

Traffic Impact Study

Nevele Resort, Casino, & Spa Development Project

Town of Wawarsing, New York

CME Project #112-068

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CHAPTER I INTRODUCTION

This report summarizes the results of a Traffic Impact Study prepared to assess the traffic associated with the re-development of the *Nevele Grande Resort and Country Club* (Nevele Grande) site with the *Nevele Resort, Casino, & Spa* (Nevele Resort) project. This report summarized the results of the latest analysis which is reflective of the current proposal at the site and is a compilation of the analysis completed and included in the GEIS including the initial Traffic Impact Study dated April 11, 2014 and Addendum #1 dated April 30, 2014 and Addendum #2 dated June 9, 2014.

The project site is approximately 176 acres and is located on the east side of US Route 209 in the Town of Wawarsing, Ulster County, New York. The site, which was occupied by the Nevele Grande, has been vacant since 2009. A map illustrating the project location is shown on Figure 1.1.

A. Planned Project

The project involves the construction of a casino that will provide a total of 1,994 slots, 6 electronic gaming tables, and 80 gaming tables (2,610 total gaming positions) with various amenities such as a 446-room hotel with meeting rooms, ice arena, spas, restaurants, and golf course. Approximately 2,490 total on-site guest parking spaces will be provided. This includes 1,891 structure parking spaces, 470 valet spots, 4 service vehicle spaces, 94 parking spaces for the golf course, and 31 parking spaces for buses, trucks and RV's. Refer to Appendix A for a copy of the Conceptual Site Plan.

Access to the site is currently provided via Nevele Road which intersects US Route 209 in two locations with unsignalized intersections; one intersection is adjacent to the site (southern) and the second is located to the north just outside the Village of Ellenville. Primary access to the site is proposed via a full access driveway that will intersect US Route 209 from the east forming a new intersection approximately 670-feet north of the existing southern Nevele Road intersection with US Route 209, which will be closed with the re-development of the site. It is proposed that the Nevele Road (Country Club Road)/US Route 209 intersection to the north remain open; however,

signing should be provided to direct all patrons of the resort to the main site access driveway located to the south on US Route 209. The intersection of Nevele Road with Arrowhead Road will be realigned to provide direct access into the site directly from US Route 209. The northern leg of Nevele Road will form a three leg intersection with the main site access roadway.

An off-site satellite parking lot that consists of approximately 545 parking spaces will be constructed for employee use only. The Applicant has reached an agreement to purchase a property located approximately 1½ miles south of the site near Lewis Lane as show in Appendix A. Employees will have direct access to US Route 209 via an existing full access driveway and will be transported to the main Nevele Casino site via shuttle buses.

This traffic impact study provides an assessment of the site assuming full build-out of the site by 2017.

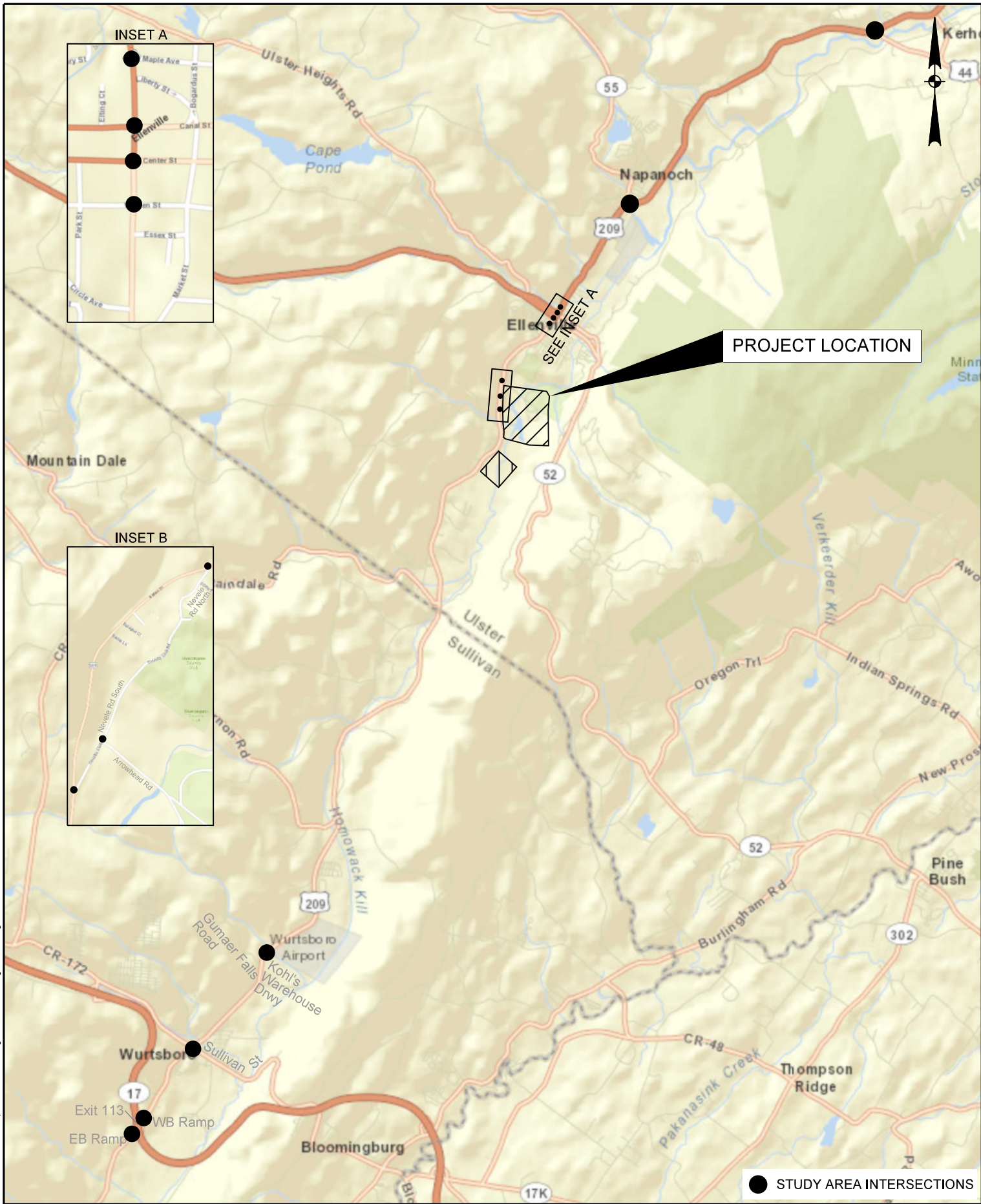
B. Study Area and Methodology

The study area is consistent with the scoping document which was adopted on November 15, 2012 and was developed through coordination with the Town of Wawarsing, Village of Ellenville, Ulster County, and the New York State Department of Transportation (NYSDOT) Regions 8 and 9. The study area intersections are highlighted on Figure 1.1 and include the following:

The study area includes the following intersections:

- US Route 209/US Route 44/NY Route 55 – Region 8
- US Route 209/NY Route 55 – Region 8
- US Route 209/Maple Avenue – Region 8
- US Route 209/Canal Street (NY Route 52) – Region 8
- US Route 209/Center Street (NY Route 52) – Region 8
- US Route 209/Warren Street – Region 8
- US Route 209/Nevele Road North – Region 8
- US Route 209/Nevele Road South – Region 8
- US Route 209/Gumaer Falls Road/Kohl's Warehouse Driveway – Region 9
- US Route 209/Sullivan Street – Region 9
- US Route 209/NY Route 17 Exit 113 Westbound Ramp – Region 9
- US Route 209/NY Route 17 Exit 113 Eastbound Ramp – Region 9
- Nevele Road/Arrowhead Road – Region 8

It is noted that the US Route 209/Nevele Road North and US Route 209/Gumaer Falls Road/Kohl's Warehouse Driveway intersections were not outlined in the approved scoping document, but have been added to the study based on agency comments. The potential traffic impact of the proposed project was determined by documenting the existing traffic conditions in the area, projecting future traffic volumes, including the peak hour trip generation of the site, and determining the operating conditions of the study area intersections after development of the proposed project.



PROJECT LOCATION

NEVELE RESORT, CASINO & SPA
TOWN OF WAWARSING, NEW YORK



PROJECT: 112-068

DATE: 6/2014

FIGURE: 1.1

CHAPTER II

EXISTING CONDITIONS

A. Roadways Serving the Site

- Arrowhead Road – Arrowhead Road is a local street that provides two-way east-west access between Nevele Road and the project site and the existing Honor's Haven Resort and Spa. Arrowhead Road has a total pavement width of approximately 24-feet with single travel lanes in each direction. No sidewalks are provided and the posted speed limit is 35-mph.
- Nevele Road – Nevele Road is a local street that provides north-south access parallel to US Route 209 and provides access to Arrowhead Road and Clifford Street. Nevele Road is also referred to as Country Club Road. Nevele Road has a total pavement width of approximately 23 to 25-feet with single travel lanes in each direction. The posted speed limit on Nevele Road varies from 25 to 35-mph. Land uses along Nevele Road include a cemetery, the Shawangunk Country Club, single family homes and apartments. No sidewalks are provided on Nevele Road.
- US Route 209 – US Route 209 is classified as an urban principal arterial roadway near the project site that provides north-south travel through Ulster County. Data published by NYSDOT in the latest version of the *Pavement Data Report* (2012) indicates that the pavement on US Route 209 is in good condition near the project site. US Route 209 generally consists of a 12-foot wide lane in each direction with 8-foot wide paved shoulders in the project vicinity. The posted speed limit on US Route 209 is 55-mph adjacent to the project site but varies throughout the study area with posted speed limits of 30-mph, 40-mph, 45-mph, and 55-mph. Land uses along US Route 209 are primarily a mix of commercial and residential with much of the land to the south of the site undeveloped. There are no pedestrian accommodations along the majority of US Route 209 in the study area with the exception of the following locations:
 - Some short sidewalk sections are located adjacent to the Sullivan Street intersection.
 - A sidewalk is provided on the east side of the roadway across the NY Route 17 overpass.
 - Within the Village of Ellenville, a sidewalk is provided on the east side of the roadway that extends from the Emerald Pond Estates Apartments to Aluminum Drive.
 - A sidewalk is also provided on the west side of the roadway within the Village of Ellenville that extends from just north of the northern Nevele Road intersection to Beckley Street.
 - A short sidewalk section is provided on the west side of US Route 209 between Irish Cape Road and Main Street north of the Village of Ellenville.

There are also segments of US Route 209 that provide a center two-way left-turn median to the north within the Village of Ellenville. Table 2.1 summarizes the existing characteristics of the State maintained roadways as referenced from the *2012 Pavement Data Report* while Table 2.2 summarizes existing characteristics of the locally maintained roadways based on field observations.

**Table 2.1 – State Maintained Segment Characteristics
(2012 Pavement Data Report)**

US Route 209						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
NY Route 17 to Town of Mamakating Village of Wurtsboro						
Sullivan	0.85	2	6	24	4	6
Town of Mamakating Village of Wurtsboro to Old NY Route 17						
Sullivan	0.52	2	10	24	4	6
Old NY Route 17 to Village of Wurtsboro Town of Mamakating						
Sullivan	0.52	2	10	24	4	6
Village of Wurtsboro Town of Mamakating to Ulster County Line						
Sullivan	1.06	2	10	24	4	6
Sullivan	0.24	2	10	24	4	6
Sullivan	1.49	2	10	24	4	6
Sullivan	0.08	2	10	36	4	6
Sullivan	0.54	2	10	24	4	6
Sullivan	0.07	2	10	36	4	6
Sullivan	3.17	2	10	24	4	6
Ulster/Sullivan County Line to Town of Wawarsing and Village of Ellenville						
Ulster	0.07	2	8	24	14	7
Ulster	0.02	2	0	30	14	7
Ulster	0.18	2	8	24	14	7
Ulster	0.53	2	8	24	14	7
Ulster	0.07	3	6	36	14	7
Ulster	0.10	2	6	36	14	7
Ulster	1.78	2	6	24	14	7
Ulster	0.46	2	8	24	14	7
Ulster	0.69	2	6	24	14	7
Ulster	0.08	3	6	37	14	7
Town of Wawarsing and Village of Ellenville to NY Route 52						
Ulster	0.31	2	0	24	14	7
Ulster	0.21	2	0	24	14	7
Ulster	0.10	2	0	24	14	6
NY Route 52 to Village of Ellenville and Town of Wawarsing						
Ulster	0.17	2	0	24	14	6
Ulster	0.02	2	0	30	14	6
Ulster	0.35	2	0	35	14	6
Ulster	0.12	2	0	36	14	6
Village of Ellenville and Town of Wawarsing to Start NY Route 55 Overlap						
Ulster	0.03	2	6	24	14	6
Ulster	0.09	2	6	24	14	6
Ulster	0.14	2	8	24	14	5
Ulster	0.19	2	4	24	14	5
Ulster	0.43	2	4	24	14	5
Ulster	0.23	2	6	24	14	6
Ulster	0.04	2	0	22	14	7
Start NY Route 55 Overlap to End NY Route 55 Overlap						
Ulster	0.65	2	6	34	14	7
Ulster	1.04	2	5	24	14	6
Ulster	0.02	2	0	24	14	7
Ulster	2.47	2	6	24	14	7
Ulster	0.18	2	8	42	14	7

**Table 2.1 – State Maintained Segment Characteristics (Continued)
(2012 Pavement Data Report)**

US Route 44/NY Route 55						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
US Route 209 to NY Route 299						
Ulster	0.05	2	12	24	14	6
Ulster	0.05	2	0	34	14	6
Ulster	1.31	2	6	22	14	6
Ulster	0.05	2	8	22	4	7
Ulster	0.18	2	6	22	4	6
Ulster	1.31	2	4	24	4	6
Ulster	4.13	2	4	24	4	6
Ulster	1.46	2	4	24	4	6
Ulster	1.84	2	4	24	4	7
NY Route 55						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
NY Route 55A to US Route 209						
Ulster	0.24	2	4	20	7	5
Ulster	0.50	2	2	20	7	5
Ulster	0.50	2	2	20	7	5
Ulster	0.72	2	2	20	7	5
Ulster	0.40	2	2	20	17	5
Ulster	0.49	2	2	20	17	5
Ulster	0.19	2	2	20	17	7
Ulster	0.14	2	2	20	17	7
Ulster	0.28	2	2	20	17	7
Ulster	0.92	2	2	20	17	7
Ulster	0.13	2	7	22	17	7
Ulster	0.03	2	0	28	17	7
Ulster	0.12	2	7	22	17	7
Ulster	0.65	2	2	20	17	7
NY Route 52 (Center Street)						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
Town of Wawarsing and Village of Ellenville to US Route 209						
Ulster	0.15	2	10	24	14	6
Ulster	0.04	4	0	36	14	7
Ulster	0.49	4	0	70	14	7
US Route 209 to Village of Ellenville and Town of Wawarsing						
Ulster	0.38	4	0	80	16	7
Ulster	0.18	4	0	60	16	7
Ulster	0.26	4	0	50	16	7
Ulster	0.05	2	0	22	16	7
Ulster	0.03	2	0	30	16	7
Ulster	0.32	2	4	22	16	6

* = Rating from the New York State's 2012 Pavement Data Report, NYSDOT

Pavement Condition 4 & 5 = Poor, 6 = Fair, 7 = Good

Functional Class:

04 = Rural Principal Arterial

07 = Rural Major Collector

14 = Urban Principle Arterial

16 = Urban Minor Arterial

17 = Urban Collector

Table 2.2 – Locally Maintained Segment Characteristics (Field Observations)

Maple Avenue						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
US Route 209 to Yankee Place						
Ulster	0.10 (Bogardus)	2	0	39	19	6
Ulster	0.11 (Maiden)	2	0	39	19	6
Ulster	0.11 (Yankee)	2	0	40	19	6
Canal Street						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
Cape Avenue to US Route 209						
Ulster	0.30 (Childs)	2	0	27	16	7
Ulster	0.09 (Elting)	2	0	30	16	7
Ulster	0.06 (Rt 209)	2	0	39	16	7
US Route 209 to Towpath Lane						
Ulster	0.11 (Market)	2	0	37	16	7
Ulster	0.05 (Liberty)	2	0	37	16	7
Ulster	0.16 (Yankee)	2	0	37	16	7
Ulster	0.19 (Towpath)	2	0	38	16	7
Warren Street						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
Park Street to US Route 209						
Ulster	0.09	2	0	28	19	7
US Route 209 to Market Street						
Ulster	0.09	2	0	25	19	7
Nevele Road (Country Club Road)						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
US Route 209 to Clifford Street						
Ulster	0.05	2	0	24	19	4
Clifford Street to Arrowhead Road						
Ulster	0.63	2	0	24	19	5
Arrowhead Road to US Route 209						
Ulster	0.19	2	0	23	19	5
Arrowhead Road						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
Nevele Road to Nevele Resort						
Ulster	0.28	2	0	25	19	5
Kohl's Warehouse Driveway						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
US Route 209 to Kohl's Warehouse						
Sullivan	0.04	3	0	57	Private	7
Gumaer Falls Road						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
US Route 209 to Kohl's Warehouse						
Sullivan	1.80	2	0	18	09	7

**Table 2.2 – Locally Maintained Segment Characteristics (continued)
(Field Observations)**

Sullivan Street						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
Village of Wurstboro Line to US Route 209						
Sullivan	0.36 (Valentine)	2	7 to 11	23	06	7
US Route 209 to Village of Wurtsboro Line						
Sullivan	0.15 (4 th)	2	6 to 10	23	06	7
Sullivan	0.60 (Henry)	2	6 to 10	23	06	7
NY Route 17 Exit 113 Westbound On/Off Ramps						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
NY Route 17 Westbound Off Ramp to US Route 209						
Sullivan	0.21	1	3 to 6	23	Ramp	7
US Route 209 to NY Route 17 Westbound On Ramp						
Sullivan	0.18	1	4 to 6	17	Ramp	7
NY Route 17 Exit 113 Eastbound On/Off Ramp						
County	Section Length (mi)	No. of Lanes	Shoulder Width (ft)	Pavement Width (ft)	Functional Class	Pavement Condition*
NY Route 17 Eastbound Off Ramp to US Route 209						
Sullivan	0.21	1	3 to 7	20	Ramp	7
US Route 209 to NY Route 17 Eastbound On Ramp						
Sullivan	0.20	1	3 to 7	16	Ramp	7

Note = Functional class estimated based on character of roadway and adjacent NYSDOT classifications.

* = Ratings from field observations based on the road condition criteria used by NYSDOT.

Pavement Condition 4 & 5 = Poor, 6 = Fair, 7 = Good

Functional Class:

06 = Rural Minor Arterial

09 = Rural Local

16 = Urban Minor Arterial

19 = Urban Local

B. Study Area Intersections

- US Route 209/US Route 44/NY Route 55 – This is a three-leg intersection operating under actuated traffic signal control. The westbound US Route 44/NY Route 55 approach provides a single lane for shared left and right turn movements. The southbound US Route 209 approach provides an exclusive left-turn lane and a through lane while the northbound US Route 209 approach provides a through lane a separate right-turn slip lane that operates under yield control. No sidewalks or crosswalks are provided at this intersection. There are no sidewalks or pedestrian accommodations at this intersection. The posted speed limit on US Route 209 and US Route 44/NY Route 55 is 55-mph.
- US Route 209/NY Route 55 – This is a three-leg intersection operating under stop-sign control on the eastbound NY Route 55 approach which provides two lanes for left and right turns. This section of US Route 209 provides single through travel lanes in each direction with a center two-way left-turn median that extends approximately 2,000 feet from just south of Irish Cape Road (to the south) to Clinton Street (to the north). This lane configuration

allows for use of this lane by left-turn vehicles both entering and exiting NY Route 55. A sidewalk is provided on the west side of US Route 209. The posted speed limit on US Route 209 is 55-mph while the posted speed limit on NY Route 55 is 30-mph.

- US Route 209/Maple Avenue – This is a three-leg intersection operating under actuated traffic signal control. The northbound US Route 209 approach provides a single lane for shared through/right-turn movements and a center two-way left-turn median, which is currently not utilized. The southbound US Route 209 approach provides an exclusive left-turn lane and a through lane. The westbound Maple Avenue approach provides a single lane; however, enough width exists for the approach to operate with two lanes to separate left and right turning vehicles. During field data collection, it was observed that westbound vehicles on Maple Avenue take advantage of the roadway width and the intersection primarily operates as a two-lane approach. It is noted that an *AutoZone* automobile parts store has been approved on the west side of US Route 209 and will add a fourth leg to this intersection. Sidewalks are provided on both sides of all intersection approaches. Crosswalks with pedestrian push buttons and indicators are provided on the east and north legs of the intersection. Based on information provided by NYSDOT, this traffic signal operates on an actuated multi-phase cycle. It is noted that Ellenville public school complex and a fire department are located on Maple Avenue. The posted speed limit on US Route 209 is 30-mph while the posted speed limit on Maple Avenue is 20-mph.
- US Route 209/Canal Street – This is a four-leg intersection operating under actuated traffic signal control. The eastbound and westbound Canal Street approaches and the northbound US Route 209 approach provide an exclusive left-turn lane and a shared through/right-turn lane. The southbound US Route 209 approach provides an exclusive left-turn lane, a through lane, and a separate right-turn lane. Sidewalks are provided on both sides of all intersection approaches and crosswalks with pedestrian push buttons and indicators are provided on each intersection approach. Based on information provided by NYSDOT, this traffic signal operates on an actuated multi-phase cycle that can be coordinated with the adjacent Center Street intersection to the south. The posted speed limit on US Route 209 and Canal Street is 30-mph.
- US Route 209/Center Street – This is a four-leg intersection operating under actuated traffic signal control. All four intersection approaches provide an exclusive left-turn lane and a shared through/right-turn lane. Sidewalks are provided on both sides of all intersection approaches and crosswalks with pedestrian push buttons and indicators are provided on each intersection approach. Based on information provided by NYSDOT, this traffic signal operates on an actuated multi-phase cycle that can be coordinated with the

adjacent Canal Street intersection to the north. The posted speed limit on US Route 209 and Center Street is 30-mph.

- US Route 209/Warren Street – This is a four-leg intersection operating under stop-sign control on the eastbound and westbound Warren Street intersection approaches. All intersection approaches provide a single lane for shared travel movements. Sidewalks are provided on both sides of US Route 209 and Warren Street; however, no crosswalks are provided at this intersection. The posted speed limit on US Route 209 and Warren Street is 30-mph.
- US Route 209/Nevele Road North – This is a three-leg intersection operating under stop-sign control on the westbound Nevele Road (Country Club Road) approach which intersects US Route 209 at a skewed angle. All intersection legs provide a single lane for shared travel movements with the exception of the southbound US Route 209 approach which provides a second approximate ¼ mile long through lane used primarily for passing. A sidewalk is provided on the east side of US Route 209; however, no crosswalks are provided at this intersection. The posted speed limit on US Route 209 is 30-mph while the posted speed limit on Nevele Road North is 25-mph.
- US Route 209/Nevele Road South – This is a three-leg intersection operating under stop-sign control on the westbound Nevele Road approach which intersects US Route 209 at a skewed angle. All intersection legs provide a single lane for shared travel movements. Sidewalks and crosswalks are not provided at this intersection. The posted speed limit on US Route 209 is 55-mph while the posted speed limit on Nevele Road South is 35-mph.
- US Route 209/Gumaer Falls Road/Kohl's Warehouse Driveway – This is a four-leg intersection operating under an actuated traffic signal. The southbound US Route 209 approach and the eastbound Gumaer Falls Road approach provide a single lane for shared travel movements. The northbound US Route 209 approach consists of a shared left-turn/through lane with a separate right-turn lane while the westbound Kohl's Warehouse Driveway approach provides an exclusive left-turn lane and a shared through/right-turn lane. No sidewalks are provided at this intersection; however, a crosswalk with push buttons and indicators are provided on the north leg of the intersection. The posted speed limit on US Route 209 is 55-mph while the posted speed limit on Gumaer Falls Road is 30-mph. The Kohl's Warehouse Driveway has a posted speed limit of 10-mph.
- US Route 209/Sullivan Street – This is a four-leg intersection operating under actuated traffic signal control. Each approach to this intersection consists of a single lane for shared travel movements. Sidewalks are provided on both sides of the eastbound and westbound Sullivan Street intersection approaches and the southbound US Route 209 approach. Crosswalks with pedestrian push buttons and indicators are provided on all four intersection

approaches. The posted speed limit on US Route 209 is 40-mph while the posted speed limit on Sullivan Street is 30-mph.

- US Route 209/NY Route 17 Westbound Ramps – This is a four-leg intersection operating under stop sign-control on the westbound NY Route 17 westbound off-ramp intersection approach. The northbound US Route 209 approach consists of an exclusive left-turn lane and a through lane while the southbound US Route 209 approach consists of a through lane and a slip right-turn lane that operates under yield control with the westbound on-ramp. The westbound off ramp approach consists of a shared left-turn/through lane and a separate right-turn lane. The west leg of this intersection is a one-way on-ramp to NY Route 17 westbound. A sidewalk is provided on the east side of US Route 209 across the overpass bridge. A crosswalk is provided on the east leg of the intersection. The posted speed limit on US Route 209 is 55-mph while the posted speed limit on the ramp is 25-mph.
- US Route 209/NY Route 17 Eastbound Ramps – This is a four-leg intersection operating under an actuated traffic signal. The northbound US Route 209 approach consists of a single lane for shared through/right-turn movements while the southbound US Route 209 approach provides an exclusive left-turn lane and a through lane. The eastbound off ramp approach consists of a shared left-turn/through lane and a separate right-turn lane. The east leg of this intersection is a one-way on-ramp to NY Route 17 eastbound. A sidewalk is provided on the east side of US Route 209 across the overpass bridge. Crosswalks with push buttons and indicators are provided on the north, west, and east legs of the intersection. The posted speed limit on US Route 209 is 55-mph while the posted speed limit on the ramp is 25-mph.
- Nevele Road/Arrowhead Road – This is a three-leg intersection operating under stop-sign control on the westbound Arrowhead Road approach. All intersection legs provide a single lane for shared travel movements. Sidewalks and crosswalks are not provided at this intersection. The posted speed limit on Nevele Road and Arrowhead Road is 35-mph.

C. Existing Conditions

Automatic Traffic Recorder Data

Automatic traffic recorders (ATRs) were placed at several locations on US Route 209, NY Route 55, and Nevele Road to record hourly traffic volumes throughout the study corridor. Data was collected for the period from Friday August 17, 2012 to Wednesday August 22, 2012 and from Tuesday, October 16, 2012 to Friday, October 26, 2012 in order to collect both weekday and weekend traffic volumes in the corridor. Table 2.3 summarizes the average daily volumes recorded by Creighton Manning in

2012. It is noted that the raw data obtained from the ATRs was not seasonally adjusted.

Table 2.3 – Summary of Average Daily Traffic Volumes and Traffic Conditions

Study Area Roadway	Date	Traffic Volumes (Weekday)			Posted Speed Limit	85 th Percentile Speed	Daily Heavy Vehicle Percentage
		NB/EB	SB/WB	Total Two-Way			
US Rt 209 – North of NY Route 55	October 2012	5,110	5,280	10,390	45	48	8
US Rt 209 – South of Shoprite Blvd	October 2012	7,280	7,270	14,550	35	41	5
US Rt 209 – North of Nevele Rd	August 2012	3,510	3,485	6,995	55	59	7
US Rt 209 – South of McDonald Rd	August 2012	4,130	3,780	7,910	55	63	10
US Rt 209 – South of Sullivan Street	August 2012	3,535	4,120	7,655	55	59	10
NY Rt 55 – West of US Route 209	October 2012	1,145	1,150	2,295	30	40	5
Nevele Rd – South of Arrowhead Road	August 2012	215	165	380	35	35	6
Nevele Rd – North of Arrowhead Rd	October 2012	335	335	670	25	29	3

NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound

This table shows that the AADT on US Route 209 is fairly low (6,995 vehicles per day (vpd)) south of the Village of Ellenville. The AADT is substantially higher (10,390 to 14,550 vpd) within the Village and north of the Village.

Turning Movement Counts

Based on the seasonal and recreational nature of the surrounding area, the traffic impact analysis was conducted during peak seasonal traffic conditions in the study area which will also coincide with peak operations at the proposed *Nevele Resort*. Therefore, existing intersection turning movement counts were conducted at the study area intersections on a Friday afternoon during the evening peak period from 4:30 to 6:30 p.m. and on Sunday afternoon during the evening peak period from 3:00 to 5:00 p.m. These peak periods represent the peak weekday afternoon and peak weekend traffic operating periods during the higher summer peak season in the study area. Turning movement counts were conducted at the majority of the study area intersections in August 2012. These counts were supplemented with additional turning movement counts conducted in October 2012 and May/June 2014 based on additions to the scope made during the scoping process and recent agency comments. The

October 2012 and May/June 2014 turning movement counts were factored to peak summer August conditions based on seasonal rates in the *Seasonal Adjustment Factors for Traffic Count Processing 2012* table provided by the NYSDOT for Factor Group 40 roadways. The raw turning movement count data is included in Appendix B. Historical traffic volume data (2000 to 2011) found in the 2011 *Traffic Data Report*, published by NYSDOT, indicates that average traffic volume growth in the vicinity of the site has increased by approximately 0.36% per year over the last several years on US Route 209, NY Route 17, and NY Route 52. Therefore, the 2012 turning movement counts were increased by 0.5% per year for two years to represent 2014 Existing traffic volumes. The counts were only balanced between the following intersections and all traffic volumes are summarized on Figures 2.1 and 2.2.

- US Route 209 between Nevele Road and Arrowhead Road
- US Route 209 between NY Route 17 Exit 113 Eastbound and Westbound Ramps

These base year 2014 Weekday and Weekend PM peak hour volumes provide existing peak summer traffic conditions at the study area intersections and form the basis for all traffic forecasts and analysis. The seasonally factored and balanced traffic volumes are included under Appendix B.

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

- The Weekday PM peak hour generally occurred from 4:30 to 5:30 p.m. while the Weekend PM peak hour generally occurred from 3:00 to 4:00 p.m.
- The two-way traffic volume on US Route 209 adjacent to the project site is approximately 640 vehicles per hour (vph) during the Weekday PM peak hour and approximately 665 vph during the Weekend PM peak hour.
- The two-way traffic volume on Nevele Road adjacent to the project site is approximately 45 vph during the Weekday PM peak hour and approximately 35 vph during the Weekend PM peak hour.
- Heavy vehicles and buses account for a total of approximately 2 percent of two-way traffic on US Route 209 at the project site during the Weekday PM peak hour and close to zero percent during the Weekend PM peak hour. No trucks or buses were observed on Nevele Road or Arrowhead Road adjacent to the project site during the data collection.

D. Transit

Transit service in the project area is provided by the Ulster County Area Transit (UCAT) via bus line UE (Kingston – Ellenville) as shown on Diagram #1. There are no existing bus stops located on US Route 209, Nevele Road, or Arrowhead Road in the vicinity of the project site. The closest bus stops are located north of the project site in the Village of Ellenville and at the ShopRite and Wal-Mart plazas.

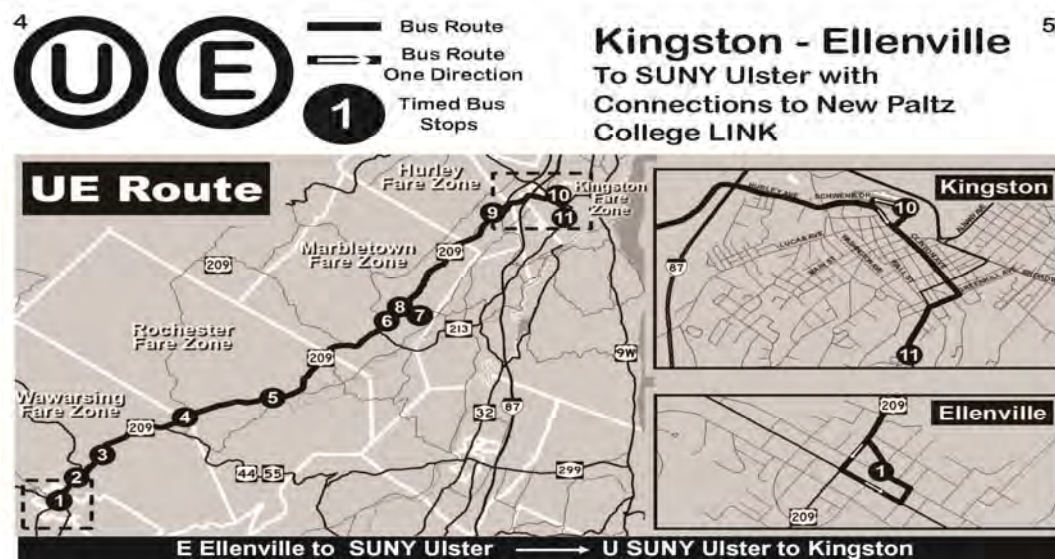


Diagram #1 - UCAT Line UE

E. Pedestrian/Bicycle Accommodations

A review of the existing road network indicates that sidewalks are typically provided within the Village of Ellenville, within the Village of Wurtsboro, and on the east side of the US Route 209 overpass that spans NY Route 17. Crosswalks, pedestrian push-buttons and indicators are provided at all signalized study intersections within the Villages of Ellenville and Wurtsboro and on the northern, western, and eastern legs of the US Route 209/NY Route 17 Exit 113 Eastbound Ramp intersection. A crosswalk is also provided on the eastern leg of the unsignalized US Route 209/NY Route 17 Exit 113 Westbound Ramp intersection. Table 2.4 shows a summary of the peak hour pedestrian crossings observed during the turning movement counts at the signalized and unsignalized intersections. The majority of the pedestrians were observed using the available sidewalks and crosswalks where present.

There is also the existing Delaware & Hudson (D&H) Canal Heritage Corridor that is a 35 mile long trail that spans Ulster County from the City of Kingston to the Village of Ellenville and traces the route of the Delaware Hudson Canal, the New York Ontario & Western (O&W) Railroad, and scenic Roundout Creek. The applicant has reached an agreement in principle to dedicate more than five additional miles of rail trail located through and along the *Nevele Resort* property that will connect the Village of Ellenville to Spring Glen.

There are no roadways in the study area designated as bike routes; therefore, bicycle traffic must share the road with vehicles.

Table 2.4 – Pedestrian and Bicycle Activity Summary

Intersection	Weekday PM Peak Hour		Weekend PM Peak Hour	
	Pedestrians	Bicycles	Pedestrians	Bicycles
US Route 209/US Route 44/NY Route 55	2	0	0	0
US Route 209/NY Route 55	1	0	4	1
US Route 209/Maple Avenue	40	0	8	0
US Route 209/Canal Street	26	2	32	1
US Route 209/Center Street	31	0	27	0
US Route 209/Warren Street	17	0	19	0
US Route 209 Nevele Road North	9	0	2	0
US Route 209 Nevele Road South	0	0	0	0
US Route 209/Gumaer Falls Rd/Kohl's Warehouse Drwy	0	0	0	0
US Route 209/County Road 172	5	0	17	2
US Route 209/NY Route 17 Exit 113 WB Ramp	6	0	0	1
US Route 209/NY Route 17 Exit 113 EB Ramp	1	0	0	0
Nevele Road/Arrowhead Road	0	0	0	0

As indicated in the table, the pedestrian networks within the Village of Ellenville north of the project area are a crucial component to the transportation network in the study area. As expected, the pedestrian traffic outside of the Village areas is minimal. Bicycle traffic observed throughout the study area was also low.

F. Accident History

Safety Information Management System (SIMS) and Accident Location Information System (ALIS) data was provided by NYSDOT at the ten study area intersections along US Route 209 and the Nevele Road/Arrowhead Road intersections.

Data was provided for the latest available three-year period from March 1, 2010 to February 28, 2013. As per the scope, representatives from Ulster County, the Town of Wawarsing, and the Village of Ellenville confirmed that the accident summaries provided by NYSDOT should contain all accidents in the project vicinity since these agencies submit copies of local accident reports to the DMV which compiles the master list distributed by NYSDOT. The accident assessment included a review of the accidents and identification of any accident patterns or concentrations at each of the study area intersections. A separate report provided by NYSDOT indicates that there are no Priority Investigation Locations (PIL) or Priority Investigation Intersections (PII) located along US Route 209 in the project corridor during the latest three year period of available data (June 1, 2010 through May 31, 2012) under the current 2012 HAL (High Accident Location) year. A PIL and PII is identified on a segment or intersection where the accident rate exceeds an upper control limit calculated at a 99.9% level of confidence and a minimum threshold of crashes has occurred. It is noted that a PIL was identified within the Village of Wurtsboro in the vicinity of the Sullivan Street intersection under the 2011 HAL year and within the Village of Ellenville near the Center Street and Canal Street intersections under the 2010 and 2011 HAL years. These locations are no longer listed on the current 2012 HAL list. The 2013 or 2014 HAL lists were not available when this information was requested in March 2014.

A review of the accident data for the approximate 21 mile study area segment of US Route 209 between US Route 44/NY Route 55 south to NY Route 17 indicates that there was one fatal accident during the study period. The accident was a midblock accident that occurred approximately 1.7 miles north of Sullivan Street and was related to a vehicle traveling southbound striking a pedestrian during dark wet conditions. It was noted that pedestrian confusion was listed as a factor in the accident.

An intersection accident evaluation was conducted to determine if the twelve study area intersections along the US Route 209 corridor have an accident rate higher than the statewide average of accidents per million entering vehicles (acc/MEV). There were no accidents reported at the Nevele Road/Arrowhead Road intersection in the last three years of available data. The intersection accident rates are summarized in Table 2.5.

Table 2.5 – Accident Rates

Intersection		Control	Total Number of Accidents	Avg. Accidents per year	acc/MEV	State Avg. Rate (acc/MEV)
Urban	US Route 209/US Route 44/NY Route 55	S	5	1.66	0.36	0.24
	US Route 209/NY Route 55	TW	3	1	0.15	0.13
	US Route 209/Maple Ave	S	4	1.33	0.16	0.24
	US Route 209/Canal St (NY Route 52)	S	17	5.66	0.80	0.39
	US Route 209/Center St (NY Route 52)	S	18	6	1.03	0.39
	US Route 209/Warren St	TW	5	1.66	0.39	0.23
	US Route 209/Nevele Road North	TW	2	0.66	0.21	0.13
	US Route 209/Nevele Rd South	TW	1	0.33	0.11	0.13
Rural	US Route 209/Gumaer Falls Rd/Kohl's Drwy	S	0	0	0.00	0.43
	US Route 209/County Rd 172 (Sullivan St)	S	12	4	0.69	0.43
	US Route 209/NY Route 17 Exit 113 WB Ramp	TW	2	0.66	0.21	0.25
	US Route 209/NY Route 17 Exit 113 EB Ramp	S	2	0.66	0.11	0.43

Note that non-reportable accidents are included in the accident totals. Prior to May 2012, non-reportable accidents were not included in the accident rate calculations.

S, TW = Signalized Control, Two-Way Stop Control

Acc/MEV= accidents per million entry vehicles

As noted above, information provided by NYSDOT indicates that there are no PIL's or PII's located along US Route 209 in the project corridor during the latest three year period of available data. Seven of the twelve study area intersections on US Route 209 have accident rates that are higher than the statewide average of accidents per million entering vehicles (acc/MEV) for rural and urban intersections. A review of the intersection accident rates indicates that the Canal Street and Center Street intersections represent the two locations that have the highest number of accidents and the greatest difference between the statewide average accident rate; however, an overall review of the accident data does not indicate a distinct pattern of accidents in relation of day of week, time of day, or vehicle traveling direction. Overall, the unsignalized intersection accidents equate to an average of two accidents or less per year.

The accident types are summarized in Table 2.6 and include property damage, personal injury, and non-reportable accidents. Note that a non-reportable accident is one with less than \$1,000 in property damage and no personal injury.

Table 2.6 – Intersection Accident Location and Type

Intersection		Accident Class				Collision Type									
		Non-Reportable	Property Damage	Injury	Fatal	Rear-End	Left-Turn	Overtaking/ Sideswipe	Fixed Object/ Deer	Right-Turn	Right-Angle	Head On	Parked Car	Pedestrian	Total
Intersection Accidents															
Intersection Accident Summary	Route 209/Route 44/55	0	3	2	0	4	0	0	1	0	0	0	0	0	5
	Route 209/Route 55	2	1	0	0	0	1	0	2	0	0	0	0	0	3
	Route 209/Maple Ave	0	1	3	0	2	0	0	0	0	0	0	0	2	4
	Route 209/Canal St	6	5	6	0	8	1	3	1	1	1	1	0	1	17
	Route 209/Center St	5	4	9	0	8	2	3	1	3	0	0	1	0	18
	Route 209/Warren St	0	3	2	0	0	1	0	0	1	2	0	0	1	5
	Route 209/Nevele Rd North	0	2	0	0	1	0	0	1	0	0	0	0	0	2
	Route 209/Nevele Rd South	0	1	0	0	0	0	0	1	0	0	0	0	0	1
	Route 209/Gumaer Falls Rd/Kohl's Drwy	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Route 209/Sullivan St	6	6	0	0	4	1	0	1	1	2	0	3	0	12
	Route 209/Route 17 Exit 113 WB Ramp	1	0	1	0	0	1	0	0	0	1	0	0	0	2
	Route 209/Route 17 Exit 113 EB Ramp	1	0	1	0	2	0	0	0	0	0	0	0	0	2
Nevele Rd/Arrowhead Rd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total		21	26	24	0	29	7	6	8	6	6	1	4	4	71
Percent of Total		29%	37%	34%	0%	41%	10%	9%	11%	9%	9%	1%	5%	5%	100%

The accident information for the past three years of available data include a variety of accident types and consisted of a total of 21 non-reportable, 26 property damage, 24 injury crashes, and no fatalities at the study area intersections. It is noted that there were no accidents recorded at the Nevele Road/Arrowhead Road intersection during the study period. The primary type of accident was rear-end collisions. A review of the accident summary data indicates that driver error and impatience (predominantly following too closely and failure to yield the right-of-way) are the typical contributing factors to the prevalent accidents. The following additional information is noted regarding pedestrian accidents and at intersections with more than ten recorded accidents:

Pedestrian Accidents – There were four pedestrian accidents reported at the study area intersections during the study period, all of which occurred within the Village of Ellenville with two occurring at Maple Avenue, one at Canal Street and one at Warren Street. The two pedestrian accidents at Maple Avenue represent half of the four recorded accidents during this period with one occurring when a vehicle making a westbound right-turn movement struck a pedestrian crossing the street (driver inattention). The second pedestrian accident at Maple Avenue did not include details on the contributing factors. Note that the traffic signal at US Route 209/Maple Avenue includes marked crosswalks and pedestrian push buttons on the west and north legs of the intersection and supplemental

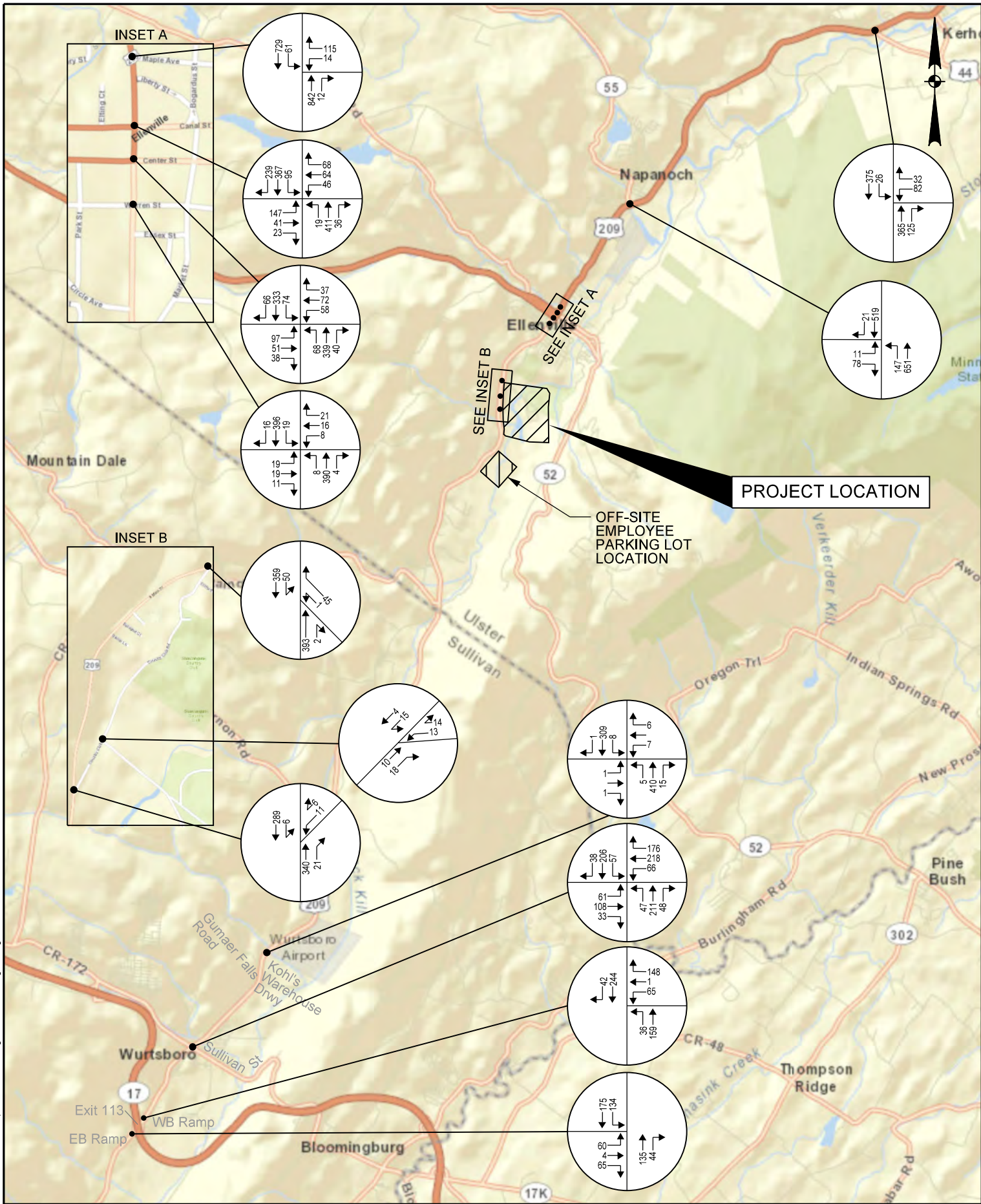
pedestrian crossing signs are in place on both the northbound and southbound approaches of US Route 209. The pedestrian collision at the Canal Street intersection involved a driver turning left from Canal Street to US Route 209 southbound during night conditions. The accident report indicated the pedestrian was crossing with the signal (pedestrian accommodations provided) and the driver of the vehicle's view was obstructed. The pedestrian accident that occurred at the unsignalized Warren Street intersection was the result of pedestrian confusion related to alcohol involvement.

US Route 209/Canal Street – Of the 17 recorded accidents at this intersection, approximately half were rear end accidents; five of which were non-reportable, two personal injury, and one property damage. Approximately 52% of the accidents occurred during the daylight hours and the remaining 48% during night-time conditions. Five accidents occurred on a Saturday or Sunday, three occurred on a Friday, and nine occurred on a weekday Monday through Thursday. An overall review of the accident data does not indicate a distinct pattern of accidents in relation to day of week, time of day, or vehicle traveling direction.

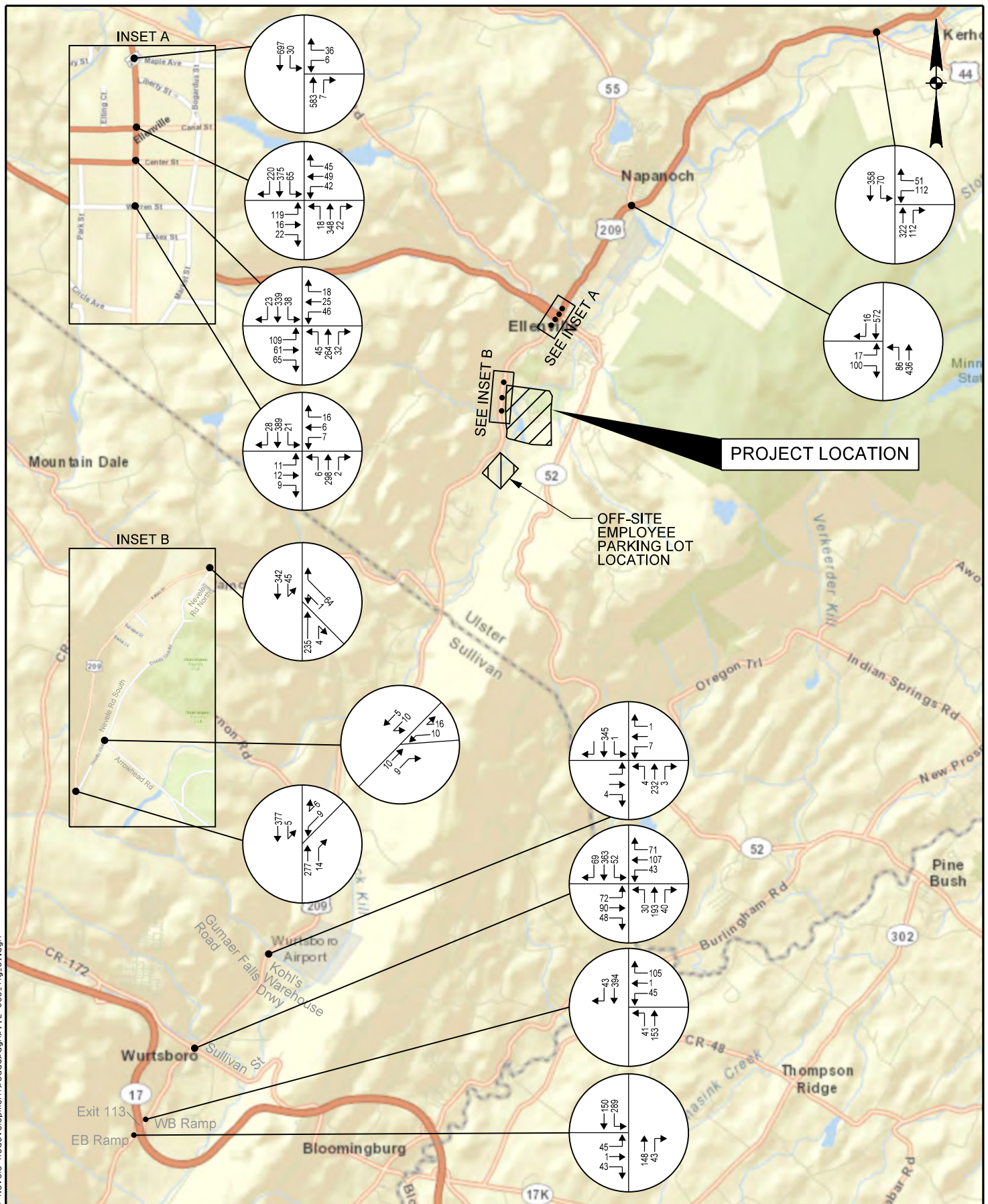
US Route 209/Center Street – Of the 18 recorded accidents at this intersection, approximately 45% were rear end accidents; two of which were non-reportable, five personal injury, and one property damage. Approximately 90% of the accidents occurred during the daylight hours. Three accidents occurred on a Saturday or Sunday, four occurred on a Friday, and eleven occurred on a weekday Monday through Thursday. An overall review of the accident data does not indicate a distinct pattern of accidents in relation of day of week, time of day, or vehicle traveling direction.

US Route 209/Sullivan Street – Of the 12 recorded accidents at this intersection, approximately 30% were rear end accidents; three of which were non-reportable and one property damage. Approximately 75% of the accidents occurred during daylight hours. Four accidents occurred on a Saturday or Sunday, two occurred on a Friday, and six occurred on a weekday Monday through Thursday. An overall review of the accident data does not indicate a distinct pattern of accidents in relation of day of week, time of day, or vehicle traveling direction.

Based on the NYSDOT accident records, there was not a prevalent type of accident that was occurring at the studied intersections; however, a high percentage of the accidents were a result of driver inattention or error. Since there are no specific trends in the vehicle direction or discernable accident patterns, the accident data provided by NYSDOT does not indicate that poor intersection design or geometry is contributing to the accidents at the study area intersections in the corridor. A summary of the accidents (TE-213 equivalent) are included in Appendix C.



Creighton Manning



EXISTING 2014 TRAFFIC VOLUMES
WEEKEND PM PEAK HOUR

NEVELE RESORT, CASINO & SPA
TOWN OF WAWARSING, NEW YORK



PROJECT: 112-068

DATE: 6/2014

FIGURE: 2.2

CHAPTER III

TRAFFIC FORECASTS

To evaluate the impact of the proposed development, traffic projections were prepared for the full build-out at the site for a single design year. It is expected that full build-out of the *Nevele Resort* will be completed and fully operational by the end of 2017.

A. No-Build Traffic Volumes

The 2017 No-Build traffic volumes are based on an analysis of existing traffic growth trends and other developments in the project area. As indicated in Chapter II, historical traffic volume data found in the latest version of the *Traffic Data Report*, published by NYSDOT, indicates that average traffic volume growth in the vicinity of the site has increased by approximately 0.36 percent per year over the last several years. Therefore, traffic projections were prepared for the 2017 design year by applying a 0.5% per year growth rate for three years to the 2014 existing traffic volumes.

In addition to background traffic growth, vehicle trips associated with other developments in the project area were considered when developing the No-Build traffic volumes. Creighton Manning contacted the Towns of Wawarsing and Mamakating and the Villages of Ellenville and Wurstboro to determine any other developments should be included in the No-Build traffic volumes. The following other developments are included in the No-Build traffic volumes:

- Wal-Mart – 125,000 SF
- AutoZone – 6,816 SF
- Wawarsing Estates – 182 Condominiums
- Yukiguni Maitake Manufacturing Facility – 825,377 SF
- G-Mart Expansion – 23,000 SF

Note that the above developments were not operational when the data collection for the *Nevele Resort* was collected in 2012 and were therefore added to the future background volumes at the study area intersections as applicable. A summary of the proposed developments and their locations are provided under Appendix D. The 2017

No-Build traffic volumes are illustrated on Figures 3.1 and 3.2, and represent the traffic conditions expected at the study area intersections before development of the proposed *Nevele Resort*.

B. Trip Generation

Trip generation determines the quantity of traffic expected to travel to/from the project site. The Institute of Transportation Engineers (ITE) *Trip Generation*, 9th edition, provides trip generation data for various land uses based on studies of similar existing developments located across the country. ITE information for casinos (LUC 473) is limited to casino/video lottery establishments that do not offer full service casino/hotel facilities with numerous support services as proposed for the re-development project. Therefore, trips associated with the *Nevele Resort* were estimated using trip generation information from other similar existing casino projects that include hotel facilities. Research about casino trip generation and information provided by a *Mohegan Sun Casino* consultant indicates that trip generation correlates most directly to the number of gaming positions and that on-site hotels and small arenas (less than 2,000 seats) do not typically affect trip generation. Creighton Manning gathered data on multiple casinos to develop a trip generation rate based on the number of gaming positions as shown on Table 3.1. The available trip generation details are included under Appendix E. The data indicates that these developments generate approximately 0.388 and 0.413 trips per gaming position during the Weekday PM peak hour of adjacent street traffic and the Weekend PM peak hour, respectively, with an approximate 50/50 split of traffic entering and exiting the site.

Table 3.1 - Trip Generation Study Casinos

Casino	Gaming Area (ksf)	Hotel Rooms	Gaming Positions	Number of Peak Trips		Peak Trip Generation Rate Per Gaming Positions	
				Weekday	Weekend	Weekday	Weekend
Mohegan Sun ¹	300	1,200	10,000	2,976	3,123	0.2976	0.3123
Mystic Lake ²	125	416	4,630	1,806	1,991	0.39	0.43
Foxwoods ³	320	1,400	11,230	3,863	4,312	0.344	0.384
Ameristar ⁴	38	356	1,803	805	904	0.4465	0.5014
Harvey's ⁴	28.25	251	1,540	793	757	0.5149	0.4916
Turning Stone ⁵	120	268	2,630	1,013	1,028	0.385	0.391
Sands Bethlehem ⁶	143	302	4,164	1,420	1,591	0.341	0.382
Average	153.5	599	5,142	1,810	1,958	0.388	0.413

¹ – Number of Trips counted by CME in August 2002.

² – Traffic Impact Study St. Croix Meadows Racing Park Proposed Casino Hudson, Wisconsin; BRW, Inc.

³ – Fax dated August 16, 2002 containing a portion of a Close, Jensen & Miller report

⁴ – Environmental Review of Proposed St. Croix Meadows Casino Hudson, Wisconsin; HDR Engineering, Inc.

⁵ – Number of Trips counted by CME in October 2003.

⁶ – Transportation Impact Study, The Provenance Casino Development, City of Philadelphia, PA; Traffic Planning & Design, Inc., November 2013

The proposed *Nevele Resort* includes the construction of a 83,100 SF casino with of 1,994 slots, 6 electronic table games, and 80 table games in addition to renovation of portions of the existing resort hotel to provide a total of 446 rooms and the construction/renovation of other supporting amenities including restaurants, retail shops, a spa, recreational facilities, meeting rooms, and an ice arena. A review of the 6 electronic table games and 80 table games indicates that they will accommodate a total of 616 gaming positions due to the varying number of seats provided at blackjack tables, poker tables, craps tables, etc.; therefore, the casino development will provide 2,610 total gaming positions (1,994 slot positions, 30 electronic table positions, and 586 table positions). It was conservatively estimated that approximately 10% of peak hour casino related trips are associated with employee traffic; therefore, a 10% employee trip credit was applied to the total trips generated by the site since these employees will be shuttled on-site from dedicated off-site parking lots located north of the site in the Village of Ellenville. It is estimated that a shuttle will run between the site and the employee parking lots six times every hour during peak periods. The employee shuttle trips were added back into the total on-site trip generation for the *Nevele Resort*. Table 3.2 summarizes the Weekday PM peak hour and Weekend PM peak hour trip generation at the site.

Table 3.2 – Trip Generation Summary

Land Use	Size	Weekday PM Peak Hour			Weekend PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Nevele Resort Re-Development	2,610 GP	507	506	1,013	539	539	1,078
10% Employee Credit		-51	-50	-101	-54	-54	-108
Employee Shuttles		+6	+6	+12	+6	+6	+12
Total Trips		462	462	924	491	491	982

Note: GP = Gaming Positions

The proposed *Nevele Resort* will generate approximately 924 Weekday PM peak hour trips and 982 Weekend PM peak hour trips at the site driveway. It is noted that the development will also generate approximately 101 to 108 off-site employee trips during the Weekday PM and Weekend PM peak hours, respectively, that will travel through the majority of the study area intersections.

A transit plan using existing transit services and expanded transit related services to and from the site for both employees and patrons will be implemented for the *Nevele Resort*. Further enhancement of transit services has the potential to reduce the single vehicle trips in the study area accessing the project site during peak and off-peak periods of travel. Although a transit plan will be implemented, to provide a worst case assessment of the potential peak hour travel at the site and surrounding roadway network, additional transit credits have not been taken as part of the traffic impact evaluation.

C. Trip Distribution

Trip distribution describes where traffic originates or where traffic is destined. Regional trip distribution patterns of the casino project were estimated based on a review of the *Gaming and Resort Market Assessment, Nevele Resort, Casino, and Spa* prepared by The Innovation Group and US Census population densities. The distribution of patron trips reflects population densities, attraction factors, and the influence of the New York City metropolitan area over a 100 mile radius. The trip distribution patterns of the casino employees reflect more localized population densities within a 10 to 20 mile radius. The following table summarizes the regional trip distribution patterns for patrons and employees of the proposed *Nevele Resort*.

Table 3.3 – Regional Trip Distribution Summary

Regional Origin / Destination	Percent of Patron Traffic	Percent of Employee Traffic
US Route 209 Points North	17%	10%
US Route 209 Points South	12%	5%
NY Route 52 Points East	15%	20%
NY Route 52 Points West	3%	10%
US Route 44/NY Route 55 East	2%	12%
NY Route 55 West	1%	3%
Sullivan Street Points East	3%	15%
Sullivan Street Points West	1%	5%
NY Route 17 Points East	44%	15%
NY Route 17 Points West	2%	5%
Total	100%	100%

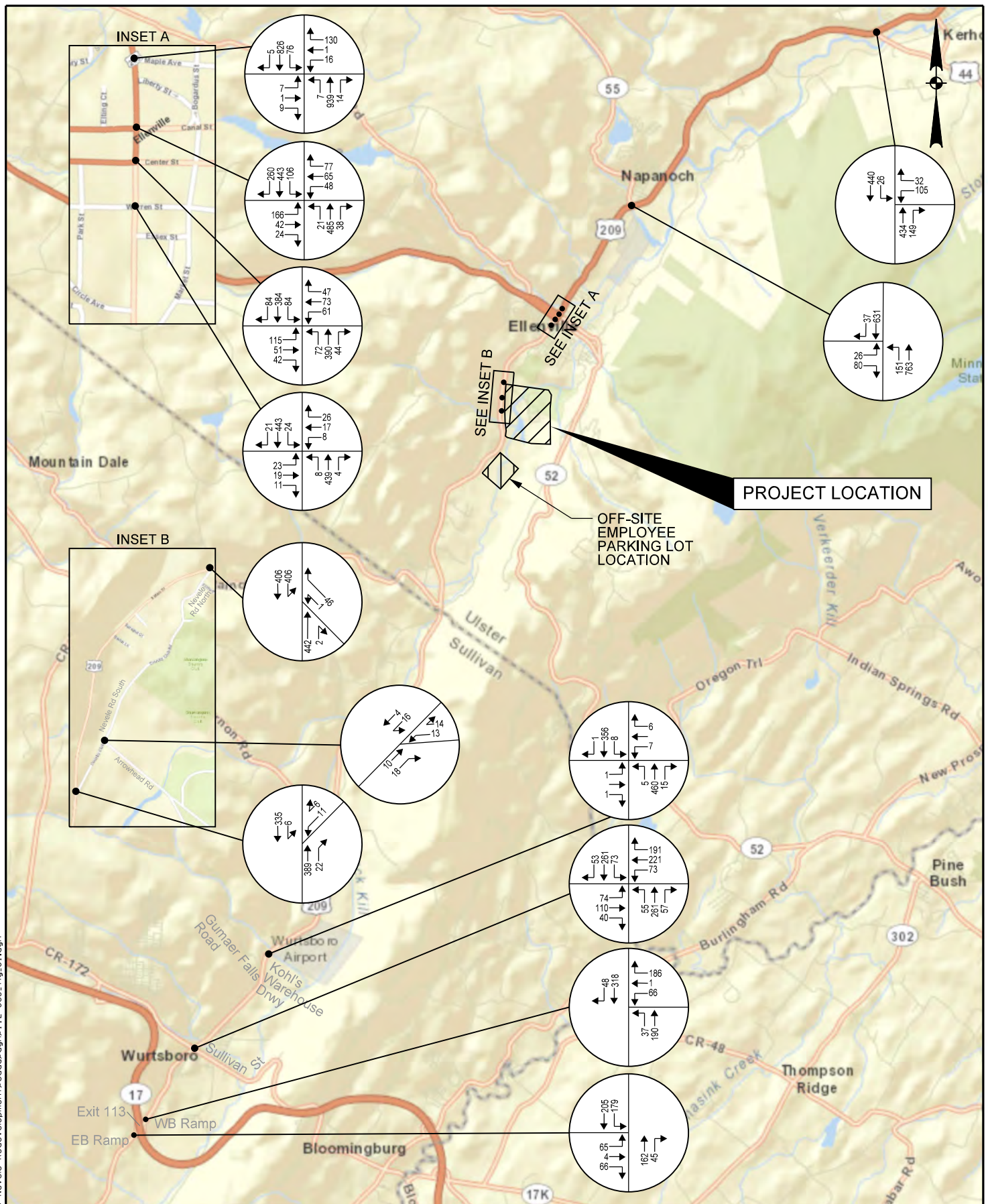
Table 3.3 shows that the majority of patron traffic is expected to travel to and from the site from the east on NY Route 17, NY Route 52, US Route 44/NY Route 55, and Sullivan Street. US Route 209 will also provide regional access from the site to and from the north and south. Employee trips will have a greater geographic dispersion, which reflects the more local nature of these trips. All patron traffic will access the site via US Route 209 at the primary site driveway (relocated Nevele Road). The peak hour trip distribution patterns are summarized on Figures 3.3 and 3.4.

D. Trip Assignment

Trip assignment combines the results of the trip generation and trip distribution and determines the specific paths and roadways that will be used between various origin/destination pairs. Figures 3.5 through 3.8 show the resulting patron and employee trip assignments for the development.

E. Build Traffic Volumes

The results of the site generated traffic assignment were added to the 2017 No-Build traffic volumes to develop the 2017 Build traffic volumes. The 2017 Build traffic volumes for the development provided on Figures 3.9 and 3.10 show the traffic volumes at the study area intersections with the site fully operational.



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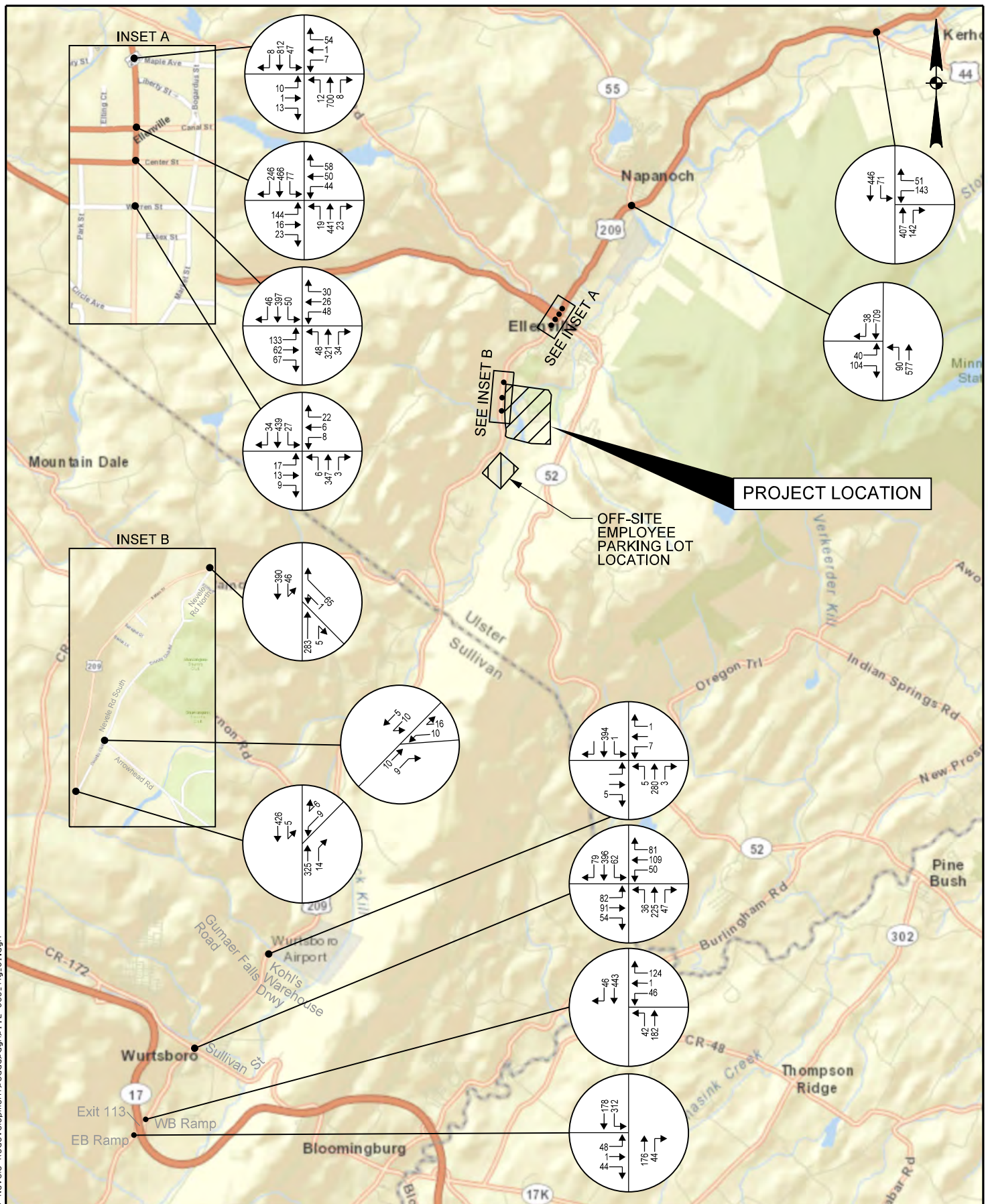


**Creighton
Manning**

PROJECT: 112-068

DATE: 6/2014

FIGURE: 3.1



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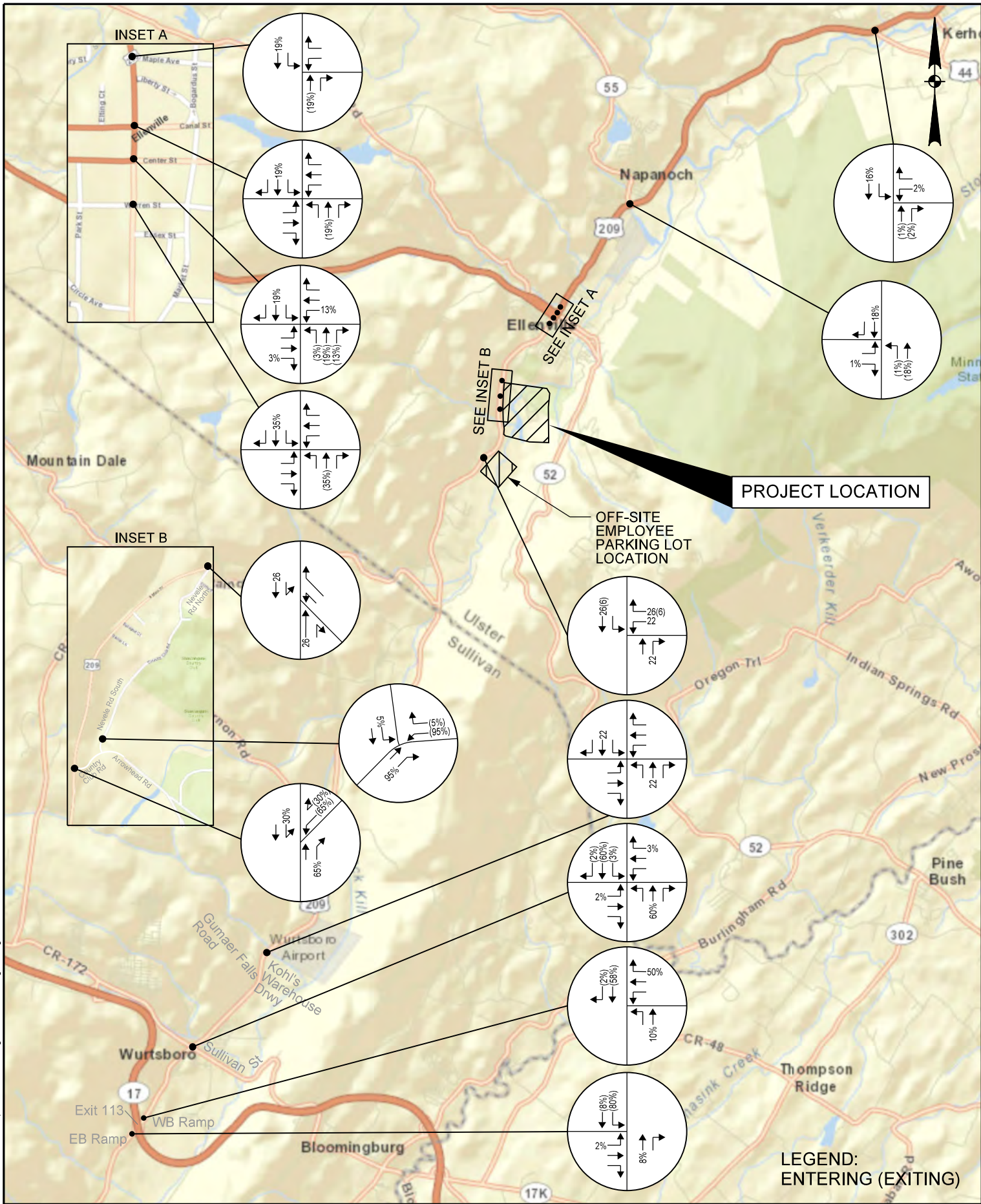


**Creighton
Manning**

PROJECT: 112-068

DATE: 6/2014

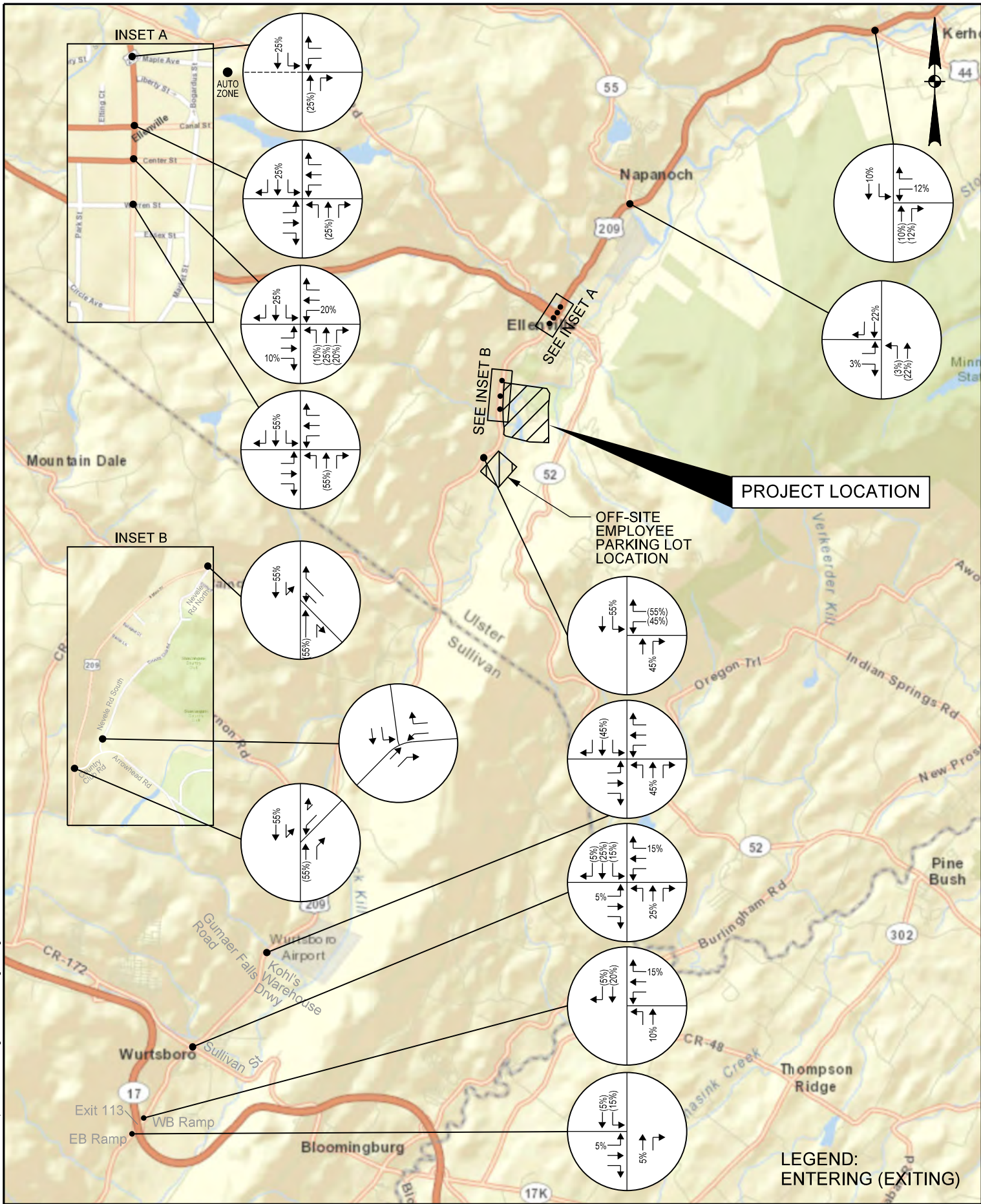
FIGURE: 3.2



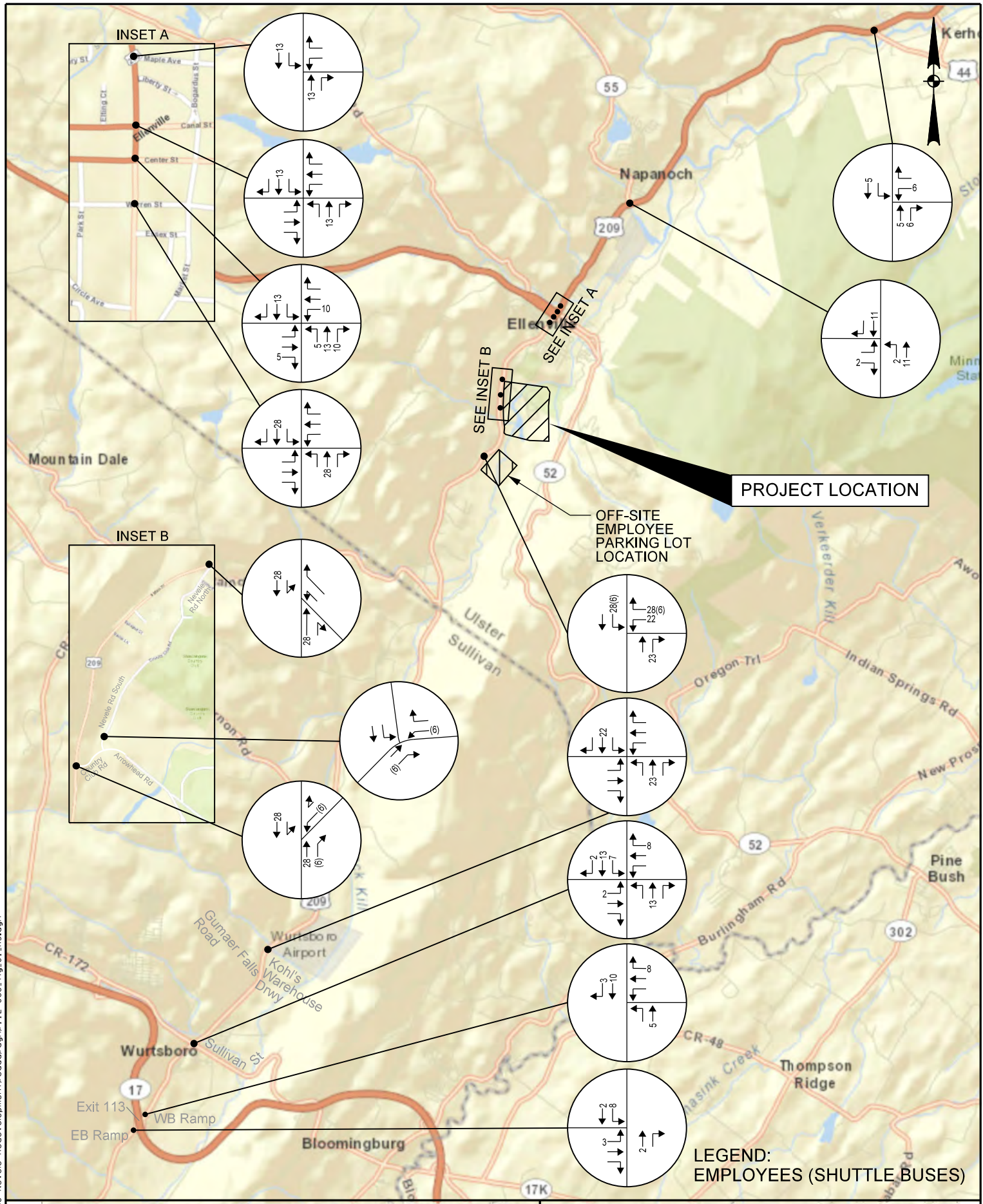
REGIONAL TRIP DISTRIBUTION

NEVELE RESORT, CASINO & SPA
TOWN OF WAWARSING, NEW YORK





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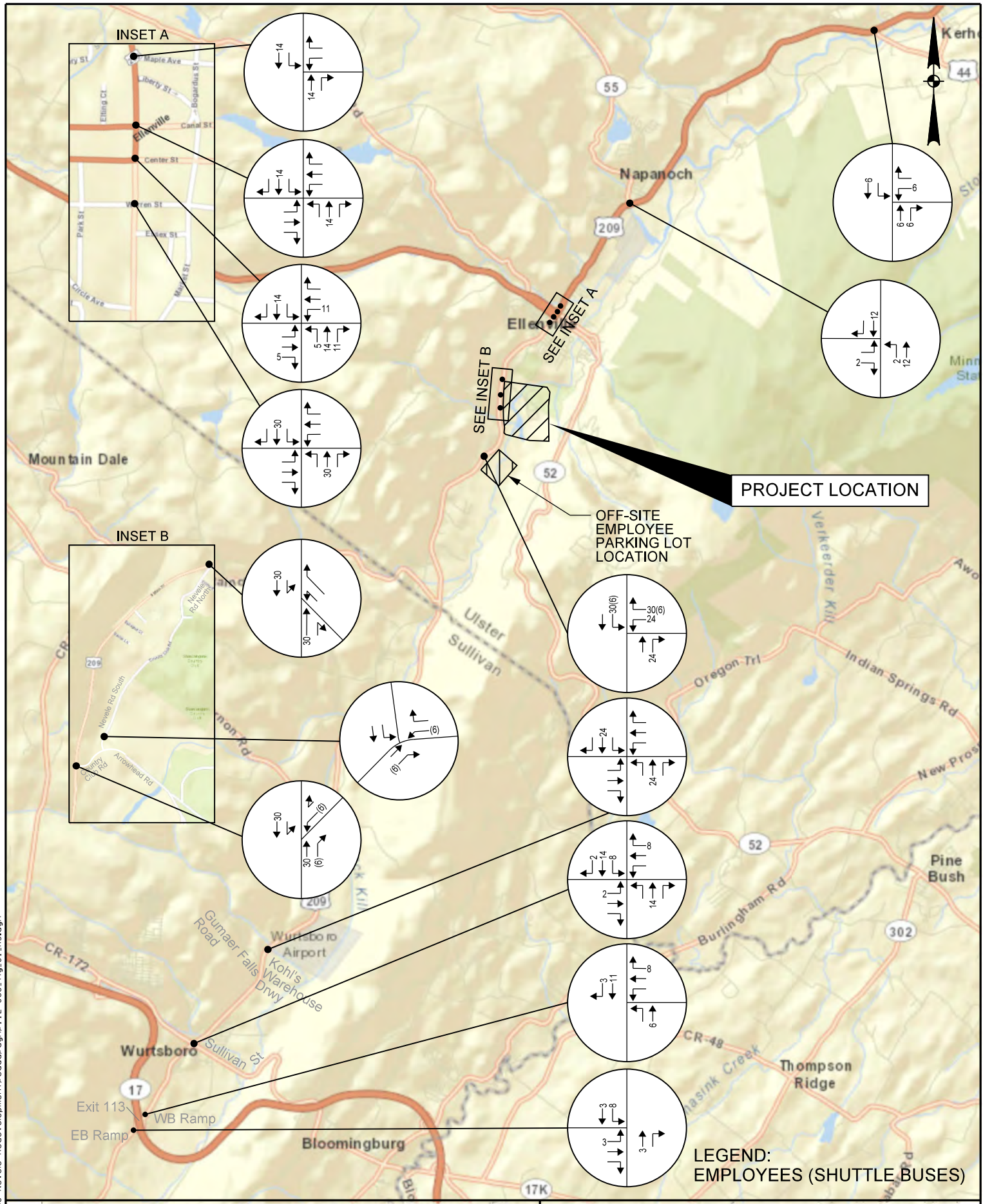


EMPLOYEE AND SHUTTLE TRIP ASSIGNMENT
WEEKDAY PM PEAK HOUR

NEVELE RESORT, CASINO & SPA
TOWN OF WAWARSING, NEW YORK



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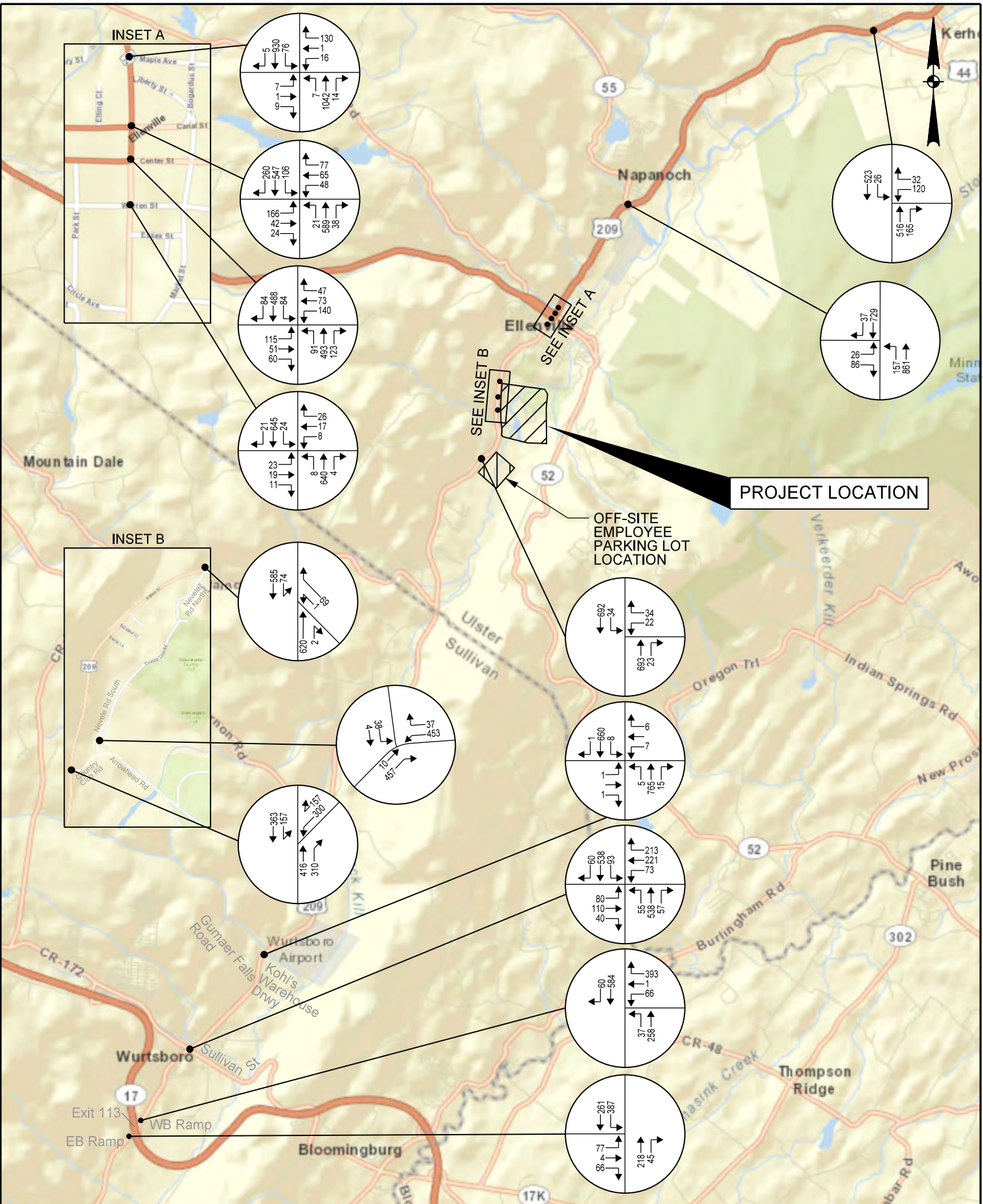


EMPLOYEE AND SHUTTLE TRIP ASSIGNMENT
WEEKEND PM PEAK HOUR

NEVELE RESORT, CASINO & SPA
TOWN OF WAWARSING, NEW YORK

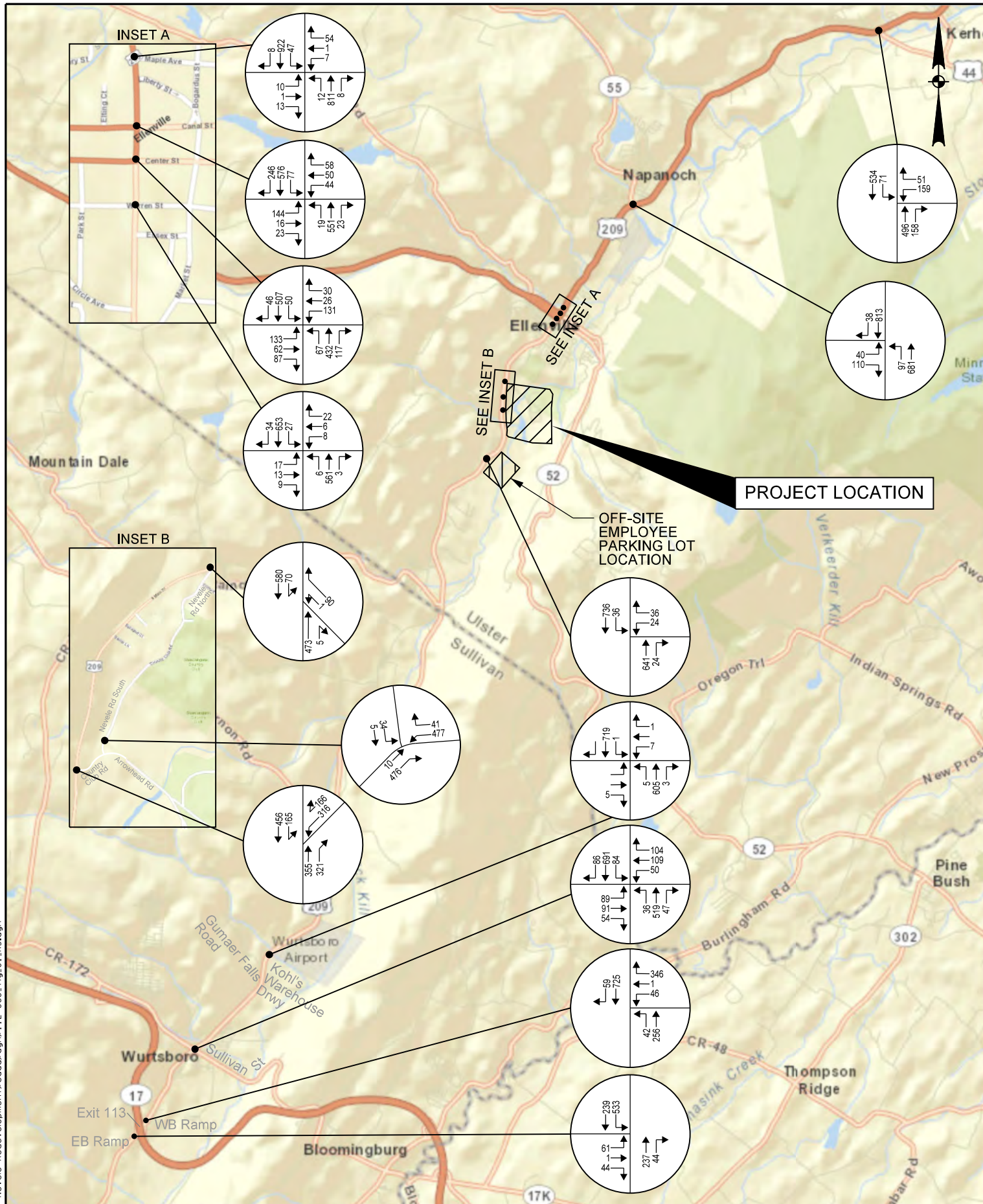


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Creighton Manning

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Creighton Manning

PROJECT: 112-068

DATE: 6/2014

FIGURE: 3.10

CHAPTER IV

ANALYSIS

A. Sight Distance Analysis

A sight distance evaluation was completed on US Route 209 at the existing Nevele Road North intersection, at the main site driveway intersection (realignment of Nevele Road South), and at the proposed off-site employee parking lot driveway. Available *intersection* sight distance was measured from the perspective of a passenger vehicle exiting and entering these intersections. The available intersection sight distance on a side street should provide drivers sufficient view of the intersection highway to allow vehicles to enter or exit the intersection without excessively slowing vehicles traveling at or near the operating speed on the intersecting mainline. The posted speed limit and the 85th percentile speed on US Route 209 near these intersections is summarized on Table 4.1. The available sight distances were compared to the guidelines presented in the American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets*, 2011, based on the applicable operating speed on US Route 209.

Table 4.1 – Speed Summary

Location on US Route 209	Posted Speed Limit	85 th Percentile Speed
Nevele Road North	30-mph	40-mph ¹
Main Site Driveway (Nevele Road South Realignment)	55-mph	60-mph ²
Off-Site Employee Parking Lot Driveway	45-mph	50-mph ³

¹ = Speed information obtained by Creighton Manning using radar gun data in May 2014.

² = Speed data provided by NYSDOT in an hourly traffic count conducted in November 2011.

³ = Speed data obtained from an ATR installed by Creighton Manning in August 2012.

Stopping sight distance was also measured along US Route 209 approaching these study area intersections. Stopping sight distance is the length of the roadway ahead that is visible to the driver and should be of sufficient length to enable a vehicle traveling at or near the operating speed to stop before reaching a stationary object in its path. Diagram 4.1 illustrates the intersection and stopping sight distance lines of sight. The sight distance evaluation is summarized in Table 4.2.

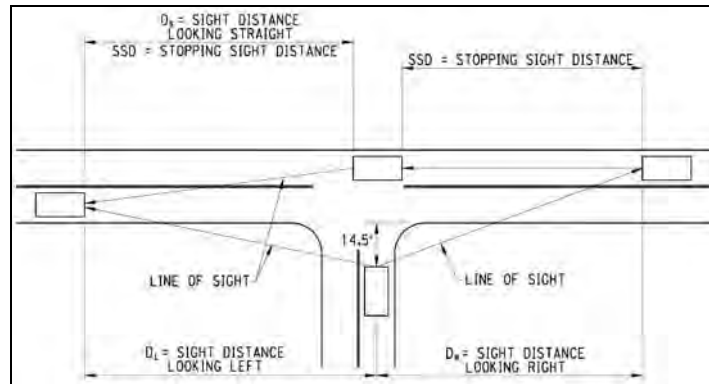


Diagram 4.1 –Sight Distance Measurements

Table 4.2 – Intersection and Stopping Sight Distance Summary

Intersection		Intersection Sight Distance (feet) ¹				Stopping Sight Distance ²	
		Right-Turn from Intersection (D _L)	Left-Turn from Intersection		Left-Turn from Route 209 (D _s)	SSD _{NB}	SSD _{SB}
			Looking Left (D _L)	Looking Right (D _R)			
US Route 209/ Nevele Road North	Available	480	480	620	480	455	580
	Recommended ³	385	385	445	325	355	270
US Route 209/ Nevele Road South (Realignment)	Available	1,215	1,215	1,010	1,165	1,135	935
	Recommended ⁴	575	665	665	490	570	570
US Route 209/Off-Site Employee Parking Lot	Available	855	855	910	770	770	945
	Recommended ⁵	480	555	555	405	425	425

¹ Intersection sight distance is measured at 14.5 feet back from the travel way at an eye height and object height of 3.5 feet for a passenger car.

² Stopping sight distance is measured for a 2-foot object located in the path of northbound and southbound vehicles on US Route 209.

³ = Sight distance measurements are compared to AASHTO recommended distances for a 40-mph operating speed.

⁴ = Sight distance measurements are compared to AASHTO recommended distances for a 60-mph operating speed.

⁵ = Sight distance measurements are compared to AASHTO recommended distances for a 50-mph operating speed.

*Stopping sight distance reflects a 9% upgrade on the southbound approach and a 9% downgrade on the northbound approach.

The AASHTO recommended intersection and stopping sight distances are met at each of these three study area intersections for the applicable operating speeds. It is recommended that any proposed vegetation and/or signage related to the site be placed a minimum of 15-feet back from the travel lane so that adequate sight lines are maintained along the site frontage.

B. Internal Access

Internal access to the facility is serviced by a two-lane wide, one-way loop road system that promotes minimal traffic conflicts. The outside, right-hand lane will be a dedicated through lane provided all the way around the loop while the inner, left-hand lane will be used for turns in and out of the adjacent driveways to eliminate cross traffic

conflicts. The internal loop road system will be designed to accommodate emergency vehicles and large supply trucks.

Hotel & Casino Guest Arrivals – The new signalized intersection on US Route 209 will provide vehicular access to the Nevele Resort. Two grand stone entry walls flanking either side of the new entry will have lit signage identifying the Nevele Resort, Casino & Spa but will not have flashing lights or advertising graphic boards. The half mile entry road and the Nevele Resort will be subtly illuminated at night. The entry road is flanked by the native forest on the north and the lush mature 113 year old golf course to the south. A vehicle approaching the resort complex will use the one-way loop road system to travel around the facility in a counterclockwise direction. Clearly marked signage at a fork in the one-way loop road will direct vehicles to the left for the valet parking entry or to the right for the self-parking garage. The valet parking reception porte-cochere is immediately visible and accessible for easy and grand arrival to the resort. Valet reception and bell service will be available at this featured entry. The self-parking garage with 1,891 parking spaces has been located behind the main hotel casino complex so that it is not immediately visible to arriving guests. Guests that choose to self-park can enter directly into the casino via the south casino entry while hotel guests with roller bags can enter via the north casino entry into the hotel lobby area.

Hotel & Casino Guest Departure – Guests that depart from the valet parking porte-cochere main entry hotel lobby will swipe their parking tickets through scanners conveniently located in the hotel lobby. This will alert the valet parking attendants so that vehicles can be returned to guests for quick departure. The 470 car valet parking lot is conveniently connected to the porte-cochere but is also carefully located around the side of the building so that parked cars are not immediately visible to arriving guests. The valet return driveway travels beneath the departing guest lanes of the one-way loop road so that vehicular conflicts are eliminated. Guests departing from the self-parking garage will exit onto the one-way loop road and will travel directly to the signalized intersection on US Route 209. Limousine and taxi service lanes are provided in the porte-cochere area.

A separate golf parking lot with 94 parking spaces is located along the one-way loop road adjacent to the golf pro shop on the lower level of the casino complex. This lot is for guests who drive to the Nevele Resort to play golf for the day. Hotel guests who plan to play golf during their stay will access the golf pro shop from the main resort level above. Golf cart access to the golf course and practice facilities will be provided via a golf cart tunnel. This will prevent any conflicts with vehicular traffic on the one-way loop road above.

The proposed site will provide a total of 31 parking spaces for buses. The one-way loop road will provide access to a loading area with 21 parking spaces for buses that has direct access to the south casino entry. Employee shuttle buses from the off-site employee parking lot will also drop off and pick up employees from this loading area. There are 10 additional overnight bus parking spaces along the loop road behind the self-parking garage. These spaces can also accommodate other oversized vehicles.

Trucks will access a subterranean loading dock and service area that is completely hidden from view. All delivery trucks, garbage trucks, recycle trucks, service vehicles, and armored vehicles will use this facility which provides direct access to the back of house areas on the lower level. There is parking for four Nevele service vehicles in the subterranean loading dock area.

C. Capacity/Level of Service Analysis

Intersection Level of Service (LOS) and capacity analysis relate traffic volumes to the physical characteristics of an intersection. Intersection evaluations were made using Synchro 8 software which automates the procedures contained in the *2010 Highway Capacity Manual* (HCM). Levels of service range from A to F with level of service A conditions considered excellent with very little delay while level of service F generally represents conditions with very long delays. Appendix F contains further detailed descriptions of LOS criteria for signalized and unsignalized intersections and copies of the detailed level of service reports. The detailed signal timing sheets provided by NYSDOT and used in the intersection evaluation are included under Appendix G.

The relative impact of the proposed project can be determined by comparing the level of service during the 2017 design year for the No-Build and Build condition. Table 4.3 shows the results of the Level of Service calculations for the weekday and weekend afternoon peak hours.

Table 4.3 – Level of Service Summary

Intersection	Control	Weekday PM Peak Hour				Weekend PM Peak Hour			
		2014 Existing	2017 No-Build	2017 Build	2017 Build w/lmp	2014 Existing	2017 No-Build	2017 Build	2017 Build w/lmp
US Rt. 209/Rt. 44/55	S								
Route 44/55 WB LR		B (15.6)	B (17.5)	B (20.0)	--	B (17.3)	B (18.5)	C (20.6)	--
Route 209 NB T		B (10.1)	B (10.4)	B (10.6)	--	B (11.1)	B (12.0)	B (12.8)	--
Route 209 SB L		A (6.9)	A (7.1)	A (7.5)	--	A (7.4)	A (8.1)	A (9.0)	--
		A (4.7)	A (4.9)	A (5.1)	--	A (5.1)	A (5.8)	A (6.4)	--
Overall		A (8.3)	A (8.8)	A (9.2)	--	A (9.4)	B (10.3)	B (11.1)	--
US Rt. 209/NY Rt. 55	TW								
Route 209 NB L		A (9.2)	A (9.9)	B (10.5)	--	A (9.0)	A (9.7)	B (10.2)	--
Route 55 EB R		C (21.9)	C (23.2)	D (27.0)	--	B (14.6)	C (18.0)	C (20.5)	--
		B (13.1)	C (15.0)	C (17.1)	--	B (13.7)	C (16.3)	C (19.0)	--
US Rt. 209/Maple Ave	S								
Maple Ave EB [LTR]		-	C (23.5)	C (23.2)	C (33.2)	-	B (19.8)	C (21.5)	C (23.0)
Maple Ave WB L[T]R		C (27.6)	C (26.4)	C (26.2)	D (37.4)	B (20.0)	C (20.2)	C (22.0)	C (23.5)
Route 209 NB [L]		-	B (16.3)	C (20.5)	B (19.6)	-	B (15.8)	B (17.8)	B (17.9)
		C (21.2)	D (37.1)	F (65.9)	C (31.0)	B (10.6)	B (13.3)	B (17.4)	B (12.1)
Route 209 SB L		C (22.7)	C (27.9)	C (28.2)	D (38.8)	B (13.0)	B (17.0)	B (19.9)	C (20.0)
		A (4.9)	A (7.2)	B (10.6)	A (8.2)	A (3.3)	A (5.5)	A (8.2)	A (4.7)
Overall		B (14.9)	C (23.5)	D (38.5)	C (22.0)	A (7.0)	A (9.8)	B (13.1)	A (9.0)
US Rt. 209/Canal St	S								
Canal St EB L		C (21.9)	C (24.8)	C (28.2)	D (42.7)	B (19.0)	C (21.1)	C (23.7)	C (30.4)
		B (12.3)	B (13.7)	B (16.1)	C (20.5)	B (10.8)	B (12.1)	B (14.1)	C (20.6)
Canal St WB L		B (19.8)	C (21.6)	C (24.9)	C (27.3)	B (17.7)	B (19.4)	C (21.6)	C (27.8)
		C (21.8)	C (23.7)	C (27.2)	C (31.9)	B (18.8)	C (21.0)	C (23.3)	C (30.9)
Route 209 NB L		B (17.3)	B (19.8)	C (23.7)	B (19.4)	B (16.3)	B (18.5)	C (21.4)	B (17.1)
		B (18.4)	C (26.0)	D (37.9)	A (6.2)	B (15.8)	B (16.9)	C (25.8)	A (3.1)
Route 209 SB L		C (21.0)	C (23.6)	C (27.6)	B (10.6)	B (16.6)	B (19.1)	C (21.9)	A (7.7)
		B (17.5)	C (22.7)	D (35.2)	B (17.4)	B (15.3)	B (16.8)	C (25.7)	B (15.4)
		B (12.5)	B (12.3)	B (11.4)	A (3.0)	B (10.9)	B (10.6)	A (9.9)	A (2.4)
Overall		B (17.9)	C (22.2)	C (30.6)	B (15.2)	B (15.4)	B (16.7)	C (22.9)	B (12.0)
US Rt. 209/Center St	S								
Center St EB L		B (13.5)	B (15.1)	B (19.6)	C (31.2)	B (12.9)	B (14.2)	B (17.2)	C (27.0)
		B (11.5)	B (12.4)	B (16.3)	C (25.8)	B (12.5)	B (13.0)	B (15.8)	C (24.8)
Center St WB L		B (12.6)	B (13.7)	B (20.0)	C (32.0)	B (13.6)	B (14.4)	C (20.1)	C (32.0)
		B (11.7)	B (12.7)	B (16.3)	C (25.8)	B (11.3)	B (12.0)	B (14.5)	C (22.7)
Route 209 NB L		B (14.9)	B (17.8)	C (22.2)	A (7.1)	B (13.3)	B (17.7)	C (23.1)	A (7.7)
		B (12.4)	B (14.0)	C (27.5)	B (18.2)	B (10.5)	B (13.3)	C (25.3)	B (18.3)
Route 209 SB L		B (14.7)	B (17.1)	C (25.4)	B (10.4)	B (12.2)	B (14.8)	C (24.9)	B (10.6)
		B (12.3)	B (13.8)	C (24.3)	A (2.7)	B (11.1)	B (12.9)	C (23.3)	A (3.2)
Overall		B (12.6)	B (14.2)	C (23.7)	B (15.3)	B (11.5)	B (13.4)	C (22.3)	B (15.2)
US Rt. 209/Warren St	TW								
Route 209 NB L		A (8.2)	A (8.4)	A (9.0)	A (9.3)	A (8.3)	A (8.5)	A (9.3)	A (9.6)
Route 209 SB L		A (8.3)	A (8.4)	A (9.0)	A (9.0)	A (8.0)	A (8.2)	A (8.9)	A (8.9)
Warren St EB LTR		C (22.6)	D (26.0)	F (60.7)	C (23.8)	C (17.7)	C (22.3)	E (49.9)	C (22.7)
Warren St WB LTR		C (18.1)	C (19.3)	E (35.0)	C (19.7)	B (14.8)	C (16.2)	D (28.8)	C (17.8)
US Rt. 209/Nevele Rd North	TW								
Route 209 SB L		A (8.3)	A (8.5)	A (9.2)	--	A (7.9)	A (8.1)	A (8.9)	--
Nevele Rd N. WB LR		B (11.3)	B (11.9)	B (14.7)	--	B (10.3)	B (10.8)	B (13.7)	--

S, AW, TW, R = Signalized, All-Way Stop, Two-Way Stop, or Roundabout controlled intersection

EB, WB, NB, SB = Eastbound, Westbound, Northbound, or Southbound intersection approaches

L, T, R = Left-turn, Through, and/or Right-turn intersection movements

L[T]R = LR represents the existing geometry, LTR represents the future geometry

X (Y.Y) = Level of service (Average Delay in seconds per vehicle)

--- = Not Applicable

Note: The Highway Capacity Manual only provides overall LOS for intersections controlled by a traffic signal.

Table 4.3 – Level of Service Summary (Continued)

Intersection	Control	Weekday PM Peak Hour				Weekend PM Peak Hour			
		2014 Existing	2017 No-Build	2017 Build	2017 Build w/lmp	2014 Existing	2017 No-Build	2017 Build	2017 Build w/lmp
US Rt. 209/Nevele Rd South	TW								
Route 209 SB L		A (8.0)	A (8.2)	B (10.3)	--	A (7.9)	A (8.1)	B (10.1)	--
Nevele Rd S. WB LR		B (12.7)	B (13.7)	F (817)	--	B (13.2)	B (14.4)	F (1046)	--
Nevele Rd S. WB L	S	--	--	--	B (16.9)	--	--	--	B (16.6)
	R	--	--	--	B (10.3)	--	--	--	A (9.8)
Route 209 NB T		--	--	--	B (15.6)	--	--	--	B (15.3)
	R	--	--	--	A (5.1)	--	--	--	A (5.2)
Route 209 SB L		--	--	--	A (9.5)	--	--	--	A (9.4)
	T	--	--	--	A (6.3)	--	--	--	A (7.3)
Overall		--	--	--	B (11.3)	--	--	--	B (11.0)
US Rt. 209/Gumaer Falls Rd/ Kohl's Warehouse Drwy	S								
Gumaer Falls Rd EB LTR		C (34.8)	D (35.8)	D (42.8)	--	C (23.7)	C (24.0)	C (32.2)	--
Kohl's Drwy WB L		C (21.5)	C (22.5)	C (29.3)	--	C (34.6)	D (36.3)	D (45.2)	--
	TR	B (19.4)	C (20.4)	C (27.0)	--	B (16.2)	B (17.7)	C (25.5)	--
Route 209 NB LT		A (5.6)	A (5.8)	A (8.1)	--	A (4.8)	A (4.8)	A (5.6)	--
	R	A (2.9)	A (2.8)	A (2.1)	--	A (3.4)	A (3.1)	A (2.2)	--
Route 209 SB LTR		A (4.9)	A (4.7)	A (6.5)	--	A (5.6)	A (5.6)	A (7.1)	--
Overall		A (5.6)	A (5.6)	A (7.6)	--	A (5.8)	A (5.7)	A (6.7)	--
US Route 209/Sullivan Street	S								
Sullivan St EB LTR		B (12.0)	B (15.1)	C (27.2)	B (19.3)	B (19.0)	C (21.1)	C (23.3)	C (20.0)
Sullivan St WB LTR		B (16.1)	C (22.0)	D (47.4)	C (30.6)	B (18.9)	C (20.5)	C (22.9)	B (19.9)
Route 209 NB [L]		--	--	--	C (26.1)	--	--	--	C (24.3)
	L[TR]	B (10.9)	B (12.3)	C (28.2)	B (19.6)	A (7.5)	A (8.7)	B (13.2)	B (11.5)
Route 209 SB [L]		--	--	--	C (28.3)	--	--	--	B (16.3)
	L[TR]	B (11.0)	B (12.8)	F (83.7)	C (20.4)	B (10.5)	B (13.0)	C (30.6)	C (21.0)
Overall		B (13.0)	B (16.1)	D (51.4)	C (23.0)	B (12.9)	B (14.7)	C (23.4)	B (17.9)
US Rt. 209/ NY Rt. 17 WB Ramp	TW								
Route 209 NB L		A (7.8)	A (8.0)	A (8.9)	--	A (8.3)	A (8.5)	A (9.4)	--
NY Route 17 WB LT		B (13.2)	B (14.8)	C (22.8)	--	C (16.0)	C (17.7)	D (26.5)	--
	R	B (10.1)	B (10.7)	B (15.2)	--	A (9.9)	B (10.3)	B (14.1)	--
US Rt. 209/ NY Rt. 17 EB Ramp	S								
NY Route 17 EB LT		B (16.9)	B (18.3)	C (20.8)	--	B (19.3)	C (20.5)	C (23.5)	--
	R	B (16.6)	B (17.8)	B (19.9)	--	B (18.9)	B (20.0)	C (22.6)	--
Route 209 NB TR		B (13.0)	B (13.3)	B (13.5)	--	B (13.1)	B (13.0)	B (14.9)	--
Route 209 SB L		B (11.9)	B (12.7)	B (16.3)	--	B (14.5)	B (15.7)	C (24.7)	--
	T	A (4.4)	A (4.4)	A (4.4)	--	A (3.8)	A (3.8)	A (3.6)	--
Overall		B (10.9)	B (11.3)	B (13.1)	--	B (12.3)	B (12.7)	B (17.8)	--
Nevele Rd/Arrowhead Rd	TW								
Nevele Rd SB L		A (7.3)	A (7.3)	A (8.5)	--	A (7.3)	A (7.3)	A (8.6)	--
Arrowhead Rd WB LR		A (8.8)	A (8.8)	D (30.1)	--	A (8.6)	A (8.6)	D (34.9)	--
Arrowhead Rd EB L	TW	--	--	--	A (8.5)	--	--	--	A (8.6)
Nevele Rd SB LR		--	--	--	C (20.4)	--	--	--	C (21.1)
US Route 209/ Off-Site Employee Parking Lot	TW								
Route 209 SB L		--	--	A (9.8)	A (9.8)	--	--	A (9.6)	A (9.6)
Employee Drwy WB LR		--	--	D (29.8)	--	--	--	D (29.7)	--
	[L]	--	--	--	C (17.1)	--	--	--	C (17.3)
	[R]	--	--	--	B (15.2)	--	--	--	B (14.4)

S, AW, TW, R = Signalized, All-Way Stop, Two-Way Stop, or Roundabout controlled intersection

EB, WB, NB, SB = Eastbound, Westbound, Northbound, or Southbound intersection approaches

L, T, R = Left-turn, Through, and/or Right-turn intersection movements

L[T]R = LR represents the existing geometry, LTR represents the future geometry

X (Y.Y) = Level of service (Average Delay in seconds per vehicle)

-- = Not Applicable

Note: The Highway Capacity Manual only provides overall LOS for intersections controlled by a traffic signal.

The capacity analysis indicates that the majority of the study area intersections are expected to operate with all movements at level of service D or better during the Weekday PM and Weekend PM peak hours of adjacent street traffic after full build-out of the *Nevele Resort*. The intersections outlined in Table 4.4 will experience a drop in level of service between the No-Build to Build conditions; however, no mitigation is recommended since they will experience minimal increase in vehicle delay and will maintain acceptable operating conditions.

Table 4.4 – Intersections with Changes in Levels of Service

Intersection	Approach	Movement	Change in Level of Service (Increased Delay)	
			Weekday PM Peak Hour	Weekend PM Peak Hour
US Route 209/US Route 44/NY Route 55	WB	LR	--	B to C (2 seconds)
US Route 209/NY Route 55	NB	L	A to B (1 second)	A to B (1 second)
	EB	L	C to D (4 seconds)	--
US Route 209/Gumaer Falls Rd/Kohl's Warehouse Drwy	WB	TR	--	B to C (8 seconds)
US Route 209/NY Route 17 WB Ramp	WB	L	B to C (8 seconds)	C to D (9 seconds)

Note: L, T, R= Left, Through, Right turn movements
 EB, WB, NB, SB = Eastbound, Westbound, Northbound, or Southbound intersection approaches
 -- = No drop in level of service occurred for stated condition

Mitigation is recommended at several study area intersections in order to maintain adequate traffic operations during the weekday and weekend afternoon peak periods. The following additional information regarding the capacity analysis is noted at the following study area intersections:

- US Route 209/Maple Avenue – In order to provide a worst-case assessment, this intersection was analyzed assuming that the westbound Maple Avenue approach operates as a single lane even though field observation indicate that motorists consistently use the existing width to accommodate two lanes. As traffic volumes in the Village increases with the development of the *Nevele Resort*, it is recommended that minor adjustments to the actuated traffic signal timing plan be implemented to maximize the northbound and southbound travel movements through the intersection. With modifications to the signal timings, peak operations of the Build condition at this intersection will continue to operate at similar levels of service as No-Build conditions. It is noted that during the peak operational times studied in this report, some drops in level of service will remain during both peaks with increases in the approach delays between 10 and 11 seconds during the Weekday PM peak and 3 to 4 seconds during the Weekend PM peak. These are considered acceptable intersection operations and will only be experienced during peak operating conditions of the *Nevele Resort*.

- US Route 209/Canal Street – As traffic volumes in the Village increase with the development of the *Nevele Resort*, the progression of traffic through this intersection will become more difficult due to the short spacing with the signalized Center Street intersection located to the south. A review of information provided by NYSDOT indicates that existing hardware should allow these two intersections to operate under a coordinated traffic signal timing plan; however, field observations indicate that these intersections operate independently of one another. In order to maximize vehicle progression at this intersection, it is recommended that a coordinated signal timing plan be implemented that will optimize northbound and southbound through movements to the extent possible. With modifications to the signal timings and signal coordination, this intersection will operate at an overall LOS B during both Weekday and Weekend PM peak hours. Maximizing the green time to mainline traffic on US Route 209 will result in some drops in level of service on the side street that will increase delay between 7 and 18 seconds during the Weekday PM peak and between 8 and 10 seconds during the Weekend PM peak. These are considered acceptable intersection operations to side street traffic and since mainline operations on US Route 209 will be maintained or improve. A review of increased queuing (shown on Table 4.6) on the side street approaches associated with the proposed traffic signal timing modifications will not impact adjacent intersections or on-street parking that is restricted within a minimum of 150-feet or more to the intersection. No additional mitigation is recommended.
- US Route 209/Center Street – Similar to the Canal Street intersection, this intersection will experience overall LOS C operations during both peak hours with the increase in traffic associated with the development of the *Nevele Resort*. With modifications to the signal timings and signal coordination at this intersection as recommended for the Canal Street intersection located to the north, this intersection will operate at an overall LOS B during both Weekday and Weekend PM peak hours. Maximizing the green time to mainline traffic on US Route 209 will result in some drops in level of service on the side street that will increase delay between 13 and 19 seconds during the Weekday PM peak and between 10 and 18 seconds during the Weekend PM peak. These are considered acceptable intersection operations to side street traffic and since mainline operations on US Route 209 will be maintained or improve. A review of increased queuing (shown on Table 4.6) on the side street approaches associated with the proposed traffic signal timing modifications will not impact adjacent intersections or on-street parking that is restricted within a minimum of 150-feet or more to the intersection. No additional mitigation is recommended.
- US Route 209/Warren Street – In the Build condition, the Warren Street intersection approaches will experience an increase in delay at this unsignalized intersection. In order to allow for better flow of traffic in and out of Warren Street, it is recommended that a two-way left-turn lane (TWLTL) be striped within the existing roadway width south from the existing northbound left-turn lane on US Route 209 associated the Center Street intersection to just north of the Essex Street intersection as shown on Figure 4.1. The TWLTL will provide a storage area for vehicles waiting to turn left onto Warren Street without impacting through movements on US Route 209. The

TWLTL would also allow vehicles to complete a two-stage left-turn from Warren Street onto US Route 209. With the mitigation in place, the Warren Street intersection approaches will operate at LOS C conditions during both peak periods. This proposed improvement will not impact parking in the Village of Ellenville since on-street parking is not allowed on US Route 209 in the vicinity of this intersection.

The construction of a TWLTL will reduce the frequency of certain types of accidents like rear-end collisions, left-turn accidents, and right-angle accidents by approximately 55 percent based on a review of the NYSDOT Post Implementation Evaluation System (PEIS). A review of historical accident information indicates that the installation of a flush median with a refuge area for left-turns at this intersection could have helped prevent three of the five total accidents reported over the last three years of available data.

- US Route 209/Nevele Road – This intersection currently experiences low traffic volumes on the Nevele Road intersection approach resulting in good operating conditions during the peak hours. As the proposed main access to the site will service substantially more traffic volumes than currently experienced, a realignment of the intersection to form a more traditional intersection layout with the side road approach perpendicular to US Route 209 is recommended. This realignment will result in relocating the Nevele Road intersection approach approximately 670-feet to the north. A traffic signal warrant was completed to confirm the geometry and control of this intersection based on signal warrant criteria contained in the *2009 Manual of Uniform Traffic Control Devices* (National MUTCD), published by The Federal Highway Administration (FHWA). The analysis shown on Chart 4.1 indicates that full build traffic volumes (2017 design year) at the US Route 209/Nevele Road intersection will be high enough to satisfy the minimum criteria for Warrant 3 (Peak Hour Volumes) to justify installation of a traffic signal; therefore, it is recommended that this intersection operate under traffic signal control.

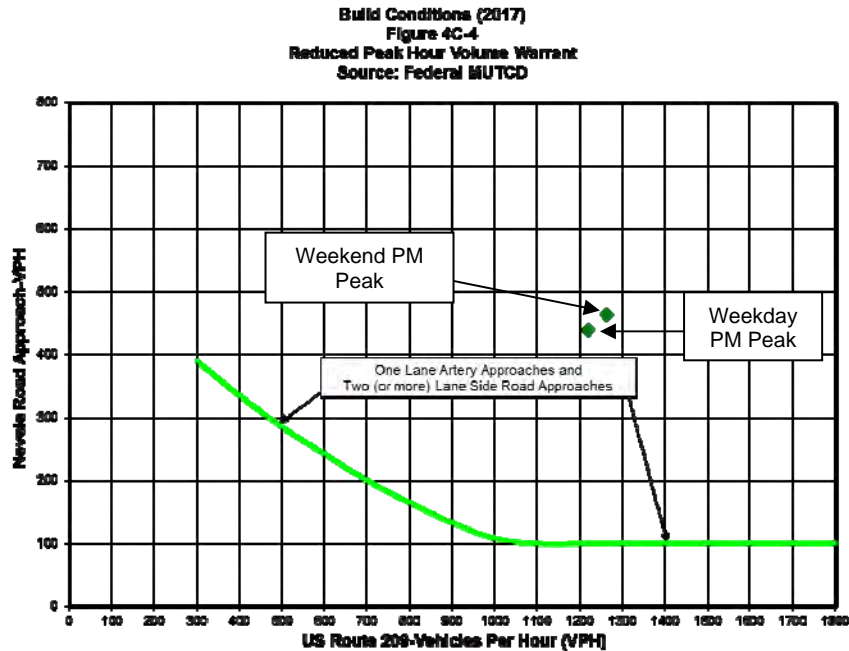


Chart 4.1 – Signal Warrant Analysis – US Route 209/Nevele Road

In addition to the installation of a traffic signal, it is recommended that a southbound left-turn lane and a separate northbound right-turn lane be constructed on US Route 209. To adequately serve traffic volumes exiting the site, a two lane approach should be constructed with separate left and right turn lanes. With the installation of a traffic signal and proposed geometric improvements, the site driveway intersection with US Route 209 will operate at overall LOS B conditions during both peak hours. The analysis assumes that a protected/permitted southbound left-turn movement with a westbound right-turn overlap would be provided as well as a northbound right-turn overlap during the westbound protected phase. A concept of this intersection is shown on Figure 4.2. A single eastbound lane will carry traffic volumes into the site; therefore, the new roadway between US Route 209 and the new Arrowhead Road intersection will be three lanes wide for approximately 200-feet prior to the two lane section.

A sight distance evaluation at the realigned Nevele Road intersection indicates that the available intersection and stopping sight distance exceeds the guidelines presented in the American Association of Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets, 6th Edition, 2011 for the 60-mph design speed on US Route 209. The analysis also indicates that adequate stopping sight distance will be available to the anticipated back of queue that will exist with the installation of a traffic signal at this location.

Coordination with emergency services has indicated that emergency access to the site will be provided via the modified main site access intersection with US Route 209. The improved site access intersection will improve the current accessibility to the project site by emergency vehicles. The new intersection will be designed to

NYSDOT standards which accommodate emergency and other large vehicles. More details on the turning radii design and accommodation of large vehicles will be coordinated and reviewed by NYSDOT during the highway work permit process.

- US Route 209/Sullivan Street – The analysis indicates that during the Weekday and Weekend PM peak hours, this intersection will operate at an overall LOS B through No-Build conditions with all movements operating at LOS C or better. The increased traffic during the peak hours at this intersection after development of the *Nevele Resort* will degrade the southbound approach to LOS F operating conditions during the Weekday PM peak hour. In order to mitigate the impacts to this intersection, it is recommended that exclusive northbound and southbound left-turn lanes be installed on US Route 209 as shown on the concept plan on Figure 4.3. These geometric improvements will result in the need to replace the existing traffic signal system at this intersection. These intersection improvements will improve the Build peak hour intersection operations to overall level of service C/B conditions during the Weekday and Weekend PM peak hours with all movements operating at LOS C or better. The Build condition operations will still result in the northbound US Route 209 approach degrading from LOS A to LOS B conditions with an increase in delay less than 3 seconds during the Weekend PM peak hour while the southbound US Route 209 through/right-turn lane degrading from LOS B to LOS C conditions with an increase in delay less than 8 seconds during both peak hours. These are considered acceptable intersection operations and will only be experienced during peak operating conditions of the *Nevele Resort*. This proposed improvement will not impact parking on US Route 209 since on-street parking is restricted in the vicinity of this intersection. The queuing analysis (shown on Table 4.6) indicates that queuing on the side streets will not increase during the weekend peak hour. In addition, the minimal increased queuing on the eastbound approach (25-feet) and westbound approach (100-feet) associated with signal timing modifications will not adversely impact on-street parking in this area.

The addition of a westbound right-turn lane on Sullivan Street was also evaluated at this intersection. While it is noted that this improvement would slightly improve operations and queuing on the westbound approach, the impact to on-street parking and ROW would be significant; therefore, this improvement was not considered since adequate operations are provided with the proposed construction of northbound and southbound left-turn lanes.

The construction of left-turn lanes will reduce the frequency of certain types of accidents like rear-end collisions, left and right turn accidents, and right-angle accidents by approximately 50 percent based on a review of the NYSDOT Post Implementation Evaluation System (PEIS). A review of historical accident information indicates that northbound and southbound left-turn lanes at this intersection could have helped prevent six of the twelve total accidents reported over the last three years of available data.

- US Route 209/NY Route 17 Eastbound Ramp – The analysis shows that this intersection will operate at LOS B during the Weekday and Weekend PM peak hours with all movements operating at LOS C or better through No-Build conditions. With the additional traffic associated with the *Nevele Resort*, the level of service during the Weekend PM peak will continue to operate at an overall LOS B; however, a review of the 95th percentile queue on the southbound left-turn movement indicates that the existing storage lane is not long enough to accommodate the increase in traffic. It is recommended that the southbound left-turn lane be extended beyond the existing 125-feet in order to accommodate southbound left-turn traffic at this intersection associated with the proposed development. A preliminary review of the existing geometry at the ramps indicates that the left-turn lane could be extended by approximately 240-feet as shown on Figure 4.4. It is noted that during the peak operational times studied in this report, some movements will degrade from LOS B to LOS C conditions with increases in the approach delays of 3 seconds or less during the Weekday PM peak and between 3 and 9 seconds during the Weekend PM peak. These are considered acceptable intersection operations and will only be experienced during peak operating conditions of the *Nevele Resort*.
- Nevele Road/Arrowhead Road – With the low traffic volumes currently at this intersection, good levels of service are experienced; however, the character of this intersection will be modified with the development of the site. It is recommended that this intersection be re-configured as part of the site entrance development so that the southbound Nevele Road approach intersects the new mainline (Arrowhead Road) and creates a “T” intersection as shown on Figure 4.2. With the re-configuration, the re-aligned stop approach of Nevele Road will operate at good levels of service during both peak hours under stop sign control. In order to discourage patrons from utilizing Nevele Road from the north, it is recommended that signing be placed on US Route 209 to clearly direct patrons to continue south toward the main site entrance on US Route 209. The small percentage of traffic distributed onto the northern leg of Nevele Road was assumed to be local traffic that may choose to use this path when entering or exiting the site.
- US Route 209/Off-Site Employee Parking Lot Driveway – The level of service analysis indicates that this stop controlled intersection would operate at LOS D on the westbound Off-Site Employee Parking Lot Driveway approach during both peak hours after build out of the proposed development if a single lane for shared travel movements is provided on each intersection approach; however, a review of left-turn lane criteria published by AASHTO in *A Policy on Geometric Design of Highways and Streets, 2011* was reviewed at this intersection. A review of the Build condition volumes on US Route 209 indicates that the left-turn lane criteria is met at this intersection for southbound left-turning traffic during both peak hours; therefore, it is recommended that US Route 209 be widened as necessary to construct an exclusive southbound left-turn lane with 100-feet of available storage at the Off-Site Employee Parking Lot Driveway. It is also recommended that a short 100-foot long center two-way left-turn lane (TWLTL) be provided opposite the southbound left-turn lane prior to tapering back to a two lane section in order to accommodate two stage

left-turns exiting the parking lot. It is also recommended that the westbound Off-Site Employee Parking Lot Driveway approach provide a left-turn lane and a separate right-turn lane with approximately 100-feet of storage exiting the parking lot so that vehicles turning left will not unnecessarily delay vehicles turning right from the driveway. A conceptual improvement plan is shown on Figure 4.5. The new intersection will be designed to NYSDOT standards which accommodate bus, truck, and emergency vehicles. More details on the turning radii design and accommodation of large vehicles will be coordinated and reviewed by NYSDOT during the highway work permit process.

The level of service analysis indicates that this intersection would operate at LOS C or better on the westbound Off-Site Employee Parking Lot Driveway approach while the southbound left-turn movement on US Route 209 will operate at LOS A during both peak hours after build out of the proposed development and the proposed geometry. A sensitivity analysis indicates that the westbound driveway approach will continue to operate at adequate levels of service during both peak hours and that adequate vehicular storage will be provided even if entering and exiting traffic at the driveway increased to approximately 500 vehicles which could potentially occur during peak employee shift changes.

US Route 209 will see an increase in traffic through the study area corridor as a result of the development of the *Nevele Resort*. In general, the traffic analysis presented in this study represents a worst-case peak condition with peak summer volumes of background and peak casino operations. As noted, the background traffic volume data was collected on a Friday and Sunday which are representative of peak seasonal travel in the study area; therefore, the Build condition volumes simulate worst-case traffic volume conditions in the study area. Table 4.5 illustrates the Weekday and Weekend PM peak hour traffic volumes along US Route 209 expected with the site developed. The Capital District Transportation Committee (CDTC) a Metropolitan Planning Organization (MPO) in the Capital District has developed mainline capacities for different types of roadways. Based upon the functional classification of US Route 209 as a Principal Arterial, the operating capacity for level of service D operations is 1,000 vehicles per lane per hour on two-lane roadway segments and 1,250 vehicles per lane per hour for roadway segments with two travel lanes and a center turn median. Table 4.5 summarizes the expected future roadway capacity.

Table 4.5 – US Route 209 Build Traffic Volumes and Capacity

Segment	Weekday PM		Weekend PM		CDTC Capacity ¹ (LOS D Threshold)	CDTC Capacity ² (LOS E Threshold)
	NB	SB	NB	SB		
US Route 44 to Route 55	885	765	720	850	1,000	1,300
NY Route 55 to Maple Avenue ³						
Southern section	1,180	1,010	875	972	1,250	1,625
Northern section	1,020	815	780	925	1,000	1,300
Maple Avenue to Center Street	830	915	755	900	1,250	1,625
Center Street to Site	575	520	520	620	1,000	1,300
Site to Sullivan Street	830	690	710	860	1,000	1,300
Sullivan Street to NY Route 17	650	650	600	795	1,000	1,300

¹Level of Service D Capacity threshold in vehicles per direction.

²Level of Service E Capacity threshold in vehicles per direction.

³ Lane geometry is a three-lane section closer to Maple Avenue and a two-lane section closer to NY Route 55.

As shown in Table 4.3, the peak traffic volumes on US Route 209 with the project will operate below the LOS D capacity thresholds for all segments except the northern section between NY Route 55 and Maple Avenue (over by 20 vehicles and below LOS E thresholds) indicating that additional lane geometry to widen US Route 209 is not needed to support the additional traffic volumes generated by the site.

A queuing analysis was also conducted to determine if the available storage at the study area intersections can accommodate future traffic associated with the proposed development. An evaluation of the 95th percentile queue between No-Build, Build, and Build with Improvement conditions and a comparison to the available storage is provided on Table 4.6. The queuing found in the table is based on the HCM 2010 analysis which provides an assessment of the intersections assuming isolated conditions unless signalized intersections are part of a coordinated system like the one proposed between Canal Street and Center Street. The SimTraffic simulation was also reviewed to observe queuing conditions and determine corridor impacts associated with closely spaced intersections.

Table 4.6 – 95th Percentile Queue Summary (in feet)

Intersection	Control	Weekday PM Peak Hour				Weekend PM Peak Hour			
		Available Storage	2017 No-Build	2017 Build	2017 Build w/lmp	Available Storage	2017 No-Build	2017 Build	2017 Build w/lmp
US Rt. 209/Rt. 44/55	S								
Route 44/55 WB LR		+1,000	75	75	--	+1,000	100	125	--
Route 209 NB T		930	175	225	--	930	200	275	--
Route 209 SB L		120	25	25	--	120	25	25	--
		+1,000	125	175	--	+1,000	150	225	--
US Rt. 209/NY Rt. 55	TW								
Route 209 NB L		205	25	25	--	205	25	25	--
		205	0	0	--	205	0	0	--
Route 209 SB TR		170	0	0	--	170	0	0	--
Route 55 EB L		925	25	25	--	925	25	25	--
		105	25	25	--	105	25	50	--
US Rt. 209/Maple Ave	S								
Maple Ave EB [L]TR		100	25	25	25	100	25	25	25
Maple Ave WB L[T]R		490	125	100	150	490	25	50	50
Route 209 NB [L]		60	25	25	25	60	25	25	25
		485	800	1,500	1,000	485	375	475	450
Route 209 SB L		225	75	75	100	225	25	50	50
		225	375	475	500	225	300	375	350
US Rt. 209/Canal St	S								
Canal St EB L		150	125	150	150	150	100	100	75
		215	50	50	50	215	25	25	25
Canal St WB L		75	50	50	50	75	25	50	50
		480	100	125	150	480	75	75	100
Route 209 NB L		40	25	25	25	40	25	25	25
		185	375	550	100	185	275	375	50
Route 209 SB L		170	75	100	75	170	50	25	50
		480	300	475	350	480	250	375	325
		180	125	125	100	180	100	100	75
US Rt. 209/Center St	S								
Center St EB L		125	75	75	125	125	75	100	125
		410	50	75	100	410	75	100	150
Center St WB L		100	50	100	150	100	25	100	150
		450	50	75	100	450	25	50	50
Route 209 NB L		80	50	75	50	80	25	50	50
		305	225	425	425	305	200	400	425
Route 209 SB L		90	50	75	50	90	25	50	25
		185	225	375	50	185	225	400	50
US Rt. 209/Warren St	TW								
Route 209 NB [L]		115	--	--	0	115	--	--	0
		200	0	0	0	200	0	0	0
Route 209 SB [L]		180	--	--	25	180	--	--	25
		305	25	25	0	305	25	25	0
Warren St EB LTR		405	25	75	25	405	25	50	25
Warren St WB LTR		400	25	50	25	400	25	25	25
US Rt. 209/Nevele Rd North	TW								
Route 209 NB TR		485	0	0	--	485	0	0	--
Route 209 SB LT		270	25	25	--	270	25	25	--
Nevele Rd N. WB LR		+1,000	25	25	--	+1,000	25	25	--
US Rt. 209/Nevele Rd South	TW S								
Nevele Rd S. WB L		360	--	--	175	360	--	--	175
		200	--	--	50	200	--	--	50
Route 209 NB T		820	--	--	225	820	--	--	200
		175	--	--	100	175	--	--	100
Route 209 SB L		160	--	--	75	160	--	--	75
		+1,000	--	--	125	+1,000	--	--	175

Table 4.6 – 95th Percentile Queue Summary (in feet) (continued)

Intersection	Control	Weekday PM Peak Hour				Weekend PM Peak Hour			
		Available Storage	2017 No-Build	2017 Build	2017 Build w/lmp	Available Storage	2017 No-Build	2017 Build	2017 Build w/lmp
US Rt. 209/Gumaer Falls Rd/ Kohl's Warehouse Drwy	S								
Gumaer Falls Rd EB LTR		+1,000	25	25	--	+1,000	25	25	--
Kohl's Drwy WB L		115	25	25	--	115	25	25	--
TR		140	25	25	--	140	0	0	--
Route 209 NB LT		930	175	375	--	930	100	250	--
R		260	25	25	--	260	0	0	--
Route 209 SB LTR		730	100	300	--	730	150	325	--
US Route 209/Sullivan Street	S								
Sullivan St EB LTR		520	150	225	175	520	200	200	175
Sullivan St WB LTR		680	325	525	425	680	200	225	200
Route 209 NB [L]		75	--	--	50	75	--	--	50
L[TR]		505	200	550	400	505	175	350	300
Route 209 SB [L]		75	--	--	100	75	--	--	75
L[TR]		290	225	1,125	425	290	350	725	500
US Rt. 209/ NY Rt. 17 WB Ramp	TW								
Route 209 NB L		120	25	25	--	120	25	25	--
TR		585	0	0	--	585	0	0	--
Route 209 SB TR		385	0	0	--	385	0	0	--
NY Route 17 WB LT		120	25	25	--	120	25	25	--
R		+1,000	25	100	--	+1,000	25	75	--
US Rt. 209/ NY Rt. 17 EB Ramp	S								
NY Route 17 EB LT		100	50	50	--	100	50	50	--
R		+1,000	25	50	--	+1,000	25	25	--
Route 209 NB TR		+1,000	100	150	--	+1,000	150	175	--
Route 209 SB L		125 {315}	100	225	--	125 {315}	200	374	--
T		585	75	100	--	585	75	75	--
Nevele Rd/Arrowhead Rd	TW								
Arrowhead Rd EB LT	TW	360	--	--	0	360	--	--	0
Arrowhead Rd WB TR		+1,000	--	--	0	+1,000	--	--	0
Nevele Rd SB LR		+1,000	--	--	25	+1,000	--	--	25
US Route 209/ Off-Site Employee Parking Lot	TW								
Route 209 NB TR		+1,000	--	0	0	--	0	0	
Route 209 SB L		100	--	25	25	--	25	25	
T		+1,000	--	--	0	--	--	0	
Employee Drwy WB L		400	--	50	25	--	50	25	
R		100	--	--	25	--	--	25	

Note = Available mainline storage provided to next unsignalized or signalized intersection. It is noted that additional storage is typically provided through adjacent unsignalized intersections.

S, TW = Signalized intersection, Two-Way Stop Controlled Intersection

EB, WB, NB, SB = Eastbound, Westbound, Northbound, or Southbound intersection approaches

L, T, R = Left-turn, Through, and/or Right-turn intersection movements

L[TR] = LR represents the existing geometry, LTR represents the future geometry

YY {YY} = Existing Storage {Proposed Storage}

-- = Not Applicable

Table 4.6 indicates that the available storage at the majority of the study area intersections will adequately accommodate traffic from the proposed development. An overall review of the SimTraffic simulation indicates that vehicles can access exclusive left and right-turn lanes throughout the roadway network. The following additional information regarding the queuing analysis is noted at the following study area

intersections where the HCM 2010 queuing exceeds storage (noted in italics in the table):

- US Route 209/Maple Avenue – A review of the SimTraffic traffic simulation shows that the southbound queue will not typically impact operations at the Glenwood Drive intersection located 225-feet to the north. In addition, while the HCM 2010 output shows long queues on the northbound approach during Existing through Build conditions, the SimTraffic simulation which takes into account metered traffic flows associated with signal coordination from adjacent intersections indicates that the 95th percentile northbound queue on US Route 209 will not extend back through and impact operations of the adjacent signalized Canal Street intersection located approximately 485-feet to the south. It is noted that the Canal Street and Center Street intersections will be coordinated and that traffic flowing northbound through these intersections will be metered by the proposed phasing of these traffic signals. The HCM evaluation does not take the metering effect into consideration when providing the queuing evaluation at the adjacent Maple Street intersection. No additional mitigation beyond the signal timing modifications proposed is recommended.
- US Route 209/Center Street – A review of the SimTraffic traffic simulation shows that the northbound queue will not typically impact operations at the Warren Street intersection. In addition, the simulation indicates that the westbound left-turn queue could spill back into the through lane during worst-case conditions; however, the distance between the US Route 209 and the adjacent Market Street intersection located 450-feet to the east could accommodate queuing from the through lane and any potential spill back from the left-turn lane. No mitigation beyond the implementation of signal coordination is recommended.
- US Route 209/Sullivan Street – The HCM 2010 queuing analysis and the SimTraffic simulation indicates that the 95th percentile southbound queue will extend through the adjacent unsignalized Pine Street intersection located approximately 290-feet to the north; however, a review of the traffic simulation shows that the southbound queue will clear during the green phase of the traffic signal cycle and that adequate gaps in traffic will be provided for vehicles to enter and exit the Pine Street intersection after construction of the northbound and southbound left-turn lanes on US Route 209. No additional mitigation is recommended beyond the turn lanes recommended.
- US Route 209/NY Route 17 Eastbound Ramp – The HCM 2010 queuing analysis and SimTraffic simulation indicates that the existing southbound left-turn storage lane will not accommodate the 95th percentile southbound queue; therefore, it was recommended that the southbound left-turn lane

be extended to the extent possible and provide 315-feet of available storage. A review of the SimTraffic simulation shows that modified left-turn lane will accommodate the southbound queue during both peak hours and will not spill back and impact through traffic on US Route 209.

D. Pedestrian, Bicycle, Transit Improvements

As noted in Chapter II, pedestrian accommodations in the vicinity of the development are limited as the site is located approximately one mile south of the Village of Ellenville. The existing Delaware & Hudson (D&H) Canal Heritage Corridor is a 35-mile long trail that spans Ulster County from the City of Kingston to the Village of Ellenville and traces the route of the Delaware Hudson Canal, the New York Ontario & Western (O&W) Railroad, and scenic Roundabout Creek. The Applicant has reached an agreement in principle to dedicate more than five additional miles of rail trail located through and along the *Nevele Resort* property that will connect the Village of Ellenville to Spring Glen; however, the Town is the entity that will implement any improvements to the corridor and as such, details are not available as part of the proposed project. The donation is being provided by the Applicant as a public benefit to the recreational system and is not part of project mitigation nor being proposed as a means of access to the site.

The Applicant has also coordinated with the Ulster County Area Transit (UCAT) on the proposed transit service plan for the *Nevele Resort*, which consists of two tiers of service described in more detail in the Transit Plan. Tier 1 will be a *Nevele Resort* operated employee shuttle servicing 2 primary employee locations – 1) Off-Site Employee Parking Lot, 2) Newburgh/Beacon Railway Station. Tier 2 would be a potential local bus loop operated by UCAT. Overall, the transit service will help to reduce single vehicle trips to the site during peak and off-peak periods of travel. The Transit Plan is included under Appendix H.

E. Parking Demand

The development plan indicates that patron parking will be completely accommodated on-site. Guests of the resort will enter via the proposed signalized intersection on US Route 209 to access a one-way loop road system that will direct

them to a valet area or self-park lots. In addition, a portion of Nevele Resort employees will be allowed to park on-site while the remaining will be accommodated off-site via a satellite employee parking lot located off-site in a parking lot located south of the project site on US Route 209. A Transit Plan developed for the Nevele Resort (Included under Appendix H) was designed to further enhance the multi-modal access by employees and patrons of the site. Part of this plan indicates that an employee shuttle service between the Nevele Resort and the satellite lot will be implemented immediately upon opening of the casino and will establish the base line service fundamental to the operation of the casino. The shuttle buses will also access the site from the satellite lot via the proposed signalized intersection on US Route 209 and use the one-way loop road system to access the bus loading area that has direct access to the south casino entry.

Parking statistics at existing and proposed casino developments were reviewed to confirm that the total potential parking demand at the proposed site can be accommodated (included under Appendix I). A review of available data for existing casinos indicates that the proposed program for the Nevele Resort is most similar to the Sands at Bethlehem Casino located in Pennsylvania which provides approximately 1.15 parking spaces per gaming position (inclusive of employees and patrons).

Based on the current proposal for 2,610 gaming positions, the total Nevele Resort parking demand is approximately 3,002 parking spaces which will accommodate both patrons and employees. As currently proposed, the on-site facilities will consist of approximately 2,459 parking stalls and 31 bus spaces while the off-site parking will accommodate up to 545 overflow employees (total of 3,004 parking spaces and 31 bus spaces) which will meet the total parking demand of the site. A summary of the parking spaces, location, and access is as follows:

1. Self-Parking Garage – The garage will provide 1,891 parking spaces located immediately adjacent to the casino and hotel lobby entry and will be accessible from the main one-way loop road.
2. Valet Parking Lot – The valet lot will accommodate 470 parking spaces and will be located immediately adjacent to the main porte-cochere entry. Access will be provided from the main one-way loop road.
3. Resort Service Vehicles – The resort will provide 4 service vehicle parking

spaces located in the sub terrain service area. These parking spaces are also accessible from the main one-way loop road.

4. Golf Parking Lot – The golf course will provide 94 parking spaces located adjacent to the golf pro shop which can be accessed from the main one-way loop road.
5. Buses – The development will provide 21 arrival and departure spaces for buses located south of the casino entry in a dedicated loading area. The main one-way loop road will provide access to 10 additional overflow spaces.
6. Employee Parking Lot – Approximately 545 parking spaces will be provided in an off-site parking lot located south of the Nevele Resort on US Route 209. Access to the resort will be provided via shuttle buses.

F. Construction Traffic

The construction traffic impact evaluation consists of a qualitative assessment of both traffic operations and physical roadway conditions to help inform the public, decision makers, and future contractors about the potential amount and location of construction traffic and how to avoid or minimize impacts. It is noted that identifying all the construction related activity and impacts with a high degree of certainty is challenging at this stage of project development. The analysis assumes a reasonable “worst-case-scenario” of construction traffic that likely overstates construction traffic impacts. Further, the construction related mitigation measures recommended in this evaluation are sufficiently broad to provide the *Nevele Resort* flexibility in the types of strategies that can be implemented to minimize construction traffic impacts while ensuring that the impacts will be avoided or reduced to the maximum extent feasible.

It is anticipated that construction activity will take place Monday to Saturday from approximately 7:30 a.m. to 6:00 p.m. and will last approximately 18 to 24 months. The necessary labor to construct the *Nevele Resort* will ramp up from 100 workers to approximately 1,000 workers during peak times. Typical material deliveries will vary from 50 to 100 trucks per day while precast and steel delivers will vary from 6 to 10 trucks per day. It is anticipated that Arrowhead Road will need to be resurfaced at the completion of the project. A construction schedule is included in Appendix J.

A “Trucking Route Logistics Plan”, has been prepared by Tishman Construction Corporation and is provided under Appendix J. The Truck Route Logistics Plan proposes that all Vehicle Types A through E (Class 2-21) will access the site from the

south via US Route 209. Vehicle Type A (Class 2-5) will access the site from the north via Nevele Road and US Route 209. A flagger will be provided to help facilitate operations in the vicinity of the development as necessary. This vehicle pattern will minimize construction impacts through the Village of Ellenville since all larger vehicles will gain access to/from the south, likely via NY Route 17 interchange. US Route 209 is classified as a principle arterial south of the site, has also been designated as a Qualifying or Access Highway for Larger Dimension Vehicles, has wide shoulders, and is in fair to good condition based on information provided by NYSDOT.

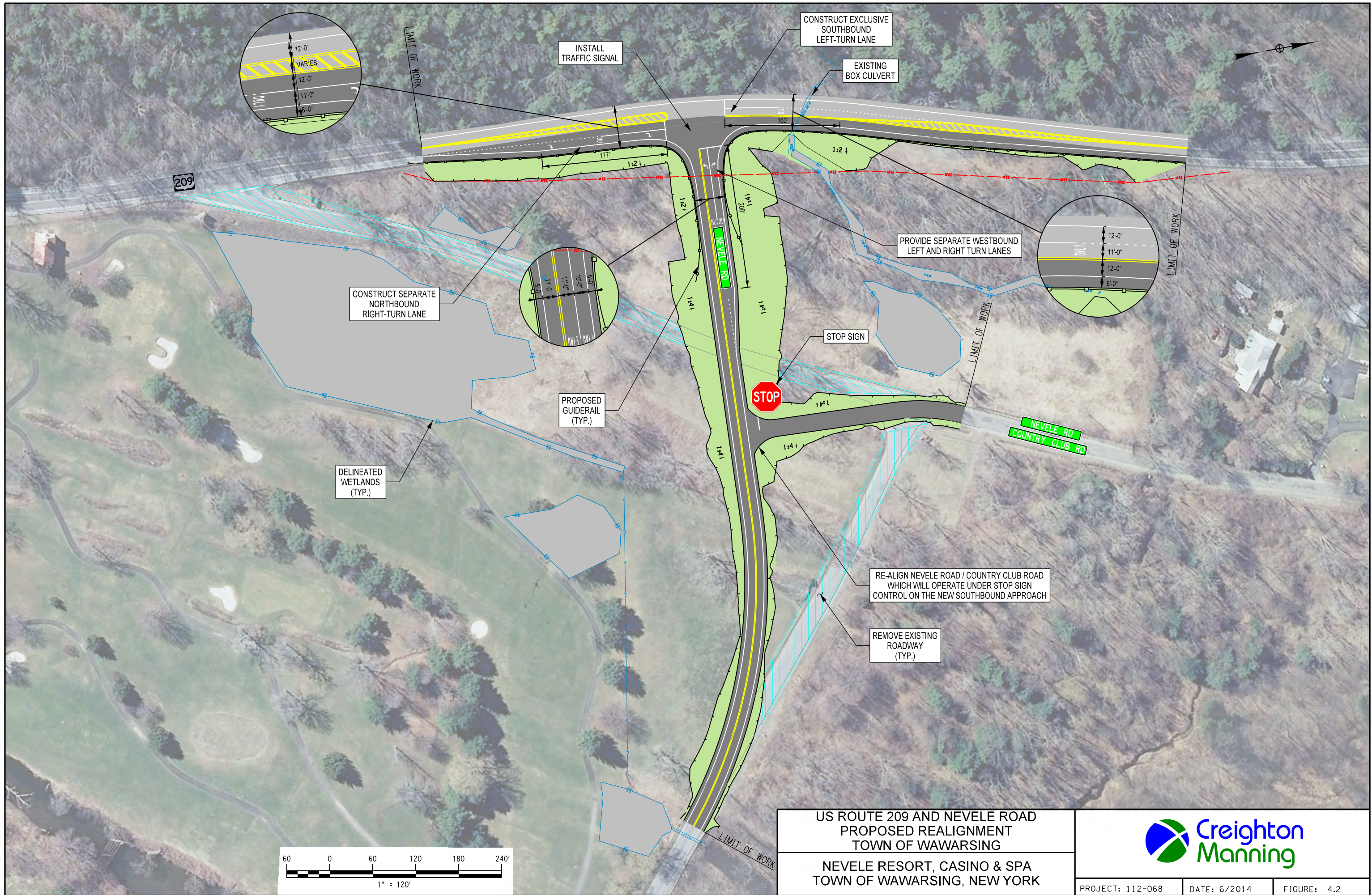
G. Special Event Traffic

At the time of the scoping document, it was anticipated that the site would include a venue for large special events. Since that time, the programming for the site has been re-defined and no longer includes plans to provide special events or live entertainment that would require a specific traffic management plan. As currently proposed, the outdoor skating rink area could be converted to accommodate small “casino related” special events such as slot tournaments, blackjack tournaments, poker tournaments, player reward parties, a New Year’s party, a Lunar New Year party, etc. It is anticipated that a majority of event attendees will be patrons of the *Nevele Resort* and therefore would not generate additional new trips above and beyond what is normally anticipated at the site. Due to the changes in the development program, a traffic evaluation of special events is no longer applicable.

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US ROUTE 209 AND NEVELE ROAD
PROPOSED REALIGNMENT
TOWN OF WAWARSING

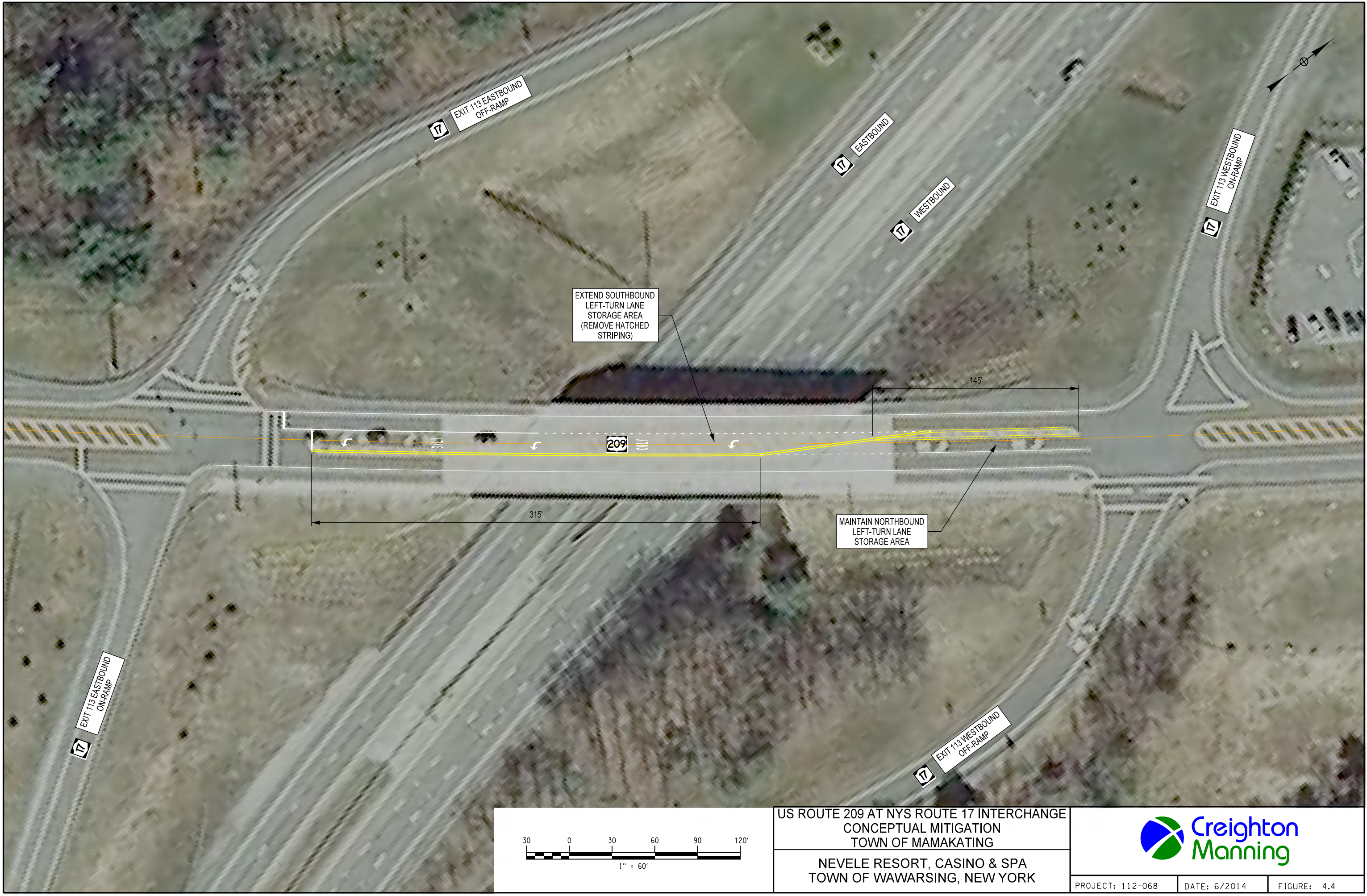
NEVELE RESORT, CASINO & SPA
TOWN OF WAWARSING, NEW YORK



PROJECT: 112-068	DATE: 6/2014	FIGURE: 4.2
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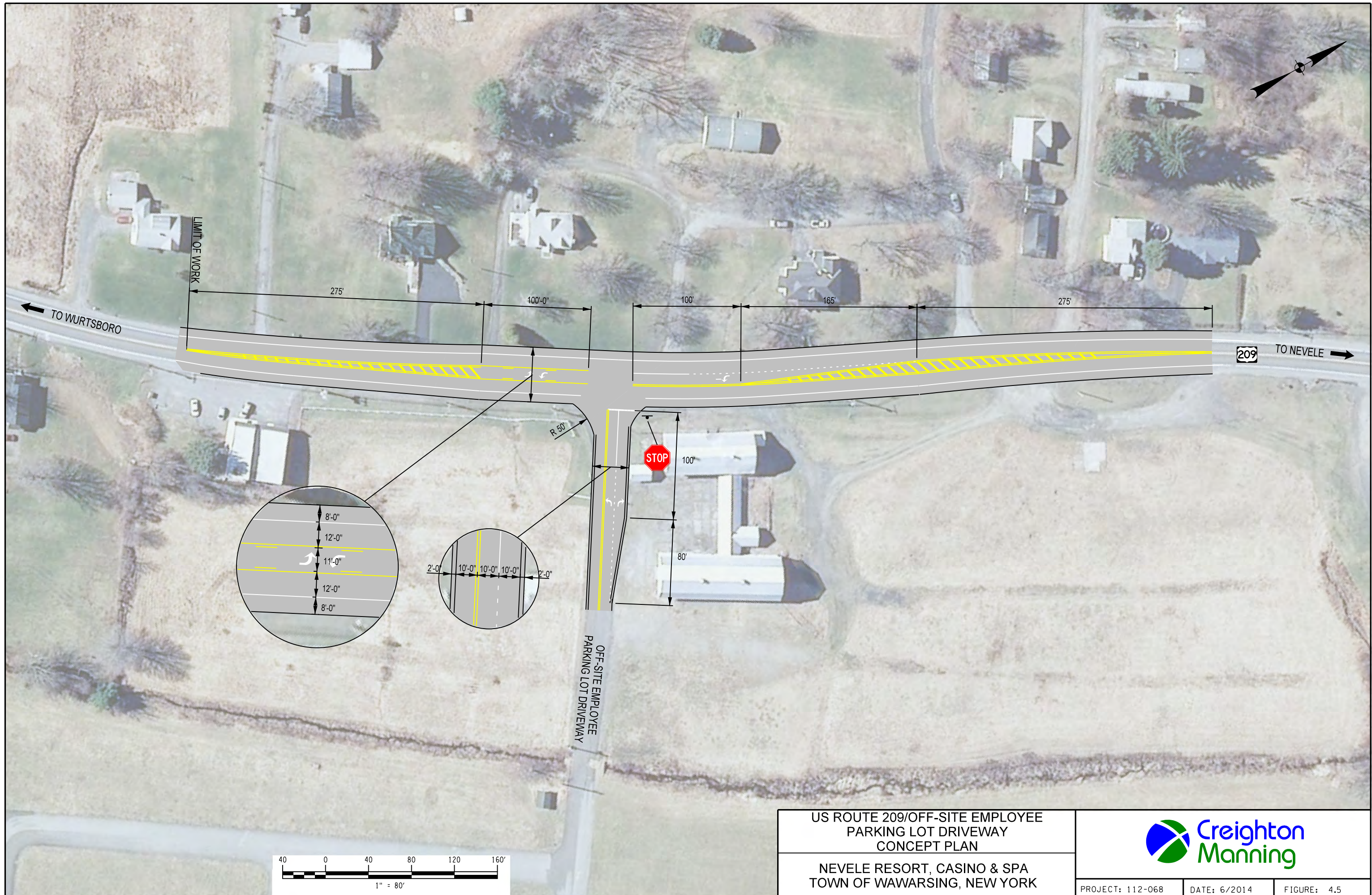
US ROUTE 209 AT NYS ROUTE 17 INTERCHANGE
CONCEPTUAL MITIGATION
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NEVELE RESORT, CASINO & SPA
TOWN OF WAWARSING, NEW YORK



PROJECT: 112-068	DATE: 6/2014	FIGURE: 4.4
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US ROUTE 209/OFF-SITE EMPLOYEE
PARKING LOT DRIVEWAY
CONCEPT PLAN

NEVELE RESORT, CASINO & SPA
TOWN OF WAWARSING, NEW YORK



PROJECT: 112-068

DATE: 6/2014

FIGURE: 4.5

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The proposed *Nevele Resort, Casino, & Spa* project consists of the re-development of the existing *Nevele Grande* site with a resort consisting of a total of 1,994 slots, 6 electronic table games, and 80 gaming tables with various amenities such as a 446-room hotel, an ice arena, spas, restaurants, and golf course. Approximately 2,490 total on-site guest parking spaces will be provided which includes 31 parking spaces for buses, trucks and RV's. Primary access to the site is proposed via a single full access driveway that will intersect US Route 209 from the east forming a new three-leg intersection as a re-alignment to the existing Nevele Road (south) intersection. An off-site satellite parking lot that consists of approximately 545 parking spaces for employee use only will be constructed approximately 1½ miles south of the site near Lewis Lane. Employees will have direct access to US Route 209 via an existing full access driveway and will be transported to the main Nevele Casino site via shuttle buses. Full build-out of the development is expected to be completed by 2017.

The traffic impact study was completed for two peak operating conditions representing peak weekday afternoon and peak weekend afternoon conditions. These two time periods represent peak operating periods at the site and coincide with peak volumes on the adjacent roadway network, especially during the peak summer season in the study area. Therefore, the study simulates worst-case traffic volume conditions. Trip generation at the site was developed based on a review of data gathered from multiple casino facilities and results in an estimated 1,013 vehicle trips during the Weekday PM peak hour at the site and 1,078 vehicle trips during the Weekend PM peak hour at the site. The trip generation accounts for off-site parking for employees with shuttle bus access to the site.

The following conclusions and recommendations are offered:

1. It is proposed that the main site access intersection (Nevele Road) be realigned to intersect US Route 209 approximately 670-feet to the north as a signalized intersection with a southbound exclusive left-turn lane, a northbound right-turn lane and two lanes for left and right turn movements exiting the site. In addition, the north leg of Nevele Road will be realigned to a stop sign approach with the main access into the site (Old Arrowhead Road). This realignment will discourage use of the northern leg of Nevele Road to access the site from US

Route 209. It is further recommended that signing along US Route 209 be placed on US Route 209 to clearly direct patrons to continue south toward the main site entrance on US Route 209

2. To help reduce the traffic entering and exiting the site, employees will park off-site at a parking lot located approximately 1½ south of the site. The employees will be shuttled to and from the site which will help reduce the single vehicle trips at the site by transporting numerous employees at once to and from the site. It is recommended that US Route 209 be widened at the unsignalized employee lot driveway intersection to provide an exclusive southbound left-turn lane and a short TWLTL section to facilitate two stage left-turn movements exiting the site. The westbound driveway approach will provide separate lanes for left and right-turn movements.
3. The following off-site intersection mitigation are proposed as follows:
 - Signal timing optimization at the US Route 209/Maple Avenue intersection.
 - A coordinated signal timing plan will be implemented using the existing traffic signal hardware at the Canal Street and Center Street intersections on US Route 209.
 - Re-striping of US Route 209 in the vicinity of Warren Street to provide a two-way left-turn center median in the corridor that extends from approximately Essex Street to the existing northbound left-turn lane at Center Street.
 - Construction of northbound and southbound left-turn lanes at the US Route 209/Sullivan Street intersection.
 - Re-striping to extend the southbound left-turn lane on US Route 209 at the NY Route 17 Eastbound Ramps.
4. Adequate sight distance will be provided at the Nevele Road North, Nevele Road South (realignment), and Off-Site Employee Parking Lot intersections on US Route 209. No sight distance related mitigation is recommended at these intersections.
5. The Applicant has coordinated with UCAT on the proposed transit service plan for the *Nevele Resort*, which consists of two tiers of service described in more detail in the Transit Plan. Tier 1 will be a *Nevele Resort* operated employee shuttle servicing 2 primary employee locations – 1) Off-Site Employee Parking Lot, 2) Newburgh/Beacon Railway Station. Tier 2 would be a potential local bus loop operated by UCAT. Overall, the transit service will help to reduce single vehicle trips to the site during peak and off-peak periods of travel. A detailed transit plan will be included in the application to the Gaming Commission.
6. Based on the current proposal for 2,610 gaming positions, the *Nevele Resort* will provide approximately 2,490 parking spaces on site and up to 545 employee parking spaces at an off-site lot to be serviced by a shuttle system. The provided parking is consistent with parking demand ratios provided at other similar casino developments.

7. A Truck Route Logistic Plan has been prepared to minimize construction related traffic impacts. Construction Types A through E vehicles (Class 2-21) will enter the site from south via US Route 209. Type A vehicles (Class 2-5) may access the site from the north via Nevele Road and US Route 209.
8. As currently proposed, the outdoor skating rink area could be converted to accommodate small “casino related” special events; however, it is anticipated that a majority of event attendees will be patrons of the *Nevele Resort* and therefore would not generate additional new trips above and beyond what is normally anticipated at the site. Due to the changes in the development program, a traffic evaluation of special events is no longer applicable.