APPENDIX 11

TRAFFIC IMPACT STUDY

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Creighton Manning

February 9, 2012

Mr. Kevin Franke
The LA Group
40 Long Alley
Saratoga Springs, New York 12866

RE: Modified Belleayre Resort at Catskill Park, Towns of Shandaken and Middletown, Ulster and Delaware Counties, NY; CME Project No. 111-164

Dear Mr. Franke:

Creighton Manning Engineering, LLP is in receipt of the updated site plan entitled "The Modified Belleayre Resort at Catskill Park", dated March 30, 2011, prepared by the LA Group. We have reviewed the modified plan in regard to traffic and offer the following:

Site Plan Modifications

The preferred alternative has been modified from the previous site plan to eliminate the upper portion of the Highmount Spa Resort with removal of 24 fractional units. The removal of these units does not result in a net decrease in the development size as these units are relocated to the Wildacres Resort adding ten fractional units to the Front 9 and fourteen fractional units to the West Village.

ENGINEERS
PLANNERS
SURVEYORS

Appendix 11- Traffic Impact Study

Appendix 11 of the latest SDEIS dated April 2011 presented a detailed traffic impact assessment of the proposed Belleayre Resort at Catskill Park. The 2011 study was an update from the initial traffic assessment completed in 2002 based on modifications to the development location, a reduction in the overall units, and removal of a golf course. The 2011 traffic impact study, which assessed the ski season Saturday peak one-hour period, offered the following mitigation:

- A fair share contribution towards improvements at the NY Route 28/CR 49A/Owl Nest Road intersection to include construction of a westbound left-turn lane on NY Route 28, construction of a northbound right-turn lane on CR 49A, and installation of a traffic signal.
- Re-alignment of CR 49A in the vicinity of the Wildacres Main Access driveway to improve sight lines and construction of northbound and southbound left-turn lanes to better facilitate the traffic turning into the proposed resort and existing ski center.
- Clearing of roadside vegetation and embankment grading at the Highmount Spa Resort Driveway.

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- Clearing of roadside vegetation, embankment grading, and installation of intersection warning signs at the Wildacres Front 9 Village Driveway.

Based on the trip generation methodologies presented in Chapter III of the 2011 Traffic Impact Study, the relocation of the 24 fractional units will result in two less shuttle bus users and one less vehicle trip traveling to the Highmount Spa Resort and relocated to the Wildacres Resort. The two shuttle bus users will be accommodated for in the 6 shuttle bus trips (3 enter and 3 exit) that were included in the 2011 analysis and the single vehicle trip will not alter the results of the analysis. Therefore, the results of the analysis and mitigation summarized above will remain the same with the Modified Site Plan relocation of the 24 fractional units.

Please call with any questions or comments.

Respectfully submitted,
Creighton Manning Engineering, LLP

Wendy C. Holsberger, P.E., PTOE
Associate

c:\ Jack H. Schoonmaker, Crossroads Ventures, LLC

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Traffic Impact Study

Belleayre Resort at Catskill Park

Towns of Shandaken and Middletown, New York

CME Project No. 99-057

Prepared For:

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72 Andrew Lane Road
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February 14, 2011

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CHAPTER I
INTRODUCTION

This report summarizes the results of a *Traffic Impact Study* (TIS) conducted for a proposed resort facility, called *Belleayre Resort at Catskill Park*, located adjacent to Belleayre Mountain in the Towns of Shandaken and Middletown, Ulster County and Delaware County, New York. This report supersedes the original TIS prepared by Creighton Manning Engineering, LLP (Creighton Manning) dated January 21, 2002. The project location is shown on Figure 1.1.

The project site is divided into two separate locations; the first, referred to as the *Highmount Spa Resort*, is located on both sides of County Road 49A (CR 49A) northeast of the Hamlet of Mapledale, southwest of the existing *Belleayre Mountain Ski Center*. The second, referred to as the *Wildacres Resort*, is located on the north side of CR 49A directly across from the existing *Belleayre Mountain Ski Center*. A Project Masterplan is included in Appendix A.

The current proposal differs from the previous proposal in several ways. The initial proposal included the development of the *Big Indian Plateau* resort which was located off of NY Route 28 in the vicinity of Friendship Road. *Highmount Estates* included the development of 21 single family homes in the initial proposal. With the new proposal, *Big Indian Plateau* has been removed and a second development, *Highmount Spa Resort,* has replaced the single family homes at *Highmount Estates.* Overall, the resorts have reduced in size with 50 fewer fractional units, 72 fewer hotel units, the removal of the 21single family homes, and the removal of an 18-hole golf course.

It is noted that the *Belleayre Mountain Ski Center* is proposing an expansion to their facility as outlined in an updated Unit Management Plan (UMP). The updated UMP outlines the expansion plans for the ski center to include new ski lifts, ski trails and ski-in-ski-out public access to the proposed *Belleayre Resort at Catskill Park.* As the two projects are closely related, a combined scoping document was prepared for the purpose of the environmental review. Therefore, the traffic study completed for the *Belleayre Resort at Catskill Park* considers the expansion of the ski center and the interaction of the two sites related to traffic.

A. Planned Project

The *Highmount Spa Resort* will consist of a 120-room hotel with a 24,000 square-foot (SF) spa/fitness center. In addition, 120 fractional lodging units will be constructed of which 53-units will be located within the hotel/spa building, 27-units in a single lodge building, and the remaining 40-units located in detached duplexes or individual units. The existing Leach Farm Building (approximately 12,000 SF) will be renovated for a Conference/Wellness Center on the north side of CR 49A.

Access to the main portion of the *Highmount Spa Resort* will be provided via one access road on the south side of CR 49A. In addition, a loop road located next to the Leach Farm Conference/Wellness Center building will be provided on the north side of CR 49A.

The *Wildacres Resort* will be developed with an 18-hole golf course with a driving range, clubhouse, pro shop, and snack bar. The *Wildacres Resort* will also include a 208-room hotel with 42 attached fractional units located across from the *Belleayre Mountain Ski Center* and will include resort retail shops, two restaurants, a lounge, a pool and spa, tennis courts, a 500-seat conference center, a 200-seat ballroom, and meeting rooms. In addition, 55 fractional units will be constructed behind the hotel in multi-unit buildings. An additional building, *Marlowe Mansion*, will be renovated as a social hall and will also accommodate offices. The *Front 9 Village* portion of the *Wildacres Resort*, located northeast of Gunnison Road, will provide 84 fractional units constructed in multi-unit buildings with a community clubhouse.

Access to the *Wildacres Resort* will be provided via four site driveways off of or connecting to CR 49A; the first access will be located on the existing Gunnison Road, the second access servicing hotel traffic will be located across from the *Belleayre Mountain Ski Center* Upper Driveway, the third access will be located approximately 1,300 feet west of the Belleayre Mountain Upper Driveway. A fourth access to the *Front 9 Village* portion of the *Wildacres Resort* will be located on CR 49A east of Gunnison Road.

The *Wilderness Activity Center* is an amenity to both resorts located approximately 1,500 feet west of the western most access to the *Wildacres Resort* on

the south side of CR 49A. Access to the Center will be via shuttles only; no public access will be provided.

It is anticipated that the proposed project will open during the year 2015 and be developed in phases through the year 2025. The updated UMP for the *Belleayre Mountain Ski Center* has a design year of 2015. A review of the phasing plan for the proposed *Belleayre Resort at Catskill Park* indicates that almost 75% of the units proposed for the project site will be developed by 2015. Therefore, to be consistent with the UMP design year and evaluation, a 2015 full build-out condition was evaluated assuming full build-out of the resort.

B. Study Area and Methodology

The study area intersections as required by the Final Scoping Document are listed below:

- NY Route 28/NY Route 214/South Street
- NY Route 28/NY Route 42
- NY Route 28/County Road 47
- NY Route 28/ Main Street
- NY Route 28/County Road 49A/Owl Nest Road
- County Road 49A/Gunnison Road/Belleayre Lower Driveway
- County Road 49A/Belleayre Upper Driveway

Additional intersections were analyzed in the original TIS for the proposed development which included the NY Route 28/Friendship Road intersection and the Main Street/Bonnieview Avenue/Academy Street intersection. These intersections will be addressed qualitatively since the modification of the proposed project, including the removal of the *Big Indian Resort*, has significantly reduced potential impacts at these intersections associated with the new development plan.

During the initial project stages, extensive study of the appropriate season and peak periods of study was undertaken. In 2000, traffic volume data from summer, fall, and winter were collected in the study corridor. In addition, volume data for the Friday afternoon peak, the Saturday morning, midday, and afternoon peaks, and Sunday afternoon peak were compared. Based on the assessment it was determined that the Saturday afternoon peak best represented the worst case peak conditions in the study area. Further it was determined that the winter season, when the *Belleayre Mountain*

Ski Center is operational, represented worst case conditions. Based on the seasonal and peak hour assessments it was determined that the Saturday PM peak hour in winter would be assessed in the study. It is further noted that true worst case conditions are presented in the study as the traffic volume data was collected during the Martin Luther King Junior holiday weekend. The latest data that was used in this study was collected in 2008. The administration of the *Belleayre Mountain Ski Center* has indicated that this particular holiday weekend was the highest weekend day on record for any day at their facility during the 2008 season. A review of the 2008 traffic data and more recent data was undertaken in determining the current traffic volumes in the study area. Details on the existing condition volumes are included in Chapter II.C.

The potential traffic impact of the proposed development was determined by documenting the existing traffic conditions in the area, projecting future traffic volumes, including the peak hour trip generation of the development, and comparing the operating condition of the study area intersections before and after full development of the proposed project.

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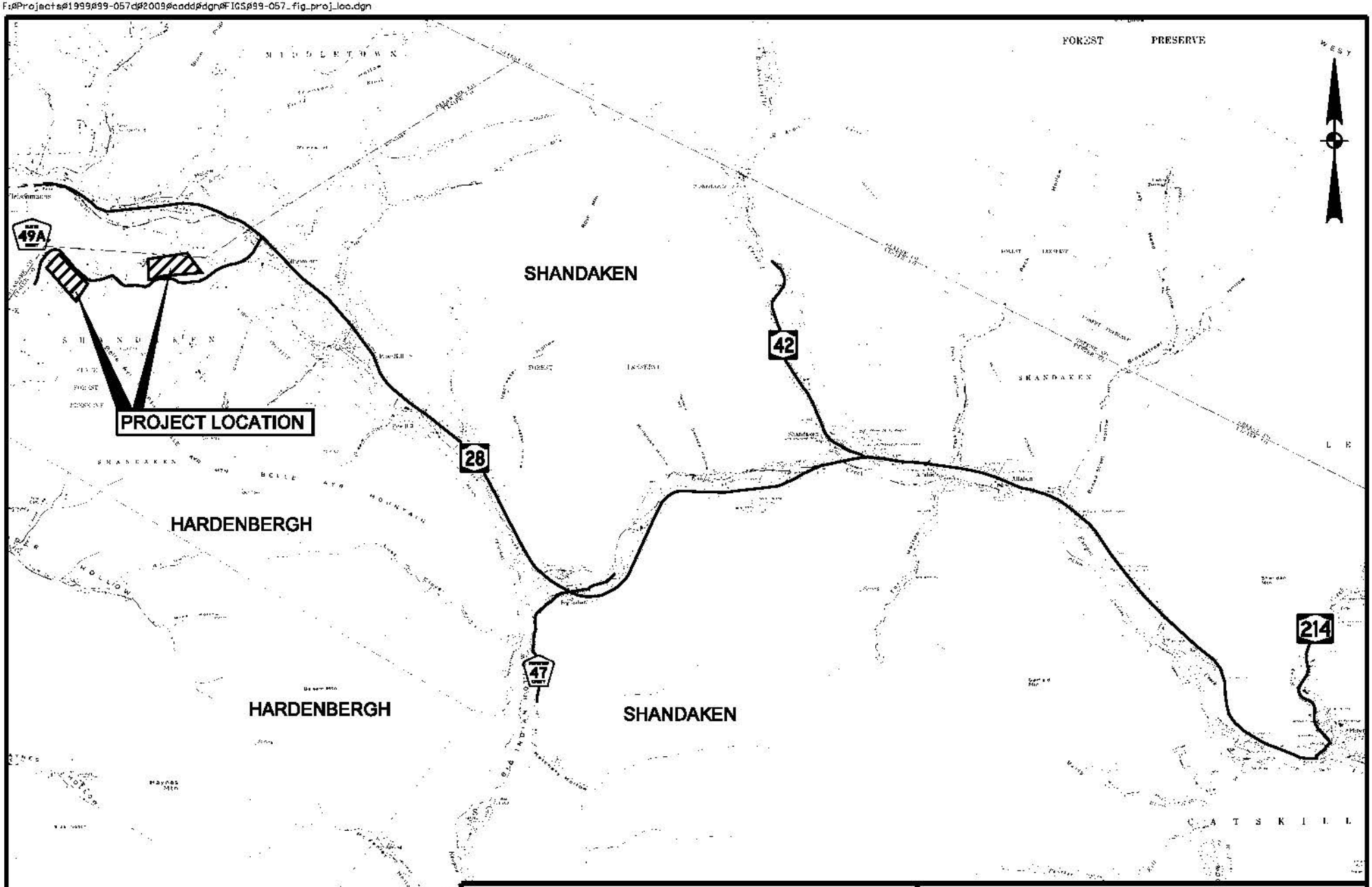


PROJECT LOCATION MAP

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

Creighton Manning

PROJECT: 99-057d	DATE: 1/11	FIGURE: 1.1

CHAPTER II

EXISTING CONDITIONS

A. Roadways Serving the Site

- NY Route 28 – Route 28 will serve as the primary means of access to the project area. NY Route 28 is a state-maintained roadway classified as a rural minor arterial. NY Route 28 extends from Kingston to the east and Oneonta to the west of the project. In the project area, NY Route 28 extends in an east-west direction with one twelve-foot wide travel lane in each direction and approximately six-foot wide shoulders. Data published by the New York State Department of Transportation (NYSDOT) in the *2009 Pavement Data Report* indicates that the pavement on NY Route 28 is in fair to good condition near the project site. The statutory speed limit in the vicinity of the project site is 55 mph

- NY Route 214 – Route 214 is a state-maintained roadway classified as a rural major collector. NY Route 214 begins at its intersection with NY Route 28 and extends northeast to NY Route 23A in Greene County. In the project area, NY Route 214 provides one twelve-foot wide travel lane in each direction with approximately eight-foot wide shoulders. Data published by the NYSDOT in the *2009 Pavement Data Report* indicates that the pavement on NY Route 214 is in good condition. The posted speed limit in the vicinity of the project is 30 mph.

- NY Route 42 – Route 42 is a state-maintained roadway classified as a rural major collector. NY Route 42 begins south of the project area at its intersection with NY Route 6 and NY Route 209 in Orange County and extends generally in a northeast direction and ends at the junction of NY Route 23A in Greene County. In the project area, NY Route 42 provides one ten-foot wide travel lane in each direction with approximately four-foot wide shoulders. Data published by the NYSDOT in the *2009 Pavement Data Report* indicates that the pavement on NY Route 42 is in good condition near the project site. The posted speed limit in the vicinity of the project is 45 mph.

- County Road 47 (CR 47) – County Road 47 is located southeast of the project site and is a two lane road extending in a north-south direction. At its intersection with NY Route 28, County Road 47 consists of approximately 10-foot travel lanes with approximately 3-foot shoulders. The speed limit in the vicinity of the project site is not posted and therefore is a statutory 55-mph.

- County Road 49A (CR 49A) – County Road 49A is a two lane road extending generally in an east-west direction between County Road 49 and NY Route 28. County Road 49A is used primarily to provide access to *Belleayre Mountain Ski Center* and rural residential properties to the southwest. In the project area, County Road 49A consists of one nine-foot travel lane in each direction with three-foot shoulders. The speed limit in the vicinity of the project site is not

posted and therefore is a statutory 55-mph although the terrain on CR 49A does not support a 55-mph travel speed. Based on a review of existing conditions, the Town and County are currently working with NYSDOT to post a speed limit of 35 mph in the area.

The roadway classifications used to describe the study area roadways is a method of grouping highways by the character of service (i.e. volumes, density, roadway networks, etc.) they provide. The functional classifications for the State roadways were obtained from information provided in NYSDOT's *2009 Pavement Data Report*.

B. Study Area Intersections

- Route 28/Route 214/South Street – This intersection is a four-way intersection operating under stop sign control on the northbound South Street approach and the southbound NY Route 214 approach. All approaches to this intersection consist of a single lane with the exception of the NY Route 28 westbound approach which provides an approximately 140 foot long right-turn lane for vehicles entering NY Route 214 northbound.

- NY Route 28/NY Route 42 – This intersection is a three-leg intersection operating under stop sign control on the southbound NY Route 42 approach. The southbound approach to this intersection forms a 'Y' to separate left and right turn movements to and from NY Route 42. The NY Route 28 approaches to this intersection consist of single lanes and the southbound NY Route 42 approach consists of two lanes in each direction; however, quickly tapers to one lane in each direction at the base of the 'Y'.

- NY Route 28/County Road 47 – This intersection is a four-way intersection operating under stop sign control on the northbound and southbound CR 47 approaches. Each approach of this intersection consists of a single lane.

- NY Route 28/Main Street – This intersection is a three-leg intersection operating under stop-sign control on the northbound Main Street approach. Each approach of this intersection consists of a single lane.

- NY Route 28/County Road 49A/Owl Nest Road – This is a four-way intersection controlled by stop signs on the northbound CR 49A approach and the southbound Owl Nest Road approach. The NY Route 28 eastbound approach consists of a shared left-turn/through lane and a separate right-turn lane. The remaining three intersection approaches each consist of a single lane.

- County Road 49A/Gunnison Road/Belleayre Lower Driveway – This is a four-way intersection controlled by a stop sign on the eastbound Gunnison Road

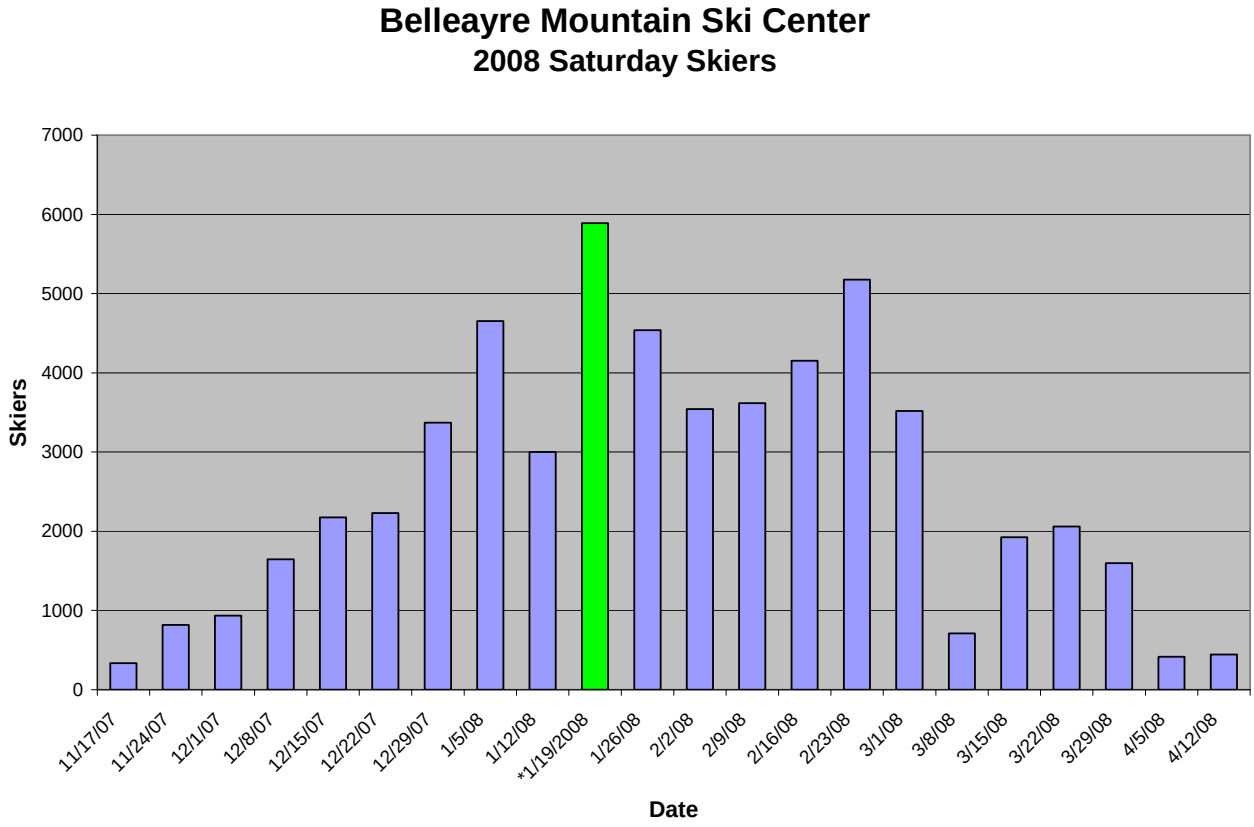
approach and the westbound driveway approach. Each approach to this intersection consists of one travel lane.

- County Road 49A/Belleayre Upper Driveway – This is a three-leg intersection controlled by a stop sign on the westbound driveway approach. Each approach to this intersection consists of one travel lane.

C. Existing Conditions

Intersection turning movement traffic counts were conducted at the study area intersections during Martin Luther King, Jr. weekend on Saturday, January 19, 2008 from 3:30 to 5:30 p.m. This represents the peak afternoon period for exiting traffic from the *Belleayre Mountain Ski Center* when the ski center closes. Recent traffic volume data published by NYSDOT in the *2009 Traffic Volume Report* indicates that traffic volumes on NY Route 28 in the study area have either decreased by approximately 2% per year or have increased by approximately 0.75% per year depending upon the segment. It was also verified by the ski center that the Martin Luther King Jr. Saturday in 2008 remains the highest attendance day to date. Therefore, traffic volumes collected in 2008 are considered representative of the current traffic volume conditions in the study area and no adjustments to the 2008 traffic volumes are necessary.

A review of the weekly distribution of skiers at the *Belleayre Mountain Ski Center* indicates that there are generally more skiers on Saturday than on any other day. The following bar chart confirms that the Saturday during Martin Luther King, Jr. weekend, when data was collected, represented the highest total number of skiers for the entire ski season and, therefore, represents a worst-case baseline condition. The peak hour traffic counts were balanced where appropriate and provide existing traffic conditions at the study area intersections as summarized on Figure 2.1 and form the basis for all traffic forecasts. The raw traffic volumes are included in Appendix B.



Automatic traffic recorders (ATRs) were installed in several locations on CR 49A to record hourly traffic volumes and vehicle speeds from Tuesday, November 17, 2009 through Tuesday, December 1, 2009. The raw ATR data is also included in Appendix B.

The following observations are evident based on the existing traffic volume data:

- The Saturday PM peak hour generally occurred between 4:30 to 5:30 p.m. on NY Route 28.

- The two-way traffic volume on NY Route 28 east of CR 49A is approximately 865 vehicles during the Saturday PM peak hour.

- The two-way traffic volume on CR 49A north of the Belleayre Mountain Upper Driveway is approximately 560 vehicles during the Saturday PM peak hour. The two-way traffic volume south of the Belleayre Driveway is 45 vehicles during the Saturday PM peak hour.

- No heavy vehicles were counted on CR 49A south of the Belleayre Mountain Upper Driveway adjacent to the project site during the Saturday PM peak hour.

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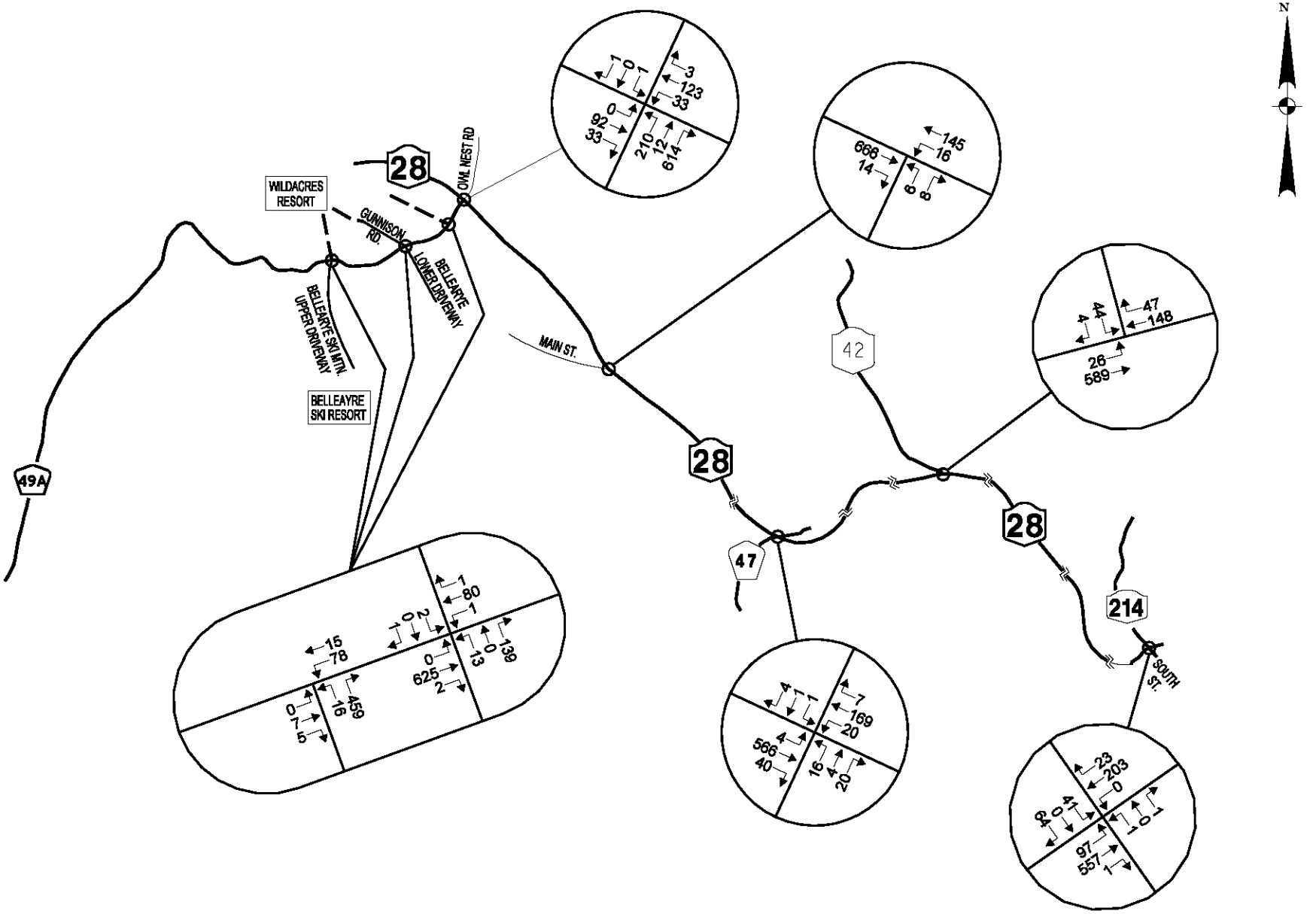

EXISTING
TRAFFIC VOLUMES

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

Creighton Manning

PROJECT: 99-057d	DATE: 1/11	FIGURE: 2.1

CHAPTER III
TRAFFIC FORECASTS

To evaluate the impact of the proposed development, traffic projections were prepared for the 2015 Build year and a comparison was made between the future traffic volumes with and without the project. Table 3.1 lists the various traffic figures which are located in the report starting on page 18.

Table 3.1 – Summary of Peak Hour Traffic Projections

Figure Description	Figure Number
2015 No-Build Traffic Volumes	Figure 3.1
Trip Distribution – Highmount Spa Resort	Figure 3.2
Trip Distribution – Wildacres Resort	Figure 3.3
Trip Distribution – Shuttle Buses	Figure 3.4
Trip Assignment – Highmount Spa Resort	Figure 3.5
Trip Assignment – Wildacres Resort	Figure 3.6
Trip Assignment – Shuttle Buses	Figure 3.7
2015 Build Traffic Volumes	Figure 3.8

A. 2015 No-Build Traffic Volumes

The 2015 No-Build traffic volumes are based on an analysis of existing traffic growth trends and other developments in the project area. As noted, historical traffic volume data published by NYSDOT indicates that traffic volume changes in the vicinity of the site have ranged from decreases of approximately 2.0% per year to increases of approximately 0.75% per year over the last several years. To ensure that all potential future growth is accounted for and to be consistent with previous studies conducted for this site, a growth rate of 2% per year was applied for 7 years to the 2008 existing traffic volumes to calculate the background growth.

It is noted that the number of skiers to the *Belleayre Mountain Ski Center* located on CR 49A adjacent to the project site is anticipated to increase as part of the updated Unit Management Plan (UMP). Information provided by the Department of Environmental Conservation (DEC) and their consultant CHA Companies (CHA) indicates that the number of skiers to this area is projected to increase by approximately 45% (3,874 skiers) as a result of the updated UMP. The expected trip generation

resulting from the mountain expansion accounts for the expected increase in passenger vehicles and bus travel on the study area roadways. The peak hour trip generation, provided by CHA, associated with the *Belleayre Mountain Ski Center* expansion was distributed to the study area intersections as shown on Figure C-1 in Appendix C and was added to the background traffic volumes to develop the 2015 No-Build traffic volumes. The 2015 No-Build traffic volumes are illustrated on Figure 3.1, and represent the traffic conditions expected at the study area intersections with completion of the UMP but before development of the proposed *Belleayre Resort at Catskill Park* project.

B. Trip Generation

Trip generation determines the quantity of traffic expected to travel to/from a given site. Two sources of trip generation were used – The Institute of Transportation Engineers (ITE) *Trip Generation*, 8th edition, and site specific counts from similar resort facilities. ITE provides trip generation data for the proposed development based on studies of similar types of existing developments located across the country. ITE trip generation accounts for peak hour travel to and from the site by passenger vehicles, busses, and delivery vehicles for trips made by individual patrons, large groups of patrons (busses), employees, and deliveries. A comparison of the trip generation rates from the different sources is discussed below:

- Lodging and Club Membership Units – The closest ITE vehicle trip generation for the lodging units and club membership units was the land use code (LUC) for recreational homes (LUC 260) which is defined as homes, often second homes, usually located in a resort, used by the owner periodically or rented seasonally. This land use code best represents the time-share type lodging units proposed as part of this project. The ITE rate for the generator peak hour was 0.36 trips per unit. This rate is similar to the rate measured at a 216 unit project located at Mt. Snow in Vermont where 0.31 trips per unit were measured. For analysis purposes, the slightly higher ITE rate was used.

- Hotel – ITE's trip generation rate for a hotel (LUC 310) reflects uses such as meeting rooms, banquet facilities, and conference centers. Since convention center trips and hotel ballroom trips are reflected in these rates no separate trip estimates were included for these ancillary uses. In addition, the restaurants, club houses, coffee shops, retail, and recreational facilities included in the proposed development are typical amenities characteristic of golf courses, hotels, and recreational homes and are included in the ITE land use code descriptions for both recreational homes and hotels. The ITE trip

generation rates include all trips expected to travel to and from a facility including employees, patrons, etc. The ITE hotel peak hour of generator rate is 0.72 trips per room. This rate is higher than measurements taken at a resort hotel and convention facility at the Sunday River Resort in Maine. The Sunday River Hotel is similar to those proposed for this development. When the hotel was fully booked, a rate of 0.326 trips per room was measured for the peak hour. This rate is less than half of the ITE rate and more closely approximates the type of hotel facility proposed. However, the higher ITE rate was used to simulate a worst case peak hour design condition at full build-out of the proposed project assuming 100% occupancy of all residential and club membership units.

- Golf Course – The golf course will be primarily for resort guests but the general public will be allowed to use the course on a space available basis. However, golf course trips were not included in the wintertime condition analysis since this represents a time of year when the golf courses will not be operational. The golf course will be operational during the summer and fall months when the background volumes on the roadway network are substantially less than the peak ski season volumes studied in this report. Therefore, the winter analysis conducted without the golf course volumes represents a worst-case assessment of the site generated and background traffic volumes on the roadway network. It is noted that during non-winter months when the golf course is operational, trips for this land use will typically be spread out during the day due to the operational characteristics of a golf course with dispersed tee times.

The ITE trip generation manual only provides one peak hour trip rate for the peak hour of the generator for Saturday conditions of the proposed resort-types of land uses. Therefore, the design analysis had to utilize the peak hour of the generator traffic occurring during the peak hours of adjacent street traffic. This is a conservative approach since the build condition volumes are calculated by adding the highest trip generation of the proposed uses to the highest seasonal background traffic conditions.

Shuttle buses will play a role in reducing the trips from the development. In the winter they will shuttle skiers to and from *Belleayre Mountain Ski Center* and in all seasons they will shuttle between the *Wildacres Resort*, the *Highmount Spa Resort*, and the *Wilderness Activity Center*. There will be no patron parking located on the *Wilderness Activity Center* site so no additional trips were added to the trip generation estimates for this facility. The shuttle buses will also serve the golf course land use during the non-winter seasons. The assessment of shuttle busses was based on discussions with the Applicant and representatives of the ski center regarding the

expected site operations and projected shared users between the two sites. It is estimated that 60% of the trips generated by the resorts during the winter peaks will be related to skiers heading to and from the *Belleayre Mountain Ski Center*. Of the trips associated with the main portion of the *Wildacres Resort* and the *Highmount Resort*, it has been assumed 10% of the skiers will drive while 90% of them will use the available ski-in/ski-out infrastructure that will include lifts and trails that connect the *Belleayre Mountain Ski Center* with the proposed resort sites. Of the trips associated with the *Front 9 Village* portion of the *Wildacres Resort*, it is estimated that 80% of the skiers will use a shuttle bus provided by the resort while 20% of them will drive to the ski center. A summary of the estimated trip generation for the resort is shown in Table 3.2.

Table 3.2 – Trip Generation Summary

Land Use			Land Use Code	Occupancy	Saturday Peak Hour Trips		
					Enter	Exit	Total
Wildacres							
Fractional Units/Timeshare (Front 9) – 84 Units			260	293	14	16	30
Hotel – 208 Rooms			310	420	83	65	148
Fractional Units/Timeshare (Main) – 97 Units			260	340	17	18	35
		Front 9 Village Total		**293**	**14**	**16**	**30**
		Main Wildacres Total		**760**	**100**	**83**	**183**
Highmount							
Hotel – 120 Rooms			310	240	49	38	87
Fractional Units – 120 Units			260	539	21	22	43
		Highmount Total		**779**	**70**	**60**	**130**
		Combined Total		**1,832**	**184**	**159**	**343**
		Assume 90% Occupancy during peak conditions					
		Front 9 Village		**265**			
		Main Wildacres/Highmount		**1385**			
UMP Update Belleayre Ski Mountain Condition	**Wildacres Front 9**	Assume **60%** of Belleayre Resort guests are skiers for UMP Update Belleayre Ski Mountain and that **65%** of those leave during the peak hour		103			
		Assume 80% of skiers will use a shuttle		82			
		Assume 20% of skiers will drive		21			
		Number of 40 person shuttles to transport 82 skiers (assuming a shuttle loop)			3	3	6
		Number of cars to transport 21 skiers (3 skiers/trip - 85% entering and 15% exiting)			6	1	7
		40% of Wildacres Front 9 Trip Generation			6	6	12
		Front 9 Trip Generation			**15**	**10**	**25**
	Wildacres Main/Highmount	Assume **60%** of Belleayre Resort guests are skiers for UMP Update Belleayre Ski Mountain and that **65%** of those leave during the peak hour		540			
		Assume 90% of skiers will ski in/ski out		486			
		Assume 10% of skiers will drive		54			
		Number of cars to transport 54 skiers (3 skiers/trip - 85% entering and 15% exiting)			15	3	18
		40% of Main Wildacres Trip Generation			40	33	73
		40% of Highmount Trip Generation			28	24	52
		Wildacres Main/Highmount Trip Generation			**83**	**60**	**143**
		Total Trip Generation			**98**	**70**	**168**

The *Belleayre Resort at Catskill Park* development is estimated to generate 168 new trips during the Saturday PM peak hour with 98 trips entering and 70 trips exiting. It is noted that the UMP for the *Belleayre Mountain Ski Center* would generate approximately 736 new trips to the study area primarily from NY Route 28 during the Saturday PM peak hour. These trips were added to background traffic volumes to determine the 2015 No-Build traffic volumes. However, as shown in Table 3.2, approximately 643 (103+540) skiers destined to the *Belleayre Mountain Ski Center* will

originate from the proposed *Belleayre Resort at Catskill Park* development via shuttles, ski trails, and cars. Therefore, it was determined that approximately 614 new trips would be generated externally on NY Route 28 by new UMP skiers during the Saturday PM peak hour. The background traffic volumes were revised to reflect the lower expected travel on traffic on NY Route 28 and the surrounding area after development of the resorts.

It is noted that transit services are provided in the study area by the Ulster County Area Transit (UCAT). Currently the Z route provides travel between Kingston and Belleayre Mountain. Since most patrons of the resort will be guests from out of town, it is not expected that they will generally utilize the public transportation system to travel to and from the site. However, it is expected that some employees of the site may utilize the public transit available when traveling to and from work. As the resort is developed, the Applicant should consider working work UCAT to determine the demand for additional transit runs to service the project site. Increased transit use will aid in reducing the number of individual trips to and from the project site.

C. Trip Distribution

Trip distribution describes where traffic originates or where traffic is destined. The trip distribution patterns were based on the existing traffic patterns observed in the area during the holiday weekend studied, as well as an assessment of the market area for the proposed resort. Based on the assessment, it was determined that the majority of the traffic traveling to and from the resorts will be coming from or destined to the greater metropolitan New York area, likely to be on Interstate 87. Therefore, the highest percentage of travel is predicted to be to/from Interstate 87, Exit 19 where NY Route 28 provides access to the project area and to/from Interstate 87, Exit 16 where NY Route 17 and CR 47 provide access to the project area. The trip distribution patterns for the *Highmount Spa Resort, Wildacres Resort*, and shuttle buses are shown on Figures 3.2 through 3.4.

D. Trip Assignment

Traffic assignment combines the results of the trip generation and trip distribution and determines the specific path and roadway that will be used between various origin/destination pairs. The *Highmount Spa Resort* Access Driveway is proposed on the southeast side of CR 49A for access to the hotel and fractional units of the *Highmount Spa Resort.* A loop access driveway will provide access to the Leach Farm Conference/Wellness Center building associated with the *Highmount Spa Resort* located on the opposite side of CR 49A. However, all site generated traffic to the proposed *Highmount Spa Resort* was distributed to the single site access road on the southeast side of CR 49A to provide a worst-case condition.

Four driveways will provide access to the *Wildacres Resort* on the north side of CR 49A; the first located east of Gunnison Road (*Front 9 Village* Driveway), a second on the existing Gunnison Road (Gunnison Road Access Driveway), a third directly opposite the *Belleayre Mountain Ski Center* Upper Driveway (*Wildacres Resort* Main Access Driveway), and the fourth southwest of the *Belleayre Mountain Ski Center* (Upper Access Driveway). The traffic assignment for each of the *Wildacres Resort* driveways was determined based on an assessment of the internal site layout and the trips associated with each component of development (See the Project Master Plan in Appendix A). The resulting peak hour traffic assignments for the Saturday PM peak hour winter conditions are shown on Figures 3.5 and 3.6. Figure 3.7 shows the proposed shuttle bus loop and anticipated peak hour buses traveling between the proposed *Front 9 Village* portion of the development and the *Belleayre Mountain Ski Center.*

E. 2015 Build Traffic Volumes

The 2015 Build volumes represent full build-out of the project and UMP and were derived by added the distributed trip generated volumes to the 2015 No-Build traffic volumes as shown on Figure 3.8. These traffic volumes represent the future condition that would exist assuming an increase in existing traffic due to background growth in addition to the UMP Update for the *Belleayre Mountain Ski Center* and full build-out of all components of the proposed *Belleayre Resort at Catskill Park* development.

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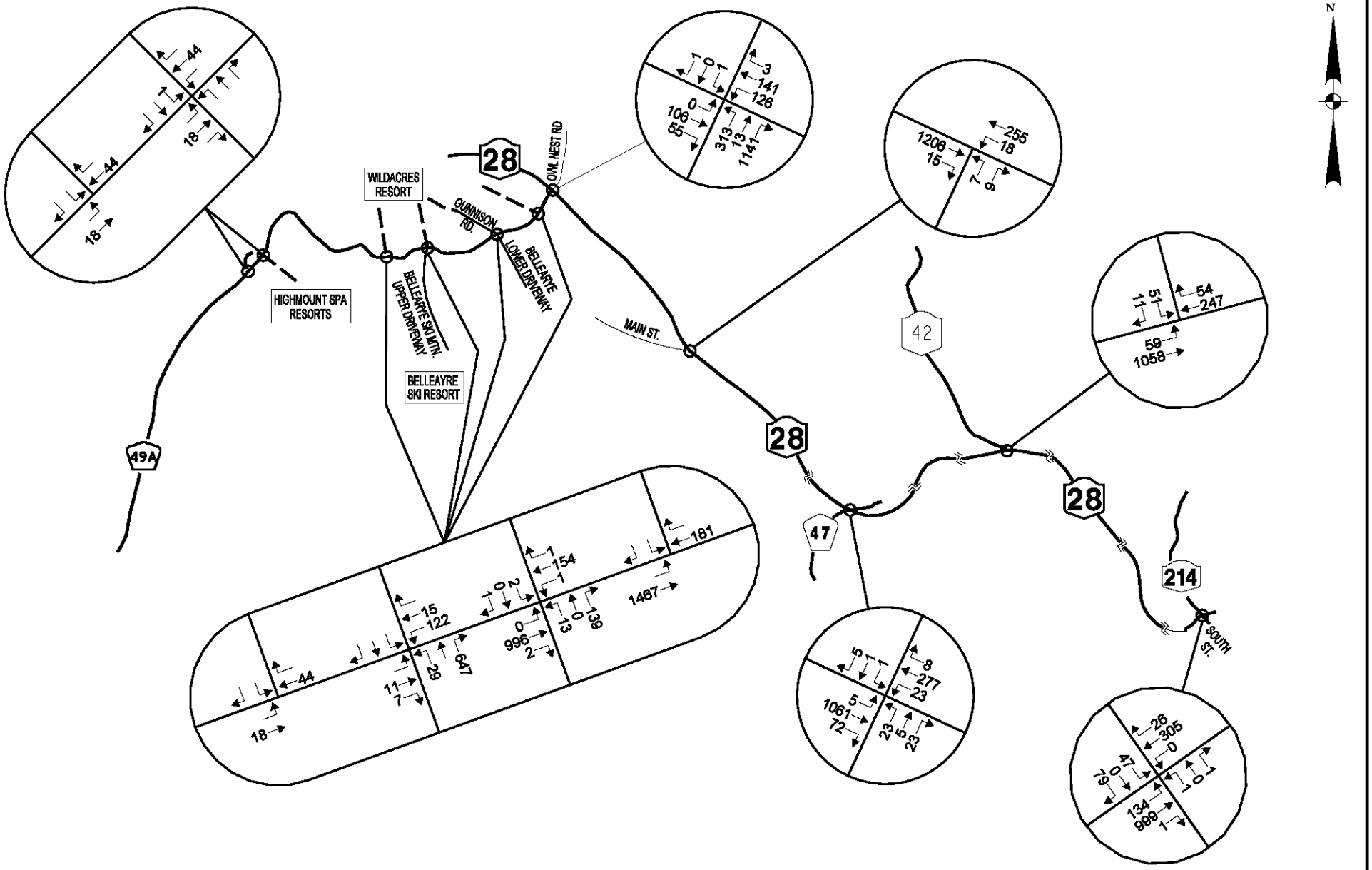

2015 NO-BUILD TRAFFIC VOLUMES

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

Creighton Manning

PROJECT: 99-057d | DATE: 1/11 | FIGURE: 3.1

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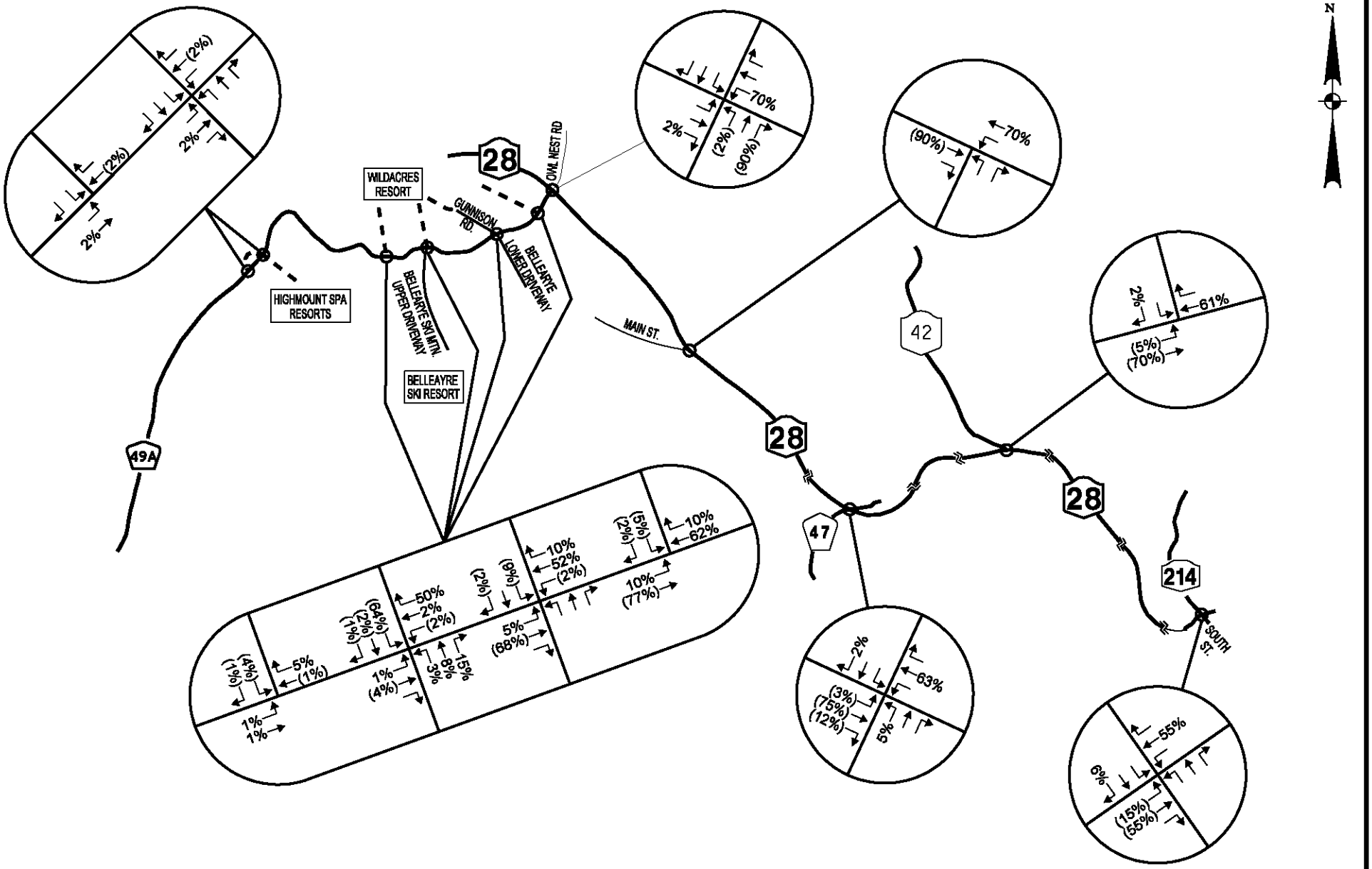

TRIP DISTRIBUTION
WILDACRES RESORT

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

Creighton Manning

PROJECT: 99-057d	DATE: 1/11	FIGURE: 3.2

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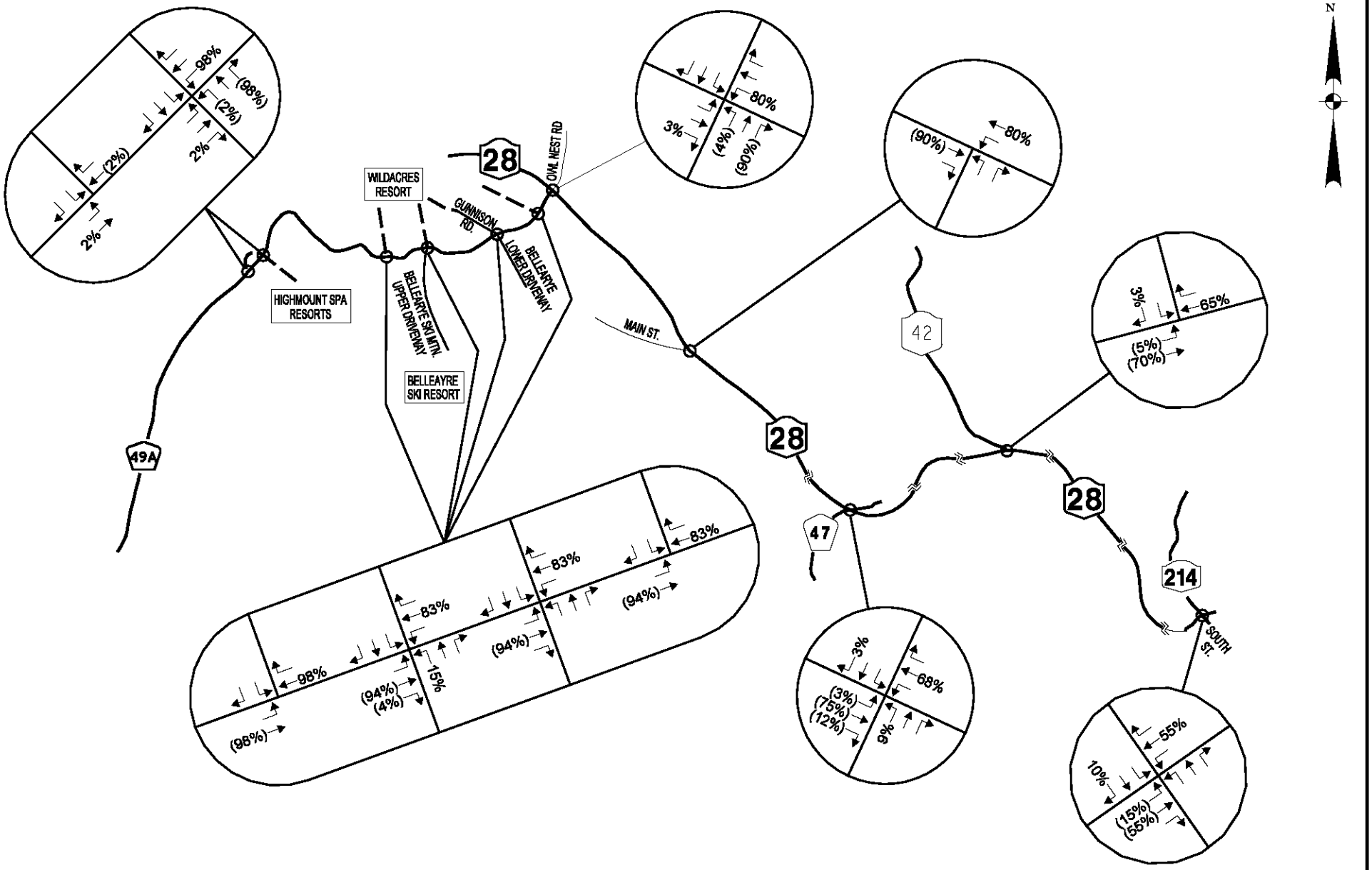

TRIP DISTRIBUTION
HIGHMOUNT RESORT

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

Creighton Manning

PROJECT: 99-057d | DATE: 1/11 | FIGURE: 3.3

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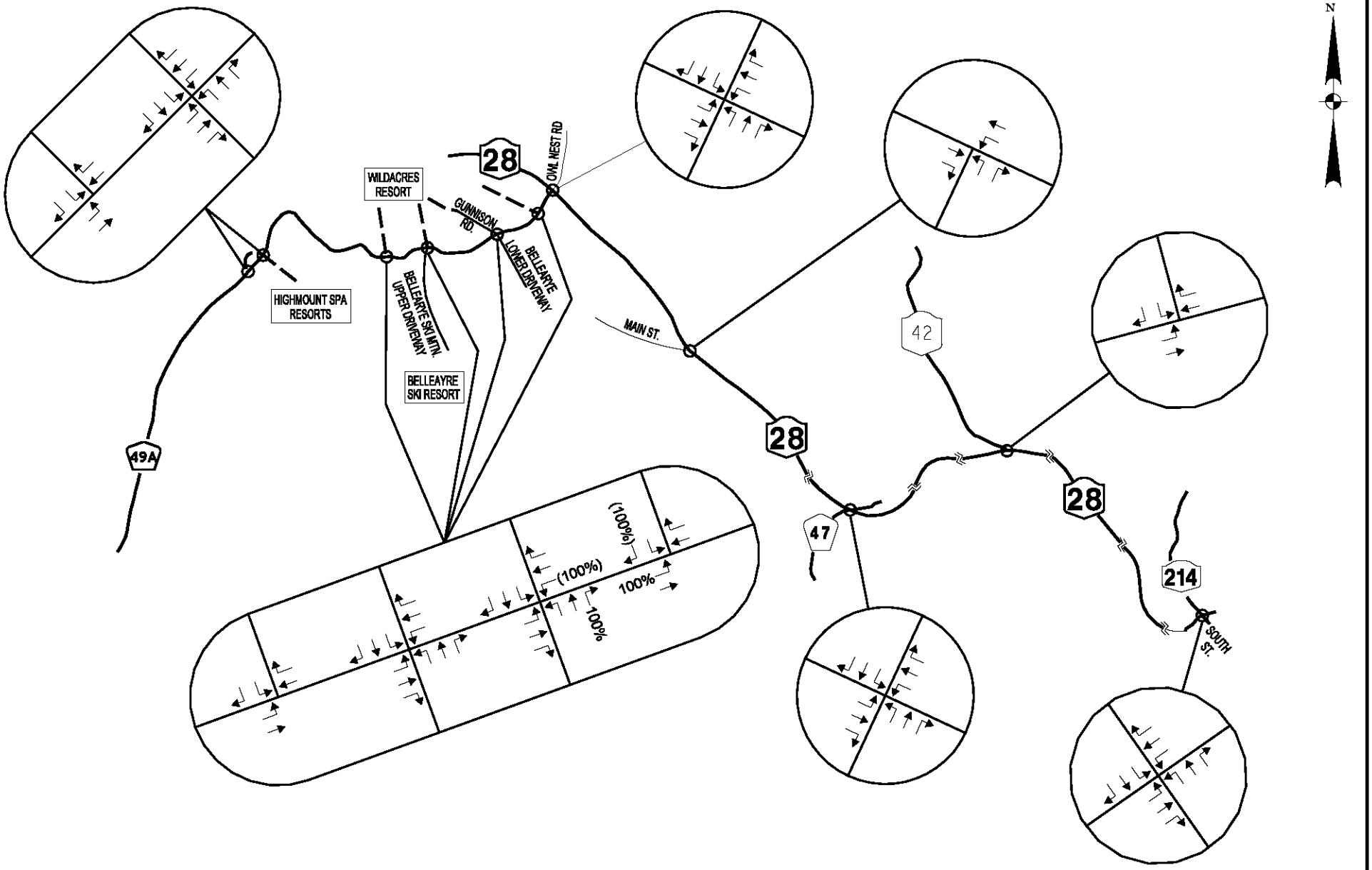

TRIP DISTRIBUTION
SHUTTLE BUSES

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

Creighton Manning

PROJECT: 99-057d	DATE: 1/11	FIGURE: 3.4

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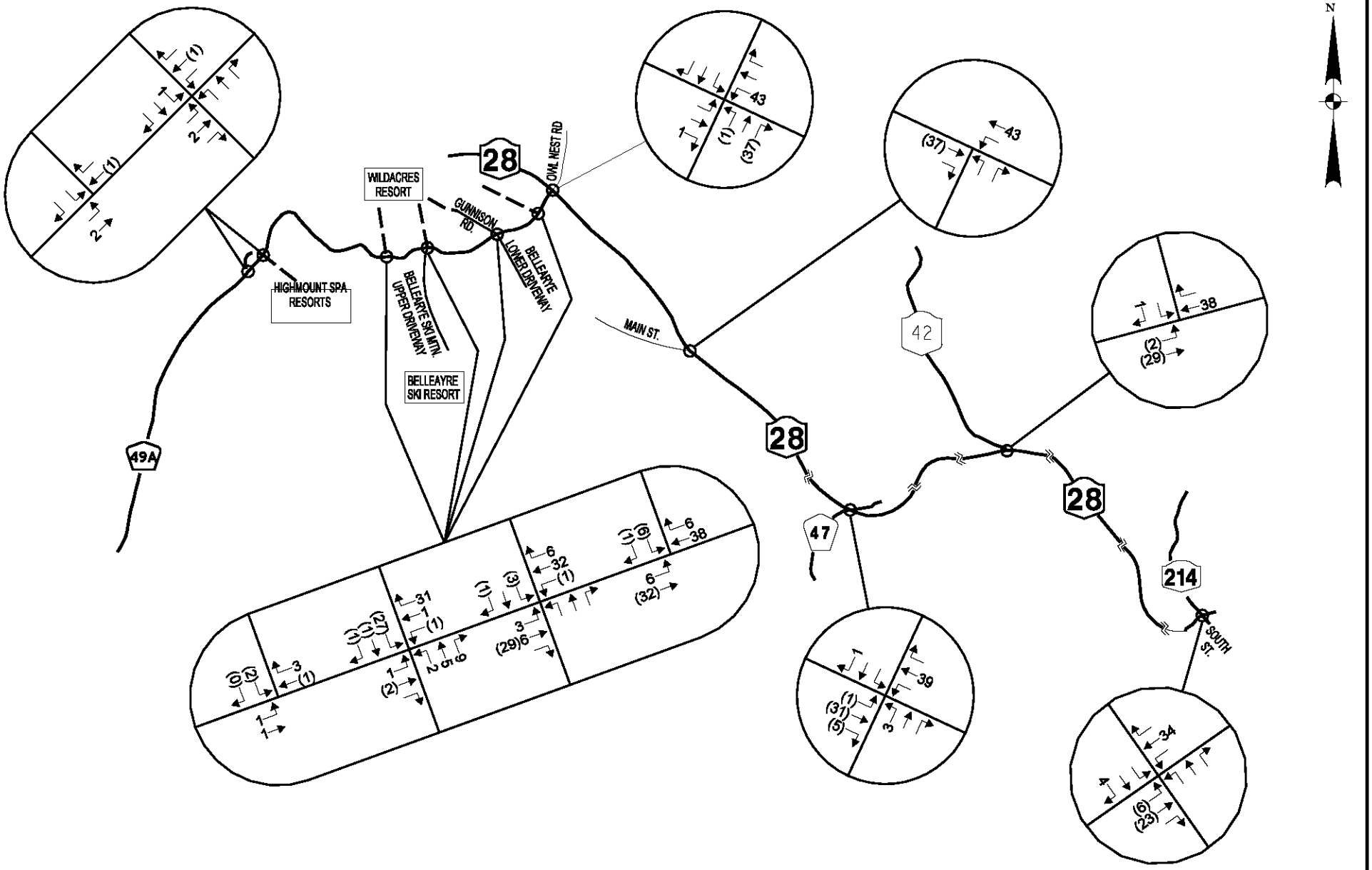

TRIP ASSIGNMENT
WILDACRES RESORT

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

Creighton Manning

PROJECT: 99-057d	DATE: 1/11	FIGURE: 3.5

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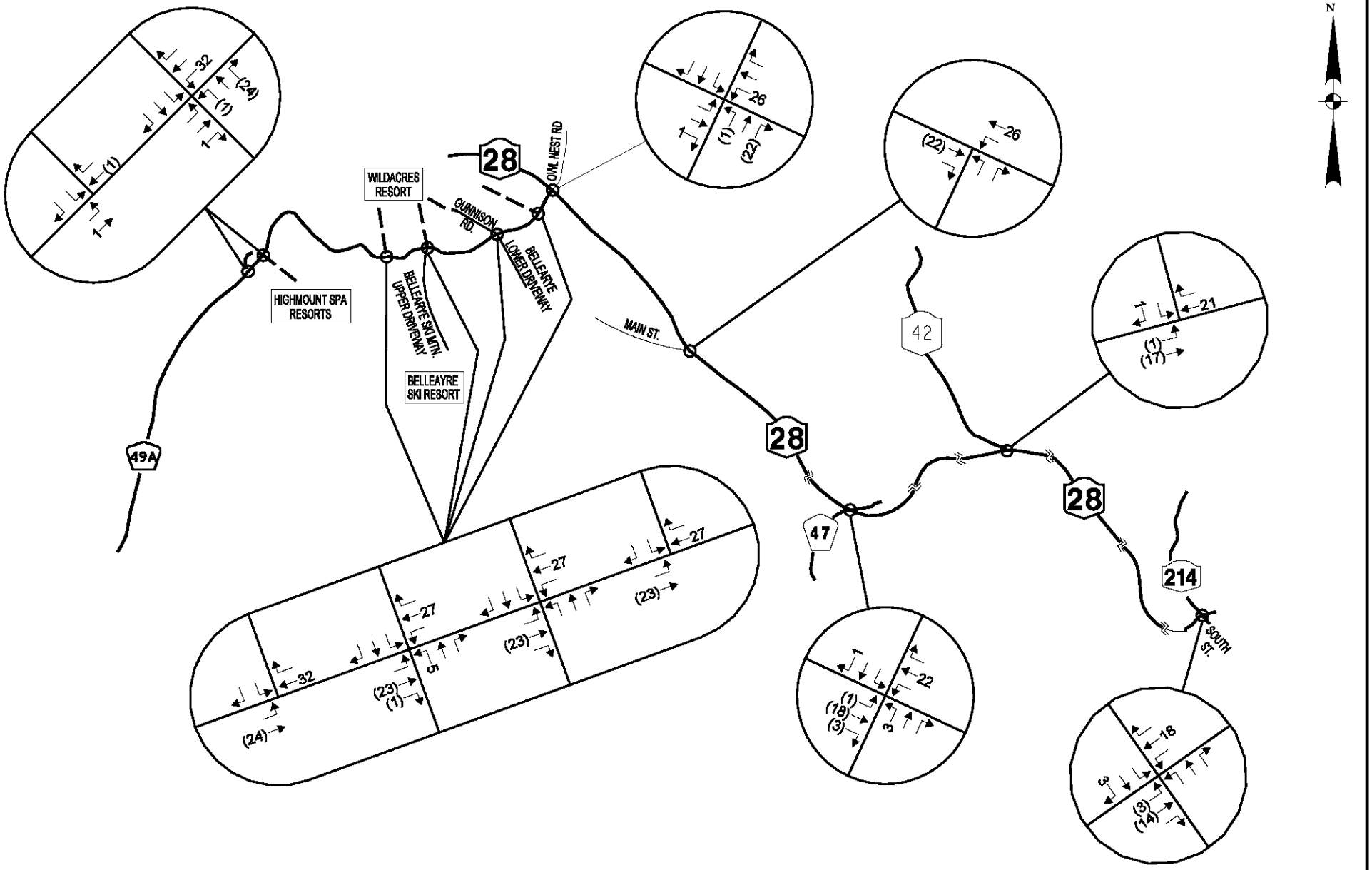

TRIP ASSIGNMENT
HIGHMOUNT RESORT

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

Creighton Manning

PROJECT: 99-057d	DATE: 1/11	FIGURE: 3.6

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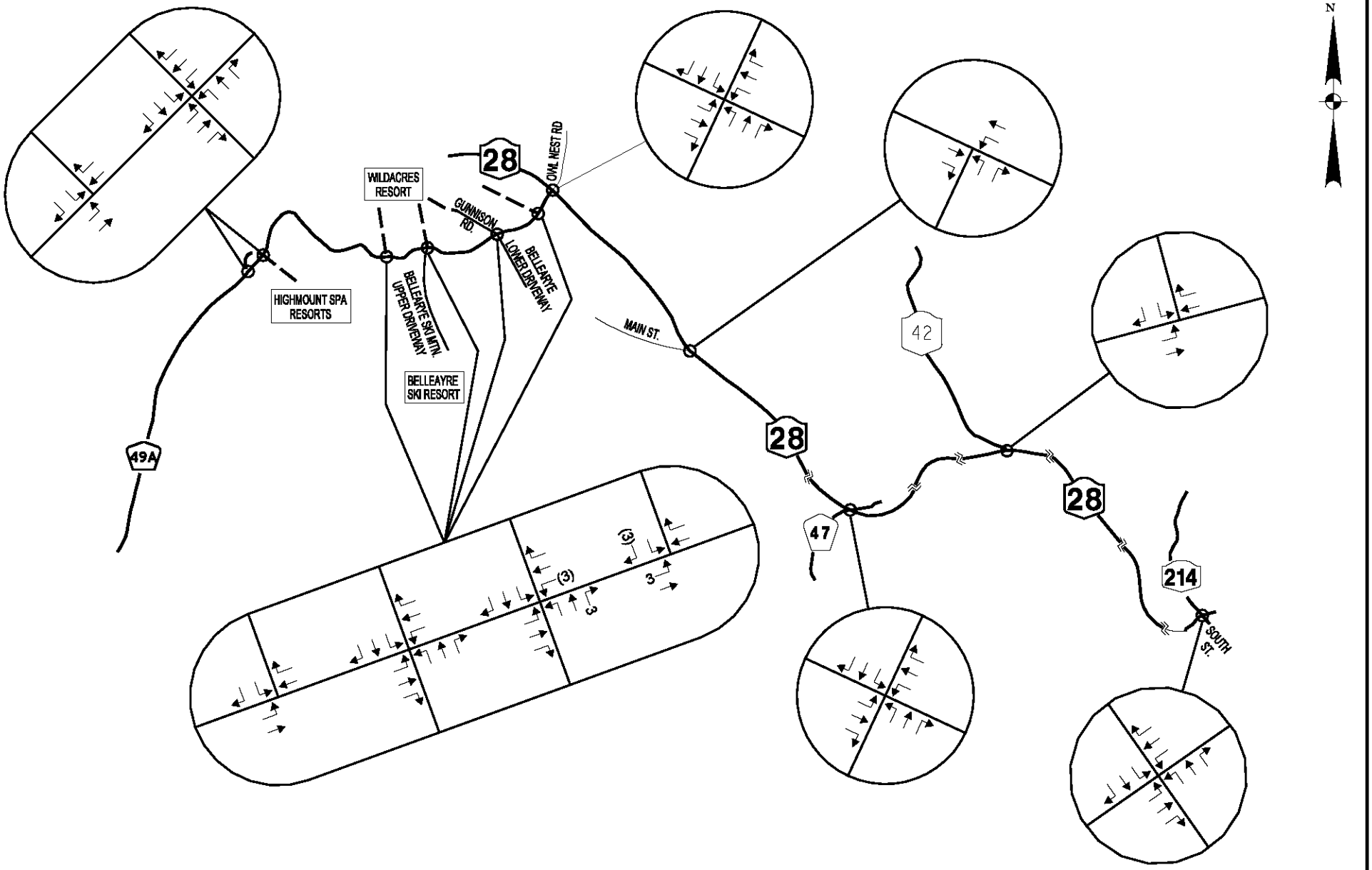

TRIP ASSIGNMENT
SHUTTLE BUSES

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

Creighton Manning

PROJECT: 99-057d	DATE: 1/11	FIGURE: 3.7

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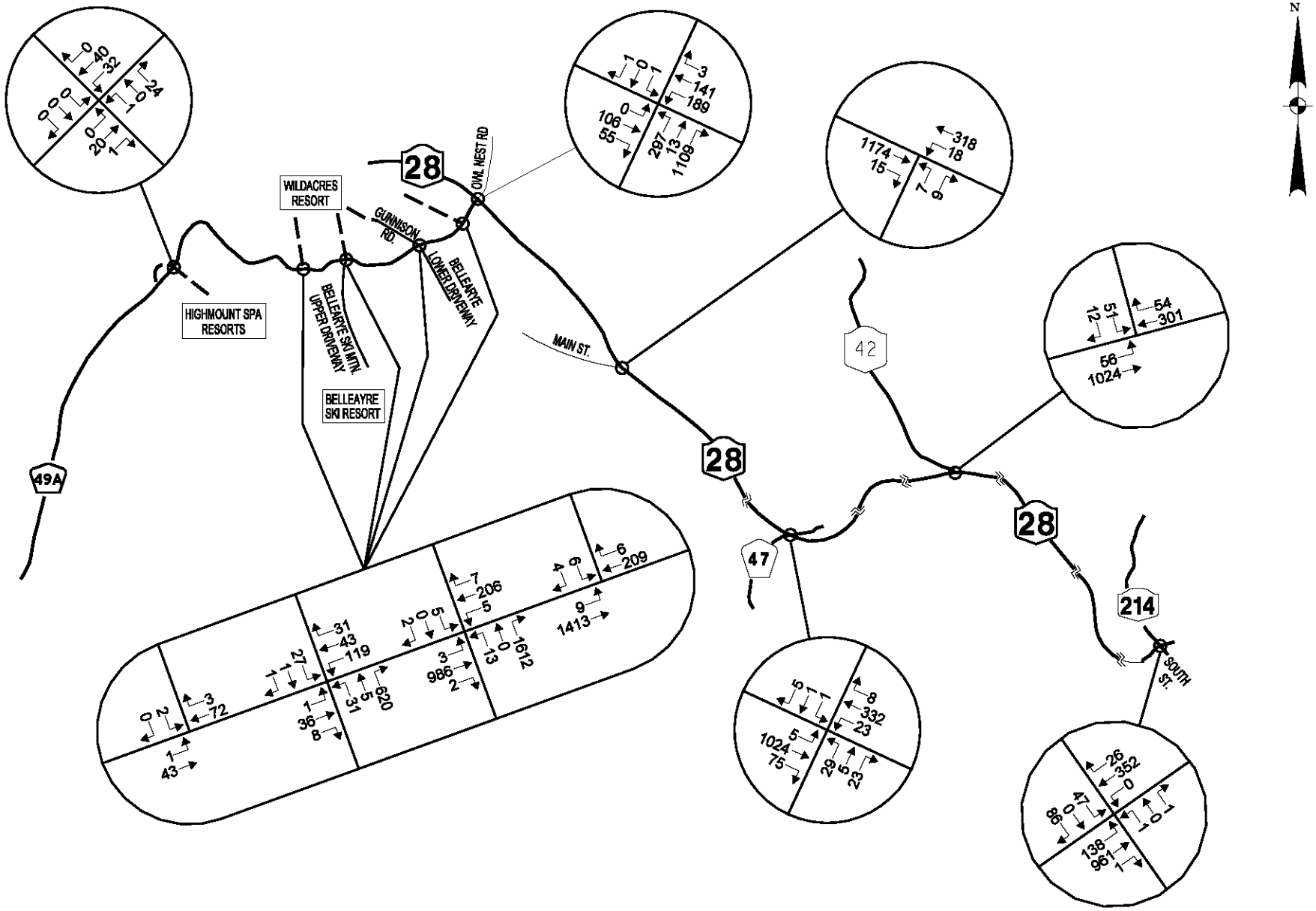


2015 BUILD
TRAFFIC VOLUMES

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

Creighton Manning

PROJECT: 99-057d | DATE: 1/11 | FIGURE: 3.8

CHAPTER IV
ANALYSIS

A. Accident Analysis

Accident data was requested from NYSDOT to determine accident trends along the study area roadways and intersections. Accident summaries and details were provided by the NYSDOT Accident Location Information System (ALIS) for the latest three years of available data from the period between October 1, 2005 and September 30, 2008.

The accident history for the roadway links on NY Route 28 and CR 49A and at the study area intersections were analyzed by summarizing the type and frequency of accidents and calculating intersection accident rates. A comparison was then made between the calculated rate and the applicable statewide mean accident rate for similar state-maintained highways, as published by NYSDOT. Table 4.1 summarizes the intersection and segment accident analysis.

Table 4.1 – Accident Summary

Intersection: Link/Segment	2005-2008 Accidents Type of Accident				Intersection/Segment Accident Rate	
	Non-Reportable	Property Damage	Personal Injury	Fatality	Statewide Mean Rate (ACC/MEV)/ (ACC/MVM)	Calculated Rate (ACC/MEV)/ (ACC/MVM)
NY Route 28						
Route 28/Route 214/South St	1	1	2	0	0.31	0.67
Link from Route 214 to Route 42	11	20	10	0	2.39	1.83
Route 28/Route 42	0	1	0	0	0.15	0.23
Link from Route 42 to CR 47	4	9	5	0	2.39	1.77
Route 28/CR 47	0	0	0	0	0.31	0.00
Link from CR 47 to Friendship Rd	1	7	8	0	2.39	2.04
Route 28/Friendship Rd	1	0	1	0	0.15	0.62
Link from Friendship Rd to Main St	0	1	1	0	2.39	2.49
Route 28/Main St	0	0	0	0	0.15	0.00
Link from Main St to CR 49A	7	4	3	0	2.39	2.64
Route 28/CR 49A/Owl Nest Rd	1	0	0	0	0.31	0.29
Link from CR 49A to Delaware Co. Line	0	1	0	0	2.39	2.08
Total Route 28	***26***	***44***	***30***	***0***		
County Route 49A						
Link from Rt 28 to Gunnison Rd	0	0	2	0	2.39	11.12
CR 49A/Gunnison Rd	0	0	0	0	0.31	0.00
Link from Gunnison Rd to Belleayre	0	0	0	0	2.39	0.00
CR 49A/Belleayre Drwy	0	0	0	0	0.15	0.00
Link from Belleayre to Delaware Co. Line	0	0	0	0	2.39	0.00
Total County Road 49A	***0***	***0***	***2***	***0***		

Note: A non-reportable accident indicates no personal injuries occurred and had property damage less than $1,000.
ACC/MEV = Accident per Million Entering Vehicles to an intersection.
ACC/MVM = Accident per Million Vehicle Miles traveled on a segment.

The following observations are evident from the accident history evaluation for the study area intersections:

- NY Route 28/NY Route 214/South Street – Four accidents occurred at this intersection during the three year study period. The calculated accident rate for this intersection is higher than the statewide mean rate for a four-way stop sign controlled rural intersection. However, a review of the four accidents over the three year period at this location indicates that there are no prevalent accident types and the accidents were the result of driver error and not a geometric deficiency. The non-reportable accident at this location occurred when a driver fell asleep and hit a guiderail while the property damage accident involved a driver failing to keep right and ending up in a ditch. The two injury accidents were both rear-end collisions that were a result of following too closely one due to alcohol involvement and the other due to driver inattention.

- NY Route 28/NY Route 42 – The only recorded accident at this location was a property damage accident when a driver struck a deer. It is noted that the calculated accident rate for this intersection is slightly higher than the statewide mean rate for a three-way stop sign controlled rural intersection. However, this is a result of the fairly low average annual daily traffic (AADT) entering this intersection and is not reflective of safety conditions at this location.

- NY Route 28/CR 47 – No accidents were recorded at this intersection over the three year time period.

- NY Route 28/Friendship Road – There were two recorded accidents at this intersection during the three year study period. The calculated accident rate for this intersection is higher than the statewide mean rate for a three-way stop sign controlled rural intersection. However, this is a result of the fairly low average annual daily traffic (AADT) entering this intersection and is not reflective of safety conditions at this location. The non-reportable and personal injury accidents recorded at this intersection were both sideswipe/overtaking collisions resulting from driver inattention and error.

- NY Route 28/Main Street – No accidents were recorded at this intersection over the three year time period.

- NY Route 28/CR 49A/Owl Nest Road – There was only one non-reportable accident recorded at this location during the three year study period. No detailed information on the conditions surrounding the accident was provided. The calculated accident rate for this intersection is lower than the statewide mean rate for a four-way stop sign controlled rural intersection.

- CR 49A/Gunnison Road – No accidents were recorded at this intersection over the three year time period.

- CR 49A/Belleayre Upper Driveway – No accidents were recorded at this intersection over the three year time period.

The following observations are evident from the accident history evaluation for the study area roadway links:

- The accident evaluation indicates that all of the roadway links accident rates are lower than the statewide mean average of 2.39 accidents per million vehicle miles (MVM) with the exception of two segments on NY Route 28 and one segment on CR 49A.

- NY Route 28 – The roadway link between the Friendship Road and Main Street intersections resulted in an accident rate that was slightly higher than the statewide mean. The two accidents on this segment involved collisions with a snow bank and a ditch due to driver inexperience and unsafe speed. The roadway link between Main Street and CR 49A experienced a total of 14 accidents during the three year study period. Half of the accidents were considered non-reportable indicating no personal injury and property damage of less than $1,000. A review of the reportable accidents indicates that they generally involved animal and fixed object collisions or accidents in a ditch which are consistent with typical accident types for an undivided rural highway.

- CR 49A – The accident rate on CR 49A between NY Route 28 and Gunnison Road is much higher than the statewide average due to the extremely low traffic volume on CR 49A. The two accidents on this link of CR 49A involved an accident in a ditch and a collision with a fixed object that were both the result of driver inexperience on a slippery road.

It is noted that there were no pedestrian related accidents or fatalities recorded at the study area intersections or segments during the three year period. Based on the NYSDOT accident records on NY Route 28 and CR 49A, a majority of the accidents occurring on the study area roadways and intersections involved a single vehicle collision with fixed objects or animals due to the rural characteristics of the area and driver error and inattention. As no prevalent conditions correctable by geometric improvements were identified, no accident related mitigation is recommended as part of the development of the project.

B. Capacity/Level of Service Analysis

Intersection Level of Service (LOS) and capacity analysis relate traffic volumes to the physical characteristics of an intersection. Intersection evaluations were made using the Highway Capacity Software (HCS) which automates the procedures contained in the *2000 Highway Capacity Manual* (HCM). Levels of service range from A to F with LOS A conditions considered excellent with very little delay while LOS F generally represents conditions with very long delays. Appendix D contains further detailed descriptions of LOS criteria for signalized and unsignalized intersections and copies of the detailed HCM level of service reports.

The relative impact of the proposed project can be determined by comparing the level of service during the 2015 design year for the No-Build and Build traffic volume conditions. Table 4.2 shows the results of the Level of Service calculations. Note that in the analysis NY Route 28 is considered an east-west roadway and CR 49A is considered a north-south roadway.

Table 4.2 – Intersection Level of Service Summary

Intersection		Control	Saturday PM Peak		
			Existing	2015 No-Build	2015 Build
Route 28/Route 214/South St		TW			
Route 28 EB	L		A (8.1)	A (8.6)	A (8.8)
Route 28 WB	L		A (8.7)	B (10.5)	B (10.3)
South Street NB	LTR		C (20.5)	F (61.2)	F (65.0)
Route 214 SB	LTR		C (20.8)	F (215.9)	F (231.2)
Route 28/Route 42		TW			
Route 28 EB	L		A (7.7)	A (8.0)	A (8.2)
Route 42 SB	L		C (18.9)	F (70.2)	F (73.5)
	R		A (9.2)	A (9.9)	B (10.3)
Route 28/ CR 47		TW			
Route 28 EB	L		A (7.6)	A (7.8)	A (8.0)
Route 28 WB	L		A (8.9)	B (11.3)	B (11.1)
CR 47 NB	LTR		C (17.0)	F (60.3)	F (73.7)
CR 47 SB	LTR		B (11.9)	C (19.1)	C (19.8)
Route 28/Main Street		TW			
Route 28 WB	L		A (9.1)	B (11.7)	B (11.5)
Main Street NB	LR		C (15.8)	E (35.2)	E (36.0)
Route 28/CR 49A/Owl Nest Road		TW			
Route 28 EB	L		A (7.5)	A (7.6)	A (7.6)
Route 28 WB	L		A (7.6)	A (7.9)	A (8.2)
CR 49A NB	LTR		F (120.6)	F (706.8)	F (841.2)
Owl Nest Road SB	LTR		C (31.7)	F (*)	F (*)
Route 28 EB	LT	S	--	D (45.2)	D (44.3)
	R		--	D (39.3)	D (38.7)
Route 28 WB	L		--	B (13.8)	B (14.8)
	TR		--	B (13.6)	B (13.8)
CR 49A NB	LT		--	C (27.2)	C (24.9)
	R		--	D (54.1)	D (45.6)
Owl Nest Road SB	LTR		--	B (16.1)	B (15.7)
	Overall		--	D (42.0)	D (35.9)
CR 49A/Gunnison Road/Belleayre Lower Drwy		TW			
CR 49A NB	L		A (7.4)	A (7.7)	A (7.9)
CR 49A SB	L		A (9.4)	B (11.7)	B (11.7)
Belleayre Driveway WB	LTR		D (34.2)	F (245.5)	F (266.4)
Gunnison Rd EB	LTR		E (39.6)	F (*)	F (*)
CR 49A/Belleayre Upper Drwy/Wildacres Main Access Drwy		TW			
CR 49A NB	L		--	--	A (7.4)
CR 49A SB	L		A (7.5)	A (7.6)	A (7.8)
Belleayre Driveway WB	LTR		B (13.1)	C (25.0)	D (34.8)
Wildacres Main Drwy EB	LTR		--	--	F (201.8)
CR 49A/Wildacres Front 9 Village Drwy		TW			
CR 49A NB	L		--	--	A (7.9)
Front 9 Village Drwy EB	LR		--	--	F (58.6)
CR 49A/Wildacres Upper Access Drwy		TW			
CR 49A NB	L		--	--	A (7.4)
Upper Access Drwy EB	LR		--	--	A (9.4)
CR 49A/Highmount Spa Resort Drwy		TW			
CR 49A NB	L		--	--	A (7.3)
CR 49A SB	L		--	--	A (7.3)
Highmount Spa Resort Drwy WB	LTR		--	--	A (8.6)
Highmount Spa Resort Drwy EB	LTR		--	--	B (10.3)

Key: TW, AW, S, R = Two-way stop, All-way stop, Signal, or Roundabout controlled intersection
NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound intersection approaches
L, T, R = Left-turn, through, and/or right-turn movements,
L[T]R = LR represents the existing geometry, LTR represents the future geometry
X (Y.Y) = Level of Service (Average delay in seconds per vehicle)
-- = Not applicable

For analysis purposes, it is assumed that level of service A and B conditions are acceptable operating conditions and only degradations or poor conditions during the build conditions are discussed. Large changes due to background/UMP should be addressed by other projects. The following conclusions are evident from this analysis:

- NY Route 28/NY Route 214/South Street – The level of service analysis indicates that the northbound South Street approach and the southbound NY Route 214 approach currently operate at a LOS C during the Saturday PM peak hour but will degrade to a level of service F during No-Build conditions. The intersection movements will continue to operate at similar levels of service during Build conditions with an increase in average vehicle delay of approximately 4 seconds on the northbound approach and approximately 15 seconds on the southbound approach during the Saturday PM peak hour when compared to the No-Build conditions. It is noted that there are very low traffic volumes on the northbound South Street approach and that no improvements are recommended to mitigate delay to these few vehicles. The delay experienced on the southbound NY Route 214 approach during the Saturday PM peak hour is mainly reflective of the through volumes on NY Route 28. It is expected that the vehicle delays experienced by vehicles on NY Route 214 will be much less during off-peak periods and during other seasonal conditions in the study area.

  A review of the peak hour traffic signal warrant (Warrant #3) presented in the National *Manual on Uniform traffic Control Devices for Streets and Highways* (National MUTCD), 2009 Edition indicates that this intersection meets the traffic volume criteria for the installation of a traffic signal during peak operating conditions of the *Belleayre Mountain Ski Center.* However, it is unlikely that this intersection will meet any of the other volume related signal warrants due to both daily peaking of traffic and seasonal variations in traffic in the project area. It is expected that the longer vehicle delays on the side street approaches will only be experienced during the peak days at the ski center which coincides with busy operations at the resort. As noted, during off-peak times, it is expected that the intersection delay will be much less at this intersection. Therefore the installation of a traffic signal at this intersection as a result of the resort project does not appear to be warranted. A stop sign on the northbound and southbound approaches is recommended to continue to control traffic at this intersection.

- NY Route 28/NY Route 42 – The level of service analysis indicates that the southbound NY Route 42 left-turn movement currently operates at a LOS C and will degrade to a LOS F during the No-Build conditions. The LOS F conditions will continue through the Build conditions with an increase in average vehicle delay of approximately 3 seconds. A review of the southbound volume to capacity (v/c) ratio indicates that while this approach may experience delays of approximately 74 seconds during the Saturday PM peak hour, it still provides adequate capacity. The delay experienced during the Saturday PM peak hour is mainly reflective of the through volumes on NY Route 28 and is generally

considered an acceptable operating condition since the traffic volumes reflect peak seasonal operating conditions. This condition is mimicked at other similar unsignalized intersections along NY Route 28. It is also noted that the 95th percentile southbound queue is approximately 75-feet (approximately 3 vehicles) which will not impact the operation of other intersections and driveways along NY Route 42. In addition, a review of the peak hour traffic signal warrant criteria (Warrant #3) presented in the National MUTCD indicates that this intersection does not meet the traffic volume criteria for the installation of a traffic signal during peak operating conditions. Therefore, no mitigation is recommended at this intersection as a result of the development of the resort project.

- NY Route 28/CR 47 – The level of service analysis indicates that the southbound CR 47 approach currently operates at a LOS B during the Saturday PM peak hour which will degrade to a LOS C during No-Build and Build conditions. The increase in vehicle delay between the No-Build and Build conditions is less than one second. The analysis also indicates that the northbound CR 47 approach currently operates at a LOS C and will degrade to a LOS F during the No-Build conditions. Similar operations will continue through the Build conditions with an increase in average vehicle delay of approximately 13 seconds. A review of the southbound volume to capacity (v/c) ratio indicates that while this approach may experience delays of approximately 74 seconds during the Saturday PM peak hour, it still provides adequate capacity. The delay experienced during the Saturday PM peak hour is mainly reflective of the through volumes on NY Route 28 and is generally considered an acceptable operating condition since the traffic volumes reflect peak seasonal operating conditions. During other off-peak times, it is expected that the intersection delay will be much less at this intersection. This condition is mimicked at other similar unsignalized intersections along NY Route 28. It is also noted that the 95th percentile northbound queue is approximately 75-feet (approximately 3 vehicles) which will not impact the operation of other intersections and driveways along NY Route 47. A review of the peak hour traffic signal warrant criteria (Warrant #3) presented in the National MUTCD indicates that this intersection does not meet the traffic volume criteria for the installation of a traffic signal during peak operating conditions. Therefore, no mitigation is recommended at this intersection as a result of the development of the resort project.

- NY Route 28/Main Street – The level of service analysis indicates that the northbound Main Street approach currently operates at a LOS C during the Saturday PM peak hour. During No-Build conditions, the northbound approach will degrade to a LOS E and will continue to operate at the same levels of service during Build conditions with an increase of delay less than one second. The 95th percentile northbound queue is approximately 25-feet (one vehicle). The delay experienced during the Saturday PM peak hour is mainly reflective of the through volumes on NY Route 28 and is generally considered an acceptable operating condition since the traffic volumes reflect peak seasonal operating conditions. This condition is mimicked at other similar unsignalized intersections along NY

Route 28. It is noted that the proposed development will not add any traffic to the northbound Main Street approach. No mitigation is recommended at this intersection as the result of the proposed project.

- NY Route 28/CR 49A/Owl Nest Road – The level of service analysis indicates that the southbound Owl Nest Road approach currently operates at a LOS C while the northbound CR 49A approach currently operates at a LOS F during the Saturday PM peak hour. During No-Build conditions, both the northbound and southbound approaches will operate at a LOS F and will continue to operate at poor levels of service during Build conditions. The average increase in vehicle delay on the northbound approach will be approximately 135 seconds between the No-Build and Build conditions. It is noted that there are very low traffic volumes on the southbound Owl Nest Road approach. The excessive delay experienced on the northbound CR 49A approach for No-Build conditions during the Saturday PM peak hour is due to the high number of skiers exiting the *Belleayre Mountain Ski Center*. In addition, a review of the northbound volume to capacity (v/c) ratio indicates that this approach will not provide adequate capacity and will experience excessive delays during the Saturday PM peak hour.

  Due to the high turning movement volumes at this intersection, it was determined that a westbound left-turn lane on NY Route 28 and a northbound right-turn lane on CR 49A is warranted for No-Build conditions. The turn lanes will provide a storage area for vehicles traveling from NY Route 28 westbound turning left onto CR 49A southbound and for vehicles traveling northbound on CR 49A turning right onto NY Route 28 eastbound. It is noted that during the winter season morning peak period, it is expected that the westbound left-turn movement will experience a high volume of traffic by skiers entering the ski center. A review of the National MUTCD indicates that the peak hour signal warrant criteria (Warrant #3) would be met for No-Build conditions during peak winter conditions. Based on the signal warrant criteria and the long vehicle delays that will be experienced during the peak hour, it is recommended that a three-phase traffic signal be installed at this intersection in addition to the construction of the left-turn lane on NY Route 28 and the right-turn lane on CR 49A. It is anticipated that the traffic signal would be fully operational during the winter months. The intersection may operate adequately during off winter peaks on flash. With the proposed improvements, this intersection will operate at an overall level of service D with all movements operating at a LOS D or better during the Saturday PM peak hour for No-Build and Build conditions.

  Since the improvements will be warranted as a result of the traffic volumes in the No-Build and Build conditions, it is recommended that the improvements be completed before the project opening in 2015. Since the combination of the Belleayre Ski Center UMP and the proposed resort project will result in the volume increases that meet the warrant criteria for the installation of a traffic signal and geometric improvements, the Applicant has committed to a fair share contribution towards the improvements at this intersection as stated in the

September 2007 Agreement in Principle.

- CR 49A/Gunnison Road/Belleayre Lower Driveway – The level of service analysis indicates that the northbound and southbound left-turn movements on CR 49A currently operate at a LOS A and will operate at a LOS A/B through Build conditions for the Saturday PM peak hour. The analysis also indicates that the eastbound Gunnison Road approach currently operates at a LOS E while the westbound Belleayre Lower Driveway approach operates at a LOS D during the Saturday PM peak hour. During No-Build conditions, the eastbound and westbound approaches will degrade to a LOS F and will continue to operate at a LOS F during Build conditions. The delay experienced during the Saturday PM peak hour is mainly reflective of the high through volumes on CR 49A and is generally considered an acceptable operating condition since the traffic volumes reflect peak seasonal operating conditions. In addition, a review of the peak hour traffic signal warrant presented in the National MUTCD indicates that this intersection does not meet the traffic volume criteria for the installation of a traffic signal during peak operating conditions of the *Belleayre Mountain Ski Center* since the Gunnison Road volume is low and the Belleayre Lower Driveway volumes are approximately 85% right-turn movements. It is expected that the drop in level of service will be short-term and would only occur when the *Belleayre Mountain Ski Center* is highly utilized.

  To help mitigate the long vehicle delays on Gunnison Road during peak periods, internal signing should be considered within the *Wildacres Resort* to divert site traffic to exit at the most southern driveway on CR 49A, the Upper Access Driveway. This diversion would allow for vehicles to enter CR 49A south of the congested *Belleayre Mountain Ski Center.* As shown in Table 4.2, the Upper Access Driveway is expected to operate at good levels of service with short vehicle delays and a large amount of reserve capacity to handle additional trips.

- CR 49A/Belleayre Upper Driveway/Wildacres Main Access Driveway – The level of service analysis indicates that the westbound Belleayre Upper Driveway approach currently operates at a LOS B and will drop to a LOS C during the No-Build conditions. As part of the *Wildacres Resort,* a fourth leg will be constructed opposite the westbound Belleayre Upper Driveway approach. With the additional traffic from the proposed development, the westbound approach will degrade to a LOS D. The new eastbound Wildacres Main Access Driveway approach will operate at poor levels of service due to the high number of westbound right-turns associated with the skiers exiting the *Belleayre Mountain Ski Center* which are expected to dominate the flow of traffic. A review of the peak hour traffic signal warrant criteria (Warrant #3) presented in the National MUTCD indicates that this intersection does not meet the traffic volume criteria for the installation of a traffic signal during peak operating conditions since the Belleayre Upper Driveway volumes are approximately 95% right-turn movements. As with the Gunnison Road intersection, it is expected that the LOS F experienced during the winter weekend conditions would be short-term. Therefore, it is recommended that the

intersection be controlled with stop signs on the eastbound and westbound driveway approaches.

As a result of sight distance limitations, it is recommended that CR 49A be realigned in the vicinity of this intersection. The roadway realignment will improve the horizontal and vertical curvature of the roadway and improve the visibility at this main point of access to the *Wildacres Resort* and the *Belleayre Mountain Ski Center*. Due to the high volume of left-turn traffic on the southbound CR 49A intersection approach, it is also recommended that exclusive left-turn lanes be constructed on CR 49A at this intersection. The left-turn lanes will allow turning vehicles to be removed from the CR 49A through traffic minimizing the impact to CR 49A mainline traffic.

- CR49A/Wildacres Front 9 Village Driveway – The level of service analysis indicates that the eastbound *Front 9 Village* Driveway approach will operate at a LOS F during the Saturday PM peak hour under stop-sign control. However, a review of the eastbound volume to capacity (v/c) ratio indicates that this approach will provide adequate capacity even though it may experience delays of approximately 1 minute during the Saturday PM peak hour. The delay experienced during the Saturday PM peak hour is mainly reflective of the high through volumes on CR 49A and is generally considered an acceptable operating condition since the traffic volumes reflect peak seasonal operating conditions. It is recommended that this intersection consist of a single lane on each approach for shared travel movements with the eastbound site access driveway approach operating under stop-sign control.

- CR 49A/Wildacres Upper Access Driveway – The analysis indicates that this intersection will operate at good levels of service in the Build conditions. It is recommended that this intersection consist of a single lane on each approach for shared travel movements with the eastbound site access driveway approach operating under stop-sign control.

- CR 49A/Highmount Spa Resort Driveway – The analysis indicates that this intersection will operate at good levels of service in the Build conditions. It is recommended that this intersection consist of a single lane on each approach for shared travel movements with the eastbound and westbound site access driveway approaches operating under stop-sign control.

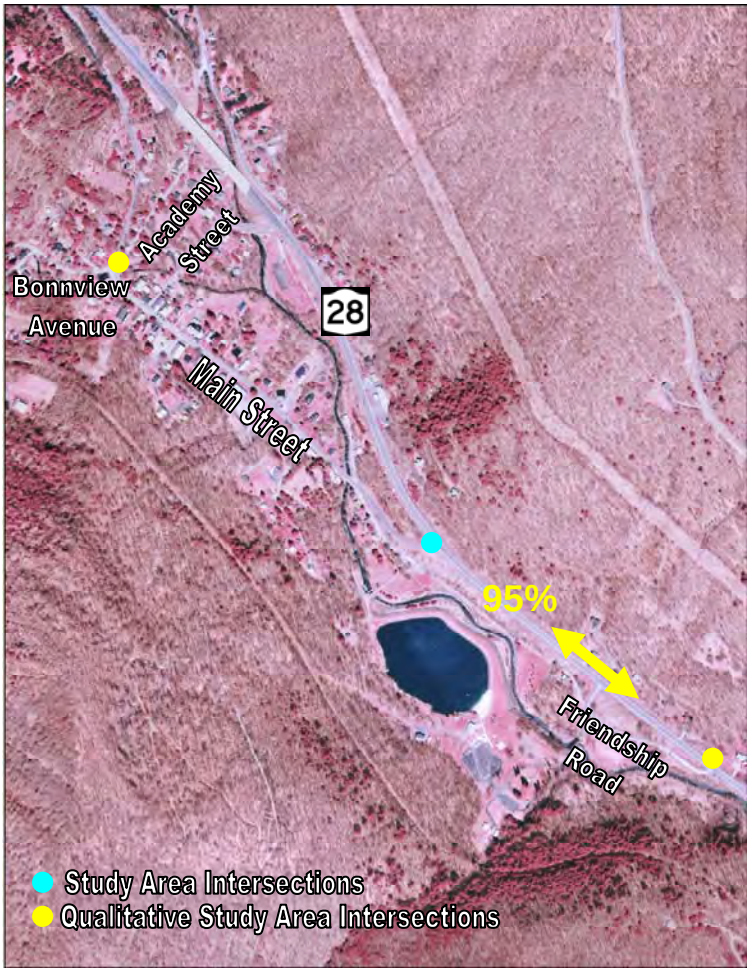
1. Qualitative Intersection Evaluation

A qualitative intersection evaluation was conducted at two additional intersections evaluated in the original TIS which are located in the project vicinity to determine if the proposed development will impact traffic operations at these locations after full build-out. The intersections are shown on Map 1 and include the following:

- NY Route 28/Friendship Road
- Main Street/Bonnieview Avenue/Academy Street

A review of the trip distributions of the *Belleayre Resort at Catskill Park* development indicates that a total of approximately 95% of the site generated traffic will travel past Friendship Road on NY Route 28 and that none will turn onto Friendship Road. This is similar to the NY Route 28/Main Street study area intersection located to the west. However, Friendship Road has significantly less traffic on it compared to the Main Street intersection and will therefore operate at acceptable levels of service after construction of the proposed project. In the previous traffic study of the project completed in 2002, Friendship Road served as the primary access to the *Big Indian Plateau* development and therefore more than 100 peak hour trips were distributed onto Friendship Road. No traffic related mitigation is recommended at this intersection.

A review of the trip distribution from the proposed site indicates that virtually no peak hour traffic would be added to the Main Street/Bonnieview Avenue/Academy Street intersection as a result of the proposed development. This distribution pattern is consistent with the previous planned development of the site studied in 2002. No traffic related mitigation is recommended at this intersection.



Map 1 – Qualitative Study Area Intersections

C. Sight Distance Analysis

Intersection sight distances were measured from the perspective of a passenger car exiting the site at the proposed site access driveway locations on CR 49A, looking straight ahead for vehicles traveling north and south on CR 49A, and turning left into the proposed development. The available intersection sight distance approaching the intersection from a side street should allow drivers a sufficient view of the intersecting highway to allow vehicles to enter or exit the intersection without excessively slowing vehicles traveling at or near the operating speed on the main line. The various sight lines measured are shown below in Figure 4.1.

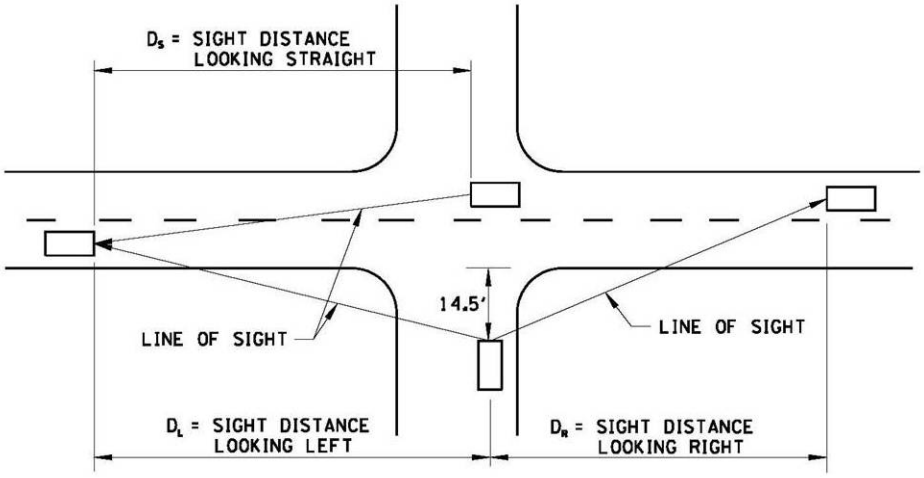


Figure 4.1 – Intersection Sight Distance Measurements

Stopping sight distance, which is the length of the roadway ahead that is visible to the driver, was also measured on CR 49A at the applicable driveway locations. The available stopping sight distance on a roadway should be of sufficient length to enable a vehicle traveling at or near the operating speed to stop before reaching a stationary object in its path.

There is no posted speed limit on CR 49A; therefore, the roadway operates with a statutory speed limit of 55-mph, although it is unlikely that this speed is attainable on many sections of the roadway. CME installed ATR's on CR 49A in the vicinity of the site access driveways to collect vehicle speed information. Based on the collected data, the 85th percentile speed on CR 49A varied at each location, ranging between 37 and 54 mph. The available sight distance in the field was measured and compared to the guidelines presented in the American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets, 2004 based on the applicable measured operating speed. The results of the sight distance analysis are summarized in Table 4.3.

It is noted that as part of the *Belleayre Mountain Ski Center* UMP, the New York State Department of Environmental Conservation (NYSDEC) requested that CR 49A be reviewed by the Town and County for a possible reduction in speeds in the corridor by providing a posted speed limit. This request is based on the collection of a substantial amount of speed data in the corridor indicating that current speeds on CR 49A are lower

than the statutory speed of 55 mph and the fact that the character of the area is changing with the expansion of the ski center and the development of the resorts. Both the Town and County have passed resolutions to post CR 49A with a posted speed limit of 35 mph through the entire study area. At 35 mph, the AASHTO recommended sight distances would be reduced for both intersection and stopping sight distance.

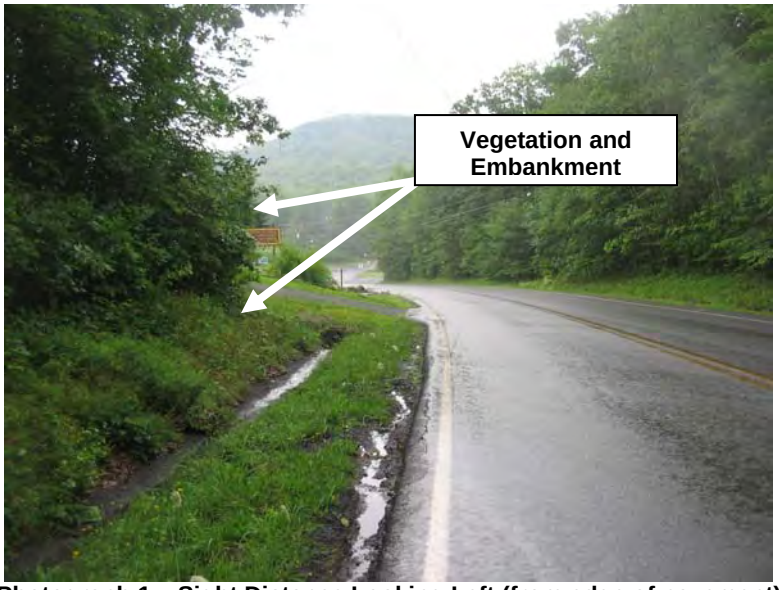
Table 4.3 – Sight Distance Evaluation (Feet)

Intersection		Intersection Sight Distance (feet) [1]						Stopping Sight Distance[2] (feet)	
		Right-Turn from Site Access Drwy (Looking Left)	Left-Turn from Site Access Drwy		Left-Turn from CR 49A (Looking Straight)	Crossing Maneuver from Site Access Drwy		SSD_{NB}	SSD_{SB}
			Looking Left	Looking Right		Looking Left	Looking Right		
CR 49A/Front 9 Village Drwy	Available	300 (450)	300 (450)	235 (400)	860	NA	NA	500	+800
	Recommended[3]	490	570	600	415	NA	NA	485	440
CR 49A/Wildacres Main Access Drwy	Available	450	450	475	380	450	480	370	395
	Recommended[4]	405	470	480	245	405	415	375	300
CR 49A/Wildacres Upper Access Drwy	Available	280 (325)	280 (325)	695	325	NA	NA	685	280
	Recommended[5]	355	415	425	305	NA	NA	270	260
CR 49A/Highmount Spa East Drwy	Available	200 (425)	200 (425)	410	310 (425)	200 (425)	410	315 (400)	235 (370)
	Recommended[6]	355	415	370	305	355	320	275	230
CR 49A/Highmount Spa West Drwy	Available	180 (410)	180 (410)	405	260 (410)	180 (410)	405	315 (400)	235 (370)
	Recommended[6]	320	370	415	270	320	355	275	230
CR 49A/Highmount Spa South Drwy	Available	295	295	+1,000	295	NA	NA	420	245
	Recommended[6]	320	370	415	270	NA	NA	270	230
CR 49A/Wilderness Center Drwy	Available	540	540	220	475	NA	NA	465	235
	Recommended[7]	395	460	405	335	NA	NA	320	265

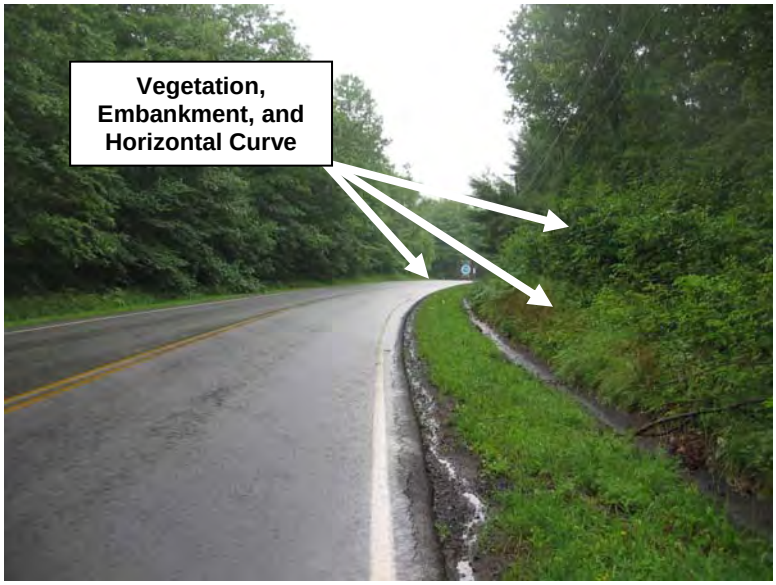
Key: XX (YY) = Available Sight Distance (Anticipated Sight Distance with Mitigation)
1 = Intersection sight distance is measured at 14.5 feet back from the travel way at an eye height and object height of 3.5 feet.
2 = SSD $_{NB,SB}$ = Stopping sight distance measured for a 2-foot object located in the path of northbound and southbound vehicles on CR 49A.
3 = Recommended distance for the 54-mph NB operating speed and 51-mph SB operating speeds on CR 49A.
4 = Recommended distance for the 43-mph NB operating speed and 42-mph SB operating speeds on CR 49A with a 6% downgrade on the NB approach and a 6% upgrade on the SB approach.
5 = Recommended distance for the 38-mph NB operating speed and 37-mph SB operating speeds on CR 49A with a 3% upgrade on the NB and SB approaches.
6 = Recommended distance for the 37-mph NB operating speed and 33-mph SB operating speeds on CR 49A.
7 = Recommended distance for the 41-mph NB operating speed and 36-mph SB operating speeds on CR 49A.
NA = Not Applicable

Utilizing the existing speed data, the following measured sight distances that were less than the AASHTO recommended distances were observed:

- CR 49A/Wildacres Front 9 Village Driveway – The available intersection sight distance for a passenger car looking left and right from the site access driveway to turn left or right onto CR 49A is limited due to an embankment, vegetation, and a horizontal curve as shown on Photograph 1 and Photograph 2 based on the existing operating speed.



Photograph 1 – Sight Distance Looking Left (from edge of pavement)



Photograph 2 – Sight Distance Looking Right (from edge of pavement)

Based on a field review, the available sight distance looking left can be increased to approximately 450-feet while the sight distance looking right can be increased to approximately 400-feet if the vegetation is cleared and the embankment is re-graded along the project frontage to maximize the sight lines.

A review of criteria in the New York State Supplement (NYS Supplement) to the National MUTCD indicates that the sight distance looking left and right with the proposed clearing are less than desirable but not critically limited. Therefore, additional mitigation is not needed. It is noted that at a lowered speed of 35-mph, the AASHTO recommended sight distance would be met for all intersection movements.

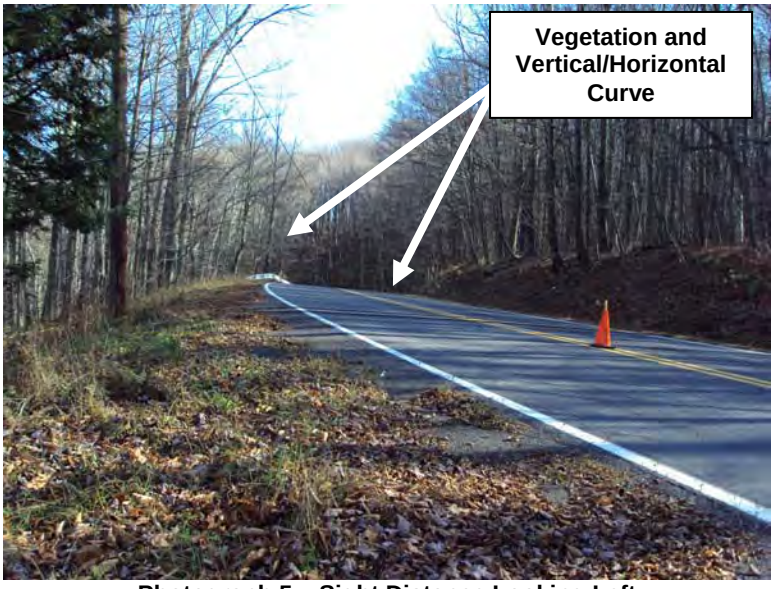
The results of the stopping sight distance evaluation indicate that the AASHTO recommended distances are met at the *Front 9 Village* Driveway for a vehicle traveling northbound and southbound along CR 49A.

- CR 49A/Wildacres Main Access Driveway – Since this intersection will serve as the main access for both the *Wildacres Resort* and the *Belleayre Mountain Ski Center*, and the sight distance is less than the recommended standards, a realignment of CR 49A and lowering of the vertical curve has been incorporated. In addition, the construction of left-turn lanes on CR 49A is recommended to remove the turning traffic from the through traffic on CR 49A. Improving the available stopping sight distance is essential since an at grade pedestrian crossing has been proposed as part of the site plan on the south side of the intersection which will allow skiers from the *Wildacres Resort* to cross CR 49A and access a new ski lift proposed on the opposite side of the road. This amenity will be an important part of the ski-in/ski-out philosophy of the two sites. A concept plan showing the geometric roadway improvements is shown on Figure 4.2. A reduction in the speed limit along CR 49A would reduce the sight distance needs at this intersection; however, the proposed geometric improvements would remain the same.

Photograph 3 – Sight Distance Looking Left

Photograph 4 – Sight Distance Looking Right

- CR 49A/Wildacres Upper Access Driveway – The results of the intersection sight distance evaluation indicate that the available intersection sight distance for a passenger car looking left from the site access driveway to turn left or right onto CR 49A is limited due to vegetation and vertical/horizontal curves as shown on Photograph 5 based on the existing operating speed.



Photograph 5 – Sight Distance Looking Left

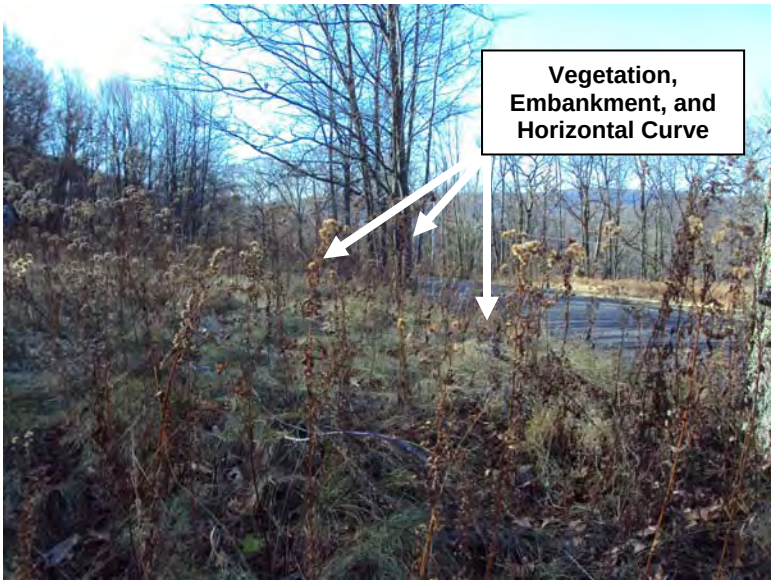
The sight distance evaluation indicates that the available sight distance looking left can be increased slightly to 325-feet if the vegetation located to the north through the curve is cleared to maximize the sight lines. It is noted that due to geometric constraints with the vertical profile on the project site, it was not feasible to move the driveway further south on CR 49A farther away from the

crest of curve. A review of the criteria in the NYS Supplement indicates that the available sight distance looking left for a passenger car to exit the proposed site access driveway is not critically limited and therefore additional mitigation is not proposed if the vegetation is cleared.

The results of the stopping sight distance evaluation indicate that the AASHTO recommended distances will be met along CR 49A at the *Wildacres* Upper Access Driveway for a vehicle traveling northbound and southbound.

It is noted that the current speeds along this section of CR 49A are close to the potential future posted speed limits if the County and State follow through with new speed postings on this roadway. Therefore, the results of the sight distance evaluation will remain the same with the posted speed limits.

- CR 49A/Highmount Spa Resort East Driveway (Main Driveway) – The results of the intersection sight distance evaluation indicate that the available intersection sight distance for a passenger car looking left from the site access driveway to turn left, right, or cross CR 49A is limited due to an embankment, vegetation, and horizontal curve as shown on Photograph 6 based on the applicable operating speed.

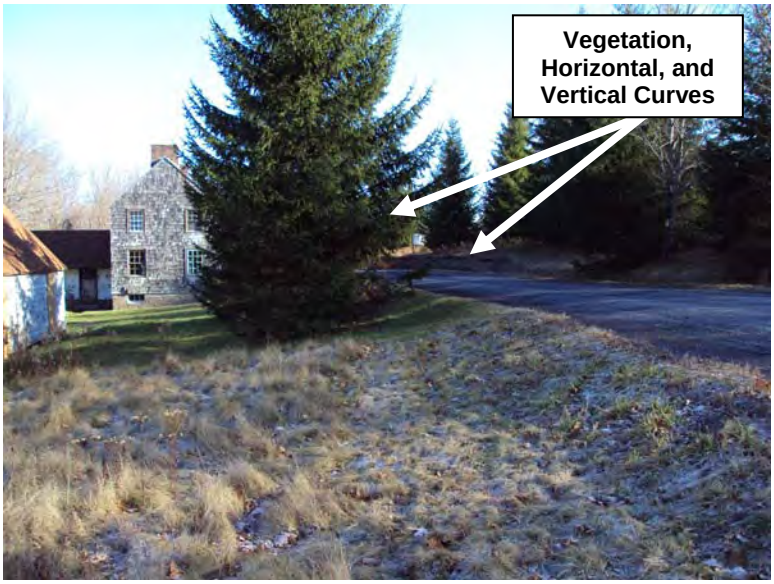


Photograph 6 – Sight Distance Looking Left

The sight distance evaluation indicates that the available sight distance looking left can be increased to approximately 425-feet if the vegetation along the project frontage is cleared and the embankment is re-graded to maximize the sight lines which will meet the AASHTO guidelines for the existing operating speed. It is noted that an extensive study of sight distance was undertaken to determine the most feasible location for the main *Highmount Spa Resort* driveway along CR 49A to maximize the available sight distance.

The results of the stopping sight distance evaluation indicate that the AASHTO recommended distances will be met at the *Highmount Spa Resort* East Driveway for a vehicle traveling northbound and southbound along CR 49A.

- CR 49A/Highmount Spa Resort West Driveway (loop road) – The results of the intersection sight distance evaluation indicate that the available intersection sight distance for a passenger car looking left and right from the site access driveway to turn left, right, or to cross CR 49A and looking straight for a vehicle to turn left onto the site driveway from CR 49A is limited due to an embankment, vegetation, and vertical/horizontal curves as shown on Photograph 7 and Photograph 8 based on the existing operating speed.



Photograph 7 – Sight Distance Looking Left

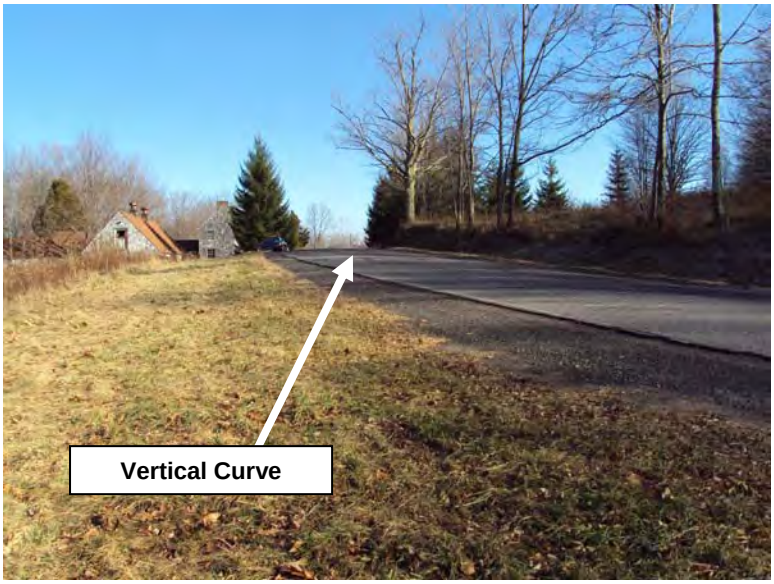
Photograph 8 – Sight Distance Looking Right

The sight distance evaluation indicates that the available sight distance looking left and looking straight can be increased to approximately 410-feet with the clearing of vegetation along the project frontage. The improved sight distance will meet the AASHTO guidelines for the existing operating speeds.

A review of the NYS Supplement indicates that the available sight distance looking right for a passenger car to exit the proposed site access driveway is less than desirable but not critically limited and therefore no mitigation is proposed.

The results of the stopping sight distance evaluation indicate that the AASHTO recommended distances are met at the *Highmount Spa Resort* West Driveway for a vehicle traveling northbound and southbound along CR 49A.

- CR 49A/Highmount Spa Resort South Driveway (loop road) – The results of the intersection sight distance evaluation indicate that the available intersection sight distance for a passenger car looking left to turn left or right onto CR 49A is less than AASHTO guidelines due to a vertical curve as shown on Photograph 9.



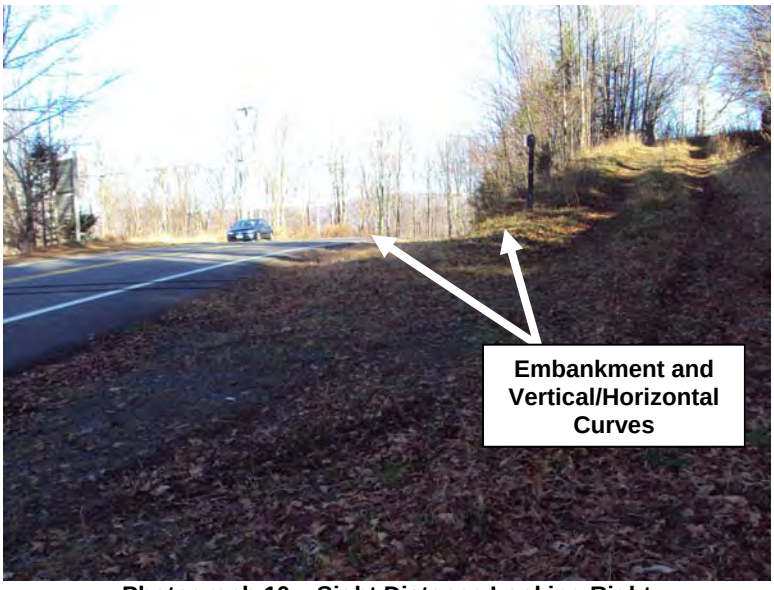
Photograph 9 – Sight Distance Looking Left

A review of the NYS Supplement indicates that the available sight distance looking left is less than desirable but not critically limited and therefore mitigation is not recommended.

The results of the stopping sight distance evaluation indicate that the AASHTO recommended distances are met at the *Highmount Spa Resort* South Driveway for a vehicle traveling northbound and southbound along CR 49A.

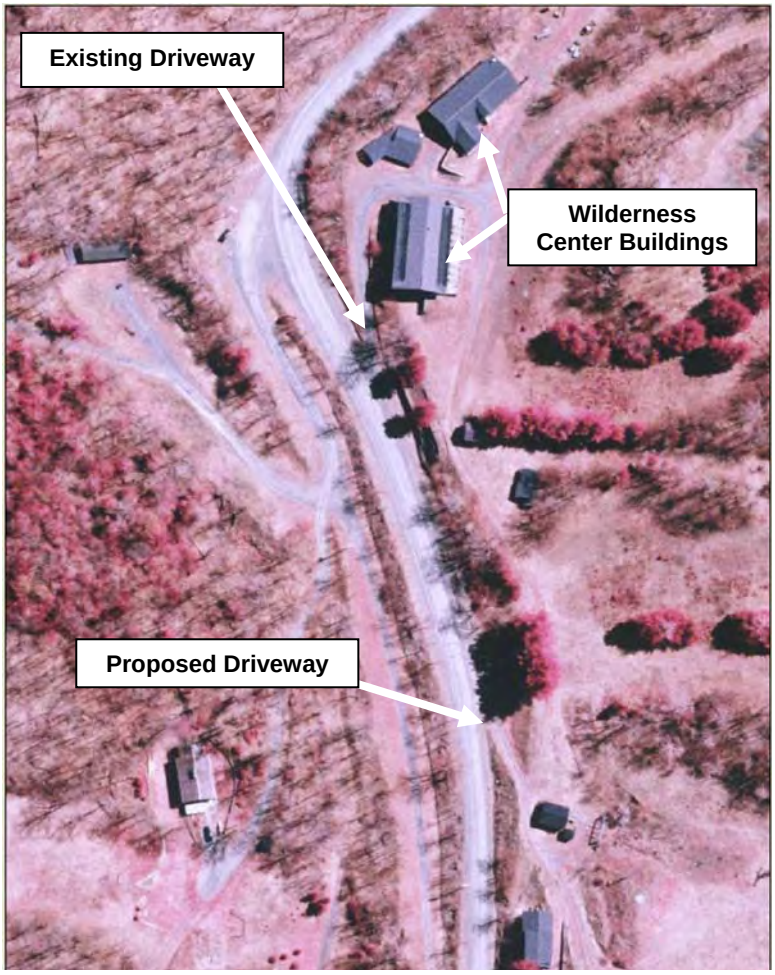
- CR 49A/Wilderness Activity Center Driveway – As previously described, the *Wilderness Activity Center* will not be accessible to public vehicles and will be accessed only by resort shuttles. The results of the intersection sight distance

evaluation indicate that the available sight distance for a passenger car looking right from the site access driveway to turn left onto CR 49A is limited due to an embankment and vertical/horizontal curves as shown on Photograph 10.

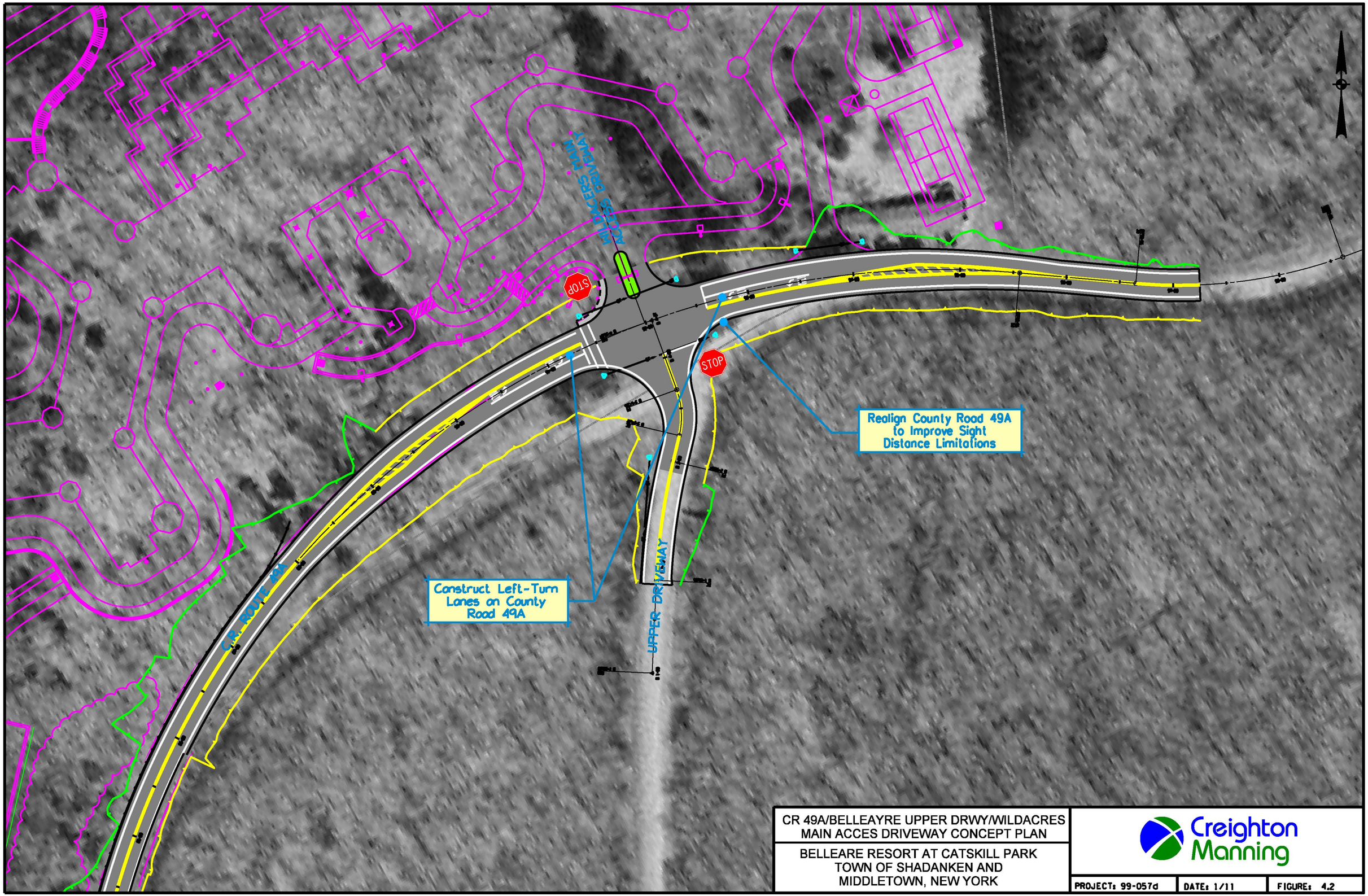


Photograph 10 – Sight Distance Looking Right

The sight distance evaluation indicates that the available sight distance looking right can not be increased without major reconstruction to the road. In addition, the results of the stopping sight distance evaluation indicate that the AASHTO recommended distance is not met at the *Wilderness Activity Center* Driveway for a vehicle traveling southbound along CR 49A. Therefore, it is recommended that the location of the *Wilderness Activity Center* Driveway be moved approximately 300-feet to the south to an existing alternative driveway as shown on Map 2. The available intersection and stopping sight distances at this alternative location meet the AASHTO guidelines for the applicable operating speed and no mitigation would be required. If the driveway can not be moved, then access should be restricted to right-in/right-out movements and shuttles will need to use the resorts as turn around locations.



Map 2 – Alternative Wilderness Center Driveway Location



CR 49A/BELLEAYRE UPPER DRWY/WILDACRES MAIN ACCES DRIVEWAY CONCEPT PLAN

BELLEARE RESORT AT CATSKILL PARK
TOWN OF SHADANKEN AND
MIDDLETOWN, NEW YORK

Creighton Manning

PROJECT: 99-057d | DATE: 1/11 | FIGURE: 4.2

FILE NAME : F:\Projects\1999\99-057d\2009\cad\dgn\99_057_fig_16.dgn
DATE/TIME : 2/24/2011
USER : mhoran

CHAPTER V
CONCLUSIONS AND RECOMMENDATIONS

The *Highmount Spa Resort* will consist of a 120-room hotel with a 24,000 SF spa/fitness center. In addition, 120 fractional lodging units will be constructed of which 53-units will be located within the hotel/spa building, 27-units in a single lodge building, and the remaining 40-units will be located in detached duplexes or individual units. The existing Leach Farm building on the north side of CR 49A will be renovated for a Conference/Wellness Center.

The *Wildacres Resort* will be developed with an 18-hole golf course with a driving range, clubhouse, pro shop, and snack bar. The *Wildacres Resort* will also include a 208-room hotel with 42 attached fractional units located across from the *Belleayre Mountain Ski Center* and will include resort retail shops, two restaurants, a lounge, a pool and spa, tennis courts, a 500-seat conference center, a 200-seat ballroom, and meeting rooms. In addition, 55 fractional units will be constructed behind the hotel in multi-unit buildings. An additional building, *Marlowe Mansion*, will be renovated as a social hall and will also accommodate offices. The *Front 9 Village* portion of the *Wildacres Resort* will provide 84 fractional units constructed in multi-unit buildings with a community clubhouse. A *Wilderness Activity Center* will also be included as part of the *Wildacres Resort*.

Access to main portion of the *Highmount Spa Resort* will be provided via one access road on the south side of CR 49A. In addition, a loop road located next to the *Leach Farm Conference/Wellness Center* building will be provided on the north side of CR 49A. Access to the *Wildacres Resort* will be provided via four site driveways off of or connecting to the north side of CR 49A; the first access will be located on the existing Gunnison Road, the second access servicing hotel traffic will be located across from the *Belleayre Mountain Ski Center* Upper Driveway, the third access will be located approximately 1,300 feet west of the Belleayre Mountain Upper Driveway, while the fourth access to the *Front 9 Village* portion of the resort will be located east of Gunnison Road. The *Wilderness Activity Center* will be developed on the south side of CR 49A approximately 1,500 feet west of the third (most southern) *Wildacres Resort* access and

will be accessed by resort shuttles only.

Based on the results of this *Traffic Impact Study* completed for the proposed *Belleayre Resort at Catskill Park*, the following conclusions and recommendations are offered:

1. Shuttle buses will play a role in reducing the trips from the development. In the winter the resort will shuttle skiers to and from the Belleayre Mountain Ski Center and year round shuttles will be provided between the resorts and the Wilderness Activity Center. Based on a review of the expected site operations, it is estimated that 60% of the trips generated by the resorts during the winter peak will be shared trips between the resort and the ski center. Of the shared trips it is estimated that 90% will use the shuttle system or ski-in/ski-out services. Therefore, the *Belleayre Resort at Catskill Park* project will generate approximately 168 new trips during the Saturday PM peak hour.

2. A review of the accident history data indicates that there are no critical accident locations in the vicinity of the project site on the study area roadways and intersections. No accident related mitigation is required for the project.

3. The level of service analysis indicates that the unsignalized study area intersections on NY Route 28 at NY Route 214, NY Route 42, CR 47, and Main Street and the CR 49A/Gunnison Road/Belleayre Lower Driveway intersection will operate at poor levels on the minor street approaches during No-Build conditions and will continue to operate similarly after construction of the proposed development. However, a review of the minor street v/c ratios indicate that while these approaches may experience longer delays during the Saturday PM peak hour, they still provide adequate capacity. The delay experienced during the Saturday PM peak hour is mainly reflective of the through volumes on NY Route 28 and CR 49A and is generally considered an acceptable operating condition since the traffic volumes reflect peak seasonal operating conditions. In addition, a review of the peak hour traffic signal warrant presented in the *National MUTCD* indicates that these intersections do not meet the traffic volume criteria for the installation of a traffic signal during peak operating conditions of the *Belleayre Mountain Ski Center* and the *Belleayre Resort at Catskill Park*. It is noted that the vehicle delays experienced on the side streets are expected to be much less during off-peak seasons and off-peak times of day. Therefore, no capacity related mitigation is recommended at these intersections.

   The level of service analysis indicates that the unsignalized NY Route 28/CR 49A/Owl Nest Road intersection will operate at poor levels of service on the minor street approaches during No-Build conditions and will continue to operate similarly after construction of the proposed development. Due to the high turn volumes traveling to and from NY Route 28 and CR 49A, it was determined that a westbound left-turn lane on NY Route 28 and a northbound right-turn lane on CR 49A is warranted for No-Build conditions. In addition, a review of the

National MUTCD indicates that the peak hour signal warrant would be met for No-Build conditions during peak winter conditions and that a three-phase traffic signal should be installed at this intersection. It is anticipated that the traffic signal would be fully operational during the winter months and may be able to operate on flash during off-peak spring/summer/fall months. This intersection will operate adequately during the Saturday PM peak hour for No-Build and Build conditions after the installation of a traffic signal. The above improvements are warranted for the No-Build condition prior to the development of the proposed project and should therefore be completed before the project opening date of 2015. Since the combination of the Belleayre Ski Center UMP and the proposed resort project will result in the volume increases that meet the warrant criteria for the installation of a traffic signal and geometric improvements, the Applicant has committed to a fair share contribution towards the improvements at this intersection as stated in the September 2007 Agreement in Principle.

4. The level of service analysis indicates that the Upper Access Driveway for the *Wildacres Resort* and the *Highmount Spa Resort* Driveway intersections on CR 49A will operate adequately during the peak hours as unsignalized intersections. The *Front 9 Village* driveway on CR 49A will operate with vehicle delays of approximately one minute on the driveway approach during the peak hour as an unsignalized intersection. It is recommended that these intersections consist of a single lane on each approach for shared travel movements with the site access road approaches operating under stop-sign control.

5. As part of the *Wildacres Resort,* a fourth leg will be constructed opposite the westbound Belleayre Upper Driveway approach at its intersection with CR 49A. The level of service analysis indicates that the new eastbound Wildacres Main Access Driveway approach will operate at a LOS F since movements from this intersection will mainly consist of left-turns who have to yield to through traffic on CR 49A and to the high number of westbound right-turns associated with the skiers exiting the *Belleayre Mountain Ski Center.* A review of the peak hour traffic signal warrant criteria presented in the National MUTCD indicates that this intersection does not meet the traffic volume criteria for the installation of a traffic signal during peak operating conditions. It is expected that the LOS F experienced during the winter weekend conditions would be short-term and it is therefore recommended that the intersection be controlled with stop signs on the eastbound and westbound approaches. As a result of sight distance limitations, it is recommended that CR 49A be realigned and regraded vertically at this intersection. To better accommodate the vehicles entering the ski center and resort from CR 49A, it is recommended that left-turn lanes be constructed on CR 49A at this intersection as part of the roadway improvements.

6. A qualitative intersection evaluation at the intersections of NY Route 28/ Friendship Road and Main Street/Bonnview Avenue/Academy Street indicates that these intersections will operate adequately after full development of the proposed project. No mitigation is necessary.

7. The results of the intersection sight distance evaluation indicate that vegetation clearing and embankment grading is necessary to provide adequate sight lines for the *Highmount Spa Resort* Driveway intersections and at the *Wildacres* Upper Access Driveway. The results of the intersection sight distance evaluation also indicate that vegetation clearing, embankment grading, and the installation of an intersection warning sign is necessary for the *Wildacres Front 9 Village* Driveway. It is also recommended that the vertical curve on CR 49A be modified and that the road be realigned in front of the *Wildacres Resort* Main Access Driveway in order to provide adequate stopping sight distance and improve the intersection sight distance. This is essential since an at grade pedestrian crossing is proposed as part of the site plan on the south side of the intersection which will allow skiers from the *Wildacres Resort* to cross CR 49A and access a new ski lift proposed on the opposite side of the road. The results of the intersection sight distance evaluation also indicate that the existing *Wilderness Activity Center* Driveway should be moved to an alternative driveway located approximately 300-feet to the south or access restrictions be placed at this intersection to eliminate movements with inadequate sight distance.

The above analysis indicates that the proposed improvements for the *Belleayre Resort at Catskill Park* project will mitigate impacts to the operation of the study area intersections.

Appendix A

Project Master Plan

Traffic Impact Study
Belleayre Resort at Catskill Park
Town of Shandaken and Middletown, New York

Proposed Wetland Activities at the Belleayre Resort Site

ID	Non-Mechanized Tree Clearing Location	Wetland Number	Square feet		Acres
C1	Hole 11 - south	16	780		0.02
C2	Hole 11 - center	16	10,655		0.24
C3	Hole 11 - north	16	7,395		0.17
C4	Hole 16 - near green	16	3,206		0.07
C5	Hole 13 cart path	16	1,026		0.02
C6	Hole 13 - west	16	12,080		0.28
C7	Hole 13 - east	21	1,778		0.04
C8	Hole 16 - near tees	21	3,732		0.09
C9	Hole 18 - west	19	12,865		0.30
C10	Hole 18 - east	20	32,515		0.75
C11	Hole 3	24	1,665		0.04
C12	Hole 7	24	2,755		0.06
	TOTAL		90,452		2.08
	Wetland Areas Crossed by Elevated Golf Cart Boardwalk & Road Bridge				
	Location	Wetland Number	Square feet	(LF)	Acres
S1	Hole 7	24	130	13.0	0.003
S2	Hole 11 - center	16	125	12.5	0.003
S3	Hole 11 - north	16	305	30.0	0.007
S4	Hole 11 - south	16	315	31.5	0.007
S5	Hole 13 cart path	16	360	36.0	0.008
S6	Hole 16 - near tees	21	250	25.0	0.006
S7	Road B Bridge	21	400	24.0	0.009
	TOTAL		1,885	172.0	0.043
	Wetland Areas Crossed By Subsurface Directional Bore				
	Location	Wetland Number		LF	
B1	Off-Site	-	-	16.5	
B2	Off-Site	-	-	16.0	
B3	Off-Site	-	-	15.0	
B4	Off-Site	-	-	13.0	
B5	Off-Site	-	-	72.0	
B6	Hole 11 -Tee Box	16	-	20.0	
B7	Hole 11 -Tee Box	16	-	20.0	
B8	Hole 16- Tee Box	21	-	25.0	
B9	Hole 7 -Tee Box	24	-	11.0	
B10	Hole 7 -Tee Box	24	-	11.0	
B11	Hole 7 -Tee Box	24	-	11.0	
	TOTAL			230.5	

**SEE SHEETS W-3.0 - W-3.4 FOR DETAILS

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Drawn MKT/JTS
Checked KJF/RPF

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Submission:
FOR REGULATORY APPROVALS ONLY

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PREPARED FOR:
Crossroads Ventures, L.L.C.
PO Box 267
Mt. Tremper, NY 12457

The Modified Belleayre Resort at Catskill Park

Wildacres Resort & The Highmount Spa Resort
Town of Shandaken & Town of Middletown, New York

Title: PROJECT MASTERPLAN

Key Plan

NORTH

Revisions

Project: 07074
Date: 01/10/11

Drawing
W-1.1

Appendix B

Raw Turning Movement and ATR Data

Traffic Impact Study
Belleayre Resort at Catskill Park
Town of Shandaken and Middletown, New York

Project: 99-057d
Counted By: DDD
Location: Pine Hill, NY
Other:

File Name : tm99057s7
Site Code : 99-057-7
Start Date : 1/19/2008
Page No : 1

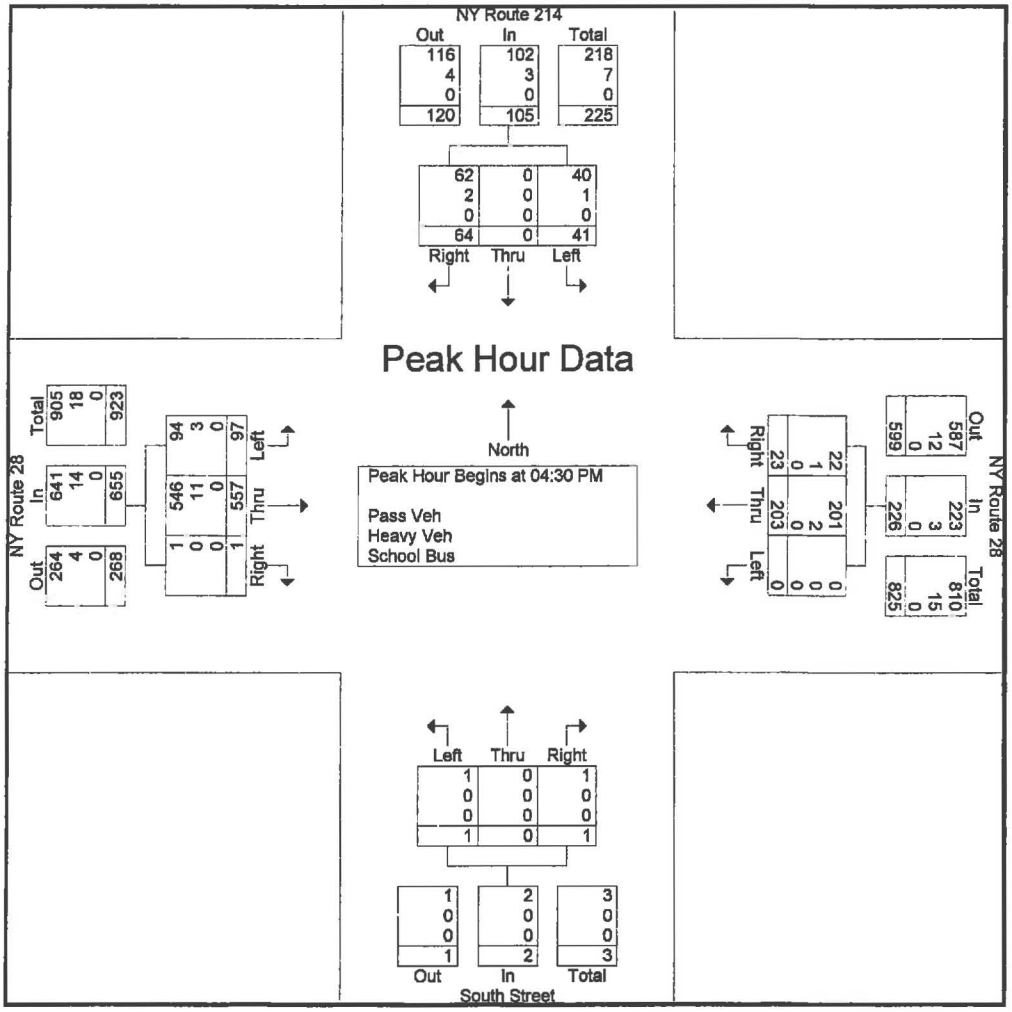
Groups Printed- Pass Veh - Heavy Veh - School Bus

	NY Route 214 Southbound				NY Route 28 Westbound				South Street Northbound				NY Route 28 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
03:30 PM	6	0	20	26	0	46	3	49	1	0	0	1	14	81	0	95	171
03:45 PM	9	0	26	35	0	50	11	61	0	0	1	1	18	93	0	111	208
Total	15	0	46	61	0	96	14	110	1	0	1	2	32	174	0	206	379
04:00 PM	9	0	17	26	1	63	6	70	0	0	0	0	29	135	1	165	261
04:15 PM	13	0	16	29	0	46	4	50	0	0	1	1	21	123	0	144	224
04:30 PM	13	0	15	28	0	64	5	69	1	0	0	1	20	124	0	144	242
04:45 PM	10	0	15	25	0	41	7	48	0	0	1	1	32	137	0	169	243
Total	45	0	63	108	1	214	22	237	1	0	2	3	102	519	1	622	970
05:00 PM	6	0	23	29	0	48	4	52	0	0	0	0	23	156	0	179	260
05:15 PM	12	0	11	23	0	50	7	57	0	0	0	0	22	140	1	163	243
Grand Total	78	0	143	221	1	408	47	456	2	0	3	5	179	989	2	1170	1852
Apprch %	35.3	0	64.7		0.2	89.5	10.3		40	0	60		15.3	84.5	0.2		
Total %	4.2	0	7.7	11.9	0.1	22	2.5	24.6	0.1	0	0.2	0.3	9.7	53.4	0.1	63.2	
Pass Veh	75	0	134	209	1	402	46	449	2	0	3	5	172	969	2	1143	1806
% Pass Veh	96.2	0	93.7	94.6	100	98.5	97.9	98.5	100	0	100	100	96.1	98	100	97.7	97.5
Heavy Veh	3	0	9	12	0	6	1	7	0	0	0	0	7	17	0	24	43
% Heavy Veh	3.8	0	6.3	5.4	0	1.5	2.1	1.5	0	0	0	0	3.9	1.7	0	2.1	2.3
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
% School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0.3	0.2

Project: 99-057d
Counted By: DDD
Location: Pine Hill, NY
Other:

File Name : tm99057s7
Site Code : 99-057-7
Start Date : 1/19/2008
Page No : 2

	NY Route 214 Southbound				NY Route 28 Westbound				South Street Northbound				NY Route 28 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 3:30:00 PM to 5:15:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 4:30:00 PM																	
4:30:00 PM	**13**	0	15	28	0	**64**	5	**69**	**1**	0	0	**1**	20	124	0	144	242
4:45:00 PM	10	0	15	25	0	41	**7**	48	0	0	**1**	1	**32**	137	0	169	243
5:00:00 PM	6	0	**23**	**29**	0	48	4	52	0	0	0	0	23	**156**	0	**179**	**260**
5:15:00 PM	12	0	11	23	0	50	7	57	0	0	0	0	22	140	**1**	163	243
Total Volume	41	0	64	105	0	203	23	226	1	0	1	2	97	557	1	655	988
% App. Total	39	0	61		0	89.8	10.2		50	0	50		14.8	85	0.2		
PHF	.788	.000	.696	.905	.000	.793	.821	.819	.250	.000	.250	.500	.758	.893	.250	.915	.950
Pass Veh	40	0	62	102	0	201	22	223	1	0	1	2	94	546	1	641	968
% Pass Veh	97.6	0	96.9	97.1	0	99.0	95.7	98.7	100	0	100	100	96.9	98.0	100	97.9	98.0
Heavy Veh	1	0	2	3	0	2	1	3	0	0	0	0	3	11	0	14	20
% Heavy Veh	2.4	0	3.1	2.9	0	1.0	4.3	1.3	0	0	0	0	3.1	2.0	0	2.1	2.0
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Project: 99-057d
Counted By: BWJ
Location: Pine Hill, NY
Other:

File Name : tm99057s6
Site Code : 99-057-6
Start Date : 1/19/2008
Page No : 1

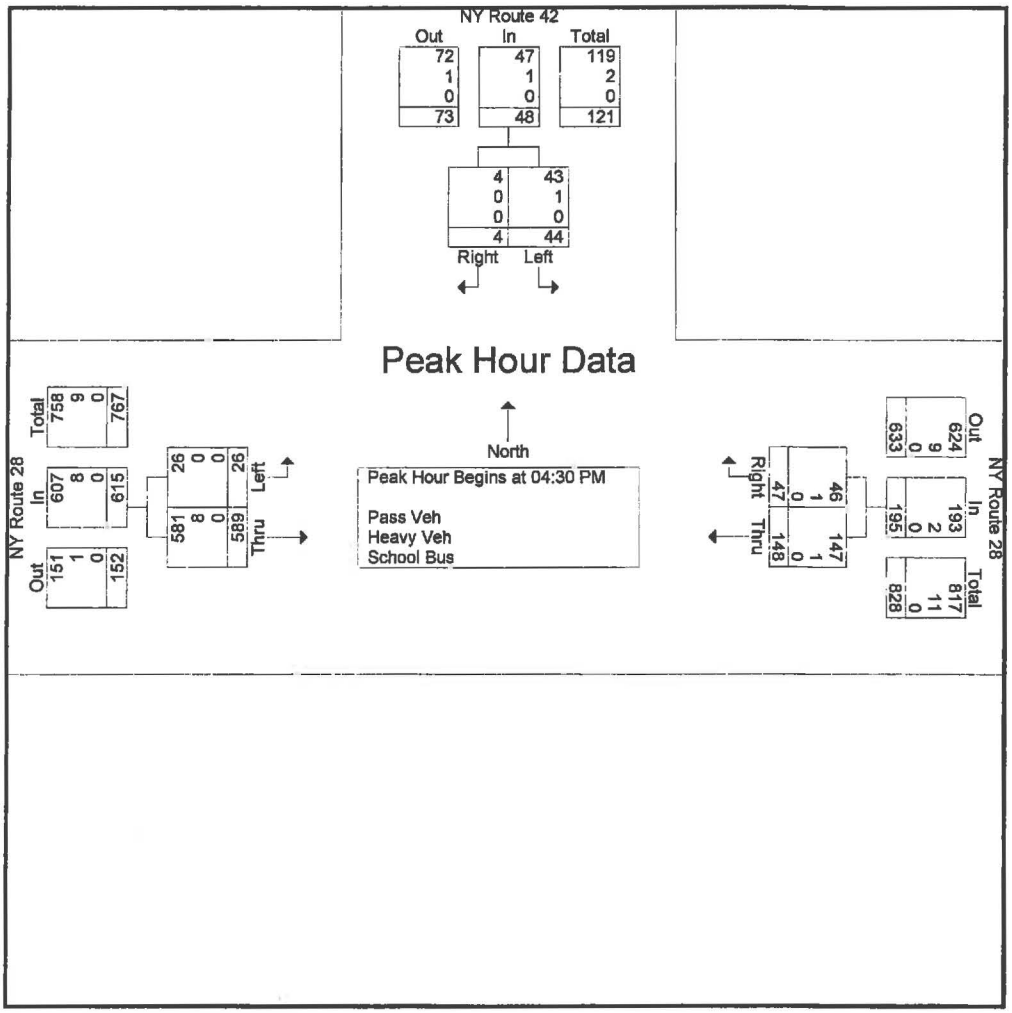
Groups Printed- Pass Veh - Heavy Veh - School Bus

	NY Route 42 Southbound			NY Route 28 Westbound			NY Route 28 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Factor	1.0	1.0		1.0	1.0		1.0	1.0		
03:30 PM	7	2	9	42	9	51	2	87	89	149
03:45 PM	7	1	8	37	20	57	3	120	123	188
Total	14	3	17	79	29	108	5	207	212	337
04:00 PM	10	3	13	46	14	60	8	138	146	219
04:15 PM	11	2	13	52	12	64	2	128	130	207
04:30 PM	8	2	10	42	9	51	3	142	145	206
04:45 PM	11	2	13	37	15	52	8	143	151	216
Total	40	9	49	177	50	227	21	551	572	848
05:00 PM	8	0	8	34	12	46	6	157	163	217
05:15 PM	17	0	17	35	11	46	9	147	156	219
Grand Total	79	12	91	325	102	427	41	1062	1103	1621
Apprch %	86.8	13.2		76.1	23.9		3.7	96.3		
Total %	4.9	0.7	5.6	20	6.3	26.3	2.5	65.5	68	
Pass Veh	77	11	88	318	97	415	41	1042	1083	1586
% Pass Veh	97.5	91.7	96.7	97.8	95.1	97.2	100	98.1	98.2	97.8
Heavy Veh	2	1	3	7	5	12	0	18	18	33
% Heavy Veh	2.5	8.3	3.3	2.2	4.9	2.8	0	1.7	1.6	2
School Bus	0	0	0	0	0	0	0	2	2	2
% School Bus	0	0	0	0	0	0	0	0.2	0.2	0.1

Project: 99-057d
Counted By: BWJ
Location: Pine Hill, NY
Other:

File Name : tm99057s6
Site Code : 99-057-6
Start Date : 1/19/2008
Page No : 2

	NY Route 42 Southbound			NY Route 28 Westbound			NY Route 28 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 3:30:00 PM to 5:15:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 4:30:00 PM										
4:30:00 PM	8	**2**	10	**42**	9	51	3	142	145	206
4:45:00 PM	11	2	13	37	**15**	**52**	8	143	151	216
5:00:00 PM	8	0	8	34	12	46	6	**157**	**163**	217
5:15:00 PM	**17**	0	**17**	35	11	46	**9**	147	156	**219**
Total Volume	44	4	48	148	47	195	26	589	615	858
% App. Total	91.7	8.3		75.9	24.1		4.2	95.8		
PHF	.647	.500	.706	.881	.783	.938	.722	.938	.943	.979
Pass Veh	43	4	47	147	46	193	26	581	607	847
% Pass Veh	97.7	100	97.9	99.3	97.9	99.0	100	98.6	98.7	98.7
Heavy Veh	1	0	1	1	1	2	0	8	8	11
% Heavy Veh	2.3	0	2.1	0.7	2.1	1.0	0	1.4	1.3	1.3
School Bus	0	0	0	0	0	0	0	0	0	0
% School Bus	0	0	0	0	0	0	0	0	0	0



Project: 99-057d
Counted By: CF
Location: Pine Hill, NY
Other:

File Name : tm99057s5
Site Code : 99-057-5
Start Date : 1/19/2008
Page No : 1

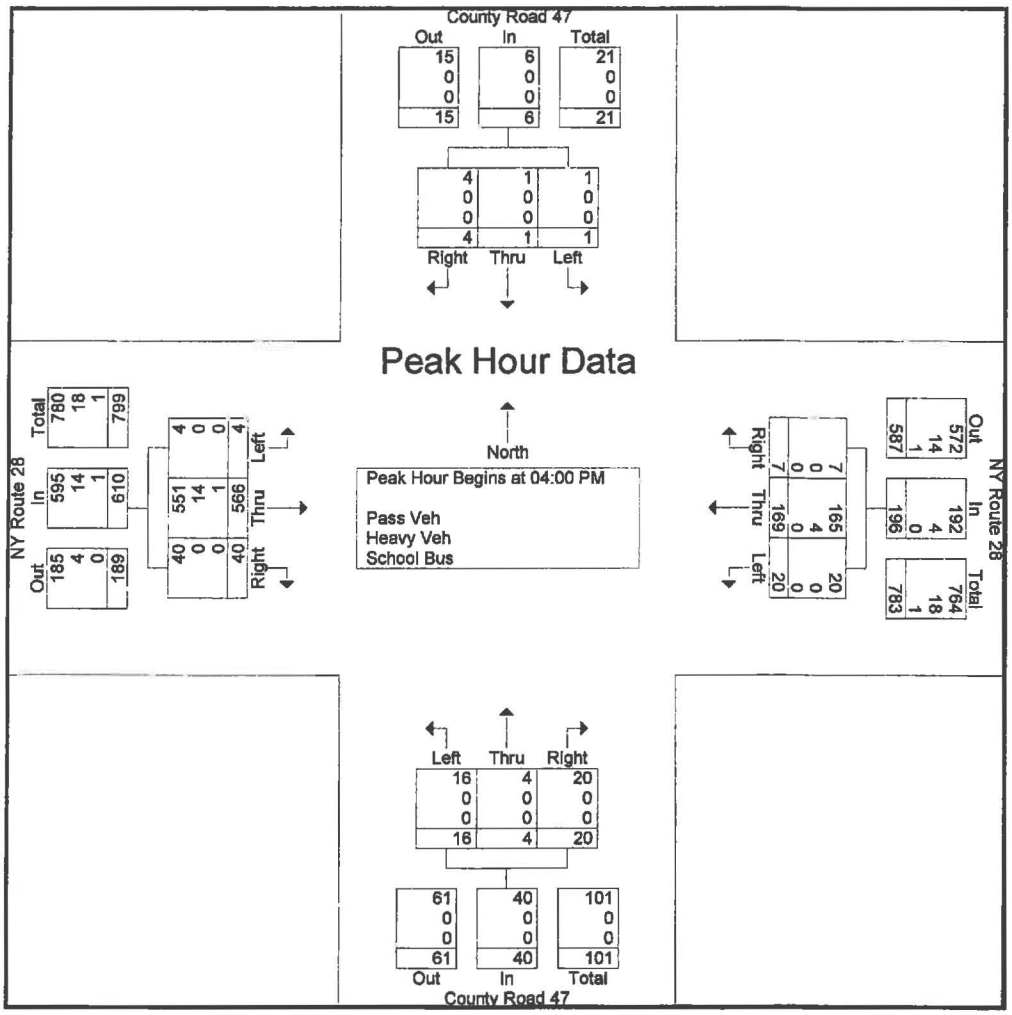
Groups Printed- Pass Veh - Heavy Veh - School Bus

	County Road 47 Southbound				NY Route 28 Westbound				County Road 47 Northbound				NY Route 28 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
03:30 PM	0	2	0	2	4	36	1	41	2	1	2	5	3	97	8	108	156
03:45 PM	0	1	0	1	4	32	0	36	1	0	2	3	1	119	8	128	168
Total	0	3	0	3	8	68	1	77	3	1	4	8	4	216	16	236	324
04:00 PM	0	1	1	2	3	45	0	48	4	3	2	9	2	145	8	155	214
04:15 PM	0	0	1	1	6	38	4	48	3	0	3	6	1	137	9	147	202
04:30 PM	0	0	1	1	5	46	1	52	4	0	10	14	1	136	10	147	214
04:45 PM	1	0	1	2	6	40	2	48	5	1	5	11	0	148	13	161	222
Total	1	1	4	6	20	169	7	196	16	4	20	40	4	566	40	610	852
05:00 PM	0	0	0	0	2	26	1	29	1	0	4	5	3	155	12	170	204
05:15 PM	0	0	0	0	2	28	0	30	5	0	2	7	1	139	14	154	191
Grand Total	1	4	4	9	32	291	9	332	25	5	30	60	12	1076	82	1170	1571
Apprch %	11.1	44.4	44.4		9.6	87.7	2.7		41.7	8.3	50		1	92	7		
Total %	0.1	0.3	0.3	0.6	2	18.5	0.6	21.1	1.6	0.3	1.9	3.8	0.8	68.5	5.2	74.5	
Pass Veh	1	4	4	9	32	284	9	325	24	5	30	59	12	1056	82	1150	1543
% Pass Veh	100	100	100	100	100	97.6	100	97.9	96	100	100	98.3	100	98.1	100	98.3	98.2
Heavy Veh	0	0	0	0	0	7	0	7	1	0	0	1	0	18	0	18	26
% Heavy Veh	0	0	0	0	0	2.4	0	2.1	4	0	0	1.7	0	1.7	0	1.5	1.7
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
% School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.1

Project: 99-057d
Counted By: CF
Location: Pine Hill, NY
Other:

File Name : tm99057s5
Site Code : 99-057-5
Start Date : 1/19/2008
Page No : 2

	County Road 47 Southbound				NY Route 28 Westbound				County Road 47 Northbound				NY Route 28 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 3:30:00 PM to 5:15:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 4:00:00 PM																	
4:00:00 PM	0	**1**	**1**	**2**	3	45	0	48	**4**	**3**	2	9	**2**	145	8	155	214
4:15:00 PM	0	0	1	1	**6**	38	**4**	48	3	0	3	6	1	137	9	147	202
4:30:00 PM	0	0	1	1	5	**46**	1	**52**	4	0	**10**	**14**	1	136	10	147	214
4:45:00 PM	**1**	0	1	2	6	40	2	48	**5**	1	5	11	0	**148**	**13**	**161**	**222**
Total Volume	1	1	4	6	20	169	7	196	16	4	20	40	4	566	40	610	852
% App. Total	16.7	16.7	66.7		10.2	86.2	3.6		40	10	50		0.7	92.8	6.6		
PHF	.250	.250	1.000	.750	.833	.918	.438	.942	.800	.333	.500	.714	.500	.956	.769	.947	.959
Pass Veh	1	1	4	6	20	165	7	192	16	4	20	40	4	551	40	595	833
% Pass Veh	100	100	100	100	100	97.6	100	98.0	100	100	100	100	100	97.3	100	97.5	97.8
Heavy Veh	0	0	0	0	0	4	0	4	0	0	0	0	0	14	0	14	18
% Heavy Veh	0	0	0	0	0	2.4	0	2.0	0	0	0	0	0	2.5	0	2.3	2.1
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.1



Project: 99-057d
Counted By: DT
Location: Pine Hill, NY
Other:

File Name : tm99057s4
Site Code : 99-057-4
Start Date : 1/19/2008
Page No : 1

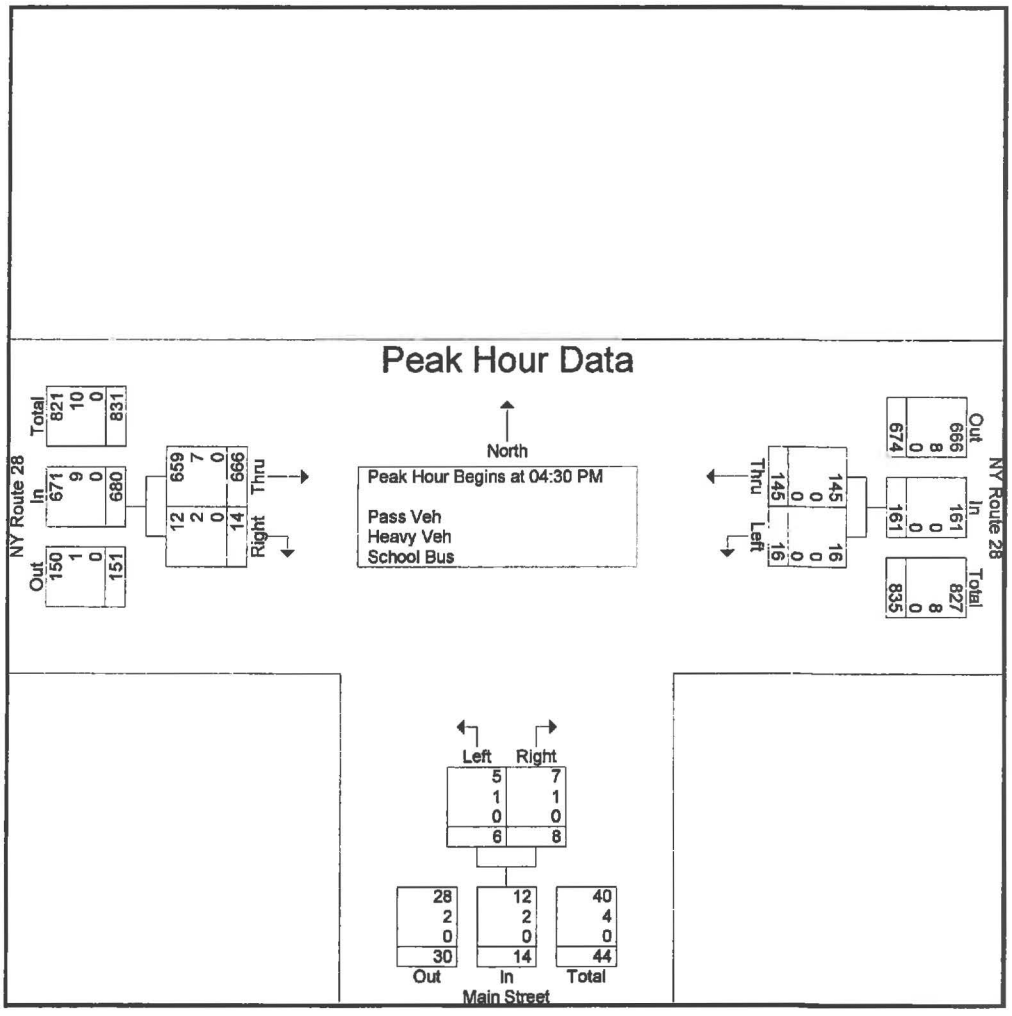
Groups Printed- Pass Veh - Heavy Veh - School Bus

	NY Route 28 Westbound			Main Street Northbound			NY Route 28 Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0		1.0	1.0		1.0	1.0		
03:30 PM	3	35	38	1	3	4	117	3	120	162
03:45 PM	3	37	40	0	3	3	143	0	143	186
Total	6	72	78	1	6	7	260	3	263	348
04:00 PM	6	41	47	2	3	5	151	2	153	205
04:15 PM	4	42	46	2	2	4	131	2	133	183
04:30 PM	4	44	48	2	3	5	160	7	167	220
04:45 PM	5	38	43	2	3	5	176	0	176	224
Total	19	165	184	8	11	19	618	11	629	832
05:00 PM	1	32	33	1	1	2	174	2	176	211
05:15 PM	6	31	37	1	1	2	156	5	161	200
Grand Total	32	300	332	11	19	30	1208	21	1229	1591
Apprch %	9.6	90.4		36.7	63.3		98.3	1.7		
Total %	2	18.9	20.9	0.7	1.2	1.9	75.9	1.3	77.2	
Pass Veh	31	294	325	10	18	28	1189	18	1207	1560
% Pass Veh	96.9	98	97.9	90.9	94.7	93.3	98.4	85.7	98.2	98.1
Heavy Veh	1	6	7	1	1	2	17	3	20	29
% Heavy Veh	3.1	2	2.1	9.1	5.3	6.7	1.4	14.3	1.6	1.8
School Bus	0	0	0	0	0	0	2	0	2	2
% School Bus	0	0	0	0	0	0	0.2	0	0.2	0.1

Project: 99-057d
Counted By: DT
Location: Pine Hill, NY
Other:

File Name : tm99057s4
Site Code : 99-057-4
Start Date : 1/19/2008
Page No : 2

	NY Route 28 Westbound			Main Street Northbound			NY Route 28 Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 3:30:00 PM to 5:15:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 4:30:00 PM										
4:30:00 PM	4	**44**	**48**	**2**	**3**	**5**	160	**7**	167	220
4:45:00 PM	5	38	43	2	3	5	**176**	0	**176**	**224**
5:00:00 PM	1	32	33	1	1	2	174	2	176	211
5:15:00 PM	**6**	31	37	1	1	2	156	5	161	200
Total Volume	16	145	161	6	8	14	666	14	680	855
% App. Total	9.9	90.1		42.9	57.1		97.9	2.1		
PHF	.667	.824	.839	.750	.667	.700	.946	.500	.966	.954
Pass Veh	16	145	161	5	7	12	659	12	671	844
% Pass Veh	100	100	100	83.3	87.5	85.7	98.9	85.7	98.7	98.7
Heavy Veh	0	0	0	1	1	2	7	2	9	11
% Heavy Veh	0	0	0	16.7	12.5	14.3	1.1	14.3	1.3	1.3
School Bus	0	0	0	0	0	0	0	0	0	0
% School Bus	0	0	0	0	0	0	0	0	0	0



Project: 99-057d
Counted By: JS
Location: Pine Hill, NY
Other:

File Name : tm99057s3
Site Code : 99-057-3
Start Date : 1/19/2008
Page No : 1

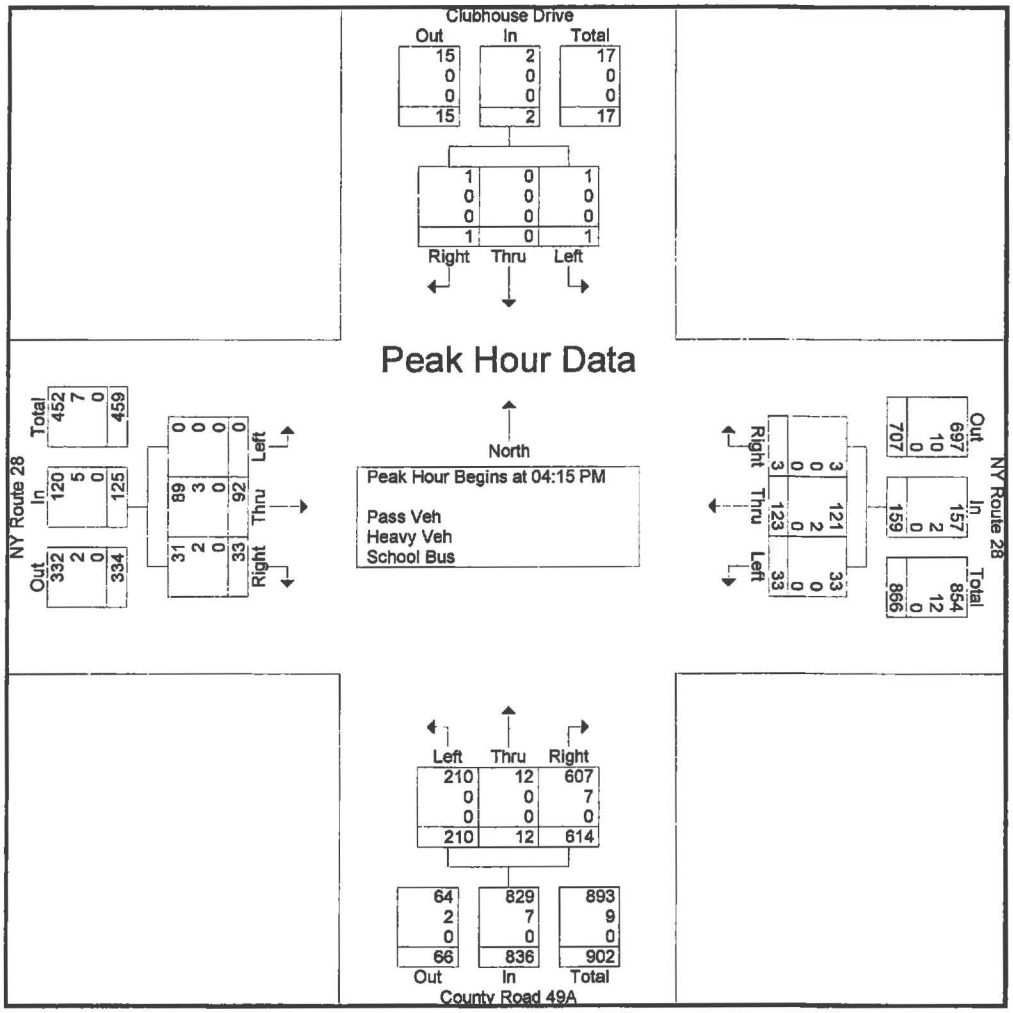
Groups Printed- Pass Veh - Heavy Veh - School Bus

	Clubhouse Drive Southbound				NY Route 28 Westbound				County Road 49A Northbound				NY Route 28 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
03:30 PM	2	0	0	2	7	31	1	39	52	2	109	163	1	15	8	24	228
03:45 PM	1	1	1	3	7	30	0	37	49	0	134	183	0	21	10	31	254
Total	3	1	1	5	14	61	1	76	101	2	243	346	1	36	18	55	482
04:00 PM	1	0	0	1	11	20	0	31	51	2	127	180	0	23	12	35	247
04:15 PM	0	0	0	0	11	40	1	52	48	4	122	174	0	17	13	30	256
04:30 PM	0	0	0	0	8	29	0	37	50	2	144	196	0	31	7	38	271
04:45 PM	1	0	1	2	8	33	2	43	53	2	167	222	0	27	5	32	299
Total	2	0	1	3	38	122	3	163	202	10	560	772	0	98	37	135	1073
05:00 PM	0	0	0	0	6	21	0	27	59	4	181	244	0	17	8	25	296
05:15 PM	1	0	0	1	5	35	0	40	59	3	97	159	0	35	0	35	235
Grand Total	6	1	2	9	63	239	4	306	421	19	1081	1521	1	186	63	250	2086
Apprch %	66.7	11.1	22.2		20.6	78.1	1.3		27.7	1.2	71.1		0.4	74.4	25.2		
Total %	0.3	0	0.1	0.4	3	11.5	0.2	14.7	20.2	0.9	51.8	72.9	0	8.9	3	12	
Pass Veh	6	1	2	9	60	235	4	299	420	19	1065	1504	1	182	61	244	2056
% Pass Veh	100	100	100	100	95.2	98.3	100	97.7	99.8	100	98.5	98.9	100	97.8	96.8	97.6	98.6
Heavy Veh	0	0	0	0	3	4	0	7	1	0	14	15	0	4	2	6	28
% Heavy Veh	0	0	0	0	4.8	1.7	0	2.3	0.2	0	1.3	1	0	2.2	3.2	2.4	1.3
School Bus	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
% School Bus	0	0	0	0	0	0	0	0	0	0	0.2	0.1	0	0	0	0	0.1

Project: 99-057d
Counted By: JS
Location: Pine Hill, NY
Other:

File Name : tm99057s3
Site Code : 99-057-3
Start Date : 1/19/2008
Page No : 2

	Clubhouse Drive Southbound				NY Route 28 Westbound				County Road 49A Northbound				NY Route 28 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 3:30:00 PM to 5:15:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 4:15:00 PM																	
4:15:00 PM	0	0	0	0	**11**	**40**	1	**52**	48	**4**	122	174	0	17	**13**	30	256
4:30:00 PM	0	0	0	0	8	29	0	37	50	2	144	196	0	**31**	7	**38**	271
4:45:00 PM	**1**	0	**1**	**2**	8	33	**2**	43	53	2	167	222	0	27	5	32	**299**
5:00:00 PM	0	0	0	0	6	21	0	27	**59**	4	**181**	**244**	0	17	8	25	296
Total Volume	1	0	1	2	33	123	3	159	210	12	614	836	0	92	33	125	1122
% App. Total	50	0	50		20.8	77.4	1.9		25.1	1.4	73.4		0	73.6	26.4		
PHF	.250	.000	.250	.250	.750	.769	.375	.764	.890	.750	.848	.857	.000	.742	.635	.822	.938
Pass Veh	1	0	1	2	33	121	3	157	210	12	607	829	0	89	31	120	1108
% Pass Veh	100	0	100	100	100	98.4	100	98.7	100	100	98.9	99.2	0	96.7	93.9	96.0	98.8
Heavy Veh	0	0	0	0	0	2	0	2	0	0	7	7	0	3	2	5	14
% Heavy Veh	0	0	0	0	0	1.6	0	1.3	0	0	1.1	0.8	0	3.3	6.1	4.0	1.2
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Project: 99-057d
Counted By: JK
Location: Pine Hill, NY
Other:

File Name : tm99057s2
Site Code : 99-057-2
Start Date : 1/19/2008
Page No : 1

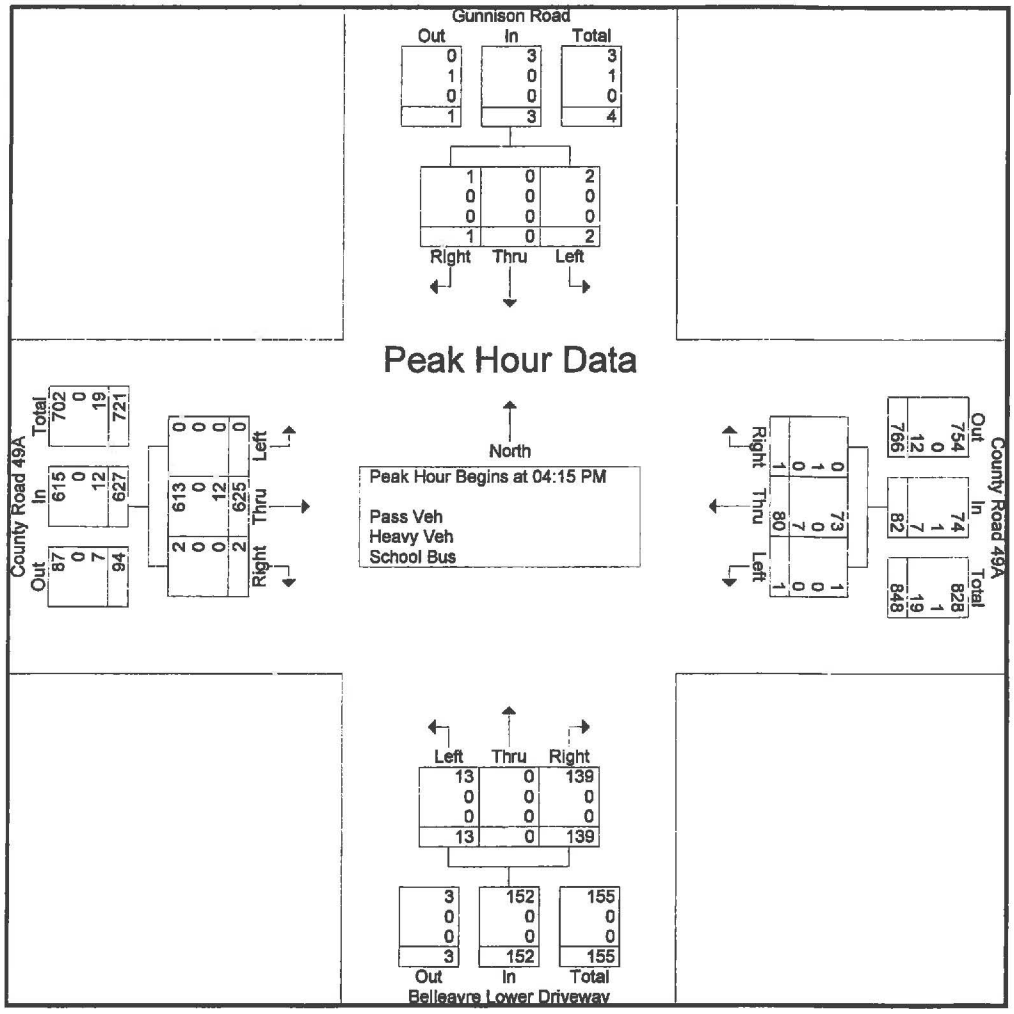
Groups Printed- Pass Veh - Heavy Veh - School Bus

	Gunnison Road Southbound				County Road 49A Westbound				Belleayre Lower Driveway Northbound				County Road 49A Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
03:30 PM	0	0	0	0	0	21	1	22	6	0	11	17	0	156	0	156	195
03:45 PM	0	1	0	1	0	19	1	20	5	0	16	21	0	159	0	159	201
Total	0	1	0	1	0	40	2	42	11	0	27	38	0	315	0	315	396
04:00 PM	0	0	0	0	0	24	0	24	5	0	32	37	1	153	2	156	217
04:15 PM	0	0	0	0	0	31	0	31	8	0	29	37	0	161	0	161	229
04:30 PM	2	0	1	3	0	18	0	18	3	0	60	63	0	111	0	111	195
04:45 PM	0	0	0	0	0	16	0	16	2	0	38	40	0	150	0	150	206
Total	2	0	1	3	0	89	0	89	18	0	159	177	1	575	2	578	847
05:00 PM	0	0	0	0	1	15	1	17	0	0	12	12	0	203	2	205	234
05:15 PM	2	0	0	2	0	9	1	10	2	0	9	11	0	85	1	86	109
Grand Total	4	1	1	6	1	153	4	158	31	0	207	238	1	1178	5	1184	1586
Apprch %	66.7	16.7	16.7		0.6	96.8	2.5		13	0	87		0.1	99.5	0.4		
Total %	0.3	0.1	0.1	0.4	0.1	9.6	0.3	10	2	0	13.1	15	0.1	74.3	0.3	74.7	
Pass Veh	3	1	1	5	1	136	3	140	30	0	207	237	1	1152	5	1158	1540
% Pass Veh	75	100	100	83.3	100	88.9	75	88.6	96.8	0	100	99.6	100	97.8	100	97.8	97.1
Heavy Veh	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
% Heavy Veh	25	0	0	16.7	0	0	25	0.6	0	0	0	0	0	0	0	0	0.1
School Bus	0	0	0	0	0	17	0	17	1	0	0	1	0	26	0	26	44
% School Bus	0	0	0	0	0	11.1	0	10.8	3.2	0	0	0.4	0	2.2	0	2.2	2.8

Project: 99-057d
Counted By: JK
Location: Pine Hill, NY
Other:

File Name : tm99057s2
Site Code : 99-057-2
Start Date : 1/19/2008
Page No : 2

	Gunnison Road Southbound				County Road 49A Westbound				Belleayre Lower Driveway Northbound				County Road 49A Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 3:30:00 PM to 5:15:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 4:15:00 PM																	
4:15:00 PM	0	0	0	0	0	**31**	0	**31**	**8**	0	29	37	0	161	0	161	229
4:30:00 PM	**2**	0	**1**	**3**	0	18	0	18	3	0	**60**	**63**	0	111	0	111	195
4:45:00 PM	0	0	0	0	0	16	0	16	2	0	38	40	0	150	0	150	206
5:00:00 PM	0	0	0	0	**1**	15	**1**	17	0	0	12	12	0	**203**	**2**	**205**	**234**
Total Volume	2	0	1	3	1	80	1	82	13	0	139	152	0	625	2	627	864
% App. Total	66.7	0	33.3		1.2	97.6	1.2		8.6	0	91.4		0	99.7	0.3		
PHF	.250	.000	.250	.250	.250	.645	.250	.661	.406	.000	.579	.603	.000	.770	.250	.765	.923
Pass Veh	2	0	1	3	1	73	0	74	13	0	139	152	0	613	2	615	844
% Pass Veh	100	0	100	100	100	91.3	0	90.2	100	0	100	100	0	98.1	100	98.1	97.7
Heavy Veh	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
% Heavy Veh	0	0	0	0	0	0	100	1.2	0	0	0	0	0	0	0	0	0.1
School Bus	0	0	0	0	0	7	0	7	0	0	0	0	0	12	0	12	19
% School Bus	0	0	0	0	0	8.8	0	8.5	0	0	0	0	0	1.9	0	1.9	2.2



Project: 99-057d
Counted By: DPR
Location: Pine Hill, NY
Other:

File Name : tm99057s1
Site Code : 99-057-1
Start Date : 1/19/2008
Page No : 1

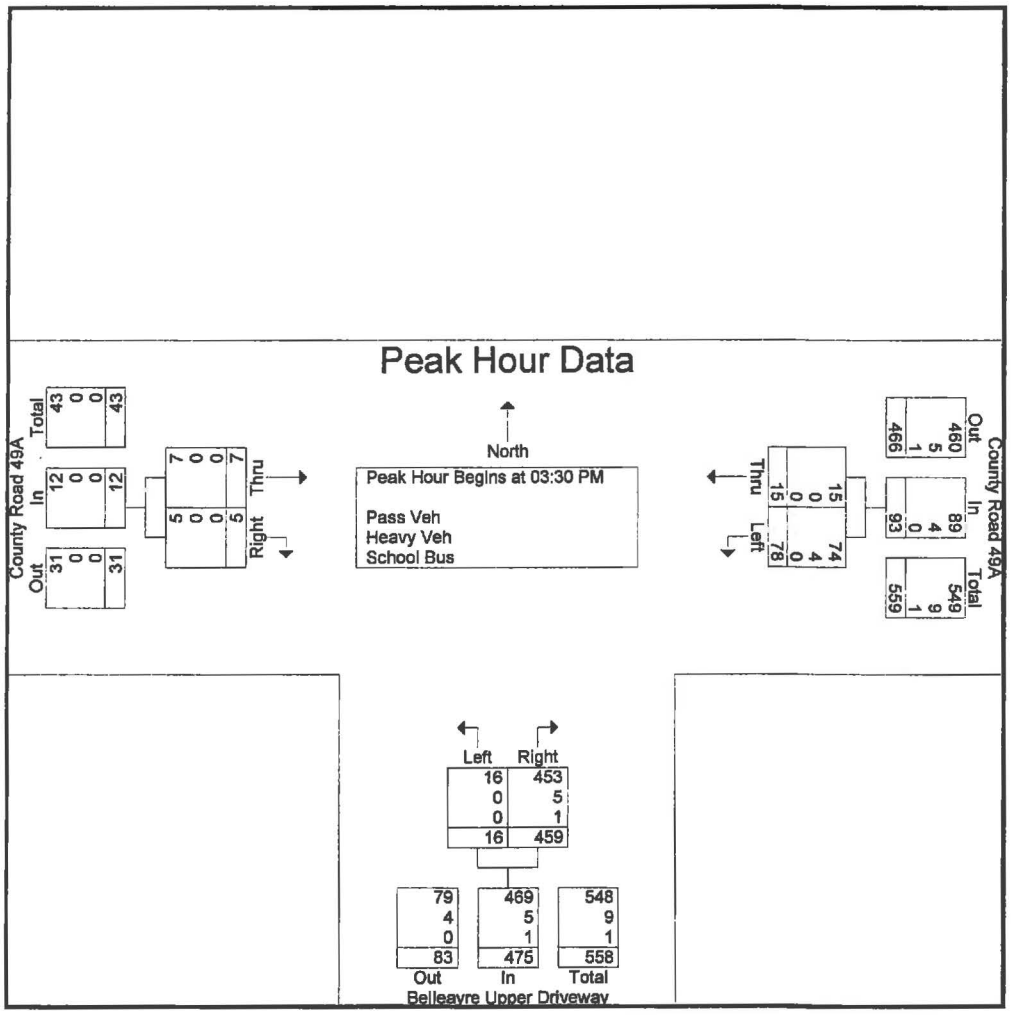
Groups Printed- Pass Veh - Heavy Veh - School Bus

	County Road 49A Westbound			Belleayre Upper Driveway Northbound			County Road 49A Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0		1.0	1.0		1.0	1.0		
03:30 PM	12	2	14	2	98	100	1	1	2	116
03:45 PM	17	1	18	4	106	110	0	0	0	128
Total	29	3	32	6	204	210	1	1	2	244
04:00 PM	22	6	28	5	110	115	4	3	7	150
04:15 PM	27	6	33	5	145	150	2	1	3	186
04:30 PM	10	5	15	5	82	87	2	0	2	104
04:45 PM	12	3	15	6	110	116	0	0	0	131
Total	71	20	91	21	447	468	8	4	12	571
05:00 PM	6	5	11	9	124	133	2	1	3	147
05:15 PM	6	2	8	1	52	53	0	0	0	61
Grand Total	112	30	142	37	827	864	11	6	17	1023
Apprch %	78.9	21.1		4.3	95.7		64.7	35.3		
Total %	10.9	2.9	13.9	3.6	80.8	84.5	1.1	0.6	1.7	
Pass Veh	106	30	136	37	818	855	11	6	17	1008
% Pass Veh	94.6	100	95.8	100	98.9	99	100	100	100	98.5
Heavy Veh	6	0	6	0	8	8	0	0	0	14
% Heavy Veh	5.4	0	4.2	0	1	0.9	0	0	0	1.4
School Bus	0	0	0	0	1	1	0	0	0	1
% School Bus	0	0	0	0	0.1	0.1	0	0	0	0.1

Project: 99-057d
Counted By: DPR
Location: Pine Hill, NY
Other:

File Name : tm99057s1
Site Code : 99-057-1
Start Date : 1/19/2008
Page No : 2

	County Road 49A Westbound			Belleayre Upper Driveway Northbound			County Road 49A Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 3:30:00 PM to 5:15:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 3:30:00 PM										
3:30:00 PM	12	2	14	2	98	100	1	1	2	116
3:45:00 PM	17	1	18	4	106	110	0	0	0	128
4:00:00 PM	22	**6**	28	**5**	110	115	**4**	**3**	**7**	150
4:15:00 PM	**27**	6	**33**	5	**145**	**150**	2	1	3	**186**
Total Volume	78	15	93	16	459	475	7	5	12	580
% App. Total	83.9	16.1		3.4	96.6		58.3	41.7		
PHF	.722	.625	.705	.800	.791	.792	.438	.417	.429	.780
Pass Veh	74	15	89	16	453	469	7	5	12	570
% Pass Veh	94.9	100	95.7	100	98.7	98.7	100	100	100	98.3
Heavy Veh	4	0	4	0	5	5	0	0	0	9
% Heavy Veh	5.1	0	4.3	0	1.1	1.1	0	0	0	1.6
School Bus	0	0	0	0	1	1	0	0	0	1
% School Bus	0	0	0	0	0.2	0.2	0	0	0	0.2



MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-333 -- English (ENU)

Datasets:

Site:	**[99-057d] Highmount**
Direction:	8 - East bound A>B, West bound B>A., **Lane:** 0
Survey Duration:	8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009
File:	F:\Projects\1999\99-057d\2009\ATR\99-057d01Dec2009Highmount.EC0 (Plus)
Identifier:	R7190MC2 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	East, West (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F2)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 1614 / 1616 (99.88%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-333
Site: 99-057d.0WE
Description: **Highmount**
Filter time: **8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009**
Scheme: Vehicle classification (Scheme F2)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(EW) Sp(5,100) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.5	0.0	0.0	1.5	1.0	0.5	2.0	0.6	0.8
0100-0200	0.0	0.0	0.0	1.5	0.0	0.5	0.5	0.3	0.4
0200-0300	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.2	0.1
0300-0400	0.0	0.5	0.5	0.5	2.0	0.0	0.5	0.7	0.6
0400-0500	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.1	0.1
0500-0600	0.5	0.5	0.0	0.5	1.0	4.0	3.0	0.5	1.4
0600-0700	6.0	**9.0<**	2.0	2.5	2.5	4.5	2.0	4.4	4.1
0700-0800	5.5	3.5	1.0	2.5	2.5	5.5	5.5	3.0	3.7
0800-0900	7.0	4.3	2.0	5.5	4.5	6.5	4.0	4.6	4.8
0900-1000	**10.0<**	4.7	6.0	5.5	9.5	7.5	6.0	6.9	6.9
1000-1100	9.0	5.3	10.5	**5.5<**	8.5	8.0	11.0	**7.5<**	8.1
1100-1200	8.0	2.3	**11.0<**	4.0	**14.5<**	**12.5<**	**12.0<**	7.5	**8.7<**
1200-1300	10.0	3.0	9.0	5.0	13.5	16.0	12.0	7.6	9.3
1300-1400	5.5	2.3	6.0	5.5	12.0	**19.0<**	**15.5<**	5.9	8.9
1400-1500	10.0	1.7	7.0	5.0	11.5	16.0	5.0	6.5	7.6
1500-1600	8.0	**3.5<**	**14.0<**	4.5	12.5	14.0	8.5	8.5	9.3
1600-1700	**11.0<**	2.0	9.5	7.5	**13.5<**	16.5	13.0	**8.7<**	**10.4<**
1700-1800	6.5	1.5	5.5	**8.0<**	11.5	11.5	9.0	6.6	7.6
1800-1900	4.0	2.0	8.0	4.5	5.5	8.0	3.0	4.8	5.0
1900-2000	3.5	2.5	2.5	5.5	2.5	10.0	2.0	3.3	4.1
2000-2100	4.0	1.0	1.0	4.5	4.5	5.0	3.0	3.0	3.3
2100-2200	1.0	0.0	2.5	4.5	4.0	5.0	1.0	2.4	2.6
2200-2300	1.0	0.0	3.0	5.0	5.5	4.0	0.0	2.9	2.6
2300-2400	0.5	0.0	2.0	2.0	1.5	1.0	0.0	1.2	1.0
Totals									
0700-1900	94.5	36.2	89.5	63.0	119.5	141.0	104.5	78.2	90.4
0600-2200	109.0	48.7	97.5	80.0	133.0	165.5	112.5	91.3	104.4
0600-0000	110.5	48.7	102.5	87.0	140.0	170.5	112.5	95.4	108.0
0000-0000	111.5	50.2	103.0	92.0	144.0	176.0	118.5	97.8	111.4
AM Peak	0900	0600	1100	1000	1100	1100	1100		
	10.0	9.0	11.0	5.5	14.5	12.5	12.0		
PM Peak	1600	1500	1500	1700	1600	1300	1300		
	11.0	3.5	14.0	8.0	13.5	19.0	15.5		

*** - No data.**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-331 -- English (ENU)

Datasets:

Site:	**[99-057d] Highmount**
Direction:	8 - East bound A>B, West bound B>A., **Lane:** 0
Survey Duration:	8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009
File:	F:\Projects\1999\99-057d\2009\ATR\99-057d01Dec2009Highmount.EC0 (Plus)
Identifier:	R7190MC2 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	East (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F2)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 792 / 1616 (49.01%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-331
Site: 99-057d.0WE
Description: **Highmount**
Filter time: **8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009**
Scheme: Vehicle classification (Scheme F2)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(E) Sp(5,100) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.1	0.1
0100-0200	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.1	0.1
0200-0300	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.2	0.1
0300-0400	0.0	0.5	0.5	0.5	1.5	0.0	0.5	0.6	0.5
0400-0500	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.1	0.1
0500-0600	0.5	0.5	0.0	0.0	0.0	1.0	1.0	0.2	0.4
0600-0700	4.0	**7.5<**	1.5	1.5	1.5	2.0	1.5	3.2	2.8
0700-0800	4.0	3.5	0.5	2.0	1.0	3.0	3.0	2.2	2.4
0800-0900	6.0	2.7	2.0	**3.0<**	1.5	3.5	3.0	3.0	3.1
0900-1000	4.0	3.0	5.0	1.5	4.0	4.5	4.0	3.5	3.7
1000-1100	**7.0<**	3.0	4.5	2.5	5.0	4.0	7.0	**4.3<**	4.6
1100-1200	6.0	2.0	**6.0<**	2.5	**5.5<**	**6.0<**	**9.0<**	4.2	**5.1<**
1200-1300	**7.0<**	**1.7<**	5.5	2.0	3.5	6.0	8.0	**3.7<**	4.6
1300-1400	2.5	1.3	2.5	1.5	4.0	**8.5<**	**10.5<**	2.3	4.2
1400-1500	4.5	1.0	3.5	2.5	4.0	6.5	3.0	2.9	3.4
1500-1600	3.0	1.5	**6.0<**	2.0	3.5	6.5	5.0	3.2	3.9
1600-1700	5.0	1.5	2.5	3.5	5.0	8.0	9.0	3.5	**4.9<**
1700-1800	3.0	1.5	3.5	**3.5<**	**5.5<**	4.5	6.0	3.4	3.9
1800-1900	2.0	0.0	2.5	1.5	0.5	6.5	1.5	1.3	2.1
1900-2000	1.0	0.5	0.0	3.0	1.0	6.5	1.0	1.1	1.9
2000-2100	1.5	0.0	0.0	2.5	1.0	2.0	1.5	1.0	1.2
2100-2200	0.0	0.0	0.0	0.5	0.5	1.5	0.5	0.2	0.4
2200-2300	0.5	0.0	1.5	1.0	0.5	1.5	0.0	0.7	0.7
2300-2400	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.1	0.1
Totals									
0700-1900	54.0	22.7	44.0	28.0	43.0	67.5	69.0	37.4	45.9
0600-2200	60.5	30.7	45.5	35.5	47.0	79.5	73.5	42.9	52.2
0600-0000	61.0	30.7	47.5	36.5	47.5	81.5	73.5	43.7	53.0
0000-0000	61.5	32.2	48.0	39.0	49.0	83.0	76.0	45.0	54.5
AM Peak	1000	0600	1100	0800	1100	1100	1100		
	7.0	7.5	6.0	3.0	5.5	6.0	9.0		
PM Peak	1200	1200	1500	1700	1700	1300	1300		
	7.0	1.7	6.0	3.5	5.5	8.5	10.5		

* - No data.

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-332 -- English (ENU)

Datasets:

Site:	**[99-057d] Highmount**
Direction:	8 - East bound A>B, West bound B>A., **Lane:** 0
Survey Duration:	8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009
File:	F:\Projects\1999\99-057d\2009\ATR\99-057d01Dec2009Highmount.EC0 (Plus)
Identifier:	R7190MC2 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	West (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F2)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 822 / 1616 (50.87%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-332
Site: 99-057d.0WE
Description: **Highmount**
Filter time: **8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009**
Scheme: Vehicle classification (Scheme F2)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(W) Sp(5,100) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.5	0.0	0.0	1.0	1.0	0.5	1.5	0.5	0.6
0100-0200	0.0	0.0	0.0	1.0	0.0	0.5	0.0	0.2	0.2
0200-0300	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0300-0400	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.1	0.1
0400-0500	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0500-0600	0.0	0.0	0.0	0.5	1.0	3.0	2.0	0.3	0.9
0600-0700	2.0	1.5	0.5	1.0	1.0	2.5	0.5	1.2	1.3
0700-0800	1.5	0.0	0.5	0.5	1.5	2.5	2.5	0.8	1.3
0800-0900	1.0	1.7	0.0	2.5	3.0	3.0	1.0	1.6	1.7
0900-1000	**6.0<**	1.7	1.0	**4.0<**	5.5	3.0	2.0	**3.5<**	3.2
1000-1100	2.0	**2.3<**	**6.0<**	3.0	3.5	4.0	**4.0<**	3.3	3.5
1100-1200	2.0	0.3	5.0	1.5	**9.0<**	**6.5<**	3.0	3.3	**3.7<**
1200-1300	3.0	1.3	3.5	3.0	**10.0<**	10.0	4.0	3.9	4.7
1300-1400	3.0	1.0	3.5	4.0	8.0	**10.5<**	**5.0<**	3.6	4.7
1400-1500	5.5	0.7	3.5	2.5	7.5	9.5	2.0	3.6	4.2
1500-1600	5.0	2.0	**8.0<**	2.5	9.0	7.5	3.5	**5.3<**	5.4
1600-1700	**6.0<**	0.5	7.0	4.0	8.5	8.5	4.0	5.2	**5.5<**
1700-1800	3.5	0.0	2.0	**4.5<**	6.0	7.0	3.0	3.2	3.7
1800-1900	2.0	2.0	5.5	3.0	5.0	1.5	1.5	3.5	2.9
1900-2000	2.5	**2.0<**	2.5	2.5	1.5	3.5	1.0	2.2	2.2
2000-2100	2.5	1.0	1.0	2.0	3.5	3.0	1.5	2.0	2.1
2100-2200	1.0	0.0	2.5	4.0	3.5	3.5	0.5	2.2	2.1
2200-2300	0.5	0.0	1.5	4.0	5.0	2.5	0.0	2.2	1.9
2300-2400	0.5	0.0	1.5	2.0	1.5	0.5	0.0	1.1	0.9
Totals									
0700-1900	40.5	13.5	45.5	35.0	76.5	73.5	35.5	40.8	44.5
0600-2200	48.5	18.0	52.0	44.5	86.0	86.0	39.0	48.4	52.2
0600-0000	49.5	18.0	55.0	50.5	92.5	89.0	39.0	51.7	55.0
0000-0000	50.0	18.0	55.0	53.0	95.0	93.0	42.5	52.8	56.9
AM Peak	0900	1000	1000	0900	1100	1100	1000		
	6.0	2.3	6.0	4.0	9.0	6.5	4.0		
PM Peak	1600	1900	1500	1700	1200	1300	1300		
	6.0	2.0	8.0	4.5	10.0	10.5	5.0		

*** - No data.**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-334 -- English (ENU)

Datasets:

Site:	**[99-057d] Wild Acres Center**
Direction:	8 - East bound A>B, West bound B>A., **Lane:** 0
Survey Duration:	8:00 Tuesday, November 17, 2009 => 14:54 Tuesday, December 01, 2009
File:	F:\Projects\1999\99-057d\2009\ATR\99-057d01Dec2009WildAcresCenter.EC0 (Plus)
Identifier:	S1328N62 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**8:00 Tuesday, November 17, 2009 => 14:54 Tuesday, December 01, 2009**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	East, West (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F2)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 1819 / 1825 (99.67%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-334
Site: 99-057d.0WE
Description: **Wild Acres Center**
Filter time: **8:00 Tuesday, November 17, 2009 => 14:54 Tuesday, December 01, 2009**
Scheme: Vehicle classification (Scheme F2)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(EW) Sp(5,100) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.5	0.0	0.0	1.5	1.0	0.5	0.5	0.6	0.6
0100-0200	0.0	0.0	0.0	1.5	0.0	0.5	0.5	0.3	0.4
0200-0300	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.2	0.1
0300-0400	0.0	0.5	0.5	0.5	2.0	0.0	0.5	0.7	0.6
0400-0500	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.1	0.1
0500-0600	0.5	0.5	0.0	0.5	1.0	4.0	2.0	0.5	1.2
0600-0700	6.5	**9.0<**	1.5	2.5	2.5	4.5	2.0	4.4	4.1
0700-0800	5.0	3.0	2.5	3.0	4.0	6.0	5.5	3.5	4.1
0800-0900	8.0	7.3	2.5	5.5	6.5	7.0	5.5	6.1	6.1
0900-1000	12.5	5.7	8.0	**8.0<**	9.5	11.0	6.5	8.5	8.5
1000-1100	10.0	6.7	**10.5<**	6.5	11.5	9.5	12.5	8.8	9.4
1100-1200	**14.5<**	2.7	9.5	6.5	**16.5<**	**14.5<**	**13.5<**	**9.3<**	**10.5<**
1200-1300	12.0	3.7	11.0	6.5	14.0	18.0	14.0	8.9	10.8
1300-1400	6.5	3.0	9.0	6.5	14.5	**21.5<**	15.5	7.5	10.4
1400-1500	**14.5<**	3.0	8.0	5.0	12.0	16.5	7.5	8.0	9.1
1500-1600	8.5	**5.0<**	**13.5<**	6.0	14.5	15.0	10.0	9.5	10.4
1600-1700	11.5	2.5	10.5	**9.5<**	**14.5<**	16.0	**15.5<**	**9.7<**	**11.4<**
1700-1800	7.5	2.0	6.0	7.0	14.0	10.0	10.0	7.3	8.1
1800-1900	5.0	2.0	8.5	5.0	6.0	8.5	3.5	5.3	5.5
1900-2000	3.0	4.0	2.5	5.5	2.5	10.5	2.0	3.5	4.3
2000-2100	4.0	1.0	1.0	4.5	5.5	5.5	3.0	3.2	3.5
2100-2200	1.0	0.0	2.5	5.0	4.0	4.5	1.0	2.5	2.6
2200-2300	1.0	0.0	3.0	5.0	5.5	4.0	0.0	2.9	2.6
2300-2400	0.5	0.0	2.0	1.5	1.5	0.5	0.0	1.1	0.9
Totals									
0700-1900	115.5	46.5	99.5	75.0	137.5	153.5	119.5	92.3	104.4
0600-2200	130.0	60.5	107.0	92.5	152.0	178.5	127.5	105.9	118.8
0600-0000	131.5	60.5	112.0	99.0	159.0	183.0	127.5	109.9	122.3
0000-0000	132.5	62.0	112.5	104.0	163.0	188.5	131.0	112.3	125.3
AM Peak	1100	0600	1000	0900	1100	1100	1100		
	14.5	9.0	10.5	8.0	16.5	14.5	13.5		
PM Peak	1400	1500	1500	1600	1600	1300	1600		
	14.5	5.0	13.5	9.5	14.5	21.5	15.5		

*** - No data.**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-335 -- English (ENU)

Datasets:

Site:	**[99-057d] Wild Acres Center**
Direction:	8 - East bound A>B, West bound B>A., **Lane:** 0
Survey Duration:	8:00 Tuesday, November 17, 2009 => 14:54 Tuesday, December 01, 2009
File:	F:\Projects\1999\99-057d\2009\ATR\99-057d01Dec2009WildAcresCenter.EC0 (Plus)
Identifier:	S1328N62 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**8:00 Tuesday, November 17, 2009 => 14:54 Tuesday, December 01, 2009**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	East (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F2)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 896 / 1825 (49.10%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-335
Site: 99-057d.0WE
Description: **Wild Acres Center**
Filter time: **8:00 Tuesday, November 17, 2009 => 14:54 Tuesday, December 01, 2009**
Scheme: Vehicle classification (Scheme F2)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(E) Sp(5,100) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.1	0.1
0100-0200	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.1	0.1
0200-0300	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.2	0.1
0300-0400	0.0	0.5	0.5	0.5	1.5	0.0	0.5	0.6	0.5
0400-0500	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.1	0.1
0500-0600	0.5	0.5	0.0	0.0	0.0	1.0	0.5	0.2	0.4
0600-0700	4.0	**7.5<**	1.0	1.5	1.5	1.5	1.0	3.1	2.6
0700-0800	3.5	3.0	1.5	2.0	1.5	3.5	3.0	2.3	2.6
0800-0900	6.0	4.0	2.5	2.5	2.5	4.0	4.0	3.5	3.7
0900-1000	5.0	3.3	6.0	3.0	4.0	6.0	3.5	4.2	4.3
1000-1100	7.5	4.0	4.0	3.5	6.5	4.5	8.5	5.0	5.4
1100-1200	**9.5<**	2.3	**6.0<**	**4.0<**	**6.5<**	**8.0<**	**9.0<**	**5.4<**	**6.2<**
1200-1300	**8.5<**	2.0	**6.5<**	3.0	4.0	6.0	8.5	**4.5<**	5.3
1300-1400	2.5	1.7	4.0	1.5	4.5	**10.0<**	11.0	2.7	4.8
1400-1500	6.5	1.7	3.5	2.5	4.5	7.0	4.5	3.5	4.1
1500-1600	3.0	**2.5<**	6.0	3.0	5.0	6.5	5.0	3.9	4.4
1600-1700	6.5	2.0	3.5	**4.5<**	5.5	8.0	**11.5<**	4.4	**5.9<**
1700-1800	3.5	1.5	4.0	3.0	**6.5<**	4.0	7.0	3.7	4.2
1800-1900	2.0	0.0	2.5	2.0	0.5	6.5	1.5	1.4	2.1
1900-2000	1.0	1.5	0.0	3.0	1.0	7.0	1.0	1.3	2.1
2000-2100	1.5	0.0	0.0	2.5	1.5	2.0	1.5	1.1	1.3
2100-2200	0.0	0.0	0.0	0.5	0.5	1.5	0.5	0.2	0.4
2200-2300	0.5	0.0	1.5	1.0	0.5	1.5	0.0	0.7	0.7
2300-2400	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.1	0.1
Totals									
0700-1900	64.0	28.0	50.0	34.5	51.5	74.0	77.0	44.6	53.1
0600-2200	70.5	37.0	51.0	42.0	56.0	86.0	81.0	50.3	59.4
0600-0000	71.0	37.0	53.0	43.0	56.5	87.5	81.0	51.1	60.2
0000-0000	71.5	38.5	53.5	45.5	58.0	89.0	82.5	52.4	61.6
AM Peak	1100	0600	1100	1100	1100	1100	1100		
	9.5	7.5	6.0	4.0	6.5	8.0	9.0		
PM Peak	1200	1500	1200	1600	1700	1300	1600		
	8.5	2.5	6.5	4.5	6.5	10.0	11.5		

*** - No data.**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-336 -- English (ENU)

Datasets:

Site:	**[99-057d] Wild Acres Center**
Direction:	8 - East bound A>B, West bound B>A., **Lane:** 0
Survey Duration:	8:00 Tuesday, November 17, 2009 => 14:54 Tuesday, December 01, 2009
File:	F:\Projects\1999\99-057d\2009\ATR\99-057d01Dec2009WildAcresCenter.EC0 (Plus)
Identifier:	S1328N62 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**8:00 Tuesday, November 17, 2009 => 14:54 Tuesday, December 01, 2009**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	West (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F2)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 923 / 1825 (50.58%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-336
Site: 99-057d.0WE
Description: **Wild Acres Center**
Filter time: **8:00 Tuesday, November 17, 2009 => 14:54 Tuesday, December 01, 2009**
Scheme: Vehicle classification (Scheme F2)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(W) Sp(5,100) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.5	0.0	0.0	1.0	1.0	0.5	0.5	0.5	0.5
0100-0200	0.0	0.0	0.0	1.0	0.0	0.5	0.0	0.2	0.2
0200-0300	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0300-0400	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.1	0.1
0400-0500	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0500-0600	0.0	0.0	0.0	0.5	1.0	3.0	1.5	0.3	0.9
0600-0700	2.5	1.5	0.5	1.0	1.0	3.0	1.0	1.3	1.5
0700-0800	1.5	0.0	1.0	1.0	2.5	2.5	2.5	1.2	1.6
0800-0900	2.0	3.3<	0.0	3.0	4.0	3.0	1.5	2.5	2.5
0900-1000	7.5<	2.3	2.0	5.0<	5.5	5.0	3.0	4.3<	4.2
1000-1100	2.5	2.7	6.5<	3.0	5.0	5.0	4.0	3.8	4.0
1100-1200	5.0	0.3	3.5	2.5	10.0<	6.5<	4.5<	3.9	4.3<
1200-1300	3.5	1.7	4.5	3.5	10.0	12.0<	5.5<	4.4	5.5
1300-1400	4.0	1.3	5.0	5.0	10.0<	11.5	4.5	4.7	5.6
1400-1500	8.0<	1.3	4.5	2.5	7.5	9.5	3.0	4.5	4.9
1500-1600	5.5	2.5	7.5<	3.0	9.5	8.5	5.0	5.6<	5.9<
1600-1700	5.0	0.5	7.0	5.0<	9.0	8.0	4.0	5.3	5.5
1700-1800	4.0	0.5	2.0	4.0	7.5	6.0	3.0	3.6	3.9
1800-1900	3.0	2.0	6.0	3.0	5.5	2.0	2.0	3.9	3.4
1900-2000	2.0	2.5<	2.5	2.5	1.5	3.5	1.0	2.2	2.2
2000-2100	2.5	1.0	1.0	2.0	4.0	3.5	1.5	2.1	2.2
2100-2200	1.0	0.0	2.5	4.5	3.5	3.0	0.5	2.3	2.1
2200-2300	0.5	0.0	1.5	4.0	5.0	2.5	0.0	2.2	1.9
2300-2400	0.5	0.0	1.5	1.5	1.5	0.5	0.0	1.0	0.8
Totals									
0700-1900	51.5	18.5	49.5	40.5	86.0	79.5	42.5	47.7	51.3
0600-2200	59.5	23.5	56.0	50.5	96.0	92.5	46.5	55.6	59.4
0600-0000	60.5	23.5	59.0	56.0	102.5	95.5	46.5	58.8	62.1
0000-0000	61.0	23.5	59.0	58.5	105.0	99.5	48.5	59.9	63.7
AM Peak	0900	0800	1000	0900	1100	1100	1100		
	7.5	3.3	6.5	5.0	10.0	6.5	4.5		
PM Peak	1400	1900	1500	1600	1300	1200	1200		
	8.0	2.5	7.5	5.0	10.0	12.0	5.5		

*** - No data.**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-337 -- English (ENU)

Datasets:

Site:	**[99-057d] Wild Acres Main Access**
Direction:	8 - East bound A>B, West bound B>A., **Lane:** 0
Survey Duration:	8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009
File:	F:\Projects\1999\99-057d\2009\ATR\99-057d01Dec2009WildAcresMain.EC0 (Plus)
Identifier:	R717H3E2 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	East, West (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F2)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 1943 / 1945 (99.90%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-337
Site: 99-057d.0WE
Description: **Wild Acres Main Access**
Filter time: **8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009**
Scheme: Vehicle classification (Scheme F2)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(EW) Sp(5,100) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.5	0.0	0.0	1.5	1.0	0.5	0.5	0.6	0.6
0100-0200	0.0	0.0	0.0	0.5	0.0	0.5	0.5	0.1	0.2
0200-0300	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.2	0.1
0300-0400	0.0	0.5	0.5	0.5	2.0	0.0	0.5	0.7	0.6
0400-0500	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.1	0.1
0500-0600	0.5	0.5	0.0	0.5	1.0	4.0	2.5	0.5	1.3
0600-0700	6.5	**9.0<**	2.0	3.0	2.0	6.0	2.5	4.5	4.4
0700-0800	5.5	3.5	2.5	3.5	4.5	6.0	6.5	3.9	4.6
0800-0900	9.0	8.0	4.5	5.0	6.0	7.0	7.5	6.6	6.8
0900-1000	12.5	6.7	10.0	**8.0<**	10.5	12.0	9.0	9.3	9.6
1000-1100	10.0	7.7	**10.5<**	7.0	11.5	10.5	10.5	9.2	9.5
1100-1200	**15.5<**	2.7	10.0	6.0	**18.0<**	**17.0<**	**12.5<**	**9.7<**	**11.1<**
1200-1300	13.5	4.0	11.0	6.5	13.5	21.5	15.0	9.2	11.6
1300-1400	7.0	3.0	8.0	7.5	15.5	**23.5<**	**16.0<**	7.7	10.9
1400-1500	**15.5<**	2.7	9.0	6.5	13.0	21.0	8.0	8.7	10.3
1500-1600	8.5	**4.5<**	**13.5<**	6.5	**16.5<**	16.5	12.5	9.9	11.2
1600-1700	12.5	2.5	10.0	**10.5<**	14.5	17.5	15.0	**10.0<**	**11.8<**
1700-1800	8.0	2.0	7.0	8.0	14.0	13.5	11.5	7.8	9.1
1800-1900	5.0	2.0	8.5	5.5	6.5	9.0	4.5	5.5	5.9
1900-2000	3.5	4.0	2.5	6.0	3.0	10.5	1.5	3.8	4.4
2000-2100	4.0	1.0	1.5	4.0	5.5	5.5	2.5	3.2	3.4
2100-2200	1.0	0.0	2.0	5.0	4.5	4.5	1.5	2.5	2.6
2200-2300	1.0	0.0	3.0	5.0	6.0	4.0	0.0	3.0	2.7
2300-2400	0.5	0.0	2.0	1.5	1.5	0.5	0.0	1.1	0.9
Totals									
0700-1900	122.5	49.2	104.5	80.5	144.0	175.0	128.5	97.6	112.4
0600-2200	137.5	63.2	112.5	98.5	159.0	201.5	136.5	111.6	127.3
0600-0000	139.0	63.2	117.5	105.0	166.5	206.0	136.5	115.7	130.9
0000-0000	140.0	64.7	118.0	109.0	170.5	211.5	140.5	117.9	133.8
AM Peak	1100	0600	1000	0900	1100	1100	1100		
	15.5	9.0	10.5	8.0	18.0	17.0	12.5		
PM Peak	1400	1500	1500	1600	1500	1300	1300		
	15.5	4.5	13.5	10.5	16.5	23.5	16.0		

*** - No data.**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-338 -- English (ENU)

Datasets:

Site:	**[99-057d] Wild Acres Main Access**
Direction:	8 - East bound A>B, West bound B>A., **Lane:** 0
Survey Duration:	8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009
File:	F:\Projects\1999\99-057d\2009\ATR\99-057d01Dec2009WildAcresMain.EC0 (Plus)
Identifier:	R717H3E2 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	East (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F2)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 959 / 1945 (49.31%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-338
Site: 99-057d.0WE
Description: **Wild Acres Main Access**
Filter time: **8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009**
Scheme: Vehicle classification (Scheme F2)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(E) Sp(5,100) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.1	0.1
0100-0200	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.1
0200-0300	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.2	0.1
0300-0400	0.0	0.5	0.5	0.5	1.5	0.0	0.5	0.6	0.5
0400-0500	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.1	0.1
0500-0600	0.5	0.5	0.0	0.0	0.0	0.5	0.5	0.2	0.3
0600-0700	4.5	**7.5<**	1.5	1.5	1.0	2.5	1.0	3.2	2.8
0700-0800	4.0	3.5	1.5	2.0	2.0	3.5	3.5	2.6	2.9
0800-0900	6.5	4.7	3.5	2.5	2.0	4.0	5.5	3.9	4.1
0900-1000	5.0	3.0	**6.5<**	3.0	5.0	7.0	5.0	4.4	4.8
1000-1100	7.5	5.0	4.0	4.0	6.5	5.0	7.0	5.4	5.5
1100-1200	**10.0<**	2.3	6.0	**4.0<**	**7.0<**	**9.0<**	**9.0<**	**5.5<**	**6.5<**
1200-1300	**9.5<**	**2.3<**	**6.5<**	3.0	4.0	8.0	9.0	**4.8<**	5.8
1300-1400	2.5	1.7	4.0	1.5	5.0	**11.0<**	11.5	2.8	5.1
1400-1500	7.0	1.7	3.5	3.0	5.0	9.0	4.5	3.8	4.6
1500-1600	3.0	2.0	6.0	3.0	6.0	7.5	6.0	4.0	4.8
1600-1700	7.0	2.0	4.0	**5.0<**	5.5	9.0	**11.5<**	4.7	**6.3<**
1700-1800	3.5	1.5	4.0	3.5	**6.5<**	5.5	8.0	3.8	4.6
1800-1900	1.5	0.0	2.5	2.5	0.5	7.0	1.5	1.4	2.2
1900-2000	1.5	1.5	0.0	3.0	1.5	7.0	1.0	1.5	2.2
2000-2100	1.5	0.0	0.0	2.5	1.5	2.0	1.0	1.1	1.2
2100-2200	0.0	0.0	0.0	0.5	0.5	1.5	1.0	0.2	0.5
2200-2300	0.5	0.0	1.5	1.0	0.5	1.5	0.0	0.7	0.7
2300-2400	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.1	0.1
Totals									
0700-1900	67.0	29.7	52.0	37.0	55.0	85.5	82.0	47.1	57.2
0600-2200	74.5	38.7	53.5	44.5	59.5	98.5	86.0	53.1	63.9
0600-0000	75.0	38.7	55.5	45.5	60.0	100.0	86.0	53.9	64.7
0000-0000	75.5	40.2	56.0	47.5	61.5	101.0	87.5	55.1	65.9
AM Peak	1100	0600	0900	1100	1100	1100	1100		
	10.0	7.5	6.5	4.0	7.0	9.0	9.0		
PM Peak	1200	1200	1200	1600	1700	1300	1600		
	9.5	2.3	6.5	5.0	6.5	11.0	11.5		

*** - No data.**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-339 -- English (ENU)

Datasets:

Site:	**[99-057d] Wild Acres Main Access**
Direction:	8 - East bound A>B, West bound B>A., **Lane:** 0
Survey Duration:	8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009
File:	F:\Projects\1999\99-057d\2009\ATR\99-057d01Dec2009WildAcresMain.EC0 (Plus)
Identifier:	R717H3E2 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	West (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F2)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 984 / 1945 (50.59%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-339
Site: 99-057d.0WE
Description: **Wild Acres Main Access**
Filter time: **8:00 Tuesday, November 17, 2009 => 14:56 Tuesday, December 01, 2009**
Scheme: Vehicle classification (Scheme F2)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(W) Sp(5,100) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.5	0.0	0.0	1.0	1.0	0.5	0.5	0.5	0.5
0100-0200	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.1	0.1
0200-0300	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0300-0400	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.1	0.1
0400-0500	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0500-0600	0.0	0.0	0.0	0.5	1.0	3.5	2.0	0.3	1.0
0600-0700	2.0	1.5	0.5	1.5	1.0	3.5	1.5	1.3	1.6
0700-0800	1.5	0.0	1.0	1.5	2.5	2.5	3.0	1.3	1.7
0800-0900	2.5	3.3	1.0	2.5	4.0	3.0	2.0	2.7	2.7
0900-1000	**7.5<**	**3.7<**	3.5	**5.0<**	5.5	5.0	**4.0<**	**4.9<**	**4.8<**
1000-1100	2.5	2.7	**6.5<**	3.0	5.0	5.5	3.5	3.8	4.0
1100-1200	5.5	0.3	4.0	2.0	**11.0<**	**8.0<**	3.5	4.2	4.6
1200-1300	4.0	1.7	4.5	3.5	9.5	**13.5<**	6.0	4.4	5.8
1300-1400	4.5	1.3	4.0	**6.0<**	10.5	12.5	4.5	4.9	5.9
1400-1500	**8.5<**	1.0	5.5	3.5	8.0	12.0	3.5	4.9	5.7
1500-1600	5.5	2.5	**7.5<**	3.5	**10.5<**	9.0	**6.5<**	**5.9<**	**6.4<**
1600-1700	5.5	0.5	6.0	5.5	9.0	8.5	3.5	5.3	5.5
1700-1800	4.5	0.5	3.0	4.5	7.5	8.0	3.5	4.0	4.5
1800-1900	3.5	2.0	6.0	3.0	6.0	2.0	3.0	4.1	3.6
1900-2000	2.0	**2.5<**	2.5	3.0	1.5	3.5	0.5	2.3	2.2
2000-2100	2.5	1.0	1.5	1.5	4.0	3.5	1.5	2.1	2.2
2100-2200	1.0	0.0	2.0	4.5	4.0	3.0	0.5	2.3	2.1
2200-2300	0.5	0.0	1.5	4.0	5.5	2.5	0.0	2.3	2.0
2300-2400	0.5	0.0	1.5	1.5	1.5	0.5	0.0	1.0	0.8
Totals									
0700-1900	55.5	19.5	52.5	43.5	89.0	89.5	46.5	50.4	55.2
0600-2200	63.0	24.5	59.0	54.0	99.5	103.0	50.5	58.4	63.4
0600-0000	64.0	24.5	62.0	59.5	106.5	106.0	50.5	61.7	66.2
0000-0000	64.5	24.5	62.0	61.5	109.0	110.5	53.0	62.7	67.9
AM Peak	0900	0900	1000	0900	1100	1100	0900		
	7.5	3.7	6.5	5.0	11.0	8.0	4.0		
PM Peak	1400	1900	1500	1300	1500	1200	1500		
	8.5	2.5	7.5	6.0	10.5	13.5	6.5		

*** - No data.**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-340 -- English (ENU)

Datasets:

Site:	**[99-057d] Wild Acres Secondary Access**
Direction:	8 - East bound A>B, West bound B>A., **Lane:** 0
Survey Duration:	8:00 Tuesday, November 17, 2009 => 14:53 Tuesday, December 01, 2009
File:	F:\Projects\1999\99-057d\2009\ATR\99-057d01Dec2009WildAcresSecondary.EC0 (Plus)
Identifier:	E148J98W MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**8:00 Tuesday, November 17, 2009 => 14:53 Tuesday, December 01, 2009**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	East, West (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F2)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 1934 / 1934 (100.00%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-340
Site: 99-057d.0WE
Description: **Wild Acres Secondary Access**
Filter time: **8:00 Tuesday, November 17, 2009 => 14:53 Tuesday, December 01, 2009**
Scheme: Vehicle classification (Scheme F2)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(EW) Sp(5,100) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.5	0.0	0.0	1.5	1.0	0.5	0.5	0.6	0.6
0100-0200	0.0	0.0	0.0	0.5	0.0	0.5	0.5	0.1	0.2
0200-0300	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.2	0.1
0300-0400	0.0	0.5	0.5	0.5	2.0	0.0	0.5	0.7	0.6
0400-0500	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.1	0.1
0500-0600	0.5	0.5	0.0	0.5	1.0	3.5	2.0	0.5	1.1
0600-0700	6.5	**9.0<**	2.0	2.5	2.0	6.5	2.5	4.4	4.4
0700-0800	5.5	3.5	2.5	3.0	4.5	6.0	6.5	3.8	4.5
0800-0900	9.0	8.0	3.5	5.5	6.0	7.5	7.5	6.5	6.8
0900-1000	12.5	6.7	9.5	**8.5<**	11.0	11.5	9.5	9.4	9.7
1000-1100	10.0	7.7	**10.5<**	7.0	11.5	10.5	10.5	9.2	9.5
1100-1200	**15.5<**	2.7	10.0	6.0	**17.5<**	**17.5<**	**12.5<**	**9.6<**	**11.1<**
1200-1300	13.0	4.0	11.0	6.5	14.0	20.5	15.0	9.2	11.5
1300-1400	7.5	3.0	8.0	7.5	15.5	**23.5<**	**16.0<**	7.8	11.0
1400-1500	**15.5<**	2.7	9.0	6.5	13.0	21.0	8.0	8.7	10.3
1500-1600	8.5	**4.5<**	**13.5<**	6.5	**15.5<**	16.5	12.5	9.7	11.1
1600-1700	12.5	2.5	10.0	**10.0<**	14.5	16.5	15.0	**9.9<**	**11.6<**
1700-1800	8.0	2.0	7.0	7.5	14.0	13.5	11.5	7.7	9.1
1800-1900	5.5	2.0	8.5	5.5	6.5	9.0	4.0	5.6	5.9
1900-2000	3.0	4.0	2.5	6.0	3.0	10.5	2.0	3.7	4.4
2000-2100	4.0	1.0	1.0	4.0	5.5	5.5	3.0	3.1	3.4
2100-2200	1.0	0.0	2.5	5.0	4.5	4.5	1.0	2.6	2.6
2200-2300	1.0	0.0	3.0	5.0	6.0	4.0	0.0	3.0	2.7
2300-2400	0.5	0.0	2.0	1.5	1.5	0.5	0.0	1.1	0.9
Totals									
0700-1900	123.0	49.2	103.0	80.0	143.5	173.5	128.5	97.2	111.9
0600-2200	137.5	63.2	111.0	97.5	158.5	200.5	137.0	111.0	126.8
0600-0000	139.0	63.2	116.0	104.0	166.0	205.0	137.0	115.1	130.4
0000-0000	140.0	64.7	116.5	108.0	170.0	210.0	140.5	117.3	133.2
AM Peak	1100	0600	1000	0900	1100	1100	1100		
	15.5	9.0	10.5	8.5	17.5	17.5	12.5		
PM Peak	1400	1500	1500	1600	1500	1300	1300		
	15.5	4.5	13.5	10.0	15.5	23.5	16.0		

*** - No data.**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-341 -- English (ENU)

Datasets:

Site:	**[99-057d] Wild Acres Secondary Access**
Direction:	8 - East bound A>B, West bound B>A., **Lane:** 0
Survey Duration:	8:00 Tuesday, November 17, 2009 => 14:53 Tuesday, December 01, 2009
File:	F:\Projects\1999\99-057d\2009\ATR\99-057d01Dec2009WildAcresSecondary.EC0 (Plus)
Identifier:	E148J98W MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**8:00 Tuesday, November 17, 2009 => 14:53 Tuesday, December 01, 2009**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	East (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F2)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 955 / 1934 (49.38%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-341
Site: 99-057d.0WE
Description: **Wild Acres Secondary Access**
Filter time: **8:00 Tuesday, November 17, 2009 => 14:53 Tuesday, December 01, 2009**
Scheme: Vehicle classification (Scheme F2)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(E) Sp(5,100) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.1	0.1
0100-0200	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.1
0200-0300	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.2	0.1
0300-0400	0.0	0.5	0.5	0.5	1.5	0.0	0.5	0.6	0.5
0400-0500	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.1	0.1
0500-0600	0.5	0.5	0.0	0.0	0.0	0.5	0.5	0.2	0.3
0600-0700	4.5	**7.5<**	1.5	1.5	1.0	2.5	1.0	3.2	2.8
0700-0800	4.0	3.5	1.5	2.0	2.0	3.5	3.5	2.6	2.9
0800-0900	6.5	4.7	3.0	2.5	2.0	4.5	5.5	3.8	4.1
0900-1000	5.0	3.0	6.0	3.0	5.5	6.5	5.0	4.4	4.7
1000-1100	7.5	5.0	4.0	4.0	6.5	5.0	7.0	5.4	5.5
1100-1200	**10.0<**	2.3	**6.0<**	**4.0<**	**7.0<**	**9.5<**	**9.0<**	**5.5<**	**6.5<**
1200-1300	**9.5<**	**2.3<**	**6.5<**	3.0	4.0	7.5	9.0	**4.8<**	5.7
1300-1400	2.5	1.7	4.0	1.5	5.0	**11.0<**	11.5	2.8	5.1
1400-1500	7.0	1.7	3.5	3.0	5.0	9.0	4.5	3.8	4.6
1500-1600	3.0	2.0	6.0	3.0	5.5	7.5	6.0	3.9	4.7
1600-1700	7.0	2.0	4.0	**5.0<**	5.5	8.5	**11.5<**	4.7	**6.2<**
1700-1800	3.5	1.5	4.0	3.0	**6.5<**	5.5	8.0	3.7	4.6
1800-1900	2.0	0.0	2.5	2.5	0.5	7.0	1.5	1.5	2.3
1900-2000	1.0	1.5	0.0	3.0	1.5	7.0	1.0	1.4	2.1
2000-2100	1.5	0.0	0.0	2.5	1.5	2.0	1.5	1.1	1.3
2100-2200	0.0	0.0	0.0	0.5	0.5	1.5	0.5	0.2	0.4
2200-2300	0.5	0.0	1.5	1.0	0.5	1.5	0.0	0.7	0.7
2300-2400	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.1	0.1
Totals									
0700-1900	67.5	29.7	51.0	36.5	55.0	85.0	82.0	46.9	57.0
0600-2200	74.5	38.7	52.5	44.0	59.5	98.0	86.0	52.8	63.6
0600-0000	75.0	38.7	54.5	45.0	60.0	99.5	86.0	53.6	64.4
0000-0000	75.5	40.2	55.0	47.0	61.5	100.5	87.5	54.8	65.6
AM Peak	1100	0600	1100	1100	1100	1100	1100		
	10.0	7.5	6.0	4.0	7.0	9.5	9.0		
PM Peak	1200	1200	1200	1600	1700	1300	1600		
	9.5	2.3	6.5	5.0	6.5	11.0	11.5		

*** - No data.**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-342 -- English (ENU)

Datasets:

Site:	**[99-057d] Wild Acres Secondary Access**
Direction:	8 - East bound A>B, West bound B>A., **Lane:** 0
Survey Duration:	8:00 Tuesday, November 17, 2009 => 14:53 Tuesday, December 01, 2009
File:	F:\Projects\1999\99-057d\2009\ATR\99-057d01Dec2009WildAcresSecondary.EC0 (Plus)
Identifier:	E148J98W MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**8:00 Tuesday, November 17, 2009 => 14:53 Tuesday, December 01, 2009**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	West (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F2)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 979 / 1934 (50.62%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-342
Site: 99-057d.0WE
Description: **Wild Acres Secondary Access**
Filter time: **8:00 Tuesday, November 17, 2009 => 14:53 Tuesday, December 01, 2009**
Scheme: Vehicle classification (Scheme F2)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(W) Sp(5,100) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.5	0.0	0.0	1.0	1.0	0.5	0.5	0.5	0.5
0100-0200	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.1	0.1
0200-0300	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0300-0400	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.1	0.1
0400-0500	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0500-0600	0.0	0.0	0.0	0.5	1.0	3.0	1.5	0.3	0.9
0600-0700	2.0	1.5	0.5	1.0	1.0	4.0	1.5	1.2	1.6
0700-0800	1.5	0.0	1.0	1.0	2.5	2.5	3.0	1.2	1.6
0800-0900	2.5	3.3	0.5	3.0	4.0	3.0	2.0	2.7	2.7
0900-1000	**7.5<**	**3.7<**	3.5	**5.5<**	5.5	5.0	**4.5<**	**5.0<**	**4.9<**
1000-1100	2.5	2.7	**6.5<**	3.0	5.0	5.5	3.5	3.8	4.0
1100-1200	5.5	0.3	4.0	2.0	**10.5<**	**8.0<**	3.5	4.1	4.5
1200-1300	3.5	1.7	4.5	3.5	10.0	**13.0<**	6.0	4.4	5.7
1300-1400	5.0	1.3	4.0	**6.0<**	**10.5<**	12.5	4.5	5.0	5.9
1400-1500	**8.5<**	1.0	5.5	3.5	8.0	12.0	3.5	4.9	5.7
1500-1600	5.5	2.5	**7.5<**	3.5	10.0	9.0	**6.5<**	**5.8<**	**6.4<**
1600-1700	5.5	0.5	6.0	5.0	9.0	8.0	3.5	5.2	5.4
1700-1800	4.5	0.5	3.0	4.5	7.5	8.0	3.5	4.0	4.5
1800-1900	3.5	2.0	6.0	3.0	6.0	2.0	2.5	4.1	3.6
1900-2000	2.0	**2.5<**	2.5	3.0	1.5	3.5	1.0	2.3	2.3
2000-2100	2.5	1.0	1.0	1.5	4.0	3.5	1.5	2.0	2.1
2100-2200	1.0	0.0	2.5	4.5	4.0	3.0	0.5	2.4	2.2
2200-2300	0.5	0.0	1.5	4.0	5.5	2.5	0.0	2.3	2.0
2300-2400	0.5	0.0	1.5	1.5	1.5	0.5	0.0	1.0	0.8
Totals									
0700-1900	55.5	19.5	52.0	43.5	88.5	88.5	46.5	50.2	54.9
0600-2200	63.0	24.5	58.5	53.5	99.0	102.5	51.0	58.1	63.2
0600-0000	64.0	24.5	61.5	59.0	106.0	105.5	51.0	61.4	66.0
0000-0000	64.5	24.5	61.5	61.0	108.5	109.5	53.0	62.4	67.5
AM Peak	0900	0900	1000	0900	1100	1100	0900		
	7.5	3.7	6.5	5.5	10.5	8.0	4.5		
PM Peak	1400	1900	1500	1300	1300	1200	1500		
	8.5	2.5	7.5	6.0	10.5	13.0	6.5		

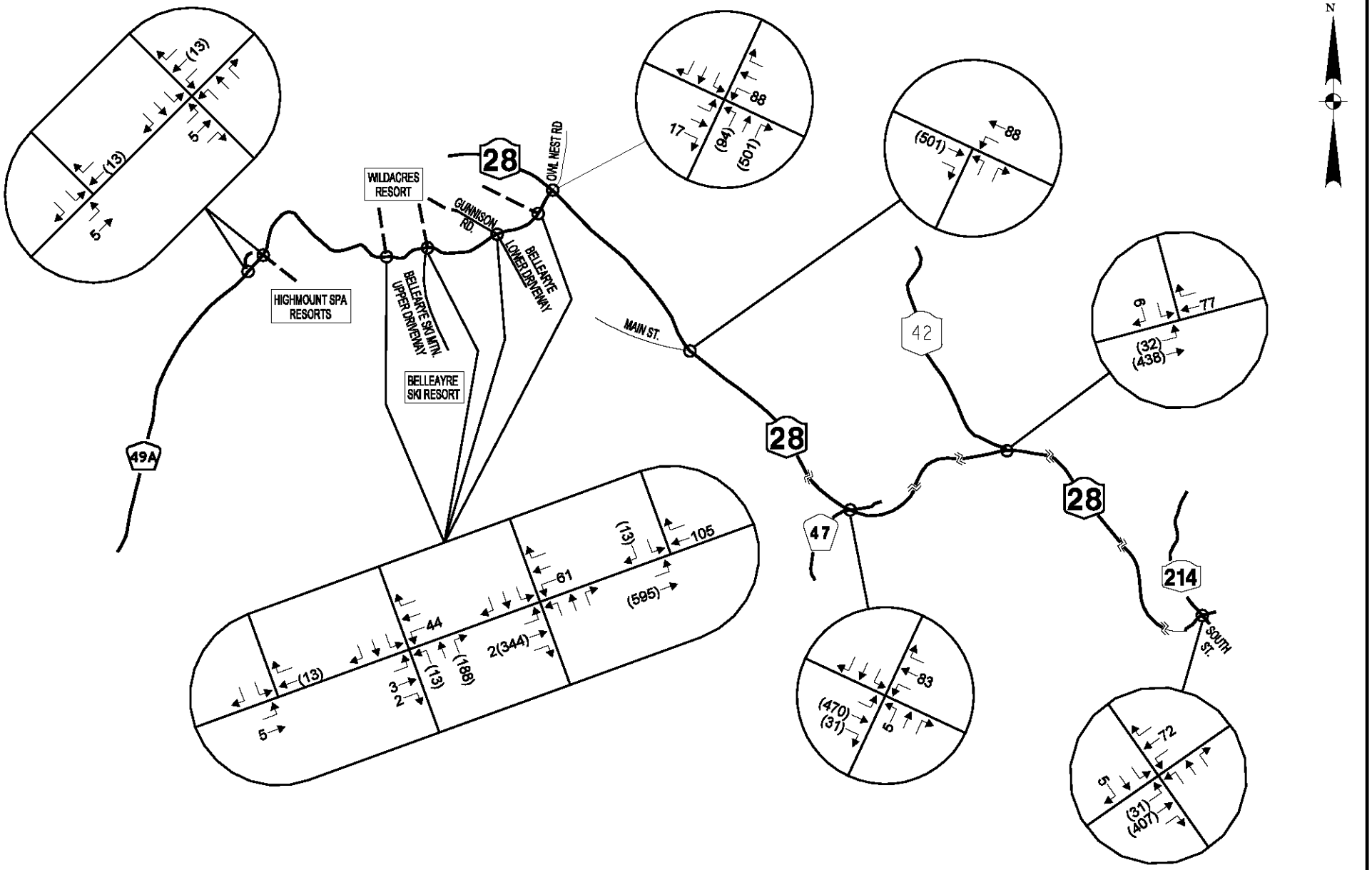
*** - No data.**

Appendix C

Belleayre Mountain Ski Center Traffic Volumes

Traffic Impact Study
Belleayre Resort at Catskill Park
Town of Shandaken and Middletown, New York

F:\Projects\1999\99-057d\2009\cadd\dgn\FIGS\trf fig.dgn



BELLEAYRE MOUNTAIN SKI CENTER
UMP EXPANSION

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

Creighton Manning

PROJECT: 99-057d	DATE: 1/11	FIGURE: C-1

Appendix D

Level of Service Analysis

Traffic Impact Study
Belleayre Resort at Catskill Park
Town of Shandaken and Middletown, New York

LOS Definitions

The following is an excerpt from the 2000 Highway Capacity Manual (HCM).

Level of Service for Signalized Intersections

Level of service for a signalized intersection is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a 15-minute analysis period. Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group. Levels of service are defined to represent reasonable ranges in control delay.

LOS A describes operations with low control delay, up to 10 s/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay.

LOS B describes operations with control delay greater than 10 and up to 20 s/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

LOS C describes operations with control delay greater than 20 and up to 35 s/veh. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LOS D describes operations with control delay greater than 35 and up to 55 s/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LOS E describes operations with control delay greater than 55 and up to 80 s/veh. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

LOS F describes operations with control delay in excess of 80 s/veh. This level, considered unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also be contribute significantly to high delay levels.

Level of Service Criteria for Unsignalized Intersections

Four measures are used to describe the performance of two-way stop controlled intersections: control delay, delay to major street through vehicles, queue length, and v/c ratio. The primary measure that is used to provide an estimate of LOS is control delay. This measure can be estimated for any movement on the minor (i.e., stop-controlled) street. By summing delay estimates for individual movements, a delay estimate for each minor street movement and minor street approach can be achieved. The level of service criteria is given in Exhibit 17-2/22.

For all-way stop controlled (AWSC) intersections, the average control delay (in seconds per vehicle) is used as the primary measure of performance. Control delay is the increased time of travel for a vehicle approaching and passing through an AWSC intersection, compared with a free-flow vehicle if it were not required to slow or stop at the intersection.

Exhibit 17-2/22: Level-of-Service Criteria for Stop Controlled Intersections

Level of Service	Control Delay (sec/veh)
A	$\leq$ 10.0
B	>10.0 and $\leq$ 15.0
C	>15.0 and $\leq$ 25.0
D	>25.0 and $\leq$ 35.0
E	>35.0 and $\leq$ 50.0
F	>50.0

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	MDN	Intersection	NY Rt 28/NY Rt 214/South St
Agency/Co.	CME, 28214exsa	Jurisdiction	Town of Shandaken, NY
Date Performed	4/1/2009	Analysis Year	Existing 2008
Analysis Time Period	Saturday PM Peak		

Project Description	99-057d, Belleayre Resort
East/West Street:	NY Route 28
North/South Street:	NY Route 214/South Street
Intersection Orientation:	East-West
Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	97	557	1	0	203	23
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.82	0.82	0.82
Hourly Flow Rate, HFR (veh/h)	105	605	1	0	247	28
Percent Heavy Vehicles	3	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	1
Configuration	LTR			LT		R
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	1	0	1	41	0	64
Peak-Hour Factor, PHF	0.50	0.50	0.50	0.91	0.91	0.91
Hourly Flow Rate, HFR (veh/h)	2	0	2	45	0	70
Percent Heavy Vehicles	0	0	0	2	0	3
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LT		LTR			LTR	
v (veh/h)	105	0		4			115	
C (m) (veh/h)	1282	982		237			341	
v/c	0.08	0.00		0.02			0.34	
95% queue length	0.27	0.00		0.05			1.45	
Control Delay (s/veh)	8.1	8.7		20.5			20.8	
LOS	A	A		C			C	
Approach Delay (s/veh)	--	--	20.5			20.8		
Approach LOS	--	--	C			C		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*MDN*	Intersection	*NY Rt 28/NY Rt 214/South St*
ency/Co.	*CME, 28214nbsa*	Jurisdiction	*Town of Shandaken, NY*
Date Performed	*4/1/2009*	Analysis Year	*No-Build 2015*
Analysis Time Period	*Saturday PM Peak*		

Project Description	*99-057d, Belleayre Resort*
East/West Street: *NY Route 28*	North/South Street: *NY Route 214/South Street*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*134*	*999*	*1*	*0*	*305*	*26*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.82*	*0.82*	*0.82*
Hourly Flow Rate, HFR (veh/h)	*145*	*1085*	*1*	*0*	*371*	*31*
Percent Heavy Vehicles	*3*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration	*LTR*			*LT*		*R*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
ume (veh/h)	*1*	*0*	*1*	*47*	*0*	*79*
Peak-Hour Factor, PHF	*0.50*	*0.50*	*0.50*	*0.91*	*0.91*	*0.91*
Hourly Flow Rate, HFR (veh/h)	*2*	*0*	*2*	*51*	*0*	*86*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LT*		*LTR*			*LTR*	
v (veh/h)	*145*	*0*		*4*			*137*	
C (m) (veh/h)	*1151*	*650*		*68*			*115*	
v/c	*0.13*	*0.00*		*0.06*			*1.19*	
95% queue length	*0.43*	*0.00*		*0.18*			*8.67*	
Control Delay (s/veh)	*8.6*	*10.5*		*61.2*			*215.9*	
LOS	*A*	*B*		*F*			*F*	
roach Delay (s/veh)	--	--	*61.2*			*215.9*		
Approach LOS	--	--	*F*			*F*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	MDN
Agency/Co.	CME, 28214busa
Date Performed	11/24/09
Analysis Time Period	Saturday PM Peak

Site Information

Intersection	NY Rt 28/NY Rt 214/South St
Jurisdiction	Town of Shandaken, NY
Analysis Year	Build 2015

Project Description 99-057d, Belleayre Resort

East/West Street: NY Route 28 | North/South Street: NY Route 214/South Street

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	138	961	1	0	352	26
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.82	0.82	0.82
Hourly Flow Rate, HFR (veh/h)	149	1044	1	0	429	31
Percent Heavy Vehicles	3	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	1
Configuration	LTR			LT		R
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	1	0	1	47	0	86
Peak-Hour Factor, PHF	0.50	0.50	0.50	0.91	0.91	0.91
Hourly Flow Rate, HFR (veh/h)	2	0	2	51	0	94
Percent Heavy Vehicles	0	0	0	2	0	3
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LT		LTR			LTR	
v (veh/h)	149	0		4			145	
C (m) (veh/h)	1096	673		64			117	
v/c	0.14	0.00		0.06			1.24	
95% queue length	0.47	0.00		0.19			9.33	
Control Delay (s/veh)	8.8	10.3		65.0			231.2	
LOS	A	B		F			F	
Approach Delay (s/veh)	--	--	65.0			231.2		
Approach LOS	--	--	F			F		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*MDN*	Intersection	*NY Rt 28/NY Rt 42*
ency/Co.	*CME, 2842exsa*	Jurisdiction	*Town of Shandaken, NY*
Date Performed	*4/1/2009*	Analysis Year	*Existing 2008*
Analysis Time Period	*Saturday PM Peak*		

Project Description	*99-057d, Belleayre Resort*
East/West Street: *NY Route 28*	North/South Street: *NY Route 42*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*26*	*589*			*148*	*47*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*1.00*	*1.00*	*0.94*	*0.94*
Hourly Flow Rate, HFR (veh/h)	*27*	*626*	*0*	*0*	*157*	*50*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
ume (veh/h)				*44*		*4*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.71*	*1.00*	*0.71*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*61*	*0*	*5*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*					*L*		*R*
v (veh/h)	*27*					*61*		*5*
C (m) (veh/h)	*1376*					*319*		*866*
v/c	*0.02*					*0.19*		*0.01*
95% queue length	*0.06*					*0.69*		*0.02*
Control Delay (s/veh)	*7.7*					*18.9*		*9.2*
LOS	*A*					*C*		*A*
roach Delay (s/veh)	--	--				*18.2*		
Approach LOS	--	--				*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	MDN	Intersection	NY Rt 28/NY Rt 42
;ency/Co.	CME, 2842nbsa	Jurisdiction	Town of Shandaken, NY
Date Performed	4/1/2009	Analysis Year	No-Build 2015
Analysis Time Period	Saturday PM Peak		
Project Description	99-057d, Belleayre Resort		
East/West Street:	NY Route 28	North/South Street:	NY Route 42
Intersection Orientation:	East-West	Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	59	1058			247	54
Peak-Hour Factor, PHF	0.94	0.94	1.00	1.00	0.94	0.94
Hourly Flow Rate, HFR (veh/h)	62	1125	0	0	262	57
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
;ume (veh/h)				51		11
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.71	1.00	0.71
Hourly Flow Rate, HFR (veh/h)	0	0	0	71	0	15
Percent Heavy Vehicles	0	0	0	2	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
v (veh/h)	62					71		15
C (m) (veh/h)	1252					121		754
v/c	0.05					0.59		0.02
95% queue length	0.16					2.91		0.06
Control Delay (s/veh)	8.0					70.2		9.9
LOS	A					F		A
;roach Delay (s/veh)	--	--				59.7		
Approach LOS	--	--				F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	MDN	Intersection	NY Rt 28/NY Rt 42
Agency/Co.	CME, 2842busa	Jurisdiction	Town of Shandaken, NY
Date Performed	11/24/09	Analysis Year	Build 2015
Analysis Time Period	Saturday PM Peak		

Project Description 99-057d, Belleayre Resort

East/West Street: NY Route 28 | North/South Street: NY Route 42

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	56	1024			301	54
Peak-Hour Factor, PHF	0.94	0.94	1.00	1.00	0.94	0.94
Hourly Flow Rate, HFR (veh/h)	59	1089	0	0	320	57
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				51		12
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.71	1.00	0.71
Hourly Flow Rate, HFR (veh/h)	0	0	0	71	0	16
Percent Heavy Vehicles	0	0	0	2	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
v (veh/h)	59					71		16
C (m) (veh/h)	1193					118		700
v/c	0.05					0.60		0.02
95% queue length	0.16					3.00		0.07
Control Delay (s/veh)	8.2					73.5		10.3
LOS	A					F		B
Approach Delay (s/veh)	--	--				61.9		
Approach LOS	--	--				F		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	MDN	Intersection	NY Rt 28/County Rd 47
Agency/Co.	CME, 28CR47exsa	Jurisdiction	Town of Shandaken, NY
Date Performed	4/1/2009	Analysis Year	Existing 2008
Analysis Time Period	Saturday PM Peak		
Project Description	99-057d, Belleayre Resort		
East/West Street:	NY Route 28	North/South Street:	County Road 47
Intersection Orientation:	East-West	Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	4	566	40	20	169	7
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.94	0.94	0.94
Hourly Flow Rate, HFR (veh/h)	4	595	42	21	179	7
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	16	4	20	1	1	4
Peak-Hour Factor, PHF	0.71	0.71	0.71	0.75	0.75	0.75
Hourly Flow Rate, HFR (veh/h)	22	5	28	1	1	5
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (veh/h)	4	21		55			7	
C (m) (veh/h)	1401	956		356			527	
v/c	0.00	0.02		0.15			0.01	
95% queue length	0.01	0.07		0.54			0.04	
Control Delay (s/veh)	7.6	8.9		17.0			11.9	
LOS	A	A		C			B	
Approach Delay (s/veh)	--	--	17.0			11.9		
Approach LOS	--	--	C			B		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*MDN*	Intersection	*NY Rt 28/County Rd 47*
ency/Co.	*CME, 28CR47nbsa*	Jurisdiction	*Town of Shandaken, NY*
uate Performed	*4/1/2009*	Analysis Year	*No-Build 2015*
Analysis Time Period	*Saturday PM Peak*		

Project Description	*99-057d, Belleayre Resort*
East/West Street: *NY Route 28*	North/South Street: *County Road 47*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*5*	*1061*	*72*	*23*	*277*	*8*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.94*	*0.94*	*0.94*
Hourly Flow Rate, HFR (veh/h)	*5*	*1116*	*75*	*24*	*294*	*8*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
ume (veh/h)	*23*	*5*	*23*	*1*	*1*	*5*
Peak-Hour Factor, PHF	*0.71*	*0.71*	*0.71*	*0.75*	*0.75*	*0.75*
Hourly Flow Rate, HFR (veh/h)	*32*	*7*	*32*	*1*	*1*	*6*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*5*	*24*		*71*			*8*	
C (m) (veh/h)	*1270*	*593*		*132*			*263*	
v/c	*0.00*	*0.04*		*0.54*			*0.03*	
95% queue length	*0.01*	*0.13*		*2.60*			*0.09*	
Control Delay (s/veh)	*7.8*	*11.3*		*60.3*			*19.1*	
LOS	*A*	*B*		*F*			*C*	
roach Delay (s/veh)	--	--	*60.3*			*19.1*		
Approach LOS	--	--	*F*			*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	MDN
Agency/Co.	CME, 28CR47busa
Date Performed	11/24/09
Analysis Time Period	Saturday PM Peak

Site Information

Intersection	NY Rt 28/County Rd 47
Jurisdiction	Town of Shandaken, NY
Analysis Year	Build 2015

Project Description 99-057d, Belleayre Resort

East/West Street: NY Route 28 | North/South Street: County Road 47

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	5	1024	75	23	332	8
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.94	0.94	0.94
Hourly Flow Rate, HFR (veh/h)	5	1077	78	24	353	8
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	29	5	23	1	1	5
Peak-Hour Factor, PHF	0.71	0.71	0.71	0.75	0.75	0.75
Hourly Flow Rate, HFR (veh/h)	40	7	32	1	1	6
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (veh/h)	5	24		79			8	
C (m) (veh/h)	1209	612		125			252	
v/c	0.00	0.04		0.63			0.03	
95% queue length	0.01	0.12		3.28			0.10	
Control Delay (s/veh)	8.0	11.1		73.7			19.8	
LOS	A	B		F			C	
Approach Delay (s/veh)	--	--	73.7			19.8		
Approach LOS	--	--	F			C		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*MDN*	Intersection	*NY Rt 28/Main Street*
,ency/Co.	*CME, 28MAINexsa*	Jurisdiction	*Town of Shandaken, NY*
Date Performed	*4/1/2009*	Analysis Year	*Existing 2008*
Analysis Time Period	*Saturday PM Peak*		

Project Description *99-057d, Belleayre Resort*

East/West Street: *NY Route 28* | North/South Street: *Main Street*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*666*	*14*	*16*	*145*	
Peak-Hour Factor, PHF	*1.00*	*0.97*	*0.97*	*0.84*	*0.84*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*686*	*14*	*19*	*172*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
ume (veh/h)	*6*		*8*			
Peak-Hour Factor, PHF	*0.70*	*1.00*	*0.70*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*8*	*0*	*11*	*0*	*0*	*0*
Percent Heavy Vehicles	*17*	*0*	*13*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*19*		*19*				
C (m) (veh/h)		*906*		*352*				
v/c		*0.02*		*0.05*				
95% queue length		*0.06*		*0.17*				
Control Delay (s/veh)		*9.1*		*15.8*				
LOS		*A*		*C*				
roach Delay (s/veh)	--	--		*15.8*				
Approach LOS	--	--		*C*				

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*MDN*	Intersection	*NY Rt 28/Main Street*
Agency/Co.	*CME, 28MAINnbsa*	Jurisdiction	*Town of Shandaken, NY*
Date Performed	*4/1/2009*	Analysis Year	*No-Build 2015*
Analysis Time Period	*Saturday PM Peak*		

Project Description	*99-057d, Belleayre Resort*
East/West Street: *NY Route 28*	North/South Street: *Main Street*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*1206*	*15*	*18*	*255*	
Peak-Hour Factor, PHF	*1.00*	*0.97*	*0.97*	*0.84*	*0.84*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*1243*	*15*	*21*	*303*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*7*		*9*			
Peak-Hour Factor, PHF	*0.70*	*1.00*	*0.70*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*10*	*0*	*12*	*0*	*0*	*0*
Percent Heavy Vehicles	*17*	*0*	*13*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*21*		*22*				
C (m) (veh/h)		*560*		*141*				
v/c		*0.04*		*0.16*				
95% queue length		*0.12*		*0.54*				
Control Delay (s/veh)		*11.7*		*35.2*				
LOS		*B*		*E*				
Approach Delay (s/veh)	--	--		*35.2*				
Approach LOS	--	--		*E*				

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	MDN	Intersection	NY Rt 28/Main Street
Agency/Co.	CME, 28MAINbusa	Jurisdiction	Town of Shandaken, NY
Date Performed	11/24/09	Analysis Year	Build 2015
Analysis Time Period	Saturday PM Peak		

Project Description 99-057d, Belleayre Resort

East/West Street: NY Route 28 | North/South Street: Main Street

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1174	15	18	318	
Peak-Hour Factor, PHF	1.00	0.97	0.97	0.84	0.84	1.00
Hourly Flow Rate, HFR (veh/h)	0	1210	15	21	378	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	7		9			
Peak-Hour Factor, PHF	0.70	1.00	0.70	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	10	0	12	0	0	0
Percent Heavy Vehicles	17	0	13	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		21		22				
C (m) (veh/h)		576		138				
v/c		0.04		0.16				
95% queue length		0.11		0.55				
Control Delay (s/veh)		11.5		36.0				
LOS		B		E				
Approach Delay (s/veh)	--	--	36.0					
Approach LOS	--	--	E					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	MDN	Intersection	NY Rt 28/CR 49A/Owl Nest Rd
Agency/Co.	CME, 28CR49AONexsa	Jurisdiction	Town of Shandaken, NY
Date Performed	4/1/2009	Analysis Year	Existing 2008
Analysis Time Period	Saturday PM Peak		

Project Description	99-057d, Belleayre Resort
East/West Street:	NY Route 28
North/South Street:	County Road 49A/Owl Nest Road
Intersection Orientation:	East-West
Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	0	92	33	33	123	3
Peak-Hour Factor, PHF	0.82	0.82	0.82	0.76	0.76	0.76
Hourly Flow Rate, HFR (veh/h)	0	112	40	43	161	3
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	1	0	1	0
Configuration	LT		R	LTR		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	210	12	614	1	0	1
Peak-Hour Factor, PHF	0.86	0.86	0.86	0.25	0.25	0.25
Hourly Flow Rate, HFR (veh/h)	244	13	713	4	0	4
Percent Heavy Vehicles	0	0	1	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT	LTR		LTR			LTR	
v (veh/h)	0	43		970			8	
C (m) (veh/h)	1427	1441		809			143	
v/c	0.00	0.03		1.20			0.06	
95% queue length	0.00	0.09		31.63			0.18	
Control Delay (s/veh)	7.5	7.6		120.6			31.7	
LOS	A	A		F			D	
Approach Delay (s/veh)	--	--	120.6			31.7		
Approach LOS	--	--	F			D		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	MDN	Intersection	NY Rt 28/CR 49A/Owl Nest Rd
Agency/Co.	CME, 28CR49AONnbsa	Jurisdiction	Town of Shandaken, NY
Date Performed	4/1/2009	Analysis Year	No-Build 2015
Analysis Time Period	Saturday PM Peak		

Project Description	99-057d, Belleayre Resort
East/West Street:	NY Route 28
North/South Street:	County Road 49A/Owl Nest Road
Intersection Orientation:	East-West
Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	0	106	55	126	141	3
Peak-Hour Factor, PHF	0.82	0.82	0.82	0.76	0.76	0.76
Hourly Flow Rate, HFR (veh/h)	0	129	67	165	185	3
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	1	0	1	0
Configuration	LT		R	LTR		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	313	13	1141	1	0	1
Peak-Hour Factor, PHF	0.86	0.86	0.86	0.25	0.25	0.25
Hourly Flow Rate, HFR (veh/h)	363	15	1326	4	0	4
Percent Heavy Vehicles	0	0	1	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT	LTR		LTR			LTR	
v (veh/h)	0	165		1704			8	
C (m) (veh/h)	1398	1389		674			0	
v/c	0.00	0.12		2.53				
95% queue length	0.00	0.40		133.54				
Control Delay (s/veh)	7.6	7.9		706.8				
LOS	A	A		F			F	
Approach Delay (s/veh)	--	--	706.8					
Approach LOS	--	--	F					

SHORT REPORT

General Information		Site Information	
Analyst	MDN	Intersection	NY Rt 28/CR 49A/Owl Nest Rd
Agency or Co.	CME, 28CR49AONnbsa	Area Type	All other areas
Date Performed	11/24/09	Jurisdiction	Town of Shandaken, NY
Time Period	Saturday PM Peak	Analysis Year	No-Build 2015

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	0	1	1	1	1	0	0	1	1	0	1	0
Lane Group		LT	R	L	TR			LT	R		LTR	
Volume (vph)	0	106	55	126	141	3	313	13	1141	1	0	1
% Heavy Vehicles	0	3	6	0	2	0	0	0	1	0	0	0
PHF	0.82	0.82	0.82	0.76	0.76	0.76	0.80	0.86	0.86	0.25	0.25	0.25
Pretimed/Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup Lost Time		2.0	2.0	2.0	2.0			2.0	2.0		2.0	
Extension of Effective Green		2.0	2.0	2.0	2.0			2.0	2.0		2.0	
Arrival Type		3	3	3	3			3	3		3	
Unit Extension		3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0	12.0	12.0	12.0			12.0	12.0		12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/Hour												
Bus Stops/Hour		0	0	0	0			0	0		0	
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	WB Only	EW Perm	03	04	NS Perm	06	07	08
Timing	G = 29.0	G = 10.0	G =	G =	G = 37.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 91.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		129	67	166	190			406	1327		8	
Lane Group Capacity		203	167	698	898			563	1248		646	
v/c Ratio		0.64	0.40	0.24	0.21			0.72	1.06		0.01	
Green Ratio		0.11	0.11	0.48	0.48			0.41	0.78		0.41	
Uniform Delay d_1		38.8	37.7	13.6	13.5			22.7	10.0		16.1	
Delay Factor k		0.22	0.11	0.11	0.11			0.28	0.50		0.11	
Incremental Delay d_2		6.4	1.6	0.2	0.1			4.5	44.1		0.0	
PF Factor		1.000	1.000	1.000	1.000			1.000	1.000		1.000	
Control Delay		45.2	39.3	13.8	13.6			27.2	54.1		16.1	
Lane Group LOS		D	D	B	B			C	D		B	
Approach Delay		43.2			13.7			47.8			16.1	
Approach LOS		D			B			D			B	
Intersection Delay		42.0			Intersection LOS						D	

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	MDN
Agency/Co.	CME, 28CR49AONbusa
Date Performed	11/24/09
Analysis Time Period	Saturday PM Peak

Site Information

Intersection	NY Rt 28/CR 49A/Owl Nest Rd
Jurisdiction	Town of Shandaken, NY
Analysis Year	Build 2015

Project Description: 99-057d, Belleayre Resort

East/West Street: NY Route 28 | North/South Street: County Road 49A/Owl Nest Road

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	0	106	55	189	141	3
Peak-Hour Factor, PHF	0.82	0.82	0.82	0.76	0.76	0.76
Hourly Flow Rate, HFR (veh/h)	0	129	67	248	185	3
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	1	0	1	0
Configuration	LT		R	LTR		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	297	13	1109	1	0	1
Peak-Hour Factor, PHF	0.86	0.86	0.86	0.25	0.25	0.25
Hourly Flow Rate, HFR (veh/h)	345	15	1289	4	0	4
Percent Heavy Vehicles	0	0	1	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT	LTR		LTR			LTR	
v (veh/h)	0	248		1649			8	
C (m) (veh/h)	1398	1389		584			0	
v/c	0.00	0.18		2.82				
95% queue length	0.00	0.65		137.62				
Control Delay (s/veh)	7.6	8.2		841.2				
LOS	A	A		F			F	
Approach Delay (s/veh)	--	--	841.2					
Approach LOS	--	--	F					

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SHORT REPORT

General Information		Site Information	
Analyst	MDN	Intersection	NY Rt 28/CR 49A/Owl Nest Rd
Agency or Co.	CME, 28CR49AONbusa	Area Type	All other areas
Date Performed	11/24/09	Jurisdiction	Town of Shandaken, NY
Time Period	Saturday PM Peak	Analysis Year	Build 2015

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	0	1	1	1	1	0	0	1	1	0	1	0
Lane Group		LT	R	L	TR			LT	R		LTR	
Volume (vph)	0	106	55	189	141	3	297	13	1109	1	0	1
% Heavy Vehicles	0	3	6	0	2	0	0	0	1	0	0	0
PHF	0.82	0.82	0.82	0.76	0.76	0.76	0.80	0.86	0.86	0.25	0.25	0.25
Pretimed/Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup Lost Time		2.0	2.0	2.0	2.0			2.0	2.0		2.0	
Extension of Effective Green		2.0	2.0	2.0	2.0			2.0	2.0		2.0	
Arrival Type		3	3	3	3			3	3		3	
Unit Extension		3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0	12.0	12.0	12.0			12.0	12.0		12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/Hour												
Bus Stops/Hour		0	0	0	0			0	0		0	
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	WB Only	EW Perm	03	04	NS Perm	06	07	08
Timing	G = 28.0	G = 10.0	G =	G =	G = 37.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		129	67	249	190			386	1290		8	
Lane Group Capacity		205	169	688	888			569	1244		655	
v/c Ratio		0.63	0.40	0.36	0.21			0.68	1.04		0.01	
Green Ratio		0.11	0.11	0.48	0.48			0.41	0.78		0.41	
Uniform Delay d_1		38.2	37.2	14.5	13.7			21.6	10.0		15.7	
Delay Factor k		0.21	0.11	0.11	0.11			0.25	0.50		0.11	
Incremental Delay d_2		6.1	1.5	0.3	0.1			3.3	35.6		0.0	
PF Factor		1.000	1.000	1.000	1.000			1.000	1.000		1.000	
Control Delay		44.3	38.7	14.8	13.8			24.9	45.6		15.7	
Lane Group LOS		D	D	B	B			C	D		B	
Approach Delay		42.4			14.4			40.8			15.7	
Approach LOS		D			B			D			B	
Intersection Delay		35.9			Intersection LOS						D	

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	MDN	Intersection	CR 49A/Gunnison Rd/L Belleayre
Agency/Co.	CME, CR49AGUNNexsa	Jurisdiction	Town of Shandaken, NY
Date Performed	4/1/2009	Analysis Year	Existing 2008
Analysis Time Period	Saturday PM Peak		

Project Description	99-057d, Belleayre Resort
East/West Street:	Gunnison Rd/Belleayre Lower Dr
North/South Street:	County Road 49A
Intersection Orientation:	North-South
Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	0	625	2	1	80	1
Peak-Hour Factor, PHF	0.77	0.77	0.77	0.66	0.66	0.66
Hourly Flow Rate, HFR (veh/h)	0	811	2	1	121	1
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	2	0	1	13	0	139
Peak-Hour Factor, PHF	0.25	0.25	0.25	0.60	0.60	0.60
Hourly Flow Rate, HFR (veh/h)	8	0	4	21	0	231
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (veh/h)	0	1		252			12	
C (m) (veh/h)	1478	823		365			116	
v/c	0.00	0.00		0.69			0.10	
95% queue length	0.00	0.00		4.95			0.34	
Control Delay (s/veh)	7.4	9.4		34.2			39.6	
LOS	A	A		D			E	
Approach Delay (s/veh)	--	--	34.2			39.6		
Approach LOS	--	--	D			E		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	MDN	Intersection	CR 49A/Gunnison Rd/L Belleayre
Agency/Co.	CME, CR49AGUNNnbsa	Jurisdiction	Town of Shandaken, NY
Date Performed	4/1/2009	Analysis Year	No-Build 2015
Analysis Time Period	Saturday PM Peak		

Project Description	99-057d, Belleayre Resort
East/West Street:	Gunnison Rd/Belleayre Lower Dr
North/South Street:	County Road 49A
Intersection Orientation:	North-South
Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	0	996	2	1	154	1
Peak-Hour Factor, PHF	0.77	0.77	0.77	0.66	0.66	0.66
Hourly Flow Rate, HFR (veh/h)	0	1293	2	1	233	1
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	2	0	1	13	0	139
Peak-Hour Factor, PHF	0.25	0.25	0.25	0.60	0.60	0.60
Hourly Flow Rate, HFR (veh/h)	8	0	4	21	0	231
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (veh/h)	0	1		252			12	
C (m) (veh/h)	1345	542		184			0	
v/c	0.00	0.00		1.37				
95% queue length	0.00	0.01		14.86				
Control Delay (s/veh)	7.7	11.7		245.5				
LOS	A	B		F			F	
Approach Delay (s/veh)	--	--	245.5					
Approach LOS	--	--	F					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	MDN
Agency/Co.	CME, CR49AGUNNbusa
Date Performed	11/24/09
Analysis Time Period	Saturday PM Peak

Site Information

Intersection	CR 49A/Gunnison Rd/L Belleayre
Jurisdiction	Town of Shandaken, NY
Analysis Year	Build 2015

Project Description 99-057d, Belleayre Resort

East/West Street: Gunnison Rd/Belleayre Lower Dr | North/South Street: County Road 49A

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	3	986	2	5	206	7
Peak-Hour Factor, PHF	0.77	0.77	0.77	0.66	0.66	0.66
Hourly Flow Rate, HFR (veh/h)	3	1280	2	7	312	10
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	5	0	2	13	0	142
Peak-Hour Factor, PHF	0.25	0.25	0.25	0.60	0.60	0.60
Hourly Flow Rate, HFR (veh/h)	20	0	8	21	0	236
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (veh/h)	3	7		257			28	
C (m) (veh/h)	1249	548		181			0	
v/c	0.00	0.01		1.42				
95% queue length	0.01	0.04		15.66				
Control Delay (s/veh)	7.9	11.7		266.4				
LOS	A	B		F			F	
Approach Delay (s/veh)	--	--	266.4					
Approach LOS	--	--	F					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	MDN	Intersection	CR 49A/Upper Belleayre Drwy
Agency/Co.	CME, CR49AUPDRWYexsa	Jurisdiction	Town of Shandaken, NY
Date Performed	4/1/2009	Analysis Year	Existing 2008
Analysis Time Period	Saturday PM Peak		

Project Description: *99-057d, Belleayre Resort*

East/West Street: *Upper Belleayre Driveway* | North/South Street: *County Road 49A*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		7	5	78	15	
Peak-Hour Factor, PHF	1.00	0.43	0.43	0.71	0.71	1.00
Hourly Flow Rate, HFR (veh/h)	0	16	11	109	21	0
Percent Heavy Vehicles	0	--	--	5	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				16		459
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.79	1.00	0.79
Hourly Flow Rate, HFR (veh/h)	0	0	0	20	0	581
Percent Heavy Vehicles	0	0	0	0	0	1
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		109		601				
C (m) (veh/h)		1568		1039				
v/c		0.07		0.58				
95% queue length		0.22		3.85				
Control Delay (s/veh)		7.5		13.1				
LOS		A		B				
Approach Delay (s/veh)	--	--	13.1					
Approach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	MDN	Intersection	CR 49A/Upper Belleayre Drwy
Agency/Co.	CME, CR49AUPDRWYnbsa	Jurisdiction	Town of Shandaken, NY
Date Performed	4/1/2009	Analysis Year	No-Build 2015
Analysis Time Period	Saturday PM Peak		

Project Description	99-057d, Belleayre Resort
East/West Street:	Upper Belleayre Driveway
North/South Street:	County Road 49A
Intersection Orientation:	North-South
Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		11	7	122	15	
Peak-Hour Factor, PHF	1.00	0.43	0.43	0.71	0.71	1.00
Hourly Flow Rate, HFR (veh/h)	0	25	16	171	21	0
Percent Heavy Vehicles	0	--	--	5	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				29		647
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.79	1.00	0.79
Hourly Flow Rate, HFR (veh/h)	0	0	0	36	0	818
Percent Heavy Vehicles	0	0	0	0	0	1
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		171		854				
C (m) (veh/h)		1549		1004				
v/c		0.11		0.85				
95% queue length		0.37		10.83				
Control Delay (s/veh)		7.6		25.0				
LOS		A		C				
Approach Delay (s/veh)	--	--	25.0					
Approach LOS	--	--	C					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	MDN
Agency/Co.	CME, CR49AUPDRWYbusa
Date Performed	11/24/09
Analysis Time Period	Saturday PM Peak

Site Information

Intersection	CR 49A/Upper Belleayre Drwy
Jurisdiction	Town of Shandaken, NY
Analysis Year	Build 2015

Project Description: 99-057d, Belleayre Resort

East/West Street: Upper Belleayre Driveway | North/South Street: County Road 49A

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	1	36	8	119	43	31
Peak-Hour Factor, PHF	0.43	0.43	0.43	0.71	0.71	0.71
Hourly Flow Rate, HFR (veh/h)	2	83	18	167	60	43
Percent Heavy Vehicles	0	--	--	5	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	27	1	1	31	5	620
Peak-Hour Factor, PHF	0.80	0.80	0.80	0.79	0.79	0.79
Hourly Flow Rate, HFR (veh/h)	33	1	1	39	6	784
Percent Heavy Vehicles	0	0	0	0	0	1
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (veh/h)	2	167		829			35	
C (m) (veh/h)	1502	1473		905			46	
v/c	0.00	0.11		0.92			0.76	
95% queue length	0.00	0.38		13.51			3.00	
Control Delay (s/veh)	7.4	7.8		34.8			201.8	
LOS	A	A		D			F	
Approach Delay (s/veh)	--	--	34.8			201.8		
Approach LOS	--	--	D			F		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	MDN	Intersection	CR 49A/Front 9 Village Drwy
Agency/Co.	CME, CR49AFNT9busa	Jurisdiction	Town of Shandaken, NY
Date Performed	11/24/09	Analysis Year	Build 2015
Analysis Time Period	Saturday PM Peak		

Project Description 99-057d, Belleayre Resort

East/West Street: Front 9 Village Driveway | North/South Street: County Road 49A

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	9	1413			209	6
Peak-Hour Factor, PHF	0.77	0.77	0.77	0.66	0.66	0.66
Hourly Flow Rate, HFR (veh/h)	11	1835	0	0	316	9
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	6		4			
Peak-Hour Factor, PHF	0.80	1.00	0.80	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	7	0	4	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	11						11	
C (m) (veh/h)	1246						78	
v/c	0.01						0.14	
95% queue length	0.03						0.47	
Control Delay (s/veh)	7.9						58.6	
LOS	A						F	
Approach Delay (s/veh)	--	--				58.6		
Approach LOS	--	--				F		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	MDN
Agency/Co.	CME, CR49AUPPERbusa
Date Performed	11/24/09
Analysis Time Period	Saturday PM Peak

Site Information

Intersection	CR 49A/Upper Access Drwy
Jurisdiction	Town of Shandaken, NY
Analysis Year	Build 2015

Project Description 99-057d, Belleayre Resort

East/West Street: Upper Access Driveway | North/South Street: County Road 49A

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	1	43			72	3
Peak-Hour Factor, PHF	0.77	0.77	0.77	0.66	0.66	0.66
Hourly Flow Rate, HFR (veh/h)	1	55	0	0	109	4
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	2		0			
Peak-Hour Factor, PHF	0.80	1.00	0.80	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	2	0	0	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	1						2	
C (m) (veh/h)	1489						826	
v/c	0.00						0.00	
95% queue length	0.00						0.01	
Control Delay (s/veh)	7.4						9.4	
LOS	A						A	
Approach Delay (s/veh)	--	--				9.4		
Approach LOS	--	--				A		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	MDN
Agency/Co.	CME, CR49AHIGHbusa
Date Performed	11/24/09
Analysis Time Period	Saturday PM Peak

Site Information

Intersection	CR 49A/Highmount Drwy
Jurisdiction	Town of Shandaken, NY
Analysis Year	Build 2015

Project Description 99-057d, Belleayre Resort

East/West Street: Highmount Driveway | North/South Street: County Road 49A

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	0	20	1	36	40	0
Peak-Hour Factor, PHF	0.77	0.77	0.77	0.66	0.66	0.66
Hourly Flow Rate, HFR (veh/h)	0	25	1	54	60	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	1	0	1	0	24
Peak-Hour Factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80
Hourly Flow Rate, HFR (veh/h)	0	1	0	1	0	29
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (veh/h)	0	54		30			1	
C (m) (veh/h)	1556	1601		1042			680	
v/c	0.00	0.03		0.03			0.00	
95% queue length	0.00	0.10		0.09			0.00	
Control Delay (s/veh)	7.3	7.3		8.6			10.3	
LOS	A	A		A			B	
Approach Delay (s/veh)	--	--	8.6			10.3		
Approach LOS	--	--	A			B		