A. INTRODUCTION

The EPT Concord Resort (the "Proposed Project"), bordered on the south by New York State (NYS) Route 17, on the west by NYS Route 42, on the north by Kiamesha Lake Road, and on the east by Heiden Road, will be developed as market conditions warrant. Initial development of the Proposed Project will be in the southern portion of the Project Site bordered by Thompsonville Road on the north and Joyland Road on the east, and will include the keystone Casino Resort. This Traffic Impact Study (TIS) analyzes the Phase 1 Casino Resort and other project related components anticipated to come on line in 2014. The 2014 Build Year elements analyzed are as follows:

- Phase 1 Casino Resort which includes a casino, a 248-room hotel, harness horse racetrack, grandstand/showroom, simulcast facility, banquet event center, and restaurants. Also included are a structured parking garage, 2,000 additional on-site surface parking spaces, horse paddock, and maintenance building with associated truck parking. Access to the 2,000-space parking lot and 1,300-space parking structure on the Casino Resort site will be via two driveways along Joyland Road south of Thompsonville Road. Access to the horse paddock and maintenance buildings will be off of Thompsonville Road.
- Improvements to the Monster Golf Course
- Golf cottages
- Select components of the Entertainment Village

In addition to the 2014 Build Year, a new four-lane entry road would be constructed from NYS Route 17 to the project site parallel to Joyland Road.

This report assesses the potential traffic and transportation impacts of 2014 Build Year as well as the full build out of the Proposed Project. Although the sequencing and phasing of the full build out program of the Proposed Project is not known at this time and will be subject to market conditions, for the purpose of this traffic study the full build out has been qualitatively analyzed, based on estimated future traffic volumes and a possible development program. This analysis is presented at the end of this report.

For the 2014 Build Year, traffic mitigation will be required at four of the study area locations. The mitigation developed meets the criteria established by the Town of Thompson and the Town's traffic consultant, for intersection operations. The following proposed mitigations were also presented to the New York State Department of Transportation (NYSDOT) Region 9 at meetings in May 2012, July 2012, and November 2012:

- Pleasant Street and Broadway – Adjust signal timings to reallocate green time to the eastbound left-turn movement during the Friday peak hour. With this mitigation measure all approaches operate at LOS D or better;
- NYS Route 42 and Concord Road – Adjust signal timings to reallocate green time to the westbound approach during the Friday peak hour. With this mitigation measure all approaches operate at LOS D or better;

- NYS Route 42 and Kiamesha Lake Road – Adjust signal timings to reallocate green time to westbound approach during the Sunday peak hour. With this mitigation measure all approaches operate at LOS C or better;
- Joyland Road and Cimarron Road, NYS Route 17 Westbound Ramps/Towner Road and Cimarron Road, NYS Route 17 Eastbound Ramps and Cimarron Road intersections – Redesign Interchange 106 (See **Figure 11-11**). The redesigned interchange was evaluated using the VISSIM micro-simulation software. With the redesigned interchange all approaches at the Interchange 106 intersections will operate at LOS D or better except for the westbound approach at the County Road 173/Overpass roundabout, which would operate at LOS E conditions. When presented to DOT and the County, the LOS E condition was accepted due to the low volumes experiencing this delay.
- Also, in consultation with and approval from NYSDOT and other involved agencies, an innovative approach towards addressing proposed mitigation, Intelligent Transportation Systems (ITS), will also be considered. Mitigation measures could include installation of adaptive traffic control systems to improve vehicle detection/operations including the addition of system detectors for data collection and monitoring.
- Video monitoring that would allow for the remote viewing of the operation of the adaptive traffic control systems at the NYS Route 17 Exit 106 Interchange to ensure that the newly implemented systems are functioning correctly. The video monitoring would also improve safety and accident response time and would be part of the overall traffic management plan to be developed for the Proposed Project with the Town and emergency services.
- A sensitivity analysis was conducted along NYS Route 42 assuming the trips generated by and improvements associated with the CALP project were removed. Under this scenario, the impacts were mitigated with signal timing adjustments at Pleasant Street and Broadway, NYS Route 42 and Anawana Lake Road, and NYS Route 42 and Depot Drive.

All mitigation will require a Highway Work Permit (HWP) from NYSDOT and possibly other government agencies such as the Sullivan County Department of Public Works (DPW) and Town of Thompson DPW.

In addition, improvements to local roads, including Chalet, Thompsonville, Rock Ridge and Concord Road, if necessary, may be required for Phase 1 and subsequent phases. The Applicant will coordinate with the Town on a program to monitor the conditions of the public roadways utilized for access to Phase 1. Based on the results of this monitoring program, the Applicant and the Town will agree upon the work necessary to improve the roads. The Applicant will either construct or fund the cost of the agreed upon roadway improvements.

B. EXISTING CONDITIONS

ROADWAY AND INTERSECTION CHARACTERISTICS

The following is a brief description of the major roadways and intersections within the study area.

NYS ROUTE 17

NYS Route 17 is a four-lane divided highway that runs in the east-west direction with a posted speed limit of 65 miles per hour (mph). The highway connects NY State Thruway (I-87) in the east with Interstate 81 (I-81) in the west. NYS Route 17 connects to NYS Route 42 with a full clover-leaf interchange. NYS Route 17 connects to Joyland Road with a partial diamond interchange for the eastbound ramps and hook ramps for the westbound ramps. NYS Route 17 is currently in the process of being converted to Interstate 86 (I-86). However, there are no plans for the NYS Route 17

conversion within Sullivan County within the next five years. This highway is under NYSDOT jurisdiction.

NYS ROUTE 42

NYS Route 42 is a two-lane, north-south arterial except between NYS Route 17 and Concord Road which provides a four-lane arterial. NYS Route 42 extends from Broadway in the south to NYS Route 55 in the north. The posted speed limit is 40 mph south of Concord Road and 45 mph north of Concord Road. North of Depot Drive, the roadway is approximately 30 feet wide, while south of Depot Drive the roadway is approximately 54 feet wide. The roadway is in fair condition with cracks in the pavement north of Depot Drive. This arterial is under NYSDOT jurisdiction.

CONCORD ROAD

Concord Road is a two-way, east-west roadway extending from NYS Route 42 to Kiamesha Lake Road (County Route 109). The roadway is approximately 30 feet wide and contains one traffic lane in each direction with a posted speed limit of 30 mph. The roadway is in poor condition with longitudinal and transverse cracks. This roadway is under the Town of Thompson jurisdiction.

KIAMESHA LAKE ROAD (COUNTY ROAD 109)

Kiamesha Lake Road (County Road 109) is a two-way, east-west roadway extending from NYS Route 42 to Heiden Road (County Route 161). The roadway is approximately 25 feet wide and contains one traffic lane in each direction with a posted speed limit of 30 mph. The roadway is in fair condition with some longitudinal cracks in the pavement. This roadway is under Sullivan County jurisdiction.

FRASER ROAD

Fraser Road is a two-way, east-west roadway extending from NYS Route 42 to Old Liberty Road. The roadway is approximately 25 feet wide and contains one traffic lane in each direction with a posted speed limit of 30 mph. The roadway is in fair condition with some longitudinal cracks in the pavement. This roadway is under the Town of Thompson jurisdiction.

THOMPSONVILLE ROAD

Thompsonville Road is a two-way, east-west roadway extending between Heiden Road (County Route 161) and Rock Ridge Drive. The roadway is approximately 21 feet wide and contains one lane in each direction with a posted speed limit of 30 mph. The roadway is in fair condition with some longitudinal cracks in the pavement. This roadway is under the Town of Thompson jurisdiction.

BROADWAY

Broadway is a two-way, east-west roadway extending between County Road 117 and NYS Route 17. Between Liberty Street and Pleasant Street, Broadway is approximately 50 feet wide and contains two lanes in each direction with on-street parking. The posted speed limit is 30 mph. The roadway at the study intersections has recently been repaved and is in excellent condition. This roadway is under the Village of Monticello jurisdiction.

LIBERTY ROAD/ OLD LIBERTY ROAD

Liberty Road/Old Liberty Road is a two-way, north-south roadway extending between Broadway and Fraser Road within the study area. Liberty Road/Old Liberty Road is approximately 25 feet wide and contains one lane in each direction with a posted speed limit that varies from 25 mph to 45 mph. This roadway is under the Village of Monticello jurisdiction from Broadway to the Monticello village line and under Sullivan County jurisdiction from the Monticello village line to Whittaker Road.

ANAWANA LAKE ROAD (COUNTY ROAD 103)

Anawana Lake Road (County Road 103) is a two-way, north-south roadway extending between NYS Route 42 and Whittaker Road. Anawana Lake Road is approximately 25 feet wide and contains one lane in each direction with a posted speed limit of 45 mph. The roadway is in fair condition. This roadway is under Sullivan County jurisdiction.

ROCK RIDGE DRIVE

Rock Ridge Drive is a two-way, north-south roadway extending between Concord Road and Thompsonville Road. Rock Ridge Drive is approximately 20 feet wide and contains one lane in each direction. There is no posted speed limit. The roadway is in poor condition with transverse and longitudinal cracks in the pavement. This roadway is under the Town of Thompson jurisdiction.

CHALET ROAD/JOYLAND ROAD

Chalet Road/Joyland Road is a two-way, north-south roadway extending between Kiamesha Lake Road and NYS Route 17. Chalet Road is unstriped, but is wide enough for one lane of traffic in each direction. There is no posted speed limit. The roadway is in poor condition. This roadway is under the Town of Thompson jurisdiction.

HEIDEN ROAD (COUNTY ROAD 161)

Heiden Road (County Road 161) is a two-way, north-south roadway extending between NYS Route 42 and NYS Route 17. The roadway is approximately 30 feet wide and contains one lane in each direction with a posted speed limit of 45 mph. The roadway is in fair condition. This roadway is under Sullivan County jurisdiction.

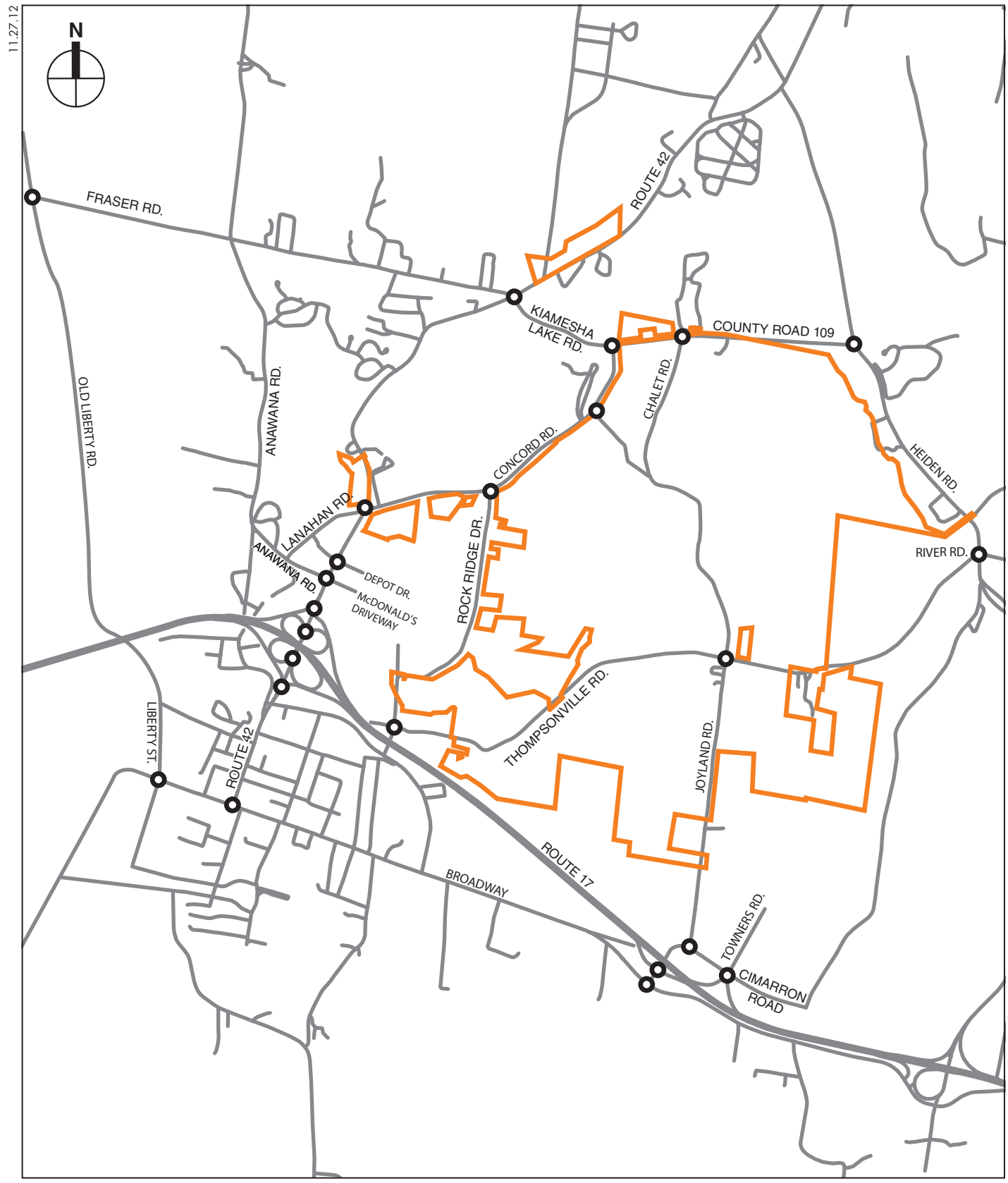
CIMARRON ROAD

Cimarron Road is a two-way, east-west roadway extending between Joyland Road and Old State Road. The roadway is approximately 25 feet wide and contains one lane in each direction. The roadway is in good condition. This roadway is under Sullivan County jurisdiction.

STUDY AREA

To assess the traffic impacts associated with the Proposed Project, a broad study area was identified that considered key intersections that might be affected by project-generated trips. As shown in **Figure 11-1**, the following 23 study locations were identified for detailed analysis:

1. Old Liberty Road/Fraser Road
2. Liberty Street/Broadway



Study Area
Figure 11-1

3. NYS Route 42/Broadway
4. NYS Route 42/NYS Route 17 Eastbound Ramps
5. NYS Route 42/NYS Route 17 Eastbound Loop Ramps
6. NYS Route 42/NYS Route 17 Westbound Loop Ramps
7. NYS Route 42/ NYS Route 17 Westbound Off-Ramp
8. NYS Route 42/ NYS Route 17 Westbound On-Ramp
9. NYS Route 42/Anawana Lake Road
10. NYS Route 42/Depot Drive
11. NYS Route 42/Concord Road/Lanahans Road
12. NYS Route 42/Kiamesha Lake Road/Fraser Road
13. Concord Road/Rock Ridge Drive
14. Thompsonville Road/Rock Ridge Drive
15. Concord Road/Kiamesha Lake Road
16. Chalet Road/Kiamesha Lake Road
17. Thompsonville Road/Joyland Road/Chalet Road
18. Heiden Road/Thompsonville Road
19. Kiamesha Lake Road/Heiden Road
20. Joyland Road/Cimarron Road
21. NYS Route 17 Ramps/Towner Road/Cimarron Road
22. NYS Route 17 Ramps/Cimarron Road
23. NYS Route 173/Cimarron Road

Physical inventories for each intersection, including intersection control and lane markings, are provided in Appendix E-1. In addition, the NYS Route 17 Eastbound/Interchange 106 on-ramp merge was analyzed.

SIGNALIZED INTERSECTION CAPACITY ANALYSIS METHODOLOGY

In consultation with the Town's traffic consultant, the operation of signalized intersections in the study area was analyzed applying the *Highway Capacity Manual (HCM)* methodology included in the Synchro 7 traffic signal software. This procedure evaluates signalized intersections for average control delay per vehicle and LOS.

LOS for the signalized intersections is based on the average control delay per vehicle for the various lane group movements within the intersection. This delay is the basis for a LOS determination for individual lane groups, each approach as a whole, and the overall intersection.

The control delay criteria for the range of service levels for signalized intersections are shown in **Table 11-1.**

Table 11-1
LOS Criteria for Signalized Intersections

Level-of-Service (LOS)	Control Delay Per Vehicle
A	≤ 10.0 seconds
B	>10.0 and ≤ 20.0 seconds
C	>20.0 and ≤ 35.0 seconds
D	>35.0 and ≤ 55.0 seconds
E	>55.0 and ≤ 80.0 seconds
F	>80.0 seconds
Source: Transportation Research Board. *Highway Capacity Manual*, 2000.	

Although the *HCM* methodology calculates a volume-to-capacity (v/c) ratio, there is no strict relationship between v/c ratios and LOS as defined in the *HCM*. A high v/c ratio indicates substantial traffic passing through an intersection, but a high v/c ratio combined with low average delay indicates an optimization of traffic flow when an approach, or the whole intersection, processes traffic close to its theoretical maximum with a minimum amount of delay. However, very high v/c ratios, especially those greater than 1.0, are often correlated with a deteriorated LOS. Other important variables affecting delay include cycle length, progression, and green time. LOS A and B indicate good operating conditions with minimal delay. At LOS C, the number of vehicles stopping is higher, but congestion is still fairly light. LOS D describes a condition where congestion levels are more noticeable and individual cycle failures (a condition where motorists may have to wait for more than one green phase to clear the intersection) can occur. Conditions at LOS E and F reflect poor service levels, and cycle breakdowns are frequent.

For developed areas, such as the roadway network within the study areas, a mid-range LOS D or better generally indicates acceptable operating conditions. The *HCM* methodology provides for a summary of the total intersection operating conditions. The analysis chooses the two critical movements (the worst case from each roadway) and calculates a summary critical v/c ratio, delay, and LOS.

UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS METHODOLOGY

The LOS criteria for unsignalized intersections are summarized in **Table 11-2**. For the purposes of this analysis, control delay is defined as the total elapsed time that includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation.

Table 11-2
LOS Criteria for Unsignalized Intersections

Level-of-Service (LOS)	Control Delay Per Vehicle
A	≤ 10.0 seconds
B	>10.0 and ≤ 15.0 seconds
C	>15.0 and ≤ 25.0 seconds
D	>25.0 and ≤ 35.0 seconds
E	>35.0 and ≤ 50.0 seconds
F	>50.0 seconds

Source: Transportation Research Board. *Highway Capacity Manual*, 2000.

Note that the LOS criteria for unsignalized intersections are somewhat different from the criteria used in signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. In addition, several driver behavior considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, whereas drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized than at signalized intersections. For these reasons, it is considered that the average control delay threshold for any given LOS is less

for an unsignalized than for a signalized intersection. The LOS for a Two-Way Stop Control intersection is determined by the control delay and is defined for each minor movement. Generally, unsignalized intersections that operate better than LOS F are considered acceptable unless certain warrants are met that may require the installation of a signal.

RAMP JUNCTION METHODOLOGY

Ramp junctions were analyzed using the Highway Capacity Software (HCS), which is consistent with the *HCM*. The service level for a ramp junction is based on density (passenger cars/lane/mile). **Table 11-3** presents a summary of the relationship between density and level of service for ramp junctions.

Table 11-3
LOS Criteria for Ramp Junctions

Level-of-Service (LOS)	Density (passenger cars/lane/mile)
A	≤ 10.0
B	>10.0 and ≤ 20
C	> 20 and ≤ 28
D	> 28 and ≤ 35
E	> 35 and ≤ 43
F	> 43

Source: Transportation Research Board. *Highway Capacity Manual*, 2000.

TRAFFIC CONDITIONS

Existing traffic conditions in the study area were established based on traffic counts conducted in August and September 2011. To provide for a conservative analysis, the counts and traffic observations were conducted over the Labor Day weekend when recreational travel peaks. Given the seasonal and recreational nature of the Proposed Project and the surrounding area, manual turning movement counts were collected at all the study area intersections during the summer months on a Friday and Sunday from 3:30 to 6:30 PM. These peak periods are similar to peak periods analyzed in previous studies for a resort in this area. The Joyland Road/NYS Route 17 interchange was under construction during the August and September data collection. The interchange was completed in November 2011, therefore supplemental counts at this interchange were collected in August 2012 to analyze existing condition operations. In addition to the manual turning movement counts, Automatic Traffic Recorder (ATR) counts were conducted at the following locations:

- NYS Route 42 between Anawana Lake Road and Depot Drive;
- Concord Road between NYS Route 42 and Rock Ridge Drive; and
- Heiden Road between Kiamesha Lake Road and Thompsonville Road.
- NYS Route 17 mainline at Interchange 106.

Data collection sheets are provided in Appendix E-1.

Figures 11-2 and 11-3 show the intersection turning movement volumes in the study area for existing conditions for the peak hours analyzed. Traffic volumes along the study area roadways

may not necessarily (and should not) balance exactly because of the presence of driveways and minor roadways, some of which are significant generators and receptors of traffic that are located between intersections.

The peak hours of the analysis are as follows:

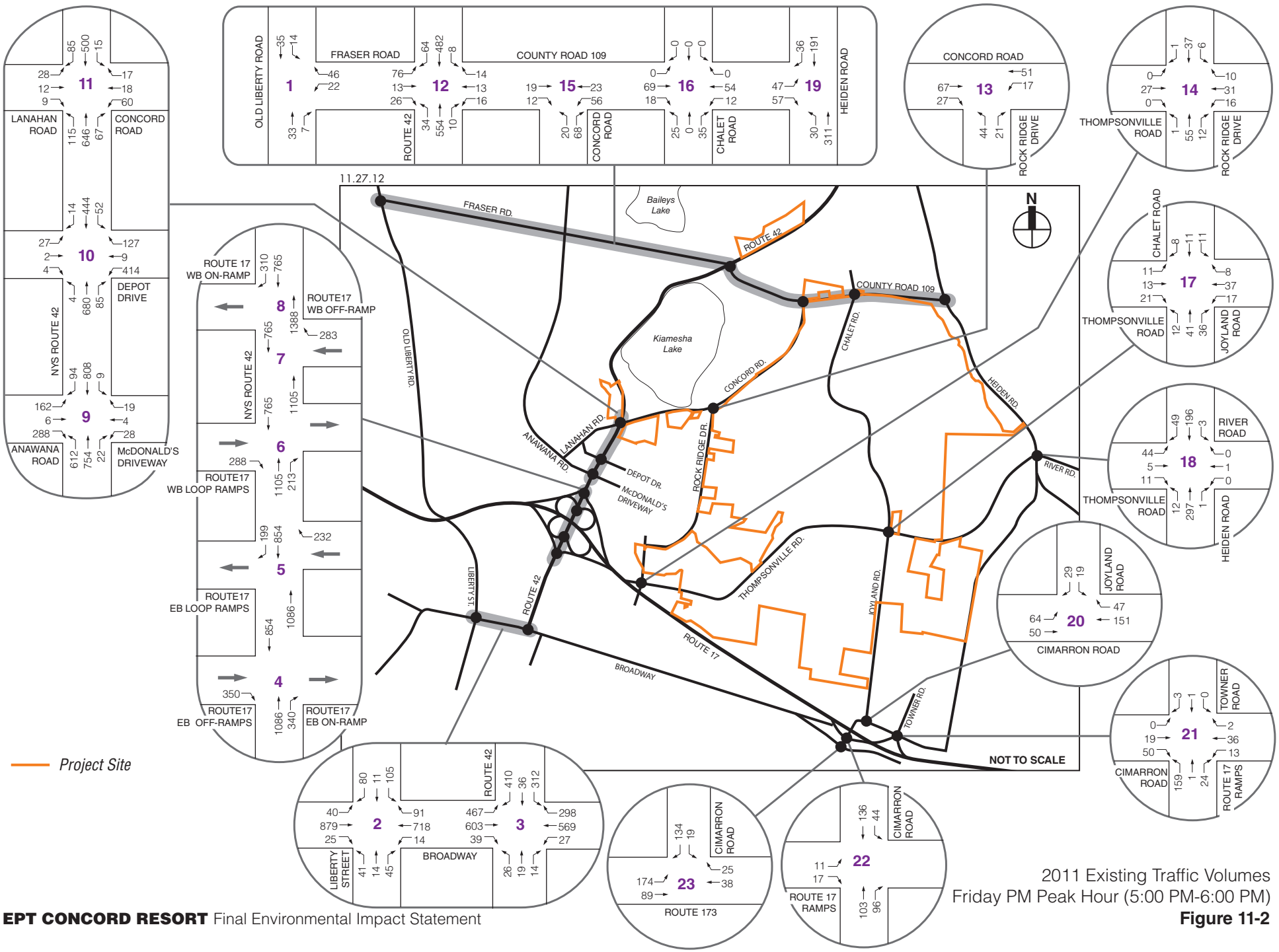
- Friday Peak Hour – 5:00 PM to 6:00 PM
- Sunday Peak Hour – 3:30 PM to 4:30 PM

The data was then analyzed using the *HCM* methodology (see Appendix E-2 for Synchro 7 outputs for all study area intersections) to compute delays, v/c ratios, and LOS as described above.

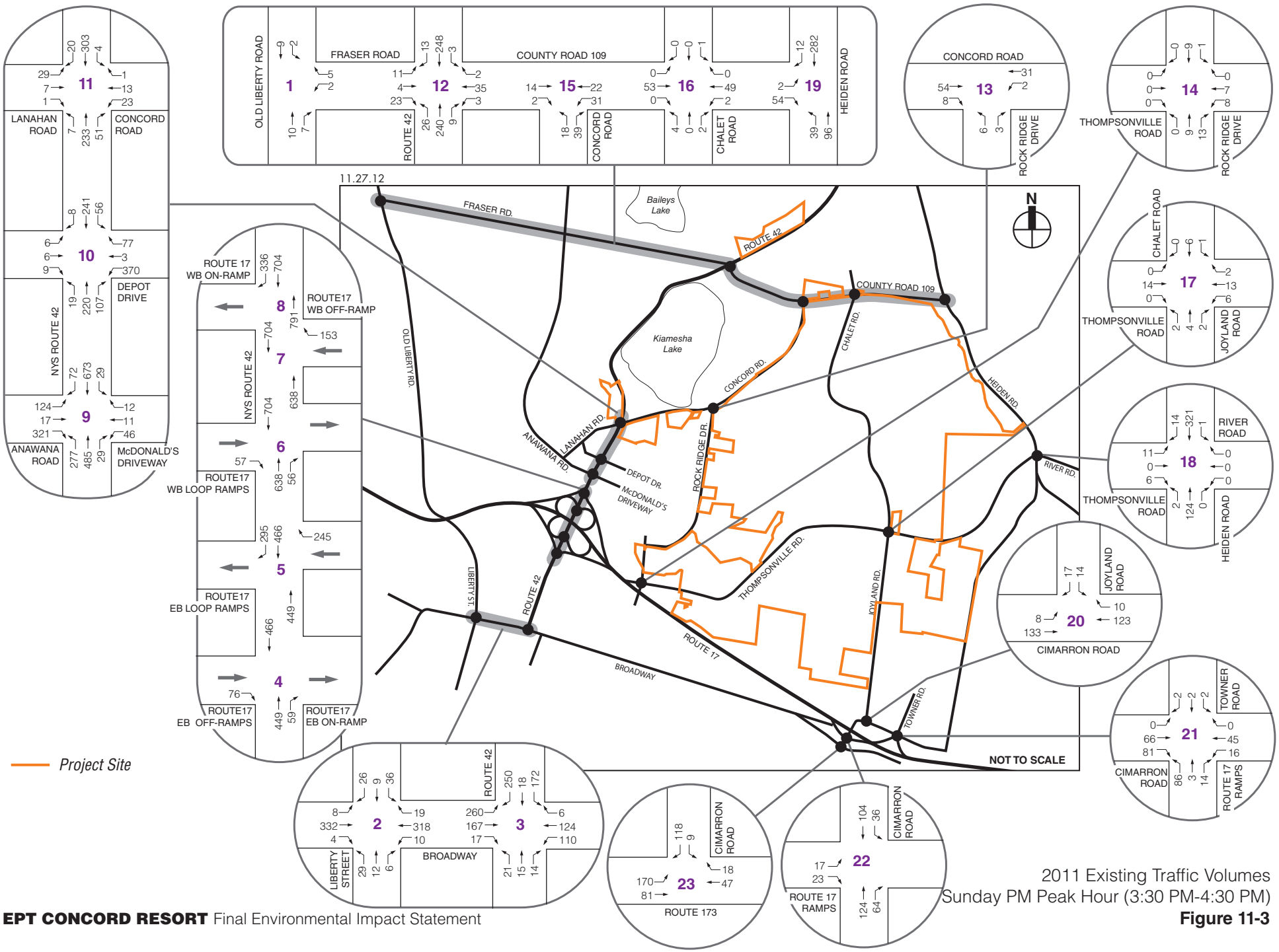
During peak hours, LOS D operations are generally considered to be acceptable operating conditions for signalized and unsignalized intersection. As shown in **Table 11-4,** the majority of the lane groups/approaches for signalized intersections in the study area generally operate at overall LOS D or better under 2011 existing conditions during the peak hours analyzed. The following are exceptions:

- NYS Route 42/Pleasant Street and Broadway – The southbound shared through/left-turn lane operates at LOS F during the Friday peak hour.
- NYS Route 42 and Anawana Lake Road – The southbound left-turn lane operates at LOS E during the Friday peak hour.
- NYS Route 42 and Depot Drive – The westbound left-turn lane operates at LOS F during the Sunday peak hour.

As shown in **Table 11-5** the movements/approaches of the unsignalized intersections in the study area generally operate at LOS C or better during the peak hours analyzed.



2011 Existing Traffic Volumes
Friday PM Peak Hour (5:00 PM-6:00 PM)
Figure 11-2



2011 Existing Traffic Volumes
Sunday PM Peak Hour (3:30 PM-4:30 PM)
Figure 11-3

Table 11-4
Existing Conditions Level of Service Analysis
Signalized Intersections

Intersection	Friday				Sunday			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Liberty Street and Broadway								
Eastbound	LTR	0.69	10.1	B	LTR	0.22	3.7	A
Westbound	LTR	0.57	8.4	A	TR	0.23	3.7	A
Northbound	LTR	0.37	15.2	B	R	0.29	14.0	B
Southbound	LTR	0.70	21.3	C	LTR	0.52	15.5	B
	Intersection		10.9	B	Intersection		5.4	A
Pleasant Street and Broadway								
Eastbound	L	0.91	29.6	C	L	0.45	6.6	A
	TR	0.72	16.6	B	TR	0.33	12.5	B
Westbound	L	0.13	15.1	B	L	0.29	10.9	B
	T	0.53	19.9	B	T	0.19	15.1	B
	R	0.34	18.6	B	R	0.00	14.4	B
Northbound	LT	0.13	18.8	B	LT	0.11	13.1	B
	R	0.01	18.1	B	R	0.01	12.7	B
Southbound	**LT**	**1.03**	**80.5**	**F**	LT	0.63	18.3	B
	R	0.38	11.1	B	R	0.15	6.4	A
	Intersection		26.7	C	Intersection		11.0	B
NYS Route 42 and NYS Route 17 WB Direct Off Ramp								
Eastbound	R	0.41	17.3	B	R	0.07	10.9	B
Northbound	T	0.61	7.3	A	T	0.42	6.3	A
Southbound	T	0.45	0.2	A	T	0.41	0.2	A
	Intersection		6.2	A	Intersection		4.0	A
NYS Route 42 and Anawana Lake Road								
Eastbound	L	0.45	34.1	C	L	0.28	21.9	C
	T	0.01	29.3	C	T	0.03	19.7	B
	R	0.19	31.0	C	R	0.22	21.3	C
Westbound	**L**	0.32	52.0	D	L	0.40	41.5	D
	TR	0.06	49.8	D	TR	0.09	39.0	D
Northbound	L	0.84	52.3	D	L	0.62	41.2	D
	TR	0.39	13.8	B	TR	0.36	18.4	B
Southbound	**L**	0.45	68.7	E	L	0.39	47.0	D
	TR	0.71	33.4	C	TR	0.68	28.8	C
	Intersection		32.4	C	Intersection		27.0	C
NYS Route 42 and Depot Drive								
Eastbound	LTR	0.50	51.2	D	LTR	0.26	39.3	D
Westbound	L	0.73	33.4	C	**L**	**1.18**	**139.7**	**F**
	LTR	0.63	29.2	C	LTR	0.78	30.7	C
Northbound	L	0.18	53.1	D	L	0.37	40.8	D
	TR	0.69	31.1	C	TR	0.49	29.0	C
Southbound	L	0.46	47.9	D	L	0.41	36.1	D
	TR	0.38	22.2	C	TR	0.33	24.7	C
	Intersection		29.9	C	Intersection		51.6	D
NYS Route 42 and Concord Road								
Eastbound	LTR	0.18	19.7	B	LTR	0.20	20.2	C
Westbound	LTR	0.41	21.5	C	LTR	0.21	20.3	C
Northbound	LTR	0.84	15.9	B	LTR	0.26	4.1	A
Southbound	LTR	0.54	7.2	A	LTR	0.29	4.3	A
	Intersection		13.1	B	Intersection		6.2	A
NYS Route 42 and Fraser Road/Kiamesha Lake Road								
Eastbound	LTR	0.48	22.7	C	LTR	0.37	18.9	B
Westbound	LTR	0.15	19.9	B	LTR	0.37	19.0	B
Northbound	LTR	0.69	11.8	B	LTR	0.31	4.4	A
Southbound	LTR	0.56	8.2	A	LTR	0.26	3.4	A
	Intersection		11.7	B	Intersection		6.1	A
Cimarron Road and Route 173								
Eastbound	L	0.30	3.1	A	L	0.31	3.1	A
	T	0.08	2.2	A	T	0.08	2.2	A
Westbound	TR	0.10	6.8	A	TR	0.10	6.8	A
Southbound	L	0.36	17.3	B	L	0.22	15.6	B
	R	0.04	10.5	B	R	0.04	10.5	B
	Intersection		6.2	A	Intersection		6.0	A

Notes: L = Left Turn, T = Through, R = Right Turn; LOS = Level of Service.
(1) Bold indicates operations LOS E or worse

Table 11-5
Existing Conditions Level of Service Analysis
Unsignalized Intersections

	Friday				Sunday			
Intersection	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Old Liberty Road and Fraser Road								
Westbound	LR	0.08	9.1	A	LR	0.01	8.5	A
Northbound	TR	0.03	0.0	A	TR	0.01	0.0	A
Southbound	LT	0.01	2.2	A	LT	0.01	6.0	A
	Intersection		4.5	A	Intersection		3.6	A
Rock Ridge Drive and Concord Road								
Eastbound	TR	0.07	0.0	A	TR	0.05	0.0	A
Westbound	LT	0.01	2.0	A	LT	0.00	0.5	A
Northbound	LR	0.10	9.8	A	LR	0.01	9.0	A
	Intersection		3.5	A	Intersection		1.0	A
Rock Ridge Drive and Thompsonville Road								
Eastbound	LTR	0.04	7.5	A	LTR	0.00	7.0	A
Westbound	LTR	0.08	7.6	A	LTR	0.01	7.1	A
Northbound	LTR	0.10	7.6	A	LTR	0.03	6.7	A
Southbound	LTR	0.07	7.6	A	LTR	0.01	7.1	A
	Intersection		7.6	A	Intersection		6.9	A
Concord Road and Kiamesha Lake Road								
Eastbound	TR	0.02	0.0	A	TR	0.01	0.0	A
Westbound	LT	0.05	5.4	A	LT	0.03	4.4	A
Northbound	LR	0.10	9.2	A	LR	0.08	9.8	A
	Intersection		6.0	A	Intersection		5.9	A
Chalet Road and Kiamesha Lake Road								
Eastbound	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Westbound	LTR	0.01	1.4	A	LTR	0.00	0.3	A
Northbound	LTR	0.08	9.6	A	LTR	0.01	9.1	A
Southbound	LTR	0.00	0.0	A	LTR	0.00	9.4	A
	Intersection		2.9	A	Intersection		0.7	A
Chalet Road and Thompsonville Road								
Eastbound	LTR	0.07	7.4	A	LTR	0.02	7.1	A
Westbound	LTR	0.10	7.8	A	LTR	0.03	7.1	A
Northbound	LTR	0.13	7.7	A	LTR	0.01	7.0	A
Southbound	LTR	0.05	7.5	A	LTR	0.01	7.1	A
	Intersection		7.6	A	Intersection		7.1	A
Heiden Road and Thompsonville Road								
Eastbound	LTR	0.16	14.3	B	LTR	0.04	12.5	B
Westbound	LTR	0.00	13.9	B	LTR	0.00	0.0	A
Northbound	LTR	0.01	0.4	A	LTR	0.00	0.1	A
Southbound	LTR	0.00	0.1	A	LTR	0.00	0.0	A
	Intersection		1.8	A	Intersection		0.6	A
Heiden Road and Kiamesha Lake Road								
Eastbound	LR	0.24	13.5	B	LR	0.09	10.8	B
Northbound	LT	0.03	0.9	A	LT	0.04	2.6	A
Southbound	TR	0.16	0.0	A	TR	0.20	0.0	A
	Intersection		2.7	A	Intersection		1.9	A
Cimarron Road and Joyland Road								
Eastbound	LT	0.06	4.6	A	LT	0.01	0.5	A
Northbound	TR	0.13	0.0	A	TR	0.08	0.0	A
Southbound	LR	0.08	10.5	B	LR	0.05	98	A
	Intersection		3.0	A	Intersection		1.3	A

Table 11-5 (cont'd)
Existing Conditions Level of Service Analysis
Unsignalized Intersections

Intersection	Friday				Sunday			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Cimarron Road and Towner Road/NYS Route 17 Westbound Ramps								
Eastbound	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Westbound	LTR	0.01	1.9	A	LTR	0.01	2.1	A
Northbound	LTR	0.25	10.7	B	LTR	0.15	10.6	B
Southbound	LTR	0.01	8.9	A	LTR	0.01	9.8	A
	Intersection		6.8	A	Intersection		4.0	A
Cimarron Road and NYS Route 17 Eastbound Ramps								
Eastbound	LR	0.05	10.4	B	LR	0.07	10.3	B
Northbound	TR	0.13	0.0	A	TR	0.12	0.0	A
Southbound	LT	0.04	2.1	A	LT	0.03	2.2	A
	Intersection		1.8	A	Intersection		2.1	A

Notes: L = Left Turn, T = Through, R = Right Turn; LOS = Level of Service
(1) Bold indicates operations LOS E or worse

RAMP JUNCTION ANALYSIS

For the ramp junction analysis, the NYS Route 17 eastbound merge at Interchange 106 was analyzed. As discussed earlier, the ramp junction level of service was determined based on the *HCM*. **Table 11-6** presents the existing merge analysis. As shown, this merge operates at LOS A during the Friday and Sunday peak hours. See Appendix E-2 for HCS outputs.

Table 11-6
Existing Conditions Level of Service
Ramp Junction

Ramp Location	Number of Lanes on Ramp	Friday		Sunday	
		Density[1]	LOS	Density[1]	LOS
NYS Route 17 EB on-ramp @ Interchange 106	1	6.4	A	9.7	A

Notes:
1. Density is in passenger cars per mile per lane

PUBLIC TRANSPORTATION

Public transit modes within the study area are limited to local bus service, provided by Sullivan County Transportation (SCT). SCT operates two bus routes in the study area (one which runs on Thursdays and the other on Fridays), both of which provide service to the Sullivan County Government Center, the Thompson Square shopping center, and the Walmart Supercenter in Monticello. Passengers must call at least 24 hours ahead to schedule pick-ups and receive bus stop information. Beyond the study area, these bus routes provide service to the Lumberland, Bethel, Delaware, and Callicoon areas.

ShortLine/Coach USA operates several regional bus routes that provide express commuter bus service to other parts of the Hudson Valley, New York City, and Long Island (available via connections in Monticello). Among these routes, service to local area destinations and attractions such as the Sullivan County Government Center, the Thompson Square shopping center, Catskill Medical Center, Sullivan Community College, the Monticello Casino & Raceway, and the Bethel Woods Center for the Arts is provided. ShortLine/Coach USA also operates long distance bus service from other parts of New York State, which are available via connections in

Monticello. The ShortLine/Coach USA Monticello terminal is located on Sturgis Road, adjacent to the Sullivan County Government Center.

There is no commuter rail service offered within the study area. The nearest commuter rail service to the study area is the New Jersey Transit/Metro-North Commuter Railroad Port Jervis line, which provides service to Port Jervis, Otisville, and Middletown, approximately 25 miles from the Project Site.

The Sullivan County International Airport is located in the Town of Bethel, outside the study area and approximately 12 miles from the Project Site. Sullivan County International Airport primarily serves small general aviation and private aircraft and does not currently service regularly scheduled commercial airline service. Regularly scheduled commercial airline service in the region is handled by Stewart International Airport, located in Newburgh, NY, approximately 35 miles from the Project Site.

PEDESTRIAN AND BICYCLE CONDITIONS

Observed pedestrian volumes were generally light in the study area. With the exception of the Village of Monticello (light to moderate pedestrian volumes), most of the study area is rural in nature and sidewalks do not exist along most of the study area roadways. Sidewalks are present along NYS Route 42 (south of its intersection with Lanahan Road/Concord Road), and along portions of East Broadway, Liberty Street, and Anawana Road. The sidewalks along East Broadway extend eastbound to its intersection with Waverly Avenue, beyond which there are no sidewalks. Although much of the pedestrian traffic is concentrated in areas with sidewalk facilities, very light sporadic pedestrian traffic also was observed in the vicinity of the Project Site, which is located in the more rural portions of the study area. Although similar light pedestrian activity was observed along Joyland Road, pedestrian activity increases significantly during the summer months.

Bicycle paths are provided along NYS Route 42. Kiamesha Lake Road (CR 109) and Fraser Road have bicycle pavement markings, but there are no other bicycle related signs or markings in the immediate area.

ACCIDENT ANALYSIS

Based on *HCM* methodology, areas where five or more accidents are reported at an intersection or along a corridor in a 12-month period are considered high accident locations. **Table 11-7** summarizes the most recent three years' available traffic accident data in the study area compiled from NYSDOT's records for the period of July 1, 2008, through June 30, 2011. NYSDOT's records provide accident data for the entire study area's intersections and corridors. A review of these data shows the following intersections/corridors experience more than five accidents per year:

INTERSECTIONS

- Pleasant Street and Broadway; and
- NYS Route 42 and Anawana Lake Road

CORRIDORS

- Heiden Road from NYS Route 17 to Kiamesha Lake Road
- Fraser Road/Kiamesha Lake Road from Old Liberty Street to Heiden Road
- Broadway from Liberty Street to Cimarron Road

- NYS Route 17 from Exit 105 to Exit 107
- NYS Route 42 from Broadway to Gibber Road

A majority of the accidents were due to rear-end collisions, which are not uncommon at signalized intersections. Counter measures to reduce rear-end collisions include, but are not limited to:

- Improving signal visibility;
- Install skid resistant pavement;
- Evaluate adequacy of yellow and all-red signal timing; and
- Install "Signal Ahead" signs.

In addition, counter-measures to reduce speeding, such as a smart trailer that displays vehicle speeds as well as increasing police enforcement against speed limit violators, and the implementation of traffic calming techniques could reduce collisions along these corridors.

Table 11-7
Study Area Accident Summary

Intersection/Corridor	Number of Accidents		Accident Trend															
	Avg/ Yr	Period 7/1/08 – 6/30/2011	Fatalities	Personal Injury	Non-Reported	Reported	Overtaking	Rear End	Right Angle	Left Turn (with other car)	Left Turn (against other car)	Right Turn (with other car)	Right Turn (against other car)	Sideswipe	Ped/ Bike	Head On	Other	Unknown
Study Intersections																		
Old Liberty and Fraser Road	0.7	2				2											2	
Liberty Street and Broadway	4.3	13		8	4	9	2	3	4	1							3	
Pleasant Street and Broadway	5.3	16		3	8	8	2	5	1	1		1	2				4	
Route 42 and Route 17 Ramps [1]	0.3	1			1			1										
Route 42 and Anawana Lake Road	6.3	19		7	10	9	4	5			3						5	2
Route 42 and Depot Drive	0.0	0																
Route 42 and Concord Road	0.7	2		2	1	1		1									1	
Route 42 and Kiamesha Lake Road	2.0	6		8		6		2	2								2	
Rock Ridge Drive and Concord Road	0.0	0																
Rock Ridge Drive and Thompsonville Road	0.3	1		1		1											1	
Concord Road and Kiamesha Lake Road	1.3	4		1		4		1						2			1	
Chalet Road and Kiamesha Lake Road	0.3	1		1		1		1										
Joyland Road and Thompsonville Road	0.7	2		3	1	1			1								1	
Heiden Road and Thompsonville Road	1.0	3		4		3			2								1	
Heiden Road and Kiamesha Lake Road	1.3	4				4											4	
Joyland Road and Cimarron Road	0	0	Note: this interchange was reconstructed in November 2011.															
Route 17 Westbound Ramps and Cimarron Road	0	0																
Cimarron Road and Route 17 Eastbound Ramps	0	0																
Cimarron Road and Broadway	1.0	3		1		3											3	
Corridors																		
Thompsonville Road from Rock Ridge Drive to Heiden Road	0.7	2		3	1	1			1								1	
Concord Road from Route 42 to Kiamesha Lake Road	3.0	9		5	1	8	1	2						1			5	
Rock Ridge Drive from Thompsonville Road to Concord Road	1.3	4		1	1	3		1									3	
Joyland Road/Chalet Road from Cimarron Road to Kiamesha Lake Road	1.7	5		1	2	3	1	1									3	
Heiden Road from NYS Route 17 to Kiamesha Lake Road	12.7	38		11	8	30		2	2	1		1		2			29	1
Fraser Road/Kiamesha Lake Road from Old Liberty Street to Heiden Road	12.7	38		21	6	32	2	3	10		1			2			19	1
Broadway from Liberty Street to Cimarron Road	54.7	164		63	50	114	29	35	25	6	12	2	7	2	2		30	10
NYS Route 17 from Exit 105 to Exit 107	43.7	131		33	34	97	11	15	1	1	1	1	1	1	1		96	1
Route 42 from Broadway to Gibber Road	45.7	137		45	35	102	10	43	13	1	9	4		3	3			9

Note: 1: NYSDOT records does not distinguish between EB and WB Ramps
Source: NYSDOT

C. THE FUTURE WITHOUT THE PROJECT — NO BUILD

TRAFFIC CONDITIONS

The No Build (Year 2014) traffic condition is an interim scenario that establishes a future baseline condition without the proposed development. Based on consultation with the Town and the surrounding communities, the No Build traffic conditions were ascertained as follows:

- Increasing the existing volumes by 1 percent per year from 2011 to 2013 for background growth and then by 0.5 percent per year from 2013 to 14 for background growth.[1]
- Manually adding trips from Concord Associates, LP (CALP)[2], the Dunbar Towers, phase 1 of Golden Ridges, and phase 1 of Westbourne estates projects. Project descriptions and locations for the No Build projects are presented in Appendix E-3. The No Build project list was developed in consultation with the Town of Thompson, Town of Forestburgh, Village of Monticello, and the Town of Fallsburg.

2014 No Build peak hour traffic volumes for the peak hours analyzed are shown in **Figures 11-4 and 11-5**.

In addition to manually adding trips generated from approved projects, the following roadway improvements associated with CALP were included in the No Build analysis:

- Realignment of Concord Road and Chalet Road – Realignment of Concord Road to the east, as approved. Chalet Road would be realigned to intersect Concord Road. The new Concord Road/Chalet Road intersection would be signalized with each approach providing a left-turn lane and a through/right-turn lane. The current intersection of Chalet Road and Kiamesha Lake Road would still exist.
- NYS Route 42/Concord Road Intersection – Widen northbound approach to provide a left-turn lane, through lane, and a right-turn lane. Widen southbound approach to provide a left-turn lane, through lane, and a shared through/right-turn lane. Widen eastbound approach to provide a left-turn lane and shared through/right-turn lane. Widen westbound approach to provide a left-turn lane and a shared left/through/right-turn lane. Modify signal timings and phasing to provide eastbound and westbound split phasing.
- Concord Road/Kiamesha Lake Road Intersection – Widen westbound approach to provide westbound left-turn lane.

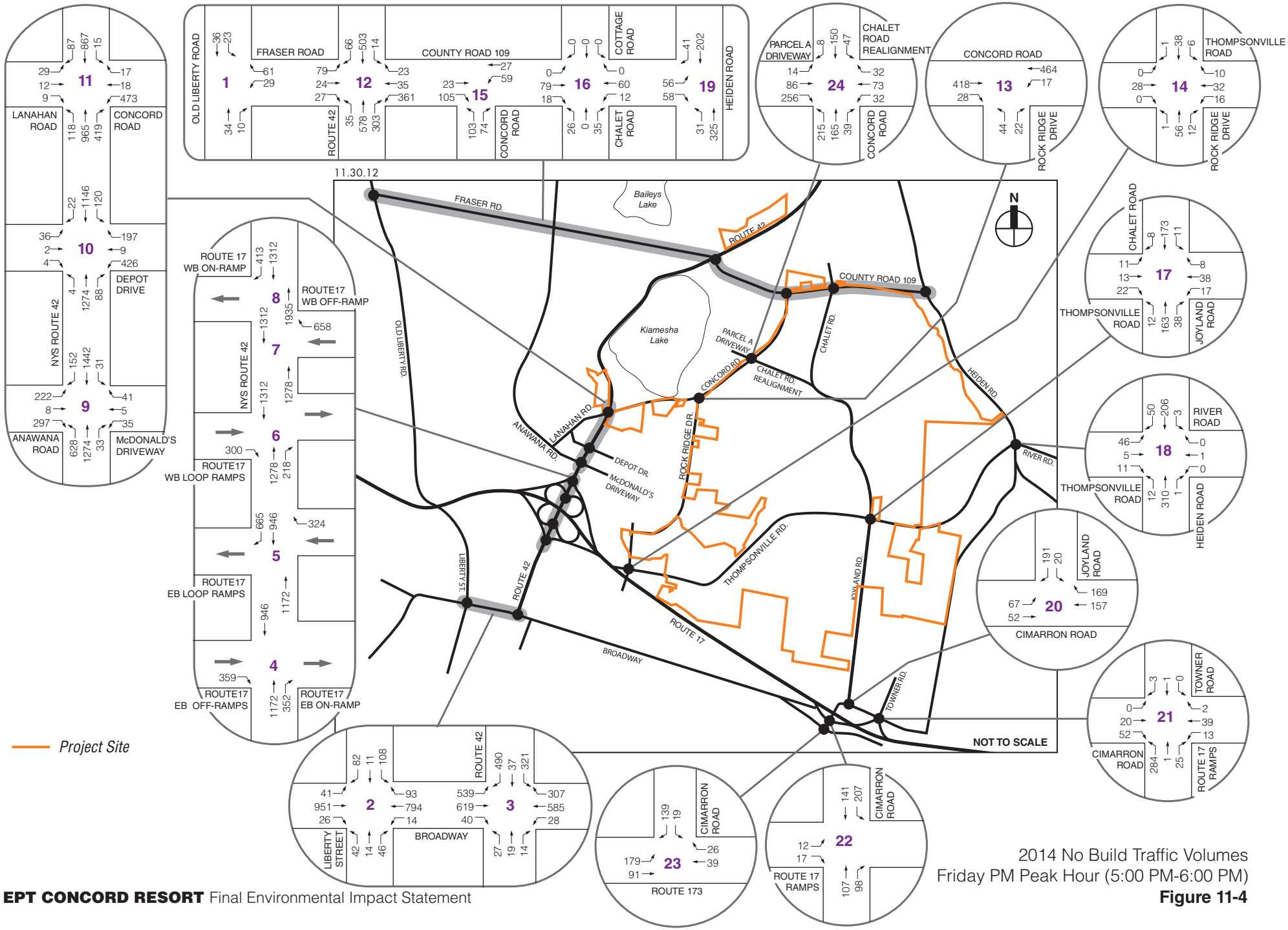
Tables 11-8 and 11-9 present a comparison of 2011 Existing and 2014 No Build LOS conditions for signalized and unsignalized intersections, respectively. 2014 No Build Synchro 7 outputs are provided in Appendix E-4.

[1] The background growth accounts for trips generated by the Gemstar Mobile Home Park, RNR Mobile Home Park, and the Birchwood Development. Based on information provided by the Town of Thompson, completion of other No Build projects are beyond the anticipated completion of the 2014 Build Year development components.

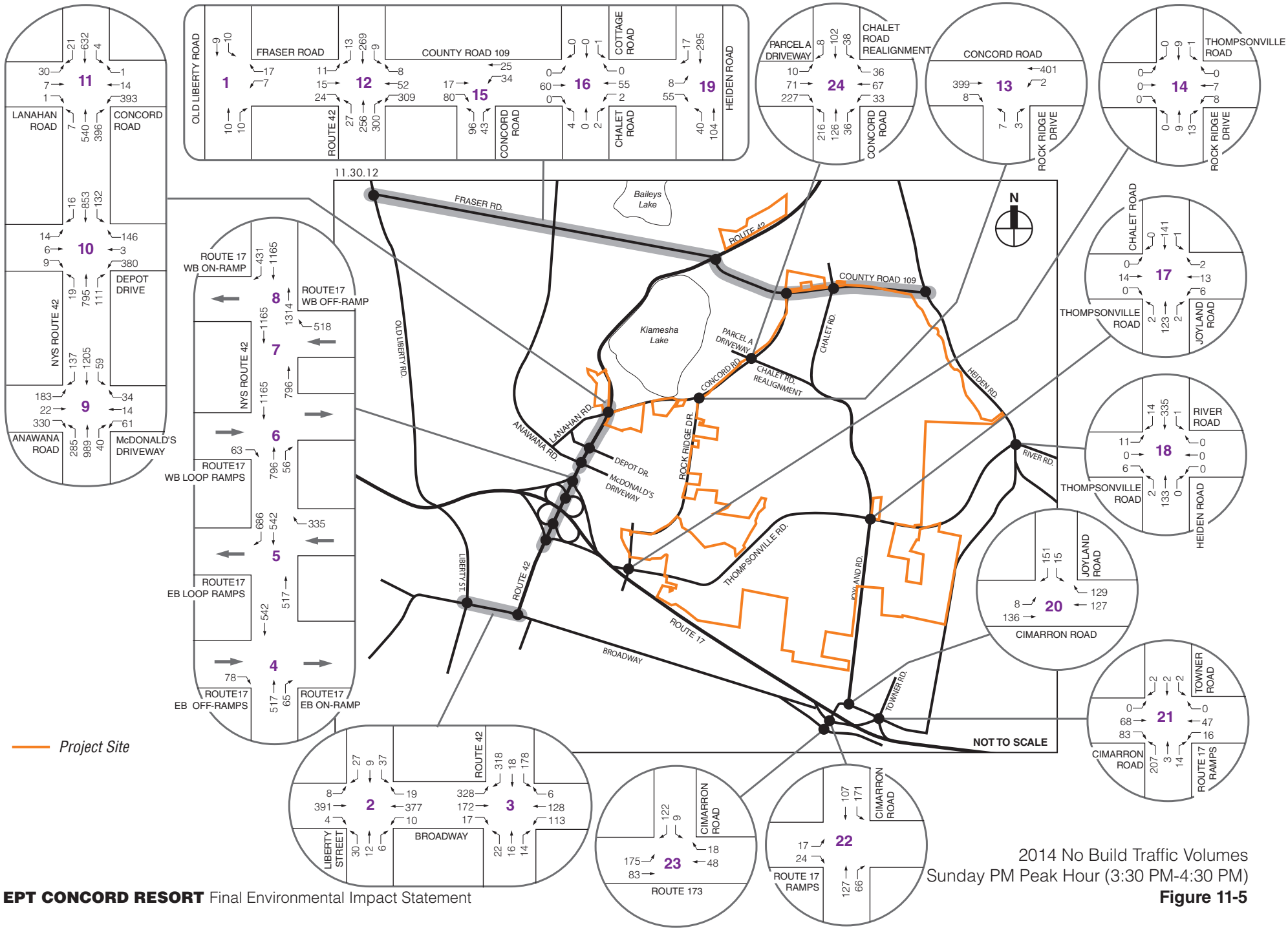
[2] The CALP development program is based on the approvals granted by the Town Board for the proposed development of the 160± acres along Concord Road that CALP owns or has lease rights to. These approvals were granted 2008 (and as subsequently amended).

Table 11-8
Existing and No Build (2014) Level of Service Analysis
Signalized Intersections

	Friday								Sunday							
	Existing				No Build				Existing				No Build			
Intersection	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Liberty Street and Broadway																
Eastbound	LTR	0.69	10.1	B	LTR	0.74	11.0	B	LTR	0.22	3.7	A	LTR	0.25	3.7	A
Westbound	LTR	0.57	8.4	A	LTR	0.61	8.9	A	LTR	0.23	3.7	A	LTR	0.27	3.7	A
Northbound	LTR	0.37	15.2	B	LTR	0.38	15.8	B	LTR	0.29	14.0	B	LTR	0.31	14.4	B
Southbound	LTR	0.70	21.3	C	LTR	0.70	22.2	C	LTR	0.52	15.5	B	LTR	0.54	16.7	B
	Intersection		10.9	B	Intersection		11.6	B	Intersection		5.4	A	Intersection		5.4	A
Pleasant Street and Broadway																
Eastbound	L	0.91	29.6	C	**L**	**1.06**	**69.4**	**E**	L	0.45	6.6	A	L	0.54	7.3	A
	TR	0.72	16.6	B	TR	0.74	17.0	B	TR	0.33	12.5	B	TR	0.33	12.5	B
Westbound	L	0.13	15.1	B	L	0.14	15.2	B	L	0.29	10.9	B	L	0.31	12.1	B
	T	0.53	19.9	B	T	0.54	20.0	B	T	0.19	15.1	B	T	0.20	16.3	B
	R	0.34	18.6	B	R	0.36	18.7	B	R	0.00	14.4	B	R	0.00	15.5	B
Northbound	LT	0.13	18.8	B	LT	0.14	19.0	B	LT	0.11	13.1	B	LT	0.11	13.8	B
	R	0.01	18.1	B	R	0.01	18.2	B	R	0.01	12.7	B	R	0.01	13.4	B
Southbound	**LT**	**1.03**	**80.5**	**F**	**LT**	**1.06**	**90.5**	**F**	LT	0.63	18.3	B	LT	0.65	19.8	B
	R	0.38	11.1	B	R	0.47	11.9	B	R	0.15	6.4	A	R	0.19	6.2	A
	Intersection		26.7	C	Intersection		35.1	D	Intersection		11.0	B	Intersection		11.2	B
NYS Route 42 and NYS Route 17 WB Direct Off Ramp																
Eastbound	R	0.41	17.3	B	R	0.82	29.0	C	R	0.07	10.9	B	R	0.58	15.2	B
Northbound	T	0.61	7.3	A	T	0.74	13.6	B	T	0.42	6.3	A	T	0.49	8.0	A
Southbound	T	0.45	0.2	A	T	0.77	2.1	A	T	0.41	0.2	A	T	0.68	1.1	A
	Intersection		6.2	A	Intersection		12.2	B	Intersection		4.0	A	Intersection		6.5	A
NYS Route 42 and Anawana Lake Road																
Eastbound	L	0.45	34.1	C	L	0.67	46.0	D	L	0.28	21.9	C	L	0.50	33.9	C
	T	0.01	29.3	C	T	0.02	34.1	C	T	0.03	19.7	B	T	0.04	28.5	C
	R	0.19	31.0	C	R	0.20	36.0	D	R	0.22	21.3	C	R	0.23	30.4	C
Westbound	L	0.32	52.0	D	**L**	**0.41**	**58.2**	**E**	L	0.40	41.5	D	**L**	**0.57**	**55.4**	**E**
	TR	0.06	49.8	D	**TR**	**0.08**	**55.1**	**E**	TR	0.09	39.0	D	TR	0.14	48.9	D
Northbound	L	0.84	52.3	D	**L**	**0.88**	**61.1**	**E**	L	0.62	41.2	D	L	0.69	53.6	D
	TR	0.39	13.8	B	TR	0.66	19.3	B	TR	0.36	18.4	B	TR	0.63	22.6	C
Southbound	**L**	**0.45**	**68.7**	**E**	**L**	**0.48**	**64.0**	**E**	L	0.39	47.0	D	**L**	**0.55**	**58.0**	**E**
	TR	0.71	33.4	C	**TR**	**1.15**	**112.6**	**F**	TR	0.68	28.8	C	TR	0.95	45.2	D
	Intersection		32.4	C	**Intersection**		**65.3**	**E**	Intersection		27.0	C	Intersection		37.5	D
NYS Route 42 and Depot Drive																
Eastbound	LTR	0.50	51.2	D	**LTR**	**0.63**	**70.0**	**E**	LTR	0.26	39.3	D	**LTR**	**0.36**	**56.7**	**E**
Westbound	L	0.73	33.4	C	**L**	**1.04**	**100.0**	**F**	**L**	**1.18**	**139.7**	**F**	**L**	**1.26**	**188.2**	**F**
	LTR	0.63	29.2	C	**LTR**	**0.84**	**55.8**	**E**	LTR	0.78	30.7	C	LTR	0.78	49.5	D
Northbound	L	0.18	53.1	D	**L**	**0.21**	**65.3**	**E**	L	0.37	40.8	D	**L**	**0.48**	**63.5**	**E**
	TR	0.69	31.1	C	**TR**	**1.07**	**84.6**	**F**	TR	0.49	29.0	C	TR	0.79	36.8	D
Southbound	L	0.46	47.9	D	**L**	**0.67**	**61.6**	**E**	L	0.41	36.1	D	**L**	**0.67**	**57.9**	**E**
	TR	0.38	22.2	C	TR	0.79	29.5	C	TR	0.33	24.7	C	TR	0.62	24.7	C
	Intersection		29.9	C	**Intersection**		**63.2**	**E**	Intersection		51.6	D	Intersection		52.0	D
NYS Route 42 and Concord Road																
Eastbound	LTR	0.18	19.7	B	L	0.38	49.9	D	LTR	0.20	20.2	C	L	0.42	38.7	D
	-	-	-	-	TR	0.16	47.7	D	-	-	-	-	TR	0.09	35.5	D
Westbound	LTR	0.41	21.5	C	L	0.84	54.0	D	LTR	0.21	20.3	C	L	0.59	26.9	C
	-	-	-	-	LTR	0.83	52.0	D	-	-	-	-	LTR	0.59	26.9	C
Northbound	LTR	0.84	15.9	B	L	0.58	22.2	C	LTR	0.26	4.1	A	L	0.03	10.4	B
	-	-	-	-	T	0.93	36.1	D	-	-	-	-	T	0.64	17.3	B
	-	-	-	-	R	0.28	0.5	A	-	-	-	-	R	0.28	0.4	A
Southbound	LTR	0.54	7.2	A	L	0.23	15.8	B	LTR	0.29	4.3	A	L	0.02	10.3	B
	-	-	-	-	TR	0.52	14.5	B	-	-	-	-	TR	0.44	13.4	B
	Intersection		13.1	B	Intersection		27.7	D	Intersection		6.2	A	Intersection		15.6	D
NYS Route 42 and Fraser Road/Kiamesha Lake Road																
Eastbound	LTR	0.48	22.7	C	LTR	0.32	19.3	B	LTR	0.37	18.9	B	LTR	0.10	15.2	B
Westbound	LTR	0.15	19.9	B	**LTR**	**1.37**	**207.4**	**F**	LTR	0.37	19.0	B	**LTR**	**1.04**	**75.2**	**E**
Northbound	LTR	0.69	11.8	B	**LTR**	**1.31**	**168.0**	**F**	LTR	0.31	4.4	A	LTR	0.83	28.0	C
Southbound	LTR	0.56	8.2	A	LTR	0.74	20.4	C	LTR	0.26	3.4	A	LTR	0.39	14.1	B
	Intersection		11.7	B	**Intersection**		**126.5**	**F**	Intersection		6.1	A	Intersection		39.5	D
Cimarron Road and Route 173																
Eastbound	L	0.30	3.1	A	L	0.33	3.2	A	L	0.31	3.1	A	L	0.32	3.1	A
	T	0.08	2.2	A	T	0.09	2.2	A	T	0.08	2.2	A	T	0.08	2.2	A
Westbound	TR	0.10	6.8	A	TR	0.10	7.3	A	TR	0.10	6.8	A	TR	0.11	7.3	A
Southbound	L	0.36	17.3	B	L	0.38	17.9	B	L	0.22	15.6	B	L	0.18	15.4	B
	R	0.04	10.5	B	R	0.05	10.0	B	R	0.04	10.5	B	R	0.04	10.1	B
	Intersection		6.2	A	Intersection		6.1	A	Intersection		6.0	A	Intersection		5.8	A



2014 No Build Traffic Volumes
Friday PM Peak Hour (5:00 PM-6:00 PM)
Figure 11-4



2014 No Build Traffic Volumes
Sunday PM Peak Hour (3:30 PM-4:30 PM)
Figure 11-5

Table 11-8 (cont'd)
Existing and No Build (2014) Level of Service Analysis
Signalized Intersections

	Friday								Sunday							
	Existing				No Build				Existing				No Build			
Intersection	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Chalet Road and Concord Road																
Eastbound	Intersection does not exist under Existing Conditions				L	1.07	302.1	F	Intersection does not exist under Existing Conditions				L	0.85	199.8	F
					TR	0.65	29.6	C					TR	0.57	26.6	C
Westbound					L	0.52	41.9	D					L	0.78	90.3	F
					TR	0.21	21.3	C					TR	0.23	21.8	C
Northbound					L	0.69	33.0	C					L	0.65	28.2	C
					TR	0.33	17.6	B					TR	0.25	15.0	B
Southbound					L	0.65	51.2	D					L	0.52	37.0	D
					TR	0.45	26.7	C					TR	0.31	23.3	C
					Intersection		28.5	C					Intersection		28.5	C

Notes: L = Left Turn, T = Through, R = Right Turn; v/c = volume to capacity ratio; LOS = Level of Service;
Bold indicates operations LOS E or worse

Table 11-9
Existing and No Build (2014) Level of Service Analysis
Unsignalized Intersections

	Friday								Sunday							
	Existing				No Build				Existing				No Build			
Intersection	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Old Liberty Road and Fraser Road																
Westbound	LR	0.08	9.1	A	LR	0.11	9.3	A	LR	0.01	8.5	A	LR	0.03	8.6	A
Northbound	TR	0.03	0.0	A	TR	0.03	0.0	A	TR	0.01	0.0	A	TR	0.02	0.0	A
Southbound	LT	0.01	2.2	A	LT	0.02	2.9	A	LT	0.01	6.0	A	LT	0.01	3.9	A
	Intersection		4.5	A	Intersection		5.1	A	Intersection		3.6	A	Intersection		4.5	A
Rock Ridge Drive and Concord Road																
Eastbound	TR	0.07	0.0	A	TR	0.31	0.0	A	TR	0.05	0.0	A	TR	0.30	0.0	A
Westbound	LT	0.01	2.0	A	LT	0.02	0.6	A	LT	0.00	0.5	A	LT	0.00	0.1	A
Northbound	LR	0.10	9.8	A	LR	0.31	24.0	C	LR	0.01	9.0	A	LR	0.04	17.5	C
	Intersection		3.5	A	Intersection		2.0	A	Intersection		1.0	A	Intersection		0.3	A
Rock Ridge Drive and Thompsonville Road																
Eastbound	LTR	0.04	7.5	A	LTR	0.04	7.5	A	LTR	0.00	7.0	A	LTR	0.00	7.0	A
Westbound	LTR	0.08	7.6	A	LTR	0.08	7.6	A	LTR	0.01	7.1	A	LTR	0.02	7.2	A
Northbound	LTR	0.10	7.6	A	LTR	0.11	7.6	A	LTR	0.03	6.7	A	LTR	0.03	6.7	A
Southbound	LTR	0.07	7.6	A	LTR	0.07	7.6	A	LTR	0.01	7.1	A	LTR	0.01	7.1	A
	Intersection		7.6	A	Intersection		7.6	A	Intersection		6.9	A	Intersection		7.0	A
Concord Road and Kiamesha Lake Road																
Eastbound	TR	0.02	0.0	A	TR	0.10	0.0	A	TR	0.01	0.0	A	TR	0.08	0.0	A
Westbound	LT	0.05	5.4	A	L	0.05	7.7	A	LT	0.03	4.4	A	L	0.03	7.6	A
	-	-	-	-	T	0.02	0.0	A	-	-	-	-	T	0.02	0.0	A
Northbound	LR	0.10	9.2	A	LR	0.26	11.4	B	LR	0.08	9.0	A	LR	0.23	10.7	B
	Intersection		6.0	A	Intersection		5.9	A	Intersection		5.9	A	Intersection		5.9	A
Chalet Road and Kiamesha Lake Road																
Eastbound	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Westbound	LTR	0.01	1.4	A	LTR	0.01	1.3	A	LTR	0.00	0.3	A	LTR	0.00	0.3	A
Northbound	LTR	0.08	9.6	A	LTR	0.08	9.7	A	LTR	0.01	9.1	A	LTR	0.01	9.2	A
Southbound	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	9.4	A	LTR	0.00	9.5	A
	Intersection		2.9	A	Intersection		2.8	A	Intersection		0.7	A	Intersection		0.7	A
Chalet Road and Thompsonville Road																
Eastbound	LTR	0.07	7.4	A	LTR	0.09	8.6	A	LTR	0.02	7.1	A	LTR	0.02	7.9	A
Westbound	LTR	0.10	7.8	A	LTR	0.12	9.0	A	LTR	0.03	7.1	A	LTR	0.04	7.9	A
Northbound	LTR	0.13	7.7	A	LTR	0.36	10.0	B	LTR	0.01	7.0	A	LTR	0.20	8.3	A
Southbound	LTR	0.05	7.5	A	LTR	0.33	9.9	A	LTR	0.01	7.1	A	LTR	0.22	8.4	A
	Intersection		7.6	A	Intersection		9.7	A	Intersection		7.1	A	Intersection		8.3	A
Heiden Road and Thompsonville Road																
Eastbound	LTR	0.16	14.3	B	LTR	0.17	14.8	B	LTR	0.04	12.5	B	LTR	0.05	12.8	B
Westbound	LTR	0.00	13.9	B	LTR	0.00	14.2	B	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Northbound	LTR	0.01	0.4	A	LTR	0.01	0.4	A	LTR	0.00	0.1	A	LTR	0.00	0.1	A
Southbound	LTR	0.00	0.1	A	LTR	0.00	0.1	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A
	Intersection		1.8	A	Intersection		1.9	A	Intersection		0.6	A	Intersection		0.5	A

Table 11-9 (cont'd)
Existing and No Build (2014) Level of Service Analysis
Unsignalized Intersections

	Friday								Sunday							
	Existing				No Build				Existing				No Build			
Intersection	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Heiden Road and Kiamesha Lake Road																
Eastbound	LR	0.24	13.5	B	LR	0.28	14.5	B	LR	0.09	10.8	B	LR	0.11	11.4	B
Northbound	LT	0.03	0.9	A	LT	0.03	0.9	A	LT	0.04	2.6	A	LT	0.04	2.6	A
Southbound	TR	0.16	0.0	A	TR	0.17	0.0	A	TR	0.21	0.0	A	TR	0.22	0.0	A
	Intersection		2.7	A	Intersection		3.0	A	Intersection		1.9	A	Intersection		2.0	A
Cimarron Road and Joyland Road																
Eastbound	LT	0.06	4.6	A	LT	0.08	5.1	A	LT	0.01	0.5	A	LT	0.01	0.5	A
Westbound	TR	0.13	0.0	A	TR	0.26	0.0	A	TR	0.08	0.0	A	TR	0.20	0.0	A
Southbound	LR	0.08	10.5	B	LR	0.41	14.0	B	LR	0.05	9.8	A	LR	0.29	11.7	B
	Intersection		3.0	A	Intersection		5.4	A	Intersection		1.3	A	Intersection		3.6	A
Cimarron Road and Towner Road/NYS Route 17 Westbound Ramps																
Eastbound	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Westbound	LTR	0.01	1.9	A	LTR	0.01	1.9	A	LTR	0.01	2.1	A	LTR	0.02	2.0	A
Northbound	LTR	0.25	10.7	B	LTR	0.40	12.3	B	LTR	0.15	10.6	B	LTR	0.34	12.8	B
Southbound	LTR	0.01	8.9	A	LTR	0.01	9.0	A	LTR	0.01	9.8	A	LTR	0.01	10.1	B
	Intersection		6.8	A	Intersection		8.4	A	Intersection		4.0	A	Intersection		6.2	A
Cimarron Road and NYS Route 17 Eastbound Ramps																
Eastbound	LTR	0.05	10.4	B	LTR	0.09	14.3	B	LTR	0.07	10.3	B	LTR	0.11	13.0	B
Northbound	TR	0.13	0.0	A	TR	0.13	0.0	A	TR	0.12	0.0	A	TR	0.12	0.0	A
Southbound	LT	0.04	2.1	A	LT	0.18	5.6	A	LT	0.03	2.2	A	LT	0.15	5.5	A
	Intersection		1.8	A	Intersection		4.3	A	Intersection		2.1	A	Intersection		4.3	A

Notes: L = Left Turn, T = Through, R = Right Turn; v/c = volume to capacity ratio; LOS = Level of Service;
Bold indicates operations LOS E or worse

Under the 2014 No Build conditions, there would be the following notable changes in LOS for the signalized intersections in the study area:

- Pleasant Street and Broadway – the eastbound left-turn lane would deteriorate from LOS C to LOS E conditions during the Friday peak hour.
- NYS Route 42 and Anawana Lake Road – during the Friday peak hour, the northbound left-turn lane, westbound left-turn lane, and westbound shared through/right-turn lane would deteriorate from LOS D to LOS E while the southbound through/right turn lanes would deteriorate from LOS C to LOS F conditions. During the Sunday peak hour, the westbound left-turn lane and the southbound left-turn lane would deteriorate from LOS D to LOS E conditions.
- NYS Route 42 and Depot Drive – during the Friday peak hour, the eastbound approach, westbound approach, northbound left-turn lane, and southbound left-turn lane would deteriorate to LOS E conditions while northbound through/right-turn lanes would deteriorate to LOS F conditions. During the Sunday peak hour, the eastbound approach, northbound left-turn lane, and the southbound left-turn lane would deteriorate to LOS E conditions.
- NYS Route 42 and Kiamesha Lake Road/Fraser Road – during the Friday peak hour, the westbound and northbound approaches would deteriorate from LOS B to LOS F conditions. During the Sunday peak hour, the westbound approach would deteriorate from LOS B to LOS E conditions.
- Under the 2014 No Build condition, the unsignalized intersections would continue to operate at LOS C or better.

RAMP JUNCTION ANALYSIS

Table 11-10 presents the existing and No Build merge analysis. As shown, this merge operates at LOS B during the Friday and Sunday peak hours under the No Build conditions. See Appendix E-4 for HCS outputs.

Table 11-10
Existing Conditions and No Build Level of Service
Ramp Junction

Ramp Location	Number of Lanes on Ramp	Friday				Sunday			
		Existing		No Build		Existing		No Build	
		Density[1]	LOS	Density[1]	LOS	Density[1]	LOS	Density[1]	LOS
NYS Route 17 EB on-ramp @ Interchange 106	1	6.4	A	11.8	B	9.7	A	14.3	B

Notes:
1. Density is in passenger cars per mile per lane

PUBLIC TRANSPORTATION

No significant adverse changes are expected in public transportation conditions by the No Build year (2014). However, under the 2014 No Build condition, it is anticipated that as part of the CALP project there may be a small increase in the demand by residents and visitors for bus service along NYS Route 42 to the NYS Route 42 retail area, and in the Village of Monticello.

PEDESTRIAN AND BICYCLE CONDITIONS

No significant adverse changes are expected in pedestrian and bicycle conditions by the No Build year (2014). However, a small increase in pedestrian traffic along NYS Route 42 is expected under 2014 No Build condition as a result of the proximity of the CALP project to the NYS Route 42 retail area and the Village of Monticello. It is expected that these areas would be walking destinations for a portion of the residents and visitors of the CALP project.

Based on conversations with the Village of Monticello Mayor's office, there are plans to extend the walkways/bike paths along East Broadway farther east past Waverly Avenue to the new NYS Route 17 interchange (at this point East Broadway is Cimarron Road); however, there are no definitive dates of improvements.

D. PROBABLE IMPACTS OF THE 2014 BUILD YEAR

2014 BUILD YEAR TRIP GENERATION

The 2014 Build Year, which includes the Phase 1 Casino Resort, Monster Golf Course improvements, Golf Cottages and select components of the Entertainment Village, will be in the southern portion of the Project Site bordered by Thompsonville Road on the north and Joyland Road on the east, and will include the keystone Casino Resort (Phase 1).

To develop the Casino Resort project-generated trips, trip rates from a variety of casinos proposed in Sullivan County, NY were used, all of which contemplated full scale tribal gaming. Included were three studies for casinos in Sullivan County. A summary of these casino trip rates

is provided in Appendix E-5. The average Friday and Sunday peak hour trip rates from the compiled casino data were applied to the square footage of the proposed Casino Resort to develop the Phase 1 project-generated trips presented in **Table 11-11**.

ITE trip rates were used to develop the trip estimates for the Golf Cottages and the Entertainment Village. In addition, a 25 percent internalization rate was applied to the Entertainment Village to capture trips generated by the Entertainment Village that would originate from the adjacent Casino Hotel.

Table 11-11
2014 Build Year Trip Generation

Land Use	ITE Code	Units		Friday PM Peak Hour			Sunday PM Peak Hour		
				In	Out	Total	In	Out	Total
Casino Resort Phase 1[1]	Based on Previous Studies	517.54[2]	ksf	666	524	1,190	754	592	1,346
Golf Course (Parcels 7 and 8)- already exists, trip estimates not developed									
Golf Cottages[3]	260 (Recreational Homes)	12	d.u.	1	2	3	2	2	4
Entertainment Village									
NY Wine & Market Components[4]	814 (Specialty Retail Center)	20	Ksf	30	39	69	31	38	69
Movie Theater[5]	445 (Multiplex Movie Theater)	12	screens	161	112	273	161	112	273
Restaurant 1[6]	931 (Quality Restaurant)	7	Ksf	35	17	52	37	22	59
Restaurant 2[6]	931 (Quality Restaurant)	5.5	Ksf	27	14	41	29	17	46
Restaurant 3[6]	931 (Quality Restaurant)	5.5	Ksf	27	14	41	29	17	46
Restaurant 4[6]	931 (Quality Restaurant)	4	Ksf	20	10	30	21	13	34
Restaurant 5[6]	931 (Quality Restaurant)	3	Ksf	15	7	22	16	9	25
Pub[7]	925 (Drinking Place)	3.5	Ksf	26	14	40	26	14	40
Music Venue	-	3.5	Ksf	10	10	20	10	10	20
Billiards	-	3	Ksf	10	10	20	10	10	20
Gallery	-	5	Ksf	10	10	20	10	10	20
Kids Quest	-	10	Ksf	10	10	20	10	10	20
Comedy Club	-	10	Ksf	10	10	20	10	10	20
Bowling[8]	437 (Bowling Alley)	35	Ksf	43	81	124	43	81	124
25% Internalization				*-99*	*-99*	*-198*	*-102*	*-102*	*-204*
Entertainment Village Net New Trips				*335*	*259*	*594*	*341*	*271*	*612*
2014 Build Year Total				**1,002**	**785**	**1,787**	**1,097**	**865**	**1,962**

Notes: ksf = 1,000 square feet

1. Trip rates from other casinos, In/Out Splits from ITE
   Friday PM Trips: T = 2.3 (x) (56% enter, 44% exit);
   Sunday PM Trips: T = 2.6 (x) (56% enter, 44% exit)
2. Includes 143.4 ksf hotel, 374.135 ksf casino space, entertainment, grandstand, amenities, and back of house space. The 455 ksf structured parking is not factored into the trip generation calculations.
3. Friday PM Trips: T = 0.26 (x) (41% enter, 59% exit)
   Sunday PM Trips: T = 0.36 (x) (46% enter, 54% exit)
4. Friday PM Trips: T = 2.40(x)+21.48 (44% enter, 56% exit);
   Sunday PM Trips: T = 2.40(x)+21.48 (44% enter, 56% exit)
5. Friday PM Trips: T = 22.76(x) (59% enter, 41% exit);
   Sunday PM Trips: T = 22.76(x) (59% enter, 41% exit)
6. Friday PM Trips: T = 7.49(x) (67% enter, 33% exit);
   Sunday PM Trips: T = 8.38(x) (63% enter, 37% exit)
7. Friday PM Trips: T = 11.34(x) (66% enter,34% exit);
   Sunday PM Trips: T = 11.34(x) (66% enter,34% exit)
8. Friday PM Trip: T = 3.54(x) (35% enter, 65% exit);
   Sunday PM Trip: T = 3.54(x) (35% enter, 65% exit)

The 2014 Build Year would result in 1,787 Friday peak hour vehicle trips and 1,962 Sunday peak hour vehicle trips.

2014 BUILD YEAR TRAFFIC ASSIGNMENT

Trip distribution percentages are used to assign the project-generated auto trips to the roadway network to and from the Project Site. Trip distributions were developed based on market research provided by the Applicant (see Appendix E-5) and existing travel patterns.

Table 11-12 presents the trip distribution for project generated trips entering the study area. Once inside the study area, vehicles trips were assigned to the local roadways based on the location of the trip-generating parcel.

Table 11-12
Trip Distribution

Route to Project Site	Local Visits	Regional Visits	Induced Tourist Visits	Calculated Trip Distribution
From the North				
Via Old Liberty Road	1%	0%	0%	**1%**
Via NYS Route 42	5%	0%	0%	**5%**
Via Heiden Road	3%	0%	0%	**3%**
From the West/Southwest				
Via NYS Route 17	6%	13%	4%	**23%**
Via Broadway	7%	0%	0%	**7%**
From the East/Southeast				
Via NYS Route 17	5%	52%	4%	**61%**
Total	**28%**	**65%**	**7%**	**100%**

As summarized in **Table 11-12** and illustrated in **Figure 11-6,** a majority (61 percent) of the project-generated trips are expected to originate from the east and southeast of the Project Site and would use NYS Route 17 for traveling to and from the Project Site. Thirty (30) percent of the project-generated trips are expected to originate from the west and southwest and would use NYS Route 17 and Broadway for traveling to and from the Project Site. The remaining nine (9) percent of project-generated trips are expected to originate from the north and travel along Old Liberty Road, NYS Route 42, and Heiden Road to access the Project Site.

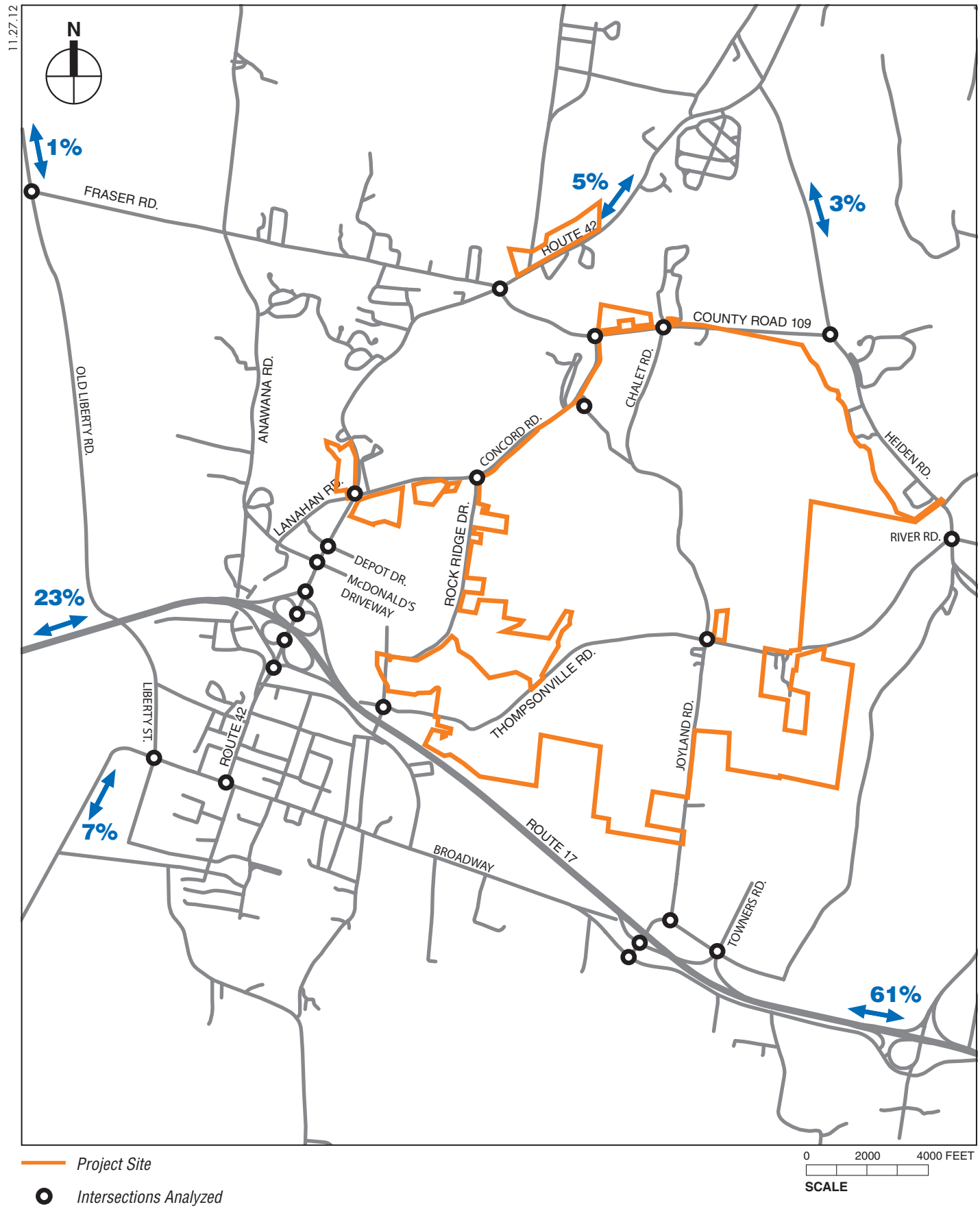
2014 Build Year -generated trips were assigned to the local network based on the trip distributions developed above for each development phase. **Figures 11-7 and 11-8** present the project only trips for the 2014 Build Year during the Friday and Sunday peak hours, respectively. **Figures 11-9 and 11-10** present the Build traffic volumes for the 2014 Build Year during the Friday and Sunday peak hours, respectively.

2014 BUILD YEAR PEAK HOUR TRAFFIC CONDITIONS

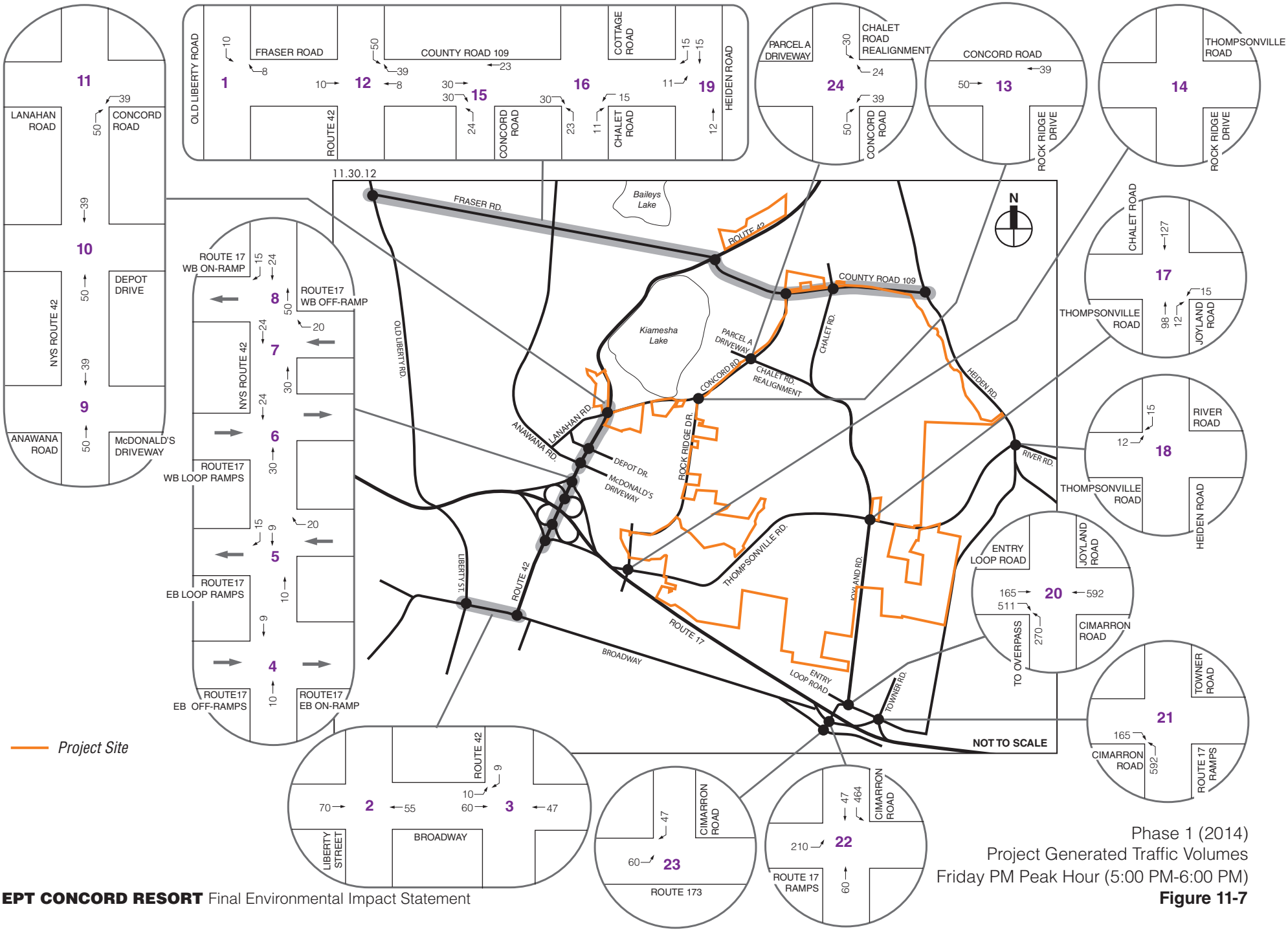
Tables 11-13 and 11-14 present a comparison of 2014 No Build and 2014 Build Year LOS conditions for signalized and unsignalized intersections, respectively. Note that as part of the Proposed Project a new four-lane entry road would be constructed from NYS Route 17 to the project site parallel to Joyland Road. 2014 Synchro 7 outputs are provided in Appendix E-6.

Table 11-13
2014 No Build and Build Level of Service Analysis
Signalized Intersections

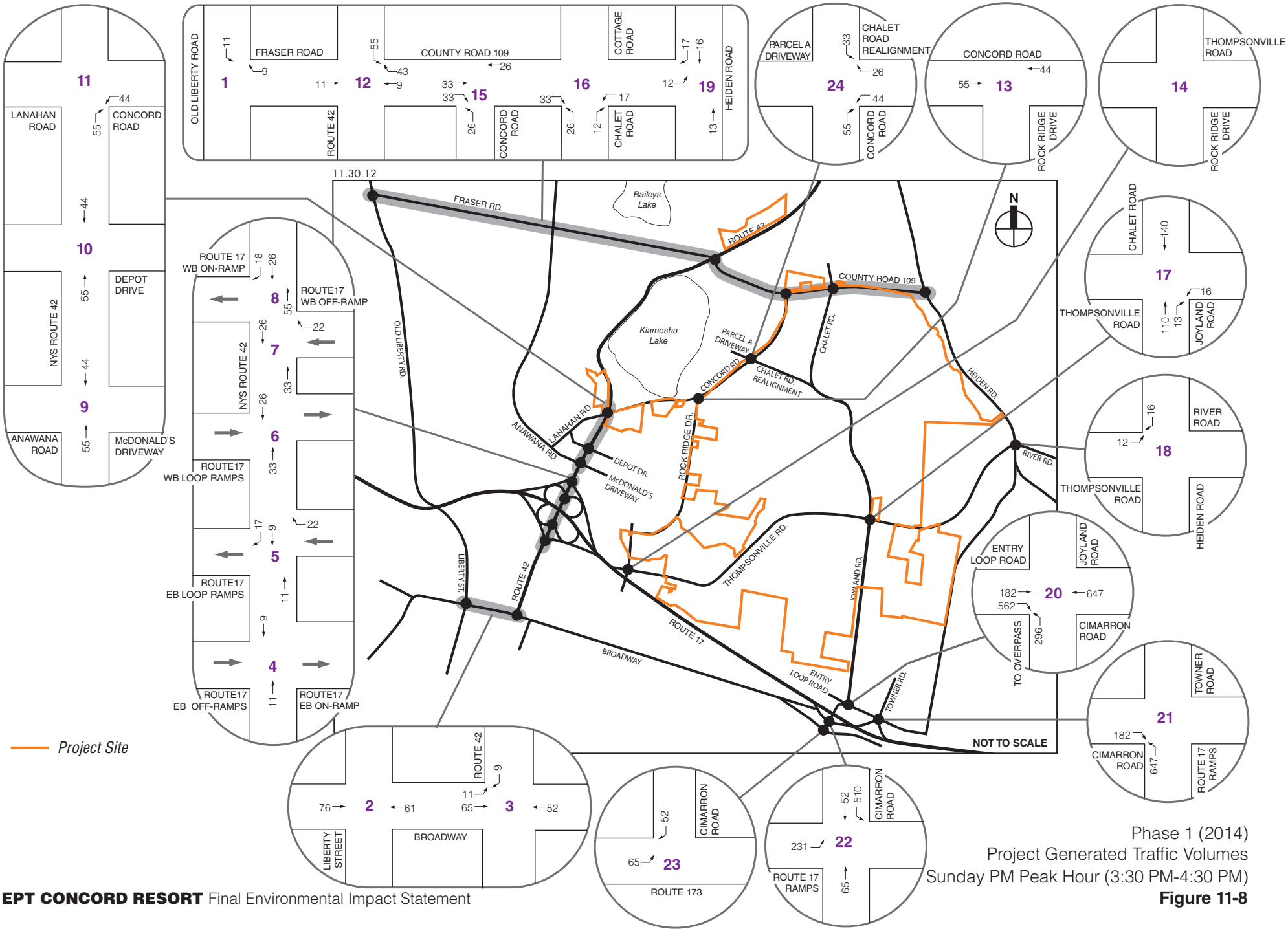
	Friday								Sunday							
	No Build				Build				No Build				Build			
Intersection	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Liberty Street and Broadway																
Eastbound	LTR	0.74	11.0	B	LTR	0.78	11.7	B	LTR	0.25	3.7	A	LTR	0.29	3.8	A
Westbound	LTR	0.61	8.9	A	LTR	0.64	9.0	A	LTR	0.27	3.7	A	LTR	0.30	3.8	A
Northbound	LTR	0.38	15.8	B	LTR	0.39	16.5	B	LTR	0.31	14.4	B	LTR	0.31	14.7	B
Southbound	LTR	0.70	22.2	C	LTR	0.71	23.4	C	LTR	0.54	16.7	B	LTR	0.55	17.3	B
	Intersection		11.6	B	Intersection		12.0	B	Intersection		5.4	A	Intersection		5.3	A
Pleasant Street and Broadway																
Eastbound	**L**	**1.06**	**69.4**	**E**	**L**	**1.12**	**89.4**	**F+**	L	0.54	7.3	A	L	0.57	7.6	A
	TR	0.74	17.0	B	TR	0.80	19.2	B	TR	0.33	12.5	B	TR	0.43	13.1	B
Westbound	L	0.14	15.2	B	L	0.17	15.7	B	L	0.31	12.1	B	L	0.32	12.1	B
	T	0.54	20.0	B	T	0.57	20.3	C	T	0.20	16.3	B	T	0.28	16.6	B
	R	0.36	18.7	B	R	0.38	18.6	B	R	0.00	15.5	B	R	0.00	15.4	B
Northbound	LT	0.14	19.0	B	LT	0.14	19.4	B	LT	0.11	13.8	B	LT	0.11	14.1	B
	R	0.01	18.2	B	R	0.01	18.6	B	R	0.01	13.4	B	R	0.01	13.6	B
Southbound	**LT**	**1.06**	**90.5**	**F**	**LT**	**1.08**	**94.9**	**F**	LT	0.65	19.8	B	LT	0.65	20.4	C
	R	0.47	11.9	B	R	0.50	12.6	B	R	0.19	6.2	A	R	0.19	6.4	A
	Intersection		35.1	D	Intersection		39.3	D	Intersection		11.2	B	Intersection		11.7	B
NYS Route 42 and NYS Route 17 WB Direct Off Ramp																
Eastbound	R	0.82	29.0	C	R	0.84	31.1	C	R	0.58	15.2	B	R	0.61	16.3	B
Northbound	T	0.74	13.6	B	T	0.75	14.2	B	T	0.49	8.0	A	T	0.51	8.5	A
Southbound	T	0.77	2.1	A	T	0.78	2.3	A	T	0.68	1.1	A	T	0.70	1.2	A
	Intersection		12.2	B	Intersection		13.0	B	Intersection		6.5	A	Intersection		7.0	A
NYS Route 42 and Anawana Lake Road																
Eastbound	L	0.67	46.0	D	L	0.67	46.0	D	L	0.50	33.9	C	L	0.50	34.2	C
	T	0.02	34.1	C	T	0.02	34.1	C	T	0.04	28.5	C	T	0.04	28.7	C
	R	0.20	36.0	D	R	0.20	36.0	D	R	0.23	30.4	C	R	0.23	30.6	C
Westbound	**L**	**0.41**	**58.2**	**E**	**L**	**0.41**	**58.2**	**E**	**L**	**0.57**	**55.4**	**E**	**L**	**0.57**	**55.5**	**E**
	TR	**0.08**	**55.1**	**E**	**TR**	**0.08**	**55.1**	**E**	TR	0.14	48.9	D	TR	0.14	49.1	D
Northbound	**L**	**0.88**	**61.1**	**E**	**L**	**0.88**	**61.1**	**E**	L	0.69	53.6	D	L	0.69	54.1	D
	TR	0.66	19.3	B	TR	0.68	19.9	B	TR	0.63	22.6	C	TR	0.66	23.3	C
Southbound	**L**	**0.48**	**64.0**	**E**	**L**	**0.48**	**64.0**	**E**	**L**	**0.55**	**58.0**	**E**	**L**	**0.55**	**58.3**	**E**
	TR	**1.15**	**112.6**	**F**	**TR**	**1.17**	**123.9**	**F**	TR	0.95	45.2	D	TR	0.98	50.3	D
	Intersection		**65.3**	**E**	**Intersection**		**69.7**	**E**	Intersection		37.5	D	Intersection		37.9	D
NYS Route 42 and Depot Drive																
Eastbound	**LTR**	**0.63**	**70.0**	**E**	**LTR**	**0.63**	**70.0**	**E**	**LTR**	**0.36**	**56.7**	**E**	**LTR**	**0.35**	**57.9**	**E**
Westbound	**L**	**1.04**	**100.0**	**F**	**L**	**1.04**	**100.0**	**F**	**L**	**1.26**	**188.2**	**F**	**L**	**1.30**	**208.0**	**F**
	LTR	**0.84**	**55.8**	**E**	**LTR**	**0.84**	**55.8**	**E**	LTR	0.78	49.5	D	LTR	0.81	54.6	D
Northbound	**L**	**0.21**	**65.3**	**E**	**L**	**0.21**	**65.3**	**E**	**L**	**0.48**	**63.5**	**E**	**L**	**0.49**	**65.3**	**E**
	TR	**1.07**	**84.6**	**F**	**TR**	**1.11**	**99.5**	**F**	TR	0.79	36.8	D	TR	0.81	37.0	D
Southbound	**L**	**0.67**	**61.6**	**E**	**L**	**0.67**	**61.6**	**E**	**L**	**0.67**	**57.9**	**E**	**L**	**0.69**	**60.7**	**E**
	TR	0.79	29.5	C	TR	0.82	30.7	C	TR	0.62	24.7	C	TR	0.64	24.5	C
	Intersection		**63.2**	**E**	**Intersection**		**69.4**	**E**	Intersection		52.0	D	Intersection		53.9	D
NYS Route 42 and Concord Road																
Eastbound	L	0.38	49.9	D	L	0.38	50.6	D	L	0.42	38.7	D	L	0.42	39.6	D
	TR	0.16	47.7	D	TR	0.16	48.3	D	TR	0.09	35.5	D	TR	0.09	36.2	D
Westbound	L	0.84	54.0	D	**L**	**0.88**	**57.4**	**E+**	L	0.59	26.9	C	L	0.65	28.5	C
	LTR	0.83	52.0	D	LTR	0.85	54.4	D	LTR	0.59	26.9	C	LTR	0.64	28.2	C
Northbound	L	0.58	22.2	C	L	0.60	23.9	C	L	0.03	10.4	B	L	0.03	10.7	B
	T	0.93	36.1	D	T	0.95	39.2	D	T	0.64	17.3	B	L	0.64	17.7	B
	R	0.28	0.5	A	R	0.31	0.5	A	R	0.28	0.4	A	L	0.32	0.5	A
Southbound	L	0.23	15.8	B	L	0.23	16.6	B	L	0.02	10.3	B	L	0.02	10.6	B
	TR	0.52	14.5	B	TR	0.53	15.2	B	TR	0.44	13.4	B	TR	0.44	13.8	B
	Intersection		27.7	D	Intersection		29.5	D	Intersection		15.6	A	Intersection		16.1	B
NYS Route 42 and Fraser Road/Kiamesha Lake Road																
Eastbound	LTR	0.32	19.3	B	LTR	0.34	19.6	B	LTR	0.10	15.2	B	LTR	0.12	15.4	B
Westbound	**LTR**	**1.37**	**207.4**	**F**	**LTR**	**1.50**	**265.9**	**F**	**LTR**	**1.04**	**75.2**	**E**	**LTR**	**1.17**	**119.7**	**F+**
Northbound	**LTR**	**1.31**	**168.0**	**F**	**LTR**	**1.31**	**170.2**	**F**	LTR	0.83	28.0	C	LTR	0.83	28.2	C
Southbound	LTR	0.74	20.4	C	LTR	1.00	53.2	D	LTR	0.39	14.1	B	LTR	0.57	17.0	B
	Intersection		**126.5**	**F**	**Intersection**		**149.7**	**F**	Intersection		39.5	D	Intersection		**55.4**	**E**
Cimarron Road and Route 173																
Eastbound	L	0.33	3.2	A	L	0.47	3.8	A	L	0.32	3.1	A	L	0.47	3.8	A
	T	0.09	2.2	A	T	0.09	2.3	A	T	0.08	2.2	A	T	0.08	2.3	A
Westbound	TR	0.10	7.3	A	TR	0.12	7.7	A	TR	0.11	7.3	A	TR	0.13	7.7	A
Southbound	L	0.38	17.9	B	L	0.40	17.4	B	L	0.18	15.4	B	L	0.19	14.6	B
	R	0.05	10.0	B	R	0.06	9.2	A	R	0.04	10.1	B	R	0.06	9.3	A
	Intersection		6.1	A	Intersection		6.2	A	Intersection		5.8	A	Intersection		6.0	A



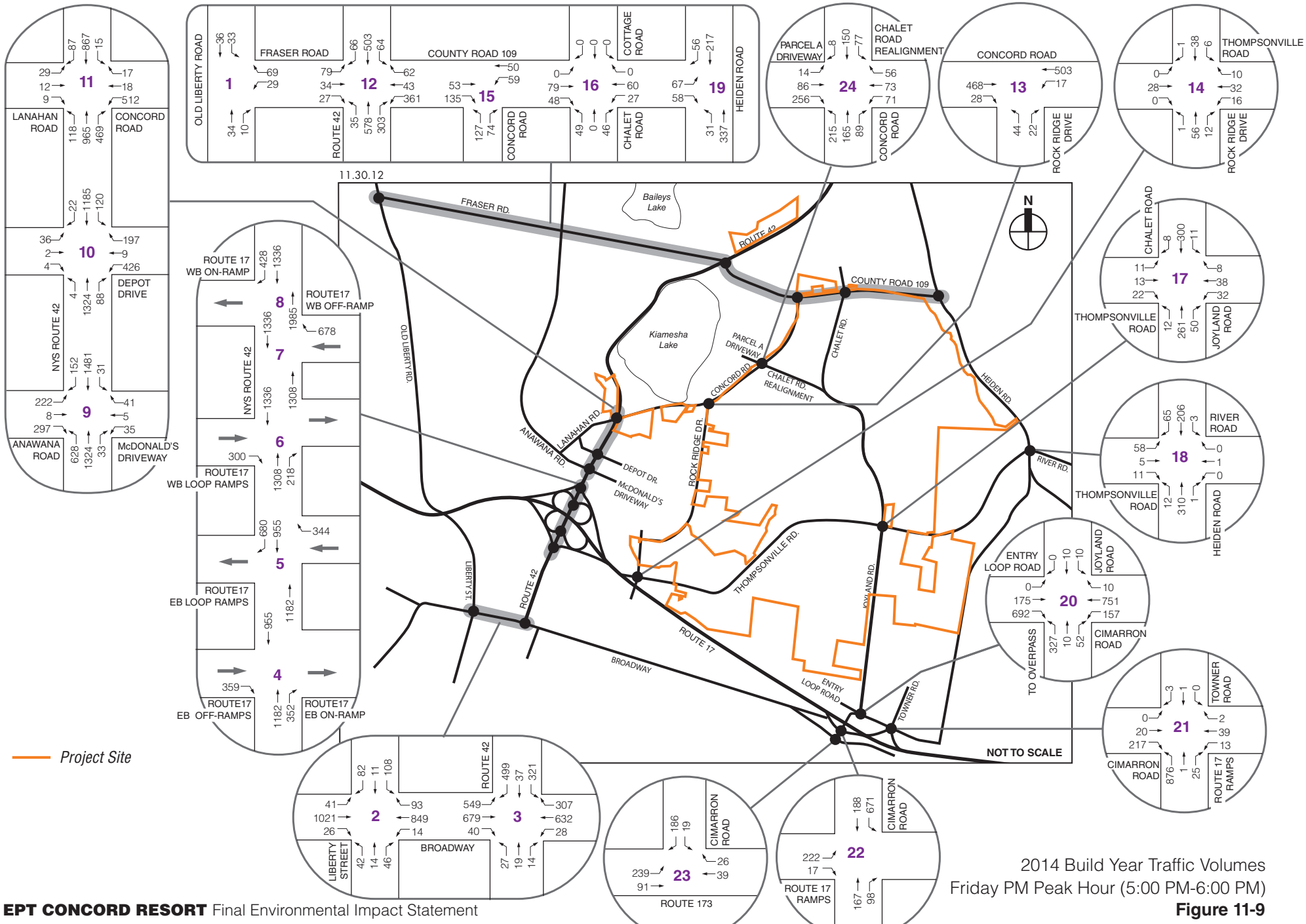
Trip Distribution
Figure 11-6



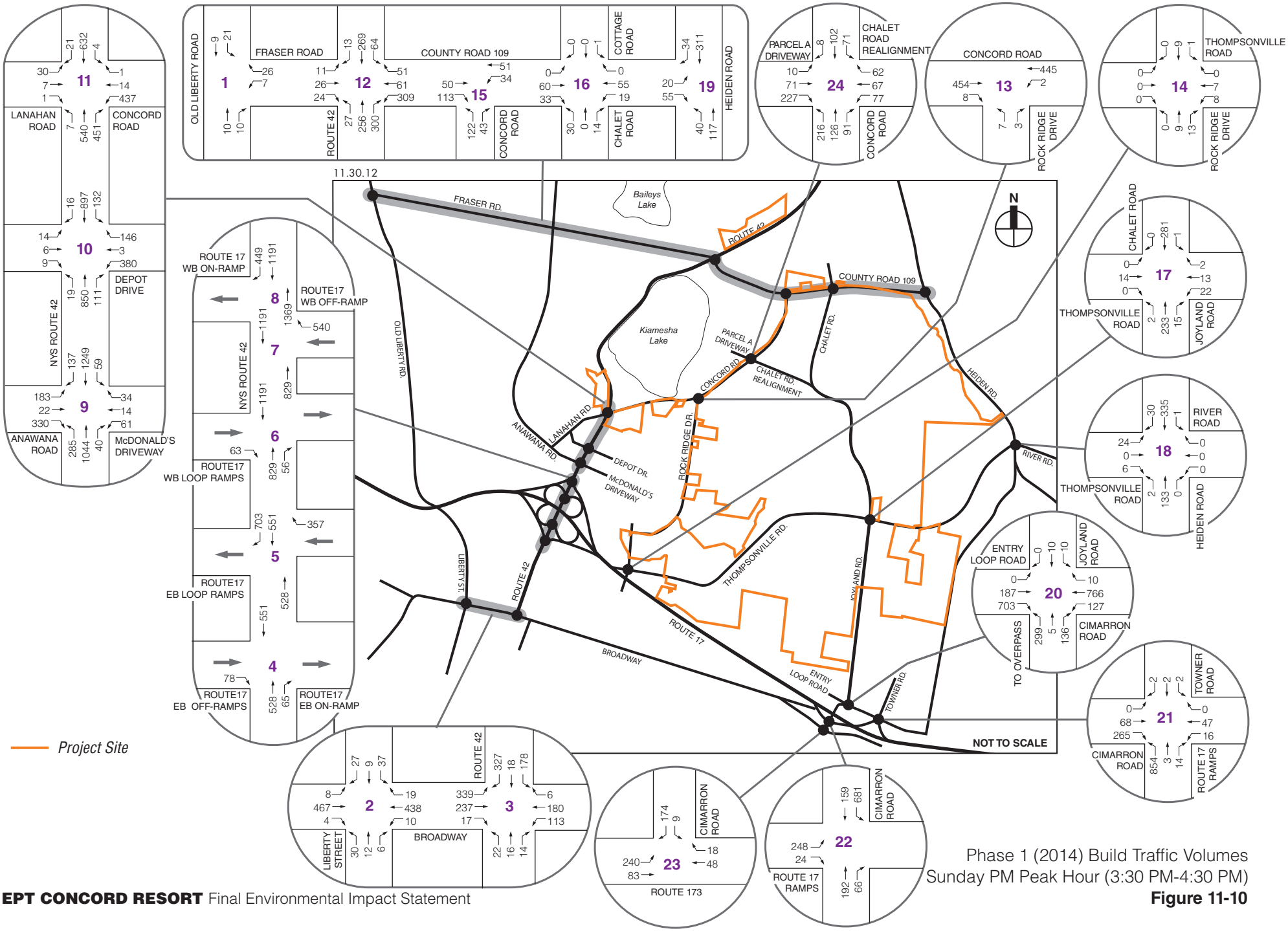
Phase 1 (2014)
Project Generated Traffic Volumes
Friday PM Peak Hour (5:00 PM-6:00 PM)
Figure 11-7



Phase 1 (2014)
Project Generated Traffic Volumes
Sunday PM Peak Hour (3:30 PM-4:30 PM)
Figure 11-8



2014 Build Year Traffic Volumes
Friday PM Peak Hour (5:00 PM-6:00 PM)
Figure 11-9



Phase 1 (2014) Build Traffic Volumes
Sunday PM Peak Hour (3:30 PM-4:30 PM)
Figure 11-10

Table 11-13 (cont'd)
2014 No Build and Build Level of Service Analysis
Signalized Intersections

	Friday								Sunday							
	No Build				Build				No Build				Build			
Intersection	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Chalet Road and Concord Road																
Eastbound	L	0.05	18.0	B	L	0.05	18.0	B	L	0.04	17.9	B	L	0.04	17.9	B
	TR	0.63	24.3	C	TR	0.63	24.3	C	TR	0.53	21.6	C	TR	0.53	21.6	C
Westbound	L	0.27	20.0	C	L	0.55	24.3	C	L	0.26	19.7	B	L	0.55	23.3	C
	TR	0.24	19.1	B	TR	0.26	19.1	B	TR	0.25	19.0	B	TR	0.27	19.0	B
Northbound	L	0.60	23.2	C	L	0.60	23.2	C	L	0.59	21.4	C	L	0.59	21.4	C
	TR	0.30	12.8	B	TR	0.42	15.5	B	TR	0.22	10.3	B	TR	0.32	12.7	B
Southbound	L	0.40	28.6	C	L	0.42	28.6	C	L	0.49	30.5	C	L	0.51	30.5	C
	TR	0.38	19.7	B	TR	0.42	20.4	C	TR	0.26	17.5	B	TR	0.28	18.1	B
	Intersection		20.8	C	Intersection		20.8	C	Intersection		19.2	B	Intersection		19.2	B

Notes: L = Left Turn, T = Through, R = Right Turn; v/c = volume to capacity ratio; LOS = Level of Service;
Bold indicates operations LOS E or worse
+ Indicates significant impact

Table 11-14
2014 No Build and Build Level of Service Analysis
Unsignalized Intersections

	Friday								Sunday							
	No Build				Build				No Build				Build			
Intersection	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Old Liberty Road and Fraser Road																
Westbound	LR	0.11	9.3	A	LR	0.12	9.4	A	LR	0.03	8.6	A	LR	0.04	8.7	A
Northbound	TR	0.03	0.0	A	TR	0.03	0.0	A	TR	0.02	0.0	A	TR	0.02	0.0	A
Southbound	LT	0.02	2.9	A	LT	0.03	3.6	A	LT	0.01	3.9	A	LT	0.02	5.2	A
	Intersection		5.1	A	Intersection		5.5	A	Intersection		4.5	A	Intersection		5.1	A
Rock Ridge Drive and Concord Road																
Eastbound	TR	0.31	0.0	A	TR	0.35	0.0	A	TR	0.30	0.0	A	TR	0.34	0.0	A
Westbound	LT	0.02	0.6	A	LT	0.02	0.6	A	LT	0.00	0.1	A	LT	0.00	0.1	A
Northbound	LR	0.31	24.0	C	LR	0.36	28.3	D	LR	0.04	17.5	C	LR	0.05	19.9	C
	Intersection		2.0	A	Intersection		2.1	A	Intersection		0.3	A	Intersection		0.3	A
Rock Ridge Drive and Thompsonville Road																
Eastbound	LTR	0.04	7.5	A	LTR	0.04	7.5	A	LTR	0.00	7.0	A	LTR	0.00	7.0	A
Westbound	LTR	0.08	7.6	A	LTR	0.08	7.6	A	LTR	0.02	7.2	A	LTR	0.02	7.2	A
Northbound	LTR	0.11	7.6	A	LTR	0.11	7.6	A	LTR	0.03	6.7	A	LTR	0.03	6.7	A
Southbound	LTR	0.07	7.6	A	LTR	0.07	7.6	A	LTR	0.01	7.1	A	LTR	0.01	7.1	A
	Intersection		7.6	A	Intersection		7.6	A	Intersection		7.0	A	Intersection		7.0	A
Concord Road and Kiamesha Lake Road																
Eastbound	TR	0.10	0.0	A	TR	0.15	0.0	A	TR	0.08	0.0	A	TR	0.13	0.0	A
Westbound	L	0.05	7.7	A	L	0.06	7.9	A	L	0.03	7.6	A	L	0.03	7.8	A
	T	0.02	0.0	A	T	0.04	0.0	A	T	0.02	0.0	A	T	0.04	0.0	A
Northbound	LR	0.26	11.4	B	LR	0.34	13.0	B	LR	0.23	10.7	B	LR	0.31	12.2	B
	Intersection		5.9	A	Intersection		5.8	A	Intersection		5.9	A	Intersection		5.5	A
Chalet Road and Kiamesha Lake Road																
Eastbound	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Westbound	LTR	0.01	1.3	A	LTR	0.02	2.5	A	LTR	0.00	0.3	A	LTR	0.02	2.0	A
Northbound	LTR	0.08	9.7	A	LTR	0.14	10.5	B	LTR	0.01	9.2	A	LTR	0.07	9.9	A
Southbound	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	9.5	A	LTR	0.00	10.2	B
	Intersection		2.8	A	Intersection		3.7	A	Intersection		0.7	A	Intersection		2.9	A
Chalet Road and Thompsonville Road																
Eastbound	LTR	0.09	8.6	A	LTR	0.10	9.7	A	LTR	0.02	7.9	A	LTR	0.03	8.8	A
Westbound	LTR	0.12	9.0	A	LTR	0.17	10.5	B	LTR	0.04	7.9	A	LTR	0.08	9.2	A
Northbound	LTR	0.36	10.0	A	LT	0.56	14.1	B	LTR	0.20	8.3	A	LT	0.44	10.7	B
	-	-	-	-	R	0.09	7.1	A	-	-	-	-	R	0.02	6.2	A
Southbound	LTR	0.33	9.9	A	LTR	0.60	15.6	B	LTR	0.22	8.4	A	LTR	0.48	11.9	B
	Intersection		9.7	A	Intersection		13.6	B	Intersection		8.3	A	Intersection		11.0	B

Table 11-14 (cont'd)
2014 No Build and Build Level of Service Analysis
Unsignalized Intersections

	Friday								Sunday							
	No Build				Build				No Build				Build			
Intersection	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Heiden Road and Thompsonville Road																
Eastbound	LTR	0.17	14.8	B	LTR	0.21	15.5	C	LTR	0.05	12.8	B	LTR	0.09	13.7	B
Westbound	LTR	0.00	14.2	B	LTR	0.00	14.4	B	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Northbound	LTR	0.01	0.4	A	LTR	0.01	0.4	A	LTR	0.00	0.1	A	LTR	0.00	0.1	A
Southbound	LTR	0.00	0.1	A	LTR	0.00	0.1	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A
	Intersection		1.9	A	Intersection		2.2	A	Intersection		0.5	A	Intersection		0.9	A
Heiden Road and Kiamesha Lake Road																
Eastbound	LR	0.28	14.5	B	LR	0.33	16.1	C	LR	0.11	11.4	B	LR	0.15	12.5	B
Northbound	LT	0.03	0.9	A	LT	0.03	0.9	A	LT	0.04	2.6	A	LT	0.05	2.4	A
Southbound	TR	0.17	0.0	A	TR	0.19	0.0	A	TR	0.22	0.0	A	TR	0.24	0.0	A
	Intersection		3.0	A	Intersection		3.3	A	Intersection		2.0	A	Intersection		2.2	A
Cimarron Road and Joyland Road																
Eastbound	LT	0.08	5.1	A	LT	0.41	14.9	B	LT	0.01	0.5	A	LT	0.44	15.5	C
					R	**1.48**	**243.3**	**F+**					**R**	**1.50**	**253.5**	**F+**
Westbound	TR	0.26	0.0	A	LTR	**2.49**	**>300**	**F+**	TR	0.20	0.0	A	**LTR**	**2.44**	**>300**	**F+**
Northbound					LTR	**1.05**	**80.6**	**F+**					**LTR**	**1.16**	**118.1**	**F+**
Southbound	LR	0.41	14.0	B	LTR	0.07	13.4	B	LR	0.29	11.7	B	LTR	0.07	13.4	B
	Intersection		5.4	A	**Intersection**		**>300**	**F**	Intersection		3.6	A	**Intersection**		**>300**	**F**
Cimarron Road and Towner Road/NYS Route 17 Westbound Ramps																
Eastbound	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Westbound	LTR	0.01	1.9	A	LTR	0.01	2.0	A	LTR	0.02	2.0	A	LTR	0.02	2.2	A
Northbound	LTR	0.40	12.3	B	**LTR**	**1.39**	**204.2**	**F+**	LTR	0.34	12.8	B	**LTR**	**1.61**	**>300**	**F+**
Southbound	LTR	0.01	9.0	A	LTR	0.01	9.4	A	LTR	0.01	10.1	B	LTR	0.01	11.2	B
	Intersection		8.4	A	**Intersection**		**144.5**	**F**	Intersection		3.6	A	**Intersection**		**>300**	**F**
Cimarron Road and NYS Route 17 Eastbound Ramps																
Eastbound	LTR	0.09	14.3	B	**LTR**	**15.97**	**>300**	**F+**	LTR	0.11	13.0	**B**	**LTR**	**13.82**	**>300**	**F+**
Northbound	TR	0.13	0.0	A	TR	0.16	0.0	A	TR	0.12	0.0	A	TR	0.16	0.0	A
Southbound	LT	0.18	5.6	A	LT	0.63	11.7	B	LT	0.15	5.5	A	LT	0.64	11.8	B
	Intersection		4.3	A	**Intersection**		**>300**	**F**	Intersection		4.3	A	**Intersection**		**>300**	**F**

Notes: L = Left Turn, T = Through, R = Right Turn; v/c = volume to capacity ratio; LOS = Level of Service;
Bold indicates operations LOS E or worse
+ Indicates significant impact

For the purpose of this analysis, significant adverse impacts are identified as: (1) any change in LOS D or better to LOS E or F; or (2) any change from LOS E to LOS F. The significant impact criteria are applied to the approach/lane group LOS for signalized intersections and approach/movement group LOS for unsignalized intersections. In addition to intersection LOS, 95th percentile queue lengths were analyzed to determine if the addition of project-generated trips result in turning volumes significantly exceeding storage capacity of a turning lane. The significance criteria were developed with the Town of Thompson and the Town's consultant. Under the Phase 1 conditions, absent mitigation, there would be the following significant impacts for the following intersections based on the criteria described above:

- Pleasant Street and Broadway – during the Friday peak hour, the eastbound left-turn lane would deteriorate from LOS E to LOS F conditions.
- NYS Route 42 and Concord Road – during the Friday peak hour, the westbound left-turn lane deteriorates from LOS D to LOS E conditions.
- NYS Route 42 and Kiamesha Lake Road – during the Sunday peak hour, the westbound approach would deteriorate from LOS E to LOS F conditions.
- Joyland Road and Cimarron Road – the westbound and northbound approaches would deteriorate from LOS A to LOS F conditions during the Friday and Sunday peak hours.

- NYS Route 17 Westbound Ramps/Towner Road and Cimarron Road – the northbound approach would deteriorate from LOS B to LOS F conditions during the Friday and Sunday peak hours.
- NYS Route 17 Eastbound Ramps and Cimarron Road – the eastbound approach would deteriorate from LOS B to LOS F conditions during the Friday and Sunday peak hours.

There are also locations that operate at LOS F conditions under the No Build scenario which would further deteriorate by more than five seconds with the addition of project traffic. While not considered an impact based on the above significance criteria, potential improvement measures have been identified that local agencies can implement to improve No Build and Build conditions at the following locations:

- NYS Route 42 and Anawana Lake Road - southbound through/right-turn lanes during the Friday peak hour. Improvements could include signal timing adjustments.
- NYS Route 42 and Deport Drive – northbound through/right-turn lanes during the Friday peak hour. Westbound left-turn lane during the Sunday peak hour. Improvements could include signal timing adjustments.
- NYS Route 42 and Fraser Road/Kiamesha Lake Road – westbound approach during Friday peak hour. Improvements could include signal timing adjustments and roadway improvements on the westbound approach. Note that the need for roadway improvements on the westbound approach is triggered by the No Build volumes.

2014 BUILD YEAR PEAK HOUR TRAFFIC MITIGATION MEASURES

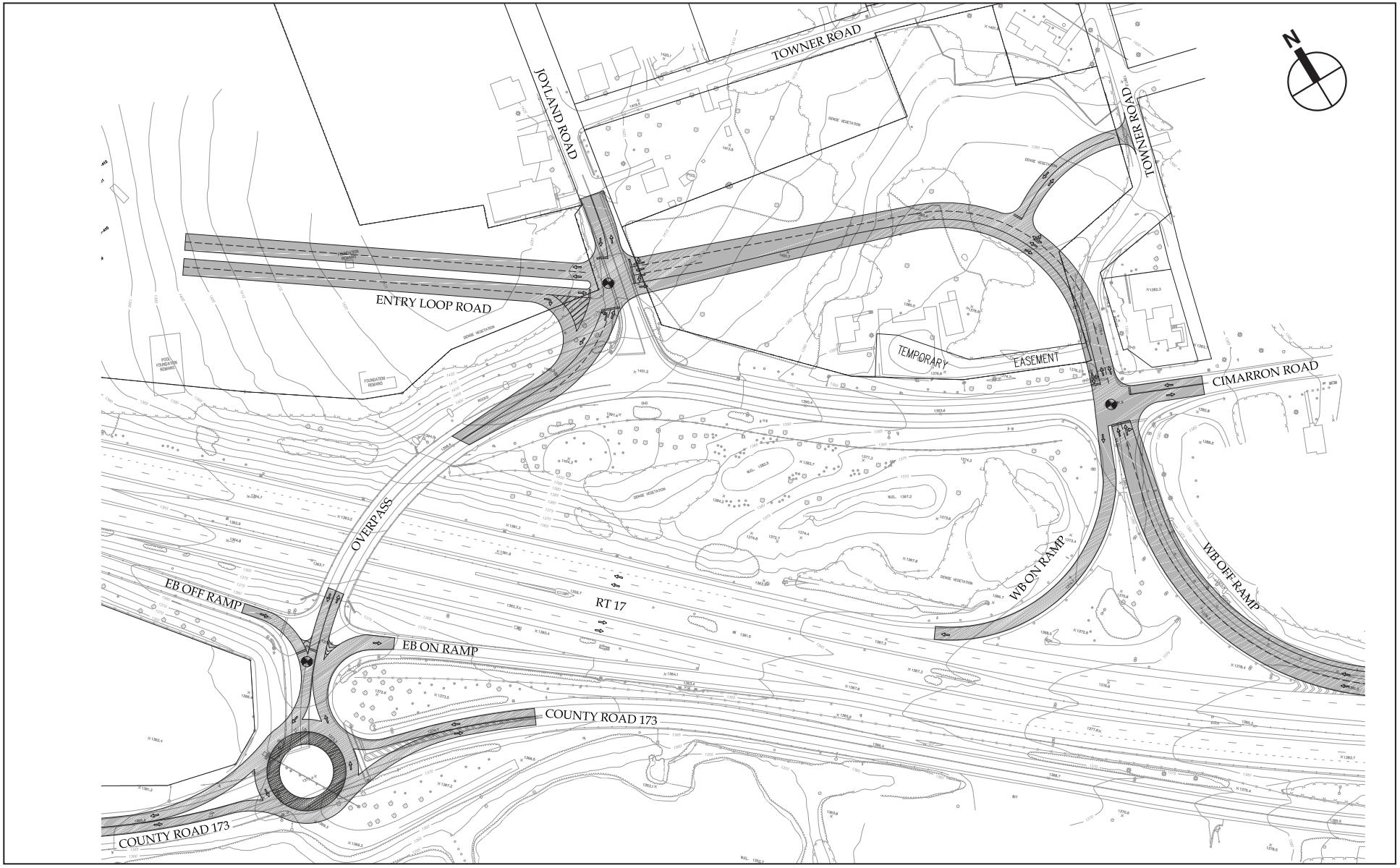
The following presents a summary of the proposed mitigation measures at each of the above impacted intersection locations. **Table 11-15** summarizes the mitigation measures for each intersection. **Tables 11-15 and 11-16** present the recommended mitigation and LOS results at the impacted intersections with the mitigation in place during the Friday and Sunday peak hours, respectively. 2014 Build Year with mitigation Synchro 7 outputs is provided in Appendix E-7. Signal warrant analyses are presented in Appendix E-8. To analyze the redesigned Interchange 106, a traffic micro-simulation model was developed using the VISSIM software in order to evaluate the proposed roundabout at the County Road 173/Overpass intersection.

- Pleasant Street and Broadway – Adjust signal timings to reallocate green time to the eastbound left-turn movement during the Friday peak hour. With this mitigation measure all approaches operate at LOS D or better;
- NYS Route 42 and Concord Road – Adjust signal timings to reallocate green time to the westbound approach during the Friday peak hour. With this mitigation measure all approaches operate at LOS D or better;
- NYS Route 42 and Kiamesha Lake Road – Adjust signal timings to reallocate green time to westbound approach during the Sunday peak hour. With this mitigation measure all approaches operate at LOS C or better;
- Joyland Road and Cimarron Road, NYS Route 17 Westbound Ramps/Towner Road and Cimarron Road, NYS Route 17 Eastbound Ramps and Cimarron Road intersections – Redesign Interchange 106 (See **Figure 11-11**). The redesigned interchange was evaluated using the VISSIM micro-simulation software. With this mitigation all approaches at the Interchange 106 intersections will operate at LOS D or better except for the westbound approach at the County Road 173/Overpass roundabout, which would operate at LOS E

conditions. When presented to DOT and the County, the LOS E condition was accepted due to the low volumes experiencing this delay.

Table 11-15
2014 Build Year Mitigation Measures Summary

Intersection	Mitigations Measures
Pleasant Street and Broadway	• Adjust signal timings to reallocate green time to eastbound left-turn lane during the Friday peak hour.
NYS Route 42 / Concord Road	• Adjust signal timings to reallocate green time to westbound approach during the Friday peak hour.
NYS Route 42 / Kiamesha Lake Road	• Adjust signal timings to reallocate green time to westbound approach during the Sunday peak hour.
Interchange 106 (Joyland Road/Cimarron Road; NYS Route 17 WB Ramps/Cimarron Road; NYS Route 17 EB Ramps/Cimarron Road)	• Realign Cimarron Road. • Install signal at NYS Route 17 WB ramps/Cimarron Road intersection. • Install signal at Joyland Road/Cimarron Road/New Entry Road intersection. • Install signal at NYS Route 17 EB ramps/Cimarron Road intersection. • Prohibit westbound left-turns and southbound left-turns at NYS Route 17 EB ramps/Cimarron Road intersection • Install roundabout at County Road 173/Cimarron Road intersection (See **Figure 11-11**)
*Note: Local roads, including Chalet, Thompsonville, Rock Ridge and Concord Road, will be assessed as part of site plan review for each phase.	



Interchange 106 Schematic

Figure 11-11

Table 11-16
2014 Build and Build with Mitigation
Level of Service Analysis
Friday Peak Hour

Intersection	Lane Group	Build v/c Ratio	Build Delay (sec)	Build LOS	Build with Mitigation v/c Ratio	Build with Mitigation Delay (sec)	Build with Mitigation LOS	Mitigation
Pleasant Street and Broadway								
Eastbound	**L**	**1.12**	**89.4**	**F+**	0.95	44.5	D	-Implement new signal timing plan
	TR	0.80	19.2	B	0.83	24.1	C	
Westbound	L	0.17	15.7	B	0.20	23.9	C	Existing / New
	T	0.57	20.3	C	0.88	42.7	D	Cycle Length: 82.6 sec / 82.6 sec
	R	0.38	18.6	B	0.67	33.9	C	Phasing: / Timing in sec (G/Y/R)
Northbound	LT	0.14	19.4	B	0.11	19.4	B	EB-L/WB-L.SBR: 15/3.2/1 / 10.8/3.2/1
	R	0.01	18.6	B	0.01	18.6	B	EB Protected/SB-R: - / 10.8/3.2/1
Southbound	**LT**	**1.08**	**94.9**	**F**	0.93	54.9	D	EB/WB: 35/3.2/1 / 14.8/3.2/1
	R	0.50	12.6	B	0.45	8.0	A	NB/SB: 20/3.2/1 / 29.4/3.2/1
	Intersection		39.3	D		33.2	C	
NYS Route 42 and Concord Road								
Eastbound	L	0.38	50.6	D	0.38	51.1	D	-Implement new signal timing plan
	TR	0.16	48.3	D	0.16	48.8	D	
Westbound	**L**	**0.88**	**57.4**	**E+**	0.86	54.8	D	Existing / New
	LTR	0.85	54.4	D	0.84	52.1	D	Cycle Length: 120 sec / 120 sec
Northbound	L	0.60	23.9	C	0.60	24.6	C	Phasing: / Timing in sec (G/Y/R)
	T	0.95	39.2	D	0.95	40.5	D	NB/SB: 60.1/3.9/1 / 60.1/3.9/1
	R	0.31	0.5	A	0.31	0.5	A	EB Protected: 18.5/3.5/1 / 15.5/3.5/1
Southbound	L	0.23	16.6	B	0.23	16.8	B	WB Protected: 27.5/3.5/1 / 30.5/3.5/1
	TR	0.53	15.2	B	0.53	15.6	B	
	Intersection		29.5	C		29.5	C	
Cimarron Road and Joyland Road								
Eastbound	LT	0.41	14.9	B	-	17.9	B	See Figure 11-11. Build with Mitigation results based on VISSIM micro-simulation runs.
	R	**1.48**	**243.3**	**F+**	-	12.4	B	
Westbound	**LTR**	**2.49**	**>300**	**F+**	-	27.7	C	
	L	-	-	-	-	9.7	A	
Northbound	**LTR**	**1.05**	**80.6**	**F+**	-	22.9	C	
	L	-	-	-	-	15.5	B	
Southbound	LTR	0.07	13.4	B	-	34.9	C	
	Intersection		**284.5**	**F**	-	15.7	B	
Cimarron Road and NYS Route 17 Westbound Ramps								
Eastbound	LTR	0.00	0.0	A	-	-	-	See Figure 11-11. Build with Mitigation results based on VISSIM micro-simulation runs.
Westbound	LTR	0.01	2.0	A	-	8.7	A	
Northbound	**LTR**	**1.39**	**204.2**	**F+**	-	2.1	A	
Southbound	LTR	0.01	9.4	A	-	2.2	A	
	Intersection		**144.5**	**F**	-	2.4	A	
Cimarron Road and NYS Route 17 Eastbound Ramps								
Eastbound	**LTR**	**15.97**	**>300.0**	**F+**	-	25.6	C	See Figure 11-11. Build with Mitigation results based on VISSIM micro-simulation runs.
Northbound	TR	0.16	0.0	A	-	-	-	
Southbound	LT	0.63	11.7	B	-	11.2	B	
	Intersection		**>300.0**	**F+**	-	14.3	B	
Cimarron Road and County Road 173 (Roundabout with Mitigation, LOS presented for approach)								
Eastbound	L	0.47	3.8	A	-	31.2	D	See Figure 11-11. Build with Mitigation results based on VISSIM micro-simulation runs.
	T	0.09	2.3	A	-	-	-	
Westbound	TR	0.12	7.7	A	-	**48.2**	**E**	
Southbound	L	0.40	17.4	B	-	-	-	
	R	0.06	9.2	A	-	3.4	A	
	Intersection		6.2	A	-	11.4	B	

Table 11-17
2014 Build and Build with Mitigation
Level of Service Analysis
Sunday Peak Hour

Intersection	Lane Group	Sunday Peak Hour: Build v/c Ratio	Build Delay (sec)	Build LOS	Build with Mitigation v/c Ratio	Build with Mitigation Delay (sec)	Build with Mitigation LOS	Mitigation
Pleasant Street and Broadway								
Eastbound	LTR	0.12	15.4	B	0.11	14.5	B	-Provide new westbound left-turn lane
Westbound	**LTR**	**1.17**	**119.7**	**F+**	0.82	30.8	C	-Implement new signal timings
	L	-	-	-	0.18	15.0	B	-The improvements at this location would be
Northbound	LTR	0.83	28.2	C	0.86	30.3	C	implemented by CALP as impacts do not occur under
Southbound	LTR	0.57	17.0	B	0.64	19.9	B	scenarios without CALP traffic (see sensitivity
	Intersection		**55.4**	**E**		25.9	C	analysis).
Cimarron Road and Joyland Road								
Eastbound	LT	0.44	15.5	C	-	17.6	B	See Figure 11-11. Build with Mitigation results based on VISSIM micro-simulation runs.
	R	**1.50**	**253.5**	**F+**	-	12.1	B	
Westbound	**LTR**	**2.44**	**>300**	**F+**	-	27.8	C	
					-	10.6	B	
Northbound	**LTR**	**1.16**	**118.1**	**F+**	-	21.1	C	
					-	16.7	B	
Southbound	LTR	0.07	13.4	B	-	32.9	C	
	Intersection		**>300.0**	**F**	-	14.6	B	
Cimarron Road and NYS Route 17 Westbound Ramps								
Eastbound	LTR	0.00	0.0	A	-	-	-	See Figure 11-11. Build with Mitigation results based on VISSIM micro-simulation runs.
Westbound	LTR	0.02	2.2	A	-	10.6	B	
Northbound	**LTR**	**1.61**	**300.4**	**F+**	**-**	2.1	A	
Southbound	LTR	0.01	11.2	B	-	3.5	A	
	Intersection		**>300.0**	**F**	-	2.9	A	
Cimarron Road and NYS Route 17 Eastbound Ramps								
Eastbound	**LTR**	**13.82**	**>300.0**	**F+**	**-**	26.5	C	See Figure 11-11. Build with Mitigation results based on VISSIM micro-simulation runs.
Northbound	TR	0.16	0.0	A	-	-	-	
Southbound	LT	0.64	11.8	B	-	11.9	B	
	Intersection		**>300.0**	**F+**	-	15.4	B	
Cimarron Road and County Road 173 (Roundabout with Mitigation, LOS presented for approach)								
Eastbound	L	0.47	3.8	A	-	31.9	D	See Figure 11-11. Build with Mitigation results based on VISSIM micro-simulation runs.
	T	0.08	2.3	A	-	-	-	
Westbound	TR	0.13	7.7	A	-	**48.1**	**E**	
Southbound	L	0.19	14.6	B	-	-	-	
	R	0.06	9.3	A	-	3.4	A	
	Intersection		6.0	A	-	11.6	B	

In addition, the ITS described in the "Introduction" of this chapter will be included in the analyses for future mitigation.

Improvements to local roads, including Chalet, Thompsonville, Rock Ridge and Concord Road, if necessary, may be required for Phase 1 and subsequent phases. The Applicant will coordinate with the Town on a program to monitor the conditions of the public roadways utilized for access to Phase 1. Based on the results of this monitoring program, the Applicant and the Town will agree upon the work necessary to improve the roads. The Applicant will either construct or fund the cost of the agreed upon roadway improvements.

WITHOUT CONCORD ASSOCIATES, LP (CALP) SENSITIVITY TEST

A sensitivity analysis was conducted to determine if the 2014 Build Year would result in significant impacts if the CALP project was not built by 2014, thus removing the associated trips generated by this project and its associated roadway improvements as described above. This sensitivity analysis focused on intersections along the NYS Route 42 corridor. Year 2014 No Build and Build without CALP peak hour traffic volumes for the peak hours analyzed are shown in **Figures 11-12, 11-13, 11-14, and 11-15. Table 11-18** presents a comparison of 2014 No Build and 2014 Build Year Build LOS conditions without the CALP project. Year 2014 without CALP Synchro 7 outputs is provided in Appendix E-9.

Under the 2014 Build Year conditions without the CALP project, absent mitigation, there would be the following significant impacts for the following intersections based on the criteria described above:

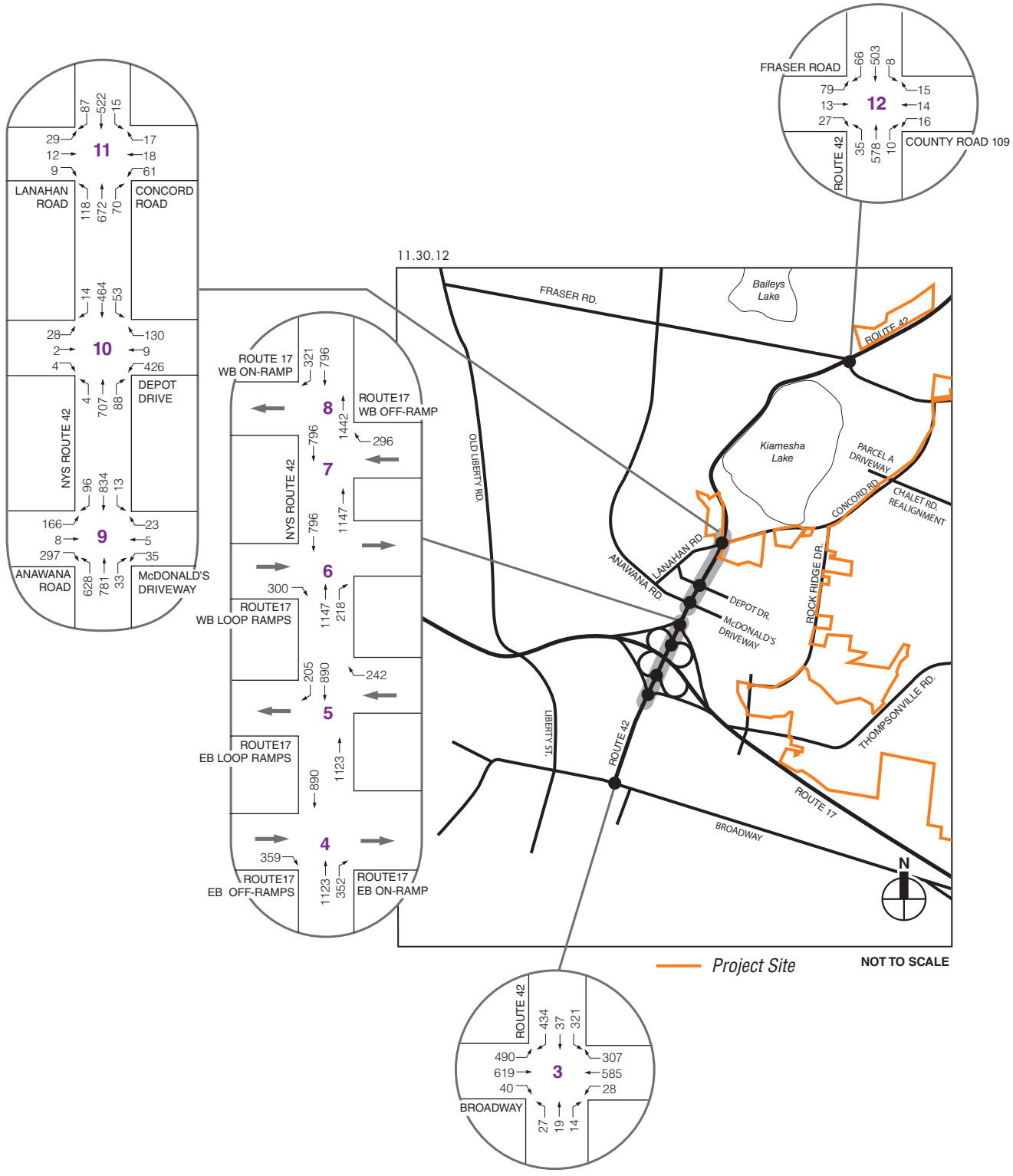
- Pleasant Street and Broadway – during the Friday peak hour, the eastbound left-turn lane would deteriorate from LOS D to LOS E conditions.
- NYS Route 42 and Anawana Lake Road – during the Friday peak hour, the northbound left-turn lane deteriorates from LOS D to LOS E conditions.
- NYS Route 42 and Depot Drive – during the Friday peak hour, the northbound left-turn lane deteriorates from LOS D to LOS E conditions.

The above locations can be mitigated by implementing signal timing adjustments. **Table 11-19** presents the recommended mitigation and LOS results at the impacted intersections with the mitigation in place during the Friday hour.

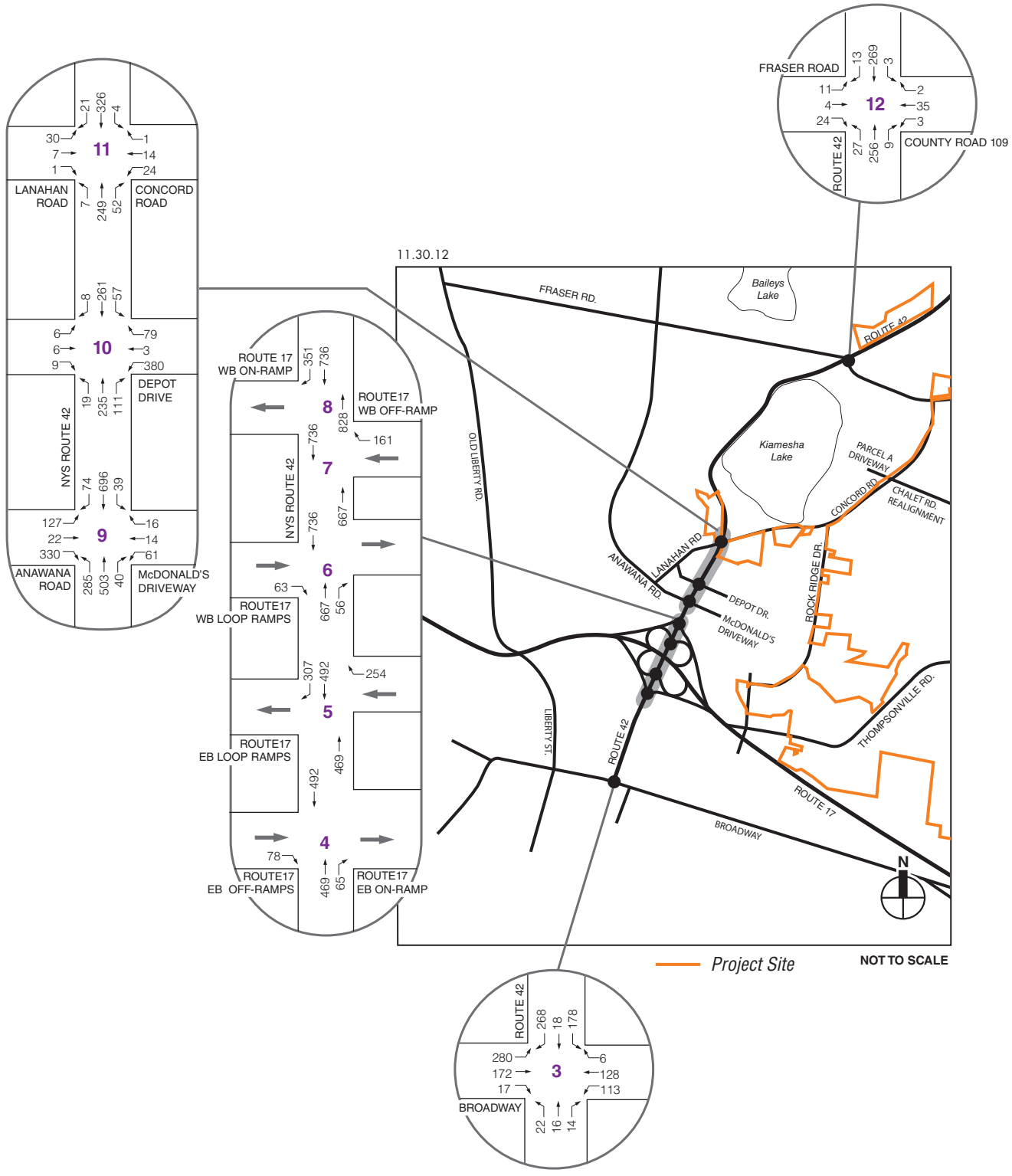
Table 11-18
2014 No Build and Build Without CALP
Level of Service Analysis

	Friday								Sunday							
	No Build				Build				No Build				Build			
Intersection	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Pleasant Street and Broadway																
Eastbound	L	0.97	42.1	D	**L**	**1.02**	**57.5**	**E+**	L	0.48	6.9	A	L	0.51	6.9	A
	TR	0.74	17.0	B	TR	0.80	19.2	B	TR	0.34	12.8	B	TR	0.45	13.4	B
Westbound	L	0.14	15.2	B	L	0.17	15.7	B	L	0.30	11.4	B	L	0.31	11.4	B
	T	0.54	20.0	C	T	0.57	20.3	C	T	0.20	15.6	B	T	0.27	15.9	B
	R	0.36	18.7	B	R	0.38	18.6	B	R	0.00	14.9	B	R	0.00	14.8	B
Northbound	LT	0.14	19.0	B	LT	0.14	19.4	B	LT	0.11	13.3	B	LT	0.11	13.5	B
	R	0.01	18.2	B	R	0.01	18.6	B	R	0.01	12.8	B	R	0.01	13.1	B
Southbound	**LT**	**1.06**	**90.5**	**F**	**LT**	**1.08**	**94.9**	**F**	LT	0.64	19.1	B	LT	0.65	19.5	B
	R	0.41	11.4	B	R	0.43	12.0	B	R	0.16	6.3	A	R	0.16	6.5	A
	Intersection		30.2	C	Intersection		33.5	C	Intersection		11.2	B	Intersection		11.7	B
NYS Route 42 and NYS Route 17 WB Direct Off Ramp																
Eastbound	R	0.45	18.3	B	R	0.49	19.0	B	R	0.07	11.2	B	R	0.08	11.1	B
Northbound	T	0.62	7.5	A	T	0.63	7.8	A	T	0.43	6.3	A	T	0.46	6.5	A
Southbound	T	0.46	0.3	A	T	0.48	0.3	A	T	0.43	0.2	A	T	0.45	0.2	A
	Intersection		6.4	A	Intersection		6.7	A	Intersection		4.0	A	Intersection		4.2	A
NYS Route 42 and Anawana Lake Road																
Eastbound	L	0.46	34.6	C	L	0.46	35.8	D	L	0.29	22.8	C	L	0.29	24.1	C
	T	0.02	29.6	C	T	0.02	30.6	C	T	0.04	20.5	C	T	0.04	21.6	C
	R	0.20	31.4	C	R	0.20	32.4	C	R	0.22	22.1	C	R	0.22	23.3	C
Westbound	L	0.38	52.8	D	L	0.39	54.0	D	L	0.49	43.2	D	L	0.50	44.6	D
	TR	0.06	50.1	D	TR	0.07	51.2	D	TR	0.11	39.7	D	TR	0.11	41.0	D
Northbound	L	0.85	53.6	D	**L**	**0.86**	**55.0**	**E+**	L	0.63	43.1	D	L	0.64	44.7	D
	TR	0.42	15.1	B	TR	0.44	15.1	B	TR	0.38	19.1	B	TR	0.41	19.1	B
Southbound	**L**	**0.33**	**60.3**	**E**	**L**	**0.34**	**61.7**	**E**	L	0.51	50.5	D	L	0.52	52.0	D
	TR	0.74	34.9	C	TR	0.75	35.2	D	TR	0.69	30.0	C	TR	0.70	30.0	C
	Intersection		33.6	C	Intersection		33.9	C	Intersection		28.3	C	Intersection		28.7	C
NYS Route 42 and Depot Drive																
Eastbound	LTR	0.51	52.0	D	LTR	0.50	52.1	D	LTR	0.26	39.8	D	LTR	0.27	41.1	D
Westbound	L	0.75	35.6	D	L	0.78	39.3	D	**L**	**1.22**	**156.8**	**F**	**L**	**1.25**	**169.9**	**F**
	LTR	0.65	30.5	C	LTR	0.67	33.3	C	LTR	0.82	35.3	D	LTR	0.84	40.6	D
Northbound	L	0.19	54.0	D	**L**	**0.19**	**55.7**	**E+**	L	0.38	41.4	D	L	0.39	42.8	D
	TR	0.71	31.5	C	TR	0.74	33.1	C	TR	0.51	29.1	C	TR	0.56	29.5	C
Southbound	L	0.46	48.5	D	L	0.49	50.7	D	L	0.42	36.7	D	L	0.43	37.8	D
	TR	0.39	22.2	C	TR	0.42	23.0	C	TR	0.35	24.7	C	TR	0.38	24.5	C
	Intersection		30.7	C	Intersection		32.4	C	**Intersection**		**55.4**	**E**	**Intersection**		**56.8**	**E**
NYS Route 42 and Concord Road																
Eastbound	LTR	0.18	19.9	B	LTR	0.18	19.7	B	LTR	0.21	20.3	C	LTR	0.15	17.3	B
Westbound	LTR	0.42	21.7	C	LTR	0.62	25.7	C	LTR	0.22	20.4	C	LTR	0.39	19.0	B
Northbound	LTR	0.87	18.6	B	LTR	0.93	25.7	C	LTR	0.27	4.2	A	LTR	0.35	6.1	A
Southbound	LTR	0.56	7.5	A	LTR	0.57	7.9	A	LTR	0.32	4.4	A	LTR	0.35	6.0	A
	Intersection		14.6	B	Intersection		18.9	B	Intersection		6.2	A	Intersection		8.1	A
NYS Route 42 and Fraser Road/Kiamesha Lake Road																
Eastbound	LTR	0.50	23.6	C	LTR	0.50	23.1	C	LTR	0.38	19.4	B	LTR	0.21	14.1	B
Westbound	LTR	0.15	20.6	C	LTR	0.21	20.5	C	LTR	0.38	19.3	B	LTR	0.26	14.5	B
Northbound	LTR	0.71	12.4	B	LTR	0.73	13.2	B	LTR	0.32	4.5	A	LTR	0.39	7.0	A
Southbound	LTR	0.58	8.4	A	LTR	0.71	11.9	B	LTR	0.28	3.4	A	LTR	0.44	6.4	A
	Intersection		12.2	B	Intersection		14.2	B	Intersection		6.1	A	Intersection		8.3	A

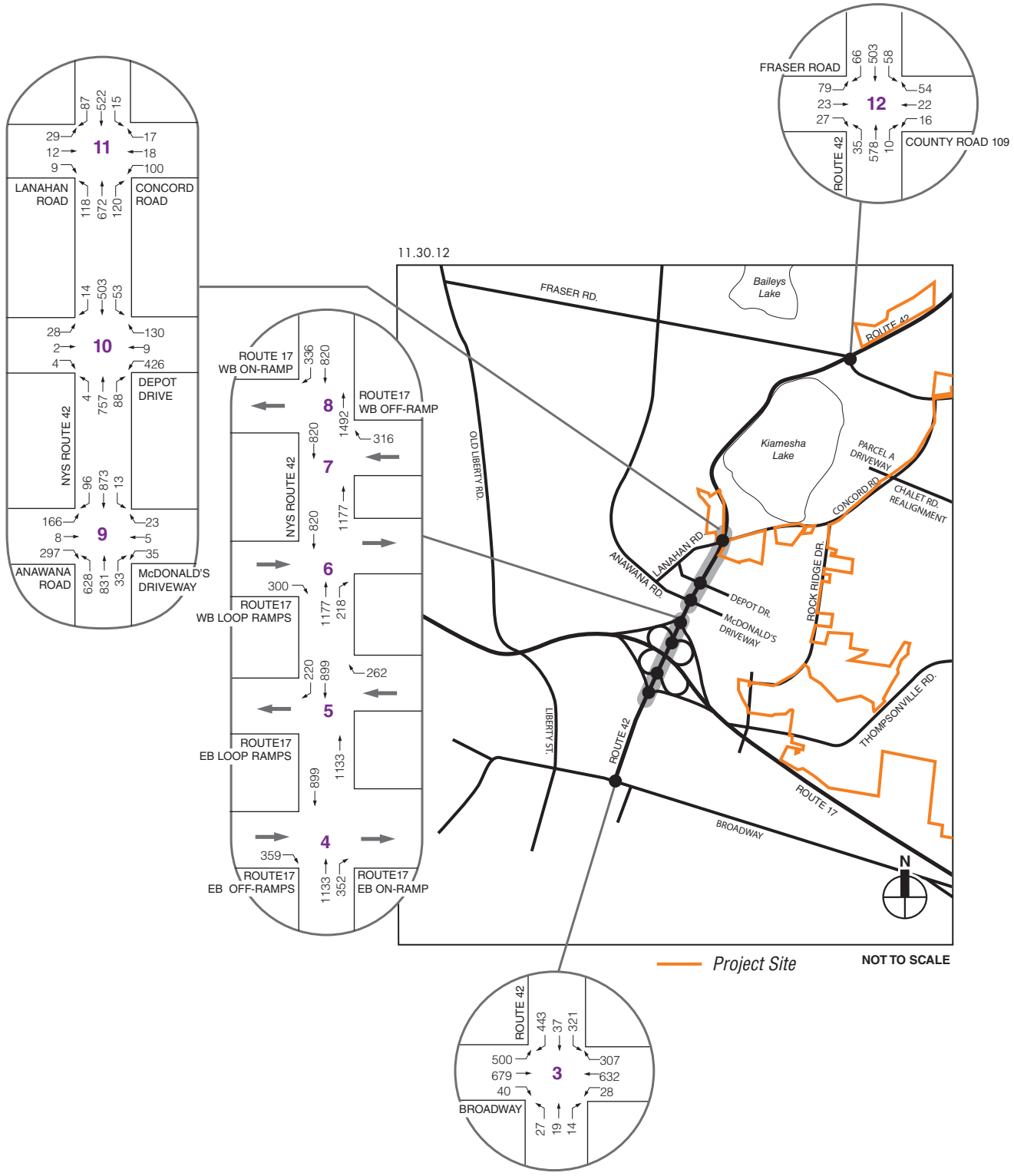
Notes: L = Left Turn, T = Through, R = Right Turn; v/c = volume to capacity ratio; LOS = Level of Service;
Bold indicates operations LOS E or worse
+ Indicates significant impact



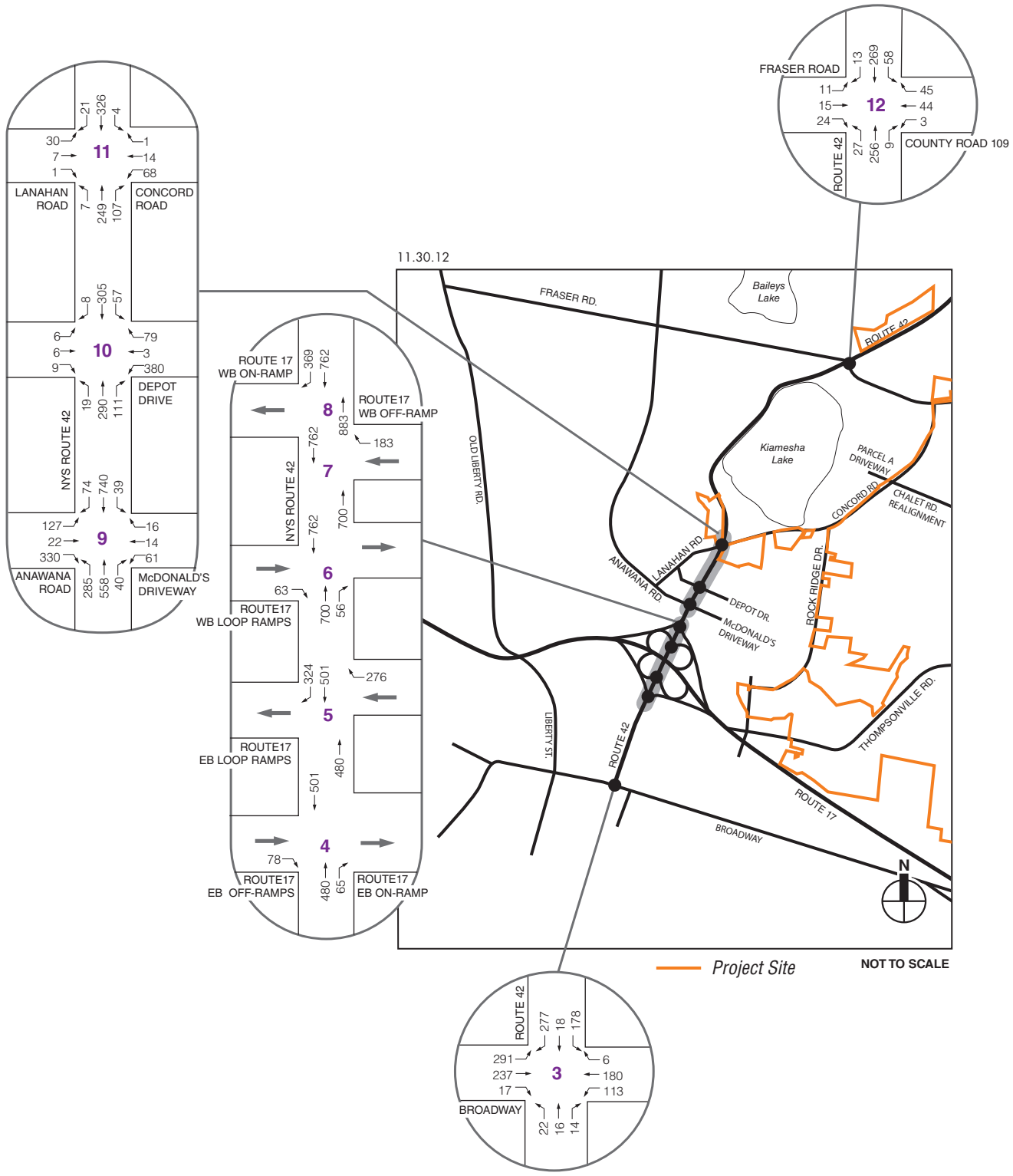
2014 No Build Traffic Volumes Without CALP
Friday PM Peak Hour (5:00 PM-6:00 PM)



2014 No Build Traffic Volumes Without CALP
Sunday PM Peak Hour (3:30 PM-4:30 PM)



2014 Build Year Traffic Volumes without CALP
Friday PM Peak Hour (5:00 PM-6:00 PM)
Figure 11-14



2014 Build Year Traffic Volumes without CALP
Sunday PM Peak Hour (3:30 PM-4:30 PM)

Table 11-19
2014 Build and Build with Mitigation without CALP
Level of Service Analysis
Friday Peak Hour

	Friday Peak Hour without CALP							
		Build			Build with Mitigation			
Intersection	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Mitigation
Pleasant Street and Broadway								
Eastbound	**L**	**1.02**	**57.5**	**E+**	0.96	45.3	D	-Implement new signal timing plan
	TR	0.80	19.2	B	0.78	19.4	B	
Westbound	L	0.17	15.7	B	0.17	17.9	B	Existing / New
	T	0.57	20.3	C	0.62	23.9	C	Cycle Length: 82.6 sec / 82.6 sec
	R	0.38	18.6	B	0.44	22.1	C	Phasing: Timing in sec (G/Y/R)
Northbound	LT	0.14	19.4	B	0.14	20.7	C	EB-L/WB-L.SBR 15/3.2/1 / 10.8/3.2/1
	R	0.01	18.6	B	0.01	19.9	B	EB/WB 35/3.2/1 / 18.8/3.2/1
Southbound	LT	1.08	94.9	F	1.05	89.1	F	NB/SB 20/3.2/1 / 22.4/3.2/1
	R	0.43	12.0	B	0.44	11.4	B	
	Intersection		33.5	C		31.9	C	
NYS Route 42 and Anawana Lake Road								
Eastbound	L	0.46	35.8	D	0.46	35.5	D	-Implement new signal timing plan
	T	0.02	30.6	C	0.02	30.3	C	
Westbound	R	0.20	32.4	C	0.20	32.2	C	Existing / New
	L	0.39	54.0	D	0.39	53.7	D	Cycle Length: 139 sec / 139 sec
Northbound	TR	0.07	51.2	D	0.07	50.9	D	Phasing: Timing in sec (G/Y/R)
	L	**0.86**	**55.0**	**E+**	0.85	53.6	D	NB-L/SB-L 15/3.9/1 / 15/3.9/1
	TR	0.44	15.1	B	0.44	15.2	B	NB Protected 10.1/3.9/1 / 12.2/3.9/1
Southbound	**L**	**0.34**	**61.7**	**E**	**0.34**	**61.4**	**E**	NB/SB 50/3.9/1 / 47.9/3.9/1
	TR	0.75	35.2	D	0.76	35.8	D	EB/WB 20/3.2/1 / 20/3.2/1
	Intersection		33.9	C		33.8	C	EB Protected 20.8/3.2/1 / 20.8/3.2/1
NYS Route 42 and Depot Drive								
Eastbound	LTR	0.50	52.1	D	0.52	52.9	D	-Implement new signal timing plan
Westbound	L	0.78	39.3	D	0.79	39.4	D	Existing / New
	LTR	0.67	33.3	C	0.68	33.0	C	Cycle Length: 143.2 sec / 143.2 sec
Northbound	**L**	**0.19**	**55.7**	**E+**	0.17	53.7	D	Phasing: Timing in sec (G/Y/R)
	TR	0.74	33.1	C	0.72	30.9	C	NB-L/SB-L 30/3.9/1 / 20.1/3.9/1
Southbound	L	0.49	50.7	D	0.47	49.0	D	SB Protected - / 5.2/3.9/1
	TR	0.42	23.0	C	0.41	21.5	C	NB/SB 45/3.9/1 / 34.9/3.9/1
	Intersection		32.4	C		31.1	C	WB Protected 35/3.2/1 / 37.8/3.2/1
								EB Protected 15/3.2/1 / 16/3.2/1

CASINO RESORT (PHASE 1) DRIVEWAY ANALYSIS

The Casino Resort (Phase 1) is accessed by four driveways. Two driveways are located along Thompsonville Road, one for horse trailers near the race track and the other to access the Employee Parking Lot on the north end of the Phase 1 Casino parcel. The other two driveways are located on the Resort Entry Road and will be used by casino patrons to enter and exit the site. One driveway is signalized and provides full access. The other driveway is a right-out only driveway. **Table 11-20** presents the 2014 Build Year turn volumes at the casino driveways on the Entry Road. The volumes into and out of the driveways are for the Casino Resort (Phase 1) trip generation only. **Table 11-21** presents 2014 Build Year LOS conditions at the two project driveways. As shown, both driveways operate at an acceptable LOS C or better. See Appendix E-10 for Synchro 7 outputs. Signal warrant analyses for the Main Casino Driveway Entrance are presented in Appendix E-8.

Table 11-20
2014 Build Conditions - Casino Driveways
Turning Volumes

Intersection	Friday		Sunday	
	Turning Movement	Volume	Turning Movement	Volume
New Entry Road / Main Casino Entrance Driveway (Signalized)				
Eastbound	L	573	L	648
	T	505	T	417
Westbound	T	405	T	177
	R	93	R	106
Southbound	L	63	L	83
	R	116	R	153
New Entry Road / Main Casino Exit Only Driveway (Unsignalized)				
Eastbound	T	1,078	T	1,065
Westbound	T	521	T	330
Southbound	R	346	R	356

Notes: L = Left Turn, T = Through, R = Right Turn

Table 11-21
2014 Build Conditions Level of Service Analysis
Casino Driveways

Intersection	Friday				Sunday			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
New Entry Road / Main Casino Entrance Driveway (Signalized)								
Eastbound	L	0.55	12.4	B	L	0.60	13.8	B
	T	0.23	2.7	A	T	0.20	3.3	A
Westbound	TR	0.65	17.1	B	TR	0.32	16.1	B
Southbound	L	0.41	20.3	C	L	0.37	19.4	B
	R	0.06	7.4	A	R	0.09	6.8	A
	Intersection		10.9	B	Intersection		11.1	B
New Entry Road / Main Casino Exit Only Driveway (Unsignalized)								
Eastbound	T	0.34	0.0	A	T	0.34	0.0	A
Westbound	T	0.17	0.0	A	T	0.11	0.0	A
Southbound	R	0.53	15.5	C	R	0.46	13.0	B
	Intersection		2.8	A	Intersection		2.6	A

Notes: L = Left Turn, T = Through, R = Right Turn; LOS = Level of Service.
(1) Bold indicates operations LOS E or worse

RAMP JUNCTION ANALYSIS

Table 11-22 presents the No Build and Build (2014 Build Year) merge analysis. As shown, this merge will continue to operate LOS B conditions during the Friday and Sunday peak hours under the Build conditions. See Appendix E-6 for HCS outputs.

Table 11-22
2014 No Build and Build Level of Service
Ramp Junction

Ramp Location	Number of Lanes on Ramp	Friday				Sunday			
		No Build		Build		No Build		Build	
		Density[1]	LOS	Density[1]	LOS	Density[1]	LOS	Density[1]	LOS
NYS Route 17 EB on-ramp @ Interchange 106	1	11.8	B	15.7	B	14.3	B	18.6	B

Notes:
1. Density is in passenger cars per mile per lane

PUBLIC TRANSPORTATION

Based on discussions with the developer, approximately 10 to 15 buses per day will service the casino, thus likely not having an impact during peak hours of traffic operations. Although there may be a small increase in public transportation demand with 2014 Build Year, this impact would not be considered significant.

PEDESTRIAN AND BICYCLE CONDITIONS

Although there may be a small increase in pedestrians and bicycles with the development of Phase 1, this impact would not be considered significant. Nonetheless, as part of the mitigation required at the Cimarron Road/NYS Route 17 Exit 106 Ramp intersections, the shoulder widths on the overpass will remain unchanged, thereby still accommodating pedestrian and bicycle traffic. In addition, the construction of the Entry Loop Road parallel to Joyland Road will lower vehicular volumes on Joyland Road, thus improving pedestrian safety on this section of roadway.

HIGH ACCIDENT LOCATIONS

As identified in the existing conditions section, the following intersections were identified as high accident locations:

- Pleasant Street and Broadway
- NYS Route 42 and Anawana Lake Road

The 2014 Build Year traffic would increase traffic by less than five percent at these locations, except at the Pleasant Street and Broadway intersection during the Sunday peak hour, which would experience a traffic increase of ten percent due to the low Sunday peak hour volumes. Therefore the project is unlikely to increase the accident rates at these intersections. However, to reduce accident rates at these locations, counter measures identified in the existing conditions section can be implemented by local agencies.

E. QUALITATIVE ASSESSMENT OF THE EPT CONCORD RESORT PROJECT AT FULL BUILD OUT

The full buildout of the proposed EPT Concord Resort will be a four-season destination resort that will be developed in phases over time, and according to market demand. To assess the impact of the full build out program on traffic, a qualitative assessment was performed that assumed full build ending in 2022. Trip estimates for the full build out of the Proposed Project and turning movements at the study area intersections were developed for the qualitative assessment; however, detailed intersection analyses were not conducted. It is also assumed that, as the anticipated development schedule will be market driven and built out in phases, subsequent development components will require supplemental traffic studies and potentially update the existing traffic counts to determine the mitigation needed to accommodate traffic generated by each development phase of the Proposed Project.

THE FUTURE NO BUILD CONDITION OF THE COMPREHENSIVE DEVELOPMENT PLAN (YEAR 2022)

The No Build traffic condition (Year 2022) is an interim scenario that establishes a future baseline condition without the full development of the Comprehensive Development Plan

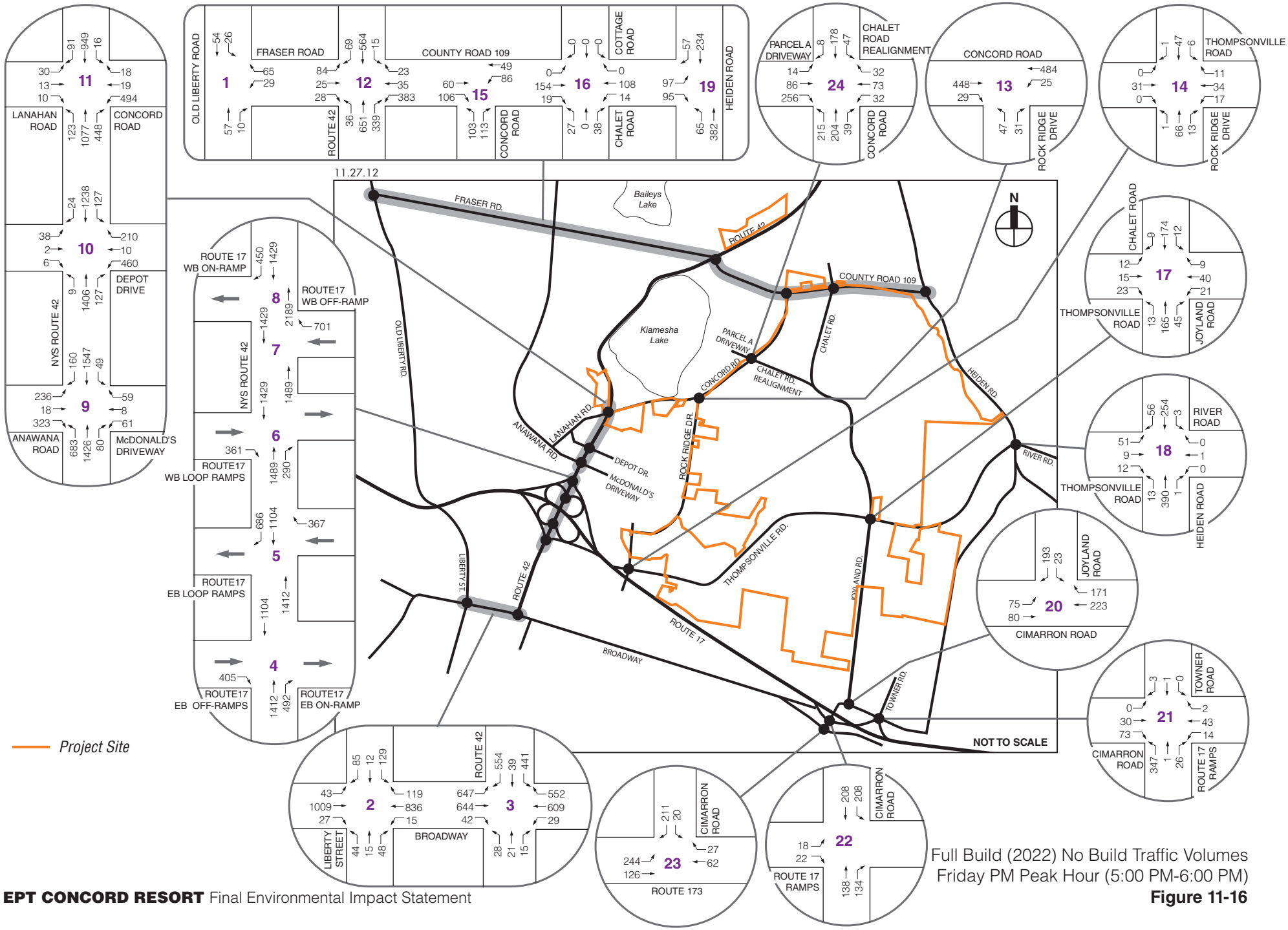
(CDP). The No Build year is the same year as the estimated build year of the Proposed Project (2022). No Build traffic conditions are ascertained based on the following procedure:

- Increasing the existing volumes by one percent per year from 2011 (existing year) to 2013 and then by 0.5 percent per year from 2013 to 2022 for background growth.
- Manually adding trips from approved projects in the vicinity of the Proposed Project.

Table 11-23 presents the No Build projects included in the development of Year 2022 No Build volumes. Project descriptions and locations for the No Build projects are presented in Appendix E-3. The No Build project list was developed in consultation with the Town of Thompson, Town of Forestburgh, Village of Monticello, and the Town of Fallsburg.

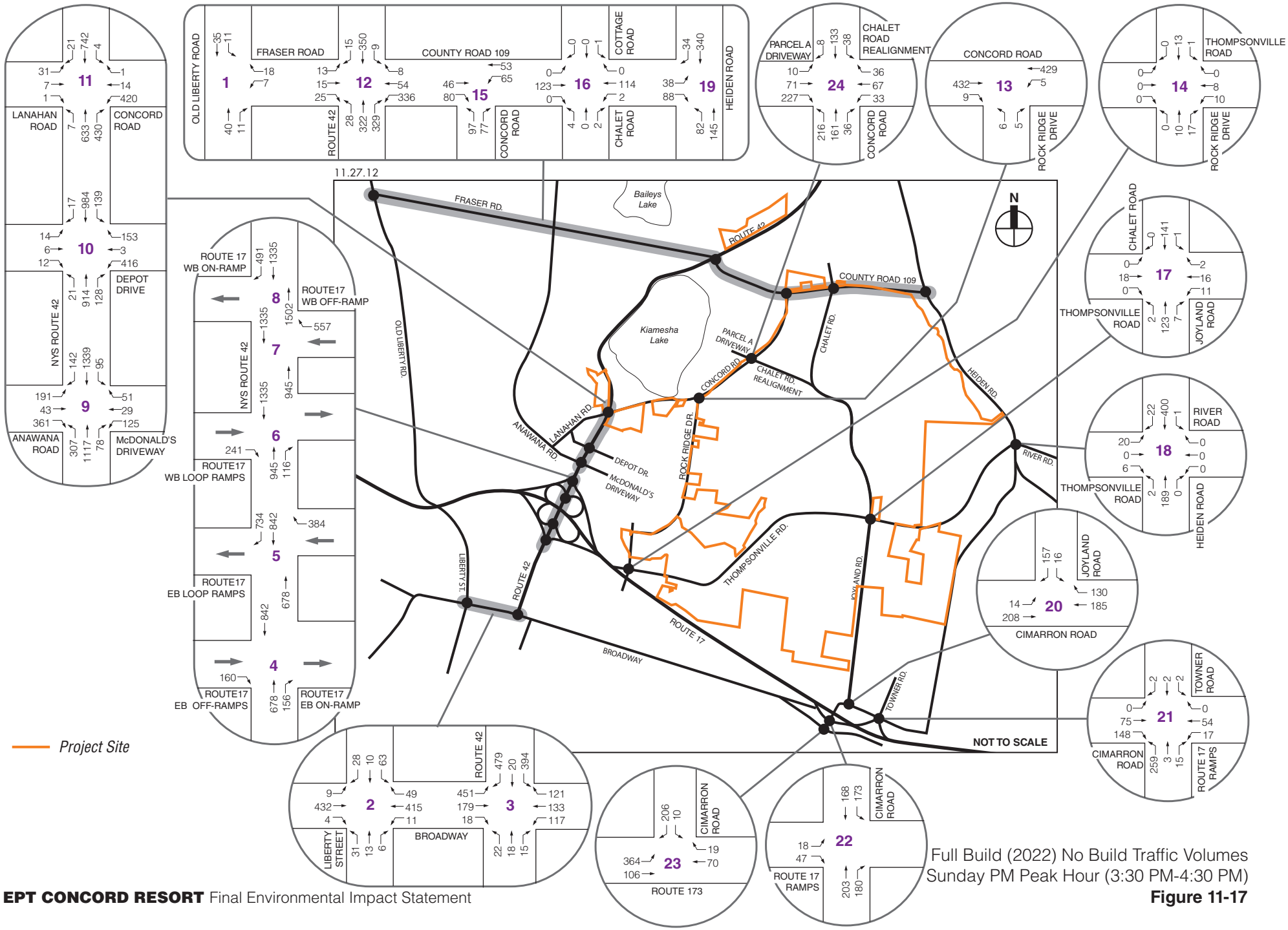
Year 2022 No Build peak hour traffic volumes for the peak hours analyzed are shown in **Figures 11-16 and 11-17**. The volumes presented do not include the Kelli Wood and Gan-Eden, which are qualitatively considered below. Based on these volumes, intersections along Heiden Road, Kiamesha Lake Road, Joyland Road/Chalet Road, Concord Road, and Thompsonville Road, a majority of which are unsignalized intersections, will likely continue to operate under acceptable LOS conditions.

Along NYS Route 42, the increase in background traffic and traffic generated by the No Build projects would exacerbate unacceptable conditions identified in the 2014 No Build analysis. South of Concord Road, turning movements may operate at LOS F conditions while the northbound and southbound movements may operate at LOS D or E conditions. North of Concord Road, if NYS Route 42 remains a two-lane roadway, intersections may deteriorate to LOS E or F conditions.



Full Build (2022) No Build Traffic Volumes
Friday PM Peak Hour (5:00 PM-6:00 PM)

Figure 11-16



Full Build (2022) No Build Traffic Volumes
Sunday PM Peak Hour (3:30 PM-4:30 PM)

Figure 11-17

Table 11-23
No Build Projects

Municipality	Project	Build Year(s)	Project Description	Location
Town of Forestburgh	Lost Lake Resort	2016 (Phase 1) 2021 (Phase 2)	Single-family residence lots, a cottage and condominium component, hotel/conference facilities and extensive recreational amenities.	Traversed by CR 108 and located west of CR 102, just south of Thompson/Forestburgh Town Line
Village of Monticello	Dunbar Towers	2013	94 condo units	South side of Broadway, just east of Route 17B
Town of Fallsburg	Raleigh and Heiden Properties	2015	236 single-family and duplex condominiums	East side of Heiden Road (CR 161) in the vicinity of Kiamesha Lake Road
	Westbourne Estates	2014 (Phase 1) 2016 (Phase 2) 2019 (Phase 3)	Mixed residential development consisting of 331 units; 196 apartment style units (44 are existing), 31 single-family units, 104 two-family/duplex units(2)	West of NYS Route 42 and south of Route 52 - access from Westbourne Drive via southside of Route 52
Town of Thompson	CALP[3]	2013 (Parcel A and Harness Track)	210,000 sf casino, 54,000 sf convention space, 1,500-room hotel, harness track	North of NYS Route 17, east of NYS Route 42, south of Kiamesha Lake Road, west of Heiden Road.
	Gemstar	2013	69-unit mobile home development. (Note: accounted for in growth rate)	Heiden Road between Kiamesha Lake Road and Thompsonville Road.
	RNR	2013	120-unit mobile home development (40 units developed for Phase 1) (Note: accounted for in growth rate)	Old Liberty Road and Pittaluga Road
	Birchwood	2013	60-70 residential units (Note: accounted for in growth rate)	Gun Club Road (straddles Town of Thompson and Forestburgh)
	Kelli Woods	2019	320 residential units (160 duplexes)	East of Rt. 103, South of Rt 107, North of Anawana Lake
	Gan-Eden	2019	885 residential units	West of Rt 104, North of Rt 107, on border of Thompson and Fallsburg
	Golden Ridges	2014 (Phase 1) 2019 (Full Build)	Zoning for up to 324 dwelling units	NYS Route 42

Note: At this time the Apollo Mall and the Stockbridge-Munsee Casino are not approved, and are therefore not included in the development of Year 2022 volumes. However, in the event that one or both of these projects become active, subsequent impact analyses may be required.

The inclusion the Kelli Wood and Gan-Eden developments would exacerbate the unacceptable conditions along NYS Route 42. However, these developments would have little impact on traffic operations along Joyland Road, Heiden Road, Kiamesha Lake Road, Concord Road, Thompsonville Road, and NYS Route 17 Interchange 106.

TRIP GENERATION FOR FULL BUILD OUT OF THE COMPREHENSIVE DEVELOPMENT PLAN (CDP)

Based on the full build out of the Proposed Project, trip generation estimates were developed by applying trip generation rates and equations presented in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 8th Edition as well as utilizing information from anticipated visitation/attendance from market research conducted by the Applicant. The trip generation estimates and assignments for each development phase and the full build out condition traffic volumes are presented below. Hypothetical build years were assigned for future phases of the Proposed Project and added to the detailed traffic study for 2014 Build Year presented earlier in this chapter. Actual

[3] If CALP should not proceed with approved plans for Parcel A and the Harness Track, including associated traffic and road improvements, a supplemental traffic impact study will need to be conducted showing the impact that eliminating this No Build project will have on the Proposed Project.

future phases of the Proposed Project will be based on market conditions and demand, and may change as development of the EPT Concord Resort proceeds.

PHASE 1 CASINO RESORT

The Phase 1 Casino Resort (part of 2014 Build Year analyzed above) will include the development of a casino, a 248-room hotel, harness horse racetrack, grandstand/showroom, simulcast facility, banquet event center, and restaurants on an approximately 117-acre parcel that would be leased to Monticello Raceway Management, Inc. (MRMI) by the Applicant. Also included in the 2014 Build Year are a structured parking garage (to be constructed with the casino and hotel), 2,000 additional on-site surface parking spaces, horse paddock, and maintenance building with associated truck parking. The site for the Phase 1 Casino Resort is located west of Joyland Road south of Thompsonville Road. To develop the Casino Resort project-generated trips, trip rates from other casinos were used, including three studies for casinos in Sullivan County. A summary of these casino trip rates is provided in Appendix E-5. The average Friday and Sunday peak hour trip rates from the compiled casino data were applied to the square footage of the proposed Phase 1Casino Resort to develop project-generated trips presented in **Table 11-24**.

Table 11-24
Casino Resort Trip Generation

Land Use	ITE Code	Units		Friday PM Peak Hour			Sunday PM Peak Hour		
				In	Out	Total	In	Out	Total
Phase 1 Casino Resort [1]	Based on Previous Studies	517.54[2]	ksf	666	524	1,190	754	592	1,346

Notes: ksf = 1,000 square feet
1. Trip rates from other casinos; In/Out Splits from ITE
Friday PM Trips: T = 2.3 (x) (56% enter, 44% exit);
Sunday PM Trips: T = 2.6 (x) (56% enter, 44% exit)
2. Includes 143.4 ksf hotel, 374.135 ksf casino space, entertainment, grandstand, amenities, and back of house space. The 455 ksf structured parking is not factored into the trip generation calculations.

The Phase 1 Casino Resort would result in 1,190 Friday peak hour vehicle trips and 1,346 Sunday peak hour vehicle trips.

GOLF

The Golf Phase of the Proposed Project would upgrade the existing golf course and clubhouse and develop 12 golf cottages. This phase would result in three Friday peak hour vehicle trips and four Sunday peak hour vehicle trips. As presented in **Table 11-25**, combining this Golf Phase with the Phase 1 Casino Resort would result in 1,193 Friday peak hour vehicle trips and 1,350 Sunday peak hour vehicle trips.

Table 11-25
Golf Phase Trip Generation

Land Use	ITE Code	Units	Friday PM Peak Hour			Sunday PM Peak Hour		
			In	Out	Total	In	Out	Total
Golf Course - ***already exists, trip estimates not developed***								
Golf Cottages[1]	260 (Recreational Homes)	12 d.u	1	2	3	2	2	4
Golf Total			**1**	**2**	**3**	**2**	**2**	**4**
Phase 1 Casino Resort Total			666	524	1,190	754	592	1,346
Phase 1 Casino Resort and Golf Total			**667**	**526**	**1,193**	**756**	**594**	**1,350**

Notes: d.u = 1,000 Dwelling Unit
1. Friday PM Trips: T = 0.26 (x) (41% enter, 59% exit);
Sunday PM Trips: T = 0.36 (x) (46% enter, 54% exit)

CASINO RESORT B

The development of the Casino Resort B will include a second hotel adjacent to the hotel on the original Phase 1 Site (leased to MRMI). This second hotel would include 250 rooms to meet the market demand for additional hotel rooms. This phase is predicated on changes to New York State Gaming Law that would permit Class 3 table gaming at the Casino. Since the hotel would be integrated in the Phase 1Casino Resort, comparable trip rates were applied. As presented in **Table 11-26**, the Casino Resort B phase of the Proposed Project would result in 334 Friday peak hour vehicle trips and 377 Sunday peak hour vehicle trips. The combination of the Phase 1 Casino Resort and the Golf and Casino Resort B phases of the Proposed Project would result in 1,527 Friday peak hour vehicle trips and 1,727 Sunday peak hour vehicle trips.

Table 11-26
Casino Resort B Trip Generation

Land Use	ITE Code	Units		Friday PM Peak Hour			Sunday PM Peak Hour		
				In	Out	Total	In	Out	Total
Casino Resort B[1]	Based on Previous Studies	145[2]	ksf	187	147	334	211	166	377
Casino Resort B Total				**187**	**147**	**334**	**211**	**166**	**377**
Phase 1 Casino Resort and Golf Total				667	526	1,193	756	594	1,350
Phase 1 Casino Resort, Golf and Casino Resort B Total				**854**	**673**	**1,527**	**967**	**760**	**1,727**

Notes: ksf = 1,000 square feet
1. Trip rates from comparable casinos, , In/Out Splits from ITE
Friday PM Trips: T = 2.3 (x) (56% enter, 44% exit); Sunday PM Trips: T = 2.6 (x) (56% enter, 44% exit)

ENTERTAINMENT VILLAGE

This phase of the Proposed Project would develop an Entertainment Village and a Resort Hotel with up to 250 rooms, a 40,000-50,000 sf conference center, and event field for cultural and recreation activities. Some of the Entertainment Village was included in the 2014 Build Year analysis above. ITE trip rates were used to develop the trip estimates for each component except for the event field. Friday and Sunday peak hour trips for the event field were based on estimated yearly attendance and peak hour trip factors from the Bethel Woods Performance Arts Center DEIS. The calculation of event field trip generation is provided in Appendix E-5. In addition, a 25 percent internalization rate was applied to the Entertainment Village to capture trips generated by the Entertainment Village that would originate from the adjacent Phase 1 Casino Hotel and the Resort Hotel and conference center.

As presented in **Table 11-27**, the Entertainment Village phase of the Proposed Project would result in 913 Friday peak hour vehicle trips and 986 Sunday peak hour vehicle trips. The combination of Phase 1 Casino Resort and the Golf, Casino Resort B, and Entertainment Village phases would result in 2,440 Friday peak hour vehicle trips and 2,714 Sunday peak hour vehicle trips.

RESIDENTIAL VILLAGE, HOSPITALITY & RECREATION

Development of this phase of the Proposed Project would include a Resort Hotel, Recreation Core for tubing and biking, Residential Village, and RV Park. ITE trip rates were used to develop the trip estimates for each component. In addition, a 25 percent internalization rate was applied to the residential village to capture trips generated by the civic center and retail components that would originate from the adjacent hotel and residential units.

As presented in **Table 11-28**, this phase would result in 783 Friday peak hour vehicle trips and 695 Sunday peak hour vehicle trips. The combination of the Phase 1 Casino Resort, Golf, Casino Resort B, Entertainment Village, and this phase of the Proposed Project would result in 3,223 Friday peak hour vehicle trips and 3,409 Sunday peak hour vehicle trips.

Table 11-27
Entertainment Village Trip Generation

Land Use	ITE Code	Units		Friday PM Peak Hour			Sunday PM Peak Hour		
				In	Out	Total	In	Out	Total
Hotel & Conference Center[1]	310 (Hotel)	250	rooms	78	70	148	67	78	145
Entertainment Village									
Event Field[2]	Based on Attendance			99	131	230	132	174	306
NY Wine & Market Components[3]	814 (Specialty Retail Center)	20	Ksf	31	38	69	31	38	69
Movie Theater[4]	445 (Multiplex Movie Theater)	12	screens	161	112	273	161	112	273
Restaurant 1[5]	931 (Quality Restaurant)	7	Ksf	35	17	52	37	22	59
Restaurant 2[5]	931 (Quality Restaurant)	5.5	Ksf	27	14	41	29	17	46
Restaurant 3[5]	931 (Quality Restaurant)	5.5	Ksf	27	14	41	29	17	46
Restaurant 4[5]	931 (Quality Restaurant)	4	Ksf	20	10	30	21	13	34
Restaurant 5[5]	931 (Quality Restaurant)	3	Ksf	15	7	22	16	9	25
Pub[6]	925 (Drinking Place)	3.5	Ksf	26	14	40	26	14	40
Music Venue	-	3.5	Ksf	10	10	20	10	10	20
Billiards	-	3	Ksf	10	10	20	10	10	20
Gallery	-	5	Ksf	10	10	20	10	10	20
Kids Quest	-	10	Ksf	10	10	20	10	10	20
Comedy Club	-	10	Ksf	10	10	20	10	10	20
Bowling[7]	437 (Bowling Alley)	35	Ksf	43	81	124	43	81	124
25% Internalization				*-128*	*-128*	*-256*	*-140*	*-140*	*-280*
Entertainment Village Net New Trips				*406*	*360*	*765*	*434*	*407*	*841*
Entertainment Village Total				**483**	**430**	**913**	**501**	**485**	**986**
Phase 1 Casino Resort, Golf, and Casino Resort B Total				854	673	1,527	967	760	1,727
Phase 1 Casino Resort, Golf, Casino Resort B, and Entertainment Village Total				**1,337**	**1,103**	**2,441**	**1,468**	**1,246**	**2,714**

Notes: ksf = 1,000 square feet
1. Friday PM Trips: T = 0.59 (x) (53% enter, 47% exit);
Sunday PM Trips: T = 0.70 (x)-29.89 (46% enter, 54% exit)
2. Friday PM Trip: T=230 (43% enter, 57% exit);
Sunday PM Trips T=306 (43% enter, 57% exit)
3. Friday PM Trips: T = 2.40(x)+21.48 (44% enter, 56% exit);
Sunday PM Trips: T = 2.40(x)+21.48 (44% enter, 56% exit)
4. Friday PM Trips: T = 22.76(x) (59% enter, 41% exit);
Sunday PM Trips: T = 22.76(x) (59% enter, 41% exit)
5. Friday PM Trips: T = 7.49(x) (67% enter, 33% exit);
Sunday PM Trips: T = 8.38(x) (63% enter, 37% exit)
6. Friday PM Trips: T = 11.34(x) (66% enter,34% exit);
Sunday PM Trips: T = 11.34(x) (66% enter,34% exit)
7. Friday PM Trip: T = 3.54(x) (35% enter, 65% exit);
Sunday PM Trip: T = 3.54(x) (35% enter, 65% exit)

Table 11-28
Residential Village, Hospitality & Recreation Trip Generation

Land Use	ITE Code	Units		Friday PM Peak Hour			Sunday PM Peak Hour		
				In	Out	Total	In	Out	Total
Resort Hotel[1]	330 (Resort Hotel)	550	rooms	99	132	231	141	140	281
Residential Village									
Innovative Medical Facility[2]	254 (Assisted Living)	90	beds	9	11	20	15	19	34
Innovative Medical Facility[3]	252 (Senior Adult Housing – Attached)	12	d.u.	1	1	2	1	1	2
Housing[4]	210 (Single Family Detached)	37	d.u.	27	16	43	20	18	38
Housing[5]	230 (Residential Condo / Townhouse)	40	d.u.	19	9	28	29	30	59
Housing[6]	220 (Apartments)	288	d.u.	116	63	179	73	74	147
Civic Center[7]	730 (Government Office Building)	35	ksf	13	29	42	0	0	0
Retail[8]	820 (Shopping Center)	20	ksf	106	110	216	31	31	62
25% Internalization				*-33*	*-33*	*-66*	*-8*	*-8*	*-16*
Recreation Core	-	5	ksf	10	10	20	10	10	20
RV Park[9]	416 (Campground/RV Park)	180	Spaces	46	21	67	21	46	67
Residential Village, Hospitality, & Recreation Total				**413**	**370**	**783**	**333**	**362**	**695**
Phase 1 Casino Resort, Golf, Casino Resort B, Entertainment Village Total				1,337	1,103	2,440	1,468	1,246	2,714
Phase 1 Casino Resort, Golf, Casino Resort B, Entertainment Village, and Residential Village, Hospitality & Recreation Total				**1,750**	**1,473**	**3,223**	**1,801**	**1,607**	**3,409**

Notes: ksf = 1,000 square feet, d.u. = dwelling unit
1. Friday PM Trips: T = 0.42(x) (43% enter, 57% exit);
Sunday PM Trips: T = 0.51(x) (50% enter, 50% exit)
2. Friday PM Trips: T = 0.22(x) (44% enter, 56% exit);
Sunday PM Trips: T = 0.38(x) (43% enter, 57% exit)
3. Friday PM Trips: T = 0.16(x) (60% enter, 40% exit);
Sunday PM Trips: T = 0.16(x) (60% enter, 40% exit)
4. Friday PM Trips: Ln(T) = 0.9 *Ln(x)+0.51 (63% enter, 37% exit);
Sunday PM Trips: Ln(T) = 0.91 *Ln(x)+0.35 (53% enter, 47% exit)
5. Friday PM Trips: Ln(T) = 0.82 *Ln(x)+0.32 (67% enter, 33% exit);
Sunday PM Trips: T = 0.23(x) + 50.01 (49% enter, 51% exit)
6. Friday PM Trips: T = 0.62(x) (65% enter, 35% exit);
Sunday PM Trips: T = 0.51(x) (50% enter, 50% exit)
7. Friday PM Trips: 1.21(x) (31% enter, 69% exit);
Sunday PM Trip: No Trips generated
8. Friday PM Trips: Ln(T) = 0.67 *Ln(x)+3.37 (49% enter, 51% exit);
Sunday PM Trips: T = 3.12(x) (49% enter, 51% exit)
9. Friday PM Trips: T = 0.37(x) (69% enter, 31% exit);
Sunday PM Trips: T = 0.37(x) (31% enter, 69% exit)

HOSPITALITY, COMMERCIAL & RESIDENTIAL PHASE (FULL BUILD OUT YEAR 2022)

The Hospitality, Commercial & Residential phase of the Proposed Project would develop an outdoor oriented hotel, residential dwelling units, movie studio, and commercial developments. ITE trip rates were used to develop the trip estimates for each component except for the movie studio. Trip generation estimates for the movie studio were developed based on surveys of the Seven21 Media studios. The calculation of movie studio trip generation is provided in Technical Appendix E-5. In addition, a 25 percent internalization rate was applied to the commercial parcels to capture trips generated that would originate from the adjacent hotel and residential units.

As presented in **Table 11-29**, this phase would result in 2,485 Friday peak hour vehicle trips and 1,340 Sunday peak hour vehicle trips. The combination of all phases of the Proposed Project, which would represent the full build out of the Proposed Project, would result in 5,708 Friday peak hour vehicle trips and 4,749 Sunday peak hour vehicle trips.

Table 11-29
Hospitality, Commercial & Residential (Full Build Out) Trip Generation

Land Use	ITE Code	Units		Friday PM Peak Hour			Sunday PM Peak Hour		
				In	Out	Total	In	Out	Total
Resort Hotel[1]	330 (Resort Hotel)	250	rooms	45	60	105	64	64	128
Housing[2]	210 (Single Family Detached)	170	d.u.	107	62	169	81	71	152
Residential									
Housing[2]	210 (Single Family Detached)	315	d.u.	186	109	295	141	125	266
Housing[3]	230 (Residential Condo/Townhouse)	35	d.u.	17	8	25	28	30	58
Movie Studio[4]	-	175	ksf	84	149	233	26	32	58
Commercial Parcels[5]									
Commercial Parcel #1	820 (Shopping Center)	55	ksf	209	217	426	84	88	172
Commercial Parcel #2	820 (Shopping Center)	65	ksf	234	243	477	99	104	203
Commercial Parcel #3	820 (Shopping Center)	25	ksf	123	128	251	38	40	78
Commercial Parcel #4	820 (Shopping Center)	5	ksf	42	43	85	8	8	16
Commercial Parcel #5	820 (Shopping Center)	105	ksf	322	335	657	161	167	328
Commercial Parcel #6	820 (Shopping Center)	35	ksf	154	161	315	53	56	109
25% internalization				*-277*	*-277*	*-554*	*-114*	*-114*	*-228*
Commercial Parcel 12 Net New Trips				807	850	1,657	329	349	678
Hospitality, Commercial & Residential Total				**1,246**	**1,239**	**2,485**	**669**	**671**	**1,340**
Phase 1 Casino Resort, Golf, Casino Resort B, Entertainment Village, and Residential Village, Hospitality & Recreation Total				1,750	1,473	3,223	1,801	1,607	3,409
Full Build Out Total				**2,996**	**2,712**	**5,708**	**2,470**	**2,279**	**4,749**

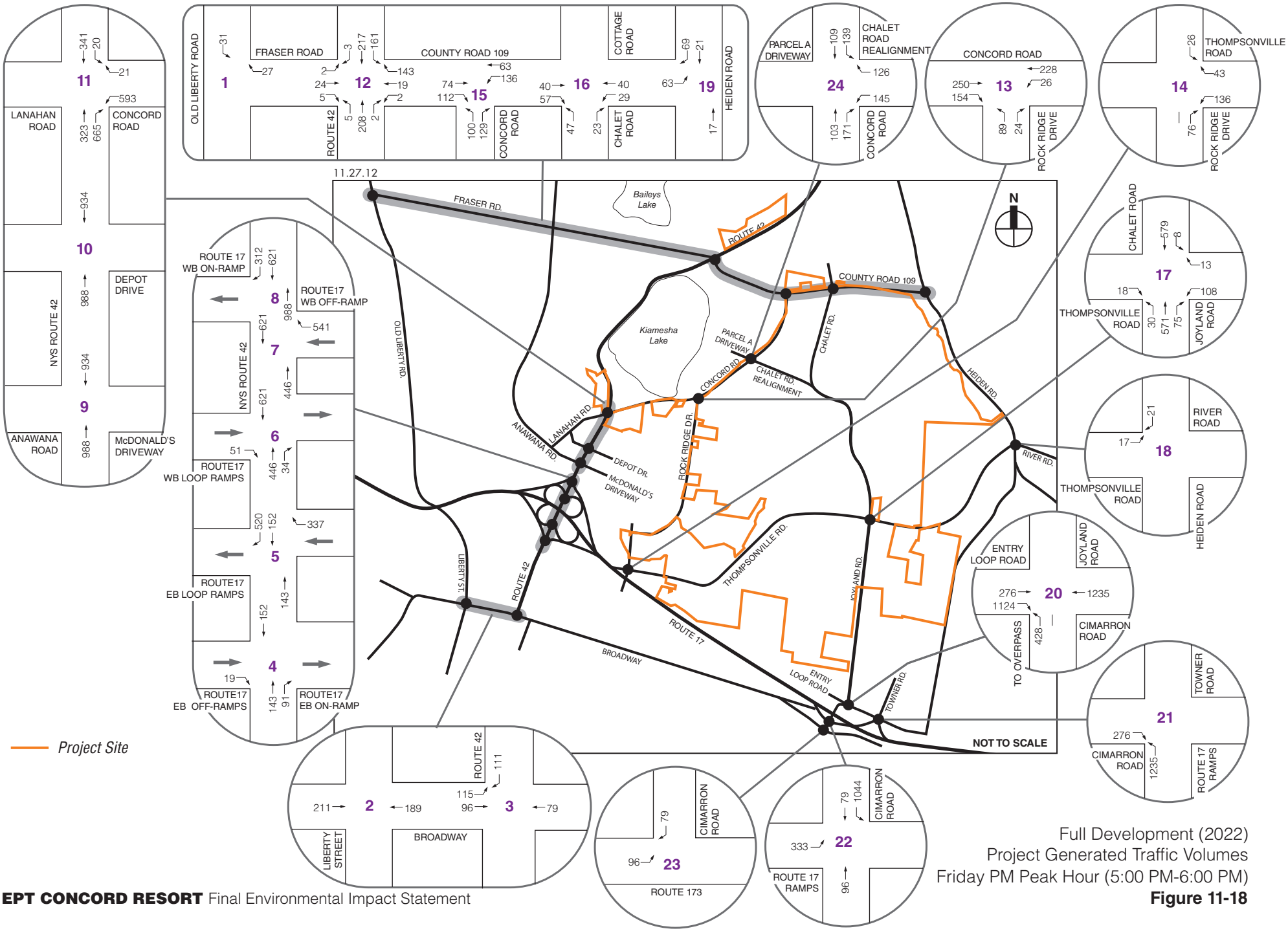
Notes: ksf = 1,000 square feet, d.u. = dwelling unit
1. Friday PM Trips: T = 0.42(x) (43% enter, 57% exit);
Sunday PM Trips: T = 0.51(x) (50% enter, 50% exit)
2. Friday PM Trips: Ln(T) = 0.9 *Ln(x)+0.51 (63% enter, 37% exit);
Sunday PM Trips: Ln(T) = 0.91 *Ln(x)+0.35 (53% enter, 47% exit)
3. Friday PM Trips: Ln(T) = 0.82 *Ln(x)+0.32 (67% enter, 33% exit);
Sunday PM Trips: T = 0.23(x) + 50.01 (49% enter, 51% exit)
4. Trip Rates from Seven21 Media survey
5. Friday PM Trips: Ln(T) = 0.67 *Ln(x)+3.37 (49% enter, 51% exit);
Sunday PM Trips: T = 3.12(x) (49% enter, 51% exit)

FULL BUILD OUT TRIP ASSIGNMENT

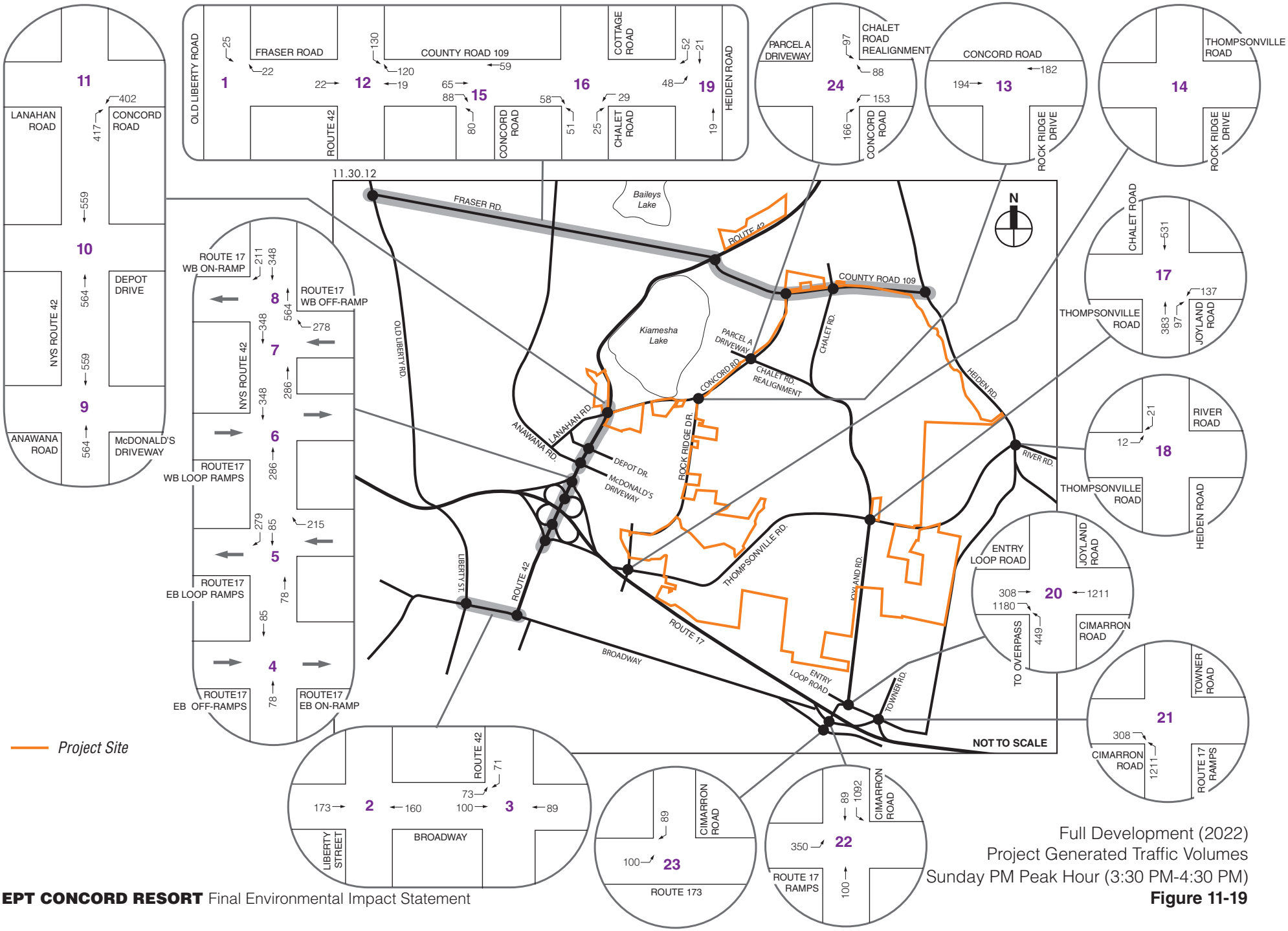
For the quantitative analysis of the full build out of the Proposed Project, the Proposed Project's generated trips were assigned to the local network based on assumptions described in detail for 2014 Build Year above. As the order and development program ultimately assigned to each future phase are market driven, the distribution percentages and assignments for the future parcels should be re-evaluated in subsequent supplemental studies. **Figures 11-18 and 11-19** present the project only trips for full build out of the Proposed Project during the Friday and Sunday peak hours, respectively. **Figures 11-20 and 11-21** present the build traffic volumes for full build out of the Proposed Project during the Friday and Sunday peak hours, respectively.

PEAK HOUR TRAFFIC CONDITIONS FOR FULL BUILD OUT OF THE COMPREHENSIVE DEVELOPMENT PLAN

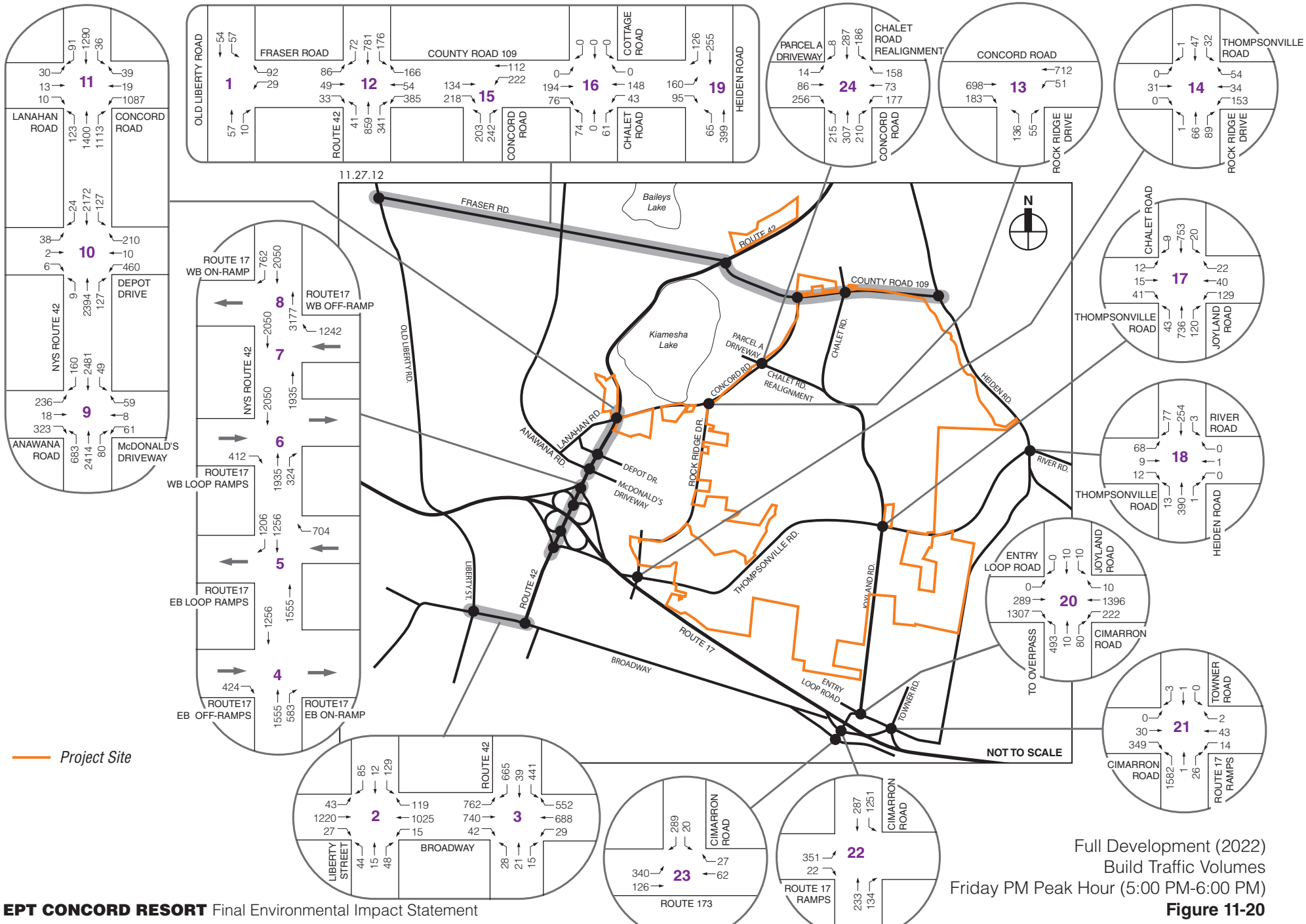
A qualitative assessment and potential mitigation based on the volumes developed for the full build of the Proposed Project are presented below for each of the study intersections and is summarized in **Table 11-30**. As the proposed EPT Concord Resort development program advances, supplemental detailed traffic studies and intersection analyses will be needed to specifically identify potential impacts and required mitigation. In addition to the potential mitigation described below, the implementation of ITS as discussed in the "Introduction" of this chapter will be included in the analyses of future mitigation.



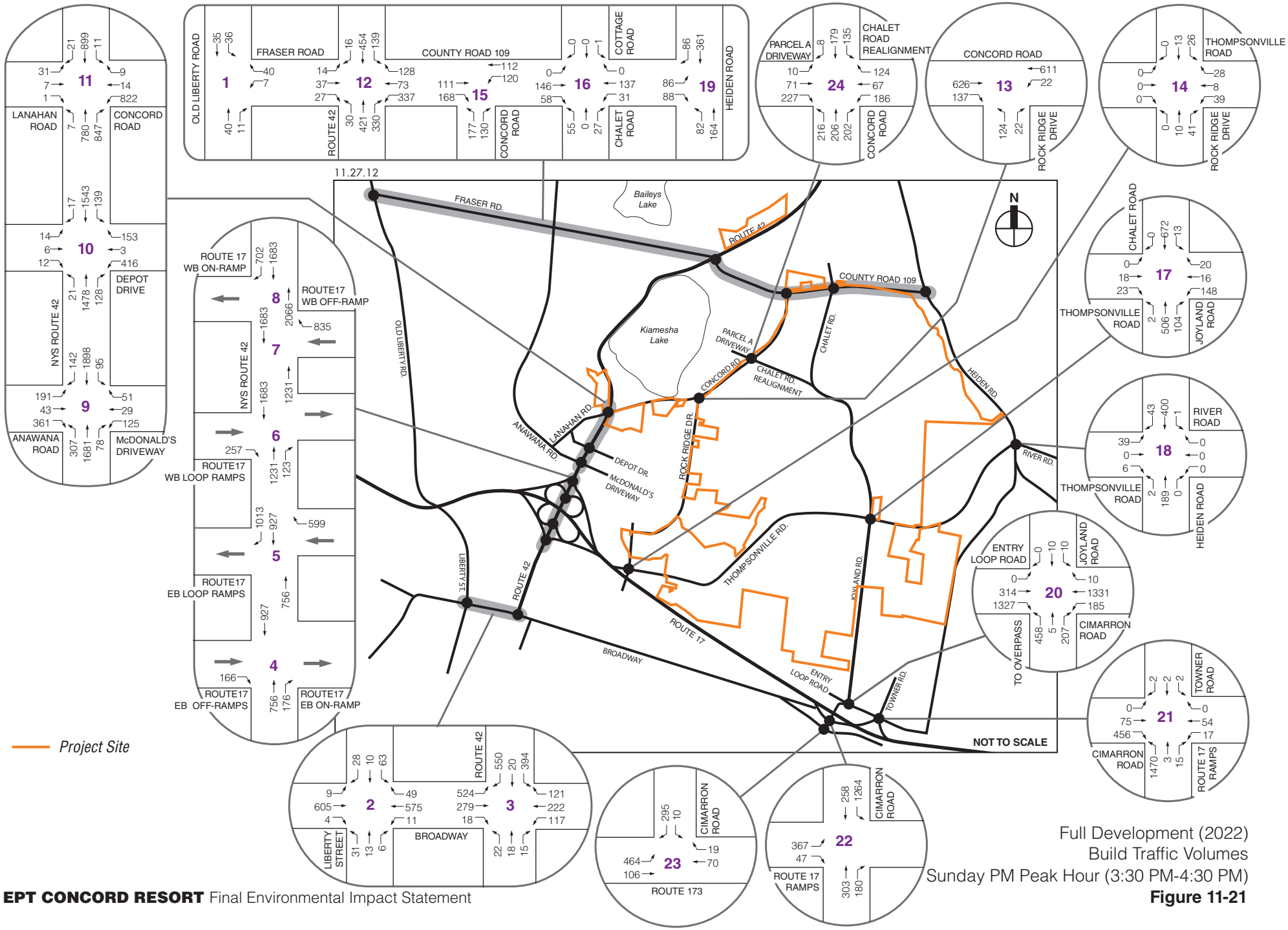
Full Development (2022)
Project Generated Traffic Volumes
Friday PM Peak Hour (5:00 PM-6:00 PM)
Figure 11-18



Full Development (2022)
Project Generated Traffic Volumes
Sunday PM Peak Hour (3:30 PM-4:30 PM)
Figure 11-19



Full Development (2022)
Build Traffic Volumes
Friday PM Peak Hour (5:00 PM-6:00 PM)
Figure 11-20



Full Development (2022)
Build Traffic Volumes
Sunday PM Peak Hour (3:30 PM-4:30 PM)
Figure 11-21

Table 11-30
Full Build Out Potential Mitigation Measures Summary

Intersection	Mitigations Measures
Liberty Street / Broadway	Potential signal re-timings
Pleasant Street / Broadway	Potential signal re-timings Potential improvements to eastbound and westbound approaches
NYS Route 42 / Anawana Lake Road	Potential signal re-timings Potential for lane geometry improvements
NYS Route 42 / Depot Drive	Potential signal re-timings Potential for lane geometry improvements
NYS Route 42 / Concord Road	Potential signal re-timings Potential for lane geometry improvements
NYS Route 42 / Kiamesha Lake Road	Potential for lane geometry improvements
Rock Ridge Drive / Concord Road	Potential signalization of intersection Potential to provide turn lanes on Concord Road
Concord Road / Kiamesha Lake Road	Potential signalization of intersection
Joyland Road / Thompsonville Road	Potential signalization of intersection
NYS Route 17 Interchange 106	Potential overpass widening and expanding the single lane roundabout to a two-lane roundabout.
Note: Mitigation measures identified for the full build out are preliminary based on a qualitative analysis of the full build volumes. Location specific mitigation measure will be identified in future studies when detailed intersection operation analyses are conducted. Local roads, including Chalet, Thompsonville, Rock Ridge and Concord Road, will be assessed as part of site plan review for each phase.	

SIGNALIZED INTERSECTIONS

- Liberty Street and Broadway – at full build out, the Proposed Project is estimated to generate approximately 330 (Sunday peak hour) and 400 (Friday peak hour) more vehicles along Broadway; therefore, potential signal re-timings may be needed at this intersection. Future supplemental studies will calculate changes in traffic volumes and identify detailed mitigation measures.
- Pleasant Street and Broadway – at full build out, the Proposed Project is estimated to generate approximately 330 (Sunday peak hour) and 400 (Friday peak hour) more vehicles at this intersection. Based on the No Build and Build volumes, this intersection may deteriorate to unacceptable LOS E or LOS F conditions with project traffic exacerbating conditions. Mitigation for this intersection could include signal timing adjustments and improvements to the eastbound and westbound approaches. Future supplemental studies will calculate changes in traffic volumes and identify detailed mitigation measures.
- NYS Route 42 and Anawana Lake Road – at full build out, the Proposed Project is estimated to generate approximately 1,120 (Sunday peak hour) and 1,920 (Friday peak hour) more vehicles at this intersection. Based on the No Build and Build volumes, this intersection may deteriorate to unacceptable LOS E or LOS F conditions with project traffic exacerbating conditions. Mitigation for this intersection could include signal timing adjustments and roadway improvements within the right-of-way. Future supplemental studies will calculate changes in traffic volumes and identify detailed mitigation measures.

- NYS Route 42 and Depot Drive – at full build out, the Proposed Project is estimated to generate approximately 1,120 (Sunday peak hour) and 1,920 (Friday peak hour) more vehicles at this intersection. Based on the No Build and Build volumes, this intersection may deteriorate to unacceptable LOS E or LOS F conditions with project traffic exacerbating conditions. Mitigation for this intersection could include signal timing adjustments and roadway improvements within the right-of-way. Future supplemental studies will calculate changes in traffic volumes and identify detailed mitigation measures.
- NYS Route 42 and Concord Road – at full build out, the Proposed Project is estimated to generate approximately 1,140 (Sunday peak hour) and 1,960 (Friday peak hour) more vehicles at this intersection. Based on the No Build and Build, this intersection may deteriorate to unacceptable LOS E or LOS F conditions with project traffic exacerbating conditions. Mitigation may be needed at this intersection that could include adjusted signal timings and additional turn lanes on all approaches. Future supplemental studies will calculate changes in traffic volumes and identify detailed mitigation measures.
- NYS Route 42 and Kiamesha Lake Road – at full build out, the Proposed Project is estimated to generate approximately 500 (Sunday peak hour) and 790 (Friday peak hour) more vehicles at this intersection. Based on the No Build and Build volumes, this intersection may deteriorate to unacceptable LOS E or LOS F conditions with project traffic exacerbating conditions. Mitigation for this intersection could include signal timing adjustments and roadway improvements within the right-of-way. Future supplemental studies will calculate changes in traffic volumes and identify detailed mitigation measures.

UNSIGNALIZED INTERSECTIONS

- Old Liberty Road and Fraser Road – this intersection would likely continue to operate at acceptable conditions and would not need mitigation to accommodate the project traffic going through this intersection.
- Rock Ridge Drive and Concord Road – at full build out, the Proposed Project would add approximately 700 vehicles to this intersection during both the Friday and Sunday peak hours. The increase in traffic at this intersection may result in the need to signalize the intersection and provide turn lanes along Concord Road.
- Rock Ridge Drive and Thompsonville Road – at full build out, the Proposed Project would add less than 300 vehicles to this intersection during both the Friday and Sunday peak hours. Given the low background volumes at this intersection and small increase in traffic due to the project, mitigation may not be needed.
- Concord Road and Kiamesha Lake Drive – at full build out, the Proposed Project would add 600 and 400 vehicles trips during the Friday and Sunday peak hours, respectively. This additional traffic may result in the need to signalize this intersection.
- Chalet Road and Kiamesha Lake Drive – at full build out, the Proposed Project would add less than 250 vehicles trips during the Friday and Sunday peak hours. Given the small amount of project trips added to low background volumes, mitigation may not be needed at this intersection.
- Joyland Road and Thompsonville Road – at full build out, the proposed EPT Concord Resort project would add a significant amount of traffic to this intersection. Therefore, it is likely this intersection would need to be signalized with turn lanes on all approaches.

- Heiden Road and Thompsonville Road – at full build out, the Proposed Project would add less than 50 vehicle trips during the Friday and Sunday peak hours. Given the small amount of project trips added to low background volumes, mitigation may not be needed at this intersection.
- Heiden Road and Lake Kiamesha Road – at full build out, the Proposed Project would add less than 170 vehicles trips during the Friday and Sunday peak hours. Given the small amount of project trips added to low background volumes, mitigation may not be needed at this intersection.

The inclusion the Kelli Wood and Gan-Eden developments would exacerbate the unacceptable conditions along NYS Route 42. However, these developments would have little impact on traffic operations along Joyland Road, Heiden Road, Kiamesha Lake Road, Concord Road, and Thompsonville Road.

NYS ROUTE 17 INTERCHANGE 106 (JOYLAND ROAD)

To accommodate the Proposed Project components anticipated to come on line in 2014 (i.e., Phase 1 Casino Resort, Golf Course, and select components of the Entertainment Village) mitigation is required at the Cimarron Road/NYS Route 17 Interchange 106 Ramp intersections and at the Joyland Road/Cimarron Road intersection to provide acceptable LOS conditions. A majority of the traffic from the full build out of the Proposed Project would continue to traverse these intersections and may degrade operations at these intersections and the two-lane overpass to unacceptable conditions. Given the right of way constraints in this area and the limited available width on the overpass, full build out of the Proposed Project may require additional mitigation that could include a re-design and re-construction of this interchange to accommodate the increased vehicle turning movements, including widening the overpass from a two-lane to four-lane roadway and expanding the roundabout at County Road 173/Overpass intersection from a single-lane to two-lane roundabout.

For future studies, the viability of using Interchange 107/Heiden Road for vehicles to access parcels to the north of Thompsonville Road should be studied to reduce the high traffic volumes on Interchange 106. If subsequent supplemental studies assign the Proposed Project's trips to Heiden Road, then intersections at Interchange 107 (Heiden Road) and between Interchange 107 and Thompsonville Road should added to the study area to be analyzed.

PUBLIC TRANSPORTATION

Under the full build out of the Proposed Project, it is anticipated that small to moderate increases in public transportation demand would occur mainly as a result of the development of the proposed residential component. However, it is the policy of the transportation agencies to adjust their schedules to meet the projected increases in demand. Additionally, a shuttle service would be provided to guests and residents of the EPT Concord Resort offering transportation to locations throughout the Casino Resort, eliminating additional vehicle trips.

PEDESTRIAN AND BICYCLE CONDITIONS

Under the full build out of the Proposed Project, there would be small to moderate increases in both pedestrian and bicycle traffic at certain locations throughout the study area. It is also assumed that, as the anticipated development schedule will be market driven and built out in phases, subsequent development components will require detailed supplemental pedestrian studies to determine the need for improvements to existing facilities or the creation of new pedestrian and bicycle facilities (as well as an examination of any pedestrian/bicycle/vehicular conflict issues that would require safety improvement measures). ✷