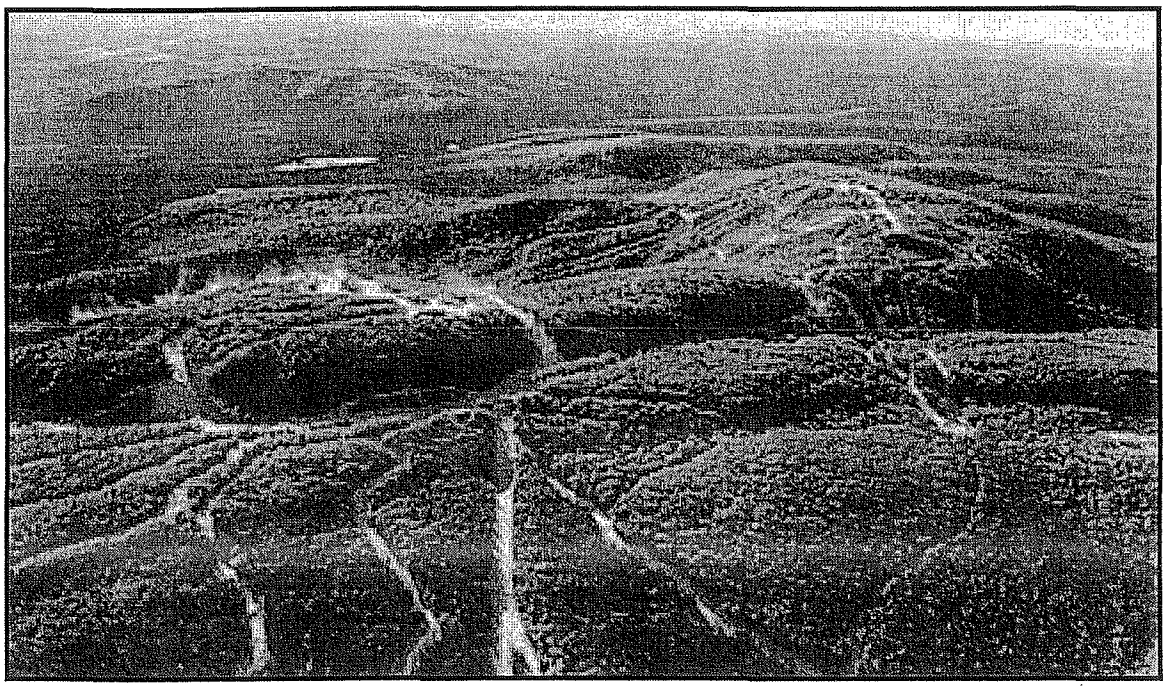
APPENDIX 1

ECONOMIC IMPACT STUDY OF THE GORE MOUNTAIN INTERCONNECT

OFFICE OF THE NEW YORK STATE COMPTROLLER

DIVISION OF LOCAL GOVERNMENT SERVICES
& ECONOMIC DEVELOPMENT

Economic Impact Study of the Gore Mountain Interconnect



Alan G. Hevesi

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Economic Impact Study of the Gore Mountain "Interconnect"

Executive Summary

The purpose of this study is to evaluate the economic impact of the construction and development of the ski lifts and trails that will, in effect, "interconnect" the Hamlet of North Creek, NY, with the main trail network of Gore Mountain Ski Center. Our study makes projections, based on ski industry statistical data, assessing the monetary impact of the development on the regional economy, which appears to be significant. It does not contain an analysis of the cost of constructing the interconnect.

The Hamlet of North Creek and Gore Mountain have a rich skiing history. Many of the first ski trails were created from the old tote roads used to extract lumber and garnet ore on the area now referred to as the "Ski Bowl." This section of the mountain, opening in 1932, became one of the first ski areas in the country. In this era, skiers from Manhattan and beyond were delivered to North Creek by ski train. Plans are in place to restore this historic rail service by reopening the line between Saratoga and North Creek, making Gore once again accessible by rail. This will give the metropolitan New York skier a viable alternative to boarding a ski train to Vermont.

Reconnecting Gore to the Ski Bowl in North Creek would help restore the Hamlet's downtown commercial district by providing skiers direct mountain access, as well as access to dining, retail, lodging and entertainment venues. Although "The Village Concept" – a self-contained base village at the foot of a ski mountain - would be unique to a New York ski resort, it is an established practice throughout the ski industry. While providing an economic stimulus to the area, the "village concept" is also beneficial to the local environment, as it tends to concentrate development efforts into a confined area, thus mitigating the chance for sprawl.

Since Gore Mountain and the Hamlet of North Creek lie within the confines of the Adirondack Park, close attention is paid to the environmental issues surrounding the development. This report summarizes environmental issues, although it does not purport to be an environmental review. The development of the interconnect in the Intensive Use Area of the Park is subject to the Unit Management Planning (UMP) process called for in the State Land Master Plan. UMP's involve an extensive analysis of the natural features of an area and the ability of the land to accommodate public use. The Commissioner of the New York State Department of Environmental Conservation has adopted the final UMP [2002-2007] and the corresponding Final Generic Environmental Impact Statement for this interconnect.

With the Interconnect in place, the economic impact of Gore on the regional economy will be significant. We estimate that if 75 percent of the previously approved real estate development occurs, combined with the additional ski terrain via the Interconnect, skiers at Gore will contribute approximately $44.9 million annually to the regional economy. This represents a 107 percent increase over the 2002-2003 (pre-interconnect) regional revenue of $21.7 million.

Ski Industry History and Trends

In the early 1930s, the first ski resorts opened across the nation. Some of the more notable ones were located in Aspen, Colorado, Lake Placid, New York, and the New England area. Resorts such as Vermont's Stowe Mountain and Bromley Mountain were founded in 1934, which ranks them among the oldest operating resorts in the United States. America's first world-class ski resort was established in Sun Valley, Idaho, in 1935 by Union Pacific Railroad President Averill Harriman.

Technological advancements helped the industry grow. The first significant improvement was in 1934 when Bunny Bertram, a Vermont native, invented the first rope tow ski lift. Fueled by a Model T engine, the rope tow replaced the task of having to climb up the mountain in order to ski down it. Modern-day skiing came about in 1936 when the first chairlift was installed on Dollar Mountain in Sun Valley. This was a significant improvement as it increased the uphill capacity for resorts. The second major advancement occurred in 1954, when methods for artificially producing snow were invented. This new technology helped balance the sometimes sparse amounts of natural snow in New York and the New England states. Without snowmaking, resorts were unable to compete against unpredictable weather patterns and some were forced to temporarily close operations during low snowfall seasons. Snowmaking has become increasingly vital to ski resorts and to the health of the ski industry.

As depicted in Appendix A, national skier visits from 1990-2002 have ranged from 46 million to 57.6 million. A skier visit, defined as "one person visiting a ski area for all or any part of a day or night one time,"[1] is used to evaluate the overall performance of a particular season. The ski industry is affected by a number of factors including the amount of snowfall and weather during the season, the overall state of the economy, and disposable income. Given the number of challenges the ski industry faces, ski resorts have found innovative methods to compete and survive. Nevertheless, a number of resorts, unable to keep up with the advancements in technology and rising infrastructure cost, have either merged or closed operations. Since the 1982-83 ski season, 250 ski resorts have ceased operations. New York State's ski resorts, including those that are publicly operated, are in a very competitive environment. Of the 493 resorts operating nationwide in 2001-02, New York accounted for almost 10 percent of the total with 50 resorts; more than any other state in the nation.

Destination Resorts

Because of increased costs and the increase in alternative entertainment venues, ski resort managers have had to shift the focus of resorts away from being solely skiing destinations towards being a recreational destination. Resort managers are discovering that in order to continue to operate, their facilities must offer skiers more than just good skiing - people are looking for an overall package that offers restaurants, nightlife, non-skiing recreational activities, and additional skiing options such as snow tubing, night skiing, etc. To remain competitive, resorts in the northeast have begun to make improvements. For example, Ski Windham offers night skiing; Grand Summit hotels have been built on the resorts operated by American Skiing Company; and Jiminy Peak has expanded its skiing terrain and added new trails.

During the 2002-03 ski season, national skier visits increased by 5.9 percent to a record breaking 57.6 million visits. Relative to the rest of the nation, the Northeast region has performed extremely well. During the 2002-03 ski season, the Northeast region attracted over 14 million visitors, which represents an increase of 16.8 percent from the previous season. Over the past 23 years, the Northeast

[1] Snow Journal Desk. "2002-03 Season U.S. Skier/Snowboarder visits could be record breaker." 30 May 2003, http://snowjournal.com/modules.php?op=modload&name=News&file=article&sid=547

region has had a two percent average annual growth rate in skier visits per year compared to a 0.9 percent growth rate nationally.

Gore Mountain

Located in the Adirondack Park, the largest protected wilderness area east of the Mississippi River, Gore Mountain Ski Center has brought skiing to the southern Adirondack region for the past 40 years. Opened in 1964 and initially operated by the State of New York, Gore Mountain has been operated by the Olympic Region Development Authority (ORDA) since 1984. Under State legislation enacted in 1981, ORDA was mandated to operate and market the resort facilities used to host the 1980 Olympics Winter Games—the Olympic Center, Whiteface Mountain, and the Verizon Sports Complex at Mt. Van Hoevenberg; the Ski Jumping Complex; the ORDA store; and in 1984, Gore Mountain.

Investments since the 1995 Unit Management Plan (UMP) have enabled Gore to improve the resort. Since Gore is located in the Intensive Use land classification for the public land of the park, it must prepare a Unit Management Plan (UMP) before any project can take place. A UMP is a "plan intended to assess the natural and physical resources present within a unit [specified area], identify opportunities for recreational use and consider the ability of the resources and ecosystems to accommodate public use. Further, they identify management objectives for public use which are consistent with the land classification guidelines."[2] Before any development can occur, each project must go through the UMP process including a draft plan addressing State Environmental Quality Review issues and a public hearing where any comments regarding the project are made. In the Adirondacks, both DEC and APA are responsible for assuring that the plans are in compliance with the State Land Master Plan (SLMP) guidelines. Under the 1995 UMP, Gore installed a new high-speed eight-passenger gondola, which was fully operational in the 1999-00 ski season. The new gondola likely contributed to the 26.2 percent increase in skier visits and the 14.7 percent increase in skiing revenue in the 2000-01 ski season. As a follow-up, Gore expanded its skiing terrain in the fall of 2002, which allowed for more efficient use of the mountain. It also included a number of new trails, which decreased the congestion on the mountain, resulting in improved skiing conditions and increased safety.

Another notable improvement to the mountain was the installation of the Hudson River Pipeline. The new pipeline, which runs directly from the river to Gore, provides the resort with nearly 100 percent snowmaking coverage, giving Gore a competitive advantage over other Northeast resorts. Since weather has been an unpredictable factor for the ski industry (see Appendix C: Weather and the Ski Industry), and presents a constant challenge to ski resorts across the nation, unlimited access to snowmaking hedges the risk of insufficient snowfall.

Destination skiers' focus not only on the skiing, but also on the amenities a resort has to offer. Table 1 compares Gore Mountain to two nearby destination resorts, Mount Snow and Sugarbush, which offer an array of activities on and off the mountain. For the purposes of this study, Warren County's master plan to establish Gore as a destination resort was broken down into two phases. Phase I involves the completion of the 2002 UMP, which is projected to increase the mountain's skiable terrain by approximately 40 acres bringing the mountain total to approximately 340 acres. Phase II of the plan is to develop the local area by building additional lodging units, restaurants, retail shops, etc. Gore, at 300 acres, attracted roughly 174,000 skier visits during the 2001-02 season. By comparison, Sugarbush, which is comparable in size, but more developed, was able to attract 132,000 more skiers than Gore.

[2] http://www.dec.state.ny.us/website/dlf/publands/ump/umplans.html

Table 1:

Gore Mountain vs. Destination Ski Resorts

Resort Name	Skiable Area (acres)	Snowmaking	# of Lifts	# of Trails	Skier Visits (2001-02)[3]
Gore Mountain	300	100%	12	65	173,530
Mount Snow	757	75%	23	145	471,628
Sugarbush	286	68%	17	115	306,000

[3] Numbers from the 2002-2003 season were not available for all resorts, so visits during the 2001-02 season were used. Numbers provided by the resorts.

As a destination resort, Gore will also be able to move into a new market and attract a higher percentage of destination skiers while increasing the number of day skiers, which should increase the mountain's impact on the local economy. Since the 1995 UMP, 17 new businesses, which range from restaurants to retail shops, have opened in the town.

At Gore Mountain, skier visits have increased by approximately 91 percent since the implementation of the 1995 UMP, to 213,928 skier visits during the 2002-03 season. With a 23 percent increase in skier visits over the previous season, Gore was well above the national increase of 5.9 percent, the Northeast increase of 16.8 percent, and competitors in Vermont (Killington at 9.6 percent, Mount Snow at 15.8 percent, and Sugarloaf at 7 percent). For more details see Appendix B: Skier Visits by Resort.

Because Gore is less developed than other nearby resorts, capital improvements at Gore have fueled faster growth in skier visits. In the past six ski seasons, Gore has increased skier visits from approximately 141,000 to almost 214,000 in 2002-03, and has the capacity to significantly increase this number with the completion of the Interconnect between the Ski Bowl and Gore Mountain.

Transforming Gore Mountain to a Destination Ski Resort

The Ski Bowl Interconnect project is a part of Gore's 2002 UMP to improve the mountain and establish it as a destination ski resort. The Ski Bowl existed back in the 1930s, so this project is simply re-opening and updating the mountain, trails, and overall area. The Interconnect project has passed the New York State Environmental Quality Review Act (SEQRA) process and has been approved by ORDA.

Warren County Economic Development Corporation and others are currently working to attract additional restaurants, hotels, lodging accommodations, shops, etc. to the Hamlet, which will contribute to transforming the area into a Ski-In/Ski-Out village and resort area. In conjunction with the 2002 UMP, plans are in place to extend a commercial rail line from Saratoga Springs to North Creek. With the direct line from the Saratoga Amtrak station, Gore Mountain will be more readily accessible to skiers from the New York City metropolitan area via Penn Station. Upgrading Gore to a destination ski resort will position Gore to more favorably compete with Vermont destination ski resorts, recapturing a portion of the $100 million spent annually by New York residents at Vermont ski venues.

Economic Impact Analysis

We estimate that the 2002 UMP will have a similar impact on skier utilization at Gore as the 1995 UMP. The main focus of the 1995 UMP was to modernize the 40-year-old resort. Gore improved its snowmaking ability, and the conditions of the lifts, trails, etc. Before Gore began the 1995 UMP, skier visits were approximately 112,000. With the completion of the plan in 2000, skier visits increased by roughly 74,000 to a total of 186,000. During the 1995-2000 period, skiing revenue at Gore increased from $2.8 million to $4.2 million (see Table 2). Although the actual average price of an adult lift ticket at Gore is approximately $50, due to the increase in season pass sales, and other discounts, it was calculated that Gore actually receives roughly $25 in skiing revenue for every skier visit.

Table 2:

Impact of Gore's 1995 UMP

Season	Skier Visits	Skiing Revenue	Regional Impact
1995/96	112,175	$2,804,381	$11,217,524
1996/97	123,792	$3,094,809	$12,379,236
1997/98	141,449	$3,638,374	$14,553,496
1998/99	125,868	$3,161,334	$12,645,336
1999/00	147,332	$3,624,912	$14,499,648
2000/01	185,900	$4,178,937	$16,715,748
2001/02	173,530	$4,396,664	$17,586,656
2002/03	213,928	$5,431,463	$21,725,852

Numbers provided by ORDA - Olympic Regional Development Authority

To forecast the increase in visits, an average was taken of the past three ski seasons (2000-01, 2001-02 and 2002-03) since combined, they represented a poor season, an average season and a record-breaking season. The 74,000 additional skiers are expected to increase the three-year average to 265,000. This translates into an additional $1.8 million in skiing revenue, for a total of $6.6 million.

In general, for the destination skier, every dollar spent on lift tickets generates additional spending on food, transportation, equipment, lodging, and nightlife activities. This additional spending is defined as secondary spending. Typically, ski resorts have used a 1:5 spending ratio to measure the regional impact of a dollar spent on the mountain, but we are using a more conservative approach by using a 1:4 spending ratio as suggested by the "Ski Area of New York." Therefore, the additional $1.85 million in skiing revenue expected from the completion of the 2002 UMP will increase the impact on the local economy by $7.4 million (see Table 3).

Table 3:

Regional Impact of Phase I

	Number of Skiers	Skiing Revenue	Secondary Revenue	Total Regional Impact
Three Year Average	191,000	4,775,000	14,325,000	**19,100,000**
Additional	74,000	1,850,000	5,550,000	**7,400,000**
Total (after Phase I)	**265,000**	**6,625,000**	**19,875,000**	**26,500,000**

The 2002 UMP is only the first phase required to establish Gore as a destination ski resort. In addition to the Interconnect, the additional skiing terrain, and other improvements to the mountain, phase II would develop the nearby Hamlet of North Creek into a Ski-In/Ski-Out Village. The Town of Johnsburg has under their jurisdiction in the hamlet area six sites for high-density development. These sites could include accommodations with up to 2,514 beds.

Various destination resorts report that each unit of bedding generates 100-150 visits. To be very conservative, we assume Gore will get 50 visits for every additional bedding unit that they build. If 75 percent of the planned bedding capacity is built, Gore should realize approximately 94,000 more visits to the mountain, $2.4 million more in skiing revenue, and $9.4 million in secondary spending (Table 4: Completion of Phase II).

Table 4

Completion of Phase II

	Skier Visits	Skiing Revenue	Secondary Revenue	Total Regional Impact
Phase I	265,000	6,625,000	26,500,000	**33,125,000**
Additional (75% build out)	94,000	2,350,000	9,400,000	**11,750,000**
Total (after Phase II)	**359,000**	**8,975,000**	**35,900,000**	**44,875,000**

As North Creek develops into a Ski-In/Ski-Out Village, the impact on the local economy is estimated to increase. Destination skiers typically stay a couple of nights and spend more dollars in the local economy. Once Gore has established itself as a destination ski resort, Gore will have a greater impact on the local economy. More specifically, the breakdown of overnight visitors to day-trippers is likely to increase, which could allow the spending ratio to increase to the industry average of 1:5. Given that New Hampshire, which is primarily a destination skiing state, uses a 1:6 spending ratio to estimate the regional impact, we consider using a 1:5 spending ratio as reasonable and conservative. If this increase in the spending ratio were achieved, then the 360,000 skier visits could generate $9 million in skiing revenue and $35.9 million in secondary revenue. In conclusion, the completion of Phase I and Phase II may result in total regional impact revenue of $44.9 million.

Development in the Adirondacks

Land in the Adirondacks is divided into two classifications: Public Land and Private Land. The Adirondack Park State Land Master Plan (APSLMP) classifies public land. Under the APSLMP, the Gore Mountain Ski Center is characterized as an intensive use area– an area where the State provides facilities for intensive forms of outdoor recreation by the public. Under the Adirondack Park Land Use and Development Plan (APLUDP), the private land in the Park is classified into six categories (see Appendix D: Land Use Definition and Intensity Guidelines).

The real estate projects discussed in the economic impact study are located in areas designated as Hamlet Low Intensity Use, and Rural Use areas of the Town of Johnsburg. The majority of the projects are concentrated in the Hamlet of North Creek with the exception of two projects located on land adjacent to the Hamlet.

According to the APLUDP, private land of the park was classified in order to foster "growth into the areas where it can be best be supported to minimize the spread of development in areas less suited to sustain such growth". Under the plan:

> "These areas will continue to provide services to park residents and visitors and, in conjunction with other land use areas and activities on both private and public land, will provide a diversity of land uses that will satisfy the needs of a wide variety of people."
>
> "Hamlet areas on the map are designed to provide reasonable expansion areas for the existing hamlets, where the surrounding resources permit such expansion."

A spokesperson from the Adirondack Park Agency stated that Gore is the "economic engine in winter for Warren County" and as such, the interconnect, and the development of the base community in the Hamlet of North Creek, are vital in continuing to attract winter tourists and residents to the area. He emphasized that community/economic/real estate development was appropriate land use for the private land surrounding Gore Mountain. In their opinion, the proximity of the Hamlet of North Creek to Gore Mountain Ski Center serves as an opportunity to develop the area in order to accommodate visitors.

As previously mentioned the Gore Mountain Ski Area is located in the Intensive Use Area of the Park and thus, must go through a UMP process before any development can occur. A UMP is a plan that evaluates the natural and physical resources present within a unit (designated land area), identifies opportunities for recreational use and takes into account the feasibility of resources and ecosystems to accommodate public use. In the Adirondacks, the Department of Environmental Conservation (DEC) and the APA develop the UMP to ensure that the plan is in compliance with the State Land Use Master Plan. Before any development in the public sections of the park can occur, each project must go through the UMP process including a public hearing where any comments regarding the project are made (Appendix E: The UMP Process).

> "There is a strong interest in Johnsburg in a ski trail connector between the Gore Mountain Ski Area, and the North Creek Ski Bowl area adjoining downtown North Creek where there is significant development potential…" (Appendix F: APA Letter)

There exists community support for this project and the economic development that will likely result from it. In the Hamlet of North Creek Action Plan it states:

> "Community leaders recognize that a more diversified economic base is required if long-term health and stability for the community are to be achieved."
>
> "To broaden this economic base, the community proposes to vigorously market the town as a four-season recreation and retirement area. Success can be achieved by expanding the retail opportunities...In addition, aggressive expansion of the outdoor recreation business such as downhill skiing at Gore...is required."
>
> "The community feels a major effort is required to both fill vacant Main St buildings and attract new businesses."

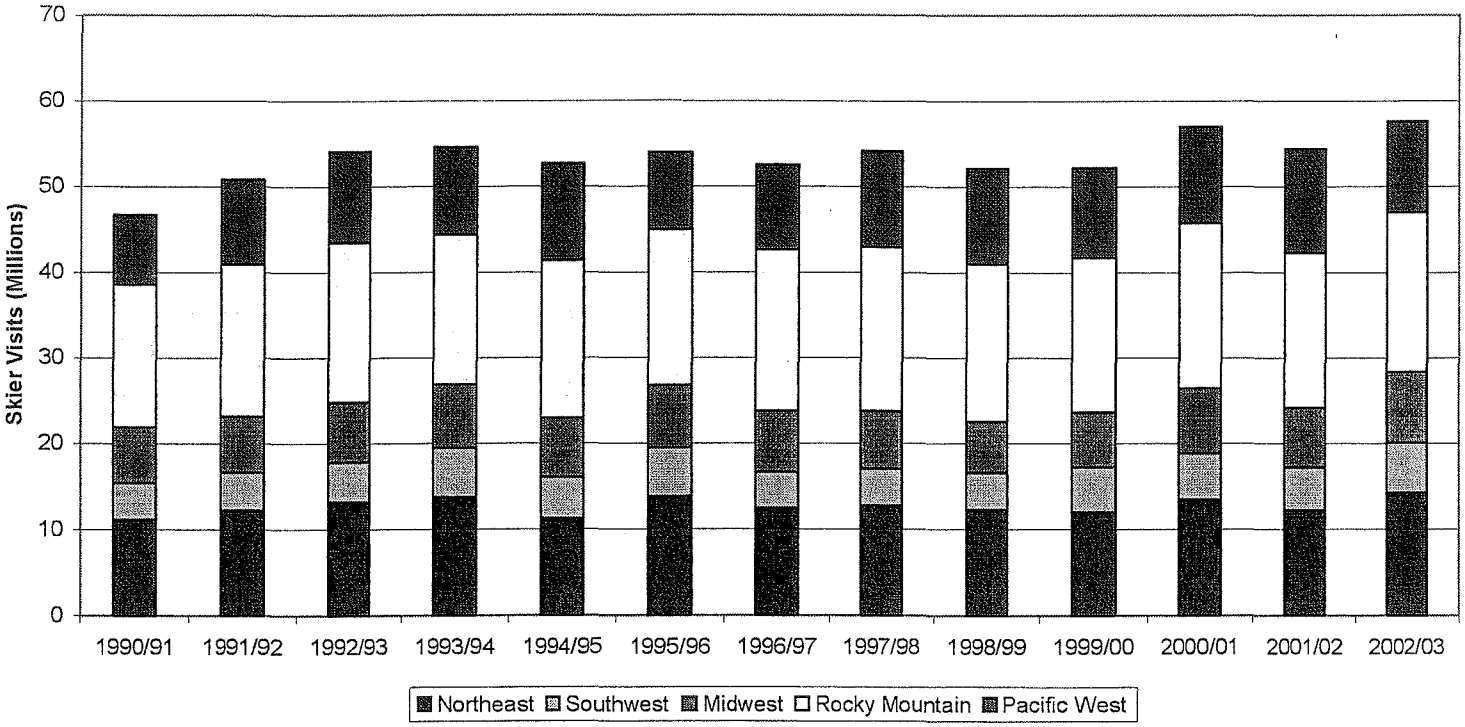
Environmental Considerations

A tourist economy will involve some real estate development. However, regional environmental groups are concerned about potential sprawl impacts from unchecked development or poor site planning. Environmental groups, like the Residents Committee for the Protection of the Adirondacks, are generally supportive of the Interconnect Project, but have also expressed concerns about sprawling development outside the hamlet to the west of Route 28. Environmental groups would like to see greater assurances for the protection of open space as well as greater concentration on infill development in the Hamlet. They suggest that development in the Hamlet of North Creek should utilize clustering and conservation subdivision techniques, which would minimize potential environmental impacts. Most of the development discussed in the impact study is concentrated near the pre-existing community, limiting sprawl.

The following associations have endorsed the Gore UMP:

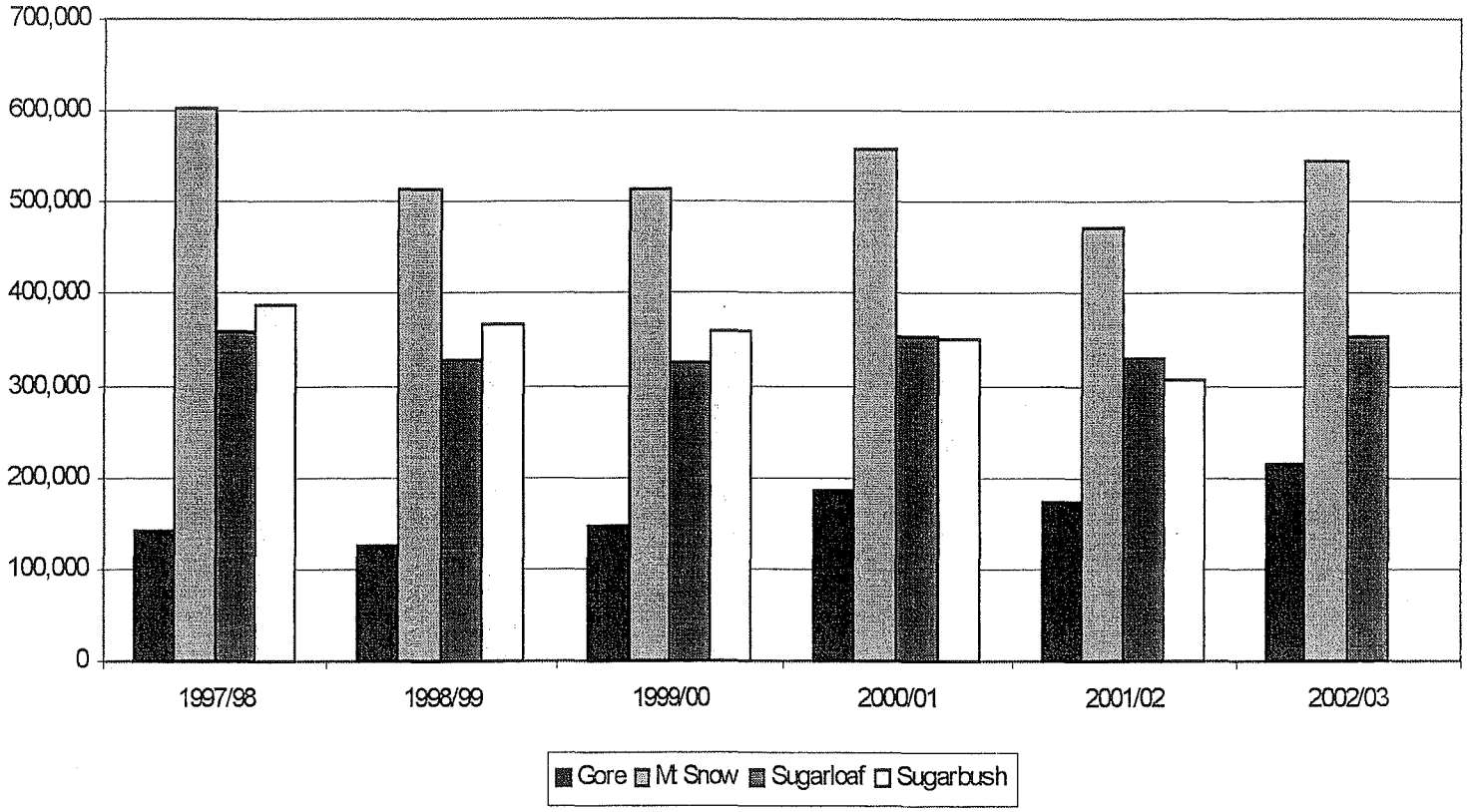
- The Adirondack Mountain Club
- Residents to Protect the Adirondacks
- The Adirondack Council
- The Adirondack Nature Conservancy
- Warren County Board of Supervisors
- Warren County EDC
- Adirondack Regional Chamber of Commerce
- Residents of the Town of Johnsburg

Appendix A: Skier Visits by Region



Kottke National End of Season Survey 2002/03

Appendix B - Skier Visits by Ski Resort

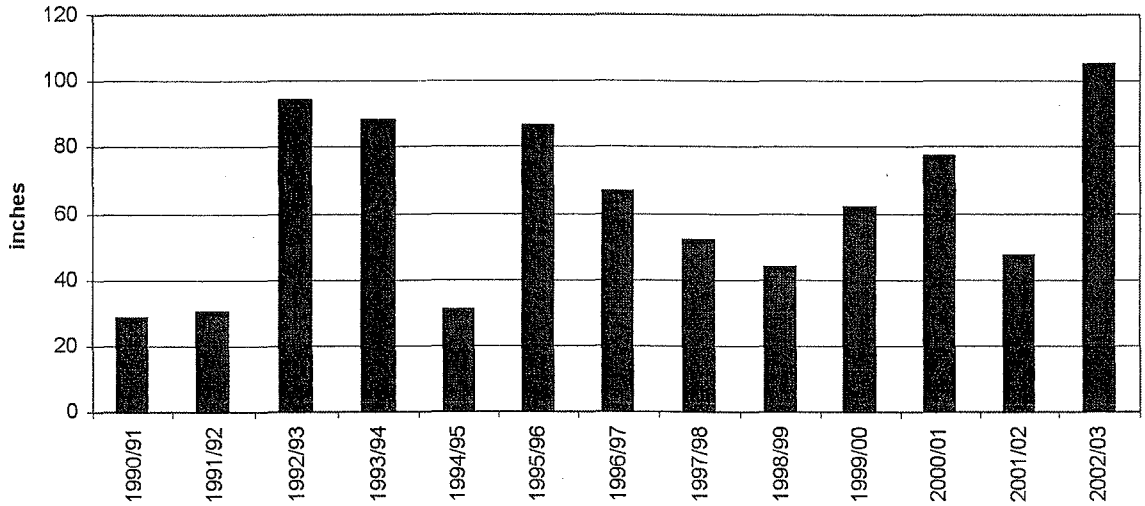


Figures reported by resorts

Appendix C - Weather and the Ski Industry

During the record-breaking 2002-03 ski season, the ski industry was presented with unanticipated natural snowfall and cold temperatures. In the Northeast, there was a 46 percent increase in snowfall from the previous season. New York's Capital District experienced its third- highest snowfall amount since the 1884-85 season with 105 inches of snow.

Graph One: Albany County Snowfall



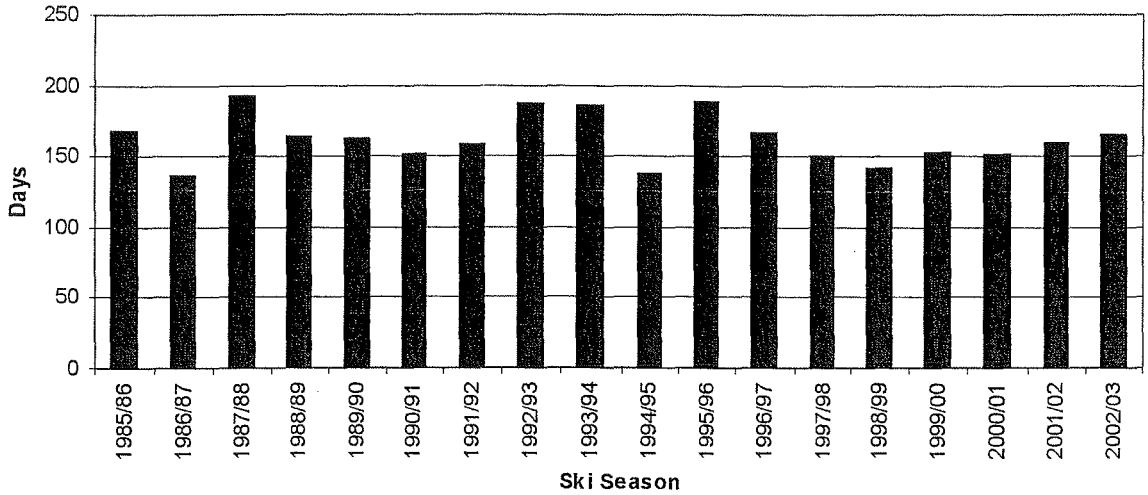
National Weather Service

The average temperature in the Capital District was 32.71 degrees Fahrenheit, which was 2.33 degrees colder than the previous season. The unprecedented snowfall and the colder temperatures enabled Northeast ski resorts to provide consistent snowmaking and preserve the quality and quantity of the snow. Furthermore, ski resorts were able to lengthen the ski season.

In addition to affecting traffic at ski resorts, weather also has an indirect effect on lodging, dining, and other service-based businesses. The direct impact on ski resorts is in the number of days that they are able to operate, which consequentially affects the number of skier visits, revenue, and other spillover affects on both direct and indirect venues. The longest season in recent years was in 1987-88, with 192 days, while the shortest season was in 1986-87 with 136 days.

Over the past five seasons, total snowfall days have gradually increased from 142 days to 164 days, but researchers are still cautious about what the weather will bring the ski industry in future years.

Graph Two: Snowfall Days



Appendix D - Land Use Definition and Intensity Guidelines

Land Use Area	Definition	Avg. # of bldgs. (per sq mi)	Avg. Lot Size (acres)
Hamlet	These are the growth and service centers of the Park where the Agency encourages development. Intentionally, the Agency has very limited permit requirements in hamlet areas.	No limit	None
Moderate Intensity Use	Most uses are permitted; relatively concentrated residential development is most appropriate.	500	1.3
Low Intensity Use	Most uses are permitted; residential development at a lower intensity than hamlet or moderate intensity is appropriate.	200	3.2
Rural Use	Most uses are permitted; residential uses and reduced intensity development that preserves rural character is most suitable	75	8.5
Resource Management	Most development activities in resource management areas will require Agency permit; compatible uses include residential uses, agriculture, and forestry. Special care is taken to protect the natural open space character of these lands.	15	42.7
Industrial Use	This is where industrial uses exist or have existed, and areas which may be suitable for future industrial development. Industrial and commercial uses are allowed in other land use area classifications.	No limit	None

Appendix E - The UMP Process

Step One:
Conduct resource inventory in the state forest area

Step Two:
Solicit written and verbal input from the public through press releases and meetings

Step Three:
Development of a draft plan and address State Environmental Quality Review issues

Step Four:
Prepare a draft plan

Step Five:
Release draft UMP and conduct public hearings

Step Six:
Resolve issues and revise the plan (with APA review)

Step Seven:
DEC Commissioner has final approval and the UMP is adopted.

Appendix F - Adirondack Park Agency Response

The Agency's response can be found on the following pages:

By FAX and Mail

November 25, 2003

[redacted]
Office of the State Comptroller
110 State Street
Albany, New York 12236-0001

Re: **North Creek Revitalization**

Dear [redacted]:

It was good meeting with you and [redacted] at the offices of the Warren County Regional Economic Development Corporation (WCREDC) on October 30th. It was an opportunity to discuss important work being done by the WCREDC to help improve the economy of the Town of Johnsburg and its hamlet of North Creek. As a planning and land use regulatory agency with an interest in resource protection and community economic improvement, we work closely with the WCREDC and the Town as they pursue projects of community importance.

The Adirondack Park Agency has significant interest in the economic vitality of towns and villages in the Park and in the strong protection of Park resources. In its work with localities, including Johnsburg, the Agency emphasizes the important relationship between environmental quality and economic vitality in an area heavily dependent on tourist visitation. Since careful planning for development and preservation is an important factor in building a sustainable economy, we provide local planning assistance to the Town of Johnsburg and encourage well thought out development proposals, as appropriate.

At present, there is strong interest in Johnsburg in a ski trail connector between the Gore Mountain Ski Area, a State-owned and

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operated facility in the State Forest Preserve, and the North Creek Ski Bowl area adjoining downtown North Creek where there is significant development potential for a range of lodging and other tourism support facilities on private lands.

The development of this ski trail connector in the Intensive Use Area of Gore Mountain is subject to the Unit Management Planning (UMP) process called for in the State Land Master Plan. A basis for this proposal was provided in the 1995 UMP as an initiative to stabilize the local economy. As stated then:

> "The ski area, if operated in harmony with the local business community, should act as a catalyst to stabilize local businesses and support the local economy. The proposed alpine ski trail connection to Ski Bowl Park, will help promote economic activity in the region. It will also broaden the variety of ski and winter sports opportunities offered to the public. It will certainly make the region more attractive to the destination vacationer."

The supplemental UMP for 2002-2007, approved by the Agency in Spring 2002, included specific provisions for development of the connector by stating that:

> "Two new quad lifts, one new lift (either chair or surface) and related trails will be constructed in order to create an alpine ski trail connection with the Town of Johnsburg Ski Bowl Park."

Regarding the private (outside State Forest Preserve) land development aspects of the proposal, these could be subject to permitting by the Adirondack Park Agency pursuant to the APA Act and other statutes, depending on the exact nature and scale of the development proposed and their specific location(s) relative to the Adirondack Park Land Use and Development Plan map.

We understand that at least part of the proposal would involve lands owned by the Town of Johnsburg. Other portions could involve lands owned by a private party on which the Agency approved a large scale project centered on a commercial ski area, the North Creek Ski Bowl, in 1982. The 1982 proposal included the ski area with 36 trails and 9 ski lifts as well as a main lodge and secondary lodge. The proposal also included a base village containing townhouses, condominiums, single family homes and three hotels. There were also provisions for an athletic club, cinema complex, shops, restaurants and other accessory structures.

While the Ski Bowl project permitted by the Agency in 1982 was not ultimately developed and the permit has long since expired, the site was the subject of preliminary discussions between Agency staff and an interested developer within the past year. In these discussions, I mentioned potential predicates of Agency permit jurisdiction over a future project. I also referred to the scope and scale of the 1982 project in response to a question of what could be approvable on the site. What would actually be approved, of course, would depend significantly on the nature of future proposals, site and structural design considerations, and the ability of projects to be served as required by local government.

For your information, I have enclosed a copy of the Adirondack Park Agency Act, descriptive brochures and other materials on the Agency's planning and regulatory programs.

Please note the APA Act §801 Statement of Legislative Findings and Purposes. Also, the §805(3) Character Descriptions and the Purposes, Policies and Objectives for land use areas defined in the Adirondack Park Land Use and Development Plan:

> "Hamlet areas will serve as the service and growth centers of the park. They are intended to accommodate a large portion of the necessary and natural expansion of the park's housing, commercial and industrial activities."

> "Moderate intensity use areas will provide for development opportunities in areas where development will not significantly harm the relatively tolerant physical and biological resources. These areas are designed to provide for residential expansion and growth and to accommodate uses related to residential uses in the vicinity of hamlets where community services can most readily and economically be provided. Such growth and the services related to it will generally be at less intense levels than in hamlet areas."

> "The purpose of low intensity use areas is to provide for development opportunities at levels that will protect the physical and biological resources, while still providing for orderly growth and development of the park. It is anticipated that these areas will primarily be used to provide housing development opportunities not only for park residents but also for the growing seasonal home market. In addition, services and uses related to residential uses

> may be located at a lower intensity than in hamlets or moderate intensity use areas."

Primary and secondary compatible uses defined for each of these land use areas is also provided in §805.3.

For your information, I have also enclosed a copy of "The North Creek Action Plan," a strategic planning document which helped guide the economic revitalization of North Creek in recent years. The Agency is proud to have provided funding for this plan which, with the steady commitment of volunteers, elected officials, and the WCREDC, has been of great local and regional economic significance.

I trust these materials will address any remaining questions about the Agency's interest in the continued economic improvement of the Town of Johnsburg as well as specific programs administered by the Agency in reference to State and private lands within the Park.

If I can be of further assistance to you, please call.

Sincerely,

Steve Erman

Stephen M. Erman
Special Assistant for Economic Affairs

SME/bjf
Enclosures

Appendix G - OSC Contacts

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APPENDIX 2

DOCUMENTS OF RECORD

- **TITLE 28**
- **LEASE AGREEMENT**
- **MASTER AGREEMENT**
- **NATURAL HERITAGE PROGRAM RESPONSE LETTER DATED MAY 11, 2005**

- New York State Consolidated Laws
  - Public Authorities

TITLE 28

NEW YORK STATE OLYMPIC REGIONAL DEVELOPMENT AUTHORITY

Section 2605. Short title.
2606. Legislative findings.
2607. Definitions.
2608. New York state olympic regional development authority.
2609. Community advisory panel.
2610. Review of and recommendation on continuation of the authority.
2611. Powers of the authority.
2612. Agreement with the park district.
2613. Appropriations by the park district.
2614. Agreements with the state.
2615. Assistance by state officers, departments, boards and commissions.
2616. Appropriations by the state.
2617. Moneys of the authority.
2618. Property and income of the authority.
2619. Capital repair and improvement account.
2620. Public bidding.
2621. Annual report.
2622. Actions.
2623. Limitation of liability.
2624. Exemption from taxation.
2625. Inconsistent provisions of other laws superseded.
2626. Construction.
2627. Separability.
2628. Temporary assignment and transfer of employees.
2629. Transfer of officers and employees.

§ 2614. Agreements with the state. 1. The specific terms of each agreement shall be negotiated between the authority and any state agency which administers or supervises a participating olympic facility owned by the state of New York.

2. Each such agreement shall provide the following:

(a) The authority shall receive the participating olympic facility, including the personal property and equipment used solely in connection therewith, which is the subject matter of this agreement in its condition at the time of the commencement of the agreement.

(b) The authority shall agree to continue to provide at the participating olympic facility the space, facilities and the level of public recreation, including youth sports training, promotion and programming, as was provided by the state agency operating said facility during the year immediately preceding the execution of the agreement.

(c) The authority shall comply with all agreements executed by the state affecting the participating olympic facility existing at the time the authority enters into the agreement with the state, provided such existing agreements are listed in the agreement with the state.

(d) Upon termination of the agreement, the personal property, including replacements and/or substitutions therefor, which is owned by the authority and used solely in connection with the participating olympic facility which is the subject matter of the agreement shall pass to and be vested in the state. Such personal property shall be accepted by the state in its condition at the time of such termination.

(e) The authority shall maintain and keep the participating olympic facility, including the personal property and equipment used solely in connection therewith, in good repair, provided that the authority shall not be required to repair any damage to the participating olympic facility, including the personal property and equipment used solely in connection therewith, existing at the time the authority enters into the agreement unless funds are made available to the authority therefor.

(f) The authority may make improvements to the participating olympic facility to the extent that federal funds are made available for such purpose.

(g) The authority may terminate its agreement with the state, if the state fails to carry out all of the provisions of the agreement or fails to appropriate and pay in each fiscal year of the state commencing with the fiscal year beginning April first, nineteen hundred eighty-two, the amount expended by the department of environmental conservation for the operation of the olympic facilities in the fiscal year immediately preceding the execution of said agreement, plus an amount supplied by a formula to be agreed upon by the parties which will reflect the legitimate and necessary net cost increases which may occur over the life of such agreement.

(h) The state may terminate its agreement with the authority if the director of the budget shall not approve the budget of the authority or if the park district fails to appropriate and pay funds as provided in subparagraphs one and two of paragraph (g) of subdivision two of section twenty-six hundred twelve of this title.

(i) To the extent the authority is not covered by insurance, the authority shall be held harmless by the state for any and all claims for damages or injuries arising out of the operation by the authority of any participating olympic facility owned by the state.

3. The authority shall enter into an agreement with the department of environmental conservation for the authority to operate, maintain and manage the Gore Mountain ski center located in the town of Johnsburg, county of Warren, state of New York. The specific terms of such agreement shall be negotiated by the authority and the department and

shall include those provisions set forth in subdivision two of this section for inclusion in agreements with the state. Such agreement shall also provide that the authority may terminate the agreement if the state fails to appropriate and pay to the olympic regional development authority for the five consecutive fiscal years from April first, nineteen hundred eighty-five, through March thirty-first, nineteen hundred ninety for the operation of Gore Mountain, an amount at least equal to the amount of funds appropriated and paid to the authority for the operation of Gore Mountain ski center for the fiscal year of the state beginning April first, nineteen hundred eighty-four, plus an amount supplied by the formula agreed to by the parties pursuant to paragraph (g) of subdivision two of this section. All of the powers of the authority provided by this title or any other law, including those pertaining to participating olympic facilities, shall apply in connection with such agreement and the operation and management of the Gore Mountain ski center.

4. The authority is hereby authorized to enter into an agreement with the town of Johnsburg, Warren county to operate and manage town-owned ski and recreational facilities on town property in such town. The specific terms of such agreement shall be negotiated by the authority and the town and shall include those provisions set forth in subdivision two of this section for inclusion in such agreement with the town. All of the powers of the authority provided by this title or any other law, including those pertaining to participating olympic facilities, shall apply in connection with such agreement and the operation and management of such facilities.

LEASE AGREEMENT

THIS LEASE AGREEMENT, made as of the __ day of September 2003, by and between THE TOWN OF JOHNSBURG, a municipal corporation organized under the laws of the State of New York with an address of PO Box 7, North Creek, New York 12853 ("Johnsburg"), and the OLYMPIC REGIONAL DEVELOPMENT AUTHORITY, an authority organized and authorized pursuant to the laws of the State of New York with an address of Lake Placid, New York 12946 (hereinafter "ORDA").

WHEREAS, Johnsburg is the owner of certain property including recreational property (the "Property") located in the Town of Johnsburg, County of Warren, State of New York, and commonly referred to as The Ski Bowl Property, tax map #66-1-14;

WHEREAS, ORDA desires to utilize a portion of the property as set forth on Exhibit "A" for the purpose of developing and operating a tubing park, operating and maintaining the existing t-bar lift and trail located at the Ski Bowl and the operation of any food concessions incident to the operation of the tubing park and ski facility;

WHEREAS, Johnsburg and ORDA place significant value on the property being leased to ORDA for the purposes of operating the above described facilities;

NOW, THEREFORE, WITNESSETH: That for and in consideration of the sum of one dollar in hand paid by ORDA to Johnsburg or other good and valuable consideration, the receipt of which is hereby acknowledged by both parties, Johnsburg agrees to Lease to ORDA, its successors and/or assigns, the right privilege and authority to Lease the property described above pursuant to the following terms and conditions:

1. LEASE TERM: The term of this Lease Agreement shall commence on the 1st day of November 2003 and end on the 31st day of March 2004. In lieu of monetary consideration attributed to the use of the property, ORDA shall pay Johnsburg the fee equivalent to skiing privileges for all students enrolled in the Johnsburg Central School. The skiing privileges shall be the equivalent of a full seasons pass for each student enrolled in the Johnsburg Central School system and shall be valid for use at both the Gore Mountain Ski Center and the Little Gore Ski facility. These season tickets will not be valid for use at the tubing park and ORDA shall be entitled to charge a fee to all users for use of the tubing park. The use of this property pursuant to this Lease Agreement shall entitle ORDA to exclusive use of the ski trail and ski lift and the tubing area. This Lease Agreement does not give ORDA exclusive access to the closed pavilion, open pavilion, skating rink area, parking area or other lands located adjacent to the above described facilities. The term of this Lease Agreement shall be renewed automatically unless either party provides written notice to the other party of their intent to not renew this Lease Agreement at least 60 days prior to the commencement of the next term (i.e. Notice of intent to terminate must be delivered to the other party prior to September 1st in any year)

2. REPAIRS, REPLACEMENTS AND FIXTURES: ORDA shall be entitled to construct, develop and maintain the tubing park and ski trails in the manner that they deem to be appropriate and consistent with reasonable tubing and skiing practices. ORDA shall also have the right to develop a tow lift and all facilities incident to operating a snowmaking facility with the tubing and ski trail. ORDA shall not be obligated to develop snowmaking facilities for the tubing area or the ski area. Johnsburg shall provide the electrical wiring necessary from the existing terminal to a location to be determined by ORDA sufficient to operate the tubing facility. Johnsburg shall also be responsible for the cost of all utilities associated with the operation of the pavilions, the skiing and the tubing. Johnsburg shall be responsible for plowing and maintaining the access road and parking area. Johnsburg shall be responsible for custodial work and maintenance both at the open and closed pavilions. Johnsburg shall provide lighting to the area however, will not be obligated to provide lighting to the tubing area but if able to shall be permitted to do so.

3. SURRENDER: At the expiration of this Agreement, ORDA will quit and surrender the Land, as improved by ORDA, in as good state and condition as received, reasonable wear and tear and damage by fire or the elements or from causes beyond its control excepted. ORDA shall retain ownership of the improvements including the bandle tow surface lift and the snowmaking spur installed on the Property.

4. COMPLIANCE WITH LAWS: ORDA shall comply with all Federal, state, county, town and village laws and ordinances respecting the use of the Land and the conduct of ORDA's use of the Land.

5. USE OF LAND: ORDA shall not use or allow the Land to be used for any purpose other than the purpose set forth above, nor shall any part of the Land be used in any manner reasonably objectionable to Johnsburg; nor so as to increase the insurance risk or prevent the obtaining of insurance.

6. INSURANCE: ORDA at its own expense shall maintain general liability insurance protecting Johnsburg against any liability arising out of the use of the Land by ORDA and any liability assumed by ORDA pursuant to any contract between Johnsburg and ORDA, including the liability assumed pursuant to its Lease Agreement; and all such insurance policies and insurance carrier shall be acceptable in form and substance to Johnsburg. The minimum coverage required by such policy is $1,000,000.00 per occurrence, bodily injury and property damage, and $300,000.00 for fire damage legal liability. The policies of insurance shall name Johnsburg as an additional insured. ORDA will furnish a certificate of insurance to Johnsburg prior to the commencement of this Lease Agreement evidencing compliance with this Section 7.

7. ASSIGNMENT: This Lease Agreement is personal to ORDA and ORDA may not assign this Lease Agreement or its rights hereunder without the prior written consent and approval of Johnsburg.

8. INDEMNIFICATION OF JOHNSBURG: For properties under the exclusive control of ORDA, including the skiing area and tubing area, Johnsburg shall not be liable for, and ORDA will indemnify, defend and save harmless Johnsburg from and against, any and all fines, suits, claims, demands, judgments, liabilities, losses, damages, actions, costs, interest and expense (including attorney's fees) arising out of any (A) act or omission of, or breach of this Lease Agreement by, ORDA or its employees, invitees or any other person entering the Land under express or implied invitation of ORDA, or (B) use of the Land by ORDA or its employees, invitees or any other person entering the Land under express or implied invitation of ORDA, including during any period of time ORDA has had access to the Land prior to commencement of this Lease Agreement. In case any action or proceeding covered by the foregoing indemnity is brought against Johnsburg, Johnsburg shall control the defense thereof and ORDA shall pay all costs, attorney's fees, expenses and liabilities resulting therefrom. ORDA and its employees, invitees or any other person entering the Land under express or implied invitation of ORDA assumes any and all risks and liabilities whatsoever relating to its use of the Land.

9. INDEMNIFICATION OF ORDA: For properties not under the exclusive use and control of ORDA, ORDA shall not be liable for, and Johnsburg will indemnify, defend and save harmless Johnsburg from and against, any and all fines, suits, claims, demands, judgments, liabilities, losses, damages, actions, costs, interest and expense (including attorney's fees) arising out of any (A) act or omission of, or breach of this Lease Agreement by, Johnsburg or its employees, invitees or any other person entering the Land under express or implied invitation of Johnsburg, or (B) use of the Land by Johnsburg or its employees, invitees or any other person entering the Land under express or implied invitation of Johnsburg, including during any period of time Johnsburg has had access to the Land prior to commencement of this Lease Agreement. In case any action or proceeding covered by the foregoing indemnity is brought against ORDA, ORDA shall control the defense thereof and Johnsburg shall pay all costs, attorney's fees, expenses and liabilities resulting therefrom. Johnsburg and its employees, invitees or any other person entering the Land under express or implied invitation of Johnsburg assumes any and all risks and liabilities whatsoever relating to its use of the Land.

10. ENTRY ON LAND BY JOHNSBURG: Johnsburg and its agents, employees and contractors shall have the right to enter all parts of the Land to inspect the same and to enforce or carry out any provision of this Agreement and to safeguard Johnsburg's interest in the Land.

11. SEVERABILITY: If any term or provision, or any portion thereof, of this Lease Agreement is declared invalid or unenforceable for any reason, the remainder of this Lease Agreement shall not be affected thereby and shall continue to be valid and enforceable to the fullest extent permitted by law.

12. ENTIRE AGREEMENT: This Lease Agreement contains all the agreements and conditions made between the parties hereto and may not be modified orally or in any manner other than by an agreement in writing signed by all the parties hereto or their respective successors in interest.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals the day and year above written.

JOHNSBURG:

BY: _____ 9-12-03
William Thomas, Supervisor

ORDA:

BY: _____ 9-12-03
Ted Blazer, President, CEO

TOWN OF JOHNSBURG
RESOLUTION # 89

WHEREAS, the Town Board of the Town of Johnsburg having engaged in substantial discussions with FrontStreet Mountain Development LLC (FrontStreet) regarding redevelopment of skiing at North Creek Ski Bowl and hereby agrees in principle to the five (5) Business Points as set forth in the attached memorandum dated July 18, 2005 from FrontStreet, and

WHEREAS, FrontStreet understands the importance and significance of preserving and enhancing the Town's recreation area, and

WHEREAS, The Town Board desires to move forward with formal discussions and authorizes the Town Supervisor and Attorney for the Town to take those preliminary actions necessary in furtherance of the Business Points.

BE IT RESOLVED THAT the Town Board supports the concepts and principles outlined in the attached memorandum and directs the Town Supervisor and Attorney for the Town to commence actions and discussions necessary to move forward with formal discussions and to take those preliminary actions necessary in furtherance of the Business Points.

Mr. Arsenault presented the preceeding resolution with a second from Mrs. VanKeuren. With all board members voting "aye" the resolution is declared passed.

STATE OF NEW YORK)
COUNTY OF WARREN)
TOWN OF JOHNSBURG)

I, William E. Rawson, Town Clerk of the Town of Johnsburg, Warren County, New York, hereby certify that I have compared the foregoing copy of Resolution Number 89, adopted by the Town Board of the Town of Johnsburg, Warren County, New York, at a meeting held at the Tannery Pond Community Center, in North Creek, New York on the 19th day of July, 2005, and that the foregoing is a true copy of said resolution entered in the minutes of said meeting.

In witness whereof, I have set my hand and seal on the 9th day of August, 2005.

SEAL

William E. Rawson
Town Clerk
Town of Johnsburg

Business Points 7-18-05

FrontStreet and the Town to agree that as and when the APA approves the FrontStreet project and the funding for the Ski Bowl ski lift project is in place, the following actions will be taken:

1. **Land Transfer to Town** – FrontStreet will transfer to the Town approximately 65 acres to enable the location of a ski lift and trails at the Old Gore Ski Bowl. The property deed shall specify that the property may be used for public skiing, hiking, biking, horseback riding and other outdoor activities. No motorized vehicles (other than for ski related maintenance), camping or hunting will be allowed. FrontStreet will retain all property building rights associated with the Land to Town and will have the exclusive right to build / operate public golf related activities on this property. FrontStreet will have a right of way to (a) cross the land for any utilities including: water, power, sewage and drainage (b) to construct drainage and storm water runoff containment facilities and septic holding tanks and leach fields under the land.

2. **Parcel A Land and Building Right Transfer to FrontStreet** – The Town will (a) assign to FrontStreet the Town's building rights associated with the 136.6 acres of Low Density Town land in the Park Area and (b) transfer to FrontStreet Parcel A, approximately 5 acres of land located to the west of Ski Bowl Road, which is surrounded by the Property.

3. **Parcel B Future Land Transfer to FrontStreet** –As and when APA and Town P&Z approve the FrontStreet major hotel project, the Town will transfer to FrontStreet Parcel B, the approximately 4 acres of land located between the Property and the old ski hut, and FrontStreet will pay the Town $200,000 as a recreation fee to be used for park improvements.

4. **Town Ski Lodge** – The public ski lodge will be located approximately in the same location as the old ski hut and FrontStreet will pay for Hudson Design to complete, under the Towns direction, the preliminary architectural design of the public ski lodge.

5. **Town Maintenance Garage Area** – As and when the Town decides that the Town maintenance garage should be relocated from the current site, FrontStreet will have the right to acquire the site (Parcel C, approximately 5 acres) for the cost of relocating the maintenance garage facilities and making reasonable upgrades to the facility to improve employee working conditions.

MASTER AGREEMENT

MASTER AGREEMENT ("Agreement") made as of the 3rd day of November 2005, between **THE TOWN OF JOHNSBURG**, a governmental entity, having an address at P.O. Box 7, North Creek, NY 12853 ("the Town"), and **FRONTSTREET MOUNTAIN DEVELOPMENT, LLC**, a Delaware limited liability company, having an address at 31 Swift's Lane, Darien, CT 06820 ("FrontStreet"). The Town and FrontStreet are referred to herein individually, as a "Party" and collectively, as the "Parties."

In consideration of the premises and of the mutual agreements hereinafter set forth, the parties hereto agree as follows:

1. Ski Trail Parcel, Parcel A and Building Rights.

(a) Conveyances. If (x) the Adirondack Park Agency ("APA") approves the application of FrontStreet to the APA for the Ski Bowl Village at Gore Mountain, located in North Creek, New York ("APA Development Approval"), and (y) the State of New York, the Olympic Regional Development Authority of the State of New York ("ORDA"), or any other source (as applicable) approves and provides the funding of 100% of the construction cost of the ski lift, trails and snowmaking for public skiing to be located on the Ski Trail Parcel and on the Town land that is adjacent to the Ski Trail Parcel ("Town Land") and depicted on the map attached hereto as Exhibit I ("Ski Lift Approval"), then upon and subject to the terms and conditions set forth in this Agreement:

(i) Ski Trail Parcel. FrontStreet shall convey to the Town and the Town shall accept from FrontStreet the property, more fully described on Schedule 1 (subject to revision pursuant to Section 1(c)(iv)), together with all buildings and improvements thereto (collectively the "Ski Trail Parcel"); and

(ii) Parcel A. The Town shall convey to FrontStreet and FrontStreet shall accept from the Town the property, together with all buildings and improvements thereto, more fully described on Schedule 2 (collectively "Parcel A"); and

(iii) Building Rights. The Town shall assign to FrontStreet, in accordance with Section 809(10)(c) of the Adirondack Park Agency Act, all of the Town's building rights associated with the 136.6 acres in the Town Park located on Ski Bowl Road, North Creek, New York ("Town Park"), which land the Parties acknowledge is zoned Low Intensity and is contiguous to FrontStreet's property at Old Gore Ski Bowl. The Parties agree that there are forty-three (43) such building rights (the "Building Rights").

(b) Closing. The settlement of all of the obligations of the Town and FrontStreet to each other under this Section 1 ("Ski Trail Closing") shall take place at the office of the Town of Johnsburg, Main Street, North Creek, New York, at 10:00 a.m., on the 20th day after APA Development Approval and Ski Lift Approval have all been received. The Ski Trail Closing shall be upon and subject to the terms and conditions set forth in Rider 1. If Ski Lift Approval is received before APA Development Approval, the Parties shall each consider waiving APA Development Approval as a condition to the closing of one or more of the conveyances contemplated by this Section 1.

(c) Additional Agreements. Effective upon the Ski Trail Closing,

(i) Permitted Uses and Use Restrictions.

(A) By the Town. The Ski Trail Parcel shall be used solely for public skiing, hiking, biking, horseback riding, golf and other outdoor activities, but not for motorized vehicles (other than for ski related maintenance and safety, and golf related maintenance and golf carts), camping or hunting. All such uses shall be free to the public except skiing and golf, for which the public will be charged a fee.

(B) By FrontStreet. FrontStreet shall have the right of way to cross the Ski Trail Parcel to access its properties adjacent to the Ski Trail Parcel and the right to cross the Ski Trail Parcel underground for any utilities including: water, power, sewage and drainage and to construct drainage and storm water runoff containment facilities and septic holding tanks and leach fields under the Ski Trail Parcel (the "FrontStreet Utilities"). FrontStreet shall have the exclusive right to build and operate public golf related activities on those portions of the Ski Trail Parcel and Town Land designated on the map attached hereto as Exhibit II. FrontStreet shall have the right to tie into the snowmaking water line for its fire-safety system, irrigation, and other non-potable water needs, all subject to FrontStreet having the obligation to pay all incremental costs for connections and operating expenses (the "FrontStreet Tie-In"). The placement of the FrontStreet Utilities and the FrontStreet Tie-In will be subject to the approval of ORDA consistent with applicable law. At the conclusion of any construction provided for in this subsection, FrontStreet shall cause the Ski Trail Parcel to be restored to substantially the same condition existing immediately prior to such construction.

(ii) Retained Building Rights. FrontStreet shall retain, in accordance with Section 809(10)(c) of the Adirondack Park Agency Act, all of the building rights associated with the Ski Trail Parcel, which land the Parties acknowledge is zoned Low Intensity and is contiguous to FrontStreet's other property at Old Gore Ski Bowl.

(iii) Town Development. In accordance with Ski Trail Approval, the Town shall cooperate with all applicable persons and entities in causing the timely construction of the ski lift, trails and snowmaking depicted on the map attached hereto as Exhibit I. The Town agrees that the ski lift marked on the map attached hereto as Exhibit III, shall be the first constructed on the Town Land or the Ski Trail Parcel, except for the short chairlift to be located at the location of the current t-bar lift. The Town further agrees that no ski lifts, trails and snowmaking shall be constructed on the Town Land or the Ski Trail Parcel in a manner that conflicts with the ski lift, trails and snowmaking depicted on the map attached hereto as Exhibit I.

(iv) Revised Survey and Conveyance. Upon completion of construction of ski trails on the Ski Trail Parcel pursuant to Ski Lift Approval, FrontStreet shall at its expense cause the description of the Ski Trail Parcel in Schedule 1 to be revised to reflect the boundaries of the ski trails as actually constructed, and the Parties shall undertake such conveyances, reconveyances and additional transactions as may be reasonably necessary to bring about the transfer of the Ski Trail Parcel, as so revised, to the Town, consistent with the new boundaries and this Agreement, provided that the amount of acreage transferred as a result of the revised conveyance will substantially equal, and in no event be less than 95% of, the amount of acreage transferred in the original conveyance.

(v) Deed Restrictions, Etc. The Parties shall execute and record deed restrictions, easements and other agreements reasonably necessary to document the terms of this Section 1(c) at the Ski Trail Closing.

(d) Delayed Approval. FrontStreet may at any time prior to the Ski Trail Closing, develop the Ski Trail Parcel for public or private skiing use in a manner that does not conflict with the ski lift, trails and snowmaking on the Ski Trail Parcel depicted on the map attached hereto as Exhibit I. The obligation of FrontStreet to consummate the transactions contemplated to occur at the Ski Trail Closing shall in such event be subject to the following additional conditions: (A) FrontStreet shall convey, and the Town shall acquire, the improvements constructed by FrontStreet ("FrontStreet Improvements") from FrontStreet, as-is where-is; and (B) FrontStreet shall be reimbursed for the cost of the FrontStreet Improvements, up to the amount budgeted by ORDA for such improvements from amounts allocated under the terms of Ski Lift Approval to the construction of the applicable improvements. If such reimbursement is not available under the terms of Ski Lift Approval, FrontStreet shall have the right, exercisable by giving notice to the Town on or before the 30th day after the scheduled date of the Ski Trail Closing, to terminate Section 1 of this Agreement. Upon any such termination, the transactions contemplated by Section 1 shall be abandoned, and the Parties shall have no further rights or obligations with respect thereto.

(e) Pre-Closing Activities of the Town. The Town agrees that so long as Section 1 remains in effect prior to the Ski Trail Closing: the Town shall cooperate with all applicable persons and entities in causing Ski Lift Approval to be obtained; the ski lift marked on the map attached hereto as Exhibit III, shall be the first constructed on the Town Land, except for the short chairlift to be located at the location of the current t-bar lift; and no ski lifts, trails and snowmaking shall be constructed on the Town Land in a manner that conflicts with the ski lift, trails and snowmaking depicted on the map attached hereto as Exhibit I.

(f) Section 1 Termination Rights. If APA Development Approval and Ski Lift Approval have not both been received by the fifth anniversary of this Agreement, FrontStreet shall have the right, exercisable at any time after such fifth anniversary, to terminate Section 1 of this Agreement. Such termination shall be effective 30 days after FrontStreet gives notice of termination to the Town. If, by the fifth anniversary of this Agreement, Ski Lift Approval has been received, but APA Development Approval has not been received, the Town shall have the right, exercisable at any time after such fifth anniversary, to terminate Section 1 of this Agreement. Such termination shall be effective 30 days after the Town gives notice of termination to FrontStreet. Upon any such termination, the transactions contemplated by Section 1 shall be abandoned, and the Parties shall have no further rights or obligations with respect thereto.

(g) Zoning. Notwithstanding anything to the contrary in this Agreement, the obligation of FrontStreet to consummate the transactions contemplated to occur at the Ski Trail Closing shall be subject to the following additional condition: the Town shall have amended the zoning of Parcels B and C to allow for private commercial uses (such as hotels) thereon.

2. Parcel B.

(a) Conveyance. If FrontStreet at its option seeks approval of the APA and the Planning & Zoning Commission of the Town of Johnsburg with respect to the construction of a hotel on Parcel B (as defined below) and all such approvals are received (collectively, "Hotel Approval"), then upon and subject to the terms and conditions set forth in this Agreement, the

Town shall convey to FrontStreet and FrontStreet shall accept from the Town the property, together with all buildings and improvements thereto, more fully described on Schedule 3 (collectively "Parcel B").

(b) Closing. The settlement of all of the obligations of the Town and FrontStreet to each other under this Section 2 (the "Parcel B Closing") shall take place at the office of the Town of Johnsburg, Main Street, North Creek, New York, at 10:00 a.m. on the 20th day after Hotel Approval. The Parcel B Closing shall be upon and subject to the terms and conditions set forth in Rider 1.

(c) Additional Agreements. Effective upon the Parcel B Closing,

(i) Park Improvements. FrontStreet will be obligated to fund the improvement or construction of recreational facilities at the Town Park as follows: (A) $200,000.00, upon the Parcel B Closing; plus (B) if FrontStreet sells Parcel C to an entity other than a wholly-owned affiliate of FrontStreet, then upon the closing of such sale ("Third Party Closing"), an amount equal to a percentage of the "Net Sale Profit" as follows: 10% of the Net Sales Profit if the Third Party Closing occurs in Year 1; 8% of the Net Sale Profit if the Third Party Closing occurs in Year 2; 6% of the Net Sale Profit if the Third Party Closing occurs in Year 3; 4% of the Net Sale Profit if the Third Party Closing occurs in Year 4; 2% of the Net Sale Profit if the Third Party Closing occurs in Year 5; and 0% of the Net Sale Profit if the Third Party Closing occurs after Year 5. "Net Sale Profit" means cash proceeds received at the Third Party Closing, net of FrontStreet's actual selling expenses. "Year" means the twelve month period that begins on the date of the Parcel B Closing, and each subsequent twelve month period beginning on the anniversary of such day; the first Year is designated "Year 1", and each subsequent Year is numbered sequentially. The funds payable to the Town under this subsection will not be allocated to the Town's general fund but will instead be restricted for use by the Town for improvement or construction of recreational facilities at the Town Park. The Town shall use its best efforts to cause the funds payable to the Town under this subsection be classified as a recreation fee.

(ii) Wells and Pump Stations. FrontStreet may, and at the request of the Town, shall, at FrontStreet's expense, using qualified contractors, relocate the two wells and the pump stations currently located on Parcel B (the "Wells and Pump Stations") to a location or locations within the current Water Service Area that is as close as reasonably possible to Parcel B; the relocated wells shall produce water at a flow rate no less than the flow rate capable of being produced by the two now-existing wells at the time of relocation (such flow rate to be determined using recognized water industry standards). FrontStreet shall be deemed to have satisfied its obligations under this subsection (ii) when the New York State Department of Health and the Department of Environmental Conservation have provided final approval of the relocated wells as suitable for potable water, and the equipment and wells are fully operational components of the North Creek Water District. For a period commencing on the date of the Parcel B Closing and ending if and when the Wells and Pump Stations are so relocated, the Town shall, at its own cost and expense, operate, inspect, maintain, service, repair, overhaul and test the Wells and Pump Stations by duly competent personnel, in accordance with prudent practice and all laws, rules and regulations applicable to the Wells and Pump Stations, as in effect from time to time. Notwithstanding the foregoing, if required by applicable law or regulation, or if reasonably requested by the Town after Hotel Approval, FrontStreet shall complete the relocation of the Wells and Pump Stations as provided in this Section prior to the

Parcel B Closing, in which case, the relocation shall be an additional condition to the obligation of the Town to consummate the transactions contemplated to occur at the Parcel B Closing. FrontStreet shall be reimbursed for the cost of the relocation if the Town defaults on its obligation to convey Parcel B.

(iii) Use Restrictions.

(A) By the Town. That portion of the Town's land adjacent to Parcel B known as "Duke Hill" shall not be used for motorized vehicles, camping or hunting.

(B) By FrontStreet. FrontStreet agrees that Parcel B shall be used solely for a hotel and retail complex.

(iv) Ski Bowl Road. Until FrontStreet acquires Parcel C and relocates the Garage Assets as contemplated by Section 3(e), the Town will have the right to use the portion of the Ski Bowl Road located on Parcel B to access Parcel C. Until the commencement of the construction of the hotel that is the subject of the Hotel Approval, the Town will have the right to use the portion of the Ski Bowl Road located on Parcel B to access the current parking area on Parcel B. All such access shall be free of charge, under access agreements with customary terms and conditions.

(v) Deed Restrictions, Etc. The Parties shall execute and record deed restrictions, easements and other agreements reasonably necessary to document the terms of this Section 2(c) at the Parcel B Closing.

(d) Zoning. Notwithstanding anything to the contrary in this Agreement, the obligation of FrontStreet to consummate the transactions contemplated to occur at the Parcel B Closing shall be subject to the following additional condition: the Town shall have amended the zoning of Parcels B and C to allow for private commercial uses (such as hotels) thereon.

3. Parcel C Option.

(a) Option Grant. Upon and subject to the terms and conditions set forth in this Agreement, the Town hereby grants to FrontStreet an option, exercisable in accordance with this Agreement, to acquire from the Town the property, together with all buildings and improvements thereto, more fully described on Schedule 4 (collectively "Parcel C"). The option set forth in this Section 3(a) is hereinafter referred to as the "Parcel C Option".

(b) Trigger Events. Commencing on or after the date upon which APA Development Approval and Ski Lift Approval have both been granted (or earlier if agreed by FrontStreet), the Town may offer, and prior to conveying Parcel C to any person or entity other than FrontStreet, the Town shall offer, to convey Parcel C to FrontStreet pursuant to this Agreement, by giving notice to FrontStreet ("Offer Notice"). On or before the 60th day after the Offer Notice, FrontStreet shall have the right to exercise the Parcel C Option. If FrontStreet fails to exercise the Parcel C Option, the Parcel C Option shall remain in effect if the Town (i) fails to enter into a definitive and legally binding agreement to sell Parcel C to a person or entity other than FrontStreet on or before the 60th day following the date upon which FrontStreet's right to exercise the Parcel C Option pursuant to the second sentence of this Section 3(b) expires or otherwise lapses, or (ii) after entering to such an agreement within such time, fails for any reason to convey Parcel C on or before the 365th day following the date upon which FrontStreet's right

to exercise the Parcel C Option pursuant to the second sentence of this Section 3(b) expires or otherwise lapses.

(c) Notice of Exercise. To exercise the Parcel C Option, FrontStreet shall within the sixty (60) day period referred to in Section 3(b), deliver to the Town a written notice stating that FrontStreet is exercising the Parcel C Option ("Notice of Exercise"). Upon receipt by the Town of the Notice of Exercise, the Town shall be legally bound to convey Parcel C to FrontStreet, and FrontStreet shall be legally bound to accept Parcel C from the Town, in accordance with the remaining terms of this Agreement.

(d) Closing. The settlement of all of the obligations of the Town and FrontStreet to each other under this Section 3 (the "Parcel C Closing") shall take place at the office of the Town of Johnsburg, Main Street, North Creek, New York, at 10:00 a.m. on the 30th day after receipt by the Town of the Notice of Exercise. The Parcel C Closing shall be upon and subject to the terms and conditions set forth in Rider 1.

(e) Additional Agreements--Relocation and Upgrade of Garage Assets. In the Offer Notice, the Town may specify a location within the Town of Johnsburg to which the maintenance garage building and related structures that are currently located on Parcel C ("Garage Assets") shall be relocated. Within a reasonable period after the Parcel C Closing, FrontStreet shall at its expense, using qualified contractors, transport the Garage Assets from Parcel C to, and relocate them at the location, if any, specified in the Offer Notice. At the Town's request set forth in reasonable detail in the Offer Notice, FrontStreet, using qualified contractors, shall within a reasonable period after the Parcel C Closing, perform up to $15,000.00 in upgrades to the maintenance garage building's lunch room and/or vehicle entrance at the new location thereof. After the Parcel C Closing, pending the relocation of the Garage Assets, the Town will have the right, notwithstanding Section 19(b)(i)(F), to use Parcel C as it was used immediately prior to the Parcel C Closing, free of charge, under a lease with customary terms and conditions.

(f) Zoning. Notwithstanding anything to the contrary in this Agreement, the obligation of FrontStreet to consummate the transactions contemplated to occur at the Parcel C Closing shall be subject to the following additional condition: the Town shall have amended the zoning of Parcels B and C to allow for private commercial uses (such as hotels) thereon.

4. Town Ski Lodge. FrontStreet and the Town hereby confirm that they have executed and delivered that certain letter agreement dated August 1, 2005 with the architectural design firm Hudson Design, 1949 Route Nine, Garrison, New York 10524 concerning "Architectural Design Services—Town Ski Hut" (attached hereto as Exhibit IV) pursuant to which Hudson Design undertakes to assist in the design of a new public ski lodge to be constructed by the Town and to be located at approximately the same location in Town Park as the old public ski hut. FrontStreet covenants to the Town that FrontStreet has paid or will pay all compensation due Hudson Design under the letter agreement, subject to and in accordance with the terms thereof.

5. Representations and Warranties as to each Party. Each Party represents and warrants to the other that:

(a) Such Party has the right, power and authority to make and perform its obligations under this Agreement and this Agreement is a valid and binding obligation of such Party enforceable against such Party in accordance with its terms, subject in the case of the Town, to the satisfaction of the conditions set forth in Section 8(k).

(b) There is no action, suit, arbitration, unsatisfied order or judgment, government investigation or proceeding against such Party or any agreement, contract or commitment to which such Party or its properties is subject, which could individually or in the aggregate interfere with the consummation of the transactions contemplated by this Agreement.

(c) Such Party has not dealt with any broker in connection with this Agreement.

6. Indemnifications.

(a) By the Town. Effective on the date hereof (in the case of (i) below), effective upon each applicable Closing (in the case of (ii) below) and effective upon the Ski Parcel Closing (in the case of (iii) and (iv) below), the Town shall indemnify, defend and hold harmless FrontStreet, FrontStreet's direct and indirect parents, subsidiaries and affiliates, and each of their respective officers, directors, shareholders, employees, members, agents, successors, transferees and assigns from and against all costs, claims and expenses (including, without limitation, reasonable attorneys' fees and disbursements):

(i) arising from or related to any breach of any representation or warranty of the Town set forth in Section 5 of this Agreement;

(ii) arising from or related to any breach of any representation or warranty of the Town set forth in Section 18(e) of this Agreement with respect to the applicable Premises, provided that any claims for indemnification under this subsection (ii) must be made to the Town before the end of the two (2) year survival period applicable to such representations set forth in Section 18;

(iii) resulting from, or incurred to remedy, any condition or circumstance which is not or is alleged to be not in compliance with the Adirondack Park Agency Act, and which arises from events or conditions at Parcel A on or prior to the date of the Ski Trail Closing; provided that any claims for indemnification under this subsection (iii) must be made to the Town on or before the second anniversary of the Ski Parcel Closing;

(iv) the Wells and Pump Stations, to the extent arising from or relating to events or conditions on or prior to the date of the Parcel B Closing or, if later, the relocation of the Wells and Pump Stations as contemplated by Section 2(c)(ii); or

(v) arising from or related to Hazardous Substances used, stored, generated, disposed of or introduced on or under Parcel C on or prior to the date of the Parcel C Closing, provided that any claims for indemnification under this subsection (v) must be made to the Town on or before the second anniversary of the Parcel C Closing.

(b) By FrontStreet. Effective on the date hereof (in the case of (i) below), effective upon each applicable Closing (in the case of (ii) below), and effective upon the Ski Parcel Closing (in the case of (iii) below), FrontStreet shall indemnify, defend and hold harmless the Town, the Town's direct and indirect parents, subsidiaries and affiliates, and each of their respective officers, directors, shareholders, employees, members, agents, successors, transferees and assigns from and against all costs, claims and expenses (including, without limitation, reasonable attorneys' fees and disbursements):

(i) arising from or related to any breach of any representation or warranty of FrontStreet set forth in Section 5 of this Agreement;

(ii) arising from or related to any breach of any representation or warranty of FrontStreet set forth in Section 18(e) of this Agreement with respect to the applicable Premises, provided that any claims for indemnification under this subsection (ii) must be made to FrontStreet before the end of the two (2) year survival period applicable to the representations set forth in Section 18; or

(iii) arising from or relating to the FrontStreet Utilities and the FrontStreet Tie-In.

7. Defaults and Remedies. If a Party defaults hereunder, the other Party shall have such remedies as such other Party shall be entitled to at law or in equity, including but not limited to, specific performance.

8. Miscellaneous.

(a) Town Termination Rights. If the Ski Trail Closing has not occurred by the tenth anniversary of this Agreement, the Town shall have the right, exercisable at any time after such tenth anniversary, to terminate this Agreement to the extent it has not been performed as of the date of termination, provided, that the Town is not in breach of its representations, warranties, covenants or agreements contained in this Agreement in any material respect. Such termination shall be effective 30 days after the Town gives notice of termination to FrontStreet. Upon any such termination, the transactions contemplated by this Agreement shall be abandoned, and the Parties shall have no further rights or obligations with respect thereto, subject to Section 10(b).

(b) Notices. Any notice, consent or other communication given under this Agreement ("Notice") shall be in writing and shall be deemed to have been duly given (i) when delivered by hand, (ii) when sent by fax (with receipt confirmed), provided that a copy is promptly thereafter mailed in the United States by first class postage-prepaid registered or certified mail, return receipt requested, (iii) when received by the addressee, if sent by Express Mail, Federal Express, or other overnight express delivery service (receipt requested) or by such other means as the Parties may agree from time to time, or (iv) three business days after being mailed in the United States, by first class postage-prepaid registered or certified mail, return receipt requested; in each case to the appropriate addresses and fax numbers set forth below (or to such other addresses and fax numbers as a Party may designate as to itself by notice to the other Party):

If to the Town:	Town of Johnsburg P.O. Box 7 North Creek, NY 12853 Attention: William H. Thomas, Supervisor Fax: (518) 251-9991	With a copy to: J. Anthony Jordan, Esq. Town Attorney, Town of Johnsburg 4 Fisher Street Greenwich, NY 12834 Fax: (518) 692-1222
If to FrontStreet:	FrontStreet Mountain Development, LLC 31 Swift's Lane Darien, CT 06820 Attention: David C. Crikelair Fax: (203) 656-0937	With a copy to: Peter A. Kast, Esq. 2975 Westchester Avenue, Suite 415 Purchase, NY 10577 Fax: (914) 701-0808

The attorneys herein identified for the respective parties are hereby authorized to give and receive on behalf of their clients all Notices.

(c) Assignments. Except as set forth below, neither Party may assign this Agreement in whole or in part without the prior written consent of the other Party. Either Party may assign this Agreement, without consent, (i) to an affiliate of such Party, and (ii) in connection with any merger, acquisition, reorganization, sale of substantially all the assets or stock of that Party or any similar event. FrontStreet may assign Section 2, without consent, to the legal entity formed to own the hotel that is the subject of the Hotel Approval. Any attempted assignment in derogation of the foregoing shall be null and void.

(d) Integration. This Agreement constitutes the entire agreement among the Parties pertaining to the subject matter hereof and supersedes all prior agreements and understandings of the Parties in connection therewith, and no covenant, representation or condition not expressed in this Agreement shall affect, or be effective to interpret, change or restrict, the express provisions of this Agreement.

(e) Amendments. Neither this Agreement nor any provision thereof may be waived, changed or cancelled except by an instrument in writing.

(f) Parties in Interest. This Agreement shall inure to the benefit of and be binding upon the Parties and their respective successors and permitted assigns. The terms of this Agreement are not intended to confer any rights or remedies thereunder upon, and shall not be enforceable by, any person or entity other than the Parties, their successors and permitted assigns, and the persons and entities indemnified under Section 6 hereof.

(g) Governing Law. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE INTERNAL LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO THE CONFLICT OF LAWS PRINCIPLES THEREOF.

(h) Waiver. No failure by any Party to insist upon the strict performance of any covenant, agreement, term or condition thereof or to exercise any right or remedy consequent upon a breach of such or any other covenant, agreement, term or condition shall operate as a waiver of such or any other covenant, agreement, term or condition of this Agreement. No waiver shall affect or alter the remainder of this Agreement and each and every covenant, agreement, term and condition thereof shall continue in full force and effect with respect to any other then existing or subsequent breach. The rights and remedies provided by this Agreement are cumulative and the exercise of any one right or remedy by any Party shall not preclude or waive its right to exercise any or all other rights or remedies.

(i) Counterparts. This Agreement may be executed by the Parties in multiple counterparts, each of which shall be deemed an original and all of which, taken together, shall constitute one and the same instrument. All signatures need not be on the same counterpart.

(j) Severability. To the extent permitted by applicable law or regulation, each provision of this Agreement shall be considered separable and if for any reason any provision or provisions thereof are determined to be invalid and contrary to any applicable law or regulation, such invalidity shall not impair the operation of or affect those portions of this Agreement which are valid.

(k) Effectiveness of Agreement. Notwithstanding anything contained herein to the contrary, the Town shall have no rights and obligations under this Agreement until the satisfaction of all requirements of Town Law §§ 64(2), 90 and 91, including those provisions of New York state law referenced therein, as they apply to each of the conveyances of real property provided for in this Agreement. The Town shall use reasonable efforts to obtain the satisfaction of such requirements promptly after date of this Agreement.

9. Further Assurances. Each Party shall, at any time and from time to time, execute, acknowledge where appropriate and deliver such further instruments and documents and take such other action as may be reasonably requested by the other in order to carry out the intent and purpose of this Agreement.

10. Survival.

(a) Closings. The agreements, obligations, liabilities, representations or warranties of the Parties set forth in this Agreement shall not survive the Closings, except for Sections 1(c), 2(c), 3(e), 4, 5, 6, 8(b), 9, 16(f), 18(e), 19(b)(i)(B), and 20, which shall survive each applicable Closing in accordance with their terms.

(b) Termination. The agreements, obligations, liabilities, representations or warranties of the Parties set forth in this Agreement shall not survive the termination of this Agreement pursuant to Section 8(a), except for (i) those Sections that survive pursuant to Section 10(a) respecting Closings that have occurred prior to the date of termination, and (ii) Sections 4, 5, and 6, which shall all survive such termination in accordance with their terms.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the day and year first above written.

TOWN OF JOHNSBURG

By:_____
Name:
Title:

FRONTSTREET MOUNTAIN DEVELOPMENT, LLC

By:_____
Name:
Title:

RIDER 1

11. Definitions. As used in this Rider 1, the following terms shall have the following meanings:

(a) "Acquirer" means the Town with respect to the Ski Trail Parcel, and FrontStreet with respect to Parcel A, Parcel B and Parcel C, as applicable.

(b) "Closing" means each of the following, as applicable: (i) with respect to the Ski Trail Parcel and Parcel A, the Ski Trail Closing, (ii) with respect to Parcel B, the Parcel B Closing, and (iii) with respect to Parcel C, the Parcel C Closing.

(c) "Premises" means the Ski Trail Parcel, Parcel A, Parcel B and Parcel C, as applicable.

(d) "Transferor" means the Town with respect to Parcel A, Parcel B and Parcel C, and FrontStreet with respect to the Ski Trail Parcel, as applicable.

12. Premises.

(a) Ancillary Rights. The Premises shall be conveyed together with Transferor's ownership and rights, if any, to land lying in the bed of any street or highway, opened or proposed, adjoining the Premises to the center line thereof, including any right of Transferor to any unpaid award by reason of any taking by condemnation and/or for any damage to the Premises by reason of change of grade of any street or highway.

(b) Personal Property. The conveyance of the Premises shall not include fixtures or articles of personal property.

(c) Condition of Premises. Except as otherwise specifically set forth herein, Acquirer shall accept the Premises "as is," with all faults and in its condition as of the date of this Agreement, subject to reasonable normal use, wear and tear between the date of this Agreement and the Closing, without any compensation for any change in such condition by reason thereof subsequent to the date of this Agreement. Acquirer has not been induced by and has not relied upon any representation, warranty or statement, whether express or implied, made by Transferor or any agent, employee or other representative of Transferor or any other person representing or purporting to represent Transferor, which are not expressly set forth in this Agreement, whether or not any such representations, warranties or statements were made in writing or orally. Acquirer agrees to accept the Premises in the condition set forth in the first sentence of this subsection (c) and shall assume the risk of any adverse physical conditions that may not have been revealed by Acquirer's investigation of the Premises prior to the Closing, provided the same were not knowingly concealed by Transferor.

13. Title Matters.

(a) Insurable Title. Transferor shall give and Acquirer shall accept such title to the Premises as any reputable title insurance company licensed in the State of New York shall be willing to approve and insure in accordance with its standard form of title policy approved by the New York State Insurance Department, subject only to the matters provided for this Agreement.

(b) Permitted Exceptions. Each of the Premises shall be conveyed subject, in each case, to the following (the "Permitted Exceptions"):

(i) Zoning and subdivision laws and regulations, and landmark, historic or wetlands designation, provided that they are not violated by the existing buildings and improvements erected on the Premises or their use as of the date of this Agreement;

(ii) Real estate taxes that are a lien, but are not yet due and payable;

(iii) Any state of facts that a survey and/or physical inspection of the Premises may show, except such facts as render title unmarketable;

(iv) Variations between tax lot lines and the record lines of title;

(v) Any covenant, restriction, agreement, utility easement, condition, or declaration of record, if any, provided that the same do not materially interfere with the existing buildings and improvements erected on the Premises or their use as of the date of this Agreement;

(vi) The uses and restrictions on the Premises set forth in this Agreement, as applicable.

14. Title Examination.

(a) Order. Acquirer shall order an examination of title in respect of each Premises from a title company licensed or authorized to issue title insurance by the New York State Insurance Department or any agent for such title company promptly after the determination of the date of the Closing applicable to such Premises. Acquirer shall cause a copy of the foregoing and of any additions or updates thereto to be delivered to the attorney for Transferor promptly after receipt thereof.

(b) Affidavit as to Judgments, Bankruptcies, etc. If a title examination discloses judgments, bankruptcies or other returns against persons having names the same as or similar to that of Transferor, Transferor shall deliver an affidavit at the applicable Closing showing that they are not against Transferor.

15. Governmental Violations and Orders. Transferor shall comply with all notes or notices of violations of law or municipal ordinances, orders or requirements noted or issued as of the date hereof by any governmental department having authority as to lands, housing, buildings, fire, health, environmental and labor conditions affecting the Premises. The Premises shall be conveyed free of them at the applicable Closing. Transferor shall furnish Acquirer with any authorizations necessary to make the searches that could disclose these matters

16. Apportionments and Other Adjustments; Water Meter and Installment Assessments.

(a) To the extent applicable, the following shall be apportioned for each of the Premises as of midnight of the day before the day of the applicable Closing: (i) taxes, water charges and sewer rents on the basis of the fiscal period for which assessed; and (ii) fuel.

(b) If the applicable Closing shall occur before a new tax rate is fixed, the apportionment of taxes shall be upon the basis of the tax rate for the immediately preceding fiscal

period applied to the latest assessed valuation.

(c) If there is a water meter on the Premises, Transferor shall furnish a reading to a date not more than 30 days before the applicable Closing and the unfixed meter charge and sewer rent, if any, shall be apportioned on the basis of such last reading.

(d) If at the date of the applicable Closing, the Premises are affected by an assessment which is or may become payable in annual installments, and the first installment is then a lien, or has been paid, then for the purposes of this Agreement all the unpaid installments shall be considered due and shall be paid by Transferor at or prior to the applicable Closing.

(e) Payments representing the amount of the apportionments and adjustments shall be made at the applicable Closing.

(f) Any errors or omissions in computing apportionments or other adjustments at a Closing shall be corrected within a reasonable time following such Closing. This subsection shall survive such Closing.

17. Pre-Closing Covenants. During the duration of this Agreement and until the applicable Closing or termination of this Agreement, whichever is earlier, Transferor shall continue to operate and maintain the Premises in substantially the same manner as the Premises are operated and managed on the date of this Agreement.

18. Representations and Warranties Regarding the Premises. Transferor represents and warrants to Acquirer that:

(a) Transferor is the sole owner of the Premises and has the full right, power and authority to convey and transfer the same in accordance with the terms of this Agreement.

(b) There are no leases or rights of occupancy affecting the Premises.

(c) Transferor has received no notice from any city, county, state or federal authority of (i) any pending or contemplated condemnation or eminent domain proceedings affecting all or any portion of the Premises, (ii) any change or proposed change of zoning affecting all or any portion of the Premises (except in connection with APA Development Approval, Ski Lift Approval or Hotel Approval, as applicable), (iii) any pending assessment affecting all or any portion of the Premises or (iv) any violation of law or ordinance affecting all or any portion of the Premises.

(d) There is no litigation pending or threatened with respect to the use, ownership or occupancy of the Premises. Transferor shall promptly notify Acquirer of any such litigation of which Transferor becomes aware prior to the date of the applicable Closing.

(e) Except with respect to Parcel C, Transferor has not used, stored, generated, disposed of or introduced (or caused to be used, stored, generated, disposed of or introduced), nor, to the best of Transferor's knowledge, has there been used, stored, generated, disposed of or introduced by or on behalf of any party other than Transferor, any pollutant, contaminant, waste or chemical, toxic, radioactive, ignitable, corrosive, reactive or otherwise hazardous substance, waste or material or any substance, waste or material having any constituent elements displaying any of the foregoing characteristics including, without limitation, petroleum, or any by-products, fractions or derivatives thereof, asbestos or asbestos – containing materials, radon,

polychlorinated biphenyls ("PCB") and PCB – containing equipment and any substance, waste or material ("Hazardous Substances") regulated under any federal, state, county, municipal or local law, rule, regulation, judgment, order, decree, permit or governmental restriction in effect relating to the environment, human health or safety or Hazardous Substances ("Environmental Laws") on or under the Premises. To the best of Transferor's knowledge, there are no pending matters, cases or investigations by or before any governmental agencies with respect to the use, storage, generation, disposal or presence of Hazardous Substances on or under the Premises (including Parcel C). The representations and warranties of Transferor contained in Section 18(e) with respect to the Premises shall survive the Closing applicable to such Premises for a period of two (2) years from and after the date of such Closing.

19. Closing Matters.

(a) Conditions to Each Closing.

(i) Transferor. The obligation of Transferor to consummate the transactions contemplated to occur at each Closing shall be subject to the satisfaction of the following conditions precedent on and as of the date of such Closing:

(A) APA Development Approval and Ski Lift Approval in the case of the Ski Trail Closing;

(B) Hotel Approval in the case of the Parcel B Closing;

(C) all representations and warranties of Acquirer contained in Section 5, and in Section 18 concerning the Premises and the other matters that are the subject of such Closing, shall have been true in all material respects as of the date made and as of the date of such Closing, and Acquirer shall have performed and complied in all material respects with all covenants, agreements and obligations required by this Agreement to be performed or complied with by Acquirer prior to or at such Closing with respect to the transactions to occur at such Closing; and

(D) receipt by Transferor of all documents and deliveries from Acquirer as provided in Section 19(b)(ii) of this Agreement with respect to such Closing.

(ii) Acquirer. The obligation of Acquirer to consummate the transactions contemplated to occur at each Closing shall be subject to the satisfaction of the following conditions precedent on and as of the date of such Closing:

(A) APA Development Approval and Ski Lift Approval in the case of the Ski Trail Closing;

(B) Hotel Approval in the case of the Parcel B Closing;

(C) all representations and warranties of Transferor (x) contained in Section 5 and in Section 18 concerning the Premises and the other matters that are the subject of such Closing, shall have been true in all material respects as of the date made and as of the date of such Closing, and Transferor shall have performed and complied in all material respects with all covenants, agreements

and obligations required by this Agreement to be performed or complied with by Transferor prior to or at such Closing with respect to the transactions to occur at such Closing; and

(D) receipt by Acquirer of all documents and deliveries from Transferor as provided in Section 19(b)(i) of this Agreement with respect to such Closing.

(iii) Separate Closings. The completion of one Closing is not a condition to the completion of any other Closing.

(b) Actions at Each Closing.

(i) By Transferor. At each Closing, Transferor shall deliver to Acquirer the following duly-executed (and acknowledged, where required) documents and other items:

(A) a bargain and sale deed with covenants against grantor's acts, in proper statutory short form for recording, duly executed and acknowledged, so as to convey to Acquirer fee simple title to the applicable Premises, free of all encumbrances, except as otherwise herein stated; the deed shall contain a metes and bounds description of the land as insured by Acquirer's title company. The deed shall contain a covenant by Transferor as required by subd. 5 of Section 13 of the Lien Law;

(B) a wire or a certified or bank check (as required by Acquirer's Title Company) to the order of Acquirer's title company (or the applicable governmental authority) for an amount equal to all applicable real estate transfer tax due upon the delivery of the deed, and copies of any required transfer tax returns therefor executed by Transferor (the obligation to pay any additional tax or deficiency and any interest or penalties thereon shall survive such Closing);

(C) copies of any applicable bills and invoices required for the apportionments referred to in Section 16 of this Agreement for the applicable Premises;

(D) a certificate stating that Transferor is not a foreign person, which certificate shall be in the form then required by FIRPTA or a withholding certificate from the I.R.S.;

(E) any other documents or deliveries required by this Agreement for such Closing or which may be reasonably required by Acquirer's Title Company;

(F) possession of the applicable Premises, free and clear of all property and tenants and other occupants and otherwise in the condition required by this Agreement; and

(G) a certificate of Transferor confirming satisfaction of the conditions set forth in Section 19(a)(i)(C).

(ii) By Acquirer. At each Closing, Acquirer shall deliver to Transferor the following duly-executed (and acknowledged, where required) documents and other items:

(A) copies of any required transfer tax returns for the applicable Premises executed by Acquirer;

(B) any other documents or deliveries required by this Agreement for such Closing or which may be reasonably required by Acquirer's Title Company; and

(C) a certificate of Acquirer confirming satisfaction of the conditions set forth in Section 19(a)(ii)(C).

20. Costs and Expenses. Acquirer shall pay the costs of Acquirer's title search, title insurance, recording fees, and the fees of Acquirer's attorneys. Transferor shall pay all State and local transfer taxes, the costs of discharging any lien or encumbrance (other than Permitted Exceptions) that Transferor is obligated to discharge hereunder, and the fees and expenses of Transferor's attorneys. FrontStreet shall pay the costs of updating or obtaining a new survey for each of the Premises. The provisions of this Section shall survive the applicable Closing.

21. Risk of Loss. In the event of fire or other casualty loss or condemnation before any Closing, the provisions of New York General Obligation Law Section 5-1311, shall apply; provided that any rights of termination that may arise pursuant to such statute shall be limited as follows: a loss or condemnation with respect to any Premises shall not in any event give rise to the termination of this Agreement in its entirety, but only of the Closing applicable to such Premises.

22. Access. Acquirer and its authorized representatives shall have the right, at reasonable times and upon reasonable notice (by telephone or otherwise) to Transferor, to inspect the Premises before the Closing applicable thereto.

23. Acceptable Funds. All money payable under this Agreement, unless otherwise specified, shall be paid by wire transfer to one or more accounts designated by each Party.

SCHEDULE 1

Ski Trail Parcel Description

Property labeled "Trail 1", Trail 2", Trail 3", Trail 4", Trail 5", Trail 6", Trail 7", and "Trail 8" on the "Map of Survey Showing Ski Trails & Parcels A, B & C of the Lands of FrontStreet Mountain Development, LLC" dated April 25, 2005, and prepared by W.J. Rourke Associates, Licensed Land Surveyor, 10264 Saratoga Road, South Glens Falls, NY 12803", attached hereto as Exhibit V.

SCHEDULE 2

Parcel A Description

Property labeled "TO BE CONVEYED FROM THE TOWN OF JOHNSBURG, PARCEL A, 4.147 ± AC." on the "Map of Survey Showing Ski Trails & Parcels A, B & C of the Lands of FrontStreet Mountain Development, LLC" dated April 25, 2005, and prepared by W.J. Rourke Associates, Licensed Land Surveyor, 10264 Saratoga Road, South Glens Falls, NY 12803", attached hereto as Exhibit V.

SCHEDULE 3

Parcel B Description

Property labeled "TO BE CONVEYED FROM THE TOWN OF JOHNSBURG, PARCEL B, 4.400 ± AC." on the "Map of Survey Showing Ski Trails & Parcels A, B & C of the Lands of FrontStreet Mountain Development, LLC" dated April 25, 2005, and prepared by W.J. Rourke Associates, Licensed Land Surveyor, 10264 Saratoga Road, South Glens Falls, NY 12803", attached hereto as Exhibit V.

SCHEDULE 4

Parcel C Description

Property labeled "TO BE CONVEYED FROM THE TOWN OF JOHNSBURG, PARCEL C, 8.206 ± AC.." on the "Map of Survey Showing Ski Trails & Parcels A, B & C of the Lands of FrontStreet Mountain Development, LLC" dated April 25, 2005, and prepared by W.J. Rourke Associates, Licensed Land Surveyor, 10264 Saratoga Road, South Glens Falls, NY 12803", attached hereto as Exhibit V.

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **FAX:** (518) 402-8925
Website: www.dec.state.ny.

Erin M. Crotty
Commissioner

RECEIVED
MAY 12 2005
The LA Group

May 11, 2005

Tracy Miller
the LA Group
40 Long Alley
Saratoga Springs, NY 12866

Dear Mr. Miller:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the proposed Trail Expansion and Ski Area Improvements for Gore Mountain UMP Amendment - 4,067 acre site - area as indicated on the map you provided, located in the Town of North Creek, Warren County.

Enclosed is a report of rare or state-listed animals and plants, significant natural communities, and other significant habitats, which our databases indicate occur, or may occur, on your site or in the immediate vicinity of your site. The information contained in this report is considered sensitive and may not be released to the public without permission from the New York Natural Heritage Program.

The presence of rare species may result in this project requiring additional permits, permit conditions, or review. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environment impact assessment.

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

Sincerely,
Heidi Krahling
Heidi J. Krahling, Information Services
NY Natural Heritage Program

Encs.
cc: Reg. 5, Wildlife Mgr.
Reg. 5, Fisheries Mgr.
Peter Nye, Endangered Species Unit, Albany

NYNHP SITE #687

Natural Heritage Report on Rare Species and Ecological Communities

NY Natural Heritage Program, NYS DEC, 625 Broadway, 5th Floor, Albany,
NY 12233-4757
(518) 402-8935

* Location displayed on map

~This report contains **SENSITIVE** information that may not be released to the public without permission from the NY Natural Heritage Program.
~Refer to the User's Guide for explanations of codes, ranks and fields.
~Location maps for certain species and communities may not be provided if 1) the species is vulnerable to disturbance, 2) the location and/or extent is not precisely known, and/or 3) the location and/or extent is too large to display.

DRAGONFLIES
and
DAMSELFLIES

Ophiogomphus anomalus — Office Use

Extra-striped Snaketail

NY Legal Status:	Unlisted, Special Concern	**NYS Rank:**	; Critically imperiled	9207
		Global Rank:	; Vulnerable	
Last Report:	**	**EO Rank:**	**	ESU
County:	Warren, Saratoga			
Town:				
Location:	Upper Hudson River			
Directions:	Exuviae have been found along a stretch of the Hudson River which extends from approximately 1 mile north of Lake Luzerne (reached by River Road on the east side of the river at Lake Luzerne) north to near where Raymond Brook enters the Hudson River appr			
General Quality and Habitat:	**For information on the population at this location and management considerations, please contact the NYS DEC Regional Wildlife Manager or NYS DEC Endangered Species Unit at 518-402-8859.			

COMMUNITIES

Vernal pool — Office Use

This occurrence of Vernal Pool is considered significant from a statewide perspective by the NY Natural Heritage Program. It is either an occurrence of a community type that is rare in the state or a high quality example of a more common community type. By meeting specific, documented significance criteria, the NY Natural Heritage Program considers this occurrence to have high ecological and conservation value.

NY Legal Status:	Unlisted	**NYS Rank:**	;	4559
		Global Rank:	;	
Last Report:	1997-05-07			
County:	Warren			
Town:				
Location:	River Road North Creek			
Directions:	East of Village of North Creek, just northeast of River Road and south of Hudson River. About 0.7 miles ENE of the junction of Route 28 and Route 28N.			
General Quality and Habitat:	Very large, essentially undisturbed, closely linked complex of pools with excellent faunal diversity. In an intact landscape with scattered displacements. Large vernally flooded pool complex in a small swamp on a sandy terrace well elevated above the Hudson River in the eastern Adirondack foothills. The pool is bounded by the hummocks of a northern white cedar swamp which overlaps with the community. Verysmall patches of shrub swamp are associated. The swamp is surrounded by upland forests in a small roadless landscape block.			

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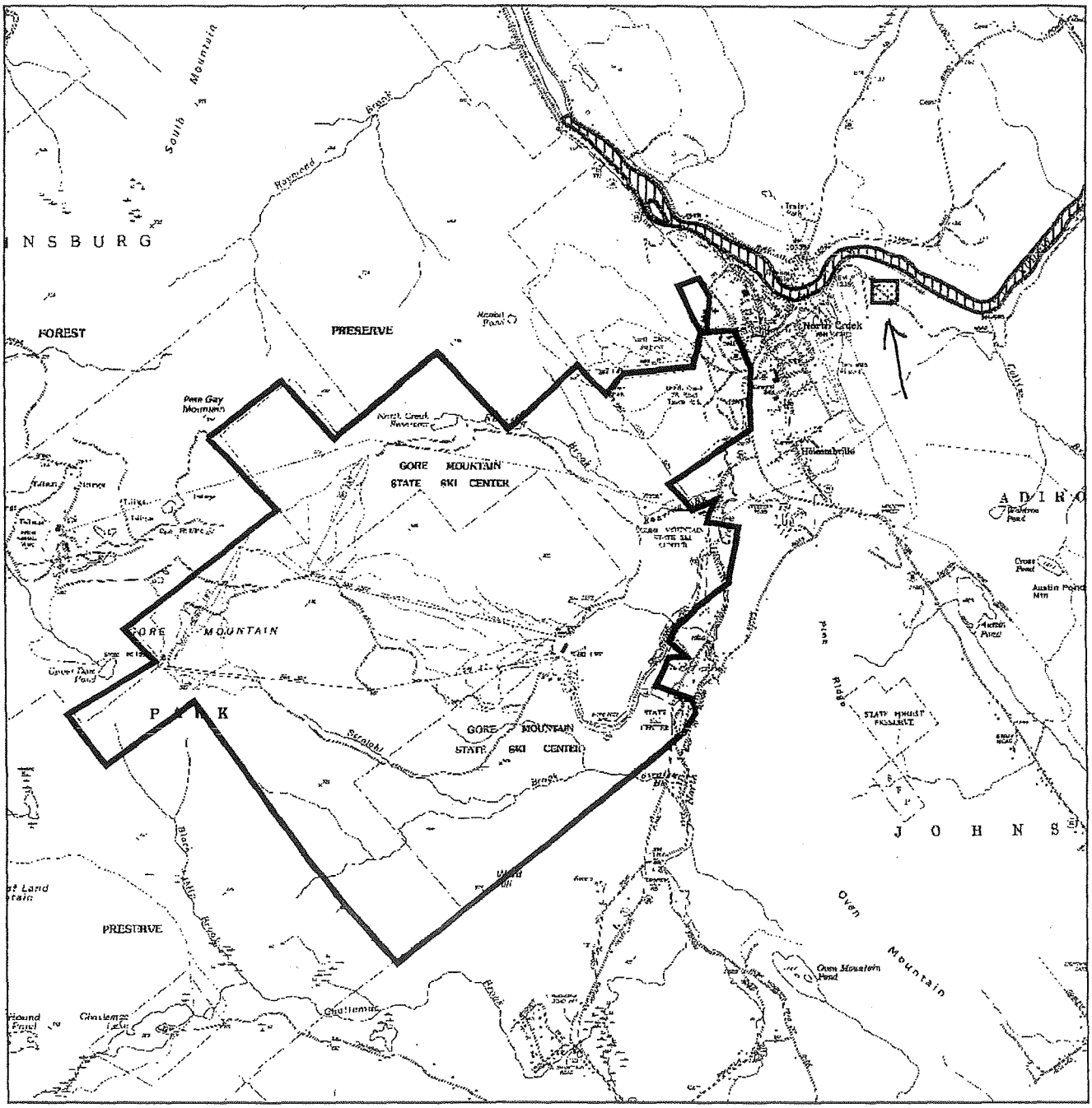
2 Records Processed

Natural Heritage Map of Rare Species and Ecological Communities

Prepared May 3, 2005 by NY Natural Heritage Program, NYS DEC, Albany, New York



PROJECT SITE (NYNHP SITE #687)

New York Natural Heritage Progam Database Records*

- Plant
- Animal
- Animal Concentration Area
- Community

Scale: 1:50000

0.5 0 0.5 Miles

N

*** The locations that are displayed are considered sensitive and cannot be released to the public without permission. We do not provide map locations for all records. Please see report for details.**

USERS GUIDE TO NY NATURAL HERITAGE DATA

New York Natural Heritage Program, 625 Broadway, 5th Floor, Albany, NY 12233-4757 phone: (518) 402-8935

NATURAL HERITAGE PROGRAM: The NY Natural Heritage Program is a partnership between the NYS Department of Environmental Conservation (NYS DEC) and The Nature Conservancy. Our mission is to enable and enhance conservation of rare animals, rare plants, and significant communities. We accomplish this mission by combining thorough field inventories, scientific analyses, expert interpretation, and the most comprehensive database on New York's distinctive biodiversity to deliver the highest quality information for natural resource planning, protection, and management.

DATA SENSITIVITY: The data provided in the report are ecologically sensitive and should be treated in a sensitive manner. The report is for your in-house use and should <u>not</u> be released, distributed or incorporated in a public document without prior permission from the Natural Heritage Program.

EO RANK: A letter code for the quality of the occurrence of the rare species or significant natural community, based on population size or area, condition, and landscape context.

A-E = Extant: A=Excellent, B=Good, C=Fair, D=Poor, E=Extant but with insufficient data to assign a rank of A-D.
F = Failed to find. Did not locate species during a limited search, but habitat is still there and further field work is justified.
H = Historical. Historical occurrence without any recent field information.
X = Extirpated. Field/other data indicates element/habitat is destroyed and the element no longer exists at this location.
U = Extant/Historical status uncertain.
Blank = Not assigned.

LAST REPORT: The date that the rare species or significant natural community was last observed at this location, as documented in the Natural Heritage databases. The format is most often YYYY-MM-DD.

NY LEGAL STATUS – Animals:

Categories of Endangered and Threatened species are defined in New York State Environmental Conservation Law section 11-0535. Endangered, Threatened, and Special Concern species are listed in regulation 6NYCRR 182.5.

E - **Endangered Species**: any species which meet one of the following criteria:
- Any native species in imminent danger of extirpation or extinction in New York.
- Any species listed as endangered by the United States Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.

T - **Threatened Species**: any species which meet one of the following criteria:
- Any native species likely to become an endangered species within the foreseeable future in NY.
- Any species listed as threatened by the U.S. Department of the Interior, as enumerated in the Code of the Federal Regulations 50 CFR 17.11.

SC - **Special Concern Species**: those species which are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York. Unlike the first two categories, species of special concern receive no additional legal protection under Environmental Conservation Law section 11-0535 (Endangered and Threatened Species).

P - **Protected Wildlife** (defined in Environmental Conservation Law section 11-0103): wild game, protected wild birds, and endangered species of wildlife.

U - **Unprotected** (defined in Environmental Conservation Law section 11-0103): the species may be taken at any time without limit; however a license to take may be required.

G - **Game** (defined in Environmental Conservation Law section 11-0103): any of a variety of big game or small game species as stated in the Environmental Conservation Law; many normally have an open season for at least part of the year, and are protected at other times.

NY LEGAL STATUS – Plants:

The following categories are defined in regulation 6NYCRR part 193.3 and apply to NYS Environmental Conservation Law section 9- 1503.

E - **Endangered Species**: listed species are those with:
- 5 or fewer extant sites, or
- fewer than 1,000 individuals, or
- restricted to fewer than 4 U.S.G.S. 7 ½ minute topographical maps, or
- species listed as endangered by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

T - **Threatened**: listed species are those with:
- 6 to fewer than 20 extant sites, or
- 1,000 to fewer than 3,000 individuals, or
- restricted to not less than 4 or more than 7 U.S.G.S. 7 and ½ minute topographical maps, or
- listed as threatened by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

R - **Rare**: listed species have:
- 20 to 35 extant sites, or
- 3,000 to 5,000 individuals statewide.

continued on back

V - Exploitably vulnerable: listed species are likely to become threatened in the near future throughout all or a significant portion of their range within the state if causal factors continue unchecked.
U - Unprotected; no state status.

FEDERAL STATUS (PLANTS and ANIMALS): The categories of federal status are defined by the United States Department of the Interior as part of the 1974 Endangered Species Act (see Code of Federal Regulations 50 CFR 17). The species listed under this law are enumerated in the Federal Register vol. 50, no. 188, pp. 39526 - 39527. The codes below without parentheses are those used in the Federal Register. The codes below in parentheses are created by Heritage to deal with species which have different listings in different parts of their range, and/or different listings for different subspecies or varieties.

(blank) = No Federal Endangered Species Act status.
LE = The element is formally listed as endangered.
LT = The element is formally listed as threatened.
PE = The element is proposed as endangered.
PT = The element is proposed as threatened.
C= The element is a candidate for listing.
LE,LT = The species is formally listed as endangered in part of its range, and as threatened in the other part; or, one or more subspecies or varieties is listed as endangered, and the others are listed as threatened.
LT,PDL = Populations of the species in New York are formally listed as threatened, and proposed for delisting.
(LE) = If the element is a full species, all subspecies or varieties are listed as endangered; if the element is a subspecies, the full species is listed as endangered.
LT,T(S/A) = One or more subspecies or populations of the species is formally listed as threatened, and the others are treated as threatened because of similarity of appearance to the listed threatened subspecies or populations.
PS = Partial status: the species is listed in parts of its range and not in others; or, one or more subspecies or varieties is listed, while the others are not listed.

GLOBAL AND STATE RANKS (animals, plants, ecological communities and others): Each element has a global and state rank as determined by the NY Natural Heritage Program. These ranks carry no legal weight. The global rank reflects the rarity of the element throughout the world and the state rank reflects the rarity within New York State. Infraspecific taxa are also assigned a taxon rank to reflect the infraspecific taxon's rank throughout the world. ? = Indicates a question exists about the rank. Range ranks, e.g. S1S2, indicate not enough information is available to distinguish between two ranks.

GLOBAL RANK:
G1 - Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or very few remaining acres, or miles of stream) or especially vulnerable to extinction because of some factor of its biology.
G2 - Imperiled globally because of rarity (6 - 20 occurrences, or few remaining acres, or miles of stream) or very vulnerable to extinction throughout its range because of other factors.
G3 - Either rare and local throughout its range (21 to 100 occurrences), or found locally (even abundantly at some of its locations) in a restricted range (e.g. a physiographic region), or vulnerable to extinction throughout its range because of other factors.
G4 - Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
G5 - Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
GH - Historically known, with the expectation that it might be rediscovered.
GX - Species believed to be extinct.

NYS RANK:
S1 - Typically 5 or fewer occurrences, very few remaining individuals, acres, or miles of stream, or some factor of its biology making it especially vulnerable in New York State.
S2 - Typically 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State.
S3 - Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.
S4 - Apparently secure in New York State.
S5 - Demonstrably secure in New York State.
SH - Historically known from New York State, but not seen in the past 15 years.
SX - Apparently extirpated from New York State.
SZ - Present in New York State only as a transient migrant.

SxB and SxN, where Sx is one of the codes above, are used for migratory animals, and refer to the rarity within New York State of the breeding (B)populations and the non-breeding populations (N), respectively, of the species.

TAXON (T) RANK: The T-ranks (T1 - T5) are defined the same way as the Global ranks (G1 - G5), but the T-rank refers only to the rarity of the subspecific taxon.
T1 through T5 - See Global Rank definitions above
Q - Indicates a question exists whether or not the taxon is a good taxonomic entity.

APPENDIX 3

VISUAL ANALYSIS

1. VISUAL RESOURCE INVENTORY & IMPACT ASSESSEMENT

1.1 METHODOLOGY

The following is a discussion of the visual resource inventory and impact assessment performed for the new actions proposed in the 2005 Gore Mountain Ski Center UMP amendment (the project). The inventory was conducted in April and May 2005 from surrounding roadways and other public vantage points. The inventory includes identification of viewpoints within a five-mile radius from which the project may be visible, as well as viewshed analyses, and impact assessments for representative viewpoints.

Visual impact is assessed in terms of the anticipated change in visual resources, including whether there would be a change in character or quality of the view with respect to significant scenic and aesthetic resources.

1.2 POTENTIAL IMPACTS

The proposed project is located in the Town of Johnsburg, Warren County, New York, and is entirely within the Adirondack Park. Much of the surrounding area is heavily wooded and sparsely developed to undeveloped. The ski area is partially visible from local roadways: clearly at times, but frequently filtered by topography and mature trees.

1.2.1 Regional and Local Landscape

Landscape character is largely determined by the topography, land use, vegetation and water features that contribute to area views. In terms of climatic, geological, ecological, and spatial characteristics, the Adirondack Park can be considered a single regional landscape, and thus the study area is entirely within this single regional landscape.

The Gore Mountain Ski Center land is classified under the Adirondack Park State Land Master Plan as an "Intensive Use Area." The Plan provides guidance so that recreational development in Intensive Use Areas remains in a setting and scale in harmony with the relatively wild and undeveloped character of the Adirondack Park.

1.2.2 NYSDEC Visual Policy Resource Inventory

This section addresses an inventory of visual resources located within the project study area (i.e. within a five-mile radius of the project site) in accordance with the NYSDEC Visual Resources Assessment Policy (NYS DEC Program Policy DEP-00-2). See Figure 1, "Zone of Potential Visibility with Vegetation."

1) *A property on or eligible for inclusion in the National or State Register of Historic Places*

There are two National Register Sites located within the project study area. These sites are:

- The Adirondack Forest Preserve: the project site is located entirely within the Preserve.
- The North Creek Railroad Depot Museum, Railroad Place, North Creek: located approximately one to two miles northeast of the project site.

2) *State Parks*

The project site is located entirely within New York State's Adirondack Park.

3) *Urban Cultural Parks*

[The State Heritage Areas program has replaced the Urban Cultural Parks program.]

There are no State Heritage Areas located within the project study area.

4) *The State Forest Preserve*

The project site is located entirely within the Adirondack Park Forest Preserve. Much of the surrounding lands to the north and west are also within the Forest Preserve. The ski area is bordered to the north by state lands classified as "Wild Forest" under the Adirondack Park State Land Use Master Plan. The Siamese Ponds Wilderness area adjoins the property to the west. Within the Forest Preserve, the project site is located within a State designated "intensive use area."

5) *National Wildlife Refuges, State Game Refuges, or State Wildlife Management Areas*

No such areas are located with the project study area.

6) *National Natural Landmarks*

There are no National Natural Landmarks located within the project study area.

7) *The National Park System, Recreation Areas, Seashores, Forests*

There are no National Park System recreation areas, seashores, or forest within the project study area.

8) *Rivers designated as National or State Wild, Scenic or Recreational*

The Hudson River is a State designated recreational river within the study area. The river is designated as recreational from approximately six mile upgradient of the mouth of North Creek downgradient to Lake Luzerne.

9) *A site, area, lake, reservoir or highway designated or eligible for designation as scenic*

The Central Adirondack Trail (Rt. 28) and the Roosevelt-Marcy By-way (including the North Creek Railroad Depot Museum) are located within the study area.

10) *Scenic Areas of Statewide Significance*

No Scenic Areas of Statewide Significance (SASS) are located within the project study area. New York State's six SASS areas are located within the Hudson Valley Region of southeastern NY.

11) *A State or federally designated trail, or one proposed for designation*

There are New York State DEC hiking trails throughout the Adirondack Park, including trails within the study area. The Schaefer Trail is a 4.5-mile long trail that loops around the ski center at Gore Mountain, making use of some of the ski trails, as it climbs to the mountain's summit. The Trail crisscrosses parts of the project site.

As part of the Vanderwacker Mountain Wild Forest Final Unit Management Plan, NYSDEC has proposed construction of a hiking trail to Moxham Mountain. Moxham Mountain is located approximately four miles to the north/northeast of the ski area. Its southern face, looking toward Gore Mountain, consists of steep cliffs and an exfoliated dome. The ski trails on the northern portion of the existing ski area, as well as the proposed ski trails on the northern and eastern expansion areas, will be visible from the summit of Moxham Mountain on clear days.

12) *Adirondack Park Scenic Vistas*

There is one scenic vista located within the project study area. It is located on Peaceful Valley Road, to the north of the crossroads at Sodom. The project site, however, is not visible from the scenic vista point- the view is of the peaks to the north/northeast, and the project is located to the west.

13) *State Nature and Historic Preserve Areas*

There are no State Nature or Historic Preserve Areas located within the project study area.

14) *Palisades Park*

Palisades Park is located in southeastern New York State, far outside the project area.

15) *Bond Act Properties purchased under Exceptional Scenic Beauty or Open Space category*

There are no Bond Act Properties purchased under Exceptional Scenic Beauty or Open Space category within the project area.

1.2.3 Additional Visual Resources

Table 1 lists the visual resources identified above as part of NYSDEC's Visual Resources Assessment policy, as well as listing visual resources that were identified as part of the overall visual impact assessment.

TABLE 1. Visual Resources and Potential Viewpoints within the Study Area

Viewpoint ID #	Description	Land Use	Significance	Viewers	Potential Visibility	Selected Viewpoint
1	Johnsburg Central School	Institutional		Local	Trails and lift equip.	Simulation
2	Junction 28N & Main St., North Creek	Business/ residential		Local/ Recreation/ Motorist	Trails and lift equip.	
3	North Creek Cemetery	Institutional		Local	Trails and lift equip.	
4	Rt. 28, north of Junction of 28 & 28N	Highway corridor		Local/ Motorist	Trails and lift equip.	
5	North Creek Railroad Station Complex	Recreation	NRHP	Local/ Recreation	Trails and lift equip.	
6	Ski Bowl Complex	Recreation		Local/ Recreation	Trails and lift equip.	
7	Roadside, Main St., south of Holcombville	Residential		Local/ Motorist	Trails and lift equip.	
8	Union Cemetery	Institutional		Local	Trails and lift equip.	
9	Austin Pond	Residential/ Recreation		Local/ Recreation	Trails and lift equip.	
10	Windover Lake	Recreation		Local/ Recreation/ Motorist	Trails and lift equip.	
11 and 11a	*The Summit at Gore Mountain*	Residential		Residential	Trails and lift equip.	
12	Rt 28N, approaching from north toward North Creek	Highway Corridor		Motorist/ Local	Trails and lift equip. (Sporadic views)	
13	Rt 28N, bridge over Hudson into North Creek	Highway		Motorist/ Local/ possibly from river?	Some lift equip., possibly some trails	Simulation
14	Rt 28, approaching from south into North Creek	Highway Corridor	Scenic By-way	Motorist Local	Trails and lift equip.	Simulation
**	Adirondack Forest Preserve		NRHP	Recreation/ Local/ Motorist		

NRHP- National Register Historic Places

1.2.4 Viewpoint Selection Process

The viewpoint selection process included: 1) identification of existing visual resources within the five-mile radius study area surrounding the project site; 2) determination of potential project visibility from each location identified; and 3) evaluation of project visibility for sensitive viewing areas in the project study area in accordance with the NYSDEC visual impact assessment policy.

A field visit was conducted on April 19, 2005 to assist in the determination of potential project visibility from the visual resources identified. Prior to the field visit, three tethered weather balloons were installed above the tree line at pre-selected locations for landscape orientation and viewshed modeling identification purposes. Photographs were taken to document the results of the field visit. Follow up visits (without balloons) were conducted on April 29, 2005 and May 3, 2005 to document additional viewpoints. Selected photos were later used to create photo simulations of the proposed conditions.

1.2.5 Description of Selected Viewpoints

A total of fourteen viewpoints were selected for visual assessment. See Figure 2, "Photo Location Map." These viewpoints provide a comprehensive visual impact assessment from locations near and further removed from the project site, as well as from north, south, and east of the project (the project will not be visible from the west side of the study area, due to topography). Table 1 provides a list of all the inventoried visual resources and potential viewpoints, and indicates land use, scenic or historic significance (if any), viewer group, and extent of potential project visibility. The three viewpoints selected for project simulation are noted on Table 1, and their locations are shown on Figure 2.

1.2.6 Assessment

Location 1 Johnsburg Central School: West side of Main Street; south of village center; located on hill above Main Street. Taken from school parking lot.

GPS coordinates

04/19/05 Visual Survey
N 43 41.581
W0 73 59.050

04/29/05 Visual Survey
N 43 41.596
W0 73 59.060

Balloons A and C were visible from this location. Both balloons were visible with the naked eye, but visibility was significantly increased with the use of binoculars.

Views

Near View	School parking lot and fields.
Middle View	Across school fields to line of pine trees at far edge of property.
Distant View	Gore Mountain ski center, eastern slopes of mountain. No current trails or trail cuts are visible. Tops of lift equipment are visible.

Location 2 Junction of 28N and Main Street, hamlet of North Creek: Northeast corner, looking west; across from Broderick Realty; in front of white house.

GPS coordinates 04/19/05 Visual Survey
N 43 41.882
W0 73 59.142

Balloons A and C were visible to the naked eye, particularly Balloon C. Visibility of Balloon A increased with the use of binoculars.

Views

Near View	Main Street and Rt. 28N up to Rte 28 intersection.
Middle View	Uphill to Rt. 28, Pine trees across Rte 28.
Distant View	Mountain ridge and eastern slopes of project site.

Location 3 Cemetery: East side of Main Street; on hill; across street from outlet of small road onto Main Street.

GPS coordinates 04/19/05 Visual Survey
N 43 41.762
WO 73 59.109

Balloons A and C were visible to the naked eye. Visibility increased with the use of binoculars.

Views

Near View	Cemetery and small valley across Main Street; house across street; pine and leafless deciduous trees.
Middle View	Beginning of slope up to Rt. 28.
Distant View	Slope and ridgeline of ski mountain.

Location 4 Rt. 28, north of junction of 28 & 28N.

GPS coordinates 04/19/05 Visual Survey
N 43 41.904
W0 73 59.348

Only Balloon C was visible from this location, possibly because the trees on the west side of Rt. 28 blocked view of Balloon A. Balloon C was clearly visible to the naked eye.

Views

Near View	Rt. 28 and field on west side of road; chain link fence on western edge of field; mature trees to the left of the field of view.
Middle View	Dense line of conifer trees across fields.
Distant View	Ridge where proposed project area will be located, with Balloon C clearly visible at top.

Location 5 North Creek Railroad Museum & Depot

GPS coordinates 04/19/05 Visual Survey
N 43 42.162
W0 73 59.338

The only balloon visible from this location was Balloon C. The railway depot is located in a slight depression, on the northern edge of the hamlet center.

Views

Near View	Railway museum driveway up to Main Street; surrounding outbuildings; Main Street.
Middle View	Sand pit across street, trees behind sand pit, hamlet buildings (residential, some commercial).
Distant View	Ridge where proposed ski center will be located.

Location 6 Ski Bowl complex: Route 28; western side; access road, just within entrance.

GPS coordinates 04/19/05 Visual Survey
N 43 41.640
W0 73 59.370

The only balloon visible from this location was Balloon A. Balloon C would have likely been visible if it had not popped.

Views

Near View	Chain link fence; field construction zone (sand piles).
Middle View	Small ski bowl and slope area, still partially snow covered; many dense tree stands.
Distant View	Ridge up to main mountain area.

Location 7 Main Street, south of Holcombville: roadside, approximately 1000 feet east of Rt. 28.

GPS coordinates 04/19/05 Visual Survey
N 43 41.167
W0 73. 58.885

Balloon A was faintly visible to the naked eye. Visibility improved significantly with the use of binoculars.

Views

Near View	Street in immediate foreground; slight but steep slope rising on western side of the road; large pine tree on western side of road.
Middle View	Line of birch trees.
Distant View	Ski area: trail cuts (some with snow) and lift equipment.

Location 8 Union Cemetery (Holcombville). West side of Main Street; adjacent to W. Holcomb Street. Top of cemetery slope, to front of west-facing ridge.

GPS coordinates 04/19/05 Visual Survey
N 43 41.313
W0 73 59.056

Balloon A was faintly visible to the naked eye; sunlight angle may have negatively affected visibility. The balloon was clearly visible with binoculars.

Views

Near View	Cemetery; pine and deciduous trees.
Middle View	Valley toward Rt. 28.
Distant View	Ridge and slopes where proposed project area is located.

Location 9 Austin Pond: east side of pond; along dirt road; at a shoreline clearing about 2000 feet in from Rt. 28.

GPS coordinates Not recorded.

Balloon A was visible to the naked eye, and significantly more visible with binoculars.

Views

Near View	Austin pond; opposite shore with small cabin; conifer and deciduous trees.
Middle View	Rt. 28 across the ponds; dense conifer and deciduous woods on opposite side of Rt. 28.
Distant View	Mountain slopes; ridgelines and peaks.

Location 10 Windover Lake: Route 8; roadside pull off; shoreline clearing.

GPS coordinates 04/19/05 Visual Survey
N 43 37.841
W0 74 00.592

No balloons were visible from this location, despite the expectation that Balloon C would be visible.

Views

Near View	Grassy clearing on shore; water.
Middle View	Densely forested area across lake; Ward Hill is dominant feature on mid-right.
Distant View	Western and eastern peaks of current ski center; trail cuts, lift equipment and utility cuts; cell tower on western peak.

Location 11 *The Summit at Gore Mountain*: Off of Rt. 28; Summit Ridge Road across from Buildings M & N parking lot; to immediate right of lamppost and grill.

GPS Coordinates Visual Survey 04/29/05
N 43 41.010
W0 73 58.984

Views

Near View	Condo/townhouse roofs.
Middle View	Valley across to Gore Mountain; blue water tank.
Distant View	Slopes of Gore; power line cut and top left trail cut (still has some snow).

Location 11a *The Summit at Gore Mountain*: Entranceway, immediately before pulling on to Rt. 28.

GPS Coordinates Visual Survey 04/29/05
N 43 41.066
WO 73 59.017

Views

Near View	Lower visibility than at Location 11. Mostly condo/townhouse roofs and trees.
Middle View	Middle ground blocked by buildings and roofs.
Distant View	Narrow sliver of ridgeline visible in background.

Location 12 Route 28N: Roadside; 1.2 miles south of Essex County Line; 0.7 miles north of Cobble Creek Road.

GPS Coordinates Visual Survey 05/03/05
N 43 44.283
W0 73 57.922

Views

Near View	Field that dips into shallow valley; grasses and shrubs; sand pit to the south.
Middle View	Forest- mixed (deciduous and conifer).
Distant View	Gore mountain: upper slopes and peaks; current higher elevation trails visible; project area somewhat visible.

Location 13 Route 28N: Bridge over Hudson River, at north entrance to Hamlet of North Creek.

GPS Coordinates Visual Survey 05/03/05
N 43 42.023
W0 73 58.980

Views

Near View	Hudson River; railroad tracks on south bank.
Middle View	Houses; trees.
Distant View	Gore mountain; ridgeline; project area

Location 14 Route 28: Roadside; across from *The Summit at Gore Mountain* entranceway; southeastern approach to North Creek.

GPS Coordinates Visual Survey 05/03/05
N 43 41.084
W0 73 59.021

Views

Near View	Route 28; valley across road.
Middle View	Route 28; valley across road; downward slope and curve of road.
Distant View	Current ski area, project area; power line cut; distant peak.

1.2.7 Visual Impact Assessment Summary

Visual impact is assessed in terms of the anticipated change in visual resources, including whether there would be a change in character or quality of the view with respect to significant scenic and aesthetic resources.

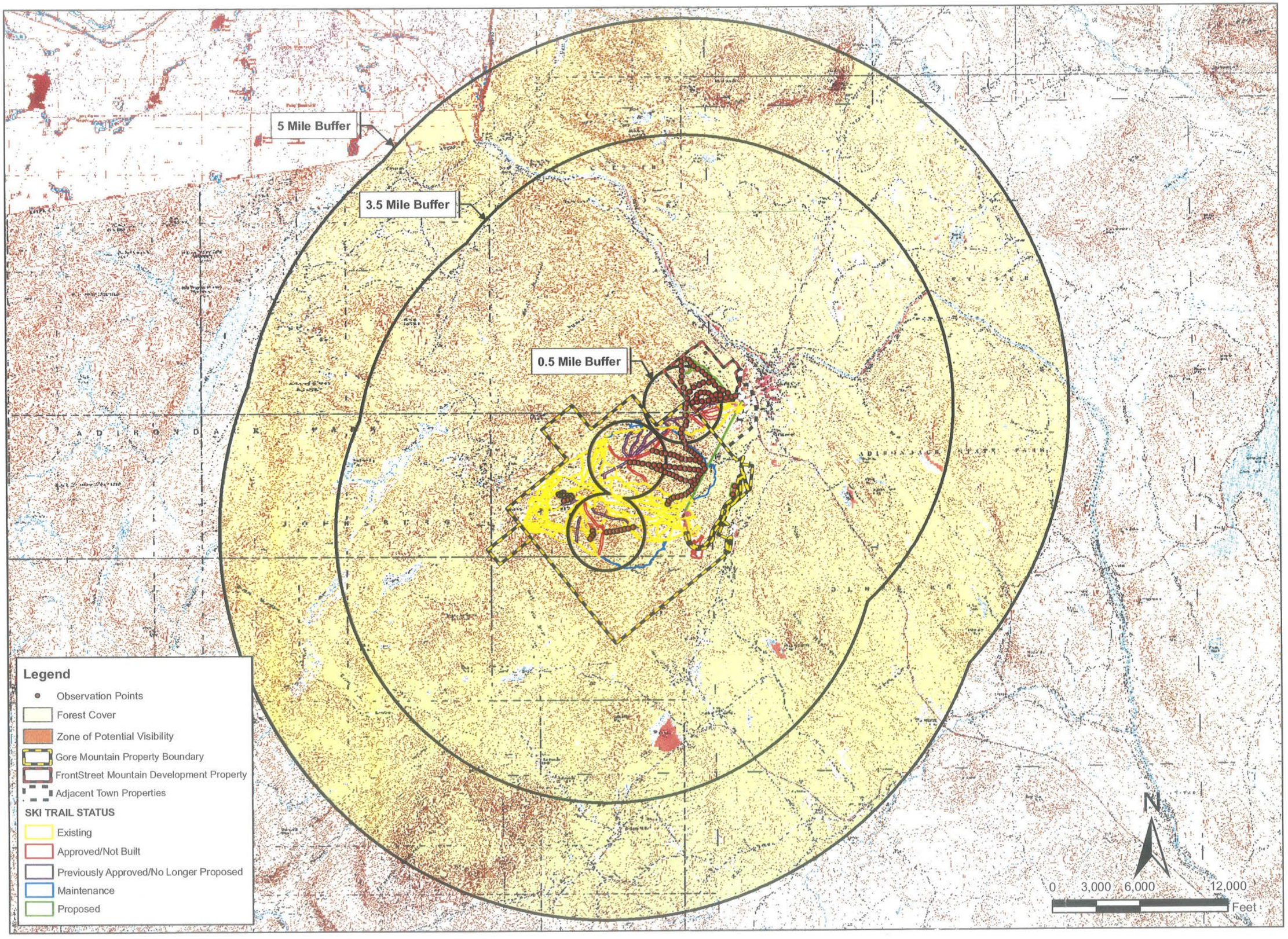
In general, views of the Gore Mountain Ski Area are limited primarily to its southern and eastern exposures. South and Pete Gay Mountains block the views of the ski area from the north and west to large degree.

The ski area is partially visible from local roadways: clearly at times, but frequently filtered by topography and mature trees. The views of Gore Mountain from the south are limited primarily to NY Route 28 just south of Weavertown, and then again near Holcombville; a number of local roadways including Durkin Road, Oven Mountain Road, and Peaceful Valley Road (County Route 29); and sections of NY Route 8, between Weavertown and Bakers Mills. The ski area is also visible from Route 28N, heading south from Olmstedville toward North Creek.

The overall appearance of the proposed Gore Mountain Ski Center is simulated in Figures, 3a and b, 4a and b and 5a and b. The Figures simulate the visual characteristics of the existing conditions and of the proposed project as seen from:

- Route 28 across from *The Summit at Gore Mountain* entranceway, approaching North Creek from the southeast and looking north (Figures 3a and 3b);
- The Route 28N bridge over the Hudson River, approaching North Creek from the north and looking southwest (Figures 4a and 4b); and
- The Johnsburg Central School athletic fields, looking west/southwest (Figures 5a and 5b).

Trail cuts and new slopes will be visible from these locations, however, the improvements to the Gore Mountain Ski Center represent a consolidation of visual impacts occurring in an area historically, and currently, used for alpine skiing and other winter sports. As a result visual resources will not be negatively impacted.



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GORE MOUNTAIN 2005 UMP AMENDMENT

Zone of Potential Visibility with Vegetation

Project: 00030
11/15/05

Figure: 1

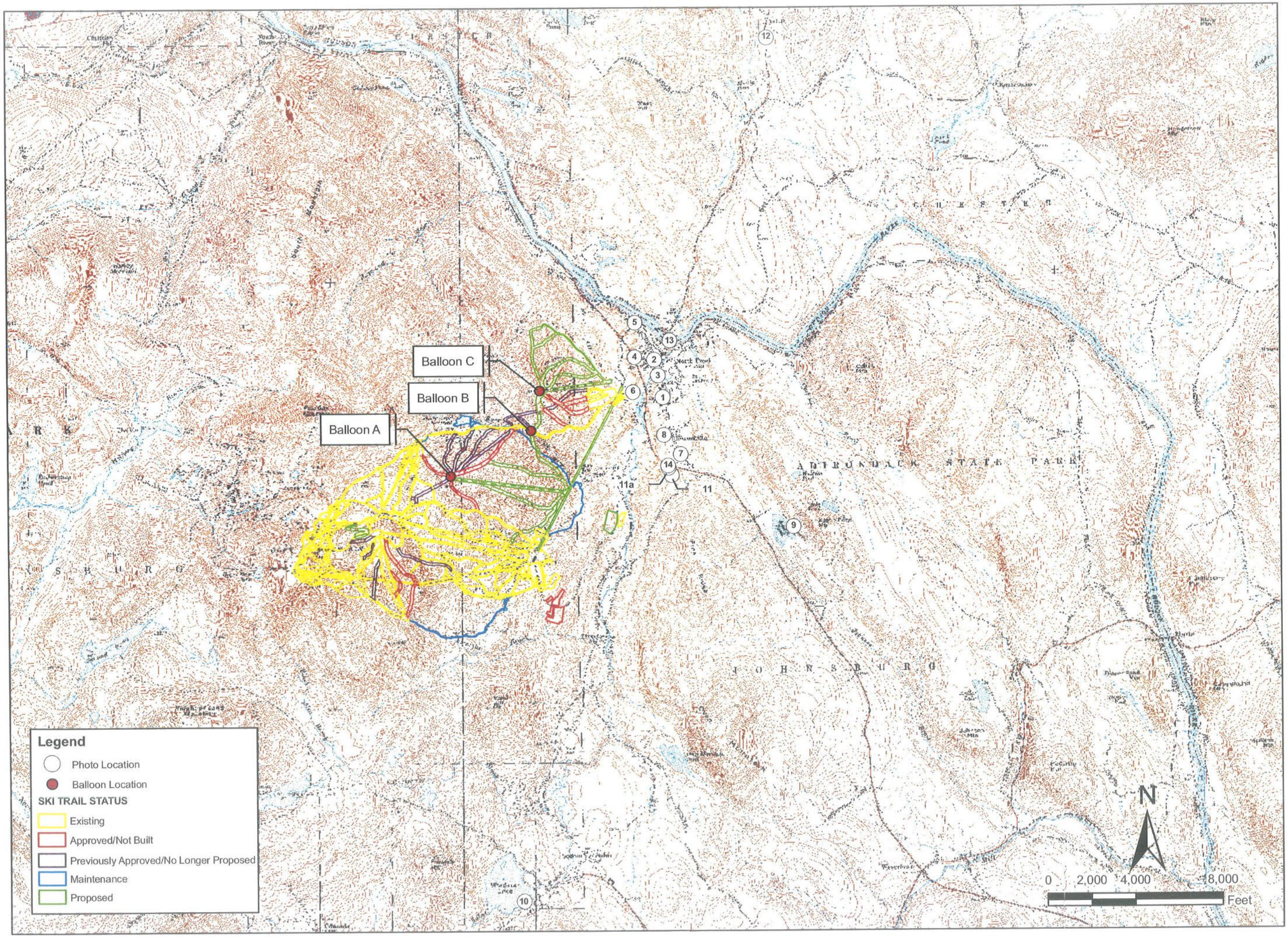

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Photo Location Map

Project: 05037
Date: 11/15/05

Figure: 2

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View From Rt. 28

Wireframe

Project: 00030
Date: 5/25/05

Figure: 3a

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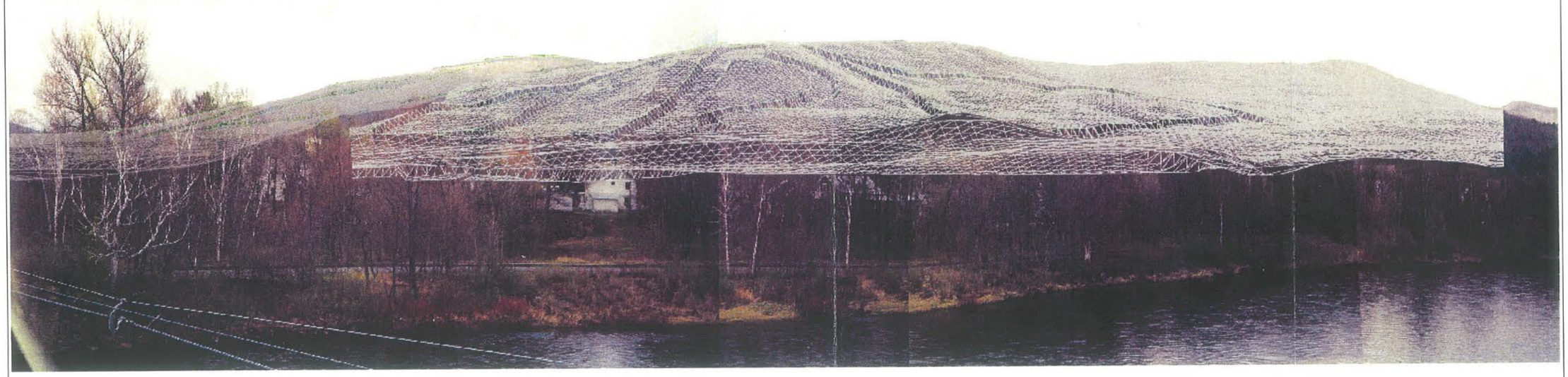
View From Rt. 28

Rendering

Project: 00030
Date: 5/25/05

Figure: 3b



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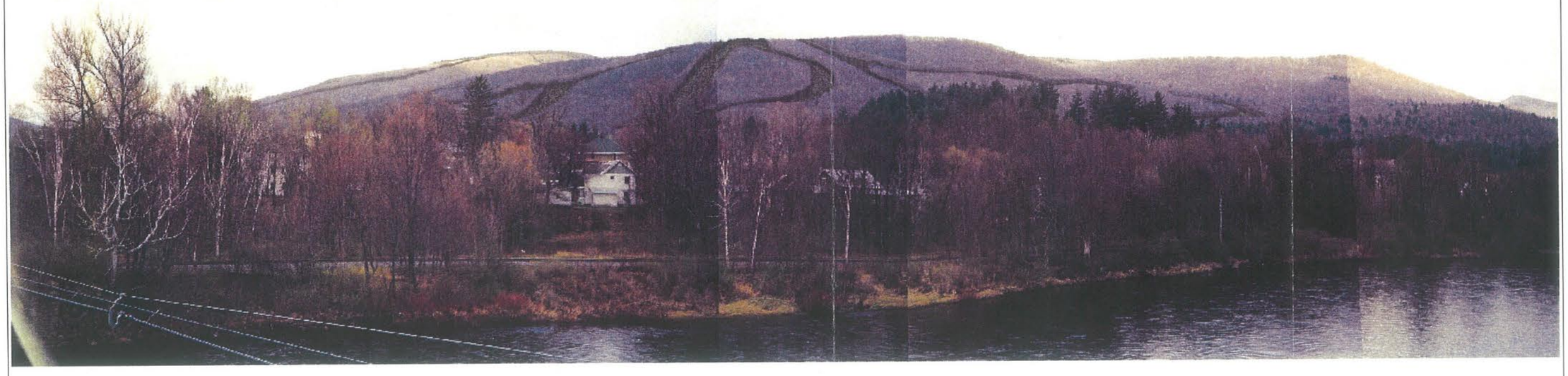
View From Rt. 28N Hudson River Bridge

Wireframe

Project: 00030
Date: 5/25/05

Figure: 4a



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GORE MOUNTAIN 2005 UMP AMENDMENT

View From Rt. 28N Hudson River Bridge

Rendering

Project: 00030
Date: 5/25/05

Figure: 4b

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GORE MOUNTAIN 2005 UMP AMENDMENT

View From Johnsburg Central School

Wireframe

Project: 00030
Date: 5/25/05

Figure: 5a

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GORE MOUNTAIN 2005 UMP AMENDMENT

View From Johnsburg Central School

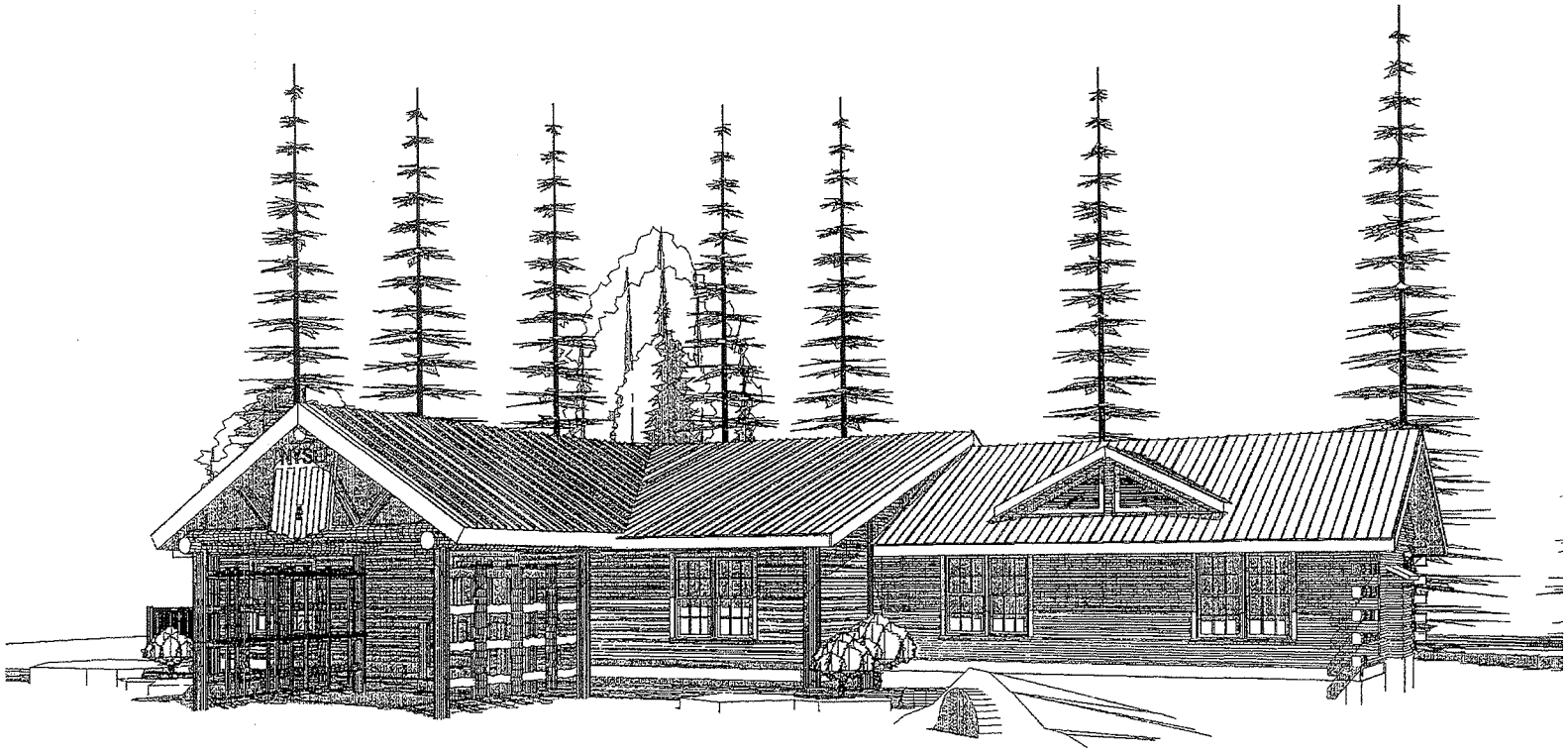
Rendering

Project: 00030
Date: 5/25/05

Figure: 5b

APPENDIX 4

NYSEF BUILDING ELEVATIONS



NYSEF GORE MOUNTAIN NY

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NORTH CREEK NY
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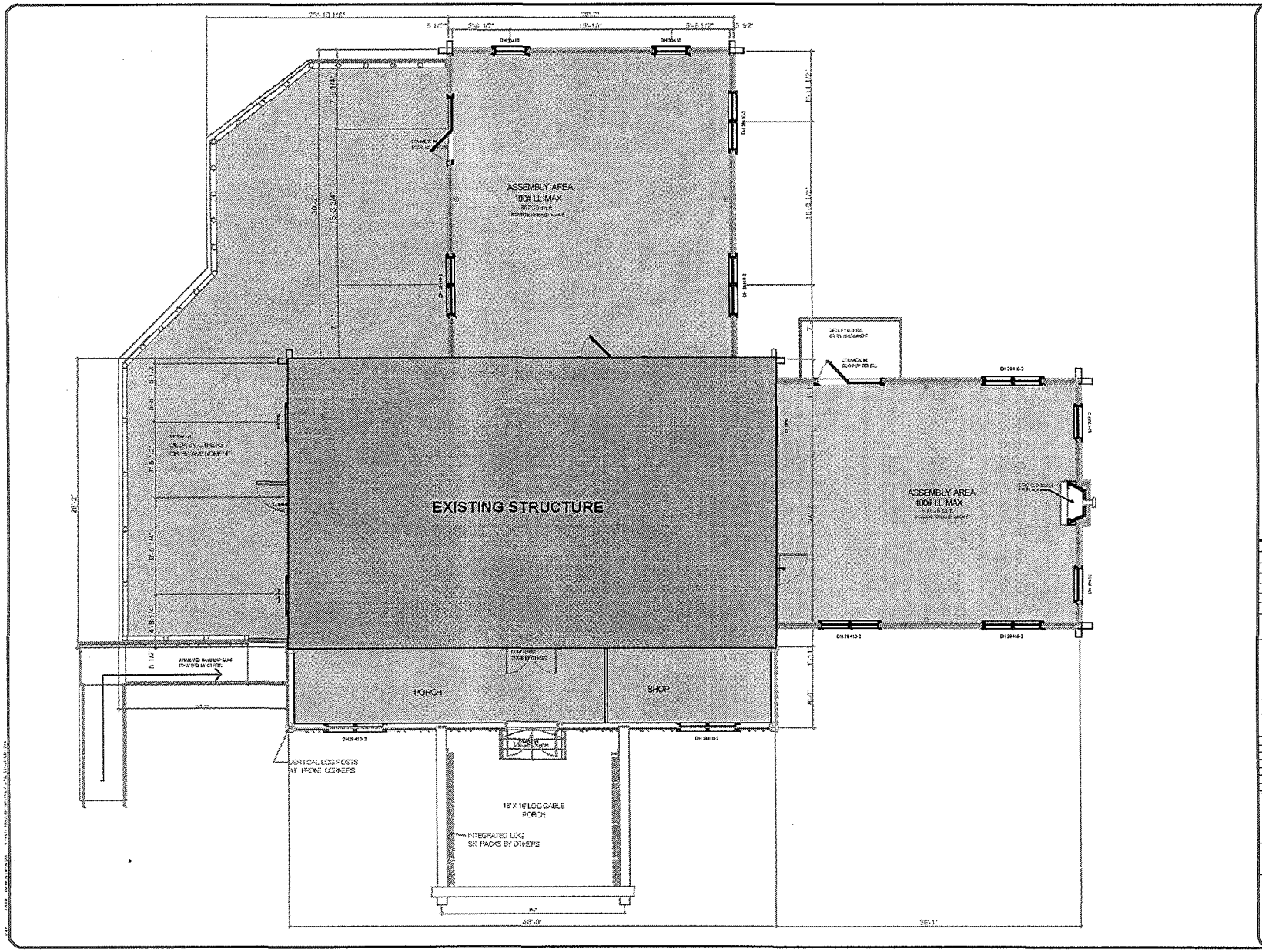

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0 1" 2" 3"

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Customer

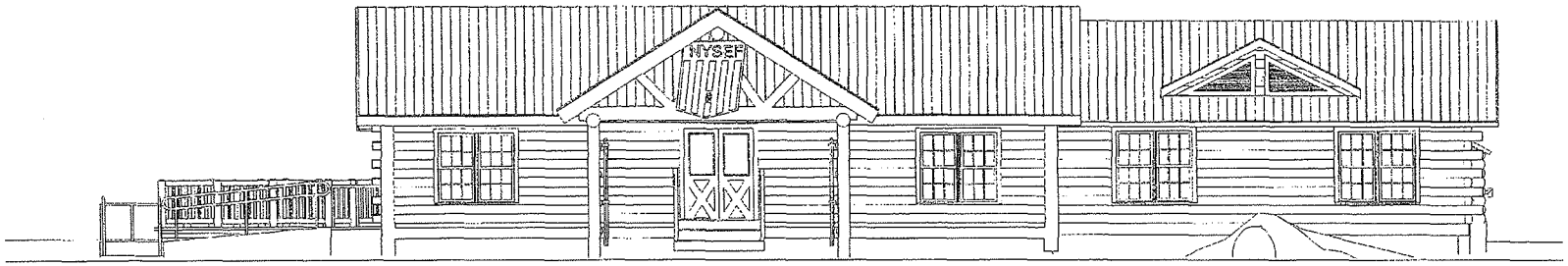
NYSEF GORE

NORTH CREEK NY
WARREN COUNTY

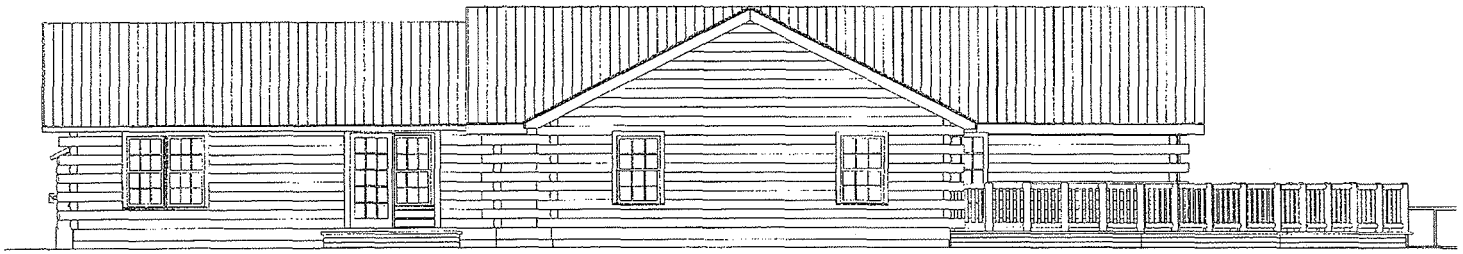
Drawing Title

First Floor Plan

1
SHEET



FRONT ELEVATION



REAR ELEVATION

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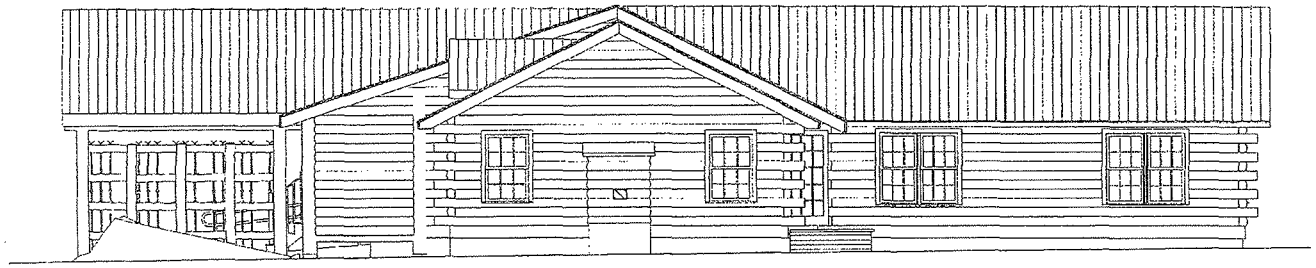
NORTH CREEK NY
WARREN COUNTY

Elevation Views

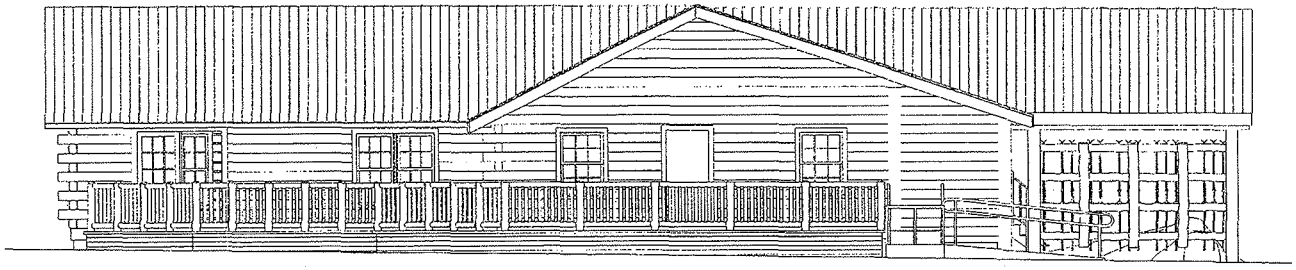
Drawing No.

2

SHEET



RIGHT ELEVATION



LEFT ELEVATION

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NYSEF GORE

NORTH CREEK NY
WARREN COUNTY

SHEET TITLE

Elevation Views

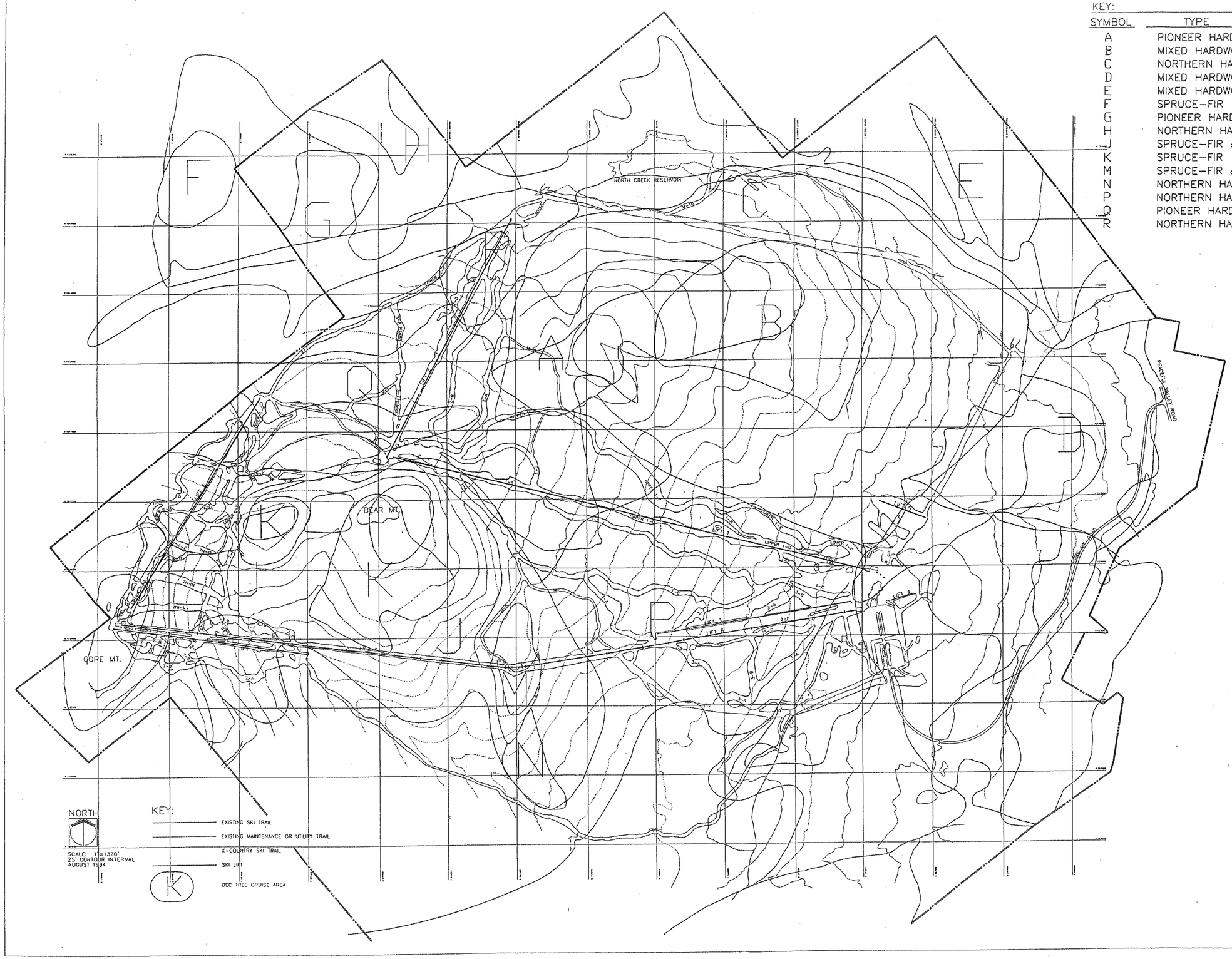
Sheet No.

3

SHEET

APPENDIX 5

TREE CRUISE DATA



KEY:

SYMBOL	TYPE
A	PIONEER HARDWOOD
B	MIXED HARDWOOD
C	NORTHERN HARDWOOD
D	MIXED HARDWOOD
E	MIXED HARDWOOD
F	SPRUCE–FIR
G	PIONEER HARDWOOD
H	NORTHERN HARDWOOD
J	SPRUCE–FIR & PIONEER HARDWOOD
K	SPRUCE–FIR
M	SPRUCE–FIR & PIONEER HARDWOOD
N	NORTHERN HARDWOOD
P	NORTHERN HARDWOOD
Q	PIONEER HARDWOOD
R	NORTHERN HARDWOOD

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GORE MOUNTAIN 2005 UMP AMENDMENT

Vegetation Community Types

Project 00030
Date 5/26/05

Figure 1

TREE CRUISE DATA BY COMMUNITY TYPE

	Community Type A		Community Type B		Community Type C		Community Type D		Community Type E		Community Type F		Community Type G	
	Total, 3-4" dbh	Total, > 4" dbh	Total, 3-4" dbh	Total, > 4" dbh	Total, 3-4" dbh	Total, > 4" dbh	Total, 3-4" dbh	Total, > 4" dbh	Total, 3-4" dbh	Total, > 4" dbh	Total, 3-4" dbh	Total, > 4" dbh	Total, 3-4" dbh	Total, > 4" dbh
Sugar Maple	0	9.9	81	125.1	22	119.1	94.7	63.4	76.5	63	0	0	34	0
Beech	0	0.5	8.2	20.2	39.2	22.2	18.2	25.8	189.2	197.2	0	0	0	0
Yellow birch	0	1.7	0	4.9	0	16.8	12.1	27.4	10.5	11	0	22.6	0	18.6
White Birch	29	130.2	0	24.4	0	6	0	24.5	0	33.5	0	0	0	110.9
White ash	0	0	0	0	0	8.9	12.1	7.4	0	0	0	0	0	0
Black Cherry	0	0	0	6.5	0	0.4	0	2.7	0	0	0	0	0	0
Ironwood	0	0	0	0	7	4.3	6.1	0	0	0	0	0	0	0
Red Spruce	0	1.9	0	10.4	0	0.4	0	0	0	0	727	237.2	0	31.7
Red Maple	0	0	14.6	27.7	0	4.4	6.1	20.9	0	28.4	0	0	0	1.4
basswood	0	0	0	0	0	0.6	0	9.2	0	0	0	0	0	0
Red Oak	0	0	30.9	11.8	0	9.9	0	0	10.5	14.7	0	0	0	0
Hemlock	0	0.6	0	0	0	0.1	0	5.4	0	0	0	0	0	0
Balsam Fir	39.4	22	0	6.8	0	0	27.6	4.9	0	0	204	0	193.5	89.9
Striped Maple	68.5	11.2	0	0	0	0	0	0	0	6.6	0	0	0	0
Aspen	0	0	0	0	0	0	0	19.7	0	3.4	0	0	0	0
Mountain Ash	0	0	0	0	0	0	0	0	0	0	0	0	0	0
total trees/ac	**136.9**	**178**	**134.7**	**237.8**	**68.2**	**193.1**	**176.9**	**211.3**	**286.7**	**357.8**	**931**	**259.8**	**227.5**	**252.5**

TREE CRUISE DATA BY COMMUNITY TYPE

	Community Type H		Community Type J		Community Type K		Community Type M		Community Type N		Community Type P		Community Type Q	
	Total, 3-4" dbh	Total, > 4" dbh	Total, 3-4" dbh	Total, > 4" dbh	Total, 3-4" dbh	Total, > 4" dbh	Total, 3-4" dbh	Total, > 4" dbh	Total, 3-4" dbh	Total, > 4" dbh	Total, 3-4" dbh	Total, > 4" dbh	Total, 3-4" dbh	Total, > 4" dbh
Sugar Maple	86.8	129.7	0	0	0	0	0	39.8	68	280.1	15.3	105.6	0	0
Beech	40.8	40.4	0	0	0	0	0	0	144.7	72.1	15.3	39.7	0	0
Yellow birch	0	38.7	0	0	0	0	0	0	0	0	0	10.6	14.4	31.3
White Birch	0	1.9	109.8	150.2	109.2	53	217	78	0	0	0	0.6	28.8	108.4
White ash	0	0	0	0	0	0	0	0	68	3.1	0	4	0	0
Black Cherry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ironwood	0	0	0	0	0	0	0	0	0	0	7.7	6.8	0	0
Red Spruce	0	0	11.5	17.7	12.8	14.9	0	38.4	0	9.5	0	0	0	32.9
Red Maple	0	13.9	0	0	0	0	0	0	0	0	0	0.4	0	24.1
basswood	0	0	0	0	0	0	0	0	0	0	0	5.9	0	0
Red Oak	0	0	0	0	0	0	0	0	0	0	0	0.9	0	0
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balsam Fir	0	10.2	237.4	165.8	263.8	337.4	159.5	101.8	0	0	0	0	43.1	38.9
Striped Maple	0	0	0	0	0	0	57.5	44.2	0	0	0	2.5	28.8	17.4
Aspen	0	0	0	0	0	0	0	18.3	0	0	0	0	0	0
Mountain Ash	0	0	11.5	29.9	12.8	5.7	0	0	0	0	0	0	0	9.2
total trees/ac	**127.6**	**234.8**	**370.2**	**363.6**	**398.6**	**411**	**434**	**320.5**	**280.7**	**364.8**	**38.3**	**177**	**115.1**	**262.2**

TREE CRUISE DATA BY COMMUNITY TYPE

	Community Type R	
	Total, 3-4" dbh	Total, > 4" dbh
Sugar Maple	28.8	191.3
Beech	28.8	25.1
Yellow birch	0	16.2
White Birch	0	0
White ash	0	0
Black Cherry	0	0
Ironwood	0	0
Red Spruce	0	1.8
Red Maple	0	0
basswood	0	0
Red Oak	0	0
Hemlock	0	0
Balsam Fir	0	0
Striped Maple	28.8	0
Aspen	0	0
Mountain Ash	0	0
total trees/ac	**86.4**	**234.4**

2005 UMP AMENDMENT DATA BY TRAIL

	Trail 10-D		Trail 10-F		Trail 10-G		Trail 11-H		Trail 11-I		Trail 11-J	
	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh
Sugar Maple	-	-	-	-	-	-	250	206	189	1,025	671	1,647
Beech	-	-	-	-	-	-	619	645	337	191	333	287
Yellow birch	-	-	-	-	-	-	34	36	-	145	-	151
White Birch	529	514	179	245	733	997	-	110	50	120	-	198
White ash	-	-	-	-	-	-	-	-	-	77	-	64
Black Cherry	-	-	-	-	-	-	-	-	-	3	-	44
Ironwood	-	-	-	-	-	-	-	-	60	37	50	31
Red Spruce	58	79	19	29	77	118	-	-	5	12	-	69
Red Maple	-	-	-	-	-	-	-	93	-	38	93	207
basswood	-	-	-	-	-	-	-	-	-	5	-	4
Red Oak	-	-	-	-	-	-	34	48	-	85	196	146
Hemlock	-	-	-	-	-	-	-	-	-	1	-	1
Balsam Fir	1,203	1,173	387	270	1,586	1,117	-	-	109	76	-	43
Striped Maple	-	-	-	-	-	-	-	22	-	-	-	-
Aspen	-	-	-	-	-	-	-	11	-	-	-	-
Mountain Ash	58	92	19	49	77	198	-	-	5	14	-	-
Total Trees Cut	**1,849**	**1,858**	**604**	**593**	**2,473**	**2,430**	**938**	**1,171**	**756**	**1,828**	**1,343**	**2,891**
Clearing acreage	**4.8**		**1.6**		**6.7**		**3.3**		**9.1**		**13.5**	
All Trees 3-4"	1849		604		2473		938		756		1343	
All Trees >4"		1858		593		2430		1171		1828		2891

PINK columns refer to trails which were previously approved and no longer proposed for the 2005 UMP Amendment - refer to trail maps for the 20(

GREEN columns refer to trails which are proposed for the 2005 UMP Amendment - refer to trail maps for the 2005 UMP with the same color codin

2005 UMP AMENDMENT DATA BY TRAIL

	Trail 11-K		Trail 11-L		Trail 11-N		Trail 12-C		Trail 12-D		Trail 12-E	
	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh
Sugar Maple	927	2,047	707	1,625	742	1,492	104	591	94	538	133	388
Beech	354	350	303	281	1,703	1,612	186	107	167	96	290	256
Yellow birch	-	168	-	140	76	226	-	84	-	77	11	58
White Birch	45	477	-	209	-	293	79	381	91	433	68	355
White ash	-	63	-	56	-	78	-	42	-	38	-	23
Black Cherry	-	65	-	48	-	3	-	2	-	2	-	1
Ironwood	49	30	44	27	61	38	33	20	30	18	18	11
Red Spruce	-	105	-	76	-	3	-	7	-	8	-	5
Red Maple	139	295	103	222	-	243	-	21	-	19	-	40
basswood	-	4	-	4	-	5	-	3	-	3	-	2
Red Oak	295	182	217	145	76	192	-	47	-	42	11	40
Hemlock	-	2	-	1	-	1	-	2	-	2	-	2
Balsam Fir	61	99	-	48	-	-	107	60	123	69	93	52
Striped Maple	106	17	-	-	-	47	185	30	214	35	161	33
Aspen	-	-	-	-	-	24	-	-	-	-	-	3
Mountain Ash	-	-	-	-	-	-	-	-	-	-	-	-
Total Trees Cut	**1,977**	**3,903**	**1,373**	**2,880**	**2,657**	**4,258**	**694**	**1,397**	**719**	**1,380**	**783**	**1,267**
Clearing acreage	**18.1**		**13.3**		**15.9**		**7.4**		**7.4**		**5.9**	
All Trees 3-4"	1977		1373		2657		694		719		783	
All Trees >4"		3903		2880		4258		1397		1380		1267

2005 UMP AMENDMENT DATA BY TRAIL

	Trail 12-F		Trail 12-H		Trail C-7		Connector		Tubing		Trail Lift 14	
	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh	Trees 3-4" dbh	Trees > 4" dbh
Sugar Maple	119	374	-	55	-	-	-	-	-	-	267	717
Beech	256	221	-	3	-	-	-	-	-	-	540	472
Yellow birch	9	55	6	22	4	9	-	-	-	-	21	109
White Birch	68	347	173	770	691	953	162	78	351	350	-	95
White ash	-	22	-	-	-	-	-	-	-	-	2	46
Black Cherry	-	1	-	-	-	-	-	-	-	-	-	3
Ironwood	18	11	-	-	-	-	-	-	-	-	36	21
Red Spruce	-	5	-	24	72	119	19	22	39	53	-	2
Red Maple	-	35	-	10	-	7	-	-	-	-	1	77
basswood	-	2	-	-	-	-	-	-	-	-	-	5
Red Oak	9	37	-	-	-	-	-	-	-	-	19	76
Hemlock	-	2	-	3	-	-	-	-	-	-	-	2
Balsam Fir	92	51	237	139	1,493	1,064	390	499	795	761	6	1
Striped Maple	160	32	394	70	8	5	-	-	-	-	-	12
Aspen	-	3	-	-	-	-	-	-	-	-	-	10
Mountain Ash	-	-	-	4	72	186	19	8	39	63	-	-
Total Trees Cut	**729**	**1,197**	**810**	**1,099**	**2,339**	**2,341**	**590**	**608**	**1,223**	**1,227**	**893**	**1,648**
Clearing acreage	**5.7**		**6.0**		**6.5**		**1.5**		**3.6**		**7.0**	
All Trees 3-4"	729		810		2339		590		1376		893	
All Trees >4"		1197		1099		2341		608		1383		1648

APPENDIX 6

STORMWATER DOCUMENTS

- **EXAMPLE STORMWATER POLLUTION PREVENTION PLAN**
- **DETAILED STORMWATER MANAGEMENT REPORT FOR BUS PARKING LOT**

Stormwater Pollution Prevention Plan

Erosion and Sediment Control Plan

Gore Mountain

Typical Trail Construction For the 2005 UMP Amendment

Prepared By

The LA Group, P.C.
40 Long Alley
Saratoga Springs, NY 12866
Ph. (518) 587-8100

Operator

New York State Olympic Regional Development Authority
216 Main Street
Lake Placid, NY 12946

May 2005

PREPARER CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

This Construction Pollution Prevention Plan was prepared in accordance with the New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-02-01), pursuant to Article 17, Titles 7, 8 and Article 70 of the Environmental Conservation Law. This SPDES General Permit implements the Federal Clean Water Act pertaining to stormwater discharges.

Construction will begin only after the requirements of SEQRA are met and any necessary Federal, State and local permits are issued.

Signature: _____

Name: _____

Title: _____

Date: _____

OWNER POLLUTION PREVENTION PLAN CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Signature: _____

Name: _____

Title: _____

Date: _____

CONTRACTOR AND SUBCONTRACTOR CERTIFICATION

I certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP for the construction site identified in such SWPPP as a condition of authorization to discharge stormwater. I also understand that the operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System (SPDES) general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Contractor will be held financially responsible for any and all fines.

Signature: _____

Company: _____

Responsible For: _____

Date: _____

Signature: _____

Company: _____

Responsible For: _____

Date: _____

Signature: _____

Company: _____

Responsible For: _____

Date: _____

Stormwater Pollution Prevention Plan

1. Regulatory Information

This Stormwater Pollution Prevention Plan (SWPPP) is prepared to inform the landowner and construction personnel of the measures to be implemented for controlling runoff and pollutants from the site during and after construction activities. The objective of this plan is to comply with the New York Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-02-01 requirements. Any materials conflicts between this plan and the site plans, specification or instructions, must be brought to the attention of the design professional. The project may have other permits and it is the responsibility of the owner and contractor to know and understand all permits.

2. Project Information

Gore Mountain 2005 UMP Amendment trail construction
Peaceful Valley Road
North Creek, NY 12853
Nearest Intersection – Peaceful Valley Road and Route 28
Warren County

3. Operator Information

NYS Olympic Regional Development Authority
216 Main Street
Lake Placid, NY 12853
Contact – Mike Pratt
Phone Number – 518.251.2411

4. SWPPP Review, Update

A. SWPPP Review

Applicable Federal, State, and local regulatory agencies that have jurisdiction may elect to review this SWPPP and notify the permittee in writing that the SWPPP does not meet the requirements of their regulations. If the SWPPP needs to be revised, the permittee and the site contractor will make the required modifications within seven days of such notification and submit written certification to the notifying agency that the changes have been implemented. A copy of the SWPPP will be kept available on site for review by regulatory agencies, engineers, and subcontractors.

B. SWPPP Update

The permittee identified in this SWPPP may amend the SWPPP when there is a change in one or more of the following project components which has an affect on the potential for discharge of pollutants from stormwater runoff associated with construction activities:

- Design
- Construction
- Operation
- Maintenance

The SWPPP shall also be updated or amended under the following conditions:

- If measures identified in the SWPPP become ineffective in eliminating or minimizing pollutants from sources identified, or in achieving the general objectives of controlling stormwater pollution from permitted construction activity.
- To identify a new subcontractor that will implement any part of the SWPPP.

5. Site Description

A. Project Description

i. Background Information and Pre-development Conditions

Gore Mountain is proposing new trails as part of the 2005 UMP Amendment. The approximate project site area is ___ acres with a disturbance of approximately ___ acres. The mountain is currently used as a ski area and the proposed new trails are consistent with the findings of the UMP.

ii. Scope of the Project

See Figure __ for the proposed development plan. There will be no increase in stormwater runoff as a result of the proposed project. Newly constructed trails will be seeded for permanent vegetation.

B. Construction Sequence – No more than 5 acres of disturbance can occur at one time without a permission letter from NYSDEC.

Construction Activities
(Identify name of planned practices)

1. *Establish Limits of Disturbance.* Work areas shall be clearly defined by appropriate means. This may include measures such as flagging tape or paint marks on trees at the limits of clearing for ski trails, marked stakes installed in the ground, or other suitable methods to clearly define the limits outside which soil disturbing activities are not permitted.

2. *Vegetation Removal.* Cut trees and shrubs within defined work areas. Wherever feasible chip tree tops and smaller growth on site.

3. *Install Structural Erosion Control.* Water bars, silt fence, or straw bale dikes. See details in Section 6 below "Stormwater Controls".

4. *Grub Stumps.* Stumps shall be grubbed only after structural erosion control is in place. Wherever possible, stumps shall be left in place or cut to grade in order to hold soil in place.

5. *Prepare Final Grades.* Grade disturbed areas to create final as-built elevations. Earthwork activities are designed to be localized and not involve large quantities of cuts and fills. The need to stockpile soil or transport bulk materials across the site is not anticipated. Should the need arise to temporarily stockpile soils during grading operations, stockpiles shall be surrounded with silt fence.

6. *Stabilize Disturbed Areas:* Stabilization shall be put in place as soon as practical after final grades are established. Stabilization shall be put in place no more than seven days after establishing final grades.

   For ski trails, stabilization will be in the form of seeding. More details on acceptable vegetation stabilization measures are provided below.

7. *Remove Temporary Structural Erosion Controls.* Silt fences and other erosion and sediment controls shall be removed only after the areas which they are serving have become permanently stabilized by vegetative or other means.

C. Trail Construction Specifications

Clearing

- Clearing shall consist of the complete cutting and removal of all trees, down timber, brush and related growth within the designated areas. Poor risk trees within a distance equal to the total height of the tree from any ski trail or lift line may be felled and removed.
- Trees lawfully cut cannot be removed from the premises in any manner but can be chipped or used on site by ORDA so long as such method is consistent with the guidelines of the State Land Master Plan, the Gore Mountain UMP and Article 8 of the ECL. Virtually all trees which are cut for ski trail construction and widening are chipped and used on site as fill for construction and erosion control projects. Access for the wood chipper on steeper terrain is limited so some trees are buried for use as fill and erosion control.
- Stumps shall be cut as close to the ground as possible and in no case should they be left in excess of 6" high. However, allowances will be made by the construction supervisor for unusual situations. The removal of trees by dozing over will <u>not</u> be allowed.
- Trees and down timber may be hauled to yarding areas specified by the construction supervisor.
- Brush, limb wood, and other small woody debris can be chipped at their source if this appears to be more convenient and if it can be done without undue disturbance of the terrain.
- When completed, the designated areas shall be free of all brush, trees, and related growth.
- All local, state, and federal laws and regulations pertaining to clearing on this particular site shall be adhered to.
- Machinery may not be operated outside the clearing limits without specific permission from the construction supervisor.
- Bridges or culverts will be used whenever crossing live streams or stream beds during skidding operation.

Rough grading

- All clearing shall be rough graded according to a schedule which allows <u>no more</u> than 600 slope feet of mineral soil (with any single contiguous area no greater than one acre) will be exposed on any trail section at any time between the rough grading and the fine grading and mulching crews.
- Topsoil may be stripped and stock piled for use during fine grading. Topsoil stock piles will have straw bales or silt fence staked down on the downhill perimeter. If stock piles are to remain for more than a week, they will be mulched.
- Rough grading with the use of bulldozers and excavators shall consist of the complete shaping of all trails. This will include the removal and burial of all stumps and large rocks and the appropriate erosion control methods (i.e. Water bar, straw bales, etc.).
- Ski trails, unlike roads, must contain rolls, long radius bumps and dips, to add interest and create a quality skiing experience. So disposal of stumps, rocks and related debris shall be incorporated into the formation of these desired features whenever

possible. (The precise location and configuration of trail contours and erosion control features are dependent to a great degree upon unknown subsurface conditions. Thus, the development of these features can take place only by supervision in the field as the rough grading progresses).

- Ledges, when they protrude above the desired grade, may be drilled and blasted where necessary to permit removal during rough grading.
- In areas of smooth surface ledge, or ledge just slightly below the natural surface, dozing will proceed so as not to disturb valuable existing overburden.
- The outside limits of trails are to remain clean and free of any disposed material except insofar as the material is needed for proper shaping or drainage.
- Care shall be exercised so as not to destroy woods growth and the root systems of trees bordering the trail.
- Water bars shall have a 2 - 5% cross slope. Stabilized outlets will be constructed at the end of all water bars. They shall be checked at the termination of each work day to ensure their proper function.
- Water bars, drainages, and culverts shall be extended beyond the cutting limits of the trail if this is required to prevent water from running back onto the trail surface. Rip-rap or straw bale dikes will be placed at the discharge ends of all drainages.

Fine grading and revegetation

- All trail areas shall be fine graded according to a schedule which allows no more than 600 slope feet of mineral soil (with no single contiguous area greater than one acre) to be exposed on any trail section at any time between the large dozers doing the rough grading and the fine grading and mulching crews.
- Water bars constructed by the rough grading crews shall be final shaped.
- All water bars will be lined with a 6 1/2 foot wide erosion control blanket (North American green s75bn), or its equivalent.
- There shall be no exposed unseeded or unmulched soil prior to weekends, downtime, or anticipated rainy periods.
- Mulching shall consist of the complete covering of all trails, lift lines, and related areas with straw. Application should average two tons per acre with three or more tons being required in areas of severe rock and steep grades, and 1-1/2 tons or less in areas with excellent soil and lower grades. This mulch may be applied by machine or manually. Certain areas with severe rock and/or ledge conditions will require hand-padding with straw bats prior to the actual mulching if done by machine. The banks or sides of all areas are to be mulched. All water courses are to be left free of straw.
- Strict erosion control measures shall be followed at all times. Water bars shall be kept established and clean at all times. Any washouts or related erosion will be repaired immediately.
- All vehicle traffic shall be confined to established work roads unless specific permission for other travel is received beforehand from the construction supervisor. All water bars on work roads shall be placed in their proper condition at the end of each work day.
- The steps involved in the fine grading process shall take place in sequence so that at no time will a fine graded section of over 600 feet be without the proper mulch cover to prevent unnecessary erosion.

D. Receiving Water(s) (include identification of any TMDL or 303(d) waters)

Unnamed tributary to North Creek

E. Soils (include general description and Hydrologic Soil Group)

The soils at the project site include the Hermon-Lyman, the Tunbridge-Lyman, Colton, Lyman-Ricker, and the Marlow complex.

Hermon = HSG A
Lyman = HSG C/D
Marlow = HSG C

F. Attachments – considered part of this SWPPP

These documents include plans, details, and technical specifications that include, but are not limited to, the following (unless otherwise specified, these documents have been prepared by The LA Group, P.C.):

- General site map. **See Site Location Map**.
- Construction Sequence Phases. See 2005 UMP Amendment Plan Figure X, "_____".
- Maintenance schedule.

6. Stormwater Controls

A. Stormwater Management Objectives

Stormwater management for the proposed project will be in the form of temporary controls only. As a result of converting forest to grass/meadow, the rate of stormwater runoff will not change. There will be no permanent structural stormwater management practices installed at this site, as they will not be necessary.

B. Erosion and Sediment Controls – Structural Practices

i. Temporary

- **Water Bars** – Water bars shall be installed during construction of ski slopes in accordance with the attached specifications and **attached detail 5A.4**. They are to be placed across the slope to reduce the potential for erosion, with diversion into a natural vegetation mat or other stabilized outlet. Particular attention shall be paid to proper spacing specifications as follows:

Slope (%)	Water Bar Spacing (ft.)
<5	125
5 to 10	100
10 to 20	75
20 to 35	50
>35	25

(Source: Guidelines for Urban Erosion and Sediment Control, USDASCS, 1997)

- **Silt Fence** – Where appropriate, silt fence shall be installed in accordance with the attached specifications and **attached detail 5A.9**. Use of silt fence is appropriate where there is no concentration of water flowing to the barrier and where the drainage area for overland flow does not exceed ½ acre per 100 feet of fence. Additionally, maximum allowable slope lengths contributing runoff to a silt fence shall be as follows:

Slope Steepness	Maximum Slope Length (ft.)
2:1	50
3:1	75
4:1	125
5:1	175
Flatter Than 5:1	200

(Source: Guidelines for Urban Erosion and Sediment Control, USDASCS, 1997)

Silt fence structures should be installed anywhere sediment retention is needed in and around a construction site.

- At the toe of highly erodable slopes
- Around culverts and storm water drainage systems
- Adjacent to lakes, streams or creeks
- Around the perimeter of a construction project

Installation guidelines (See figure 5A.9)

- Dig a small trench
- Unroll silt fence system. Position the post in the back of the trench (downhill side) and drive the post into the ground
- Lay the bottom 6 inches of the fabric into the trench to prevent undermining by storm water run-off
- Backfill the trench and compact
- It is a good practice to construct the silt fence across a flat area in the form of a horseshoe. This aids in pending the runoff and allowing sedimentation.

Maintenance – Silt fences should be inspected periodically for damages such as tearing by equipment, animals, or wind and for the amount of sediment which has accumulated. Removal of the sediment is generally necessary when it reaches 1/3 the height of the silt fence. In situations where access is available, machinery can be used; otherwise, it must be removed manually. The key elements to remember are:

- The sediment deposits should be removed when heavy rain or high water is anticipated.
- The sediment removed should be placed in an area where there is no danger of erosion.
- The silt fence should not be removed until adequate vegetation ensures no further erosion of the disturbed slopes. Generally, the

fabric is cut at ground level, the wire and posts removed, the sediment spread, and seeding and mulch is applied immediately.

- **Straw Bale Dikes** – Dikes may be used as a substitute for silt fence ONLY where shallow depth to rock precludes the proper installation of silt fence. Installation shall be in accordance with the attached specifications and details. Dikes shall NOT be used where there is concentrated flow. Dikes shall NOT be used where more than 3 months of erosion and sediment control is required unless bales are replaced or an additional parallel row of bales is installed prior to the original straw bales being in place for 3 months. Length of slope above the straw bale dike shall not exceed the following:

Slope Steepness	Maximum Slope Length (ft.)
2:1	25
2.5:1	50
3:1	75
3.5:1	100
4:1	125

(Source: Guidelines for Urban Erosion and Sediment Control, USDASCS, 1997)

Construction specifications (see Figure 5A.8):

- Bales shall be placed in a row with ends tightly abutting the adjacent bales.
- Each bale shall be embedded in the soil a minimum of 4 inches.
- Bales shall be securely anchored in place by stakes driven through the bales. The first stake in each bale shall be driven toward the previously laid bale to force bales together.
- Inspection shall be frequent and repair or replacement shall be made promptly as needed.
- Bales shall be removed when they have served their usefulness, so as not to block or impede storm flow or drainage.

C. Stabilization Practices (including vegetative practices)

i. Temporary and Permanent

- Maintain existing vegetation outside of marked limits of disturbance. Soils disturbed for construction of ski trails shall be permanently stabilized by successfully establishing an herbaceous ground cover.

Seeding – A commercially available seed mixture appropriate to the climate shall be used to stabilize disturbed areas to be revegetated. The "Adirondack Seed Mix" contains the following:

43.65% Boreal creeping red fescue
34.3% perennial ryegrass
17% Kentucky bluegrass

The boreal red fescue is particularly well suited to the local climate and the perennial ryegrass will germinate rapidly and accelerate stabilization. If desired, additional ryegrass, perennial or annual, may be used in addition to the Adirondack seed mix.

Seed may be applied by a number of suitable means including broadcasting, hydroseeding, or incorporated as part of a geotextile (i.e. Green & Bio Tech SureTurf 1000 and 4000 Seeded Mat System ®, BIOMAT ® seeded mats).

The Adirondack Seed Mix will be used to stabilize the widened areas of the Twister Trail. An alternative NYSDOT seed mix may be used under those special conditions that may be most suitable, including steeper slopes (i.e. >15 to 20%), or wherever the Adirondack Mix does not become effectively established. This seed mix contains a number of wildflowers as well as sheep fescue and annual ryegrass. Components of this mix were chosen by NYSDOT because of their ability to produce a root system of varying root types, including fibrous shallower roots and deep tap roots. The per acre cost for seeding using this mix is approximately $1,140 versus approximately $35 per acre for the Adirondack Mix specified.

Mulching – Broadcast seeded areas and hydroseeded areas shall also be mulched. Broadcast seeded areas shall be mulched with straw at a rate of 2 to 3 bales per thousand square feet (100-120 bales per acre). Straw mulch shall be secured in place be either driving over the mulched area with a tracked vehicle or by applying a non-asphaltic tackifier.

Hydroseeded areas shall be mulched with straw as described above or with wood cellulose mulch applied during the hydroseeding process. Wood cellulose mulch shall be applied at a rate of 50 pounds per thousand square feet (2,000 pounds per acre). A non-asphaltic tackifier may be included with the hydromulch application.

Fertilization – Seeded areas shall be fertilized at the time of seeding in order to promote seed germination and plant growth that will provide stabilization. A suitable turf starter fertilizer shall be applied as per dictated by soil test or apply 850 pounds of 5-10-10 or equivalent per acre (20 lbs/1,000 sq. ft.)

D. Additional Controls (if necessary)

7. **Comparison of Pre- and Post-Construction Stormwater Runoff – Although the area of disturbance is approximately ___ acres, there will not be an increase in stormwater runoff. The area that will be converted from forest to open trail (grass/meadow) will not increase the rate or amount of stormwater runoff.**

A. Stormwater Quantity
Site Area: ___ acres

Total Area of Disturbance: _ acres
Total Acres of New Impervious: 0 acres

B. Stormwater Quality – The WQv was calculated using the minimum Rv of 0.2. This was necessary because there is no existing or new impervious surface at this site. See attached WQv calculation.

Water Quality Storage Volume WQ_v = 0.38 acre-feet of storage

Appendix 1
Other Controls

Waste Materials: All waste materials generated during construction will be disposed at a suitable landfill, transfer station or C and D landfill.

Hazardous Waste: The project will not be a generator of hazardous waste and it is not anticipated that any hazardous waste will be generated during construction. If there are any materials generated, a licensed hazardous waste carrier will be contracted to dispose the hazardous material at a suitable disposal site. If hazardous materials are discovered during construction, the work will be stopped until the issue is resolved.

Sanitary Waste: Portable sanitary facilities will be made available to construction personnel and will be serviced regularly.

Offsite Vehicle Tracking: Earthworking equipment involved with the construction will remain on the project site and will not regularly egress or ingress the site. Any trucks used to bring in materials or remove materials via municipal paved roads will do so over a stabilized construction entrance. If significant off-site vehicle tracking begins to occur, the contractor will be directed to institute a daily, or as-needed, street sweeping program in the immediate vicinity of the site.

Timing of Measures/Controls

- Temporary structural erosion controls will be installed prior to earthwork as per the attached plans.

- A qualified professional shall conduct an assessment of the site prior to the commencement of construction and certify in an inspection report that the appropriate erosion and sediment controls described in the SWPPP and required by Part III.D of GP-02-01 have been adequately installed to ensure overall preparedness of the site for commencement of construction.

- Structural erosion controls and non-stabilized areas shall be inspected once a week or within 24 hours after a rainfall of 0.5 inches or more. Copies of the Stabilization Inspection Forms and Structural Inspection Forms located at the end of this report shall be completed in full for every inspection performed.

- Areas to be undisturbed for more than 14 days will be temporarily stabilized by seeding.

- Disturbed areas will be reseeded and mulched immediately after final contours are re-established and no more than 14 days after the completion of construction at that site.

- Temporary erosion control devices will not be removed until the area served is stabilized by the growth of vegetation and the area is certified as being stabilized by the Erosion Control Superintendent.

- Any areas that cannot be seeded to turf by October 1 or earlier will receive a temporary seeding. The temporary seeding will consist of winter rye seeded at the rate of 120 pounds per acre (2.5 pounds per 1,000 square feet) or stabilized as per the temporary stabilization for winter construction/frozen conditions.

If necessary, the general construction sequence was completed in preparing the SWPPP (see Construction Sequence Worksheet). The operator shall prepare a summary of construction status using the Construction Sequence Form at the end of this document once every month. Significant deviations to the sequence and reasons for those deviations (i.e. weather, subcontractor availability, etc.), shall be noted by the contractor. The schedule shall be used to record the dates for initiation of construction, implementation of erosion control measures, stabilization, etc. A copy of this table will be maintained at the construction site and be updated in addition to the individual Stabilization Inspection Forms and Structural Inspection Forms completed for each inspection.

Appendix 2
Maintenance/Inspection Procedures

Erosion and Sediment Control Inspection

These are the inspection and maintenance practices that will be used to maintain erosion and sediment controls. The practices listed herein shall be implemented in accordance with the attached maintenance schedule.

A maintenance inspection report will be made after each inspection. A copy of the report form to be completed by the inspector is attached in Appendix 4. Reports should be compiled and maintained on-site.

- It is recommended that a rain gage be installed at the site.
- The Erosion Control Superintendent will supervise day-to-day erosion control activities on the site. The Erosion Control Superintendent and his crews will make at least weekly inspections of erosion control devices, as well as inspections following any storm event of 0.5 inches or greater.
- All measures will be maintained in good working order; if repair is necessary, it will be initiated within 24 hours of report.
- Built up sediment will be removed from silt fence when it has reached one-third the height of the fence.
- Silt fence will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in ground.
- All temporary sediment basins should be inspected for stability and integrity once a week or after a storm event of 0.5 inch or more. Any structural failure in sediment basins or trenches that serve them will be repaired within 24 hours after detection.
- All temporary sediment basins or trenches shall be cleaned out when one foot of sediment or half the design depth of the trap has accumulated. All spoils shall be removed to a stabilized upland area.
- Seeded and planted areas will be inspected for bare spots, washouts, and healthy growth. If necessary, spot reseeding or sodding will be implemented.

Temporary Stabilization for Winter Construction/Frozen Conditions
The following temporary stabilization measures **MUST** be performed when construction is occurring during winter/frozen ground conditions. The following requirements do not supercede any other requirements of this SWPPP as they apply to non-frozen ground conditions.

1. Perimeter erosion control **MUST** still be installed prior to earthwork disturbance as per this SWPPP.

2. Any area of disturbance that will remain inactive for a period of 14 consecutive days **MUST** be mulched. This includes any previously disturbed areas that are covered with snow.

3. Mulch **MUST** consist of loose straw applied at the rate of 2 to 3 bales (90 to 100 pounds) per thousand square feet.

4. Mulch **MUST** be applied uniformly over the area of bare soil or bare soil that is covered with snow. For the latter condition, mulch **MUST** be applied on top of snow.

5. Using a tracked vehicle, mulch **MUST** be crimped into the bare soil/snow. The tracked vehicle **MUST** be driven across the mulched areas in at least two directions to maximize crimping of mulch into the soil/snow.

6. If mulch gets blown off an area to a significant degree, the site inspector **WILL** require that an area be re-mulched in accordance with Items 2 through 5 above, and this area **WILL** be included on the inspection checklist for the next inspection.

7. If a particular area repeatedly experiences loss of mulch due to wind, then the inspector **WILL** require that an alternative method be used to secure the mulch in place. Such alternatives may include the use of netting, tackifier or other methods deemed appropriate by the inspector.

8. During periods when snow is melting and/or surface soils are thawing during daytime hours, mulched areas **MUST** be re-tracked (crimped) as per Item 5 above at least once every seven days, more frequently if directed by the inspector. Additional mulch may be required to obtain complete coverage of an area. Biodegradable erosion control matting may be required on steeper slopes.

9. Additional stabilization measures for non-frozen ground conditions described in this SWPPP **WILL** be implemented at the time deemed appropriate by the inspector.

Summer Trail Maintenance Specifications

General

- The annual summer trail maintenance schedule or plan of work should contain regular maintenance and repair activity necessary to keep all slopes, trails and facilities in satisfactory condition for skiing, safety, aesthetics of the area and quality control of the environment.

Drainage and erosion control

- In the spring of the year when the snow starts to melt, water bars should be checked to see that the water is flowing. Even with snow cover still on the ground, the partially frozen water bars can be re-channeled by the use of hand shovels. The running water will eat its way through the snow or ice and eventually open up the water bars.
- When the snow is all gone these water bars should be checked again to see that they are working properly and repairs made if needed. These checks should continue throughout the summer months especially before and after major storms. If severe erosion is noticed, the bars should be "rip-rapped" with stone or lined with jute matting. The checking interval can be reduced once the water bars are stabilized. However, they should always be checked and cleaned out in the fall after all the leaves have fallen and in the spring when melting starts.
- Culverts and bridge openings should be checked on the same schedule as water bars. They should be kept free from obstructions and sediment buildup.
- Washed and eroded areas should be repaired as soon as the trails dry out enough so that no more damage will occur. This repair work should be accomplished by filling in the washed or eroded areas with new material, and adding seed and mulch.

Trails and trail edges

- Snags, dead trees, undermined and leaning trees, limbs and other debris, rocks, etc. within or along the edges of trails should be removed, except that trail edges will be feathered where possible to enhance potential Bicknell thrush habitat.

Seeding

- To establish permanent cover over all slopes and trails, reseeding may be required from time to time. Seeding should be done in the spring after the slopes and trails have dried, (to be completed by June 10) or alternatively during the period from August 1 to September 15.

Mulching

- Remulching may become necessary if bare rocks and ledge appear or where reseeding has taken place. Mulch should be applied at a rate of 2 tons per acre.
- Mulching and proper drainage is the key in keeping valuable topsoil in place until a good sod has been developed.

Weed and brush control

- The best deterrent to weed and brush growth is a dense, well-cared-for sod of grasses and legumes.

Mowing

- All slopes and trails should be mowed each year or every other year to maintain a low cover and to control woody growth. The best time to mow is mid-August after the established grasses have gone to seed giving the potential for new growth. The most desirable cutting height is 3-1/2 to 4 inches.

Appendix 3
Spill Prevention Practices

Good Housekeeping and Material Management Practices
The following good housekeeping and material management practices will be followed on site during the construction project to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

- Materials will be brought on site in the minimum quantities required.
- All materials stored on site will be stored in a neat, orderly manner in their appropriate containers, and if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposal.
- Manufacturer's recommendations for proper use and disposal will be followed.
- The construction manager or his designee will inspect daily to ensure proper use and disposal of materials on site.
- The contractor shall prohibit washing of tools, equipment, and machinery in or within 100 feet of any watercourse or wetland.
- All above grade storage tanks are to be protected from vehicle damage by temporary barriers.

Inventory for Pollution Prevention Plan
The materials and substances listed below are expected to be on-site during construction.

- Petroleum for fueling vehicles will be stored in above ground storage tanks. Tanks will either be steel with an enclosure capable of holding 110% of the storage tank volume or of a Con-Store, concrete encased type typically employed by NYSDOT. Hydraulic oil and other oils will be stored in their original containers. Concrete and asphalt will be stored in the original delivery trucks.
- Fertilizer may be stored on site in its original container for a short period of time prior to seeding. Original containers will be safely piled on pallets or similar devices to protect from moisture.
- Portable sanitary facilities, which contain chemical disinfectants (deodorants) will be located on-site, with the disinfectants held in the tank of the toilet.

Hazardous Products
These practices are used to reduce the risks associated with hazardous materials.

- Products will be kept in original containers unless they are not resealeable.
- Original labels and material safety data sheets will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

Spill Prevention – Product Specific Practices
The following product specific practices will be followed on site.

Petroleum Products:
- Construction personnel should be made aware that emergency telephone numbers are located in this SWPPP.
- The contractor shall immediately contact NYSDEC in the event of a spill, and shall take all appropriate steps to contain the spill, including construction of a dike around the spill and placing absorbent material over this spill.
- The contractor shall instruct personnel that spillage of fuels, oils, and similar chemicals must be avoided and will have arranged with a qualified spill remediation company to serve the site.
- Fuels, oils, and chemicals will be stored in appropriate and tightly capped containers. Containers shall not be disposed of on the project site.
- Fuels, oils, chemicals, material, equipment, and sanitary facilities will be stored/located away from trees and at least 100 feet from streams, wells, wet areas, and other environmentally sensitive sites.
- Dispose of chemical containers and surplus chemicals off the project site in accordance with label directions.
- Use tight connections and hoses with appropriate nozzles in all operations involving fuels, lubricating materials or chemicals.
- Use funnels when pouring fuels, lubricating materials or chemicals.
- Refueling and cleaning of construction equipment will take place in parking areas to provide rapid response to emergency situations.
- All on-site vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Any vehicle leaking fuel or hydraulic fuel will be immediately scheduled for repairs and use will be discontinued until repairs are made.

Fertilizers:
- Fertilizer will be stored in its original containers on pallets with water resistant coverings.
- Proper delivery scheduling will minimize storage time.
- Any damaged containers will be repaired immediately upon discovery and any released fertilizer recovered to the fullest extent practicable.

Paints:

- All containers will be tightly sealed and stored when not required for use.
- Excess paint will not be discharged to the storm water system or wastewater system, but will be properly disposed of according to manufacturers' instructions or State and local regulations.

Concrete Trucks:

- Concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water only at designated locations on site.

Asphalt Trucks:

- Asphalt trucks shall not discharge surplus asphalt on the site.

Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup. The construction manager responsible for the day-to-day site operations will be the spill prevention and cleanup coordinator. He will designate at least three other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the onsite construction office or trailer.

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies. Any spill in excess or suspected to be in excess of two gallons will be reported to the NYSDEC Regional Spill Response Unit. Notification to the NYSDEC (1-800-457-7362) must be completed within two hours of the discovery of the spill.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to absorbent pads, brooms, dust pans, mops, rags, gloves, goggles, activate clay, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with spilled substance.
- Spills of toxic or hazardous material will be reported to the appropriate State or local government agency, regardless of the size.

SPILL RESPONSE REPORT

Within 1 hour of a spill discovery less than 2 gallons in volume the following must be notified:
Mike Pratt, General Manager Gore Mountain
518.251.2411

Within 1 hour of a spill discovery greater than 2 gallons the following must be notified:
Mike Pratt
NYSDEC Spill Response Hotline 1-800-457-7362
Spill Response Contractor

Material Spilled: _____

Approximate Volume: _____

Location: _____

Distance to nearest down gradient drainage: _____

Distance to nearest down gradient open water: _____

Temporary control measures in place: _____

Appendix 4
Forms for the Stormwater Pollution Prevention Plan

Gore Mountain 2005 UMP Amendment
SWPPP INSPECTION REPORT

_____ _____ _____
Inspector Name Signature Date of Inspection

Inspection #_____

YES	NO		
☐	☐	Routine Inspection.	Date of last inspection:_____
☐	☐	Inspection following rain event.	Date/time of storm ending:_____
			Rainfall amount:_____
			Recorded by:_____
☐	☐	Is this a final site inspection?	
☐	☐	Has site undergone final stabilization?	
☐	☐	If so, have all temporary erosion and sediment controls been removed?	

REPORT CHECKLIST
Complete the following report checklist and key issue items to attached site plan.

1. Site Disturbance (Indicate Locations on Plan)

YES	NO		
☐	☐	1.1	Areas previously disturbed, but have not undergone active site work in the last 14 days?
☐	☐	1.2	Areas disturbed within last 14 days?
☐	☐	1.3	Areas expected to be disturbed in next 14 days?
☐	☐	1.4	Do areas of steep slopes or complex stabilization issues exist? If "YES" explain_____

Additional Comments: _____

2. Inspection of Control Devices

YES	NO		
☐	☐	2.1	Perimeter controls (silt fences) installed? Type_____
☐	☐	2.2	Silt accumulation? Amount (%)_____
☐	☐	2.3	Inlet protection? Type_____
☐	☐	2.4	Silt accumulation? Amount (%)_____

Additional Comments: _____

_____

_____

3. Stabilization

YES	NO		
☐	☐	3.1	Are all existing disturbed areas contained by control devices? Type of devices_____
☐	☐	3.2	Are there areas that require stabilization within the next 14 days? Specify Area_____
☐	☐	3.3	In recently or previously stabilized areas, is there evidence of permanent or temporary stabilization measures that have been implemented where work has ceased for 14-21 days?
☐	☐	3.4	Is there current snow cover or frozen ground conditions?
☐	☐	3.5	Rills or gullies?
☐	☐	3.6	Slumping/deposition?
☐	☐	3.7	Loss of vegetation?
☐	☐	3.8	Lack of germination?
☐	☐	3.9	Loss of mulching?

☐ ☐ Action Items: _____

_____

_____

4. Receiving Structures/Water Bodies

Indicate locations where runoff leaves the project site on the site plan.

_____

YES	NO		
☐	☐	4.2	Surface water swale or stream?
☐	☐	4.3	Municipal or community system?
		4.4	Indicate drainage pathways.

_____

Inspect locations where runoff from project site enters the receiving waters and indicate if there is evidence of:

☐	☐	4.5	Rills or gullies?
☐	☐	4.6	Slumping/deposition?
☐	☐	4.7	Loss of vegetation?
☐	☐	4.8	Undermining of structures?

☐ ☐ Action Items: _____

_____

_____

5. General Site Condition

YES	NO		
☐	☐	5.1	Have action items from previous reports been addressed?
		5.2	Contractors summary on pertinent progress last 7 days.
			_____
			_____
		5.3	Anticipated work to be begun in the next 7 days.
			_____
			_____
☐	☐	5.4	Does routine maintenance of protection components occur on a regular basis?
☐	☐	5.5	Does cleaning and/or sweeping affected roadways occur, at minimum, daily?
☐	☐	5.6	Is debris and litter removed on a monthly basis, or as necessary?
☐	☐	5.7	Is the site maintained in an orderly manner?

Additional Comments: _____

_____

_____

SUMMARY OF ACTION ITEMS

Action
1.
2.
3.
4.
5.
6.
7.

Action Reported To: _____

Company: _____

Received By: (Signature) _____

Construction Activities (Identify name of planned practices)	**Start → Stop**
1. Establish Limits of Disturbance. Work areas shall be clearly defined by appropriate means. This may include measures such as flagging tape or paint marks on trees at the limits of clearing for ski trails marked stakes installed in the ground, or other suitable methods to clearly define the limits outside which soil disturbing activities are not permitted.	
2. Vegetation Removal. Cut trees and shrubs within defined work areas. Wherever feasible chip tree tops and smaller growth on site.	
3. Install Structural Erosion Control. Water bars, silt fence, straw bale dikes, wattles. See details in Section 6 below "Stormwater Controls".	
4. Grub Stumps. Stumps shall be grubbed only after structural erosion control is in place. Wherever possible, stumps shall be left in place or cut to grade in order to hold soil in place.	
5. Prepare Final Grades. Grade disturbed areas to create final as-built elevations. Earthwork activities are designed to be localized and not involve large quantities of cuts and fills. The need to stockpile soil or transport bulk materials across the site is not anticipated. Should the need arise to temporarily stockpile soils during grading operations, stockpiles shall be surrounded with silt fence.	
6. Stabilize Disturbed Areas: Stabilization shall be put in place as soon as practical after final grades are established. Stabilization shall be put in place no more than seven days after establishing final grades. For ski trails, stabilization will be in the form of seeding. More details on acceptable vegetation stabilization measures are provided below.	
7. Remove Temporary Structural Erosion Controls. Silt fences and other erosion and sediment controls shall be removed only after the areas which they are serving have become permanently stabilized by vegetative or other means.	

STORM WATER POLLUTION PREVENTION PLAN
PLAN CHANGES, AUTHORIZATION, AND CHANGE CERTIFICATION

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:

_____

_____

_____

_____

REASONS FOR CHANGES:

_____

_____

_____

_____

REQUESTED BY: _____

DATE: _____

AUTHORIZED BY: _____

DATE: _____

CERTIFICATION OF CHANGES:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the penal code.

SIGNATURE: _____

DATE: _____

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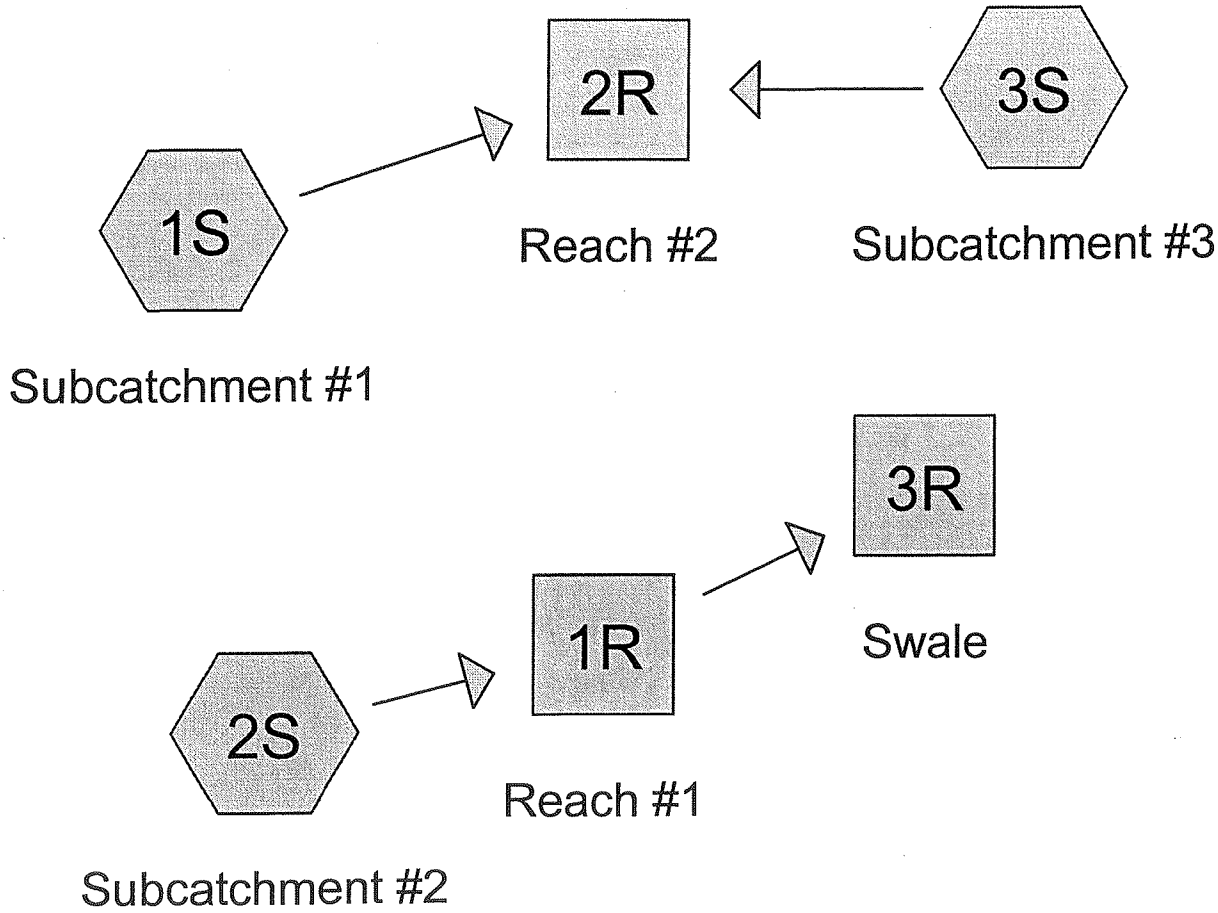
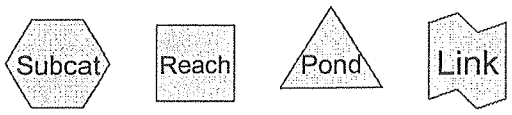
Stormwater Management Report





Drainage Diagram for 5037UMP_park_ex
Prepared by The LA Group 10/31/2005
HydroCAD® 7.00 s/n 000439 © 1986-2003 Applied Microcomputer Systems

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subcatchment #1 Runoff Area=554,701 sf Runoff Depth=2.23"
Flow Length=1,866' Tc=16.6 min CN=73 Runoff=37.87 cfs 2.365 af

Subcatchment 2S: Subcatchment #2 Runoff Area=188,382 sf Runoff Depth=2.24"
Flow Length=1,103' Tc=9.4 min CN=73 Runoff=16.36 cfs 0.806 af

Subcatchment 3S: Subcatchment #3 Runoff Area=20,615 sf Runoff Depth=3.82"
Flow Length=130' Tc=1.8 min CN=90 Runoff=3.42 cfs 0.151 af

Reach 1R: Reach #1 Peak Depth=1.20' Max Vel=7.6 fps Inflow=16.36 cfs 0.806 af
n=0.035 L=73.0' S=0.0685 '/' Capacity=25.68 cfs Outflow=16.21 cfs 0.805 af

Reach 2R: Reach #2 Peak Depth=1.91' Max Vel=9.0 fps Inflow=38.31 cfs 2.516 af
n=0.035 L=593.0' S=0.0632 '/' Capacity=24.68 cfs Outflow=37.28 cfs 2.512 af

Reach 3R: Swale Peak Depth=0.68' Max Vel=17.0 fps Inflow=16.21 cfs 0.805 af
n=0.012 L=426.0' S=0.0728 '/' Capacity=221.90 cfs Outflow=15.92 cfs 0.805 af

Total Runoff Area = 17.532 ac Runoff Volume = 3.322 af Average Runoff Depth = 2.27"

Subcatchment 1S: Subcatchment #1

Runoff = 37.87 cfs @ 12.09 hrs, Volume= 2.365 af, Depth= 2.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Existing 100yr Rainfall=5.20"

Area (sf)	CN	Description
554,701	73	Woods, Fair, HSG C

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.6	1,866	0.1500	1.9		**Lag/CN Method, Overland flow**

Subcatchment 2S: Subcatchment #2

Runoff = 16.36 cfs @ 12.01 hrs, Volume= 0.806 af, Depth= 2.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Existing 100yr Rainfall=5.20"

Area (sf)	CN	Description
188,382	73	Woods, Fair, HSG C

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	1,103	0.2000	1.9		**Lag/CN Method, Overland flow**

Subcatchment 3S: Subcatchment #3

Runoff = 3.42 cfs @ 11.91 hrs, Volume= 0.151 af, Depth= 3.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Existing 100yr Rainfall=5.20"

Area (sf)	CN	Description
12,301	98	Paved parking & roofs
8,314	79	50-75% Grass cover, Fair, HSG C
20,615	90	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	130	0.0600	1.2		**Lag/CN Method,**

Reach 1R: Reach #1

Inflow Area = 4.325 ac, Inflow Depth = 2.24" for Existing 100yr event
Inflow = 16.36 cfs @ 12.01 hrs, Volume= 0.806 af
Outflow = 16.21 cfs @ 12.02 hrs, Volume= 0.805 af, Atten= 1%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.6 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.9 fps, Avg. Travel Time= 0.4 min

Peak Depth= 1.20' @ 12.01 hrs
Capacity at bank full= 25.68 cfs
Inlet Invert= 1,115.00', Outlet Invert= 1,110.00'
3.00' x 1.50' deep Parabolic Channel, n= 0.035 Length= 73.0' Slope= 0.0685 '/'

Reach 2R: Reach #2

Inflow Area = 13.207 ac, Inflow Depth = 2.29" for Existing 100yr event
Inflow = 38.31 cfs @ 12.09 hrs, Volume= 2.516 af
Outflow = 37.28 cfs @ 12.13 hrs, Volume= 2.512 af, Atten= 3%, Lag= 2.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.0 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 3.1 fps, Avg. Travel Time= 3.2 min

Peak Depth= 1.91' @ 12.11 hrs
Capacity at bank full= 24.68 cfs
Inlet Invert= 1,110.00', Outlet Invert= 1,072.50'
3.00' x 1.50' deep Parabolic Channel, n= 0.035 Length= 593.0' Slope= 0.0632 '/'

Reach 3R: Swale

Inflow Area = 4.325 ac, Inflow Depth = 2.23" for Existing 100yr event
Inflow = 16.21 cfs @ 12.02 hrs, Volume= 0.805 af
Outflow = 15.92 cfs @ 12.03 hrs, Volume= 0.805 af, Atten= 2%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 17.0 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 6.2 fps, Avg. Travel Time= 1.1 min

Peak Depth= 0.68' @ 12.02 hrs
Capacity at bank full= 221.90 cfs
Inlet Invert= 1,110.00', Outlet Invert= 1,079.00'
4.00' x 2.50' deep Parabolic Channel, n= 0.012 Length= 426.0' Slope= 0.0728 '/'

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subcatchment #1 Runoff Area=554,701 sf Runoff Depth=1.25"
Flow Length=1,866' Tc=16.6 min CN=73 Runoff=21.04 cfs 1.328 af

Subcatchment 2S: Subcatchment #2 Runoff Area=188,382 sf Runoff Depth=1.26"
Flow Length=1,103' Tc=9.4 min CN=73 Runoff=9.19 cfs 0.452 af

Subcatchment 3S: Subcatchment #3 Runoff Area=20,615 sf Runoff Depth=2.56"
Flow Length=130' Tc=1.8 min CN=90 Runoff=2.35 cfs 0.101 af

Reach 1R: Reach #1 Peak Depth=0.90' Max Vel=6.6 fps Inflow=9.19 cfs 0.452 af
n=0.035 L=73.0' S=0.0685 '/' Capacity=25.68 cfs Outflow=9.08 cfs 0.452 af

Reach 2R: Reach #2 Peak Depth=1.39' Max Vel=7.9 fps Inflow=21.34 cfs 1.429 af
n=0.035 L=593.0' S=0.0632 '/' Capacity=24.68 cfs Outflow=20.73 cfs 1.426 af

Reach 3R: Swale Peak Depth=0.51' Max Vel=14.5 fps Inflow=9.08 cfs 0.452 af
n=0.012 L=426.0' S=0.0728 '/' Capacity=221.90 cfs Outflow=8.92 cfs 0.452 af

Total Runoff Area = 17.532 ac Runoff Volume = 1.881 af Average Runoff Depth = 1.29"

Subcatchment 1S: Subcatchment #1

Runoff = 21.04 cfs @ 12.10 hrs, Volume= 1.328 af, Depth= 1.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Existing 10yr Rainfall=3.80"

Area (sf)	CN	Description
554,701	73	Woods, Fair, HSG C

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.6	1,866	0.1500	1.9		**Lag/CN Method, Overland flow**

Subcatchment 2S: Subcatchment #2

Runoff = 9.19 cfs @ 12.02 hrs, Volume= 0.452 af, Depth= 1.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Existing 10yr Rainfall=3.80"

Area (sf)	CN	Description
188,382	73	Woods, Fair, HSG C

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	1,103	0.2000	1.9		**Lag/CN Method, Overland flow**

Subcatchment 3S: Subcatchment #3

Runoff = 2.35 cfs @ 11.91 hrs, Volume= 0.101 af, Depth= 2.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Existing 10yr Rainfall=3.80"

Area (sf)	CN	Description
12,301	98	Paved parking & roofs
8,314	79	50-75% Grass cover, Fair, HSG C
20,615	90	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	130	0.0600	1.2		**Lag/CN Method,**

Reach 1R: Reach #1

Inflow Area = 4.325 ac, Inflow Depth = 1.26" for Existing 10yr event
Inflow = 9.19 cfs @ 12.02 hrs, Volume= 0.452 af
Outflow = 9.08 cfs @ 12.02 hrs, Volume= 0.452 af, Atten= 1%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.6 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.6 fps, Avg. Travel Time= 0.5 min

Peak Depth= 0.90' @ 12.02 hrs
Capacity at bank full= 25.68 cfs
Inlet Invert= 1,115.00', Outlet Invert= 1,110.00'
3.00' x 1.50' deep Parabolic Channel, n= 0.035 Length= 73.0' Slope= 0.0685 '/'

Reach 2R: Reach #2

Inflow Area = 13.207 ac, Inflow Depth = 1.30" for Existing 10yr event
Inflow = 21.34 cfs @ 12.10 hrs, Volume= 1.429 af
Outflow = 20.73 cfs @ 12.14 hrs, Volume= 1.426 af, Atten= 3%, Lag= 2.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.9 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 2.6 fps, Avg. Travel Time= 3.8 min

Peak Depth= 1.39' @ 12.11 hrs
Capacity at bank full= 24.68 cfs
Inlet Invert= 1,110.00', Outlet Invert= 1,072.50'
3.00' x 1.50' deep Parabolic Channel, n= 0.035 Length= 593.0' Slope= 0.0632 '/'

Reach 3R: Swale

Inflow Area = 4.325 ac, Inflow Depth = 1.25" for Existing 10yr event
Inflow = 9.08 cfs @ 12.02 hrs, Volume= 0.452 af
Outflow = 8.92 cfs @ 12.04 hrs, Volume= 0.452 af, Atten= 2%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 14.5 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 5.6 fps, Avg. Travel Time= 1.3 min

Peak Depth= 0.51' @ 12.03 hrs
Capacity at bank full= 221.90 cfs
Inlet Invert= 1,110.00', Outlet Invert= 1,079.00'
4.00' x 2.50' deep Parabolic Channel, n= 0.012 Length= 426.0' Slope= 0.0728 '/'

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subcatchment #1 Runoff Area=554,701 sf Runoff Depth=0.36"
Flow Length=1,866' Tc=16.6 min CN=73 Runoff=5.21 cfs 0.382 af

Subcatchment 2S: Subcatchment #2 Runoff Area=188,382 sf Runoff Depth=0.36"
Flow Length=1,103' Tc=9.4 min CN=73 Runoff=2.38 cfs 0.130 af

Subcatchment 3S: Subcatchment #3 Runoff Area=20,615 sf Runoff Depth=1.17"
Flow Length=130' Tc=1.8 min CN=90 Runoff=1.13 cfs 0.046 af

Reach 1R: Reach #1 Peak Depth=0.47' Max Vel=4.6 fps Inflow=2.38 cfs 0.130 af
n=0.035 L=73.0' S=0.0685 '/' Capacity=25.68 cfs Outflow=2.35 cfs 0.130 af

Reach 2R: Reach #2 Peak Depth=0.70' Max Vel=5.5 fps Inflow=5.36 cfs 0.428 af
n=0.035 L=593.0' S=0.0632 '/' Capacity=24.68 cfs Outflow=5.15 cfs 0.427 af

Reach 3R: Swale Peak Depth=0.27' Max Vel=10.0 fps Inflow=2.35 cfs 0.130 af
n=0.012 L=426.0' S=0.0728 '/' Capacity=221.90 cfs Outflow=2.28 cfs 0.130 af

Total Runoff Area = 17.532 ac Runoff Volume = 0.559 af Average Runoff Depth = 0.38"

Subcatchment 1S: Subcatchment #1

Runoff = 5.21 cfs @ 12.12 hrs, Volume= 0.382 af, Depth= 0.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Existing 1yr Rainfall=2.20"

Area (sf)	CN	Description
554,701	73	Woods, Fair, HSG C

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.6	1,866	0.1500	1.9		**Lag/CN Method, Overland flow**

Subcatchment 2S: Subcatchment #2

Runoff = 2.38 cfs @ 12.03 hrs, Volume= 0.130 af, Depth= 0.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Existing 1yr Rainfall=2.20"

Area (sf)	CN	Description
188,382	73	Woods, Fair, HSG C

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	1,103	0.2000	1.9		**Lag/CN Method, Overland flow**

Subcatchment 3S: Subcatchment #3

Runoff = 1.13 cfs @ 11.92 hrs, Volume= 0.046 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Existing 1yr Rainfall=2.20"

Area (sf)	CN	Description
12,301	98	Paved parking & roofs
8,314	79	50-75% Grass cover, Fair, HSG C
20,615	90	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	130	0.0600	1.2		**Lag/CN Method,**

Reach 1R: Reach #1

Inflow Area = 4.325 ac, Inflow Depth = 0.36" for Existing 1yr event
Inflow = 2.38 cfs @ 12.03 hrs, Volume= 0.130 af
Outflow = 2.35 cfs @ 12.04 hrs, Volume= 0.130 af, Atten= 1%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.6 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.0 fps, Avg. Travel Time= 0.6 min

Peak Depth= 0.47' @ 12.04 hrs
Capacity at bank full= 25.68 cfs
Inlet Invert= 1,115.00', Outlet Invert= 1,110.00'
3.00' x 1.50' deep Parabolic Channel, n= 0.035 Length= 73.0' Slope= 0.0685 '/'

Reach 2R: Reach #2

Inflow Area = 13.207 ac, Inflow Depth = 0.39" for Existing 1yr event
Inflow = 5.36 cfs @ 12.12 hrs, Volume= 0.428 af
Outflow = 5.15 cfs @ 12.17 hrs, Volume= 0.427 af, Atten= 4%, Lag= 3.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.5 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 2.1 fps, Avg. Travel Time= 4.7 min

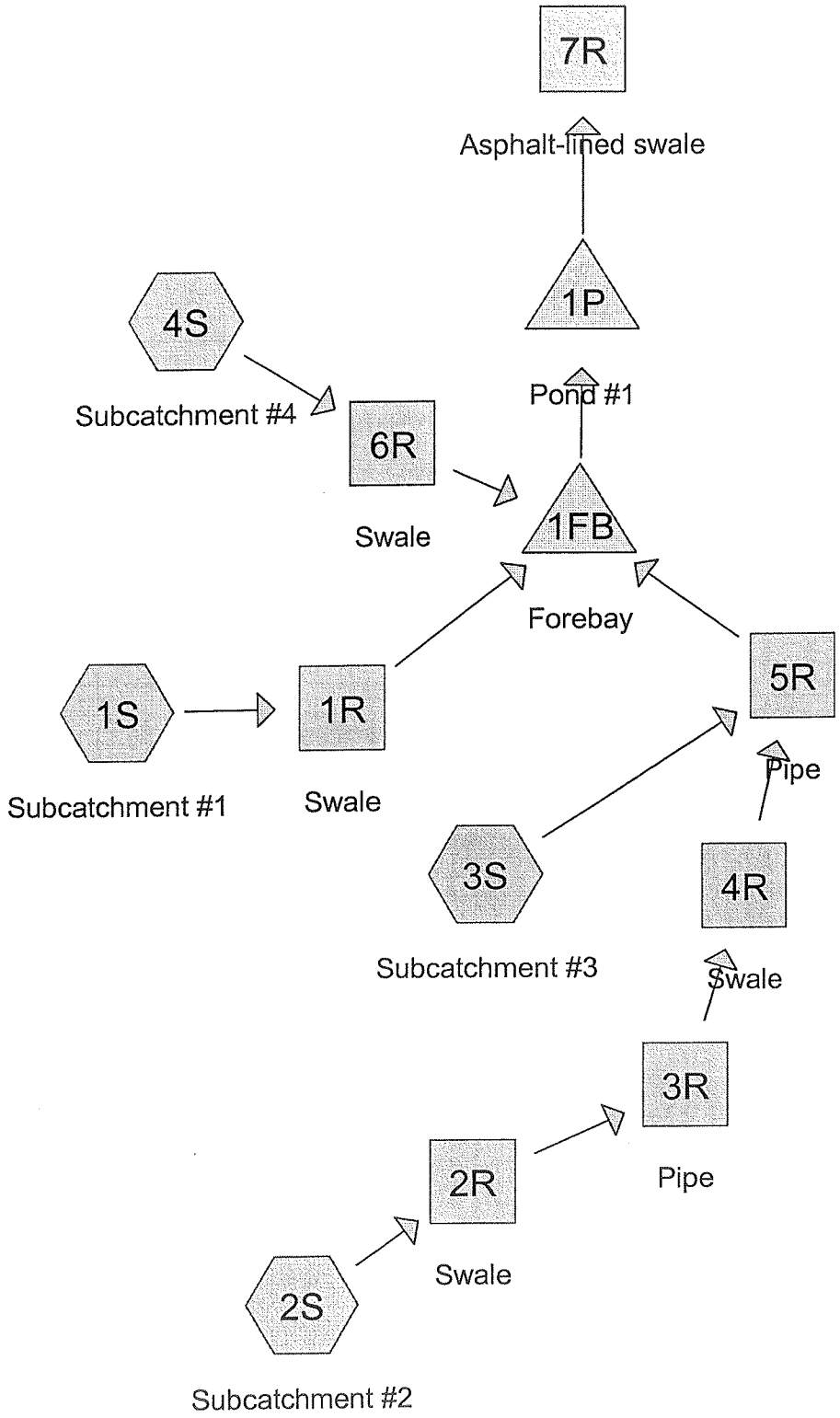
Peak Depth= 0.70' @ 12.14 hrs
Capacity at bank full= 24.68 cfs
Inlet Invert= 1,110.00', Outlet Invert= 1,072.50'
3.00' x 1.50' deep Parabolic Channel, n= 0.035 Length= 593.0' Slope= 0.0632 '/'

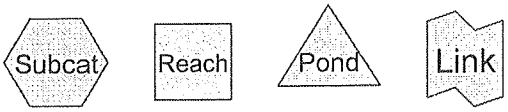
Reach 3R: Swale

Inflow Area = 4.325 ac, Inflow Depth = 0.36" for Existing 1yr event
Inflow = 2.35 cfs @ 12.04 hrs, Volume= 0.130 af
Outflow = 2.28 cfs @ 12.06 hrs, Volume= 0.130 af, Atten= 3%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.0 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 4.3 fps, Avg. Travel Time= 1.6 min

Peak Depth= 0.27' @ 12.05 hrs
Capacity at bank full= 221.90 cfs
Inlet Invert= 1,110.00', Outlet Invert= 1,079.00'
4.00' x 2.50' deep Parabolic Channel, n= 0.012 Length= 426.0' Slope= 0.0728 '/'





Drainage Diagram for 5037UMP_park_prop
Prepared by The LA Group 10/31/2005
HydroCAD® 7.00 s/n 000439 © 1986-2003 Applied Microcomputer Systems

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subcatchment #1 Runoff Area=448,592 sf Runoff Depth=2.15"
Flow Length=1,200' Tc=12.0 min CN=72 Runoff=34.37 cfs 1.846 af

Subcatchment 2S: Subcatchment #2 Runoff Area=8,814 sf Runoff Depth=2.16"
Flow Length=90' Tc=1.2 min CN=72 Runoff=0.94 cfs 0.036 af

Subcatchment 3S: Subcatchment #3 Runoff Area=98,146 sf Runoff Depth=3.32"
Flow Length=260' Tc=4.1 min CN=85 Runoff=14.40 cfs 0.623 af

Subcatchment 4S: Subcatchment #4 Runoff Area=151,266 sf Runoff Depth=2.49"
Flow Length=1,470' Tc=9.8 min CN=76 Runoff=14.31 cfs 0.720 af

Reach 1R: Swale Peak Depth=1.30' Max Vel=8.0 fps Inflow=34.37 cfs 1.846 af
n=0.035 L=776.0' S=0.0528 '/' Capacity=81.71 cfs Outflow=32.73 cfs 1.841 af

Reach 2R: Swale Peak Depth=0.20' Max Vel=3.7 fps Inflow=0.94 cfs 0.036 af
n=0.035 L=79.0' S=0.1139 '/' Capacity=119.98 cfs Outflow=0.90 cfs 0.036 af

Reach 3R: Pipe Peak Depth=0.40' Max Vel=3.1 fps Inflow=0.90 cfs 0.036 af
D=12.0" n=0.012 L=58.0' S=0.0050 '/' Capacity=2.73 cfs Outflow=0.90 cfs 0.036 af

Reach 4R: Swale Peak Depth=0.21' Max Vel=2.6 fps Inflow=0.90 cfs 0.036 af
n=0.035 L=633.0' S=0.0552 '/' Capacity=212.79 cfs Outflow=0.75 cfs 0.036 af

Reach 5R: Pipe Peak Depth=1.25' Max Vel=9.1 fps Inflow=14.90 cfs 0.659 af
D=15.0" n=0.012 L=76.0' S=0.0200 '/' Capacity=9.90 cfs Outflow=9.90 cfs 0.659 af

Reach 6R: Swale Peak Depth=1.06' Max Vel=4.6 fps Inflow=14.31 cfs 0.720 af
n=0.035 L=221.0' S=0.0226 '/' Capacity=53.47 cfs Outflow=13.89 cfs 0.719 af

Reach 7R: Asphalt-lined swale Peak Depth=0.58' Max Vel=9.9 fps Inflow=7.32 cfs 1.493 af
n=0.014 L=480.0' S=0.0396 '/' Capacity=344.55 cfs Outflow=7.31 cfs 1.493 af

Pond 1FB: Forebay Peak Elev=1,095.77' Storage=846 cf Inflow=54.78 cfs 3.219 af
Discarded=0.13 cfs 0.082 af Primary=54.56 cfs 3.136 af Outflow=54.69 cfs 3.218 af

Pond 1P: Pond #1 Peak Elev=1,096.24' Storage=60,971 cf Inflow=54.56 cfs 3.136 af
Discarded=2.13 cfs 1.249 af Primary=7.32 cfs 1.493 af Outflow=9.45 cfs 2.743 af

Total Runoff Area = 16.226 ac Runoff Volume = 3.226 af Average Runoff Depth = 2.39"

Subcatchment 1S: Subcatchment #1

Runoff = 34.37 cfs @ 12.04 hrs, Volume= 1.846 af, Depth= 2.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Prop 100yr Rainfall=5.20"

Area (sf)	CN	Description
357,704	73	Woods, Fair, HSG C
90,888	70	Brush, Fair, HSG C
448,592	72	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	1,200	0.1500	1.7		**Lag/CN Method, Overland flow**

Subcatchment 2S: Subcatchment #2

Runoff = 0.94 cfs @ 11.91 hrs, Volume= 0.036 af, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Prop 100yr Rainfall=5.20"

Area (sf)	CN	Description
4,983	73	Woods, Fair, HSG C
3,831	70	Brush, Fair, HSG C
8,814	72	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	90	0.2300	1.2		**Lag/CN Method, Overland flow**

Subcatchment 3S: Subcatchment #3

Runoff = 14.40 cfs @ 11.94 hrs, Volume= 0.623 af, Depth= 3.32"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Prop 100yr Rainfall=5.20"

Area (sf)	CN	Description
4,015	98	Paved parking & roofs
68,986	89	Gravel roads, HSG C
12,433	70	Brush, Fair, HSG C
12,712	73	Woods, Fair, HSG C
98,146	85	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	260	0.0500	1.1		**Lag/CN Method,**

Subcatchment 4S: Subcatchment #4

Runoff = 14.31 cfs @ 12.01 hrs, Volume= 0.720 af, Depth= 2.49"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Prop 100yr Rainfall=5.20"

Area (sf)	CN	Description
6,608	98	Paved parking & roofs
16,943	89	Gravel roads, HSG C
25,324	74	>75% Grass cover, Good, HSG C
102,391	73	Woods, Fair, HSG C
151,266	76	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	1,470	0.2500	2.5		**Lag/CN Method, Overland flow**

Reach 1R: Swale

Inflow Area = 10.298 ac, Inflow Depth = 2.15" for Prop 100yr event
Inflow = 34.37 cfs @ 12.04 hrs, Volume= 1.846 af
Outflow = 32.73 cfs @ 12.09 hrs, Volume= 1.841 af, Atten= 5%, Lag= 2.9 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.0 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 2.9 fps, Avg. Travel Time= 4.4 min

Peak Depth= 1.30' @ 12.06 hrs
Capacity at bank full= 81.71 cfs
Inlet Invert= 1,141.00', Outlet Invert= 1,100.00'
6.00' x 2.00' deep Parabolic Channel, n= 0.035 Length= 776.0' Slope= 0.0528 '/'

Reach 2R: Swale

Inflow Area = 0.202 ac, Inflow Depth = 2.16" for Prop 100yr event
Inflow = 0.94 cfs @ 11.91 hrs, Volume= 0.036 af
Outflow = 0.90 cfs @ 11.92 hrs, Volume= 0.036 af, Atten= 4%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.7 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.2 fps, Avg. Travel Time= 1.1 min

Peak Depth= 0.20' @ 11.91 hrs
Capacity at bank full= 119.98 cfs
Inlet Invert= 1,141.00', Outlet Invert= 1,132.00'
6.00' x 2.00' deep Parabolic Channel, n= 0.035 Length= 79.0' Slope= 0.1139 '/'

Reach 3R: Pipe

Inflow Area =	0.202 ac,	Inflow Depth =	2.16"	for	Prop 100yr event
Inflow =	0.90 cfs @	11.92 hrs,	Volume=	0.036 af	
Outflow =	0.90 cfs @	11.93 hrs,	Volume=	0.036 af,	Atten= 1%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.1 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.0 fps, Avg. Travel Time= 0.9 min

Peak Depth= 0.40' @ 11.93 hrs
Capacity at bank full= 2.73 cfs
Inlet Invert= 1,132.00', Outlet Invert= 1,131.71'
12.0" Diameter Pipe n= 0.012 Length= 58.0' Slope= 0.0050 '/'

Reach 4R: Swale

Inflow Area =	0.202 ac,	Inflow Depth =	2.16"	for	Prop 100yr event
Inflow =	0.90 cfs @	11.93 hrs,	Volume=	0.036 af	
Outflow =	0.75 cfs @	12.03 hrs,	Volume=	0.036 af,	Atten= 17%, Lag= 6.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.6 fps, Min. Travel Time= 4.0 min
Avg. Velocity = 1.0 fps, Avg. Travel Time= 11.0 min

Peak Depth= 0.21' @ 11.96 hrs
Capacity at bank full= 212.79 cfs
Inlet Invert= 1,131.71', Outlet Invert= 1,096.75'
8.00' x 3.00' deep Parabolic Channel, n= 0.035 Length= 633.0' Slope= 0.0552 '/'

Reach 5R: Pipe

Inflow Area =	2.455 ac,	Inflow Depth =	3.22"	for	Prop 100yr event
Inflow =	14.90 cfs @	11.95 hrs,	Volume=	0.659 af	
Outflow =	9.90 cfs @	11.95 hrs,	Volume=	0.659 af,	Atten= 34%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.1 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.4 fps, Avg. Travel Time= 0.4 min

Peak Depth= 1.25' @ 11.90 hrs
Capacity at bank full= 9.90 cfs
Inlet Invert= 1,096.75', Outlet Invert= 1,095.23'
15.0" Diameter Pipe n= 0.012 Length= 76.0' Slope= 0.0200 '/'

Reach 6R: Swale

Inflow Area = 3.473 ac, Inflow Depth = 2.49" for Prop 100yr event
Inflow = 14.31 cfs @ 12.01 hrs, Volume= 0.720 af
Outflow = 13.89 cfs @ 12.04 hrs, Volume= 0.719 af, Atten= 3%, Lag= 1.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.6 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.6 fps, Avg. Travel Time= 2.3 min

Peak Depth= 1.06' @ 12.03 hrs
Capacity at bank full= 53.47 cfs
Inlet Invert= 1,105.00', Outlet Invert= 1,100.00'
6.00' x 2.00' deep Parabolic Channel, n= 0.035 Length= 221.0' Slope= 0.0226 '/'

Reach 7R: Asphalt-lined swale

Inflow Area = 16.226 ac, Inflow Depth = 1.10" for Prop 100yr event
Inflow = 7.32 cfs @ 12.46 hrs, Volume= 1.493 af
Outflow = 7.31 cfs @ 12.48 hrs, Volume= 1.493 af, Atten= 0%, Lag= 1.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.9 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 6.1 fps, Avg. Travel Time= 1.3 min

Peak Depth= 0.58' @ 12.47 hrs
Capacity at bank full= 344.55 cfs
Inlet Invert= 1,079.00', Outlet Invert= 1,060.00'
5.00' x 4.00' deep Parabolic Channel, n= 0.014 Length= 480.0' Slope= 0.0396 '/'

Pond 1FB: Forebay

Inflow Area = 16.226 ac, Inflow Depth = 2.38" for Prop 100yr event
Inflow = 54.78 cfs @ 12.06 hrs, Volume= 3.219 af
Outflow = 54.69 cfs @ 12.07 hrs, Volume= 3.218 af, Atten= 0%, Lag= 0.2 min
Discarded = 0.13 cfs @ 12.07 hrs, Volume= 0.082 af
Primary = 54.56 cfs @ 12.07 hrs, Volume= 3.136 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,095.77' @ 12.07 hrs Surf.Area= 720 sf Storage= 846 cf
Plug-Flow detention time= 0.5 min calculated for 3.207 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (792.3 - 791.9)

#	Invert	Avail.Storage	Storage Description
1	1,095.00'	5,480 cf	**Custom Stage Data (Irregular)** Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,095.00	523	91.0	0	0	523
1,100.00	1,796	159.0	5,480	5,480	2,013

#	Routing	Invert	Outlet Devices
1	Primary	1,095.00'	**30.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
2	Discarded	0.00'	**0.010400 fpm Exfiltration over entire Wetted area**

Discarded OutFlow Max=0.13 cfs @ 12.07 hrs HW=1,095.76' (Free Discharge)
└─**2=Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=53.48 cfs @ 12.07 hrs HW=1,095.76' (Free Discharge)
└─**1=Broad-Crested Rectangular Weir** (Weir Controls 53.48 cfs @ 2.3 fps)

Pond 1P: Pond #1

Inflow Area =	16.226 ac,	Inflow Depth =	2.32"	for	Prop 100yr event
Inflow =	54.56 cfs @	12.07 hrs,	Volume=	3.136 af	
Outflow =	9.45 cfs @	12.46 hrs,	Volume=	2.743 af,	Atten= 83%, Lag= 23.5 min
Discarded =	2.13 cfs @	12.46 hrs,	Volume=	1.249 af	
Primary =	7.32 cfs @	12.46 hrs,	Volume=	1.493 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,096.24' @ 12.46 hrs Surf.Area= 10,814 sf Storage= 60,971 cf
Plug-Flow detention time= 105.5 min calculated for 2.733 af (87% of inflow)
Center-of-Mass det. time= 66.3 min (856.0 - 789.8)

#	Invert	Avail.Storage	Storage Description
1	1,090.00'	97,669 cf	**Custom Stage Data (Irregular)** Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,090.00	6,560	306.0	0	0	6,560
1,100.00	13,374	446.0	97,669	97,669	15,743

#	Routing	Invert	Outlet Devices
1	Primary	1,092.00'	**12.0" x 83.0' long Culvert** Ke= 0.500 Outlet Invert= 1,080.00' S= 0.1446 '/' n= 0.012 Cc= 0.900
2	Discarded	0.00'	**0.010400 fpm Exfiltration over entire Wetted area**

Discarded OutFlow Max=2.13 cfs @ 12.46 hrs HW=1,096.24' (Free Discharge)
└─**2=Exfiltration** (Exfiltration Controls 2.13 cfs)

Primary OutFlow Max=7.31 cfs @ 12.46 hrs HW=1,096.24' (Free Discharge)
└─**1=Culvert** (Inlet Controls 7.31 cfs @ 9.3 fps)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subcatchment #1 Runoff Area=448,592 sf Runoff Depth=1.19"
Flow Length=1,200' Tc=12.0 min CN=72 Runoff=18.93 cfs 1.024 af

Subcatchment 2S: Subcatchment #2 Runoff Area=8,814 sf Runoff Depth=1.20"
Flow Length=90' Tc=1.2 min CN=72 Runoff=0.53 cfs 0.020 af

Subcatchment 3S: Subcatchment #3 Runoff Area=98,146 sf Runoff Depth=2.12"
Flow Length=260' Tc=4.1 min CN=85 Runoff=9.45 cfs 0.398 af

Subcatchment 4S: Subcatchment #4 Runoff Area=151,266 sf Runoff Depth=1.45"
Flow Length=1,470' Tc=9.8 min CN=76 Runoff=8.38 cfs 0.419 af

Reach 1R: Swale Peak Depth=0.98' Max Vel=6.7 fps Inflow=18.93 cfs 1.024 af
n=0.035 L=776.0' S=0.0528 '/' Capacity=81.71 cfs Outflow=17.93 cfs 1.020 af

Reach 2R: Swale Peak Depth=0.15' Max Vel=3.1 fps Inflow=0.53 cfs 0.020 af
n=0.035 L=79.0' S=0.1139 '/' Capacity=119.98 cfs Outflow=0.51 cfs 0.020 af

Reach 3R: Pipe Peak Depth=0.29' Max Vel=2.6 fps Inflow=0.51 cfs 0.020 af
D=12.0" n=0.012 L=58.0' S=0.0050 '/' Capacity=2.73 cfs Outflow=0.50 cfs 0.020 af

Reach 4R: Swale Peak Depth=0.15' Max Vel=2.2 fps Inflow=0.50 cfs 0.020 af
n=0.035 L=633.0' S=0.0552 '/' Capacity=212.79 cfs Outflow=0.39 cfs 0.020 af

Reach 5R: Pipe Peak Depth=0.99' Max Vel=9.2 fps Inflow=9.64 cfs 0.418 af
D=15.0" n=0.012 L=76.0' S=0.0200 '/' Capacity=9.90 cfs Outflow=9.51 cfs 0.417 af

Reach 6R: Swale Peak Depth=0.82' Max Vel=4.0 fps Inflow=8.38 cfs 0.419 af
n=0.035 L=221.0' S=0.0226 '/' Capacity=53.47 cfs Outflow=8.10 cfs 0.418 af

Reach 7R: Asphalt-lined swale Peak Depth=0.42' Max Vel=8.2 fps Inflow=3.71 cfs 0.487 af
n=0.014 L=480.0' S=0.0396 '/' Capacity=344.55 cfs Outflow=3.70 cfs 0.487 af

Pond 1FB: Forebay Peak Elev=1,095.50' Storage=548 cf Inflow=27.90 cfs 1.855 af
Discarded=0.12 cfs 0.069 af Primary=27.77 cfs 1.786 af Outflow=27.89 cfs 1.854 af

Pond 1P: Pond #1 Peak Elev=1,093.46' Storage=33,810 cf Inflow=27.77 cfs 1.786 af
Discarded=1.69 cfs 1.057 af Primary=3.71 cfs 0.487 af Outflow=5.40 cfs 1.544 af

Total Runoff Area = 16.226 ac Runoff Volume = 1.860 af Average Runoff Depth = 1.38"

Subcatchment 1S: Subcatchment #1

Runoff = 18.93 cfs @ 12.05 hrs, Volume= 1.024 af, Depth= 1.19"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Prop 10yr Rainfall=3.80"

Area (sf)	CN	Description
357,704	73	Woods, Fair, HSG C
90,888	70	Brush, Fair, HSG C
448,592	72	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	1,200	0.1500	1.7		**Lag/CN Method, Overland flow**

Subcatchment 2S: Subcatchment #2

Runoff = 0.53 cfs @ 11.91 hrs, Volume= 0.020 af, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Prop 10yr Rainfall=3.80"

Area (sf)	CN	Description
4,983	73	Woods, Fair, HSG C
3,831	70	Brush, Fair, HSG C
8,814	72	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	90	0.2300	1.2		**Lag/CN Method, Overland flow**

Subcatchment 3S: Subcatchment #3

Runoff = 9.45 cfs @ 11.95 hrs, Volume= 0.398 af, Depth= 2.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Prop 10yr Rainfall=3.80"

Area (sf)	CN	Description
4,015	98	Paved parking & roofs
68,986	89	Gravel roads, HSG C
12,433	70	Brush, Fair, HSG C
12,712	73	Woods, Fair, HSG C
98,146	85	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	260	0.0500	1.1		**Lag/CN Method,**

Subcatchment 4S: Subcatchment #4

Runoff = 8.38 cfs @ 12.02 hrs, Volume= 0.419 af, Depth= 1.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Prop 10yr Rainfall=3.80"

Area (sf)	CN	Description
6,608	98	Paved parking & roofs
16,943	89	Gravel roads, HSG C
25,324	74	>75% Grass cover, Good, HSG C
102,391	73	Woods, Fair, HSG C
151,266	76	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	1,470	0.2500	2.5		**Lag/CN Method, Overland flow**

Reach 1R: Swale

Inflow Area = 10.298 ac, Inflow Depth = 1.19" for Prop 10yr event
Inflow = 18.93 cfs @ 12.05 hrs, Volume= 1.024 af
Outflow = 17.93 cfs @ 12.10 hrs, Volume= 1.020 af, Atten= 5%, Lag= 3.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.7 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 2.7 fps, Avg. Travel Time= 4.9 min

Peak Depth= 0.98' @ 12.07 hrs
Capacity at bank full= 81.71 cfs
Inlet Invert= 1,141.00', Outlet Invert= 1,100.00'
6.00' x 2.00' deep Parabolic Channel, n= 0.035 Length= 776.0' Slope= 0.0528 '/'

Reach 2R: Swale

Inflow Area = 0.202 ac, Inflow Depth = 1.20" for Prop 10yr event
Inflow = 0.53 cfs @ 11.91 hrs, Volume= 0.020 af
Outflow = 0.51 cfs @ 11.93 hrs, Volume= 0.020 af, Atten= 3%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.1 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.1 fps, Avg. Travel Time= 1.2 min

Peak Depth= 0.15' @ 11.92 hrs
Capacity at bank full= 119.98 cfs
Inlet Invert= 1,141.00', Outlet Invert= 1,132.00'
6.00' x 2.00' deep Parabolic Channel, n= 0.035 Length= 79.0' Slope= 0.1139 '/'

Reach 3R: Pipe

Inflow Area = 0.202 ac, Inflow Depth = 1.20" for Prop 10yr event
Inflow = 0.51 cfs @ 11.93 hrs, Volume= 0.020 af
Outflow = 0.50 cfs @ 11.94 hrs, Volume= 0.020 af, Atten= 2%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.6 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.9 fps, Avg. Travel Time= 1.0 min

Peak Depth= 0.29' @ 11.93 hrs
Capacity at bank full= 2.73 cfs
Inlet Invert= 1,132.00', Outlet Invert= 1,131.71'
12.0" Diameter Pipe n= 0.012 Length= 58.0' Slope= 0.0050 '/'

Reach 4R: Swale

Inflow Area = 0.202 ac, Inflow Depth = 1.20" for Prop 10yr event
Inflow = 0.50 cfs @ 11.94 hrs, Volume= 0.020 af
Outflow = 0.39 cfs @ 12.06 hrs, Volume= 0.020 af, Atten= 22%, Lag= 7.6 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.2 fps, Min. Travel Time= 4.9 min
Avg. Velocity = 0.9 fps, Avg. Travel Time= 12.2 min

Peak Depth= 0.15' @ 11.98 hrs
Capacity at bank full= 212.79 cfs
Inlet Invert= 1,131.71', Outlet Invert= 1,096.75'
8.00' x 3.00' deep Parabolic Channel, n= 0.035 Length= 633.0' Slope= 0.0552 '/'

Reach 5R: Pipe

Inflow Area = 2.455 ac, Inflow Depth = 2.04" for Prop 10yr event
Inflow = 9.64 cfs @ 11.95 hrs, Volume= 0.418 af
Outflow = 9.51 cfs @ 11.95 hrs, Volume= 0.417 af, Atten= 1%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.2 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.1 fps, Avg. Travel Time= 0.4 min

Peak Depth= 0.99' @ 11.95 hrs
Capacity at bank full= 9.90 cfs
Inlet Invert= 1,096.75', Outlet Invert= 1,095.23'
15.0" Diameter Pipe n= 0.012 Length= 76.0' Slope= 0.0200 '/'