crossroads ventures llc

DRAFT Environmental Impact Statement

Appendix 17A

Federal Wetland Pre-Construction Notification
(See Appendix 17B for Updated PCN Plan Sheets)

The Belleayre Resort at Catskill Park

PRE-CONSTRUCTION NOTIFICATION FOR THE BELLEAYRE RESORT AT CATSKILL PARK ULSTER AND DELAWARE COUNTIES, NEW YORK

Prepared For
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1.0 Introduction

This document is a pre-construction notification submitted in compliance with the conditions of Nationwide Permits 7, 13, 14, and 25, which are administered by the US Army Corps of Engineers (ACOE). The proposed project is a resort development on lands constituting a total of 1,960 acres in Delaware and Ulster Counties in the Catskill mountains of New York State.

1.1 Applicant Information

Crossroads Ventures, LLC 72 Andrews Lane Road P.O. Box 267 Mount Tremper, New York 12457

1.2 Project Location

The proposed Belleayre Resort at Catskill Park is located in the Central Catskill region of New York State near the intersection of the boundaries of Delaware County, Ulster County and Greene County. Figure 1, "State Location Map" illustrates the project location in New York State. The site is located approximately 35 miles west of the City of Kingston, which is off of Exit 19 of the New York State Thruway. Figure 2, "Regional Location Map" illustrates the project location on a more regional scale, and shows the project site south of NY Route 28 and to the east and west of Belleayre Mountain Ski Center. The project site includes lands in the Town of Shandaken in Ulster County and lands in the Town of Middletown in Delaware County.

In the Town of Shandaken, New York State owns approximately 73% of the total acreage of the Town. Of this amount, approximately 56,000 acres are defined as "Forever Wild", and 2,000 acres are designated as "Intensive Use Area" and include the Belleayre Mountain Ski Center and the Belleayre Beach at Pine Hill Lake. The project site is on private lands bracketing this Intensive Use area. Figure 3, "Catskill Park," illustrates the location of the project site in relationship to the boundaries of the Catskill Park and lands owned by New York State.

The project is also located within the New York City watershed. New York City's West-of-Hudson watershed is the source of approximately 90 percent of New York City's drinking water supply. The New York City watershed boundaries include parts of five counties and total about 1,900 square miles or 1 million acres. The West-of-Hudson watershed is subdivided into the Catskill watershed that includes the Ashokan Reservoir, and the Delaware watershed that includes Pepacton Reservoir. The project site consists of lands that are in the uppermost headwaters of both the watersheds that drain to the Ashokan Reservoir and the Pepacton Reservoir. Since the project is located at the headwaters of both the Ashokan and Pepacton Watersheds, it is by definition at the farthest possible distance from these bodies of water. By streamflow distance, the project site is 20 miles above the Ashokan Reservoir and 14 miles above the Pepacton Reservoir. Figure 4, "West-of-Hudson Watershed", illustrates the location

of the project site in relation to the portion of the New York City water supply watershed west of the Hudson River.

The Crossroads assemblage of lands consists of approximately 1,960 acres, 1,242 acres of which are east of Belleayre Mountain Ski Center (the Ski Center) and approximately 718 acres of which are to the west of the Ski Center. Figure 5, "Site Location Map", illustrates the boundaries of the property that comprise the total assemblage on a more local scale. The project site, i.e. that portion of the total assemblage on which development is proposed, consists of a total of 573 acres, 331 acres of which are east of the Ski Center and 242 acres of which are west of the Ski Center.

1.3 Proposed Project

Figure 6, "Layout Plan," illustrates the location and general types of development being proposed as part of the Belleayre Resort at Catskill Park. The different component land areas that comprise the project site are proposed to contain a mix of resort land uses that include recreational, lodging, lodging-related commercial, and a 21-lot residential subdivision for single family home sites. Each component of the proposed development is described below.

Of the 1,960 acres total in the Crossroads assemblage, approximately 573 acres will be directly affected by development of the proposed project (the project site) and approximately 1,387 acres of the total 1,960 acre assemblage (71%) will remain undeveloped. Within the areas to be developed, there are numerous areas where natural vegetation will not be impacted, i.e., a total of 70 acres or almost 4%. These areas range from small areas less than one-tenth of an acre to larger areas up to 10 acres in size. If these areas were to be considered undeveloped, then the total area of the Crossroads' assemblage that would remain undeveloped increases to 74%, i.e., 1,453 acres undeveloped and 507 acres developed.

The lands to the east of the Ski Center are collectively known as the Big Indian Plateau. Two sub-areas comprising the Big Indian Plateau, separated by Giggle Hollow, are proposed to be developed. Approximately 265 acres will be developed east of Giggle Hollow as the Big Indian Country Club with the Big Indian Resort and Spa, and 65 acres will be developed west of Giggle Hollow as Belleayre Highlands.

The major components of the Big Indian Resort and Spa and the Big Indian Country Club include an 18-hole championship signature golf course, 150 room hotel building, golf clubhouse and a health spa, 95 detached lodging units in 55 structures to be built around the golf course, golf course maintenance buildings, and a wastewater treatment facility. Belleayre Highlands will comprise the existing Brisbane (Turner) mansion, 88 detached lodging units in 22 four-unit structures, tennis courts, and a swimming pool.

The lands to the west of Belleayre Mountain Ski Center are proposed to be developed in a similar manner as the lands east of the Ski Center. In total, approximately 242 acres are proposed to be developed of the total 718 acres in this portion of the assemblage. On lands to the west and east of County Route (CR) 49A, the road from NY Route to the Ski Center, the

Wildacres Resort is proposed. Components of the Wildacres Resort include an 18-hole championship golf club, a 250-room hotel and spa with an integrated conference center, interfaith chapel and golf clubhouse, 168 detached lodging units in 21 structures, lodging unit clubhouse, Children's Center, golf course maintenance buildings, and a wastewater treatment facility.

Farther west on CR 49A, the 21-lot single family subdivision, Highmount Estates, is proposed on lands to the west of the former Highmount Ski Area. The Wilderness Activity Center is proposed on the former Highmount Ski Center Lands.

1.4 Permits Required

The applicant proposes to construct this project under authorization of Nationwide Permits 7, 13, 14, and 25. Most of the proposed impacts to wetlands under federal jurisdiction will be the result of construction of roads to access the Project Site. These activities will meet the standards for Nationwide Permit 14. There will be no impacts to jurisdictional wetlands resulting from construction of buildings, parking lots, golf courses or other recreational amenities. All utility lines serving the Project Site will be routed to run alongside the roadways, and will be installed under pavement or in road shoulders at the points where roads cross wetlands. In the case where a road crosses a stream and/or wetland by means of a bridge, the utility lines will be attached to the underside of the bridge structure and not buried in the streambed. Therefore, no authorization of utility line installation in wetlands under NWP 12 will be required.

Nationwide Permit 7 will be used to authorize installation of a sewage treatment plant outfall in Birch Creek. Streambank stabilization measures installed at this outfall will be authorized under Nationwide Permit 13.

Installation of poured concrete piers to support elevated golf cart paths crossing wetlands will occur under authorization of Nationwide Permit 25, which governs structural discharges.

2.0 Existing Site Conditions

2.1 Extent of Wetlands and Waters On-Site

Wetland scientists of the LA Group, P.C. delineated the wetland boundaries on the Project Site during a series of visits between September 14 and November 9, 1999. Figures 7 and 8 are small-scale maps of the Project Site showing the locations of the wetlands and other waters of the United States. Descriptions of the main characteristics of the wetlands are summarized in Tables 1 and 2.

ACOE personnel visited the Project Site to examine the wetlands on August 16, 2000. The ACOE issued a Jurisdictional Determination for the project on February 15, 2002. This jurisdictional determination verified the wetland delineation and indicated which wetlands are

Table 1
Summary of Wetlands on the Western Property

Wetland Group Location and Watershed	Wetland ID Number and Boundary Lines Defining the Wetland	Ecological Communities in Wetland ¹	Principal Values & Functions ²	Area of wetlands (acres)	Is this an Isolated wetland?
Western	(1) AB/AC – wetland	RH, SM	FL, RC	1.73	no
part of site,	(2) AD – wetland/ watercourse	RS, SM	FL, AR	0.58	no
near Todd	(3) AE – wetland	SM	FL, AR	0.30	yes
Mountain Road; Bush	(4) AF/AG/AI/AJ – wetland/ stream system	RS, SB	FL, RC	3.07	no
Kill	(5) AH – wetland	RH	RC, AB	0.01	no
watershed.	(6) AK – wetland parallel to AI	SM, RS	FL, AR	0.64	no
	(7) AL – wetland	HD	FL, AR	1.79	yes
	(8) AM – wetland	SM	FL	0.04	no
	(9) AN – wetland	SM	FL	0.02	no
	(10) AO – wetland	SM	FL	0.08	yes
	(11) AP – wetland	SM	FL	0.03	yes
Highmount	(12) HA/HB – wetland	SM, RS	FL, RC	0.10	no
Ski Area	(13) HC – wetland	SM	RC	0.08	no
and	(14) HD – drainage ditch	RS	FL	0.09	no
northward;	(15) HE – wetland/watercourse	SM, RS	FL	0.14	no
Emory	(16) M/N – stream and seepy	RH, HS	FL, RC	3.64	no
Brook watershed.	areas				
Area East	(17) CA – seepy area & stream	HS	FL, FW	0.37	yes
and South of	(18) CB/CC – seepy area and stream	HS	FL, FW	0.22	yes
Wildacres	(19) H – forested wetland	HS	FL, FW	0.38	yes
Hotel;	(20) I – forested wetland	HS	FL, FW	1.26	yes
Emory Brook	(21) K/L – segment of stream draining wetlands H and I	RS	RC	0.56	yes
watershed	(22) Y/Z – segment of stream draining wetlands H and I	RS	RC	0.06	yes
	(23) Q/R – rocky streamcourse	RS	RC	0.54	no
	(24) HN/O/P – seepy stream headwaters, rocky	RS, SM	RC, FL	0.29	no
	streamcourse				
	Total acreage of all wetlands				
Total acreage of non-isolated wetlands					
Total acreage of isolated wetlands					r

See Table 2 for footnotes.

Table 2
Summary of Wetlands on the Eastern Property

Wetland Group	Wetland ID Number and	Ecological	Principal	Area of	Is this an
Location and	Boundary Lines Defining the	Communities	Values &	wetlands	Isolated
Watershed	Wetland	in Wetland ¹	Functions ²	(acres)	wetland?
Area West of	(25) A – Intermittent stream	RS	AR, RC	0.05	yes
Giggle Hollow;	course				
Woodchuck	(26) B/C – Intermittent stream	RS, SM	AR, RC	0.17	yes
Hollow Brook,	course/wetland				
tributary of	(27) Woodchuck Hollow Brook	RH	AB, FW,	0.57	no
Birch Cr.	(not delineated)		RC		
Wetlands along	(28) D/E/F – Birch Creek	SB, SM, MS	AB, FL,	1.45	no
Birch Creek and	Adjacent to Route 28, Near		FW, RC		
in its valley.	Belleayre Day Use Area.				
	(29) G – Wetland on Birch	SM	AR, FL,	0.09	no
	Creek floodplain		FW		
	(30) BQ/BR – Wetland near	SB, SM	AR, FL,	2.26	no
	Lasher Road		FW		
	(31) BV/BX – Birch Creek at	MS	AB, FW,	0.30	no
	Lasher Road bridge.		RC		
Giggle Hollow	(32) BG/BH/BI – upper part of	RS	RC	1.33	no
Brook and other	Giggle Hollow Brook	,			
intermittent	(33) BK – Small wetland pocket	SM	FL	0.04	yes
streams joining	next to access road				
Birch Creek.	(34) BJ/BL/BM – Wetland and	RS, SM, HS	FW, RC	1.28	yes
	streamcourse near access road				
	(35) BN/BO – Wetland and	RS, SM, HS	FW, RC	0.51	yes
	streamcourse near access road			:	
Total acreage o	Total acreage of all wetlands				
Total acreage of non-isolated wetlands					
Total acreage of isolated wetlands					

¹Ecological communities:

HD = hardwood swamp

HS = hemlock-hardwood swamp

RH = rocky headwater stream

RS = intermittent rocky stream wetland

SB = shrub swamp

SM = shallow emergent marsh

²Values and Functions:

AB = aesthetic benefits

AR = aquifer recharge

FL = flood mitigation and stormwater control

FW = fish and wildlife habitat

RC = resource cycling and export

subject to federal regulations. As indicated in Tables 1 and 2, a number of the wetlands are isolated, i.e., not connected to any surficial drainage system. Only activities within non-isolated wetlands are regulated by the ACOE. Wetlands and other waters of the United States existing on the site total 24.07 acres in size, of which 16.97 acres are non-isolated.

2.2 Condition and Functions of Wetlands and Waters On-site

Tables 1 and 2 list the principal functions and values of each of the wetlands. Among the more common functions are flood mitigation, resource cycling and export, and aquifer recharge. Some of the wetlands provide fish and wildlife habitat or provide aesthetic benefits.

2.2.1 Groundwater Discharge and Recharge

Most of the wetlands receive at least some, if not most of their water from groundwater discharge. This is generally the case for wetlands adjacent to streams, but also pertains to most of the wetlands higher up on the hillsides. Apparently, the state of the bedrock geology and the unconsolidated surficial materials favors the emergence of groundwater at the surface, either as springs or as broader seepy areas. The latter are especially prone to develop wetland vegetation, and in some of these places, organic matter accumulates in the wetland soil.

All but a few of the wetlands also carry water down to lower elevations, and in many cases, have small channels running through them, or consist largely of channels with some wetland vegetation within or adjacent to them. Many of these, such as wetlands 1, 4, 12, 13, 14, 15, 16, 23, 24, and 32, act as small tributaries of permanent streams that drain the Project Site. In other cases, one can walk downstream along a channel flowing through a wetland, and find that its flow gradually diminishes, eventually disappearing. Usually, such a disappearance of surface water takes place in an area where the soil has a noticeably greater component of cobbles and boulders, and it is apparent that the water is returning to the groundwater. Sometimes, the stream reappears a few yards downhill, but in other cases, it does not, and the water recharges a deeper aquifer.

2.2.2 Flood and Stormwater Control

In addition to groundwater inputs, most of the wetlands also receive stormwater and snowmelt runoff from surrounding hillsides. Due to their situation in somewhat flatter topography, plants, and microtopography, such as hummocks, the wetlands hold back and temporarily store some of the runoff, thereby diminishing the storm peak and prolonging the period of post-storm flow in the streams fed by the wetlands.

2.2.3 Resource Cycling and Export

Sheet-flow of stormwater also brings dissolved nutrients, sediments, and particles of organic matter into the wetlands. Organic matter also falls or is blown in as leaves, dead branches, and tree trunks, which undergo decay in the wetland. These materials provide nutrients and energy

for microorganisms, plants, and animals within the wetland. Eventually, a portion of these resources, along with some of the organisms, are exported downstream, providing support for food webs in streams such as Birch Creek. Therefore, fish and other wildlife in places outside the Project Site benefit from nutrient and energy dynamics within the on-site wetlands.

3.0 Project Description

3.1 Wildacres Resort Area

The master plan for the western part of the Project Site is present in drawing MP-1. Following is a detailed list of the components of this part of the project.

1. Wildacres Resort

- A. 250 room hotel across from Ski Center entrance
 - 1. Resort-related shops of up to 13,000 square feet
 - 2. Two restaurants of 150 seats and 300 seats each
 - 3. 100-seat beverage lounge
 - 4. Indoor Pool
 - 5. Two Tennis Courts
 - 6. Full Service Spa with 15 treatment rooms and a lap pool
 - 7. 250 Seat Interfaith Chapel
 - 8. Conference Center with 500-seat ballroom/auditorium
 - 9. 200-seat ballroom
 - 10. Eight meeting rooms
- B. Existing Marlowe mansion to be third restaurant, 150 seats, and operational offices
- C. Highmount Golf Club
 - 1. 18-hole championship golf course
 - 2. Driving range and practice green
 - 3. Clubhouse connected to the Hotel
 - a. 40-seat snack bar
 - b. Pro shop
 - c. Cart storage
 - d. Locker rooms with steam and sauna
 - e. Limited public access
- D. 168 two-bedroom detached lodging units in 21 octoplex units

- E. Clubhouse for octoplex lodging unit occupants
 - 1. 40-seat snack bar
 - 2. Outdoor swimming pool
 - 3. Health club
 - 4. Game rooms
 - 5. Reception, sales and operations office
 - 6. Two tennis courts
- F. Children's Center for Members' and Guests' Children
- 3. Highmount Estates 21 lot subdivision for only single-family, privately-owned homes
- 4. Wilderness Activity Center day use for Resort members, guests, and the public
 - A. Four season facility offering programs in outdoor education and recreation with appeal for the 13-19 age group as well as adults
 - B. Utilize existing buildings at former Highmount Ski Area
 - 1. Main Building
 - a. Cafe with lounge and library
 - b. Locker rooms
 - c. Weight training room
 - d. Ski waxing room
 - e. Jacuzzi, sauna, steam rooms
 - f. New addition with indoor climbing wall and outdoor ice climbing wall and outdoor deck
 - 2. Chalet outdoor equipment sales and rental space
 - C. New 15 foot by 25 foot warming hut building near top of former ski lift
 - D. Limited parking for Wilderness Activity Center staff only. Guest and public access will be via a shuttle from the Hotels.

3.2 Big Indian Plateau Area

The master plan for the eastern part of the Project Site is present in drawing MP-4; a detailed list of the components of this part of the project is provided below.

2. Big Indian Plateau

- A. Big Indian Country Club
 - 1. 18-hole championship golf course
 - 2. Driving range and practice green
 - 3. Clubhouse connected to the Hotel
 - a. Pro shop
 - b. 40 seat snack bar
 - c. Locker rooms with steam and sauna rooms
 - d. Cart storage
 - e. Limited public access
 - 4. Thirty-five 4-bedroom detached lodging units
 - 5. Sixty 3-bedroom detached lodging units in 20 triplex buildings

B. Big Indian Resort and Spa

- 1. Luxury hotel with 150 rooms
- 2. Two restaurants of 75 and 150 seats
- 3. Beverage lounge with 50 seats
- 4. Ballroom for 200 people
- 5. Four meeting rooms
- 6. Full service spa with 15 treatment rooms and lap pool

C. Belleayre Highlands

- 1. Eighty-eight 2-bedroomdetached lodging units in 22 quadplex buildings
 - 2. Social/activities center at Brisbane (Turner) mansion
 - a. Game room
 - b. 25-seat snack bar
 - c. Reception, sales and operational offices
 - 3. Outdoor swimming pool and cabana
 - 4. Four tennis courts

3.3 Stormwater Management

The proposed stormwater control consists of a series of road side swales, cross culverts and stormwater detention basins which will capture, convey and detain stormwater runoff from the developed portions of the project site. By creating positive discharge through site grading within each of the subcatchments, the proposed stormwater control systems are capable of reducing post-development runoff rates from 10, 25 and 100-year storms.

No existing surface waterbodies will be impounded. The ponds used to store irrigation water will be isolated dug and lined ponds and not associated with any of the streams or brooks on the project site. Water levels in the ponds can be controlled by irrigation withdrawals and the amount of replenishment provided so that there is always reserve capacity in the ponds to accept runoff from storm events without the ponds discharging to surface water resources. Sufficient freeboard will be maintained in the irrigation ponds so that they can contain the runoff from the 100-year storm from the areas that drain to them. For the Big Indian Country Club site the irrigation ponds will capture and hold runoff from the Big Indian Resort and Spa and associated parking while the irrigation pond at the Highmount Golf Club will capture stormwater from a portion of the detached lodging units south of Gunnison Road.

3.3.1 Stormwater Flows

If proper stormwater controls were not incorporated into project design, surface water hydrology could be affected by development due to increases in stormwater runoff volume and rate and possible reductions in water infiltration that contributes to base flows. This project's stormwater management plan has been designed to minimize these types of impacts. A complete analysis of stormwater quantity management, including management of the 10, 25 and 100 year storm events, is included in Exhibit 1, "Operational Phase Stormwater Quantity Management Plan." This exhibit includes all HydroCAD results for the 25-year design storm as well as summary tables for the other storm events modeled. The proposed stormwater management system has been designed so that the 25-year storm is controlled to pre-construction discharge levels, and the proposed system has also been designed to safely convey the 100-year storm. The analysis contained in Exhibit 1 makes use of additional deep hole test pit and percolation tests performed at proposed detention basin locations in the Fall of 2002 performed to more precisely define basin exfiltration rates.

The HydroCAD water quantity modeling did not utilize proposed porous pavement in the analyses. HydroCAD utilized conventional asphalt in place of the porous pavement. This approach insured that if any of the porous pavement should decrease in its operational efficiency over time, the stormwater management system is designed to be capable of providing suitable treatment of runoff from the project site.

All project roads were included in the HydroCAD and WinSLAMM modeling for water quantity used to design the proposed stormwater management system to mitigate potential impacts from project stormwater.

To analyze the hotel rooftop of the proposed Big Indian Resort and Spa, which is to be covered in earth and planted, the rooftop was treated as a vegetated surface, and assigned a curve number in HydroCAD that is consistent with this type of "ground cover." A report containing recommendations for landscaping on elevated structures was used by the designers of the stormwater management system to provide the hydrology information necessary to incorporate the proposed hotel building into the stormwater modeling in a realistic manner.

The lined irrigation ponds have been incorporated into the HydroCAD and WinSLAMM analyses and the resultant stormwater management plan, recognizing that during high-intensity or prolonged storm conditions storage volume may not be available. The irrigation ponds are equipped with a weir that connects them with the rest of the stormwater management system and the system as a whole is capable of handling design storms up to and including the 100-year storm. Therefore, inclusion of the irrigation ponds in the analysis of the entire system is appropriate and accurately integrated into the overall stormwater management system designed for the project.

In each of the above inputs into the HydroCAD analysis, the most conservative assumptions were utilized.

3.3.2 Stormwater Quality

Pollutant Removal

Similarly, if proper stormwater controls were not utilized, development could result in increases in nutrient and metals loading, exports of solids, thermal loading, and a general decrease of water quality in receiving waters. This project's stormwater management plan has been designed to minimize these types of impacts. The WinSLAMM program (Windows Source Loading and Management Model) was used in the design of stormwater control devices in order to maximize potential pollutant removal efficiencies, including the maximization of phosphorus removal from project-generated stormwater.

The project is located within the watersheds of two of New York City's water supply reservoirs, the Ashokan and the Pepacton reservoirs. Therefore, the impacts that may result from increased nutrient loading have been evaluated. Three sources are considered to cumulatively contribute to the overall nutrient export that may be expected from the project development: golf course fertilization, stormwater runoff, and wastewater disposal.

As discussed previously in this section, nutrient export as a result of golf course fertilization practice is an identifiable source. In order to mitigate potential impacts to surface water as a result of increased phosphorus and nitrogen loading from golf course fertilizer use, an Integrated Turf Management Plan (Exhibit 2) was prepared based partly on the results of a Fertilizer and Pesticide Risk Assessment (Exhibit 3).

The loss of nitrate and phosphorus in runoff from the sloped 18th fairway on Big Indian Resort and Spa Golf Course was analyzed using the GLEAMS model. Nine different fertilizer application programs were used to analyze nitrogen and phosphorus runoff based upon different chemical composition, application rates, and application frequency. Undiluted Nitrate concentrations were compared with the State and Federal standards for nitrates in drinking water, MCL = 10 mg/l. In no case did the total nitrogen concentrations in runoff events exceed 10 mg/l. Furthermore, the Turf Management Plan was refined to produce phosphorus export coefficients equal to or less than the "grass area" export coefficients used by NYCDEP in determining Total Maximum Daily Load (TMDL) calculations for the Ashokan and Pepacton watersheds.

Reducing the annual phosphorus application to 0.25 pounds of phosphorus per thousand square feet per year will result in the annual export coefficient of 1.11 kg./ha.

Because the fertilizer application rates have been reduced to closely match the phosphorus export coefficients use by the NYCDEP for "grassy areas," the effects of nutrient export in the context of pre- and post-development is further analyzed in the Operational Phase Stormwater Quality Management Plan (Exhibit 4) and subsequently described below.

Exhibit 4 of the DEIS provides an assessment of the expected water quality impacts of the project. This exhibit focuses on water quality of the stormwater runoff while Exhibit 1, "Operational Phase Stormwater Quantity Management Plan," examines the volumes and means to control velocity and release rates of the stormwater runoff.

In order to assess stormwater quality and nutrient export from the project, a computer model simulation of runoff water quality was completed using WinSLAMM (Windows Source Loading and Management Model, Pitt and Voorhees, 2000, Version 8.4). Section 2 of Exhibit 4 describes the model, including the conceptual framework of WinSLAMM's method of stormwater runoff water quality estimation, background data, and assumptions utilized for this report.

The potential water quality impacts have been quantified for both the site in the pre-development condition and for the property at full buildout, which provides the data to assess potential changes in water quality associated with development of the resort.

The goal of the project's stormwater management program is to manage runoff water quality to minimize nutrient or contaminant export or closely match pre-development stormwater quality. This has been accomplished by locating stormwater management facilities throughout the project site and by maintaining a low density of development that converts less than 5% of the project assemblage to impervious surfaces.

As further discussed in Exhibit 4, stormwater is anticipated to produce ± 71 kg of phosphorus per year and ± 328 kg of nitrates per year. See Table 3 below, "Overall Nutrient Export".

Sanitary waste is a source of nutrients to groundwater and surface water resources. Several wastewater disposal alternatives have been evaluated to treat effluent from the proposed developments. These alternatives include clustering subsurface systems; regional disposal systems to accommodate the wastewater from portions of the development; a combination of the above; and installing a collection network to convey all the wastewater to the New York City owned and operated Pine Hill Wastewater Treatment Plant.

Net Nutrient **Total Phosphorus** (kg./yr.) Nitrogen (kg./yr.) Loading Pepacton Reservoir Wastewater 24.3 9.7 21.4 53.4 Stormwater 48.0 48.0 214.0 214.0 SUBTOTAL 72.3 57.7 267.4 235.4 Ashokan Reservoir Wastewater 41.2 41.2 90.7 90.7 Stormwater 22.0 22 114.3 114.3 **SUBTOTAL** 63.2 205.0 63.2 205 TOTAL 472.4 440.4 135.5 120.9 **See Exhibit 5

Table 3. Overall Nutrient Export

Centralized wastewater treatment facilities are proposed for the Wildacres Resort and Big Indian Plateau. Regional wastewater treatment facilities are capable of decreasing phosphorus to $\pm 0.1 - 0.5$ mg/l and reducing nitrogen to ± 1.1 mg/l.

Treated wastewater from Big Indian Plateau will be discharged to Birch Creek for roughly six months out of the year, and to a holding area for spray irrigation during the remaining six months. Treated wastewater from Wildacres will be discharged to subsurface leach fields for 6 months out of the year and to a holding area for spray irrigation for during the remaining 6 months. Spray irrigation of the effluent will further reduce phosphorus and nitrogen concentrations by $\pm 90\%$. Subsurface leach fields reduce nutrient concentrations by an additional 60-90%. The uncertainty associated with this disposal option is with the availability of carbonaceous substrate, which is typically limiting in wastewater effluents. The overall discharge characteristics are summarized in the table below, Table 4, "Wastewater Nutrient Export".

Wastewater Loading Estimates (kg/yr) Point Spray Leach Field (6 mo) Total Annual Load Discharge Irrigation (60% - 90% (60% - 90% Wildacres (6 mo) (6 mo) removal) removal) TP (kg./yr.) 4.9 19.4 4.9 24.3 9.7 53.4 N (kg./yr.) 10.7 42.7 10.7 _ _ 21.4 Big Indian TP (kg./yr.) 37.5 3.7 41.2 41.2 N (kg./yr.) 82.4 8.2 90.7 90.7 TOTAL TP (kg./yr.) 37.5 3.7 19.4 4.9 60.6 46.1 N (kg./yr.) 82.4 8.2 42.7 10.7 133.4 101.3

Table 4. Wastewater Nutrient Export

Phosphorus and nitrogen exports were estimated using the above noted nutrient concentrations and wastewater flows. Hence, the total sanitary waste export of phosphorus and nitrogen are estimated to be 46.1 - 60.6 kg/yr and 101.3 - 133.4 kg/yr, respectively.

The sanitary wastewater nutrient exports were combined with the stormwater nutrient exports to assess the cumulative condition over the Crossroads assemblage. An export between 121 and 136 kg of phosphorus may be expected from sanitary wastewater and stormwater runoff. The total nitrogen export is anticipated to be between ±440 and 472 kg over the entire Crossroads assemblage (Table 3, "Overall Nutrient Export").

The cumulative impacts of wastewater and stormwater quality will not rise to the level of significant impact. The additional loadings will, as a worst-case scenario, only consume 0.4% of the available load to the Pepacton Reservoir and 1.3% of the available load to the Ashokan Reservoir. The available load represents the amount of phosphorus that can be safely introduced to the reservoir systems without any adverse effects. Hence, the phosphorus load that is anticipated to result from the Crossroads assemblage will not impact water quality. Furthermore, The resulting phosphorus load will only constitute 0.194% of the existing load to the Pepacton Reservoir and 0.192% of the existing load to the Ashokan Reservoir (see Figure 9, "Cumulative Phosphorus Loading").

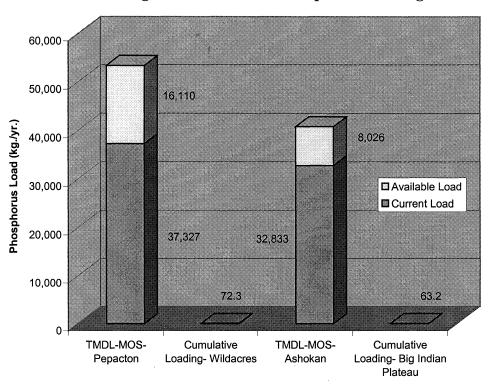


Figure 9 - Cumulative Phosphorus Loading

The nitrate runoff concentrations were compared to Tributary concentrations, which were measured by the NYC DEP and recorded in the report entitled "Monitoring of Tributaries Draining Belleayre Mountain Crossroads Ventures Development Location." The flow-weighted aggregate concentration of nitrate in the streams is 0.32 mg/l. As determined from the wastewater analysis and stormwater quality analysis (Exhibit 4), the net nitrate discharge concentrations are anticipated to be $\pm 1.1 \text{ mg/l}$ and 0.54 mg/l, respectively. The estimated instream concentration of nitrates after the project development is anticipated to be $\pm 0.36 \text{ mg/l}$. This represents an increase of 0.02 mg/l, which is not anticipated to change the ecology of the stream. Hence, the impacts associated with the increased nitrate concentration in the tributaries will not rise to the level of significant impacts.

Golf Course Management

Application of pesticides to the proposed golf courses could result in runoff containing pesticide residues that could potentially reach nearby surface waters. If present in sufficient quantities, pesticide residues may have negative impacts on aquatic biota such as aquatic invertebrates and fish. A site-specific integrated pest management plan, based on a site-specific fertilizer and pesticide risk assessment habeen developed to mitigate these potential impacts. See Exhibit 3, "Pesticide and Fertilizer Risk Assessment and Exhibit 2, "Integrated Turf Management Plan" for a full discussion of how the proposed golf course maintenance practices have been designed to avoid potential impacts to surface water resources.

Use of golf course fertilizers could potentially result in increased phosphorus runoff from the golf course into nearby surface waters. Increased phosphorus loading to nearby surface waters and downstream NY City water supply reservoirs could result in increased biological production, thereby decreasing water quality and affecting drinking water quality. Increased nitrogen loading could also potentially lead to contravention of State and Federal drinking water standards for nitrate. A site-specific integrated pest management plan, based on a site-specific fertilizer and pesticide risk assessment has been developed to mitigate these potential impacts

Water for golf course irrigation will not be taken from existing surface water resources. The sources of irrigation water for the Big Indian Country Club will be a bedrock well (well R1) located near Birch Creek and the treated effluent from the wastewater treatment facility serving Big Indian Plateau. The water that is in Birch Creek and the surrounding surficial aquifer is separate from the water withdrawn from the bedrock well, which is in a confined aquifer. There is a layer of clay between the water in the surficial aquifer/Birch Creek and the groundwater to be used for irrigation water. This clay layer prevents water in the surficial aquifer from passing through and down into the confined bedrock aquifer.

Golf course irrigation could have a small positive impact on local surface water. Water removed from the confined bedrock aquifer will be stored in the irrigation ponds and then applied to the golf course turf when necessary. If any irrigation water percolates through the soil column, it could eventually find its way via subsurface flow into the surficial aquifer connected with Birch Creek, thus adding to groundwater base flow. However, this contribution to base flow is not expected to be significant since irrigation water will be applied so that losses to runoff and percolation are minimized and plant uptake is maximized. This is achieved by carefully controlling irrigation rates and irrigation timing. (See Exhibits 9 and 10, which contain the water budget analyses done for the project, for a complete discussion of how base flow to surface waters will be maintained when the project is developed.)

The primary source for irrigation water for the Highmount Golf Club will be treated wastewater generated by the Wildacres Resort and Highmount Estates. The identified potential source of the raw water is the Village of Fleischmanns water supply system, which draws water from wells and springs that are hyrologically isolated from nearby surface waters, including Emory Brook. Thus the project's use of potable water, treatment of project-generated wastewater, and use of project-generated wastewater will not have an impact on surface water resources.

3.3.3 Erosion Control Measures

Erosion and sediment control procedures for the proposed project consist of a project phasing plan as well as specific temporary erosion control measures designed to keep sediment within the limits of the areas to be disturbed during construction.

A phasing plan has been developed in order to reduce the amount of area to be disturbed at any given time. Limiting the amount of contiguous disturbed and exposed soils reduces the potential for erosion. The phasing plan was developed using the drainage patterns of the site (site

subcatchments) and the locations of surface water resources that could be affected. In almost every instance, disturbance within each drainage is limited to 25 acres or less. Where there is more than one area to be disturbed that is hydrologically contiguous, or drains to the same surface water resource, the phasing plan requires stabilization of previous phases prior to disturbing subsequent phases.

The proposed erosion control measures have been developed to provide a system of controls that include redundant safeguards and a number of "back up" elements. For example, all areas to be disturbed will have temporary sediment basins at their downhill edge. The basins have been located and sized to capture and hold the 10-year storm. Located below these basins are additional silt fences, which will capture possible residual sediment in runoff that could be released from the sediment basins during unusual storm events, site conditions, or breakouts. Additionally, a comprehensive list of stabilization measures have been compiled for each of the different slope categories on the site. Temporary stabilization measures for areas to be disturbed as well as soil stockpiles have also been developed.

In summary, the proposed erosion control plan is based upon a series of redundant controls, including phasing, size limitations, preservation of wooded lands, utilizing natural drainage divides, perimeter controls (i.e. silt fence), temporary sediment basins, and structural and vegetation stabilization measures. An erosion control crew will implement the proposed erosion and sedimentation plan under the supervision of a Professional Certified Erosion Control Specialist. Their sole responsibility will be for monitoring to insure the effective implementation and maintenance of erosion control measures on the project site.

3.4 Proposed Wetlands Impacts

3.4.1 Wildacres Resort Area

In the western part of the Project Site, no development is proposed to take place in the former Adelstein property, and therefore, no impacts will occur to wetlands in that area (i.e., wetlands 1 through 11). Also, proposed development in the former Highmount Ski Area, which will become the Wilderness Activity Center, will not involve impacts to wetlands in that area (i.e. wetlands 12, 13, 14, and 15). Therefore, all impacts to wetlands in the western property will occur in its eastern half, the Wildacres Resort area.

All the proposed impacts to the wetlands in the Wildacres area are listed in Table 5, "Projected Impacts to Wetlands on the Belleayre Resort Site." As indicated in that table, the proposed impacts to non-isolated wetlands includes 0.0003 acre of fill and 2.31 acres of vegetation clearing. Impacts to isolated (i.e., non-jurisdictional) wetlands will include 1.08 acres of fill and 0.25 acre of vegetation clearing. Following are more detailed descriptions of the proposed impacts.

1. Wetlands 16 and 23, totaling 4.18 acres of non-isolated wetlands, will not be filled, but have been incorporated in their existing states into the golf course layout. Some of the holes of the Highmount Golf Club are proposed to play over wetlands 16 and 23, and the wetlands have

been incorporated into the design of the golf course to serve as hazards to be avoided by golfers, much the same as a sand bunker is designed into a golf course as a hazard to be avoided. Up to 2.26 acres of selective hand removal of some trees may be necessary to allow golfers to avoid and shoot over these hazards. Drawing SG-1 shows the affected areas in wetland 16, and Drawing SG-2 shows the affected areas in wetland 23. Procedures to be followed in selective clearing of trees are described in Exhibit 6, "Wetland Tree Removal Protocols."

2. Wetland 16 will also be affected by the proposed golf course cart path in the western portion of the Wildacres Resort/Highmount Golf Club. Any and all such golf cart paths that need to cross over delineated jurisdictional wetlands will be constructed of elevated "boardwalk type" wetland crossings (see Figure 10, "Cross-Section of Elevated Golf Cart Path). This type of wetland crossing requires a small amount of wetland disturbance related to the pouring of concrete supports in tightly sealed forms (10-inch-diameter SonotubesTM) within wetlands. Wherever possible, boardwalk cart paths will be constructed so that all support structures are constructed in uplands. As illustrated on the project layout plans, seven such crossings totaling 300 linear feet (1670 square feet) are proposed. The longest crossing is 83 feet long and the shortest is 9 feet long. Wetland 23 will be crossed by a 32-foot-long cart path boardwalk, occupying 160 square feet. All but two of the cart path crossings will be 5 feet wide. The other two will be 8 feet wide so that they can be used by maintenance trucks. In this way, additional wetland impacts for maintenance vehicle crossings will be avoided.

There will be a total of 56 such concrete piers installed in these wetlands, which will constitute a total area of approximately 31 square feet. These will be installed under authorization of Nationwide Permit 25, for structural discharges. Construction of each pier will involve drilling a hole up to 10 feet deep using a backhoe-mounted power auger, inserting a SonotubeTM, and filling it with concrete.

3. A narrow portion of wetland 24 will need to be crossed to access the Wildacres Resort detached lodging units to the north of Gunnison Road. A bridge to be constructed at the crossing will require only 14 square feet (0.0003 acre) of fill in the wetland. Specifically, this fill will take place on the north side of the bridge, where approximately 13 linear feet of the corrugated sheet piling and the fill behind it, will extend no more than 2½ feet into the wetland. Details of the proposed crossing are illustrated in Figure 11, "Stream Crossing Details, Wildacres Bridge Plan & Elevation." This fill will lie at least two feet above the level of the stream's ordinary high water mark, which is assumed to be at an elevation of 1997 feet at this location. This impact falls within the ½-acre limit for fill in a non-tidal wetland under Nationwide Permit 14.

Upstream from the bridge, wetland 24 will be crossed by a golf fairway, including 82 linear feet of golf cart path, which will require up to 0.28 acre of selective clearing of vegetation.

Table 5. Projected Impacts to Wetlands on the Belleayre Resort Site

			Impacts to Non- Isolated Wetlands		Impacts to Isolated Wetlands	
Wetland ID no. & Boundary Lines	Impact ID no. and Location	Draw- ing no.	Wetland Fills (acres)	Vegetation Clearing (acres) [†]	Wetland Fills (acres)	Vegetation Clearing (acres)
	Wildacres Area	MP-1				
(16) M/N	16a. Golf Hole no. 11	SG-1		0.41		
	16b. Golf Hole no. 13	SG-1		0.50		
	16c. Golf Hole no. 16	SG-1		0.88		
(17) CA	17. Parking garage	SG-1, 3			0.29	
(18) CB/CC	18a. Road grading	SG-3			0.01	
	18b. Golf Hole no. 10	SG-1				0.004
(19) H	19a. Road grading	SG-1			0.01	-
	19b. Golf Hole no. 18	SG-1			0.34	
(20) I	20a. Golf Hole no. 18	SG-1			0.21	
	20b. East side of wetland	SG-1				0.09
	20c. Road grading	SG-1			0.01	
(21) K/L	21a. Golf Hole no. 13	SG-1				0.03
	21b. Golf Hole no. 16	SG-1			0.15	0.10
	21c. Area near road	SG-1				0.02
(22) Y/Z	22. Road & stormwater basin	SG-1			0.06	
(23) Q/R	23a. Golf Hole no. 2	SG-2		0.20		
	23b. Golf Hole no. 4	SG-2		0.04		
(24) HN/O/P	24a. Golf Hole no. 8	SG-2		0.28		
	24b. Bridge crossing	SG-2	0.0003			
Subtotals			0.0003	2.31	1.08	0.25
Big Indian Pl	otoon Aroo	MP-4				
(26) B/C	26. Road grading	SG-5			0.01	
(29) G	29. Access road grading	SG-6	0.036		0.01	
(32) BG/BH	32. Giggle Hollow bridge	SG-8	0.056	0.28		
(33) BK	33. Golf Hole no. 11	SG-9	0.050	0.20	0.04	
(34)	34a. Golf Hole no. 6	SG-9			0.01	0.01
BJ/BL/BM	34b. Road & stormwater basin	SG-9			0.34	0.01
(35) BN/BO	35. Road grading	SG-7			0.003	
(36) WMA	36. Bridge over Birch Creek	SG-7	0.007		3.003	
Subtotals			0.0990	0.28	0.39	0.01
Totals for en	tire property		0.0993	2.58	1.47	0.26

[†]All raised cart paths are included within areas of vegetation clearing. Support posts for raised cart paths will occupy only 15 sq. ft. in non-isolated wetlands and 5 sq. ft. in isolated wetlands.

4. Impacts to isolated (non-regulated) wetlands 17, 18, 19, 20, 21, and 22 include 1.08 acres of fill for construction of golf fairways, roadways, and a parking garage (see Table 5 and Drawings SG-1 and SG-3). An additional 0.25 acre of vegetation clearing will be required, mainly for golf fairways, including 35 linear feet of golf cart paths on boardwalks.

3.4.2 Big Indian Plateau Area

The eastern property of the Project Site, known as the Big Indian Plateau Area, has fewer wetlands, and consequently, fewer locations at which wetlands are impacted. Also, the total impacts are lower in each category, except for wetland fills in non-isolated wetlands, which amounts to 0.099 acre. Also proposed is 0.28 acre of clearing in non-isolated wetlands. In isolated wetlands, there will be 0.39 acre of fill and 0.01 acre of vegetation clearing. Following are details on the main areas of impact.

1. In wetland 29, construction of an access road will require deposition of fill in an area of 0.036 acre (see Figure 12 and Drawing SG-6). Due to the limited amount of frontage on Friendship Road at this point, the extent of wetlands on the floodplain of Birch Creek, and the steep slopes adjacent to the floodplain, it is not possible to construct a roadway without some wetland impacts.

Immediately south of the point where this roadway will connect to Friendship Road, it will cross Birch Creek, in an area which is part of wetland 28. A bridge will be constructed at this point, but there will be no impacts to Birch Creek nor to any other part of wetland 28 (see Figure 13). Therefore, no authorization from the ACOE is required for construction of this bridge. A hydraulic analysis of the proposed bridge is provided in Exhibit 7, "Bridge Hydraulics." This bridge and the others proposed for this project are designed to allow the passage of the 50-year storm with a minimum 2 feet of freeboard between the bridge deck and the water, and to pass a 100-year storm with reduced freeboard. Details of silt fences, sediment dewatering basins, and cofferdams that will be used during construction of bridges and other work in wetlands are depicted in Figure 14.

- 2. In order to keep wetland impacts to a minimum, the wetland in Giggle Hollow, wetland 32, will be crossed by a bridge, rather than using a culvert and fill (see Figure 15 and Drawing SG-8). At this location, there will be no impacts to the stream channel, but 0.056 acre of fill will be needed in the adjacent wetland, and up to 0.28 acre of clearing of trees and tall shrubs will be necessary. This small area of wetland fill, is well within the ½-acre limit for fills in non-tidal wetlands authorized under Nationwide Permit 14.
- 3. Wetland 36 is located at the point where Winding Mountain Road crosses Birch Creek. This wetland lies completely off the Project site; therefore, it is not listed in Table 2. The existing bridge at this location will first be rehabilitated to handle construction traffic by installation of a new deck with railings. Later, the bridge will be replaced by one that is approximately twice as long (70 feet), wider, and higher (see Figure 16). Due to widening of the approach to the bridge, it will be necessary to fill and grade a roadside swale containing a wetland. The impacted area will be 292 square feet (0.007 acre), which is well within the ½-acre limit

for fills in non-tidal wetlands authorized under Nationwide Permit 14. By lengthening the bridge, this work will improve the width of the opening through which high flows must pass. Also improving the flow of floodwaters will be the removal of existing stone-filled gabions at the bridge abutment.

- 4. In the Big Indian Plateau area, isolated (non-regulated) wetlands that will be impacted are wetlands 26, 33, 34, and 35 (see Drawings SG-5, SG-7, and SG-9). The largest impact will be in wetland 34, where 0.34 acre of wetland will be filled or excavated to construct a road and a stormwater detention basin. Each of the other impacts from filling will be 0.04 acre or less, and will result from road construction or golf fairway construction. In addition, there will be 0.01 acre of vegetation clearing in wetland 34, on the edge of a golf hole.
- 5. The outfall for the wastewater treatment plant serving Big Indian Plateau is proposed for a location just downstream of the bridge over Birch Creek from Friendship Road. The location of the outfall is illustrated in Figure 17. This location was chosen because it is on lands owned by the Applicant, the pipe that outfalls into Birch Creek is located in the road shoulder at the bridge, and placing the outfall below the bridge would not affect the hydraulics used to design the bridge.

It will be necessary to excavate out a small section of the south bank of Birch Creek to install the outfall. A pipe leading up to the outfall will be installed in a trench leading away from the south bank. A temporary cofferdam will be installed in Birch Creek prior to conducting the work in the streambank. The cofferdam will remain in place until installation, including placement of riprap, is complete. The cofferdam will allow work behind it to proceed in the dry. Approximately 6 cubic yards of riprap will be placed at the outfall. A dewatering basin will be installed on the south side of Birch Creek should it be necessary to pump out water that accumulate behind the cofferdam. (see detail on Figure 14). Work will take place outside of the streambed from the south side of the creek. Operation of machinery within the streambed will be strictly prohibited. Installation of the outfall will be inspected at least three times a day by a member of the erosion control crew, including at least once a day by the project Environmental Monitor/Erosion Control Superintendent (a Certified Professional Erosion Control Specialist). Erosion control measures at the bridge construction site will be inspected daily prior to beginning work, at the end of the workday, and at some time in between. Inspection reports/checklists will be completed and maintained for each inspection. All disturbed areas not stabilized by the outfall and riprap will be seeded and mulched as soon as practical after work is completed, but in no event longer than 14 days after establishment of final grades.

4.0 Public Interest Review

4.1 Public Interest Benefits of Proposed Action

The Crossroads assemblage consists of a total approximately 1,960 acres of land. Of this 1,960 acres approximately 1,387 acres, or 71%, are not proposed for development. The approximately

1,387 acres of lands left undeveloped will be protected from future development by restrictions that could take the form of deed-restricted lands or conservation easements. These restrictions will be structured so that they run with the land in the event of transfer of ownership. The benefits that will occur as a result of development restrictions on the approximately 1,387 acres include precluding further land development around the proposed project including additional impervious areas and additional wastewater generation, preservation of open space, protection of wildlife habitat, maintenance of an undisturbed forested buffer between areas proposed to be developed and some of the surrounding surface waters, and preservation of lands visible along the NY Route 28 corridor.

The proposed project includes some road improvement measures that will also improve access and circulation around the Belleayre Mountain Ski Center. Horizontal and vertical realignment on Ulster County Road 49A will improve sight distances and provide safer conditions. The improvements proposed for the NY Route 28 and Ulster County Road 49A intersection include a left hand turn lane off of west bound NY Route 28 onto Ulster County Road 49A and a right hand turn lane from County Road 49A to NY Route 28 eastbound and a traffic signal. These measures will improve through traffic flow on NY Route 28 as well as improve turning movements onto and off of NY Route 28.

The proposed project will provide significant employment opportunities. During the construction phase the project will generate a total of 2,114 person years of direct employment and an additional 1,765 person years of indirect employment. The construction phase will produce direct wages and salaries of \$81.09 million and indirect wages and salaries of \$64.40 million. The operation phase of the project will provide direct full time employment for 747 full-time equivalent employees including 542 full-time jobs and 330 seasonal and part-time positions. There will be a direct total annual payroll of \$20.5 million, with an average full time salary of \$27,272 annually. The operation phase of the project will also produce 211 indirect off-site jobs in the region with indirect wages and salaries of \$7.43 million.

Tax revenue generation derived from sales taxes, personal income, corporate and other business related taxes will increase at the local, county, and State levels. For the construction phase of the project tax revenues of \$704,000 will be generated for Delaware County, \$3,248,000 for Ulster County, and tax revenues of \$14,473,100 will be generated for New York State.

For the operation phase there will be an annual property tax revenue increase of \$1,503,154 in Shandaken and Ulster County. There will also be an annual property tax revenue increase of \$526,472 in Middletown and Delaware County. In addition to the employment and tax benefits provided by the project, it is projected that annual off-site Resort patron spending of \$11.81 million will occur, and that this will occur mostly in local village and hamlet centers.

In addition to the several benefits outlined above, the major contribution of the Belleayre Resort Project will devolve directly upon the community in which it is situated. The investors in Crossroads Ventures, LLC have earmarked 1/3 of all the profits from their ventures to be held by and for the use by the Crossroads Foundation, a not-for-profit corporation. The Foundation, by its charter, exists to enhance the cultural, health, youth, and education programs in the Towns of

Middletown and Shandaken and the Village of Fleischmanns. The Crossroads investors in addition, have already vested the Foundation with personal cash contributions totaling \$235,000. Initial grants have already been made in sums ranging from \$5,000-\$25,000 each to the Margaretville Memorial Hospital, the Belleayre Conservatory, the Skene Memorial Library, the Neal Grant Foundation, and the Catskill Watershed Museum. Crossroads Foundation undertook in the fall of 2001 a series of community wide forums in Middletown and Shandaken entitled Vision Quest 2010 to elicit from the community a list of community causes which future gifts by the Foundation should most appropriately target on a priority basis.

The project will result in increased public recreation opportunities, in addition to golf, on and around the project site including development of additional trails on the project site as open space, some connecting to and augmenting access to existing state trails administered by the NYSDEC. The SE Group, formerly Sno-Engineering, has indicated the possibility of a family oriented moderate grade multi-use trail roughly following the right-of-way of the abandoned railroad.

The project will help increase the attendance at Belleayre Mountain Ski Center. One of the goals of the facility improvements that are occurring at Belleayre under their 1998 Unit Management Plan is to increase capacity to serve 4,500 skiers per day. Recent attendance figures for Belleayre indicate that this figure was reached on four occasions this past ski season. Of these four days of skier attendance over 4,500, none of these occurred on weekdays. With the extended stays of Resort guests, weekday use will likely see the largest amount of increase in attendance on a percentage basis. Resort guests would also utilize the expanding summer activities that occur at the Ski Center, including summer lift rides, concerts, craft fairs and dining.

There is a considerable variety of cultural and arts related activities and organizations active in the towns of Middletown and Shandaken. These include:

Open-Eye Theater (Arkville)
Community Choral of the Catskills
Roxbury Arts Group Festival
October Festival at Belleayre Mountain Ski Center
Shandaken Theatrical Society
The German Alps Oktoberfest
Belleayre Conservatory Music Festival
Writers in the Mountains
Empire State Railway Museum
Margaretville Memorial Hospital Auxiliary Crafts Fair
Pakatakan Farmers Market

The sponsoring organizations of these activities all operate on a not-for-profit basis and the funds generated by their activities are applied to a variety of community causes. It is expected that some proportion of Resort guests will exhibit a keen interest in some, if not all, of these activities, thus enhancing the financial purposes of these organizations.

The project will provide the added benefit of serving as an educational/instructional resource regarding the Catskill Park and the New York City Watershed for Resort guests. Information and activities provided by the Resort will enhance the appreciation of Resort guests of the benefits of the Park and the Watershed.

4.2 Project Impacts and Their Magnitude

4.2.1 Land and Water

Construction on the project site will require grading for the various components including access roads, building locations and the proposed golf courses. Geotechnical and hydrogeological investigations on the site revealed that the depth to bedrock on the project site at higher elevations ranges from 12 to 22 inches, while in the valley along NY Route 28 indicate that bedrock is 80 to 100 feet below existing grade.

Given the bedrock depth, it will be necessary to perform some limited blasting to accomplish some of the proposed grading. Additionally, the irrigation ponds near the Big Indian Resort and Spa are likely to be blasted as will the foundations of the hotel building itself, as well as the Wildacres Resort hotel building.

Limited surface waters in two different watersheds exist on the project site. Surface water resources consist of intermittent and perennial streams that originate in the higher elevations of the site, or above the site, and flow in a generally northerly direction in well defined stream channels. None of the waters on the site are listed by the USEPA as "impaired" waters under Section 303(d) of the Clean Water Act.

Neither the Big Indian Country Club nor the Highmount Golf Course fronts on any perennial streams. Two intermittent streams run through Wildacres Resort. The closest fairway to a watercourse feeding Birch Creek is 1,000 feet away; one fairway on Highmount is 300 feet from a tributary to Emory Brook, while the remaining fairways average a 1,500-foot distance from the Brook itself.

Site configuration assures that no existing surface waterbodies will be impounded. The ponds used to store irrigation water will be isolated dug and lined ponds and not associated with any of the streams or brooks on the project site, nor will there by any potential overflow from the ponds. In addition to well water, the ponds will be fed by capturing and holding runoff from the Big Indian Resort and Spa and associated parking as well as the Wildacres Resort detached lodging units south of Gunnison Road.

The project includes stormwater management facilities that are designed to control a 25-year storm event while withstanding the discharge from a 100-year event. The stormwater management system for the project has been designed in accordance with the NYSDEC Stormwater Management Guidelines and the requirements of the NYCDEP.

In order to mitigate potential impacts to drinking water, surface water and aquatic biota as a result of pesticide runoff, an Integrated Turf Management Plan was prepared based upon the results of a Fertilizer and Pesticide Risk Assessment. The results of the Risk Assessment were used to eliminate from consideration numerous potential pesticides due to a combination of their runoff potential and toxicity to aquatic invertebrates and fish as well as their leaching potential in relation to State drinking water standards. Additionally, the results of the Risk Assessment were used to design a fertilizer program that would result in healthy golf course turf, without resulting in significant phosphorus and nitrogen transport off-site. The Turf Management Plan and Fertilizer and Pesticide Risk Assessment were prepared in consultation with Dr. A. Martin Petrovic, a professor of Turf Grass Science at Cornell University.

The principal aquifers of the region are contained in gently folded continental red, gray and gray-green sandstones, siltstones, and shales of Late Devonian age and stratified drift of Pleistocene age. Most of the local wells tap bedrock aquifers in the vicinity of the project site which reportedly yield as high as 550 gpm (gallons per minute), although most are less than 50 gpm. Much groundwater discharges naturally from springs have been historically and continue to be utilized for individual and public supply systems. Reported spring yields of 5 to 10 gpm are common and many range upward to 100 gpm.

The Big Indian Plateau portion of the project will take its potable water from two sources: the primary source will be the bedrock Rosenthal Well #2, located east of NYSDEC's Belleayre Beach at Pine Hill Lake; and the back-up source will be Silo A Spring located on Bonnie View Avenue, northwest of the Hamlet of Pine Hill. The Big Indian Country Club and Belleayre Highlands will require a combined average daily flow of 91,854 gallons taking into account use of water saving devices. Rosenthal Well #2 has a projected capacity of 118,080 gpd. Silo A Spring has a projected capacity of 99,792 gpd. These capacities exceed the requirements set forth by New York State. Additionally, water quality analytical results reveal that minimal treatment for disinfection and corrosion will be needed.

Irrigation water needs for the eastern portion of the project will be satisfied through the use of Rosenthal Well #1 located 170 feet north of Rosenthal Well #2, as well as supplemental input from the wastewater treatment plant, stormwater, and precipitation. Well #1 has a recognized capacity of 50 gpm or 72,000 gpd.

The Wildacres Resort portion of the project requires an average daily demand of 109,308 gallons and will obtain its potable and irrigation water supply from the Village of Fleischmanns public water supply system. The Village water system has sufficient excess capacity with which to serve the project's combined potable and irrigation water needs which are estimated to be 250,000 gpd. Water would be purchased from the Village and treated to the extent required prior to distribution on-site. Water conserving devices will be utilized throughout the Wildacres Resort.

During operation of the golf course, irrigation water needs for the western portion of the project can be satisfied by use of treated wastewater, supplemented as needed by existing on-site wells and the Village of Fleischmanns water supply.

An extensive study of on-site soils and alternative wastewater treatment options was undertaken by Delaware Engineering for the Belleayre Resort at Catskill Park. With respect to the Big Indian Country Club and Belleayre Highlands, the proposed wastewater treatment plan includes a single regional treatment facility located in the north-central part of the development. The treated effluent may be discharged to the on-site lined storage ponds for irrigation or discharged to a surface outfall into Birch Creek.

The NYCDEP wastewater treatment facility, Pine Hill Wastewater Treatment Plant, currently has sufficient capacity to treat the wastewater from Big Indian Plateau. Discussions with NYCDEP during the preparation of this report resulted in the City of New York stating that treatment of the wastewater flow from Big Indian Plateau is not allowable at this time due to liability concerns.

For the Wildacres Resort, a single regional treatment facility is proposed in the northwest corner of the development. The treated effluent may be discharged to an on-site lined storage pond during the growing season and used for irrigation or to an adjacent subsurface absorption system when not needed for irrigation.

4.2.2 Flora and Fauna

The proposed site is almost completely covered with a secondary growth forest dominated by sugar maple, beech, hemlock, yellow birch, oak and ash. All of the tree stands observed on the site, even on the steepest slopes and in the wetlands, are secondary growth less than 100 years old. In the eastern portion of the project site there is an extensive network of logging roads and logging skid trails that provide access to essentially all of the 1,242± acres that comprise the assemblage.

As previously stated, the project site will affect $573\pm$ acres. Within these developed acres there will be pockets of untouched vegetation totaling 44 acres. Hence, the proposed project will result in the disturbance of only approximately $507\pm$ acres of vegetation, or approximately 26% of the 1,960 acres that comprise the assemblage. Approximately 74% of the land area and, therefore, existing vegetation in the assemblage will remain undisturbed.

The largest amount of disturbance will take place in the beech-maple mesic forest ecological community. Clearcutting of vegetation beyond the proposed clearing limits illustrated on the accompanying site plans will not be permitted. In order to create views, only selective cutting of trees less than six inches dbh (diameter at breast height) and pruning of limbs on larger trees will be permitted. This clearing of forest represents a short-term, local, adverse impact. Once hotels, detached lodging units and other buildings along with the associated infrastructure, are constructed (covering only 84.75 acres within the project site), natural regrowth and landscaping will occur, returning the vast majority of the cleared area to a vegetated state. Areas disturbed

outside of building sites will also be revegetated as soon as practicable. The planting plans included with the accompanying site plans call for the planting of over 4,100 trees of indigenous species on the project site plus a substantial amount of ornamental trees and shrubs in the formal landscape. This is in addition to the 281 acres of golf courses.

Wetland areas occupy approximately 6 acres on the eastern portion of the project site and 11 acres on the western portion of the project site, for a total of 17 acres. Some of these wetlands are protected by federal regulations administered by the ACOE. The NYSDEC has not mapped any wetlands on these properties, and all of the wetlands are below the minimum size (12.4 acres) for regulation by the State. The entire project requires placement of clean fill in jurisdictional wetlands only totaling 0.099 acre.

Detailed surveys of wildlife on and around the assemblage were performed in 1999 and 2000 by LA Group biologists. Wildlife surveys focused on the bird, mammal, reptile, and amphibian inhabitants. In addition to on-site wildlife surveys, review of database surveys of both the US Fish and Wildlife Service and NYSDEC's Natural Heritage Program confirmed the absence of any rare, threatened or endangered species, or significant wildlife habitats on or near the project site. No threatened or endangered amphibians or reptiles, including the state-listed timber rattlesnake were observed during field surveys. No rare mammals were observed during site visits by LA Group biologists.

Impacts to wildlife on the proposed Belleayre Resort project site may include both direct and indirect impacts to common species of amphibians, reptiles, birds and mammals. In order to mitigate potential impacts to wildlife, habitat fragmentation will be kept to a minimum. Over 73% of the 1,960± acre assemblage will remain undeveloped and protected from future development by deed restriction or other similar manner. Much of the land that will be protected from future development is in close proximity to State lands or adjacent to State lands. In effect, this will result in an increase of area to remain undeveloped and act as a buffer to the Forest Preserve.

4.2.3 Determination of Significance by the Lead Agency Under SEQRA

On June 1, 2000, the New York State Department of Environmental Conservation, as lead agency under the State Environmental Quality Review Act, declared that the proposed Belleayre Resort project may have a significant effect on the environment, and that a Draft Environmental Impact Statement would be prepared. It was declared to be a Type 1 action under SEQR and was assigned project number 3-9903-00059/00001.

5.0 Alternative Analysis

5.1 Section 404(b)(1) Guidelines

The Section 404(b)(1) guidelines set forth a rebuttable presumption that non-water-dependent projects do not need to be located near wetlands to fulfill their basic purpose, and that an upland

alternative would be less impacting. Given that the proposed project site of 1,960 acres contains only 24 acres of wetlands, of which 17 acres are subject to Federal regulations, it must be considered to be an upland site. Any similar site in the Catskill region would be expected to contain at least as large a proportion of wetlands. Also, it would be difficult to design a similar resort development without the need to cross wetlands and streams with roads or to fill a portion of a wetland in grading a golf course.

Considering the magnitude of the proposed project, which is necessary to draw the critical mass to make the project successful, a very small portion of wetlands (1.47 acres of isolated wetlands and 0.099 acre of non-isolated wetlands) will be impacted, and the site plans are carefully drafted to avoid impacts to on-site wetlands wherever possible. Federal wetlands policy, specifically, the Clinton Initiative¹, has recognized that projects with small or minimal impacts to wetland have a correspondingly lesser need to evaluate off-site alternatives.

5.2 Basic and Overall Project Purpose

The primary objective of the proposed project is to develop a recreation-oriented resort that will compliment the current recreational opportunities at the Belleayre Mountain Ski Center and together to provide a four-season destination resort in the Central Catskill region. As an engine of economic development, the purpose of the project it to benefit the people and institutions of the region, as well as the investors in the project.

The proposed Belleayre Resort at Catskill Park is an integrated singular development project although its major components (Wildacres and Big Indian) are physically separated to the west and east of Bellearye Mountain Ski Center. If the Ski Center were not subject to "Forever Wild" restrictions prohibiting the construction of roads, the project would, in all probability, have been able to reserve rights-of-way connecting the two elements.

In response to inquiries by local groups and State agencies, the project sponsor evaluated the feasibility of scaling back the project site to lessen impacts. A project of reduced scale, such as one that develops either the western property or the eastern property, but not both, is not a financially viable alternative. The intended purpose of such an alternative would be to eliminate the physical disturbance in total to one tract of land or the other and thereby avoid the potential environmental impacts associated with site development. However, as examined in detail for the proposed action, it is noted that the extensive investment in terms of site design and construction planning already minimize or avoid environmental impacts associated with the full construction of the site.

At the same time that physical disturbance would be reduced, there would be significantly less economic benefit accruing to the Town (or Towns depending on which site were not developed), County, and State, in terms of construction period benefits or the annual increase in property and

¹ "Protecting America's Wetlands: A Fair, Flexible, and Effective Approach," White House Office on Environmental Policy, August 24, 1993.

sales taxes associated with the project itself and the spillover economic activity generated in the Route 28 Corridor.

Most important, detailed market and fiscal analyses undertaken by the applicant show that it is not a reasonable or feasible alternative to the proposed action in that any reduction or elimination of a project element results in either an increased risk to overall marketability and financial viability, or an unacceptably low financial return on investment. The market-based and financial analyses that underlie this conclusion are summarized below, including reports by the National Golf Foundation Consulting, Inc. (NGF) regarding the market-based need for two full golf courses, and the fiscal evaluation by HVS Consulting Services.

Market Analysis

The market evaluation and financial analyses conducted to determine project viability also included an assessment of whether the project can be scaled back so that it includes only the eastern portion of the proposed project or only the western portion of the proposed project.

The marketability of the project is fatally compromised if either the western or eastern portion of the project is removed. This is particularly focused on the marketplace factors suggesting two full service golf courses are necessary to make the project viable. From a market demand standpoint, the proposed project cannot consist of either the eastern portion of the project or the western portion of the project site. The project must make an approach to the broadest segment of the market. The project must be of sufficient scale and quality to make a recognizable impact of the target market's impression of the area. The project must offer a variety of activities and facilities to accommodate all members of the family and all levels of proficiency at the various activities. These statements have been consistently supported by various land use and economic analyses of the proposed project performed by various experts in resort development, particularly resorts that involve golf.

Over the recent decades, the Catskill Region has not enjoyed a reputation as a desirable destination for significant numbers of potential tourists from the New York metro region. From a marketing standpoint, it would be unwise to select a single socio-economic segment of the potential market. The current plan involving a $3\frac{1}{2}$ -star family hotel and a 5-star luxury hotel targets both the large population segment in the middle of the market and the largest disposable income segment at the top of the market. This strategy is consistent with the HR&A "West of Hudson Development Study," which states that "expansion of the tourist economy (of the NYC watershed) demands an adequate supply of high quality facilities serving a range of target markets".

The National Golf Foundation (NGF) Consulting, Inc. performed an analysis of the proposed project. NGF is a specialized consulting group that provides assistance to clients regarding the feasibility of potential development projects. The National Golf Foundation has long been recognized as the US golf industry's primary source for golf business information because of their vast golf-related databases and extensive experience in consulting to the golf industry.

The NGF's annual surveys throughout the country ascertain the habits of golfers and the basic operational characteristics of golf facilities. Among the key aspects of NGF's golf facility research is the industry standard classification of golf facilities, including golf resorts. It is clear from NGF Consulting research and experience that the most successful golf resorts tend to include multiple golf courses, each with distinguishable design and identity characteristics, that can serve a wide range of golfer skills and desires. The following is a summary of NGF's findings as they relate to the proposed project.

"As discussed the appropriate number of golf courses to be included in a new resort is dependent on several factors. In examining each of these factors as they relate to the proposed Crossroads resort proposal, each factor appears to indicate that more than one golf course is warranted in the overall master plan. First, the proposed facility is in immediate proximity to the New York Metropolitan area, which NGF Consulting data indicates is the most undersupplied golf market in the country. This proximity has made attraction of these underserved golfers a key element of the overall Crossroads plan and handling these golfers during limited peak demand periods will be a key success issue for the new Resort.

The variety of offerings at the proposed Resort is consistent with the offerings of several competing resort properties in the area, many of which have two or more golf courses. Further, the program and marketing plan for the proposed project is consistent with a high golf orientation and is expected to include a significant corporate golf outing and event component. As these programs will be key in the overall marketing and potential success of the proposed facility, providing an adequate inventory of premium, peak-demand tee times appears to be a critical element in the overall success of the Crossroads resort project.

Based on the NGF Consulting examination of the feasibility and business plan documents provided by Crossroads, coupled with our extensive experience in new golf facility consulting, NGF Consulting is of the belief that a minimum of two golf courses is not only warranted for the Crossroads resort concept, but will be critical to the success of the overall development. Put as simply as possible, without an adequate inventory of golf tee times the lodging components cannot be filled, and without filling the lodging components the recent efforts to improve visitation in this local area cannot be sustained."

Brian McCallen, Senior Editor of Golf Magazine, Senior Travel Editor of Golf Magazine and author of "Top 100 Golf Courses You Can Play" and "Golf Resorts of the World" has commented extensively in his letter dated August 10, 2001 on the desirability of multiple courses in a destination resort. Fully 87% of the courses listed in the "Top 100 Golf Courses You Can Play" have an excess of 18 holes and virtually all of the resorts in "Golf Resorts of the World" have in excess of 18 holes.

In addition to the NGF and McCallen assessments of the need for more than one golf course, Gail Flannigan Associates, with marketing experience for golf destinations of over 25 years, also provided input on the proposed project. Ms. Flannigan concurred that more than one golf course was necessary, especially with related conference components of the proposed project. The following is a portion of Gail Flannigan Associates' assessment of the proposed project.

"The most successful golf resorts are those which offer a minimum of 36 holes of golf – a fact that marketing studies have contributed to the fierce competition among all resorts to garner the very valuable meetings and incentive industry – estimated at upwards of \$200 billion worldwide.

Also, from a practical perspective, if a large group has limited time during meetings to play golf, it is extremely desirable to have more than one course in order to do "shot gun" starts. Thus, the attendees can play at the same time and return to the meeting quickly. Large groups who are staying for several days also enjoy the variety of playing a different course on a different day."

Ms. Flannigan's conclusions are supported by further communication from Mr. Peter B. Redfield, President of Events Enhancement of West Norwalk, Connecticut, a major meeting and conference organizing firm.

Edwin McMullen, Senior Partner of E.H. McMullen & Associates, past chairman of the American Resort Development Association, as well as a member of the Resort Development Council to the Urban Land Institute has also reviewed the scope of the proposed project. Mr. McMullen has been a developer of large scale mixed use resort real estate developments in Florida, California, Nevada, Hawaii, Colorado, Arizona and South Carolina as well as in Mexico, Canada and the Caribbean. Mr. McMullen, in his review of the project, states that "thirty six holes of golf is the absolute minimal to create the overall resort you have planned," and "no major resort developer is likely to demonstrate real interest in a project that has less than 36 holes of golf".

Financial Analysis

As set forth above, the marketability and demand-based viability of the proposed project requires the full breadth of project components, including both hotels to fully cover the marketplace from a 3 to 5 star hotel, two golf courses, and the time-share units. As analyzed by the consulting arm of the Hotel Appraisals, LLC (HVS Consulting Services), this market-driven need for all components to be considered as an integrated whole, is also reflected in the financial performance of the proposed project.

HVS is the leading national consulting firm providing appraisal and financial consulting services to the hotel industry. Their report examines the future financial performance of the proposed development under a variety of scenarios that enable a comparison of the proposed full development to that of reduced-scale scenarios that reflect the "East or West Development Alternative."

HVS assessed the potential development of the Bellearye Resort by examining detailed estimates of initial project costs and future revenues and expenses once the Resort was operational. By relating the financial performance of the Resort (i.e., net income after expenses) and then relating this performance to the initial cost of the development, the project's return on initial investment can be measured. HVS applied the industry standard real estate evaluation technique known as the "Internal Rate of Return (IRR)," which determines the ratio of aggregated present value of

future net income (for a 10 year period) over total development costs. The resulting ratios (typically expressed as a percentage figure) are then evaluated against industry typical yields that would be expected for a specific type of real estate project.

The first step in the analysis was to carefully define and determine the construction costs, income projections and operating projections for the project components. The analysis specifically looked at the two hotels, the golf courses, and the detached lodging units (club membership and timeshare). This enabled the study to evaluate five key scenarios, of which scenarios 4 and 5 reflect the East or West Development Alternatives:

- 1) All four property components constructed (The Proposed Action)
- 2) Elimination of the golf club at Wildacres
- 3) Elimination of the country club at Big Indian
- 4) Elimination of all of Wildacres
- 5) Elimination of all of Big Indian

Net income is the gross revenues less all fixed and operating expenses. The HVS study provides detail projection of income based on all revenue-producing components of the project (i.e., room charges, food, golf, spa, retail sales, conference fees) applying regionally adjusted industry benchmarks in terms of rates, occupancy, and golf rounds played. Expenses, also benchmarked to industry standards, included fixed costs (i.e. property taxes, insurance, operating reserves) and variable operating costs (including labor, supplies, marketing, administrative, fees, and others). Income and expense streams over the 10 year analysis period were adjusted based on historical inflation trends as calculated by the Consumer Price Index, and an average rate of 3 percent per year was utilized.

For each of the scenarios other than the full project, the study examines how reductions in development elements affect the future performance of the facility. These include variations in revenue opportunities (i.e., no golf course revenues) or in the occupancy or other characteristics of visitors and guests. Annual operating expenses also vary considerably by the elements eliminated and by the reduced fixed costs (such as no property tax increases on the east or west tract if it remains undeveloped. Development costs (which are the base value of the IRR calculation) clearly vary by the degree that project elements are eliminated, particularly given the significant investment in infrastructure and road development.

It is noted in the HVS report that the detached lodging units are analyzed separately as distinct from the hotel and golf course projects based on their unique real estate development characteristics. Essentially, the detached lodging units are only viable if the golf courses and other facilities are developed, so they are tied to the success of the other project components. However, the detached lodging units alone do not adequately support the golf facilities which, as noted above, require the demand generated by the hotels, day users, country club members, and detached lodging patrons. From a financial performance standpoint, they are also distinct in that the development costs are recouped on the initial sale of the units and then more marginally on the subsequent but smaller income and expenses associated with managing the properties on behalf of the future owners. Thus, detached lodging units reflect more the direct relationship of

sales price to construction prices (which also makes the units very sensitive to construction cost fluctuations) and as a result, require a proportionately higher IRR to be considered a viable real estate project.

Table 6 presents a summary of the financial IRR analysis conducted by the HVS Consulting group. As shown in the table, for the key components of the project (exclusive of the detached lodging units) only the proposed project yields an IRR sufficient to attract equity investment and to secure financing. It is important to note that IRR cannot be compared to typical consumer investment returns such as bank interest rates which don't reflect long term risk factors and the balancing of equity and debt necessary undertake real estate development.

Based on this financial analysis as well as their in-house market data and review of other documents prepared for the Belleayre Resort project, the HVS Consulting study concludes that the proposed project – namely, full development of all project components – is the only feasible and viable approach. This is based on the following findings:

- 1) Development of 36 golf holes is arguably the single most critical element of the project program.
- 2) Critical mass is essential to attracting sufficient patron demand and market awareness for the Resort. This is critical to overcome the current limitations of the surrounding area.
- 3) Economies of scale generated by the operating efficiencies of co-operatively operating the two facilities is important to providing enough expense sharing contributing to the overall feasibility of the project.
- 4) Elimination of market segmentation, thereby allowing for both middle and top elements of the target marketplace to create customer base.

Conclusion

The *East or West Alternative* is not considered a reasonable or feasible alternative based on the information on market and financial viability summarized above and found in their entirety in Appendix 27 of the DEIS. It is unlikely that this alternative would ever attract sufficient equity investment or financing or, if built, would be marginally performing or scaled back to a substantially lower quality development without the integration of well designed and high performance environmental standards.

Further, based on the extensive investment in design details and mitigation measures to minimize or avoid adverse impacts associated with full development of the project, the need for further consideration of the *East or West Alternative* has not been established.

Table 6. Summary of Financial Analysis

	Calculated	Industry	
	Internal Rate	Threshold of	
Project Scenario	of Return	Viability	Comment
Proposed Project (exclusive of detached lodging	14.7 %	14 %	Generally meets the industry threshold for a financially sound project.
units)			Addition of detached lodging units add to overall viability.
2) No golf @ Wildacres (exclusive detached lodging units)	8.3%	14%	Would not meet threshold, would not generate sufficient return to attract equity investors or financing. Addition of detached lodging units would not add sufficient viability to overcome low IRR
3) No country club @ Big Indian (exclusive of detached lodging units)	8.3%	14%	Same as above
4) No Wildacres (exclusive of detached lodging units)	8.4%	14%	Same as above, slightly higher IRR based on reduced development costs
5) No Big Indian (exclusive of detached lodging units)	10.7%	14%	Same as above, higher IRR based on reduced development costs Addition of detached lodging units would still not be sufficient to overcome lower IRR.
			not be sufficient to overcome lower fixe.
6) Detached Lodging Units @ Wildacres	33.5%	25%	Well exceeds industry threshold
7) Detached Lodging Units @ Big Indian	41.6%	25%	Same as above

Source: "Economic Evaluation: Bellearye Resort at Catskill Park" HVS Consulting Services, September 2002

5.3 Alternative Sites

Prior to proposing the Belleayre Resort project at the project site the Applicant considered other lands in the area that could have potentially met the Applicant's objectives of providing a high quality, four-season resort to complement the existing recreational facilities at Belleayre Mountain Ski Center, and spurring the revitalization of the economy, especially in Shandaken and Middletown.

Alternative locations were limited by the fact that they had to be within a reasonable distance to the Ski Center in order to provide the mutually beneficial relationship between the proposed project and the Ski Center.

Alternative locations were also limited by the fact that the majority of lands in the vicinity of the proposed project site are not private lands, but rather lands controlled by New York State or New York City and upon which development is precluded. In the remaining areas, topographic constraints make very few parcels suitable for development.

One alternative location that was given consideration was approximately 1,000 acres to the west of the proposed project site. These lands are on and around Fleischmann Mountain. This alternative was not pursued after it was determined that the owner was not interested in selling the property.

Lands in the hamlet of Shokan known as the Pitcairn Estate were investigated as a possible site. The lands have frontage along NY Route 28 and include Kenozia Lake. The reasons for not pursuing this alternative included extensive freshwater wetlands on the property as well as the fact that the Ashokan Reservoir is located just on the other side of NY Route 28 from the Pitcairn Estate.

A third site that was investigated was an assemblage of properties in Lanesville, Greene County, off of Harry Sickler Road. This site was not chosen for three reasons: (1) much of the area was prone to flooding, (2) the largest parcel in the assemblage could not be acquired, and (3) development of this parcel would not provide the needed economic benefits to Ulster and Delaware Counties.

Following the investigation into these three alternative sites, the Applicant approached the Shandaken Town Assessor and requested a list of all properties in the Town that were available and had sufficient acreage. The intent of this request was an attempt to locate two or more parcels, each of sufficient size on which to construct a Resort and related amenities. A number of properties were identified but were determined to be unsuitable for a number of reasons. A number of parcels located at lower elevations were identified but these parcels either contained or were adjacent to perennial streams and/or contained 100-year floodplains. Alternative parcels of suitable size identified in higher elevations were either on unavailable land owned by New York State, were private lands unsuitable for development because of topographical constraints (lands were simply too steep to support development), or were accessible only by narrow and inadequate Town roads.

5.4 Evaluation of On-Site Alternatives

The original project layout consisted of three 18-hole golf courses and an additional 9-hole par three golf course. This layout was abandoned, however, in response to environmental and local concerns. Consequently, attempts to purchase additional properties were abandoned.

The golf course layouts are dictated by site topography, therefore limiting the number of alternative layouts for the courses. The Big Indian Country Club golf course layout has been closely scrutinized. The tee location on hole 18 was moved slightly to the west to avoid a potential archeological feature. Alternative golf layouts for the Highmount Golf Club were developed as a result of adding more lands to the project site. This made it possible to build a golf course without needing to develop the former Adelstein property, in the westernmost part of the project site, thereby avoiding impacts to the numerous wetlands on that parcel. Changes made between earlier layouts and the final layout include the movement of hole 17 to the south and slightly moving the 13th green and 16th tees to avoid potential archeological sites.

The proposed Resort and Spa building at the Big Indian Country Club is the third of three building designs for the same location, while the proposed hotel at Wildacres Resort represents the fusion of a number of previously proposed buildings that would have been separate buildings. A previous alternative site plan consisted of separate upper and lower lodges, and additional stand alone buildings for the conference center and the golf clubhouse. This alternative layout was replaced by the current single hotel building in order to improve the ease and efficiency of operations of the various resort functions and to lessen construction impacts. At one time, up to 100,000 square feet of retail space was considered at the Wildacres Resort. Over time, the design of the retail area was modified to decrease the amount of retail square footage to 60,000, then 20,000 and finally to the currently proposed 13,000 square feet of strictly hotel-related shops. The downscaled retail space is in direct response to concerns raised by area businesses in relation to competition.

Throughout the evolution of the design of the proposed project, attention was paid to minimizing effects on the wetlands, both isolated and non-isolated. The majority of the project design took place before the ACOE issued its jurisdictional determination for these wetlands. Therefore, all wetlands were considered as potentially subject to federal regulations, and the project was designed to minimize impacts to all wetlands, to the greatest extent practical. Among the design measures adopted are the following:

- All underground utilities that must cross wetlands will be installed in roadbeds or other parts of the roadway fill, so as to keep the wetland disturbance confined, and to avoid the need to excavate trenches in wetland soil, in which to bury the utility lines.
- In parts of the golf courses that will not be accessible by internal roadways, elevated golf cart paths across wetlands have been designed to accommodate maintenance vehicles in order to avoid the need to construct special crossings for those vehicles.
- In order to stay out of wetlands, parking areas were consolidated and underground parking garages beneath the resort hotels were incorporated into the design.
- Clearing of woody vegetation at places where golf course fairways will cross wetlands will be accomplished using hand tools (see Exhibit 6). As described in federal wetland regulations (33 CFR 323.2(d)(3)(ii)), activities that remove above-ground parts of vegetation without soil disturbances that may redeposit excavated soil material are not classified as a discharge of fill materials, and therefore, are not regulated. Clearing in such places will be done judiciously, so as to provide a sufficient opening for golf play without greater width than necessary.

• Golf courses on the project site were designed to occupy the less steep slopes to avoid indirect impacts to waters of the United States through stormwater discharges.

Proposed discharges of fill into regulated wetlands will take place only for the purpose of constructing roads to access developable uplands on the site. Even these fills have been minimized by making use of bridges at the crossings, rather than culverts.

The four proposed bridge crossings are a reasonable alternative to culverted stream crossings which would cause direct loss of aquatic habitat. For example, culverting the Giggle Hollow brook would require a box culvert approximately 100 feet in length, thus eliminating 100 feet of aquatic habitat provided by this stream. Spanning the stream crossings with bridges also allows for free movement of fishes upstream and downstream of the bridges as well as unimpeded drift of aquatic invertebrates.

Electroshocking surveys conducted by the New York State Department of Environmental Conservation, including work done in September of 2000 specifically for this project, demonstrated that Birch Creek and Giggle Hollow Brook both contain juvenile salmonids, indicating that these waters serve as areas of trout spawning and are valuable aquatic resources. Constructing bridges instead of culverted stream crossings avoids the loss of potential spawning areas in these creeks. No trout were found in the brook that will be crossed by the Wildacres Bridge, but it is believed that trout exist further downstream in the drainage system from this unnamed tributary to Emory Brook.

Spanning all four of these crossings avoids introducing any structures, fill, or other material into any of the streams being crossed. The width of the bridges are not excessive. They are designed to safely convey two way vehicular access and egress to the project site.

Described below are the various factors considered in choosing the locations of the proposed roads to provide access to the project site.

Big Indian Plateau Access

In order to gain access to the Big Indian Plateau in a direct manner, it is necessary to cross Birch Creek, just as it is necessary to cross Birch Creek to access the Belleayre Beach at Pine Hill Lake. In this area Birch Creek essentially runs parallel to NY Route 28. The following is a discussion of the alternative access points considered for the Big Indian Plateau portion of the Belleayre Resort project.

The Big Indian Plateau portion of the project site has alternative access points from Woodchuck Hollow Road, Friendship Road, NY Route 28 via Winding Mountain Road, NY Route 28/Lasher Road, and Lost Clove Road.

Woodchuck Hollow Road is a two-lane Town of Shandaken Road that is unsurfaced and deadends at the project site. Access to the project site via Woodchuck Hollow Road would require vehicles to pass through Pine Hill after turning off of NY Route 28. Woodchuck Hollow Road is

proposed to be used to access the project site, but for emergency purposes only. The desire to avoid routing non-emergency traffic through the higher density residential area of the hamlet of Pine Hill precluded Woodchuck Hollow Road from being considered a preferred primary access route. Also, Woodchuck Hollow Road is used by many hikers as the starting point for the trails along Belleayre Mountain and beyond. By limiting project traffic to emergency vehicles only, potential negative hiker/vehicle interactions have been avoided.

The Big Indian Plateau portion of the project site has approximately 240 feet of frontage on Friendship Road. Friendship Road is a two-lane Town of Shandaken road that connects on either end with NY Route 28. Friendship Road near its western end provides access to Belleayre Beach at Pine Hill Lake, as well as to two residences. Friendship Road, near its eastern end, is the preferred alternative access point for serving the operational access needs of the project. In order to provide access to the project site, a new bridge will need to be constructed to span Birch Creek. An access road of approximately 7,500 feet between Friendship Road and the area proposed to be developed as the Big Indian Country Club, Resort and Spa is required in order to meet Town road slope requirements. (The access road is a private road but was designed to meet Town of Shandaken road standards.)

Having the main access point off of Friendship Road was not the original access point planned for this portion of the project site. Originally, it was planned to access the Big Indian Country Club, Resort and Spa and Belleayre Highlands from an access road off of Lasher Road. Lasher Road is also a two-lane Town of Shandaken Road with an existing bridge over Birch Creek. Lasher Road connects with NY Route 28 next to the existing Jake Moon Restaurant. The originally planned access road would have intersected Lasher Road at a point just beyond the bridge over Birch Creek. An access road of approximately 8,450 feet between Friendship Road and the area proposed to be developed as the Big Indian Country Club, Resort and Spa is required in order to meet road slope requirements. The reason that this alternative was not selected as the preferred access location was the potential for significant visual impacts from the clearing and grading necessary to construct a road at this location. Unlike the Friendship Mountain Road access road that is located perpendicular to NY Route 28, there would be direct views into the Lasher Road access from NY Route 28 when traveling from the east through the hamlet of Big Indian. This access would also require additional impervious area since it is almost 0.2 mile longer than the alternative access from Friendship Road. As proposed, the project would use the existing Lasher Road only as an access to an employee parking area on the flat area to the south of the existing Jake Moon restaurant.

Access to the western portion of the project site currently exists via Winding Mountain Road, which is not surfaced and in most places is only wide enough for one way travel. Winding Mountain Road is proposed as the main access road for the early construction phases of the project. Routing construction traffic onto Winding Mountain Road will avoid having potentially louder construction vehicles utilize the access via Friendship Road which is in proximity to the Belleayre Beach at Pine Hill Lake. It is also planned to have Winding Mountain Road serve as an emergency egress road during the operational phase of the project. Should conditions prohibit people from leaving the project site via Friendship Road and the bridge over Birch Creek, people will be able to leave on Winding Mountain Road by traveling on a proposed short

connector road to be constructed between the proposed access road off of Friendship Road and Winding Mountain Road.

Lost Clove Road is also located adjacent to the western portion of the project site. Unlike the alternative access points off of Friendship Road and Winding Mountain Road, access via Lost Clove Road would be much less direct from NY Route 28. In order to access the project site at this location, one would have to travel approximately 1.75 miles on County Road 47 and Lost Clove Road, passing a number of residences along the way, before accessing the project site. Once on the site, an access drive of over 8,300 feet would be required to get onto the portion of the site to be developed as the Big Indian Country Club. Access at this location would also be adjacent to a State hiking trail trailhead parking area and would require crossing the State hiking trail on the portion of the trail located on the project site. Access for this location could also result in potentially significant visual impacts from nearby State hiking trails, including those on Balsam Mountain a short distance to the south.

Internal site access on this portion of the project requires that there be a road crossing of the intermittent stream in Giggle Hollow that connects the Big Indian Country Club, Resort and Spa and Belleayre Highlands. Road standards in the Town of Shandaken limit access roads with only a single direction of travel (i.e. cul-de-sacs) to be no more than 1,200 feet in length. Therefore, without the connection across Giggle Hollow that provides access to locations at Woodchuck Hollow Road and Friendship Road, it would only be possible to build an access road 1,200 feet into the project site from each of the existing Town roads. The proposed bridge road crossing in Giggle Hollow is located near the highest elevation on the property. This minimizes the amount of elevation change when making the crossing. An alternative location could have been selected but this would have required construction on longer, and possibly steeper, slopes. The connector road passing through Giggle Hollow also allows club members staying at Belleayre Highlands to drive to the Big Indian Country Club, Resort and Spa without having to travel on the local public road network, including the roads through Pine Hill.

Wildacres Resort Access

The access off of Gunnison Road closest to County Road 49A provides access to a portion of the Highmount Golf Club and the collection of detached lodging units and their recreational amenities north of Gunnison Road. The location of this aspect of the project flows from the layout of the golf course. The proposed access location is the only one on this portion of the site that would not require the access road to cross a golf hole.

5.5 Minimization of Adverse Impacts through Stormwater Management and Soil Erosion Control

As described above, in Section 3.3, the project has been designed with stormwater controls that will maintain existing rates of stormwater runoff for the 25-year and smaller storms. Also, runoff from larger storms, up to and including the 100-year storm, will be released at a rate that does not exceed existing runoff from a 25-year storm. This will avoid impacts to wetlands from increased flow of the streams that run through them, and the consequent increased erosion of

mineral sediments and organic particles. Also, the stormwater detention system will counteract any tendency to increased stream "flashiness" resulting from greater impervious surface area. It will also promote infiltration of stormwater into the soil and recharge of the shallow aquifers that feed many of the on-site wetlands.

The following measures will be implemented to mitigate, eliminate and/or minimize any potential impacts to soil resources and water resources due to soil disturbance and/or erosion.

- 1. As much existing site vegetation will remain as possible. Silt fencing and construction fencing will be used to physically define the limit of work. The limits of clearing are shown on the grading plans (Drawings SG-1 through SG-9). Silt fences will not be relied upon as a sole method of controlling erosion. Redundancy in the form of phasing and maintaining vegetation buffers, utilization of site-wide sediment basins, widespread use of temporary stabilization, and comprehensive stabilization planning will be implemented to prevent or reduce erosion.
- 2. Construction will occur in multiple Phases, Sub-phases, and Work Areas, which will reduce the potential for erosion by reducing the amount of soil exposed at any given time. Sediment retention basins capable of holding runoff from a 10 year storm on bare soil will be constructed and maintained throughout the site.
- 3. All soil stockpiles will be mulched with long-fiber cellulose wood mulch such as Eco Aegis® or approved equal when not in use to prevent erosion of the stockpiled materials. Should stockpiles remain in place over the winter, they will be seeded with an annual rye grass or winter wheat mixture to stabilize the soil.
- 4. All erosion control measures will be checked regularly for proper functioning during construction and maintained as needed. A Certified Professional Erosion Control Specialist will be the superintendent overseeing day-to-day activities on the site, including making at least weekly inspections, and following any storm event of 0.5 inches or greater, to check erosion control devices. A crew of four to six people and the appropriate equipment per golf course will be under his direction and will be dedicated to installing, inspecting and maintaining erosion control devices. The Erosion Control Superintendent will have complete stop-work authority and will have access to contractor equipment and manpower to maintain the erosion control system.
- 5. To minimize impacts due to wind erosion, natural vegetation at the limit of clearing will remain intact to serve as wind breaks. Access roads and haul roads will be watered as needed to reduce re-suspension of dust on site.
- 6. A stabilized construction entry of crushed stone will be prepared to minimize tracking of soil and mud onto adjacent roads. Also, periodic sweeping of the adjacent roads will be completed during construction and a regular street sweeping program will be implemented during construction.

6.0 Demonstration of Compliance with Nationwide Permit Conditions

As explained at the beginning of this document, the proposed activities within regulated wetlands are authorized under Nationwide Permits 7, 13, 14, and 25. As with all of the Nationwide Permits, this authorization is valid only when the applicant complies with a set of conditions. The general permit conditions relevant to this project are discussed in the following subsections.

6.1 Proper Maintenance (condition no. 2)

During the construction phase of the project, the erosion control crew will be responsible for monitoring of authorized fills and structures in wetlands to insure that they are properly maintained. After all fills have been stabilized through revegetation or other means, and the construction phase of the project has been completed, this function will be assumed by maintenance personnel employed by the Belleayre Resort.

6.2 Soil Erosion and Sediment Controls (condition no. 3)

As described above, an erosion control plan will be implemented to insure that all exposed soils are stabilized as quickly as possible and that any sediments washed from those areas will be captured before reaching any wetland or stream.

6.3 Aquatic Life Movements (condition no. 4)

Bridges will be used to carry roadways across all of the streams with any significant fish populations, and will not affect the substrate or depth of water in the stream, thereby insuring continued movement of aquatic life. Culverts installed in other crossings of wetland or streams will be designed to maintain low-flow conditions in order to insure that invertebrates and small vertebrates are capable of moving between the parts of the wetland separated by the fill.

6.4 Equipment (condition no. 5)

To the greatest extent practicable, work within wetlands will be performed with heavy equipment placed on the adjacent uplands. If heavy machinery must enter a wetland, soil disturbance will be minimized by placing the equipment on mats that will distribute its weight over a broad area.

6.5 Water Quality (condition no. 9)

Water Quality Certification under Section 401 of the US Clean Water Act must be granted by the New York State Department of Environmental Conservation. In this case, there is a blanket certification because the amount of wetland disturbance will be less than 0.1 acre in size and there will be less than 200 linear feet of stream disturbance.

6.6 Endangered Species (condition no. 11)

A check of the files of the New York Natural Heritage Program and the US Fish and Wildlife Service by these agencies revealed no records of rare, threatened, or endangered species, or of the critical habitat of any such species within the project area. Biologists of the LA Group, P.C., who examined the flora and fauna of the site, did not identify any such species in the course of those studies.

6.7 Historic Properties (condition no. 12)

A Stage 1A Literature Review and Archeological Sensitivity Assessment was prepared for the project in March 2000. This report did not identify any known archeological sites or any sites on the State or National Registers of Historic Places on the project site. However, three resources on the project site were identified as having potential historical significance. These were (1) the Turner/Brisbane Mansion and associated caretaker's house, gate and carriage barn, (2) the Marlowe Mansion, and the (3) Leach farmhouse and barn on Galli Curci Road. The Stage 1A report also identified some other resources off the project site as having potential historical significance.

The Stage 1A report was submitted to the New York State Office of Parks Recreation and Historic Recreation for their review (OPRHP). The three resources described above were determined to be eligible for listing on the State and National Historic Registers of Historic Places. OPRHP concurred with the findings and recommendation of the Phase 1A report that Phase 1B testing should take place on those areas of the project site that both would be disturbed as part of the project plans and have potential for containing archeological resources.

A Stage 1B Cultural Resource Survey was prepared for the project in August 2001. Testing for the Stage 1B survey was done in accordance with the testing plan described in the Phase 1A report and approved by OPRHP.

The Stage 1B report and supporting letter report were submitted to OPRHP for their review. The Stage 1B report identified a number of features with potential for historical or archeological significance. The majority of the resources identified are 20th century sites. Based upon these identifications some minor modifications to the project layout and grading plans were made in order to avoid impacting some of the identified resources. OPRHP's review of the Stage 1B materials led them to state "OPRHP has no further issues regarding project ground disturbance and archeology: additional archeological study is not warranted."

In January 2002 additional Phase 1B field reconnaissance work was performed for the area of the proposed employee parking area off of Lasher Road. No historically significant archeological deposits were discovered, and it was deemed that no further archeological investigation is warranted.

After reviewing these studies, as well as site plans and the Draft Environmental Impact Statement for the project, OPRHP declared that it "does not have substantial concerns regarding potential impacts to the existing historic resources" (see letters dated November 21, 2001 and April 11, 2002 from Kenneth Markunas, in Exhibit 8, "Correspondence").

6.8 Notification (condition no. 13)

Under Nationwide Permit 14, a pre-construction notification must be submitted to the ACOE if there is a discharge in a special aquatic site, including wetlands. This document serves as that notification. As required, this document includes a delineation of the boundaries of the affected wetlands. The sections above describe how the project plan has been developed to minimize the amount of both permanent and temporary losses of wetlands in the course of development of this site.

An additional required component of the notification is a compensatory mitigation proposal. That mitigation is discussed in Section 6.7

6.9 Suitable Material (condition no. 18)

All materials deposited within wetlands will consist of clean soil materials. Contractors performing the work will specifically be prohibited from using unsuitable materials, such as construction and demolition debris, pieces of asphalt, trash, metals, etc.

6.10 Mitigation (condition 19)

As indicated in Table 5, "Projected Impacts to Wetlands on the Belleayre Resort Site, "there are only four places where deposition of fill will take place in jurisdictional wetlands. Primarily through the use of bridges, these fills have been minimized to such an extent that the largest single fill is less than 0.06 acre (2600 square feet). These fills are of such a small size that they represent a negligible or minor impairment of the functions and benefits of the involved wetlands.

As compensation for these impacts, the Applicant proposes the following:

- 1. A 25-foot-wide protective buffer zone will be established along the length of Giggle Hollow, except for the place where a road crossing is proposed.
- 2. After completion of the project, all remaining regulated wetlands will be protected from further development. Included will be the 6.09 acres of regulated wetlands on the former Adelstein Property, which constitutes 203 acres in the westernmost part of the Western Property. This will be accomplished by means of deed restrictions and/or conservation easements on the wetlands and surrounding undeveloped lands.

6.11 Management of Water Flows (condition 21)

The roadway crossings of streams and wetlands, as well as the stormwater management system, have been designed to maintain preconstruction downstream flow conditions, to the maximum extent practicable. Bridges over streams have been designed so as not to impede the passage of normal high flows.

The new bridge at Friendship Road and the bridge replacement at Winding Mountain Road will not involve any structural supports within Birch Creek nor will any structural support be within the immediate banks of the creek. Support structures for the bridges will be installed outside of the defined stream channels. Both the Friendship Road and Winding Mountain Road bridge structures were sized to pass the anticipated stream runoff for Birch Creek, which both bridges cross at the base of the mountain. The accepted criteria is to design the waterway opening below the main bridge supporting members to pass the fifty year storm (Q_{50}) with a minimum of two feet of freeboard, and the one hundred year storm (Q_{100}) with reduced freeboard.

6.12 Fills Within 100-Year Floodplains (condition 26)

The fill deposited in wetlands 29 and 36 will result in permanent above-grade fills in a 100-year floodplain. All applicable FEMA and local floodplain management requirements will be followed. In the Town of Shandaken, development within a FEMA-mapped Flood Fringe Overlay District is subject to a special use permit, and any development within 100 feet of a NYSDEC-classified stream is subject to special permit review.

7.0 Compliance With the NYSDEC for Section 401 Water Quality Certification, Use and Protection of Waters

The activities proposed here are authorized under Nationwide Permits 7, 13, 14, and 25. Nearly all of these activities will comply with the regional conditions for State of New York Water Quality Certification, as issued by the ACOE on May 21, 2002. Following are explanations of how the project meets the conditions for Water Quality Certification (WQC).

Nationwide Permit 7

This permit will be used to authorize the construction of the outfall of the Big Indian Plateau sewage treatment plant. The blanket WQC does not apply to outfalls constructed in Special Aquatic sites, as defined in federal regulations at 40 CFR 230.3(r) and Subpart E, which include sanctuaries and refuges, wetlands, mudflats, vegetated shallows, coral reefs, and riffle and pool complexes. The site of the outfall is in a section of Birch Creek where the channel is bordered by nearly vertical banks, and there is no riparian wetland. However, a riffle and pool complex may exist in this stretch of the Stream. Therefore, blanket Water Quality Certification may not apply to this activity.

Nationwide Permit 13

The construction of the sewage treatment plant outfall will also make use of Nationwide Permit 13, for bank stabilization. This will be used for placement of stone riprap on the streambank, at the point where the outfall pipe emerges. This activity meets the blanket WQC because (1) the bank stabilization will be less than 200 feet in length, (2) the project is not in a Coastal Erosion Hazard Area, and (3) the erosion protection is not a vertical bulkhead.

Nationwide Permit 14

All the proposed road crossings of wetlands are the activities authorized under this permit, including the bridge crossings of Birch Creek, Giggle Hollow, and the unnamed stream in wetland 24 at Wildacres. The NYSDEC has certified that activities authorized under Nationwide Permit 14, which do not involve discharges greater than 0.1 acre in size or more than 200 linear feet of stream disturbance, will comply with the applicable provisions of the Clean Water Act and applicable New York State water quality standards. The proposed activities, in aggregate, will not exceed these thresholds; therefore, this project is eligible for this blanket certification.

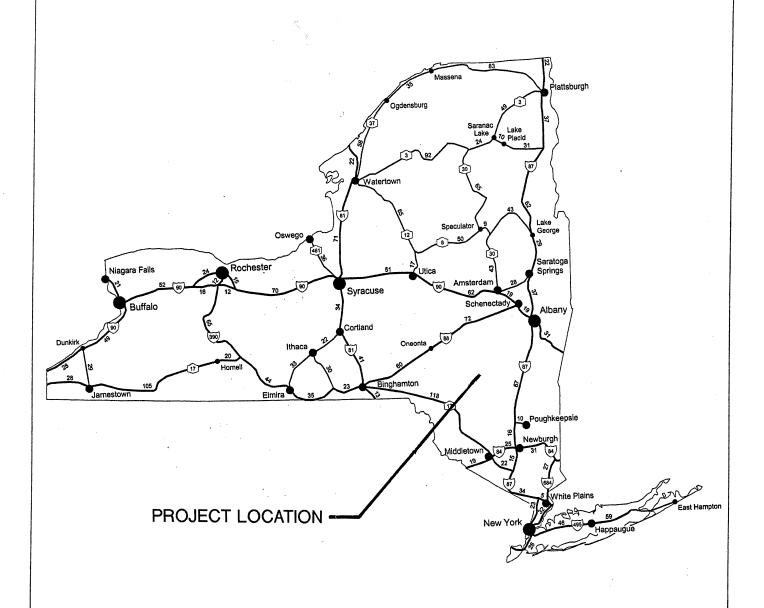
Nationwide Permit 25

This permit authorizes structural discharges, including the pilings that will be used to support the elevated golf cart paths that will cross wetlands in seven locations. These will meet the standards for blanket WQC because (1) the structures will not be located in a designated Significant Coastal Fish and Wildlife Habitat area, (2) none of the pile-supported structures will have a surface area greater than 4,000 square feet, (3) no structural support member will have a surface area greater than 64 square feet, and (4) the spacing between structural support members will not cause accretion of bottom sediments.

8.0 Conclusion

The information presented in this document has outlined the proposed Belleayre Resort at Catskill Park, its components, and its projected impacts to the environment. Its impacts to wetlands regulated by the federal government will consist of 0.0993 acre of wetland fill and 2.58 acres of clearing of woody vegetation. It is clear that the project is eligible for authorization under Nationwide Permits 7, 13, 14, and 25.

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the LA group

Landscape Architecture and Engineering, P.C. 40 Long Alley Saratoga Springs New York 12886 518/587-8100 Telefax 518/587-0180

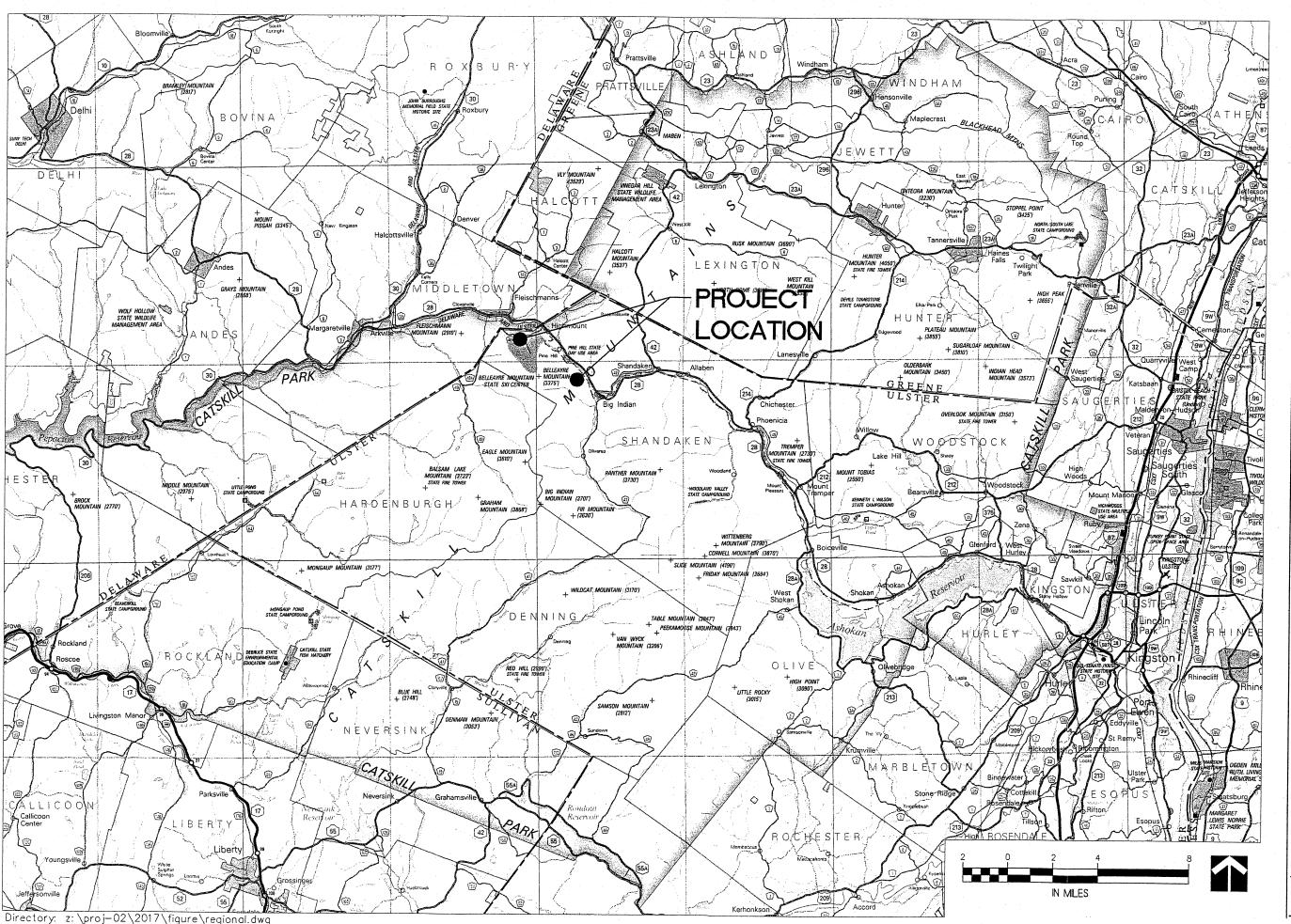
BELLEAYRE RESORT AT CATSKILL PARK DRAFT ENVIRONMENTAL IMPACT STATEMENT

STATE LOCATION MAP

Date:

Project: 00052

Figure



the LA group Landscape Architecture and Engineering, P.C.

40 Long Alley Saratoga Springs New York 12866 518/587-8100 Telefax 518/587-0180



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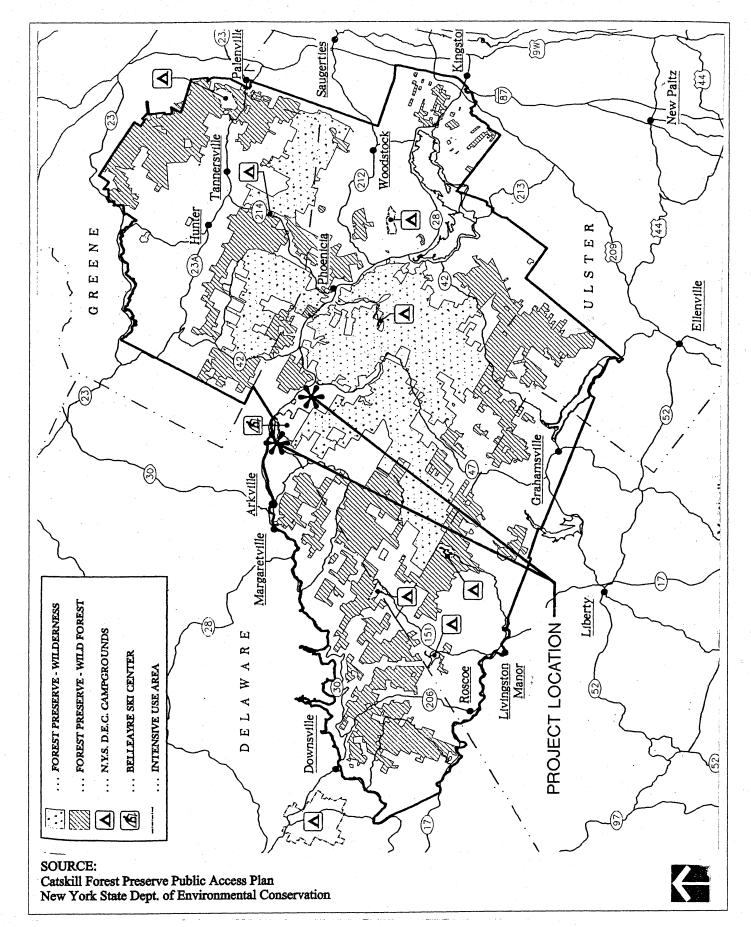
BELLEAYRE RESORT AT CATSKILL PARK

DRAFT ENVIRONMENTAL IMPACT STATEMENT

REGIONAL LOCATION MAP

Project: <u>00052</u> Date: _____

Figure





the LA group

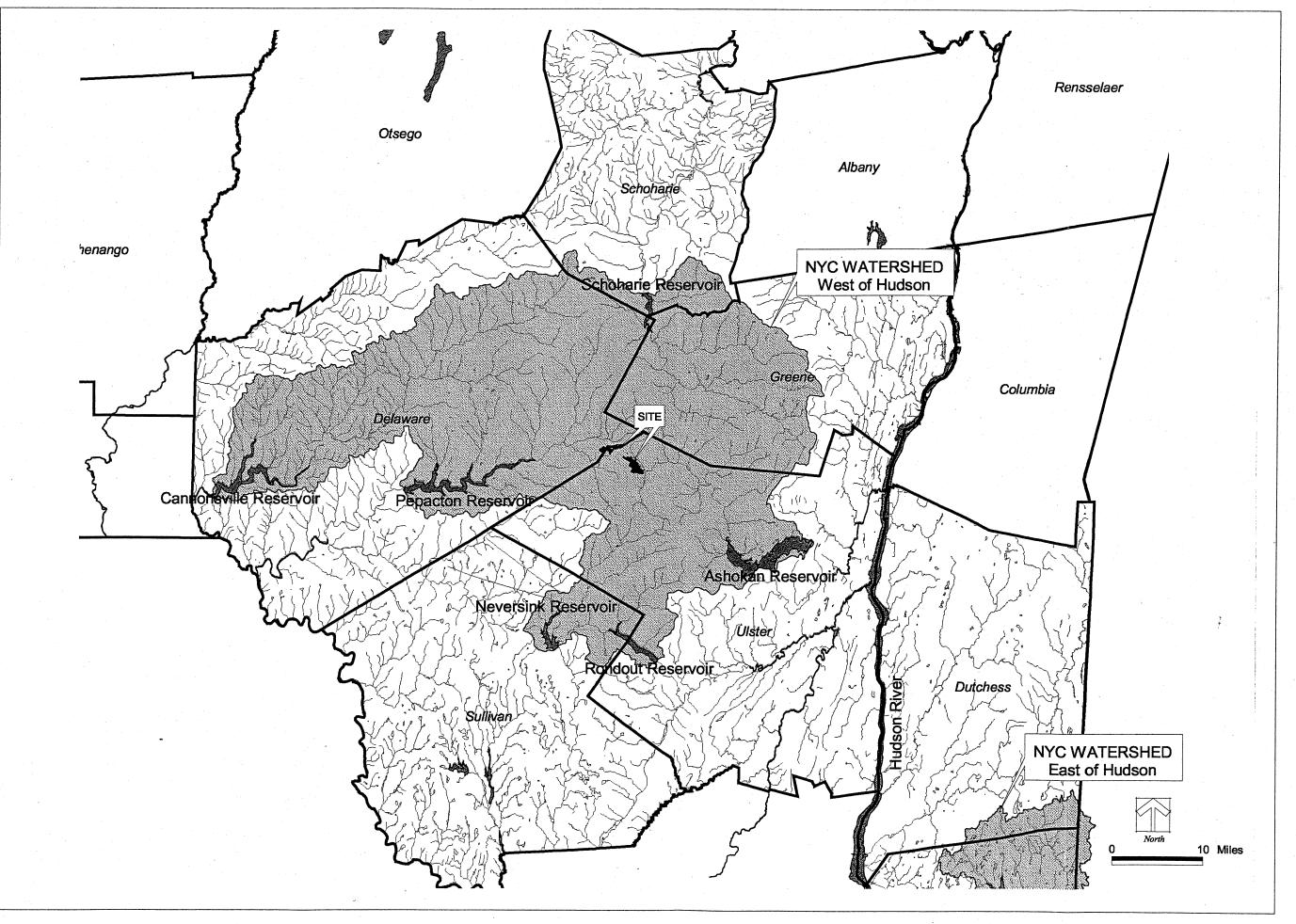
Landscape Architecture and Engineering, P.C. 40 Long Alley Saratoga Springs New York 12866 518/587-8100 Telefax 518/587-0180 BELLEAYRE RESORT AT CATSKILL PARK DRAFT ENVIRONMENTAL IMPACT STATEMENT

CATSKILL PARK

Date:

Project: 00052

Figure



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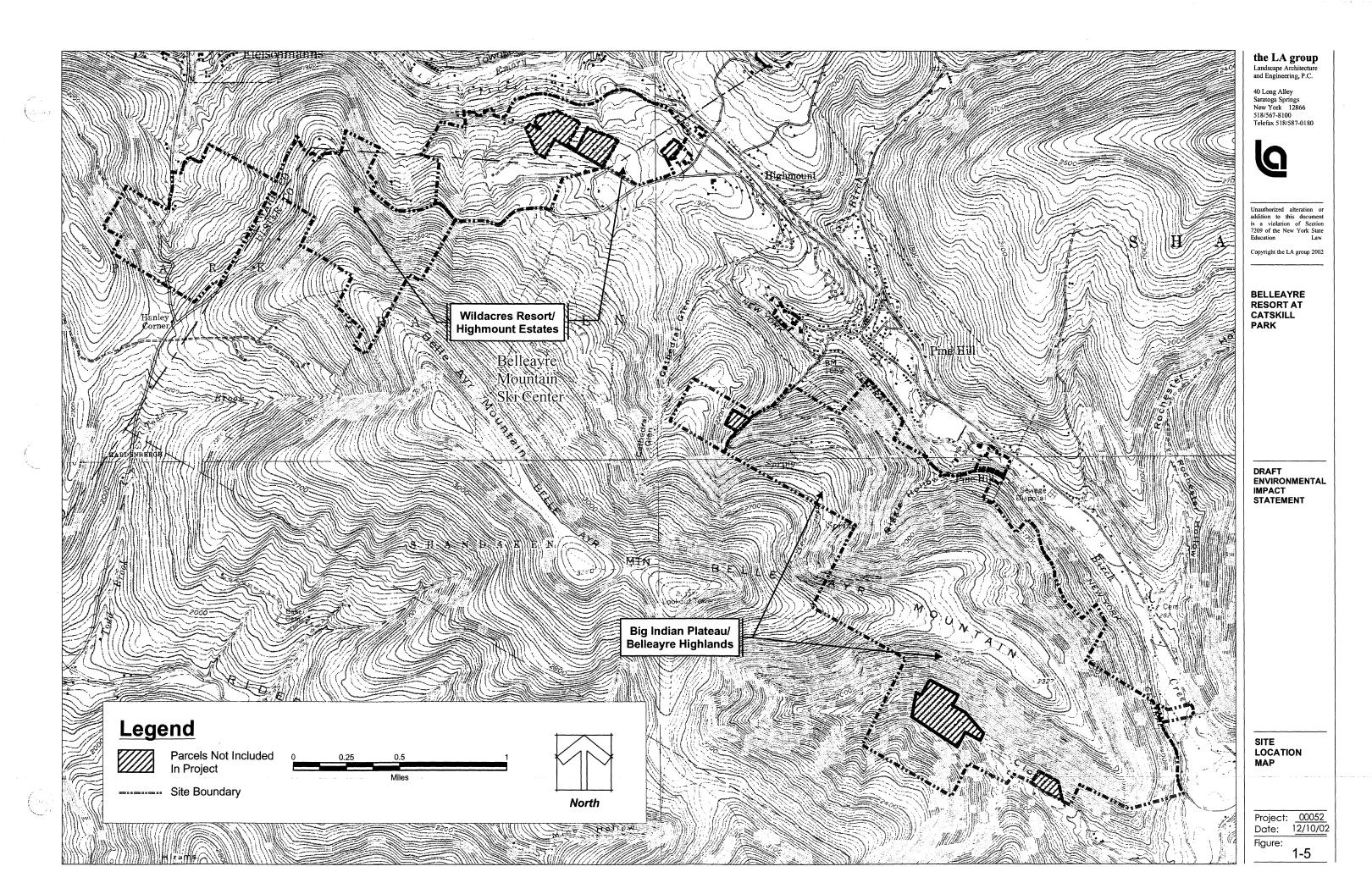
BELLEAYRE RESORT AT CATSKILL PARK

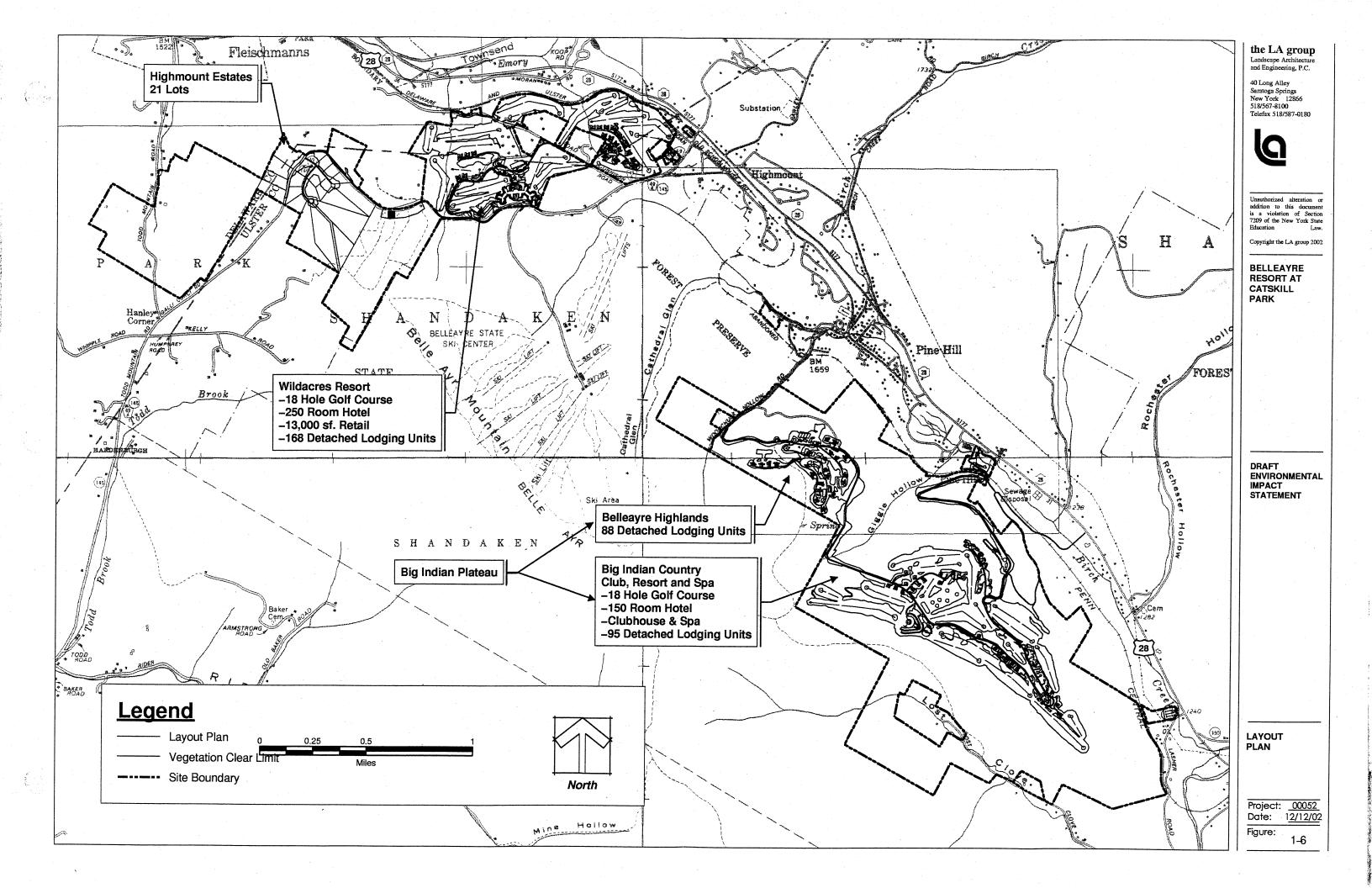
DRAFT ENVIRONMENTAL IMPACT STATEMENT

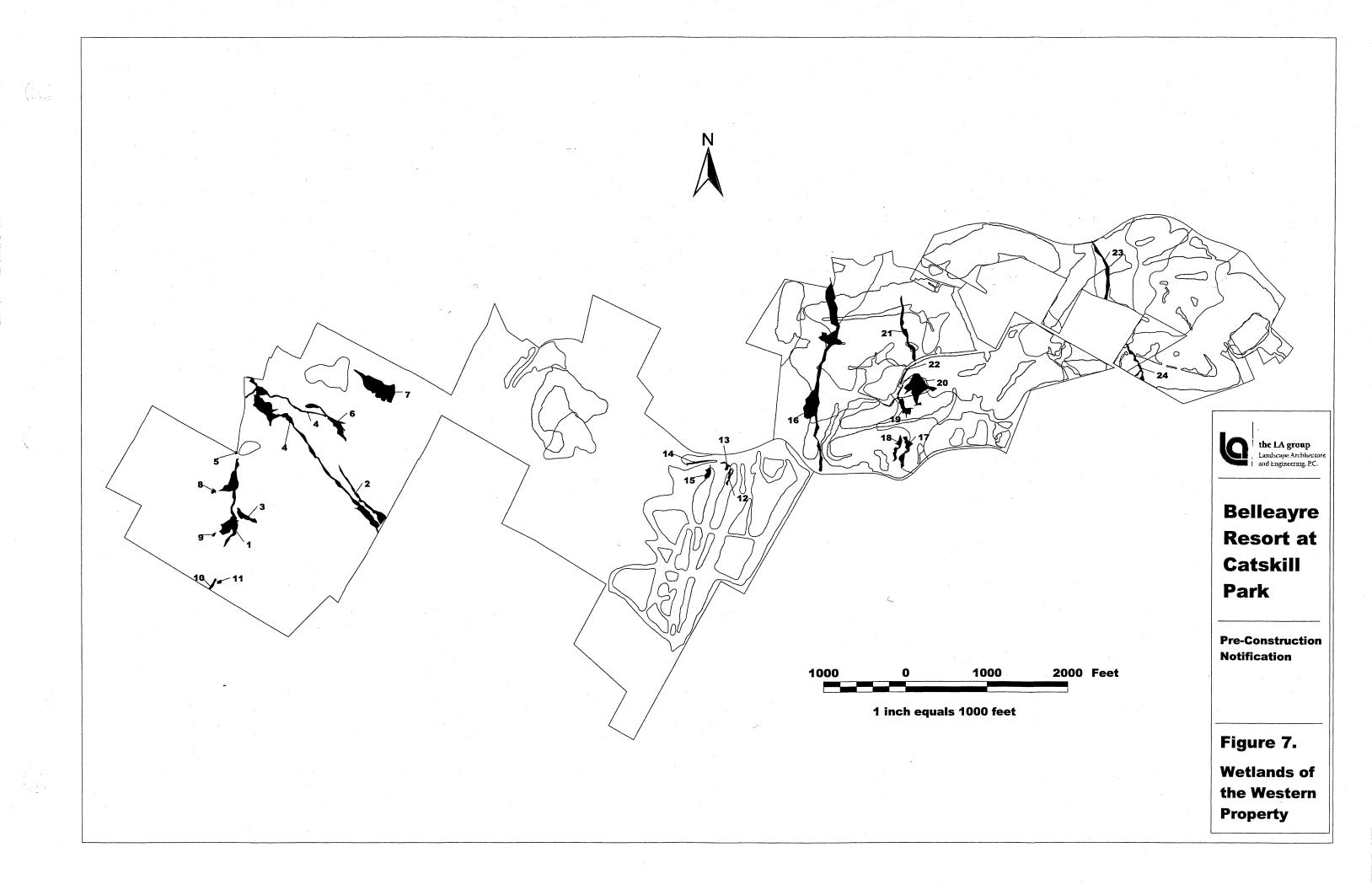
WEST-OF -HUDSON WATERSHED

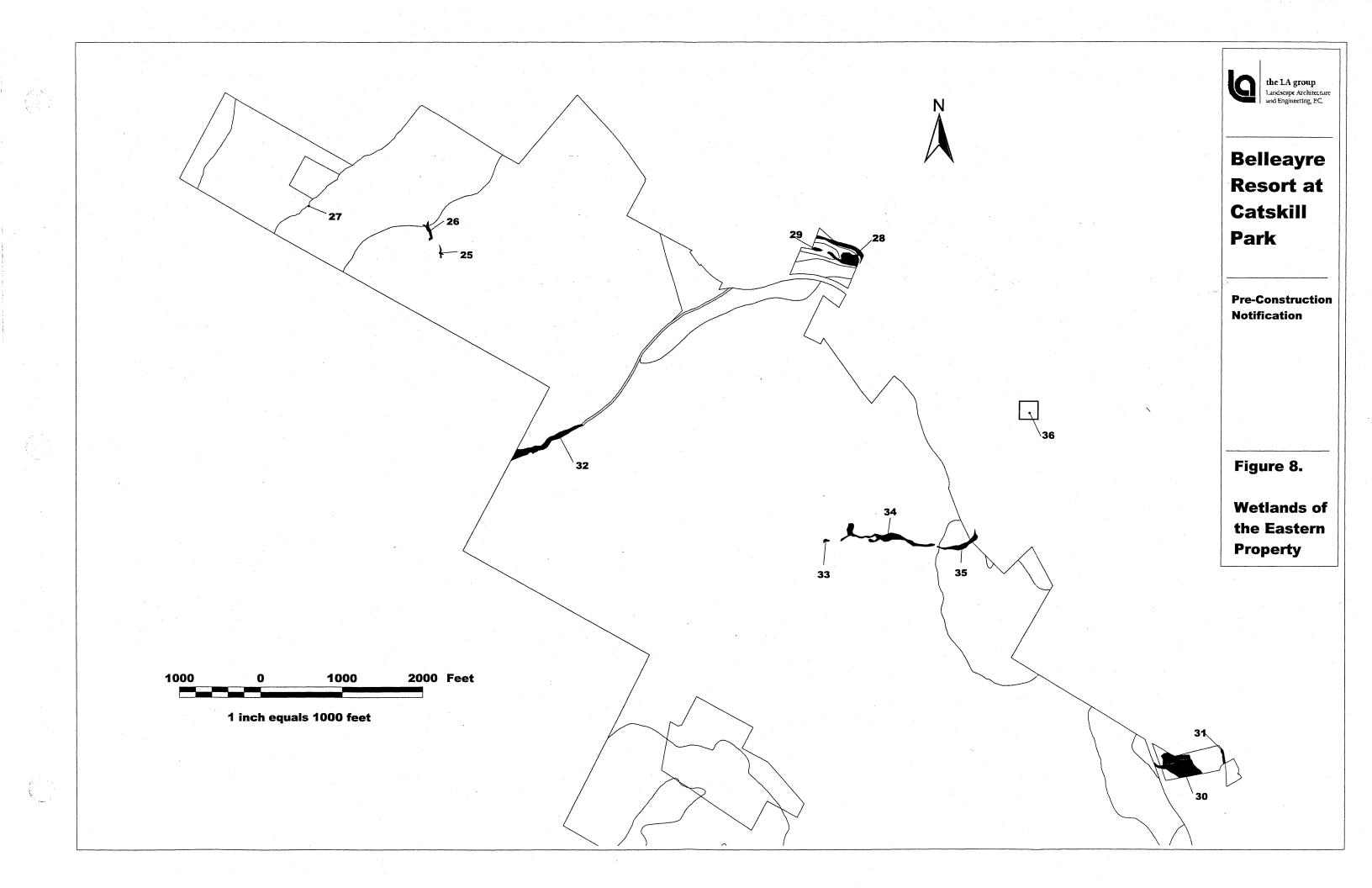
Project: <u>00052</u> Date: _____

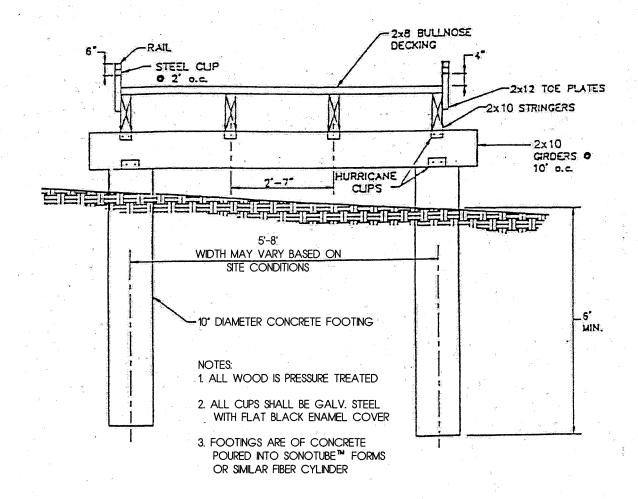
Figure













the LA group

Landscape Architecture and Engineering, P.C.

40 Long Alley Saratega Springs New York 12866 518/587-8100 PRECONSTRUCTION NOTIFICATION
FOR THE
BELLEAYRE RESORT AT CATSKILL PARK

CROSS-SECTION OF ELEVATED GOLF CART PATH

Date:

Project: 00052

Figure

10

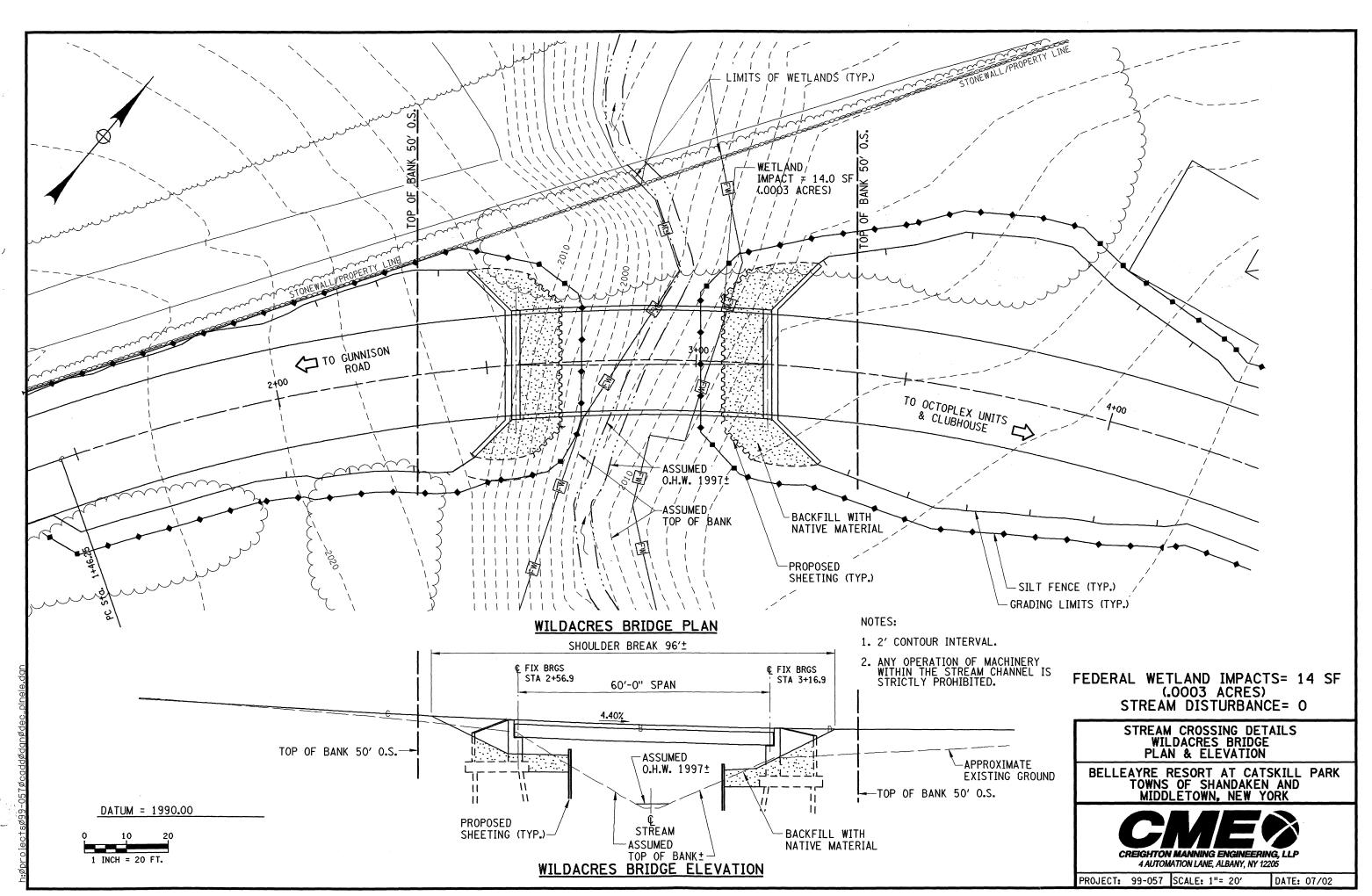


Figure 11

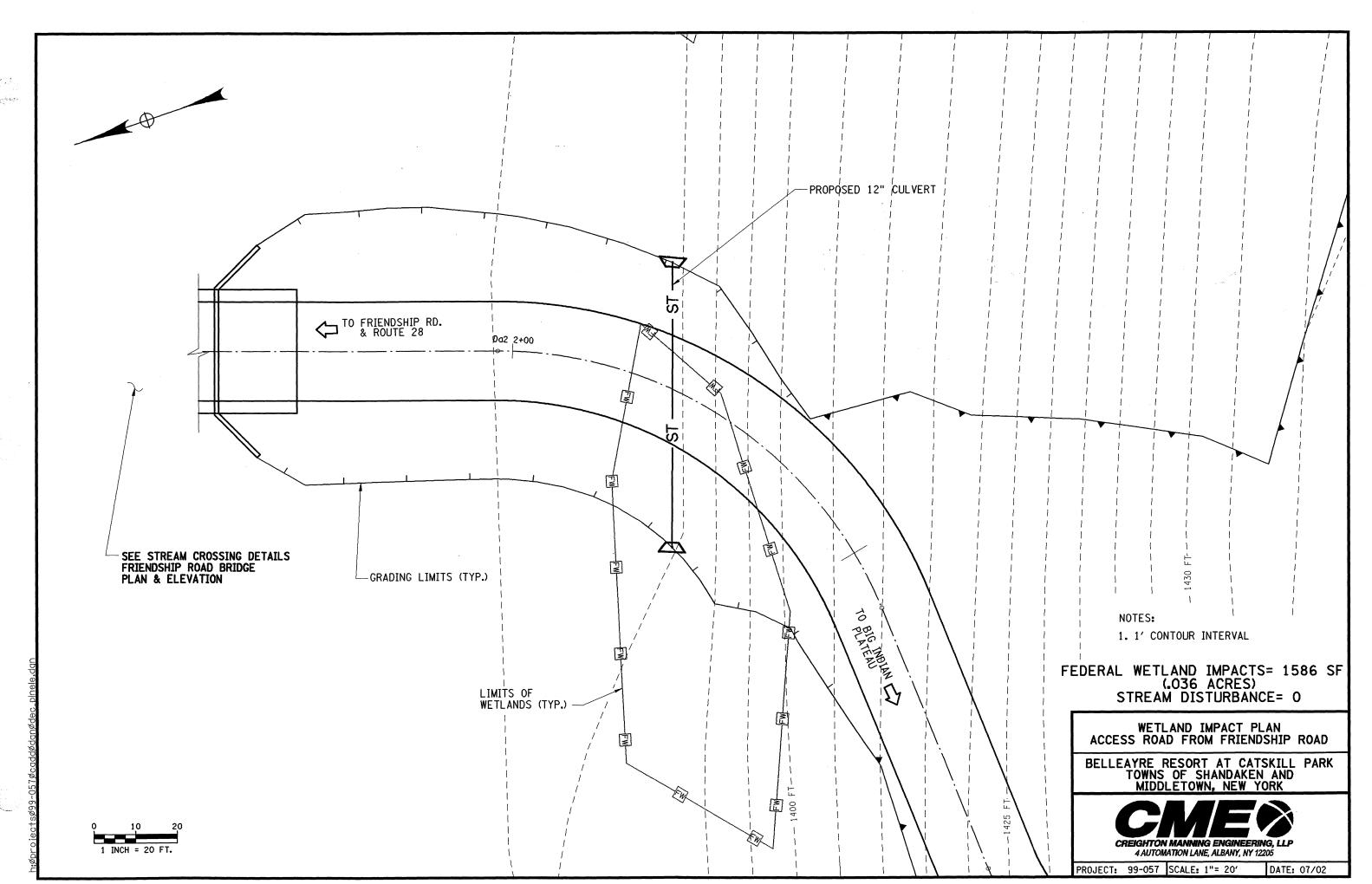


Figure 12

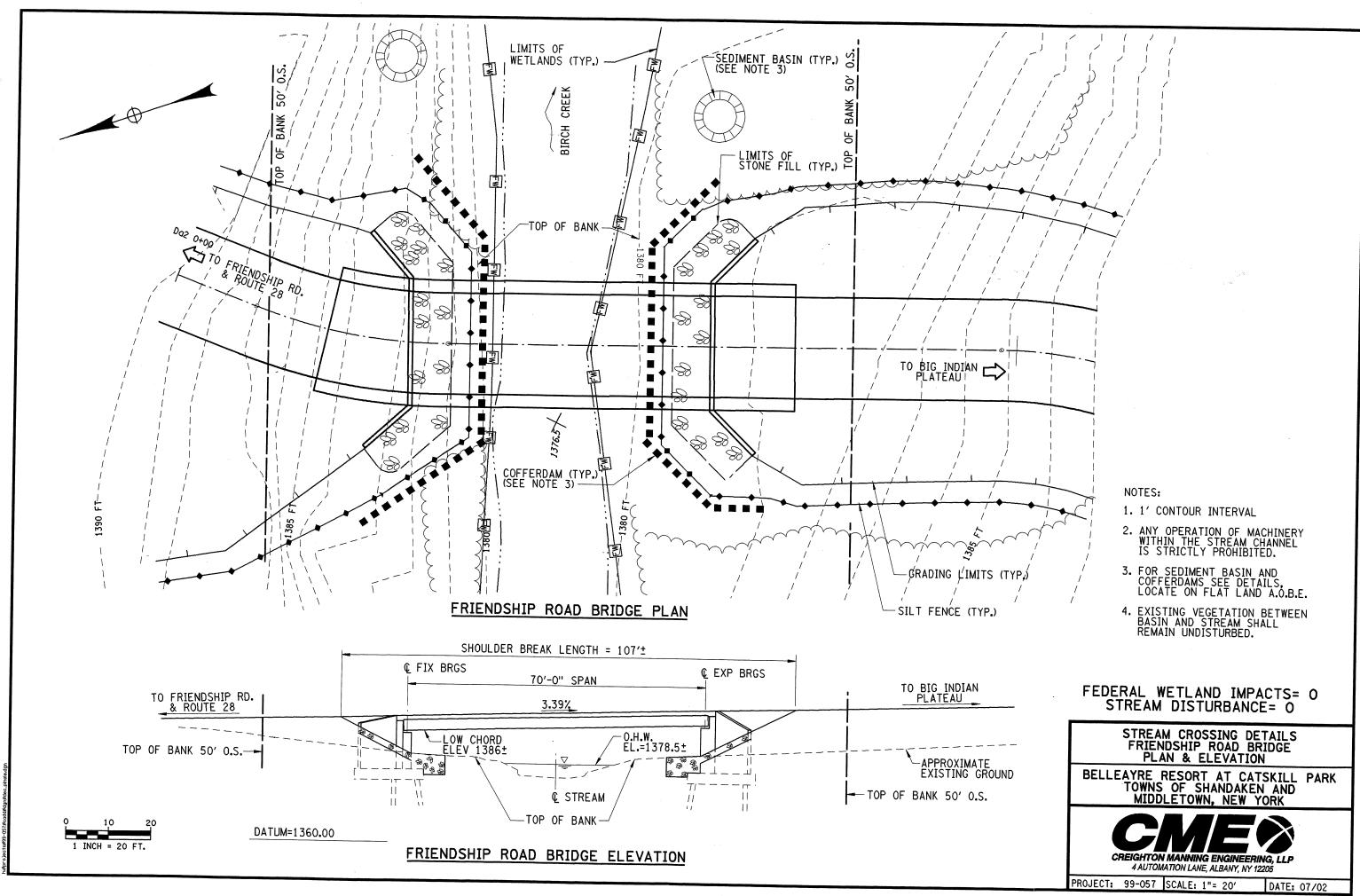
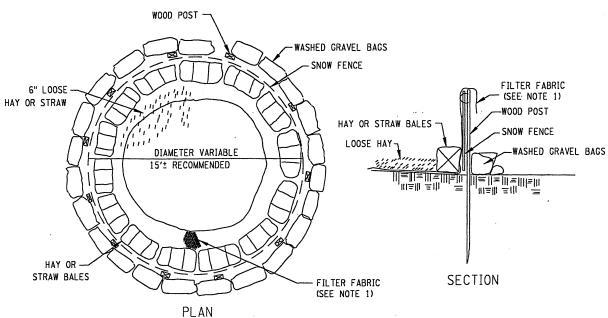


Figure 13

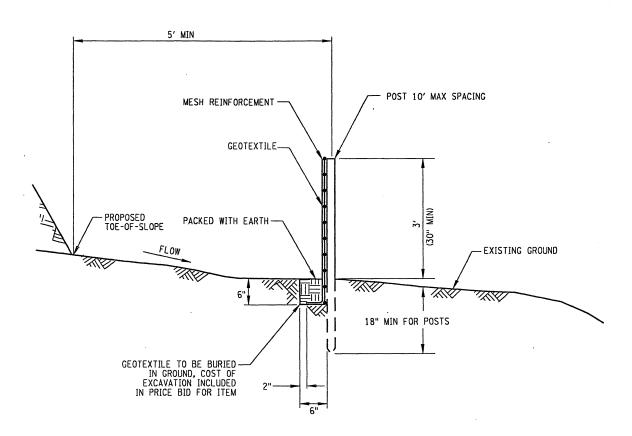


NOTES: 1. FILTER FABRIC SHALL BE ON THE APPROVED LIST FOR GEOTEXTILES SILT FENCE ISSUED BY THE DEPARTMENT'S MATERIAL BUREAU.

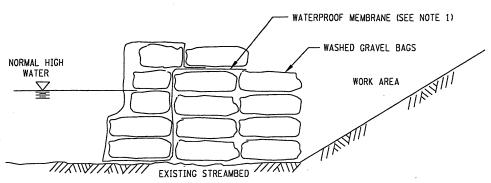
2. WHEN SEDIMENT BASIN IS REQUIRED IN CONJUNCTION WITH ITEM 552.07nnnn COFFERDAM (WATER DISCHARGE CONTROL) COST SHALL BE INCLUDED IN COFFERDAM ITEM.

STANDARD SYMBOL

SEDIMENT BASIN



SECTION
SILT FENCE



NOTES: 1. WATERPROOF MEMBRANE SHALL BE ON THE APPROVED LIST FOR GEOMEMBRANES ISSUED BY THE COUNTY.

- GRAVEL THAT IS PLACED IN BAGS SHALL BE STONE SIZE 1A-2 AND BE PREWASHED AS NOT TO ALLOW SMALL PARTICLES TO BE EMITTED INTO THE WATERWAYS. GRAVEL BAGS SHALL BE REMOVED IN THEIR ENTIRETY AT THE COMPLETION OF THE PROJECT.
- 3. INTERLOCK AND OVERLAP GRAVEL BAGS.
- 4. MAXIMUM HEIGHT 3.0' AND AS APPROVED BY THE ENGINEER-IN-CHARGE.

COFFERDAMS
ITEM 552.07

STANDARD SYMBOL

STREAM CROSSING DETAILS FRIENDSHIP ROAD BRIDGE EROSION CONTROL DETAILS

BELLEAYRE RESORT AT CATSKILL PARK TOWNS OF SHANDAKEN AND MIDDLETOWN, NEW YORK



PROJECT: 99-057 SCALE: 1"= 20'

DATE: 05/02

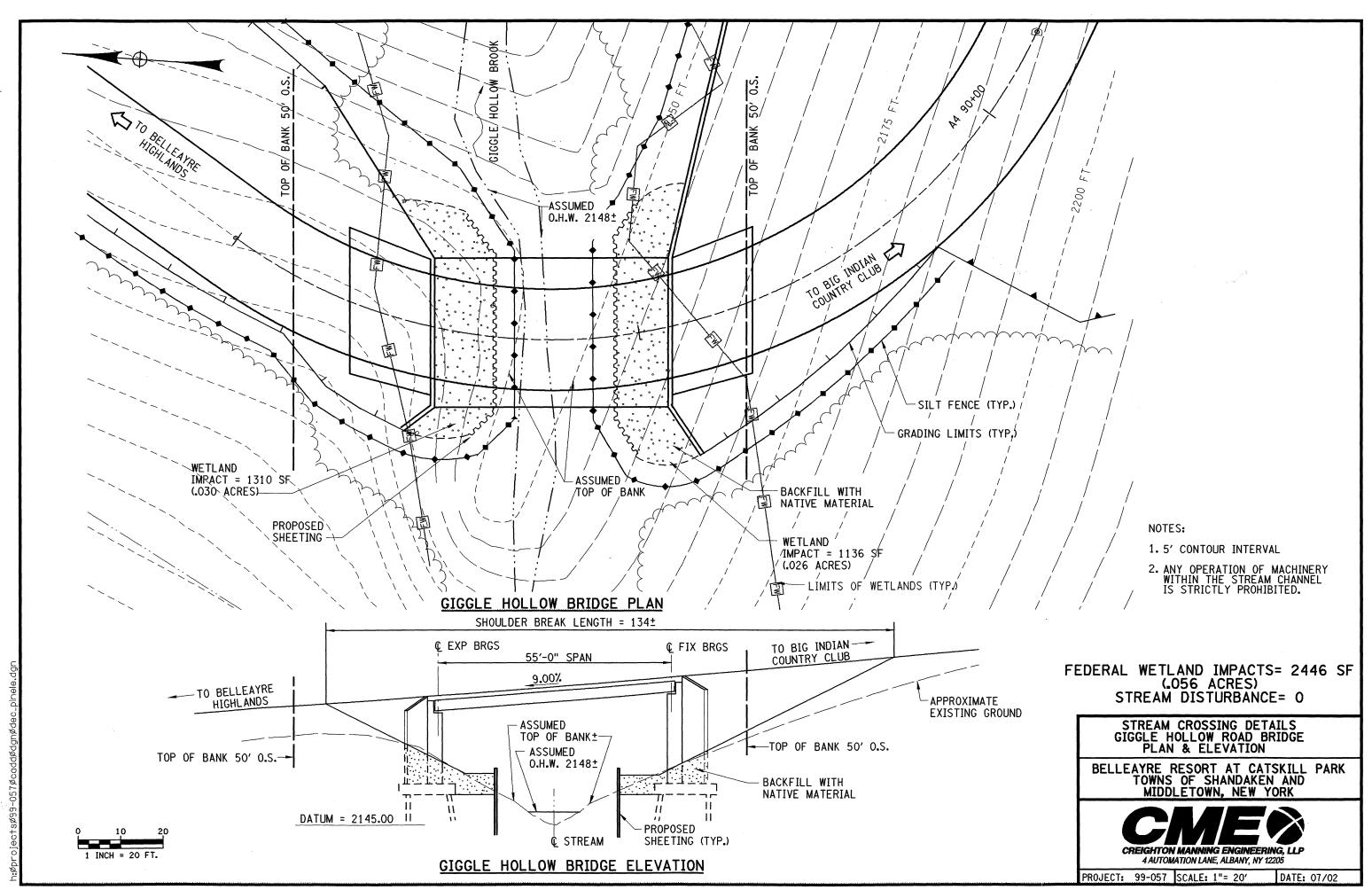


Figure 15

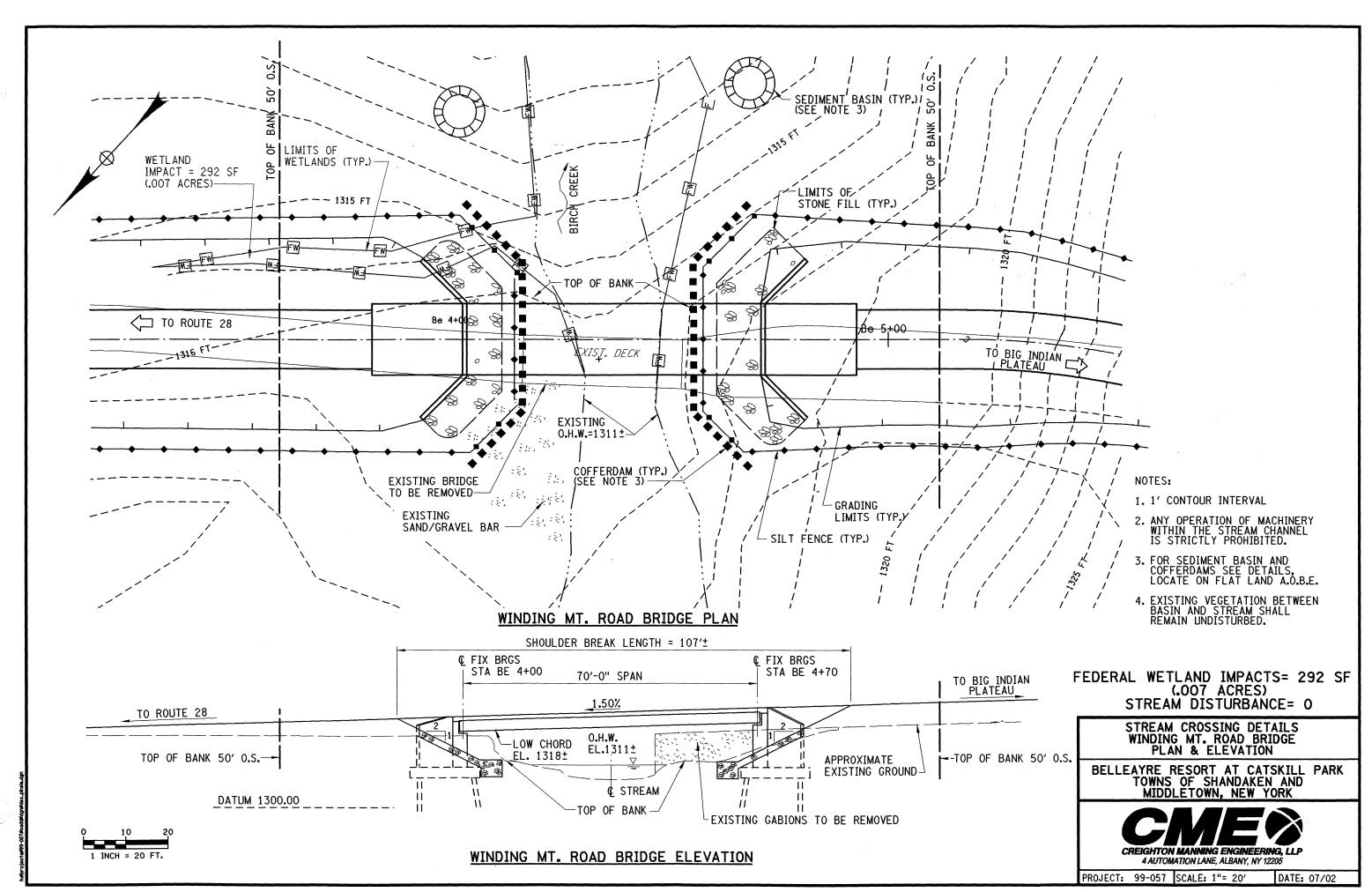
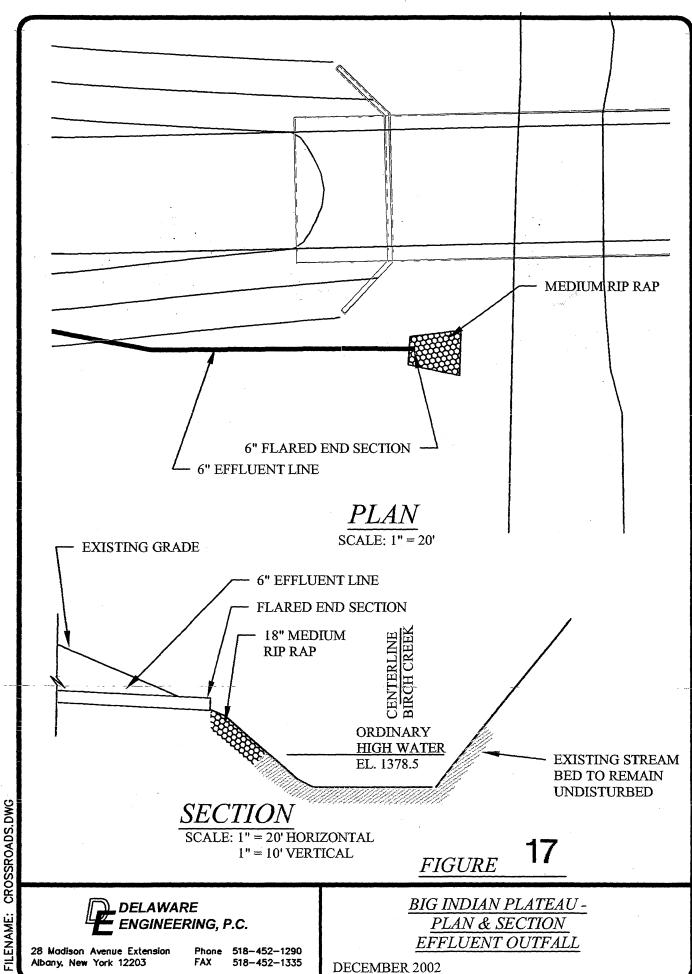


Figure 16



Operational Phase Stormwater Quantity Management Plan

DEIS Appendix # 9A

Integrated Turf Management Plan

DEIS Appendix # 14

Fertilizer and Pesticide Risk Assessment

DEIS Appendix # 15

Operational Phase Stormwater Quality Management Plan

DEIS Appendix # 10A

Construction Phase Stormwater Quality Management Plan
DEIS Appendix # 10

Wetland Tree Removal Protocols

Selective Wetland Tree Removal Protocols

Removal of trees will be done in such a manner as to minimize soil disturbance to the maximum extent practicable. The wetland tree removal methods, as described below, will be contained in the Construction Specifications that will be developed for soliciting bids for project construction.

- 1. All trees will be felled by hand using chain saws. Stumps will be left in place.
- 2. When construction scheduling allows, activities will be performed in the winter when there is snow cover and frozen ground conditions. Trees will be felled and winched out of wetland areas using machinery operating from upland locations. At the discretion of the Contractor, trees may or may not be sectioned prior to winching them out of wetlands.
- 3A. During times when the ground is not frozen and there is no snow cover, some felled trees will be removed by lifting them out of wetlands, and some felled trees will be left in place.

Wetland Edges

Felled trees or sections of felled trees will be lifted and removed from the edges of wetland areas using machinery equipped with typical log-loader pincers, chains, or straps. Machinery will be operated in upland areas, and will lift and boom trees, or sections of trees, out of wetlands and into upland areas. The type of machine that is used will dictate how far into wetland areas this procedure can be implemented. A larger track-hoe excavator will have the capability of reaching trees that are felled within 30 to 40 feet of the wetland edge.

Wetland Interiors

Trees that are felled farther within the wetland will be topped, and only the tops will be winched out by machinery operating from upland areas. The remaining trunk will be limbed, and the trunks and cut limbs will be left within the wetland.

3B. In some areas, all felled trees will be removed using the following procedures:

Wetland Edges

Trees will be removed from the edges of wetlands in the same manner as in 3A above.

Wetland Interiors

Trees will be removed from areas more interior in the wetland but trees will not be topped after felling and prior to winching. Entire trees will be winched out of the wetland so that the weight of the winched tree is supported and distributed by the crown of the winched tree.

The decision to implement protocol 3A or 3B in particular areas will be made by the Golf Course Architect prior to finalization of construction bid documents. In most, if not all instances, protocol 3A will be employed. Protocol 3B will give the Golf Course Architect the flexibility to

make sure that the quality of a particular golf hole is not compromised by unusually high numbers of trees or unusually large trees left within affected wetland areas. The wetland play over areas will develop into a combination of herbaceous and shrub plant communities following selective tree removal. This plant community development would be hindered by dense ground covering by a high number of felled trees or by a number of particularly large trees.

4. Trees will be removed in a corridor approximately 20 to 25 feet wide using method 3B above. Construction matting will then be installed starting from uplands and working out into the wetlands with equipment always working on matting. Once matting is placed through the wetland area, trees will be cut, topped, and lifted out of wetlands using machinery operating on the construction matting. Tops will either be lifted out of the wetland or winched out as per protocol 3A above.

Bridge Hydraulics

DEIS Appendix # 24

Correspondence



New York State Office of Parks, Recreation and Historic Preservation Historic Preservation Field Services Bureau Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

January 6, 2003

Terresa Bakner Whiteman, Osterman & Hanna 1 Commerce Plaza Albany, NY 12260

Re: CORPS,/DEC/SEQRA
Belleayre Resort at Catskill Park
Shandaken/Middletown, Ulster &
Delaware Counties
99PR4498

Dear Ms. Bakner:

Thank you for requesting the comment of the State Historic Preservation Office (SHPO). We have had an opportunity to review the project in accordance with Section 106 of the National Historic Preservation Act of 1966 and relevant implementing regulations

Based upon our review of the submitted archeological information, the SHPO has no further concerns regarding archeology: additional survey for the project is **not** warranted.

Based upon our review of the submitted plans, drawings and Draft Environmental Impact Statement, it is the SHPO's opinion that the project will have **No Adverse Effect** upon properties in or eligible for inclusion in the State and National Registers of Historic Places. This 'No Adverse Effect' is based upon the provision that the following condition is met:

CONDITION

All work (interior and exterior) that is proposed for the historic structures on the
project site shall be reviewed by the SHPO prior to the initiation of any construction
activities.

If you have any questions regarding this letter or any aspect of your project, please feel free to contact me at your convenience. Ext. 3273.

Sincerely,

Kenneth Markunas Historic Sites

Restoration Coordinator

FAXED: 1/6/03



New York State Office of Parks, Recreation and Historic Preservation Historic Preservation Field Services Bureau Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

April 11, 2002

Kenneth Graham
Project Manager
Crossroads Ventures LLC
P.O. Box 267. Andrew Lane Road
Mount Tremper, NY 12457

Re: SEQRA
Belleayre Resort at Catskill Park
Shandaken/Middletown, Ulster &
Delaware Counties
99PR4498

Dear Mr. Graham:

You have provided our office with information that requests comment on this project. As the state agency responsible for the coordination of the state's historic preservation program, including the encouragement and assistance of local preservation efforts, the Office of Parks, Recreation and Historic Preservation offers the following comment:

Based upon our review of the submitted archeological information, the OPRHP has no further concerns regarding archeology: additional survey for the project is **not** warranted.

Based upon our review of the submitted plans, drawings and Draft Environmental Impact Statement, the OPRHP does not have substantial concerns regarding potential impacts to the existing historic resources. Considering the size and complexity of the project, it is noteworthy that the mansions and the outbuildings would not suffer substantial losses to the integrity of their settings. It was noted that the design has utilized available space and plant materials to help screen the project from the new development. However, considering the intensity of the development, it would be impossible to completely avoid some impact to the historic resources. Although a substantial project is planned for the mountainside, the use of local materials, low building heights and judicious site selection have minimized negative impact upon the historic properties to a great extent.

The OPRHP recommends that any work performed on the historic properties (both interior and exterior) utilize the Secretary of Interior's <u>Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings</u>. Our office is willing to provide a courtesy review of the proposed work when the contract documents become available.

SEQRA
Belleayre Resort at Catskill Park
Shandaken/Middletown, Ulster &
Delaware Counties
99PR4498

Please inform our office if state or federal funding or permitting, licensing, etc. becomes involved with the project. A separate review from our office under state Section 14.09 or federal Section 106 will be required.

If you have any questions regarding this letter or any aspect of your project, please feel free to contact me at your convenience. Ext. 3273.

Sincerely,

Kenneth Markunas

Historic Sites

Restoration Coordinator

Cc: Alexander F. Ciesluk, Jr., DEC Region #3



New York State Office of Parks, Recreation and Historic Preservation Historic Preservation Field Services Bureau Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

November 21, 2001

Terresa M. Bakner Whiteman, Osterman & Hanna LLP One Commerce Plaza Albany, NY 12260

Re: Into. Request
Belleayre Ski Center WHITEMAN OSTERMAN
Shandaken/ Middlerowe, HANNA LLP
Ulster/Delaware Co.
99PR4498

Dear Ms. Bakner:

The Office of Parks, Recreation and Historic Preservation (OPRHP) has received the documentation that you provided on this project. As the state agency responsible for the coordination of the State's historic preservation programs, including the encouragement and assistance of local preservation efforts, we offer the following comments.

OPRHP has no further issues regarding project ground disturbance and archeology; additional archeological survey is not warranted.

Before we can offer our opinion of the construction portion of the work, we will have to review the project plans that depict the rehabilitation of existing structures, the construction of new buildings, and, landscape and topographic changes that attend the project. Please provide the requested information as soon as it becomes available so that we can complete our review of the project

If you have any questions, please feel free to contact me at your convenience. Ext. 3273.

Sincerely,

Kenneth Markunas

Historic Sites

Restoration Coordinator

New York State Office of Parks, Recreation and Historic Preservation Historic Preservation Field Services Bureau Peebles Island Resource Center, PO Box 189, Waterford, NY 12188-0189

PROJECT REVIEW COVER FORM

Please complete this form and attach it to the top of any and all information submitted to this office for review.

Accurate and complete forms will assist this office in the timely processing and response to your request

This information relating to a previously subsequence of the project by this office (Previous number assigned to this project by this office)	this office you do not need to continue pless an	
	If you have checked this box you will need to complete ALL of the following information.	
Project Name	S TO STATE OF THE	
Location You MUST include street number, street name a City/Town/Village	nd/or County, State of Interstate route number if applicable	
List the correct municipality in which your project is being undertaken. If in a NON-INCORPORATED hamlet/village you must also provide the name of the town.		
County	If your project covers multiple communities/counties please attach a list defining all municipalities/counties included.	
1. Is this project being developed using New York State funds? Federal funds? Federal funds? If you checked either or both of these boxes list the New York State and/or Federal Agency or Program that is providing the funding:		
2. Does this project requires a New York State permit? If you checked either or both of these boxes list the New York State and/or Federal Agency or Program that is providing the permit and the type of permit being requested:		
3. SEQRA New York State Environmental Quality Review Act	4. Information Request No state or federal funding or permit(s) involved	
CONTACT PERSON FOR PROJECT		
Name	Title	
Firm/Agency		
Address	City STATE Zip	
Phone()	Fax _()	

The Historic Preservation Review Process in New York State

In order to insure that historic preservation is carefully considered in publicly-funded or permitted undertakings, there are laws at each level of government that require projects to be reviewed for their potential impact/effect on historic properties. At the federal level, Section 106 of the National Historic Preservation Act of 1966 (NHPA) direct the review of federally funded, licensed or permitted projects. At the state level, Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law of 1980 performs a comparable function. Local environmental review for municipalities is carried out under the State Environmental Quality Review Act (SEQRA) of 1978.

Project review is conducted in two stages. First, the Field Service's Bureau assesses a property to determine whether or not is listed in the New York State or National Registers of Historic Places. If not, it is reviewed to determine whether or not it meets the criteria to be included in the registers. If listed or determined eligible for listing, then the second stage of the review is undertaken. This portion of the review determines whether or not the proposed action/project will have an impact on the qualities of the property that make it eligible.

ALL	PROJECTS SUBMITTED FOR REVIEW SHOULD INCLUDE THE FOLLOWING MATERIAL(S).
Projec	et Description
	description of the nature and extent of the work to be undertaken as part of Relevant portions of the project applications or environmental statements litted.
Maps	Locating Project
and road nan	p locating the project in the community. The map must clearly show street nes surrounding the project area as well as the location of all portions of ppropriate maps include tax maps, Sanborn Insurance maps, and/or angle maps.
Photo	graphs
Photographs standard (bla	may be black and white prints, color prints, or color laser/photo copies; ck and white) photocopies are NOT acceptable.

- -If the project involves rehabilitation, include photographs of the building(s) involved. Label each exterior view to a site map and label all interior views.
- -If the project involves new construction, include photographs of the surrounding area looking out from the project site. Include photographs of any buildings (more than 50 years old) that are located on the project property or on adjoining property.

Surface Water and Groundwater Assessment Big Indian Plateau

DEIS Appendix #19

Wildacres Resort Water Budget Report

DEIS Appendix # 19A