to determine if the individual(s) are required to be held at the Sullivan County Jail, pending trial. The jail can hold 208 inmates and generally operates at a 75 percent level of capacity.

4.11.2 Fire Protection

Sullivan County has approximately 2,500 fire and rescue volunteers within the 15-town region, according to Harold Kroninberg, County Fire Coordinator. Each town has a Volunteer Fire Department with the exception of the Village of Monticello, which has full-time staff. In the event of a major emergency, a county-wide mutual aid agreement was created with adjacent Ulster and Orange Counties.

4.11.3 Emergency Services

The county relies on a private ambulance company, Mobile Medic, as the primary provider of emergency medical services. Based in Hurleyville, approximately 8 miles away, Mobile Medic provides advanced life support (ALS) throughout Sullivan County. Mobile Medic is called first to the accident scene with the local community ambulatory services called in as backup or to handle additional emergencies.

Each community has its own ambulatory corps, which responds to emergency calls on a 24-hour, seven-day-a-week basis. The Rock Hill Ambulatory Corps, closest to the project site, provides two ambulances to respond to medical emergencies. The Village of Monticello has three vehicles that can be called upon as back up to assist in any medical emergencies. The Monticello Ambulance Corps is within two miles from Interchange 107 on State Route 17.

All medical emergencies are directed to Community General Hospital of Sullivan County, located 10 miles from the site in the Village of Harris within the northwest quadrant of Thompson. A smaller medical facility, Community General Hospital, is located in the Village of Callicoon in the Township of Delaware approximately 26 miles due west of the project site.

4.11.4 Schools

The Monticello Central School District provides K-12 education for the Towns of Bethel, Fallsburg, Forestburgh, Mamakating and Thompson covering a 190 square mile area. This school district has an enrollment of approximately 3,439 students situated within five school facilities including the Monticello High School (9-12), Monticello Middle School (6-8), one (K-5) elementary school, one (K-2) elementary school and one (3-5) elementary school. All of the schools within the district have been expanded within the last few years. There is excess capacity in this school system. An enrollment study for the Monticello Central School District published in January 2010 found that there is currently significant unused pupil capacity in the district's school buildings, and enrollment estimates suggest that unused capacity will continue to exist into the future for at least the next five years (Seversky 2010).

A nine member Board of Education oversees the school budgetary process and is in charge of setting policies and procedures for its employees. The annual budget is estimated at approximately $75.99 million for the 2010-2011 school year based on information obtained from the Monticello Central School District.

4.11.5 Recreation/Open Space

There are no recreational facilities on the project site. Recreational facilities located near the project area include the Holiday Mountain Ski Area and Concord's Monster and International Golf Course. The Neversink River which adjoins the project site along its eastern boundary offers trout fishing with six public access points available between Bridgeville and Hasbrouck as noted on the Sullivan County Open Space and Eco-Tourism map (1999).

Open space on the site is generally limited to the portions of the site that are west of County Highway 161 and Old County Highway. The portions of Gildick that occur along the east side of

County Highway are also open space. The remainder of Gildick consists of the auto salvage yards and mining areas. None of these lands are public open space.

In general, Sullivan County is well-known throughout the region for its unique blend of natural resources and year round leisure and outdoor recreational opportunities. Located in the foothills of the scenic Catskill Mountains, this region offers an extensive variety of recreational pursuits including fishing, hunting, golf, camping and a number of state and county parks open to the public for day and overnight use.

Sullivan County has over 168,000 acres of open space of which over 50 percent is dedicated to private forest lands and agricultural lands. State, county and municipal parks comprise an additional 34,220 acres of land or 20 percent of the total open space. Open space constitutes 25 percent of the over 1,011 square miles of land area in Sullivan County.

4.12 Utilities

The information in this section was updated to reflect current conditions. No significant changes in services were found, other than the closing of the Sullivan County Landfill.

4.12.1 Water Supply

Both the Town of Thompson and the Village of Monticello have public water supplies in the area. These have been previously described in Section 3.1.4, and shown on Figure 3-2.

The entire project area is located outside of the watershed to the New York City public drinking water supply.

4.12.2 Wastewater Treatment

Wastewater collection and treatment facilities are located in both the Town of Thompson and the Village of Monticello. These facilities have been previously described in Section 3.1.4, and shown on Figure 3-2.

4.12.3 Electrical

New York State Electric & Gas Corporation (NYSEG) currently provides electric service to this area of Sullivan County. The closest substation to the site is at Interchange 109 in Rock Hill, approximately two miles east of the site.

4.12.4 Gas

A natural gas distribution system does not currently exist within Sullivan County. An interstate transmission line, owned by Columbia Gas, does traverse through the county but is not currently available for local service.

4.12.5 Telephone and Cable

Verizon is currently the local telephone service provider in the area who maintains the overhead distribution lines. Telephone service is currently provided from central office locations in Monticello and Fallsburg. AT&T is also an approved local telephone service provider in the area. In general, they provide telephone service over Verizon's equipment from their own central office locations. However, in some cases, they either maintain parallel service lines or share ownership of lines with Verizon. AT&T and Verizon have an alliance agreement to share equipment.

Currently, Time Warner provides cable TV service in the area, providing cable TV from a fiber optic to co-ax cable system. Existing service is generally fed along overhead lines from a hub site in Wurtsboro.

4.12.6 Solid Waste

There is currently little to no solid waste generated on the project site. The Division of Solid Waste manages Sullivan County's solid waste at the materials recovery facility in Monticello at the old landfill and at five recycling and transfer stations located throughout the County.

4.13 Land Use and Community Character

This section reviews land use planning, zoning, aesthetics, and community character in the area around the project site. This section was updated to reflect current conditions. The principal change from the DEIS is the adoption by the Town of Fallsburg of a new comprehensive plan and updated zoning that affords that municipality greater control over growth and development.

4.13.1 Land Use

Land use on the site and surrounding area can be seen on Figure 4-16. As indicated previously, the site is predominantly undeveloped with the exception of the Gildick parcel, which supported an auto salvage yard and a mining operation totaling approximately 62 acres, including sediment basins. The property contained a garage used by the auto salvage operation (demolished in 2003) and a small abandoned farmhouse. The remaining portion of the Gildick parcel contains mining roads, several ponds, forested areas, floodplains/wetlands and steep rock outcrops. The southern portion of the site was strewn with junk cars and auto parts. Figures 4-17 through 4-20 show original site land use in these areas. In anticipation of the property being taken into trust, junk cars, parts and other miscellaneous debris have been removed from the site. In addition, the unvegetated areas of the mining operation have been regraded and seeded.

The other parcels do not contain any active land uses and are largely forested with some minor earth removal. Three foundations are located on Cooke West, including the foundations of a former hotel in the southeastern corner of the Cooke West parcel close to County Highway 161. Portions of the Cooke and Rossini parcels were historically used for timber harvesting.

Development along County Highway 161, adjacent to the Gildick property contains a mix of year-round and seasonal homes. The major land use consists of a 25-unit bungalow community,

located approximately 1800 feet north of Interchange 107 off State Route 17. Several single family homes are located south of the site. These properties are located off Foss Road, which also provides direct access into the site for the auto salvage and the mining operations. There are no stores or other destinations by the project site, so pedestrian traffic is limited.

Small single family residences, north of the Cooke East property, are scattered along the western side of County Highway161. Most of these properties are located close to the road on one acre lots with large open parcels to the rear. Many of these properties were traditionally seasonal homes and have been winterized for year-round use.

Land uses adjacent to the Cooke West property include a small manufacturing operation located south of the parcel. Access is off of Old Route 17. To the west of the Cooke West property is a scattering of modest homes with access onto Jones Road. Several single family homes are located adjacent to the Rossini parcel to the south along County Highway 161. The balance of the adjacent land use is characterized as undeveloped forest lands.

Commercial uses become more pronounced west of the project site along State Route 17 and towards the Village of Monticello. This area has experienced commercial sprawl due to zoning and access/visibility along a major thoroughfare. Monticello is the central business district for the Town of Thompson and contains a variety of retail and service establishments. This business area is located approximately 2.5 miles from the site. The Sullivan County Government Center is located within the Village of Monticello. The closest resort facility to the site is the Raleigh Hotel which is approximately 3 miles north of State Route 17 on County Highway 161.

The proposed water supply connection alignment generally passes through commercial and residential areas. The proposed wastewater treatment connection alignment passes through sparsely residential areas (including some hotels), with the exception of the more densely developed Thompsonville area.

4.13.2 Land Use Planning and Growth Management

An updated review of the local land use policies and zoning regulations in Thompson and Fallsburg, and the Village of Monticello – the communities nearest to the Casino Project – is provided below (see also Appendix U). These communities have clearly thought through their goals, and have pursued a deliberate and considered path toward establishing policies and land use regulations aimed at reflecting community values. As discussed, the Town of Thompson and the Village of Monticello have recognized their interdependence, and have jointly prepared a comprehensive plan. While this plan was prepared in 1999, it reflects planning practices and principles still in place. The Town of Fallsburg comprehensive plan was completed in 2006, and similarly reflects current planning practices and principles. These policies and growth management tools are expected to guide growth, as it may occur, and to uphold those community values embodied in these plans. While local land use and zoning regulations would not apply once tribal lands are held in trust, the Casino Project is consistent with the approach taken in these planning documents.

4.13.2.1 Town of Thompson / Village of Monticello

Joint Comprehensive Plan (1999). The Town of Thompson encompasses the Village of Monticello, making these two communities inherently interconnected. As such, the Town of Thompson and the Village of Monticello prepared a joint comprehensive plan in 1999 to coordinate planning efforts and to establish consistent visions and goals for the area. The Joint Comprehensive Plan recognizes the significance of the tourism industry on the local economy and the importance of encouraging economic growth while preserving sensitive environmental resources. Much of the area's tourism appeal relies on the preservation of the scenic and bucolic nature of Sullivan County.

The Town of Thompson/Village of Monticello Joint Comprehensive Plan notes the decline of the tourism industry in Sullivan County over recent decades. The rejuvenation of this industry is seen as an important means to revitalize the Village of Monticello and the Town of Thompson. For example, as stated in the Plan:

> *"Providing for land uses such as the Concord Resort Hotel is necessary to preserve major employment centers and preserve a source of attraction to the Town and region. The number of major resorts has dwindled and those which remain should be protected from incompatible adjacent land uses and permitted to expand and develop, provided those development plans maximize the protection and enjoyment of the Town's natural resources on which the bulk of the tourism industry depends."*

Even though these communities seek to foster economic development and increase tourism, they stress the importance of controlled growth and carefully planned development. Without guiding development, economic growth could result in undesirable development patterns and diminish the scenic and rural value of the area on which the tourism industry depends. The Joint Comprehensive Plan also encourages concentrating future growth in existing hamlet centers and other areas where existing retail, office, or industrial development are currently concentrated. A primary objective of these policies is to prevent sprawl and to concentrate development in areas equipped with municipal water and sewer services, to lessen the burden on the environment.

The Joint Comprehensive Plan outlines a clear vision for future growth in Thompson and Monticello and recommends a number of modifications to local zoning codes that would help realize these goals. One of the recommendations of the Plan is to implement provisions for conservation or cluster developments. These types of developments minimize land disturbance by clustering homes on smaller lots, thereby preserving open space. In addition, the extent of infrastructure is reduced, including roadways, water and sewer distribution systems, etc.

Some of the major land use recommendations that have a bearing on the Casino Project are identified below:

- Revitalize the Village of Monticello, especially along Broadway, to serve as a tourist attraction and as a commercial and business center

- Establish regional centers that are convenient to interstate highway access

- Preserve major employment centers as a source of attraction to the town and the region, including resort hotel developments

The revitalization of downtown Monticello and attracting resort and destination type uses to the area are considered integral components of the economic development plan for Sullivan County.

Zoning. The primary tool for enforcing the visions and goals outlined in the comprehensive plan is the local zoning ordinance. The Joint Comprehensive Plan recognized that existing zoning at the time the Plan was adopted was not favorable for guiding future growth in line with these objectives and cited weak zoning regulations and poor zoning enforcement as contributors to unorganized and disjointed previous development. Zoning standards in the Town of Thompson favored low- and medium-density single-family residential development in most areas, which promotes sprawling suburban-type development. Zoning regulations in the Village of Monticello did not support mixed-use or higher-density multi-family development in downtown areas, which is needed to enhance the vibrancy of the downtown. Commercial zoning districts within each municipality encouraged strip development. As a result, commercial facilities became highway-oriented and were established along major highways outside of the downtown area such as along State Route 17 (now Interstate 86, or I-86), Old Route 17, Route 42, and Route 17B.

The Joint Comprehensive Plan and local zoning ordinances are structured to prevent disorganized and incompatible land uses. These documents are adopted land use policies that direct development in an orderly, environmentally-sound manner. They are intended to preserve the rural character of Thompson and Monticello, while promoting economic development.

Town of Thompson Zoning. The Town of Thompson zoning code employs a number of tools that enforce orderly and environmentally-conscious development. In line with recommendations of the Joint Comprehensive Plan, the zoning code includes provisions for cluster subdivisions and planned unit developments (PUD), which promote open space conservation.

Much of the Town of Thompson is zoned for low-density residential uses. In order to prevent sprawl, the zoning code allows cluster subdivisions and PUDs. Cluster subdivisions involve reducing residential lot sizes and grouping homes together to maximize preservation of open space and minimize disturbance required for infrastructure. As stated in the Code:

> *"The purpose of this provision is to provide flexibility in the design and development of land in such a way as to promote the most appropriate use of land, to facilitate the adequate and economical provision of streets and utilities, and to preserve the natural and scenic qualities of open space."*

Cluster subdivisions are permitted within the Suburban Residential (SR) district and the Rural Residential (RR-2) district.

A PUD is similar to cluster zoning in that it promotes development that preserves open space. However, commercial uses are also permitted in PUDs that primarily serve residents of the PUD. Minimum site area for a PUD is 30 acres of which at least 35 percent of the land area must be

preserved as open space. PUDs are permitted in the SR district and Rural Residential (RR-1) district.

To regulate nonresidential uses, the zoning code establishes a number of commercial and business districts. These districts are intended to restrict nonresidential development to appropriate areas, such as in hamlet centers or in close proximity to major highways. Nonresidential districts in the Town include the Highway Commercial (HC-1 and HC-2) districts, the Commercial Industrial (CI) district, the Extractive Industry (E) district, the Planned Resort Development (PRD) district, and the Planned Business Park (PBP) district.

The HC-1 and HC-2 districts are primarily designated in or near hamlet centers. Permitted nonresidential uses are subject to site plan review and special permits, but include lodging establishments, business offices, retail uses, eateries, theaters, and government offices. CI districts are primarily designated along or in proximity to principal highways such as State Route 17 and State Route 17B. The CI district permits similar commercial uses as the HC-1 and HC-2 districts, but also permits larger-scale uses such as manufacturing and warehouse activities. The E district is also restricted to areas along major highways and permits quarrying and stockpiling activities, with a special permit and site plan review.

The PBP district is allowed within other business districts and is intended to permit commercial, administrative, and research facilities. The PRD district has been established to foster development of the resort and tourism industry, which is a significant contributor of the region's economy. This district allows the Town to support the tourism industry by limiting resorts and entertainment centers to appropriate areas where they can realize their greatest economic potential without adversely affecting residential areas. PRD districts are permitted within an RR-1 district, SR district, HC-1 district, and HC-2 district. The PRD district allows large-scale recreational venues and compatible land uses provided that they do not have significant adverse effects on the environment and the quality of life for Town residents.

Village of Monticello Zoning. The Village of Monticello is more densely developed than the Town of Thompson and is the focus of neighborhood commercial activity and higher-density residential development. The Village zoning code is structured to limit commercial, retail, and business activity to principal highways in the Village with residential uses along local streets. Mixed residential and commercial uses are permitted in business districts, where appropriate, to promote vitality in the downtown area.

A significant portion of the Village of Monticello is zoned as RM (Multiple Dwelling Residence). The RM district allows multiple-family dwelling units by special permit. As such, higher-density residential uses are concentrated in the Village center, rather than in more sparse, rural areas of the community such as the Town of Thompson. This development pattern is consistent with the vision expressed in the Town of Thompson/Village of Monticello Joint Comprehensive Plan.

The Village has retained a professional planning firm for the purpose of updating its zoning ordinance in the near future. Under New York State law, local land use regulations, such as zoning codes, must be consistent with local comprehensive plans. It is possible, therefore, that

the Village may elect to update its 1999 joint comprehensive plan as a prerequisite to revising its zoning and other land use regulations. Nonetheless, revisions to the existing zoning code are expected to provide the Village with more refined tools to manage its growth and direct new development in a manner consistent with its comprehensive plan policies.

4.13.2.2 Town of Fallsburg

Town of Fallsburg Comprehensive Plan (2006). Similar to the Town of Thompson and the Village of Monticello, the Town of Fallsburg has implemented land use policies that work to enhance its economic base while preserving its rural and small-town character. The Town of Fallsburg adopted an updated comprehensive plan in 2006 to strengthen its land use policies in response to increasing development pressure. Much of the Town consists of undeveloped woodland and agricultural land with distinct hamlet centers. While the Town encourages increased development to expand its tax base and employment opportunities, it seeks to ensure that development occurs in a controlled manner that is beneficial to the community and its residents and that protects important environmental features.

Principal goals of the comprehensive plan are to enhance the economic vitality of the Town while preserving open space and farmland. The comprehensive plan outlines a series of objectives that direct growth in areas most suitable to accommodate development. These include areas with existing municipal water and sewer services, or areas where these services can be expanded. The comprehensive plan recommends directing growth in hamlet centers where municipal services are available and where higher-density development already exists. Concentrating development in hamlet centers discourages sprawl and creates vibrant neighborhoods.

The importance of preserving farmland is further evidenced by the comprehensive plan's recommendation to pursue the purchase of development rights (PDR) for farmers through grants from the New York State Department of Agriculture and Markets. In addition, the Plan recommends offering a density bonus to developers who are willing to preserve 25 acres or more of soils classified as having prime or statewide significance for agricultural purposes.

The Town of Fallsburg Comprehensive Plan positions the Town to manage future growth. This is an adopted public policy document that affects other legislation in the Town and that affects the approval process of new development. The primary regulatory document that enforces the visions and goals of the comprehensive plan is the Town zoning code. The Plan recommended a number of zoning revisions that would enhance its ability to guide growth in the Town. Recommendations included:

- Expanding the Agricultural (AG-1) zoning district to further protect farmland and agricultural businesses
- Adopting cluster subdivision regulations
- Creating a Mixed Use (MX) zoning district
- Creating a Planned Resort (PR) zoning district
- Creating a Neighborhood Business (NB) district

- Reducing the extent of business districts outside of hamlet centers
- Adopting a State Route 42 Overlay Zone to improve the appearance of this corridor

The recommendations listed above strive to create a master plan for future development that promotes economic development, encourages commercial activities in higher-density areas, and prevents suburban residential sprawl.

Town of Fallsburg Zoning Code. The Town of Fallsburg zoning code is the regulatory document that enforces goals and objectives of the Town comprehensive plan. The zoning code was last updated in 2007 and incorporates many of the principles outlined in the comprehensive plan. In compliance with the comprehensive plan, an MX district, an NB district, and a PR district were created. These zoning districts allow the Town to direct growth in hamlet centers and implement special standards that cater to the Town's unique position of hosting many resort venues. In addition, the zoning code has provisions for cluster subdivisions and the AG-1 district was expanded to protect the interest of farmers and the critical nature of the Town's farmland.

After the adoption of the Town comprehensive plan, the zoning code was modified to consolidate business and commercial districts into hamlet centers and provide greater flexibility in lower-density residential districts for cluster developments. The geographic extent of the Business (B-1) district was reduced and modified to limit small-scale commercial and service uses to principal highways and hamlet centers, which are conducive to this type of development. Mixed commercial and residential uses are permitted as well, which is characteristic of hamlet centers. The zoning code also implements a Hamlet Residence (HR-1) district to allow for greater density of residential development in hamlet centers.

As discussed above, in response to recommendations of the comprehensive plan, the zoning code incorporates several new districts that will allow the Town to better manage growth. The NB district was created to allow small-scale business development along principal roadways and in hamlet centers that is compatible with adjacent residential uses. The MX district was created to foster mixed commercial and residential development in hamlet centers. The PR district was created to support continued development of existing resort facilities, which support much of the area's economy, or support reuse of these already developed sites for mixed residential and commercial developments.

The zoning code that was adopted in 2007 expanded AG-1 districts to support agricultural practices in the Town, which are a significant component of the Town's character and a way of life that sustains many local residents. Expanding the AG-1 district reduces the potential for outlying areas of the Town to be developed with commercial businesses and higher-density residential developments.

A significant portion of the Town is zoned for large-lot residential uses, which aim to preserve the rural character of the Town by reducing density of residences. However, higher-density cluster subdivisions are permitted in residential zoning districts, which promote open space preservation for larger developments. Cluster subdivision sites must be at least 15 acres whereby at least 35 percent of the site must be preserved as open space. Cluster subdivisions allow homes

to be grouped on smaller lots to minimize overall land disturbance and the extent of infrastructure, which is more efficient and reduces impervious surface coverage.

Similar to the Town of Thompson, the Town of Fallsburg includes provisions for PUD districts, which encourage community developments of clustered housing and small-scale commercial uses that serve local residents. Minimum site area for a PUD is 25 acres of which at least 35 percent must be preserved as open space. As with cluster subdivisions, the PUD allows for higher-density development in order to minimize land disturbance and offer greater protection to environmental resources.

4.13.2.3 Zoning

The project parcels are located within two different zoning districts as noted on Figure 4-21. These include Highway Commercial 2 on Gildick and Rossini and, Commercial-Industrial on Cooke West and Cooke East.

The alignment for the water supply connection goes primarily through Rural Residential zoned areas. This alignment also goes through a small area zoned Neighborhood-Commercial in Thompsonville, and a small area zoned as Recreation District in Fallsburg.

4.13.2.4 Aesthetics

The project site is located in a rural setting within the foothills of the Catskill Mountains that is bounded by County Highway 161 and the Neversink River. The remediated upper mining and auto salvage areas on Gildick are visible from State Route 17 (See Figure 4-17) and from the immediately adjacent residences on Foss Road. The lower mining operations are visible from Edwards Road. Otherwise, the topography and trees generally block views of the Gildick, Cooke and Rossini properties from the adjacent roadways.

4.13.2.5 Community Character

The Town of Thompson possesses a rural atmosphere that is attributable to the surrounding natural areas that compromise much of Sullivan County. Historically, Thompson was a summer tourist and vacation destination for urban dwellers looking for a chance to enjoy that outdoors. This area offers a plethora of outdoor sporting activities, including fishing, camping, golf, and boating. Many of the visitors come from the greater New York/New Jersey area and came to the resorts and bungalow colonies that were scattered throughout the lower Catskill region.

Although no longer the tourist attraction that it was during its “Borscht Belt” heyday of the 1950’s and 1960’s, Sullivan County still has a number of bungalow colonies that are used during July and August. These bungalow colonies are now mainly used by Orthodox Jewish communities. One such colony is located on land adjacent to the project site, but most are at least two miles away. In addition, Sullivan County contains two Orthodox Jewish yeshivas, which are year-round, religious institutions of learning. These yeshivas are located five to ten miles from the project site. People observing Orthodox Jewish customs are only allowed to walk

on the Sabbath; however, most of the bungalow colonies and the yeshivas are self-contained facilities with synagogues on site.

The demise of the resort industry had a profound impact on the area and caused an economic depression from which the area is just beginning to show signs of recovery. The lack of a vibrant tourist trade and new job opportunities has caused a disincentive in maintaining properties and promoting physical improvements along the retail corridor between Thompson and Monticello. Residential growth from the greater New York City metro area is starting to occur in Sullivan County, but commercial development in the area is still limited and the area retains its predominately rural characteristics.

4.14 Greenhouse Gas Emissions

Tech Environmental, Inc. prepared a greenhouse gas (GHG) emissions analysis consistent with the NYSDEC Policy "Guide for Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements," July 15, 2009 (the "Policy"). Although the Policy does not apply to this FEIS under NEPA (as well as because the Casino Project would be on lands taken into trust for the Stockbridge-Munsee Community), it does provide guidance in performing an assessment of GHG emissions for activities such as the Project. The Policy recommends a project to quantify its carbon dioxide (CO_2) emissions and to review and assess mitigation measures that reduce such emissions. In addition, the Policy suggests the project proponent quantify the effect of proposed mitigation in terms of emissions reduction and energy savings. Because the existing site is vacant, it does not generate greenhouse gases and, as such, the greenhouse gas analysis focuses on the Build conditions (see Section 5.14).

5.0 Environmental Consequences

Similar to the review of the affected environment, this section considers the three main project components (the work on tribal lands, roadway improvements and utility corridors). The potential effects of both the Casino Project Alternative (short and long term as well as direct and indirect) and the No Action Alternative are considered here. Construction related impacts for erosion and sediment control, stormwater management and minimizing land disturbance (Section 5.1.2), traffic (Section 5.7), air quality (Section 5.8) and noise (Section 5.9) are also considered. Cumulative effects, in consideration with other known and potential projects in the area, are considered in part here but are discussed fully in Section 6.0. Impacts from induced growth are discussed in Section 7.0.

This section of the FEIS incorporates updated analyses conducted to reflect changes in conditions or circumstances, new information and/or changes in law or regulations detailed in Section 4.0 of this FEIS. The overall Casino Project did not change from the description in the DEIS other than some adjustment to the phasing. Changes from the impacts reported in the DEIS are summarized below.

There are no changes to the impacts reported in the DEIS with regard to impacts on topography and geology, fish and wildlife, and historical and archaeological resources as the updated investigations and inquiries did not reflect relevant changes in conditions or information. With regard to soil, groundwater and surface water, the FEIS takes account of the changes to the groundwater infiltration basins that are part of the stormwater management system for on-site construction necessitated by the NYSDOT taking of land for its State Route 17 Neversink River bridge replacement. The FEIS also reflects the revisions in this system to comply with the 2010 edition of the NYS Stormwater Management Design Manual. Overall, similar to the DEIS, the Casino Project will meet or exceed applicable standards and guidance in the USEPA NPDES General Permit for Discharges from Large and Small Construction Activities for on-site construction and the NYSDEC SPDES General Permit requirements for the off-site construction, and thus prevent any significant impacts to soil, groundwater or surface water.

The FEIS also reflects the potential limited increase in USACE jurisdictional wetlands of approximately 0.59 acres due to the changed conditions – but essentially unchanged functions and values – of former mining Basins 1, 2 and 4. The FEIS assumes that, due to the mine restoration undertaken by the Tribe, these areas will be considered to be jurisdictional, and thus provides additional mitigation at the same approximately 3:1 ratio provided for the 1.48 acres of vegetated wetlands that were reported as impacted in the DEIS.

A post-DEIS petroleum spill reported to be along the proposed water main route and possible tank tightness test failures at the Concord Hotel along the proposed sewer main route should be remediated by either the responsible party or NYSDEC before work in that area commences; if not, the Tribe will coordinate with the responsible party and/or NYSDEC to ensure that the construction work does not exacerbate a spill and meets all applicable health and safety requirements. Standard construction practices and reporting methods will be employed.

Traffic analyses were conducted for the revised 2018 build year based on the 2010 traffic counts and other updated information regarding roadway conditions, as well as the current list of other proposed projects in the study area. The new projects include the proposed Concord Hotel and Casino and the initial phase of the Rock Hill Town Center development, both of which are located in the Town of Thompson. The assessment used conservative assumptions similar to those employed in the DEIS. It also assumed, consistent with the DEIS, that a series of improvements, including those at Interchange 107 of State Route 17 and the widening of County Highway 161 between the proposed site driveway and State Route 17, will be undertaken. The level of service (LOS) analysis shows results similar to those in the DEIS; traffic volumes during the Friday, Saturday and Sunday PM peak hours will be at LOS C or better, except for a single intersection at D. In terms of regional traffic, the Casino Project, as reported in the DEIS, will add approximately 75 percent of its traffic to State Route 17, east of County Highway 161, toward New York City. While project-related daily traffic volumes (including background growth) will increase on State Route 17 in Sullivan and Orange Counties by 26 percent and 17 percent, respectively (which are higher percentages than reported in the DEIS), the capacity of State Route 17 in its current configuration can accommodate this increased volume of traffic.

The air quality microscale and mesoscale analyses were updated to reflect current traffic volumes, current ambient air quality data and changes to the NAAQS. The updated analyses, similar to those in the DEIS, show that the Casino Project will not cause or contribute to any violations of the NAAQS, and that Sullivan and Orange County will remain in attainment or unclassified for all criteria pollutants, except that Orange County will remain in non-attainment status for ozone. Regional impacts are also similar to those reported in the DEIS. The noise analysis was updated to reflect current traffic information and, consistent with the DEIS, shows no significant impact from the project.

The socioeconomics assessments, after being updated to reflect current conditions in the region, reflect similar results as the DEIS. The Casino Project revenue stream will have significant benefits for the Tribe, allowing improvements in both needed programs and infrastructure on the reservation in rural Wisconsin and creating employment for Tribe members on or near the reservation. The overall fiscal benefits of the Casino Project in the region will be positive, similar to those reported in the DEIS, as there will be increased employment and concomitant indirect economic benefits from both construction and operation stages. For example, the updated analysis indicates that the annual economic benefits to the Sullivan County region from project operation will be over $700 million and to the State will be over $900 million. The housing demand generated by the Casino Project, similar to the assessment in the DEIS, will be met by a combination of existing housing stock and units already proposed in Sullivan County.

The evaluation of community services was also updated based on current data and information. Similar to the DEIS, no significant impacts are expected on these services. Utilities remain adequate to service the project, as reported in the DEIS. The land use and community character impacts remain similar to those described in the DEIS, as the changes in comprehensive planning and zoning serve to allow municipalities to better control growth and development, and thus limit any potential indirect effects of the Casino Project.

The greenhouse gas assessment used the NYSDEC Policy "Guide for Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements," July 15, 2009 as guidance, as there is no equivalent federal document. The analysis shows that the project will generate less than 25,000 tons per year of carbon dioxide emissions, and that the preferred alternative will reduce emissions from the base case (a building that complies with the New York State Energy Code) by 22.9 percent. The preferred alternative includes a number of energy saving and sustainability measures.

As previously indicated, land that is taken into trust by the United States on the behalf of the Tribe is no longer subject to New York State environmental jurisdiction. The Tribe intends to obtain federal permits for work performed on trust land since the development will not occur until the land is held in trust for the Tribe and thus under federal jurisdiction. However, to the extent appropriate, the Tribe has used New York State environmental laws as guidance on applicable standards, such as the NYS Stormwater Management Design Manual and the NYSDEC Policy on Greenhouse Gas Emissions.

5.1 Topography, Geology and Soils

5.1.1 Earthwork

Tribal Lands. Site earthwork (earth and rock excavation) will be required for construction of the Casino Project. The site plan has been designed to minimize site cuts and fills by situating the majority of the building development on the lower, flatter portion of the Gildick parcel. The area of site disturbance will be minimized by consolidating the building program in a main facility that has two other smaller support buildings. The Phase II, 750-room hotel will contain 15 stories and will be attached to the casino, thereby reducing its footprint on the site. Additionally, approximately 95 percent of all parking spaces are in multi-level parking structures or under the casino, further reducing site cuts and fills and the amount of site disturbance. The quantities of cuts and fills for the development are estimated at over 1,000,000 cubic yards of rock and overburden excavation and 705,000 cubic yards of fill

Due to the site's topographic conditions, a cut and fill balance on the site is not possible. To the extent practical, excavated rock and earth material will be processed on-site for reuse as suitable fill material or for other specialized materials, such as structural backfill, road base and rip-rap. Topsoil will be stripped and reused in landscaped areas and to revegetate currently exposed soil areas, to the extent available within the disturbed areas of the site. A significant portion of the excess material will be used directly for the proposed off-site roadway and interchange improvements along County Highway 161 and State Route 17. The remainder will be transported off-site to projects needing fill material. No material will be removed solely for the purposes of resale.

Rock removal requiring blasting will be done using controlled blasting techniques, including the use of pre-splitting and/or line drilling along the proposed bedrock face. Stabilization of existing and/or created rock slopes will be conducted, as required. The extent and nature of the required

rock excavation, and the specific construction techniques to be used, will be determined after conducting test borings and additional geologic mapping of the rock outcrops in the proposed rock cut areas. The excavation will also be further assessed during construction as the rock slopes are exposed.

Public Roadway Improvements. Improvements to the adjacent public roadways will also require earth and rock excavation. General procedures will be the same as those described above.

Utilities Connections. The water and wastewater treatment connection alignments will be in existing roadways and are not, therefore, expected to require any significant amounts of earthwork. Installation of the underground lines may result in excess material being removed from the trenches. This material will be removed from the site.

5.1.2 Erosion and Sedimentation Control

5.1.2.1 Tribal Lands

During construction, areas of soils will be exposed. These soils could erode into, and cause sedimentation of, adjacent waterbodies and wetlands if controls are not established. The control of soil erosion and sedimentation from the site during construction will be based on the regulations, guidelines, and conditions set forth by the USEPA in its National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Large and Small Construction Activities. In accordance with Appendix B 2 of the General Permit, the USEPA is the permitting authority for projects located in Indian Country within the State of New York. Design of the proposed facilities also considered erosion and sediment control by maximizing the use of previously disturbed areas, working with site topography to balance cuts and fills, avoiding direct impacts to natural waterbodies, and providing restoration of disturbed areas. Permanent control features are discussed in Section 5.2.

Storm Water Pollution Prevention Plan (SWPPP). Controls during construction will be incorporated in a Storm Water Pollution Prevention Plan (SWPPP) that complies with the NPDES General Permit requirements for on-site construction and NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit requirements for the off-site construction. A preliminary SWPPP has been developed for portions of the Casino Project located on the Gildick property and is included in Appendix K. Final SWPPPs will be prepared for on-site and off-site project components prior to earth disturbing activities. The preliminary SWPPP establishes the on-site portion of the Casino Project's approach to controlling water pollution during construction and lists structural and non-structural Best Management Practices (BMPs) that may be employed to control stormwater pollution associated with construction. The SWPPP also identifies stormwater control measures that are anticipated to remain after the construction is complete. Erosion control methods such as minimizing areas of disturbance, maintaining existing vegetated areas and employing non-structural and structural stabilization methods are discussed. Stabilization methods include seeding, mulching, geotextiles, flocculation (see section on colloidal soils below), bonded fiber matrices, permanent vegetative

cover, turf reinforcement mats, bioengineering, armoring, and outlet stabilization. Other measures will include stabilized construction exits, dewatering and dust control methods, management of hazardous materials and stockpiling. Velocity dissipation methods such as surface roughening, diversion swales, check dams, earth dikes and level spreaders are detailed. Measures for sediment control techniques such as hay bales, fiber rolls, silt fences, and temporary sedimentation basins are also detailed. Finally, the SWPPP describes training, inspection and reporting responsibilities.

Colloidal Soils. Extensive deposits of colloidal soils are not anticipated on the site based on subsurface explorations and the site's history as a sand and gravel mining operation. At this time, it is unknown if such deposits will be encountered during construction of the off-site roadway and utility improvements, although it will be a goal to either avoid or minimize the disturbance of these soil types, where practical. However, to the extent that colloidal or other soil fines are encountered during construction that cannot be controlled with standard soil erosion and sediment control measures, a filtration system or flocculation treatment will be provided as an additional treatment process to remove fine, suspended particles from the stormwater runoff.

A flocculent, such as polyacrylamide (PAM), will be used to control colloidal soils if necessary. PAM has been shown to conveniently and inexpensively stabilize soils and remove fine suspended sediments from stormwater. PAM is a long-chain organic polymer developed to clarify drinking water. PAM products reduce erosion and sedimentation by targeting the smallest soil particles, fine silts, clays and colloidal materials, which are difficult or impossible to control using conventional erosion and sediment control measures. Silt fence and sediment basins only trap particles as small as sands and coarse silts and silts, respectively. PAM also increases infiltration rates in soils by preventing surface sealing.

PAM may be applied by two methods, direct and passive, and is available in four media types, powder, powder dissolved in water, emulsion, and gel block. The powder, powder dissolved in water, and emulsion types are applied directly to exposed soil surfaces. The gel blocks are used within a ditch or conveyance system for in situ water treatment above pre-constructed sediment ponds. To optimize performance, site-specific assessments of soil and water will be conducted by the manufacturer in order to select the proper application method and dose. If needed, PAM used at the site will only be in anionic or non-ionic form and will only be used in conjunction with other stormwater controls. No cationic PAM will be used.

Post construction stormwater quantity and quality controls are discussed in Section 5.2.

5.1.2.2 Public Roadway Improvement

Roadway improvements will require erosion and sediment controls, and preparation of a SWPPP, as described in the previous section. Detention basins, as described in Section 5.2.2, may also serve as temporary control basins during construction. The SWPPP for work performed on non-tribal lands will be subject to NYSDEC for review and approval under the SPDES Program.

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5.1.2.3 Utilities Connections

The connection routes have been designed to be located within existing roadways and areas where soils have been previously disturbed by roadway construction. Potential impacts associated with construction operations and stabilization of soils will be addressed by soil erosion and sediment control measures, as earlier described. All areas of disturbed soils will be stabilized following installation of the line. The SWPPP for work performed on non-tribal lands will be subject to NYSDEC for review and approval.

5.1.3 Mining Resources

The Casino Project has taken the mining operations out of service. Other larger surface mining operations in the area continue to be productive. There will be no impact on overall mining resources in the region.

5.1.4 No Action Alternative

In the No Action Alternative, the impacts to topography, geology and soils as described above would not occur and the site would remain vacant.

If mining activities were resumed on Gildick they would continue and expand over the next 20 years, as discussed in Section 4.1.5. These activities would continue to reshape the landscape within the mining limits and would continue to add sediment to the Neversink River. The auto salvage operation would also resume on its previous limited scale. It would likely not impact topography or geology, but would continue to disturb limited areas of soils.

Cooke East and West and Rossini would remain unchanged in either scenario.

5.2 Groundwater and Surface Water

5.2.1 Tribal Lands

Site improvements were designed so that there will be no new direct discharges to the Neversink River. The design also includes multiple measures to minimize impacts to the groundwater and surface water resources on and adjacent to the site. The stormwater mitigation measures are an integral part of the site layout and design and will be incorporated into the construction specifications. The design for these stormwater management measures is based on the New York State Stormwater Management Design Manual, 2010 edition (NYS Stormwater Manual). The provisions of this design manual have been used as guidelines in developing a program and performance standards to mitigate on-site stormwater impacts relative to the control of peak runoff flows and water quality management for the post-development operation term stormwater management system as they provide more specific guidance than the applicable federal laws. The NYS Stormwater Manual was updated in 2010 and the design of the Casino Project has been reviewed to ensure consistency with the new requirements. The design also incorporates changes

to the stormwater management system design necessitated by the proposed taking of land by NYSDOT as part of the State Route 17 Neversink River bridge replacement. Specific elements of the overall stormwater management plan are identified on Figures 5-1, 5-2 and 5-3, and discussed in detail in the following sections. Figure 5-4 shows the post-construction drainage areas. In summary, the overall plan includes the following key elements:

- Groundwater infiltration basins to reduce storm-related surface water runoff from impervious areas, to recharge groundwater, and to ameliorate thermal impacts
- Floodplain compensatory storage to fully mitigate any loss of floodplain volume
- Attenuation of peak runoff flows from major storm events up to and including the 100-year storm event
- Treatment of stormwater runoff to address potential water quality and thermal impacts

The following sections describe these elements as part of a comprehensive program of water management measures that will be implemented in order to mitigate any adverse impacts resulting from the operation of the Casino Project. These measures will meet or exceed the standards and guidelines as outlined in the NYS Stormwater Manual As a result, surface and groundwater resources on and adjacent to the site will be protected. An important design feature of the development plan is that there will be no direct discharges of stormwater from developed areas on the site to the groundwater or surface water (including wetland resource areas) without first undergoing water quality treatment as described below. Also, the impacts resulting from the creation of impervious surfaces (roofs and pavement) will be mitigated by creation of new on-site stormwater infiltration areas.

Construction-related impacts are described in Section 5.1. It should be noted that the stormwater management system will be built in Phase I and is designed to accommodate both Phase I and Phase II of the development. Appendix L provides supporting data and analysis for the stormwater management plan.

5.2.1.1 Groundwater

Drinking water for the project will be provided by connection to the Village of Monticello system. This means there will be no withdrawal impacts at the site or Neversink River. A small irrigation well may be installed (see Section 5.12.1) that will have peak usage during only two months per year. Existing groundwater fluctuations will continue to occur due to variations in precipitation, temperature and other factors. As groundwater generally runs at or near the bedrock surface from the hills west of the site, towards the river, groundwater control will be required during and after construction, depending on final site grading and the extent to which groundwater will be intercepted. The goal of the proposed site design is to maintain existing overall groundwater flow patterns through the site so that downgradient discharges to the river will be unchanged. Where groundwater interception and/or diversions are required, discharges

from these systems will be reintroduced as groundwater flow to simulate predevelopment conditions prior to discharge off-site.

In order to minimize water quality and quantity impacts from the proposed development, groundwater recharge has been incorporated in the drainage system design. The proposed infiltration basins were designed to provide an infiltration volume that replicates existing site characteristics. The design infiltration rate is based on a field percolation test performed by GZA GeoEnvironmental, Inc. on June 15, 2001 at test pit location TP-13 (refer to Appendix L-1). Test pit TP-13 is located east of Infiltration Basin 1. Soils in this test pit were representative of soils encountered in the test pits performed in other areas proximate to the river and near the existing mining ponds, as well as consistent with prior soil mapping studies in this area of the site. Therefore, the use of this soils and permeability data can be appropriately applied for the design of Infiltration Basins 1, 2 and 3.

The infiltration basins will retain (with zero discharge from the basins) and recharge 100 percent of the 1-year, 24-hour storm event runoff volume. During the 2-year, 24-hour storm event, the infiltration basins begin to discharge via outlet structures to the downstream wetland areas. The existing infiltration volume that is being lost as a result of development (creation of impervious surfaces) during the 2-year, 24-hour storm event is 9.19 acre-feet (based on a total infiltration timed period of 72 hours during and post design rainfall event). Infiltration Basins 1, 2 and 3 will store and infiltrate a total of 14.51 acre-feet of runoff volume during the equivalent 2-year, 24-hour storm event. Therefore, the proposed drainage system design provides an infiltration volume greater than what occurs naturally under existing conditions. Water entering these infiltration basins will be pre-treated to enhance the quality of the water that is being recharged to the ground. This pre-treatment is described in Section 5.2.1.5.

The DEIS used a different method of calculating infiltration, so the volumes in the FEIS, as reported above, are not comparable to those in that document. The DEIS reported a loss of infiltration volume of 1.14 acre-feet, which is based a calculation derived from the 1997 Massachusetts Stormwater Management Standards ("MSMS"). The MSMS assumes a specific volume of recharge based on a weighted hydrologic soil group and the impervious area. The infiltration values in the 1997 MSMS have since been revised and, therefore, the results that were presented in the DEIS are obsolete. In predicting the volume of groundwater recharge provided (1.30 acre-feet), the DEIS considered only the volume of infiltration between hours 10 through 24 of the design storm event. The loss of infiltration volume for a 2-year storm presented in this document compares the post construction volume of stormwater runoff prior to infiltration versus the pre-construction volume of runoff. The current calculation reports the volume from hour 0 to hour 72 of the storm event and is, therefore, a larger number. The current calculation is consistent with generally accepted practices. However, for comparison purposes, if the methodology of the 1997 MSMS is applied to the revised stormwater management system design, similar results would be obtained as reported in the DEIS

Consequently, the proposed site design will maintain existing surface and groundwater flow patterns, provide for treatment of stormwater prior to recharge to the ground in a quantity no less than that which exists prior to development of the site. Future groundwater flows going to

existing (and created) wetlands areas and to the Neversink River are available to recharge downstream aquifers, such as the Town's potential well site located south of State Route 17. Therefore, existing groundwater flows will be either maintained or enhanced.

5.2.1.2 Direct Surface Water Impacts

The site plan has been designed so that no direct impacts will occur to the Neversink River, nor to any of the streams and ponds on Cooke West, Cooke East or Rossini. The stability of the banks of the Neversink River will not be affected as there will be no work on or adjacent to the banks and stormwater flows from the site will be controlled. However, direct impacts to surface waters shown on Figure 5-5 will occur as part of the Casino Project. Phase I and Phase II will cumulatively impact all of Pond 4 (0.07 acres), portions of Basins 1 and 2 (0.37 acres) and 705 linear feet (lf) of three intermittent streams (Waterways 3, 4 and 17). The majority of this intermittent stream impact occurs from construction of the Phase II parking garage to Waterway 3 (WW-3), which passes through WA-21. Mitigation of these direct impacts will occur in locations shown on Figure 5-6.

Mitigation of the impacts to the intermittent streams will be two-fold with a total of approximately 800 lf of new stream habitat created. First, a new stream channel (approximately 60 lf) will be created to maintain the surface water connection between upstream areas such as WA-3, 6 and 7 with the lower portion of WA-4. This new channel will carry flows as they come off the hillside, and will carry only minimal stormwater runoff from the development. Second, a new stream channel will be constructed within the wetland creation area (approximately 740 lf). Should the Supplemental Wetland Mitigation Areas (see discussion in Section 5.3.2.1) be required, the total new stream habitat will be approximately 360 feet. These mitigation areas will replace lost stream habitat and will ensure that current flow patterns are not interrupted. An assessment of the stream impact areas is provided in Appendix Q. This assessment was based on the USACE and USEPA (2004) *Physical Stream Assessment* review. The Functions and Values Assessment (Appendix R) includes review of the stream replacement areas.

Mitigation of impacts to the existing ponds and basins will occur through creation of new pond habitat as well as enhancement of existing habitat. Sections 5.3.2.1 and 5.4.1 discuss these mitigation measures in detail. In summary, there will be enhancement of approximately 0.6 acres of Basin 1 and 5, and creation of approximately 0.5 acres of pond habitat within the wetland creation area.

The buffer zone to the Neversink River will be stabilized. Under existing conditions, approximately 1 acre within 100 feet of the river is unvegetated, consisting of unstabilized and exposed soils from mining and auto salvage operations (that are slowly re-establishing). Under proposed conditions, this will be reduced to approximately 7,000 square feet of impervious area for the roadway and utility yard. The remaining 100 foot area will be vegetated.

Except for the direct impacts to WW-3, 4 and 17, there will be no impacts to the buffer zones of the other fourteen intermittent streams. Indirect impacts, such as impacts to water quality and water quantity, are discussed in the following sections.

5.2.1.3 Floodplain Encroachment

A detailed flood study has been conducted for the adjacent reach of the Neversink River by the FEMA (2011) through their National Flood Insurance Program. Base flood elevations have been determined for that portion of the river and overbank area that would be inundated in a 100-year storm event (floodplain).

The horizontal extent of the floodplain and floodway has also been delineated. Consistent with NYSDEC and FEMA guidelines for development in or adjacent to flood-prone areas, the goals of the project development plan are as follows:

- **Floodway:** avoid any development or land alteration that would alter the river flow pattern, contribute to river channel erosion or increase the water surface elevation.
- **Floodplain:** minimize development or land disturbance such that all occupiable buildings are flood-proofed, all disturbed areas are stabilized to prevent erosion, and that any grading or filling within the floodplain is compensated for so that there is no resultant increase in the base flood elevation.

Development impacts to the floodway have been totally avoided. The only activity proposed within the floodway will be wetland mitigation, which will not reduce the flood storage volume within this area. The proposed wetland mitigation area will have a positive effect of vegetating and stabilizing a large, exposed soil area within the floodway that is part of the existing mining operation.

Impacts to the 100-year floodplain (elevation 1084) have been avoided to the greatest extent practicable. Roadway improvements to County Highway 161 and State Route 17 will impact no floodplains. No buildings or support structures are proposed within the delineated floodplain. Minor impacts to the floodplain are unavoidable where the floodplain extends into the main portion of the Gildick parcel (Figure 5-1). Specifically, the filling of 7.03 acre-feet of the floodplain will be required to construct the eastern access road to the casino building (refer to Appendix L-2). This roadway has been designed to cross the floodplain at a narrow section to limit the amount of filling. This limited filling will occur in an overbank area outside the main stream channel. This is an area that is susceptible to the inundation of surface water from the river only in high flow conditions (greater than a 2-year storm event). Consequently, this floodplain area is not subject to frequent inundation or to erosive velocities.

This minor floodplain encroachment will be fully mitigated by providing a compensatory floodplain volume which is equal to the size of the area which was impacted, such that flood levels associated with the river will not be increased. Compensatory storage for impacts to the floodplain will be provided within Infiltration Basin 1, Pre-Treatment Basin 1, and a compensatory storage area to be created adjacent to the existing floodplain of the river (refer to

Figure 5-2). The total compensatory storage volume of these three basins equals 7.03 acre-feet, the equivalent volume of proposed floodplain filling.

Infiltration Basin 1 and Pre-Treatment Basin 1 have outlet structures at elevations below the 100-year floodplain elevation of 1084. Therefore, during the 100-year, 24-hour storm event, the floodplain of the river is hydraulically connected to these stormwater basins and can backflow into them through the outlet structures, thereby providing compensatory storage volume. The compensatory storage volumes provided within Infiltration Basin 1 and Pre-Treatment Basin 1 were calculated based on the accumulative storage volume provided within each basin above the 100-year, 24-hour storm peak stage and storage volume. In the compensatory storage area, additional storage volume will also be provided by regrading an area between elevations 1080 and 1084 feet that is hydraulically connected to the river floodplain. Consequently, there will be no net loss of floodplain storage over existing conditions.

5.2.1.4 Peak Stormwater Flow Attenuation

The NYS Stormwater Manual states that the release of stormwater from development should not exceed pre-development (natural) conditions. The performance standards outlined in the NYS Stormwater Manual are to prevent stream channel erosion, assure the adequacy of existing and proposed drainage systems, and to not increase the potential for flooding on downstream properties and roadways. The following summarizes how the Casino Project stormwater management plan addresses each of these performance standards.

Goal 1 – Prevent stream channel erosion (Channel Protection)

The proposed stormwater management design incorporates temporary and permanent measures to minimize impacts from erosion both during construction and upon completion of construction. Section 5.1 discusses the soil erosion and sediment control plan for construction activities. The proposed drainage system design, further described in Section 5.2.1.5, incorporates vegetated swales, flow dissipaters, infiltration basins and sediment forebays in order to decrease velocities and minimize erosion.

Goal 2 – Assure drainage system adequacy (Overbank Flood)

This goal is achieved through the proper design of the on-site drainage collection system. The drainage collection system will be sized to carry runoff flows from the 25-year storm event. The facilities used for stormwater detention have been designed to safely pass the 100-year storm event. The stormwater detention facilities are shown on Figure 5-1. The HydroCAD hydrologic/hydraulic model has been used to size the detention systems. This model is based on Technical Release 20 (TR-20 method) for developing and routing runoff hydrographs.

Table 5-1 summarizes the sizing of the proposed stormwater management system components and peak detention volumes for the 100-year, 24-hour storm event.

As shown in Table 5-1, the components of the proposed stormwater management system are sized to attenuate the 100-year storm event without overtopping. Each basin will be designed with appropriate freeboard and emergency overflow structures. Therefore, the drainage collection and stormwater management systems have been adequately designed to maintain pre-development runoff rates and prevent adverse flooding impacts to downstream areas.

Table 5-1 Stormwater Management System Sizing and Flow Volumes

Stormwater Management Method	Stormwater Management Facility	Total Storage Volume (cubic feet)	100-Yr Storm Peak Storage Volume (cubic feet)	100-Year Peak Depth within Basin (feet)	Depth of Basin (feet)
Sediment Forebay	Pre-Treatment Basin 1	169,230	166,225	9.1	10.3
Sediment Forebay	Pre-Treatment Basin 2	157,774	89,254	6.7	10.0
Sediment Forebay	Pre-Treatment Basin 3	98,721	148,931	7.6	10.0
Detention/Infiltration	Infiltration Basin 1	591,545	454,766	11.3	14.0
Detention/Infiltration	Infiltration Basin 2	292,854	217,293	7.7	10.0
Detention/Infiltration	Infiltration Basin 3	290,262	206,669	7.9	10.0

NOTES: [1]Refer to Section 5.2.1.5 of this report for detailed descriptions of these stormwater management systems.

The StormCAD model was used to design and analyze gravity flow pipe networks to ensure no backflow or flooding within the proposed piping system design. The HydroCAD model was also used. This model uses TR-20 methodology to determine peak rates of runoff for the various storm events. This model also attenuates the peak rate by routing the hydrograph through the reaches and basins. Each basin was evaluated for post-development conditions to mitigate the peak runoff flow within each drainage area so there is no net increase in stormwater runoff leaving the site.

Goal 3 – No increase of the potential for downstream flooding (Extreme Storm)

A HydroCAD hydrologic model was developed to determine the post-development peak rates of runoff from the site for the 1-year, 2-year, 10-year and 100-year, 24-hour storm events. Table 5-2 provides the peak runoff rates for both pre- and post-development conditions for the various storm frequencies. Figure 5-4 shows proposed drainage areas. The design point of analysis (DP-1) is the southeastern corner of the property. This is the downstream point at which the entire site is contributing runoff flows (either overland or subsurface) to the Neversink River.

Table 5-2 Stormwater Peak Runoff Rates and Volumes

Storm Frequency (Inches of Rainfall)	1-year (3.0 in.)	2-year (3.5 in.)	10-year (5.0 in.)	100-year (8.0 in.)
Pre-development Peak Runoff Rate	52 cfs	93 cfs	272 cfs	749 cfs
Pre-development Runoff Volume	21 ac-ft	34 ac-ft	84 ac-ft	215 ac-ft
Post-development Peak Runoff Rate	46 cfs	82 cfs	237 cfs	747 cfs
Post-development Runoff Volume	18 ac-ft	29 ac-ft	79 ac-ft	215 ac-ft

NOTES: Refer to HydroCAD analysis in Appendix L-3.

Based on the HydroCAD analysis, and shown in Table 5-2, the proposed Stormwater Management Practices (SMPs), will provide storage and attenuation of peak flows in order to achieve no increase in stormwater flows (both peak rate and volume) for all storm events up to and including the 100-year event. Consequently, there will be no increase in the potential for flooding in the Neversink River either immediately adjacent to or downstream of the site and the performance standards as outlined in the NYS Stormwater Manual, related to peak flow attenuation, will be met.

Since the DEIS was published, the NYSDOT has notified the land owner of proposed takings and easements of their property related to the proposed State Route 17 Neversink River bridge replacement. The easement will impact approximately one-half of Infiltration Basin 2 (as originally configured in the DEIS), which was one of two major detention and infiltration basins proposed on the site in the DEIS. Consequently, Infiltration Basin 2 has been relocated and reconfigured to avoid the proposed easement area and Infiltration Basin 3 has been added and designed to maintain an overall storage volume for detention of up to the 100-year storm as proposed in the DEIS. Consequently, all of the performance goals with regard to peak flow attenuation, as outlined in the DEIS, are still being met.

5.2.1.5 Water Quality Management

The NYS Stormwater Manual provides design standards for controlling water quality impacts from developed sites. These guidelines relate to the water quality of runoff and associated contaminants, including soil erosion and sedimentation, and to the control of thermal discharges in watersheds having streams that support cold water fisheries. The specific design criteria and mitigation measures that satisfy these guidelines and are incorporated in the site design are outlined below.

Consistent with the NYS Stormwater Manual, the performance standard for controlling the quality of stormwater runoff from the site is as follows:

> *The Water Quality Volume (WQv) is designed to improve water quality sizing to capture and treate 90% of the average annual stormwater runoff volume. The WQv is directly related to the amount of impervious cover created at a site.*

The NYS Stormwater Manual outlines SMPs that are presumed to meet this water quality and pollutant removal standard. These SMPs include ponds, wetlands, infiltration systems, filters and open channels. The proposed use of these SMPs, as described below, is intended to meet the requirements for the control of sediments and other pollutants such as nutrients.

Table 5-3 summarizes the proposed water quality pre-treatment system which will be made up of three (3) water quality basins, three (3) water quality swales, and one (1) water quality structure. All water quality facilities were sized using the NYS SPDES Water Quality Volume (WQv) Calculator. The design characteristics of these water quality facilities are provided below.

Table 5-3 Water Quality Treatment Volumes

Tributary Drainage Subarea	Water Quality System Component ID	Contributing Impervious Area to System (acres)	Required Water Quality Treatment[1] (acre-feet)	Provided Water Quality Treatment Volume (acre-feet)
Subarea 1 Subarea 16 Subarea 18 Subarea 20	Pre-Treatment Basin 1	31.0	2.9 ac-ft	2.9 ac-ft
Subarea 10 Subarea 19	Pre-Treatment Basin 2	4.2	0.4 ac-ft	0.7 ac-ft
Subarea 21	Pre-Treatment Basin 3	5.0	0.45	0.8
Subarea 6 Subarea 9	Water Quality Swale 1	1.1	No flow up to and including the 100 year storm	N/A
Subarea 5	Water Quality Swale 2	0.7	0.3	0.3
Subarea 8	Water Quality Swale 3	0.3	0.2	0.4
Subarea 15	Water Quality Structure 1	1.9	0.17 ac-ft	0.17 ac-ft

NOTES: [1]Refer to Water Quality Treatment Volume Calculation Worksheets in Appendix L-3.

The proposed water quality system components, as shown in Table 5-3, exceed the water quality treatment standards set forth in the NYS Stormwater Manual. Specific measures, which have been incorporated into the design of the stormwater management system to provide preliminary treatment of stormwater runoff. The deep sump will trap sediment, while the hood will prevent floatables from entering the drainage system. This SMP will be used within the parking areas and where water quality swales are not feasible.

Treatment of Roof Runoff. Runoff from the proposed building roofs will be treated within the proposed water quality basins or a water quality structure in accordance with the NYS Stormwater Manual. Roof runoff from the parking structures, warehouse/storage building, service station, and central plant will be treated in one of the water quality basins prior to discharge to a downstream infiltration basin or the existing pond. Roof runoff from the main casino building will be treated in a Water Quality Structure.

The Water Quality Structure (WQS 1) will be sized to provide a water quality treatment volume of 0.165 acre-feet to treat 90 percent of the average annual stormwater runoff volume from the main casino roof. As noted previously, the water quality treatment volume was calculated using the NYS SPDES Water Quality Volume WQv Calculator. An 18-inch pipe will convey the

required treatment volume to WQS 1, while the excess roof runoff will bypass the water quality structure via an overflow pipe that outfalls to a plunge pool prior to discharging to the adjacent wetland. This overflow will maintain base flow conditions in this wetland system. The location of the water quality structure and associated piping system is shown on Figure 5-2.

Water Quality Swales. Vegetative swales have been incorporated into the drainage system design to intercept overland runoff from the undisturbed land west of the proposed development and to direct it through and around the development site. These flow diversions will be designed in accordance with USEPA's *Storm Water Technology Fact Sheet – Flow Diversion*, September, 1999. They will provide preliminary treatment by allowing sediment to settle out of the runoff and by allowing the vegetation to remove other contaminants from the runoff prior to discharge to the Neversink River.

One water quality swale (Water Quality Swale 1) will transport runoff from wetland WA-3, under the western loop road, to the existing wetland located to the south of the casino building. Discharge from wetland WA-3 to this water quality swale is not expected except for storms exceeding a 100 year storm event. Additional water quality swales (Water Quality Swale 2 and 3) will be constructed parallel to the main entry driveway and will intercept runoff coming onto the site from the west. This runoff will then be discharged to Infiltration Basins 2 and 3 for further treatment and control. These swales are shown on Figure 5-1 and each swale is designed to provide a minimum flow time for stormwater of 30 minutes or more.

Pre-Treatment Basin 1. Runoff from the main parking areas (surface parking and top levels of parking structures) and from the surrounding circulation roads will be collected into Pre-Treatment Basin 1. This basin has been designed as a wet basin that acts as a large sediment trap. This facility provides pretreatment of stormwater runoff in a sediment forebay prior to discharge into the wet pond. Extended treatment, in the form of additional settlement and biological uptake of pollutants, will be provided in the wet pond. Treated runoff from Pretreatment Basin 1 will discharge into the adjacent, existing pond.

Infiltration Basin 1. This type of basin is optimal for treating stormwater runoff, mitigating thermal impacts and providing groundwater recharge. This basin has been sited in porous soils to maximize the opportunity for groundwater infiltration of runoff. Stormwater runoff entering this infiltration basin is pretreated as it travels through the deep sump, hooded catch basins, Pre-Treatment Basin 1 and the existing pond. Pretreatment of the runoff will ensure proper functioning of this SMP.

In addition to water quality benefits, this basin will provide groundwater recharge and treatment of stormwater thermal impacts. The current design incorporates an infiltration basin sized to infiltrate 100 percent of the stormwater runoff volume during the 1-year, 24-hour storm event. Overflows from this basin for higher storm events will be discharged to the wetland creation area as sheet flow from a level spreader. Groundwater flow from the infiltration basin will also provide base flow to the proposed wetland creation area, which lies immediately downgradient.

Pre-Treatment Basin 2. Runoff from the main entry driveway between the service station and the warehouse and storage areas will be collected into Pre-Treatment Basin 2 near the

warehouse. The design of this basin includes a sediment forebay to trap sediment, as well as a wet pond area to provide additional treatment of stormwater runoff. This type of treatment facility provides treatment of the first flush of runoff by removing suspended solids within the forebay and extended treatment in the wet pond for additional removal of suspended solids and biological uptake of water soluble contaminants. Pre-Treatment Basin 2 will discharge to Infiltration Basin 2, as described below.

Infiltration Basin 2. Stormwater runoff entering Infiltration Basin 2 is pretreated as it travels through the deep-sump, hooded catch basins and Pre-Treatment Basin 2. Stormwater runoff from offsite and undeveloped portions of the site will flow through Water Quality Swale 2 for pretreatment. The current design incorporates an infiltration basin sized to infiltrate 100 percent of the stormwater runoff volume during the 1-year, 24-hour storm event. Overflows from this basin for the 2-, 10- and 100-year, 24-hour storm events will be discharged as sheet flow across upland vegetation to wetland area WA-8.

Pre-Treatment Basin 3. Runoff from the main entry driveway, between the water tower and the service station will be collected into Pre-Treatment Basin 3 near the service station. The design of this basin includes a sediment forebay to trap sediment, as well as a wet pond to provide additional stormwater treatment. This type of treatment facility provides treatment of the first flush of runoff by removing suspended solids within the forebay and extended treatment in the wet pond for additional removal of suspended solids and biological uptake of water soluble contaminants. Pre-Treatment Basin 3 will discharge to Infiltration Basin 3, as described below.

Infiltration Basin 3. Stormwater runoff entering Infiltration Basin 3 is pretreated as it travels through the deep-sump, hooded catch basins and Pre-Treatment Basin 3. Stormwater runoff from offsite and undeveloped portions of the site will flow through Water Quality Swale 3 for pretreatment. The current design incorporates an infiltration basin sized to infiltrate 100 percent of the stormwater runoff volume during the 1-year, 24-hour storm event. Overflows from this basin for the 2-, 10- and 100-year storm events will be discharged as sheet flow across upland vegetation to wetland area WA-8.

5.2.1.6 Spill Prevention

Special spill prevention measures will be incorporated into the stormwater management design to protect against potential harmful spills from the gas station and the warehouse. These measures will include the following:

- The incorporation of oil/grease separators into the drainage collection system associated with these areas
- Containment diking around all exterior storage and transfer areas involving hazardous materials, petroleum products and fertilizers
- The development and implementation of a Spill Prevention Plan in accordance with USEPA's *Storm Water Management Fact Sheet - Spill Prevention Planning*, September, 1999

5.2.1.7 Pollutant Removal

To achieve the desired pollutant removal for the proposed drainage system, the stormwater management system has been designed to incorporate SMP measures as outlined in the NYS Stormwater Manual. Each SMP is expected to remove a percentage of pollutants. According to the NYSDEC manual, the Pre-Treatment Basin (wet ponds) and infiltration basins will each, in and of themselves, achieve at least 80 percent TSS and 40 percent Total Phosphorus. Additional removal will occur as stormwater passes through a series of SMPs. These measures are used in various combinations within each tributary drainage subarea to achieve the desired results.

Infiltration Basins 1 and 2 have been designed to completely infiltrate the one-year storm event and, therefore, will also completely infiltrate the Water Quality Volume as required in the NYS Stormwater Manual. As set forth in the NYS Stormwater Manual, if the infiltration basins are designed in accordance with the sizing criteria of Chapter 4 of that Manual (and constructed in accordance with the performance criteria), the design "will be presumed to meet water quality requirements set forth in this manual." The design of the infiltration basins for the Casino Project meets these criteria, and therefore, once constructed, the basins will meet the NYS Stormwater Manual standards

Pre-treatment has been provided for all stormwater flowing into Infiltration Basin 1, 2 and 3. Pre-treatment measures include:

- Deep sump catch basins
- Catch basin inserts
- Water quality swales
- Pre-Treatment Basins 1, 2 and 3

5.2.1.8 Inspection and Maintenance of Stormwater Controls

Inspection and maintenance of stormwater control measures are integral to the proper treatment of the site's stormwater. The following sets forth the proposed inspection and maintenance for the stormwater controls.

- *Street sweeping:* Street sweeping will occur at least twice a year, once coinciding with the end of the winter sanding season and once during the late fall.

- *Catch Basins, Area Drains and Drop Inlets:* The removal of sediments and trash will occur when catch basins, area drains and drop inlets are cleaned out. At a minimum, catch basins, area drains and drop inlets will be inspected quarterly and cleaned on a semi-annual basis.

- *Swales:* Swales will be inspected at least semi-annually, and maintenance and repairs made as necessary. Additional inspections will be scheduled during the first few months to make sure the vegetation is adequately established. Repairs and reseeding will be done as required. Swales will be mowed at least once per year. The grass will not be cut too

often, or shorter than four inches, in order to maintain the effectiveness of the swale for pollutant removal. Sediment and debris will be removed manually, at least once per year, before the vegetation is adversely impacted.

- *Pre-Treatment Basins:* After construction, the pre-treatment basins will be inspected after every major storm for the first few months to ensure proper function. Thereafter, the basins will be inspected twice per year, with cleaning occurring as needed.

  The sediment forebay located within the pre-treatment basins will be inspected and cleaned four times per year. Accumulated sediment in forebay will also be removed at this time.

- *Infiltration Basins*: Once constructed, the infiltration basins will be inspected after several storm events to confirm drainage system functions, bank stability, and vegetation growth. Problems will be addressed immediately. During the first six months of operation, the basin will be inspected immediately after significant storm events and cleaned to remove sediment buildup. The control structure will be inspected and cleaned when sediment appears to have clogged the structure. Thereafter, the basin will be inspected annually and sediment will be removed as necessary or at a minimum once every 10 years. At least twice during the growing season, the side slopes will be mowed, and accumulated trash and debris will be removed.

- *Water Quality Structure*: The water quality structure (Stormceptor© or equivalent) will be inspected and maintained annually or when the sediment volume in the water quality structure reaches 15 percent of the total storage. Oil will be removed through the 6-inch inspection/cleanout pipe and sediment removed through the 24-inch diameter outlet riser pipe. Alternatively, oil will be removed from the 24-inch opening if water is removed from the treatment chamber, lowering the oil level below the drop pipes.

The entire stormwater management system, including piping, catch basins, and manholes, will be cleaned prior to final site acceptance.

5.2.1.9 Control of Thermal Discharges

The NYS Stormwater Manual addresses the implications of thermal impacts that can result from the creation of impervious surfaces in trout waters, where cold temperatures are critical to species survival; and Section 704 of the Water Quality Regulations, Title 6, Chapter X, New York State Codes, Rules and Regulations provides criteria for thermal discharges. These are summarized as follows.

- The natural seasonal cycle shall be retained, with no large day-to-day temperature fluctuations due to proposed discharges

- Stormwater discharges cannot exceed 70°F at any time. (Note: Discussions with NYSDEC and review of historic temperature recordings at the nearby USGS river gauging station confirm that the existing temperature in the Neversink River exceeds

70°F during the summer months; minimum releases from the Neversink Reservoir are sustained with a goal to maintain the downstream river temperature at less than 75°F)

- From June to September, discharge cannot raise or lower stream temperature more than 2°; from October to May, discharge cannot raise stream temperature more than 5° or over 50°F, whichever is less

Specific measures that will be incorporated into the site design to mitigate thermal impacts from stormwater discharges and allow the Casino Project to satisfy these standards are shown on Figure 5-1. These mitigation measures include:

Infiltration Basins. Potential thermal impacts will be addressed primarily by the use of infiltration basins. Infiltration Basins 1, 2 and 3 mitigate thermal impacts as well as treat water quality. The current design incorporates three (3) infiltration basins sized to infiltrate 100 percent of the stormwater runoff volume during the 1-year, 24-hour storm event. Therefore, there will be no surface water discharge to the river from the developed portions of the site during a normal rainfall year. This water will enter the river system only after it has either traveled as groundwater for more than 400 feet or emerges into the wooded wetland creation area, therefore ensuring no thermal impacts. The only surface water discharges into the river from the site will be from undeveloped areas through natural drainage ways and proposed water quality swales, which will not exacerbate thermal impacts.

Enhancement of Vegetative Cover. The landscape design will incorporate measures to minimize and/or reduce the thermal impacts of stormwater runoff from the site. These measures include:

- Maintaining a wooded buffer strip between the development and the river
- Revegetating and stabilizing all existing unvegetated areas on the site, which are not to be developed
- Incorporating trees and shrubs into the site's landscaping design to provide some shading along roadways and within parking areas
- Designing the building roofs and deck of the parking garage to minimize heat retention and detention time of runoff accumulation, to the extent possible
- Incorporating shading vegetation around the proposed water quality basins, the infiltration basins, and the existing basins that will remain
- Using trees and shrubs as a canopy in the wetland creation area to shade emergent groundwater and surface water discharges

5.2.1.10 Green Infrastructure Practices

The 2010 NYS Stormwater Design Manual includes a section entitled "Green Infrastructure Practices". This section outlines certain site design practices which, if incorporated, can be used to reduce the design volume for stormwater quality mitigation measures. The Casino Project as proposed incorporates various Green Infrastructure Practices; however, a reduction credit for the design of the site stormwater mitigation measures has not been taken and, therefore, all stated performance criteria will be met in full. Specific practices proposed for this site that are consistent with the NYS Stormwater Management Design Manual and other accepted Low Impact Development (LID) practices include:

- ***Preservation of Undisturbed Areas:*** To the extent practical, site improvements have been proposed in areas that have been previously disturbed and used as an automobile salvage yard and mining operation. Disturbance to existing vegetated areas has been limited as much as possible and the parcels west of County Route 161, totaling nearly 170 acres, will remain undeveloped. Impacts have also been minimized by clustering the facilities and by using retaining walls to limit grading impacts.

- ***Parking Area Reduction:*** Multi-story parking structures are proposed to serve the Casino, hotel and employee parking. Ultimately, over 96 percent of all parking spaces will be in parking garages, thereby significantly reducing the amount of impervious cover associated with on-site parking and the associated runoff (volume, rate and quality) impacts.

- ***Infiltration of Runoff:*** There will be no direct discharge of runoff to the Neversink River from any proposed impervious areas (roofs and pavement) areas during a normal rainfall year, thereby enhancing groundwater recharge and runoff water quality, control of peak runoff rates leaving the site and minimizing the potential for thermal impacts to the river.

- ***Revegetation of Disturbed Areas.*** All currently disturbed and unvegetated areas of the site that are not used for development have been or will be stabilized and vegetated to reduce runoff, encourage infiltration and minimize soil erosion. All areas disturbed during the construction process that will not be used for buildings, parking, or roadways, will be permanently stabilized with vegetation or other landscape material to control runoff and prevent soil erosion. This is in addition to the other proposed site design measures as outlined above in the Enhancement of Vegetative Cover.

5.2.2 Public Roadway Improvements

Control of potential groundwater and surface water resources impacts from proposed off-site roadway improvements will be addressed in a fashion similar to that described in Section 5.2.1. It is estimated that the improvements will result in an increase of approximately 1.3 acres of impervious area off-site. There will be no stream impacts and no floodplain impacts. The following summarizes the specific components of the off-site roadway stormwater management

plan. Because this work is not on tribal lands, it will require federal, state and/or local permits. Final design will be subject to NYSDOT and/or Sullivan County approval, as owners of the existing roadways. Figure 5-1 shows these components.

Deep Sump Hooded Catch Basins. Catch basins with deep sumps and hoods will be installed to provide preliminary treatment of stormwater runoff. The deep sump will trap sediment, while the hood will prevent floatable pollutants from entering the drainage system. These catch basins will be used for all closed drainage systems for the off-site improvements.

Roadway Stormwater Management Area #1. Improvements to Old Route 17 south of Interchange 107 will consist of pavement widening to provide turning lanes. Runoff from the majority of the increased pavement area will run off-road into an existing swale and basin located between Old Route 17 and the eastbound on-ramp to State Route 17. It is proposed that this area be utilized for the treatment and/or detention of the storm drainage before its release into the wetland located to the south of Old Route 17.

Roadway Stormwater Management Area #2. Existing County Highway 161 from the intersection with Old Route 17 and the State Route 17 bridge, is uncurbed with runoff flowing to the east between Old Route 17 and State Route 17. It eventually reaches the State Route 17 drainage ditch that continues to the east and discharges into the Neversink River. The proposed improvements for this portion of County Highway 161 include the widening of the pavement and the addition of curbing and a closed drainage system. All of the pavement runoff from this segment of road will be collected by the closed drainage system and outlet into a proposed treatment and detention area located on the east side of County Highway 161, just south of the State Route 17 bridge (Roadway SWM Area #2 on Figure 5-1). This area will be used to treat the runoff and detain it to pre-development levels before releasing it to follow the existing drainage patterns.

Roadway Stormwater Management Area #3 and #3A. The existing runoff from the segment of County Highway 161 that begins at the State Route 17 bridge and extends north to the intersection with the State Route 17 westbound off-ramp flows overland and discharges into a drainage ditch along the north side of State Route 17. This ditch continues to the east and eventually discharges into WA-8. The segment of County Highway 161 that continues north from the intersection with the State Route 17 westbound off-ramp up to the existing highpoint on County Highway 161 discharges runoff overland into WA-9 to the east of the highway. This wetland drains eastward through a culvert under Foss Road before joining the existing State Route 17 roadside ditch and discharging into WA-8.

The proposed improvements for these two segments of County Highway 161 include curbing and a closed drainage system to keep pavement runoff separate from the natural runoff from the west that passes under the highway in this area. The closed drainage system will outlet into a proposed treatment and detention area (SWM Area #3) located to the east of County Highway 161 just north of the State Route 17 westbound off-ramp intersection. This area will provide water quality treatment and detention before releasing the runoff to follow the existing drainage patterns. SWM Area #3A is proposed for the State Route 17 ditch prior to its discharge into

WA-8. This basin will provide treatment and detention for the upgraded portion of the State Route 17 off-ramp to County Highway 161 northbound and will trap sediment being transported in this existing drainage ditch.

NYSDOT is also proposing stormwater management facilities in this vicinity in conjunction with its roadway and bridge improvement projects associated with State Route 17. Consequently, the required stormwater management functions provided by SWM Areas 3 and 3A may be provided as part of NYSDOT's highway improvement project. The Tribe will coordinate with NYSDOT regarding the need for additional or combined stormwater facilities.

Roadway Stormwater Management Area #4. From the highpoint on County Highway 161 to the entrance to the proposed Casino Project, the existing runoff from the roadway flows overland to the east eventually reaching the Neversink River. The proposed improvement will curb the roadway and collect the runoff in a closed drainage system that will outlet into a detention basin located next to the proposed water tower at the site entrance. The outflow from this basin will flow into the proposed water quality swale that parallels the entrance road and discharges into Infiltration Basin 2 on the site.

Roadway Transition North of Main Entrance. The County Highway 161 segment north of the main entrance will transition from four lanes back to the existing two lane roadway width over a distance of approximately 1,200 feet. This transition section will remain uncurbed with runoff being directed into roadside drainage swales that will provide treatment and recharge, as occurs under existing conditions. From these roadside swales, runoff is discharged as overland flow down gradient to the east. Runoff is subsequently picked up in existing natural swales and watercourses which eventually discharge into WA-3.

Mitigation of Thermal Impacts. The proposed roadway improvements will not have any adverse thermal impacts to the Neversink River. Each of the proposed stormwater management measures also provides mitigation of thermal impacts by detaining and infiltrating roadway runoff. Consequently, there will be no direct discharges of runoff from the roadway improvements to the river and all runoff will flow overland or in grassed swales for a minimum distance of 1,500 feet prior to entering the river. Additionally, a portion of the new four-lane County Highway 161 section and the transition section north of the site entrance will flow into one of the two on-site infiltration basins which will convert surface runoff to groundwater flow. This plan for thermal impact mitigation may be supplemented or superseded by NYSDOT's stormwater design for the State Route 17 roadway improvements.

5.2.3 Utilities Connections

Groundwater. There will be no impact on groundwater resources for installation of water supply or wastewater treatment connections. Some dewatering may be required during construction. These activities will conform to NYSDEC SPDES standards.

Surface Waters and Drainage. Construction and installation of utilities will have no impact to surface waters or drainage patterns. Topography will not be altered and stream course alterations will not occur. For the stream and roadway drainage way crossings, the new lines will be installed over the existing culverts. Soil erosion and sediment control methods, based on NYSDEC SPDES requirements, will be used to control potential temporary construction impacts.

Floodplains. There will be no work within, nor alteration of, floodplain areas.

5.2.4 No Action Alternative

Under the No Action Alternative, impacts to groundwater and surface water resources would be limited to those that would occur with leaving the site vacant. Runoff from surrounding roadways would continue to discharge their sediment load to WA-8. Basins 1 through 4, which are shallow, unshaded ponds would remain in the lower mining area, potentially increasing water temperatures in the river. The habitat value of these existing basins would continue to be low, and subject to ongoing sediment load from adjacent mining operations.

If mining were to be resumed, the basins in the lower mining area would likely continue to be used as mining areas and/or as areas to control sediment runoff. Restoration of the mining area would eventually occur under the mining reclamation plan, but not to the extent proposed for the Casino Project. In addition, that restoration would not occur for at least 20 years. In the meantime, degradation from the mining operation would continue. The habitat value of the original mining basins would continue to be low, and subject to ongoing sediment load from adjacent mining operations. Mining in the upper mining area would not have direct impacts to groundwater or surface water, but could result in a sediment input to the Necersink River, as has occurred in the past. The resumption of auto salvage operations would have minimal impact on groundwater and surface water, although the potential for impacts on groundwater and surface water from spills would be present. Cooke East and West and Rossini would remain unchanged in this scenario.

5.3 Vegetation and Wetlands

5.3.1 Upland Vegetation

5.3.1.1 Tribal Lands

The Casino Project has been located, as much as possible, within currently unvegetated areas. The parcels west of County Highway 161, which total approximately 170 acres, will remain undisturbed. Impacts to vegetated areas east of County Highway 161 will, however, occur. Table 5-4 summarizes vegetative impacts and mitigation. Phases I and II will create impervious area, such as roadways, surface and structured parking lots and buildings. Overall, the net condition will change from an area that is currently approximately 15 percent unvegetated (but pervious) to a site that is 14 percent unvegetated, but impervious. Softwood areas will be reduced, but

successional areas will be increased. By clustering development on the east side of County Highway 161, where large-scale land use disturbances have occurred for years, the project minimizes habitat fragmentation.

Table 5-4 Vegetation Impacts

Vegetative Type	Existing Acres (%)	Proposed – Phase I Acres (%)	Proposed – Phase II Acres (%)
Hardwood	72 (22%)	72 (22%)	72 (22%)
Softwood	135 (41%)	96 (29%)	92 (28%)
Wetland/Water	63 (19%)	66 (20%)	66 (20%)
Successional/ Landscaped	10 (3%)	50 (15%)	50 (15%)
None*	50 (15%)	41 (13%)	45 (14%)
Stormwater Basins	0 (0%)	5 (1%)	5 (1%)
Total	330 (100%)	330 (100%)	330 (100%)

*Under existing conditions, this represents pervious areas disturbed by mining and auto salvage. Under proposed conditions, this represents impervious areas such as roads, parking areas and buildings.

Additional area will be temporarily disturbed as a result of grading. Following construction, however, these temporarily disturbed areas, along with other currently unvegetated areas, will be restored. This restoration will include landscaping areas immediately adjacent to roadways and buildings. Further from these developed areas, restoration will focus on providing wildlife food, cover and nesting areas, stabilization, and aesthetically pleasing areas. Only native, non-invasive species will be used in these areas. These species will be typical of the region and reflect species that occur in the impact areas. This landscape plan is an integral part of site design and will be part of the construction plans and specifications.

During final site planning, the existing landscape will be assessed and documented to identify specimen trees for preservation and to record landscape patterns and vegetation communities. The patterns will inform the design of new landscape areas and guide the selection of plant material. Specimen plantings will be grouped in areas near the proposed buildings where they will have the greatest visual impact. The design approach for landscape areas away from the main buildings will emphasize native plant communities and patterns that are well adapted to the site and local conditions. Once established, this vegetation will be less dependent on irrigation and soil amendments for viability. In addition to enhancing the existing landscape, the plantings will provide food, cover and nesting areas for wildlife in the area. Landscape buffers will be reestablished in areas along the Neversink River providing filtration of surface run-off and screening of development areas from the opposite side of the river.

The landscape plan will focus on design, construction and installation, with recommendations for regular and comprehensive maintenance. The maintenance plan will propose a preventative approach to pest management. By identifying local conditions that foster disease, weeds and pests, the landscape can be designed and maintained to reduce problems. An Integrated Pest Management approach that emphasizes prevention techniques, monitoring methods and biological controls as alternatives to regular pesticide and herbicide application is recommended.

If required, herbicides, fungicides and pesticides will be chosen for effectiveness while minimizing adverse and toxic impacts to people and the environment. All material storage and application will comply with Occupational Safety and Health Administration Material Safety Data Sheet requirements for each product.

5.3.1.2 Public Roadway Improvements

The existing roadways are typically bordered by forest vegetation. State Route 17 and, to a lesser degree, County Highway 161, have mowed grass shoulders.

Impacts to forest vegetation will occur, and the proposed roadway improvements will create additional impervious area. Overall, the net increase in impervious surfaces will consist of approximately 1.3 acres.

Additional area will be temporarily disturbed as a result of grading. Following construction, however, these temporarily disturbed areas will be restored. This restoration will focus on providing stabilization, wildlife food, cover and nesting areas, and aesthetically pleasing areas. Only native, non-invasive species will be used in these areas. These species will be typical of the region and reflect species that occur in the impact areas.

5.3.1.3 Utilities Connections

The proposed water supply and wastewater treatment connection lines have been designed to be located within existing roadways and/or their adjacent maintained shoulder. As such, the installation will have minimal impact to natural vegetation.

5.3.2 Wetlands

5.3.2.1 Tribal Lands

Based on the approved wetland delineation, Phase I of the proposed development will impact a total of 1.48 acres of vegetated wetlands in WA-4. Phase I will additionally impact 0.07 acres of Pond 4 and 0.37 acres of Basins 1 and 2. Phase II will impact 0.05 acres of WA-21. A total of 705 lf of intermittent streams will also be impacted for Phase I and II. Mitigation is proposed so that there will be no net loss of wetland acreage or functions and values. Neither roadway improvements nor utility connections will have wetland impacts. Should the USACE determine that the Basins have become jurisdictional, additional impacts will total 0.59 acres in Basins 1, 2 and 4 and mitigation is proposed so that there will be no net loss of wetland acreage or functions and values of this additional area.

Placement of fill in waters of the United States will require a permit under Section 404 of the Clean Water Act from the USACE and a Water Quality Certificate from the NYSDEC under Section 401 of the Clean Water Act (see Section 1.3). Application has been made for these approvals. The initial applications were made to the USEPA and USACE for the Sections 401

and 404 approvals, respectively, and a joint Public Notice was issued by the USACE and USEPA on October 11, 2002. The comment period ended November 11, 2002. Responses to comments were submitted to the USACE and USEPA. Mitigation plans are currently being finalized, as described below. However, it has been determined that NYSDEC will issue the Section 401 Water Quality Certificate. As such, NYSDEC has reviewed the application. If necessary, the applications will be amended to reflect the additional 0.59 acres in Basins 1, 2 and 3 and the corollary mitigation if those areas are subject to USACE jurisdiction. The NYSDEC will make a determination with respect to the Section 401 Water Quality Certificate after this FEIS is issued.

The following sections discuss project alternatives, impacts and mitigation for wetland areas. A separate section on Supplemental Wetland Mitigation is provided below should the Basins be determined to be jurisdictional by the USACE.

Alternatives Analysis. The Casino Project alternative evaluated here is considered the least environmentally damaging practicable alternative. The alternatives analysis in Section 3.0 discusses the various designs evaluated in more detail and why the proposed alternative was selected.

5.3.2.2 **Avoidance and Minimization.** The proposed Casino Project design avoids wetland impacts to the greatest extent practicable. While other project alternatives had impacts ranging upwards of 15 acres to seven wetland areas and seven streams, the preferred alternative impacts a total of 1.53 acres (in Phases I and II) in two wetland areas and three intermittent streams. Initially, wetland impacts were estimated to be over five acres. However, minimization efforts significantly reduced these impacts. These efforts included:

- Placing more of the surface parking into structured parking
- Relocating the Phase II structured parking away from WA-3
- Using a retaining wall and tighter parking requirements in the surface parking lot to reduce impacts to WA-4
- Redesigning stormwater management basins to reduce impacts to existing Basin 1
- Steeper grading and minor relocation of the western access road to avoid impacts to WA-4
- Redesigning a stormwater outlet to avoid impacts to WA-8

In addition, development elements were pulled away from wetland boundaries as much as possible. One example was moving the warehouse to inside the access road, as opposed to the outside near off-site wetland areas. Widening of County Highway 161 was also kept on the east side of the road to avoid the toe-of-slope wetlands along the west side of the road on Cooke West.

5.3.2.3 **Wetland Impacts.** Impacts to wetland resources, including waterbodies, arise from direct and indirect, short- or long-term activities. Short-term impacts from construction operations are addressed in Section 5.1.1. Long-term indirect impacts from stormwater are addressed in Section 5.2. This section addresses long-term direct impacts (i.e., filling of wetlands) on wetlands from the project.

Table 5-5 summarizes direct wetland impacts, as shown on Figure 5-5. Intermittent stream impacts were considered in Section 5.2.2. The main wetland impact will occur to WA-4 from construction of the casino and parking garage in Phase I. Basin 1 will be impacted by grading for the loop road and for the proposed adjacent stormwater basins. Basin 2 will be entirely impacted for construction of stormwater facilities. A small area of Basin 4 will also be impacted. Phase II wetland impacts will arise from construction of the parking garage in WA-21.

Table 5-5 Wetland Impact Summary

Resource Area	Phase I Impact	Phase II Impact
WA- 4	1.48 acres	0
WA-21	0	0.05 acres
Pond 4	0.07 acres	0
Basin 1	0.19 acres	0
Basin 2	0.40 acres	0
Basin 4	0.002 acres	0

Wetland Mitigation. Figure 5-6 shows an overview of proposed Primary Wetland Mitigation Area, based on the original USACE Jurisdictional Determination, as well as the Supplemental Wetland Mitigation Areas. Creation of new resource areas and enhancement of existing areas is proposed to provide mitigation for direct wetland impacts. The mitigation areas have been designed so that there will be no net loss of wetland functions or values from the Casino Project. Appendix R provides this assessment. In addition, the Casino Project's wetland impacts will be replaced at a wetland creation ratio of approximately 3:1. Final mitigation plans are subject to approval by the USACE and NYSDEC under Sections 404 and 401 of the Clean Water Act, respectively. Table 5-6 summarizes mitigation measures for the project's wetland impacts. These measures are described below. Potential supplemental mitigation is discussed separately in the section "Supplemental Wetland Mitigation", below.

Wetland mitigation areas will be constructed as part of the overall site design during Phase I construction. These areas are an integral part of site design and will be incorporated into the construction specifications. The USACE issued a Special Public Notice (dated December 18, 2003) citing the USACE and USEPA regulations that require compensatory mitigation for unavoidable impacts. Final guidelines and a checklist for review of mitigation plans were provided in a Special Public Notice dated January 10, 2005. These guidelines were used in the development of the proposed mitigation design to ensure success. The checklist will be submitted to the USACE and NYSDEC as part of the final mitigation approval.

Table 5-6 Primary Wetland Mitigation[1]

Mitigation Area	Vegetated Wetland (acres)	Open Water (acres)
Wetland Creation Area	4.3	0.5
Wetland Enhancement Area	0.1	0.5
Total	4.4	1.0

[1] See also Supplemental Wetland Mitigation discussion

Primary Wetland Creation Area – Overview. Figures 5-7 and 5-8 show the detailed grading and planting plans for the Primary Wetland Creation Area, respectively. This area will create 4.3 acres of vegetated wetland and 0.5 acres of open water in the current lower mining area. Existing Basins 3 and 4 and the mostly unvegetated mining area will be replaced. Existing Basin 5, which is a small basin just above the intermittent outlet to the Neversink River, will remain in place, but will be improved. The existing discharge to the Neversink River will be unchanged. This will avoid direct or indirect disturbance of the Neversink River. Isolated WA-20 will not be affected.

The Primary Wetland Creation Area is designed to maintain and improve the existing vegetative buffer along the Neversink River. This mitigation area will occur in extremely low value, mostly unvegetated areas that are have been impacted by mining operations. The creation area will slope gently from the north to the south, consistent with existing drainage patterns. Existing topographical rises at the northern end will remain. In this manner, the Neversink River will overflow into the wetland as a backwater condition during flood events, from the south, as opposed to a flood condition from the north. This will reduce velocities during flood conditions in all except the highest of storms. Fully pretreated stormwater discharges from the Casino Project site will enter at the northern end. This will maximize any additional water quality treatment the wetland may provide before the waters are discharged to the river. This treatment includes further reductions of water temperature. A stream channel will be created from the northern end to the discharge point at the southern end to direct flows within the creation area. One pond will be created. This will be created at the inlet to the creation area and will serve as a splash area for stormwater discharges. This pond will also create habitat diversity and provide fish habitat. The pond and the stream channel that leads from the pond will include overhang logs, root wad revetments, fallen tree shelters and/or large rocks that will provide naturalized stabilization as well as shelter and basking areas for fish and wildlife.

Primary Wetland Creation Area – Hydrology and Soils. The Primary Wetland Creation Area is within a region of high water table, as evidenced by the interception of groundwater and creation of basins as a result of the mining extraction. The proposed pond will be established at the same elevation as the current ponds. This area will be overexcavated in order to remove accumulated sediments. The pond will be created with a final depth of up to approximately eight feet, based on current water elevations. The remainder of the area will be graded to an elevation that will intercept seasonal high groundwater. This will require the excavation of certain areas and the filling of depressions left by the mining operations. The area will be overexcavated by twelve inches. Topsoil will be brought in to achieve final grade and provide a substrate for planting. The source for this soil will preferentially be topsoil removed from the on-site wetland impact areas. This will help establish wetland soil characteristics (physical, chemical and

biological). This soil will be supplemented, if necessary, with soils having a minimum of 12 percent organic carbon content by dry weight.

Monitoring of groundwater levels has occurred in order to determine an appropriate elevation for the wetland. The water levels of existing Basins 1, 3 and 4 (see Figure 3-8), as well as a groundwater monitoring well located between Basin 1 and Basin 3, were monitored from August through October 2002, May through October 2003 and August 2010. The water level in these basins is indicative of groundwater, and the results indicate that the basin water levels rise and fall as groundwater does. The surficial deposits are mapped as outwash sand and gravel, and visual observations and test pits confirm this. The coarse grained nature of the deposits in this area indicate that there is a direct hydraulic connection between groundwater and surface water near these ponds. Neither the geologic history of the site, material observed in the basins, nor adjacent test pits indicate the presence of low permeability layers that would hydraulically isolate the basins from the ambient groundwater.

Table 5-7 shows the monitoring results to date. In general, the water elevations in Basins 3 and 4 were identical. The difference in the surface elevation of Basin 1, compared to Basins 3 and 4, is reflective of the hydraulic gradient in the area. The well shows groundwater at an elevation between the upper and lower basins, as expected. Based on this data, the average growing season groundwater elevation is 1065.0, with a maximum difference between high (1065.7) and low (1064.1) elevations of 1.6 feet. As such, the design elevation for the wetland to be created at Basins 3 and 4 is set to be not more than one foot above elevation 1065.6. With this elevation, groundwater will be at or near the surface during high groundwater periods, but will fall to approximately one to one and a half feet below the surface at low groundwater periods. On the average, groundwater will be approximately six inches below surface.

Table 5-7 Water Level Monitoring Data

Date	Basin 1	Basin 3	Basin 4	Groundwater Well
6-22-02	--	--	--	1072.8
8-5-02	1075.7	1064.2	1064.9	--
9-16-02	1077.7	1064.2	1064.1	1071.6
10-7-02	1077.3	1064.2	1064.2	1071.4
10-21-02	1078.6	1065.3	1065.4	1072.1
10-25-03	--	--	--	1071.1
5-8-03	1077.8	1065.1	1065.3	1071.4
6-9-03	1078.7	1065.7	1065.6	1072.0
6-25-03	1078.7	1065.7	1065.7	--
7-17-03	1077.2	1064.7	1064.7	1071.3
7-28-03	1077.0	1064.6	1064.5	1070.5
8-18-03	1077.7	1064.8	1065.0	1071.3
9-4-03	1079.0	1065.3	1065.9	1071.9
9-25-03	1078.8	1065.5	1065.8	1072.0
8-23-2010	1075.3	1064.0	1063.8	---

Wetland Creation Area – Stormwater Benefits. Stormwater management from the site will occur entirely upstream of the Primary Wetland Creation Area, as detailed in Section 5.2. However, the mitigation area will provide some additional benefit to control stormwater from the site, which are summarized below. Therefore, the wetland creation area was evaluated to determine the level of stormwater benefits provided by the created wetland with regard to runoff storage volume and the retention time during specific storm periods that would provide additional peak flow attenuation and water quality enhancement. Supplemental data are provided in Appendix S.

During periods of no flow, the created wetland area is maintained by naturally occurring groundwater conditions. The grade at the bottom of the wetland area is designed to be at the normal groundwater level during the growing season. A proposed pond within the wetland area will be excavated approximately eight feet below the groundwater level on order to maintain a permanent pool elevation. There is a positive gradient and drainage swale from the north end of the wetland to the natural outlet channel at the south end where it discharges to the Neversink River.

During minor storm events with return frequencies of less than 1-year, virtually all runoff from the improved portions of the site will be recharged to the groundwater in Infiltration Basin 1. Groundwater will enter the wetland area subsurfacely, thereby contributing base flow to the wetland system. There will be no direct surface water discharge into the wetland area from improved portions of the site during these lower rainfall events; however, there will be discharges to the wetland area from undeveloped portions of the site.

During rainfall events with return periods from 1-year up to approximately 5-years, surface discharges will occur from the infiltration basin into the wetland area. The total storage volume in the wetland area (prior to overtopping the existing berm next to the Neversink River) is approximately 302,300 cubic feet (6.9 acre-feet). The estimated flow, storage volume and detention time for the 1 and 2-year storm events are shown in Table 5-8.

Table 5-8 Wetland Creation Area Flow, Storage Volume, and Detention Time

Parameter	1-Year Storm	2-Year Storm
Peak Inflow Rate (into wetland)[1], cfs	46.1	82.0
Peak Outflow Rate (out of wetland), cfs	32.8	58.8
High Water Elevation, feet above MSL	1,066.1	1,066.6
Peak Storage Volume, cubic feet	152,700	230,600
Plug Flow Detention Time[2], hours	1.8	1.5

(1) Inflow is from undeveloped portions of the site. There is no inflow from Infiltration Basin 1 during the 1-Year Storm.

(2) The theoretical average detention time that a given inflow of water will reside within the created wetland pond as calculated by HydroCad.

Based on the storage volume provided in these minor to intermediate storm events, settlement of larger particles (typically >20 um) will take place allowing for the capture of some Total Phosphorous and Total Nitrogen. Also, there will be some additional uptake of nutrients by the wetlands vegetation during the growing season. The berm that separates the wetland from the river has a top elevation that ranges from 1,073.4 feet at the upper end to 1,065.0 feet at the lower end. During storm events of 10-years and greater, the peak runoff inflow volume from the site will exceed the storage capacity of the wetland, thereby overtopping the berm and discharging to the river, as currently occurs. Additionally, during these more severe storm events, the high water elevation of the adjacent river will overtop the berm, thereby flushing the wetland and any stored runoff with river water.

Primary Wetland Creation Area – Vegetation. Because hydric soils from the wetland impact areas will be relocated to the Primary Wetland Creation Area, it is expected that native species will rapidly colonize from the seed bank. However, to ensure successful vegetative establishment, a planting plan is proposed. After final grades are established, the entire area will be broadcast with annual and wetland seed mixes, including a rapid colonizing species. The annual grass will provide quick stabilization and cover; wetland seed mixes will increase future plant diversity and habitat value. Along the upland border, a native seed mix will be used to establish vegetative cover. Upland trees and shrubs will be planted to screen the wetland area and provide a buffer between the developed portions of the site and the new wetland. This screening will include re-establishment of a full buffer between the river and the site, especially in areas where mining has encroached towards the river. Emergent plants and live stakes will be planted along the created pond edge and stream channel to provide immediate, naturalized stabilization and wildlife habitat.

Plant species that will be used in the mitigation area have been selected to provide a number of benefits and to reflect typical wetland vegetation in the area. Criteria considered in the selection of the plant materials include known success in wetland creation areas, local presence, ability to grow rapidly and colonize, provision of food source at various times of year, growth forms to provide a variety of cover type (including year-round cover as provided by evergreens or dense shrubs), and aesthetics. Only plants that are native and non-invasive are included. The selected plant species reflect the species in the impact areas and provide additional diversity. In addition to these plants, live stakes will be used along the proposed pond and stream corridor to provide rapid, natural looking stabilization. Live stakes are branch and stem cuttings taken from native wetland shrubs, most typically dogwoods and willows. Cuttings are planted in the ground where they rapidly grow into individual shrubs.

In order to develop a basis for the plant species list, six reference wetlands were observed and vegetation data collected. Figure 5-9 shows the location of these reference wetlands. Reference wetlands provide a good source of information on plant species that are typical of the area and that are generally successful in a setting such as that for the created wetland. Wetlands that are near the mitigation site, as well as wetlands that are in floodplain situations along the Neversink River were considered. Reference Wetlands (RW) 1 and 2 are within the floodplain of the Neversink River and are situated along intermittent tributaries to the Neversink River. RW 3 and 4 are situated adjacent to the Neversink River, within its floodplain. RW 5 and 6 are located on an intermittent tributary to the Neversink River. These last two reference wetlands are within the

floodplain of the Neversink River, but in a finger of the floodplain that extends up the intermittent tributary. These six reference wetlands show a diversity of emergent, scrub-shrub and forested community types. Table 5-9 provides a list of plant species observed in these reference wetlands. Table 5-10 provides a list of the plant species proposed for the wetland creation area. It was, in large part, derived from those species found in Table 5-9.

Table 5-9 Reference Wetland Plant Species List

Common Name	Scientific Name	Indicator Status	RW1	RW2	RW 3	RW4	RW5	RW6
Trees								
Red Maple	*Acer rubrum*	FAC	X	X	X	X		X
Yellow Birch	*Betula alleghenienis*	FAC	X		X			
Gray Birch	*Betula populifolia*	FAC	X		X	X		
Green Ash	*Fraxinus penslvanica*	FACW			X			
Cottonwood	*Populus deltoides*	FAC	X		X			
Black Cherry	*Prunus serotina*	FACU	X		X			
Slippery Elm	*Ulmus rubra*	FAC	X		X			
Shrubs								
Speckled Alder	*Alnus rugosa*	FACW+	X	X	X	X		X
Ironwood	*Carpinus caroliniana*	FAC	X		X			X
Silky Dogwood	*Cornus amomum*	FACW	X	X	X	X		X
Maleberry	*Lyonia lingustrina*	FACW				X		
Sweetgale	*Myrica gale*	OBL	X	X	X			
Rose sp.	*Rosa sp*	NI	X	X	X			
Blackberry	*Rubus alleghenienis*	FACU-	X	X	X	X		
Pussy Willow	*Salix discolor*	FACW	X	X	X			X
Black Willow	*Salix nigra*	FACW-	X	X	X	X		
Meadow-sweet	*Spiraea latifolia*	FAC+	X	X	X	X	X	X
Arrowwood	*Viburnum dentatum*	FAC	X	X	X			X
Herbaceous								
Groundnut	*Apios americana*	FAC	X		X			
Lady Fern	*Athyrium filix-femina*	FAC	X					
Beggar-ticks	*Bidens sp*	FACW	X	X	X		X	X
Blue-joint Grass	*Calamagrostis canadensis*	FACW+	X	X	X	X	X	X
Fringed Sedge	*Carex crinata*	OBL	X	X	X			X
Shallow Sedge	*Carex lurida*	OBL	X	X	X			
Tussock Sedge	*Carex stricta*	OBL	X	X	X		X	X
Bittersweet	*Celastrus scandens*	FACU-	X		X			
Nightshade	*Circaea lutetiana*	FACU	X		X			
Deer tongue Grass	*Diachanthelium clandestinun*	FAC+	X	X	X			
Woodfern	*Dryopteris spinulosa*	FAC+	X	X	X			

Common Name	Scientific Name	Indicator Status	RW1	RW2	RW 3	RW4	RW5	RW6
Trees								
Horsetail	*Equisetum pratense*	FACW	X		X	X	X	
Flat-top Goldenrod	*Euthania graminifolia*	FAC	X	X	X			
Virginia Rye	*Elymus virginicus*	FACW-	X		X			
Bedstraw	*Gallium sp*	FACW	X	X	X	X	X	X
Canada Manna Grass	*Glyceria canadensis*	OBL	X				X	X
Marsh St. John's wort	*Hyperisum fraseri*	OBL	X	X	X		X	X
Jewelweed	*Impatiens capensis*	FACW	X		X	X	X	X
Blue Flag	*Iris versicolor*	OBL	X	X	X		X	
Soft Rush	*Juncus effusus*	FACW+	X	X	X	X	X	X
Purple Loosestrife	*Lythrum salicaria*	FACW+		X				
Mayflower	*Maianthemum canadensis*	FAC-	X		X			
Sensitive Fern	*Onoclea sensibilis*	FACW	X	X	X		X	X
Cinnamon Fern	*Osmunda cinnamomea*	FACW	X				X	
Royal Fern	*Osmunda regalis*	OBL	X				X	
Virginia Creeper	*Parthenocissus quinquefolia*	FACU	X		X		X	
Canary Grass	*Phalaris arundinacea*	FACW	X	X	X		X	
Common Reed	*Phragmities australis*	FACW	X		X			
Arrow-leaf Tearthumb	*Polygonum sagittatum*	OBL	X				X	
Dewberry	*Rubus hispidus*	FACW	X		X		X	
Blackberry	*Rubus allegneniensis*	FACU-	X	X	X			
Green Bulrush	*Scirpus atrovirens*	OBL	X	X	X			
Wool-grass	*Scirpus cyperinus*	FACW+	X		X		X	
Common Greenbrier	*Smilax rotundifolia*	FAC	X	X	X			
Climbing Nightshade	*Solanum dulcamara*	FAC-	X		X			
Goldenrod	*Solidago rugosa*	FAC	X	X	X			
Skunk Cabbage	*Symplocarpus foetidus*	OBL	X		X			
New York Fern	*Thelypteris novaborancensus*	FAC	X		X			
Marsh Fern	*Thelypteris thelypteroides*	FACW+	X		X		X	
Poison Ivy	*Toxicodendron radicans*	FAC	X	X	X	X	X	X
False Hellebore	*Verattrum viride*	FACW+	X	X	X			
Violet	*Viola sp*	NI	X	X	X		X	X
Grape sp.	*Vitis sp*	NI	X		X			X

[1] OBL Obligate occur in wetland with a frequency of 99%
FACW Facultative Wetland occur in wetlands with a frequency of 67% to 99%
FAC Facultative occur in wetlands with a frequency of 34% to 66%
FACU Facultative Upland occur in wetlands with a frequency of 1% to 33%
UPL Upland occur in wetlands with a frequency of <1%

Table 5-10 Wetland Creation Area Plant Species[1]

Scientific Name	Common Name	Indicator Status	Comment
Herbaceous[2]			
Acorus calamus	Sweet Flag	OBL	Good wildlife food; cover; spreads quickly
Asclepias incarnata	Swamp Milkweed	OBL	Aesthetic
Aster novae-angliae	New England Aster	FACW-	Aesthetic
Calamagrostis	Blue-joint Grass	FACW+	Good wildlife food; spreads quickly
Carex intumescens	Bladder Sedge	FACW+	Good wildlife food
Caltha palustris	Marsh Marigold	OBL	Aesthetic
Carex lupulina	Hop Sedge	FACW+	Good wildlife food
Carex lurida	Lurid Sedge	OBL	Good wildlife food
Carex stricta	Tussock Sedge	OBL	Good wildlife food
Chelone glabra	Turtlehead	OBL	Good wildlife food; aesthetic
Eupatoriadelphus	Spotted Joe-pye	FACW	Aesthetic; spreads quickly
Eupatorium perfoliatum	Boneset	FACW+	Aesthetic; spreads quickly
Glyceria canadensis	Canada Manna Grass	OBL	Good wildlife food; spreads quickly
Juncus effusus	Soft Rush	FACW+	Spreads quickly
Leersia oryzoides	Rice Cutgrass	OBL	Good wildlife food
Lobelia cardinalis	Cardinal Flower	FACW+	Aesthetic
Mimulus ringens	Monkey Flower	OBL	Good wildlife food; aesthetic
Onoclea sensibilis	Sensitive Fern	FACW	Spreads quickly
Pontedaria cordata	Pickerelweed	OBL	Good wildlife food; aesthetic
Sagittaria latifolia	Arrowhead	OBL	Good wildlife food; aesthetic
Scirpus atrovirens	Green Bulrush	OBL	Good wildlife food
Scirpus cyperinus	Wool-grass	FACW+	Good wildlife food
Scirpus pungens	Three-square Bulrush	OBL	Good wildlife food
Scirpus validus	Soft-stem Bulrush	OBL	Good wildlife food
Veratrum viride	False Hellebore	FACW+	Good wildlife cover
Verbena hastata	Blue Vervain	FACW+	Aesthetic
Veronia noveboracensis	New York Ironweed	FACW+	Aesthetic
Shrub			
Alnus spp[3]	Alders	FACW	Good wildlife food (winter); cover; spreads quickly
Cornus amomum[3]	Silky Dogwood	FACW	Good wildlife food (fall); cover; spreads quickly
Cornus foemina[3]	Gray Dogwood	FAC	Good wildlife food; cover; spreads quickly
Cornus stolonifera[3]	Red Osier Dogwood	FACW+	Good wildlife food; aesthetic; cover; spreads quickly
Ilex verticillata	Winterberry	FACW+	Good wildlife food (fall/winter);
Lindera benzoin	Spicebush	FACW	Good wildlife food; aesthetic
Rhododendron	Swamp Azalea	OBL	Aesthetic; winter cover (evergreen)
Rosa palustris	Swamp Rose	OBL	Good wildlife food (fall/winter); winter cover (dense); aesthetic

Scientific Name	Common Name	Indicator Status	Comment
Salix discolor[3]	Pussywillow	FACW	Good wildlife food; aesthetic; spreads quickly
Sambucus canadensis[3]	Elderberry	FACW-	Good wildlife food; cover; spreads quickly; aesthetic
Vaccinium corymbosum	Highbush Blueberry	FACW-	Good wildlife food; winter cover
Viburnum dentatum[3] *(recognitum)*	Arrowwood	FACW-	Good wildlife food
Viburnum lentago	Nannyberry	FAC	Good wildlife food; cover
Forested			
Acer rubrum	Red Maple	FAC	Good wildlife food
Carpinus caroliniana	Musclewood (American Hornbeam)	FAC	Good wildlife food
Fraxinus pennsylvanica	Green Ash	FACW	Good wildlife food
Nyssa sylvatica	Black Tupelo	FAC	Good wildlife food
Pinus strobus	White Pine	FACU	Good wildlife food (winter); year round cover; aesthetic
Salix nigra	Black Willow	FACW+	Good wildlife food; spreads quickly; winter cover

1 This table provides a recommended list of vegetation species. Changes in vegetation species types and amounts may occur during USACE review.

2 Must include a minimum of ten species and no greater than 20% per species.

3 Shrub species which may be planted as live stakes.

Wetland Enhancement Areas. The wetland enhancement areas consist of the enhancement of approximately 0.6 acres of existing Basins 1 and 5, as shown in Figure 5-6. These basins were originally created as part of the mining operation and were used to control runoff from adjacent mining operations. While they are still subject to sediment inputs from surrounding activities, they have assumed some wetland characteristics.

Basin 1 is flooded during high water levels. During most of the growing season, however, the standing water was observed to have retreated significantly with a maximum water depth of six inches, approximately two feet below the existing culvert outlet. The higher levels of the basin support emergent growth. Enhancement of this area is proposed to include stabilization of the banks and surrounding area, increasing the depth to create a deeper permanent pool of water, and provision of landscaping to provide shade as well as diverse wetland plant species. Section 5.4.1 describes an aquatic shelf which will also be provided to further enhance fisheries habitat.

Basin 5 is a shallow basin that has accumulated sediments from the mining operation that have settled out. The basin also has silt fence established at its outlet to minimize the existing discharge of sediments. The proposed enhancement includes excavation of this basin to remove the accumulated sediments and seeding any disturbed areas. Once the entire wetland creation area is stabilized, the silt fence at the lower end of Basin 5 will be removed, along with any accumulated debris such as one tire that is buried in the outlet. No work is needed nor proposed near the banks of the Neversink River.

Other Mitigation Measures. Two other mitigation measures are proposed that will protect and/or improve existing wetland conditions: provisions for a stormwater management plan and the landscape plan. The stormwater management plan is described in detail in Section 5.2. With regards to protection of wetlands, this plan will control and treat stormwater runoff, and provide water quality treatment and mitigation of potential thermal impacts. This plan will also improve the currently uncontrolled runoff from State Route 17 and County Highway 161 that is transporting heavy loads of sediments into the wetlands. This plan also incorporates provisions for infiltration. It will allow for surface water to recharge groundwater, contributing to base flows for wetlands.

The landscape plan has been designed to restore the unvegetated portions of the site. Portions of these areas had been eroding and sediment is being carried into adjacent wetlands and waterways, including the Neversink River. Stabilization of these areas has already been initiated. The landscape plan will reclaim these areas with specific goals of stabilization, wildlife habitat and aesthetics. The landscape plan is discussed in Section 5.3.1.

Supplemental Wetland Mitigation. Should the USACE determine that Basins 1 through 5 have become jurisdictional areas, then supplemental wetland mitigation will be provided. As indicated in Table 5-5, these new areas would increase overall wetland impacts to 2.19 acres, including both open water and vegetated wetlands. Stream impacts would not be changed. In addition, Basins 3 and 4, which are currently proposed to be reclaimed as part of the mitigation plan, could be assumed to be inappropriate for wetland creation. As such, a supplemental wetland mitigation plan has been developed as a contingency to a change in jurisdictional status. This plan will consist of four areas. Figure 5-6 shows the general location of these four areas. Each of these four areas will follow the general design and construction details described previously. A brief description of these areas follows. Final mitigation area sizes and design will be determined during permitting with the USACE. If all of these Supplemental Wetland Mitigation Areas are used, the total mitigation will be 6.86 acres of creation, 0.53 acres of enhancement in SWM-1, and 0.6 acres of enhancement as originally proposed in Basins 1 and 5. Assuming a maximum of 2.19 acres of impact to jurisdictional areas, this results in a mitigation ratio of approximately 3:1, the same as proposed for the Primary Creation Area and in the DEIS.

> **SWM-1.** This supplemental wetland mitigation (Figure 5-10) will include both enhancement as well as creation. Creation and enhancement will mostly occur in the area previous disturbed by mining operations around Basins 3 and 4. The enhancement will include areas of sparse wetland vegetation that are growing up through some of the compacted previously mined soils areas. This area will include 1.66 acres of creation and 0.53 acres of enhancement, and will be integrated with existing Basins 3 and 4. This area will also include a created stream segment to connect Basins 3 and 4.
>
> **SWM-2.** This area (Figure 5-11), totaling approximately 3.1 acres, will consist of wetland creation. This area occurs above a large wetland complex (WA-12) on Cooke West. As with the other SWM areas, the design, construction and monitoring will follow the general details described for the Primary Wetland Creation Area.

SWM-3. This area (Figure 5-12), located on Cooke East, will create approximately 1.08 acres of wetlands. This site is centered on an area that has been filled in the past, and that lies between wetlands on Cooke West and Cooke East. Drainage that comes from WA-10 on Cooke West will be directed into SWM-3. SWM-3 is also in the vicinity of the proposed new access road, and its creation will take advantage of grading and construction work already proposed in the vicinity.

SWM-4. This area (Figure 5-12), located on Cooke West, will create approximately 1.02 acres of wetlands. SWM-4 will generally be a linear creation adjacent to WA-10.

Monitoring and Reporting. Monitoring of the mitigation areas, both during and beyond construction, will occur in accordance with the provisions of the Section 401 Water Quality Certificate and the 404 permit. It is assumed that monitoring will occur for five years, and that periodic reports will be submitted. Monitoring will include review of mitigation area success, as well as proposed remediation efforts, if required, for mitigation area failures. In addition, monitoring of soil erosion and sediment conditions will be performed based on a frequency set forth in the USEPA NPDES Stormwater General Permit. Monitoring specifics are outlined below.

The wetland mitigation areas (including the wetland creation area, pond and stream creation areas and enhancement of Basins 1 and 5) will be monitored. Monitoring reports will be submitted to the USACE for five years following construction.

Both formal and informal monitoring will occur. Informal monitoring will occur at the beginning of each growing season. It will start the first full growing season after completion of construction and planting. The goal of the informal monitoring will be to determine if there are any obvious problems that need to be addressed. This will include issues such as erosion or major failure of the wetland plant community to become established. If issues are identified, corrective measures will be proposed to the USACE for review before they are undertaken. Informal monitoring will occur for the first three years. Informal monitoring results will not be reported to the agencies unless remedial actions are identified that will require approval.

Formal monitoring will occur at the end of each growing season. Monitoring efforts will include establishment of monitoring plots in the mitigation areas. The formal reports will address the following eight success standards:

1. Shrub and sapling planted portions must have at least an average shrub/sapling density of 10 feet on center. At least 75 percent of the individual woody species must be healthy. Volunteer species (i.e., those not planted) may be included in these assessments. Species diversity must be present. In order for a species to be counted towards diversity, the species must be well represented (i.e., account for at least five percent areal cover within a monitoring plot. Areas planted with live stakes must have at least two woody species. Other areas planted with woody species must have a total six different well represented

species. Overall areal coverage in woody planted areas must be at least 80 percent wetland species.

2. Emergent areas must have 80 percent cover with wetland species. Overall, diversity must be present and show at least six different well represented species (i.e., accounting for over five percent aerial cover in a given location).

3. Aquatic shelf areas must provide cover for 25 percent of the bank area, as it shades the immediately adjacent water. Species will be distributed both as aquatic species growing in the water, as well as adjacent overhanging species rooted in the bank. Diversity should show that there are at least four species accounting for at least five percent each of the total 25 percent cover area.

4. Invasive, nonnative species must be controlled. Invasive, nonnative species include common reed (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*), Russian olive (*Eleagnus* spp.), multiflora rose (*Rosa multiflora),* and buckthorn (*Rhamnus frangula*). Based on The Nature Conservancy ecological integrity thresholds, a 5-19 percent presence of exotic species is considered optimal. As such, should exotic species begin to exceed 15 percent cover in discrete areas, remedial actions will be proposed.

5. Wildlife habitat features (overhanging logs, fallen tree shelters, and root wad revetments) must be in place and secured.

6. All slopes, soils, substrates, and constructed features within and adjacent to the mitigation areas must be stabilized.

7. The extent of wetland in the wetland creation area will approximate that shown on the design plans.

8. The upland vegetated area between the wetland creation area and the circulation road must provide at least 80 percent areal coverage.

The annual reports will include a narrative reporting on the above success criteria. A concise description of remedial actions done during the monitoring year to meet success standards, including actions such as removing debris, replanting, controlling invasive plant species (with biological, herbicidal, or mechanical methods), or adjusting hydrology, will be provided. The status of erosion control measures will be reviewed, including whether or not the temporary controls such as hay bales are still needed and whether or not they have been removed. The reports will include a discussion of fish and wildlife observations within the mitigation areas and form of habitat use (i.e. nesting, feeding, shelter, etc.). The report will also recommend remedial measures, if necessary, to achieve or maintain achievement of the success standards and otherwise improve the extent to which the areas provide wetland functions and values. An overview of the mitigation areas will be included, as well as photographs. Data collected at the monitoring plots will be included as an appendix to each report.

Executive Order 11990. The Casino Project complies with Executive Order 11990 (Protection of Wetlands). This Executive Order was established so that federal agencies "avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative". It has been demonstrated that there are no practicable alternatives with less environmental damage, and that measures have been proposed to minimize harm to wetlands.

5.3.2.4 Public Roadway Improvements

There will be no direct wetland impacts. Potential indirect impacts to wetlands will be temporary due to construction adjacent to the roadside wetlands. Mitigation measures to minimize temporary construction impacts include the implementation of the Casino Project's Stormwater Pollution Prevention Plan, as described in Section 5.1.

5.3.2.5 Utilities Connections

Because the proposed water and sewer lines will be placed in the developed road area, there will be no direct wetland impacts. Potential indirect impacts to wetlands will be temporary due to construction adjacent to the roadside wetlands. Mitigation measures to minimize temporary construction impacts include the implementation of the Casino Project's Stormwater Pollution Prevention Plan, as described in Section 5.1.

5.3.3 Threatened and Endangered Plant Species

No endangered or threatened plant species were observed in any of the proposed areas of activities. Neither the USFWS nor NYSDEC indicate any known species of concern. There will be no impact on endangered or threatened plant species.

5.3.4 No Action Alternative

In the No Action Alternative, impacts to vegetation and wetlands would be avoided. Areas, both upland and wetland, which had been disturbed by mining and auto salvage operations, would continue to become re-established.

If mining and auto salvage operations were to resume, current areas that the Tribe had reclaimed would again lose vegetation to these operations. Restoration of the resumed mining areas would eventually occur under the mining reclamation plan over a very long time frame (at least 20 years), but not to the degree proposed for the Casino Project. Restoration of the auto salvage area would not be likely to occur. Cooke East and West and Rossini would remain unchanged in either scenario.

5.4 Fish and Wildlife

5.4.1 Fisheries

Tribal Lands. No direct impacts to significant fisheries or fisheries habitat will occur. The Neversink River provides the most valuable fisheries habitat on the project site. There will be no direct impacts to the Neversink River, and development will be set back from the river. The existing 33 foot NYSDEC fishing easement will remain. In addition, the area adjacent to the river will be further restored. Indirect impacts from stormwater runoff will be controlled, as discussed in Section 5.2. Most importantly, thermal impacts have been minimized through a number of means as discussed in Section 5.2. In addition, the ponds on Cooke West and south of Interchange 107 will be undisturbed.

Four of the basins within the former mining operation provide some limited fisheries habitat. As previously discussed, the basins associated with the mining area have steep, gravelly banks, and are generally devoid of vegetation. The proposed enhancement of Basin 1 will include increased depth, to provide both a more stable water level as well as to provide additional interaction with groundwater to control water temperatures. In addition, the enhanced basin will be designed with the addition of an aquatic shelf. The shelf will slope from the edge of the existing shore and will typically consist of three zones: shallow emergent (0-18 inches of water), deep marsh (18-36 inches of water), and aquatic bed (36-60 inches of water). The shelf will be vegetated with emergent and aquatic species selected for their habitat value and occurrence within the region (Table 5-11). This habitat will substantially improve the breeding, feeding, and cover habitat of Basin 1 for fisheries and amphibians. Similar plantings will be introduced along the margins of the new ponds proposed within the creation area.

Existing Basins 2, 3 and 4 will be converted to either stormwater management facilities, vegetated wetlands or ponds. The condition of existing Basin 5 will be improved by improvement of the water quality discharging to that basin and removal of accumulated sediments. The new aquatic habitats will provide improved conditions through the removal of sediments, and inclusion of habitat features including variable bottom conditions and the provision of shade trees and overhang logs. With the protection and increased buffering of the Neversink River, enhancement of Basins 1 and 5 and the provision of the new open water, fisheries habitat impacts will be minimized.

Table 5-11 Typical Plant Species for Proposed Aquatic Shelf

Scientific Name	Common Name	Habitat Characteristics
Acorus calamus	Sweetflag	Wet meadow and shallow emergent marsh habitat
Alnus rugosa	Speckled Alder	Scrub/shrub habitat
Carex stricta	Tussock Sedge	Wet meadow and shallow emergent marsh habitat
Cornus amomum	Silky Dogwood	Scrub/shrub habitat
C. stolonifera	Red-osier Dogwood	Scrub/shrub habitat
Eupatoriadelphus maculatus	Joe-pye Weed	Wet meadow habitat
Nymphaea odorata	White Water Lily	Aquatic bed habitat
Nuphar luteum	Yellow Water Lily	Aquatic bed habitat
Peltandra virginica	Arrow Arum	Deep marsh habitat
Pontederia cordata	Pickeral Weed	Deep marsh habitat
Sagittaria latifolia	Northern Arrowhead	Shallow and deep marsh habitat
Scirpus validus	Soft-stem Bulrush	Shallow marsh habitat
Sparganium amercanum	Burreed	Shallow marsh habitat
Vallisneria americana	Wild Celery	Aquatic bed habitat

This list represents suggested plant species. Variations may occur in species composition or quantities due to availability and/or permit conditions.

Public Roadway Improvements. There will be no fisheries impacts. No direct impacts to surface waters will occur and potential indirect construction impacts will be controlled through the implementation of the Stormwater Pollution Prevention Plan.

Utilities Connections. There will be no fisheries impacts along either alignment. No direct impacts to surface waters will occur and potential indirect construction impacts will be controlled through the implementation of the Stormwater Pollution Prevention Plan.

5.4.2 Wildlife

Tribal Lands. The proposed development will not impact the relatively intact wildlife habitat areas west of County Highway 161 (approximately 170 acres). Rather, it will be clustered in the area east of County Highway 161 where extensive habitat disruption from the mining and auto salvage operations has already occurred. As such, the ecological integrity of most of the site will remain in forest and forested wetland vegetation, resulting in minimal impacts to wildlife habitat. The proposed construction activity will result in the disturbance and lateral displacement of some species of wildlife in the project area, such as birds and more mobile mammals including raccoons and squirrels. There will be some loss of wildlife species that are slow moving and have small home ranges or burrowing adaptations, such as invertebrates, reptiles, amphibians, small rodents, ground squirrels, and woodchucks, within the newly impacted areas of the Casino Project. The development of the site will displace upland habitat during construction. As these

wildlife species have high reproductive rates and will repopulate the undeveloped areas of the project site and adjoining habitat, this loss and disruption of individual species is not anticipated to have an impact on overall wildlife populations. However, the proposed action will temporarily reduce some habitat for wildlife species, as indicated by the net loss of approximately 50 acres of softwood forest. This loss will be mitigated in part by the net gain of approximately 50 acres of successional area. This successional area, created in areas that are currently unvegetated or sparsely vegetated and were part of the mining and auto salvage operations, will not be maintained and will develop into a forested area.

Post-construction operation of the proposed facility will cause wildlife to be displaced by the proposed parking spaces and buildings, resulting in a long-term impact. Wildlife will be able to inhabit the re-vegetated areas on the proposed site and adjacent undisturbed areas, and stable populations will return over time.

No significant impacts to wildlife are anticipated. Impacts have been limited as much as possible by the clustering of the development in one area. Mitigation to minimize unavoidable impacts will include a landscaping plan designed to maximize future wildlife use of the site by using plant species with known wildlife food and habitat value and creation of additional edge habitat in appropriate areas. The implementation of setbacks from the Neversink River will serve to further minimize the impacts to the riparian zone in general and resident bird mammal, reptile, and amphibian species in particular. Wetland mitigation will replace lost wetland habitat and landscaping of the proposed facility and parking areas will allow some species to return to the area.

Public Roadway Improvements. The development of the proposed roadway improvements will impact mowed right-of-way with limited wildlife habitat value. The proposed project will also displace some upland forest vegetation, resulting in impacts to some portions of the project area and some loss of associated wildlife habitat.

The proposed construction activity will result in the disturbance and lateral displacement of some species of wildlife in the project area such as birds and more mobile mammals including raccoons and squirrels. Wildlife species that are slow moving and have small home ranges or burrowing adaptations, such as invertebrates, reptiles, amphibians, small rodents, ground squirrels, and woodchucks, will probably be lost on the newly impacted areas of the project area during construction. These wildlife species have high reproductive rates and will repopulate the undeveloped areas of the project area and adjoining habitat. This loss and disruption of individual species is not anticipated to have a significant impact on overall wildlife populations. Wildlife will be able to inhabit the adjacent undisturbed areas, and stable populations will return over time.

Utilities Connections. The proposed alignments have been designed to be located within existing roadways and/or their adjacent unvegetated shoulders. As such, the installation will have no impacts to wildlife habitat.

5.4.3 Threatened and Endangered Wildlife Species

Tribal Lands. There will be no impact to federally listed or proposed endangered or threatened wildlife species. The federally endangered dwarf wedgemussel was not found within the project area during the survey conducted in 2001 (Hoggarth and Madej 2001). The brook floater (*Alasmidonta varicosa*), classified as a species of concern by the USFWS, has a viable population in the Neversink River in the vicinity of the Casino Project. Field conditions were confirmed in 2010, and indicated no changes in conditions and no evidence of any mortality events.

The brook floater is listed as threatened by NYNHP. Impacts to this population are not anticipated. The brook floater is presumably sensitive to eutrophication changes, microhabitat, oxygen content, water temperature, and impacts to host fish on which it is dependent for reproduction. Of particular concern for this project are pollution, thermal impacts and sedimentation of the Neversink River. The Casino Project has been designed to avoid these impacts.

There will be no construction in the Neversink River or its banks and therefore, there will be no direct impact to habitat of the brook floater. Provision of the stormwater management practices discussed in Section 5.2 will ensure that indirect impacts are also controlled both during construction and operational phases. The measures taken to be protective of the mussels are described below.

Freshwater mussels are filter feeders on microscopic food items and are therefore susceptible to smothering by silt and sediments. Although susceptibility to silt and sediment differs from species to species, the brook floater inhabits gravelly riffles and is sensitive to sedimentation. Brook floaters observed in the Casino Project study area inhabited gravelly areas with minimal fine sediments. Maintaining the existing sediment transport conditions of the Neversink River will, therefore, seem to be most beneficial to the brook floater. Suspended sediments can also result in increased shell erosion. Sediment generated by the Casino Project will be controlled by implementing the SWPPP (Section 5.1.2).Vegetated swales, flow dissipaters, detention basins, sediment forebays and BMPs during construction will prevent sediments from reaching the Neversink River and impacting the brook floater.

Increased water temperature from stormwater runoff could impact the brook floater. Thermal impacts to the Neversink River and the brook floater will be controlled by managing stormwater through water quality swales, water quality basins and infiltration basins. Constructed wetlands will also ameliorate thermal impacts. Minimization of thermal impacts is described in Section 5.2.1.9. Therefore, an increase in water temperature which might affect the brook floater is not anticipated.

Indirect modifications of mussel habitat via hydrologic changes caused by increased stormwater runoff have been shown in other studies. Habitats within the Neversink River will be protected by controlling the rate at which stormwater enters the river. Peak flow stormwater management is described in Section 5.2.1.4. Because there will be no difference in pre-development and post

development runoff rates, no hydrologically induced modifications to brook floater habitat are expected.

Polluted stormwater could impact the brook floater. Pollution impacts will be avoided in a number of ways. Deep sump hooded catch basins are proposed to remove contaminants from stormwater prior to stormwater reaching infiltration basins. A water quality structure is proposed to intercept stormwater prior to discharge to a water quality basin (Section 5.2.1.5). This structure will treat runoff from roof and parking areas. The water quality structure will remove and store suspended sediments and hydrocarbon contaminants.

Wastewater from the Casino Project will be managed (see Section 5.12.2) through treatment at the off-site Kiamesha Lake Sewer Treatment Facility. The permitted treatment capacity of the facility is based on the assimilative capacity of the receiving stream. The assimilative capacity is the ability of the stream to clean itself or receive waste waters without violating water quality standards or having deleterious effects to aquatic life.

Host fishes of freshwater mussels may be impacted by many of the same factors that impact mussels (e.g., eutrophication, thermal impacts, habitat modification). NYSDEC provided historic information of 25 fish species within the Neversink River in the vicinity of Bridgeville. Included among the fish were the pumpkinseed, margined madtom, blacknose dace, longnose dace, and golden shiner, which are known host fish of the brook floater. Sedimentation controls and stormwater management for the Casino Project will be protective of these species and their habitats.

Restoration efforts along the river bank, such as for the wetland creation areas, and stabilization of areas that are currently eroding to the river, may actually improve conditions. If the designed erosion and sediment controls and stormwater management controls are implemented, and as adjacent habitats will be protected, enhanced and restored, there should be no negative impacts to the habitat of the brook floater. The findings of Hoggarth and Madej (2001) support this conclusion.

The bald eagle (*Haliaeetus leucocephalis*), listed as threatened by NYNHP is reported as using the Neversink River as a flyway. The bald eagle may perch in trees along the river. No nesting areas were observed or have been reported. The National Bald Eagle Management Guidelines do not provide recommendations to avoid or minimize impacts to wintering bald eagles. The buffer strips maintained at the project site will help avoid impacts on the eagles' use of the river corridor. The Casino Project will therefore have no impact on the bald eagle.

Public Roadway Improvements. Roadway improvements will have no direct or indirect impacts on endangered or threatened species. All roadway work will be more than 1,000 feet from the river bank. As such, proposed improvements will also have no direct impact on the brook floater (swollen wedge mussel) populations in the river, or on bald eagle use of the river as a flyway. As discussed previously, the stormwater management plan will mitigate potential indirect impacts to aquatic habitat of the brook floater.

Utilities Connections. Neither the USFWS nor NYSDEC indicate the presence of species of concern along the alignments. No impacts to endangered or threatened species will occur.

5.4.4 No Action Alternative

In the No Action Alternative, impacts to fish and wildlife would not occur. Habitat that had been impacted by previous mining and auto salvage operations would continue to re-naturalize. Specific improvements to existing areas of open water to decrease thermal impacts to aquatic resources would not occur.

If mining and auto salvage operations were resumed, areas that had begun to re-establish would be disturbed again. Restoration would eventually occur under the mining reclamation plan over a very long time frame (at least 20 years), but not to the degree proposed for this project. Restoration of the auto salvage area would not be likely. Specific Improvements to existing areas of open water to decrease thermal impacts to aquatic resources would not occur. Cooke East and West and Rossini would remain unchanged in either scenario.

5.5 Hazardous Materials

Tribal Lands. Items identified in Section 4.5 have been removed from the site and appropriate action taken to remediate identified releases, with NYSDEC oversight. Solid wastes, including the automobiles and automobile parts, have been removed. All ASTs and containers have also been removed and disposed of properly. The BIA performed a Level I Contaminant Survey and verified acceptability of the site.

Operationally, no significant impacts resulting from the handling and storage of hazardous materials are anticipated. The use of standard hazardous materials associated with building and grounds maintenance, janitorial supplies, and repair of gaming machines are anticipated subsequent to the development of the casino. These materials may include paints, solvents, oil, fuel, grease, herbicides, pesticides and cleaning supplies. Materials will be stored on-site in a secured area in small quantities, and only limited quantities of waste, if any, will be generated. Once in operation, the facility will comply with federal regulations related to hazardous materials and waste management, air emission, surface water discharges, storage tanks, and community right to know, including the following federal programs, where applicable: the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Clean Air Act (CAA), the National Pollutant Discharge Elimination System (NPDES), Oil Pollution Control Act (OPA), and the Emergency Planning and Community Right-to-Know Act (EPCRA).

A service station on the site will include the storage of gasoline, oil and waste oil tanks and pumps. All applicable regulations will be followed in the construction and operation of the service station and the associated storage tanks.

Public Roadway Improvements. There are no known areas of contamination within the limits of the roadway improvements. Standard construction practices and reporting methods will be followed should areas of potential contamination be found during construction.

Utilities Connections. The updated 2010 review of applicable data bases showed one petroleum spill listed as Active, at the intersection of Rose Valley Road and Old Route 17 and tank tightness test failures (but not necessarily releases) at the Concord Hotel. These are the only known areas of potential contamination within the proposed utility corridors. These conditions have been reported to NYSDEC, and should be remediated by the responsible party or, if necessary, the NYSDEC, prior to the commencement of project construction in these areas. In the unlikely event these conditions has not been remediated by that time, the project will coordinate with the responsible party and/or NYSDEC to ensure that the construction work does not exacerbate a spill and meets all applicable health and safety. Standard construction practices and reporting methods will be followed should areas of potential contamination be found during construction.

Construction Impacts. Construction period activities related to hazardous materials handling and storage will be governed by the SWPPP for all construction packages. The SWPPPs, as laid out in Appendix K, include requirements for control of refueling and equipment maintenance areas; storage of fuels, hydraulic oils, paints, solvents, adhesives and other potentially hazardous materials; good housekeeping; and spill control. The construction contractor(s) will be required to sign and adopt the SWPPP. Based on the investigations and remediation completed to date, there is no evidence to suggest that significant areas of contamination that could require remediation remain on the Site. In the event that contamination is encountered during development activities, response actions will be implemented in accordance with NYSDEC regulations and, if applicable, federal regulations including CERCLA, RCRA, SARA, Title III or NYSDOT regulations.

No Action Alternative. In the No Action Alternative, the site would not be used and there would be no potential for introduction of hazardous materials, other than potential illegal dumping. If mining operations and auto salvage were resumed, there would be potential for future spills or releases, as had occurred in the past. Cooke East and West and Rossini would remain unchanged in either scenario.

5.6 Historical and Archaeological

Tribal Lands. The proposed development plan is largely in an area that has been previously disturbed. There are no prehistoric or historic cultural features in the area proposed for construction. In addition, the single piece of chert that was found is not a significant resource and is not within the development area. NYSOPRHP issued a determination of No Effect for the Casino Project. This is provided in Appendix F. While Foundation 2 on Cooke West may be potentially significant, no impacts are proposed in these areas.

Public Roadway Improvements. While there are two foundations and one structure within the project area that may be potentially significant, no impacts are proposed to these areas. The new

bridge carrying County Highway 161 across State Route 17 will place road approximately 60 feet closer to the stone house. There will, however, be no impact to the structure.

Water Supply Connection. NYSOPRHP has indicated that there will be no impacts on historical or archaeological resources (see Appendix F).

Wastewater Treatment Connection. NYSOPRHP has indicated that they do not consider an archaeological survey warranted for the proposed route. In addition, the only potential for impacts on historical structures of significance will arise if a pump station or other aboveground facility were proposed. See Appendix F for NYSOPRHP correspondence. The final location of this pump station requested by the Town has not been determined. The Town of Thompson will coordinate the pump station with NYSOPRHP once the location is set.

Construction Impacts. Construction impacts will be avoided by identification of proposed work areas and setting limits of work in the field.

No Action Alternative. In the No Action Alternative, there would be no impact to cultural resources – whether the site remained vacant or the mining and auto salvage operations were resumed.

5.7 Traffic and Transportation

Potential traffic impacts associated with the proposed Casino Project are described in detail in the *Traffic Impact Study* provided in Appendix B and are summarized here. To assess impacts, traffic volumes were projected to a future design year, 2018, the expected completion date for the entire project. Existing conditions were based on the updated 2010 traffic counts and other updated information. A No-Build scenario was developed representing conditions in 2018 assuming that the Casino Project is not built; this scenario accounts for the 2010 update with regard to other proposed projects that were assumed to be operational by the 2018 future design year. A Build scenario was also developed and analyzed which superimposes Casino Project traffic on the No-Build traffic conditions. Anticipated future traffic volumes were evaluated with respect to the roadway system capacity to determine system deficiencies, if any. Highway ramp levels of service (LOS) safety, and signal warrants were all considered.

For the Build condition analysis certain roadway improvements are considered necessary to support the Casino Project and are assumed to be in place. These improvements or "Measures to Mitigate Harm" are described here and listed again in Section 8.0 of this FEIS. These improvements are the same as those identified in the DEIS. The Tribe has entered into an Agreement with Sullivan County, to mitigate impacts, including traffic impacts. In this binding agreement the Tribe agrees to pay for road improvements to state, county and local roads required for the development and operation of the Casino Project. A copy of the Agreement is provided in Appendix D. With the improvements, the impacts of the Casino Project on the roadway system are similar to the those reported in the DEIS; all intersections and the ramps to State Route 17 will perform at LOS D or better.

This assessment begins with a discussion of future traffic conditions without the project, including already proposed NYSDOT improvements. Casino Project improvements are then described so that future conditions with the Casino Project can be considered with the proposed mitigation assumed to be in place. Finally, regional impact, public transportation, and construction impacts are discussed.

5.7.1 Future No-Build Traffic Volumes

Future No-Build traffic volumes reflect growth in existing traffic (background growth) and new traffic generated by planned development projects in the site vicinity. For this study, a background growth rate of one percent per year was assumed. This rate is consistent with the rate used in other recent studies for projects in the area and reflects current trendline data that shows no traffic growth on State Route 17 in recent years during the peak hours studied. The DEIS used a slightly higher rate of 1.5 percent per year. It also assumed an "induced growth" rate of 0.5 percent per year. This same induced growth rate was also applied in the FEIS for the years 2013 to 2018 (although a significant portion of the Casino Project is expected to be completed in 2014, 2013 was used to be conservative; all elements are expected to be completed by 2018). The background growth rate was modified for this document since, as discussed, it was not supported by the current traffic conditions. Background development projects considered for this analysis are listed in Table 5-12. These include all large proposals currently considered active in the Town of Thompson and large projects in neighboring communities identified in the 2008 Route 17B corridor study commissioned by NYSDOT. ("Large" includes projects generating 50 or more peak hour vehicle trips in Thompson and projects generating 100 or more peak hour trips in neighboring communities.) Certain projects that were considered in the DEIS have been built or cancelled and are consequently not included in the current list. Likewise, there are projects on the current list that were not proposed when the DEIS was prepared.

Traffic from the anticipated background development projects was assigned to the roadway network in accordance to the patterns assumed in the individual traffic impact studies for these projects where available. Figures 5-13, 5-14, and 5-15 show the estimated year 2018 No-Build peak hour traffic volumes at the study intersections.

Intersection capacity analyses were completed based on the projected 2018 No-Build volumes. Table 5-13 shows future No-Build intersection levels of service As shown, the capacity analysis results indicate that all critical movements at the study area intersections operate well under capacity at LOS A or B under future No-Build conditions.

Table 5-12 Proposed Off-Site Developments

Name	Size	Location	Peak Hour Trips
Kelli Woods	160 dwelling units	Anawana Lake Road, Thompson	72
RNR Mobile Home Park	107 units	Old Liberty Turnpike, Thompson	54
Gated Residential Community	42 Estate Lots	Hilltop Road, Monticello	36
Zader Manor Apartments	184 units	Cold Spring Road, Liberty	94

Name	Size	Location	Peak Hour Trips
Proposed Apartments	480 units	Concord Road. (State Route Exit 105a), Thompson	244
Thompson Heights	94 Duplex Units	Cantrell Road, Thompson	42
Proposed Sackett Lake Resort	350 room hotel 300 seat quality restaurant 30,000 sf specialty retail, golf course 18-hole golf course Residential area	Off of Route 42 (south of State Route 17), Thompson	544
Concord Hotel and Casino	500 room hotel renovation, casino and support facilities	Off of Route 42 on the east side of Kiamesha Lake, Thompson	1140
Airport Rd &SR 17B	Special use	Bethel	130
Hamilton Road	106 Townhouse units	Intersection of Hamilton Road and Route 42, Monticello	48
Gan Eden Estates	905 units	Columbia Hill, Anawana Lake Road, Thompson	778
Holiday Inn Express	89 unit motel	Route 42 North, Thompson	50
Goodstein Office Building	27,000 sf office at Emerald Corporate Park	Exit 109 off of State Route 17, Rock Hill	4
Fairways at Kiamesha Lake	117 Apartment Units (2 and 3 bedroom)	Next to Concord Golf Course, Thompson	60
Holiday Inn Express	136 room hotel	Anawana Lake Rd., Thompson	76
Comfort Inn	72 room hotel	Bard Road, Monticello	40
Thompson Lake Apartments	416 units-1 and 2 bedroom upscale townhouses	Behind Home Depot, Thompson	187
Sterling Homes	75 Upscale Homes	Sackett Lake Road, Monticello	65
Proposed Motel	85 Rooms	Monticello	51
Forest Park Homes	63 homes	Fraser Road, Thompson	54
Kingwood Recreational Homes	350 units	Wild Turnpike, Thompson	126
Treasure Lake Townhouses	150 units	Rock Hill Drive, Thompson	68
Rock Hill Town Center	Phase I – 540 homes; 60,000 sf retail	Thompson	728
Woodstone Lake Homes	180 units	Bethel	155

Notes:
Projects noted in **bold** text were not included in the DEIS.
The following projects were included in the DEIS and are excluded from the FEIS as they have since been constructed or cancelled: Water Park at Holiday Mountain Ski Area, Sullivan Suites Hotel (2 locations), Home Depot, Mohawk Mountain Resort and Casino, and Bethel Performing Arts Center.
Peak hour trips are generally for Sunday evening. Peaks for individual projects will vary.

Table 5-13 Intersection Level of Service Summary – 2018 No-Build Conditions

	Summer Peak Hour Conditions								
	Friday Afternoon			Saturday Evening			Sunday Afternoon		
Unsignalized Intersection/ Approach[1]	**Avg. Total Delay[2]**	**V/C[3]**	**LOS[4]**	**Avg. Total Delay[2]**	**V/C[3]**	**LOS[4]**	**Avg. Total Delay[2]**	**V/C[3]**	**LOS[4]**

Unsignalized Intersection/ Approach[1]	Summer Peak Hour Conditions								
	Friday Afternoon			Saturday Evening			Sunday Afternoon		
	Avg. Total Delay[2]	V/C[3]	LOS[4]	Avg. Total Delay[2]	V/C[3]	LOS[4]	Avg. Total Delay[2]	V/C[3]	LOS[4]
State Route 17 EB Off-Ramp/Old Route 17									
LR from State Route 17 Off-Ramp	10	0.17	B	9	0.10	A	10	0.18	A
State Route 17 EB On-Ramp Connection/Old Route 17									
LT from EB Old Route 17	1	0.02	A	0	0.00	A	1	0.01	A
State Route 17 EB On-Ramp Connection/Route 17 EB On-Ramp									
L from EB On-Ramp Connection	10	0.05	A	9	0.00	A	10	0.02	B
County Highway 161/Old Route 17									
LTR from EB Old Route 17	6	0.09	A	5	0.05	A	6	0.07	A
LTR from WB Old Route 17	0	0.00	A	0	0.00	A	0	0.00	A
LTR from NB Kroeger Road	11	0.00	B	0	0.00	A	11	0.00	B
LTR from SB County Highway 161	10	0.06	A	9	0.02	A	10	0.04	A
County Highway 161/State Route 17 WB On-Ramp									
LT from NB County Highway 161	2	0.03	A	1	0.01	A	2	0.02	A
County Highway 161/State Route 17 WB Off-Ramp									
LR from WB State Route 17 Off-Ramp	15	0.58	B	9	0.14	A	10	0.21	B
County Highway 161/Old County Highway									
LR from WB Old County Road	15	0.01	B	10	0.01	A	13	0.02	B
LT from SB County Highway 161	0	0.01	A	0	0.00	A	0	0.00	A

[1] L = Left Turn Movement; T = Through Movement; R = Right Turn Movement; EB = Eastbound; WB = Westbound; NB =Northbound; SB = Southbound
[2] Average delay per vehicle (in seconds)
[3] Volume-to-capacity ratio
[4] LOS = Level of service

5.7.2 Proposed Roadway Improvements by Others

All improvements for State Route 17, including capacity, safety, and geometric improvements, fall under the jurisdiction of NYSDOT. Independent of this project, NYSDOT is currently implementing the *Route 17 (Future Interstate 86) Interchange Spacing and Geometrics Study* which identified alternatives to address State Route 17 interchange deficiencies. The ultimate goal is to provide the necessary improvements to upgrade State Route 17 to interstate standards in order that it may become the future I-86.

The NYSDOT study primarily focuses on interchange spacing and geometric features necessary to meet interstate standards on the 106-mile stretch of State Route 17 from Interchange 84 in Delaware County, through Sullivan County, and up to and including Interchange 131 in Orange County (at Interstate 87). The primary study area for the NYSDOT study consists of all State Route 17, the mainline and ramps, and all intersecting and parallel facilities. The secondary environmental study area covers a broad area surrounding State Route 17, with consideration given to include population centers, National Highway System (NHS) facilities, and community facilities, where appropriate. The secondary traffic study area includes parallel and secondary roads and intersections directly affected by operations of State Route 17, and is defined as a one-mile width centered about State Route 17, with additional width to cover areas containing roadways and intersections of particular importance.

Bringing State Route 17 to Interstate standards involves the consideration of improving or consolidating selected interchanges based upon Interstate spacing, geometrics, and service requirements and guidelines. The NYSDOT study looks at area/corridor level planning needs, which are general needs that apply to the overall State Route 17 corridor, including an assessment of needs regarding interchange spacing, access, access control and overall operations. The study also looks at project level planning needs, which have been identified for each interchange in the study corridor.

As part of its study, NYSDOT plans to provide improvements at the interchange that provides primary access for the proposed Casino Project, State Route 17 Interchange 107 in Thompson. Preliminary NYSDOT plans for Interchange 107 include realignment of westbound on- and off-ramps to improve turning radii, relocation/reconstruction of the State Route 17 eastbound on and off-ramps to improve alignment and turn radii, extension of the eastbound acceleration lane on State Route 17 by 100 feet, and reconstruction of the bridge to provide adequate (16 feet) vertical clearance. NYSDOT is also considering eliminating Interchange 108. Assuming this ramp is closed in the future, its traffic will likely be diverted equally between Interchanges 107 and 109. This closure will not significantly impact traffic operations at Interchange 107.

A list of proposed NYSDOT improvements for State Route 17 Interchanges 107, 108, and additional State Route 17 interchanges located east of the proposed Casino project is provided in Table 5-14. Tables 21 and 22 of Appendix B provide additional detail.

The improvements listed in Table 5-14 primarily address interchange spacing, as well as geometric, safety, and bridge clearance improvements. Based on discussions with NYSDOT

officials, NYSDOT plans to address the potential need for additional capacity along State Route 17. Thus, all improvements proposed in NYSDOT's State Route 17 study are designed to accommodate future roadway widenings (an additional lane in each direction) when and where appropriate.

Table 5-14 State Route 17 Interchange Spacing and Geometrics Study Improvements

Interchange No.	Interchange Improvements
Sullivan County	
107	Realign WB ramps; reconstruct bridge; reconstruct EB off-ramp; reconstruct slip ram to EB on-ramp; extend EB on-ramp acceleration lane
108	Eliminate interchange (close existing EB on and off-ramps)
109	Close existing EB and WB ramps; construct new EB and WB ramps; improve signage
110	Improve sight distance; reconstruct EB on-ramp
111	Eliminate Interchange (close existing EB on and off-ramps)
112	Reconstruct WB on and off-ramps; extend WB on-ramp acceleration lane; reconstruct bridge; reconstruct EB off-ramp; remove existing EB on-ramp and construct cul-de-sac turnaround; construct new EB on-ramp; realign intersection of County Routes 166 and 166A to accommodate major movement
113	Reconstruct EB and WB on and off-ramps; install traffic signal; reconstruct bridge
114	Eliminate interchange (close existing WB off-ramp) OR: Reconstruct WB off-ramp; extend WB deceleration lane; construct new WB on-ramp; construct new bridge; construct new trumpet interchange; construct new EB on and off-ramps OR: Remove existing WB off-ramp; construct new diamond interchange with bridge over Route 17 mainline; construct new WB on and off-ramps; construct new EB on and off-ramps
115	Construct new WB on-ramp; reconstruct WB off-ramp; realign Roosa Gap Road; reconstruct bridge; construct new EB off-ramp; remove gravel driveway
116	Extend WB and EB acceleration lanes
117	None
118	Extend WB acceleration lane; improve intersection channelization at WB ramps/Brown Road; reconstruct bridge; extend EB deceleration lane
118A	Eliminate interchange (remove existing EB off-ramp)
119	Remove existing EB and WB on and off-ramps; construct new EB and WB on and off-ramps; eliminate parking area at EB ramps OR: Remove EB and WB on ramps and construct new on-ramps; extend WB deceleration lane
Orange County	
120	Extend WB acceleration lane; extend EB deceleration lane
121	None recommended
122	Entire interchange is being upgraded as part of a separate NYSDOT project
122A	Reconstruct EB and WB ramps and ramp access roadway to new grade; reconstruct bridge

Interchange No.	Interchange Improvements
123	Realign West Main Street/Matthews Street intersection
124	Jack bridge
125	Reconstruct bridge Reconstruct EB and WB ramps; realign Route 17M in vicinity of WB ramps and Harriman Drive in vicinity of EB ramps; reconstruct bike/pedestrian trail in vicinity of WB ramps OR: Reconstruct bridge; construct new EB and WB ramps (diamond configuration); realign Route 17M in the vicinity of the WB ramps and Harriman Drive in vicinity of EB ramps; reconstruct bike/pedestrian trail in vicinity of WB ramps; new traffic signal
126	Interchange is being upgraded as part of a separate NYSDOT project
127	Construct new WB and EB ramps (diamond configuration); construct new bridge OR: Construct new WB ramps (trumpet configuration) construct new bridge; construct new EB ramps
128	Eliminate interchange (close existing WB off-ramp); bridge reconstruction under separate NYSDOT project
129	Realign Old Mansion Road; reconstruct WB off-ramp; construct new WB on-ramp; lower Route 17 mainline to provide bridge clearance; construct new EB on-ramp; reconstruct park and ride lot entrance; realign Orange-Rockland Road
130	Lower Route 17 mainline to provide bridge clearance; eliminate break in access along acceleration lane on NYS Route 208 south of EB ramps
130A	Lower Route 17 mainline to provide bridge clearance
131	Reconstruct WB off-ramp; close existing WB ramp; construction additional right turn lane on WB ramp and provide dual right turn; lower Route 17 mainline to provide bridge clearance OR: Reconstruct WB off-ramp; construct new frontage road east; construct new bridge; new traffic signal; lower Route 17 mainline to provide bridge clearance

5.7.3 Proposed Improvements

Based on the analysis of future traffic volumes with the Casino Project, the proposed project will add between 2,060 and 2,264 peak hour vehicles to the roadway network (see Section 5.7.4). This includes approximately 375-410 vehicles oriented north of the site on County Highway 161 and 1,685-1,850 vehicles oriented south of the site on County Highway 161 between the site driveway and State Route 17. A portion of the trips oriented to the north are assumed to be shared trips with the proposed Concord Hotel and Casino. To mitigate this additional traffic, the existing roadway network in the vicinity of the project will require geometric and traffic control improvements. The proposed access improvements are shown in Figure 3-4.

The Tribe will pay for on-site improvements, intersection improvements, and improvements to County Highway 161 and associated work. Because the state was already planning to improve Interchange 107, the cost of these improvements will be shared with NYSDOT. Section 3.2.2 of Appendix B provides full descriptions of all improvements. The alternatives analysis for these improvements was provided in Section 2.5.

State Route 17 Interchange 107 Improvements. As noted, most of the proposed improvements for this project are already being planned by NYSDOT as part of their State Route 17 (future I-86) interchange study. The Casino Project is proposing some broader scale design solutions because of the increased volumes which NYSDOT did not consider in its design. The combined design includes the following elements:

- The eastbound off-ramp at Interchange 107 will be reconstructed to meet interstate highway standards, and the eastbound on-ramp connection will be removed and relocated adjacent to the eastbound off-ramp
- The acceleration lane for the eastbound on-ramp will also be extended. Interchange 107 westbound ramps will be realigned per NYSDOT plans to improve turning radii and provide additional stacking
- The County Highway 161 bridge over State Route 17 will be reconstructed by NYSDOT to meet interstate highway standards (a minimum of 16 feet vertical clearance)
- In coordination with NYSDOT bridge reconstruction, additional capacity will be provided on County Highway 161 (a second southbound lane and potentially the space for a second northbound lane in the future if needed) to support the Casino Project.
- In order to allow for future improvements and as requested by NYSDOT, improvements to Interchange 107 will also allow for three lanes in each direction on State Route 17
- Finally, in addition to NYSDOT improvements, an exclusive northbound left-turn lane at County Highway 161 intersection with Interchange 107 westbound on-ramp is also part of the improvements

Meetings have been held with local, county and state transportation officials to review the proposed improvements at Interchange 107. Coordination meetings are ongoing with NYSDOT to determine appropriate improvements that will support regional growth as well as traffic growth from proposed casinos and other developments in the area. NYSDOT has reviewed the common "reverse betterment" agreement process by which a private entity and NYSDOT enter into an agreement about how design, bid and construction stages of improvements get advanced and financed. In general, with respect to the Interchange 107 improvements, NYSDOT will pay for the costs of the improvements that they have already assumed, and the Casino Project will pay for anything above and beyond that. There will likely be two agreements, one for design and a second for construction. NYSDOT has indicated that preliminary design plans have been completed; however, final design work is currently on hold for financial reasons.

5.7.3.1 **Site Access Improvements.** Site access improvements include widening County Highway 161 between State Route 17 Interchange 107 and the proposed project site driveway to provide two lanes in each direction with a landscaped median. An emergency access driveway connecting the south end of the site with Foss Road will be provided. In the vicinity of the site, this access driveway will be used for emergencies

only and will be gated when not in use. Old County Highway will be closed at County Highway 161. A new connection to Old County Highway will be provided approximately 500 feet to the south of the existing intersection by extending Foss Road out to County Highway 161. Foss Road will provide access to the emergency driveway as well as signalized access for the residences along Old County Highway and Foss Road.

Intersection Improvements. Signalization will be provided at the site driveway entrance with exclusive channelized double turn lanes into and out of the site. A signal will also be provided at the new access road to Old County Highway and Foss Road. Intersection improvements will include providing exclusive southbound and eastbound left-turn lanes at County Highway 161/Old Route 17 and the underground conduit necessary for a future traffic signal at this location. The possibility of realigning the south end of County Highway 161 at this intersection (east of its current location) will also be considered.

On-Site Improvements. On-site improvements focus on providing free-flow around the site to the greatest extent possible, while considering site topography and minimizing impacts to wetlands and naturally vegetated areas. The proposed site driveway (see Figure 3-2) will have two lanes in each direction in order to accomplish this goal. Efficient design of bus loading/unloading areas will also minimize on-site bus idling.

5.7.4 Project-Generated Traffic

Traffic volumes generated by the Casino Project were estimated and assigned to the roadway network in order to develop the 2018 Build condition peak hour traffic volumes. Procedures used to generate and assign trips to the roadway network are described below. A trip is defined as a one-way movement to or from the site. One vehicle entering and leaving a site constitutes two vehicle trips.

Trip Generation. The development program for the Casino Project is nearly identical to the Phase I of the Mohegan Sun entertainment facility. The only significant difference is that the Stockbridge-Munsee project in Thompson will include a 750-room hotel whereas there was no hotel component in Phase I of the Mohegan Sun project. Consequently, traffic forecasts for the Stockbridge-Munsee project are based on observed Phase I conditions at Mohegan Sun with traffic added to account for the hotel. When Phase I of the Mohegan Sun casino project opened in 1996, an extensive traffic data collection program was undertaken to measure the quantity of traffic traveling to/from that site. Counts collected on a typical summer weekend (Friday, June 25, through Sunday, June 27, 1999) at the Mohegan Sun facility were used to forecast project trips for the proposed Stockbridge-Munsee project. The traffic volumes during these three days represent ninety-fifth percentile volumes[1] for the Mohegan Sun facility. A summary of the Mohegan Sun count data is provided in Volume II, Appendix E.

[1] For ninety-five percent of the days on which counts were collected (including both weekday and weekend days throughout the year), total daily trips to and from the Mohegan Sun included approximately 34,500 or less

Trip generation estimates for the proposed hotel are based on rates from the Institute of Transportation Engineers (ITE) *Trip Generation* manual, 6th Edition, 1997, Land Use Code 310 ("Hotel"). It is likely that most of the traffic generated by the hotel will be shared trips with the casino generating no additional ("new") trips. However, to present a conservative analysis, thirty percent of the total trips generated by the proposed 750-room hotel are assumed to be new trips. The remaining seventy percent of the hotel trips are assumed to be shared hotel/casino trips.

Similar to the Mohegan Sun facility, the Stockbridge-Munsee facility will be built in phases. Approximately 55 percent of the casino/entertainment facility space will be built in the first phase. The second phase will include construction of the hotel and the balance of the casino/entertainment facility. Both phases are expected to be built by 2018. Table 5-15 summarizes the estimated trip generation for the proposed project during peak summer months.

Table 5-15 Project Trip Generation Summary – Total Trips

	Friday Daily Trips	Friday Afternoon Peak Hour[1] Trips			Saturday Daily Trips	Saturday Evening Peak Hour[1] Trips			Sunday Daily Trips	Sunday Afternoon Peak Hour[1] Trips		
		In	Out	Total		In	Out	Total		In	Out	Total
Proposed Casino[2]	28,650	847	1,056	1,903	34,620	1,171	930	2,101	32,770	956	1,160	2,116
Proposed Hotel[3]	1,900	83	74	157	2,080	88	69	157	1,920	68	80	148
Total Trips	**30,550**	**930**	**1,130**	**2,060**	**36,700**	**1,259**	**999**	**2,258**	**34,690**	**1,024**	**1,240**	**2,264**
Phase I Trips	**15,328**	**453**	**565**	**1,018**	**18,522**	**626**	**498**	**1,124**	**17,532**	**511**	**621**	**1,132**

Notes:
[1] Friday afternoon peak hour for the proposed project traffic is 4:00 to 5:00 pm. Saturday evening peak hour is generally between 8:00 and 9:00 pm, and Sunday afternoon peak hour is 4:00 to 5:00 pm.
2 Based on 95th percentile of driveway counts collected between 1997 and 2001 at the Mohegan Sun facility in Uncasville, Connecticut.
3 Based on rates from Institute of Transportation Engineers Trip Generation manual, 6th Edition, 1997, Land Use Code 310 (Hotel). It is assumed that thirty percent of the trips generated by the proposed hotel are new trips (the remaining seventy percent are shared trips with the casino).

Peak hour trip generation for the proposed project includes 2,060 trips (45 percent entering and 55 percent exiting) on Fridays, and approximately 2,260 trips on both Saturdays (56 percent entering and 44 percent exiting) and Sundays (45 percent entering and 55 percent exiting). Of these trips, approximately 94 percent are generated by the Casino and six percent are generated by the proposed hotel. The peak hour trip forecasts for the Casino Project are considerably higher than those used in studies for other casinos in the project area. The Casino project trips are 26 to 49 percent higher than the trips estimated for the Concord Hotel and Casino. They are 62 to 88 percent higher than the predicted trips for the Mohawk Mountain Resort casino. (The Mohawk Mountain Resort casino was an active proposal when the DEIS was prepared and was included in the DEIS analysis. It referenced later in this study in the development of the Cumulative Build traffic scenario.) Accordingly, the traffic forecasts for the Casino Project are quite conservative.

vehicles per day. This volume of daily traffic is generally experienced at the Mohegan Sun on Saturdays during the summer.

The Casino Project is anticipated to attract approximately 100 buses per day (100 bus trips in and 100 bus trips out). During the week, the bulk of the buses will enter the site during the morning hours. Bus trips will be more evenly spread out on weekends. It is estimated that buses could generate between 20 and 30 trips during the weekend peak hours. These numbers are included in the total trip generation estimates presented in Table 5-15.

Trips generated by background growth and development in the area are expected to generate pass-by trips into and out of the site. Pass-by trips are trips that enter and exit the project site as they pass by the site. Since pass-by trips are already on the adjacent street, they do not represent "new" trips. Pass-by trips for retail uses can range between 20 and 60 percent of the background traffic passing by the site. If ten percent of all existing traffic on County Highway 161 were assumed to enter and exit the proposed project while passing by the site, there will be a decrease in "through" traffic volumes along County Highway 161 (both directions) of 20 to 60 vph during peak hours. To present a conservative analysis, traffic volumes were not decreased to account for pass-by trips.

A portion of the traffic generated by the proposed project will likely be trips diverted off of State Route 17. As such, these vehicles will already be traveling along State Route 17 and therefore do not represent "new" trips. To provide a conservative analysis, all "diverted" trips are assumed to be "new" trips, and are included in the total trip generation estimates presented in Table 5-15.

A portion of the proposed project trips may be shared with trips to and from other planned projects in the area. For example, a resident of Rock Hill Center Phase I may work at the Casino Project. A trip between Rock Hill and the Casino will be a "shared trip". This analysis assumes no shared trips occur between existing or proposed residential developments and the Casino Project to be conservative.

Shared trips are expected to occur between or among casinos and these shared trips are considered in the Build analysis. Out-of town visitors may choose to visit both casinos considered in the Build scenario, the Casino Project and the proposed casino at the Concord Hotel and Casino. To estimate shared trip rates among multiple casinos, traffic count data was reviewed for roadways in the vicinity of the Foxwoods and Mohegan Sun casinos in Connecticut, which are approximately 13 miles apart. Traffic volume data for I-95, Route 117, Route 395, and Route 2 suggests that addition of a second casino within a 13 mile radius of an existing casino does not double the amount of traffic on major roadways generated by the first casino. Rather, the second casino results in a traffic volume increases ranging between zero and 70 percent of the traffic generated by the first casino. This suggests shared trip percentages in the range of 30 to 100 percent. Similarly, visitor count data for Atlantic City suggests that a second casino results in increases of approximately 35 percent compared to the number of visitors for a single, stand alone casino, and a third casino adds approximately 30 percent of the number of visitors at a single casino. This data suggests shared trip rates of approximately 65 percent with two casinos and 70 percent with three casinos. To provide a conservative analysis, the traffic analysis for this project assumes that 70 percent of the trips to a second casino are new trips and that 50 percent of the trips to a third casino (as assumed in the Cumulative Build in Section 6.7) are new trips.

In the Build scenario, the Casino Project is assumed to be a higher traffic generator than the Concord Hotel and Casino. It is also the first casino that one would encounter driving from the New York City metropolitan area, the primary target market for the Casino Project. Accordingly, the Casino Project is assumed to be the "first" casino in the area and the Concord Hotel and Casino the "second". As such, 30 percent of the trips to the Concord Hotel and Casino were treated as shared trips with the Casino Project. These shared trips represent only 15 percent of the trips to/from the Casino Project. Consequently, 85 percent of the trips to/from the Casino Project represent new trips on the roadway system.

Finally, additional growth in traffic volumes may be induced with the completion of the Casino Project. "Induced growth" refers to trips that are not generated directly by the project, but trips generated by expanding economic activity in the area as a result of the proposed project. As noted above, an additional 0.5 percent per year growth rate was applied to the overall background traffic growth rate to account for induced growth following the expected completion of Phase I of the Casino Project in 2013. The overall 1.5 percent per year background growth rate used to project future 2018 Build traffic volumes is appropriate and consistent with other recent studies conducted in the area. In fact, a comparison of 2001 mainline traffic counts for the State Route 17 summer weekend peaks included in the DEIS with current volumes included in this study show no growth in traffic. Hence, the 1.5 percent per year overall growth rate assumed in this study represents a reasonable (if not conservative) assumption.

Trip Distribution and Assignment. The distribution and assignment of anticipated project vehicle trips to the roadway network was based on a market analysis prepared for the Casino Project, a review of other area studies and existing peak hour traffic patterns in the vicinity of the project site. Separate patterns were developed for patron/customer trips and employee trips. The market studies suggest that a very high percentage of the customer trips will originate in the New York City metropolitan area. Employees are likely to reside much closer to the Proposed Casino and thereby have less of an impact on the transportation system. Studies of other casinos previously proposed in the area refer to data collected at the Foxwoods casino in Connecticut to claim that up to 35 percent of peak hour trips are employee trips. For the Casino Project, it is conservatively assumed that only 15 percent of the peak hour trips are employee trips. The trip distribution pattern is presented in Table 5-16.

Table 5-16 Assumed Trip Distribution

Direction	Patron Trips	Employee Trips
East on State Route 17	75%	30%
West on State Route 17	12%	50%
North on County Highway 161	12%	10%
East on Old Route 17	0.5%	5%
West on Old Route 17	0.5%	5%
Total	100%	100%

The assumed trip distributions show that over 75 percent of the proposed patron trips originate from the east and the majority of the remaining trips are evenly distributed between points north and west of the site. Employee trips are more heavily oriented to the west and the nearest population center, the Village of Monticello. Based on these distribution patterns, project-generated traffic was assigned to the traffic volume network.

5.7.5 Future Build Traffic Volumes

The project-generated traffic was added to the No-Build condition peak hour traffic volumes assuming the proposed roadway improvements described in Section 5.7.3. The effects of background traffic growth, other planned development projects, shared trips between the two casinos, and induced growth were incorporated into the future Build peak hour traffic volume networks, which are shown on Figures 5-16, 5-17 and 5-18. A comparison of future No-Build condition traffic volumes to future Build traffic volumes is presented in Table 5-17. (A comparison of Build volumes between the DEIS and FEIS is included in the full traffic study, Appendix B.)

Under 2018 Build conditions, weekend peak hour traffic volumes on County Highway 161 north of the project site are between 720 and 1,210 vph, or approximately 305 to 345 vph more than the peak hour traffic volumes under No-Build conditions. Many of the new trips on this roadway section are generated by the Concord Hotel and Casino. South of the project site, Build condition traffic volumes on County Highway 161 increase between 1,615 and 1,785 vph, more than doubling the No-Build the peak hour traffic volumes. East and west of the interchange, traffic volumes on Old Route 17 experience relatively minor increases in traffic volumes for Build conditions (between 20 and 25 vph).

Project-related traffic volume increases on each of the State Route 17 Interchange 107 ramps range between 190 and 710 vph. Again, due to the relatively low traffic volumes using this interchange, these increases represent at least a doubling of the projected No-Build volumes for individual ramps.

Table 5-17 2018 Traffic Volume Summary – Build Conditions

	2018 Peak Hour Traffic Volumes								
	Friday Afternoon			Saturday Evening			Sunday Afternoon		
Location	No-Build	Build	Difference	No-Build	Build	Difference	No-Build	Build	Difference
County Highway 161:									
North of the Project Site	905	1210	305	385	720	335	695	1040	345
South of the Project Site (North of Interchange 107)	905	2520	1615	385	2160	1775	700	2485	1785
Old Route 17:									
West of Int. 107 EB Off-Ramp	180	200	20	65	85	20	105	125	20
East of County Highway 161	115	135	20	60	85	25	110	130	20

Location	2018 Peak Hour Traffic Volumes								
	Friday Afternoon			Saturday Evening			Sunday Afternoon		
	No-Build	Build	Difference	No-Build	Build	Difference	No-Build	Build	Difference
State Route 17 Interchange 107 Ramps:									
Eastbound Off	145	335	190	95	350	255	170	375	205
Eastbound On	220	855	635	105	665	560	310	1010	700
Westbound Off	505	1030	525	140	850	710	180	760	580
Westbound On	150	380	230	80	280	200	155	405	250
State Route 17*:*									
West of Interchange 107	6015	6370	355	4885	5280	395	5530	5935	405
East of Interchange 107	6445	7245	800	4955	6145	1190	5695	7030	1335

Comparison of estimated 2018 No-Build and Build traffic volumes on the State Route 17 mainline indicates that traffic volumes increase between 355 and 1,335 vph.

5.7.6 Future Build Intersection Operating Conditions

Roadway operating levels of service for the future Build condition were calculated following procedures defined in the *2000 Highway Capacity Manual (HCM)*. Anticipated future intersection operating levels of service were calculated based on the projected 2018 Build conditions traffic flows and analysis procedures outlined in the *2000 Highway Capacity Manual*. Intersection level of service analysis was performed for each of the study intersections as well as for the proposed site driveway and the extension of Foss Road at County Highway 161. The analysis results are summarized in Table 5-18.

The analysis results indicate that the proposed access improvements/mitigation measures will adequately support the proposed development traffic. The study area intersections will operate LOS C or better under future Build conditions. Maintaining adequate roadway capacity along the principal site access route will mitigate potential traffic congestion and related pollution and noise impacts. Impacts to the residents along Old County Road and Foss Road will be minimal because the Foss Road extension will be used for casino access only during emergencies.

As noted previously, signal conduit will be installed at the County Highway 161/Old Route 17 intersection. The southbound through and left turn movements at this intersection are projected to experience moderate delays and the actual volumes making these moves will not warrant signalization. Should future, yet to be defined development cause these volumes to increase, signalization could be considered. As shown in Table 5-18, with signalization, the intersection of County Highway 161/Old Route 17 will operate at LOS A or B.

Due to the conservative assumptions used for this analysis, traffic operations will likely be better than indicated by the results. The future Build scenario traffic analyses are based on the following conservative assumptions:

1. Peak hour traffic volumes are based on peak summer weekend conditions. Off-season background traffic volumes in the area are substantially lower, and project-related traffic volumes will be seven to twelve percent lower on off-season weekends compared to summer weekends.

2. The analysis assumes that traffic due to background growth and development increases by a total of one percent per year for background growth and development plus 0.5 percent induced growth resulting from the introduction of the Casino Project). Actual background growth has been non-existent on State Route 17.

Table 5-18 Intersection Level of Service Summary – Future Build Conditions (including Proposed Improvements)

	Summer Peak Hour Conditions								
	Friday Afternoon (4:45-5:45 p.m.)			Saturday Evening (7:30-8:30 p.m.)			Sunday Afternoon (4:00-5:00 p.m.)		
Intersections Approach[1]	**Ave. Total Delay[2]**	**V/C[3]**	**LOS[4]**	**Ave. Total Delay[2]**	**V/C[3]**	**LOS[4]**	**Ave. Total Delay[2]**	**V/C[3]**	**LOS[4]**
Unsignalized:									
State Route 17 EB On- and Off-Ramps/Old Route 17									
LT from EB Old Route 17	3	0.04	A	1	0.00	A	4	0.02	A
LR from SB State Route 17 Off-Ramp	14	0.44	B	11	0.38	B	12	0.43	B
County Highway 161/Old Route 17									
L from EB Old Route 17	8	0.21	A	8	0.22	A	8	0.21	A
LTR from WB Old Route 17	0	0.00	A	0	0.00	A	0	0.00	A
LTR from NB Kroeger Road	15	0.01	C	0	0.00	A	18	0.01	C
L from SB County Highway 161	20	0.08	C	19	0.05	C	19	0.09	C
T from SB County Highway 161	19	0.01	C	19	0.00	C	18	0.00	C
County Highway 161/State Route 17 WB On-Ramp									
LT from NB County Highway 161	10	0.05	A	9	0.02	A	11	0.04	B
County Highway 161/State Route 17 WB Off-Ramp									
L from WB State Route 17 Off-Ramp	21	0.17	C	17	0.03	C	23	0.09	C
Signalized:									
County Highway 161/Foss Road Extension	1	0.44	A	1	0.40	A	1	0.47	A
County Highway 161/Project Site Driveway	24	0.89	C	8	0.18	B	14	0.78	B
County Highway 161/Old Route 17	10	0.48	B	5	0.34	A	9	0.71	A

	Summer Peak Hour Conditions								
	Friday Afternoon (4:45-5:45 p.m.)			Saturday Evening (7:30-8:30 p.m.)			Sunday Afternoon (4:00-5:00 p.m.)		
Intersections Approach[1]	**Ave. Total Delay[2]**	**V/C[3]**	**LOS[4]**	**Ave. Total Delay[2]**	**V/C[3]**	**LOS[4]**	**Ave. Total Delay[2]**	**V/C[3]**	**LOS[4]**

Notes: [1] L = Left Turn Movement; T = Through Movement; R = Right Turn Movement; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound
[2] Average delay per vehicle (seconds)
[3] V/C = Volume-to-capacity ratio
[4] LOS = Level of service

3. In addition to overall background traffic growth, anticipated traffic from potential new development has been considered, resulting in an actual growth rate that is much larger than 1.5 percent per year.

4. The traffic analysis assumes no pass-by or diverted trips, and therefore assumes that all project trips are *new* trips. However, it is likely that some percentage of the traffic traveling to and from the casino is already on State Route 17, and will not represent *new* trips for State Route 17. Thus, this assumption provided a conservative analysis.

5. The traffic analysis assumes traffic volumes generated by the Casino Project that are approximately 60 percent higher than the projected volume from the two other previous casino proposals in the area; in addition, a low percentage of project-generated traffic is assumed to be employee-related.

Because of the conservative nature of this analysis, traffic operations will likely be better than reported above.

5.7.7 Analysis Update

The traffic forecasts for the 2018 No Build and Build conditions assume that the Concord Hotel Resort and Casino is built and fully occupied by 2018. However, as of December 2011, the original Master Plan for this project has been withdrawn and a new firm has been selected by the proposed developers to create a new Master Plan. The announcement of this event provided no anticipated dates for either the formulation of the new Master Plan or for submission of that new Plan to appropriate governmental agencies for review and approval. Accordingly, it is now questionable as to whether or not the Concord project will, as assumed in this FEIS for a conservative analysis, be developed by 2018. As such, new traffic forecasts were developed and new capacity analysis results were prepared assuming that the Concord project, as now appears reasonable, is not built by 2018.

Tables 5-19 and 5-20 presented below illustrate the expected changes in peak hour traffic volumes assuming that the Concord project is not included in the No Build and Build conditions, respectively. As shown, removal of this project from the No Build conditions removes more than 200 peak hour vehicles from County Highway 161 north of State Route 17. It also removes more than 300 vehicles from the projected State Route 17 mainline volumes. The distribution of Concord project trips is different under Build conditions relative to No Build conditions as it is assumed that there would be a sharing of trips between the Concord Casino and the Stockbridge-Munsee Casino. As such, removal of the Concord project from the Build condition reduces volumes on County Highway 161 by more than 300 peak hour trips. Similar reductions would be realized on Route 17 west of Interchange 107.

Table 5-19 2018 Traffic Volume Summary – No Build Conditions (with and without Concord project)

	2018 Peak Hour Traffic Volumes								
	Friday Afternoon			Saturday Evening			Sunday Afternoon		
Location	FEIS	FEIS w/o Concord	Difference	FEIS	FEIS w/o Concord	Difference	FEIS	FEIS w/o Concord	Difference
County Highway 161:									
North of the Project Site	905	666	-239	385	141	-244	695	473	-222
South of the Project Site (North of Interchange 107)	905	666	-239	385	141	-244	700	473	-227
State Route 17 Interchange 107 Ramps:									
Eastbound Off	145	93	-52	95	28	-67	170	115	-55
Eastbound On	220	156	-64	105	49	-56	310	253	-57
Westbound Off	505	452	-53	140	71	-69	180	126	-54
Westbound On	150	87	-63	80	24	-56	155	95	-60
State Route 17*:*									
West of Interchange 107	6015	5703	-312	4885	4564	-321	5530	5236	-294
East of Interchange 107	6445	6131	-314	4955	4636	-319	5695	5405	-290

Table 5-20 2018 Traffic Volume Summary – Build Conditions (with and without Concord project)

	2018 Peak Hour Traffic Volumes								
	Friday Afternoon			Saturday Evening			Sunday Afternoon		
Location	FEIS	FEIS w/o Concord	Differenc e	FEIS	FEIS w/o Concord	Difference	FEIS	FEIS w/o Concord	Difference
County Highway 161:									
North of the Project Site	1210	907	-303	720	405	-315	1040	738	-302
South of the Project Site (North of Interchange 107)	2520	2485	-35	2160	2135	-25	2485	2472	-13
State Route 17 Interchange 107 Ramps:									
Eastbound Off	335	257	-78	350	251	-99	375	296	-79
Eastbound On	855	811	-44	665	686	21	1010	871	-139
Westbound Off	1030	1087	57	850	930	80	760	825	65
Westbound On	380	287	-93	280	201	-79	405	315	-90
State Route 17*:*									
West of Interchange 107	6370	6068	-302	5280	4967	-313	5935	5637	-298
East of Interchange 107	7245	7119	-126	6145	6107	-38	7030	6819	-211

The impact of these volume changes on traffic operations (peak hour operating levels of service) were evaluated for two representative locations. These include the Proposed Site Drive/County Route 161 intersection and the Route 17 Eastbound On-Ramp merge with the Route 17 mainline. Only the Sunday evening peak hour conditions were analyzed as traffic operations during this time period are generally worse than projected for the other peak traffic hours studied. As shown in Table 5-21, elimination of the Concord project from the traffic forecasts improves the expected Sunday evening peak hour operating level of service at the site driveway. The intersection will operate at only 64 percent of capacity without the Concord project compared to 78 percent of capacity with the Concord project. Similarly, Route 17 operations improve slightly without the Concord project. Level of Service D operations are expected during the Sunday evening peak hour for the Eastbound On-ramp merge with the Route 17 mainline with or without the Concord project; however, without the Concord project the mainline operating speeds will be higher.

Table 5-21 Intersection Level of Service Summary-2018 Build Conditions (with and without Concord project)

	FEIS			FEIS w/o Concord		
Intersections Approach[1]	**Ave. Total Delay[1]**	**V/C[2]**	**LOS[3]**	**Ave. Total Delay**	**V/C**	**LOS**
County Highway 161/Project Site Driveway	14	0. 78	B	11	0. 64	B
	Speed[4]	**Density[5]**	**LOS**	**Speed**	**Density**	**LOS**
Route 17 Eastbound On-ramp/Mainline Merge	50	32	D	51	31	D

[1] Average Total Delay in Seconds per Vehicle
[2] Volume-to-capacity ratio for critical movements
[3] Level of Service
[4] Speed in miles per hour
[5] Density in passenger cars per lane per mile

5.7.8 Regional Impact

Approximately seventy-five percent of the visitor traffic generated by the Casino Project will use State Route 17 east of the project site towards New York City. The proposed project could add up to 405 vph to State Route 17 west of County Highway 161, and 1,335 vph east of County Highway 161 during summer weekend peak hours.

Including traffic from background growth, background developments, and the Casino Project, peak hour traffic volumes along State Route 17 could reach approximately 6,370 to 7,245 vph and 5,280 to 6,145 vph west and east of County Highway 161, respectively, during the Friday afternoon and Saturday evening peak hours and 5,935 to 7,030 during the Sunday afternoon peak hour (Table 5-17). The maximum reported in the DEIS was 7,235 vph for Friday afternoon, east of Interchange 107.

State Route 17 currently provides two lanes in each direction and has a capacity of up to 4600 vph per direction (2300 vph per lane). An analysis of the peak hour volumes by direction indicates that State Route 17 in this location has adequate capacity to serve the future traffic volumes with the Casino Project.

Table 5-21 summarizes projected peak month average daily traffic volumes at more remote locations along State Route 17 in Sullivan and Orange Counties for existing and projected future No-Build and Build conditions. In Sullivan County, east of County Highway 161, project-related daily traffic volumes result in a 10,420 vpd (26 percent) increase to volumes on State Route 17. In Orange County just east of the Sullivan County border, traffic volume increases by approximately 9,800 vpd (18 percent). At the highest volume location in Orange County (between the beginning of Route 6 and 17M overlap to Routes 207 and 17A), the project results in a 8,300 vpd (eight percent) increase in traffic volumes on State Route 17, for a total daily volume of 111,600 vpd. East of I-87, traffic volume increases due to the proposed project are estimated to be nearly 7,000 vpd (approximately 36 percent).

Table 5-21 Peak Month Average Daily Traffic Volumes on State Route 17

		2018	
Route 17 Highway Segment	**Existing (2010)**	**No-Build**	**Build**
Sullivan County:			
Delaware County Line to Route 206 and CR 124	8,300	11,200	11,900
Route 206 and CR 124 to Route 17B Monticello Exit 104	18,300	22,600	23,300
Route 17B Monticello Exit 104 to Route 42 Exit 105	31,000	38,200	39,600
Route 42 Exit 105 to Old Route 17 CR 173	27,000	35,600	37,000
Old Route 17 CR 173 to CR 161 Bridgeville Exit 107	43,100	51,700	53,800
CR 161 Bridgeville Exit 107 to EB CR 173	32,100	40,700	51,120
EB CR 173 to Orange County Line	34,400	41,600	51,300
Orange County:			
Sullivan County Line to Route 211	48,600	55,700	65,500
Route 211 to Start Routes 6 & 17M Overlap	81,800	87,600	96,600
Start Routes 6 & 17M Overlap to Routes 207 & 17A	99,000	103,300	111,600
Routes 207 & 17A to End Route 6 Overlap	91,900	96,200	104,500
End Route 6 Overlap to Route 32	72,900	77,200	85,600
Route 32 to ACC I-87 Harriman	59,600	62,500	69,400
ACC I-87 Harriman to Routes 210 & 17A	16,400	19,300	26,300
Routes 210 & 17A to Rockland County Line	27,700	30,600	37,600

Project-related traffic volumes on other county roads and local streets in surrounding counties are anticipated to disperse to less significant levels. Project traffic was distributed to distant regional roadways based on existing traffic patterns and population density of surrounding areas. Table 5-22 highlights the high volume location of several additional highways/county routes in Orange County.

Table 5-22 Average Daily Traffic Volumes on Other Regional Roadways, Orange County

Highway/Roadway Segment	Existing (2010)	2018 No-Build	2018 Build
I-87 between Rockland County Line and I-16 Routes 6 & 7	135,100	137,900	144,200
I-84 between start of Rt. 52 overlap to Dutchess County Line	101,900	104,800	106,900
Rt. 6 between start of Rt. 987 Overlap to Rockland County Line	18,800	20,200	22,900
Rt. 17K between CR 23 Rockcut Road to start of Rt. 32 overlap	21,500	21,800	21,900
Rt. 209 between end of Rt. 6 overlap to CR 80 Neversink Drive	8,200	8,800	9,100

For the roadways shown in Table 5-22, project-related traffic volume increases in Orange County are highest on Route 6. Between the beginning of the Route 987 overlap and the Rockland County line, the daily traffic volumes on Route 6 are estimated to increase by 2,700 vpd (13 percent) due to the proposed project. At the other four locations shown in Table 5-22, project-related traffic volume increases are five percent or less. As expected, casino related traffic impacts decrease with distance.

All improvements for State Route 17, including capacity, safety, and geometric improvements, fall under the jurisdiction of NYSDOT.

5.7.9 Public Transportation

It is expected that public transportation to and from the region will increase in response to the opening of the proposed Casino Project. Future arrangements with local bus companies including the Shortline, Greyhound and other private bus companies to provide direct service to the Casino on a regular basis will be pursued. The Shortline Bus Company has already expressed interest in reviewing its current schedule and expanding its trip frequency to accommodate increased ridership. Similar services are in place for the Mohegan Sun and Foxwoods resorts. As an example, Greyhound's Lucky Streak Casino service offers an additional 30 weekday/40 weekend runs to Atlantic City from New York's Port Authority for casino visitors in the New York/NJ metropolitan area. The advent of new resort style casinos in Sullivan County will contribute to increased bus ridership and offset the number of vehicles that will typically be on the local roadways and major highways. As bus service increase, private automobile trips will be reduced.

Existing local limousine, charter and taxi services are expected to expand their services as well to provide connections to meet increased demand. These services could be used to transport visitors from the bus and rail stations directly to the Casino Project.

To understand potential future regional rail and bus services, a meeting was held with NYSDOT and New York Thruway Authority officials in April 2005 to discuss recent and on-going transportation studies to provide rail and bus services to improve access and relieve congestion in Sullivan County. In 2003, NYSDOT (2003) completed the *Catskill Rail Feasibility Study*, which looked at alternative rail alignments to Sullivan County.

5.7.10 Construction Impacts

Tribal Lands and Roadway Improvements. Construction of the Casino Project and associated roadway improvements expected to last approximately twelve to eighteen months. The proposed casino will be constructed on the Gildick property in a location that is removed from existing developments and residences. Construction traffic for the roadway improvements will only be in the immediate vicinity of Interchange 107. Therefore, the construction traffic impacts will be limited to noise and dust impacts for the limited number of homes that are immediately adjacent to the project site. These impacts will be minimized by use of standard construction practices such as wash down areas to remove dried mud from wheels, wetting of areas that are producing dust, and maintaining equipment mufflers.

During construction, the project site will generate truck and construction worker traffic. Most vehicles generated by the Casino Project (trucks and construction workers) will originate from south of the site (State Route 17 and County Highway 161). Thus, principal off-site construction impacts associated with the Casino Project will occur on State Route 17 interchange 107 and County Highway 161 to the south of the project site.

Utilities Connections. Impacts to traffic and transportation for installation of the utility connections are related solely to construction activities. The proposed alignments within the road right-of-way could allow for one lane of traffic to pass at all times for the entire length of the alignment. Installation will proceed along the corridor, and construction impacts will not remain in one specific area for long periods of time.

5.7.11 No Action Alternative

If the Casino Project does not occur, upgrades to Interchange 107 would still be implemented by NYSDOT. County Highway 161 would remain largely unchanged. If the site remained vacant, it would generate no traffic. If the mining and auto salvage operations resumed, there would be a limited amount of site generated traffic, similar to what had occurred in the past.

5.8 Air Quality

Tech Environmental, Inc. (2011) prepared an analysis of potential air quality impacts arising from both mobile (i.e., vehicular) and stationary (i.e. boilers) sources. This report is included as Appendix I and summarized below. This analysis focuses on the tribal lands and roadway improvement areas. Utility connections will not have air quality impacts, other than possible construction impacts discussed in Section 5.7.9 and 5.8.4.

5.8.1 Microscale Analysis

An analysis of potential mobile-source air quality impacts was performed in conformance with all federal and state guidelines. Analyses were conducted at the proposed Casino Project location, where mobile sources will be most concentrated. As discussed below, the analyses showed no exceedances of NAAQS standards.

A microscale carbon monoxide (CO) analysis was performed for three roadway intersections near the site with the potential to be impacted by the proposed action. The NYSDOT Environmental Procedures Manual was used as guidance in conducting the analysis as it provides more detailed requirements than are found under federal law. Maximum 1-hour and 8-hour CO concentrations were predicted for the 2010 Existing, 2018 No-Build, and 2018 Build conditions using the USEPA CAL3QHC Version 2 microscale dispersion model. In addition, a 2018 Cumulative Build condition was analyzed (see Section 6.8). These cumulative results are presented here for ease of comparison.

Additionally, a microscale air quality analysis was performed for nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and particulate matter (PM_{10} and $PM_{2.5}$) for the same roadways and receptors. Typically, microscale air quality analyses are not performed for these pollutants because the CO analysis is the most sensitive; therefore, NYSDOT does not provide specific guidance for performing microscale analyses for NO_2, SO_2, and PM_{10} $PM_{2.5}$. All applicable guidance from NYSDOT and USEPA was followed for the modeling of these additional air pollutants. Ozone is not included because this air pollutant is not directly emitted by motor vehicles, but is formed in the atmosphere from a complex series of photochemical reactions involving oxides of nitrogen (NO_x) and volatile organic compounds (VOCs). These chemical reactions occur over time periods and distances that are too large to represent with microscale air quality modeling; therefore, it is not possible to perform a microscale impact analysis for ozone.

As indicated in Section 5.7, all signalized and unsignalized intersections in the traffic study area were classified for Level of Service (LOS). All intersections that are predicted to operate at LOS D or worse for either the 2018 Build or 2018 Cumulative Build cases (discussed in Section 6.8) were analyzed. Three intersections met this criterion, including, the intersection of the main project site driveway with County Highway 161. The air quality analysis included the following three intersections:

- County Highway 161/Old Route 17 - Unsignalized (All cases)
- County Highway 161/State Route 17 WB Off-Ramp – Unsignalized (All cases)
- County Highway 161/Main Site Driveway – Signalized (Build cases only)

The 2018 Build and Cumulative Build cases include all the roadway improvements proposed as traffic mitigation, as discussed in Section 5.7

The CAL3QHC microscale modeling results are summarized in Tables 5-23 and 5-24 for the 1-hour and 8-hour CO concentrations, respectively. The maximum 2018 Build 1-hour CO concentration of 4.0 ppm is less than the NAAQS of 35.0 ppm. The maximum 2018 Build 8-hour CO concentration of 2.8 ppm is less than the NAAQS of 9.0 ppm. The maximum predicted CO concentrations for 2018 Build were predicted to occur at the northeast corner of the intersection of County Highway 161 and the site driveway. The maximum predicted 1-hour and 8-hour CO concentrations for the Cumulative Build scenario are 4.5 ppm and 3.2 ppm, respectively, and comply with the NAAQS.

The results for NO_2 are summarized in Table 5-25. The maximum 2018 Build annual NO_2 concentration of 34.6 μg/m^3 is less than the NAAQS of 100 μg/m^3. The maximum predicted annual NO_2 concentration for the 2018 Build scenario is predicted to occur at the intersection of County Highway 161 and State Route 17 WB offramp, along the east side of the offramp. The maximum predicted annual NO_2 concentration for the Cumulative Build scenario is 35.7 μg/m^3 and complies with the NAAQS.

The results for SO_2 are summarized in Tables 5-26 through 5-28 for the 3-hour, 24-hour, and annual SO_2 concentrations. The maximum 2018 Build 3-hour SO_2 concentration of 22.8 μg/m^3 is less than the NAAQS of 1,300 μg/m^3. The maximum 2018 Build 24-hour SO_2 concentration of 16.8 μg/m^3 is less than the NAAQS of 365 μg/m^3. The maximum 2018 Build annual SO_2 concentration of 2.2 μg/m^3 is less than the NAAQS of 80 μg/m^3. The maximum predicted SO_2 concentrations for the 2018 Build scenario are predicted to occur at the northeast corner of the intersection of County Highway 161 and the site driveway, and at the intersection of County Highway 161 and State Route 17 WB offramp along the east side of the offramp. The maximum 3-hour, 24-hour and annual SO_2 concentrations for the Cumulative Build scenario are the same as those for the Build scenario except for the Old Route 17 and County Highway 161 intersection..

The modeling results for PM_{10} and $PM_{2.5}$ are summarized in Tables 5-29 and 5-30 for the 24-hour and annual concentrations, respectively. The maximum 2018 Build 24-hour $PM_{2.5}$ and PM_{10} concentration of 27.6 μg/m^3 and 39.4 μg/m^3 are less than the NAAQS of 35 μg/m^3 and 150 μg/m^3, respectively. The maximum 2018 Build annual $PM_{2.5}$ concentration of 9.3 μg/m^3 is less than the NAAQS of 15 μg/m^3. The maximum predicted $PM_{2.5}$ and PM_{10} concentrations for the 2018 Build scenario are predicted to occur at the northeast corner of the intersection of County Highway 161 and the site driveway. The maximum predicted 24-hour and annual $PM_{2.5}$ and PM_{10} concentrations for the Cumulative Build scenario are essentially the same as those for the Build scenario.

The project is located in an ozone attainment area and the previous analysis shows that it does not have a significant effect on regional emissions. These modeling results demonstrate that the predicted worst-case concentrations of all modeled air pollutants at all receptor locations will be safely in compliance with the NAAQS. Therefore, the worst case traffic generated by the Casino Project will not cause or contribute to any violations of the NAAQS.

Table 5-23 Maximum Predicted One-Hour Carbon Monoxide Concentrations at Sensitive Receptors Plus Background (ppm)

Intersection	2010 Existing	2018 No-Build	2018 Build	Cumulative Build
County Highway 161/Old Route 17	3.3	3.2	3.6	4.5
County Highway 161/Route 17 WB Off-Ramp	3.6	3.5	3.8	3.8
County Highway 161/Main Site Driveway	N/A	N/A	4.0	4.3

Intersection	2010 Existing	2018 No-Build	2018 Build	Cumulative Build
NAAQS:	**35**	**35**	**35**	**35**

Notes: The results include background CO concentration of 3.1 ppm in 20101, and 2.8 in 2018.
N/A = Not Applicable – This intersection does not exist for the Existing or No-Build scenarios.

Table 5-24 Maximum Predicted Eight-Hour Carbon Monoxide Concentrations at Sensitive Receptors Plus Background (ppm)

Intersection	2010 Existing	2018 No-Build	2018 Build	Cumulative Build
County Highway 161/Old Route 17	2.3	2.3	2.6	3.2
County Highway 161/Route 17 WB Off-Ramp	2.6	2.6	2.7	2.7
County Highway 161/Main Site Driveway	N/A	N/A	2.8	3.1
NAAQS:	**9**	**9**	**9**	**9**

Notes: The results include background CO concentration of 2.2 ppm in 2010, and 2.0 ppm in 2018.
N/A =Not Applicable – This intersections does not exist for the Existing or No-Build scenarios.

Table 5-25 Maximum Predicted Annual Nitrogen Dioxide (NO_2) Concentrations Sensitive Receptors Plus Background (µg/m^3)

Intersection	2010 Existing	2018 No-Build	2018 Build	Cumulative Build
County Highway 161/Old Route 17	31.3	30.7	32.9	35.2
County Highway 161/Route 17 WB Off-Ramp	34.0	32.0	34.6	34.8
County Highway 161/Main Site Driveway	N/A	N/A	34.6	35.7
NAAQS:	**100**	**100**	**100**	**100**

Notes: The results include a background annual NO_2 concentration of 30 µg/m^3 in 2010 and 2018.
N/A = Not Applicable – This intersection does not exist for the Existing or No-Build scenarios.

Table 5-26 Maximum Predicted 3-Hour Sulfur Dioxide (SO_2) Concentrations at Sensitive Receptors Plus Background (µg/m^3)

Intersection	2010 Existing	2018 No-Build	2018 Build	Cumulative Build
County Highway 161/Old Route 17	21.9	21.9	21.9	22.8
County Highway 161/Route 17 WB Off-Ramp	21.9	21.9	22.8	22.8
County Highway 161/Main Site Driveway	N/A	N/A	22.8	22.8
NAAQS:	**1,300**	**1,300**	**1,300**	**1,300**

Notes: The results include a background 3-hour SO_2 concentration of 21 µg/m^3 in 2010 and 2018.

N/A = Not Applicable – This intersections does not exist for the Existing or No-Build scenarios.

Table 5-27 Maximum Predicted 24-Hour Sulfur Dioxide (SO_2) Concentrations at Sensitive Receptors Plus Background (µg/m^3)

Intersection	2010 Existing	2018 No-Build	2018 Build	Cumulative Build
County Highway 161/Old Route 17	16.4	16.4	16.4	16.8
County Highway 161/Route 17 WB Off-Ramp	16.4	16.4	16.8	16.8
County Highway 161/Main Site Driveway	N/A	N/A	16.8	16.8
NAAQS	**365**	**365**	**365**	**365**

Notes: The results include a background 24-hour SO_2 concentration of 16 µg/m^3 in 2010 and 2018.
N/A = Not Applicable – This intersection does not exist for the Existing or No-Build scenarios.

Table 5-28 Maximum Predicted Annual Sulfur Dioxide (SO_2) Concentrations at Sensitive Receptors Plus Background (µg/m^3)

Intersection	2010 Existing	2018 No-Build	2018 Build	Cumulative Build
County Highway 161/Old Route 17	2.1	2.1	2.1	2.2
County Highway 161/Route 17 WB Off-Ramp	2.1	2.1	2.2	2.2
County Highway 161/Main Site Driveway	N/A	N/A	2.2	2.2
NAAQS:	**80**	**80**	**80**	**80**

Notes: The results include a background annual SO_2 concentration of 2 µg/m^3 in 2010 and 2018.
N/A = Not Applicable – This intersection does not exist for the Existing or No-Build scenarios.

Table 5-29 Maximum Predicted 24-Hour Particulate Matter ($PM_{2.5}$/PM_{10}) Concentrations at Sensitive Receptors Plus Background (µg/m^3)

Intersection	2010 Existing	2018 No-Build	2018 Build	Cumulative Build
County Highway 161/Old Route 17	26.4/37.4	26.4/37.4	26.8/38.6	27.6/39.4
County Highway 161/Route 17 WB Off-Ramp	26.8/38.2	26.4/38.2	27.2/39.4	27.2/39.4
County Highway 161/Main Site Driveway	N/A	N/A	27.6/39.4	28.0/39.8
NAAQS:	**35/150**	**35/150**	**35/150**	**35/150**

Notes: The results include a background 24-hour $PM_{2.5}$ µg/m^3 concentration of 26 in 2010 and 2018, and a background 24-hour PM_{10} concentration of 37 µg/m^3 in 2010 and 2018.
N/A = Not Applicable – This intersection does not exist for the Existing or No-Build scenarios.

Table 5-30 Maximum Predicted Annual Particulate Matter ($PM_{2.5}$) Concentrations at Sensitive Receptors Plus Background (μg/m^3)

Intersection	2010 Existing	2018 No-Build	2018 Build	Cumulative Build
County Highway/Old Route 17	9.1	9.1	9.2	9.3
County Highway 161/Route 17 WB Off-Ramp	9.2	9.1	9.2	9.2
County Highway 161/Main Site Driveway	N/A	N/A	9.3	9.4
NAAQS:	**15**	**15**	**15**	**15**

Notes: The results include a background annual $PM_{2.5}$ concentration of 9 μg/m^3 in 2010 and 2018.
N/A = Not Applicable – This intersection does not exist for the Existing or No-Build scenarios.

5.8.2 Regional Mesoscale Analysis

A mesoscale air quality analysis was performed by Tech Environmental to calculate the potential regional air quality effects of the traffic generated by the Casino Project alone as well as cumulatively with other proposed casinos on Orange County, using as a measure the total daily emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x) on major highways. Thirty-five roadways were included in the analysis, as listed in Section 4.8.2.

The analysis is summarized below and provided in full in Appendix I. As shown below, motor vehicle traffic in Orange County related to the proposed Casino Project will result in an insignificant (less than one percent) increase in total VOC and NO_x emissions in Orange County.

Mesoscale Analysis Procedure. The mesoscale analysis calculated emissions of VOC and NO_x over the study area for three scenarios, based on the traffic analyses:

- 2018 No-Build
- 2018 Build
- Cumulative Build

The vehicle miles traveled (VMT) for each roadway were calculated by multiplying the length of each roadway by the average daily traffic volume on the roadway. The VOC and NO_x emissions for each roadway were calculated by multiplying the VMT by the MOBILE6.2 predicted VOC and NO_x emission factors in grams per mile. The MOBILE6.2 emission factors were obtained from NYSDOT for the warm summertime temperatures, which correspond with the peak ozone season.

Predicted Mesoscale Emissions. A summary of the results of the mesoscale analysis is presented in Tables 5-31 and 5-32. Table 5-31 shows that the 2018 No-Build VOC major roadway emissions over the study area are 3,487 kg/day. The major roadway emissions of VOC

for the 2018 Build scenario are predicted to be 3,581 kg/day, a 2.7 percent increase from the No-Build mesoscale VOC emissions. The major roadway emissions of VOC for the Cumulative Build scenario are predicted to be 3,710 kg/day, a 6.4% increase from the No-Build mesoscale VOC emissions.

Table 5-31 shows that the 2018 No-Build NO_x major roadway emissions over the study area are 7,2328 kg/day. The major roadway emissions of NO_x for the 2018 Build scenario are predicted to be 7,456 kg/day, a 3.0 percent increase from the No-Build mesoscale NO_x emissions. The major roadway emissions of NO_x for the Cumulative Build scenario are predicted to be 7,758 kg/day, a 7.2 percent increase from the No-Build mesoscale NO_x emissions.

Table 5-32 shows an estimate for the total emissions of VOC and NO_x in Orange County for the 2018 No-Build, Build, and Cumulative Build scenarios. The emissions information in Table 5-32 shows that the Build scenario will increase total emissions of VOC and NO_x over the No-Build scenario by only 0.2 percent and 0.5 percent, respectively. Table 5-32 shows that the Cumulative Build scenario will increase total emissions of VOC and NO_x over the No-Build scenario by only 0.5 percent and 1.1 percent, respectively.

Motor vehicle traffic in Orange County related to the proposed Stockbridge-Munsee Casino Project will result in an insignificant (less than one percent) increase in total VOC and NO_x emissions in Orange County. This very small increase in ozone precursor emissions will have no discernible effect on local ozone levels in Orange County due to the relatively small change and the fact that photochemical reaction times are not rapid enough to form ozone until a parcel of air has been transported a long distance downwind. The potential increase in VOC and NO_x emissions from the casinos are even smaller when compared to precursor emissions from the entire region and urban areas located upwind (such as Philadelphia and New York City). Thus, the proposed casinos will not have a significant impact on the air quality in Orange County.

Table 5-31 Summary of Daily Major Roadway VOC and NO_x Emissions in Orange County, New York (kg/day)

Pollutant	2018 No-Build	2018 Build	Cumulative Build
VOC	3,487	3,581	3,710
NO_x	7,238	7,456	7,758

Table 5-32 Summary of Daily Total VOC and NO_x Emissions in Orange County, New York (kg/day)

Pollutant	2018 No-Build	2018 Build	Cumulative Build
VOC	42,179	42,273	42,402
NO_x	48,156	48,374	48,676

5.8.3 Stationary Source Emissions

The Casino Project will use distillate oil (0.3 percent sulfur) for both heating and electrical generation, and propane for cooking, since natural gas is not available at the site. Wherever possible, fuel-burning equipment will be selected that can burn either gas or oil, so that gas firing may be used in future years if a pipeline is extended into the area. The emission estimates assumed distillate oil for heating and electrical generation. Phase II assumes construction of the hotel.

Phase I will require the following fuel-burning equipment:

- Commercial size boilers with a total heat input of 57 x 10^6 Btu/hour, firing 400 gallons distillate oil per hour and limited to 3,000 hours per year of operation
- Emergency generators supplying a total of 5 MW of power, firing 400 gallons distillate oil per hour, limited to 50 hours per year of operation, and designed with ignition timing retard NO_x control
- Kitchen use of 88 x 10^6 cubic feet of propane for cooking, annually

The additional equipment installed in Phase II will be:

- One additional commercial size boiler with a heat input of 30 x 10^6 Btu/hour, firing 210 gallons distillate oil per hour and limited to 3,000 hours per year of operation
- One additional emergency generator supplying 1.5 MW of power, firing 120 gallons distillate oil per hour, limited to 50 hours per year of operation

Total potential emissions for Phase I and II fuel-burning equipment are summarized in Table 5-33.

The State of New York, including Sullivan County and the project site, is part of the 11-state Ozone Transport Region (OTR), established by the Clean Air Act Amendments of 1990 to address high ozone levels in the northeast corridor stretching from Washington, D.C. to Maine. In the OTR, more stringent air pollution control regulations apply. Since the site is in the OTR, a federal Non-Attainment New Source Review permit will be required if potential emissions of Volatile Organic Compounds (VOC) exceeded 50 tons per year or potential emissions of NO_x exceeded 100 tons per year. Outside an OTR, a permit will only be required if VOC exceeded 100 tons per year. Potential emissions of these pollutants from both Phase I and II are well below that threshold. The facility will require a federal Prevention of Significant Deterioration (PSD) permit if potential emissions of any criteria pollutant exceeded 250 tons per year, classifying it as a new major source. Table 5-33 reveals that total Phase II potential emissions of all criteria pollutants are below 250 tons per year. Thus, the Casino Project does not require any federal pre-construction air quality permits. During the first year of operation, the Casino Project will not need to apply for a federal Title V operating permit because potential emissions of all criteria pollutants are below 100 tons per year and potential emissions of VOC are below 50 tons

per year. The operating permit must be applied for during the first year of operation and a renewal permit applied for every five years after that.

The Casino Project would consider switching from distillate oil to natural gas if gas becomes available to the site in the future. If fuel burning equipment were switched over to natural gas, emissions of NO_x and VOC would stay about the same, emissions of CO would likely increase somewhat, and emissions of SO_2 and PM would decrease. The actual change in emissions from the Casino Project's stationary sources with a conversion to natural gas would depend on the equipment manufacturer and the combustion design.

On-site cogeneration is an option being considered for the hotel in Phase II of the Casino Project, either with diesel reciprocating engines or combustion turbines, if pipeline natural gas becomes available at the site by that phase's 2018 build year. The present conceptual design of mechanical systems, because there is no pipeline natural gas, relies on purchase of all electricity from New York State Electric & Gas (NYSEG) and distillate oil-fired boilers to provide space heating and domestic hot water for the buildings. In the event that NYSEG secures a franchise from Columbia Gas and installs a distribution system serving portions of Sullivan County that include the Casino Project site, the availability of pipeline gas would increase the possibility for some type of cogeneration system by eliminating additional fuel-oil trucking and storage to serve the electric generating equipment. Although such availability of pipeline natural gas is not now foreseeable, the feasibility of cogeneration for Phase II of the Casino Project will nonetheless be assessed in the Casino Project's detailed mechanical design. Table 5-33 summarizes the potential air pollutant emissions for Phases I and II of the project, including the on-site generation option. The emission totals in Table 5-34 reveal that the facility would likely need a federal pre-construction air permit under Non-Attainment New Source Review regulations if cogeneration is included in the design as NO_x will exceed 100 tons per year. A federal PSD permit would not be needed, and application for a federal Title V permit would be made in the first year of facility operation.

Table 5-33 Total Potential Emissions From Stationary Source Fuel Combustion (tons/yr)

	NO_x	SO_2	CO	VOC	PM
Phase I Equipment					
Boilers	12.0	25.6	3.0	0.1	2.0
Generators	4.0	0.4	0.9	0.1	0.1
Kitchen	4.1	0.02	1.8	0.2	0.3
Total	**20.1**	**26.0**	**5.7**	**0.4**	**2.4**
Phase I & II Equipment					
Boilers	18.3	39.0	4.6	0.2	3.0
Generators	5.2	0.5	1.2	0.1	0.2
Kitchen	4.1	0.02	1.8	0.2	0.3
Total	**27.6**	**39.5**	**7.6**	**0.5**	**3.5**

Table 5-34 Total Potential Emissions For Phases I and II from Stationary Source Fuel Combustion Assuming On-Site Cogeneration (tons/year)

	NO_x	SO_2	CO	VOC	PM
Reciprocating Engine Option					
Boilers	18.3	39.0	4.6	0.2	3.0
Generators	169.2	19.14	39.4	12.6	6.8
Kitchen	4.1	0.02	1.8	0.2	0.3
Total	**191.69**	**58.1**	**45.8**	**13.0**	**10.1**
Combustion Turbine Option					
Boilers	18.3	39.0	4.6	0.2	3.0
CTs	14.9	13.2	30.2	8.6	9.2
Generators	42.3	4.8	9.9	3.2	1.7
Kitchen	4.1	0.02	1.8	0.2	0.3
Total	**79.6**	**57.0**	**46.5**	**12.2**	**14.2**

5.8.4 Construction Impacts

For all components of the project (site, roadway and utility), air quality may be temporarily affected by fugitive dust from construction activities and exhaust emissions from construction vehicles. The worst air quality impacts will be associated with the excavation phase of the project. Reasonable mitigation measures will be employed as necessary to minimize the potential impact of air pollutant emissions generated by project construction operations on all locations surrounding the site. These measures include compacting the soil or using gravel to stabilize the site access points, periodically cleaning paved streets near the entrances to the site, as necessary, to minimize vehicle mud/dirt carryout, and requiring that trucks hauling excavate from the site install secure covers over their loads.

5.8.5 No Action Alternative

In the No Action Alternative there would be no changes to air quality. Minor fugitive dust would continue to enter the air from the resumption of mining operations.

5.9 Noise

Casino Project construction is expected to produce temporary increases in sound levels in the area immediately adjacent to the site. The site's proximity to the highway is an advantage and means construction vehicles and delivery trucks will not pass through a residential district. Reasonable measures will be implemented to mitigate the short-term construction effects, including the use of effective mufflers on all equipment and the proper maintenance of equipment.

Operation of the Casino Project will produce small off-site changes in ambient sound levels. All mechanical equipment, such as boilers and generators, will be housed in sound-insulated structures and silencers will be used on diesel-powered generator exhausts. The volume of traffic generated by the project is not expected to perceptibly increase the existing sound levels from traffic on nearby roads, including State Route 17.

In order to quantify potential noise impact, a noise study was conducted. This is presented in Appendix I and summarized below. This analysis focuses on the tribal lands and roadway improvement areas. Utility connections will not have noise impacts, other than possible construction impacts discussed in Section 5.7.9.

Sound Level Regulations and Guidelines. Since there are no local, state, or federal noise regulations with decibel limits applicable to the motor vehicles visiting the site, an appropriate federal sound level criterion for residential areas was used. The Federal Highway Administration (FHWA) has published Noise Abatement Criteria (NAC) for residential areas stating that noise barriers are recommended to mitigate peak hour L_{eq} sound levels from a new highway project when they exceed a threshold of 67 dBA. The FHWA guideline, a 1-hour L_{eq} of 67 dBA, was used to judge the effects of the Casino Project on nearby residential and recreational areas.

Calculated Existing and Future Sound Levels. The FHWA's Traffic Noise Model (TNM) was used to evaluate the sound level impact from the project's traffic on sensitive receptors such as residential homes. The TNM modeling presented in the DEIS was updated to reflect changes in the predicted traffic volumes for the 2010 Existing case, the 2018 No-Build case, the 2018 Build case, and the Cumulative Build case, for the peak hour of traffic generation. The results of the updated traffic noise modeling are summarized in Table 5-35.

Table 5-35 Existing and Future Sound Levels (L_{eq}) In Residential and Recreational Areas For the Peak Hour of Trip Generation (dBA)

Analysis Scenario	185 Highway 161	34 Foss Road	16 Old County Road	Neversink River (south)	Neversink River (north)
Existing 2010	60	58	54	54	54
No-Build 2018	62	60	56	56	56
Build 2018	63	61	57	57	57
Cumulative Build	63	61	57	57	57
FHWA Guideline	67	67	67	67	67

The TNM modeling results summarized in Table 5-35 demonstrate that the highest sound level predicted after the Casino Project is built (63 dBA) will be easily in compliance with the FHWA guideline for sound levels in residential areas (67 dBA).

The TNM modeling shows that the sound levels at the residences and at the Neversink River will increase by 1 dBA between the No-Build, Build and Cumulative Build scenarios. Because the

changes are less than 3 dBA, these results suggest that the potential increase in sound levels will generally not be noticeable near the project area (refer to Table 4-15). The project's traffic will have an even smaller effect on locations further from the project.

The TNM modeling of the potential sound level impacts from motor vehicles demonstrates that the traffic generated by the Casino Project during the period with the largest trip generation will not have a significant impact on community sound levels. Community sound levels after the Casino Project is built will comply with the FHWA guideline for sound levels in residential and recreational areas.

Construction Impacts. Construction is expected to produce temporary increases in sound levels in the area immediately adjacent to construction areas. The Casino Project, the roadway improvement area, and much of the utilities connections alignments are proximate to the highway. This is an advantage because construction vehicles and delivery trucks will not pass through a residential district. Reasonable measures will be implemented to mitigate the short-term construction effects, including the use of effective mufflers on all equipment and the proper maintenance of equipment.

No Action Alternative. In the No Action Alternative, no new noise generators would be introduced. If the mining and/or auto salvage operations resumed, there would be limited noise from these operations, similar to what had occurred in the past.

5.10 Socioeconomics

5.10.1 Tribal Conditions

The Tribe is expected to gain substantial socioeconomic benefit from the proposed gaming facility. The tribal government and tribal members will benefit from the anticipated economic resources that will result from the Casino Project. The proposed facility will provide a secure source of income for the Tribe. This income will enable the Tribe to diversify its economy by investing in other forms of economic development, as well as providing revenues to meet community goals. This new revenue stream is needed since revenues from tribal businesses support tribal government operations (though those operations have been scaled back in recent years due to budgetary constraints), but are not enough to support other tribal needs. These activities will in turn result in benefits for tribal members on and near the reservation. The income stream will allow the Tribe to fund activities to reestablish its Wisconsin land base. A 2009 decision by the U.S. Court of Appeals for the 7th Circuit held that the Wisconsin reservation had been diminished and disestablished. The Tribe wants to purchase lands within the 1856 reservation boundaries and put those lands into trust. However, it does not have the funding necessary to aggressively pursue this land acquisition program. Since 2008, the Tribe has only been able to make two purchases for a total of approximately 210 acres. The reestablishment of the Tribe's land base benefits the Tribe in a number of ways. It expands the area under tribal authority and, once the lands are taken into trust, the areas under tribal jurisdiction. This benefits the Tribe by consolidating the existing checkerboard pattern of land

ownership on the reservation and increasing the land base over which it can exercise its sovereign rights. It also increases the land available for use by the Tribe and its membership. Stockbridge holds land communally, so by increasing the land base it means that there is more land available for tribal member housing locations and available for traditional hunting and gathering uses. It also provides more land for management as part of the tribal forestry enterprise.

Employment. Although it is not anticipated that many tribal members will relocate to New York State, the Casino Project will provide employment opportunities should tribal members wish to do so. More importantly, revenues from the Casino Project that allow for establishment of an employment office and diversification of the Tribe's economy will increase available employment opportunities in Wisconsin on and around the Wisconsin reservation (e.g., construction jobs for infrastructure improvements and social service jobs for the provision of various tribal services. These local, Wisconsin opportunities may include the development of businesses such as a grocery store, a community child care center, hair salon, hardware store, dry-cleaners, restaurants, a hotel, and a nursing care and rehabilitation facility. Some businesses could be developed by the Tribe, but increased revenues could also fund increased private sector economic development activities by tribal members.

Housing. To assist tribal members in meeting the existing and future housing needs on the Wisconsin Reservation, the Tribe established a home loan program in 2000. Such a program was needed as tribal members often have difficulty obtaining conventional mortgages since tribal land is held through land assignments. However, the Tribe placed a moratorium on new loans under the home loan program in 2005 due to funding constraints, as well as operational issues and the program subsequently has not been reinstated. Additional revenue from the Casino Project will allow the Tribe to re-establish a home loan program. It will also allow the Tribe to assist the 60 tribal families waiting for rental and homeownership programs and make improvements to the 15 percent of the housing units that are in substandard or overcrowded condition on the Wisconsin reservation.

Education. Expansion of tribal education and scholarship programs is needed to improve the educational and economic opportunities of tribal members and to prepare tribal members to meet the challenge of the future. The Tribe operates a Head Start program that needs funding to support unfunded federal mandates. While area schools receive some federal funding to provide educational assistance to these students and their families, the Tribe also employs two people as Indian student counselors to provide assistance to 100 Community students and additional funding may help increase the number of tribal students who graduate from high school. The Tribe has also established a Tribal Higher Education Grant Fund that provides grants to approximately 74 individuals per year pursuing undergraduate and graduate degrees. Additional funding will allow the Tribe to expand its assistance to students, fund scholarship opportunities, and provide incentives and opportunities for tribal members to obtain professional and advanced degrees. This goal goes to the heart of tribal self-determination.

Community Infrastructure. The Tribe needs funding to develop and improve infrastructure on its Wisconsin reservation to increase development opportunities and improve socioeconomic

conditions for its members. Current infrastructure needs include the development of additional community water supplies, expanding wastewater treatment systems, developing elder care facilities, expanding health care, and developing and improving roads.

Future development on the Tribe's Wisconsin reservation is not possible unless the Tribe can provide a source of clean water that has adequate flow levels. To do this, the Tribe will need to construct additional community drinking water systems. The Tribe borrowed funds to make improvements to its existing drinking water system in the eastern half of the reservation, where there are nitrate problems. Such a system would need to include a filtering system and is estimated as costing $4 million. Additional revenues will fund these types of improvements.

The Tribe also needs to expand its wastewater system into the eastern half of the reservation since it believed that the individual septic systems in that area add to the nitrate contamination in the groundwater. Such a system is estimated as costing $4 million. The Tribe may also need to establish additional wastewater treatment facilities to serve those areas of the reservation where individual septic systems are not viable, but the land is otherwise suitable for development. A cost estimate for constructing a wastewater treatment system in such an area is $2.8 million.

The construction of a nursing and rehabilitation center for elders and persons recovering from serious injury or illness is needed. Such a facility will allow tribal elders, an important resource to the very fabric of the Tribe, to remain a part of tribal life in the Community, instead of moving away to the necessary facilities. It will also allow individuals who need temporary nursing care to remain a part of their families and tribal life while recovering from illness or injury. The Tribe is interested in expanding their assisted living facility and developing additional capacity to allow individuals to be near their families when they need nursing support.

The Tribe also needs additional sustained funding to allow it to expand, provide, and maintain universal health care coverage and services for other tribal members. This funding is needed since the Tribe provides most of the support for the health operations provided to tribal members and health care is one of the Tribe's fastest growing costs. The Tribe typically runs out of federal funding, which is provided in accordance with federal law, halfway through the fiscal year and in 2011 had to provide over $2.5 million toward health care costs.

Many of the Tribe's highest priority road development projects have not been completed due to inadequate funding. While the Tribe receives some federal funding for road construction and maintenance, many road development projects have not been completed due to inadequate funding. Stockbridge would like to do over $4.5 million in road improvements in the next 5 years, not including deferred maintenance costs for 84.5 miles of reservation roads and bridges or the costs to operate the roads like providing snow removal. Based on past funding levels, federal funding will likely provide $2.6 million of the Tribe's estimated $8.5 million need. Therefore, it will take many more years until even the highest priority projects are completed, unless the Tribe is able to create additional streams of revenue to support these infrastructure projects.

5.10.2 Project Area Conditions

This section examines the effects of the Casino Project on the labor pool, housing market, and local and regional economies of the six county study area, which encompasses the tribal lands, roadway improvement area, utilities connections corridors and beyond. The analysis performed by AKRF, Inc (Appendix J) considered Phase I and Phase II both separately and cumulatively using updated data and information. Only the full build (Phase I and II combined) is summarized here. Effects are based on an estimation of the projected effects such as jobs directly and indirectly created and economic activity generated (e.g., spending and tax revenues). In addition, the effects of visitors visiting the destination casino are discussed in terms of visitor spending and other visitor-related considerations.

The section first looks at the overall economic impact from the construction activities and the operation of the casino facility. The economic and fiscal impacts are projected using the Regional Input-Output Modeling System (RIMS II) developed by the U.S. Department of Commerce. This model measures the direct effects of the project as well as the secondary "ripple effects" through the local and regional economies. The section then describes the likely effects of the Casino Project on employment and housing in the study area. Since the Casino Project will introduce a new resort-type destination attraction to the County, the likely effects on the existing tourism industry are discussed, particularly for the entertainment, eating and drinking, and lodging markets within the service and retail sectors. Section 5.11 discusses how the Casino Project might affect community services.

5.10.2.1 Construction

Construction of the proposed project will result in impacts in the Sullivan County and New York State economies. Effects during construction will stem from the direct construction employment and spending from the project, as well as the secondary, or indirect, economic activity generated throughout the economy by the direct spending (often referred to as the "ripple" effect).

Methodology. The method used for modeling the direct and indirect (or generated) effects of construction activity on New York State's economy was the RIMS II modeling system. The model contains data on 406 economic sectors, showing how each sector affects every other sector as a result of a change in the quantity of its product or service. This FEIS analysis employed an updated model obtained from the U.S. Department of Commerce in July 2010, which is based on the most recent data available. The model is based on recent data, and has been further adjusted to reflect changes in the consumer price index.

Economic Benefits. Based on preliminary estimates, the total estimated construction cost of the combined Phases I and II is over $800 million. Table 5-36 presents an overview of the projected employment and economic activity from the construction of Phase I and Phase II. The table shows separately the direct (construction), indirect (secondary and induced), and total direct and indirect economic effects from constructing the entire project. The table shows the estimated cumulative effects of the project's investments over the development period. Assuming that the

entire development period, including non-construction time between phases, will be seven years in duration, the table also models the projected benefits on an annual basis.

Employment. Based on the direct expenditures on construction activities, the direct construction employment will be 5,307 person-years of employment over the 6-year construction period (Table 5-36).

Table 5-36 Employment and Economic Benefits from Construction of Phase I and Phase II

	Total in New York State during Entire Development Period[1]	Average Amount Per Year[1]
Employment		
(Person-Years)[2]		
Direct (Construction	5,307	885
Indirect (Secondary and Induced	3,971	662
Total	**9,279**	**1,547**
Wages and Salaries		
(Millions of dollars)		
Direct (Construction)	$301.91	$50.32
Indirect (Secondary and Induced)	$203.22	$33.87
Total	**$505.13**	**$84.19**
Total Economic Output or Demand [3]		
(Millions of dollars)		
Direct (Construction)	$800.00	$133.33
Indirect (Secondary and Induced)	$734.08	$122.35
Total	**$1,534.08**	**$255.68**
	Fiscal	
Tax Revenues. Exclusive of Real Estate[4]		
(Dollars)		
Direct (Construction)	$17,299,000	$2,883,200
	$22,056,100	$3,676,000
Total	**$39,355,100**	**$6,559,200**

Notes:

1 Assumes that the entire development period, including non-construction time between phases, will be six years in duration.

2 A person-year is the equivalent of one person working full-time for a year.

3 The economic output or total effect on the local economy derived from the direct construction spending.

4 The figures assume no sales tax will be paid on construction materials; figures include personal income taxes, corporate and business taxes for contractors and subcontractors, sales tax on indirectly generated activity, and numerous other taxes on construction and secondary expenditures.

Source: The characteristics and construction cost of the completed project; the Regional Input-Output Modeling System (RIMS II), U.S. Department of Commerce, Bureau of Economic Analysis; and the tax rates by applicable jurisdiction.

In addition to this direct employment resulting from the construction activities, the total employment resulting from these construction expenditures will include jobs in business

establishments providing goods and services to the contractors and workers, thereby resulting in the creation of indirect employment. As shown in Table 5-36, construction of the entire Casino Project will indirectly generate another 3,971 person-years of employment. In total, construction will create an estimated 9,279 person-years of employment.

Wages and Salaries. The direct and indirectly-generated employment attributed to the construction activities will result in the creation of wages and salaries earned by the workers. Direct wages and salaries generated by the entire Project's capital improvement expenditures are estimated at $301.91 million. The construction activities are expected to directly support wages and salaries valued at an average of $50.32 million per year, assuming a six-year development period. In total, including indirect and generated wages and salaries, construction of the Casino Project is projected to have wages and salaries equaling approximately $505.13 million, or an average of $84.19 million per year.

Economic Activity. The total economic activity from constructing the Casino Project, including indirect expenditures, is estimated at more than $1.5-billion dollars ($1,534.08 million). This figure expresses the amount of total effect that the Casino Project will have on the economy. Over the six-year period, the total effect is estimated to average $255.68 million annually.

Although construction of the Casino Project is projected to have a substantial economic effect on the regional economy in southern New York State, it will be expected to have a positive, but somewhat lesser, effect on the local economy. Components of the Casino Project that will employ specialty trades that currently occur in Sullivan County, but are underemployed locally, will be expected to have the largest direct local effect. Local vendors and businesses that will serve the construction activities will also be indirectly positively affected. However, the economic effects from construction of the Casino Project would, to a large degree, not be localized but will occur throughout the regional economy in southern New York State.

Fiscal Benefits. Although the Tribe itself is tax exempt, construction activity will generate several forms of tax revenue including personal income taxes, corporate and business taxes from contractors and subcontractors, and sales tax on materials purchased directly by contractors and subcontractors. Most of the tax revenues will accrue to New York State; however Sullivan County will be expected to receive a modest amount of increased tax revenues from construction activity. As shown in Table 5-36, construction is estimated to create approximately $39.36 million in tax revenue, or, assuming a 6-year period, an average of about $6.56 million annually..

5.10.2.2 Economic Benefits of Operations

The economic benefits from the operation of the Casino Project will include direct employment, the creation of wages and salaries, and gross revenues from operations. To the extent the economic activity is taxable, annual tax revenues also will be generated. Direct economic benefits will generate additional indirect economic benefits as funds are re-circulated through the local and regional economy. The Casino Project will also be expected to result in other, more qualitative, effects, as a result of its presence in Sullivan County as an attractive destination for tourists and visitors.

Indirect economic effects are derived from two types of secondary economic activities. The first type, referred to as "induced" or "generated" activities, includes increases in employment and incomes created by successive rounds of spending. For example, the take-home income earned by the proposed Casino Project's employees will be spent on food, housing, and other goods and services. Some of this spending translates into income for local businesses, business owners, and their employees. Part of these second round incomes are, in turn, spent locally and thus become income to another set of individuals. As successive rounds of spending occur, additional income is created. Since it is projected that a relatively high proportion of the Casino Project's employees will be dispersed throughout a large commuting zone (see Section 5.10.2.4), and a high proportion of the project's expenses will be incurred regionally, this induced effect can be expected to be spread over an extensive region encompassing Sullivan and Orange Counties in New York, as well as portions of Ulster and Delaware Counties in New York, and portions of Wayne and Pike Counties in Pennsylvania.

The model used to analyze this type of indirect economic activity was the RIMS II model of Sullivan County, as the Casino Project is centrally located within Sullivan County, and this county is expected to receive the majority of the economic benefits of the Casino Project's operations. The model was developed for Sullivan County using the latest available data in July, 2010. A similar RIMS II model for the state's economy was also used to assess the project's effect on the broader regional economy. Using the models and the projected direct permanent jobs, earnings and other direct spending at the Casino Project, the total annual, recurring economic effects were projected.

The other type of secondary activities included in the model are those that originate entirely off site but are attributable to the operations of the Casino Project. These activities include goods and services provided to project-generated visitors by local service and retail establishments. For example, visitors to the casino that spend money at off-site businesses (e.g., gas stations, restaurants, lodging establishments, etc.) are considered to be creating an indirect economic impact because money generated from these expenditures is dispersed into the local and regional economy. This other type of secondary activity is analyzed in the section dealing with visitor and visitor spending.

Employment. As indicated in Tables 5-37 and 5-38, the proposed Phase II development would bring the direct employment from the Casino Project up to an estimated 4,907 full-time equivalent jobs In addition to direct employment, the expenditures associated with the annual operation of the proposed Project are projected by the RIMS II model to create an additional 936 full-time equivalent jobs off-site throughout Sullivan County, bringing the total direct and indirect jobs to 5,843 full-time equivalent jobs in Sullivan County. In the broader New York State economy, the RIMS II model's economic multipliers for the state's industrial sectors estimate that the project will create an additional 1,820 indirect and generated jobs, bringing the total direct and indirect jobs to 6,727 full-time equivalent jobs in New York State.

Table 5-37 Estimated Phase I Permanent Employment (Full-Time Equivalent Jobs)

Business Unit	Managers	Staff	Total
Casino	292	970	1,262
Food & Beverage/Retail & Other	87	635	722
Security	20	180	200
Parking & Transportation	26	125	151
Engineering & Facilities Maintenance	10	165	175
Information Technology	5	35	40
General & Administration	100	350	450
TOTAL	**540**	**2,460**	**3,000**

Table 5-38 Illustrative Economic Benefits from the Annual Operation of Phase I and II

	Sullivan County Region	Total in New York State
Employment		
(Full-Time Equivalent Jobs) [1]		
Direct (On-Site)	4,907	4,907
Indirect (Secondary and Induced)	936	1,820
Total	**5,843**	**6,727**
Wages and Salaries		
(Millions of constant 2011 dollars)		
Direct (On-Site)	$177.28	$177.28
Indirect (Secondary and Induced)	$60.94	$115.11
Total	**$238.22**	**$292.39**
Total Economic Output or Demand [2]		
(Millions of constant 2011 dollars)		
Direct (On-Site)	$514.96	$514.96
Indirect (Secondary and Induced)	$225.90	$443.62
Total	**$740.86**	**$958.58**

Notes:

[1] Full-time equivalent jobs express part-time jobs, based on the number of hours worked in a year, in terms of their equivalent amount of full-time jobs.

[2] The economic output or total effect on the economy derived from the direct spending during operation.

Source: The projected operating characteristics of the completed Proposed Project; and the Regional Input-Output Modeling System (RIMS II), U.S. Department of Commerce, Bureau of Economic Analysis.

The employment opportunities created by the Casino Project will be diverse, catering to a wide range of skill sets already substantially existing within the study area. New jobs will include opportunities in casino operations (such as machine technicians, cashiers, dealers, and table game supervisors); marketing (such as public relations, market research, and advertising); casino services (such as security, food and beverage preparation and service, retail purchasing, and maintenance and facilities specialists); human resources (such as employee relations, compensation, and staffing and training specialists); and finance and administration (such as accounts payable, audit, payroll, income control specialists, information technology, and legal).

The Casino Project expects to implement a recruitment and training program well ahead of the opening of the facilities.

Illustrative economic benefits from the annual operation of the Casino Project are presented in Table 5-38. The expenditures associated with the annual operation are projected by the RIMS II model to create additional full-time equivalent jobs off-site throughout Sullivan County, bringing the total direct and indirect jobs to 5,843 full-time equivalent jobs. While the RIMS II analysis is calibrated for Sullivan County, the actual effects will not be concentrated in the County, per se, but will more likely be more regionally dispersed within the overall study area. In the broader scale, or within the overall New York State economy, the RIMS II model's economic multipliers for the State's industrial sectors estimate that the Casino Project will create an additional 1,820 indirect and generated jobs, bringing the total direct and indirect jobs to 6,727 full-time equivalent jobs dispersed widely in New York State.

Wages and Salaries. The direct and indirectly-generated employment attributed to the annual operation will result in the creation of wages and salaries earned by the workers. Direct wages and salaries generated by the operation of the Casino Project are estimated at approximately $177.28 million (all figures in this section are in constant 2011 dollars). In total, including indirect and generated wages and salaries, the annual operation is projected to have wages and salaries equaling approximately $238.22 million in Sullivan County. In the broader New York State economy, the total direct and indirect wages and salaries from the annual operation of the completed proposed Project are projected to equal approximately $292.39 million.

Economic Activity. The completed Casino Project is projected to have a direct effect on the local economy, measured as economic output or demand from the direct spending during operation, equal to approximately $514.96 million annually. This amount includes the direct wages and salaries and other spending associated with annual operation. Based on the RIMS II model for Sullivan County, the total economic activity, including indirect expenditures that will result from the completed proposed project, is estimated at $740.86 million annually. In the broader New York State economy, the operation of the completed proposed project is estimated to have a total effect of approximately $958.58 million annually.

Fiscal Benefits. In addition to the fiscal benefits that local governments are provided under the Local Government Agreement, which is described in Section 5.11, the Casino Project will also generate certain tax revenues. Although the Tribe itself is tax exempt, the operation of the casino facility will generate tax revenues in the form of personal income taxes, corporate and business taxes from contractors and suppliers, and sales taxes on materials purchased directly by contractors and suppliers. In addition, the Tribe anticipates that it will enter into a Tribal-State agreement with New York State to provide for the collection and remission to the State of a portion of certain taxes on sales to non-Indians for items like tobacco and petroleum products. These revenues will be in addition to any other payments to the State required under the Tribal-State Compact with New York State.

5.10.2.3 Property Taxes

Based on real property tax bills for fiscal year 2010 and school tax bills for fiscal year 2009, the Casino Project site generated approximately $25,086 in property tax revenues for the Town of Thompson and Sullivan County, of which 56.5 percent was directed to County and Court expenses, 29.6 percent to the Town of Thompson, 7.8 percent to the Rock Hill and Monticello Fire Districts, 2.2 percent to the Ethel B. Crawford Public Library, and 0.5 percent to the Rock Hill Ambulance District. The Casino Project site also generated approximately $33,812 in school taxes during 2009. The site is located entirely within the Monticello Central School District.

Upon designation as trust land by the BIA, the parcels will become exempt from all real property taxation. As a result, the approximately $58,898 in property and school tax revenues allocated among the taxing jurisdictions will no longer be available to these jurisdictions. Although the Casino Project site will no longer generate these real property taxes, the Tribe has entered into an Agreement with the local governments (see Appendix D). This Agreement is a binding agreement with Sullivan County that provides funding to locally impacted entities to mitigate impacts to the local community. Under the Agreement, the Tribe will make an annual payment to Sullivan County of $15 million. This amount will be allocated among the impacted local and county government entities to mitigate the effects of the proposed Casino Project.

In addition to the Agreement with Sullivan County, the Tribe will also enter into a Tribal-State Compact with New York State. This Compact is expected to include provisions for payments to the State to mitigate costs incurred by State agencies resulting from the project. While this Compact is not yet in place, it is anticipated to include, for example, a provision to establish a State Police Casino Detail that focuses on law enforcement issues associated with the casino. Funding for this detail will be covered under the Compact and is discussed in more detail in this analysis in Section 5.11.

5.10.2.4 Effects of Employees

Workers employed on site, and those whose jobs are indirectly generated, are expected to be dispersed widely within the study area (as discussed below) . It is anticipated that approximately 84 percent of the future employees of the Casino Project would be drawn from the one hour commuting area. These workers are expected to exhibit commuting characteristics not unlike those of the existing labor pool (see Table 4-23). Approximately 70 percent of these employees will be expected to live within a 15 minute driving distance from the Casino Project. Given the accessibility of State Route 17, these travel times roughly equate to mileage distances. Therefore, a substantial number of these workers could be drawn from Middletown and other Orange County communities within this 15 minute drive radius, with others being drawn from population concentrations in Liberty and nearby Monticello.

Given the dispersal of project employees throughout a relatively expansive commuter zone, the effects of employee concentration, such as localized commuter congestion and school over burdens, is expected to be minimal. The following discussion further illuminates this finding through an estimation of in-migration and job shifting within the existing labor pool.

Projected In-Migration. Of the direct full-time-equivalent (FTE) positions, it is anticipated that 3,435 FTE positions, will be recruited from within an approximate 100-mile radius. It is assumed that a vast majority of the Casino Project employees and their families recruited from beyond the 100-mile radius of the Casino Project site will move to a location within the study area, the radius of which is defined by a one-hour driving distance. In addition, some employees may relocate within the study area. Table 5-39 summarizes the projected distribution of counties of residence (post-relocation) for all of the estimated employees. As shown, it is estimated that 84 percent will ultimately live within the study area. About one-half of all employees will ultimately reside within Sullivan County.

Table 5-39 Projected County of Residence: All Project Employees

Location	Full-Time-Equivalent Employees	Percent of Total Project Employment
Within study area		
Sullivan County	2,473	50%
Orange County	989	20%
Ulster County	144	3%
Delaware County	130	3%
Wayne County	277	6%
Pike County	124	2%
Study Area Total	**4,137**	**84%**
Outside study area		
Outside Study Area Total	**770**	**16%**

Source: AKRF, Inc.

The operation of the proposed casino, hotel, and associated restaurants and entertainment amenities will require the ongoing purchase of a wide range of goods and services, many of which will be purchased within the study area. The demand generated within the local and regional economies would represent powerful opportunities for the expansion and creation of businesses, and the growth of employment, to serve the operational needs of the Casino Project.

The expenditures associated with the annual operation of the Casino Project will create an estimated 936 full-time-equivalent jobs off site throughout Sullivan County. Similar to direct Casino Project employment, this indirect employment will be met by a combination of existing and new study area residents.

The in-migration resulting from indirect employment is more difficult to quantify than in-migration from Casino Project employment due to several factors. First, the locations where indirect employment is generated will be dispersed throughout Sullivan County and beyond, meaning that the potential commuting area will vary depending on the location of employment. In addition, many of the indirectly-generated FTE positions will be filled by current residents working additional hours at an existing job.

For purposes of analysis it is conservatively assumed that indirect employment generated by the Casino Project will exhibit a similar distribution as direct employment in terms of proportions of existing versus new residents employed, and their location in the study area. Under these assumptions, approximately 84 percent of the indirect employment generated in the region, or 789 FTE employees, will ultimately live within the study area (see Table 5-40). Of these employees, an estimated 343 (over 40 percent) will be new residents of the study area. The remaining employment will be met through existing residents that are currently unemployed, underemployed, or employed job-changers. As with direct Casino Project employment, it is assumed that Sullivan County will experience the most dramatic influx of residents, with an estimated 221 FTE employees and their families newly residing in Sullivan County.

Table 5-40 Projected County or Residence: Indirect Employees

Location	Full-Time-Equivalent Employees	Percent of Total Indirect Employment
Within study area		
Sullivan County	472	50%
Orange County	189	20%
Ulster County	27	3%
Delaware County	25	3%
Wayne County	53	6%
Pike County	23	2%
Study Area Total	**789**	**84%**
Outside study area		
Outside Study Area Total	**147**	**16%**
Source: AKRF, Inc.		

Housing Market Impacts. It is estimated that 2,140 FTE employees (and their families) will be new residents within the study area (1,798 direct employees and 343 indirect employees), and will therefore place new demands on the study area's housing market. Table 5-41 shows the number of new households estimated within each of the study area counties, as well as the projected demand in terms of the expected allocation of renters/buyers.

Table 5-41 New Study Area Housing Demand from Project Employees and Indirect Employment

Location	New Households	Projected Renters	Projected Home Buyers
Sullivan County	1,381	455	926
Orange County	475	148	327
Ulster County	76	24	52
Delaware County**Error! Bookmark not defined.**	57	15	42
Wayne County	104	20	84
Pike County	47	7	40
Study Area Total	**2,140**	**669**	**1,471**

Sources: AKRF, Inc. Projected allocation of renters/buyers based on county ratios from 2010 Census, Summary Tape File 3.

There are other, less quantifiable factors that could alter the Casino Project-generated housing demand within the study area, such as positions vacated by employees to take a job at the Casino Project. Conservatively assuming that all workers that filled vacated positions were new to the study area, there will be an additional demand for housing within the study area from as many as 2,174 FTE employees (in addition to the FTE employees described above). Depending on the location of residence for these new replacement employees, the Casino Project could result in a net increase in housing demand of anywhere from 1,381 to 2,488 units in Sullivan County, and from 2,140 to 4,314 units within the study area as a whole (including Sullivan County).

The Casino Project-generated housing demand within Sullivan County will be greater than the existing supply of vacant housing for rent and sale. Based on the U.S. Census Bureau's 2010 Census, there were approximately 1,424 housing units for rent and 1,029 units for sale in Sullivan County. However, there are approximately 5,634 housing units being proposed for development in Sullivan County. Table 5-42 shows proposed residential developments in the study area. The amount of future housing development in Sullivan County will be heavily influenced by the major project initiatives proposed, such as the Casino Project. Given the amount of housing in the planning stages, it is expected that the housing demand generated by the Casino Project will be met by a combination of the existing housing stock and new housing development in the study area.

Table 5-42 Proposed Residential Development in Casino Project Study Area

Area	Units
Sullivan County	4,382
Orange County	580
Ulster County	287
Wayne County	155
Pike County	230
Study Area Total	**5,634**

Notes: Housing units include apartments, mobile homes, townhouses, and single-family units. These residential development projects are in various stages of planning and approval, and the number of units and timing of development will be dictated by market forces.

Sources: Sullivan County data were collected and utilized in the traffic analysis presented in the FEIS, and the Orange County, Ulster County, Wayne County and Pike County data are U.S. Census 2009 New Privately Owned Residential Building Permit Estimates.

Projected Effects on Study Area Workforce. Sullivan County's labor force will experience the most dramatic benefits from Casino Project operations. As shown in Table 5-41, it is estimated that 2,473 FTE Project employees will ultimately be residents of Sullivan County. This will represent approximately 7.1 percent of the total workforce in Sullivan County.

Of the 3,435 Project employees recruited from within the 100-mile radius of the Casino Project site, approximately 443 will be unemployed Sullivan County residents, representing approximately 14 percent of the current unemployed workforce in Sullivan County. Sullivan County has a relatively high percentage of unemployed persons with previous work experience

in the retail trade and accommodation and food services sectors, which are complementary experience bases for Casino Project employment. Overall, it is estimated that the Casino Project will employ approximately 835 currently unemployed persons that are residing within the study area.

According to industry research and employee surveys conducted at similar casino operations, casino employment opportunities attract workers due to highly competitive benefit packages, including attractive health and life insurance benefit programs, paid vacations, and disability insurance. Job security and opportunities for advancement in the operation and within the industry are also cited as attractive reasons for unemployed or "underemployed" persons (those currently in part-time or seasonal positions) to take full-time casino jobs.

Given the high rates of part-time and seasonal employment in Sullivan County, many workers interested in full-time, year-round work will be attracted by the positions and benefit packages offered by the Casino Project. Approximately 870 residents of Sullivan County are projected to vacate existing full-time, part-time, and seasonal positions for Casino Project employment. Given that an estimated 870 Sullivan County residents will be vacating other positions for Casino Project work, the Project would indirectly generate a demand for new employment within those vacated positions, some of which will be filled by unemployed Sullivan County residents, as well as new residents to Sullivan County.

In addition to direct employment, the expenditures associated with the annual operation of the Casino Project will create an estimated 936 FTE jobs off site throughout Sullivan County. It is estimated that 472 existing and future Sullivan County residents will benefit from indirect employment opportunities. Combined with direct employment, the 2,945 Sullivan County residents holding positions directly and indirectly generated by the Project will represent 8.4 percent of Sullivan County's annual average workforce (based on the 2010 estimate of 35,000 workers). As with the direct Casino Project employment, many of the indirect jobs generated by the Project will be filled by study area residents that are currently unemployed; applying the same ratios used for the analysis of direct employment, it is estimated that as many as 85 currently unemployed Sullivan County residents will be employed by indirect job opportunities generated by the Casino Project.

The Casino Project will have positive employment benefits, although far less substantial, outside of Sullivan County within the study area. It is estimated that 467 currently unemployed residents within the study area boundary outside of Sullivan County will be employed due to the Casino Project (392 direct Casino Project employees and 75 jobs generated indirect). In total, approximately 1,981 workers (1,664 Casino Project employees and 317 employees generated indirectly) will reside outside of Sullivan County, but within the study area.

5.10.2.5 Effects of Casino Visitors

The Casino Project is expected to attract up to 6 million visitors per year when it opens. The majority of these visits will represent new trips to the area. The introduction of new visitors into Sullivan County is expected to result in an overall strengthening of the regional economy.

Spending by casino visitors on incidental purchases off-site, such as at restaurants, hotels, motels, and retail establishments, are also expected to represent important economic benefits accruing in the local and regional economies.

Off-site Visitor Spending Patterns. The Casino Project is designed as a destination facility, with self-contained entertainment, dining, and lodging facilities. The casino visitors arriving by bus will be expected to have a different effect on the local and regional economy than will those arriving by private vehicle. Bus visitors will be expected to have a neutral, or indirect effect of the local economy. Since they have less opportunity to explore the local environs or patronize local establishments. Their indirect positive effect results from their on-site spending for food, lodging, and gaming, which ultimately supports casino jobs and expenditures by the Casino Project in the local and regional economies.

The casino visitors dependent upon private automobiles have more mobility to leave the site and explore surrounding communities and patronize area businesses. Sullivan County's tourist industry is active and provides opportunities for casino visitors to experience other venues besides those offered at the Casino Project. Automobile-dependent casino visitors are expected to drive substantial distances to the casino, and an anticipated category of purchases will involve gasoline and oil and other automobile-related products. Although the Casino Project will have an on-site service station that is expected to provide for the needs of many casino motorists, it is likely that that casino visitors will also purchase gasoline and automobile-related products at existing service stations along their travel routes, thereby increasing their annual sales of gas and oil.

Among the casino visitors whose spending will affect local and regional economic activity are the local residents who visit the casino. The Casino Project is expected to provide Sullivan County residents with an alternative leisure and entertainment venue that is expected to offer competition to existing area businesses in the entertainment and leisure sector. This competition will be felt by local businesses when local residents visit the Casino Project instead of visiting the leisure and entertainment venues formerly visited. The business sectors most likely to be affected include restaurants, movie theaters, and other entertainment sector venues. The hospitality industry, including hotels, motels, and bed and breakfast establishments, may also experience the effects of casino hotel competition upon the completion of the Phase II hotel. While this shift in local spending, referred to as the "substitution effect," is expected to result in a slight decrease in business activity among competing businesses, the spending is retained within the overall Sullivan County and regional economy, and this spending continues to support economic activity, such as wages and salaries, purchases, and associated taxes, within the overall local economic sphere. In addition, the spending undertaken by employees and their families newly relocated to the region, and the spending incurred by new residents assuming the existing full- and part-time jobs vacated by new casino employees will represent entirely new consumer spending activity in their communities of residence and the local and regional economy, thereby further offsetting the potential negative effects of the potential consumer spending shifts.

Overall, the effect of casino visitors on the local and regional economy is expected to be positive. Casino visitor spending will be concentrated within the confines of the Casino Project operation,

thereby supporting the foundation of the economic activity generated by the Casino Project's operations. Incidental spending by casino visitors is expected to result in direct economic benefits to local businesses and the businesses along travel routes that serve travelers, such as automobile service sector. Actual visitor spending, and particularly the real potential for increased out-of-casino visitor spending, is expected to stimulate entrepreneurial activities and overall business growth as the local economy adapts to provide attractive compliments and alternatives to the Casino Project's attractions. The potential for negative economic activity resulting from the substitution effect of local spending shifts is expected to be offset by newly generated employee spending, as well as by the adaptation of the local business sectors to attract and capture the spending potential of casino employees and visitors.

5.10.3 No Action Alternative

Under the no action alternative, the Tribe would not improve its economic self-sufficiency so that it can satisfy tribal needs, such as expanding the various services provided by the Tribe, protecting its heritage, diversifying its economy, and purchasing additional useable lands. It also would not have an economically viable alternative for resolving its land claim. Sullivan County and the surrounding area would not receive the economic benefits of the Casino Project. Following a steady trend established decades earlier, population in Sullivan County as a whole would be expected to grow in the future without the Casino Project, although at a lesser degree. Employment in Sullivan County is expected to increase by approximately 4,800 jobs, or about 12.3 percent between 2010 and 2020 based on NYMTC projections. Other projects, such as those identified in Section 6, would contribute to the economy.

The resumption of mining and/or auto salvage operations would have minor socioeconomic impact, providing a very limited amount of jobs and tax revenues.

5.11 Community Services

The Casino Project will create additional demand for community services, including police, fire and emergency services, schools, and health and welfare-related services. The additional demand will mostly be created due to the establishment of new residences within the overall study area, but demands on certain community services will also result from the visitors to the Casino Project.

As discussed in Section 5.10.2, the Casino Project will create approximately 4,907 direct full-time-equivalent (FTE) jobs, and 936 indirect FTE jobs off-site throughout Sullivan County. The employees filling these jobs will be drawn from an extensive commuter region encompassing all of Sullivan and Orange Counties, and portions of Ulster and Delaware Counties, and portions of Wayne and Pike Counties, Pennsylvania. Of these direct and indirect employees, 2,140 will be new residents into the overall study area.

Because the Casino Project is centrally located within Sullivan County, and the majority of the new employees migrating into the region will come into Sullivan communities, the majority of the new demands on community services will be incurred by Sullivan County and the

municipalities in the immediate vicinity of the Casino Project, mainly the Towns of Thompson and Fallsburg, and the Village of Monticello. Of the 2,140 new residents, approximately 1,381 will be expected to settle in Sullivan County communities. The balance of new residents will be spread over the study area, with approximately 475 settling in Orange County, 57 in Delaware County, and 76 in Ulster County. The remaining new residents will be widely spread in communities beyond these counties.

Currently unemployed or under-employed workers who assume direct or indirect Casino Project jobs will increase their consumer spending and saving potential, and, as regards community services, will decrease their reliance on public assistance and health and welfare programs. The new residents assuming casino jobs will bring new consumer spending and saving potential into the region, thereby creating new economic activity and the generation of sales taxes on the purchase of goods and services. In addition, new property tax revenues will be generated by new residential construction, and will be collected by County, municipal, school, and special district taxing authorities.

To mitigate potential impacts resulting from increased demand for services, the Tribe has entered into an Agreement with Sullivan County and the local governments. The Agreement is a binding agreement that provides funding to Sullivan County in the amount of $15 million per year. The County is obligated to allocate this funding to municipal governments in Sullivan County to mitigate impacts to the affected local communities. The New York State legislature has authorized the State to enter into compacts with Indian tribes for gaming in Sullivan County. The Tribe is negotiating a Tribal-State Compact with New York State government to this effect.

Law Enforcement and Social Services. It is anticipated that the State of New York will require the formation of New York State Police Casino Details under the Tribal-State Compact. The Casino Detail will be responsible for conducting the day-to-day police operations needed to maintain public order and public safety, and for enforcing the applicable criminal laws of the State. It is anticipated that the Tribe will fund this Casino Detail through monies provided to the State under the Compact. Along with the Casino Detail, the Tribe will also have on-site security guards to provide additional security services for the project. In addition to maintaining order, the law enforcement and security personnel will also ensure that there are no underage gamblers.

Other law enforcement services needed as a result of the Casino Project, such as those related to policing roads and activities off the casino premises, will be provided by the Sullivan County Sheriff's Department, the local State Police barracks, and the municipal police departments, as needed. Criminal offenders will be prosecuted through the New York State criminal justice system. In the event that a State Police Casino Detail is not required under the Compact, the Tribe anticipates that it will reach a separate agreement on law enforcement jurisdiction and have the Sullivan County Sheriff's Department provide on-site policing.

New York has specific federal statutes conferring limited criminal and civil jurisdiction to the State that are similar to Public Law 280 (the federal statute that grants certain criminal and civil jurisdiction to the states). 25 U.S.C. Sect. 232, "Jurisdiction of New York State over offenses committed on reservations within the State," cedes criminal jurisdiction to New York in cases

where criminal offenses are committed by or to an Indian on Indian Reservations within the State. The Tribe anticipates that State law enforcement will be used for the Casino Project, at least initially.

Traffic-related enforcement services are expected to experience an increased demand due primarily to casino visitors traveling to and from the Casino Project. As noted elsewhere, approximately 75 percent of the visitors will arrive and depart from the site on State Route 17, east of Interchange 107. Traffic and automobile-related infractions, especially speeding, are expected to increase on this roadway, with minor increases on the other area road networks accessing the site. The number of motor vehicle accidents is also expected to increase due to the increased volume of traffic on the roadways, particularly on State Route 17.

The New York State Police will be the primary law enforcement agency responsible for patrolling and servicing any increase in accident and traffic-related enforcement activity on State Route 17, and local police and the Sullivan County Sheriff's Department will be required to answer the increased demands on local and County roadways.

A potential increase in criminal behavior and anti-social behavior is a potential result of the presence of the casino in the study area. The direct relationship between casino gambling and increases in local crime rates, however, has not been definitively established. Research and literature on this matter suggest that further study is needed, but overall, the literature shows that communities with legalized gambling at casinos are as safe as communities without casinos. Data indicate that while there is not a definitive direct link between gambling and crime, pathological gamblers have higher arrest rates than non-pathological gamblers, a group of gamblers representing approximately 1.2 to 1.6 percent of the adult population. A small percentage of casino visitors residing in the local area may exhibit pathological gambling characteristics due to the easy accessibility of the casino to their places or residence or employment. In situations where this occurs, local law enforcement and local social services agencies may experience an increased demand for services.

As the vast majority of the casino visitors will travel to the Casino Project from communities dispersed widely beyond the study area, the potential social and law enforcement effects related to pathological gambling will effectively be diffused throughout a much broader region encompassing the full area from which visitors will be drawn. There is evidence, however, that people who become pathological gamblers also have other behavior disorders that require the attention of local agencies. Consequently, a portion the demands on social and law enforcement agencies attributed to pathological gambling are, in fact, not new demands.

The Tribe and Sullivan County have acknowledged, however, that issues associated with gaming related addiction and pathological gambling behavior may need to be addressed, and anticipate that it will be included in the Tribal-State Compact. However, to the extent that this is not addressed, the Tribe has agreed to enter into a supplemental agreement with local governments to ensure the provision of services relating to the prevention and treatment of gambling addiction in the Agreement with Sullivan County.

Fire Protection and Emergency Medical Services. The proposed Casino Project will use existing fire protection and emergency medical service networks established for the Town of Thompson. Primary fire protection service will be provided by the Rock Hill Fire Station, which is identified as the locally impacted entity in the Tribe's Agreement, and the Village of Monticello Fire Station. Mobile Medic will be the primary provider of emergency medical services, with the Rock Hill and Village of Monticello Ambulance Corps providing back-up services. The project will place a burden on these fire protection and emergency medical service networks due to the increase in the number of new households and visitors to the area. However, the Agreement provides additional resources to local governments for these services to ensure that the service providers are able to handle the anticipated volume of people and the level of activity that is generated by the Casino Project. The parties believe that the fire protection and emergency services will be addressed in the Compact. If they are not, the Tribe expects to enter into separate agreements relating to fire protection and emergency medical services.

In addition, the Tribe has agreed to adopt fire protection and building construction codes that are no less rigorous than the New York State Uniform Building and Fire Prevention Cite in the Agreement. The Tribe will enforce its fire protection and building codes, but independent consultants shall also provide quarterly reports on construction activity and facility conditions to the County.

Schools. As discussed above and summarized in Table 5-44 below, the Casino Project will attract a total of 2,316 new residents (and their families) to school districts in the overall region (1,945 direct employees of the Casino Project, and 371 indirect employees generated by Casino Project operations). Of these, an estimated 2,140 will settle within the study area, with the remaining new residents settling in communities beyond the study area itself. These new residential family units will be expected to increase the overall population of the region by an additional 1,383 children under the age of 18; it is estimated that 1,274 of these children will newly reside within the study area.

Table 5-43 Anticipated School Children and Place of Residence

	Total	Current Residents	New Residents	% New Residents	New Children Under 18 years old
Sullivan County	2,945	1,563	1,381	46.9	812
Orange County	1,178	703	475	40.3	289
Delaware County	155	98	57	36.7	35
Ulster County	171	95	76	44.4	46
Wayne County	330	225	104	31.6	64
Pike County	147	100	47	32.2	29
Total Within Study Area	**4,926**	**2,786**	**2,140**	**43.5**	**1,274**
Outside Study Area	917	742	175	19.1	109
Total	**5,843**	**3,527**	**2,316**	**39.6**	**1,383**

Source: AKRF, Inc. 2010

Among the 1,274 new school-age children in the study area, it is anticipated that 812 of them will live in Sullivan County communities, 289 in Orange County, 35 in Delaware County, 46 in Ulster County, and 92 in the Pennsylvania counties of Wayne and Pike. An estimated 109 children under the age of 18 will come from Casino Project employee families settling in communities outside of the immediate study area.

Among the 812 children under the age of 18 living in Sullivan County, the Monticello and Fallsburg Central School Districts expected to experience the largest enrollment increases due to the project site's approximate location to these districts and the availability of rental and owner-occupied housing opportunities in the towns and village comprising these districts. The school-age children outside these two school districts will be broadly distributed among the remaining eight Sullivan County school districts, and among the school districts in the other counties making up the region in which new residents will settle.

It is assumed that 80 percent of the new children under 18 years old settling in Sullivan County, or 650 children, will attend either the Monticello or the Fallsburg schools, with the remaining 162 children attending schools in the other eight Sullivan districts. Assuming that the distribution of children was 75 percent to the Monticello schools, and 25 percent to the Fallsburg districts, the Casino Project employees will increase the number of students in each of these two districts by 488 and 162 students, respectively.

Table 5-44 Existing Characteristics of Impacted School Districts

	Monticello Central District	Fallsburg Central District
2010-2011 Enrollment	3,439	1,393
2010-2011 Budget	$75,985,992	$35,579,068
Budget per Pupil	$22,095	$25,541
Percent of Cost Covered by Local Property Taxes	54.2%	50.0%
Cost per Pupil from Local Property Taxes	$11,975	$12,770

Sources: 2010-11 Property Tax Report Card Data, Part I - Budget, Levy and Enrollment Claim Year: 2009-2010 (http://www.emsc.nysed.gov/mgtserv/propertytax/201011_property_tax_report_card_budget_levy_and_enrollment.html.html). Accessed September 9, 2010, and Monticello Central and Fallsburg Central School Districts. Note: Enrollment figures are approximate.

As shown in Table 5-44, the Monticello Central School District currently has a total enrollment of approximately 3,439 students in its six schools; the 2010-2011 District budget is $75,985,992, or $11,865 per pupil that must be derived from local property taxes. The addition of 488 students to the Monticello School district will represent an increase in school population of approximately 14 percent, and, without accounting for increased revenues, will increase annual operating costs that must be covered locally by approximately $5.8 million.

The Fallsburg Central School District's three schools have a total enrollment of approximately 1,393, and a 2010-2011 budget of $35,579,068, and costs averaging approximately $12,770 per pupil from local revenue sources. An addition of 162 new students to this district will represent a student body increase of approximately 12 percent, and an additional cost from local revenue sources of approximately $2.1 million. The Monticello School District is specifically identified

as a locally impacted entity and as such is entitled to compensation under the Agreement with Sullivan County. However, the payment to Sullivan County under the Agreement is intended to provide funding to mitigate impacts on other locally impacted entities, including Fallsburg.

In addition, these potential increases in school costs will partially be offset by increased school taxes generated by new households resulting from the Casino Project. As discussed above, the Casino Project will be expected to create approximately 1,381 new household units in Sullivan County, of which 80 percent, or approximately 1,105, will locate within the Fallsburg and Monticello School Districts. Of these, it is estimated that approximately 68 percent, or 750 units, will be home buyers. The average 2008 per-parcel (e.g., equivalent to single-family home) school tax bill for homes within the Fallsburg and Monticello Central School Districts in 2008 was $2,163.[2] Assuming this amount applies to new employees' households, the home buyers will pay an estimated $1.8 million annually to the Monticello Central School District, and approximately $598,000 annually to the Fallsburg Central School District.

This increase in estimated operating costs will, to an extent, be further offset by the excess capacity in the school system. An enrollment study for the Monticello Central School District published in January 2010 found that there is currently significant unused pupil capacity in the district's school buildings, and enrollment estimates suggest that unused capacity will continue to exist into the future for at least the next five years (Seversky 2010).

Recreation and Open Space. No recreation or open space resources exist on the project site, although the Neversink River is used recreationally by boaters and fishermen. A NYSDEC public access site is located adjacent to the southernmost part project site along Edwards Road on the eastern bank of the River, and another NYSDEC access site is located north of the site in Fallsburg, along Route 42. Neither of these sites will be affected by the project. The Casino Project, especially the hotel, will be partially visible to recreational users of the Neversink River in segments of the River north of the State Route 17 crossing. The visibility of the project facilities will be minimized by the Tribe's restoration and revegetation of the open mined areas along the river banks. See also Section 5.13 for a visual impact analysis.

New residents to the study area will increase the demand on local recreational resources, including parks and recreation programs. Further, Casino Project visitors will represent a new market for Sullivan County recreational opportunities and outlets. Pursuant to the Agreement, the Sullivan County Visitor's Association will have space in the proposed facility for materials on recreation opportunities in Sullivan County.

No Action Alternative. Under the No Action Alternative, the site would remain vacant would not place any demands on community services. Resumption of the mining and auto salvage operations would put a very minor demand on community services, such as potentially emergency response.

[2] Average per parcel school tax data from http://www.orps.state.ny.us/cfapps/MuniPro/osc/county/oscAvrtaxlevy.cfm, accessed September 9, 2010.

5.12 Utilities

This section addresses water supply, wastewater treatment and electric, gas, fuel oil, telephone and cable connections. This applies to the tribal lands and utilities connections. This applies only to the roadway improvement area where the utility corridors occur within the roadway improvement area.

5.12.1 Water Supply

Demand Analysis. The cumulative water demand estimated for the Casino Project is provided in Table 5-45 and includes domestic water usage, cooling and heating make-up water requirements.

Table 5-45 Projected Water Demand

	Phase I	Phase II
Average Daily Demand	209,400 gpd	430,000 gpd
Maximum Daily Demand	342,660 gpd	706,000 gpd

A Technical Memorandum entitled, *Derivation of Water Demand and Wastewater Generation* has been prepared and is included as Appendix M. It provides a detailed back-up of the water demand for the proposed project based on historic water usage data from the Mohegan Sun Casino in Uncasville, CT. The Phase 1 Mohegan Sun Casino is virtually identical to the Casino Project in terms of overall size, internal uses and support spaces.

Average daily water demand projections were modeled from actual flow records for the Mohegan Sun Casino. Four years of water use records for the Mohegan Sun facility were evaluated, including the increased usage for their hotel addition. The maximum daily water demand was determined from historic data from the Mohegan Sun facility, which provided both daily and hourly visitation and occupancy data.

Peak hourly water demands and fire flow requirements will be met from an on-site water storage tank. Peak fire flow demand for the casino facility and hotel is estimated to be 1,500 gallons per minute.

Irrigation water for landscape maintenance is not included in the above water demand estimates and is expected to come from on-site wells. Irrigation is estimated at 60,000 gpd during the peak seasonal usage (based on 15 acres of irrigated area at one inch of water per week). Peak usage will generally occur in the months of July and August, with diminished usage during the previous and following two months.

Service Impact. As indicated previously, the Village of Monticello system has an available excess capacity of 900,000 gpd, based on the peak summer demand. Therefore, the proposed project will not exceed the Village's capacity. The Tribe has a Water Services Agreement with the Village and the Town of Thompson to extend the Village water system to supply the water demand for the Casino Project. As part of this agreement, a new production well will be

installed in the existing Village well field to increase the Village's supply to off-set the usage by the Casino Project. The Village will own and be responsible for the permits for the wells.

5.12.2 Wastewater

Generation Analysis. Cumulative wastewater flow rates currently estimated for the Casino Project are shown in Table 5-46.

Table 5-46 Projected Wastewater Flows

	Phase I	Phase II
Average Daily Flow	162,000 gpd	327,000 gpd
Maximum Daily Flow	259,200 gpd	523,200 gpd
Peak Hourly Flow	338 gpm	681 gpm

A Technical Memorandum entitled, *Derivation of Water Demand and Wastewater Generation* has been prepared and is included as Appendix M. It provides a detailed back-up of the wastewater generation for the proposed project based on historic water usage data from the Mohegan Sun Casino in Uncasville, CT. The Phase 1 Mohegan Sun Casino is virtually identical to the Casino Project in terms of overall size, internal uses and support spaces.

Wastewater flow projections were modeled from actual water usage records for the Mohegan Sun Casino. Four years of water use records for the Mohegan Sun facility were evaluated, including flows from their hotel addition.

Average Daily Flow is defined as being the average daily flow for each monthly period, adding the monthly averages and dividing by the number of months involved. For the purposes of collection system design and inflows to the plant, Maximum Daily Flow and Peak Hourly Flow were also estimated. The maximum day flow is the highest flow that will occur in a continuous 24-hour period, typically occurring at the casino on a holiday or peak weekend day. These peak flow values were determined from historic data from the Mohegan Sun facility, which provided both daily and hourly visitation and occupancy data. Based on the projected wastewater flows as summarized in Table 5-46 above, the maximum day wastewater flow is approximately 1.6 times the average flow rate. Additionally, the Peak Hourly Flow has been estimated based on the projected pumping rate of the on-site wastewater pump station and is the maximum flow that will occur during a one hour period (assumed to occur on the maximum day). It should also be noted that that difference between the water demand and wastewater flow estimates for the project is primarily due to the cooling and heating make-up water requirements, which have been included in the water demand estimates.

Service Impact. The Tribe and the Town of Thompson have a Sewer Service Agreement which reserves sufficient capacity in the Kiamesha Lake Sewer Treatment Facility to accommodate the wastewater flows from Phases I and II of the Casino Project and provides for the implementation of the preferred sewer alternative. Because the total project wastewater flow of 327,000 gpd, Average Daily Flow, is considerably less than the available 1.3 million gpd excess capacity in the Thompson wastewater treatment facility, it is not anticipated that this project will impact

other existing or proposed users. The Sewer Service Agreement also recognizes normal fluctuations in flow rate, as described above. The treatment facility has approximately 2 million gallons of storage capacity in the oxidation tanks that serves to equalize the incoming peak flows prior to the main treatment process. The Town will continue to own and be responsible for the state and federal permits for the facility.

5.12.3 Electrical Service

The electrical demand for the Casino Project is expected to be approximately 10.5 MVA. NYSEG officials have indicated that, in order to provide this level of power to the site, they will have to upgrade their transmission substations and lines in the area. These upgraded lines will likely use existing power poles and equipment along the transmission route. A letter from NYSEG documenting their commitment to upgrade the substation and undertake other improvements, as required to meet the electric power demands of the development is provided in Appendix F.

5.12.4 Gas and Fuel Oil

As there is no natural gas service currently available in Sullivan County, it is proposed that oil be used as the fuel for heating, cooling and emergency generators. This will require the on-site storage of approximately 100,000 gallons of fuel oil (based on a two-week delivery schedule). Conversion to natural gas for these utility needs will be an option if and when gas service becomes available. Propane gas is proposed for cooking needs. This will require approximately 30,000 gallons of on-site storage. Proper containment measures will be provided on-site for all gas and oil storage.

In accordance with the requirements of the Emergency Planning and Community Right-to-Know Act (EPCRA), based on the volume of fuel anticipated to be stored at the facility it may be necessary to maintain a material safety data sheet (MSDS). The facility may also be required to report an annual inventory of these chemicals. The reporting would need to be made in accordance with Tier II reporting requirements and procedures. In addition, a Spill Prevention, Control and Countermeasure (SPCC) Plan will need to be prepared to describe the approach to oil spill prevention, preparedness and response to prevent oil discharges to navigable waters and adjoining shorelines.

5.12.5 Telephone and Cable

There are two possible providers for telephone service to the site, Verizon and AT&T. Verizon's current service lines do not have capacity to meet the projected service requirements of the Casino Project, estimated at 2,800 lines for the casino and an additional 1,000 to 1,500 lines for the hotel. New line capacity would have to be added from their central office facilities. The central office locations would need to be upgraded as well to provide this additional capacity.

Verizon could also provide T-1 Internet service to the site. Correspondence from Verizon

documenting their commitment to meet the telephone needs of the development is provided in Appendix F.

AT&T would also need to upgrade their system capacity both at their central office locations and by adding additional line capacity in order to service the projected needs of the project. As part of their system upgrade to service the site, they could also supply T-1 Internet service.

Both telephone and related Internet service will be provided to the site either from new overhead distribution lines or underground cable, which would run in existing roadways. Impacts would, therefore, be negligible.

This area of Sullivan County is being upgraded with digital cable service by Time Warner with the installation of overhead lines on existing utility poles. No special construction measures are anticipated, and associated environmental impacts would be negligible.

5.12.6 Solid Waste

Based on the generation of solid waste at Mohegan Sun Phase I over a six year period, the Casino Project is projected to generate an average 78 tons/week. Recycling is anticipated to make up approximately 20 percent of the waste stream. This will include certain types of paper, cardboard, glass, mixed containers of steel, plastic and aluminum beverage and fluorescent bulbs as per Sullivan County mandatory recycling. All solid waste generated by the Casino Project will be taken to one of Sullivan County's transfer stations (the Highland Transfer Station in Monticello is closest to the project site) and from there it will be trucked out of the County to other landfills for disposal.

5.12.7 Construction Impacts

Construction activities should have no impacts on utilities.

5.12.8 No Action Alternative

In the No Action Alternative, utilities would not need to be upgraded and no new connections would occur. The sewer connection to the Thompsonville area would not be completed and existing systems that are on septic systems would not be able to tie-in. Even if the mining and auto salvage operations resumed, there would be no increased demand for water or sewer.

5.13 Land Use and Community Character

5.13.1 Tribal Lands

With the Casino Project, existing land use will change from reclaimed mining/auto salvage to be a gaming entertainment complex. While the reuse of the project site results in a change in land use, this type of development is supported within the Town of Thompson Master Plan (1999) and

by local and county-wide economic development agencies. The following section discusses land use, lighting, visual, community character impacts and the in place planning tools with which the communities can manage growth.

Land Use. The Phase I development will not impact adjacent land uses directly, although additional traffic will be added. The construction of a multi-story hotel under Phase II may provide some moderate visual impacts given its location within the project. Traffic impacts upon the local residents will be limited since all traffic will be directed into the site within ¼-mile of Interchange 107 off State Route 17.

The goal of the site planning process was to minimize on-site land use impacts and to provide an aesthetic and functional setting for visitors to the Casino Project while preserving and enhancing the natural habitats of the site. Specific efforts to minimize land use impacts included:

- Working with site topography to balance cuts and fills and reduce visual impacts
- Avoiding large wetland and floodplain areas
- Providing a setback from the Neversink River
- Designing the proposed loop road to coincide with existing dirt roads as much as possible
- Providing restoration of existing disturbed areas
- Designing naturalized landscaping near buildings, parking lots and roads (Section 5.3.1)
- Minimizing roadway and building light spillage into neighboring wildlife habitat areas and adjacent properties while maintaining adequate levels of illumination for safety and way finding

Land Use Planning/Growth Management. In regard to potential additional development beyond that which is already proposed to occur, most study area communities have land use policies in place to guide this future growth. As shown in Section 4.13, a review of the land use plans and policies in the town's most likely to sustain casino-related growth pressures (Thompson and Fallsburg, and the Village of Monticello) indicates that these municipalities are equipped to manage growth in a sound, and a generally environmentally-conscious manner, and to discourage growth patterns and suburban sprawl-type development. These municipalities have adopted zoning ordinances and comprehensive plans that provide tools to preserve their rural and touristic character. The Town of Thompson and the Village of Monticello prepared a joint comprehensive plan in 1999, and the Town of Fallsburg adopted a comprehensive plan in 2006.

Although these communities may absorb a moderate portion of population influx due to the Casino Project, each municipality has developed a set of clear and deliberate public policy documents that will direct growth in an environmentally sound and orderly manner. These

documents do not intend to inhibit economic growth, but have implemented mechanisms to control growth and develop in a manner consistent with objectives of the community.

Lighting. Outdoor lighting for the project will be designed to facilitate the movement of pedestrians and vehicles, providing a safe and legible environment for nighttime use of the proposed casino while minimizing impacts on adjacent land uses. An integrated approach to the illumination of roadways, parking facilities, buildings, signage and landscape features will promote security and assist in wayfinding. Fixtures will be chosen to reduce glare and light spill. Cut-off fixtures will be used to direct light away from the property boundary, and lights will be tightly focused using shields to eliminate glare. Filters will be installed to disperse light evenly. These measures are an integral part of the site design and will be incorporated in the construction plans and specifications.

Residences located along County Highway 161, Old County Road, Foss Road, and on the east side of the Neversink River are potentially sensitive light receptor areas. Topography will help to minimize lighting impacts from the casino to the residential areas to the south and west of the proposed development. The Casino Project is located approximately 100-130 feet below the level of the residences along County Highway 161, Old County Road and Foss Road. In addition, the area between the Casino Project and the nearby residences along the roadways is vegetated. The vegetation on the slope areas consists of both deciduous and evergreen trees, including hemlock and white pine, providing screening throughout the year.

Residences located south of the main entrance have the potential to be impacted by lighting associated with the main entrance and, to the east, by roadway and service station lighting. Impacts will be minimized with a combination of light fixture cut-offs and evergreen screening. The same combination of fixture selection and evergreen screening, in addition to the natural screening provided by the buffer strip between the Casino Project and the River will be used on the slope east of the Casino Project to lessen the lighting impact to residences located along the Neversink River. In addition, the parking structure adjacent to the casino facility will be studied to determine the extent that architectural screens or baffles can contribute to controlling light impacts.

With these measures, impacts to land use have been minimized and mitigated.

Visual. In order to determine potential visual impacts, AKRF, Inc. performed a visual impact analysis. This is provided as Appendix N. The analysis was conducted for a three mile radius following NYSDEC criteria. Due to the topography of the area, degree of vegetation, and the fact that the casino and hotel will be constructed in a depression, it was determined that there will be no significant adverse visual impacts to the three mile study area. Primary views of the casino and hotel will be from the Neversink River and a small segment of Edwards Road. Views from adjacent roadways, such as State Route 17, River Road, Fred Road, Marsh Road, County Highway 161 and Patio Drive will be limited.

Community Character. Community character is defined by its built environment, the area's natural features and open space, the types of housing, architectural styles, and local public

facilities that serve the residents and visitors. The development of the proposed casino and hotel on the site of a former mining and junkyard will pose some moderate impacts upon the local community character primarily from an aesthetic and traffic standpoint. Local residents will have to contend with increased traffic to this site, which will be mitigated through a series of traffic improvements in the vicinity of the State Route 17 interchange and along County Highway 161 to the site entrance. Pedestrian movements will be improved as well to make it safer and more desirable for the local residents to enjoy their neighborhood without vehicular conflicts. Most specifically, Old County Highway will become a cul-de-sac and will not be subject to casino traffic. This will help to ensure that the summer visitors to the bungalow colony and the local residents can continue to easily and safely use the road for pedestrian and residential traffic.

A segment of the rural population prefers their current slow-paced rural lifestyle. Their DEIS comment letters indicate that they believe that the current conditions in the community promote the family values that they cherish. They believe that regional growth, additional traffic, gamblers in their communities, and casino employees will create an undesirable community character impact. While some portions of the community believe that casinos will damage community character, others in the community anticipate casinos, believing that they may benefit economically.

The Casino Project is consistent with Sullivan County's past, as well as continued interest, of being a tourist destination. The Tribe has even agreed that the local tourism association could have space to display information in the casino facility. As noted in the joint Comprehensive Plan for the Village of Thompson/Town of Monticello, supporting the resort and tourist industries was considered vital to improving the economic viability and quality of life in this area.

The Casino Project will also create positive change to the image of the immediate neighborhood in the Town of Thompson by eliminating a physical eyesore and promoting economic revitalization. The influx of new jobs and economic resources will serve to enhance the image of this area that will create positive returns for the area through a reinvigorated economy.

As noted in the joint Comprehensive Plan for the Village of Thompson/Town of Monticello, supporting the resort and tourist industries was considered vital to improving the economic viability and quality of life in this area.

5.13.2 Public Roadway Improvements

The public roadway improvement area is already a transportation corridor and, as such, land use will not be greatly altered. Proposed work will occur within existing rights-of-way, with the exception of the extension of Foss Road which will cross the Cooke East parcel.

5.13.3 Utilities Connections

Both the water supply and wastewater treatment connections will be installed underground and will have no land use impacts. The proposed sewer pump station in the Thompsonville area has not been located by the Town to date. However, it will generally consist of a 15 by 25 foot building with access and parking for one maintenance truck. The site will be fenced and landscaped.

5.13.4 Construction Impact

Construction land use impacts will be minimized by establishing narrow work area limits in the field. As indicated in Section 5.3, areas that are temporarily disturbed during construction will be re-established.

5.13.5 No Action Alternative

Under the No Action Alternative, land uses would continue in their current trend. Expansion of the mining operation was anticipated; however, at this time, that land use is largely screened from abutting uses. Community character, as it is today, would continue to be affected by general growth and development.

If mining and auto salvage operations were resumed, those uses would be largely screened from abutting uses, as had occurred in the past. Cooke East and West and Rossini would remain unchanged in this scenario.

5.14 Pollution Prevention and Sustainable Design

There are a number of sustainable design (such as energy and resource conservation) opportunities that will be considered for the construction and operation of the Casino Project buildings. In addition to the incorporation of water and energy conservation measures that are mandated by local, state and federal regulations, the following additional design and operational features are under review and will be part of the final design. Additional measures are outlined in Section 5.15.

5.14.1 Mechanical Systems

Use of Displacement Ventilation. With the large high-volume spaces proposed, there is an opportunity to establish a vertical displacement, or under floor air delivery (UFAD) system approach whereby air is supplied at the floor level and returned at the ceiling. Displacement ventilation and UFAD systems typically consume less energy than conventional overhead distribution systems. They also provide improved air quality in the occupied zone, which is especially pertinent in areas where smoking is allowed.

Use of Demand Controlled Ventilation. Casinos typically overcome air contamination, primarily attributable to smoking, by providing very high fixed outside air rates to dilute the contaminants. These outside air rates are determined based upon the assumed peak occupancy of the facility, as occupancy rates drive the contaminant levels and the need for dilution and ventilation. Demand controlled ventilation takes advantage of the great diversity actually experienced in occupancy over the course of a day, and between high and low activity seasons, by actively controlling the quantity of outside air being conditioned based upon measured indoor air quality (which effectively tracks occupancy). This measurement feedback control ensures proper indoor air quality is maintained while greatly reducing total energy consumption.

Maximizing High Temperature Differentials. By maximizing system temperature differentials, the quantities being distributed (air, chilled water, hot water, etc.) can be reduced. Given the great horizontal distribution distances typically found in casinos, reducing systems quantities significantly reduces energy consumption as well as initial capital costs.

Motors and Motor Controls. Due to the continuous operation of the casino, maximizing motor functions can be very efficient and cost effective. Therefore, all motors in continuously operated systems shall be in the "premium efficiency" category. In addition, variable speed drives on all major HVAC pumps and fans can minimize distribution energy consumption in proportion to the actual cooling and heating requirements. Finally, ECM motors on HVAC terminal units and cabinet fans allow for soft, noiseless starts and operation at optimal flow levels to reduce energy consumption.

Commissioning. Commissioning insures construction compliance with design intent ultimately saving energy by ensuring the systems function and control properly.

5.14.2 Electrical Systems

Cogeneration. Depending on the actual electric and gas utility tariffs, cogeneration can be an extremely efficient and effective means of providing some of the electric and thermal energy for the Casino Project, as indicated in Section 5.8.3. Alternative sizing scenarios to be studied include sizing the cogeneration plant based upon the continuous thermal load such as hotel domestic hot water; sizing the cogeneration plant to satisfy the steady state base electric load of the facility and configure the plant so full utilization is achieved for a 24 hour, 7 day a week operation; and sizing the cogeneration plant to limit the peaking electric load thereby maximizing electric purchasing power with close to 100 percent demand utilization.

Use of Occupancy Sensors. There are many back-of-house areas that can have their lighting controlled by occupancy sensors, including administrative offices, utility rooms, stairwells, etc.

Use of Daylight Responsive Lighting Controls. Windows will be incorporated into the design to maximize natural lighting. There are many administrative areas, and potentially hotel areas, that can be designed to maximize natural daylight. Daylight responsive lighting controls reduce peak electrical demand, peak cooling requirements, electrical consumption and enhance lamp life.

Use of LED Exit Lights. LED exit lights reduce energy consumption. They can be used throughout the facility.

5.14.3 Water Recovery and Conservation

For public restrooms, waterless urinals and infra-red automatic faucets on lavatories can significantly reduce water consumption and effluent outflow. At a minimum, state of the art, low flow fixtures will be utilized.

5.14.4 Architectural Design of Building Envelope

Design considerations will consider use of selective low-e coatings to reduce solar heat gain while maintaining light transmission and use of highly thermal broken frames to reduce both heat loss and solar heat gain across the envelope.

5.14.5 Landscape

As indicated in Section 5.3.1.1, the landscape plan will focus on design, construction and installation, with recommendations for regular and comprehensive maintenance. The maintenance plan will propose a preventative approach to pest management. By identifying local conditions that foster disease, weeds and pests, the landscape can be designed and maintained to reduce problems. An Integrated Pest Management approach that emphasizes prevention techniques, monitoring methods and biological controls as alternatives to regular pesticide and herbicide application is recommended. If required, herbicides, fungicides and pesticides will be chosen for effectiveness while minimizing adverse and toxic impacts to people and the environment. All material storage and application will comply with Occupational Safety and Health Administration Material Safety Data Sheet requirements for each product.

5.14.6 Construction

Pollution prevention considerations for construction operations have already been discussed for limitation of work area (Section 5.1.1), erosion and sedimentation control (Section 5.1.2) and implementation of the SWPPP (Section 5.1.2 and Appendix K).

5.14.7 Recycling

Recycling of materials such as paper, cardboard, plastic and glass will be provided for. Specific space will be designated for recycling operations, including storage, sorting and processing.

5.14.8 No Action Alternative

In the No Action Alternative, there would be no need for pollution prevention or sustainable design efforts. Should the mining and auto salvage operations resume, they would need to comply with any applicable regulations with regard to pollution prevention, in particular control of sediment and of potential releases.

5.15 Greenhouse Gas Emissions Analysis

Tech Environmental, Inc. prepared a greenhouse gas (GHG) emissions analysis for the Casino Project consistent with the NYSDEC Policy "Guide for Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements," July 15, 2009 (the "Policy"). Although the Policy does not apply to this Casino Project, it does provide guidance in performing an assessment of GHG emissions for activities such as the Casino Project. The Policy recommends a project to quantify its carbon dioxide (CO_2) emissions and to review and assess mitigation measures that reduce such emissions. In addition, the Policy suggests the project proponent quantify the effect of proposed mitigation in terms of emissions reduction and energy savings.

The energy modeling for the Project reflects the New York State Energy Code (the "Code") in effect at the time of the filing of this FEIS, namely the ASHRAE Standard 90.1-2004, adopted by New York on April 9, 2008. This GHG analysis conforms to the NYSDEC Policy. A comparable assessment was not conducted for the DEIS, as assessments of GHG emissions were not generally conducted in environmental impact statements, including those under NEPA, at that time. Further, the draft Council on Environmental Quality Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions (February 2010) suggests that an assessment of GHG emissions may only be warranted when a project will have direct GHG emissions of at least 25,000 metric tons of CO_2-equivalent GHG emissions. Although total project direct emissions (with mitigation) are less than 25,000 metric tons, which is below the Guidance suggested threshold for an assessment, this GHG assessment has been included for informational purposes.

The Policy identifies five potential sources of GHG emissions that could be considered: direct emissions from on-site stationary sources and fleet vehicles owned by the Casino Project, indirect emissions from energy generated off-site (electricity) and traffic generated by the Casino Project, and indirect emissions from the Casino Project's solid waste generation and disposal. This assessment addresses each of the sources.

CO_2 emissions were quantified for: (1) the Base Case corresponding to the New York State Code, and (2) the Preferred Alternative, which includes all energy saving measures. Building energy saving measures include high-efficiency boilers, chillers and HVAC units; Demand Control Ventilation (DCV) controls for the Main Facility; building envelope insulation that exceeds Code; lighting efficiency better than Code; high-efficiency refrigeration systems, low-energy design electronic gaming machines (EGMs); and a central energy management system. Solid waste energy mitigation consists of recycling cardboard and consumer beverage containers.

Transportation energy mitigation is arranging direct bus service to the Casino Project on a regular basis from urban areas.

This GHG analysis uses the eQUEST energy design software (version 3.63), which incorporates the U.S. Department of Energy's DOE-2 building energy use model, along with CO_2 emission rates of 22.4 lb/gallon distillate oil1, 120.6 lb/103 cubic feet (Mcf) of natural gas and 671.5 lb/MWhr of electricity. eQUEST assumes that all heating fuel is natural gas; however, no natural gas pipeline is available in the Casino Project region, and thus the Project will be using distillate oil for heating. The GHG analysis therefore converted the eQUEST natural gas usage to an equivalent amount of distillate oil (on a heating basis) to calculate CO2 emissions. CO_2 emissions produced by project motor vehicle trips were analyzed using the USEPA MOBILE6.2 emissions factor of 550.4 grams/mile for the vehicle population. Further details of the GHG study methodology are given in Appendix T.

Table 5-47 summarizes the Casino Project's GHG emissions for the Base Case (a building that complies with the New York State Energy Code) and for the Preferred Alternative (which includes all energy saving measures). The Preferred Alternative will reduce total CO_2 emissions by 22.9% as compared to the Base Case. Figure 5-19 illustrates the GHG emission components that comprise the total and the reductions achieved through mitigation measures in each component. These mitigation measures include a number of sustainability components, including both site design measures and building design and operation measures. The site design measures include:

- Minimizing building footprint and conserving natural areas through the use of multi-story buildings and multi-level parking structures, with the preservation of a natural buffer area along the Neversink River

- Providing access to public transportation through arrangements with private bus companies to provide direct service to the Casino Project on a regular basis from urban areas

- Designing water efficient landscaping, using drought-resistant and native plants, to minimize water usage

- Minimizing energy use through building orientation, by having glass windows and doors at the casino entrance facing south and the major side of the hotel facing south and west

- Implementing stormwater design BMPs, including groundwater infiltration basins (to reduce runoff and recharge groundwater) and stormwater treatment to prevent water quality impacts

The building design and operation measures include:

- Energy Management Systems – All buildings will utilize a highly efficient energy management system (EMS) to constantly monitor and control energy use, to minimize the use of heat, cooling, and lighting

- High-Efficiency Chillers and HVAC Units – All buildings but the warehouse will have rooftop chillers or HVAC units to provide air-conditioning that will have energy efficiency 10% better than Code and be Energy-STAR rated

- Demand Control Ventilation (DCV) – These controls for heating and cooling will be used in the Main Facility building to match outside air flow into the system to the occupancy of the facility, which saves energy by controlling the quantity of outside air being conditioned as a function of measured indoor air quality (which effectively tracks occupancy)

- Energy Efficient Windows and Building Envelope -- Buildings will increase roof insulation to R-20 (better than NYS Code), will increase wall insulation to R-20 (better than Code), and will reduce the window heat-transfer U-value to U=0.33 (better than NYS Code) using double-pane low-e glass

- Install Energy Efficient Interior Lighting – With the exception of the casino floor, which has specialty lighting, building lighting plans will be designed with a Light Power Density (LPD) 10% below Code. LED lights will be used for exit signs

- High-Efficiency Refrigeration System – The Project's walk-in freezers, refrigerators and other food-refrigeration equipment will achieve an approximately 10% energy reduction through the use of equipment with high-efficiency fan motors, high-efficiency compressors and anti-sweat heater controls

Other pollution prevention and sustainable design elements are discussed in Section 5.14.

Table 5-47 Greenhouse Gas (CO_2) Emissions Summary Casino Project (Tons/Year)

Source	Base Case	Preferred Alternative	Percent Reduction in GHG Emissions
Direct Stationary Source Emissions	7,297.0	1,764.9	75.8%
Indirect Stationary Source Emissions	21,365.9	19,153.3	10.4%
Subtotal Stationary Source Emissions	28,662.8	20,918.3	27.0%
Transportation Emissions (Direct and Indirect)	20,496.0	16,624.0	18.9%

Source	Base Case	Preferred Alternative	Percent Reduction in GHG Emissions
Solid Waste Management Emissions	1,569.0	1,569.0	0%*
Total CO_2 Emissions	50,727.8	39,111.3	22.9%

* Recycling is mandatory in Sullivan County and is thus included in both the Base Case and Preferred Alternative.

No Action Alternative. Under the No Action Alternative, there would be no emission of greenhouse gases. Should the mining and auto salvage operations resume, there would be very minor emissions of greenhouse gas emission from the limited amount of equipment that would be used on the site.

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6.0 Cumulative Impacts

Pursuant to the regulations under NEPA, cumulative impacts refer to environmental impacts which occur "from incremental impact of the action when added to other past, present and reasonably foreseeable future actions" (40 CFR 1508.7). Section 5.0 considered the cumulative impacts of both Phase I and Phase II of the Casino Project on the environment. These phases represent the foreseeable future actions at the site. To ensure that all cumulative impacts have been evaluated, this Environmental Impact Statement also looks at the potential cumulative impacts of the Casino Project when considered in conjunction with other proposed and assumed projects in the area that may be constructed after the full build year.

As with the preceding sections, Section 6.0 of the FEIS was updated to address changes in conditions or circumstances, new information and/or changes in law or regulations. Similar to the review of the affected environment and environmental consequences, this section considers the three main project components (the work on tribal lands, roadway improvements and utility corridors). Most importantly for this section, it includes a review and update of other potential projects in the area as of 2018. Reviews were conducted of available federal, state and local records and relevant parties were contacted for updates as appropriate.

This list of other projects is very comprehensive in order to capture as much proposed and likely projects as possible. While it contains some modifications, the major potential projects remain similar to the DEIS, with the exception of the Rock Hill Town Center project. In addition, although there is no third proposed casino that is actually proposed (unlike the circumstances at the time of the DEIS), the FEIS nonetheless conservatively assumes one (denominated as Assumed Casino #3) at an unspecified location west of the Casino Project. The location is also conservative, as it means that traffic going to that casino will need to pass by Interchange 107 from the east, thus maximizing the potential cumulative traffic and related impacts.

The timing of the projects is considered in relation to the updated full build year of 2018; this is a very conservative (and unrealistic) assumption, particularly in regard to traffic and related impacts, because several of the major projects – in particular the Concord Resort and master plan and the Rock Hill Town Center Phase II – are long-term phased projects that are not proposed to be constructed and operational until well after 2018. For example, Phase II of the Rock Hill Town Center project, even if built according to its current schedule, will not be completed until between 2025 and 2030. In addition, the cumulative traffic assessment does not incorporate any mitigation measures that might be implemented by the other projects to address traffic impacts of those projects, and does not account for NYSDOT's planned improvements on State Route 17 that will transform this roadway into a federal interstate highway with increased capacity.

In addition to the projects listed on Figure 6-1 that are included in the 2018 Build Year case, five other projects are considered for this cumulative impact analysis:

- **Concord Resort.** Early stages of this project (Concord Hotel and Casino), including the 500 room hotel and casino, are included as part of the 2018 No-Build and 2018 Build scenarios in Section 5.0. The Concord Resort master plan, which could include as much

as almost 3,000 residential homes and over 600,000 sf of retail (Concord Associates, 2008), is included as a potential cumulative impact. Although the details of the Concord Resort do not appear to be fixed, and the development appears somewhat uncertain based on news reports (ie, the prior Master Plan has been withdrawn and a new firm retained to create a new Plan), these elements are included here in order to provide a conservative analysis.

- **Rock Hill Town Center**. Phase I of this largely residential proposal is assumed to be completed by 2018 and is considered in the 2018 No-Build and 2018 Build scenarios. However, the last phases of this project are not expected to be completed until 2025 to 2030. Phase I is proposed to include 540 residential units and 60,000 sf commercial space. Phase II will add approximately 1,133 residential units.

- **Assumed Casino #3**. New York law authorizes up to three Indian casinos in Sullivan or Ulster County. While there are currently no active proposals for such casinos, other than the Casino Project, the BIA has determined that the EIS should consider two additional casinos in the project area. When the DEIS was prepared there were two other active casino proposals in the vicinity of the Casino Project. The prior study included the Mohawk Mountain Resort and Casino as part of the background development projects for the No-Build scenario. This project was to be located north of State Route 17 Interchange 105 (west of the Stockbridge-Munsee casino site). The project consisted of a 165,000 square feet casino and 750-room hotel. The DEIS assumed construction of the Cayuga Casino as part of the Cumulative Build scenario. This project was to be located at the Monticello Raceway (also west of the Stockbridge-Munsee site). It included a 160,000 square feet casino. Neither of these projects is active. As the Concord Hotel and Casino is an active proposal that includes a casino, it has been used for one of the potential casinos (i.e., Assumed Casino #2). The Concord Hotel and Casino is included as part of the 2018 No-Build and 2018 Build scenarios, and thus also is included in the Cumulative Build scenario. The cumulative impact analysis also assumes another potential casino (Assumed Casino #3) that is comparably sized to the past proposals that will be constructed at a yet to be determined site west of the Casino Project. This approach is similar to that employed in the DEIS

- **NYSDOT Neversink River Bridge Replacement**. NYSDOT is advancing plans for the replacement of the existing State Route 17 bridge over the Neversink River. This is located directly south of the Casino Project and, as such, is considered as a project that could have cumulative impacts.

- **NYSDOT Interchange 107 Improvements**. NYSDOT is also advancing plans to improve Interchange 107, as described in Section 5.7. This project is also located directly south of the Casino Project and, as such, is considered as a project that could have cumulative impacts.

It should be noted that the traffic, air quality and noise analyses in Section 5.7, 5.8 and 5.9 assumed that the projects shown on Figure 6-1 will be constructed prior to 2018 and are included

as part of the future 2018 Build and No-Build cases. As such, Sections 6.7, 6.8 and 6.9 only consider the further impacts of the projects listed above.

Changes from the cumulative impacts reported in the DEIS are summarized below. Overall, although the identity of the proposed and assumed projects considered in this section have changed since the DEIS, the cumulative impacts are comparable to those reported in the DEIS.

The only proposed projects in the site vicinity that could affect topography and soil, groundwater and surface water, fish and wildlife, and vegetation and wetlands are the NYSDOT bridge replacement project and the Interchange 107 improvement project. Because NYSDOT will need to comply with applicable stormwater management and wetland avoidance, minimization and mitigation requirements, no cumulatively significant effects on these resources will occur. There will be no cumulative effect with regard to hazardous materials, as there is no known contamination in the vicinity of the site or the reported petroleum spill on the water main route. There will be no cumulative impacts on historical and archaeological resources, as those are site specific resources.

The cumulative traffic analysis was based on the 2010 traffic counts, other updated information regarding roadway conditions, the expected roadway improvements described in Section 5.0, the current list of other proposed projects in the study area and the conservative assumptions employed in Section 5.0 as well as those noted above. Under the operating LOS analysis at the relevant intersections: (a) during the Friday peak PM hour, LOSs will range from C to E, as opposed to B to D in the DEIS, with a single LOS E at the County Highway 161/ State Route 17 westbound off-ramp; (b) during the Saturday peak PM hour, LOSs will range from B to D, as opposed to B to E in the DEIS; (c) during the Sunday peak PM hour, LOSs will range from C to E, as opposed to B to C in the DEIS. Regional traffic impacts will also be comparable to those reported in the DEIS, as the aggregate effect of three casinos, the Concord Resort master plan and Rock Hill Town Center projects will increase congestion on State Route 17 during summer peak weekend hours in the vicinity of Interchange 107. The single LOS F is projected for the State Route 17 eastbound on-ramp on some Sunday evenings during the summer. However, as noted above, the conditions reflected in this assessment are not likely to occur, and one if not more of the projects considered in this evaluation, if developed, will not be fully operational for at least a decade after 2018 date of analysis. Under a sensitivity analysis, which removed Assumed Casino #3 (because there is no proposal for such a development) and reassigned traffic accordingly, this single LOS F would improve to LOS E. Thus, to the extent traffic conditions deteriorate on State Route 17 in the vicinity of Interchange 107 after 2018, there is ample time for the planned NYSDOT Route 17 improvements to ameliorate those conditions.

The cumulative air quality microscale and mesoscale analyses reflect current traffic volumes, current ambient air quality data and changes to the National Ambient Air Quality Standards (NAAQS). The updated analyses, similar to those in the DEIS, show that the Casino Project, along with those other projects and Assumed Casino #3, will not cause any NAAQS exceedances, even at the site where emissions will be most concentrated. The mesoscale analysis, which estimated cumulative effects on Orange County, shows, similar to the DEIS, that emissions will have an insignificant (one percent or less) increase in total VOC and NO_x emissions.

The noise analysis will not change from the DEIS. Only the two NYSDOT improvement projects could have a cumulative effect on noise with the Casino Project, and those cumulative impacts, if they occurred, will be from construction and will thus be temporary.

The cumulative impacts of socioeconomics impacts, after being updated to reflect current conditions in the region and the Casino Project, the Assumed Casino #3, the Concord Resort master plan (which for these purposes includes the Concord Hotel and Casino) and the full Rock Hill Town Center project, reflect similar results as reported in the DEIS. These proposed and potential projects will generate increased employment opportunities and revenues for the region. Project-generated housing demand should not result in significant adverse socioeconomic impacts, particularly as the components of the proposed Concord Resort master plan and Rock Hill Town Center Phase II projects will add substantial number of housing units that will, in part, help meet the demand created by the Casino Project, the Concord Hotel and Casino project and the Assumed Casino #3. The long time frame for these projects allows ample time for municipalities to manage and control such new development in an environmentally sound and orderly manner, and thus limit any potential indirect cumulative impacts. The cumulative impact on schools is not expected to be significant, as increased tax revenues from the projects considered in this assessment, excess capacity, the Agreement with Sullivan County for the Casino Project and similar agreements by other projects, and school districts' ability for long-term planning to address increased enrollment will all mitigate the impacts of increased costs. Potential impacts on other community services will be mitigated through similar means.

Similar to the DEIS, no significantly cumulative impacts on utilities are expected. The principal new projects – the Concord Resort master plan and Rock Hill Town Center plan to supply their own water and will not affect the Village of Monticello system, from which the Casino Project will draw. The Town of Thompson's Kiamesha Wastewater Treatment Facility has permitted excess capacity of approximately 1.3 mgd, which could accommodate the Casino Project and the Concord Resort master plan (including the Concord Hotel and Casino), and other proposed developments (except Rock Hill Town Center, which has proposed to utilize a private sewer treatment plant) within the current sewer service area.

The cumulative impacts on land use and community character impacts remain similar to those described in the DEIS, particularly in light of the ability of municipalities to control growth and development under land use and zoning. Finally, the cumulative effects from the Casino Project's GHGs are not significant.

Five Casino Analysis. Many comments received by the BIA on the DEIS, including comments from Region 2 of the Environmental Protection Agency and the then New York Governor's Office, requested a five-casino impact analysis for Sullivan County. These requests noted that the State of New York was at that time in the process of negotiating the settlement of land claims with five Indian tribes, and that the Governor of the State of New York intended to introduce or had introduced legislation that would allow for the development of up to five Indian casinos in the vicinity of Sullivan County. The BIA Eastern Regional Office's initial response to these requests, upon suggestion by Region 2 of the Environmental Protection Agency, was that it would include a narrative in the Final version of this EIS that would generally address the environmental impacts reasonably assumed to result from the construction and operation of five

casinos, but that the narrative would not include any quantitative analysis of the assumed impacts. However, the BIA has since determined that including a non-quantitative analysis in a FEIS to address environmental impacts that may result from speculative future actions would be improper under NEPA.

As mentioned above, NEPA requires that environmental impacts from reasonably foreseeable future actions be analyzed in an EIS, alongside those environmental impacts that are directly attributable to a proposed action. Importantly, future actions that are not "reasonably foreseeable" are excluded from review in an EIS. Generally, future actions are not "reasonably foreseeable" when the probability that the action will occur is remote or highly speculative. *See, e.g., Kleppe v. Sierra Club*, 427 U.S. 390 (1976) (agency was not required to conduct an environmental analysis on coal extraction activities under NEPA in a particular region when the agency had not proposed any major federal action with respect to that region; had the agency developed a regional plan for coal extraction activities, the plan "would define fairly precisely the scope and limits of the proposed development of the region," and would be subject to analysis under NEPA); *Hart and Miller Islands Area Envt'l. Group, Inc. v. U.S. Army Corps of Engineers*, 505 F. Supp 732, 752-757 (D. Md. 1980) (holding that the "cumulative impacts" component of an EIS need not address "actions that are merely contemplated"). This limiting principle exists for practical reasons; if administrative agencies were required to analyze all potential future actions in their environmental analyses, the bounds of such analyses would be endless, and it would become impossible to analyze the environmental consequences of, and the alternatives to, proposed agency actions.

Despite the comments requesting a five casino impact analysis for Sullivan County included in this FEIS, the BIA has concluded that the future development and operation of five Indian casinos in this region is not reasonably foreseeable at this time, and as such it need not be discussed in this document. BIA has concluded that, while a number of Indian tribes have filed land claims for former Indian lands in New York, and several of these tribes have reportedly had their land claim settlement proposals linked to the future development of Indian casinos in Sullivan County, these settlement proposals do not independently make the development of additional Indian casinos "reasonably foreseeable" for purposes of analysis under NEPA.

In 2001, the State of New York passed a law approving up to three Indian casinos in Sullivan and Ulster Counties (Laws of New York, 2001 Chapter 383, Part B). No specific tribes were identified as being authorized to develop casinos under this law. While settlement agreements were executed with five tribes, including the Stockbridge-Munsee Community, in 2004, such agreements have since lapsed. Furthermore, legislation introduced in early 2005 by the then Governor to authorize a total of five Indian casinos in the region was withdrawn later that same year. The Casino Project is the only such proposed Indian casino that currently has an application to have land taken into trust before the BIA.

For these reasons, the BIA has determined that the development of only three casinos is plausible at this time. While existing tribal land claims in New York may still make the development of five Indian casinos possible, the lack of specific, definitive information on the location and size of any additional Indian casinos, the lack of State support for the development of more than three Indian casinos, and court decisions affecting the resolution of Indian land claim settlements in

the State of New York make the development of any additional Indian casinos beyond the three already authorized by state law far from reasonably foreseeable. Accordingly, this FEIS does not analyze the environmental impacts of the development and operation of five casinos in the Sullivan County area. The inclusion of three casinos in the FEIS cumulative impact assessment is itself quite conservative, as there is only one active pending casino proposal in the region (the Stockbridge-Munsee proposal). It is noted that the proposed Concord Hotel and Casino and Assumed Casino #3, which along with the Casino Project, comprise the three casinos analyzed in the FEIS, could ultimately be Indian, or Indian associated, casinos.

6.1 Geology, Topography and Soils

Impacts to geology, topography and soils are very site specific and generally would not be cumulative with other projects. The possibility of transport of sediment during construction off of one site could, however, be cumulative with the impacts from sediment of another site if there was a shared waterbody. There are no other proposed development projects that may also discharge directly to the Neversink River with the exception of the two NYSDOT projects. The Casino Project and the NYSDOT projects will provide measures to control and monitor runoff from the construction site, as described in detail in Section 5.1, and in accordance with applicable state and federal regulations. As such, the projects would not be expected to have a significant cumulative impact on water quality through sedimentation.

6.2 Groundwater and Surface Water

Groundwater quality impacts of the Casino Project would be potentially cumulative with another project if they were within the same recharge or aquifer area. The two NYSDOT improvement projects, Rock Hill Town Center and the Goodstein Office Building are the only projects potentially close enough that they could have cumulative impacts on the region with the Casino Project. The Rock Hill Town Center and Goodsetin Office Building projects are located on the opposite side of the Neversink River. Based on available information (USGS, 1961; Advanced Testing Company 1997 and 2000; GZA, 2001), the Neversink River in the area of the project is a regional groundwater discharge point. Therefore, the portions of the aquifers on either side of the river are hydrologically separate from each other and cumulative impacts would not occur from projects on opposite sides of the river, relative to either groundwater withdrawals or groundwater quality. The two NYSDOT projects will occur in areas that are already predominantly paved, and will provide stormwater management in compliance with state and federal regulations (previously described in Section 5.1 and 5.2). Additionally, none of the projects are in the same mapped unconfined aquifer as the Casino Project. There would, therefore, be no potential cumulative impacts to groundwater quality on a regional or temporal basis. The cumulative impacts related to groundwater supply issues are discussed in Section 6.12.

Surface water impacts would, similarly, be cumulative only with other projects in the same immediate watershed. Of the major projects, this Casino Project and the NYSDOT State Route 17 improvements are the only projects that discharge directly to the Neversink River. The State Route 17 improvements at Interchange 107 and the new bridge over the Neversink River are considered with this Casino Project, so potential cumulative impacts have been addressed in Section 5.0. NYSDOT is currently finalizing plans for the bridge replacement, and these plans

incorporate stormwater management features that comply with applicable state and federal regulations. The other State Route 17 improvements within the Neversink River watershed are more remote, and also include only minor changes to impervious area. In fact, the closing of Interchange 108 will actually decrease impervious area to a minor amount. As such, these improvements will have negligible impact on surface water quality. These improvements will also need to comply with state and federal regulations governing control of stormwater runoff. As such, the Casino Project and the NYSDOT plans should not result in regional cumulative impacts to the Neversink River.

While the Concord Resort is within the Neversink River watershed, it is over three miles distant. Because of this distance and the federal, state and local requirements with which that project must comply in regards to stormwater management, it should not result in a regional cumulative impact to the Neversink River.

Potential cumulative impacts on the Neversink River from stormwater during construction were discussed in Section 6.1.

6.3 Vegetation and Wetlands

Similar to impacts to geology and topography, vegetation impacts are generally localized. Exceptions to this would be if two projects impact a unique vegetation area; separately the impacts may be insignificant, but cumulatively the impacts may become significant. Cumulative impacts would mostly be tied to assessment of two adjoining projects and the cumulative loss of vegetation. The Casino Project will not impact any unique vegetation species or communities. The two NYSDOT improvements, the closest proposed projects, similarly have not been reported to contain any unique species or communities. As indicated in the correspondence in Appendix F, neither the USFWS nor NYSDEC have records of endangered or threatened plant species in the vicinity of the Casino Project.

With regard to wetlands, the cumulative impact assessment requires consideration that activities in one area could potentially affect downstream wetlands as flow patterns or water quality is altered. The work would, however, have to be in a shared watershed. Only the NYSDOT projects are in the same watershed as the Casino Project wetlands. The Neversink River bridge replacement project has been estimated in the Draft Design Report (NYSDOT 2009) to impact approximately 0.6 acres. As mitigation, NYSDOT is proposing to create new wetland areas so that there will be no net loss of wetlands. Wetland impacts for the NYSDOT improvements at Interchange 107 have not been reported by the agency, but wetlands in that area are limited and impacts would be minimal. If impacts do occur as a result of the NYSDOT work at Interchange 107, NYSDEC would be expected to provide mitigation similar to the mitigation provided for the Neversink River bridge replacement. Any mitigation must be approved by the USACE pursuant to Section 404 of the Clean Water Act and/or NYSDEC under a Section 401 Water Quality Certificate. As the Casino Project will also mitigate its wetland impacts, there are no reasonably foreseeable cumulative impacts on vegetation or wetlands. On a regional, not watershed basis, it should be noted that these projects would be subject to federal and state regulations that govern impacts to wetland resources and require mitigation for impacts.

6.4 Fish and Wildlife

Fisheries. The Casino Project and the NYSDOT bridge replacement projects are the only projects that could potentially result in cumulative impacts to fisheries in the Neversink River (the Interchange 107 improvement project is over 200 feet from the Neversink River). The Casino Project has been designed to have no direct impacts to the Neversink River, and to control potential indirect impacts caused by changes to water quality, as discussed in Section 6.1 and 6.2. This Casino Project will not, therefore, impact aquatic habitat. The NYSDOT plans for the bridge replacement have been designed to minimize disturbance to the Neversink River, particularly during construction. That project is also subject to the federal and state regulations governing work in or near waterbodies such as the Neversink River. Potential impacts will, therefore, be subject to regulation. Because the Casino Project will not impact fish habitat and because the bridge replacement will be subject to pertinent environmental regulations, it is assumed that there should be no significant cumulative impacts.

Wildlife. No cumulative impacts to wildlife, wildlife habitat or wildlife movement corridors are foreseeable in connection with the Casino Project. As discussed in Section 6.3, impacts to vegetation and the habitat it provides to wildlife are not expected to be cumulatively significant. With regard to wildlife corridors, riverbanks are generally considered to be good potential corridors. Both the Casino Project and the NYSDOT bridge replacement project are along the Neversink River. However, the cumulative impacts to wildlife corridors are expected to be minimal. The Casino Project will maintain and enhance the area along the Neversink River. The bridge replacement project will not significantly alter the bridge span and piers, which, along with the Bridgeville bridge, currently provide a barrier to wildlife movement along the Neversink River.

The brook floater occurs in the Neversink River near both the Casino Project and the NYSDOT bridge replacement project. The Casino Project has been specifically designed so that there are no direct impacts to the Neversink River and that potential indirect impacts to water quality are mitigated. The NYSDOT bridge replacement project may have direct impacts during pier construction. NYSDOT is in consultation with NYSDEC to monitor potential impacts and to relocate individuals prior to construction, if necessary.

6.5 Hazardous Materials

The Casino Project has already had a positive impact on the environment in terms of hazardous waste, as areas that were contaminated have been removed from the project site. The amount of hazardous materials at the other sites is not known. However, as other sites, except for the NYSDOT infrastructure improvement projects, are well removed from each other and do not occur in the same specific watersheds or aquifers, impacts would not be cumulative. If NYSDOT encounters any hazardous materials in the course of its activities, it would be expected to address such material consistent with applicable law.

6.6 Historical and Archaeological Resources

Impacts to historical and archaeological resources are generally very site specific, and would not be cumulative unless the projects are physically close. In any case, the Casino Project will have no impacts to historical or archaeological resources. It cannot, therefore, have any cumulative impacts.

6.7 Traffic

The discussion in Section 5.7 and Appendix B included the majority of the cumulative impacts (i.e., those projects shown on Figure 6-1) on traffic. The analysis, typical of most traffic analyses, includes consideration of general background growth (assuming 1.0 percent per year in this case), as well as specific projects. The analysis also included an additional 0.5 percent per year applied to future traffic volumes to account for induced growth resulting from the introduction of the Casino Project in the area in 2013. The analysis in Section 5.7 also discusses the NYSDOT State Route 17/I-86 improvements and incorporates roadway improvements described in Section 7.7.2 and 5.7.3. The analysis assumes that those potential developments will occur and proposed mitigation for the Casino Project is in place, and thus addresses, in part, the cumulative impact of all of these projects.

This section and the attached traffic study (Appendix B, Section 3.3) include the analysis of cumulative traffic impacts. The "Cumulative Build" condition adds traffic to the Build condition volumes from the following projects:

- Full build out of the Concord Resort master plan, generating up to 5,300 peak hour trips
- Full build out of the Rock Hill Town Center, generating 1,103 peak hour trips. This includes the trips from Phase I, considered in the No-Build and Build scenarios
- Assumed Casino #3, generating 1,270 peak hour trips

Consistent with the DEIS, the FEIS Cumulative Build scenario assumes that three casinos are built in Sullivan County. The Casino Project and the Concord Hotel and Casino are considered active projects and hence are included in the No-Build (for the Concord Hotel and Casino) and Build conditions (for both) in Section 5.0. Since there is no active third casino project in the area, a hypothetical casino is assumed in this Cumulative Build assessment, located west of the project site and generating traffic volumes equal to volumes estimated for the Mohawk Mountain Resort Casino when that project was active is included in this Cumulative Build discussion as Assumed Casino #3. Locating Assumed Casino #3 to the west maximizes traffic impacts, as it would entail vehicles travelling from the east (the origination of most expected patrons of Assumed Casino #3) to pass by Interchange 107 on State Route 17, thus maximizing traffic volumes at that location.

As discussed above, (see Section 3.2.4), when multiple casinos are built in the same market, trip making among casinos is commonplace such that the second and third casinos into the market generate fewer new trips than the first casino. Consequently, when accounting for shared trips, it

was assumed only 70 percent of the trips generated by the Concord Hotel and Casino were new trips on the roadway system and only 50 percent of the trips generated by Assumed Casino #3 were new trips. The shared trips were assumed to travel among the three casinos. This assumption has the effect of changing the trip distribution for the Casino Project shifting some of the traffic that would be oriented to the east if it were the only casino present to the west and north under Build conditions. An additional shift to the west occurs under Cumulative Build conditions.

Cumulative Build Traffic Volumes. Cumulative Build condition traffic volumes are documented in Appendix B and shown graphically in Figures 6-2, 6-3, and 6-4. A comparison of future Build condition traffic volumes to future Cumulative Build traffic volumes is presented in Table 6-1. The Concord Resort master plan project adds significantly to volumes on County Route 161 past the project site. The other development projects considered add to State Route 17 volumes at Interchange 107. Compared to Build conditions, Cumulative Build condition traffic volumes on State Route 17 increase by 28 to 32 percent (1,705 to 1,760 vph) west of Interchange 107 and by 13 to 15 percent (910 to 1,030 vph) east of Interchange 107. County Highway 161 will experience increases between 160 and 445 vph (approximately 11 to 51 percent).

Table 6-1 2018 Traffic Volume Summary – Cumulative Build Conditions

	2018 Peak Hour Traffic Volumes								
	Friday Afternoon			Saturday Evening			Sunday Afternoon		
Location	Build	Cum .Build	Differ-ence	Build	Cum. Build	Differ-ence	Build	Cum. Build	Differ -ence
County Highway 161									
North of the Project Site	1210	1655	445	720	1085	365	1040	1430	390
At State Route 17 Overpass	1265	1455	190	1075	1305	230	1420	1580	160
Old Route 17									
West of Int. 107 EB Off-Ramp	200	195	-5	85	80	-5	125	120	-5
East of County Highway 161	135	130	-5	85	75	-10	130	125	-5
State Route 17 Interchange 107 Ramps									
Eastbound Off-Ramp	335	630	295	350	670	320	375	655	280
Eastbound On-Ramp	855	760	-95	665	590	-75	1010	900	-110
Westbound Off-Ramp	1030	1000	-30	850	725	-125	760	680	-80
Westbound On-Ramp	380	680	300	280	555	275	405	730	325
State Route 17									
West of Interchange 107	6370	8130	1760	5280	6985	1705	5935	7665	1730
East of Interchange 107	7245	8275	1030	6145	7055	910	7030	7965	935

Anticipated future intersection operating levels of service were calculated based on the projected 2018 Cumulative Build condition traffic flows and analysis procedures outlined in the *2000 Highway Capacity Manual (Transportation Research Board 2000)*. The Cumulative Build condition analysis results assume the proposed roadway improvements described in Sections 5.7 .2 and 5.7.3. The analysis results are summarized in Table 6-2

Table 6-2 shows that the two signalized site driveways (main driveway and emergency access via the proposed Foss Road extension) operate at LOS D or better under future 2018 Cumulative

Build conditions. The unsignalized intersection of County Highway 161 at State Route 17 westbound on-ramp operates at LOS B or better under Cumulative Build conditions. At the intersection of the State Route 17 EB On- and Off-Ramps, all movements will operate at LOS D or better during all three peak hours.

Table 6-2 Intersection Level of Service Summary – Future Cumulative Build Conditions (including Proposed Improvements)

	Summer Peak Hour Conditions								
	Friday Afternoon (4:00-5:00 p.m.)			Saturday Evening (8:00-9:00 p.m.)			Sunday Afternoon (4:00-5:00 p.m.)		
Intersections Approach[1]	**Avg. Total Delay[2]**	**V/C[3]**	**LOS[4]**	**Avg. Total Delay[2]**	**V/C[3]**	**LOS[4]**	**Avg. Total Delay[2]**	**V/C[3]**	**LOS[4]**
Unsignalized:									
State Route 17 EB On- and Off-Ramps/Old Route 17									
LT from EB Old Route 17	3	0.04	A	1	0.00	A	4	0.02	A
L from SB State Route 17 Off-Ramp	29	0.83	D	18	0.72	C	20	0.74	C
County Highway 161/State Route 17 WB On-Ramp									
LT from NB County Highway 161	10	0.04	A	9	0.01	A	10	0.04	B
County Highway 161/State Route 17 WB Off-Ramp									
L from WB State Route 17 Off-Ramp	39	0.29	E	28	0.05	D	39	0.16	E
Signalized:									
County Highway 161/Foss Road Extension	1	0.52	A	1	0.46	A	1	0.54	A
County Highway 161/Project Site Driveway	40	0.99	D	18	0.78	B	25	0.81	C
County Highway 161/Old Route 17[5]	5	0.59	A	5	0.65	A	6	0.64	A

Notes:
[1] L = Left Turn Movement; T = Through Movement; R = Right Turn Movement; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound
[2] Average delay per vehicle (seconds)
[3] V/C = Volume-to-capacity ratio
[4] LOS = Level of service
[5] The analysis assumes future signalization at the intersection of County Highway 161/Old Route 17. Before signalization (geometric improvements only, including exclusive southbound and eastbound left turn lanes), the southbound County Highway 161 approach to this intersection operates at LOS F during summer weekend peak hours.

At the third unsignalized intersection, the State Route 17 WB Off-Ramp left turns are expected to operate at LOS E for the Friday afternoon and Sunday afternoon peak hours. The State Route 17 westbound off-ramp at County Highway 161 is estimated to carry up to 1,005 vehicles, including only 10 to 45 vehicles turning left onto southbound County Highway 161. The delay

for vehicles turning on to County Highway 161 from this exit ramp could reach 39 seconds during the summer weekend peak hours. However, volume-to-capacity ratios well below 1.0 (between 0.05 and 0.29) indicate that additional capacity is still available.

The southbound approach of County Highway 161 at Old Route 17 may experience LOS F conditions[3] until the intersection becomes signalized. The southbound left turn movement on this approach is between 11 vph (approximately one car every five minutes) and 21 vph (approximately one car every three minutes) on summer weekends. As shown in Table 6-2, with signalization, the intersection of County Highway 161/Old Route 17 will operate at LOS A under future Cumulative Build conditions. The level of future development near this intersection will determine if and when a signal is needed.

Table 6-3 summarizes the LOS results for 2018 No-Build, Build, and Cumulative Build scenarios. As shown in Table 6-3, study area intersections will operate at LOS B or better under future No-Build conditions and LOS C or better under future Build conditions. Under Cumulative Build conditions, most intersections operate at LOS D or better; one intersection (County Highway 161 and State Route 17 westbound off-ramp) would operate at LOS E during the Friday and Sunday PM peak hours. These results for the Cumulative Build scenario however, as noted under the Build condition analysis, are based on some conservative assumptions. These include:

1. Peak hour traffic volumes are based on peak summer weekend conditions; off-season background traffic volumes in the area are much lower, and traffic associated with the three casinos would be lower in the off-season weekends.

2. The analysis assumes that traffic due to background growth and development increases by 1.0 percent per year and 0.5 percent for induced growth. Actual historic growth rates on State Route 17 are flat. In addition to overall background traffic growth, the inclusion of anticipated traffic from potential new development results in a projected growth rate that is many times larger than 1.5 percent per year.

3. The analysis assumes that there are no shared trips made among the various background development projects. Since some of these projects are commercial uses and others are residential uses there is likely to be some double counting of trips as trips made between these uses are counted twice in this analysis.

4. The traffic analysis assumes no pass-by or diverted trips. Since it is likely that some percentage of the traffic traveling to and from the casino(s) is already on State Route 17, they will not represent *new* trips for State Route 17.

5. The traffic analysis assumes traffic volumes generated by the Casino Project that are approximately 60% higher than the projected volume from the two other previous casino proposals in the area, and assumes that a lower percentage of Casino Project generated traffic would be employee related.

[3] Analyses provided in Volume II, Appendix B.

Because of the conservative nature of this analysis, traffic operations will likely be better than shown in Table 6-2.

Table 6-3 summarizes the LOS results for 2018 No-Build, Build, and Cumulative Build scenarios.

Table 6-3 2018 Intersection Level of Service Summary

Intersections Approach[1]	Intersections Level of Service								
	2018 No-Build Conditions			2018 Build Conditions with Improvements			2018 Cumulative Build with Improvements		
	Fri. Peak Hour[2]	Sat. Peak Hour[3]	Sun. Peak Hour[4]	Fri. Peak Hour[2]	Sat. Peak Hour[3]	Sun. Peak Hour[4]	Fri. Peak Hour[2]	Sat. Peak Hour[3]	Sun. Peak Hour[4]
Unsignalized:									
State Route 17 EB On- and Off-Ramps/Old Route 17[5]									
LT from EB Old Route 17	A	A	A	A	A	A	A	A	A
LR from SB State Route 17 Off-Ramp	B	A	A	B	B	B	D	C	C
County Highway 161/Old Route 17[6]									
LTR from EB Old Route 17	A	A	A	A	A	A	A	A	A
LTR from WB Old Route 17	A	A	A	B	B	C	B	B	B
LTR from NB Kroeger Road	B	A	B	B	A	C	C	A	B
LTR from SB County Highway 161	A	A	A	B	B	C	C	B	B
County Highway 161/State Route 17 WB On-Ramp									
LT from NB County Highway 161	A	A	A	A	A	B	A	A	B
County Highway 161/State Route 17 WB Off-Ramp									
LR from WB State Route 17 Off-Ramp	B	A	B	C	C	C	E	D	E
Signalized:									
County Highway 161/Foss Road Extension[7]	N/A[8]	N/A	N/A	A	A	A	A	A	A
County Highway 161/Project Site Driveway	N/A[8]	N/A	N/A	C	B	B	D	B	C

Notes:

1 L = Left Turn Movement; T = Through Movement; R = Right Turn Movement; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

2 Friday afternoon peak hour is from 4:15 to 5:15 PM.

3 Saturday evening peak hour is from 8:00 to 9:00 PM.

4 Sunday afternoon peak hour is from 4:15 to 5:15 PM.

5 Note that this intersection is two separate intersections under future No-Build conditions.

6 Analysis of County Highway 161/Old Route 17 assumes signalization under Future Cumulative Build conditions.

7 Under No-Build conditions, this intersection refers to County Highway 161 at Old County Highway.

8 N/A = Not Applicable.

Cumulative Build Condition Interchange Ramp Merge Operations. The Cumulative Build condition merge level of service was calculated for the two merge sections at State Route 17 Interchange 107 based on the *2000 Highway Capacity Manual* methodologies described earlier and the results are presented in Table 6-4. The State Route 17 eastbound and westbound on-ramp merge movement changes from LOS C under future Build conditions to LOS D under Cumulative Build conditions for the Friday summer weekend peak hour. Speeds during this condition are reduced to 50 mph. Saturday peak hour operations of both ramps are expected to remain at LOS C even under Cumulative Build conditions. During the Sunday afternoon peak hour, the Route 17 eastbound on-ramp is expected to degrade from LOS D to LOS F while the westbound on-ramp is expected to remain at LOS C under Cumulative Build conditions.

An analysis was completed to determine impact of the assumed "third casino" included in the Cumulative Build condition on the Sunday evening, eastbound Route 17 merge operations. Because there is no proposal for a third casino in Sullivan County, traffic from a third casino was removed from the Cumulative Build scenario and assumed shared trips to/from the Proposed Casino and the assumed Concord Resort Casino were reassigned accordingly. The new or "Alternative Cumulative Build" scenario volumes were evaluated for the Sunday evening merge condition. Based on this analysis it was found that the Sunday peak hour State Route 17 Interchange 107 eastbound merge operations improve from LOS F to LOS E by eliminating consideration of a third casino in the Cumulative Build condition. The Route 17 eastbound mainline volume drops to just below the mainline design capacity.

Table 6-4 Merge Analysis – State Route 17 Interchange 107 Ramps – Cumulative Build Conditions

	2018 Cumulative Build Conditions								
	Friday PM Peak Hour			Saturday PM Peak Hour			Sunday PM Peak Hour		
Location	LOS[1]	Speed[2]	Density[3]	LOS	Speed	Density	LOS	Speed	Density
State Route 17 at Exit 107 EB On-Ramp	D	52	29	C	53	28	F	47	36
State Route 17 at Exit 107 WB On-Ramp	D	50	34	C	53	28	C	53	27

Notes:
1 LOS=Level of Service
2 Speed is in miles per hour.
3 Density is in passenger cars/mile/lane.

Similar to the cumulative intersection analysis, as a consequence of the conservative nature of this analysis, traffic operations will likely be better than shown in Table 6-4. In addition, as noted earlier, these conditions would not occur by 2018. Accordingly, implementation of some or all of NYSDOT's planned improvements to State Route 17 in the vicinity of Interchange 107 as part of the proposal to bring the roadway to interstate standards would mitigate these potential impacts.

6.8 Air Quality

The air quality impact analysis summarized in Section 5.8 used the traffic analysis as its basis to determine air quality impacts from mobile sources, thereby incorporating cumulative traffic from the projects listed on Figure 6-1, as well as the five projects listed at the beginning of Section 6.0. The microscale analysis, which focused on the Casino Project location and Interchange 107, showed that the Casino Project, along with those other projects, would not cause any NAAQS exceedances, even right at the site where emissions would be most concentrated.

For the Cumulative Build case, maximum one-hour CO levels were 4.5 ppm (35 ppm NAAQS); maximum eight-hour CO levels were 3.2 ppm (9 ppm NAAQS), maximum annual NO_2 levels were 35.7 $\mu g/m^3$ (100 $\mu g/m^3$ NAAQS); maximum 3-hour, 24-hour and annual SO_2 concentrations were 22.8 $\mu g/m^3$, 16.8 $\mu g/m^3$ and 2.2 $\mu g/m^3$ (1,300 $\mu g/m^3$, 365 $\mu g/m^3$ and 80 $\mu g/m^3$ NAAQS, respectively) maximum 24-hour and annual $PM_{2.5}$ levels were 28.0 $\mu g/m^3$ and 9.4 $\mu g/m^3$ (35 $\mu g/m^3$ and 15 $\mu g/m^3$ NAAQS, respectively), and maximum 24-hour PM_{10} concentrations were 39.8 $\mu g/m^3$ (150 $\mu g/m^3$ NAAQS). See specifically Tables 5-20 through 5-27.

Similarly, the mesoscale analysis, which estimated cumulative effects on Orange County, showed that emissions would have an insignificant (one percent or less) increase in total VOC and NO_x emissions (see Section 5.8.2). Specifically, VOCs for the No-Build condition are 42,179 kg/day and NO_x concentrations are 48,156 kg/day. Cumulative build conditions raise these to 42,402 kg/day and 48,676 kg/day, respectively.

The Casino Project and the other projects will also have air emissions as a result of stationary sources such as boilers and emergency generators. Because of their project type and small size, the majority of the projects would not be expected to have any significant stationary sources of air emissions and/or are well removed from the Casino Project and therefore could not have cumulative air quality impacts arising from stationary sources. The two additional casinos would be the prime concern for potential cumulative impacts, as they would be expected to be comparable with the Casino Project in terms of potential air emissions. However, the Concord Hotel and Casino is a renovation, and Assumed Casino #3 has no site. As such, an analysis is not practical. The other elements of the Concord Resort master plan are in large measure residential or not major in size and thus would not be expected to have significant stationary sources.

The use of clean fuels and properly designed fuel-combustion equipment for the proposed Casino Project means that air quality concentrations at the Casino Project property line will be safely in compliance with all air quality standards. In light of this design, the air quality concentrations from the Casino Project will be insignificant. Thus, there are no cumulative impacts from the Casino Project and other nearby future developments.

6.9 Noise

Noise impacts are generally very localized. Since sound levels drop 6 decibels with every doubling of distance from a source and as all of the other projects are more than two miles away,

it can be concluded that there will be no cumulative noise impacts. Construction noise related to Route 17 improvements will be temporary and is not a component of total operational noise.

6.10 Socioeconomics

This section assesses the effects of the Casino Project cumulatively with the Concord Hotel and Casino, Assumed Casino #3, and the full build out of the Concord Resort master plan and the Rock Hill Town Center projects, both of which are in the Town of Thompson. These four projects were assessed for potential impacts on the labor pool, housing market, schools, and local and regional economies. This analysis applies program information from the Concord Hotel and Casino project, which includes a casino, and the formerly proposed Mohawk Mountain Resort and Casino. While this formerly-proposed project is no longer being advanced, it is considered a representative example for purposes of this cumulative effects analysis in regard to Assumed Casino #3. The cumulative assessment also considered full build out of the proposed Concord Resort master plan and the Rock Hill Town Center project, both in the Town of Thompson.

Labor Pool. In total, there would be approximately 14,164 FTE workers directly employed by the projects indentified above. In addition to direct employment, it is estimated that the four projects would generate approximately 2,674 indirect jobs in the region upon full operation of their facilities. Given that all of these projects would be in relatively close proximity to each other, it is expected that they would draw a majority of their employment from within the same six-county study area described in Section 4.10.2. The indirect employment generated by the projects would come from an even broader area, because the locations where indirect employment is generated would be dispersed throughout Sullivan County and beyond. The additional direct and indirect employment opportunities presented by the projects would result in even greater increases in the study area's workforce, as well as greater reductions in the unemployment rate compared to what was projected for the Casino Project alone. In addition, it is expected that with a tighter labor market, the three casinos would need to compete for employees, resulting in higher wages and benefits.

The analysis of the Casino Project estimated that approximately 27 percent of the Casino Project's employment would come from the existing Sullivan County workforce. However, that existing workforce would not have the capacity to absorb 27 percent of the total employment from all three casinos and other proposed projects. Therefore, while Sullivan County residents would have a larger number of total jobs from the development of the projects, it is expected that a greater percentage of the total jobs would be absorbed by the workforce within surrounding counties, and there would be a greater percentage of in-migration to Sullivan County from surrounding counties. It is also expected that a greater percentage of the employment would be drawn from outside a 100-mile radius of the Town of Thompson.

Given the robust labor supply in the larger study area, the percentage increase of in-migration to Sullivan County under a three-casino scenario is not expected to be significantly greater than what was estimated for the single Casino Project analysis above (which estimates that 28 percent of all Project-generated employment would come from new households in Sullivan County). The Spectrum Report cites a Pathfinders (2003) Workforce Report for the Sullivan County area dated

August 2003, which defined a "labor-shed" consisting of Sullivan County and at least six portions of its six neighboring counties in New York, Pennsylvania, and New Jersey. Within this labor-shed area, Pathfinders identified a total of 67,400 people who were classified as "underemployed" and potentially ready to change jobs for higher wages and/or better benefits when the casinos open. In addition, the Pathfinders report identified 14,000 unemployed persons and estimated that another 14,400 persons could re-enter the workforce if good jobs became available.[4] Many of these workers, if hired for positions with the casinos or businesses supporting the casinos, would remain in their existing places of residents and commute to the casino or a supporting business in Sullivan County.

While the three casinos and other elements of the cumulative impact analysis would provide new employment opportunities for unemployed and underemployed residents of the study area, and very likely lead to a reduction in the unemployment rate, there would continue to be an unemployed population. Not all unemployed residents of the study area would be interested in, and/or qualified for, positions at a casino, another proposed project, or businesses supporting the projects. In addition, the three casinos and Concord Resort would generate a "critical mass" of employment opportunities that would entice more people to move to the study area compared to conditions with only one casino in operation. The creation of new jobs would also prompt those who had been discouraged from seeking employment to begin a job search (thereby defining them as unemployed). Therefore, while three casinos would certainly fuel job growth, it would be speculative to predict the effects of multiple casinos on the unemployment rate relative to the single Casino Project analysis.

The three casinos and other elements would generate a level of new employment demand that would tighten the labor market within the study area, as existing and future businesses would compete for a share of the same labor pool. This competition for employees could lead to higher wages and benefits at the casinos, and more generally within certain industry sectors. While higher wages throughout the region would translate into more buying power, thus increasing the demand for goods and services, it could also force some business owners to match any increases in salaries. The potential for increases in wages would be most prevalent among business types that provide support to the casino operations, as well as industry sectors with employee skill sets that are comparable to casino employment.

The upward influence on wages is not expected to have a significant adverse impact on the viability of existing and future businesses. The Pathfinders Workforce Report identified an existing prospective labor pool within a commuting area that could satisfy the direct and indirect employment generated by the casino projects. And as described above, the prospect of employment from the casinos and supporting businesses would draw some new workers to the study area, so there would continue to be a pool of unemployed and underemployed workers. Finally, the three casinos and other proposed project components would not open for business at the same time; they are all at different stages of review, approval, and planning, and each is

[4] The Pathfinders Report defined a labor shed consisting of Sullivan County and at least portions of six neighboring counties in New York, Pennsylvania, and New Jersey. Unemployment rates have increased between 2003 and 2009. For instance, the unemployment rate in Sullivan County has increased from 5.3 percent in 2003 to 8.7 percent in 2009. The findings of the 2003 report are therefore conservative in light of existing economic conditions.

expected to be developed in phases, with the full employment demands estimated above not being realized for a decade or longer. The cumulative pressure exerted on the labor pool would occur over a period of many years, enabling the local and regional economies to better adjust to fluctuations in the labor market.

Housing Market. The Casino Project would generate an estimated demand for 2,140 new housing units in the study area, 1,381 of which would be located in Sullivan County. Applying the same percentages to the anticipated direct and indirect employment for the four projects would result in a demand for approximately 6,168 new housing units in the study area, 3,980 of which would be located in Sullivan County. The cumulative demand for new housing could be even greater, given that there would be a greater percentage of employment drawn from outside the 100-mile radius, resulting in more in-migration. However, as described above in the discussion of cumulative effects on the labor pool, the percentage of in-migration under a three-casino scenario is not expected to differ substantially from that of the single Casino Project analysis. The Pathfinders Workforce Report cited above suggests that it would be theoretically possible for the three casinos and other new employers in Sullivan County to fill virtually all of the 18,000 new jobs [based on the Spectrum Report employment estimate] from the Pathfinders labor-shed and that these new employees could commute from where they now live, thus creating no new housing demand. This is not the operating assumption of the Spectrum analysis, and it is not a realistic scenario. Nevertheless, it provides support to the assumption that the amount of in-migration to Sullivan County generated under a cumulative impact scenario would be somewhat proportional to a one-casino analysis.

There are several other factors that make it speculative to further quantify potential cumulative effects on the housing market. There would be some housing demand generated by new residents that are "backfilling" employment positions vacated by casino and other project workers; the extent of this influence would depend on the amounts of project-related employment drawn from currently employed versus unemployed existing and future residents. There would be some percentage of households that have more than one wage-earner employed by a casino or by a business supporting the casinos' operations (for purposes of analysis it is conservatively assumed that all 16,838 direct and indirectly-generated employees from project operations would live in separate households). In addition, the indirect employment base would be distributed over a wider region than the study area used in this assessment, because the businesses supporting the four projects' operations would be spread out throughout Sullivan County and beyond.

Overall, given the estimated scale of the housing demand and the over 10-year time frame in which this demand would be generated, there would not be significant adverse socioeconomic impacts due to casino-generated housing demand generated by four projects. As shown in Table 5-39, there are over 5,600 housing units planned for development in the study area, 4,382 of which would be located in Sullivan County. In addition, the Rock Hill Center Phase II project and Concord Resort master plan are expected to add 4,589 residential units, increasing the number of planned residential units in Sullivan County to 9,971 residential units, for a total of 10,223 housing units planned in the study area. The housing demand generated by the four projects would be satisfied through a combination of available existing housing stock and new development. The extent of housing development in Sullivan County and the surrounding area counties is expected to be driven in large part by the progress of major proposed development

projects such as the three casinos. Therefore, if the three casinos were to be developed, the planned housing would be expected to move forward to satisfy the anticipated demand. Furthermore, the long time frame would allow municipalities to prepare for orderly future growth and development, which would be in keeping with the Town of Thompson—Village of Monticello's Joint Comprehensive Plan and the Town of Fallsburg's Comprehensive Plan.

Local and Regional Economies. The proposed Casino Project would have positive direct and indirect impacts on local, regional, and state economies in association with other proposed projects, including the two other proposed resort casinos. The combined economic effect is difficult to quantify given that the methodologies for projecting direct and indirect economic effects differ among the various casino impact analyses. However, it is clear that the agglomerative effect of the four projects considered in this analysis would generate new housing and commercial development from entrepreneurs seeking to capitalize on the enormous growth in employment and the spending generated by that employment, the growth in operational spending from the casinos, and the increased visitor spending. If the three casinos and other project components were to operate simultaneously, it is expected that a greater percentage of the workforce would find full-time employment at higher wages than would be expected with only one casino in operation, resulting in reduced welfare rolls and increased spending. The three casinos, combined with venues planned for the area such as the Concord Resort, would generate a critical mass of entertainment options that would make the area a more attractive destination for a wide variety of visitors. As described in the Town of Thompson—Village of Monticello Joint Comprehensive Plan, the general decline of the larger resorts and the poor health of the racing industry has led to the demise of various support businesses such as restaurants. According to the Comprehensive Plan, much of the area's commercial activity has suffered from lack of investment, which has created a vicious cycle that until recently has made the region less and less appealing as a tourist destination. The casino projects would help break this cycle of disinvestment by generating new jobs directly at the casinos, and indirectly through businesses supporting casino operations and providing goods and services to casino employees and visitors. The Comprehensive Plan suggests that Sullivan County must be "rebuilt from the ground up as a resort area," and suggests the Town of Thompson as a logical site for a County convention center. The casinos and Concord Resort projects would generate the renewed interest, visitation and investment in the area that would be necessary to facilitate those goals.

6.11 Community Services

There will be increased demands on community services from the Casino Project and the other proposed projects. However, the impacts from these demands will be mitigated through the Agreement with Sullivan County for the Casino Project (Appendix D). Similarly, the other proposed developments will mitigate their impacts, including the need for community services. These projects will either generate tax revenues that will mitigate potential impacts (for private projects such as the Concord Resort) or will provide an agreement with the authorities for mitigation (in the case of a proposed casino). These projects will also provide individual mitigation measures such as traffic improvements. A specific review of the school demand is provided below.

Schools. The four projects assumed in this analysis would have a cumulative effect on the operating and capital costs of public schools in the study area, particularly in Sullivan County. In addition the residential components of the Rock Hill Center and the Concord Resort master plan projects would generate school-aged children, while many direct and indirectly-generated employees would be new to the study area, and some would have families with school-aged children.

As described above in the discussion of the cumulative effects on the housing market, the direct and indirect employment cumulatively generated by the four projects would result in an estimated 6,168 new households in the study area, 3,980 of which would be located in Sullivan County. It is estimated that about 1,943 new study area households would collectively have 3,672 children that would be new to the study area's school systems. Of that population, there would be an estimated 1,239 households within Sullivan County that collectively would have 2,341 children that would be new to Sullivan County school systems.

Among the 2,341 new children under the age of 18 living in Sullivan County, the Monticello and Fallsburg Central School Districts are expected to experience the largest enrollment increases due to the projects' locations relative to these districts and the availability of rental and owner-occupied housing opportunities in the towns and village comprising these districts. The school-age children outside these two school districts would be broadly distributed among the remaining eight Sullivan County school districts, and among the school districts in the other counties making up the region in which new residents would settle.

It is assumed that 80 percent of the new children under 18 years old settling in Sullivan County, or approximately 1,873 children, would attend either the Monticello or the Fallsburg schools, with the remaining 468 children attending schools in the other eight Sullivan districts. Assuming that the distribution of children was 75 percent to the Monticello schools, and 25 percent to the Fallsburg districts, the projects' employees would cumulatively increase the number of students in each of these two districts by 1,405 and 468 students, respectively. In addition, new residents of the Concord Resort and Rock Hill Center projects are projected to add 166 and 435 school-aged children, respectively, to the Monticello schools by full build-out, resulting in a total cumulative increase of 2,006 students in the Monticello Central School District.[5]

The Monticello Central School District currently has a total enrollment of approximately 3,439 students in its schools; the 2010-2011 District budget is $75,985,992, or $11,975 per pupil that must be derived from local property taxes. The addition of 2,006 students to the Monticello School district would represent an increase in school population of about 58 percent, and would increase annual operating costs – prior to the consideration of mitigating factors – that must be covered locally by approximately $24.0 million. The Fallsburg Central School District's three schools have a total enrollment of approximately 1,393 students, and a 2010-2011 budget of $35,579,068, and costs averaging approximately $12,770 per pupil from local property taxes. An

[5] According to the Concord Resort DEIS, the Concord Resort project would generate approximately 166 school-age children who would attend the Monticello School District. According to the Rock Hill Town Center DEIS/DGEIS, the population of school-age children projected for the proposed development would be approximately 435 children over the 15-year build out. Neither of these analyses estimated incremental school-age children generated by project employees.

addition of 468 new students to this district would represent a student body increase of approximately 34 percent, and an additional annual cost from local revenue sources – again, prior to the consideration of mitigating factors – of $6.0 million.

As explained below, these incremental costs would be offset by increases in property taxes to the school districts as well as impact fees from the three casino projects assumed in the analysis and existing additional capacity. Overall, it is likely that there would be no significant incremental costs, and there could be positive revenues to the school districts.

Similar to the cumulative effects on the labor and housing markets, there are other, less quantifiable factors that could alter the cumulative demand on area schools. There would be currently employed workers within the study area that would vacate other positions for direct or indirect project employment. The positions vacated by those employees would presumably be filled by other workers, some of whom would migrate to the study area and have children that would be new to the school systems. There would be some current study area residents that, upon receiving a new job, would move elsewhere within the study area, particularly to Sullivan County to be closer to the casinos and other projects. There may also be new households in which more than one household member is employed by the projects or businesses with new indirect employment generated by the projects, which would reduce the overall demand (this analysis conservatively assumes that all direct and indirect employees would live in separate households). In addition, some children of project-generated employees would presumably attend private schools, which also would reduce the overall demand on public schools.

Despite these uncertainties, there is little doubt that the projects would result, prior to consideration of the factors discussed below, in new incremental costs incurred by school systems. There are numerous factors that would mitigate these potential cumulative impacts on schools. Part of these new school costs would be offset by school real estate taxes applied to the homes of all new households (including those without children). As discussed above, cumulative employment demand generated by the four projects would result in approximately 3,980 new household units in Sullivan County, of which 80 percent, or approximately 3,184, would locate within the Fallsburg and Monticello School Districts. Of these, it is estimated that approximately 68 percent, or 2,706 units, would be home buyers. The average 2008 per-parcel (e.g., equivalent to single-family home) school tax bill for homes within the Fallsburg and Monticello Central School Districts in 2008 was $2,163 (New York State Office of Real Property Services, 2010).

Assuming this amount applies to new employees' households, the new households would pay an estimated $5.2 million annually to the Monticello Central School District, and approximately $1.7 million annually to the Fallsburg Central School District. There would also be taxable components of the planned projects that would generate additional school tax revenues. For example, the Concord Resort DEIS estimates that at full build-out, the project would pay $17.4 million annually in local real property taxes to the Monticello Central School District, while the Rock Hill Center DEIS/DGEIS estimates that the Rock Hill Town Center project would generate annual property tax revenues of approximately $4.18 million to the Monticello Central School District. The estimated tax revenues cited above are not entirely exclusive, because some of the property taxes generated by the Concord Resort and Rock Hill Town Center would come from

new project workers occupying project housing. However, these school tax revenues alone could potentially exceed the incremental costs generated by project-generated students.

Irrespective of project-generated tax revenues, the casinos would be obligated to pay impact fees to help offset municipal costs generated by the casino projects—these school systems would receive a portion of those fees. In addition, given that the three casinos and other projects would be phased in over a period of at least ten years, the cumulative demands on school systems would not be fully realized for a decade or longer.

6.12 Utilities

The Tribe has entered into agreements that allow the Casino Project to connect to local water and wastewater treatment service providers. These agreements commit those providers to supplying a certain level of service. In assigning the necessary water supply or wastewater treatment capacity to the Casino Project, this capacity is no longer available for other future projects in the respective service areas. In addition, the Casino Project may also indirectly result in the extension of the existing water and sewer service networks to areas that do not currently have such services. This commitment of capacity may have cumulative impacts when considered with other projects as available capacity is committed.

Water Supply. The Casino Project will connect to the Village of Monticello's water supply system. As indicated in Section 2.6.1, the Village's water system currently has an available (and permitted) excess capacity of approximately 900,000 gpd, based on the peak summer demand. The Casino Project will require an average daily demand of 430,000 gpd (Phase I and Phase II). The projected maximum day demand for the Casino Project is 706,000 gpd, which will be predominately satisfied by an on-site water storage tank. Although, this level of water demand leaves more than half the existing Village capacity available for other projects, the Tribe has committed to developing additional supply capacity in the Village's current well field to off-set the usage by the Casino Project. This commitment is provided for in a Water Services Agreement between the Tribe, the Town of Thompson and the Village of Monticello.

The Rock Hill Town Center is proposing to develop a private community water supply system and, as such, would not have cumulative impacts on the public water supply systems. Similarly, the Concord Resort (Concord Associates, 2008) has proposed to create its own water system on the property and, as such, that project will not have cumulative impact on public water supplies.

The other assumed additional casino does not have specific site and, as such, its potential cumulative effects cannot be addressed. However, it should be noted that the original The Mohawk Mountain Resort and Casino proposed to obtain their required water supply from groundwater resources that would have been developed through the installation of bedrock wells at and near their casino site. Therefore, there would have been no reasonably foreseeable cumulative impact on water supply capacity.

Wastewater Treatment. The Casino Project will connect to the Town of Thompson's Kiamesha Lake Wastewater Treatment Facility which discharges to Kiamesha Brook. As indicated in Section 2.7.1, the Town's system currently has an available permitted excess capacity of approximately 1.3 mgd. The Casino Project will generate an average daily flow of

327,000 gpd (Phase I and Phase II). This leaves almost 1 mgd excess capacity available for other projects. The Concord Resort (Concord Associates 2008) had been allocated capacity at the Kiamesha Lake Wastewater Treatment Facility for a full build project that was bigger than the current plans. That agreement has since lapsed. In addition, the Town is anticipating a direct sewer service area expansion in the hamlet of Thompsonville to the north of the Project site. Service will be provided by the construction of an off-site wastewater pump station in the vicinity. The Town requested the construction of this pump station, which would otherwise not be required to service the Casino Project, to service the approximately 25 existing residences in the area that are currently on septic systems. These residences would add approximately 7,500 gallons per day of wastewater to the Kiamesha Lake Wastewater Treatment Facility. This pump station may also be designed to provide excess capacity for future development in the Thompsonville area. Although these projects are in the early planning stages, they could collectively generate an additional 60,000 gallons per day of wastewater to the Town's system. Even considering the cumulative demands of the Concord Resort and the Thompsonville area, there is more than adequate permitted capacity at the facility for these additional connections.

The assumed third casino does not have a specific site and, as such, its potential cumulative effects cannot be addressed. However, it should be noted that the Mohawk Mountain Resort and Casino had proposed to construct an on-site treatment facility that would have discharged to Anawana Brook, and the Cayuga Casino at Monticello Raceway had proposed connection to the Village of Monticello's wastewater system which discharges to Tannery Brook. As such, these projects would not have had cumulative effects on the capacity of the Town's system

The Rock Hill Town Center is proposing to construct a private sewer treatment plant and, as such, would not have cumulative impacts on the public wastewater treatment systems.

The Casino Project's wastewater service agreement with the Town of Thompson commits the Tribe to participating in the expansion of the system capacity should it become necessary. As such, there will be no reasonably foreseeable cumulative impacts from the provision of wastewater services to the Casino Project. Any potential expansions required at the treatment facility would be accomplished under existing federal, state and local requirements. This permitting process considers long-term impacts to environmental resources, including regional groundwater supplies. Therefore, both local and regional cumulative impacts would be considered.

Other Utilities. Electric, gas, fuel oil, telephone and cable utilities will be provided by utility providers as required to service proposed developments in the area. These providers are committed to providing the level of service required and expect to meet the projected utility loads and demands. NYSEG has undertaken a study to determine the cumulative impacts of multiple casinos and other future growth in the county on their existing electric distribution system and to plan for future upgrades of their system to meet these future demands.

6.13 Land Use and Community Character

Land Use. Foreseeable cumulative impacts to land use could arise if several major development projects are closely grouped and significantly alter the land use of that area. Other than the

NYSDOT improvements to existing infrastructure, none of these projects are located close to the Casino Project. The NYSDOT projects are transportation improvement projects that do not result in a change in land use. No significant alteration or impact to land use is foreseeable in the area immediately surrounding and/or adjacent to the Casino Project. As such, there are no significant cumulative land use impacts.

The most direct way to control potential impacts to land use over a long-term is through community land use and zoning by-laws and multi-year master or comprehensive plans (see Section 5.13 for a review of existing rules and plans). The local governmental agencies, which have actively supported the introduction of casinos to the area, have been very proactive in updating their zoning ordinances and master plans, looking forward towards economic growth spurred by the potential casinos and other large projects.

Sullivan County has initiated the planning process for updating the Sullivan County Comprehensive Master Plan. County policies associated with large regional commercial development projects are expected to be addressed in the updated plan. A joint Comprehensive Plan was adopted for Monticello and Thompson in 1999. The plan recommended amending the local zoning ordinance to permit "Regional Service-type industries", including hotel, gaming and recreational uses. Finally, the Town of Thompson has formed a multi-disciplinary committee to prepare amendments to the zoning ordinance that will outline requirements for large commercial multi-use development projects. The Town of Fallsburg adopted a new comprehensive plan 2006 and adopted updated zoning that provides for greater control over and channeling of growth and development and channeling of growth. All of these measures will serve to help the municipalities and County to direct growth so as to protect the land use patterns they recognize as being integral to the area, most specifically open space areas.

Community Character. The new and redeveloped properties in the Town of Thompson and in other areas of Sullivan County will have a positive cumulative impact upon the local community. Much of the proposed development is proposed to occur in previously developed sites that had not received much attention during the extensive period of time in which this area has been depressed. Therefore, it is anticipated that most changes to the physical environment will be relatively minor. Open space, parklands and water courses are largely protected now and will not be compromised in any way. The proposed growth and development activities will help to revitalize downtown and strip retail areas, as well as provide roadway upgrades, new jobs and increased taxes to support the upgrade of the local infrastructure. And, while it may increase the pace of development in Sullivan County, the Project and other developments are consistent with and complementary to the current trend of increased development in this area. There may be some current uses that are negatively impacted by increased development in Sullivan County, such as the Orthodox Jewish bungalow colonies and yeshivas and their practice of walking along rural roadways. However, many of these facilities are remote from the proposed developments, so that patron and employee travel may not have that much of an impact.

6.14 Greenhouse Gas Emissions

The greenhouse gas (GHG) emission analysis in Section 5.10 reveals the Casino Project includes significant energy mitigation measures in its design, achieving a 27% reduction in GHG emissions for direct and indirect stationary source emissions. The project's annual CO_2 emissions are 19,153 tons/year (17,372 metric tons/year), which is below the threshold in CEQ's draft GHG Guidance for warranting analysis. Accordingly, a cumulative impact assessment is not necessary. Further, for informational purposes, it should be noted that the Casino Project's annual CO_2 emissions in the year 2018 (19,153 tons) are an insignificant fraction of total fuel-burning CO_2 emissions projected in 2018 for the U.S. (7,290,000,000 tons) or for the world (36,600,000,000 tons) (US Energy Information Administration 2010)[6]. The Casino Project's annual CO_2 emissions are also an insignificant fraction of human respiration of CO_2 for the population of the U.S. in 2018 (161,000,000 tons/year)[7]. This would also be true GHG emissions from the other proposed or assumed projects were considered (which would be speculative in the absence of necessary energy and architectural data).

[6] http://www.eia.doe.gov/oiaf/ieo/highlights.html

[7] The average human respiration of CO2 is 805 lb/year/person

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7.0 Induced Growth

The CEQ NEPA regulations require analysis of indirect effects, although only reasonably foreseeable impacts need to be considered. Indirect effects are defined at 40 CFR 1508.8(b) as those effects caused by the proposed action but that occur later in time or are further removed in distance. Indirect effects that may be caused by construction, such as sedimentation, or by operational activities, such as stormwater runoff, were considered with the discussion in Section 5.0. However, indirect effects may also include growth inducing effects on population, and related effects on the natural environment. Potential growth inducing impacts on the project area would be generated by the development of one, or several, gaming operations as a result of improved socioeconomic conditions and the resulting potential increase in population. These conditions, and most especially new construction to support the increased population, may have environmental impacts. These growth induced socioeconomic and environmental impacts, as well as planning to control such growth induced impacts, are considered in this section. The discussion in this section of the FEIS was updated to address changes in conditions or circumstances, new information and/or changes in law or regulations. However, as underlying conditions and the scope of other potential projects remain similar to those reported in the DEIS, the induced impacts also remain much the same – primarily positive economic benefits for the region.

7.1 Socioeconomic Growth Induced Impacts

The Casino Project has the potential to induce new housing and commercial development as a result of the creation of new permanent employment opportunities. The operation of the proposed Casino Project would also generate a demand for goods and services, thereby stimulating economic activity. In addition, visitors would spend money in the area, further stimulating economic activity. All three of these factors have the potential to induce growth both locally and regionally.

Employee-Related Induced Effects. New employees moving into the study area represent one important source of induced growth potential. New residents will require places to live and they will spend their earnings in the area. As discussed in Section 5.10.2.4, the employees will be drawn from a wide commuting zone and their effects will be broadcast throughout this overall region. Sullivan County, however, will have a concentration of the induced growth benefits and effects. The wages earned by project employees will be largely spent in the communities in which they reside. New residents who settle in Sullivan County, for example, will represent new consumers of housing, as well as goods and services. A second important new source for induced growth in the study area are employees already residing in the study area who were formerly unemployed or who shifted from part-time jobs to full-time jobs at the Casino Project. The wages earned by these individuals will represent incrementally greater spending potential of existing residents.

Employee wages are used to provide workers and their families with the necessities of life, including food and shelter, clothing, health care, and other services and goods. To the extent that

the majority of these purchases are made locally, businesses and industries serving resident communities with these goods and services will experience increased demands, resulting in further investments in capital and labor needed to meet these increased demands. In Sullivan County communities in particular, such as the Towns of Thompson and Fallsburg, and the Village of Monticello, opportunities for the expansion of existing businesses and the opening of new businesses will exist. The hamlet centers of Fallsburg and Thompson and the central business district of Monticello are locales in which commercial induced growth will likely occur, thereby providing opportunities to revitalize and increase economic activities in these places.

The effects of induced growth on the business sectors will most likely be in the form of expansion and new growth opportunities for retailers of food and goods, such as grocers, department stores, lumber, hardware, and clothing. In addition, personal support and medical services, such as doctors and dentists, as well as accountants and insurance businesses, will be expected to experience new demand opportunities. Eating and drinking establishments, as well as recreation and amusement operations will be expected to benefit from the increased demand of new employee residents and the increased spending potential of formerly unemployed and underemployed Casino Project employees.

The housing market is another area where induced growth effects from new residents may be seen (Appendix U provides further detail). It is anticipated that most new employees moving into the region will initially seek rental housing, thereby inducing a demand for the provision of rental units through new construction or the division of existing structures into rental units. New employees in the upper wage brackets will seek to purchase homes, drawing from the existing inventory of homes and stimulating the construction of new homes. These induced effects on the rental market will likely be felt closer to the location of the Casino Project, in Thompson, Fallsburg, and Monticello, whereas the induced effects of new single-family home construction will be dispersed throughout the broader study area from which employees will be drawn. As discussed in Section 5.10.2, the Casino Project expected to be a significant employment generator (both directly and indirectly). In total, it is expected that approximately 1,160 of these new workers will choose to locate within Sullivan County.

It is expected that a significant percentage of this new housing demand will be absorbed by existing housing stock. In addition, there were 1,252 new residential building permits recorded in 2009 in Orange, Ulster, Wayne, and Pike Counties, and 4,382 residential units planned in Sullivan County, for a total of 5,634 housing units planned for development in the study area. In addition, the Rock Hill Town Center Phase II and Concord Resort master plan projects are expected to add an additional 4,589 residential units, increasing the number of planned residential units in Sullivan County to 9,971 residential units, for a total of 10,223 housing units planned in the study area. This will be more than enough to accommodate all direct and indirect workers expected to move into Sullivan County. The housing units that are already proposed will be governed by the existing land use codes, such as local zoning laws. These new developments will, therefore, reflect the growth policies and principles embodied in the existing comprehensive plans and zoning ordinances, and will, presumably be consistent with community goals. In regard to potential additional development beyond that which is already proposed to occur, most

study area communities have land use policies in place to guide this future growth, as discussed in Section 7.3.

Operation-Related Induced Effects. The purchase of goods and services by the Casino Project will represent a substantial growth inducing effect. The annual operations of the Casino Project will represent $514.96 million per year in new purchases. The operation will require the ongoing purchase of a wide range of goods and services, many of which will be purchased within the local and regional market areas. The demand that the local and regional economies experience will represent powerful opportunities for the expansion and creation of businesses to serve the operational needs of the Casino Project.

The secondary or indirect economic benefits of the Casino Project as a result of its operations will also be substantial. Indirect induced spending will total approximately $443.62 million per year. Wholesalers, for example, providing fresh produce will likely invest to expand their operations to secure competitive positions in the new markets created by the Casino Project. The new spending and investment by these businesses, in capital and labor that is stimulated by direct Casino Project spending, represents an important segment of induced growth potential for the region.

Visitor-Related Induced Effects. When in full operation, the Casino Project could attract up to 10 million visitors per year. These visitors are expected to spend money in the local and regional economies on transportation, food, lodging, and entertainment while traveling to and from their homes to the project area, and while visiting, exploring, and partaking in other tourist activities in the local area. Visitors using private automobiles represent a particularly mobile source of potential spending and growth inducing activity. As many as 2.5 million of these annual automobile-based visits could originate from within the local area within a roughly half-hour drive of the Casino Project. These visitors will likely be day visitors and thereby will not represent a significant new spending resource for the local economy. Being residents of the general area, this type of visitor already contributes to economic activity in the region. Overall, given a relatively fixed range of consumer spending on a per household basis, visits to the Casino Project by these individuals could actually represent a negative effect on the local economy due to the "substitution" factor, whereby consumer food and entertainment spending is shifted to the Casino Project and away from existing venues, such as local theaters and restaurants.

However, the up to 7.5 million annual Casino Project visitors coming from further away will be expected to add new spending in the local and regional economy with purchases of travel-related goods and services, especially gasoline, and secondarily with purchases of off-site lodging, food, and entertainment. Visitors will create a demand for overnight accommodations and the region's hotel and hospitality industries will experience an increased demand for their services. Once complete, the Casino Project's Phase II hotel will represent competition for these overnight visitors, requiring the local lodging industries to distinguish their services. However, given the number of potential overnight visitors, the Phase II hotel will not be able to accommodate all overnight visitors attracted to the region, and it is therefore anticipated that there will be a significant "spill-over" effect representing growth opportunities for local hotels, motels, and other lodging businesses.

The Casino Project includes several restaurants, and many visitors will be expected to dine on-site. However, there will be some spill-over into restaurants in the local communities. In addition, snacks will represent an area of economic activity and potential induced growth for off-site businesses. Food and gasoline businesses at Middletown and Monroe/Woodbury Common exits of State Route 17, for example, will be expected to experience growth inducing demands.

Despite the on-site dining opportunities, visitors in the numbers expected will create a significant potential market for the expansion and creation of local restaurant businesses. It is anticipated that the potential demand for high-quality dining and restaurant experiences resulting from the presence of casino visitors will stimulate investment in the upgrade and enhancement of existing restaurants, and the establishment of new restaurants aimed at attracting casino visitors. These investments will represent important economic development and downtown revitalization forces in Monticello and Liberty, as well as the hamlets of Fallsburg and Thompson.

Regional economic improvement, downtown revitalization, and overall increased local business activity in the local economy will, to some degree, depend on the local business investment and marketing. Capturing visitor spending requires an economic infrastructure that will entice casino visitors to venture into nearby business centers and spend money in local businesses. Without such, these visitors will spend elsewhere. The presence of the Casino Project will stimulate economic activity in the region via the Casino Project's operations and the wages and salaries earned by its employees Local businesses will have a significant opportunity to leverage the unrealized benefits of this Project and to entice Casino Project visitors to increase their non-casino spending in the local economy.

7.2 Environmental Growth Induced Impacts

The induced growth created by one (or more) casino may have indirect impacts on the environment, most specifically associated with land development for new housing and businesses resulting from population growth. While casino developments will likely indirectly create the need for new housing development, it cannot be reasonably projected what that need might specifically be, nor how the need might be met. In fact, the housing projects already approved in the study area, along with existing stock, will meet most of the housing need, as discussed in Section 5.10.2 and 7.1. Specificity in the assessments of effects from induced land development is difficult at best, and is particularly so given the disperse area in which induced growth could be expected (see Figure 4-15 showing study area). Land development and associated impacts depend on numerous factors including general regional and statewide economic conditions, state permitting requirements, county planning efforts, local zoning and land use ordinances, and the decisions of individual landowners. For example, in relation to housing, the rehabilitation of existing vacant or substandard housing and businesses (as opposed to construction of new facilities) is likely to be a large part of the revitalization of the region and will reduce the need for new housing. Also, as reported in Section 7.1, there are over 10,000 housing units already planned in the study area. Spectrum (2004) also reports that the anticipated need for new housing generated by the casinos could be met by the currently proposed housing developments. Finally, it is difficult to separate induced growth that may be caused by casino

development from growth that will otherwise occur anyway, although at a slower pace, without the casinos. The Sullivan County Division of Planning and Community Development *Sullivan 2020 Report* (2004) indicated that the Sullivan County population will continue to grow, making the area more urban. Given these influences and changing conditions over time, it is difficult to forecast with real confidence specific areas that may be developed or not. As a result, specific impacts are not reasonably foreseeable. Nevertheless, the following provides a general discussion of what sort of induced growth environmental impacts there could be and how those impacts will be managed and controlled. It is likely, however, that induced growth effects will be dispersed throughout the extensive Sullivan-Orange-Ulster-Delaware-Wayne (PA)-Pike (PA) County area, and not concentrated in any given area, although it is reasonable to assume that new employees and businesses may gravitate toward closer locations. As discussed earlier, however, the existing inventory of available and proposed housing will be adequate to absorb new housing demands spurred by casino and casino-related development. Each residential development project comprising the future inventory that is known to be under consideration will be or has been subject to extensive environmental review by the local authorities, and applicants will have made accommodations for adequate infrastructure and community services, and will have identified and addressed potential environmental effects. These same approval processes will assure that induced growth will be in conformance with local land use plans, and will not result in adverse environmental or other effects.

Geology, Topography and Soils. Potential growth induced impacts cannot be reliably assessed for geology, topography and soils because the impacts are dependent on the precise location of the impact. In general, however, these impacts are addressed and managed through local processes such as site plan review, building permits, SPDES and NPDES requirements, and compliance with project specific construction term soil erosion and sediment control practices.

Groundwater. Specific impacts to groundwater cannot be determined without knowledge of the location of the development and type of use proposed. Capacity issues are addressed under "Utilities" below.

Surface Water. Potential growth induced impacts on surface waters cannot be reliably assessed because the impacts will depend on the location of the development with respect to the surface water or within a given watershed, as well as the type of use proposed. Direct impacts to surface waters will be controlled through permits such as the NYSDEC Use and Protection of Waters regulations. Indirect impacts to water quality will be controlled through state and federal permit and approval processes including Section 401 of the Clean Water Act, SPDES and NPDES. Impact to floodplains will be minimized by specific local zoning regulations governing floodplain development.

Although the Casino Project is not within the New York City Watershed, it is anticipated that some casino-related economic effects, including housing demand and economic stimulation, may occur in Ulster and Delaware Counties, both of which comprise portions of the Watershed. The Watershed portions of these counties, however, are likely to remain unaffected because it is expected that any growth effects occurring in these counties will be located along the State Route 17 corridor, outside the Watershed, due to the distance between Ulster and Delaware County locations and the location of the casino job centers. It is also noted that the roughly north-south

oriented roadway system between the Sullivan County casino area and the Watershed area is comprised of minor local and county roads, some of which are closed during winter season. It is unlikely that casino-related growth will occur along these roadways extending into the Watershed area. Further, any induced development that may occur in the watershed area will be subject not only to local zoning and environmental regulation, but will be subject to the rigorous review standards of the New York City Watershed Rules and Regulations, which are designed to ensure the protection of the Watershed and its resources. Therefore, no significant adverse impacts are expected to occur as a result of induced growth, if any, occurring in the New York City Watershed.

Vegetation and Wildlife. Vegetation and wildlife will be impacted as land development occurs. The magnitude cannot be assessed given the infeasibility of projecting the amount and location of induced development and the associated impacts. However, given that the projected area of growth is very large, most of these impacts will be diffuse. Potential impacts for endangered or threatened species are also very project and location specific. Again, however, strong federal and state regulatory programs provide impact avoidance, minimization and mitigation requirements.

Wetlands. As with the other environmental resources, growth induced impacts to wetlands are impossible to assess given the uncertainty of where development will occur. However, the values of wetlands are well recognized at the federal, state and local levels in the study area. Wetland impacts will be controlled by regulations such as Section 404 of the Clean Water Act and the NY Freshwater Wetlands Act.

Traffic, Air Quality and Noise. Future projected growth was factored into the traffic analysis by assigning an assumed yearly rate. A yearly rate of 1.0 percent was assumed for general background growth for every year through the analysis and an additional 0.5 percent was assumed for induced growth from 2013 (when Phase I of the Casino Project will be operational) to 2018. These factors were added to traffic estimates resulting in an overall increase in traffic estimates of 10.5 percent for both local and regional (including Orange County) analyses. As such, the traffic analysis in Sections 5.7 and 6.7 already include growth assessments. Because the air quality (Section 5.8 and 6.8) and noise analyses (Section 5.9 and 6.9) are based on the traffic analyses, induced growth has also been already factored into the preceding discussions in these areas.

Potential impacts to air quality caused by additional housing and the associated new home heating oil will be expected to be negligible. It cannot be predicted how many new homes will be constructed, nor how they will be heated. However, calculating potential emissions from a residential furnace using the USEPA dispersion model SCREEN3 shows that maximum concentrations at the property line will be “insignificant” as that term is defined by USEPA (i.e., below background levels).

Utilities. Induced growth could place a demand on the capacity of public water and sewer providers. While it is impossible to determine what this future demand will be, the fact that the induced growth will be occur over a large region also means that the potential increased demand for public utilities will be diffuse. With respect to providers close to the casinos, there is surplus capacity that will accommodate increased demand due to induced growth (see Section 6.12). The

Casino Project's service agreements commit the Tribe to participating in the expansion of system capacity should it become necessary. As such, there will be no reasonable foreseeable induced growth impacts from the provision of water and wastewater services to the Casino Project. Any potential expansions required at the facility will be accomplished under existing federal, state, and local requirements. This permitting process considers long-term impacts to environmental resources, including regional groundwater supplies and, as such, regional and temporal cumulative impacts will have already been considered. In addition, new water supply uses over 1,000 gpd are subject to regulatory controls through review by the Delaware River Basin Commission.

Conversely, the presence of the new water and sewer lines could induce growth which may have been previously limited by the fact that public water and sewer was not available. Although it will be publicly owned by the Village and Town within their respective borders, the new water line will be dedicated for the Casino Project's use. There is a possibility for some additional users along the line if land that is currently part of the Town of Thompson is annexed into the Village of Monticello. However, the only provisions for other uses at this time include an inter-connection with the Village system for mutual emergency supply purposes and for fire protection along the route in both communities. It is not anticipated that there will be any other new customer service connections to this water line and, therefore, no resultant induced growth.

The new sewer line will be a force main designed to service only the Casino Project development. The one exception was a specific request by the Town of Thompson to include a second pump station in the Thompsonville area. This pump station will service approximately 25 existing residences and may be designed by the town to provide excess capacity for some limited future development in the area. Future development project that have been identified by the town include a residential subdivision (100 lots) and a hotel of approximately 250 rooms. The additional wastewater flow from these future sources, which was considered in cumulative impacts (Section 6.12), is estimated to be 60,000 gallons per day. Other than this identified additional flow, there will be no other new customer service connections to this sewer line. Therefore, there will be no resultant induced growth other than those projects identified above which are already in the planning stages.

Land Use. Given that the amount and location of induced growth is speculative, it is not possible to quantify specific land use impacts. Qualitatively, any development, whether spurred by the casino developments or by expected growth in general, will affect land use. County and local efforts for zoning, open space restrictions, growth management and broad-scale planning will serve to direct growth in a manner desired by the affected community or region. The following section discusses these planning efforts in greater depth.

7.3 Planning for Induced Growth

In addition to the specific controls mentioned above, planning efforts are also used to address potential induced growth impacts. Sullivan County and neighboring municipalities have been aware of the proposed casino projects for years. In order to understand the impacts that may occur to the area, the County has undertaken several proactive steps to analyze the proposals and

begin planning for growth management. The *Sullivan 2020 Report* was specifically undertaken to assess voters' views of their current quality of life and their vision and concerns for the future, as well as to assist the planning process for anticipated growth and change in the County either with or without the casinos. For example, the report recommends that "concentrated growth zones" be established to mitigate potential sprawl. Planning tools like this allow the County to better manage and control the environmental impacts of induced growth. The Sullivan County Legislature also commissioned a report to analyze the potential economic impact of multiple casinos on the region (Spectrum 2004). The findings of the report stress that growth management techniques such as "Smart Growth" concepts are vital to assuring that new growth occurs in a constructive manner that is consistent with protection of environmentally sensitive areas and revitalization of urban centers such as Monticello and Liberty.

These reports are part of the County's ongoing plans for directing the induced growth that will come with the establishment of one or more casinos. These forward-looking efforts put the County in a strong position for growth management. These planning efforts, along with existing regulations and the environmental documentation required for the casino developments, provide local officials, planners, and public citizens an estimate of the existing situation and the possible future situation relative to potential development activity that might be induced. Through the use of this information, stakeholders can be better informed as to the magnitude of growth and how to adapt their local ordinances and zoning codes to accommodate future growth. See also Section 5.13 and Appendix U for detailed discussion of the existing planning tools available to the community.

8.0 Mitigation Summary

Proposed mitigation measures were integrated into the discussion of impacts from the Casino Project and are considered in depth in Section 5.0, in order to fully assess potential impacts. A summary of the mitigation measures is also provided below. While there are changes to some mitigation measures discussed in the DEIS due to changing conditions, most particularly in relation to stormwater due to NYSDOT's taking of land, the approach towards mitigation in the FEIS remains the same.

8.1 Erosion and Sedimentation Control

The potential for soil erosion and sedimentation from the site during construction will be mitigated by compliance with the regulations, guidelines, and conditions set forth by the USEPA's NPDES General Permit for Storm Water Discharges From Construction Activities for the on site work on trust lands and for off site work including roadway improvements and utilities, with the NYSDEC SPDES Program. Design of the proposed facilities also avoid potential erosion and sediment control by maximizing the use of previously disturbed areas, working with site topography to balance cuts and fills, avoiding direct impacts to natural waterbodies, and providing restoration of disturbed areas. Controls during construction will be incorporated in the detailed, project specific SWPPP that complies with the NPDES requirements (see Section 5.1 and Appendix K). The SWPPP must be certified by the Contractor and Owner and has specific reporting requirements.

The preliminary SWPPP provided in Appendix K, establishes the on-site approach to controlling storm water pollution during construction and lists structural and non-structural Best Management Practices (BMPs) that may be employed to control stormwater pollution associated with the construction of the Casino Project. The SWPPP also identifies stormwater control measures that are anticipated to remain after the construction is complete. Control methods such as minimizing areas of disturbance, maintaining existing vegetated areas and non-structural and structural stabilization methods are discussed. Stabilization methods include seeding, mulching, geotextiles, flocculation, bonded fiber matrices, permanent vegetative cover, turf reinforcement mats, bioengineering, armoring, and outlet stabilization. Other measures include stabilized construction exits, dewatering and dust control methods, management of hazardous materials and stockpiling. Velocity dissipation methods such as surface roughening, diversion swales, check dams, earth dikes and level spreaders are detailed. Measures for sediment capture techniques such as hay bales, fiber rolls, silt fences, and sedimentation basins, filter berms, and sediment tanks are also detailed. Finally, the SWPPP clearly outlines training, inspection and reporting responsibilities.

8.2 Groundwater

Potential groundwater quality impacts will be mitigated by compliance with the stormwater management plan described in Section 5.2. In particular, groundwater infiltration basins are part of the project design to reduce storm-related surface water runoff from impervious areas to

recharge groundwater and to ameliorate thermal impacts. Stormwater runoff will be pretreated before entering the infiltration basins.

As stated in Section 5.2, the goal of the proposed site design is to maintain existing overall groundwater flow patterns through the site so that downgradient discharges to the river will be unchanged. Where groundwater interception and/or diversions are required, discharges from these systems will be reintroduced as groundwater flow to simulate predevelopment conditions prior to discharge off-site.

In order to minimize water quality and quantity impacts from the proposed development, groundwater recharge has been incorporated in the drainage system design. The proposed infiltration basins were designed to provide an infiltration volume that replicates existing site characteristics.

The infiltration basins will retain (with zero discharge from the basins) and recharge 100 percent of the 1-year, 24-hour storm event runoff volume. During the 2-year, 24-hour storm event, the infiltration basins begin to discharge via outlet structures to the downstream wetland areas. The existing infiltration volume that is being lost as a result of development (creation of impervious surfaces) during the 2-year, 24-hour storm event is 9.19 acre-feet (based on a total infiltration timed period of 72 hours during and post rainfall event). Infiltration Basins 1, 2 and 3 will store and infiltrate a total of 14.51 acre-feet of runoff volume during the equivalent 2-year, 24-hour storm event. Therefore, the proposed drainage system design provides an infiltration volume greater than what occurs naturally under existing conditions. Water entering these infiltration basins will be pre-treated to enhance the quality of the water that is being recharged to the ground. The DEIS used a different method of calculating infiltration, so the numbers in this FEIS reported above are not comparable to those in that document. The DEIS reported an infiltration volume of 1.30 acre-feet, which was based only on the volume of infiltration between hours 10 through 24 of the design storm event. The current calculation reports the volume from hour 0 to hour 72 of the design storm event and, as such, is a larger number. The current calculation is consistent with generally accepted practices.

8.3 Surface Waters

There are four components to surface water mitigation measures:

Direct Impacts. Direct impacts have been avoided and minimized to the greatest extent practicable by site planning and use of retaining walls and parking garages. There will be no impacts to perennial streams, most specifically the Neversink River. There will, however, be unavoidable impacts to 0.07 acres of Pond 4, to 0.37 acres of non-jurisdictional Basins 1 and 3, and to 705 lf of intermittent streams as discussed in Section 5.2.1.2. Mitigation of these impacts will be provided by creation of 0.5 acres of new pond habitat, habitat improvements to Basins 1 and 5, and creation of 800 lf of new intermittent stream. These measures are described in detail in Sections 5.2.1.2, 5.3.2.1 and 5.4.1. Supplemental wetland mitigation areas are provided should the USACE take jurisdiction over the five Basins. This mitigation is also discussed as part of the USACE application and overseen by the USACE. These areas will be monitored for success five years after their completion (Section 5.3.2.1) and monitoring reports prepared.

Floodplain Impacts. Direct impacts have been avoided and minimized to the greatest extent practicable by site planning and use of retaining walls and parking garages. There will be no impacts to the floodway. There will, however, be unavoidable impacts to the floodplain. Section 5.2.1.3 reports the filling of 7.03 acre-feet of the floodplain for the access road. Mitigation is provided through the construction of 7.03 acre-feet of new storage area in Infiltration Basin 1, Pre-Treatment Basin 1 and a compensatory storage area. Consequently there will be not net loss of floodplain storage.

Stormwater Flows. Section 5.2.1.4 describes the design of the stormwater management system that will mitigate for increased stormwater flows resulting from increased impervious areas. The New York State Stormwater Management Design Manual, 2010 edition (NYS Stormwater Manual) states that the release of stormwater from development should not exceed pre-development (natural) conditions. These standards are met by the Casino Project's stormwater management system. Table 5-2 specifically shows that stormwater peak runoff rates and volumes will not be increased by the Casino Project.

Water Quality Management. The NYS Stormwater Manual provides design standards for controlling water quality impacts from developed sites (see Section 5.2.1.5). These guidelines relate to the water quality of runoff and associated contaminants, including soil erosion and sedimentation, and to the control of thermal discharges in watersheds having streams that support cold water fisheries.

To achieve the desired pollutant removal for the proposed drainage system, the stormwater management system has been designed to incorporate SMP measures as outlined in the NYS Stormwater Manual. Each SMP is expected to remove a percentage of pollutants. According to the NYS Stormwater Manual, the Pre-Treatment Basin (wet ponds) and infiltration basins will each, in and of themselves, achieve at least 80 percent TSS and 40 percent Total Phosphorus. Additional removal will occur as stormwater passes through a series of SMPs. These measures are used in various combinations within each tributary drainage subarea to achieve the desired results.

Infiltration Basins 1, 2 and 3 have been designed to completely infiltrate the one-year storm event and, therefore, will also completely infiltrate the Water Quality Volume as required in the NYS Stormwater Manual. Designed in accordance with the sizing criteria of Chapter 4, the NYS Stormwater Manual states that the design "will be presumed to meet water quality requirements set forth in this manual." if constructed in accordance with the performance criteria. Pre-treatment has been provided for all stormwater flowing into Infiltration Basin 1, 2 and 3. Pre-treatment measures include:

- Deep sump catch basins
- Catch basin inserts
- Water quality swales
- Pre-Treatment Basins 1, 2 and 3.

Inspection and maintenance of stormwater control measures are integral to the proper treatment of the site's stormwater. The following summarizes the proposed inspection and maintenance for the stormwater controls that was set forth in Section 5.2.1.8.

- *Street sweeping:* Street sweeping will occur at least twice a year, once coinciding with the end of the winter sanding season and once during the late fall.

- *Catch Basins, Area Drains and Drop Inlets:* The removal of sediments and trash will occur when catch basins, area drains and drop inlets are cleaned out. At a minimum, catch basins, area drains and drop inlets will be inspected quarterly and cleaned on a semi-annual basis.

- *Swales:* Swales will be inspected at least semi-annually, and maintenance and repairs made as necessary. Additional inspections will be scheduled during the first few months to make sure the vegetation is adequately established. Repairs and reseeding will be done as required. Swales will be mowed at least once per year. The grass will not be cut too often, or shorter than four inches, in order to maintain the effectiveness of the swale for pollutant removal. Sediment and debris will be removed manually, at least once per year, before the vegetation is adversely impacted.

- *Pre-Treatment Basins:* After construction, the pre-treatment basins will be inspected after every major storm for the first few months to ensure proper function. Thereafter, the basins will be inspected twice per year, with cleaning occurring as needed.

  The sediment forebay located within the pre-treatment basins will be inspected and cleaned four times per year. Accumulated sediment in forebay will also be removed at this time.

- *Infiltration Basins*: Once constructed, the infiltration basin will be inspected after several storm events to confirm drainage system functions, bank stability, and vegetation growth. Problems will be addressed immediately. During the first six months of operation, the basin will be inspected immediately after significant storm events and cleaned to remove sediment buildup. The control structure will be inspected and cleaned when sediment appears to have clogged the structure. Thereafter, the basin will be inspected annually and sediment will be removed as necessary or at a minimum once every 10 years. At least twice during the growing season, the side slopes will be mowed and accumulated trash and debris will be removed.

- *Water Quality Structure*: The water quality structure (Stormceptor© or equivalent) will be inspected and maintained annually or when the sediment volume in the water quality structure reaches 15 percent of the total storage. Oil will be removed through the 6-inch inspection/cleanout pipe and sediment removed through the 24-inch diameter outlet riser pipe. Alternatively, oil will be removed from the 24-inch opening if water is removed from the treatment chamber, lowering the oil level below the drop pipes.

8.4 Wetlands

Wetland impacts have been avoided or minimized to the greatest extent practicable through site planning and design consideration (see Sections 2.3 and 5.3.2.1). As reported, however, there will be unavoidable loss of approximately 1.60 acres of vegetated and open water wetlands. Mitigation is proposed so that there will be no net loss of wetlands functions or values. There will be the creation of 4.3 acres of new vegetated wetland in a currently disturbed area next to the Neversink River. There will also be wetland enhancement areas at Basins 1 and 5. Impacts to these areas will be subject to approval by the NYSDEC and USACE, as appropriate, under Sections 401 and 404 of the Clean Water Act. The mitigation areas will be monitored for five years, with monitoring reports going to the USACE and NYSDEC. Should the USACE take jurisdiction over the five Basins, impacts will increase slightly by 0.59 acres. Supplemental wetland mitigation areas have been provided in this eventuality in order to maintain the creation ratio at approximately 3:1.

8.5 Traffic

The Casino Project, alone or in conjunction with other projects (including the proposed Concord Hotel and Casino), will generate additional traffic. The traffic analyses provided in Sections 5.7 and 6.7 and Appendix B considered traffic impacts and specific mitigating measures to minimize effects. The mitigation needs of the area immediately surrounding the site are somewhat reduced by the fact that the Casino Project is located adjacent to Interchange 107 of State Route 17, and that NYSDOT is already proposing improvements to that interchange. Specific mitigation measures, described in detail in Section 5.7.3, include:

- State Route 17 Interchange 107 improvements, in conjunction with already proposed NYSDOT improvements. Combined improvements include widening and raising the bridge over State Route 17; on-ramp and off-ramp improvements to meet interstate highway standards; acceleration lane extensions, turning radii improvements; additional lane capacity on County Highway 161; and, under full cumulative build conditions, addition of a traffic signal.

- County Highway 161 improvements include widening the roadway between Interchange 107 and the proposed site access and signalization at the new access.

- A new access road to Old County Highway and Foss Road with a signal to separate this intersection from the new site access.

- Emergency access to the site from Foss Road.

- On-site circulation to accommodate free flow movements and avoid stacking effects on public roadways.

The Tribe agreed to pay for the improvements to the local roadways as part of the Agreement with Sullivan County (Appendix D). The Tribe is also working with NYSDOT on the coordination of improvements to Interchange 107 and has discussed cost-sharing for these

improvements since NYSDOT is already planning many of the proposed improvements to Interchange 107.

8.6 Air Quality

The microscale and mesoscale analyses reported in Sections 5.8.1, 5.8.2 and 6.8 show that there will be no significant impact on air quality from the operation of the Casino Project. Mitigation measures for potential construction-related impacts include typical practices such as control of dust. These measures are implemented as part of the SWPPP.

8.7 Noise

The noise analyses in Section 5.9 and 6.9 show no significant noise impacts requiring mitigation. Mitigation measures for potential construction-related impacts include such standard practices as the use of mufflers on all equipment and the proper maintenance of equipment.

8.8 Community Services

The Casino Project will create additional demand for community services, including police, fire and emergency services, schools and health and welfare-related services. To mitigate potential impacts resulting from increased demand for services, the Tribe entered into the Agreement with Sullivan County (Appendix D). The Agreement is a binding agreement that provides funding to Sullivan County in the amount of $15 million per year. The County is obligated to allocate this funding to municipal governments in Sullivan County to mitigate impacts to the affected local communities. The Spectrum report (2004) indicated in their review of the cumulative effect of three potential gaming venues that the proposed $15 million annual payments will mitigate community service impacts.

8.9 Utilities

The Tribe has entered into service agreements with the Village of Monticello and the Town of Thompson to provide water and sewer service for the Casino Project (Appendix D). The Tribe is also responsible for the cost of the new infrastructure needed to provide this service under these agreements. Both of these providers will have excess capacity remaining for future growth in the area.

8.10 Land Use, Vegetation and Wildlife

The Casino Project will alter the existing land use, vegetation and wildlife habitat of the Gildick parcel (former auto salvage and mining uses as well as forested areas). Avoidance, minimization and mitigation measures are included in the design to address these impacts (see Section 5.13). Impacts have been avoided by the re-use of disturbed areas of the site. Impacts have also been minimized by clustering the facilities, by building parking structures instead of surface parking,

and by using retaining walls to limit grading impacts. Further mitigation is provided by the landscape plan which will use native, drought and pest resistant species with wildlife habitat values, especially in areas away from human incursion. The location of the Casino Project in a depression limits potential visual impacts. Outdoor lighting will be designed to minimize impacts to adjacent land uses. For example, using cut-off fixtures to direct lighting away from property boundaries and filters to disperse lighting evenly. These measures are an integral part of the site design and will be incorporated in the construction plans and specifications.

8.11 Greenhouse Gas Emission

The greenhouse gas (GHG) emissions analysis in Section 5.15 reveals that the project has included significant energy mitigation measures in its design, achieving a substantial reduction in GHG emissions. Building energy saving measures include high-efficiency boilers, chillers and HVAC units; Demand Control Ventilation (DCV) controls for the Main Facility; building envelope insulation that exceeds Code; lighting efficiency better than Code; high-efficiency refrigeration systems, low-energy design electronic gaming machines (EGMs); and a central energy management system. Solid waste energy mitigation consists of recycling cardboard and consumer beverage containers. Transportation energy mitigation is arranging direct bus service to the Project on a regular basis from urban areas.

9.0 Environmental Justice

Executive Order 12898 (Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations) requires that "each Federal agency shall make achieving environmental justice 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". The environmental justice review determines if there is an environmental justice population that could be affected by the project, and if that population is affected.

There is no indication of minority populations or low-income housing near the project area. There will not be, therefore, environmental justice population impacts.

The Tribe itself is considered an environmental justice community. As discussed in Section 5.10, there will be a positive impact on the tribal population.

10.0 Abbreviations

The following are common abbreviations used in this text.

ACS	American Community Survey
AST	aboveground storage tank
BIA	Bureau of Indian Affairs
Btu	British Thermal Unit
CFR	Code of Federal Regulations
cfs	cubic feet per second
cy	cubic yard
DP	Design Point
EB	eastbound
FEMA	Federal Emergency Management Agency
Fed. Reg.	Federal Register
FTE	full time equivalent
FIRM	Flood Insurance Rate Map
ft	feet
gpd	gallons per day
gpm	gallons per minute
JTP	Judgmental Test Pit
LOS	Level of Service
MGD	million gallons per day
MSL	mean sea level
MW	megawatt
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NB	northbound
NEPA	National Environmental Policy Act of 1969
NOAA	National Oceanic and Atmospheric Administration
	National Pollutant Discharge Elimination System
	Natural Resources Conservation Service
NWI	National Wetlands Inventory
NYCRR	New York Codes, Rules, and Regulations
NYNHP	New York Natural Heritage Program
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
NYSEG	New York State Electric and Gas Corporation
	New York State Office of Parks, Recreation, and Historic Preservation
	New York State Public Preservation Office
OTB	Off Track Betting

ppm	parts per million
PSD	Prevention of Significant Deterioration
psi	pounds per square inch
SB	southbound
sf	square feet
SMPs	Stormwater Management Practices
SWPPP	Stormwater Pollution Prevention Plan
sq ft	square feet
Stat.	Statute
TCNY	Trading Cove New York
TSS	total suspended solids
USACE	United States Army Corps of Engineers
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VOCs	volatile organic compounds
WA	Wetland Area
WB	westbound
WCA	Wetland Creation Area
WEA	Wetland Enhancement Area
WRA	Wetland Restoration Area

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14.0 Index

100-year, ix, x, 57, 58, 59, 122, 123, 124, 128
10-year, 57, 124, 130, 143, 244, 263
1-year, 120, 124, 127, 128, 131, 142, 261
25-year, 89, 123
2-year, viii, 57, 120, 122, 124, 261
Aboveground storage tank (AST), 76, 269
Air quality, xvi, xxii, 83, 84, 85, 181, 182, 186, 187, 189, 190, 191, 221, 241, 257, 265
Alternative, ix, iii, v, vi, vii, xvii, xix, 9, 10, 15, 16, 17, 21, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 41, 88, 118, 135, 137, 138, 152, 158, 159, 160, 166, 180, 181, 191, 192, 207, 208, 215, 217, 221, 222, 223, 226, 231
Ambulance, 101, 102
Amphibian, xii, 155
Aquatic, xi, 63, 71, 148, 151, 153, 157, 158, 234
Archaeological, xiii, 6, 19, 24, 77, 78, 79, 159, 160, 235, 272
Artesian Water Company, vi, 36, 37
Auto salvage, v, vi, xx, 1, 9, 21, 42, 43, 45, 50, 57, 59, 60, 67, 71, 103, 104, 105, 111, 118, 121, 136, 152, 154, 158, 217, 265
Bald eagle, 75, 157
Bashakill, 23
Basin, iv, viii, ix, x, xi, 26, 50, 52, 55, 57, 60, 70, 71, 104, 117, 119, 120, 121, 122, 124, 125, 126, 127, 128, 129, 130, 131, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 148, 150, 153, 156, 157, 258, 260, 261, 262, 263, 264
Bedrock, 37, 38, 39, 41, 42, 43, 44, 45, 46, 51, 115, 119, 248
Bird, xii, 155
Brook floater, xii, 74, 75, 156, 157
Buffer, 27, 121, 122, 131, 140, 143, 157, 219
Bureau of Indian Affairs, i, xiii, 1, 202, 269
Carbon monoxide (CO), xvi, 84, 85, 182, 184, 189, 190, 241
Casino Project, i, iv, v, vi, viii, x, xi, xii, xiv, xv, xvi, xvii, xviii, xix, xx, xxi, xxiv, xxv, 1, 4, 6, 9, 10, 11, 13, 14, 15, 16, 17, 18, 27, 28, 33, 36, 37, 38, 39, 41, 50, 79, 87, 89, 98, 115, 118, 119, 121, 123, 131, 134, 135, 138, 139, 140, 152, 156, 157, 160,161, 164, 166, 167, 168, 169, 171, 180, 181, 182, 183, 186, 188, 189, 191, 192, 193, 194, 195, 197, 198, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 213, 214, 215, 216, 217, 218, 219, 220, 227, 229, 232, 233, 234, 235, 241, 242, 243, 244, 245, 248, 249, 250, 252, 254, 255, 258, 260, 262, 264, 265
Catchbasin, ix, 126, 127, 128, 129, 130, 133, 263
Cayuga, 18, 271
Census, xvii, 18, 88, 90, 91, 204, 205, 271, 274
Central plant, iv, 11, 126
Chert, 78, 159
Colloidal, 116, 117, 260
Community, i, v, xviii, xix, xx, 1, 15, 85, 86, 89, 90, 101, 102, 104, 105, 112, 144, 150, 158, 164, 192, 193, 194, 195, 202, 208, 209, 217, 219, 220, 221, 245, 249, 250, 256, 258, 265, 267, 274, 275, 276, 277, 279
Commute, xviii, xix, xxiv, xxv, 83, 198, 202, 203, 208, 243, 244, 252
Compensatory storage, ix, 119, 122, 262
Concord Hotel, 15, 77, 99, 245
Construction, vii, viii, ix, x, xii, xiii, xvi, xvii, xviii, xix, xx, xxi, xxv, 4, 5, 9, 12, 15, 28, 30, 31, 32, 36, 38, 39, 43, 46, 52, 89, 95, 115, 116, 117, 118, 119, 121, 123, 130, 135, 136, 137, 139, 150, 152, 154, 155, 156, 158, 159, 160, 161, 166, 167, 181, 188, 189, 190, 191, 192, 194, 195, 196, 197, 198, 209, 211, 217, 219, 221, 222, 223, 230, 232, 233, 249, 252, 253, 255, 256, 260, 262, 263, 265, 266, 273
Convenience store, iv, 11
Cooke East, iv, 9, 12, 26, 43, 44, 45, 53, 55, 57, 60, 66, 78, 105, 111, 121, 220
Cooke West, xi, 9, 24, 26, 28, 30, 42, 43, 44, 45, 53, 55, 57, 58, 59, 60, 66, 70, 71, 72, 76, 78, 105, 111, 121, 139, 153, 159
County Highway 161, iv, x, xiv, xv, 9, 10, 13, 14, 15, 16, 25, 26, 27, 28, 30, 31, 32, 33, 34, 35, 43, 44, 52, 53, 54, 55, 57, 58, 59, 63, 67, 68, 69, 70, 79, 80, 81, 85, 86, 103, 105, 111, 115, 122, 133, 134, 135, 137, 139, 149, 154, 160, 163, 166, 167, 168, 170, 171, 172,173, 178, 181, 182, 183, 184, 185, 186, 219, 236, 237, 239, 264
Critical Environmental Areas, 69
Cultural, ii, xiii, 3, 6, 77, 78, 79, 159, 160, 272
Cumulative, x, iv, xx, xxii, xxiv, 182, 183, 184, 185, 186, 187, 188, 192, 196, 214, 215, 227, 229, 231, 232, 233, 234, 235, 236, 237, 239, 240, 241, 244, 246, 247, 248, 249, 250, 258, 264, 265
Decibel (dB), 85, 86, 191
Delaware County, 82, 164, 203, 204, 209, 211
Delaware River, 52, 258
Delineation, x, 26, 64, 67, 68, 69, 271
Department of Interior, i, 1
Dwarf wedgemussel, 75, 156
Earthwork, vii, 115, 116
Economy, iii, xviii, xix, 6, 7, 16, 18, 99, 193, 196, 197, 198, 199, 200, 201, 206, 207, 208, 220, 254, 255
Emerald Green, vii, 39
Emergency services, xix, 6, 12, 101, 208, 211, 265
Employment, v, xviii, xxiv, 17, 88, 90, 94, 95, 97, 98, 99, 100, 107, 193, 195, 196, 197, 198, 199, 200, 201, 203, 204, 206, 208, 210, 242, 243, 244, 245, 246, 247, 252
Endangered, xii, 19, 39, 69, 74, 75, 152, 156, 157, 158, 233, 257
Enhancement, viii, xi, 121, 131, 139, 140, 148, 150, 153, 255, 264, 270
Environmental Assessment, 10, 271, 273

Erosion, vii, xii, 46, 47, 48, 50, 116, 117, 118, 122, 123, 125, 135, 150, 151, 152, 154, 156, 157, 223, 256, 260, 262
European, i, 2, 6, 73
Executive Order, 17, 152, 267
Fallsburg, Town of, vi, 18, 22, 51, 77, 83, 104, 111, 209, 212, 213, 246, 253, 255, 277
Farmland, xi, ii, 3, 46, 50
FEMA, x, 57, 58, 59, 64, 122, 269
Fire, xviii, xix, 89, 101, 102, 208, 210, 211, 214, 258, 265
Fisheries, xi, 52, 70, 71, 125, 148, 153, 154, 262
Fishing easement, xi, 71, 153
Flocculation, viii, 116, 117, 260
Floodplain, ix, x, 19, 26, 57, 58, 59, 60, 64, 67, 68, 119, 122, 123, 133, 135, 144, 218, 256, 262
Floodway, ix, x, 57, 122, 262
Forest, xi, 54, 55, 56, 59, 60, 62, 63, 67, 68, 74, 103, 105, 137, 154, 155
Foss Road, iv, vi, xiv, 10, 13, 28, 29, 30, 31, 32, 67, 79, 87, 105, 111, 133, 167, 168, 173, 192, 219, 220, 237, 239, 264
Fuel, xvi, xx, 76, 158, 188, 189, 190, 214, 216, 241, 243, 249
Gaming tables, iii, 11
Gas, xvi, xx, 3, 15, 76, 103, 104, 128, 188, 189, 199, 207, 214, 216, 222, 249, 269, 276
Geology, 41, 42, 43, 115, 118, 232, 233, 256
Gildick, v, vii, 5, 9, 11, 16, 26, 27, 28, 30, 37, 42, 43, 45, 50, 52, 53, 54, 55, 57, 58, 59, 66, 67, 68, 70, 71, 76, 78, 103, 104, 105, 111, 115, 116, 122, 181, 265, 271
Government, xi, ii, iii, xviii, 3, 6, 88, 89, 105, 193, 201, 202, 209, 210, 271
Gravel, v, 16, 21, 37, 38, 43, 45, 47, 50, 51, 52, 71, 117, 141, 165, 190, 271
Groundwater, vii, viii, ix, xi, xii, 7, 36, 37, 39, 50, 51, 52, 53, 54, 55, 56, 63, 68, 76, 88, 89, 118, 119, 120, 127, 131, 132, 133, 134, 135, 140, 141, 142, 149, 153, 232, 248, 249, 256, 258, 260, 261
Habitat, viii, xi, xii, 46, 52, 60, 70, 71, 73, 74, 75, 121, 135, 136, 140, 143, 148, 149, 151, 153, 154, 155, 156, 157, 218, 234, 261, 265
Hardwood, 59, 60, 63, 136
Hazardous materials, xiii, 76, 117, 129, 158, 159, 234, 260
Heritage, iii, xii, 6, 7, 59, 208, 269, 271, 276
Historical, ii, xiii, 3, 16, 17, 19, 24, 25, 30, 77, 78, 79, 159, 160, 235
Hospital, 102
hotel, i, iii, vii, xviii, xx, xxi, 1, 9, 11, 12, 17, 24, 26, 60, 78, 99, 105, 107, 115, 188, 193, 203, 207, 213, 214, 215, 216, 217, 219, 222, 250, 254, 258
Hotel, 15, 18, 77, 99, 105, 245, 249
Housing, v, xvii, xviii, xix, xxiv, xxv, 7, 15, 17, 88, 90, 91, 92, 93, 193, 195, 198, 204, 205, 212, 219, 242, 244, 245, 246, 247, 252, 253, 255, 257, 267, 277
Hudson River, 17
Induce, xxv, 252, 258
Induced, xxiii, xxv, 157, 171, 172, 174, 196, 197, 198, 200, 235, 252, 253, 254, 255, 256, 257, 258, 259
Infiltrate, viii, 57, 120, 127, 128, 131, 261
Infiltration, iv, viii, ix, 12, 39, 51, 117, 119, 120, 122, 124, 125, 126, 127, 128, 130, 131, 134, 142, 149, 156, 157, 260, 261, 262, 263
Integrated Pest Management, x, 137, 223
Interchange 104, 21
Interchange 107, ix, iv, vi, xi, xiv, xv, xx, 9, 13, 16, 21, 22, 28, 30, 33, 34, 35, 53, 58, 67, 71, 76, 77, 79, 80, 102, 105, 133, 153, 164, 166, 167, 181, 210, 217, 232, 236, 240, 241, 264
Intermittent, viii, x, 27, 52, 53, 54, 55, 56, 57, 58, 67, 68, 70, 71, 86, 121, 122, 137, 138, 139, 140, 144, 261
Intersection, iv, xiii, 13, 28, 31, 32, 34, 35, 36, 37, 69, 77, 79, 80, 81, 85, 133, 134, 162, 164, 165, 166, 167, 168, 173, 182, 183, 184, 185, 186, 237, 239, 264
Interstate 86, iv, xv, xxiv, 10, 13, 19, 33, 35, 80, 164, 167, 235, 273
Iroquois, 2
Irrigation, xx, 38, 119, 136, 214
Jones Road, 105
Justice, 101, 209, 267
Kiamesha Creek, 38, 58, 59, 70, 71
Kiamesha Lake Wastewater Treatment Facility, v, vii, 15, 38, 248
Land use, ix, x, vi, xx, xxi, xxv, 19, 21, 22, 23, 104, 105, 107, 136, 217, 218, 219, 220, 221, 249, 250, 255, 258, 265
Landscape, vii, x, xi, xx, xxi, 38, 118, 131, 136, 137, 148, 149, 155, 214, 218, 223, 265
Level of Service (LOS), xiii, xv, 81, 160, 161, 162, 163, 173, 182, 237, 239, 240, 248, 249, 269
Lighting, xxi, 217, 218, 219, 222, 266
Local Government Agreement, xi, xiv, xx, 201, 202, 209, 210, 211, 212, 213, 245, 264, 265
Mamakating, Town of, vi, 18, 23, 102
Mammal, xii, 155
Mesoscale analysis, xxiv, 186, 187, 229, 241, 265
Microscale analysis, xvi, 85, 182, 241, 265
Mined Lands Reclamation, ii, 5
Mining, ix, vi, x, xi, xx, 1, 5, 9, 16, 21, 24, 43, 45, 50, 51, 52, 57, 59, 60, 71, 103, 104, 105, 111, 117, 118, 120, 121, 122, 135, 136, 140, 143, 148, 152, 153, 154, 158, 191, 217, 219, 221, 265
Mitigation, x, viii, ix, x, xi, 4, 118, 121, 122, 125, 131, 134, 136, 137, 138, 139, 140, 143, 144, 149, 150, 151, 152, 155, 161, 182, 190, 233, 235, 245, 257, 260, 261, 262, 264, 265
Mobile sources, xvi, 83, 182, 241
Mohawk Mountain Resort and Casino, 18, 242, 245, 248, 249, 271, 273
Mohegan Sun, 11, 19, 168, 170, 180, 214, 215, 217
Mohican, i, ii, 1, 3, 6, 79, 88
Mohican North Star Casino and Bingo, ii, 3, 88
Monitoring, xi, xii, 76, 83, 84, 137, 141, 150, 151, 223, 261, 264
Monticello raceway, 11, 14, 18, 19, 21, 242, 249, 271, 273
Monticello, Village of, iv, vi, vii, xx, 10, 11, 14, 16, 18, 19, 21, 36, 39, 50, 67, 68, 77, 83, 101, 102, 103, 104, 105, 107, 112, 119, 202, 209, 211, 212, 214, 220, 242, 245,

246, 248, 249, 250, 253, 255, 258, 259, 265, 271, 272, 273, 274, 277
Munsee, xi, i, 1, 10, 12, 78, 84, 187, 276, 277
Mussel, vii, 39, 74, 156, 157, 272
National Ambient Air Quality Standard (NAAQS), xvi, 83, 84, 85, 182, 183, 184, 185, 186, 229, 241, 269
National Pollutant Discharge Elimination System (NPDES), ii, vii, xxvi, 4, 5, 116, 135, 158, 256, 260, 269
Native species, 143
Neversink River, xi, iv, vii, viii, ix, x, xi, xii, xvii, xxi, 9, 12, 21, 22, 24, 27, 37, 38, 39, 42, 43, 50, 51, 52, 53, 54, 55, 57, 58, 59, 60, 66, 67, 68, 70, 71, 74, 75, 103, 111, 118, 119, 121, 122, 127, 131, 133, 134, 136, 140, 142, 143, 144, 148, 149, 153, 155, 156, 157, 192, 213, 218, 219, 232, 233, 234, 261, 264, 272
New Source Review, ii, xvi, xvii, 4, 188, 189
New York Freshwater Wetlands Act, 63, 257
New York Natural Heritage Program (NYNHP), 59, 60, 69, 74, 75, 156, 157, 269
New York State Department of Environmental Conservation (NYSDEC), vii, xi, xii, 4, 5, 39, 50, 53, 69, 70, 71, 76, 83, 84, 116, 117, 118, 119, 122, 130, 131, 138, 139, 152, 153, 157, 158, 159, 213, 219, 233, 256, 261, 264, 269
New York State Department of Transportation (NYSDOT), iv, vi, xv, 10, 13, 16, 33, 34, 35, 79, 84, 85, 133, 161, 164, 165, 166, 167, 180, 181, 182, 187, 232, 235, 264, 269, 271, 273, 276
New York State Office of Parks, Recreation and Historic Properties (NYSOPPRHP), xiii, 77, 78, 79, 159, 160, 269
New York State Public Preservation Office (NYSPPO), xiii, 77, 269
Noise, xi, xvii, 85, 86, 173, 181, 191, 192, 241, 257, 265
NO_x, xvi, xxiv, 182, 186, 187, 188, 189, 190, 229, 241
Oil, xii, xiii, xvi, xx, 75, 76, 77, 128, 130, 158, 188, 189, 207, 214, 216, 249, 257, 263
Old County Highway, ix, iv, vi, xiv, 10, 13, 28, 30, 31, 32, 44, 57, 79, 80, 81, 103, 163, 168, 219, 239, 264
Old Route 17, xiv, 14, 34, 35, 67, 69, 77, 79, 80, 85, 105, 133, 163, 168, 171, 182, 184, 185, 186, 236, 237, 239
Oneida, i, 2, 4, 17, 79
Orange County, xv, xviii, xxiv, 83, 84, 89, 90, 102, 164, 165, 166, 179, 186, 187, 188, 198, 202, 203, 204, 205, 208, 209, 211, 229, 241, 257, 273
Ozone, xvi, 83, 84, 85, 182, 183, 187, 188
Parking garage, iii, iv, 9, 121, 131, 139, 261, 262
Particulate Matter (PM), xvi, 189, 190, 239, 240
Peak hour, 173, 214, 238
Permit, ii, vii, xvi, xvii, 4, 5, 38, 39, 50, 116, 133, 138, 150, 154, 188, 189, 215, 216, 250, 256, 260, 273, 276, 277
Phase I, iii, iv, v, vii, viii, x, xv, xvi, xviii, xix, xx, 9, 11, 12, 14, 76, 115, 119, 121, 136, 137, 138, 139, 188, 189, 190, 195, 196, 200, 207, 214, 215, 217, 227, 248, 249, 254
Phase II, iii, iv, v, vii, viii, x, xv, xviii, xix, xx, 9, 12, 14, 115, 119, 121, 136, 137, 138, 139, 188, 189, 195, 196, 207, 214, 215, 217, 227, 248, 249, 254
Pike County, xviii, 90, 198, 203, 204, 205, 208, 211
Pine Hills Golf Course, 3
Police, xix, 36, 101, 208, 209, 210, 265
Pond, viii, x, xi, 42, 44, 50, 52, 53, 54, 55, 57, 58, 66, 68, 70, 71, 76, 104, 117, 120, 121, 125, 126, 127, 128, 129, 135, 137, 139, 140, 141, 142, 143, 150, 153, 261, 262, 275
Population, i, vi, xviii, xxv, 2, 17, 18, 75, 90, 91, 95, 101, 156, 164, 179, 202, 208, 210, 211, 212, 220, 243, 246, 252, 255, 267
Propane, xvi, xx, 70, 188, 216
Public comment, i, 1
Public transportation, xvi, 83, 161, 180
Pump station, xiii, xx, 13, 15, 38, 160, 215, 220, 249, 258
Raleigh Hotel, 105
Reference wetland, xi, 144
Regional Input-Output Modeling System II (RIMS II), xviii, 195, 196, 197, 198, 199, 200, 201
Reptile, xii, 155
Reservation, i, xvii, 3, 6, 15, 78, 88, 89, 193, 194
Rock Hill, 39, 102, 104, 202, 211, 216
Roof, ix, 126, 127, 157
Rossini, v, 9, 16, 25, 26, 42, 43, 44, 45, 53, 55, 56, 59, 67, 68, 78, 105, 111, 121
Runoff, iv, viii, ix, xi, 12, 52, 53, 54, 55, 57, 58, 117, 119, 120, 121, 123, 124, 125, 126, 127, 128, 131, 133, 134, 135, 142, 143, 148, 149, 153, 156, 157, 232, 233, 252, 260, 261, 262
Schools, xix, 88, 102, 194, 202, 208, 209, 211, 212, 242, 246, 247, 265
Sediment, viii, xii, 57, 58, 104, 117, 118, 123, 124, 126, 127, 128, 130, 133, 134, 135, 148, 149, 150, 152, 156, 157, 232, 256, 260, 263
Sediment forebay, 123, 127, 128, 130, 156, 263
Seneca Indian Nation, v, 17
Service station, i, iii, xiii, 1, 9, 11, 126, 128, 158, 207, 219
Sheldrake Stream, 50, 58, 59, 70, 71, 74
Signalization, 173, 237, 239, 264
Site access, ix, iv, 13, 28, 30, 167, 190, 264
Slot machines, iii, 3, 10, 11
SO_2, xvi, 83, 84, 85, 182, 183, 184, 185, 189, 190, 241
Socioeconomics, ix, xi, xvii, xxii, xxiv, xxv, 87, 89, 193, 194, 242, 244, 252
Softwood, x, 59, 60, 63, 136, 155
Soil, ix, ii, vii, x, xii, xxii, 5, 19, 37, 39, 44, 45, 46, 48, 50, 51, 52, 63, 64, 76, 78, 115, 116, 117, 118, 120, 121, 122, 123, 125, 127, 135, 136, 140, 143, 150, 151, 152, 190, 232, 256, 260, 262, 272
State Route 17, ix, i, iv, vi, viii, xiv, xv, xvii, xxi, xxiii, xxiv, 1, 9, 13, 14, 16, 17, 18, 19, 21, 23, 24, 27, 28, 33, 34, 35, 37, 38, 44, 52, 53, 57, 58, 67, 69, 74, 77, 79, 80, 81, 82, 85, 86, 101, 102, 105, 111, 115, 121, 122, 133, 134, 137, 149, 160, 163, 164, 165, 166, 167, 168, 170, 171, 173, 175, 178, 179, 180, 181, 182, 184, 185, 186, 191, 202, 210, 213, 217, 219, 232, 235, 236, 237, 238, 239, 240, 255, 264, 272, 273
Stockbridge, xi, i, ii, v, 1, 2, 3, 4, 10, 12, 15, 78, 84, 187, 276, 277, 279

Stockbridge-Munsee, i, v, 1, 10, 12, 15, 78, 84, 187, 276, 277, 279
Stormwater, x, xi, iv, viii, ix, xi, xii, 12, 19, 26, 39, 57, 58, 116, 117, 118, 119, 120, 121, 123, 124, 125, 126, 127, 128, 129, 130, 131, 133, 134, 136, 138, 139, 140, 142, 149, 153, 156, 157, 233, 252, 260, 262, 263, 270, 272, 273
Stormwater management, x, xi, iv, ix, xi, xii, 12, 19, 26, 118, 119, 123, 124, 125, 126, 128, 129, 130, 133, 134, 138, 142, 149, 153, 156, 157, 260, 262, 270, 273
Stormwater Pollution Prevention Plan (SWPPP), xi, viii, xiii, 116, 117, 118, 156, 159, 260, 265, 270
Stream (see also Waterway), xi, iii, viii, x, 6, 24, 26, 27, 50, 52, 53, 54, 55, 56, 57, 58, 59, 67, 68, 70, 71, 74, 121, 122, 123, 125, 131, 133, 135, 137, 138, 139, 140, 143, 150, 157, 195, 261, 262, 274, 275
Structured parking, iv, 11, 26, 27, 136, 138
Sullivan County, v, vi, xv, xviii, xix, xx, xxi, xxiv, xxv, 1, 9, 10, 15, 16, 17, 18, 19, 43, 50, 69, 71, 77, 82, 83, 84, 87, 89, 90, 91, 92, 93, 95, 97, 98, 99, 100, 101, 102, 103, 104, 105, 107, 112, 133, 160, 164, 165, 179, 180, 188, 196, 198, 199, 200, 201, 202, 203,204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 216, 217, 220, 230, 231, 232, 242, 244, 245, 246, 247, 250, 252, 253, 256, 258, 271, 272, 273, 274, 275, 277
Suspended particles, viii, 117
Suspended solids, ix, 128, 270
Tannery Brook, 58, 69, 71, 249
Tax, xix, xxv, 195, 197, 198, 201, 202, 209, 245
Thermal impacts, ix, xi, 71, 119, 125, 127, 130, 131, 134, 149, 153, 156, 157, 158, 222, 223, 261, 262, 269
Thompson, Town of, i, iv, v, vi, vii, xiii, xx, 1, 10, 14, 15, 18, 36, 37, 38, 39, 52, 57, 58, 84, 90, 91, 92, 93, 97, 101, 102, 103, 105, 112, 160, 164, 202, 208, 211, 214, 215, 217, 220, 242, 245, 248, 249, 250, 253, 255, 258, 265, 274, 275, 277
Threatened, xii, 19, 69, 74, 75, 152, 156, 157, 158, 233, 257
Title V, ii, xvi, xvii, 4, 189
Topography, viii, 26, 43, 44, 111, 116, 118, 168, 218, 219, 232, 233, 256, 260
Tourism, v, vi, xviii, 17, 18, 98, 99, 195, 220
Triangle floater, 74
U.S. Army Corps of Engineers (USACE), xi, ii, x, xi, 4, 24, 27, 63, 64, 68, 69, 121, 139, 148, 150, 231, 261, 264, 270, 274, 277
U.S. Environmental Protection Agency (USEPA), ii, vii, xi, 4, 5, 83, 84, 116, 121, 127, 129, 139, 182, 230, 270, 274, 275, 277
Ulster County, v, xviii, 17, 18, 84, 90, 102, 198, 203, 204, 205, 208, 209, 211, 231
Unemployment, xvii, 88, 98, 242, 243
United States Fish and Wildlife Service (USFWS), xii, 69, 74, 75, 152, 156, 158, 233, 270
Upland, x, xi, 24, 51, 54, 55, 56, 59, 60, 63, 64, 66, 68, 71, 128, 135, 143, 146, 151, 154, 155
Utilities, vi, xx, 9, 10, 14, 19, 21, 23, 103, 116, 118, 135, 137, 152, 154, 155, 158, 159, 181, 192, 195, 214, 217, 220, 248, 249, 256, 257, 265
Utility yard, 26, 121
Vegetation, ix, x, xi, xxii, 59, 60, 62, 63, 64, 67, 68, 70, 71, 73, 74, 127, 128, 130, 131, 135, 136, 137, 143, 144, 148, 152, 153, 154, 155, 219, 233, 234, 257, 263, 265
Visual, xi, xii, xx, xxi, 23, 25, 76, 136, 141, 213, 217, 218, 219, 266
Volatile Organic Compounds (VOC), xvi, xxiv, 182, 186, 187, 188, 189, 190, 229, 241, 270
Wastewater, ix, xi, v, vii, xi, xiii, xvii, xx, 10, 14, 15, 16, 19, 36, 38, 39, 41, 44, 58, 59, 67, 68, 69, 70, 71, 74, 75, 77, 88, 103, 105, 116, 135, 137, 157, 160, 194, 214, 215, 220, 248, 249, 258
Water quality, ii, viii, ix, xi, 5, 37, 53, 57, 58, 59, 118, 119, 120, 122, 125, 126, 127, 130, 131, 134, 140, 149, 153, 156, 157, 232, 233, 234, 256, 261, 262, 263, 272, 273
Water quantity, ix, 122
Water supply, vi, vii, xi, xx, 10, 14, 36, 37, 41, 44, 53, 67, 68, 77, 89, 103, 105, 111, 135, 137, 214, 220, 248, 258
Water tower, iv, 11, 134
Watershed, 23, 52, 53, 57, 103, 232, 233, 256, 275
Waterway, ix, x, 54, 55, 56, 63, 121, 271
Wayne County, xviii, 90, 198, 203, 204, 205, 208, 211
Wetland, ix, x, xi, ii, iv, vi, viii, ix, x, xi, xii, xxii, 4, 5, 7, 12, 19, 21, 22, 23, 24, 25, 26, 27, 29, 30, 34, 41, 46, 51, 52, 57, 58, 59, 63, 64, 66, 67, 68, 69, 70, 71, 104, 116, 119, 120, 121, 122, 125, 127, 128, 131, 132, 133, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 168, 218, 233, 257, 261, 264, 269, 270, 271, 272, 274
Wetland creation, iv, viii, xi, xii, 12, 51, 121, 127, 131, 132, 140, 142, 143, 144, 148, 150, 151, 157
Wildlife, xi, xii, 7, 23, 46, 69, 71, 72, 73, 74, 136, 137, 140, 143, 147, 148, 149, 151, 153, 154, 155, 156, 158, 218, 234, 257, 265, 270, 274, 276, 277
Wisconsin, i, xvii, 1, 2, 6, 7, 11, 15, 88, 89, 193, 194, 271, 275
Zoning, x, 19, 21, 104, 105, 111, 250, 255, 256, 258, 259

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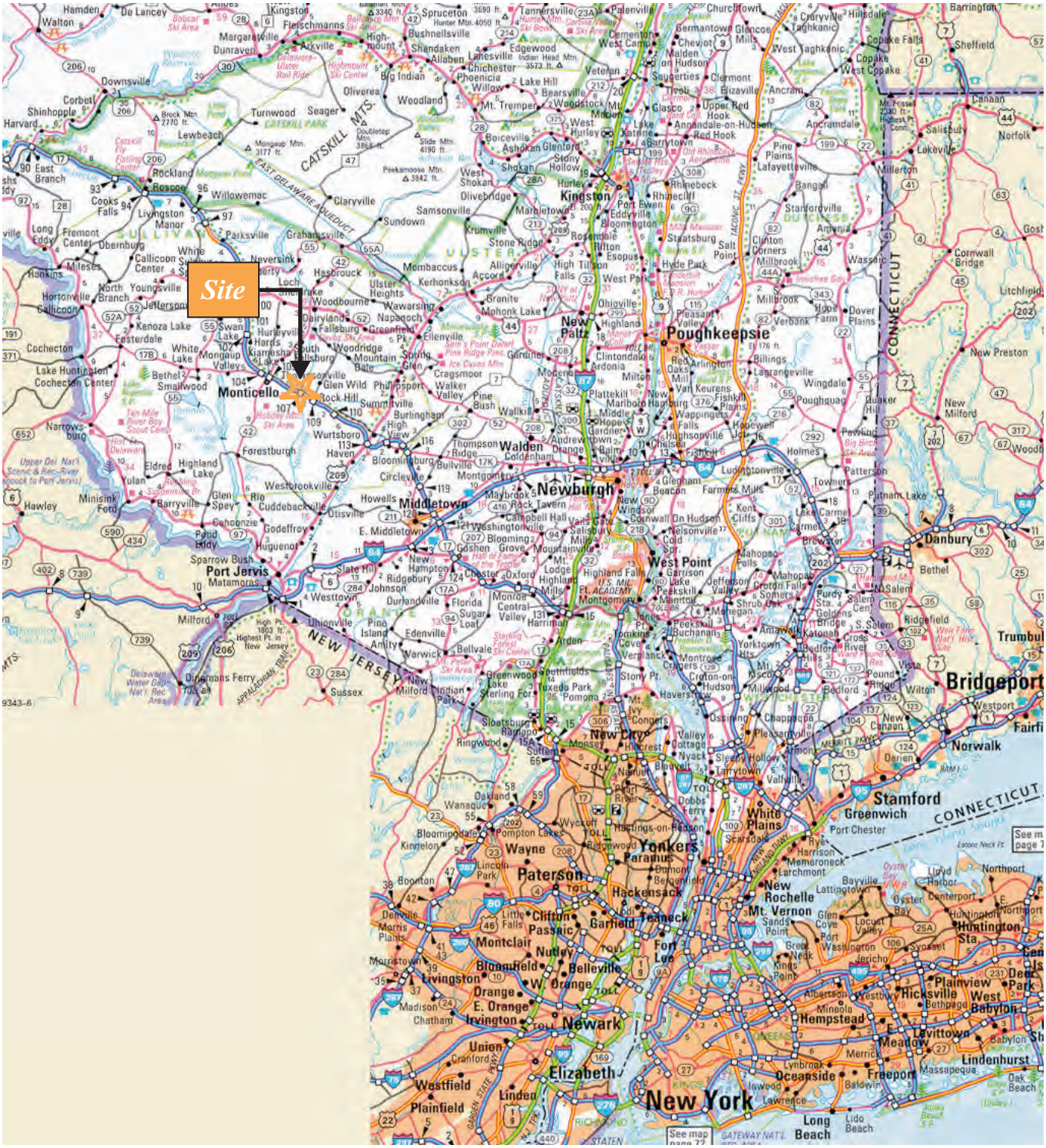


15 0 3.75 7.5 15

Approximate Scale in Miles

Source: Randy McNally Road Atlas
Map Printed, 1999
Page 71

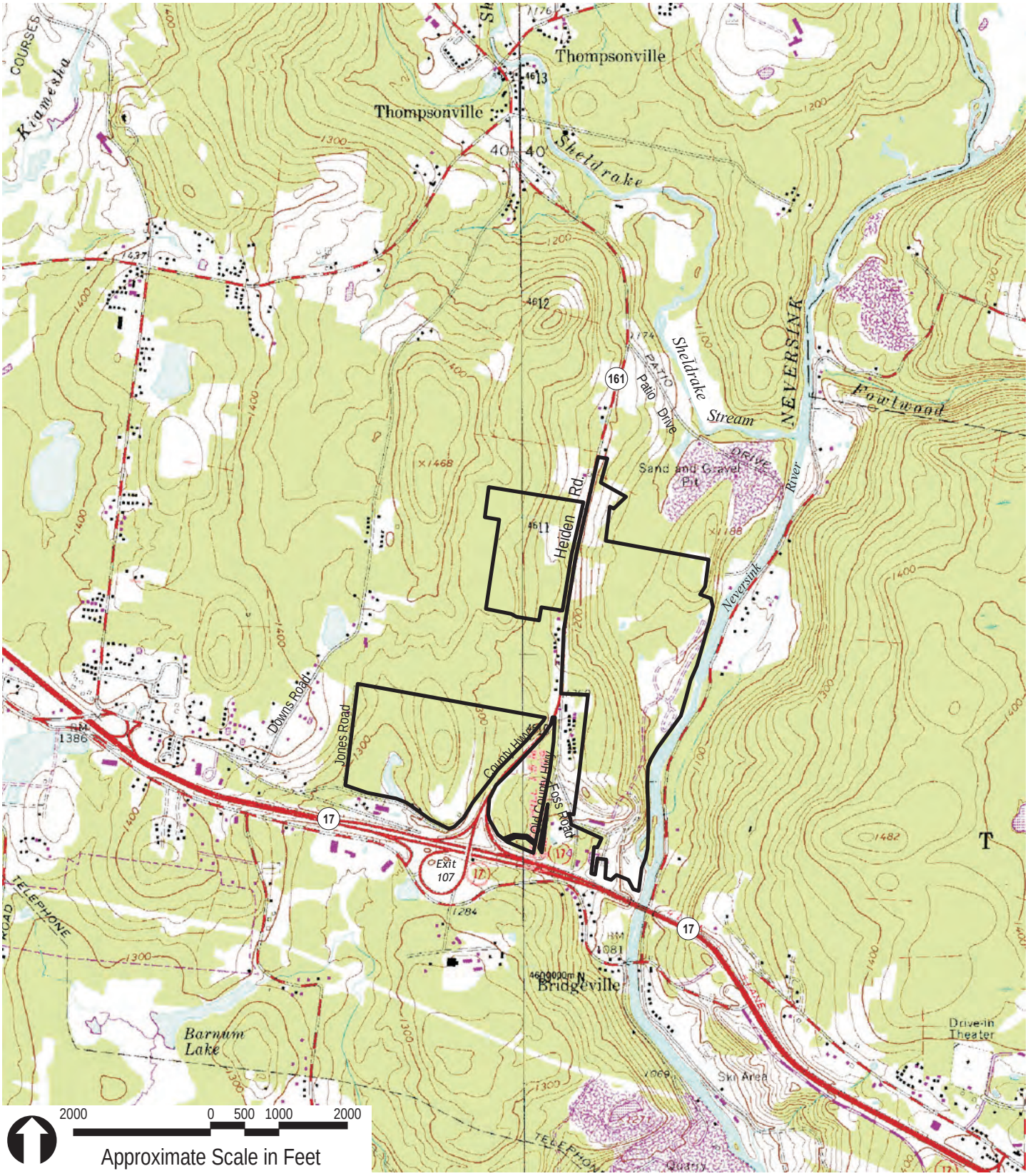
Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Regional Location

Figure 1-1

Fig 1-2_3478_slm.cdr



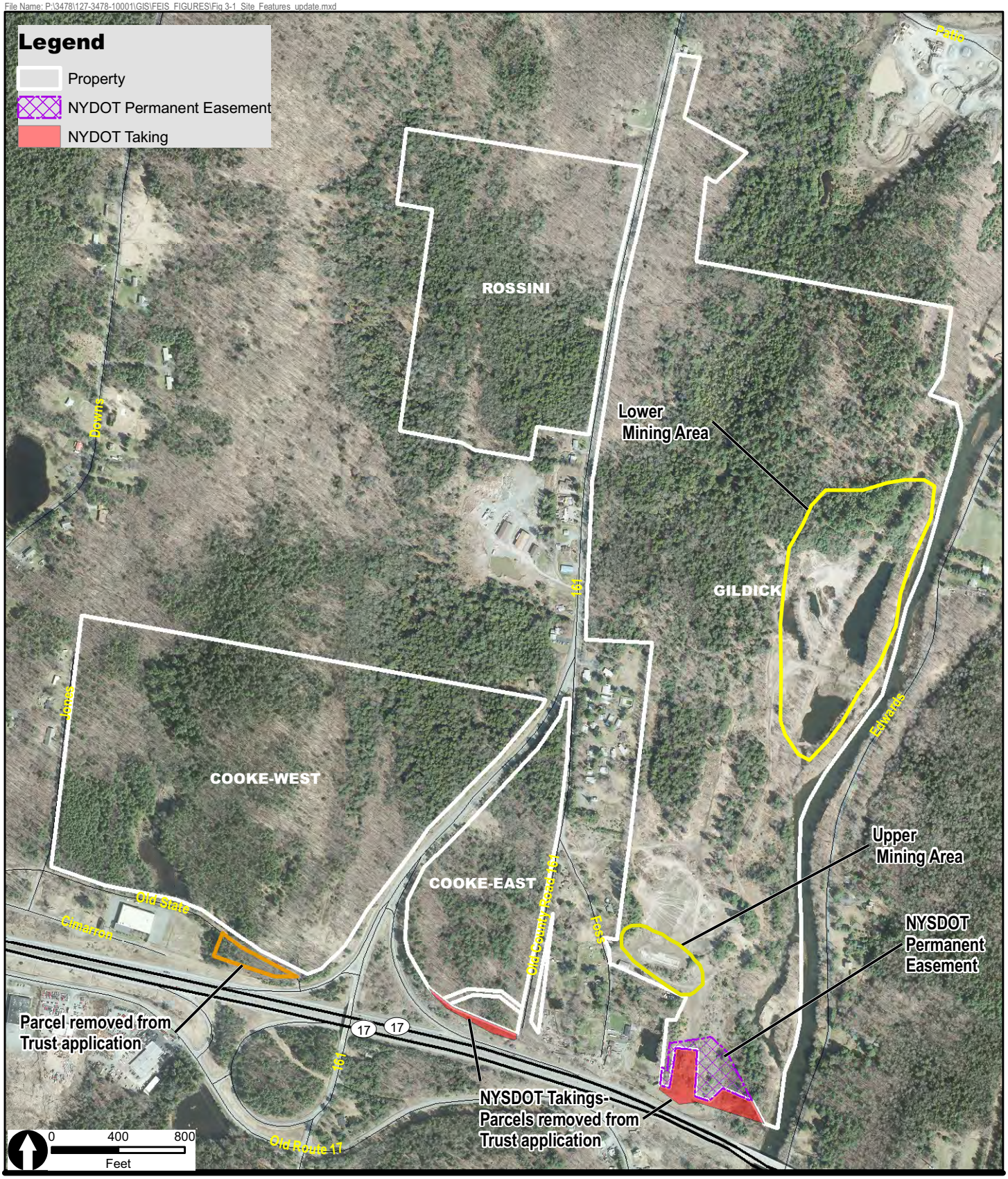
Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Site Location

Figure 1-2

Date Printed: 1/20/2012
File Name: P:\3478\127-3478-10001\GIS\FEIS_FIGURES\Fig 3-1_Site_Features_update.mxd



Source:
Airphoto-New York State
GIS 2010

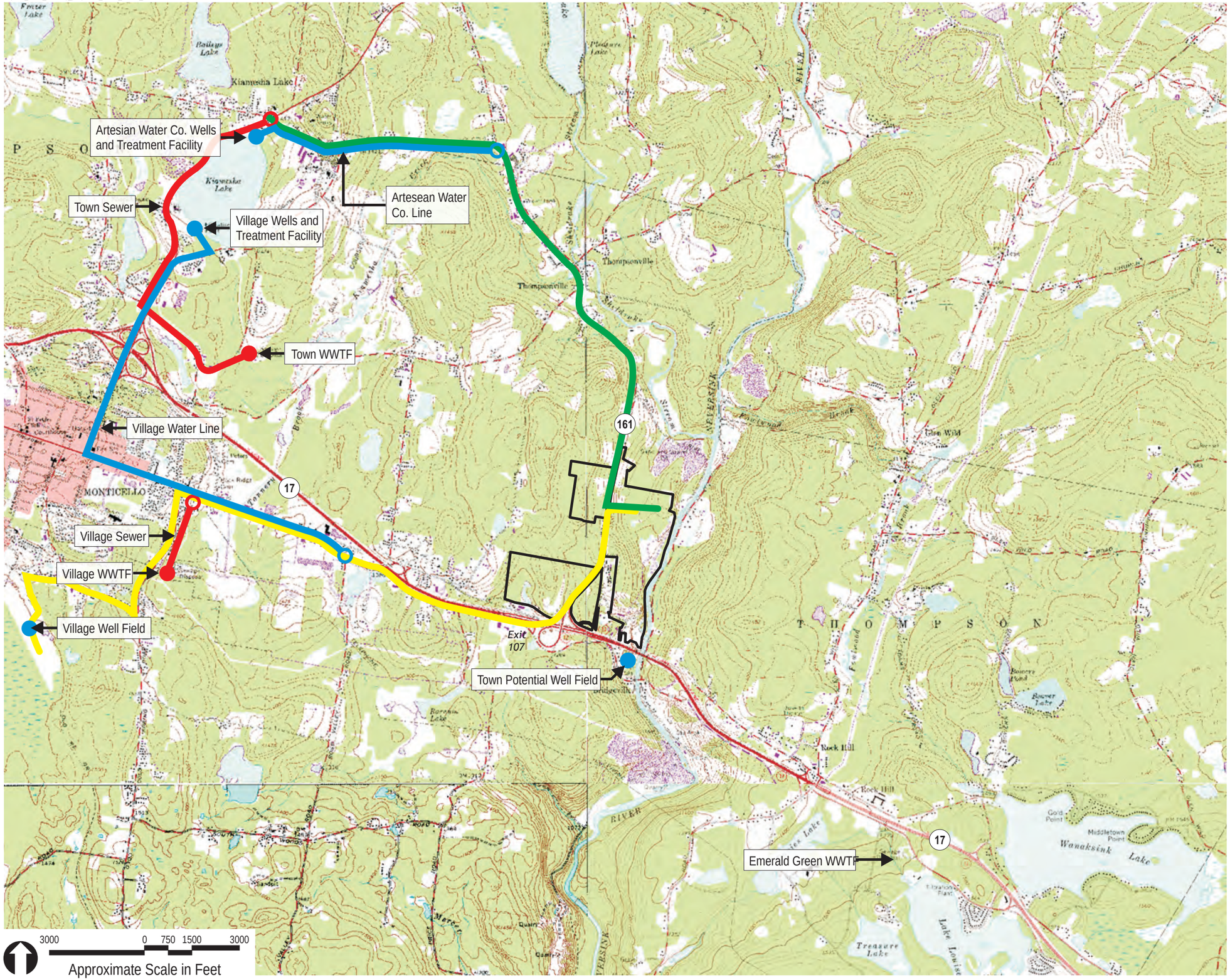
Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Site Features

Figure 3-1

Fig 3-2_3418_existing_proposed_water_sewer_service.cdr



Legend

- Existing Sewer Line
- Existing Water Line
- Potential Sewer Connection Point
- Potential Water Connection Point
- Facility
- Proposed Connection to Village of Monticello System
- Proposed Town of Thompson, Connection to Kiamesha WWTF

TETRA TECH

Stockbridge-Munsee Casino
Thompson, New York

Existing and Proposed Water and Sewer Service

Figure 3-2

KEY

1 Main Entrance

2 Phase 1 Casino
1,500 Valet Spaces Below
Building Service/
Employee Drop-Off Below

3 Phase 1 Parking
5,000 Sp.@ 6 Levels

4 Phase 1 Employee Parking
1,500 Sp.@ 5 Levels

5 EMT/Fire/Tribal Court
In Employee Garage

6 Stormwater Management

7 Water Tower

8 Service Station

9 Warehouse & Storage
30,000 sf/150 Parking Spaces

10 Emergency Access

11 Utility Yard/
40,000 sf Power Plant

12 Phase 1 Parking
330 Spaces

13 Phase 2 Hotel
750 Rooms @ 15 Floors

14 Phase 2 Hotel Parking
900 Spaces

15 Primary Wetland Mitigation

16 Supplemental Wetland Mitigation

LEGEND

Pond

Wetland

Streams & River

Property Line

100-year Floodplain

100-year Floodway

600 0 150 300 600

Approximate Scale in Feet

Stockbridge-Munsee Casino
Thompson, New York

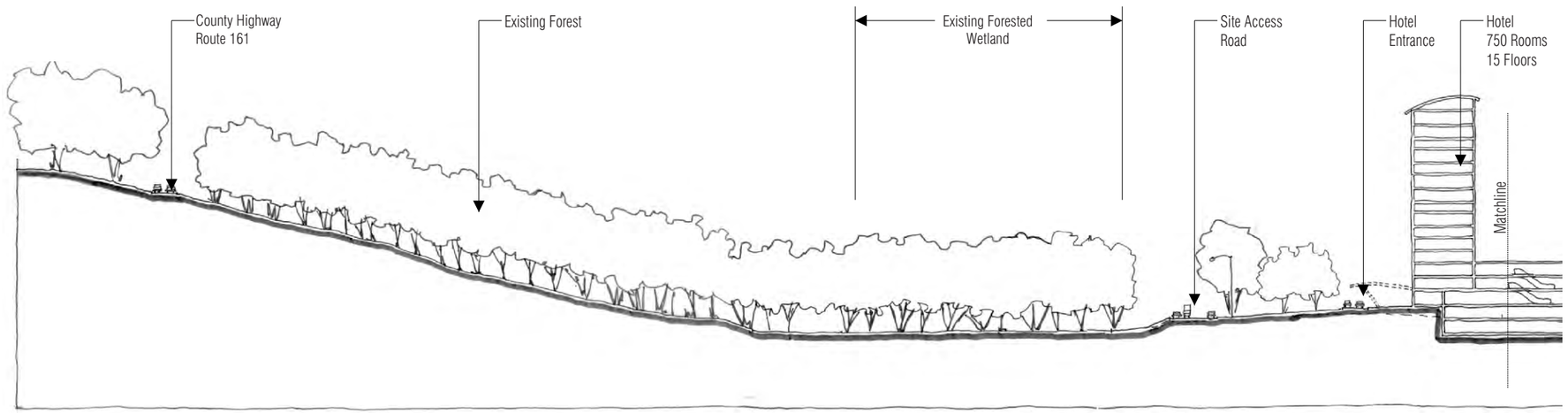
TETRA TECH

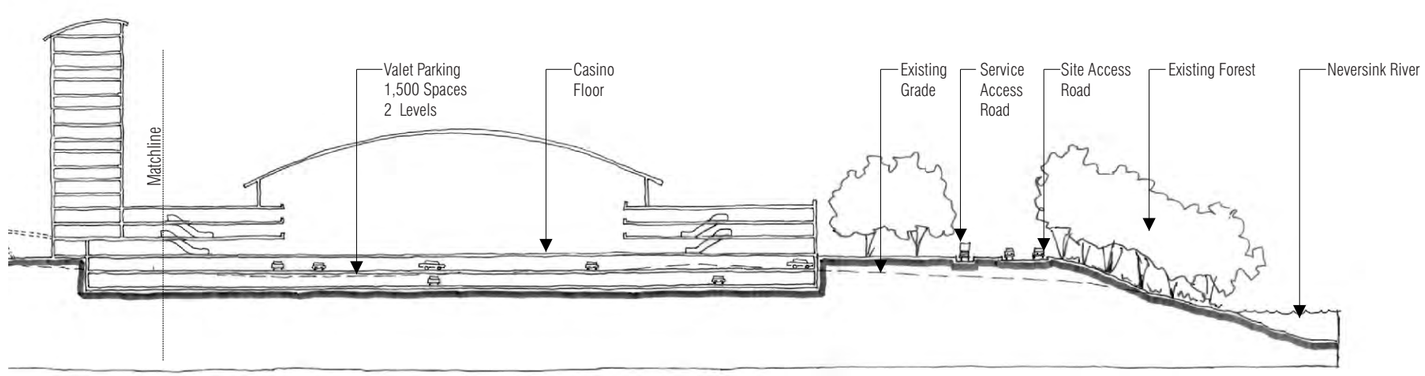
EDAW

Proposed Site Plan

Figure 3-3

Fig 3-4A+B_3478_site_plan_cross_sections.cdr





East/West Cross Section Through Site at Casino

125 31.25 25 62.5 125

Approximate Scale in Feet

TETRA TECH

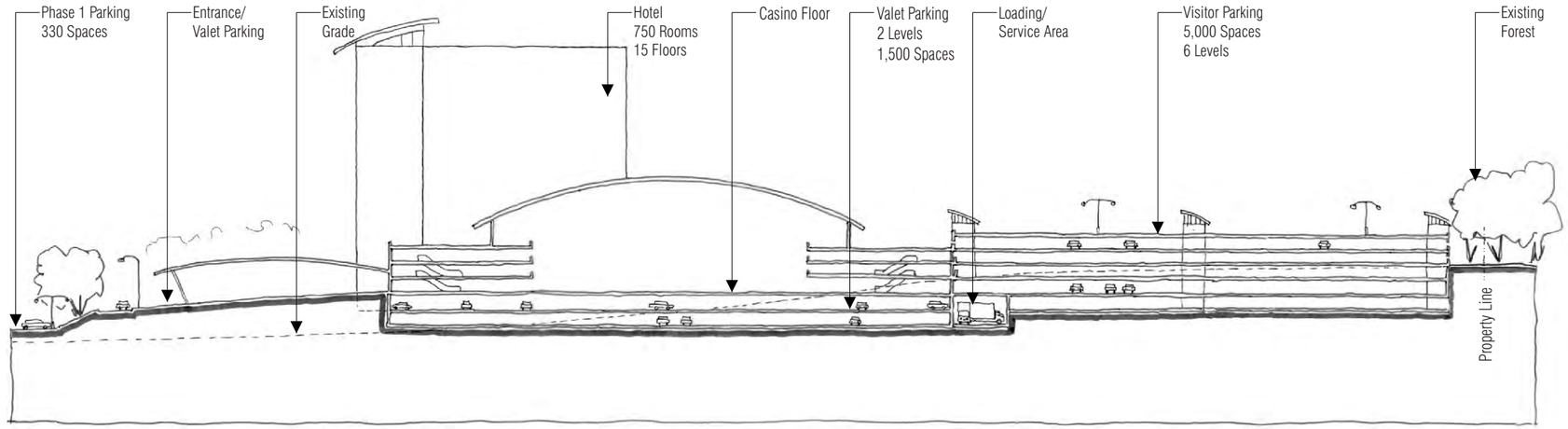
EDAW

Stockbridge-Munsee Casino
Thompson, New York

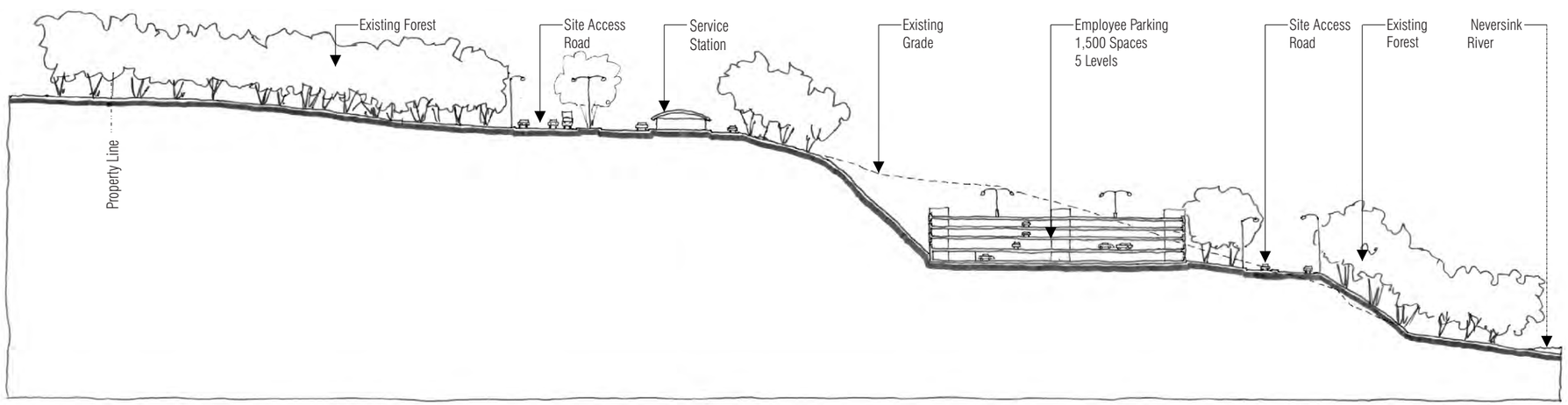
Site Plan
Cross Sections

Figure 3-4A

3478_site_plan_cross_sections.cdr



North/South Section Through Casino and Parking Structure



East/West Cross Section Through Site at Employee Parking

125 31.25 25 62.5 125

Approximate Scale in Feet

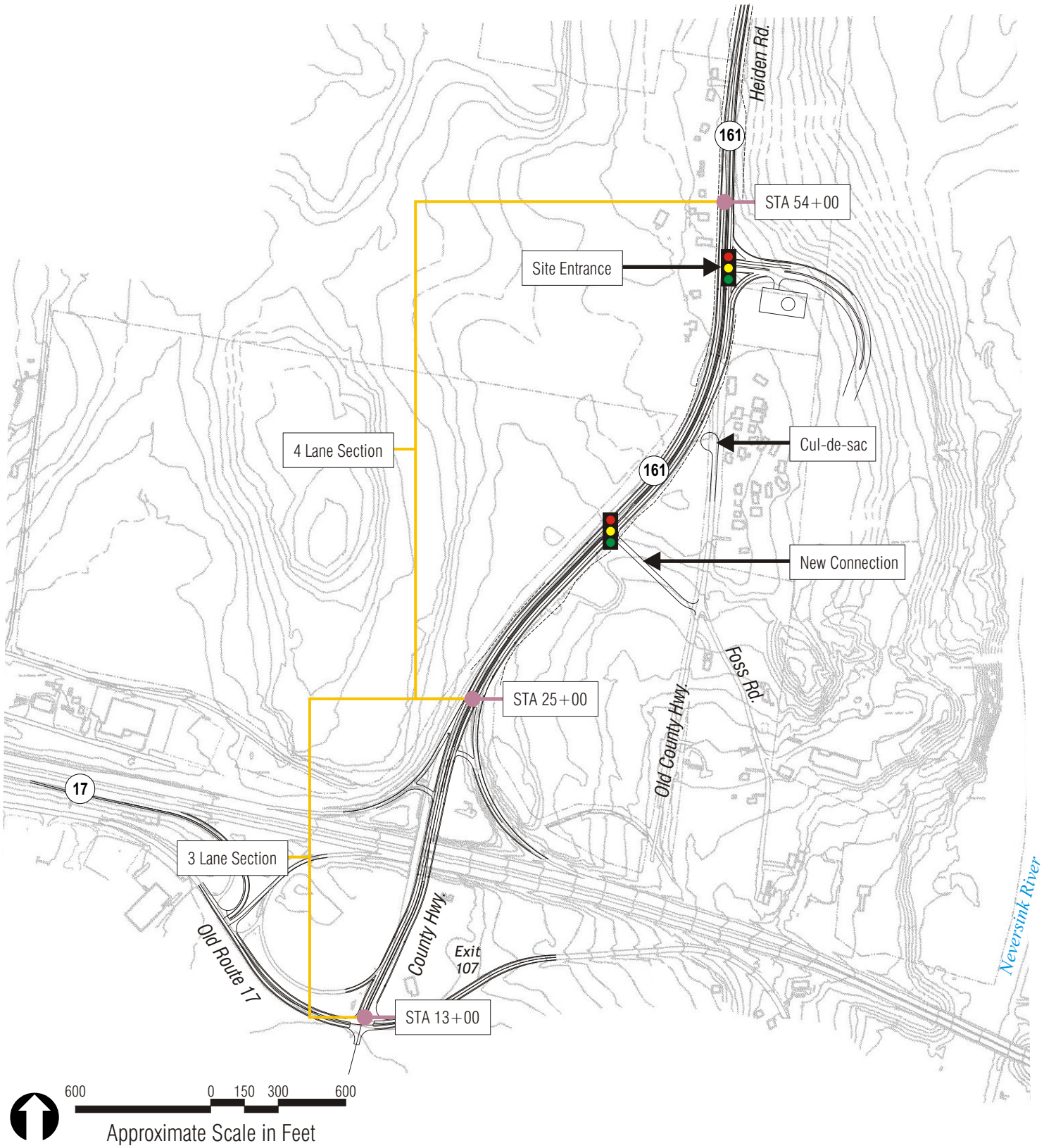
TETRA TECH

EDAW

Stockbridge-Munsee Casino
Thompson, New York

Site Plan
Cross Sections

Figure 3-4B



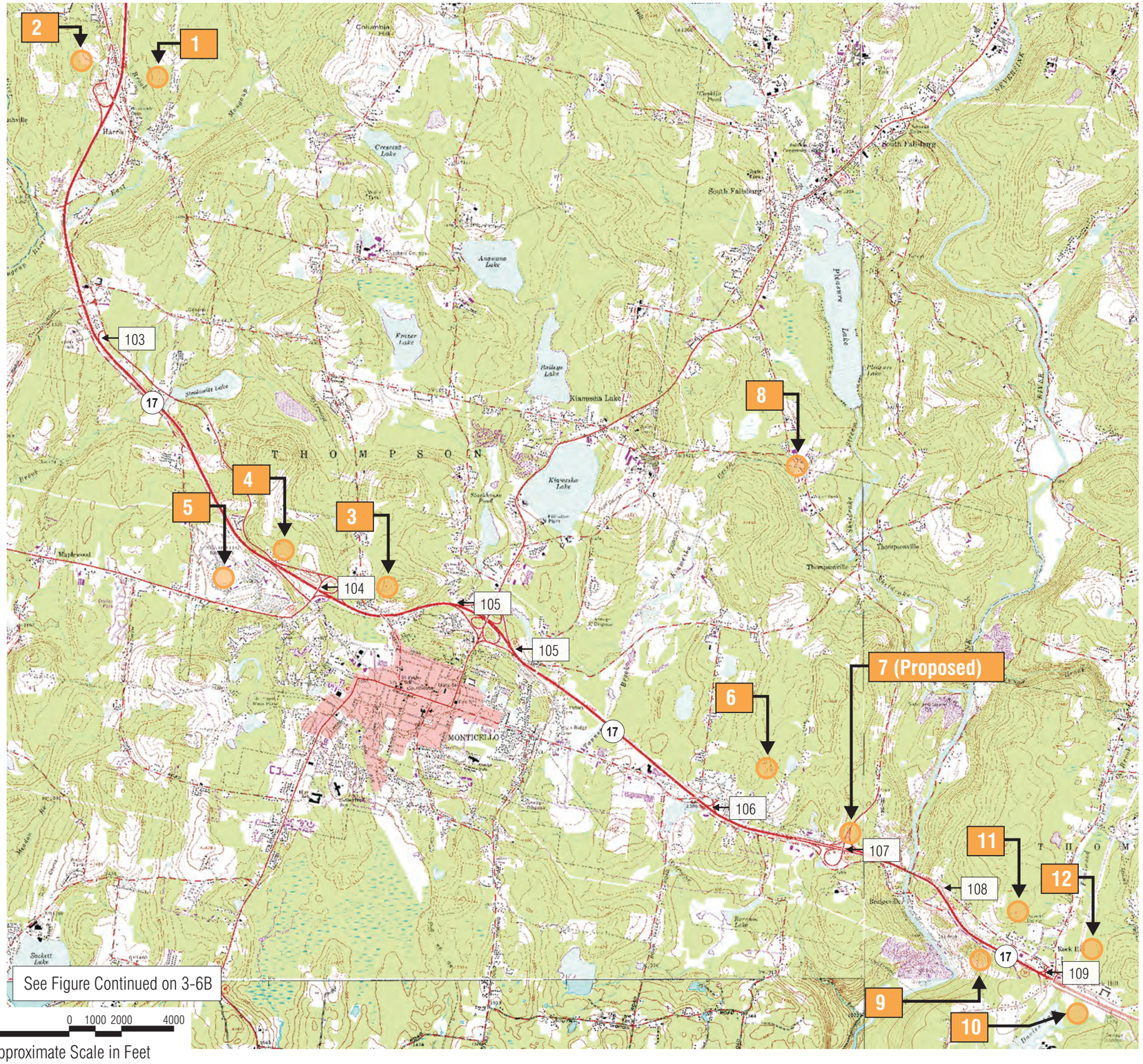
Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Proposed Roadway Improvements

Figure 3-5

3478_updated_alternative_site_locations.cdr



4000 0 1000 2000 4000

Approximate Scale in Feet

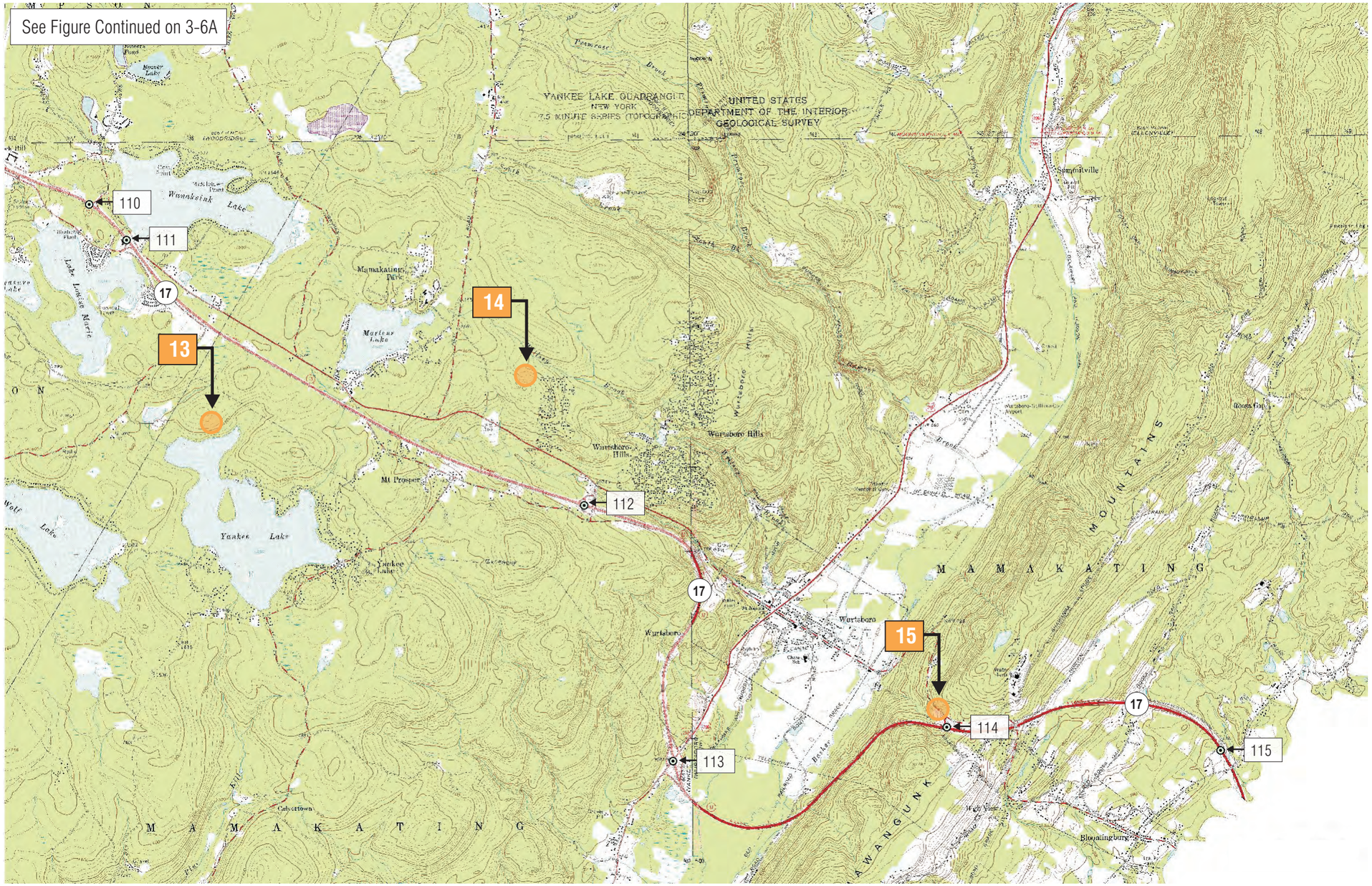
TETRA TECH

Stockbridge-Munsee Casino
Thompson, New York

Alternative
Site Locations

Figure 3-6A

Fig 3-6A+B_3478_updated_alternative_site_locations.cdr



4000 0 1000 2000 4000

Approximate Scale in Feet

TETRA TECH

Stockbridge-Munsee Casino
Thompson, New York

Alternative
Site Locations

Figure 3-6B

KEY

1 Main Entrance

2 Phase 1 Casino
1,800 Valet Spaces Below
Building Service/
Employee Drop-Off Below

3 Phase 1 Parking
3,500 Sp.@ 5 Floors
40,000 sf Power Plant

4 Phase 1 Employee Parking
1,500 Sp.@ 3 Floors

5 EMT/Fire/Tribal Court
In Employee Garage

6 Stormwater Management

7 Water Tower

8 Service Station

9 Warehouse & Storage
30,000 sf/150 Parking Spaces

10 Service Entrance

11 Utility Yard

12 Phase 1 Parking
700 Spaces

13 Phase 2 Hotel
750 Rooms @ 15 Floors

14 Phase 2 Hotel Parking
700 Spaces

1000 0 250 500 1000
Approximate Scale in Feet

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Site Layout Alternative 1 Figure 3-7

KEY

1 Main Entrance

2 Phase 1 Casino
1,800 Valet Spaces Below
Building Service/
Employee Drop-Off Below

3 Phase 1 Parking
3,500 Sp.@ 5 Floors
40,000 sf Power Plant

4 Phase 1 Employee Parking
1,500 Sp.@ 3 Floors

5 EMT/Fire/Tribal Court
In Employee Garage

6 Stormwater Management

7 Water Tower

8 Service Station

9 Warehouse & Storage
30,000 sf/150 Parking Spaces

10 Service Entrance

11 Utility Yard

12 Phase 1 Parking
700 Spaces

13 Phase 2 Hotel
750 Rooms @ 15 Floors

14 Phase 2 Hotel Parking
700 Spaces

Legend

- Pond
- Wetland
- Streams and River
- Property Line
- 100-year Floodplain
- 100-year Floodway

1000 0 250 500 1000

Approximate Scale in Feet

NOTE: Contour Interval = 5 feet

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Site Layout Alternative 2 Figure 3-8

KEY

1 Main Entrance

2 Phase 1 Casino
1,800 Valet Spaces Below
Building Service/
Employee Drop-Off Below

3 Phase 1 Parking
3,500 Sp.@ 5 Floors
40,000 sf Power Plant

4 Phase 1 Employee Parking
1,500 Sp.@ 3 Floors

5 EMT/Fire/Tribal Court
In Employee Garage

6 Stormwater Management

7 Water Tower

8 Service Station

9 Warehouse & Storage
30,000 sf/150 Parking Spaces

10 Service Entrance

11 Utility Yard

12 Phase 1 Parking
700 Spaces

13 Phase 2 Hotel
750 Rooms @ 15 Floors

14 Phase 2 Hotel Parking
700 Spaces

Legend

- Pond
- Wetland
- Streams and River
- Property Line
- 100-year Floodplain
- 100-year Floodway

1000 0 250 500 1000

Approximate Scale in Feet

NOTE: Contour Interval = 5 feet

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Site Layout Alternative 3 Figure 3-9

KEY

1 Main Entrance

2 Phase 1 Casino 1,500 Valet Spaces Below Building Service/Employee Drop-Off Below

3 Phase 1 Parking 3,500 Sp.@ 5 Floors 40,000 sf Power Plant

4 Phase 1 Employee Parking 1,500 Sp.@ 4 Floors

5 EMT/Fire/Tribal Court In Employee Garage

6 Stormwater Management

7 Water Tower

8 Service Station

9 Warehouse & Storage 30,000 sf/150 Parking Spaces

10 Service Entrance

11 Utility Yard

12 Phase 1 Parking 1,000 Spaces

13 Phase 2 Hotel 750 Rooms @ 15 Floors

14 Phase 2 Hotel Parking 700 Spaces

900 0 225 450 900

Approximate Scale in Feet

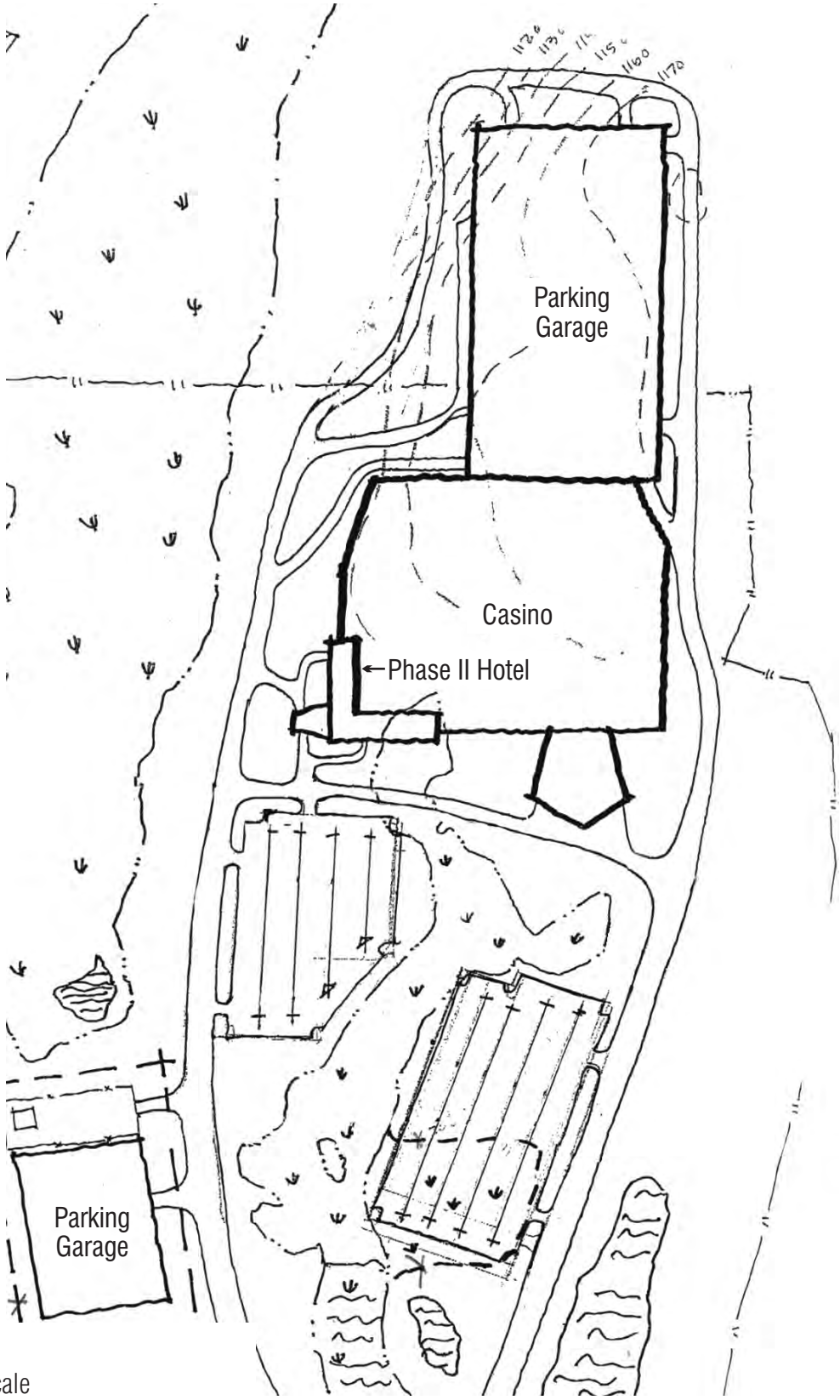
NOTE: Contour Interval = 5 feet

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

EDAW

Site Layout Alternative 4 Figure 3-10



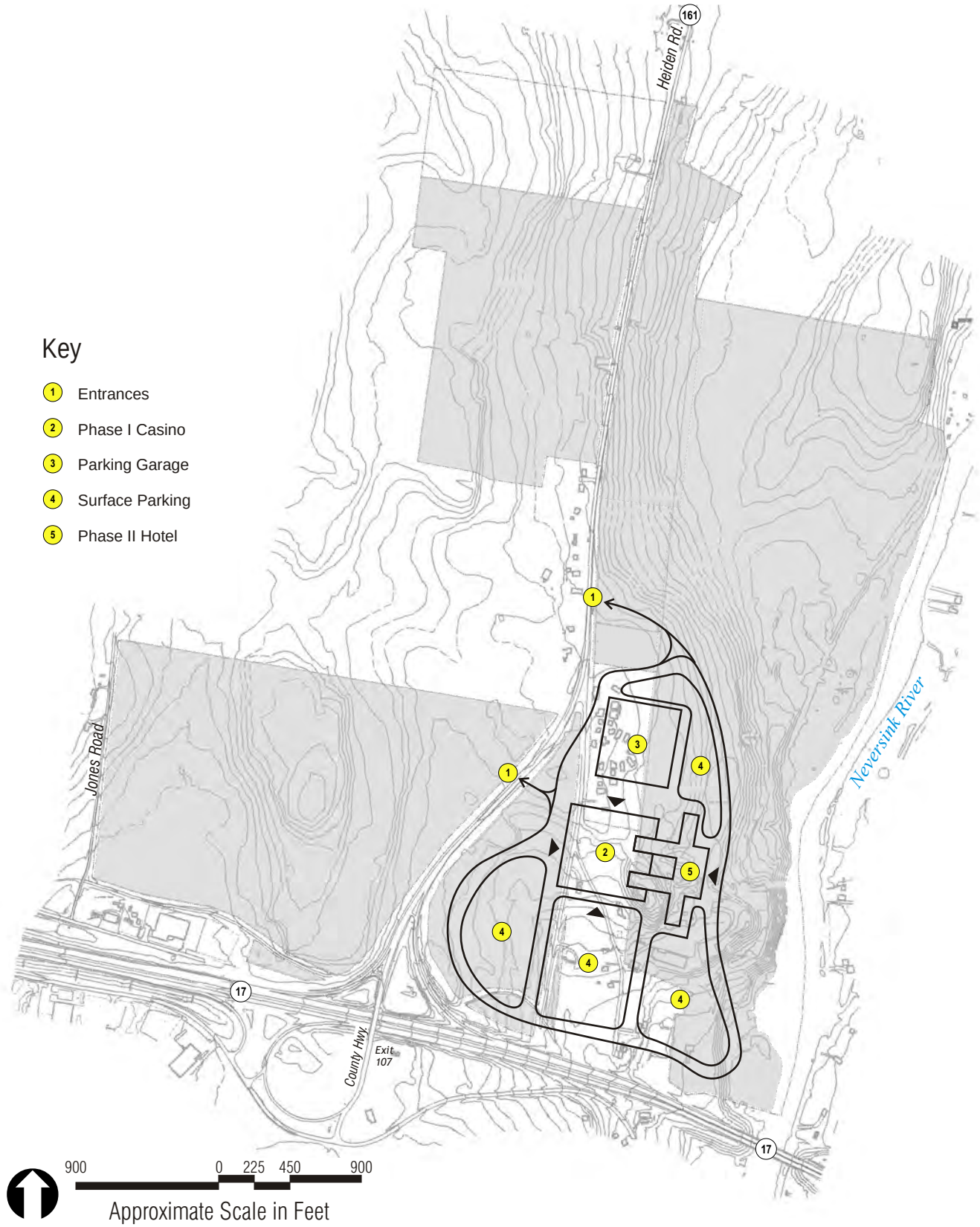
Not To Scale

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

EDAW

Site Layout Alternative 5 Figure 3-11



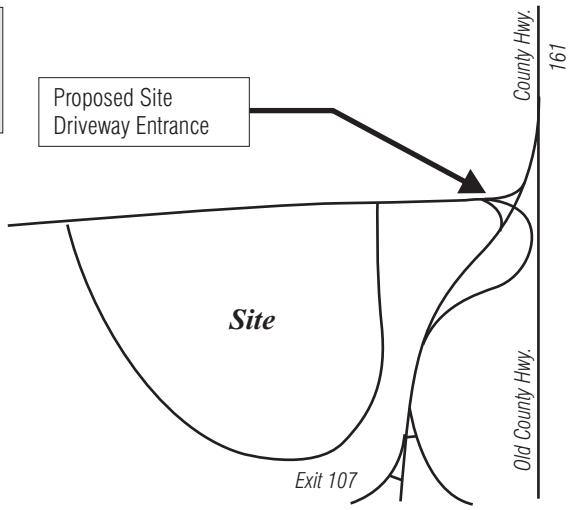
Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

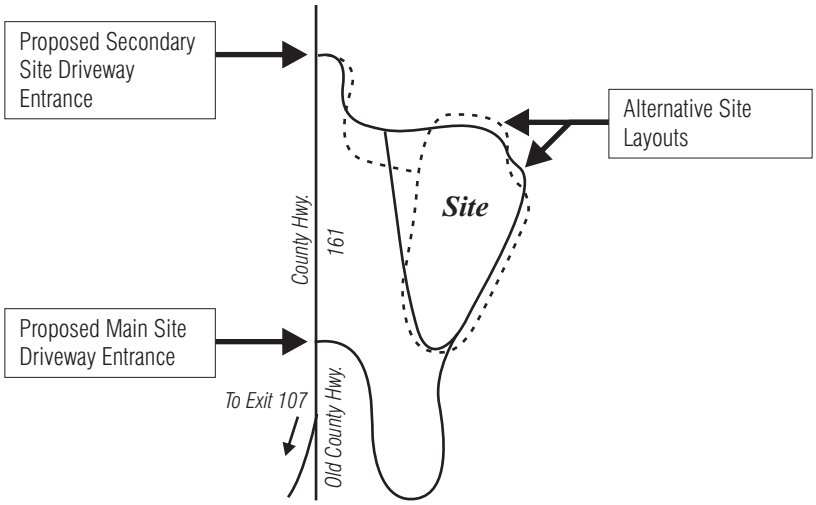
EDAW

Site Layout Alternative 6 Figure 3-12

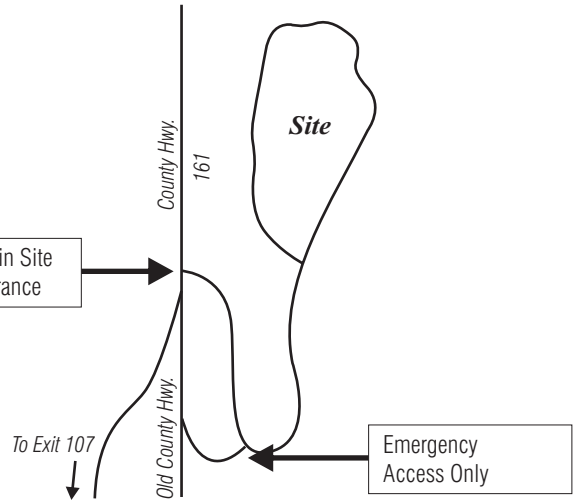
Alternative A1
Grade Separated
Driveway Entrance



Alternative A2
Two Site Access Driveways



Alternative A3
One Site Driveway and Emergency
Access Driveway (PROPOSED)



Not to Scale

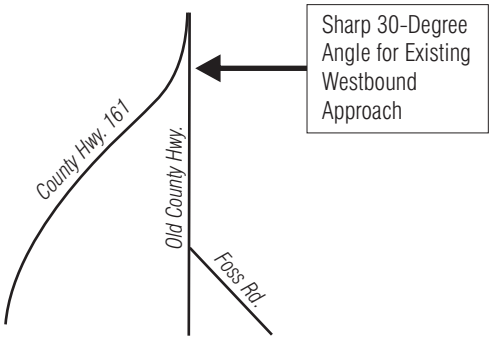
Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Site Access
Alternatives

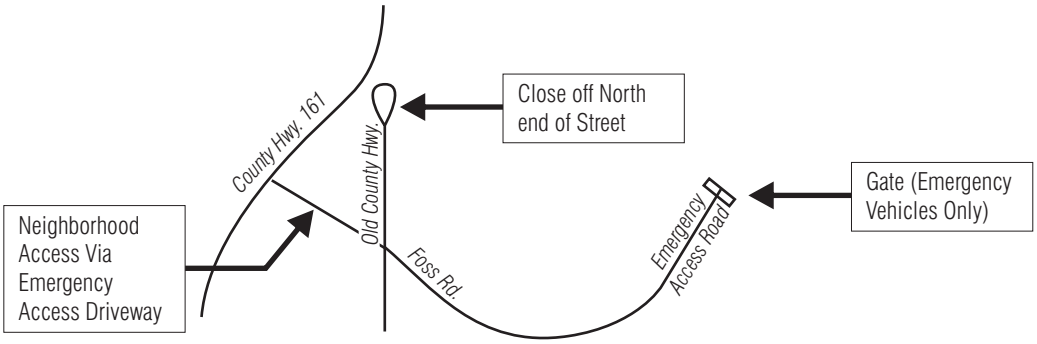
Figure 3-13

Existing Conditions



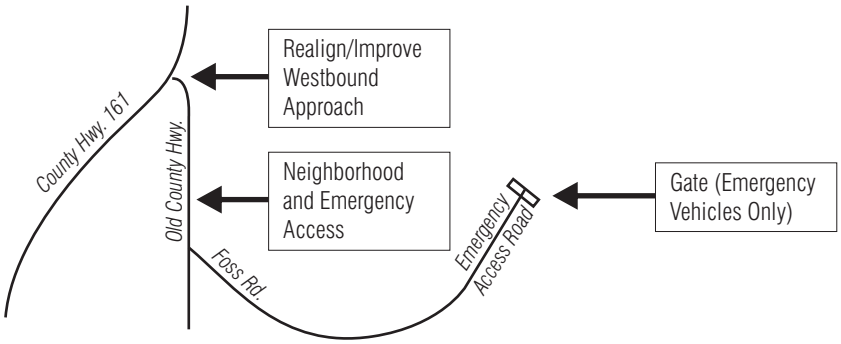
Alternative B1

Close off North End of Old County Hwy. and Provide Neighborhood Access Via Emergency Access Road (PROPOSED)



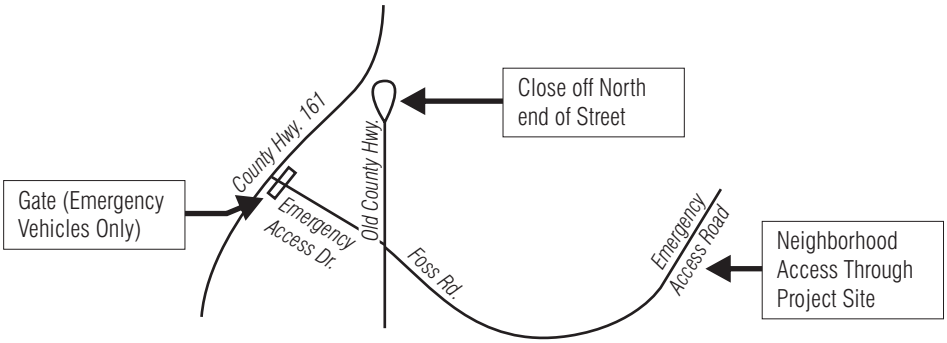
Alternative B2

Realign Westbound Approach of Intersection and Provide Operational Safety Improvements



Alternative B3

Close off North End of Old County Hwy. and Provide Neighborhood Access Via Main Project Site Driveway



Not to Scale

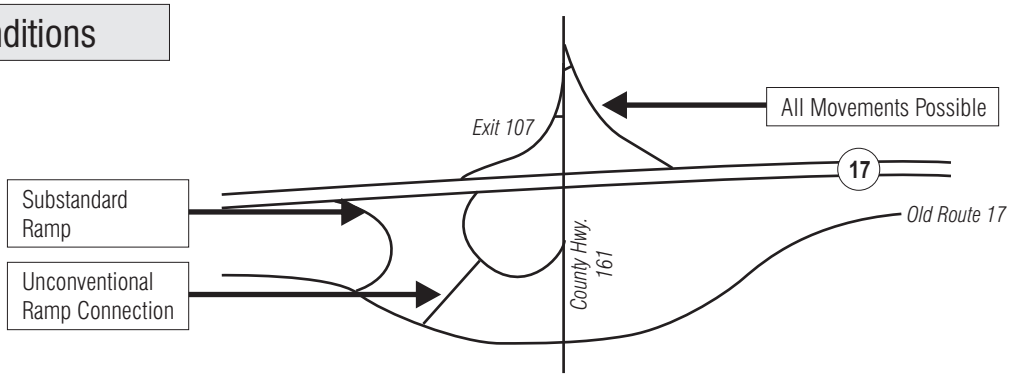
Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Old County Highway Access Alternatives

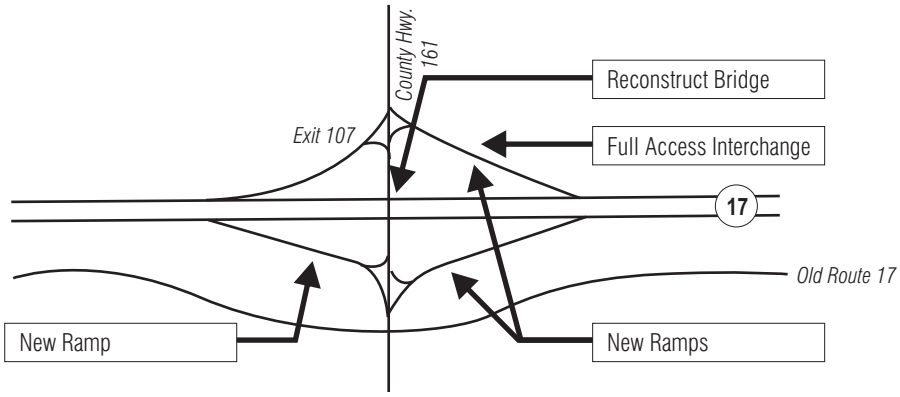
Figure 3-14

Existing Conditions



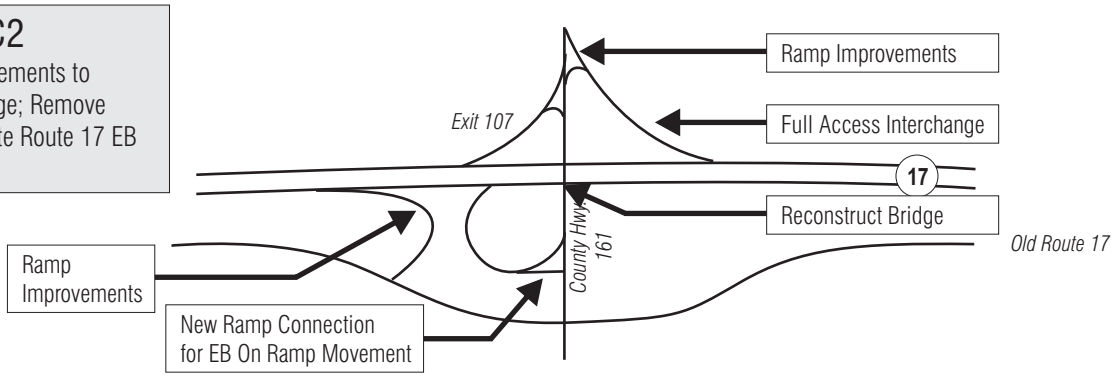
Alternative C1

Diamond Interchange



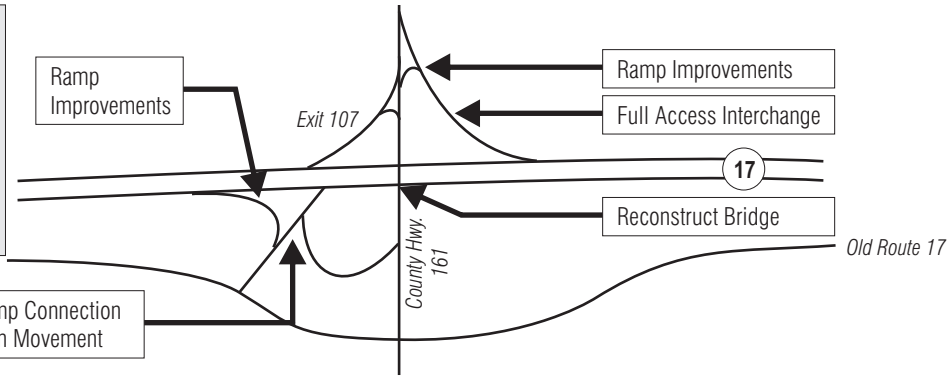
Alternative C2

Geometric Improvements to Existing Interchange; Remove Connection to State Route 17 EB On-Ramp



Alternative C3

Geometric Improvements to Existing Interchange per NYSDOT plans; Move Connection to State Route 17 EB On-Ramp to the North and Reconstruct Bridge (PROPOSED)



Not to Scale

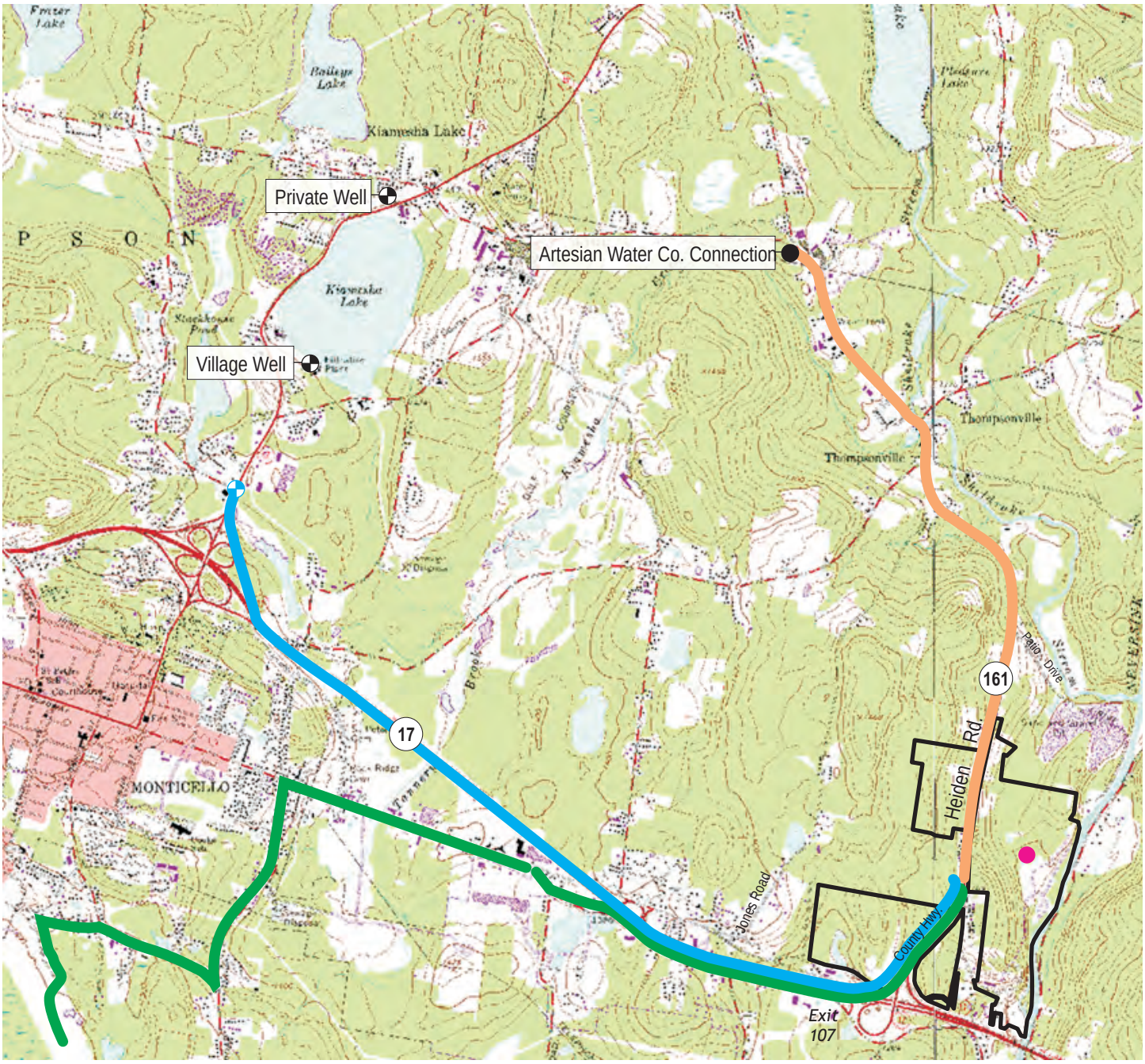
Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

State Route 17 Interchange 107
Improvement Alternatives

Figure 3-15

Fig 3-16_3478_water_supply_alternatives.cdr



Legend

- Alternative 1 (Proposed) - Connection to Village of Monticello System
- Alternative 2 - Connection to Artesian Water Company System
- Alternative 3 - Connection to Town of Thompson System
- Alternative 4 - On-Site Water Supply

3000 0 750 1500 3000

Approximate Scale in Feet

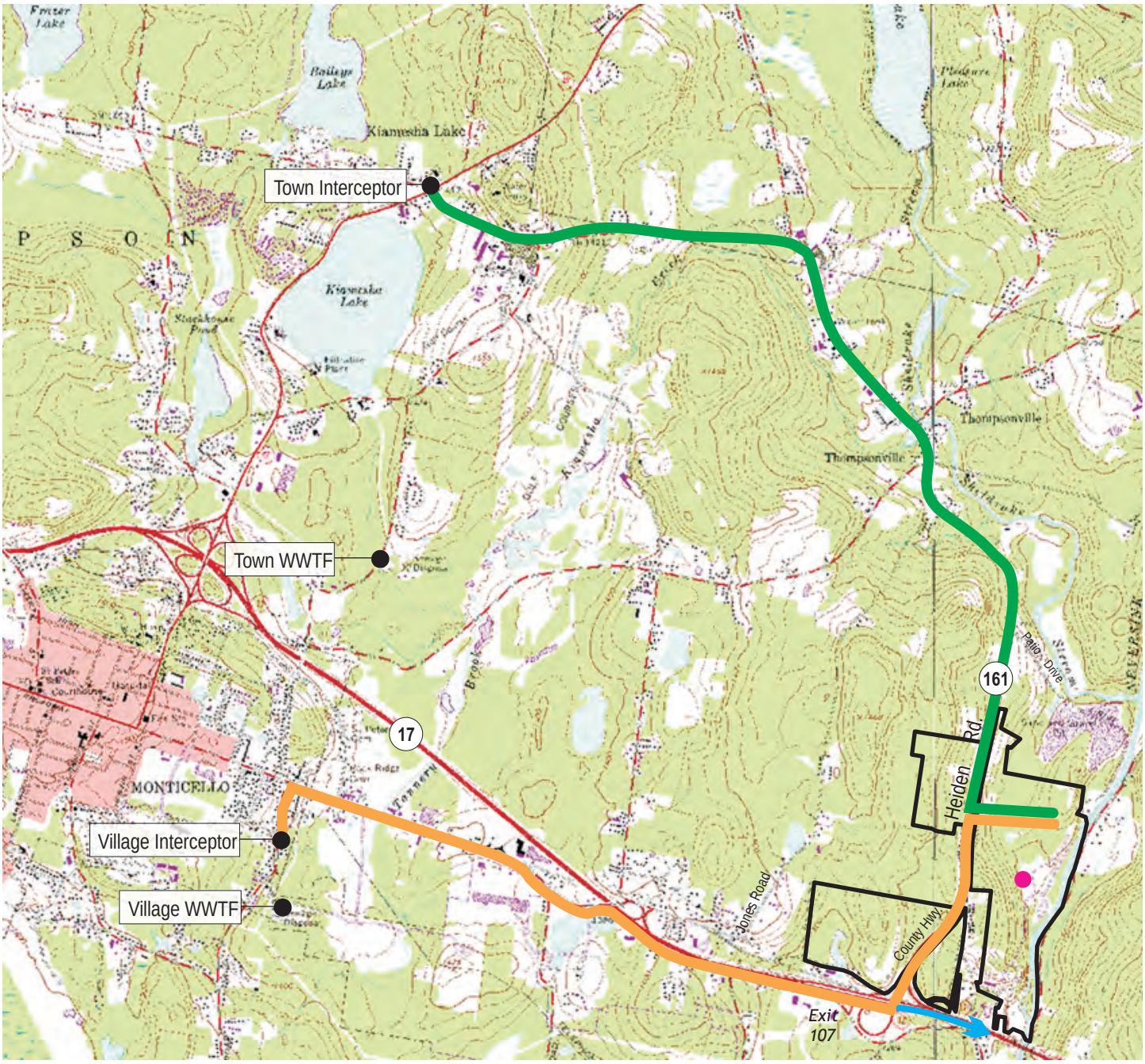
Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Water Supply Alternatives

Figure 3-16

Fig 3-17_3478_wastewater_treatment_alternatives.cdr



Legend

- Alternative 1 (Proposed) - Town of Thompson, Connection to Kiamesha WWTF
- Alternative 2 - Connection to Village of Monticello WWTF
- Alternative 3 - Town of Thompson, Connection to Emerald Green WWTF
- Alternative 4 - On-Site Wastewater Treatment

3000 0 750 1500 3000

Approximate Scale in Feet

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Wastewater Treatment Alternatives

Figure 3-17

900 0 225 450 900

Approximate Scale in Feet

NOTE: Contour Interval = 10 feet

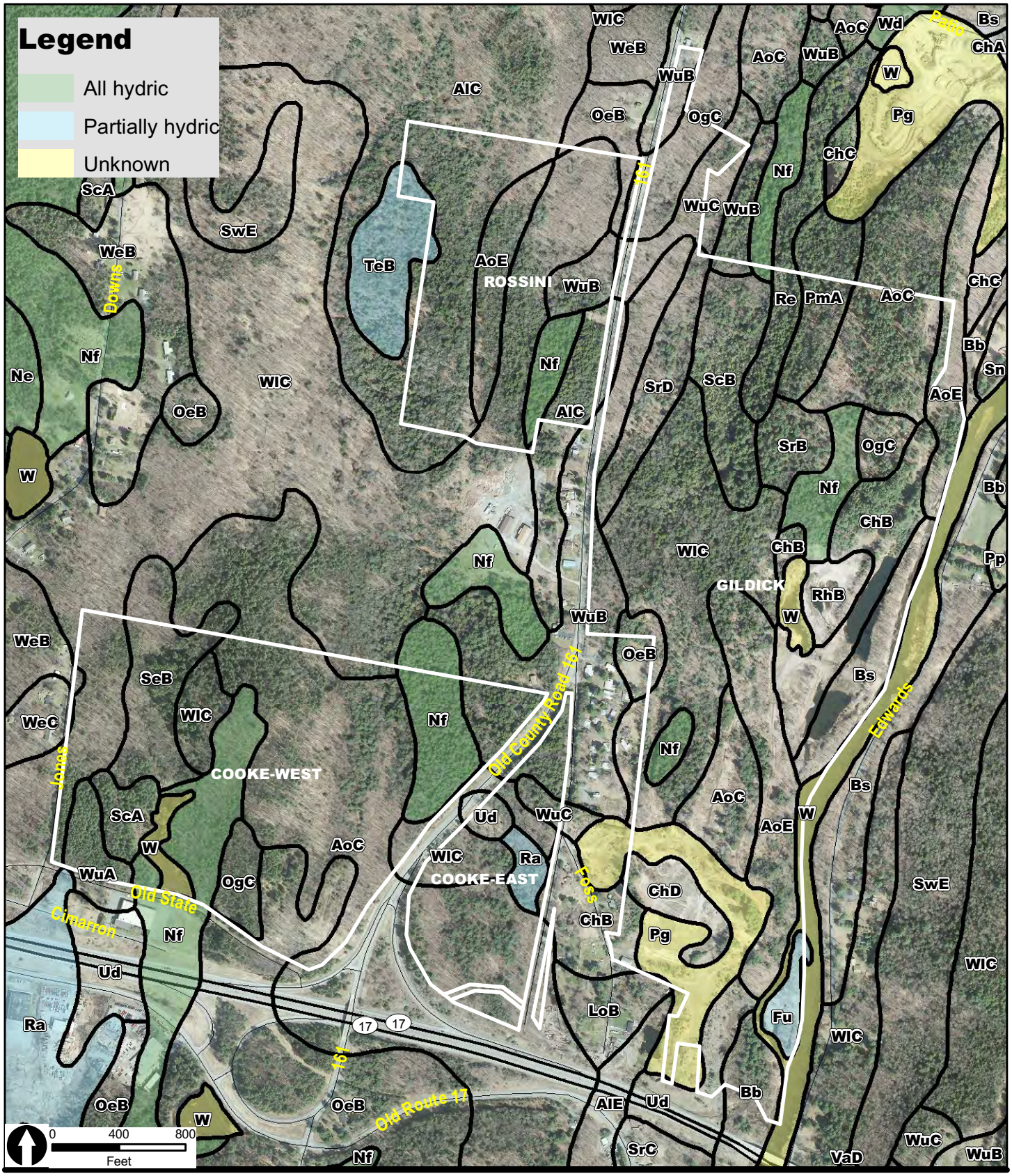
Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Site Topography

Figure 4-1

Date Printed: 2/8/2012
File Name: S:\NY_GIS\Projects\Trading_Cove\2010\FEIS GRAPHICS\Fig 4-2_Tribal Lands and Roadwa soils.mxd



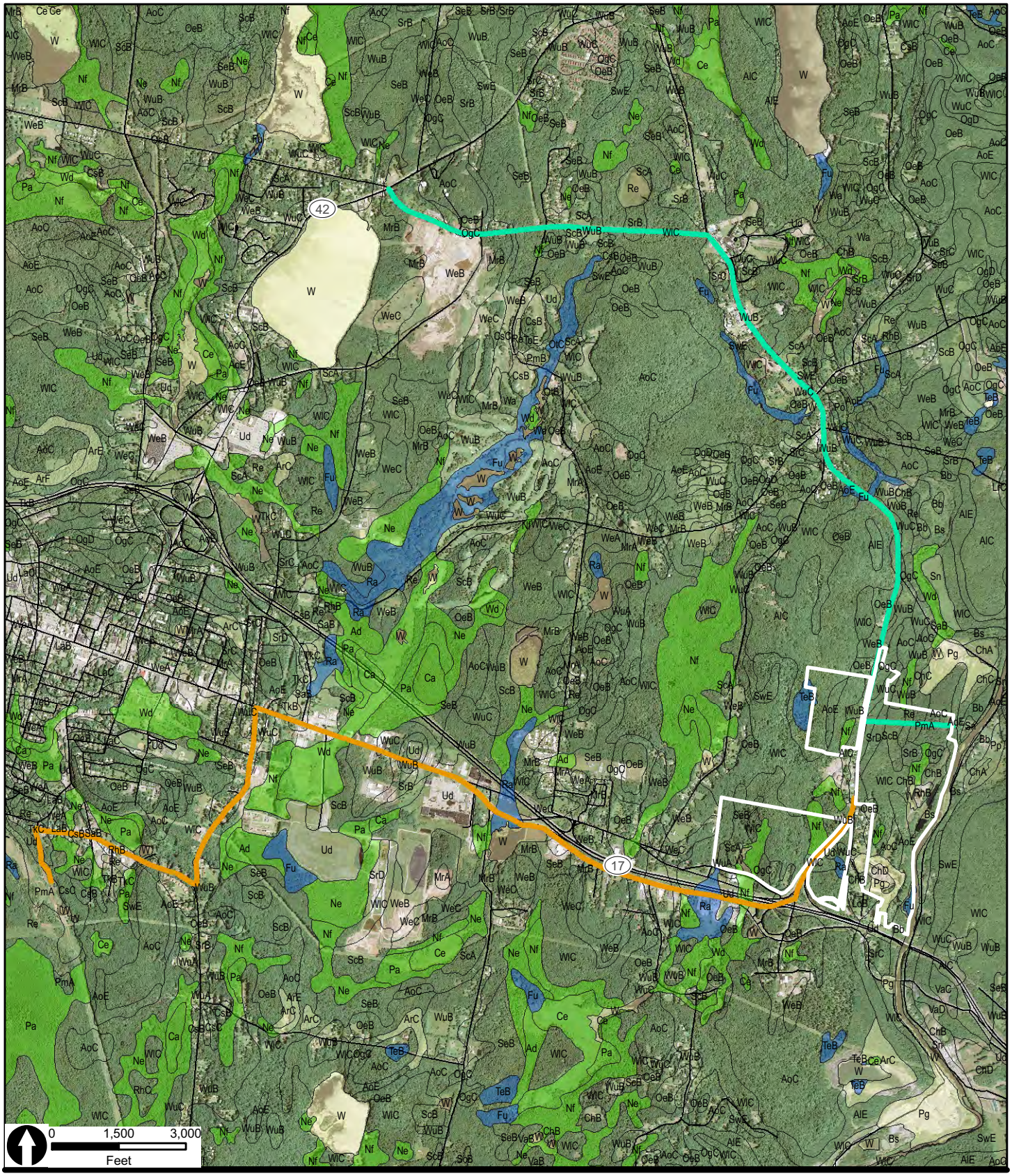
Source:
Airphoto-New York State
GIS 2010 Airphoto

Stockbridge-Munsee Casino
Thompson, New York

Tribal Lands and
Roadway Soils

Figure 4-2

Date Printed: 2/8/2012
File Name: S:\NY_GIS\Projects\Trading_Cove\2010\FEIS GRAPHICS\Fig 4-3_Water and Sewer Connection Routes.mxd



Source:
Airphoto-USDA 2009
NAIP

Note:
Soil Data From NRCS Survey
Database Ver. 8 dated 2-5-10

Stockbridge-Munsee Casino
Thompson, New York

Water and Sewer Connection Routes-Soils

Figure 4-3

Source: Rizzo Associates
Compiled Survey and GPS Data

NOTE: Contour Interval = 10 feet

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

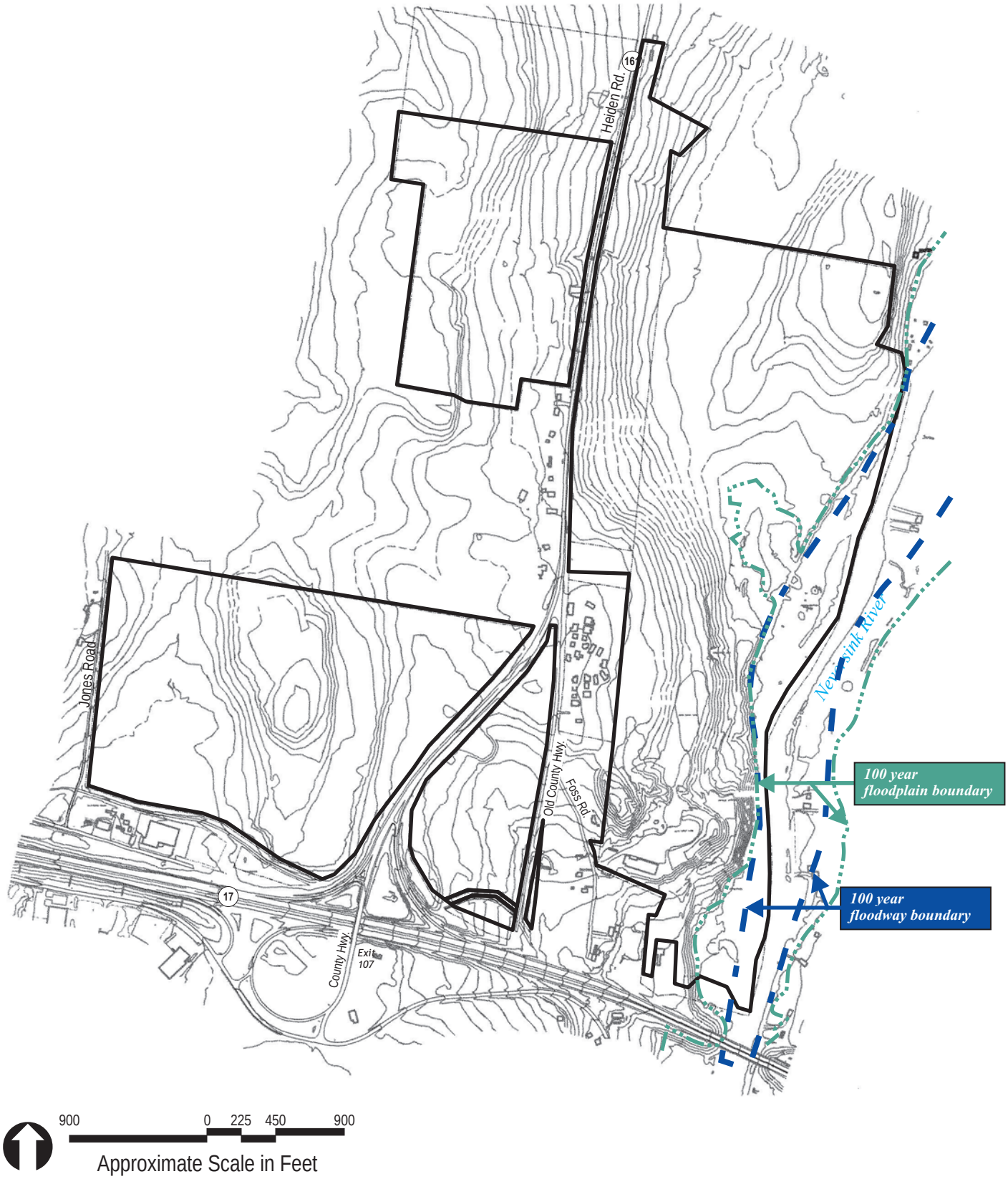
Surface Water

Figure 4-4

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Existing Drainage Areas Figure 4-5



Source: FEMA - Digital Flood Insurance Rate Map Database, Sullivan County, NY Dated 2/18/11

NOTE: Contour Interval = 10 feet

Stockbridge-Munsee Casino
Thompson, New York

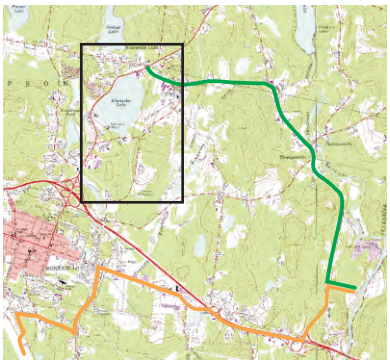
TETRA TECH

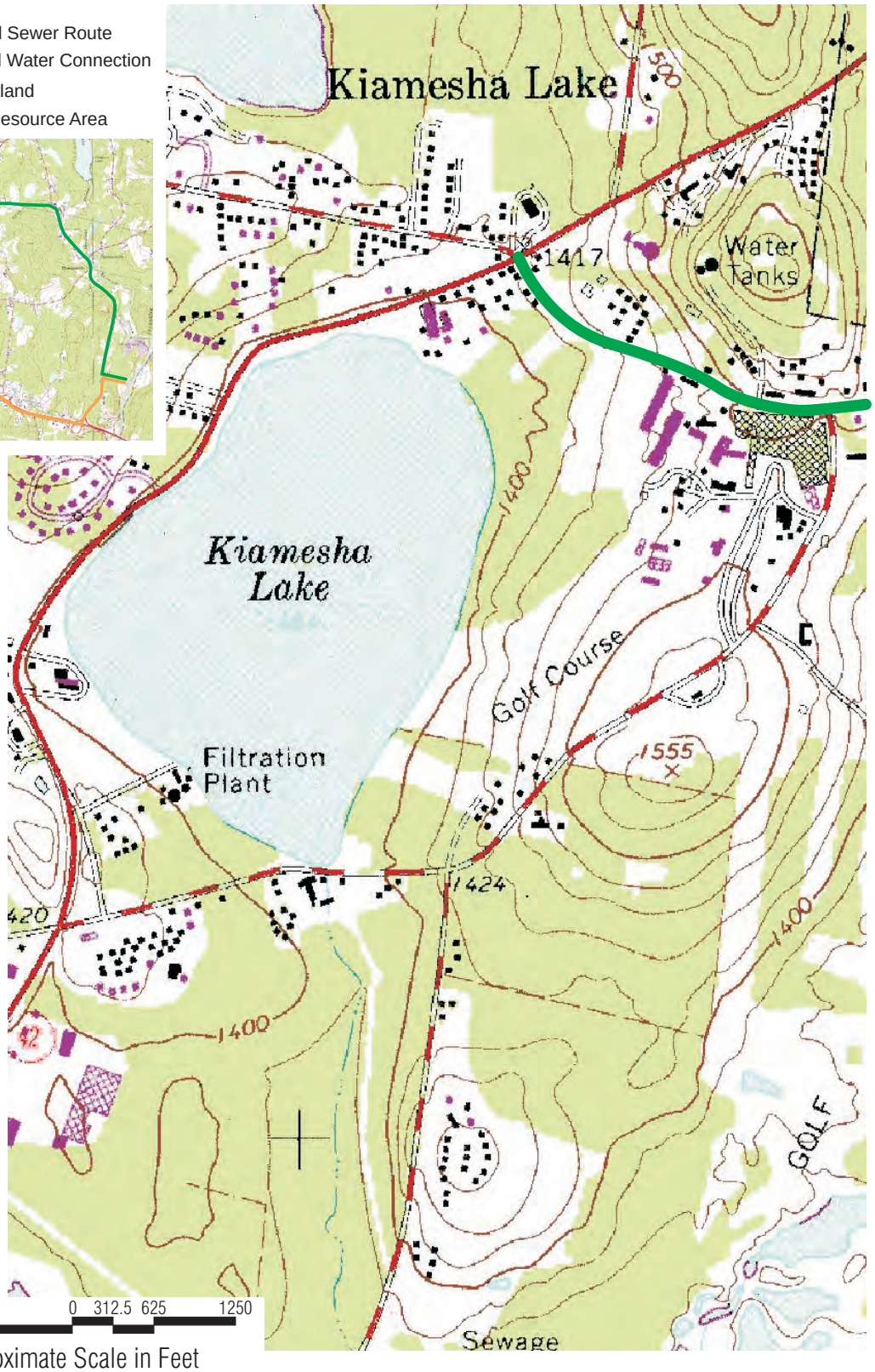
Floodplain

Figure 4-6

Legend

- Proposed Sewer Route
- Proposed Water Connection
- MO-xx DEC Wetland
- NRA-xx Natural Resource Area





1250 0 312.5 625 1250

Approximate Scale in Feet

Source: USGS Topographic Maps
Map Printed, 1966; Map Revised, 1988

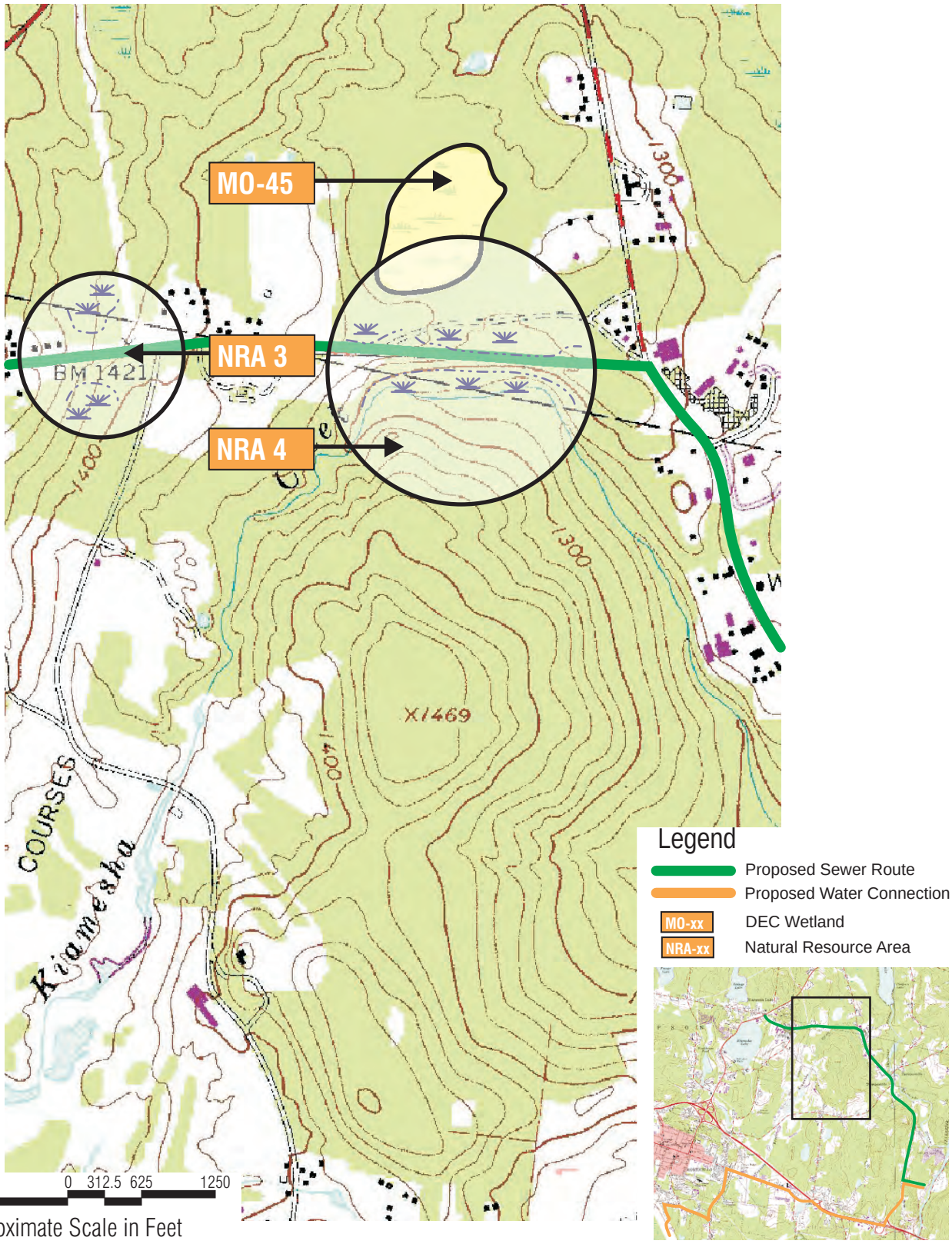
NOTE: Contour Interval = 20 feet

Stockbridge-Munsee Casino
Thompson, New York

Water and Sewer Connection Routes - Wetlands and Waterways

Figure 4-7A

TETRA TECH



1250 0 312.5 625 1250

Approximate Scale in Feet

Source: USGS Topographic Maps
Map Printed, 1966; Map Revised, 1988

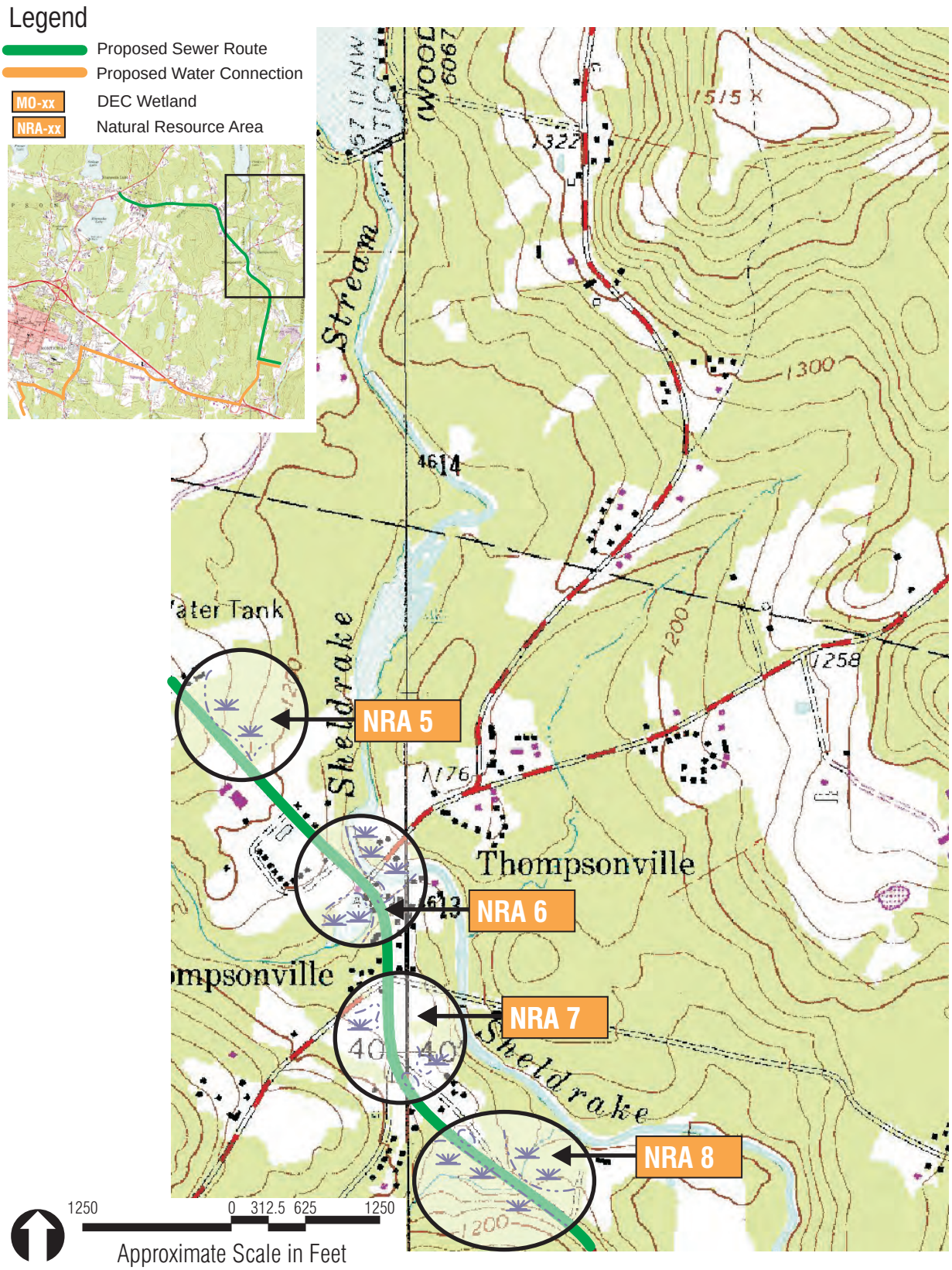
NOTE: Contour Interval = 20 feet

Stockbridge-Munsee Casino
Thompson, New York

Water and Sewer Connection Routes - Wetlands and Waterways

Figure 4-7B

TETRA TECH



Source: USGS Topographic Maps
Map Printed, 1966; Map Revised, 1988

NOTE: Contour Interval = 20 feet

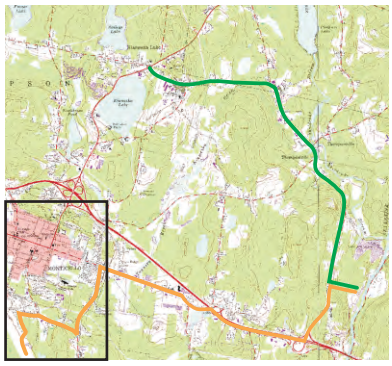
Stockbridge-Munsee Casino
Thompson, New York

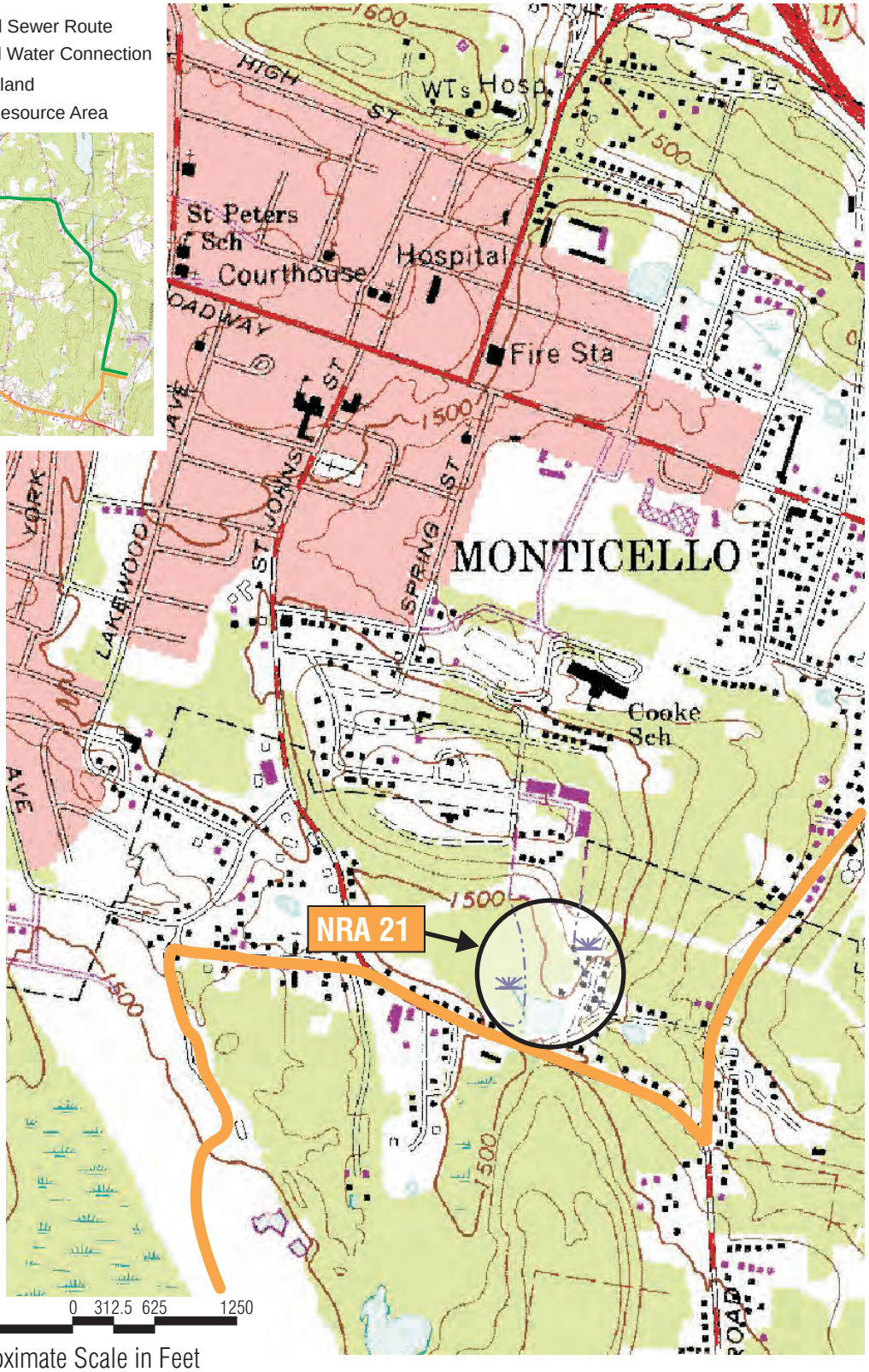
Water and Sewer Connection Routes - Wetlands and Waterways

Figure 4-7C

Legend

- Proposed Sewer Route
- Proposed Water Connection
- MO-xx DEC Wetland
- NRA-xx Natural Resource Area





1250 0 312.5 625 1250

Approximate Scale in Feet

Source: USGS Topographic Maps
Map Printed, 1966; Map Revised, 1988

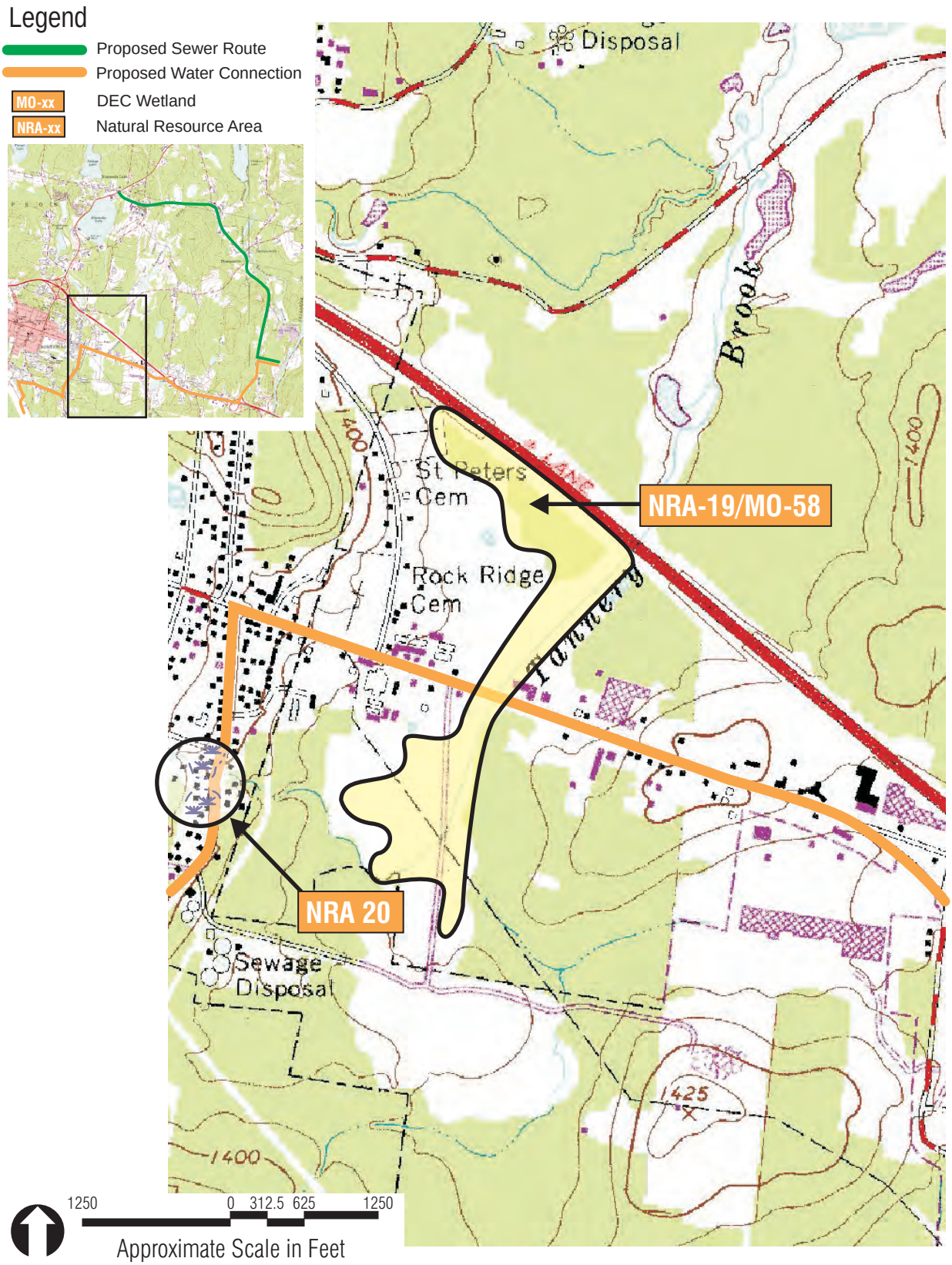
NOTE: Contour Interval = 20 feet

Stockbridge-Munsee Casino
Thompson, New York

Water and Sewer Connection Routes - Wetlands and Waterways

Figure 4-7D

TETRA TECH



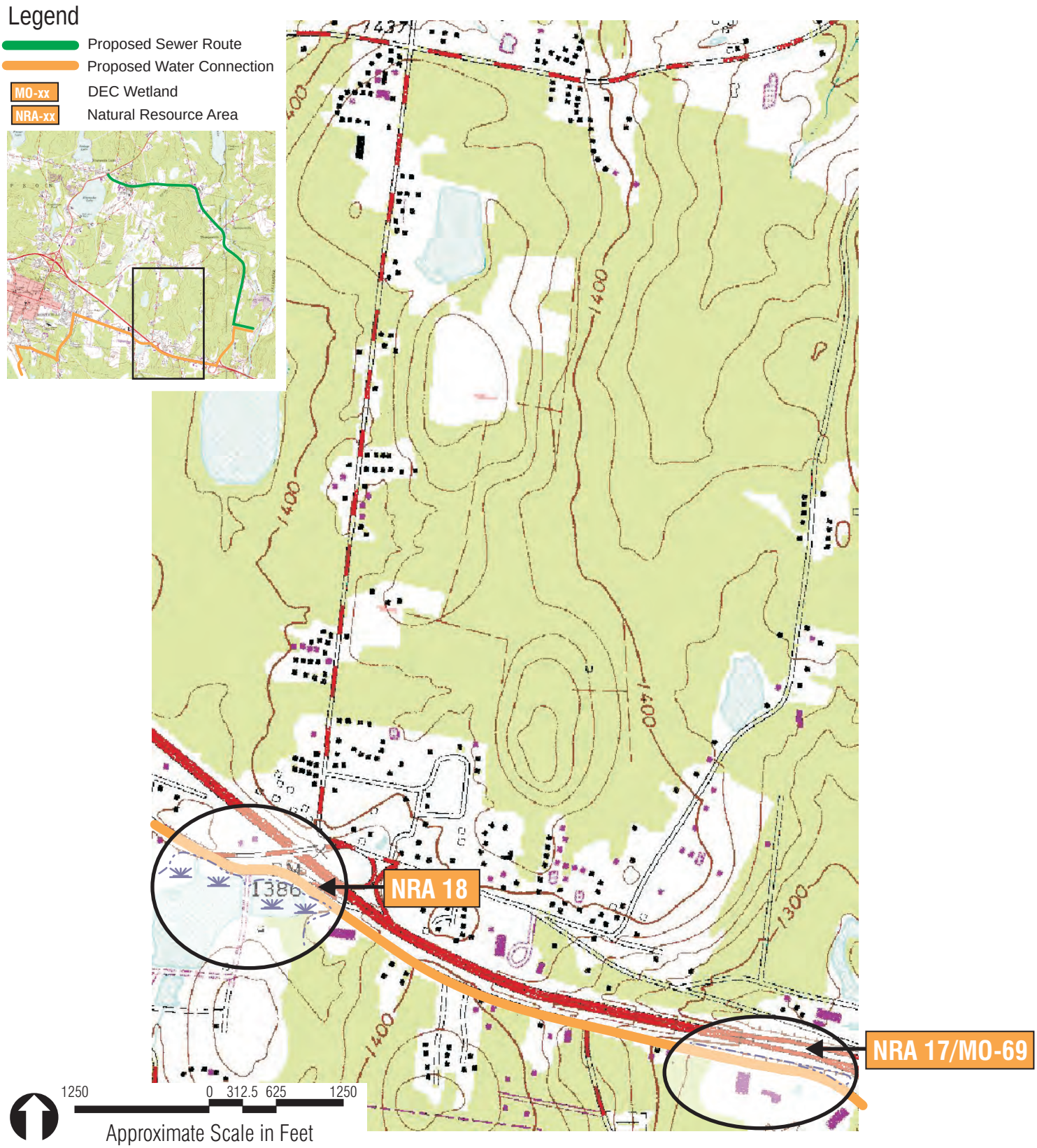
Source: USGS Topographic Maps
Map Printed, 1966; Map Revised, 1988

NOTE: Contour Interval = 20 feet

Stockbridge-Munsee Casino
Thompson, New York

Water and Sewer Connection Routes - Wetlands and Waterways

Figure 4-7E



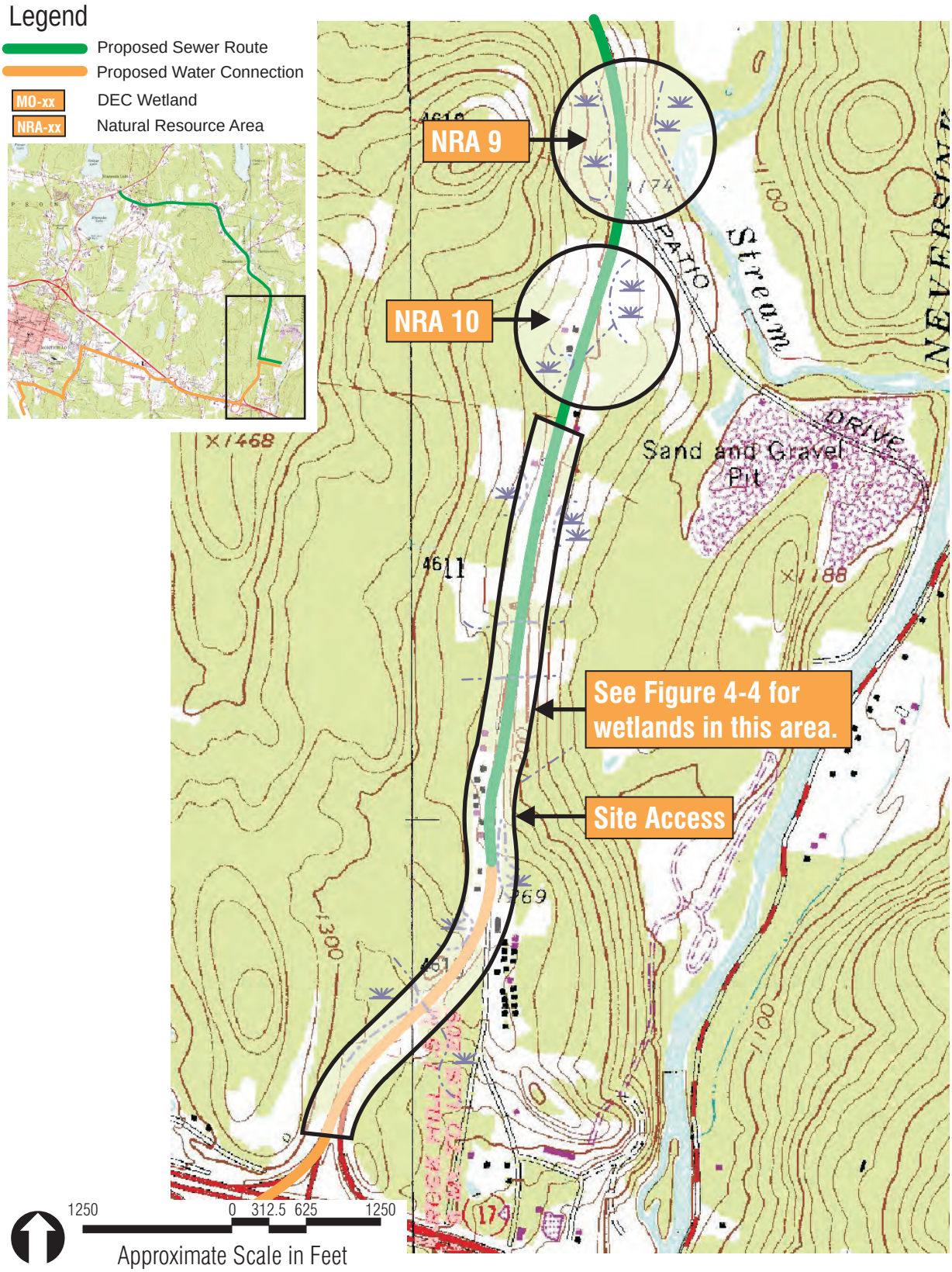
Source: USGS Topographic Maps
Map Printed, 1966; Map Revised, 1988

NOTE: Contour Interval = 20 feet

Stockbridge-Munsee Casino
Thompson, New York

Water and Sewer Connection Routes - Wetlands and Waterways

Figure 4-7F



Source: USGS Topographic Maps
Map Printed, 1966; Map Revised, 1988

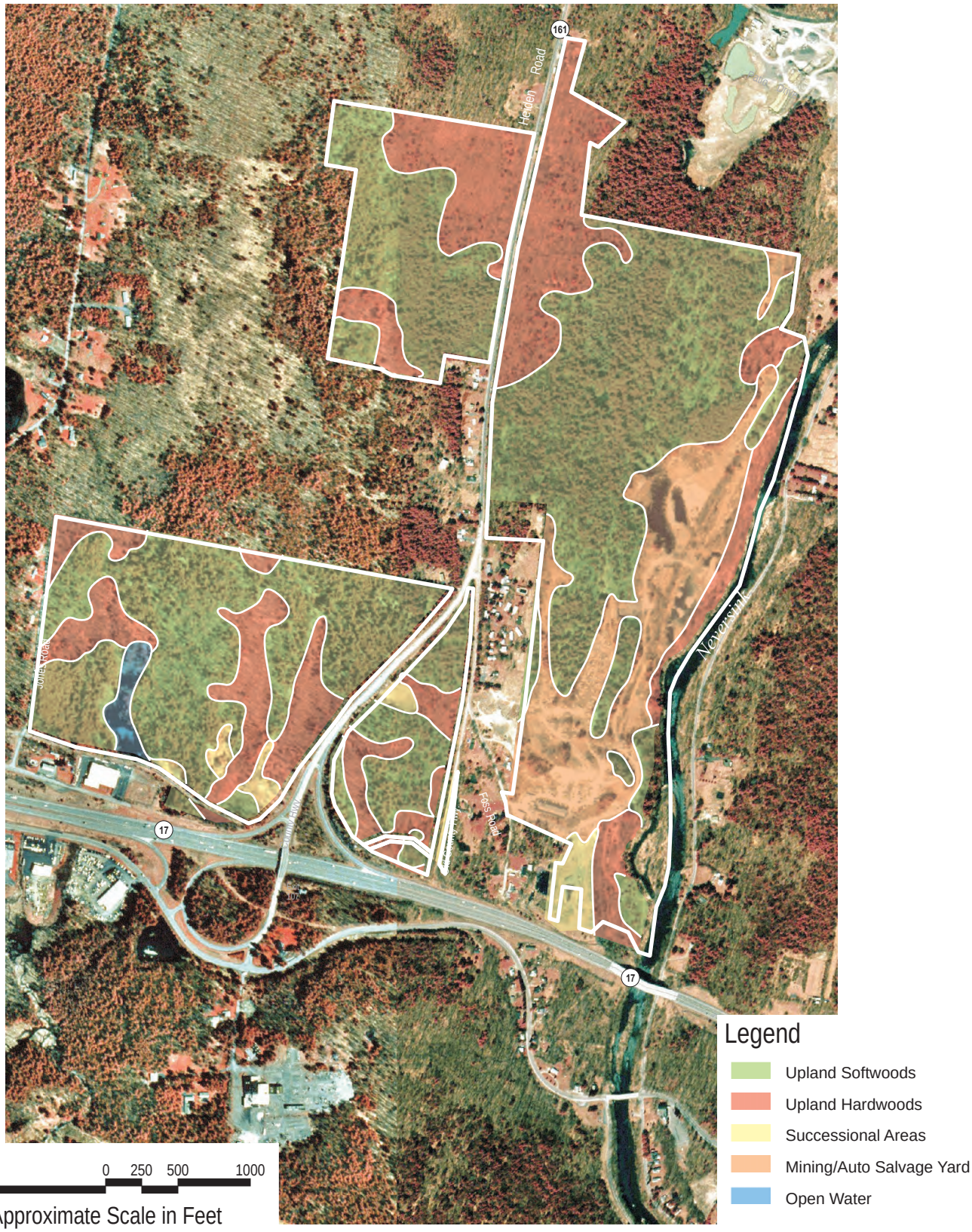
NOTE: Contour Interval = 20 feet

Stockbridge-Munsee Casino
Thompson, New York

Water and Sewer Connection Routes - Wetlands and Waterways

Figure 4-7G

Fig 4-8_3478_tribal_lands_vegetation.cdr

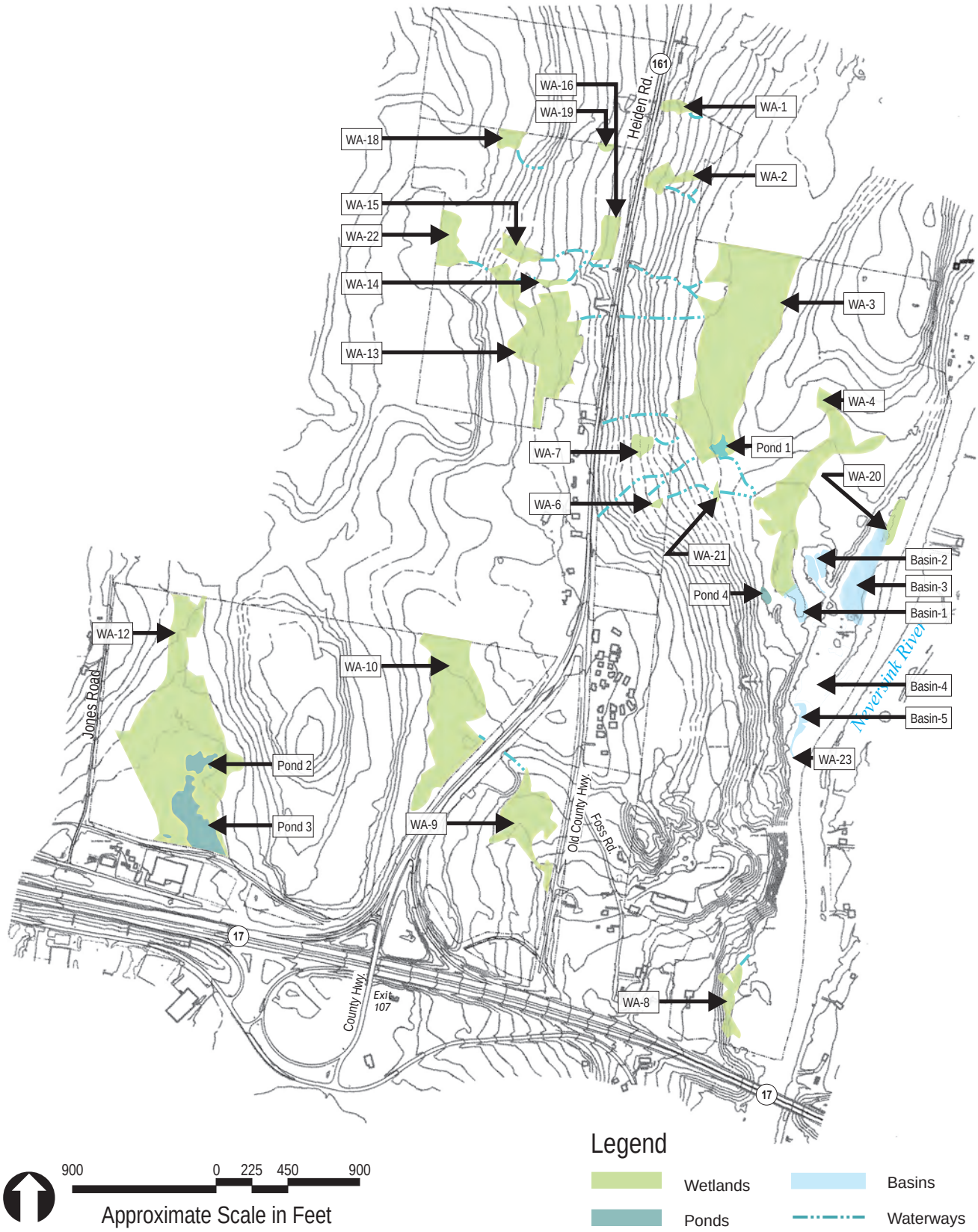


Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Vegetation

Figure 4-8



900 0 225 450 900

Approximate Scale in Feet

Legend

- Wetlands
- Ponds
- Basins
- Waterways

Source: Rizzo Associates
Compiled Survey and GPS Data

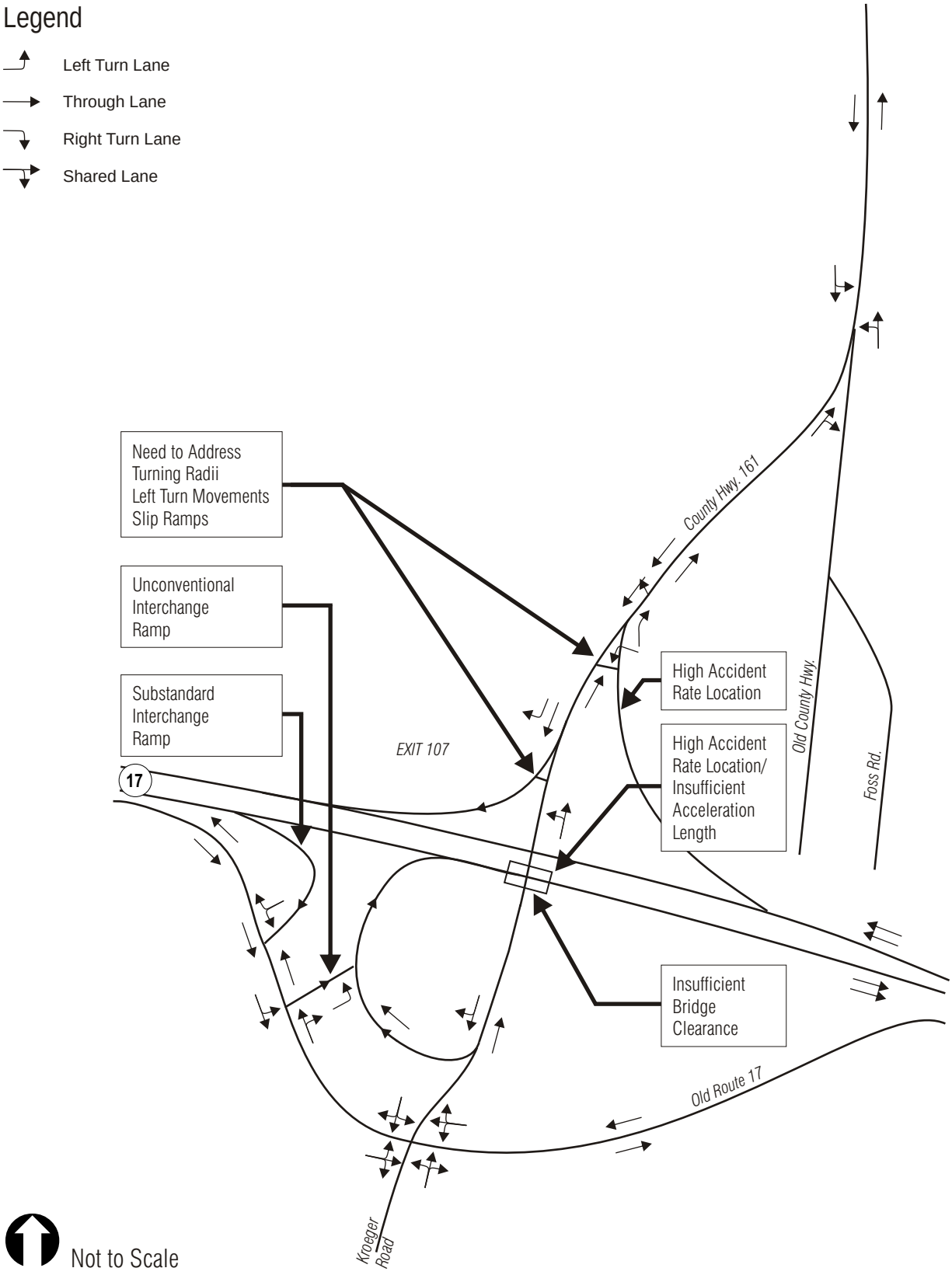
NOTE: Contour Interval = 10 feet

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Wetlands

Figure 4-9

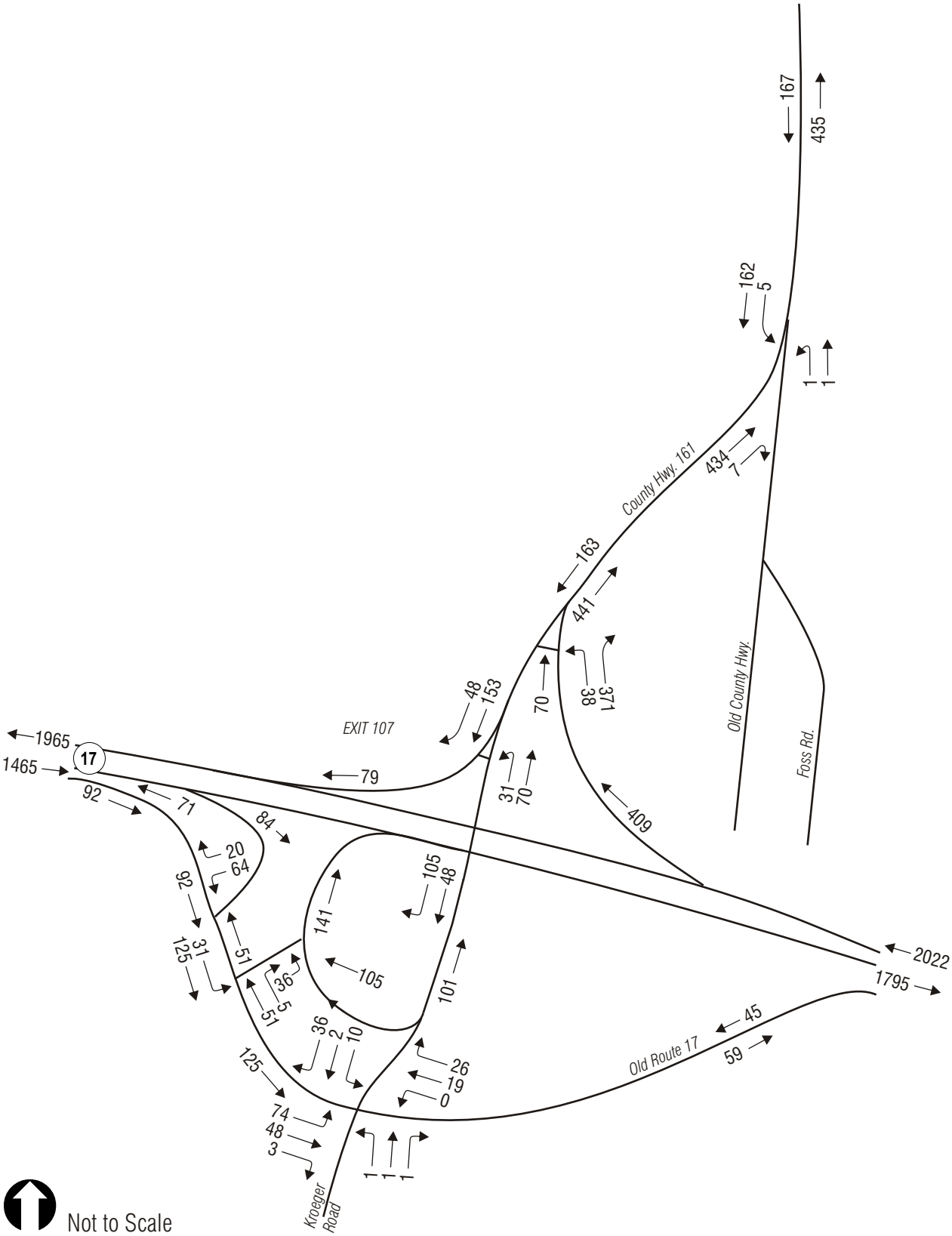


Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Lane Geometries -
Existing Conditions

Figure 4-10



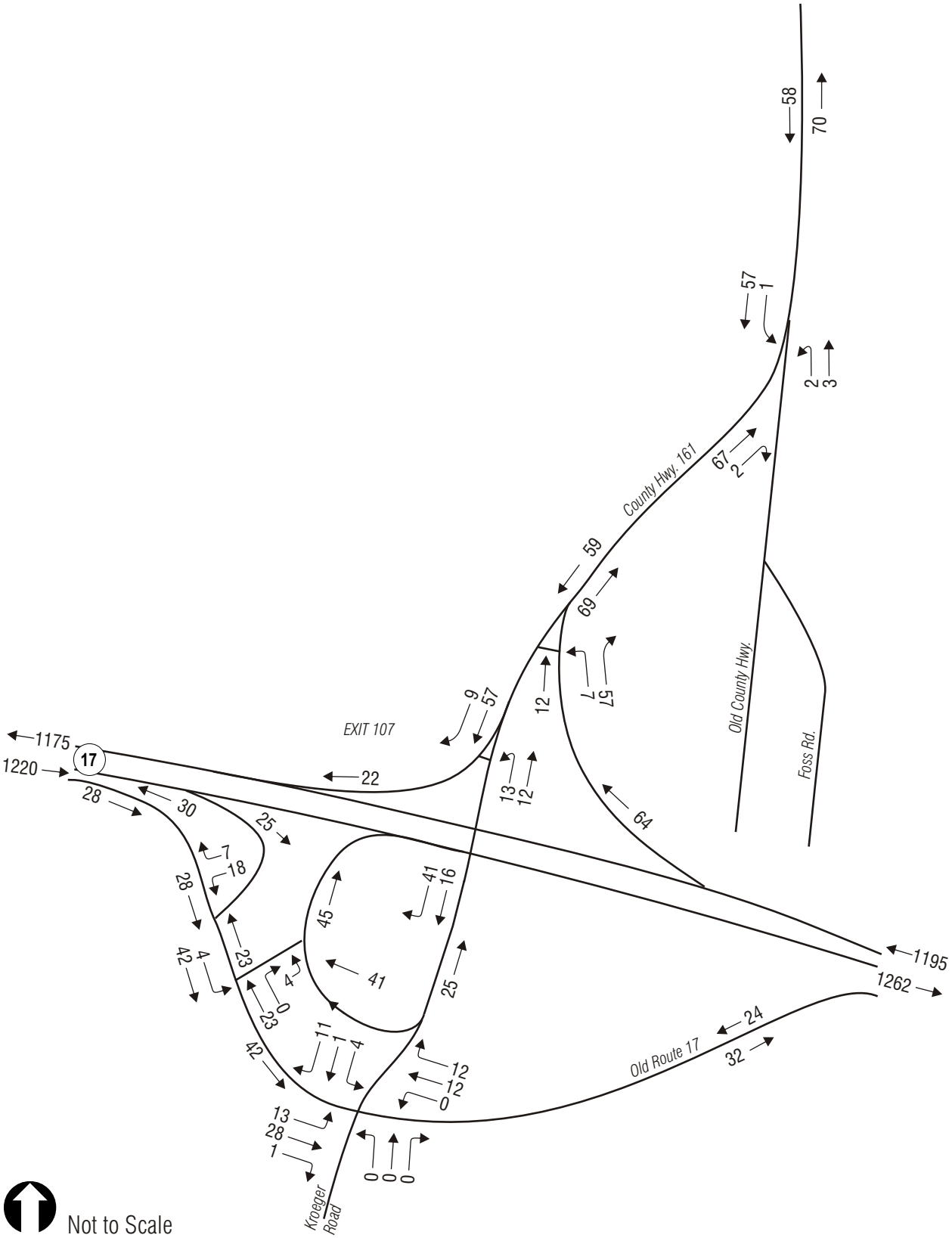
Not to Scale

Stockbridge-Munsee Casino
Thompson, New York

2010 Existing Traffic Volumes

Friday Afternoon Peak Hour

Figure 4-11



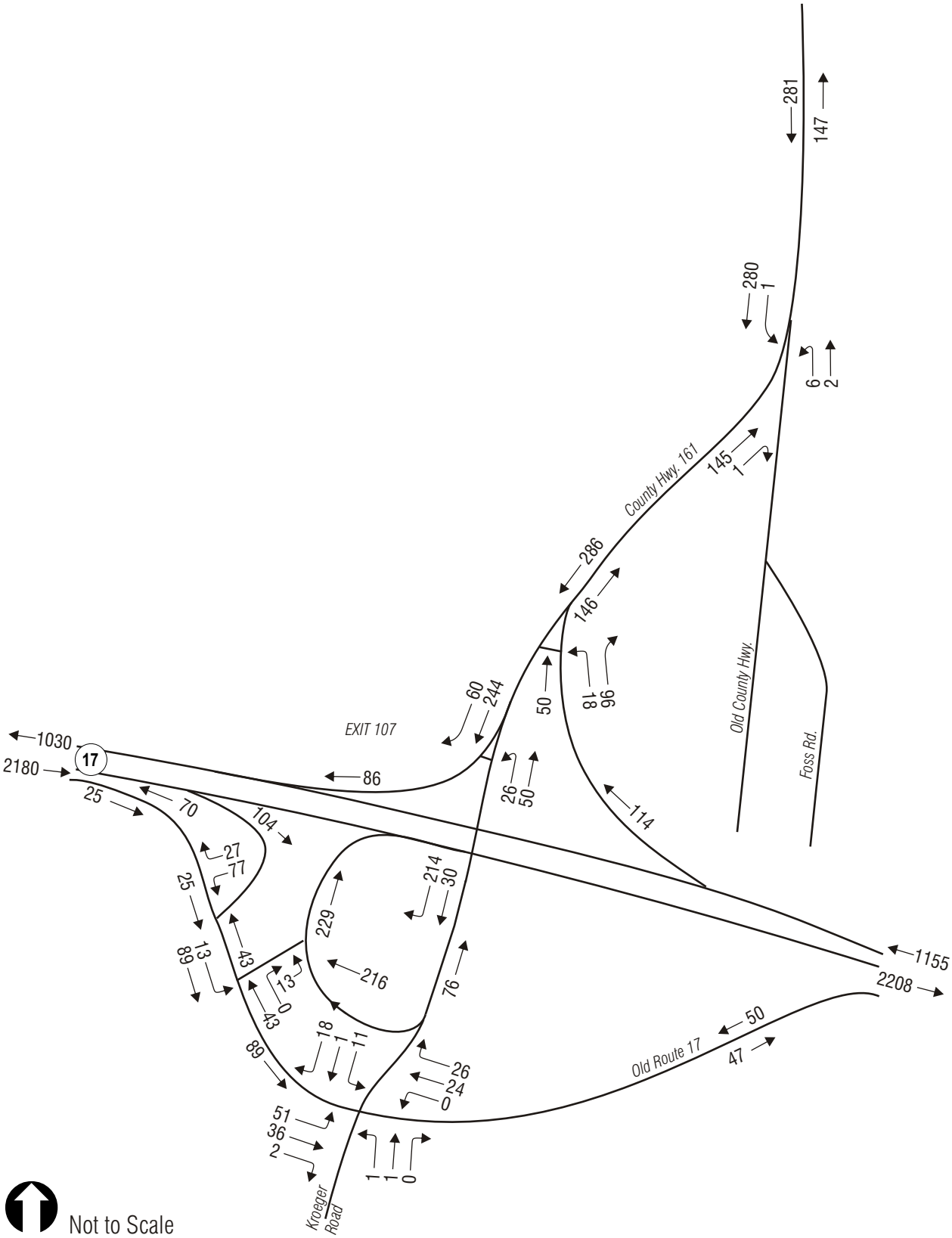
Not to Scale

Stockbridge-Munsee Casino
Thompson, New York

2010 Existing Traffic Volumes

Saturday Evening Peak Hour

Figure 4-12



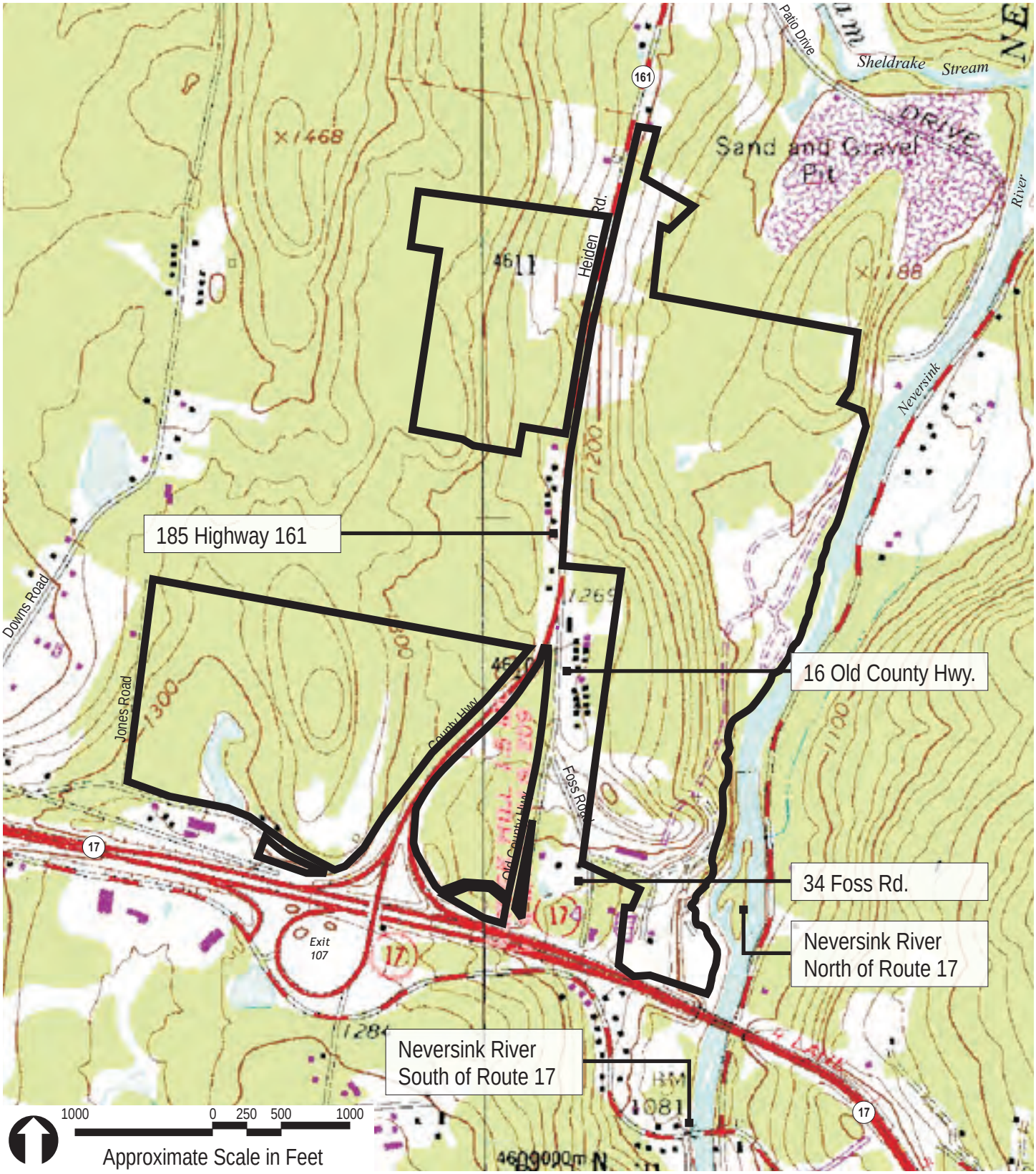
Not to Scale

Stockbridge-Munsee Casino
Thompson, New York

2010 Existing Traffic Volumes

Sunday Afternoon Peak Hour

Figure 4-13



Date: April 3, 2001

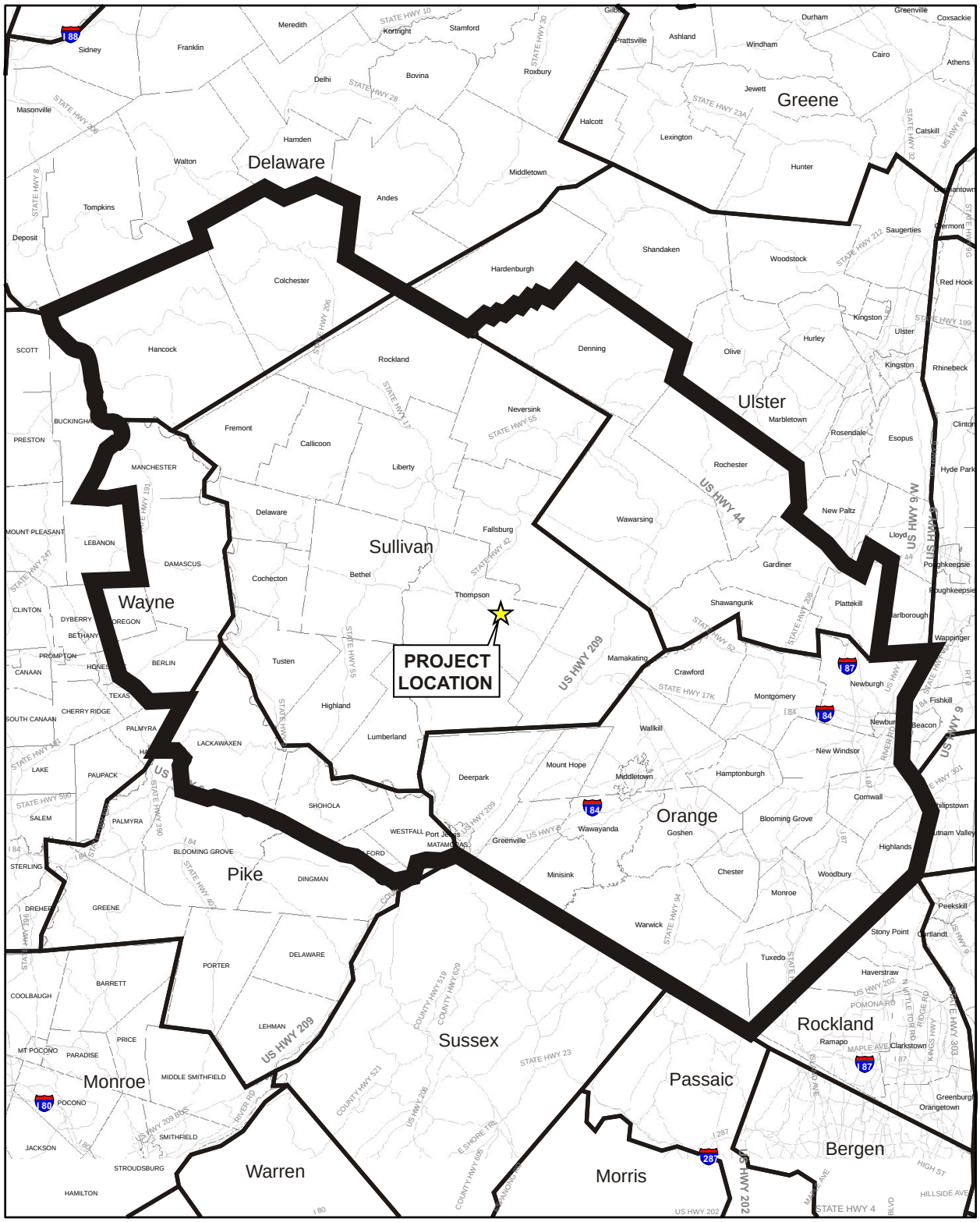
Source: USGS Topographic Maps
Woodbridge, NY
Map Printed, 1966; Map Revised, 1988
Monticello, NY
Map Printed, 1966; Map Revised, 1988

NOTE: Contour Interval = 20 feet

Stockbridge-Munsee Casino
Thompson, New York

Noise Monitoring Locations

Figure 4-14



Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Socioeconomic Analysis
Study Area

Figure 4-15

Source: NY State GIS
Date of Photo: 1997 and 1994

Stockbridge-Munsee Casino
Thompson, New York

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Land Use

Figure 4-16

View from State Route 17

Unstabilized Slope

Stockbridge-Munsee Casino
Thompson, New York

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Upper Mining Area
(2001)

Figure 4-17

Sand and Gravel Removal

Sand and Gravel Stockpiling

Stockbridge-Munsee Casino
Thompson, New York

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Lower Mining Area
(2001)

Figure 4-18

Car Storage in Upper Area

Car Storage in Middle Area

Stockbridge-Munsee Casino
Thompson, New York

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Auto Salvage Operations (2001)

Figure 4-19

Tire Stockpiling

Car Storage on Roadside

Stockbridge-Munsee Casino
Thompson, New York

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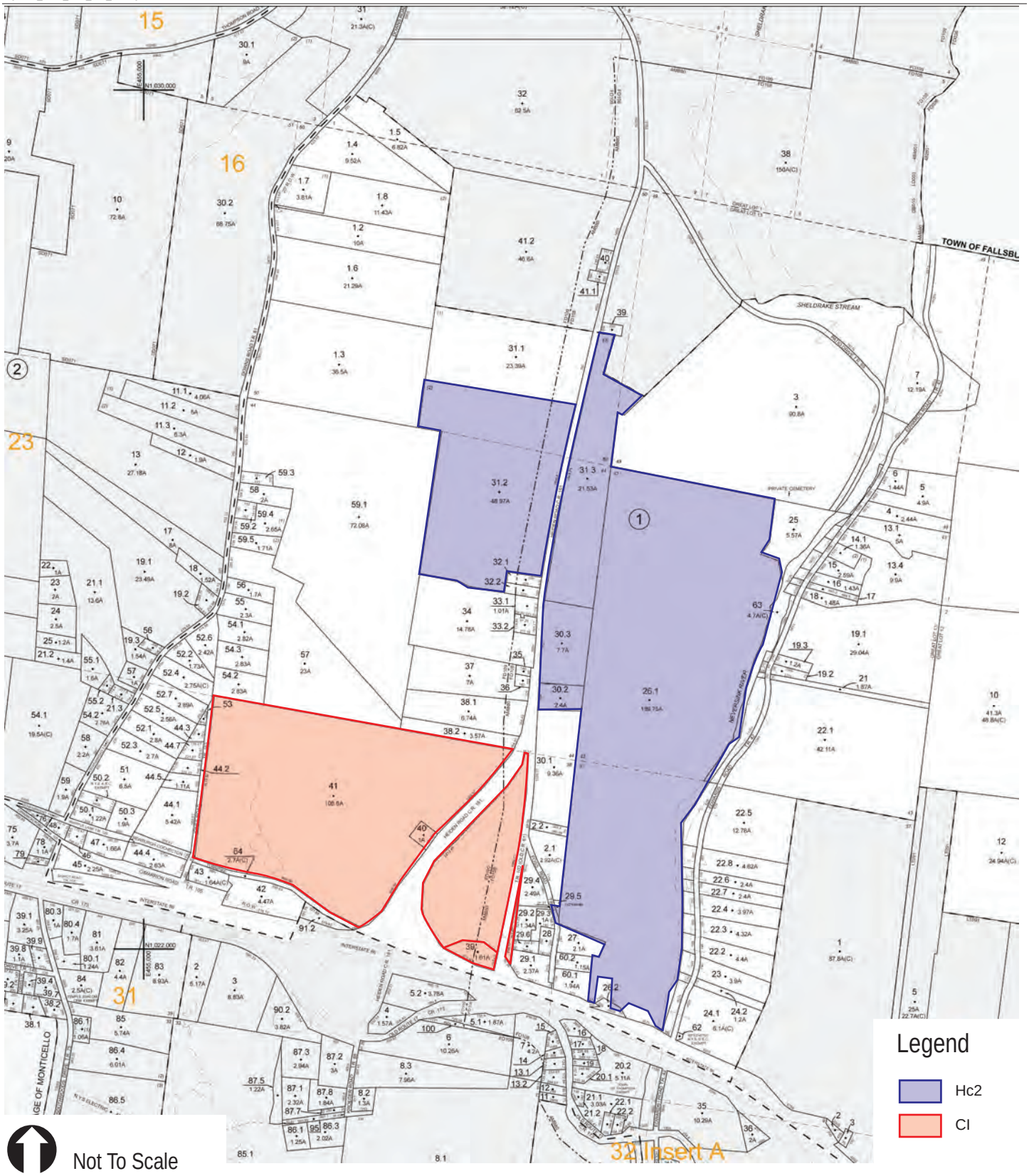
Auto Salvage Operations (2001)

Figure 4-20

Fig 4-20_3478_land_use_zoning.cdr

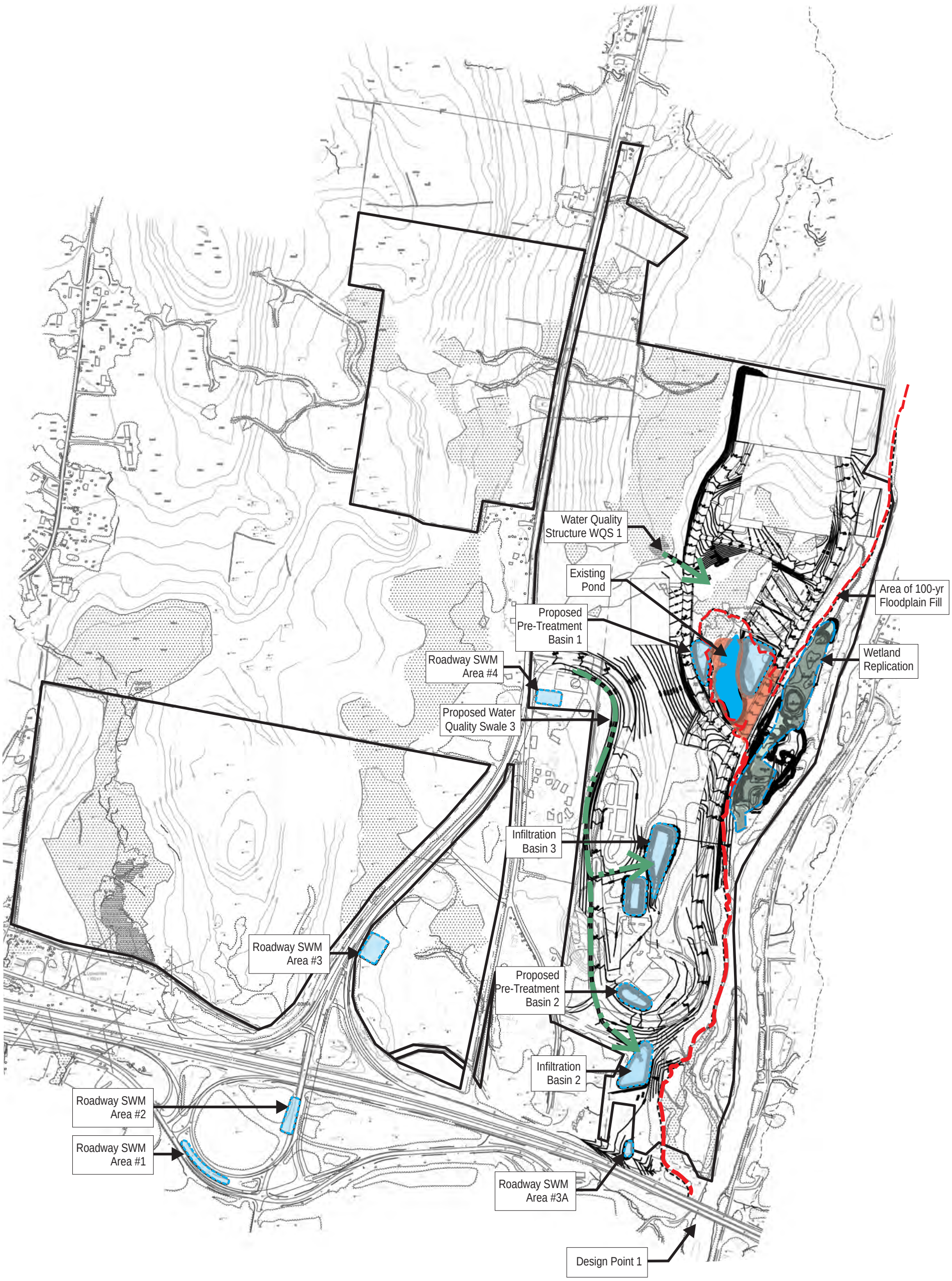


Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Land Use and Zoning

Figure 4-21



Legend

- Floodplain Fill Area
- Existing Pond
- Proposed Stormwater Management Facility
- Proposed Water Quality Swale
- 100 yr Floodplain
- Wetland Replication
- Point of Stormwater Analysis
- 100-yr Floodplain Compensatory Storage Area

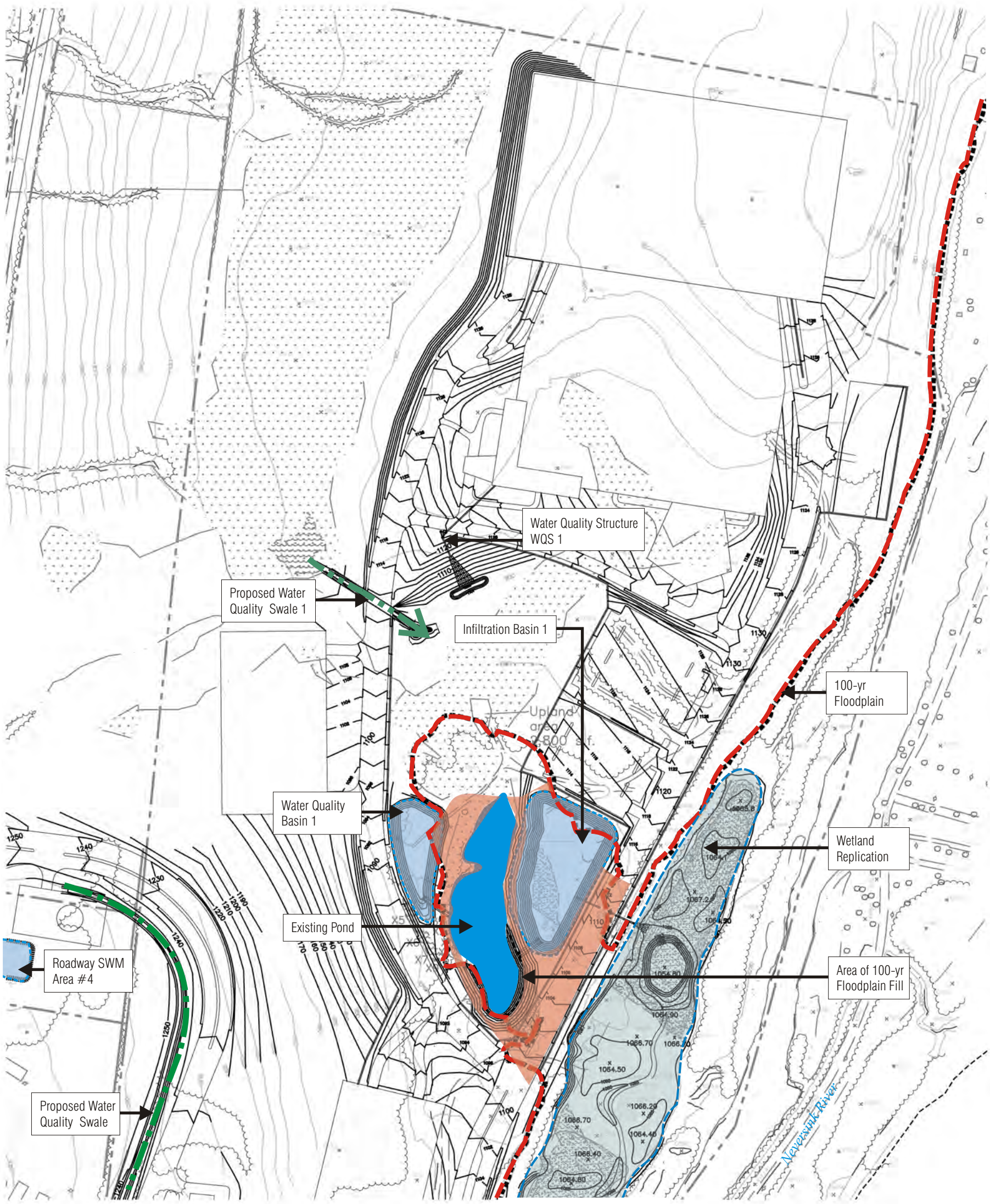
600 0 150 300 600

Approximate Scale in Feet

TETRA TECH

Stockbridge-Munsee Casino
Thompson, New York

Proposed Stormwater Management Plan - Overview Figure 5-1



Legend

- Floodplain Fill Area
- Existing Pond
- Proposed Stormwater Management Facility
- Proposed Water Quality Swale
- 100 yr Floodplain
- Wetland Replication
- Point of Stormwater Analysis
- 100-yr Floodplain Compensatory Storage Area

240 0 60 120 240

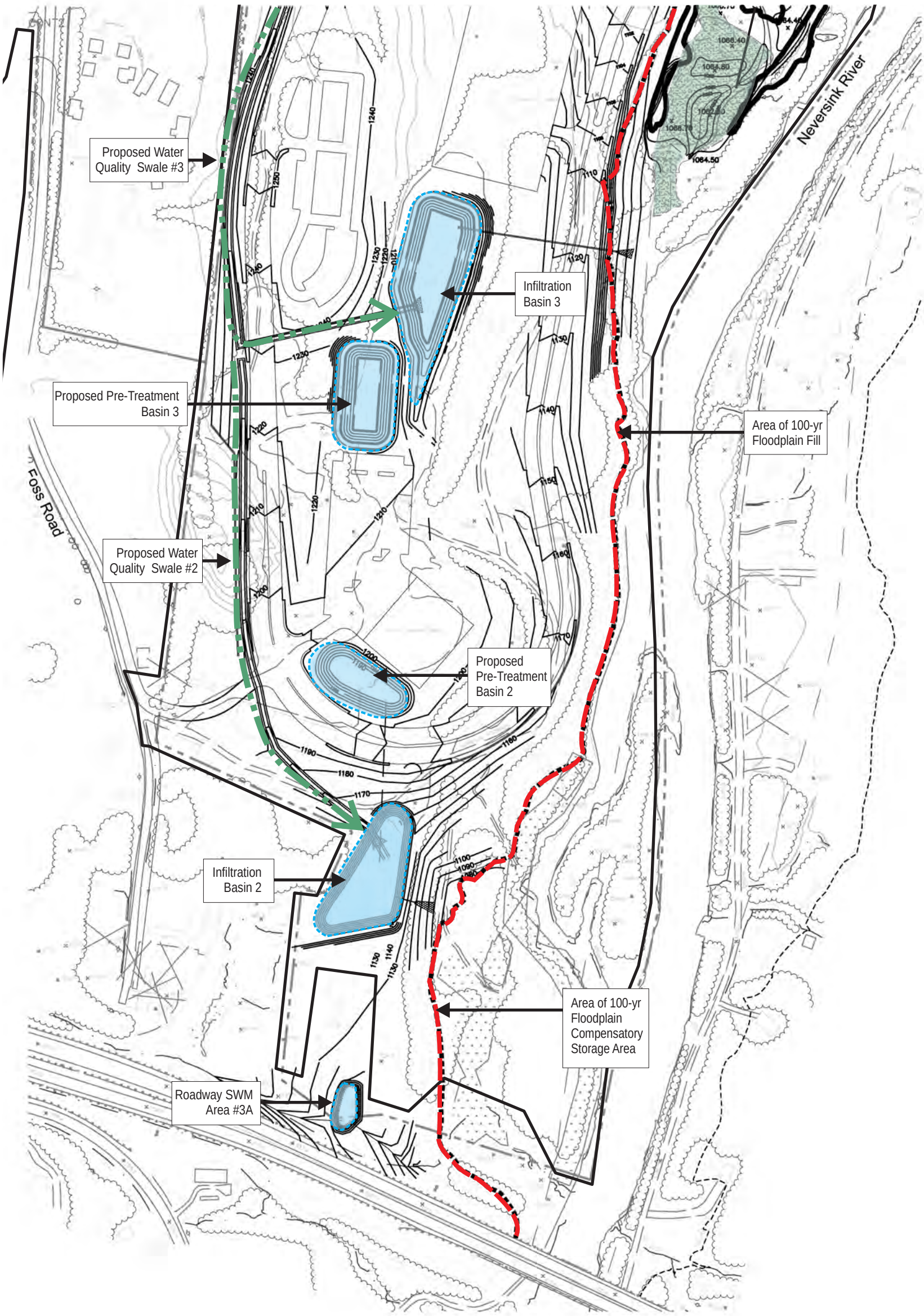
Approximate Scale in Feet

TETRA TECH

Stockbridge-Munsee Casino
Thompson, New York

Proposed Stormwater Management Plan - Northern Area

Figure 5-2



Legend

- Floodplain Fill Area
- Existing Pond
- Proposed Stormwater Management Facility
- Proposed Water Quality Swale
- 100 yr Floodplain
- Wetland Replication
- Point of Stormwater Analysis
- 100-yr Floodplain Compensatory Storage Area

240 0 60 120 240

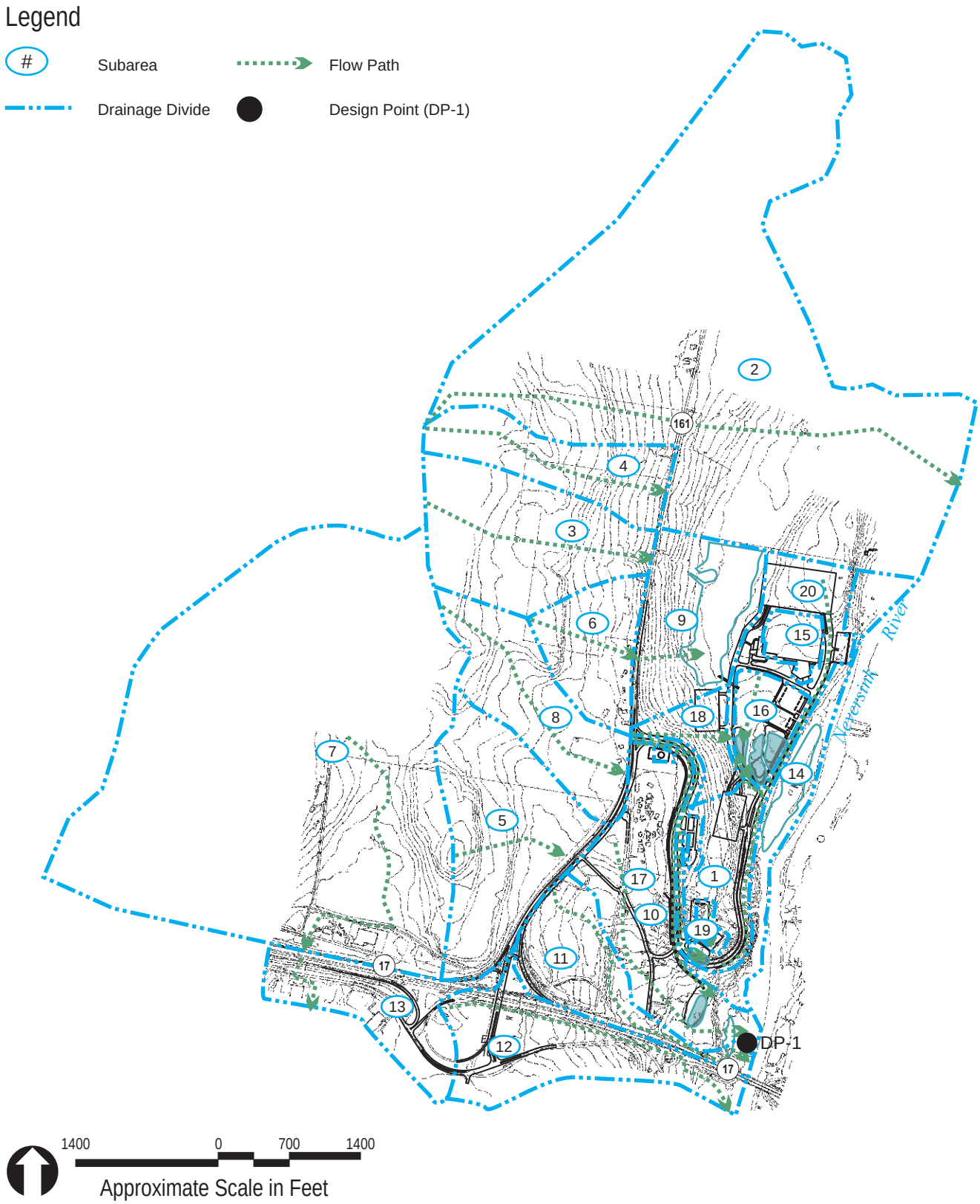
Approximate Scale in Feet

TETRA TECH

Stockbridge-Munsee Casino
Thompson, New York

Proposed Stormwater Management Plan - Southern Area

Figure 5-3



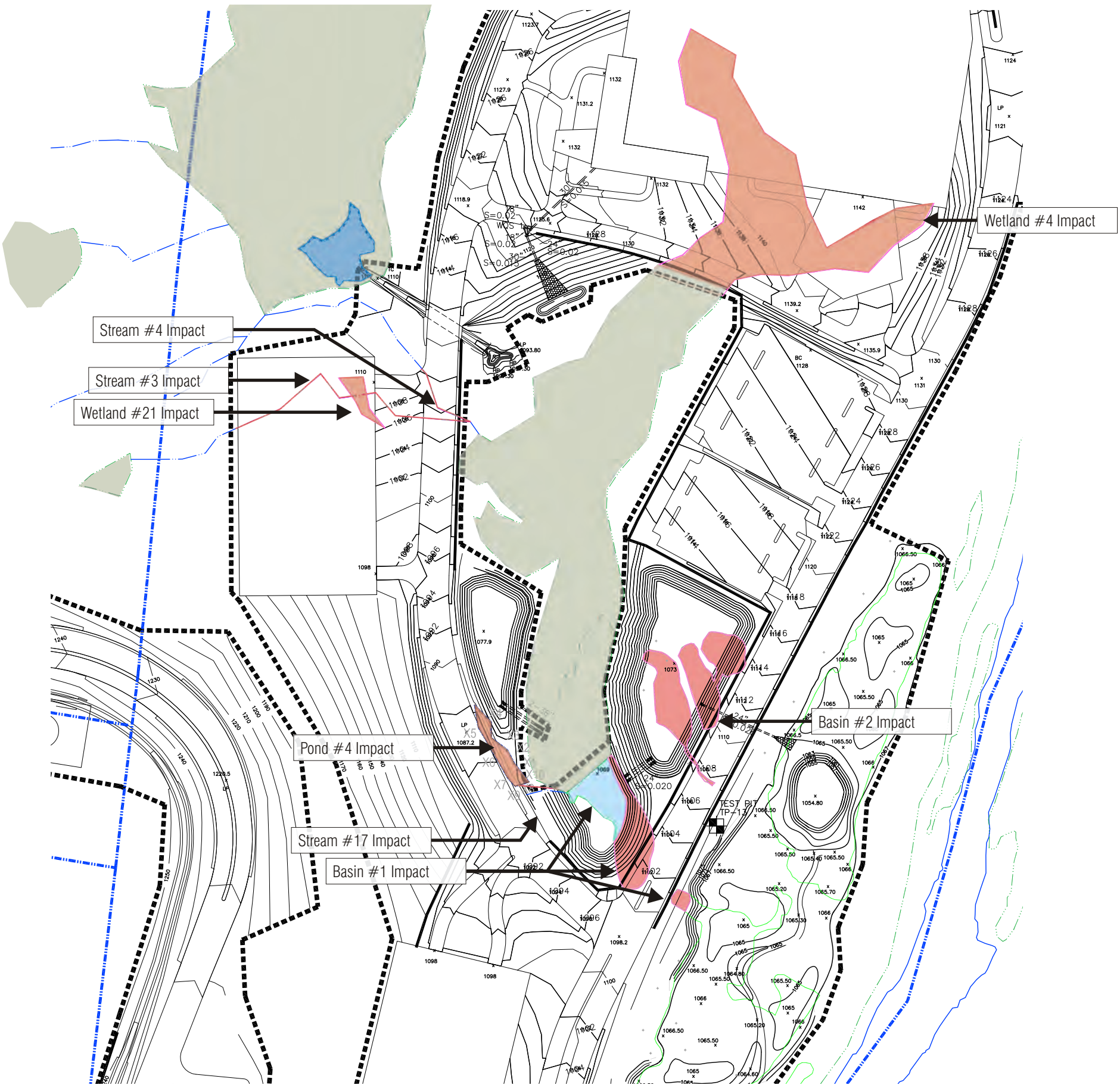
NOTE: Contour Interval = 10 feet

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Proposed Drainage

Figure 5-4



Wetland Impacts

Wetland	Impact Area
Wetland 4	1.48 ac
Wetland 21	0.05 ac
Total=	**1.53 ac**

Stream Impacts

Stream	Impact Area
Stream 3	480 LF
Stream 4	162 LF
Stream 17	63 LF
Total=	**705 LF**

Pond Impacts

Pond	Impact Area
Pond 4	0.07 ac
Total=	**0.07 ac**

Basin Impacts

Basin	Impact Area
Basin 1	0.19 ac
Basin 2	0.4 ac
Basin 4	0.002
Total=	**0.59 ac**

Legend

- Impact Area
- Pond
- Basin
- Vegetated Wetland
- Stream

200 0 50 100 200

Approximate Scale in Feet

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Wetland and Waterway Impacts

Figure 5-5

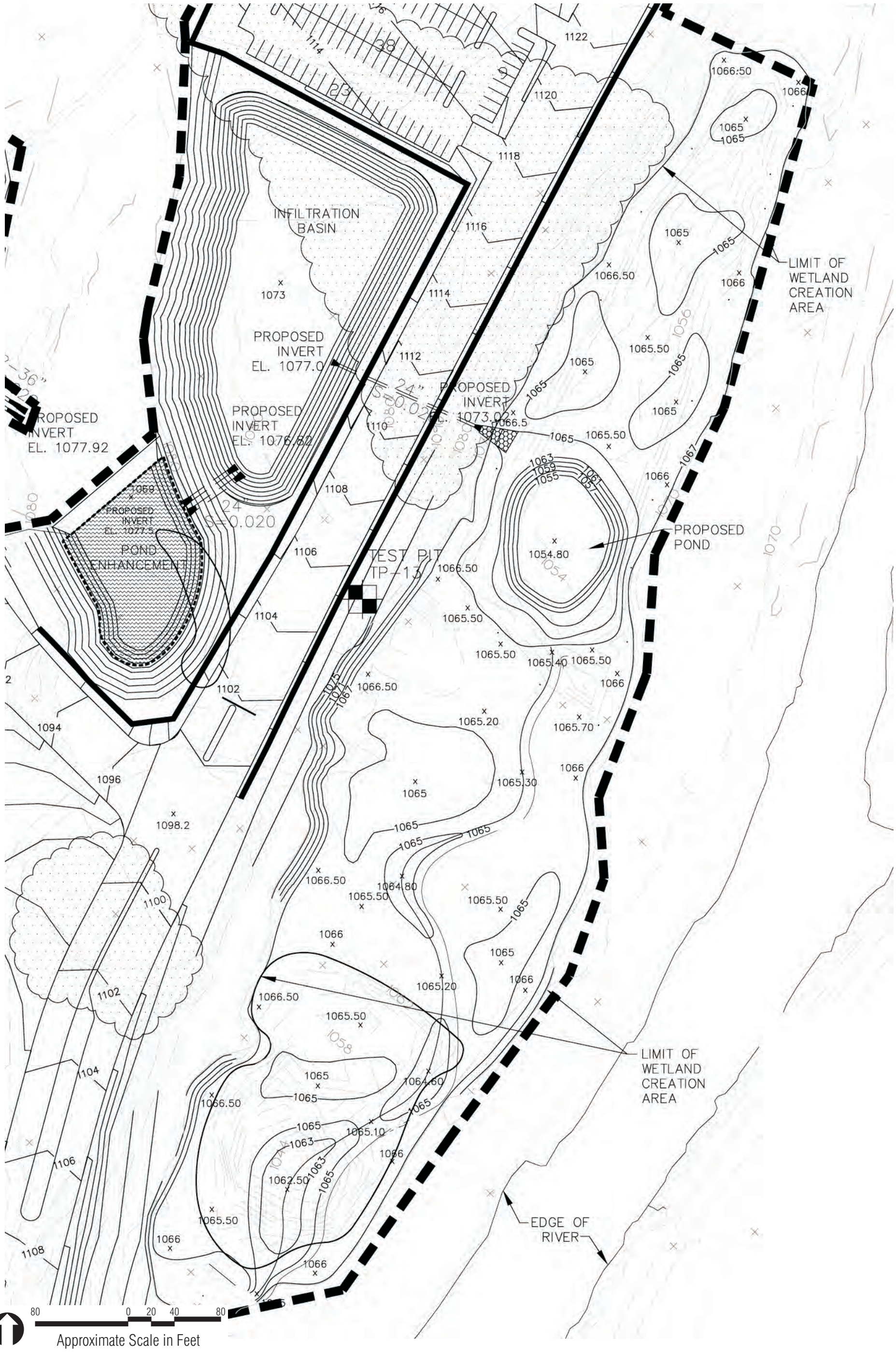
NOTE: Contour Interval = 2 feet

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Site Wetland
Mitigation Overview

Figure 5-6

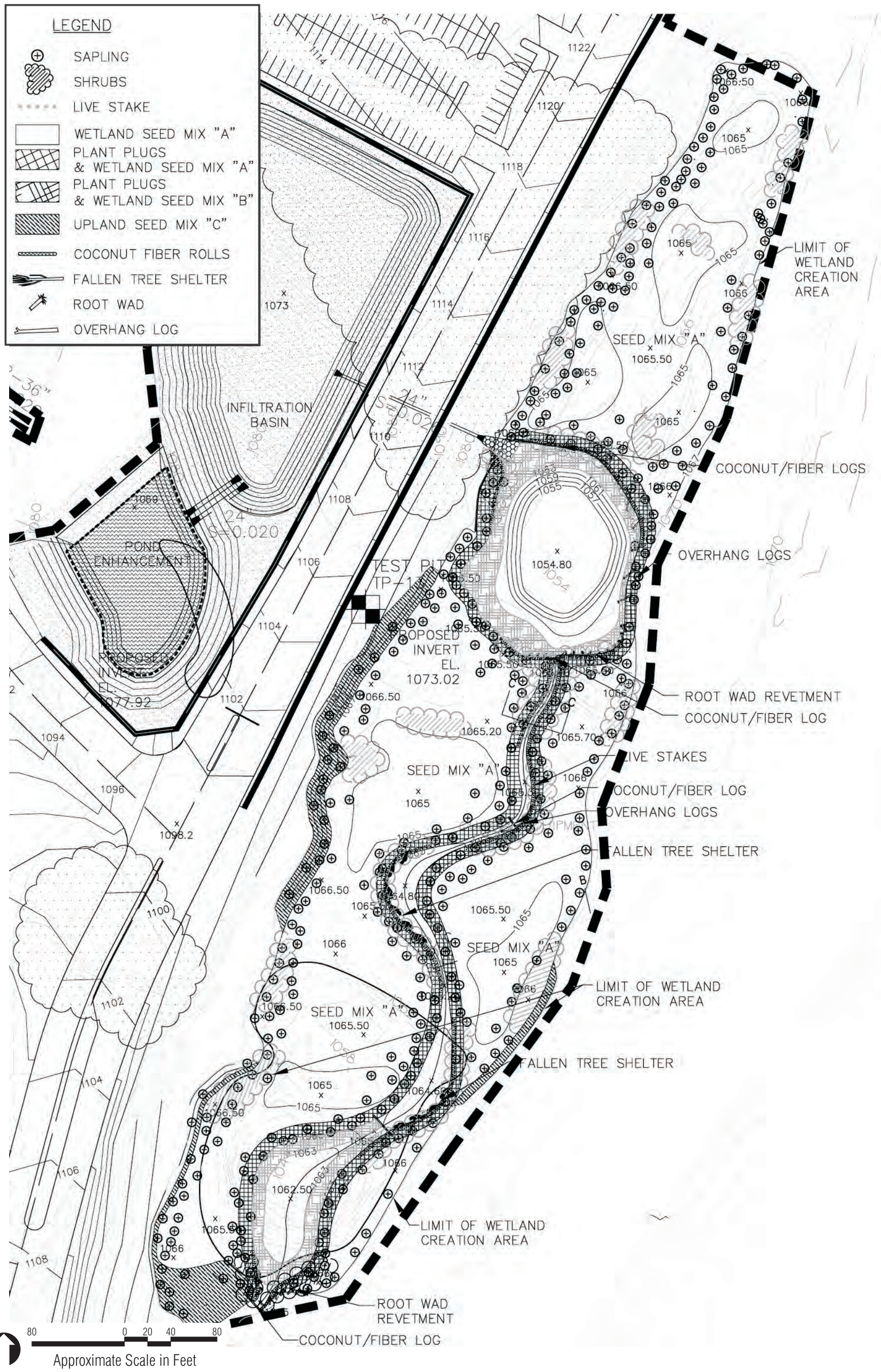


Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Primary Wetland Creation Area
Grading Plan

Figure 5-7

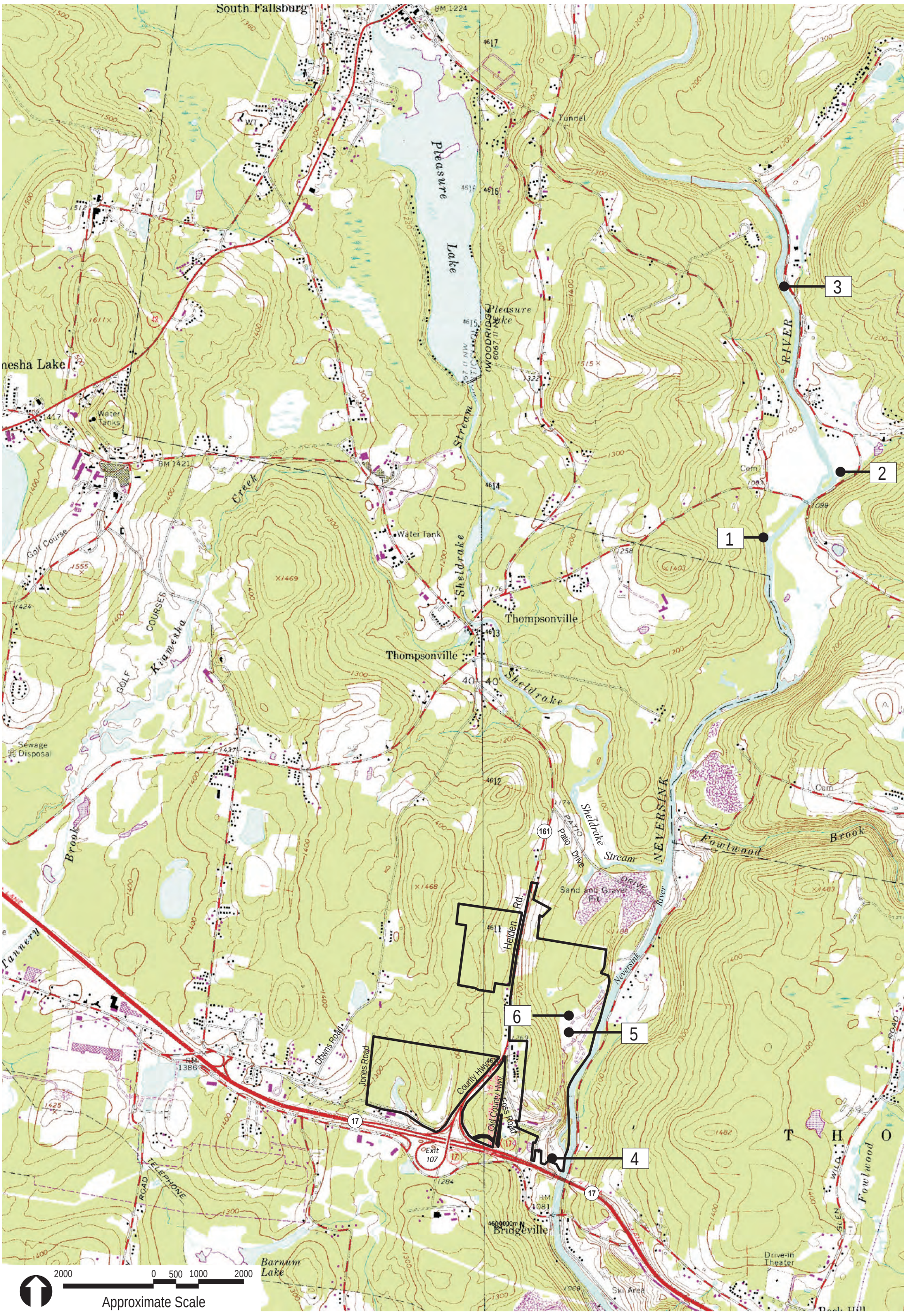


Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Primary Wetland Creation Area
Planting Plan

Figure 5-8

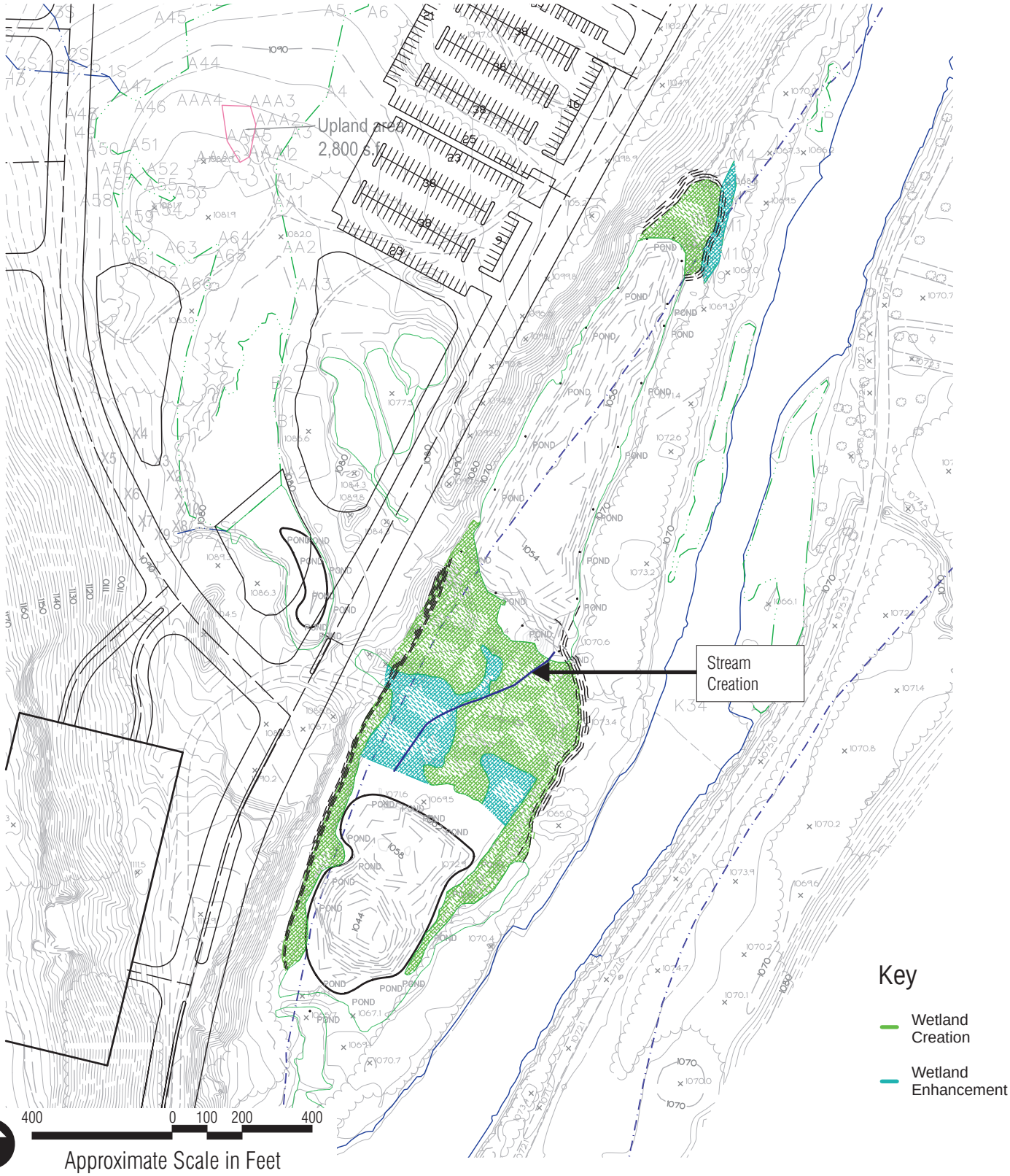


Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Reference
Wetland Locations

Figure 5-9



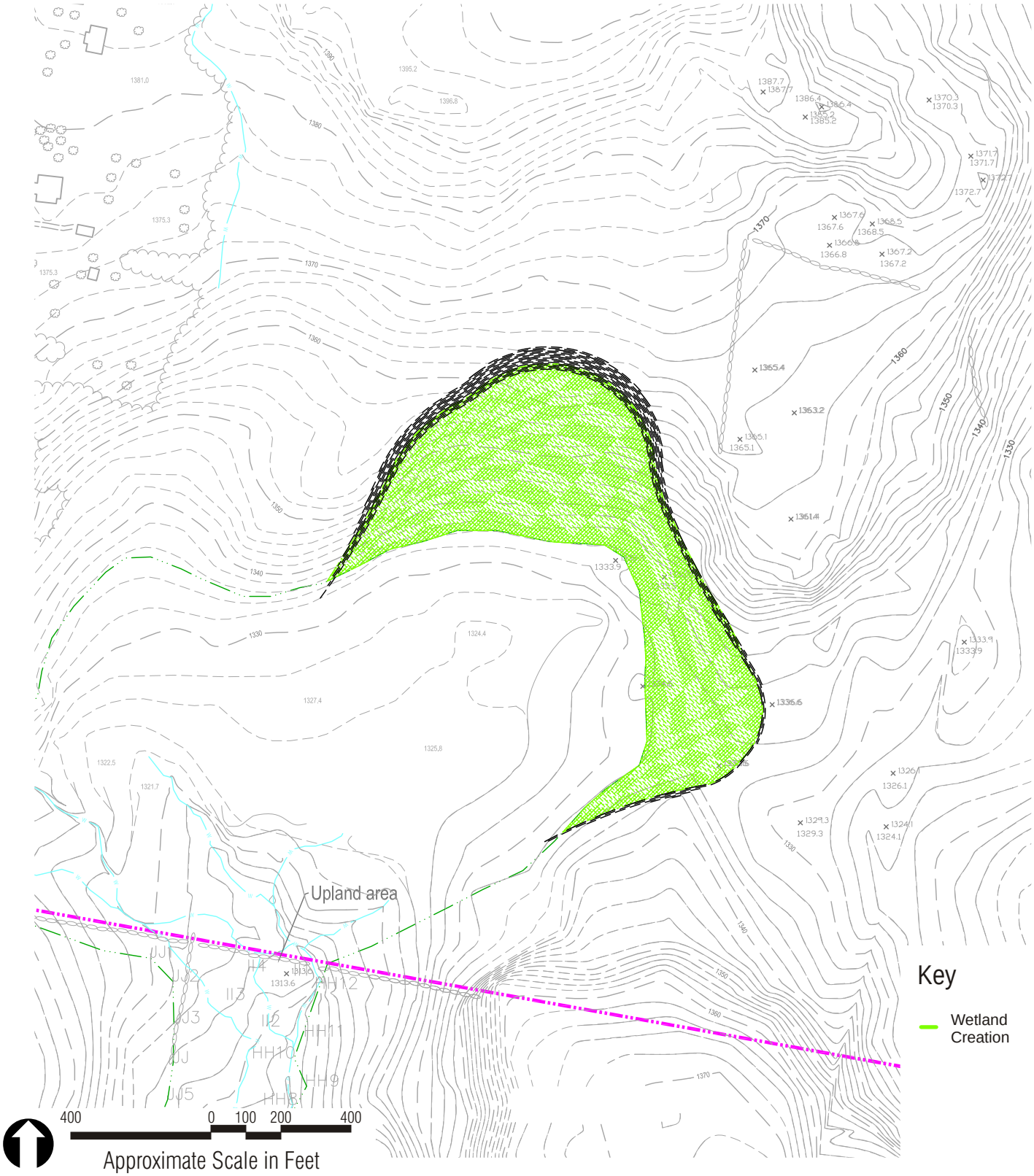
NOTE: Contour Interval = 2 feet

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Supplemental Wetland
Mitigation Area 1

Figure 5-10



NOTE: Contour Interval = 2 feet

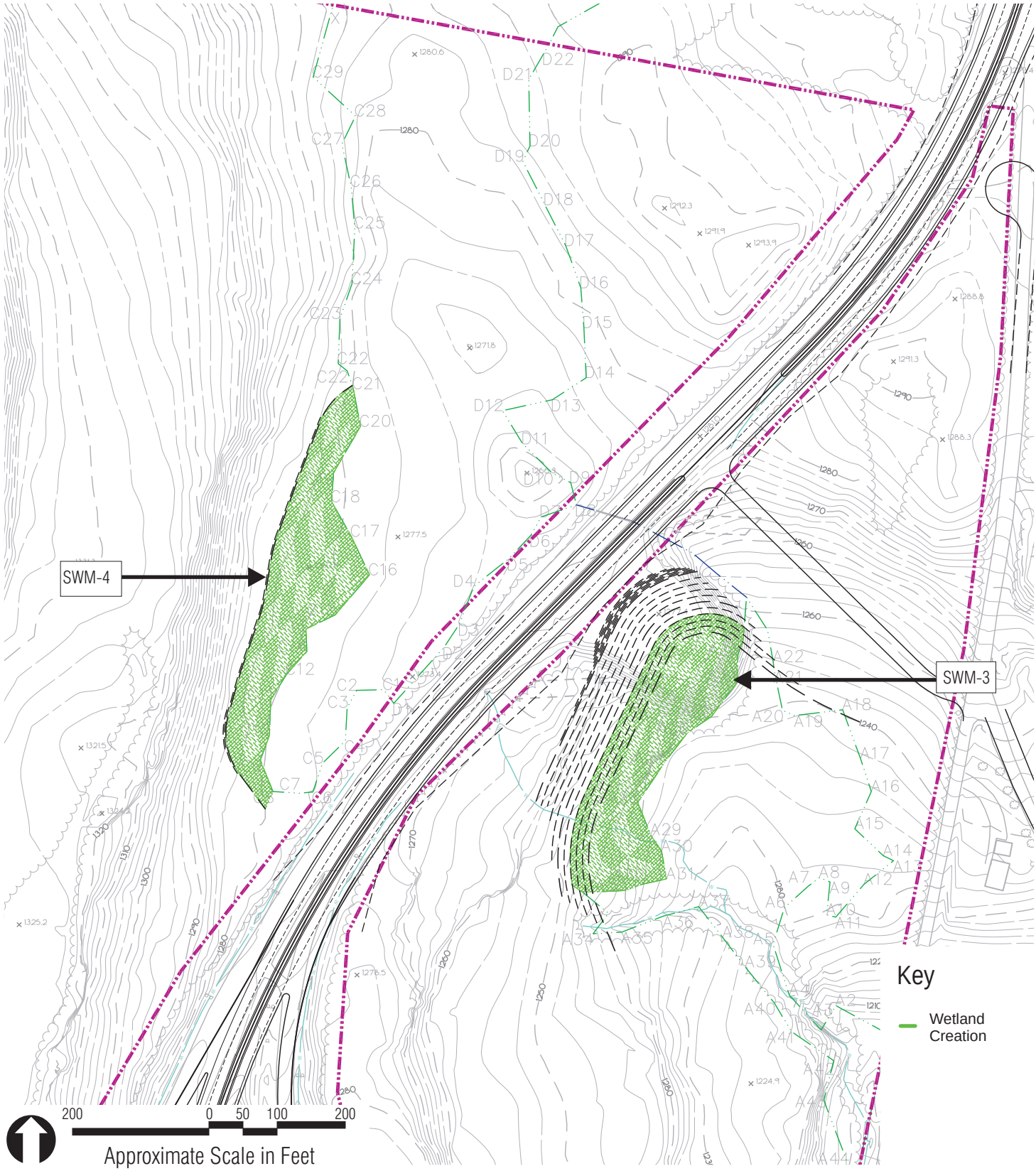
Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Supplemental Wetland Mitigation Area 2

Figure 5-11

Fig 5-12_3478_Supplemental_wetand_area-2.cdr



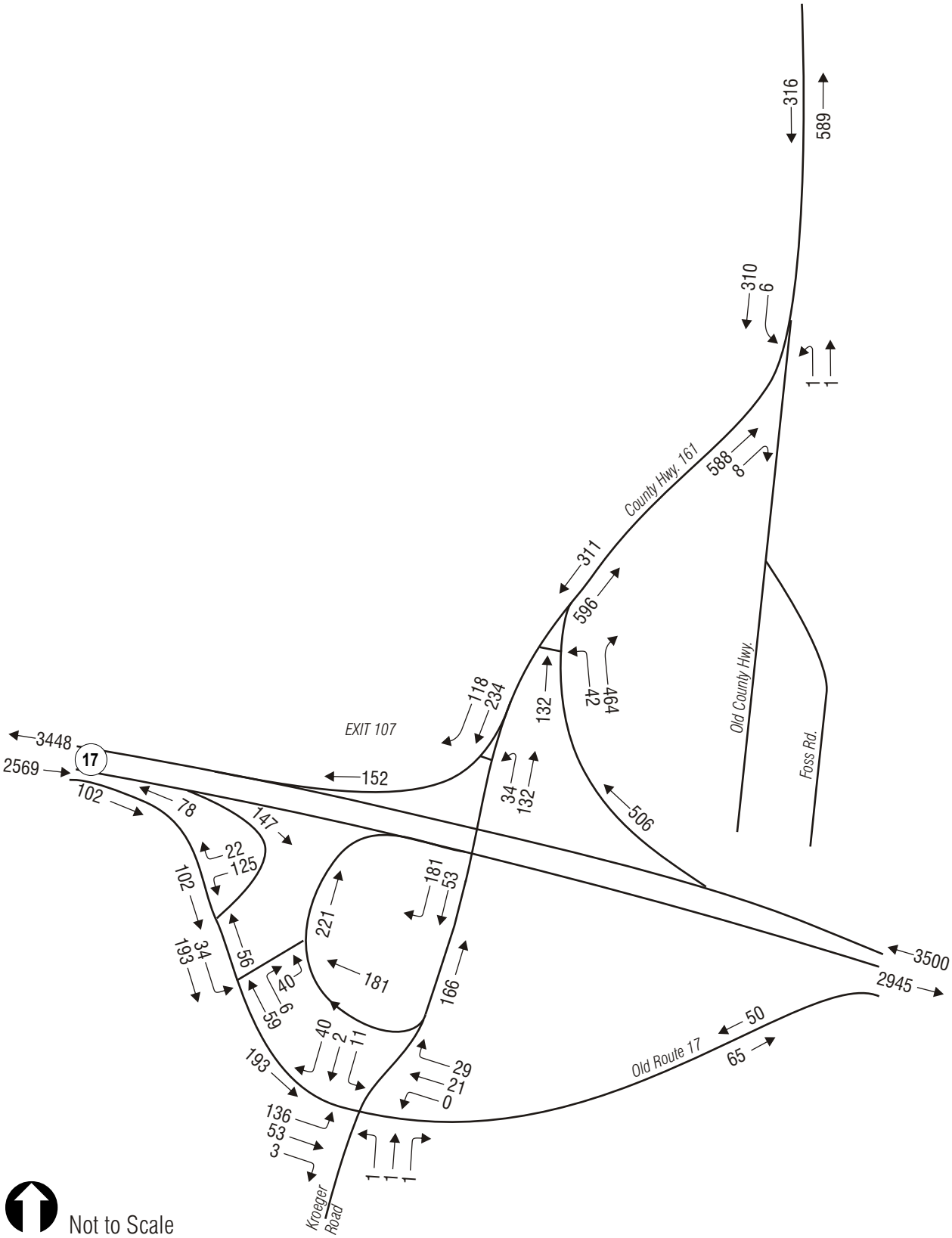
NOTE: Contour Interval = 2 feet

Stockbridge-Munsee Casino
Thompson, New York

TETRA TECH

Supplemental Wetland Mitigation Areas 3 & 4

Figure 5-12



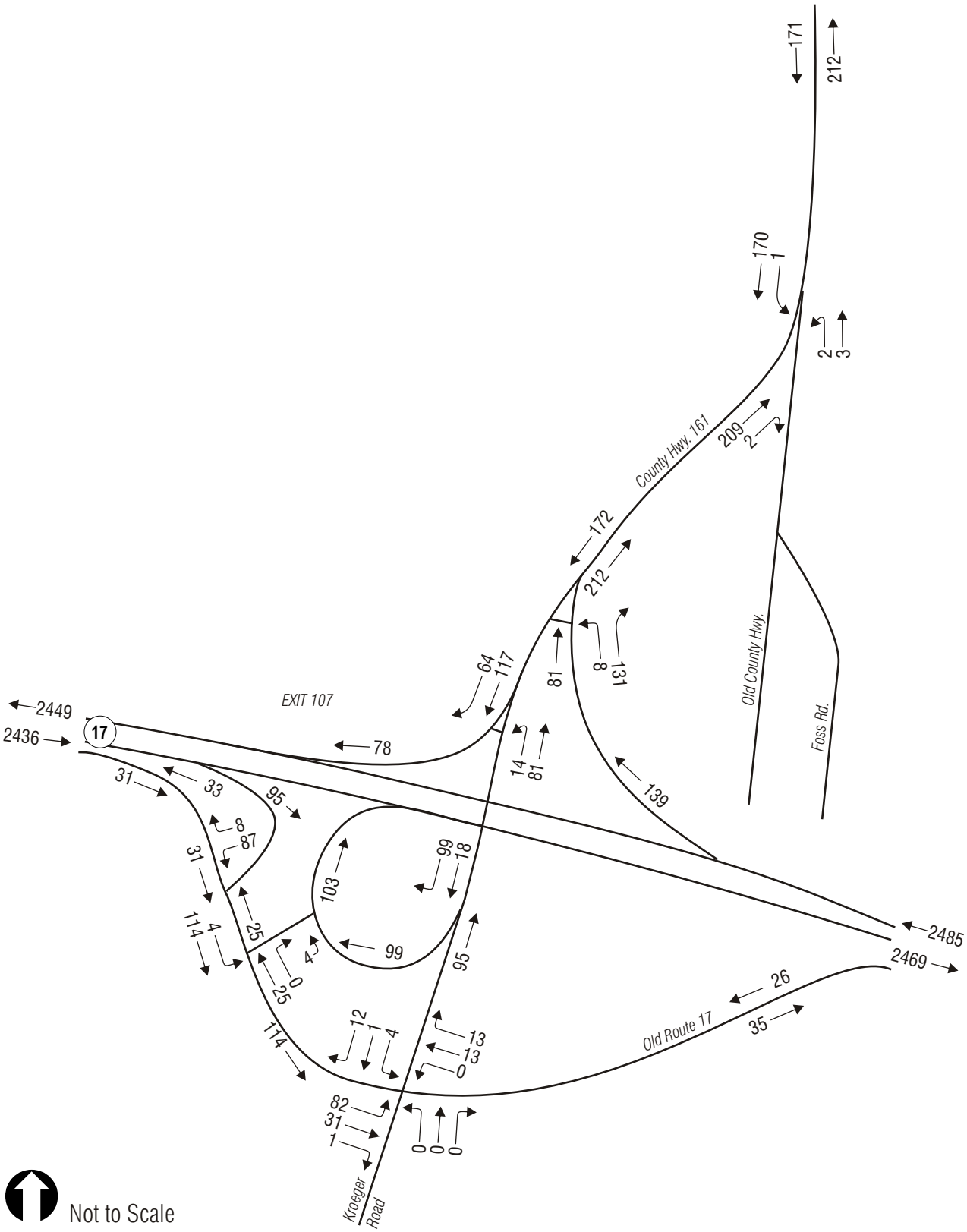
Not to Scale

Stockbridge-Munsee Casino
Thompson, New York

2018 No-Build Traffic Volumes

Friday Afternoon Peak Hour

Figure 5-13



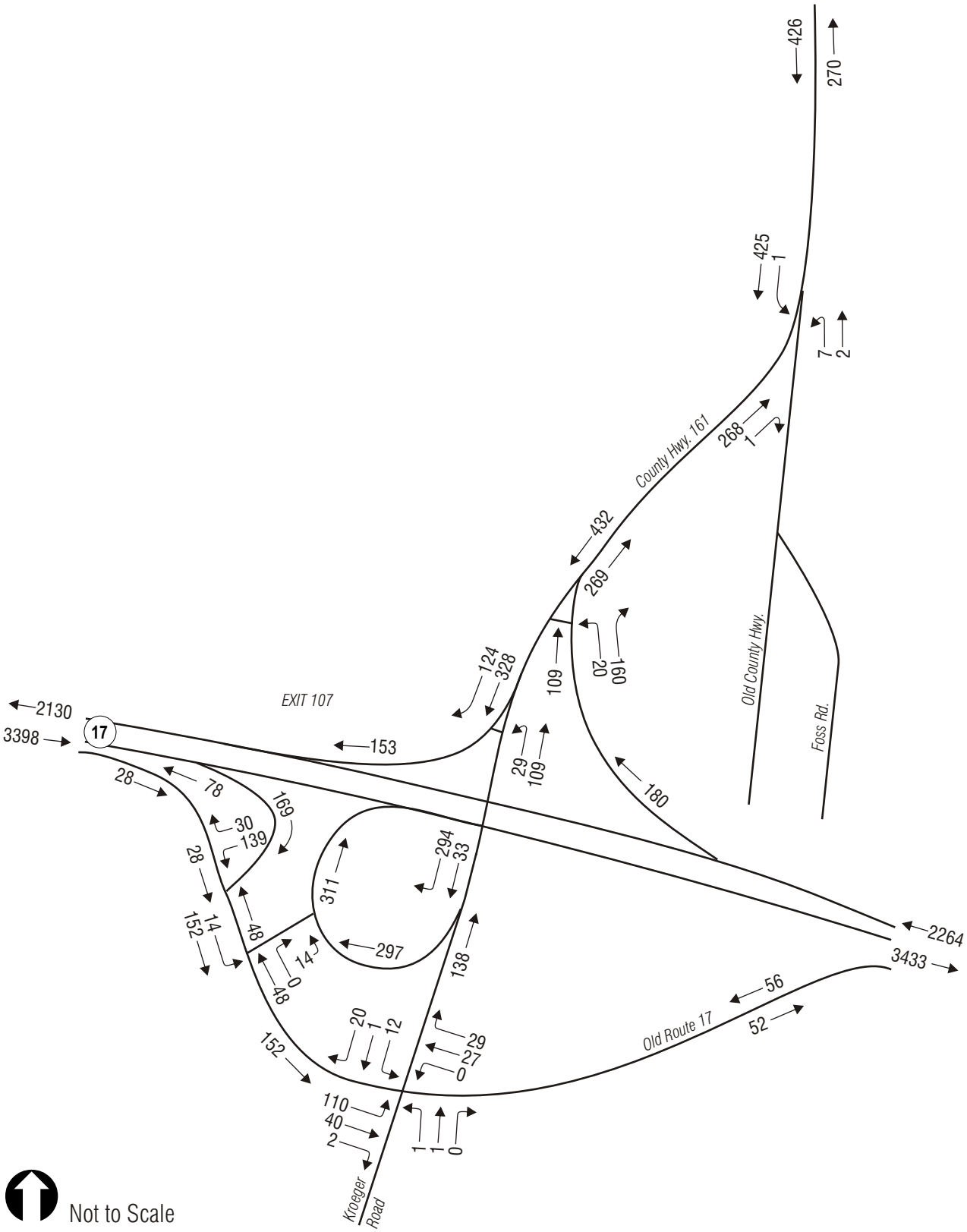
Not to Scale

Stockbridge-Munsee Casino
Thompson, New York

2018 No-Build Traffic Volumes

Saturday Evening Peak Hour

Figure 5-14



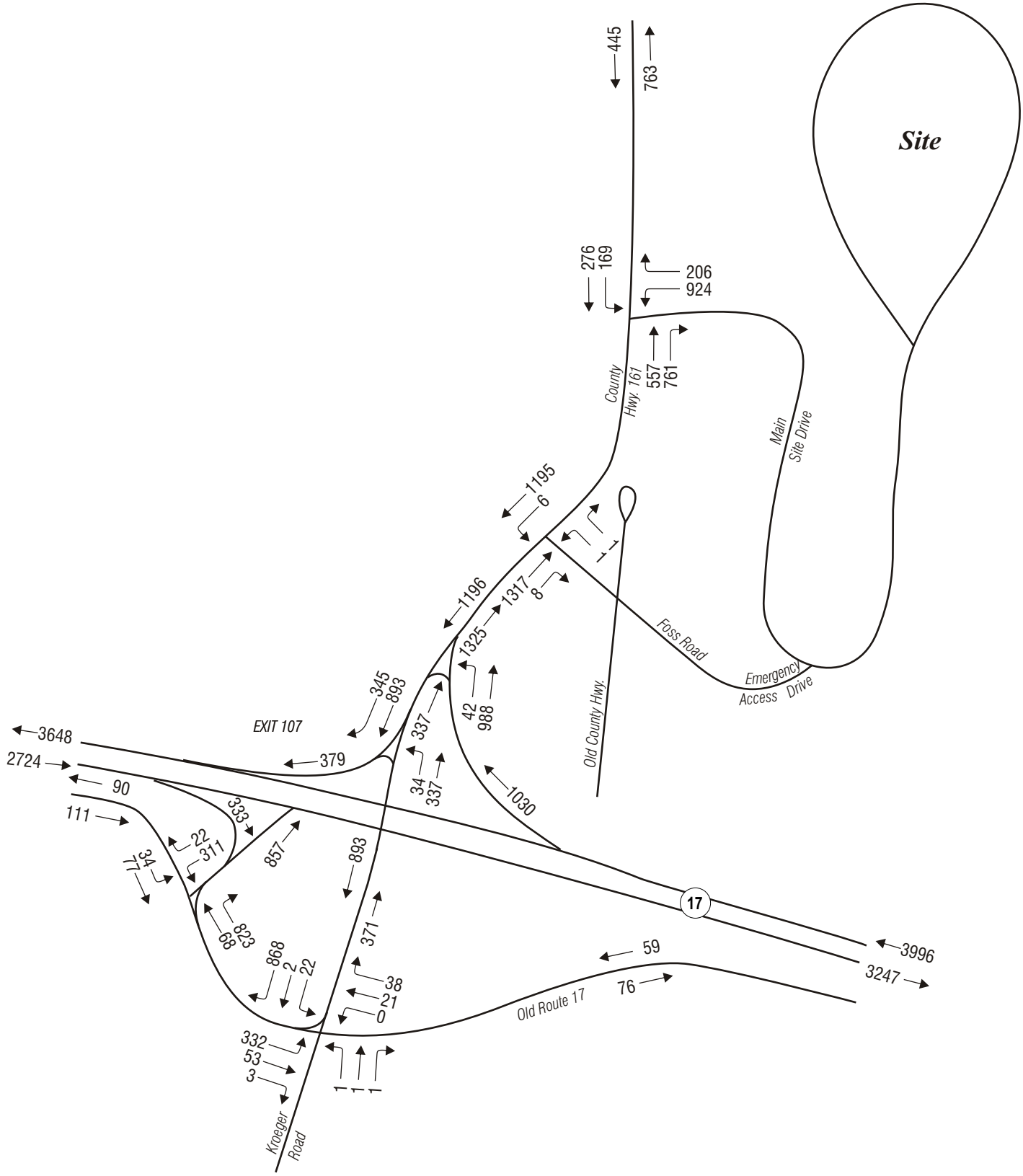
Not to Scale

Stockbridge-Munsee Casino
Thompson, New York

2018 No-Build Traffic Volumes

Sunday Afternoon Peak Hour

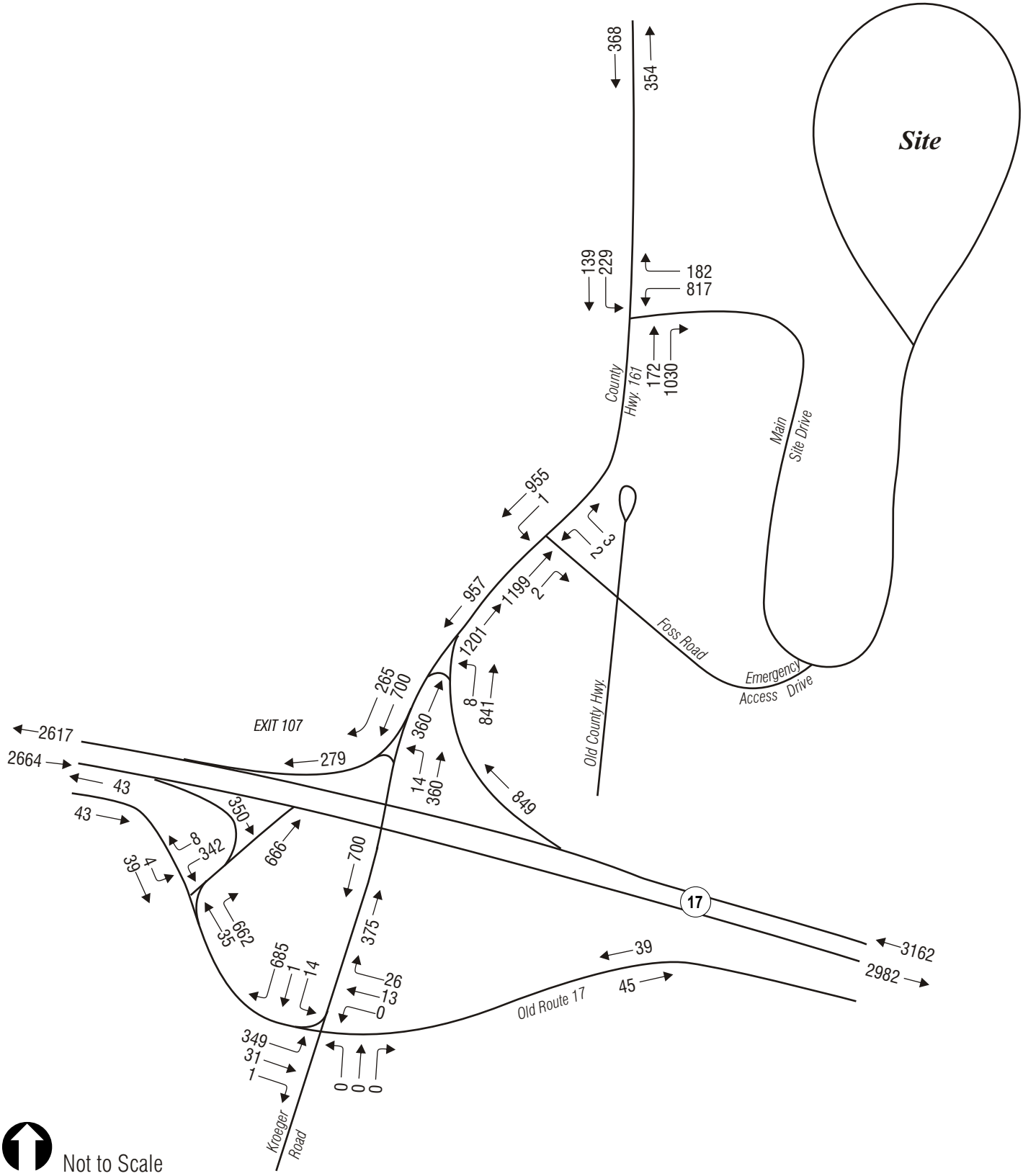
Figure 5-15



Stockbridge-Munsee Casino
Thompson, New York

2018 Build
Traffic Volumes
Friday Afternoon Peak Hour

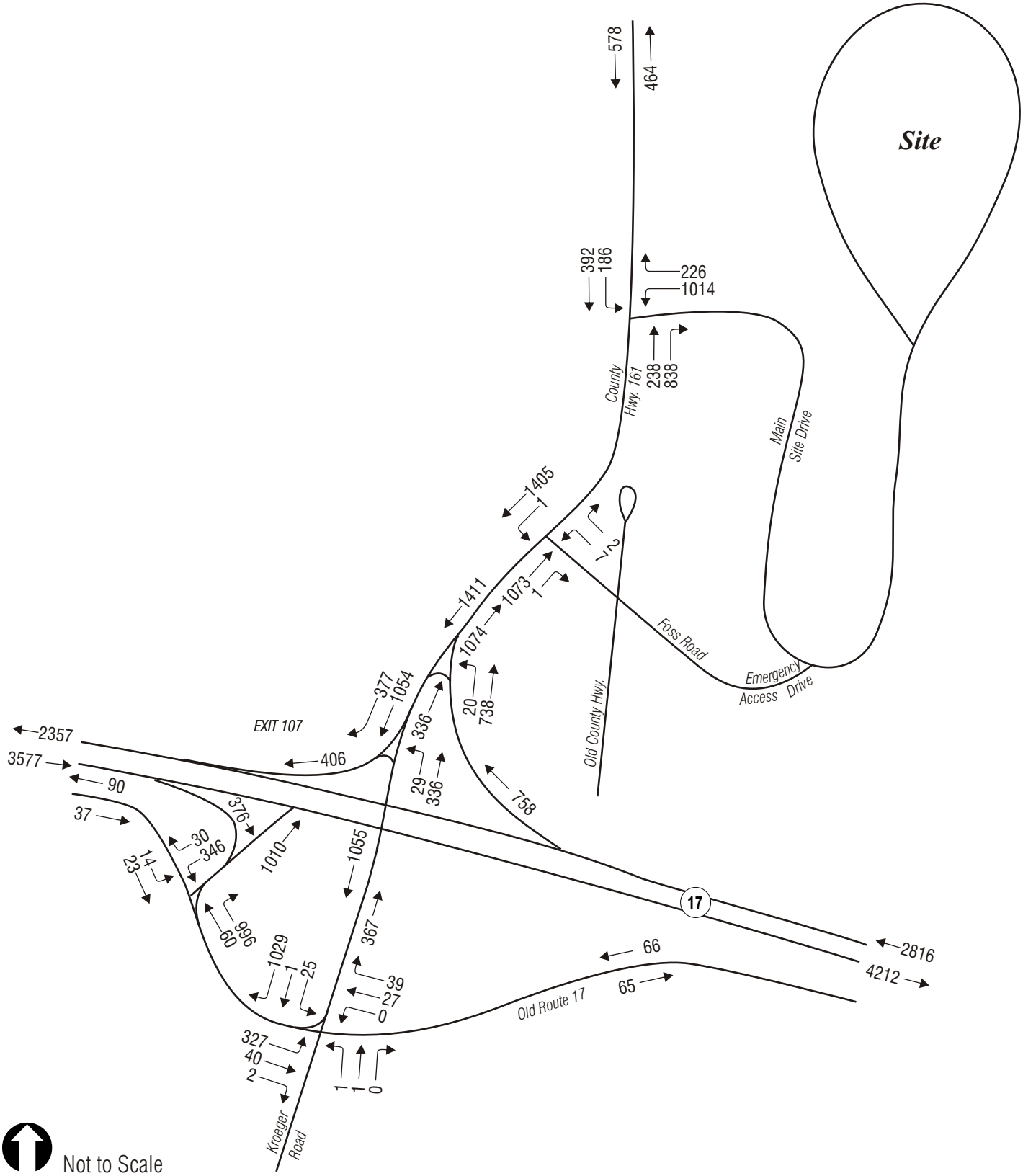
Figure 5-16



Stockbridge-Munsee Casino
Thompson, New York

2018 Build
Traffic Volumes
Saturday Evening Peak Hour

Figure 5-17

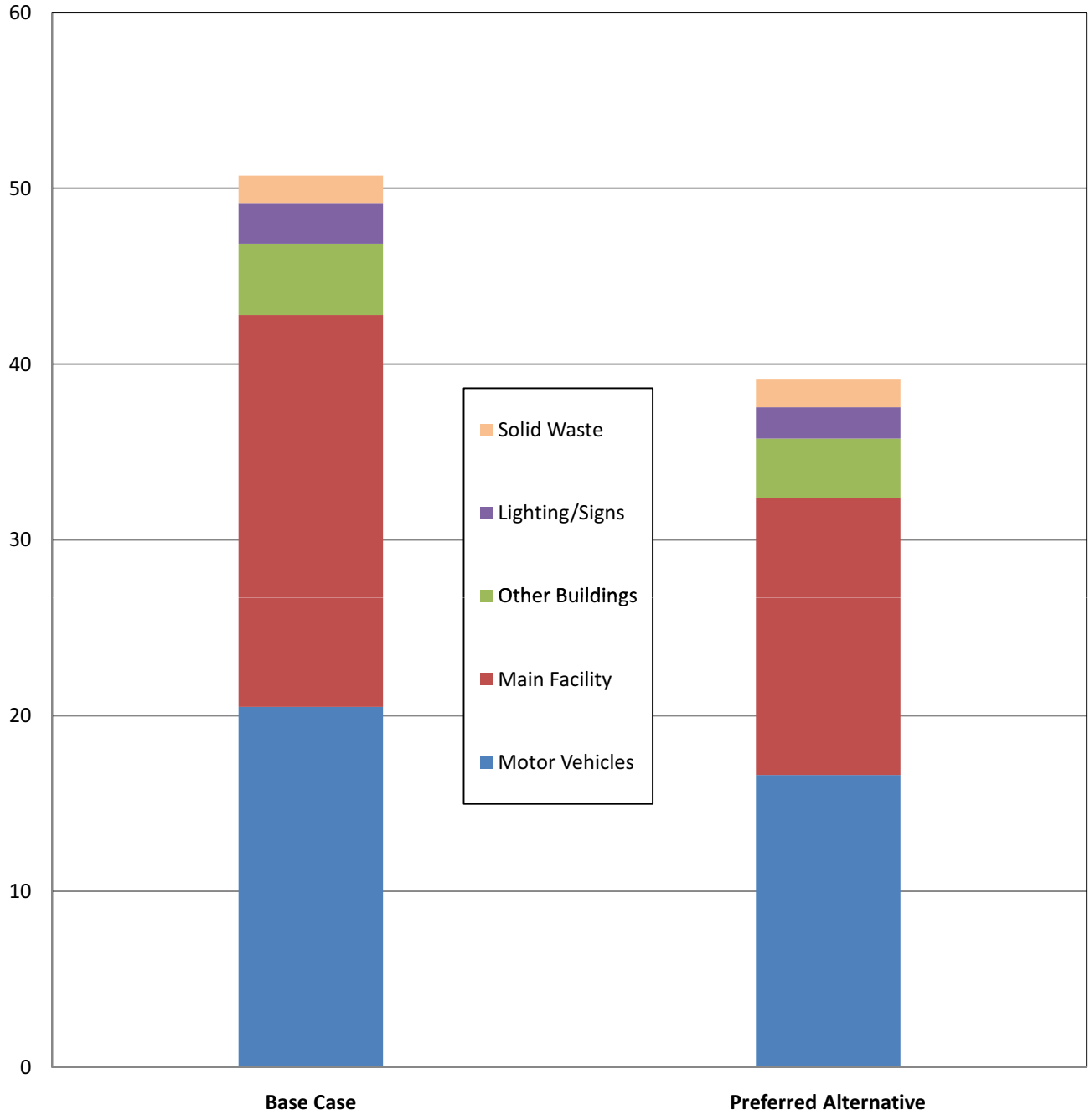


Stockbridge-Munsee Casino
Thompson, New York

2018 Build
Traffic Volumes
Sunday Afternoon Peak Hour

Figure 5-18

Greenhouse Gas (CO_2) Emissions for the Stockbridge-Munsee Casino (1,000 tons/year)



Stockbridge-Munsee Casino
Thompson, New York

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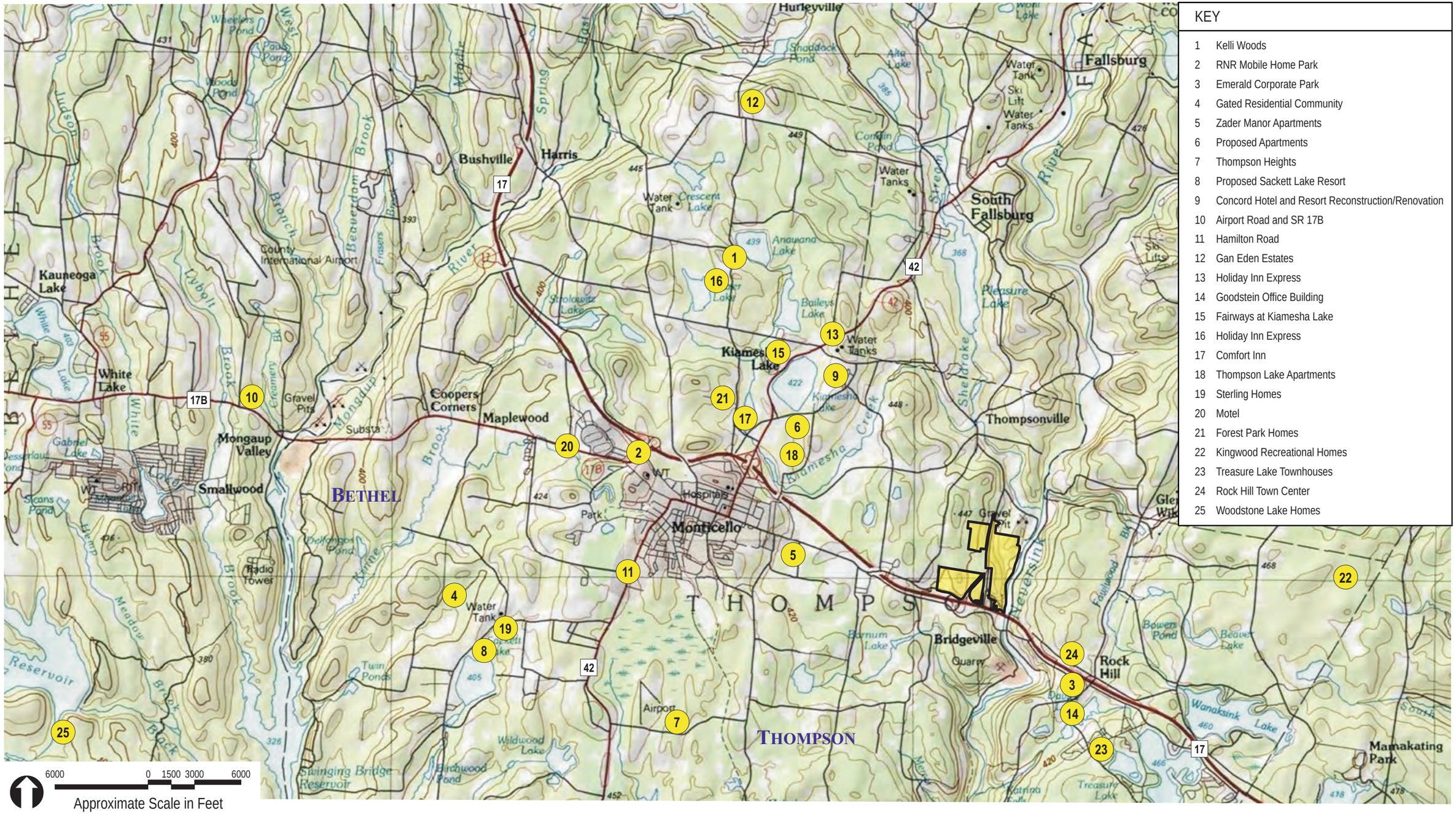
Greenhouse Gas (Co_2) Emissions

Figure 5-19

Fig 6-1_7419_proposed_offsite_developments_6000.cdr



KEY

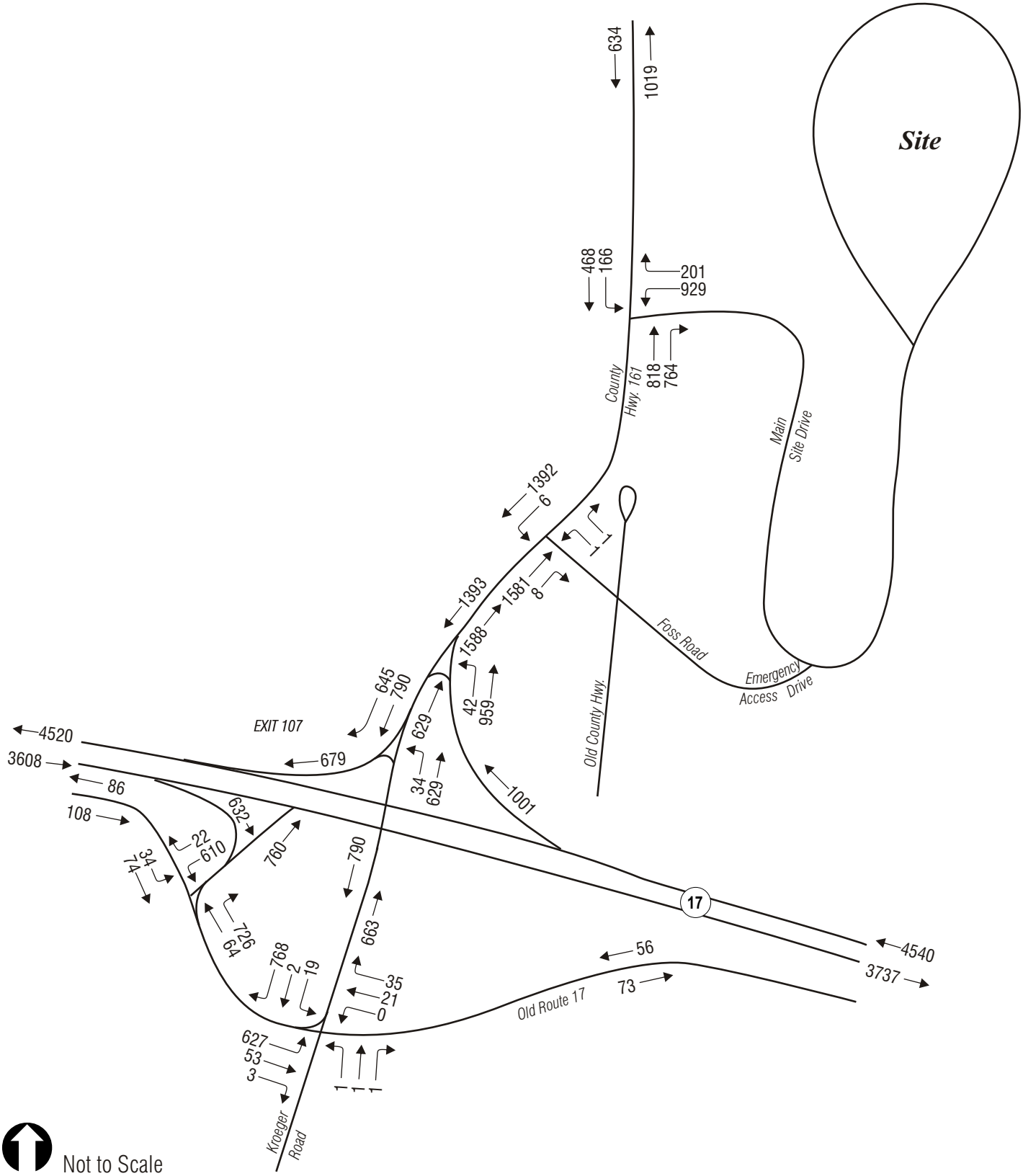
1 Kelli Woods
2 RNR Mobile Home Park
3 Emerald Corporate Park
4 Gated Residential Community
5 Zader Manor Apartments
6 Proposed Apartments
7 Thompson Heights
8 Proposed Sackett Lake Resort
9 Concord Hotel and Resort Reconstruction/Renovation
10 Airport Road and SR 17B
11 Hamilton Road
12 Gan Eden Estates
13 Holiday Inn Express
14 Goodstein Office Building
15 Fairways at Kiamesha Lake
16 Holiday Inn Express
17 Comfort Inn
18 Thompson Lake Apartments
19 Sterling Homes
20 Motel
21 Forest Park Homes
22 Kingwood Recreational Homes
23 Treasure Lake Townhouses
24 Rock Hill Town Center
25 Woodstone Lake Homes

TETRA TECH

Stockbridge-Munsee Casino
Thompson, New York

Regional Project Locations

Figure 6-1

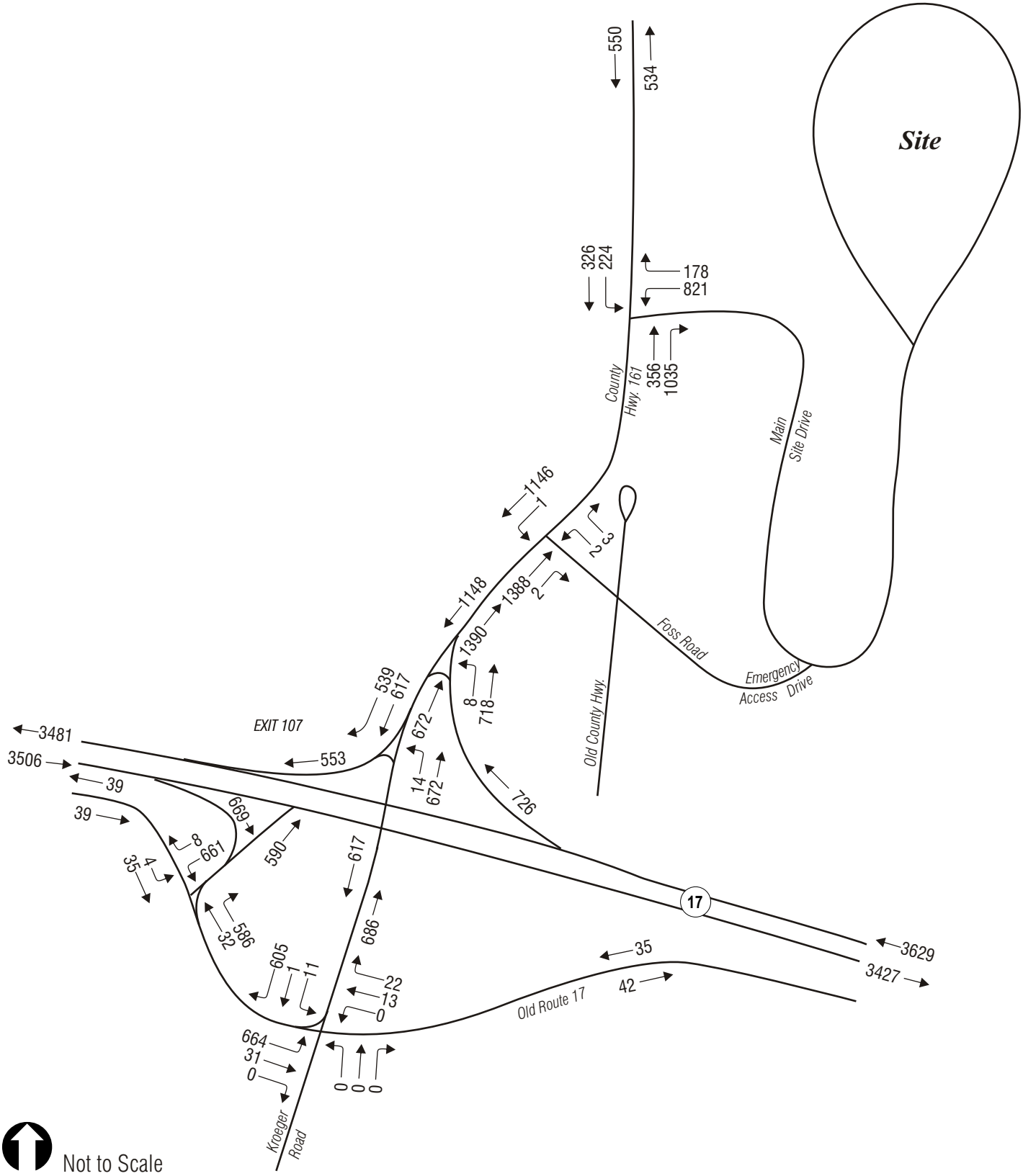


Stockbridge-Munsee Casino
Thompson, New York

Cumulative Build Traffic Volumes

Friday Afternoon Peak Hour

Figure 6-2

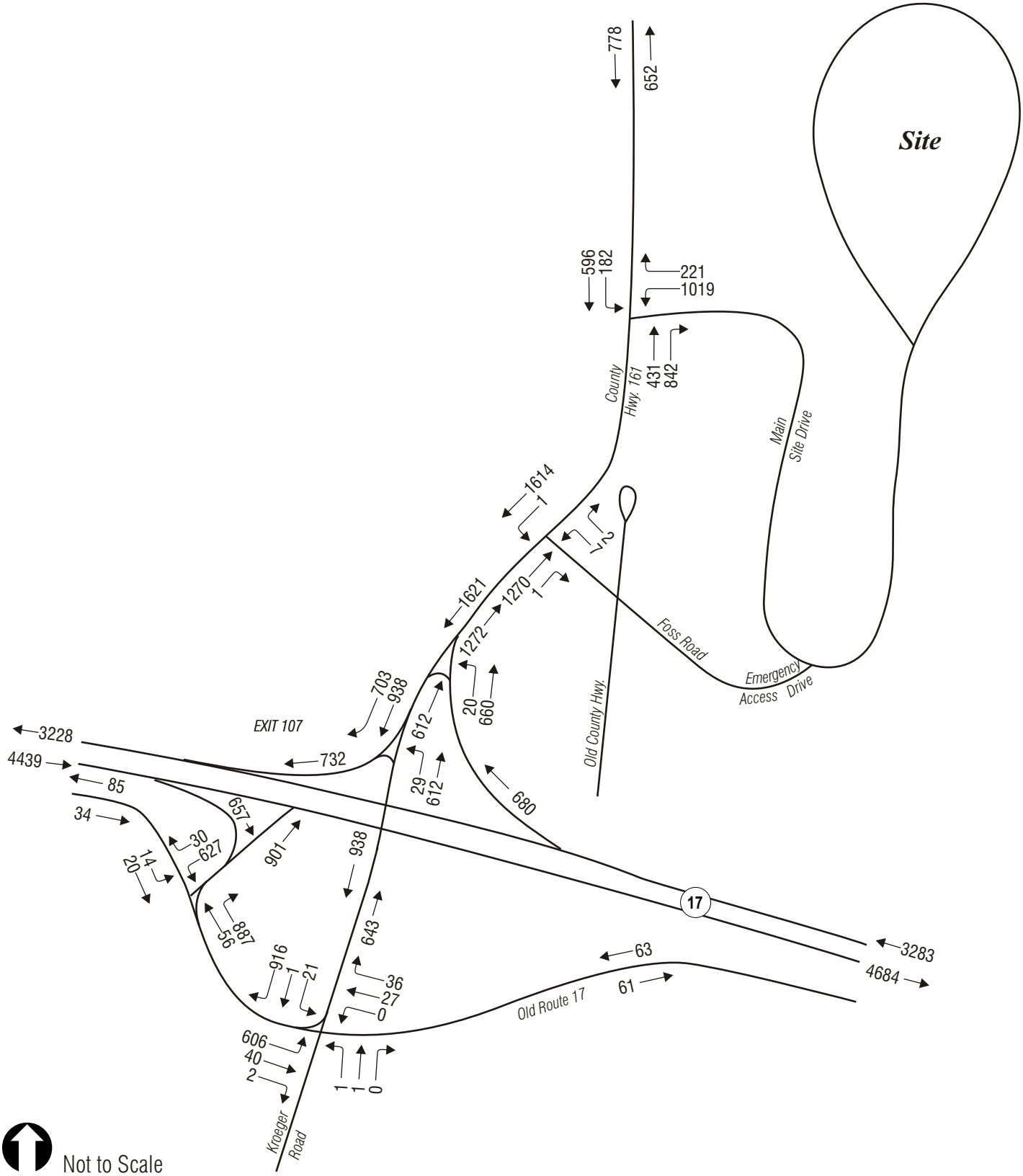


Stockbridge-Munsee Casino
Thompson, New York

Cumulative Build Traffic Volumes

Saturday Evening Peak Hour

Figure 6-3



Stockbridge-Munsee Casino
Thompson, New York

Cumulative Build Traffic Volumes

Sunday Afternoon Peak Hour

Figure 6-4