

Chapter 11: Traffic and Transportation

A. INTRODUCTION

This chapter considers the potential transportation impacts from the Proposed Action. As described in Chapter 1, “Project Description,” the Proposed Action includes; 1) the adoption of the MOD Zoning (the “Proposed Zoning Action”) to establish a Medical Oriented District (MOD) in the area surrounding the existing New York Presbyterian Hospital (NYPH) facility recommended as part of *Envision Cortlandt*, the Town’s Sustainable Comprehensive Plan; and 2) site plan approval for the MOD Development Plan (the “Proposed Project”) proposed by the Applicants, Gyrodyne, LLC and VS Construction, including a mix of medical, residential, and commercial uses as well as parking and public amenities on multiple parcels within the MOD.

The Proposed Zoning Action would allow for the development of up to 200,000 gsf of new medical uses, 366 residential units, a 100 room hotel, 120 assisted living units, and 60,000 gsf commercial uses. As part of the Proposed Project, Gyrodyne is proposing the development of 100,000 gross-square feet (gsf) of Class A medical office space, 200 residential units, and 4,000 gsf accessory retail and public amenities including associated parking on a 13.8 acre site directly across Route 202/35 from the NYPH entrance. VS Construction is proposing the development of a 100 room hotel, 120 assisted living units, 166 residential units, 15,000 gsf of medical office, 15,000 gsf retail space, 7,000 gsf of restaurant space as well as associated parking located across Route 202/35 from the NYPH campus between Lafayette and Conklin Avenues.

This chapter examines the potential effects of the Proposed Action on the study area transportation system, describing existing conditions within the Study Area and comparing future conditions in 2021 both without the Proposed Action (the “No Action” analysis), and with: 1) The MOD Development Plan; and 2) the full build out of the MOD Zoning (the “With Action” analyses).

PRINCIPAL CONCLUSIONS

Traffic conditions were evaluated at 23 intersections for the Weekday AM and PM peak hours. Under the 2021 With Action Condition, there were two development programs analyzed:

- 1) The MOD Development Plan including the Gyrodyne and Evergreen Project Sites; and
- 2) The Proposed Zoning Action including adoption and full build out the density requirements set forth in the MOD zoning law.

Table 11-1 identifies the locations of potential traffic impacts with both the MOD Development Plan and the Proposed Zoning Action and where mitigation measures have been proposed to fully mitigate the impact. In addition, at two intersections, mitigation measures were recommended to mitigate the projected impacts to one or more impacted movements to provide improvements where possible. No impacts were identified for vehicular and pedestrian safety, parking, pedestrians and transit.

The impacts and mitigation shown in **Table 11-1** are based on the additional time it would take to make an individual movement at an intersection. However, while some individual movements may experience an increase in delay, the total increase in delay through a series of movements

along a route is not identified. For this reason, the total delay along the Route 202/35 corridor in the study area was also evaluated.

With the mitigation measures proposed for the MOD Development Plan, the travel times along the Route 202/35 corridor from Dayton Lane to Lexington Avenue would be reduced by approximately 17 seconds and 1 minute 27 seconds in the Weekday AM and PM peak hours, respectively as compared to the 2021 No Action Condition.

With the mitigation measures proposed for the Proposed Zoning Action the travel times along the Route 202/35 corridor from Dayton Lane to Lexington Avenue would be increased by approximately 28 seconds and 1 minute 40 seconds in the Weekday AM and PM peak hours, respectively, as compared to 2021 No Action Conditions. However, if installed, an Adaptive Traffic Control System (ATCS) has the potential to generate similar delays to the 2021 No Action Condition.

In addition to operational traffic improvements, the proposed mitigation measures for the MOD Development Plan would provide added safety benefits to many of the intersections along the Route 202/35 corridor in the study area. The proposed MOD Development Plan would also provide additional pedestrian facilities, including sidewalks and crosswalks, providing pedestrian connectivity between the Project Sites as well as the NYPH. Both the pedestrian network and traffic safety measures would be expanded as part of the requirements for the full build out of the Proposed Zoning Action.

**Table 11-1
Summary of Traffic Impacts**

Intersection		MOD Development Plan				Proposed Zoning Action			
EB/WB Street	NB/SB Street	Weekday AM		Weekday PM		Weekday AM		Weekday PM	
		Traffic Impact	Mit	Traffic Impact	Mit	Traffic Impact	Mit	Traffic Impact	Mit
Route 6	Dayton Lane	Not Impacted	N/A	Not Impacted	N/A	Not Impacted	N/A	NB-L	Yes
Route 202/35	Lafayette Avenue/NYPH driveway	Not Impacted	N/A	EB-TR	Yes	SB-LT	Yes	EB-TR WB-T NB-LTR SB-LT SB-R	Yes Yes Yes Yes Yes
Route 202/35	Conklin Avenue/Evergreen Driveway	Not Impacted	N/A	Not Impacted	N/A	Not Impacted	N/A	WB-TR	Yes
Route 202/35	Bear Mountain Parkway	EB-LT	Yes	EB-LT WB-T	Yes No	EB-LT	No	EB-LT WB-T	Yes No
Route 202/35	Croton Avenue/Maple Row	NB-L	No	WB-L WB-TR NB-L	No No No	EB-T NB-L	No No	WB-L WB-TR NB-L	No No No
Route 202/35	Lexington Avenue	EB-TR	Yes	EB-TR WB-T	No No	EB-TR	Yes	EB-TR WB-T	No No
South Driveway	Route 202/35	Not Impacted	N/A	WB-LR	No	Not Impacted	N/A	WB-LR	No
Route 202/35	Dayton Lane	SB-LR	Yes	SB-LR	Yes	SB-LR	Yes	SB-LR	Yes
Route 202/35	Tamarack Drive	Not Impacted	N/A	NB-LR	No	Not Impacted	N/A	NB-LR	No
Route 202/35	Shipley Drive/Diamond Avenue	Not Impacted	N/A	NB-LTR	No	Not Impacted	N/A	NB-LTR	No
Route 202/35	Locust Avenue	SB-LTR	No	Not Impacted	N/A	SB-LTR	No	Not Impacted	N/A
Bear Mountain Parkway	Arlo Lane	NB-LTR	No	NB-LTR	No	NB-LTR	No	NB-LTR	No
Total Impacted Intersections/Lane Groups		6/6		9/13		7/8		11/19	

Notes: L = Left Turn, T = Through, R = Right Turn, EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound, Mit = Mitigation Provided, NA = Not Applicable

B. CAPACITY ANALYSIS METHODOLOGY

SIGNALIZED INTERSECTIONS

The operation of signalized intersections in the study area was analyzed by applying the Percentile Delay Methodology included in the Synchro 10 traffic signal software. The Percentile Delay Methodology differs from the *Highway Capacity Manual (HCM)* Methodology by calculating vehicle delays for five different percentile scenarios (10th, 30th, 50th, 70th and 90th) and taking the volume weighted average of the scenarios as compared to HCM which calculates delay for a single average scenario. In addition, the Percentile Delay Methodology includes an additional queue delay component to account for the effects of queues and blocking on short links and turning bays. The methodology evaluates signalized intersections for average delay per vehicle and level of service (LOS).

LOS can be characterized for the entire intersection, each intersection approach, and each lane group. Delay alone is used to characterize LOS for the entire intersection or an approach. Total delay and volume-to-capacity (v/c) ratio are used to characterize LOS for a lane group. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group.

LOS A describes operation with a delay of 10 seconds per vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B describes operation with delay between 10 and 20 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C describes operation with delay between 20 and 35 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D describes operation with delay between 35 and 55 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E describes operation with delay between 55 and 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F describes operation with delay exceeding 80 seconds per vehicle or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

A lane group can incur a delay less than 80 seconds per vehicle when the volume-to-capacity ratio exceeds 1.0. This condition typically occurs when the cycle length is short, the signal progression is favorable, or both. As a result, both the delay and volume-to-capacity ratio are considered when

lane group LOS is established. A ratio of 1.0 or more indicates that cycle capacity is fully utilized and represents failure from a capacity perspective (just as delay in excess of 80 seconds per vehicle represents failure from a delay perspective).

The delay criteria for the range of service levels for signalized intersections are shown in **Table 11-2**.

Table 11-2
LOS Criteria for Signalized Intersections

Total Delay Per Vehicle	Level-of-Service (LOS) ⁽¹⁾	
	v/c ratio ≤ 1.0	v/c ratio > 1.0
≤ 10.0 seconds	A	F
>10.0 and ≤ 20.0 seconds	B	F
>20.0 and ≤ 35.0 seconds	C	F
>35.0 and ≤ 55.0 seconds	D	F
>55.0 and ≤ 80.0 seconds	E	F
>80.0 seconds	F	F

Note: (1) For approach-based and intersection-wide assessments, LOS is defined solely by delay.
Source: Transportation Research Board. *2010 Highway Capacity Manual*.

UNSIGNALIZED INTERSECTIONS

LOS for a two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections is determined by the computed or measured control delay using HCM Methodology. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns at TWSC intersections and for all movements at AWSC intersections. LOS is not defined for the intersection as a whole for TWSC intersections.

The LOS criteria for both TWSC and AWSC unsignalized intersections are summarized in **Table 11-3**.

Note that the LOS criteria for unsignalized intersections are somewhat different from the criteria used in signalized intersections. At TWSC intersections, drivers on the stop-controlled approaches are required to select gaps in the major-street flow in order to execute crossing or turning maneuvers. In the presence of a queue, each driver on the controlled approach must also use some time to move into the front-of-queue position and prepare to evaluate gaps in the major-street flow. AWSC intersections require drivers on all approaches to stop before proceeding into the intersection.

Table 11-3
LOS Criteria for Unsignalized Intersections

Control Delay Per Vehicle	Level-of-Service (LOS) ⁽¹⁾	
	v/c ratio ≤ 1.0	v/c ratio > 1.0
≤ 10.0 seconds	A	F
>10.0 and ≤ 15.0 seconds	B	F
>15.0 and ≤ 25.0 seconds	C	F
>25.0 and ≤ 35.0 seconds	D	F
>35.0 and ≤ 50.0 seconds	E	F
>50.0 seconds	F	F

Note: (1) For TWSC intersections, the LOS criteria apply to each lane on a given approach and to each approach on the minor street (for TWSC intersections). LOS is not calculated for major-street approaches or for the intersection as a whole.
Source: Transportation Research Board. *2010 Highway Capacity Manual*.

C. 2017 EXISTING CONDITIONS

To assess the traffic impacts associated with the Proposed Action, a Study Area was identified that considered key intersections that might be affected by project generated trips. As presented in **Figure 11-1**, a total of 23 locations were identified for analysis:

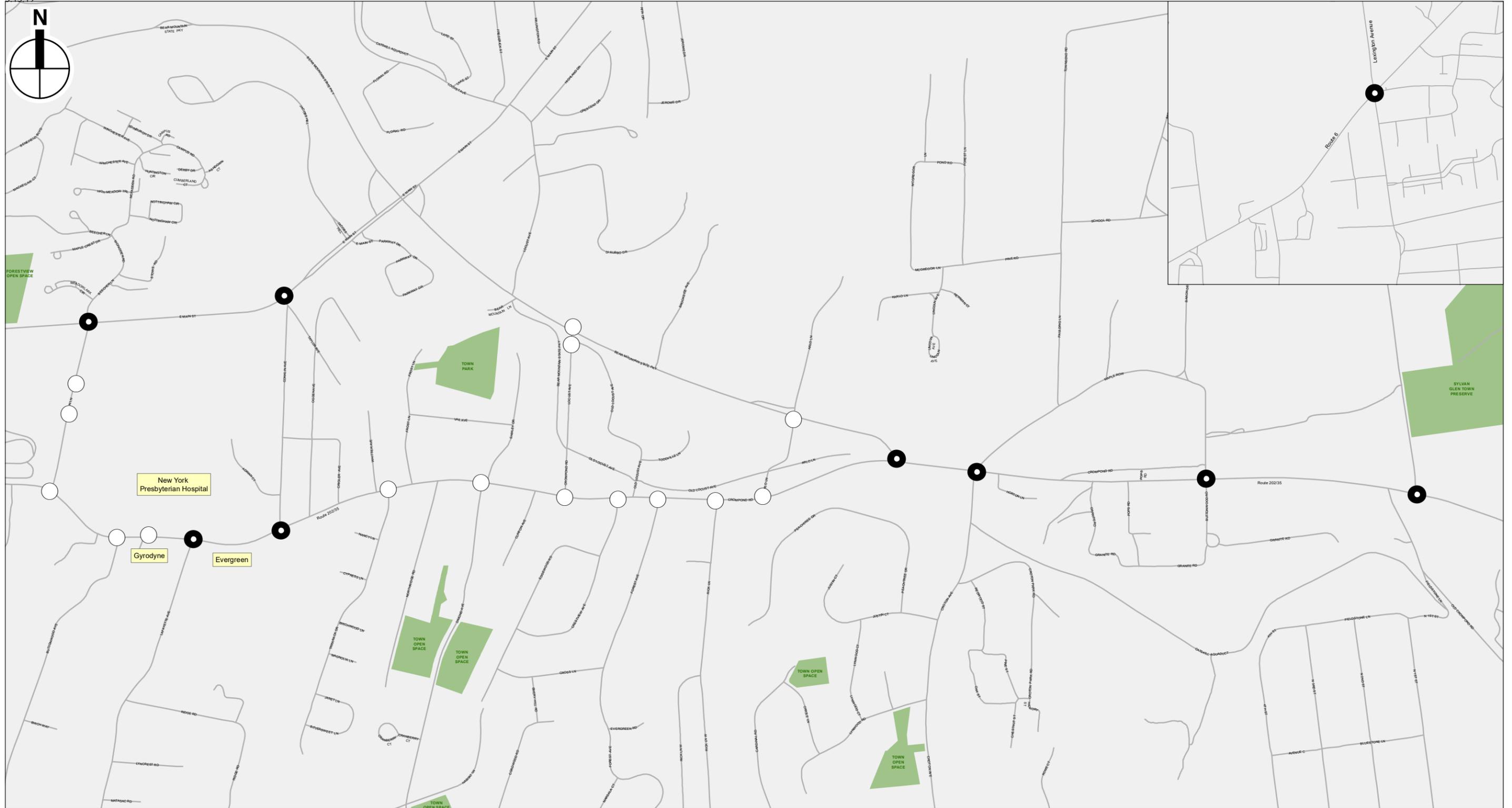
1. Route 202/35 and Dayton Lane
2. Route 202/35 and Buttonwood Avenue
3. Route 202/35 and Conklin Avenue
4. Route 202/35 and Tamarack Drive
5. Route 6 and Dayton Lane
6. Dayton Lane and Beach Shopping Center (North)
7. Dayton Lane and Beach Shopping Center (South)
8. Route 202/35 and Dimond Avenue/Shipleigh Drive
9. Route 202/35 and Locust Avenue
10. Route 202/35 and Crestview Avenue
11. Route 202/35 and Bear Mountain Parkway
12. Route 202/35 and Croton Avenue/Maple Row
13. Route 202/35 and Lexington Avenue
14. Route 202/35 and Medical Center Driveway/NYPH Driveway
15. Route 202/35 and Lafayette Avenue/NYPH Driveway
16. Route 6 and Conklin Avenue
17. Bear Mountain Parkway and Locust Avenue
18. Route 202/35 and Forest Avenue
19. Route 202/35 and Rick Lane
20. Bear Mountain Parkway and Arlo Lane
21. Route 202/35 and Arlo Lane
22. Route 6 and Lexington Avenue
23. Lafayette Avenue and Ridge Road

Manual turning movement counts and vehicle classification counts were collected at all the study area intersections during the Weekday AM (7:00 AM to 9:00 AM) and Weekday PM (4:00 PM to 6:00 PM) peak periods. Existing traffic conditions at intersections 1 through 4 listed above were established based on traffic counts conducted in February 2016 and intersections 5 through 13 collected in May 2016. Traffic counts for intersections 14 and 15 were conducted in May 2017, intersections 16 through 22 were collected in October 2017 and intersection 23 was collected in October 2018. Traffic counts collected in 2016 were grown by two percent per year, consistent with historical data along the corridor and recent traffic studies in Cortlandt, for a baseline analysis year of 2017. Data collection sheets are provided in **Appendix 11**.

In addition to the manual turning movement counts at study area intersections, Automatic Traffic Recorder (ATR) counts were conducted for one full week during the months of February 2017 on Route 202/35 (both east and west of Croton Avenue), October 2017 on Route 202/35 east of Lafayette Avenue, and September 2018 on Lafayette Avenue between Ridge Road and Route 202/35. Field inventories of roadway geometry and signal timings/phasing were also conducted to provide the appropriate inputs to the operational analyses and are provided in **Appendix 11**.

ROADWAY AND INTERSECTION CHARACTERISTICS

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



Legend

-  Signalized intersection
-  Unsignalized intersection

CORTLANDT MOD



Study Area
Figure 11-1

ROUTE 202/35

U.S. Route 202 and NYS Route 35 (“Route 202/35”), also designated as Crompond Road, is a principal arterial roadway under the jurisdiction of the New York State Department of Transportation (NYSDOT) that generally traverses in an east-west direction. Route 202/35 within the Study Area generally provides one moving lane in each direction with two-way traffic volumes ranging from approximately 785 to 1,980 vehicles per hour (vph) and varies in width between approximately 32 and 50 feet. The shoulders along Route 202/35 in the study area are generally 6 feet wide or less. Based on field observations, the pavement along Route 202/35 in the study area is in good condition, as also reported by NYSDOT’s *Highway Sufficiency Ratings*. Route 202/35 has a posted speed limit of 40 mph in the western portion of the study area and 45 mph in the eastern portion of the study area.

ROUTE 6

U.S. Route 6 (“Route 6”), also designated as Main Street, is a principal arterial roadway under the jurisdiction of NYSDOT that generally traverses in an east-west direction. Within the Study Area, Route 6 generally provides one moving lane in each direction with two-way traffic volumes ranging from approximately 700 to 2,130 vph and varies in width between approximately 50 and 60 feet without shoulders. Based on field observations, the pavement along Route 6 in the study area is in good condition, as also reported by NYSDOT’s *Highway Sufficiency Ratings*. Route 6 has a posted speed limit of 30 mph in the western portion of the study area and 40 mph in the eastern portion of the study area.

BEAR MOUNTAIN STATE PARKWAY

Bear Mountain State Parkway is a limited-access principal arterial roadway under the jurisdiction of NYSDOT. Although generally an east-west roadway, Bear Mountain State Parkway intersects with Route 202/35 in a north-south direction. Bear Mountain State Parkway generally provides one moving lane in each direction within the Study Area and has a pavement width of approximately 30 feet in the vicinity of its intersection with Route 202/35. At its intersection with Route 202/35, Bear Mountain State Parkway has a gravel shoulder on the west side and provides no shoulder on the east side. Based on field observations, the pavement along the Bear Mountain Parkway in the study area is in good condition. Bear Mountain State Parkway has a posted speed limit of 45 mph in the study area and two-way traffic volumes of approximately 755 to 1,145 vph.

LAFAYETTE AVENUE

Lafayette Avenue is classified by NYSDOT as a minor arterial roadway. Lafayette Avenue generally traverses in a north-south direction and provides one moving lane in each direction with two-way traffic volumes of approximately 180 to 345 vph. At its intersection with Route 202/35, Lafayette Avenue provides a single shared left turn/right turn lane. The north leg of the intersection provides egress from the NYPH campus. The pavement width along Lafayette Avenue is approximately 24 feet wide within the Study Area. The shoulders along Lafayette Avenue in the study area are generally 2 feet wide or less. Based on field observations, the pavement along Lafayette Avenue in the study area is in fair condition. Lafayette Avenue is under the jurisdiction of the Town of Cortlandt. Lafayette Avenue has a posted speed limit of 30 mph in the Study Area.

CROTON AVENUE

Croton Avenue is classified by NYSDOT as a minor arterial roadway that generally traverses in a north-south direction within the study area. Croton Avenue generally provides one moving lane in each direction with a two-way traffic volume of approximately 560 to 740 vph. At the northern

end of Croton Avenue at its intersection with Route 202/35, Croton Avenue has a northbound left turn lane and a shared through/right turn lane to facilitate movements at the intersection. The pavement width along Croton Avenue varies between approximately 22 and 41 feet. The shoulders along Croton Avenue in the study area are generally less than 6 feet wide. Based on field observations, the pavement along Croton Avenue in the study area is in good condition. Croton Avenue is under the jurisdiction of the Town of Cortlandt within the study area. Croton Avenue has a posted speed limit of 30 mph within the study area.

LEXINGTON AVENUE

Lexington Avenue is classified by NYSDOT as a minor arterial roadway. Lexington Avenue generally traverses in a north-south direction and provides one moving lane in each direction with two-way traffic volumes of approximately 375 to 735 vph. At its intersection with Route 202/35, Lexington Avenue provides a dedicated right turn lane and a shared left turn/through lane. The pavement width along Lexington Avenue is approximately 24 feet wide within the study area and no shoulders are provided. Based on field observations, the pavement along Lexington Avenue in the study area is in fair condition. Lexington Avenue is under the jurisdiction of the Town of Cortlandt. Lexington Avenue has a posted speed limit of 30 mph in the study area.

MAPLE ROW

Maple Row is classified by NYSDOT as a major collector roadway. Maple Row generally traverses in a north-south direction and generally provides one moving lane in each direction with two-way traffic volumes of approximately 295 to 340 vph. The pavement width along Maple Row is approximately 33 feet wide within the study area. The shoulders along Maple Row in the study area are generally less than 2 feet wide. Based on field observations, the pavement along Maple Row in the study area is in good condition. Maple Row is under the jurisdiction of the Town of Cortlandt within the study area. Maple Row has a posted speed limit of 30 mph in the study area.

DAYTON LANE

Dayton Lane is classified by NYSDOT as a local roadway. Dayton Lane generally traverses in a north-south direction and provides one moving lane in each direction with two-way traffic volumes of approximately 360 to 780 vph. At its intersection with Route 202/35, Dayton Lane provides a single shared left turn/right turn lane. The pavement width along Dayton Lane is approximately 38 feet wide within the study area and no shoulders are provided. Based on field observations, the pavement along Dayton Lane in the study area is in fair condition. Dayton Lane is under the jurisdiction of the City of Peekskill. Dayton Lane has a speed limit of 30 mph in the study area.

BEACH SHOPPING CENTER DRIVEWAYS

The Beach Shopping Center Driveways are private driveways. The Beach Shopping Center Driveways generally traverse in an east-west direction and provide access to the Beach Shopping Center. Both the northern and southern driveways provide one moving lane in each direction and centerline striping is provided on the pavement to designate the travel lanes. The pavement width along approximately 24 and 27 feet wide along the northern and southern driveway, respectively. Based on field observations, the pavement along the Beach Shopping Center Driveways in the study area is in fair condition.

BUTTONWOOD AVENUE

Buttonwood Avenue is classified by NYSDOT as a local roadway with a two-way traffic volume of approximately 10 to 25 vph. Buttonwood Avenue generally traverses in a north-south direction and provides one moving lane in each direction; however centerline striping is not provided on the pavement to designate the travel lanes. At its intersection with Route 202/35, Buttonwood Avenue provides a single shared left turn/right turn lane. The pavement width along Buttonwood Avenue is approximately 35 feet wide within the study area and no shoulders are provided. Based on field observations, the pavement along Buttonwood Avenue in the study area is in fair condition. Buttonwood Avenue is under the jurisdiction of the Town of Cortlandt. Buttonwood Avenue has a posted speed limit of 30 mph in the study area.

NYPH DRIVEWAYS, CORTLANDT MEDICAL CENTER DRIVEWAYS

The NYPH and Cortlandt Medical Center Driveways are private driveways. The driveways generally traverse in a north-south direction and provide access to New York-Presbyterian Hudson Valley Hospital to the north of Route 202/35 and Cortlandt Medical Center to the south of Route 202/35. On the south side of Route 202/35, the Cortlandt Medical Center driveway provides one moving lane in each direction; however, centerline striping is not provided on the pavement to designate the travel lanes. On the north side of Route 202/35, the westernmost New York Presbyterian driveway provides two receiving lanes for access to NYPH campus and egress is provided at the easternmost driveway at the intersection of Route 202/35 and Lafayette Avenue. The pavement width for each of the driveways is approximately 24 feet wide and no shoulders are provided. Based on field observations, the pavement of the NY Presbyterian and Medical Center Driveways in the study area is in fair condition. The driveways have a posted speed limit of 10 mph.

RIDGE ROAD

Ridge Road is classified by NYSDOT as a local roadway with two-way traffic volumes of approximately 50 to 90 vph. Ridge Road generally traverses in an east-west direction and provides one moving lane in each direction; however, centerline striping is not provided on the pavement to designate the travel lanes. At its intersection with Lafayette Avenue, Ridge Road provides a single shared left turn/right turn lane. The pavement width along Ridge Road is approximately 30 feet wide within the study area and no shoulders are provided. Based on field observations, the pavement along Ridge Road in the study area is in fair condition. Ridge Road is under the jurisdiction of the Town of Cortlandt. Ridge Road has a speed limit of 30 mph in the study area.

CONKLIN AVENUE

Conklin Avenue is classified by NYSDOT as a local roadway with two-way traffic volumes of approximately 420 to 460 vph. Conklin Avenue generally traverses in a north-south direction and provides one moving lane in each direction. At its intersection with Route 202/35, Conklin Avenue provides a dedicated left turn lane and a dedicated right turn lane. The pavement width along Conklin Avenue is approximately 24 feet wide within the study area. The shoulders along Conklin Avenue in the study area are generally 4 feet wide or less. Based on field observations, the pavement along Conklin Avenue in the study area is in fair condition. Conklin Avenue is under the jurisdiction of the Town of Cortlandt. Conklin Avenue has a posted speed limit of 30 mph in the study area.

TAMARACK DRIVE

Tamarack Drive is classified by NYSDOT as a local roadway with two-way traffic volumes of approximately 35 to 55 vph. Tamarack Drive generally traverses in a north-south direction and provides one moving lane in each direction; however centerline striping is not provided on the pavement to designate the travel lanes. At its intersection with Route 202/35, Tamarack Drive provides a single shared left turn/right turn lane. The pavement width along Tamarack Drive is approximately 30 feet wide within the study area and no shoulders are provided. Based on field observations, the pavement along Tamarack Drive in the study area is in fair condition. Tamarack Drive is under the jurisdiction of the Town of Cortlandt. Tamarack Drive has a posted speed limit of 30 mph in the study area.

DIMOND AVENUE

Dimond Avenue is classified by NYSDOT as a local roadway with two-way traffic volumes of approximately 40 to 145 vph. Dimond Avenue generally traverses in a north-south direction and provides one moving lane in each direction; however centerline striping is not provided on the pavement to designate the travel lanes. At its intersection with Route 202/35, Dimond Avenue provides a single shared left turn/right turn lane. The pavement width along Dimond Avenue is approximately 26 feet wide within the study area. The shoulders along Dimond Avenue in the study area are generally 4 feet wide or less. Based on field observations, the pavement along Dimond Avenue in the study area is in fair condition. Dimond Avenue is under the jurisdiction of the Town of Cortlandt. Dimond Avenue has a posted speed limit of 30 mph in the study area.

SHIPLEY DRIVE

Shipley Drive is classified by NYSDOT as a local roadway with two-way traffic volumes of approximately 10 vph. Shipley Drive generally traverses in a north-south direction and provides one moving lane in each direction; however centerline striping is not provided on the pavement to designate the travel lanes. At its intersection with Route 202/35, Shipley Drive provides a single shared left turn/right turn lane. The pavement width along Shipley Drive is approximately 30 feet wide within the study area and no shoulders are provided. Based on field observations, the pavement along Shipley Drive in the study area is in fair condition. Shipley Drive is under the jurisdiction of the Town of Cortlandt. Shipley Drive has a speed limit of 30 mph in the study area.

LOCUST AVENUE

Locust Avenue is classified by NYSDOT as a local roadway with two-way of volumes of approximately 40 to 90 vph. Locust Avenue generally traverses in a north-south direction and provides one moving lane in each direction. At its intersection with Route 202/35, Locust Avenue provides a single shared left turn/right turn lane. The pavement width along Locust Avenue is approximately 22 feet wide within the study area. The shoulders along Locust Avenue in the study area are generally 3 feet wide or less. Based on field observations, the pavement along Locust Avenue in the study area is in fair condition. Locust Avenue is under the jurisdiction of the Town of Cortlandt. Locust Avenue has a posted speed limit of 30 mph in the study area.

CRESTVIEW AVENUE

Crestview Avenue is classified by NYSDOT as a local roadway with two-way traffic volumes of 10 to 20 vph. Crestview Avenue generally traverses in a north-south direction and provides one moving lane in each direction; however centerline striping is not provided on the pavement to designate the travel lanes. At its intersection with Route 202/35, Crestview Avenue provides a single shared left turn/right turn lane. The pavement width along Crestview Avenue is

approximately 24 feet wide within the study area and no shoulders are provided. Based on field observations, the pavement along Crestview Avenue in the study area is in fair condition. Crestview Avenue is under the jurisdiction of the Town of Cortlandt. Crestview Avenue has a posted speed limit of 30 mph in the study area.

FOREST AVENUE

Forest Avenue is classified by NYSDOT as a local roadway with two-way traffic volumes of approximately 20 vph. Forest Avenue generally traverses in a north-south direction and provides one moving lane in each direction; however centerline striping is not provided on the pavement to designate the travel lanes. At its intersection with Route 202/35, Forest Avenue provides a single shared left turn/right turn lane. The pavement width along Forest Avenue is approximately 30 feet wide within the study area and no shoulders are provided. Based on field observations, the pavement along Forest Avenue in the study area is in fair condition. Forest Avenue is under the jurisdiction of the Town of Cortlandt. Forest Avenue has a posted speed limit of 30 mph in the study area.

RICK LANE

Rick Lane is classified by NYSDOT as a local roadway with two-way traffic volumes of 10 to 20 vph. Rick Lane generally traverses in a north-south direction and provides one moving lane in each direction; however centerline striping is not provided on the pavement to designate the travel lanes. At its intersection with Route 202/35, Rick Lane provides a single shared left turn/right turn lane. The pavement width along Rick Lane is approximately 24 feet wide within the study area and no shoulders are provided. Based on field observations, the pavement along Rick Lane in the study area is in fair condition. Rick Lane is under the jurisdiction of the Town of Cortlandt. Rick Lane has a posted speed limit of 30 mph in the study area.

ARLO LANE

Arlo Lane is classified by NYSDOT as a local roadway with two-way traffic volumes of 20 to 60 vph. Arlo Lane generally traverses in a north-south direction and provides one moving lane in each direction; however centerline striping is not provided on the pavement to designate the travel lanes. At its intersection with Route 202/35, Arlo Lane provides a single shared left turn/right turn lane. The pavement width along Arlo Lane is approximately 26 feet wide within the study area and no shoulders are provided. Based on field observations, the pavement along Arlo Lane in the study area is in fair condition. Arlo Lane is under the jurisdiction of the Town of Cortlandt. Arlo Lane has a speed limit of 30 mph in the study area.

LEVEL OF SERVICE CONDITIONS

Based on a review of all the traffic count data, the peak hours for the study area were determined to be 7:45 AM to 8:45 AM and 5:00 PM to 6:00 PM for the Weekday AM and Weekday PM peak hours, respectively. Traffic volumes for the 2017 existing peak hours analyzed are presented in **Figures 11-2** and **11-3**.

Traffic operating conditions at each study area intersection were analyzed using the Synchro 10 Percentile delay and *HCM2010* methodology (see **Appendix 11** for Synchro 10 outputs for all study area intersections) to compute delays, v/c ratios, and LOS as described in Section B above.

During peak hours, LOS D operations are generally considered to be acceptable operating conditions for signalized and unsignalized intersections. As shown in **Table 11-4** most of the study area intersection lane groups/approaches operate at LOS D or better under 2017 Existing Conditions during the peak hours analyzed. The following are exceptions:



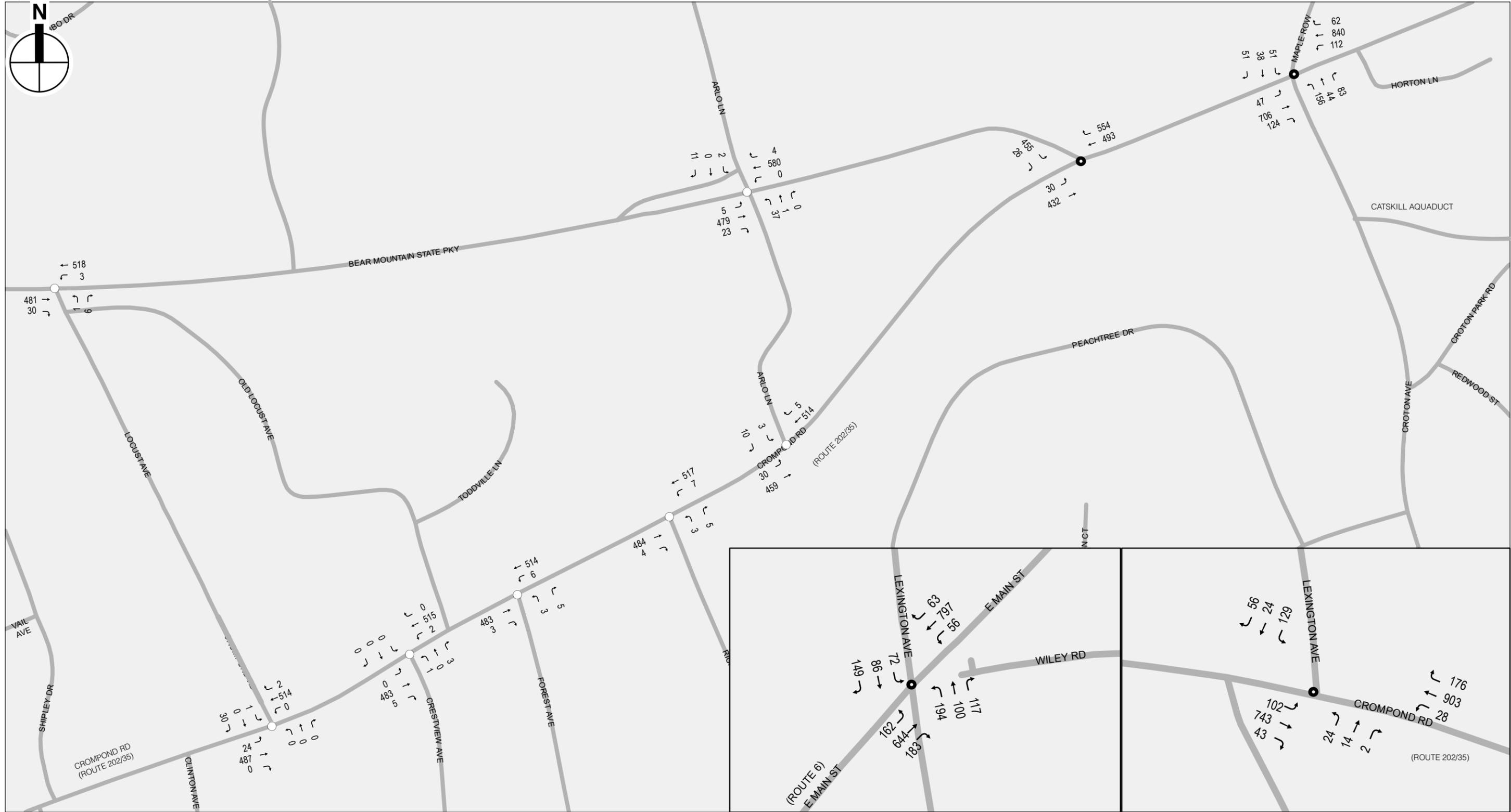
- Legend**
- Signalized Intersection
 - Unsignalized Intersection

CORTLANDT MOD

2017 Existing Traffic Volumes
 Weekday AM Peak Hour
Figure 11-2a



- Legend**
- Signalized Intersection
 - Unsignalized Intersection



Legend

- Signalized Intersection
- Unsignalized Intersection

CORTLANDT MOD

0 500 FEET

2017 Existing Traffic Volumes
Weekday PM Peak Hour
Figure 11-3b

**Table 11-4
2017 Existing Conditions Level of Service Analysis**

Intersection	Weekday AM				Weekday PM				
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	
Signalized Intersections									
Route 6 and Dayton Lane									
Eastbound	L	0.04	5.2	A	L	0.08	9.7	A	
	TR	0.24	8.0	A	TR	0.46	19.1	B	
Westbound	L	0.11	5.3	A	L	0.33	11.3	B	
	TR	0.14	9.6	A	TR	0.25	15.8	B	
Northbound	L	0.39	32.2	C	L	0.81	47.3	D	
	TR	0.22	27.6	C	TR	0.13	23.7	C	
Southbound	LT	0.53	35.8	D	LT	0.08	23.1	C	
	R	0.30	19.6	B	R	0.07	14.4	B	
Intersection			14.8	B	Intersection			22.4	C
Route 6 and Conklin Avenue									
Eastbound	L	0.01	2.6	A	L	0.01	3.0	A	
	TR	0.15	4.8	A	TR	0.24	5.7	A	
Westbound	L	0.23	3.1	A	L	0.29	4.2	A	
	TR	0.14	3.1	A	TR	0.17	3.6	A	
Northbound	LT	0.23	55.0	D	LT	0.35	57.3	E	
	R	0.70	19.9	B	R	0.72	18.6	B	
Southbound	LTR	0.23	33.6	C	LTR	0.41	38.8	D	
	Intersection			8.0	A	Intersection			9.4
Route 6 and Lexington Avenue									
Eastbound	L	0.28	17.2	B	L	0.87	80.4	F	
	TR	0.91	51.9	D	TR	0.89	44.8	D	
Westbound	L	0.43	21.1	C	L	0.32	17.6	B	
	TR	0.79	38.7	D	TR	1.01	71.0	E	
Northbound	L	0.29	33.8	C	L	0.85	75.8	E	
	TR	0.81	65.1	E	TR	0.65	69.7	E	
Southbound	L	0.43	36.4	D	L	0.31	44.9	D	
	TR	0.55	52.1	D	TR	0.91	99.2	F	
Intersection			46.2	D	Intersection			64.3	E
Route 202/35 and Lafayette Avenue/NYPH Driveway									
Eastbound	TR	0.49	18.8	B	TR	0.59	25.3	C	
Westbound	L	0.11	13.1	B	L	0.28	17.4	B	
	T	0.51	19.1	B	T	0.51	23.4	C	
Northbound	LTR	0.57	17.5	B	LTR	0.82	41.8	D	
Southbound	LT	0.78	87.2	F	LT	1.41	259.7	F	
	R	0.13	0.9	A	R	0.34	7.6	A	
Intersection			22.3	C	Intersection			50.6	D
Route 202/35 and Conklin Avenue									
Eastbound	L	0.32	1.9	A	L	0.36	1.7	A	
	T	0.28	1.6	A	T	0.31	1.1	A	
Westbound	TR	0.44	10.9	B	TR	0.49	11.6	B	
	L	0.47	51.3	D	L	0.45	50.9	D	
Southbound	R	0.48	9.2	A	R	0.34	6.7	A	
	Intersection			9.3	A	Intersection			8.6
Route 202/35 and Bear Mountain Parkway									
Eastbound	LT	0.76	53.0	D	LT	0.71	47.6	D	
Westbound	T	0.38	19.1	B	T	0.45	13.5	B	
	R	0.39	2.1	A	R	0.53	9.8	A	
Southbound	LR	1.15	129.4	F	LR	0.83	60.1	E	
Intersection			63.3	E	Intersection			31.9	C
Route 202/35 and Croton Avenue/Maple Row									
Eastbound	L	0.10	1.7	A	L	0.16	2.9	A	
	T	0.81	18.5	B	T	0.64	7.2	A	
	R	0.23	0.6	A	R	0.13	1.0	A	
Westbound	L	0.53	12.8	B	L	0.27	7.1	A	
	TR	0.56	17.5	B	TR	0.79	26.1	C	
Northbound	L	1.44	287.0	F	L	0.94	114.7	F	
	TR	0.38	26.2	C	TR	0.41	36.5	D	
Southbound	LTR	0.89	86.1	F	LTR	0.71	69.5	E	
	Intersection			39.9	D	Intersection			27.3

**Table 11-4 (cont'd)
2017 Existing Conditions Level of Service Analysis**

Intersection	Weekday AM				Weekday PM			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Signalized Intersections (continued)								
Route 202/35 and Lexington Avenue								
Eastbound	L	0.12	6.2	A	L	0.53	21.1	C
	TR	0.92	32.1	C	TR	0.82	23.7	C
Westbound	L	0.08	6.6	A	L	0.11	6.0	A
	T	0.67	18.2	B	T	1.02	54.8	D
	R	0.10	3.0	A	R	0.21	2.5	A
Northbound	LTR	0.14	29.3	C	LTR	0.23	32.9	C
Southbound	LT	0.74	50.1	D	LT	0.69	49.9	D
	R	0.21	8.1	A	R	0.18	5.5	A
	Intersection		26.2	C	Intersection		35.7	D
Unsignalized Intersections								
Dayton Lane and Beach Shopping Center North Driveway								
Westbound	LR	0.15	10.9	B	LR	0.23	13.7	B
Southbound	L	0.04	7.6	A	L	0.05	8.3	A
Dayton Lane and Beach Shopping Center South Driveway								
Westbound	LR	0.09	11.4	B	LR	0.83	55.0	F
Southbound	L	0.02	7.7	A	L	0.13	9.2	A
Route 202/35 and Dayton Lane								
Eastbound	L	0.11	8.5	A	L	0.15	9.6	A
Southbound	LR	0.93	80.3	F	LR	1.13	127.4	F
Route 202/35 and Buttonwood Avenue								
Westbound	L	0.01	8.9	A	L	0.00	8.4	A
Northbound	LR	0.13	17.8	C	LR	0.01	14.7	B
Route 202/35 and Cortlandt Medical Driveway/NYPH Driveway								
Eastbound	L	0.11	9.3	A	L	0.04	9.3	A
Westbound	L	0.04	8.6	A	L	0.01	8.2	A
Northbound	LTR	0.03	14.3	B	LTR	0.11	14.6	B
Route 202/35 and Tamarack Drive								
Westbound	L	0.00	8.3	A	L	0.03	8.7	A
Northbound	LR	0.10	15.9	C	LR	0.07	16.1	C
Route 202/35 and Dimond Avenue/Shiple Drive								
Eastbound	L	0.00	0.0	A	L	0.01	8.7	A
Westbound	L	0.01	8.3	A	L	0.02	8.4	A
Northbound	LTR	0.09	12.7	B	LTR	0.34	19.6	C
Southbound	LTR	0.03	10.7	B	LTR	0.00	0.0	A
Route 202/35 and Locust Avenue								
Eastbound	L	0.01	8.2	A	L	0.03	8.6	A
Southbound	LTR	0.29	21.2	C	LTR	0.07	12.5	B
Route 202/35 and Crestview Avenue								
Westbound	L	0.00	8.4	A	L	0.00	8.4	A
Northbound	LTR	0.07	16.1	C	LTR	0.02	14.3	B
Route 202/35 and Forest Avenue								
Westbound	L	0.01	8.4	A	L	0.01	8.5	A
Northbound	LR	0.04	13.6	B	LR	0.04	15.4	C
Route 202/35 and Rick Lane								
Westbound	L	0.01	8.5	A	L	0.01	8.5	A
Northbound	LR	0.03	15.6	C	LR	0.03	15.3	C
Route 202/35 and Arlo Lane								
Eastbound	L	0.01	8.3	A	L	0.03	8.7	A
Southbound	LR	0.07	12.2	B	LR	0.05	14.8	B
Bear Mountain Parkway and Locust Avenue								
Westbound	L	0.00	8.4	A	L	0.00	8.6	A
Northbound	R	0.02	11.3	B	R	0.01	11.8	B
Bear Mountain Parkway and Arlo Lane								
Eastbound	L	0.01	8.3	A	L	0.01	8.8	A
Westbound	L	0.00	9.1	A	L	0.00	0.0	A
Northbound	LTR	0.30	39.3	E	LTR	0.38	41.2	E
Southbound	LTR	0.23	25.0	D	LTR	0.08	15.4	C
Lafayette Avenue and Ridge Road								
Westbound	LR	0.06	9.1	A	LR	0.09	10.0	B
Southbound	L	0.01	7.4	A	L	0.03	7.7	A
Notes: L = Left Turn, T = Through, R = Right Turn, LOS = Level of Service = Indicates poor operating conditions.								

- Route 6 and Conklin Avenue—the northbound left turn/through movement operates at LOS E during the Weekday PM peak hour.
- Route 6 and Lexington Avenue—the eastbound left turn operates at LOS F during the Weekday PM peak hour. The westbound through/right turn movement operates at LOS E during the Weekday PM peak hour. The northbound left turn operates at LOS E during the Weekday PM peak hour. The northbound through/right turn movement operates at LOS E during the Weekday AM and Weekday PM peak hours. The southbound through/right turn movement operates at LOS F during the Weekday PM peak hour.
- Route 202/35 and Lafayette Avenue/NYPH Driveway—the southbound left turn/through movement operates at LOS F during the Weekday AM and Weekday PM peak hours.
- Route 202/35 and the Bear Mountain State Parkway—the southbound approach operates at LOS F and LOS E during the Weekday AM and Weekday PM peak hours, respectively.
- Route 202/35 and Croton Avenue/Maple Row—the northbound left turn operates at LOS F during the Weekday AM and Weekday PM peak hours. The southbound approach operates at LOS F and LOS E during the Weekday AM and Weekday PM peak hours, respectively.
- Dayton Lane and Beach Shopping Center Driveway (South)—the westbound approach operates at LOS F during the Weekday PM peak hour.
- Route 202/35 and Dayton Lane—the southbound approach operates at LOS F during the Weekday AM and Weekday PM peak hours.
- The Bear Mountain State Parkway and Arlo Lane—the northbound approach operates at LOS E during the Weekday AM and Weekday PM peak hours.

The Route 202/35 corridor has long standing traffic congestion concerns, particularly for the segment of the corridor from Yorktown to Cortlandt where the Bear Mountain Parkway merges with Route 202/35. This segment of Route 202/35 is primarily one lane in either direction with turning lanes. The intersections of Route 202/35 and Bear Mountain Parkway and Croton Avenue/Maple Row are at the western end of this segment and are closely spaced, operating with a single traffic controller. As shown in **Table 11-4**, these intersections currently operate at or above capacity under existing conditions and any additional traffic would further exacerbate these conditions.

PARKING CONDITIONS

Off-street parking facilities are provided for most of the land uses in the study area.

On-street parking is prohibited along most of the study area roadways, including the Route 202/35, Route 6, and Lexington Avenue corridors.

PEDESTRIAN AND BICYCLE CONDITIONS

Pedestrian and bicycle volumes were generally observed to be low in the study area. Pedestrian infrastructure (sidewalks, crosswalks, etc.) does not exist along Route 202/35 within the study area from Dayton Lane to Lexington Avenue. At the intersection of Dayton Lane and Route 202/35, sidewalk exists along the northern portion of Route 202/35 in the City of Peekskill and connects to the sidewalk on the west side of Dayton Lane which continues to connect to the sidewalk at U.S. Route 6. Sidewalks are provided along most of the length of Route 6 within the study area and pedestrian crosswalks are provided at the study area intersections along Route 6 (at Dayton Lane, Conklin Avenue, and Lexington Avenue). At the intersection of Route 202/35 and Lexington Avenue there exists a short segment of sidewalk on the southern side of the roadway from Old Crompond Road to approximately 300 feet east of Lexington Avenue and on the west side of Lexington Avenue for approximately 100 feet to provide access to the bus stop for the

Westchester County Bee-Line Route 15. South and west crosswalks are provided at the intersection to connect the sidewalks. Bicycles and Pedestrians are prohibited on Bear Mountain Parkway.

PUBLIC TRANSPORTATION

The Westchester County Bee-Line Bus System operates the following bus routes within the study area: Routes 10 (“Croton Commuter”), 14 (“Peekskill-Yorktown-White Plains”), 15 (“Peekskill-Yorktown-White Plains”), 16 (“Peekskill-Yorktown”), 17 (“Peekskill-White Plains”), and 18 (“Peekskill Commuter”). Routes 10, 14, 15 and 17 operate along U.S. Route 6 in the study area. Route 16 operates between the Cortlandt Town Center and NYPH via Westbrook Drive, North Division Street and Route 202/35. Route 18 operates to/from the Peekskill Metro-North station along U.S. Route 6 to Conklin Avenue, along Route 202/35, and to Broad Avenue to return to Peekskill. The bus routes which service the study area offer service to various municipalities in northern and central Westchester County as well as target destinations in the study area, such as the Cortlandt Train Station and the Cortlandt Town Center Shopping Center.

The Metropolitan Transportation Authority’s (MTA) Metro-North Railroad offers commuter rail service near the study area via its Hudson Line. The Cortlandt train station is located approximately 3 miles southwest of the proposed MOD. The Peekskill train station is located approximately 2 miles west of the proposed MOD. There are approximately 1 to 2 trains stop in each direction at both the Cortlandt and Peekskill stations during the AM and PM commuter hours. Both the Cortlandt and Peekskill train stations have commuter parking lots.

D. EXISTING CRASH HISTORY AND SAFETY ASSESSMENT

Table 11-5 summarizes the most recent three year’s traffic crash data for each of the study area intersections compiled from the NYSDOT records for the period of January 1, 2016 through December 31, 2018 (see **Appendix 11** for NYSDOT crash data records).

INTERSECTION CRASHES

During the January 1, 2016 through December 31, 2018 three-year period, a total of 233 reportable and non-reportable crashes with no fatalities and 76 injuries occurred at the study area intersections.

As shown in **Table 11-5**, 14 intersections exceed the statewide average crash rate. For the purpose of this safety assessment, eight intersections that have crash rates exceeding the statewide average crash rates for similar facilities and have five or more reported crashes in a 12-month period are discussed in detail below:

1. Route 6 and Dayton Lane
2. Route 6 and Conklin Avenue
3. Route 6 and Lexington Avenue
4. Route 202/35 and Dayton Lane
5. Route 202/35 and Conklin Avenue
6. Route 202/35 and Bear Mountain State Parkway
7. Route 202/35 and Croton Avenue/Maple Row
8. Route 202/35 and Lexington Avenue

Intersections with fewer than five crashes in a 12-month period were not examined further as the sample size is insufficient for identifying predominant crash patterns or geometric deficiencies.

**Table 11- 5
Intersection Crash Summary**

Intersection		Study Period							
		All Vehicle Crashes by Year				Crash Rate ¹		Total Fatalities	Total Injuries
		2016	2017	2018	Total	2016-2018 (Acc/MEV) ²	2017-2018 State Average (Acc/MEV) ²		
East-West Roadway	North-South Roadway								
Route 6	Dayton Lane	11	10	13	34	1.59	0.23	0	10
Route 6	Conklin Avenue	7	5	12	24	1.25	0.23	0	12
Route 6	Lexington Avenue	11	10	18	39	1.09	0.23	0	12
Beach Shopping Center Driveway (North)	Dayton Lane	0	1	0	1	0.10	0.18	0	0
Beach Shopping Center Driveway (South)	Dayton Lane	0	0	0	0	0.00	0.05	0	0
Route 202/35	Dayton Lane	6	1	3	10	0.50	0.12	0	3
Route 202/35	Buttonwood Avenue	1	1	0	2	0.12	0.12	0	2
Route 202/35	Medical Center Driveway/NY Presbyterian Driveway	1	3	3	7	0.43	0.15	0	3
Route 202/35	Lafayette Avenue/NY Presbyterian Driveway	0	3	2	5	0.24	0.23	0	2
Route 202/35	Conklin Avenue	3	5	5	13	0.67	0.15	0	4
Route 202/35	Tamarack Drive	0	0	1	1	0.07	0.18	0	1
Route 202/35	Dimond Avenue/Shipleigh Drive	2	0	2	4	0.31	0.15	0	2
Route 202/35	Locust Avenue	2	3	1	6	0.49	0.18	0	3
Route 202/35	Crestview Avenue	0	0	0	0	0.00	0.18	0	0
Route 202/35	Forest Avenue	3	0	0	3	0.22	0.18	0	2
Route 202/35	Rick Lane	1	0	0	1	0.07	0.18	0	0
Route 202/35	Arlo Lane	0	1	2	3	0.21	0.18	0	1
Route 202/35	Bear Mountain State Parkway	5	15	13	33	1.12	0.31	0	4
Route 202/35	Croton Avenue/Maple Row	9	6	9	24	0.70	0.23	0	9
Route 202/35	Lexington Avenue	6	8	6	20	0.68	0.23	0	6
Bear Mountain State Parkway	Locust Avenue	0	0	0	0	0.00	0.12	0	0
Bear Mountain State Parkway	Arlo Lane	2	0	1	3	0.20	0.20	0	0
Ridge Road	Lafayette Avenue	0	0	0	0	0.00	0.18	0	0
Total		70	72	91	233	-	-	0	76

Notes:
(1) A crash rate is the number of crashes that occur at a given location for a specified time period divided by a measure of exposure for the same period.
(2) Acc/MEV is the accident for the time period identified divided by Million Entering Vehicles (MEV) which uses the total number of vehicles entering an intersection as the measure of exposure.
Bold intersections have crash rates exceeding the statewide average crash rates for similar facilities and have five or more reported crashes in a 12-month period.
Source: NYSDOT, January 1, 2016 through December 31, 2018 crash data and January 1, 2017 through December 31, 2018 Average Accident Rates

Potential safety improvements and their safety improvement factors are provided where a crash pattern was identified and potential safety improvements are feasible. The primary safety improvement factor is a Crash Modification Factors (CMF) which is a factor for a given countermeasure that when multiplied by the existing crashes provides an estimate of the future crashes with the countermeasure. For example, if 100 crashes exist today and an improvement measure has a CMF of 0.8, it is anticipated that there would be 80 crashes if the proposed countermeasure was implemented. CMFs were derived from the *FHWA Crash Modification Factors Clearinghouse* and the *2018 NYSDOT PIES - Reduction Factor Report*.

ROUTE 6 AND DAYTON LANE

As shown in **Table 11-5**, during the three-year period, 34 crashes occurred at the Route 6 and Dayton Lane intersection, resulting in ten injuries. The crash rate for this intersection is 1.59 Accidents/MEV.

As shown in **Table 11-6**, the predominant crash type at the intersection is a rear end collision with right turn and left turn crashes secondary. In addition, dark-road lighted conditions (24 percent of the total crashes) and wet road surface conditions (18 percent of total crashes) were common contributing environmental conditions. 85 percent of the crashes at the intersection were attributed to driver error.

**Table 11-6
Route 6 and Dayton Lane Crash Types**

Crash Type	Number	Percentage
Rear End	11	32%
Right Turn	6	18%
Left Turn	5	15%
Sideswipe	4	12%
Right Angle	4	12%
Overtaking	1	3%
Fixed Object	1	3%
Head On	1	3%
Animal	0	0%
Other/Unknown	1	3%
Total	34	-

Source: NYSDOT, January 1, 2016 through December 31, 2018 crash data.

Potential Safety Improvements

- Install a “Signal Ahead” anticipatory warning sign along Route 6 eastbound and westbound (CMF of 0.83 for rear-end crashes and 0.85 for left turn crashes)
- Improve roadway lighting at the intersection (CMF of 0.32 for nighttime crashes)

ROUTE 6 AND CONKLIN AVENUE

As shown in **Table 11-5**, during the three-year period, 24 crashes occurred at the Route 6 and Conklin Avenue intersection, resulting in 12 injuries and three serious injuries. The crash rate for this intersection is 1.25 Accidents/MEV.

As shown in **Table 11-7**, the predominant crash type at the intersection is a rear end collision with right turn and left turn crashes secondary. In addition, dark-road lighted conditions (13 percent of total crashes) and wet or snow/ice road surface conditions (17 percent of total crashes) were common contributing environmental conditions. 79 percent of the crashes at the intersection were attributed to driver error.

**Table 11-7
Route 6 and Conklin Avenue Crash Types**

Crash Type	Number	Percentage
Rear End	12	50%
Right Turn	3	13%
Left Turn	4	17%
Sideswipe	1	4%
Right Angle	1	4%
Overtaking	1	4%
Fixed Object	1	4%
Head On	1	4%
Animal	0	0%
Other/Unknown	0	0%
Total	24	-

Source: NYSDOT, January 1, 2016 through December 31, 2018 crash data.

Potential Safety Improvements

- Install yellow retroreflective signal backplates to improve signal visibility (CMF of 0.85 for all crashes)

- Install left turn flashing yellow arrow signals with supplemental traffic signs with text “Left Turn Yield on Flashing Yellow Arrow” (CMF of 0.86 for left turn crashes)

ROUTE 6 AND LEXINGTON AVENUE

As shown in **Table 11-5**, during the three-year period, 39 crashes occurred at the Route 6 and Lexington Avenue intersection, resulting in 12 injuries and one serious injury. The crash rate for this intersection is 1.25 Accidents/MEV.

As shown in **Table 11-8**, the predominant crash type at the intersection is a rear end collision with left turn and overtaking secondary. Nearly half of all rear end collisions occur in the eastbound direction. In addition, 23 percent of total accidents occurred at night in dark-road lighted or unlighted conditions and 15 percent occurred during wet or snow/ice road surface conditions. 90 percent of crashes at the intersection are attributed to driver error.

Table 11-8
Route 6 and Lexington Avenue Crash Types

Crash Type	Number	Percentage
Rear End	20	51%
Right Turn	1	3%
Left Turn	5	13%
Sideswipe	0	0%
Right Angle	0	0%
Overtaking	7	18%
Fixed Object	1	3%
Head On	1	3%
Animal	0	0%
Other/Unknown	4	10%
Total	39	-

Source: NYSDOT, January 1, 2016 through December 31, 2018 crash data.

Potential Safety Improvement Measures

An Adaptive Traffic Control System (ATCS) was installed along a portion of the Route 6 corridor including the intersection of Lexington Avenue and Route 6 in spring of 2018. An ATCS system has a CMF of 0.87 for all crash types. In addition, the following measures could provide additional improvements:

- Improve roadway lighting at the intersection (CMF of 0.32 for nighttime crashes)
- Install yellow retroreflective signal backplates to improve signal visibility (CMF of 0.85 for all crashes)

ROUTE 202/35 AND DAYTON LANE

As shown in **Table 11-5**, during the three-year period, ten crashes occurred at the Route 202/35 and Dayton Lane intersection, resulting in zero injuries. The crash rate for this intersection is 0.5 Accidents/MEV.

As shown in **Table 11-9**, the predominant crash type at the intersection is a left turn collision with the remaining crashes being either rear end or fixed object collisions. In addition, 30 percent of crashes occurred at night in dark-road lighted or unlighted conditions. All of the crashes at the intersection are attributed to driver error, with the majority due to a vehicle failing to yield right-of-way.

Table 11-9
Route 202/35 and Dayton Lane Crash Types

Crash Type	Number	Percentage
Rear End	1	10%
Right Turn	0	0%
Left Turn	8	80%
Sideswipe	0	0%
Right Angle	0	0%
Overtaking	0	0%
Fixed Object	1	10%
Head On	0	0%
Animal	0	0%
Other/Unknown	0	0%
Total	10	-

Source: NYSDOT, January 1, 2016 through December 31, 2018 crash data.

Potential Safety Improvement Measures

- Installation of a new red/yellow/green signal (CMF of 0.78 for all crashes and 0.75 for left turn crashes)
- Install left turn only lane for the southbound Dayton Lane approach (CMF of 0.75 for all crashes)

ROUTE 202/35 AND CONKLIN AVENUE

As shown in **Table 11-5**, during the three-year period, 13 crashes occurred at the Route 202/35 and Conklin Avenue intersection, resulting in no injuries. The intersection crash rate is 0.67 Accidents/MEV.

As shown in **Table 11-10**, the predominant crash types at the intersection are rear end and fixed object collisions. Of the fixed object collisions, two occurred making a right turn onto Conklin Avenue two occurred traveling eastbound on Route 202/35 and one occurred traveling westbound on Route 202/35 involving the stone wall on the northwest corner and the majority involved dark-road lighted conditions. A majority of the crashes at the intersection (69 percent) are attributed to driver error, most commonly following too closely and improper turning. In addition, dark-road lighted or unlighted conditions (38 percent of total crashes) and wet or snow/ice road surface conditions (23 percent of total crashes) were common contributing environmental conditions.

Table 11-10
Route 202/35 and Conklin Avenue

Crash Type	Number	Percentage
Rear End	5	38%
Right Turn	0	0%
Left Turn	2	15%
Sideswipe	0	0%
Right Angle	0	0%
Overtaking	0	0%
Fixed Object	5	38%
Head On	0	0%
Animal	0	0%
Other/Unknown	1	8%
Total	13	-

Source: NYSDOT, January 1, 2016 through December 31, 2018 crash data.

Potential Safety Improvement Measures

- Install a “Signal Ahead” anticipatory warning sign along Route 202/35 westbound (CMF of 0.83 for rear-end crashes and 0.85 for left turn crashes)
- Improve roadway lighting at the intersection (CMF of 0.32 for nighttime crashes and 0.44 for fixed object crashes occurring at night)

ROUTE 202/35 AND BEAR MOUNTAIN STATE PARKWAY

As shown in **Table 11-5**, during the three-year period, 33 crashes occurred at the Route 202/35 and Bear Mountain State Parkway intersection, resulting in four injuries and one serious injury. The crash rate for this intersection is 1.12 Accidents/MEV.

As shown in **Table 11-11**, the predominant crash type at the intersection is rear end collisions with left turn and overtaking being secondary. Of the rear end crashes, 63 percent occur in the eastbound direction. The majority of crashes at the intersection (88 percent) are attributed to driver error, with following too closely being the most frequent factor. In addition, common contribution environmental conditions included dark-road lighted or unlighted conditions (36 percent) and wet road surface condition (18 percent).

**Table 11-11
Route 202/35 and Bear Mountain State Parkway**

Crash Type	Number	Percentage
Rear End	19	58%
Right Turn	0	0%
Left Turn	5	15%
Sideswipe	1	3%
Right Angle	0	0%
Overtaking	5	15%
Fixed Object	2	6%
Head On	0	0%
Animal	1	3%
Other/Unknown	0	0%
Total	33	-

Source: NYSDOT, January 1, 2016 through December 31, 2018 crash data.

Potential Safety Improvement Measures

- Install a “Signal Ahead” anticipatory warning sign along Route 202/35 eastbound (CMF of 0.83 for rear-end crashes)
- Install yellow retroreflective signal backplates to improve signal visibility (CMF of 0.85 for all crashes)
- Install left turn lane along the Route 202/35 eastbound approach (CMF of 0.88 for all crashes)
- Improve roadway lighting at the intersection (CMF of 0.32 for nighttime crashes)

ROUTE 202/35 AND CROTON AVENUE/MAPLE ROW

As shown in **Table 11-5**, during the three-year period, 24 crashes occurred at the Route 202/35 and Croton Avenue/Maple Row intersection, resulting in nine injuries. The crash rate for this intersection is 0.70 Accidents/MEV.

As shown in **Table 11-12**, the predominant crash type for the intersection is rear end collisions. 88 percent of the total crashes being attributed to driver error with following too closely being the

most frequent factor. In addition, wet road surface conditions (17 percent of total crashes) was a common contributing environmental condition.

Table 11-12
Route 202/35 and Croton Avenue/Maple Row

Crash Type	Number	Percentage
Rear End	15	63%
Right Turn	4	17%
Left Turn	4	17%
Sideswipe	0	0%
Right Angle	0	0%
Overtaking	0	0%
Fixed Object	1	4%
Head On	0	0%
Animal	0	0%
Other/Unknown	0	0%
Total	24	-

Source: NYSDOT, January 1, 2016 through December 31, 2018 crash data.

Potential Safety Improvement Measures

- Install a “Signal Ahead” anticipatory warning sign along Route 202/35 westbound (CMF of 0.83 for rear-end crashes and 0.85 for left turn crashes)
- Install yellow retroreflective signal backplates to improve signal visibility (CMF of 0.85 for all crashes)
- Install pavement markings to better delineate and channelize Croton Avenue northbound left turn lane (CMF of 0.65 for left turn crashes)

ROUTE 202/35 AND LEXINGTON AVENUE

As shown in **Table 11-5**, during the three-year period, 20 crashes occurred at the Route 202/35 and Lexington Avenue intersection, resulting in six injuries and one serious injury. The crash rate for this intersection is 0.68.

As shown in **Table 11-13**, the predominant crash type for this intersection is rear end collisions. A majority of the crashes (85 percent) are attributed to driver error with following too closely being the most frequent factor. In addition, 20 percent of the total crashes occurred at night in dark-road lighted conditions.

Table 11-13
Route 202/35 and Lexington Avenue

Crash Type	Number	Percentage
Rear End	10	50%
Right Turn	0	0%
Left Turn	3	15%
Sideswipe	0	0%
Right Angle	2	10%
Overtaking	3	15%
Fixed Object	2	10%
Head On	0	0%
Animal	0	0%
Other/Unknown	0	0%
Total	20	-

Source: NYSDOT, January 1, 2016 through December 31, 2018 crash data.

Potential Safety Improvement Measures

- Add a “Signal Ahead” anticipatory warning sign along Route 202/35 westbound and Lexington Avenue southbound (CMF of 0.83 for rear-end crashes and 0.85 for left turn crashes)
- Install yellow retroreflective signal backplates to improve signal visibility (CMF of 0.85 for all crashes)

ROADWAY SEGMENT CRASHES

During the January 1, 2016 through December 31, 2018 three-year period, a total of 150 reportable and non-reportable crashes with no fatalities, 51 injuries, and 6 serious injuries occurred along the 1.56-mile Route 202/35 corridor from Dayton Lane to Croton Avenue/Maple Row, as shown in **Table 11-14**.

**Table 11-14
Segment Crash Summary**

Segment			Study Period							Total Fatalities	Total Injuries
Roadway	To	From	All Vehicle Crashes by Year				Crash Rate ¹				
			2016	2017	2018	Total	2016-2018 (Acc/MVM) ²	State Average (Acc/MVM) ²			
Route 202/35	Dayton Lane	Conklin Avenue	13	12	12	37	6.97	3.50	0	15	
Route 202/35	Conklin Avenue	Arlo Lane	12	9	11	32	3.01	3.50	0	9	
Route 202/35	Arlo Lane	Croton Avenue/Maple Row	20	31	30	81	10.44	3.50	0	27	
Total			45	52	53	150	-	-	0	51	

Notes:
 (1) A crash rate is the number of crashes that occur at a given location for a specified time period divided by a measures of exposure for the same period.
 (2) Acc/MVM is the accidents for the time period identified divided by Million Vehicle Miles (MVM) which uses the number of vehicles traveling on a roadway segment, expressed as vehicle miles traveled or VMT, as the measure of exposure.
Bold segments have crash rates exceeding the statewide average crash rates for similar facilities and have five or more reported crashes in a 12-month period.
Source: NYSDOT, January 1, 2016 through December 31, 2018 crash data.

The crash data identified two segments, Route 202/35 between Dayton Lane and Conklin Avenue and Route 202/35 between Arlo Lane and Croton Avenue/Maple Row, where the crash rates exceeding the statewide average crash rates for similar facilities and there are five or more reported crashes in a 12-month period.

ROUTE 202/35 BETWEEN DAYTON LANE AND CONKLIN AVENUE

As shown in **Table 11-14**, during the three-year period, 37 crashes occurred along the 0.40-mile long segment of Route 202/35 between Dayton Lane and Conklin Avenue, resulting in 15 injuries and four serious injuries. The crash rate for this roadway segment is 6.97 Accidents/MVM.

As shown in **Table 11-15**, the predominant crash type for the roadway segment is left turn collisions with fixed object and rear end collisions being secondary. Of the left turn collisions, approximately half occurred at or near the intersection of Dayton Lane and Route 202/35 and involved driver error failing to yield right of way at a stop sign control. The majority of the fixed object collisions occurred near the intersection of Conklin Avenue and Route 202/35 of which 30 percent were attributed to speeding in the westbound direction and 40 percent occurred at night or at dawn and can be attributed to poor visibility and lack of roadway lighting at the intersection. The majority of rear end collisions occurred near the intersection of Lafayette Avenue and Route 202/35 with 70 percent of crashes occurring in the westbound direction and all crashes citing following too closely as the factor.

Table 11-15
Route 202/35 between Dayton Lane and Conklin Avenue Crash Types

Crash Type	Number	Percentage
Rear End	9	24%
Right Turn	0	0%
Left Turn	13	35%
Sideswipe	1	3%
Right Angle	3	8%
Overtaking	1	3%
Fixed Object	10	27%
Head On	0	0%
Animal	0	0%
Other/Unknown	0	0%
Total	37	-

Source: NYSDOT, January 1, 2016 through December 31, 2018 crash data.

Potential Safety Improvement Measures

As the majority of crashes (62 percent) along this segment of roadway occur as a result of deficiencies at the intersections of Route 202/35 and Dayton Lane and Route 202/35 and Conklin Avenue, the potential intersection safety improvement measures listed above would also reduce the crash rate along this segment of roadway.

ROUTE 202/35 BETWEEN ARLO LANE AND CROTON AVENUE/MAPLE ROW

As shown in **Table 11-14**, during the three-year period, 81 crashes occurred along the 0.36-mile long segment of Route 202/35 between Arlo Lane and Croton Avenue/Maple Row, resulting in 27 injuries and two serious injuries. The crash rate for this roadway segment is 10.44 Accidents/MVM.

As shown in **Table 11-16**, the predominant crash type for the roadway segment is rear end collisions with left turn collisions being secondary. Of the rear-end collisions, 58 percent occurred in the eastbound direction with 26 percent occurring in the westbound direction and the remaining coming from the north or south. The majority of rear end crashes were attributed to following too closely with unsafe speed also being a contributing factor. More than half of the left turn collisions occurred at night or at dawn and can be attributed to poor visibility and lack of roadway lighting at the intersection.

Table 11-16
Route 202/35 between Arlo Lane and Croton Avenue/Maple Row

Crash Type	Number	Percentage
Rear End	46	57%
Right Turn	4	5%
Left Turn	9	11%
Sideswipe	1	1%
Right Angle	1	1%
Overtaking	8	10%
Fixed Object	4	5%
Head On	3	4%
Animal	4	5%
Other/Unknown	1	1%
Total	81	-

Source: NYSDOT, January 1, 2016 through December 31, 2018 crash data.

Potential Safety Improvement Measures

As the majority of crashes (86 percent) along this segment of roadway occur at or between the intersections of Route 202/35 and Bear Mountain Parkway and Route 202/35 and Croton Avenue/Maple Row, the potential intersection safety improvement measures listed above would also reduce the crash rate along this segment of roadway.

VEHICLE SPEED DATA

Vehicle speed data was collected at two locations along Route 202/35 in the vicinity of the MOD developments and at one location along Lafayette Avenue between Ridge Road and Route 202/35 to determine the 85th percentile speed on these corridors. **Table 11-17** presents a comparison of collected 85th percentile speeds and the posted speed limits. As shown in **Table 22-27**, the 85th percentile speeds are greater than the respective posted speed limits by between 2 and 13 mph.

**Table 11-17
Speed Data Summary¹**

ATR Location	Direction	85th Percentile Speed (mph)	Posted Speed Limit (mph)
Crompond Road (Route 202/35) - from Taylor Ave. to Whittier Ave.	Eastbound	43	40 ²
	Westbound	42	40
Crompond Road (Route 202/35) - from Forest Avenue to Rick Lane	Eastbound	49	45
	Westbound	53	40
Lafayette Avenue - from Ridge Road to Crompond Road (Route 202/35)	Northbound	38	30
	Southbound	39	30

Notes:
 1. Based on ATR counts collected from September 21 through October 3, 2018.
 2. 35 mph warning sign on this segment. Standard posted speed limit is 40 mph.

POTENTIAL TRAFFIC CALMING MEASURES

As described above, speeding occurs along both the Route 202/35 and Lafayette Avenue corridors. Potential traffic calming measures and their associated CMFs are presented below.

Route 202/35

- Narrow travel lane widths to 11 feet using shoulder striping at locations where the travel lanes are currently greater than 11 feet (CMF of 0.69 for all crashes)
- Driver speed feedback signs (e.g., fixed location radar speed signs) (CMF of 0.95 for all crashes)
- After implementing traffic calming measures, reassess speed limits

Lafayette Avenue

- Driver speed feedback signs (e.g., fixed location radar speed signs) (CMF of 0.95 for all crashes)
- Installation of centerline rumble strips (CMF of 0.91 for all crashes)

Along the Route 202/35 corridor, a speed limit change would have a CMF of 0.57 for wet road crashes. The installation of speed advisory panels would have a CMF 0.58 for wet road crashes, 0.68 for rear-end crashes, and 0.72 for speed-related crashes.

INTERSECTION SIGHT DISTANCE

The required intersection sight distances (ISD) for selected unsignalized intersections along Route 202/35 in the study area were determined based on guidelines presented in *A Policy on Geometric Design of Highways and Streets, 2011*, published by the American Association of State Highway Transportation Officials (AASHTO) and NYSDOT design guidance (EB 17-007).

Table 11-18 presents the AASHTO recommended sight distances for unsignalized intersections along Route 202/35 in the areas where the 85th Percentile Speeds were recorded (as presented in **Table 11-17**). The existing sight distances for the unsignalized intersections within the study area should be confirmed to comply with the recommended distances below and where necessary brush and other landscaping should be trimmed to improve sight distance (CMF of 0.74 for all crashes). In addition, to improve the visibility and warn drivers of the presence of unsignalized intersections from Route 202/35, advanced intersection warning signs should be considered where appropriate along Route 202/35 (CMF of 0.73 for all crashes).

Table 11-18
Intersection Sight Distance Summary
Typical Unsignalized Intersections on Route 202/35

Route 202/35 Segment	Side Street Location	Intersection Sight Distance (feet) ¹		
		Right Turn from Side Street	Left Turn from Side Street	
		Looking Left	Looking Left	Looking Right
Taylor Avenue to Whittier Avenue	North Side of Route 202/35	405	465	475
	Side Streets: Taylor Avenue Whittier Avenue			
Forest Avenue to Rick Lane	South Side of Route 202/35	470	545	585
	Side Streets: Forest Avenue Rick Lane			

Note: 1. Based on AASHTO recommended sight distances and 85th Percentile Speeds presented in Table 6.

E. 2021 NO ACTION CONDITIONS

The Future without the Proposed Action, or “No Action,” traffic condition is an interim scenario that establishes a future baseline condition without the Proposed Action. The No Action year is the same year as the build year of the MOD Development Plan (2021). No Action traffic conditions were ascertained based on the following procedure:

- Increase the 2017 Existing Conditions traffic volumes by 1.0 percent per year from 2017 (existing year) to 2021 (build year) for background growth, resulting in an overall compounded growth rate of 4.06 percent. The use of 1.0 percent per year was based historical data for the corridor.
- Manually add trips from pending developments (“No Action projects”) located in the vicinity of the Proposed Action.
- Consideration of major roadway improvements in the vicinity of study area.

The Cortlandt Planning Office, Yorktown Planning Office and Peekskill Planning Office were contacted for a list of pending developments located in the vicinity of the project site. **Table 11-19** (approved for use in this study by the Town of Cortlandt) lists the 25 pending projects identified by the three municipalities. Where possible, information was provided about the project build year and the project status. **Table 11-19** indicates which developments were included as part of the background growth factor and which developments have discrete trips added to the No Action traffic network. Any discrete trips generated by these developments were either provided by the corresponding published traffic studies or calculated utilizing trip generation rates contained in the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition*. The trips generated and trip rates for these developments are included in **Appendix 11**.

Based on available information, there are no other major roadway improvements scheduled through 2021 which would affect traffic patterns along the study area roadways.

Table 11-19
No Action Projects Expected to be Complete by 2021

Development	Location	Size	Development Type	Build Year	Status	Action
Town of Cortlandt						
Valeria	341 Furnace Dock Road	147 Units	Townhouse/Condo	Unknown	Under Construction	Analyzed in No Action
Picciano	Intersection of Maple Avenue & Furnace Dock Road	2 Units	Single Family	2014	Approved	Included in Background Growth
Maple Avenue Partners	Maple Avenue	4 Units	Single Family	Unknown	Approved	Included in Background Growth
Rustic Meadows	South and west side of Croton Avenue at intersection of Jacob Street	4 Units	Single Family	Unknown	Approved	Included in Background Growth
Khan	Lexington Avenue	3 Units	Single Family	Unknown	Approved	Included in Background Growth
Cortlandt Crossing	U.S. Route 6	130,000 SF	Commercial	2016	Under Construction	Analyzed in No Action
Pondview Commons	U.S. Route 6 and Regina Avenue	56 Units	Single Family	2019	Approval Pending	Analyzed in No Action
Cortlandt Pitch	Crompond Road, between Bear Mountain Parkway and Maple Row	68,000 SF	Indoor Sports Complex	2019	Approval Pending	Analyzed in No Action
Hanover Estates	Croton Avenue between Route 202/35 and Furnace Dock Road	25 Units	Single Family	2016	Approval Pending	Analyzed in No Action
Town of Yorktown						
Field Home Expansion	2300 Catherine Street	96 Beds 136 Units	Nursing Home Retirement Community	Unknown	Dormant	Analyzed in No Action
State Land Corp	Across street from 3481 Crompond Road	200,000 SF	Retail	Unknown	Rezone Only Approved	Analyzed in No Action
Lowe's (formerly Costco)	3200 Crompond Road	120,663 SF 12,100 SF 4,000 SF	Home Improvement Restaurant/Retail Bank	2018	Under Construction	Analyzed in No Action
BJ's/Staples Shopping Center	3303-3399 Crompond Road	2,500 SF	Restaurant	2018	Approved	Included in Background Growth
RPG/Mohegan Court	3574 Lexington Avenue	8 Units	Single Family	2018	Pending	Included in Background Growth
Faith Bible Church	3500 Mohegan Avenue	352 Seats	Church	Unknown	Approved	Included in Background Growth
Fieldstone Manor Subdivision	3680 Lexington Avenue	7 Units 14 Units	Apartments Single Family	Unknown	Approved	Analyzed in No Action
Granite Knolls Sports Complex	Stony Street	N/A	Park	2018	Under Construction	Analyzed in No Action
Shrub Oak International School	3151 Stony Street	521 Employees	Private School	2018	Approved	Analyzed in No Action
Crompond Terrace	Old Crompond Road	110 Units 32,000 SF 45,400 SF	Condominiums Retail Office	Unknown	Dormant	Analyzed in No Action
City of Peekskill						
Fort Hill Apartments	St Mary's Convent	178 Units	Apartments	2018	Under Construction	Analyzed in No Action
Gateway Townhomes	Main and Spring Street	16 Units	Apartments	2018	Under Construction	Analyzed in No Action
Lofts at Main	Main and Diven Street	75 Units	Apartments	2018	Under Construction	Analyzed in No Action
Senior Independent Living	1847 Crompond Road	53 Units	Senior Living	2019	Approved	Analyzed in No Action
One Park Place	Park and Brown Street	181 Units	Apartments	2019	Approved	Analyzed in No Action
Central Firehouse	Main and Broad Street	30,000 SF	Firehouse	2018	Under Construction	Included in Background Growth
Sources: Town of Cortlandt Planning Department, Town of Yorktown Planning Department, City of Peekskill Planning Department						

LEVEL OF SERVICE CONDITIONS

The traffic from the No Action projects were added to the grown 2021 traffic volumes to develop the 2021 No Action volumes. Traffic volumes for the 2021 No Action peak hours analyzed are shown in **Figures 11-4 and 11-5**. **Table 11-20** presents a comparison of 2017 Existing and 2021 No Action LOS Conditions for the study area intersections for the Weekday AM and PM peak hours. Synchro 10 outputs for the 2021 No Action Condition are provided in **Appendix 11**.

Table 11-20
2017 Existing and 2021 No Action Conditions Level of Service Analysis

Intersection	Weekday AM								Weekday PM							
	2017 Existing				2021 No Action				2017 Existing				2021 No Action			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Signalized Intersections																
Route 6 and Dayton Lane																
Eastbound	L	0.04	5.2	A	L	0.04	5.3	A	L	0.08	9.7	A	L	0.09	10.1	B
	TR	0.24	8.0	A	TR	0.29	9.4	A	TR	0.46	19.1	B	TR	0.55	21.3	C
Westbound	L	0.11	5.3	A	L	0.13	5.5	A	L	0.33	11.3	B	L	0.40	12.7	B
	TR	0.14	9.6	A	TR	0.16	9.8	A	TR	0.25	15.8	B	TR	0.33	17.2	B
Northbound	L	0.39	32.2	C	L	0.41	32.8	C	L	0.81	47.3	D	L	0.83	48.6	D
	TR	0.22	27.6	C	TR	0.24	27.7	C	TR	0.13	23.7	C	TR	0.13	23.5	C
Southbound	LT	0.53	35.8	D	LT	0.54	36.1	D	LT	0.08	23.1	C	LT	0.08	22.9	C
	R	0.30	19.6	B	R	0.31	19.7	B	R	0.07	14.4	B	R	0.07	14.2	B
	Intersection	14.8	B	Intersection	15.0	B	Intersection	22.4	C	Intersection	23.6	C				
Route 6 and Conklin Avenue																
Eastbound	L	0.01	2.6	A	L	0.01	2.6	A	L	0.01	3.0	A	L	0.02	3.3	A
	TR	0.15	4.8	A	TR	0.18	5.1	A	TR	0.24	5.7	A	TR	0.29	6.2	A
Westbound	L	0.23	3.1	A	L	0.26	3.4	A	L	0.29	4.2	A	L	0.34	5.2	A
	TR	0.14	3.1	A	TR	0.16	3.2	A	TR	0.17	3.6	A	TR	0.22	4.0	A
Northbound	LT	0.23	55.0	D	LT	0.24	55.2	E	LT	0.35	57.3	E	LT	0.35	57.1	E
	R	0.70	19.9	B	R	0.71	19.8	B	R	0.72	18.6	B	R	0.75	18.3	B
Southbound	LTR	0.23	33.6	C	LTR	0.23	33.4	C	LTR	0.41	38.8	D	LTR	0.42	38.1	D
	Intersection	8.0	A	Intersection	7.9	A	Intersection	9.4	A	Intersection	9.3	A				
Route 6 and Lexington Avenue																
Eastbound	L	0.28	17.2	B	L	0.34	17.8	B	L	0.87	80.4	F	L	0.95	95.7	F
	TR	0.91	51.9	D	TR	0.93	53.8	D	TR	0.89	44.8	D	TR	1.16	120.7	F
Westbound	L	0.43	21.1	C	L	0.53	24.5	C	L	0.32	17.6	B	L	0.58	42.5	D
	TR	0.79	38.7	D	TR	0.83	41.8	D	TR	1.01	71.0	E	TR	1.17	127.0	F
Northbound	L	0.29	33.8	C	L	0.39	39.8	D	L	0.85	75.8	E	L	1.04	115.3	F
	TR	0.81	65.1	E	TR	0.93	87.9	F	TR	0.65	69.7	E	TR	0.74	74.5	E
Southbound	L	0.43	36.4	D	L	0.55	45.1	D	L	0.31	44.9	D	L	0.36	46.1	D
	TR	0.55	52.1	D	TR	0.67	62.3	E	TR	0.91	99.2	F	TR	0.96	107.7	F
	Intersection	46.2	D	Intersection	52.7	D	Intersection	64.3	E	Intersection	112.1	F				
Route 202/35 and Lafayette Avenue/NYPH Driveway																
Eastbound	TR	0.49	18.8	B	TR	0.62	22.4	C	TR	0.59	25.3	C	TR	0.78	33.3	C
Westbound	L	0.11	13.1	B	L	0.14	14.6	B	L	0.28	17.4	B	L	0.41	20.6	C
	T	0.51	19.1	B	T	0.58	22.7	C	T	0.51	23.4	C	T	0.67	32.5	C
Northbound	LTR	0.57	17.5	B	LTR	0.61	20.6	C	LTR	0.82	41.8	D	LTR	0.85	47.0	D
Southbound	LT	0.78	87.2	F	LT	0.78	83.9	F	LT	1.41	259.7	F	LT	1.43	267.1	F
	R	0.13	0.9	A	R	0.14	0.9	A	R	0.34	7.6	A	R	0.37	9.4	A
	Intersection	22.3	C	Intersection	24.9	C	Intersection	50.6	D	Intersection	54.1	D				
Route 202/35 and Conklin Avenue																
Eastbound	L	0.32	1.9	A	L	0.37	2.2	A	L	0.36	1.7	A	L	0.50	5.2	A
	T	0.28	1.6	A	T	0.36	1.8	A	T	0.31	1.1	A	T	0.39	1.0	A
Westbound	TR	0.44	10.9	B	TR	0.52	13.1	B	TR	0.49	11.6	B	TR	0.69	20.8	C
Southbound	L	0.47	51.3	D	L	0.48	51.5	D	L	0.45	50.9	D	L	0.46	51.1	D
	R	0.48	9.2	A	R	0.53	15.3	B	R	0.34	6.7	A	R	0.32	9.7	A
	Intersection	9.3	A	Intersection	10.7	B	Intersection	8.6	A	Intersection	13.0	B				





- Legend
- Signalized Intersection
 - Unsignalized Intersection



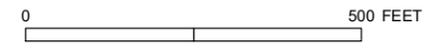


Legend

- Signalized Intersection
- Unsignalized Intersection

0 500 FEET

2021 No Action Traffic Volumes
 Weekday PM Peak Hour
 Figure 11-5a



2021 No Action Traffic Volumes
Weekday PM Peak Hour
Figure 11-5b

Table 11-20 (cont'd)
2017 Existing and 2021 No Action Conditions Level of Service Analysis

Intersection	Weekday AM								Weekday PM							
	2017 Existing				2021 No Action				2017 Existing				2021 No Action			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Signalized Intersections (continued)																
Route 202/35 and Bear Mountain Parkway																
Eastbound	LT	0.76	53.0	D	LT	1.01	88.3	F	LT	0.71	47.6	D	LT	1.44	249.6	F
Westbound	T	0.38	19.1	B	T	0.45	19.7	B	T	0.45	13.5	B	T	0.61	20.9	C
	R	0.39	2.1	A	R	0.46	5.1	A	R	0.53	9.8	A	R	0.69	16.7	B
Southbound	LR	1.15	129.4	F	LR	1.36	214.8	F	LR	0.83	60.1	E	LR	1.02	118.2	F
	Intersection	63.3	E	Intersection	103.4	F	Intersection	31.9	C	Intersection	94.8	F				
Route 202/35 and Croton Avenue / Maple Row																
Eastbound	L	0.10	1.7	A	L	0.13	2.6	A	L	0.16	2.9	A	L	0.33	28.2	C
	T	0.81	18.5	B	T	1.02	59.0	E	T	0.64	7.2	A	T	0.88	59.9	E
	R	0.23	0.6	A	R	0.25	1.6	A	R	0.13	1.0	A	R	0.14	1.7	A
Westbound	L	0.53	12.8	B	L	1.04	124.6	F	L	0.27	7.1	A	L	0.56	17.8	B
	TR	0.56	17.5	B	TR	0.67	20.8	C	TR	0.79	26.1	C	TR	1.12	93.5	F
Northbound	L	1.44	287.0	F	L	1.66	373.8	F	L	0.94	114.7	F	L	0.97	120.4	F
	TR	0.38	26.2	C	TR	0.42	26.7	C	TR	0.41	36.5	D	TR	0.42	37.0	D
Southbound	LTR	0.89	86.1	F	LTR	0.99	108.4	F	LTR	0.71	69.5	E	LTR	0.73	71.2	E
	Intersection	39.9	D	Intersection	67.9	E	Intersection	27.3	C	Intersection	71.8	E				
Route 202/35 and Lexington Avenue																
Eastbound	L	0.12	6.2	A	L	0.18	7.5	A	L	0.53	21.1	C	L	0.58	25.1	C
	TR	0.92	32.1	C	TR	1.18	112.6	F	TR	0.82	23.7	C	TR	1.16	107.1	F
Westbound	L	0.08	6.6	A	L	0.11	7.4	A	L	0.11	6.0	A	L	0.20	9.5	A
	T	0.67	18.2	B	T	0.82	26.1	C	T	1.02	54.8	D	T	1.50	253.0	F
	R	0.10	3.0	A	R	0.12	2.9	A	R	0.21	2.5	A	R	0.30	4.9	A
Northbound	LTR	0.14	29.3	C	LTR	0.14	28.9	C	LTR	0.23	32.9	C	LTR	0.21	31.6	C
Southbound	LT	0.74	50.1	D	LT	0.77	50.8	D	LT	0.69	49.9	D	LT	0.84	59.7	E
	R	0.21	8.1	A	R	0.21	9.0	A	R	0.18	5.5	A	R	0.22	10.0	A
	Intersection	26.2	C	Intersection	67.0	E	Intersection	35.7	D	Intersection	147.6	F				
Unsignalized Intersections																
Dayton Lane and Beach Shopping Center North Driveway																
Westbound	LR	0.15	10.9	B	LR	0.16	11.1	B	LR	0.23	13.7	B	LR	0.26	14.3	B
Southbound	L	0.04	7.6	A	L	0.04	7.6	A	L	0.05	8.3	A	L	0.06	8.3	A
Dayton Lane and Beach Shopping Center South Driveway																
Westbound	LR	0.09	11.4	B	LR	0.10	11.5	B	LR	0.83	55.0	F	LR	0.92	73.4	F
Southbound	L	0.02	7.7	A	L	0.02	7.7	A	L	0.13	9.2	A	L	0.14	9.3	A
Route 202/35 and Dayton Lane																
Eastbound	L	0.11	8.5	A	L	0.12	8.8	A	L	0.15	9.6	A	L	0.18	10.6	B
Southbound	LR	0.93	80.3	F	LR	1.32	221.6	F	LR	1.13	127.4	F	LR	1.80	421.2	F
Route 202/35 and Buttonwood Avenue																
Westbound	L	0.01	8.9	A	L	0.01	9.3	A	L	0.00	8.4	A	L	0.00	8.8	A
Northbound	LR	0.13	17.8	C	LR	0.18	22.5	C	LR	0.01	14.7	B	LR	0.02	18.8	C
Route 202/35 and Cortlandt Medical Driveway/NYPH Driveway																
Eastbound	L	0.11	9.3	A	L	0.13	9.8	A	L	0.04	9.3	A	L	0.06	10.2	B
Westbound	L	0.04	8.6	A	L	0.04	8.9	A	L	0.01	8.2	A	L	0.01	8.7	A
Northbound	LTR	0.03	14.3	B	LTR	0.04	17.0	C	LTR	0.11	14.6	B	LTR	0.15	18.9	C
Route 202/35 and Tamarack Drive																
Westbound	L	0.00	8.3	A	L	0.00	8.6	A	L	0.03	8.7	A	L	0.03	9.1	A
Northbound	LR	0.10	15.9	C	LR	0.13	19.7	C	LR	0.07	16.1	C	LR	0.09	20.6	B
Route 202/35 and Dimond Avenue/Shipleigh Drive																
Eastbound	L	0.00	0.0	A	L	0.00	0.0	A	L	0.01	8.7	A	L	0.01	9.3	A
Westbound	L	0.01	8.3	A	L	0.01	8.7	A	L	0.02	8.4	A	L	0.03	8.8	A
Northbound	LTR	0.09	12.7	B	LTR	0.12	14.7	B	LTR	0.34	19.6	C	LTR	0.49	31.0	D
Southbound	LTR	0.03	10.7	B	LTR	0.03	11.3	B	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Route 202/35 and Locust Avenue																
Eastbound	L	0.01	8.2	A	L	0.01	8.4	A	L	0.03	8.6	A	L	0.03	9.1	A
Southbound	LTR	0.29	21.2	C	LTR	0.40	30.2	D	LTR	0.07	12.5	B	LTR	0.09	14.7	B

Table 11-20 (cont'd)
2017 Existing and 2021 No Action Conditions Level of Service Analysis

Intersection	Weekday AM								Weekday PM							
	2017 Existing				2021 No Action				2017 Existing				2021 No Action			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Unsignalized Intersections (continued)																
Route 202/35 and Crestview Avenue																
Westbound	L	0.00	8.4	A	L	0.00	8.7	A	L	0.00	8.4	A	L	0.00	8.8	A
Northbound	LTR	0.07	16.1	C	LTR	0.09	19.7	C	LTR	0.02	14.3	B	LTR	0.03	17.7	C
Route 202/35 and Forest Avenue																
Westbound	L	0.01	8.4	A	L	0.01	8.8	A	L	0.01	8.5	A	L	0.01	8.9	A
Northbound	LR	0.04	13.6	B	LR	0.05	15.8	C	LR	0.04	15.4	C	LR	0.06	19.3	C
Route 202/35 and Rick Lane																
Westbound	L	0.01	8.5	A	L	0.01	8.8	A	L	0.01	8.5	A	L	0.01	8.9	A
Northbound	LR	0.03	15.6	C	LR	0.04	18.8	C	LR	0.03	15.3	C	LR	0.05	19.2	C
Route 202/35 and Arlo Lane																
Eastbound	L	0.01	8.3	A	L	0.01	8.5	A	L	0.03	8.7	A	L	0.04	9.3	A
Southbound	LR	0.07	12.2	B	LR	0.09	13.4	B	LR	0.05	14.8	B	LR	0.07	18.6	C
Bear Mountain Parkway and Locust Avenue																
Westbound	L	0.00	8.4	A	L	0.00	8.8	A	L	0.00	8.6	A	L	0.03	9.1	A
Northbound	R	0.02	11.3	B	R	0.03	12.4	B	R	0.01	11.8	B	R	0.09	14.7	B
Bear Mountain Parkway and Arlo Lane																
Eastbound	L	0.01	8.3	A	L	0.01	8.6	A	L	0.01	8.8	A	L	0.01	9.6	A
Westbound	L	0.00	9.1	A	L	0.00	9.6	A	L	0.00	0.0	A	L	0.00	0.0	A
Northbound	LTR	0.30	39.3	E	LTR	0.44	64.4	F	LTR	0.38	41.2	E	LTR	0.79	138.6	F
Southbound	LTR	0.23	25.0	D	LTR	0.33	35.2	E	LTR	0.08	15.4	C	LTR	0.13	22.0	C
Lafayette Avenue and Ridge Road																
Westbound	LR	0.06	9.1	A	LR	0.04	9.1	A	LR	0.09	10.0	B	LR	0.06	9.7	A
Southbound	L	0.01	7.4	A	L	0.01	7.5	A	L	0.03	7.7	A	L	0.03	7.6	A
Notes: L = Left Turn, T = Through, R = Right Turn, LOS = Level of Service = Indicates notable deterioration in operating conditions																

Under the 2021 No Action Conditions, there would be the following notable changes in LOS for the study area intersections:

- Route 6 and Conklin Avenue—the northbound left turn/through movement would deteriorate from LOS D to LOS E during the Weekday AM peak hour.
- Route 6 and Lexington Avenue—the eastbound left turn movement would deteriorate within LOS F during the Weekday PM peak hour. The eastbound through/right turn movement would deteriorate from LOS D to LOS F during the Weekday PM peak hour. The westbound through/right turn movement will deteriorate from LOS E to LOS F during the Weekday PM peak hour. The northbound left turn movement will deteriorate from LOS E to LOS F during the Weekday PM peak hour. The northbound through/right turn lane will deteriorate from LOS E to LOS F during the Weekday AM peak hour. The SB through/right turn movement will deteriorate from LOS D to LOS E during the Weekday AM peak hour and within LOS F during the Weekday PM peak hour.
- Route 202/35 and Bear Mountain State Parkway—the eastbound left turn/through movement would deteriorate from LOS D to LOS F during the Weekday AM and PM peak hours. The southbound left turn/right turn would deteriorate within LOS F during the Weekday AM peak hour and from LOS E to LOS F during the Weekday PM peak hour.
- Route 202/35 and Croton Avenue/Maple Row—the eastbound through movement would deteriorate from LOS B to LOS E during the Weekday AM peak hour and from LOS A to LOS E during the Weekday PM peak hour. The westbound left turn movement would deteriorate from LOS B to LOS F during the Weekday AM peak hour. The westbound

- through/right turn movement would deteriorate from LOS C to LOS F during the Weekday PM peak hour. The northbound left turn movement would deteriorate within LOS F during the Weekday AM peak hour. The southbound approach would deteriorate within LOS F during the Weekday AM peak hour.
- Route 202/35 and Lexington Avenue—the eastbound through/right turn movement would deteriorate from LOS C to LOS F during the Weekday AM and PM peak hours. The westbound through movement would deteriorate from LOS D to LOS F during the Weekday PM peak hour. The southbound left turn/through movement would deteriorate from LOS D to LOS E during the Weekday PM peak hour.
 - Dayton Lane and Beach Shopping Center South Driveway—the westbound left turn/right turn movement would deteriorate within LOS F during the Weekday PM peak hour.
 - Route 202/35 and Dayton Lane—the southbound left turn/right turn lane would deteriorate within LOS F during the Weekday AM and PM peak hours.
 - Bear Mountain Parkway and Arlo Lane —the northbound approach would deteriorate from LOS E to LOS F during the Weekday AM and PM peak hours. The southbound approach would deteriorate from LOS D to LOS E during the Weekday AM peak hour.

TRAFFIC SAFETY CONDITIONS

With the increase in development surrounding the study area and accompanying traffic volumes, there may be an increase in the number of crashes experienced under 2021 No Action Condition. Based on the anticipated increase in traffic due to the No Action projects (see **Table 11-19**), the following intersections are estimated to have one or more additional accidents per year:

- Route 6 and Dayton Lane (estimated 1.4 additional accidents/year)
- Route 6 and Conklin Avenue (estimated 1.1 additional accidents/year)
- Route 6 and Lexington Avenue (estimated 1.8 additional accidents/year)
- Route 202/35 and Bear Mountain Parkway (estimated 2.9 additional accidents/year)
- Route 202/35 and Croton Avenue/Maple Row (estimated 1.8 additional accidents/year)
- Route 202/35 and Lexington Avenue (estimated 2.1 additional accidents/year)

There are no known safety improvement or traffic calming measures being implemented within the study area in conjunction with the No Action projects listed in **Table 11-19**.

PARKING CONDITIONS

Similar to existing conditions, off-street parking facilities are proposed for most of the No Action projects shown in **Table 11-19** and therefore, no significant changes to parking conditions within the study area are expected in the 2021 No Action Condition.

PEDESTRIAN AND BICYCLE CONDITIONS

As none of the No Action projects located within the study area propose changes to the pedestrian and bicycle infrastructure or are expected to generate substantial pedestrian or bicycle volumes, no significant changes are expected under 2021 No Action Conditions.

PUBLIC TRANSPORTATION

No significant changes in public transportation conditions are expected under 2021 No Action Condition. While a minor increase in public transit ridership is expected with the No Action

projects, it is the policy of the transit agencies (Metro-North Commuter Railroad and the Bee-Line Bus System) to adjust their operating schedules to reflect demand as needed.

F. 2021 WITH ACTION CONDITION – MOD DEVELOPMENT PLAN

PROJECT DESCRIPTION

The Proposed Project includes the development of two sites, Gyrodyne and Evergreen, located on the south side of Route 202/35 opposite the NYPH. The Gyrodyne Project is a mixed-use development with approximately 100,000 gsf of Class A medical office space, 200 residential units, and 4,000 gsf accessory retail and public amenities on a 13.8 acre site directly across Route 202/35 from the NYPH entrance. The Gyrodyne Project would provide approximately 563 parking spaces (383 surface lot spaces and 180 spaces located in a parking structure.) Under existing conditions, the Gyrodyne site has 30,000 gsf of medical office that will be removed as part of the Gyrodyne Project. The Gyrodyne Project Site's driveway would utilize the existing driveway to the medical offices across from the NYPH entrance driveway on Route 202/35 forming a four-leg intersection. The proposed full access driveway would be improved to provide one shared left turn/through lane and one right turn only lane and would be signalized.

The Evergreen Project is also a mixed-use development with an approximate 100 room hotel, 120 assisted living units, 166 residential units, 15,000 gsf of medical office, 15,000 gsf retail space, 7,000 gsf of restaurant space as well as 593 surface parking spaces located across Route 202/35 from the NYPH campus between Lafayette and Conklin Avenues and adjacent to the Gyrodyne Project. Access to the Evergreen Project Site would be provided by a full access driveway at Route 202/35 opposite Conklin Avenue to create a four-leg intersection. The driveway would provide one left turn only lane and one shared through/right turn lane.

PROJECT TRIP GENERATION

The estimated number of trips generated by the Proposed Project was based on trip generation rates provided by the *Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition)*. Based on discussions with NYSDOT, the Weekday AM and PM Peak Hour Generator was conservatively used for all land uses. The ITE rates were adjusted to reflect:

- Internalization – internal trips made between multiple land uses within the Gyrodyne or Evergreen Project Sites;
- Mode share for transit, pedestrian, and bicycle trips; and
- Vehicle occupancy.

Internal trips, trips within each development site, were calculated using the *ITE Trip Generation Handbook (3rd Edition)* and *National Cooperative Highway Research Program (NCHRP) Report 684: Enhancing Internal Trip Capture Estimation for Mixed-Use Developments* methodology. Trips that must exit and travel on public roadways are considered external trips. Transit, pedestrian, bicycle, and mode share trips are calculated using the *ITE Trip Generation Handbook (3rd Edition)* mode share and vehicle occupancy values. See **Appendix 11** for the detailed Trip Generation Memorandum.

Based on discussions with the Town of Cortlandt Department of Technical Services Code Enforcement, the existing 30,000 gsf of medical office on the Gyrodyne site is and currently operates as fully occupied. Trip reductions are taken based on the current occupancy of the development.

As shown in **Table 11-21** it is estimated that the Proposed Project would generate approximately 442 net new trips during the Weekday AM peak hour (222 entering, 220 exiting) and 671 net new trips during the Weekday PM peak hour (311 entering, 360 exiting).

PROJECT VEHICLE TRIP DISTRIBUTION AND ASSIGNMENT

For the purpose of estimating the likely distribution of project generated trips to and from the Proposed Project, a directional distribution of vehicle trips was created for each peak hour utilizing the existing travel patterns in the study area. These trip distribution patterns are shown in **Figure 11-6** and represent the most logical approach and departure paths to and from the project site. **Figures 11-7** and **11-8** show the project generated vehicle trips for the Weekday AM and PM peak hours, respectively, for the Proposed Project.

LEVEL OF SERVICE CONDITIONS

The project generated vehicle trips for the Proposed Project described above were added to the No Action traffic volumes in order to estimate the With Action traffic volumes. **Figures 11-9** and **11-10** show the 2021 With Action traffic volumes for the Weekday AM and PM peak hours, respectively, for the Proposed Project. **Table 11-22** presents a comparison of the 2021 No Action and 2021 With Action LOS conditions for the Proposed Project. Synchro 10 outputs for the 2021 With Action condition are provided in **Appendix 11**.

Under the 2021 With Action condition, absent any additional improvements beyond those specified in the project description above, there would be impacts at the following locations;

- Route 202/35 and Lafayette Avenue/NYPH Driveway—the eastbound approach would deteriorate from LOS C to LOS E during the Weekday PM peak hour.
- Route 202/35 and Bear Mountain State Parkway—the eastbound approach would deteriorate within LOS F during the Weekday AM and PM peak hours. The westbound through movement would deteriorate from LOS C to LOS E during the Weekday PM peak hour.
- Route 202/35 and Croton Avenue/Maple Row—the westbound left turn movement would deteriorate from LOS B to LOS E during the Weekday PM peak hour. The westbound through/right turn movement would deteriorate within LOS F during the Weekday PM peak hour. The northbound left turn movement would deteriorate within LOS F during the Weekday AM and PM peak hours.
- Route 202/35 and Lexington Avenue—the eastbound through/right turn movement would deteriorate within LOS F during the Weekday AM and PM peak hours. The westbound through movement would deteriorate within LOS F during the Weekday PM peak hour.
- Dayton Lane and Beach Shopping Center South Driveway—the westbound left turn/right turn movement would deteriorate within LOS F during the Weekday PM peak hour.
- Route 202/35 and Dayton Lane—the southbound approach would deteriorate within LOS F during the Weekday AM and PM peak hours.
- Route 202/35 and Tamarack Drive—the northbound approach would deteriorate from LOS C to LOS E during the Weekday PM peak hour.
- Route 202/35 and Shipley Drive—the northbound approach would deteriorate from LOS D to LOS F during the Weekday PM peak hour.
- Route 202/35 and Locust Avenue—the southbound approach would deteriorate from LOS D to LOS F during the Weekday AM peak hour.
- Bear Mountain Parkway and Arlo Lane—the northbound approach would deteriorate within LOS F during the Weekday AM and PM peak hours.







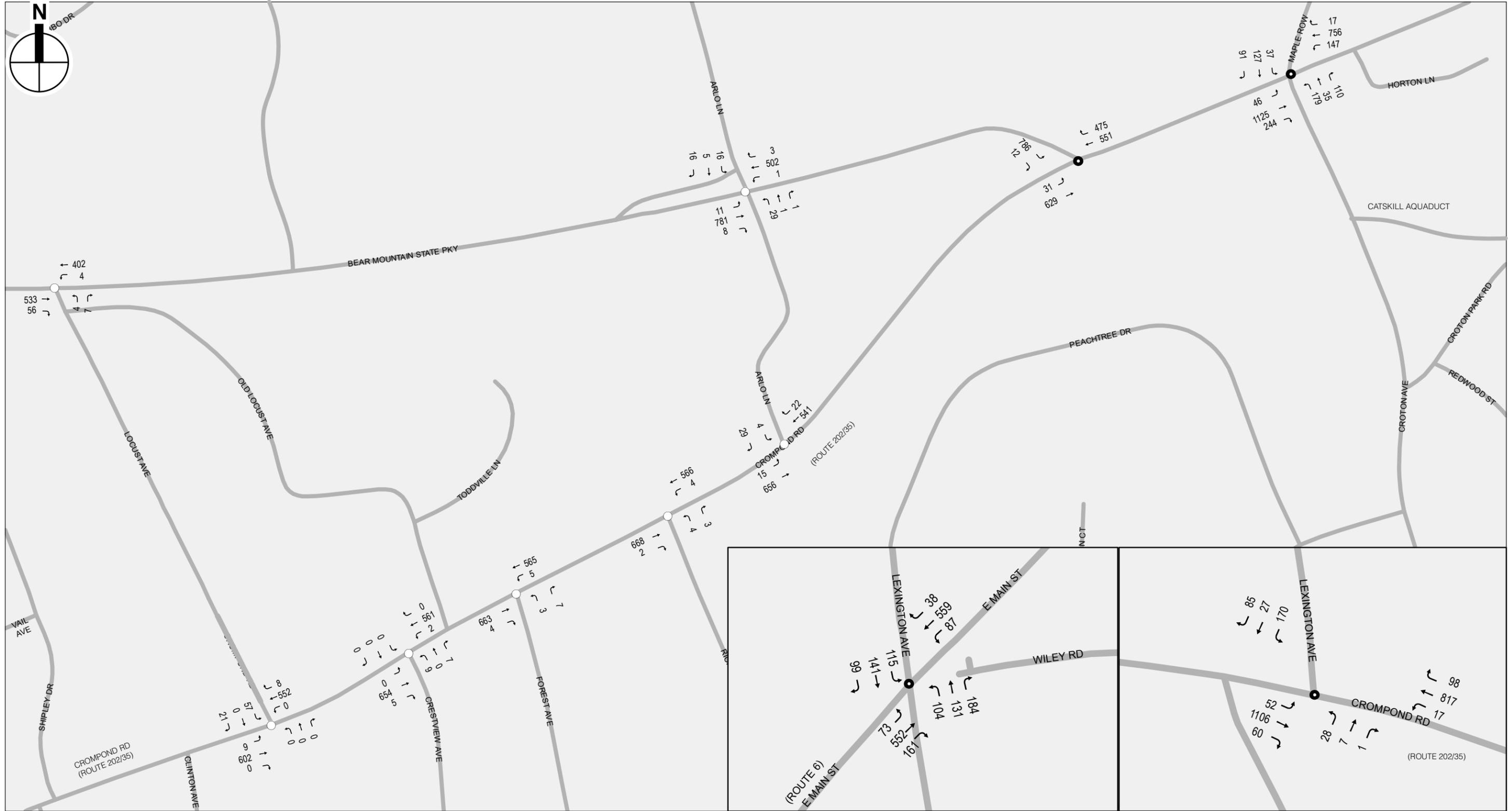
- Legend**
- Signalized Intersection
 - Unsignalized Intersection



- Legend
- Signalized Intersection
 - Unsignalized Intersection



- Legend**
- Signalized Intersection
 - Unsignalized Intersection



Legend

- Signalized Intersection
- Unsignalized Intersection

CORTLANDT MOD

2021 With Action Traffic Volumes - MOD Development Plan
Weekday AM Peak Hour
Figure 11-9b



- Legend**
- Signalized Intersection
 - Unsignalized Intersection

**Table 11-21
Proposed Project Trip Generation**

Building Component	Development Size	Peak Hour	ITE Data ²					Trip Generation											
			ITE Land Use		Independent Variable	ITE Trip Rate ¹	Total Trips	% In	% Out	Total Trips		Internal Trips		Non-Motorized, Carpool, Transit		Final Adjusted Trips ³		External Trips	
			#	Name						In	Out	In	Out	In	Out	In	Out		
Gyrodyne																			
Residential (Apartments)	200	Units	AM	221	Multifamily Housing (Mid-Rise)	Dwelling Units	0.32	64	0.27	0.73	17	47	1	10	1	1	15	36	51
			PM	221	Multifamily Housing (Mid-Rise)	Dwelling Units	0.41	82	0.60	0.40	49	33	7	7	1	1	41	25	66
Medical Office	100	Ksf	AM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	3.53	223	0.62	0.38	138	85	9	2	1	0	128	83	211
			PM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	4.10	410	0.39	0.61	160	250	7	2	0	3	153	245	398
Eatery	4	Ksf	AM	932	High Turnover (Sit-down) Restaurant	1,000 SF Gross Floor Area	14.04	56	0.52	0.48	29	27	13	6	0	1	16	20	36
			PM	932	High Turnover (Sit-down) Restaurant	1,000 SF Gross Floor Area	17.41	70	0.50	0.50	35	35	9	7	0	1	26	27	53
Medical Office (To Be Removed)	30	Ksf	AM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	-3.53	-76	0.62	0.38	-47	-29	0	0	0	0	-47	-29	-76
			PM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	-4.10	-123	0.39	0.61	-48	-75	0	0	0	0	-48	-75	-123
Gyrodyne AM Net Trips																112	110	222	
Gyrodyne PM Net Trips																172	222	394	
Evergreen																			
Assisted Living	120	Beds	AM	254	Assisted Living	Beds	0.18	22	0.67	0.33	15	7	0	0	0	0	15	7	22
			PM	254	Assisted Living	Beds	0.34	41	0.45	0.55	18	23	0	0	0	0	18	23	41
Hotel	100	Rooms	AM	310	Hotel	Rooms	0.54	45	0.54	0.46	24	21	1	4	2	0	21	17	38
			PM	310	Hotel	Rooms	0.61	49	0.58	0.42	28	21	7	4	0	1	21	16	36
Eatery	7	Ksf	AM	932	High Turnover (Sit-down) Restaurant	1,000 SF Gross Floor Area	14.04	98	0.52	0.48	51	47	25	8	0	0	26	39	58
			PM	932	High Turnover (Sit-down) Restaurant	1,000 SF Gross Floor Area	17.41	122	0.50	0.50	61	61	15	26	1	1	45	34	60
Retail	15	Ksf	AM	820	Shopping Center	1,000 SF Leasable Area	3.00	45	0.54	0.46	42	21	7	4	0	0	17	17	79
			PM	820	Shopping Center	1,000 SF Leasable Area	4.21	64	0.50	0.50	55	32	22	18	0	0	10	14	56
Medical/Dental Laboratory	15	Ksf	AM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	3.53	41	0.62	0.38	25	16	6	15	0	0	19	1	20
			PM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	4.10	62	0.39	0.61	24	38	4	5	0	0	20	33	48
Residential (Apartments)	166	Units	AM	221	Multifamily Housing (Mid-Rise)	Dwelling Units	0.32	53	0.27	0.73	14	39	1	9	1	1	12	29	41
			PM	221	Multifamily Housing (Mid-Rise)	Dwelling Units	0.41	68	0.60	0.40	41	27	15	8	1	1	25	18	34
Evergreen AM Net Trips																110	110	220	
Evergreen PM Net Trips																139	138	277	
Total External AM Trips																222	220	442	
Total External PM Trips																311	360	671	
Notes:																			
ksf = 1,000 square feet																			
1. Based on discussions with NYSDOT, rates shown are average generator peak hour rates from the <i>Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition</i>																			
2. Final Adjusted Trips are calculated by subtracting internal, non-motorized, carpool, and transit trips from the Total Trips.																			

Table 11-22

2021 No Action and With Action Conditions Level of Service Analysis – Proposed Project

Intersection	Weekday AM								Weekday PM							
	2021 No Action				2021 With Action				2021 No Action				2021 With Action			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Signalized Intersections																
Route 6 and Dayton Lane																
Eastbound	L	0.04	5.3	A	L	0.04	5.4	A	L	0.09	10.1	B	L	0.10	10.5	B
	TR	0.29	9.4	A	TR	0.30	9.3	A	TR	0.55	21.3	C	TR	0.59	22.6	C
Westbound	L	0.13	5.5	A	L	0.13	5.7	A	L	0.40	12.7	B	L	0.42	13.9	B
	TR	0.16	9.8	A	TR	0.17	10.0	A	TR	0.33	17.2	B	TR	0.34	18.0	B
Northbound	L	0.41	32.8	C	L	0.53	36.7	D	L	0.83	48.6	D	L	0.87	53.3	D
	TR	0.24	27.7	C	TR	0.23	27.5	C	TR	0.13	23.5	C	TR	0.13	23.2	C
Southbound	LT	0.54	36.1	D	LT	0.53	35.6	D	LT	0.08	22.9	C	LT	0.08	22.6	C
	R	0.31	19.7	B	R	0.30	19.6	B	R	0.07	14.2	B	R	0.07	14.0	B
	Intersection	15.0	B	Intersection	15.5	B	Intersection	23.6	C	Intersection	25.7	C				
Route 6 and Conklin Avenue																
Eastbound	L	0.01	2.6	A	L	0.01	2.7	A	L	0.02	3.3	A	L	0.02	3.8	A
	TR	0.18	5.1	A	TR	0.18	5.2	A	TR	0.29	6.2	A	TR	0.29	7.0	A
Westbound	L	0.26	3.4	A	L	0.29	3.8	A	L	0.34	5.2	A	L	0.41	6.6	A
	TR	0.16	3.2	A	TR	0.16	3.3	A	TR	0.22	4.0	A	TR	0.22	4.9	A
Northbound	LT	0.24	55.2	E	LT	0.23	54.5	D	LT	0.35	57.1	E	LT	0.33	55.1	E
	R	0.71	19.8	B	R	0.73	19.6	B	R	0.75	18.3	B	R	0.77	17.7	B
Southbound	LTR	0.23	33.4	C	LTR	0.23	32.9	C	LTR	0.42	38.1	D	LTR	0.40	36.3	D
	Intersection	7.9	A	Intersection	8.1	A	Intersection	9.3	A	Intersection	10.0	A				
Route 6 and Lexington Avenue																
Eastbound	L	0.34	17.8	B	L	0.34	17.6	B	L	0.95	95.7	F	L	0.95	95.8	F
	TR	0.93	53.8	D	TR	0.93	54.0	D	TR	1.16	120.7	F	TR	1.18	125.3	F
Westbound	L	0.53	24.5	C	L	0.54	25.0	C	L	0.58	42.5	D	L	0.59	44.1	D
	TR	0.83	41.8	D	TR	0.83	41.5	D	TR	1.17	127.0	F	TR	1.17	127.7	F
Northbound	L	0.39	39.8	D	L	0.41	40.3	D	L	1.04	115.3	F	L	1.05	123.7	F
	TR	0.93	87.9	F	TR	0.96	92.4	F	TR	0.74	74.5	E	TR	0.77	76.2	E
Southbound	L	0.55	45.1	D	L	0.57	46.3	D	L	0.36	46.1	D	L	0.38	46.4	D
	TR	0.67	62.3	E	TR	0.68	63.3	E	TR	0.96	107.7	F	TR	0.97	109.1	F
	Intersection	52.7	D	Intersection	53.6	D	Intersection	112.1	F	Intersection	114.6	F				
Route 202/35 and Gyrodyne/NYPH Driveway																
Eastbound	Intersection Unsignalized in No Action Condition				L	0.24	5.4	A	Intersection Unsignalized in No Action Condition				L	0.13	5.5	A
					TR	0.50	6.3	A					TR	0.50	7.6	A
Westbound					L	0.22	1.4	A					L	0.24	1.9	A
					TR	0.57	3.1	A					TR	0.70	6.0	A
Northbound					LT	0.33	45.1	D					LT	0.46	46.9	D
					R	0.38	12.2	B					R	0.50	10.9	B
	Intersection	6.3	A	Intersection	8.7	A										
Route 202/35 and Lafayette Avenue/NYPH Driveway																
Eastbound	TR	0.62	22.4	C	TR	0.74	23.9	C	TR	0.78	33.3	C	TR	1.04	71.3	E
Westbound	L	0.14	14.6	B	L	0.19	13.8	B	L	0.41	20.6	C	L	0.60	22.0	C
	T	0.58	22.7	C	T	0.68	26.2	C	T	0.67	32.5	C	T	0.84	36.2	D
Northbound	LTR	0.61	20.6	C	LTR	0.64	22.6	C	LTR	0.85	47.0	D	LTR	0.88	52.4	D
Southbound	LT	0.78	83.9	F	LT	0.78	83.4	F	LT	1.43	267.1	F	LT	1.42	262.7	F
	R	0.14	0.9	A	R	0.14	0.9	A	R	0.37	9.4	A	R	0.37	9.4	A
	Intersection	24.9	C	Intersection	26.8	C	Intersection	54.1	D	Intersection	65.7	E				
Route 202/35 and Conklin Avenue/Evergreen Driveway																
Eastbound	L	0.37	2.2	A	L	0.41	3.2	A	L	0.50	5.2	A	L	0.56	2.8	A
	T	0.36	1.8	A	TR	0.47	4.2	A	T	0.39	1.0	A	T	0.55	2.8	A
Westbound	TR	0.52	13.1	B	LTR	0.73	20.7	C	TR	0.69	20.8	C	LTR	0.97	46.5	D
	Northbound	L	-	-	L	0.70	89.5	F	L	-	-	-	L	0.68	77.9	E
Southbound	TR	-	-	-	TR	0.26	16.0	B	TR	-	-	-	TR	0.30	15.2	B
	L	0.48	51.5	D	L	0.56	54.3	D	L	0.46	51.1	D	L	0.49	50.0	D
	R	0.53	15.3	B	R	0.63	12.6	B	R	0.32	9.7	A	R	0.53	13.0	B
	Intersection	10.7	B	Intersection	15.7	B	Intersection	13.0	B	Intersection	24.9	C				

Table 11-22 (cont'd)

2021 No Action and With Action Conditions Level of Service Analysis – Proposed Project

Intersection	Weekday AM								Weekday PM							
	2021 No Action				2021 With Action				2021 No Action				2021 With Action			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Signalized Intersections (continued)																
Route 6 and Dayton Lane																
Route 202/35 and Bear Mountain Parkway																
Eastbound	LT	1.01	88.3	F	LT	1.40	231.2	F	LT	1.44	249.6	F	LT	2.98	922.4	F
Westbound	T	0.45	19.7	B	T	0.55	21.9	C	T	0.61	20.9	C	T	0.74	58.9	E
	R	0.46	5.1	A	R	0.47	8.0	A	R	0.69	16.7	B	R	0.71	21.0	C
Southbound	LR	1.36	214.8	F	LR	1.36	215.4	F	LR	1.02	118.2	F	LR	1.03	118.4	F
	Intersection		103.4	F	Intersection		138.6	F	Intersection		94.8	F	Intersection		283.2	F
Route 202/35 and Croton Avenue/Maple Row																
Eastbound	L	0.13	2.6	A	L	0.15	3.1	A	L	0.33	28.2	C	L	0.33	25.7	C
	T	1.02	59.0	E	T	1.09	63.8	E	T	0.88	59.9	E	T	0.99	58.5	E
	R	0.25	1.6	A	R	0.27	2.3	A	R	0.14	1.7	A	R	0.18	2.6	A
Westbound	L	1.04	124.6	F	L	1.04	124.6	F	L	0.56	17.8	B	L	0.84	77.3	E
	TR	0.67	20.8	C	TR	0.74	23.7	C	TR	1.12	93.5	F	TR	1.21	129.3	F
Northbound	L	1.66	373.8	F	L	1.90	472.2	F	L	0.97	120.4	F	L	1.16	167.9	F
	TR	0.42	26.7	C	TR	0.42	26.7	C	TR	0.42	37.0	D	TR	0.42	37.0	D
Southbound	LTR	0.99	108.4	F	LTR	0.99	108.4	F	LTR	0.73	71.2	E	LTR	0.73	71.5	E
	Intersection		67.9	E	Intersection		76.8	E	Intersection		71.8	E	Intersection		90.9	F
Route 202/35 and Lexington Avenue																
Eastbound	L	0.18	7.5	A	L	0.26	8.9	A	L	0.58	25.1	C	L	0.63	28.7	C
	TR	1.18	112.6	F	TR	1.23	134.0	F	TR	1.16	107.1	F	TR	1.27	152.5	F
Westbound	L	0.11	7.4	A	L	0.11	7.5	A	L	0.20	9.5	A	L	0.20	9.8	A
	T	0.82	26.1	C	T	0.91	35.2	D	T	1.50	253.0	F	T	1.61	303.0	F
	R	0.12	2.9	A	R	0.12	2.9	A	R	0.30	4.9	A	R	0.30	5.7	A
Northbound	LTR	0.14	28.9	C	LTR	0.17	30.1	C	LTR	0.21	31.6	C	LTR	0.26	33.6	C
Southbound	LT	0.77	50.8	D	LT	0.78	53.8	D	LT	0.84	59.7	E	LT	0.85	61.4	E
	R	0.21	9.0	A	R	0.23	10.3	B	R	0.22	10.0	A	R	0.25	12.2	B
	Intersection		67.0	E	Intersection		80.1	F	Intersection		147.6	F	Intersection		184.5	F
Unsignalized Intersections																
Dayton Lane and Beach Shopping Center North Driveway																
Westbound	LR	0.16	11.1	B	LR	0.17	11.5	B	LR	0.26	14.3	B	LR	0.28	15.4	C
Southbound	L	0.04	7.6	A	L	0.04	7.7	A	L	0.06	8.3	A	L	0.06	8.5	A
Dayton Lane and Beach Shopping Center South Driveway																
Westbound	LR	0.10	11.5	B	LR	0.10	12.0	B	LR	0.92	73.4	F	LR	1.04	108.8	F
Southbound	L	0.02	7.7	A	L	0.02	7.7	A	L	0.14	9.3	A	L	0.14	9.5	A
Route 202/35 and Dayton Lane																
Eastbound	L	0.12	8.8	A	L	0.13	9.2	A	L	0.18	10.6	B	L	0.21	11.6	B
Southbound	LR	1.33	225.2	F	LR	1.86	459.3	F	LR	1.80	421.2	F	LR	2.83	893.7	F
Route 202/35 and Buttonwood Avenue																
Westbound	L	0.01	9.3	A	L	0.01	9.7	A	L	0.00	8.8	A	L	0.00	9.3	A
Northbound	LR	0.18	22.5	C	LR	0.22	28.2	D	LR	0.02	18.8	C	LR	0.02	24.1	C
Route 202/35 and Cortlandt Medical Driveway/NYPH Driveway																
Eastbound	L	0.13	9.8	A	Intersection Signalized in Action Condition				L	0.06	10.2	B	Intersection Signalized in Action Condition			
Westbound	L	0.04	8.9	A					L	0.01	8.7	A				
Northbound	LTR	0.04	17.0	C					LTR	0.15	18.9	C				
Route 202/35 and Tamarack Drive																
Westbound	L	0.00	8.6	A	L	0.00	9.0	A	L	0.03	9.1	A	L	0.04	9.8	A
Northbound	LR	0.13	19.7	C	LR	0.20	26.9	D	LR	0.09	20.6	C	LR	0.20	36.3	E
Route 202/35 and Dimond Avenue/Shipleigh Drive																
Eastbound	L	0.00	0.0	A	L	0.00	0.0	A	L	0.01	9.3	A	L	0.02	9.9	A
Westbound	L	0.01	8.7	A	L	0.01	9.1	A	L	0.03	8.8	A	L	0.03	9.4	A
Northbound	LTR	0.12	14.7	B	LTR	0.15	17.5	C	LTR	0.49	31.0	D	LTR	0.76	72.3	F
Southbound	LTR	0.03	11.3	B	LTR	0.03	12.3	B	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Route 202/35 and Locust Avenue																
Eastbound	L	0.01	8.4	A	L	0.01	8.7	A	L	0.03	9.1	A	L	0.04	9.7	A
Southbound	LTR	0.40	30.2	D	LTR	0.57	50.9	F	LTR	0.09	14.7	B	LTR	0.13	17.6	C

Table 11-22 (cont'd)
2021 No Action and With Action Conditions Level of Service Analysis – Proposed Project

Intersection	Weekday AM								Weekday PM							
	2021 No Action				2021 With Action				2021 No Action				2021 With Action			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Unsignalized Intersections (continued)																
Route 202/35 and Crestview Avenue																
Westbound	L	0.00	8.7	A	L	0.00	9.1	A	L	0.00	8.8	A	L	0.00	9.4	A
Northbound	LTR	0.09	19.7	C	LTR	0.12	25.7	D	LTR	0.03	17.7	C	LTR	0.04	23.9	C
Route 202/35 and Forest Avenue																
Westbound	L	0.01	8.8	A	L	0.01	9.2	A	L	0.01	8.9	A	L	0.01	9.6	A
Northbound	LR	0.05	15.8	C	LR	0.06	18.8	C	LR	0.06	19.3	C	LR	0.09	26.8	D
Route 202/35 and Rick Lane																
Westbound	L	0.01	8.8	A	L	0.01	9.2	A	L	0.01	8.9	A	L	0.01	9.6	A
Northbound	LR	0.04	18.8	C	LR	0.06	23.5	C	LR	0.05	19.2	C	LR	0.07	26.5	D
Route 202/35 and Arlo Lane																
Eastbound	L	0.01	8.5	A	L	0.02	8.9	A	L	0.04	9.3	A	L	0.06	10.0	A
Southbound	LR	0.09	13.4	B	LR	0.12	15.3	C	LR	0.07	18.6	C	LR	0.13	23.1	C
Bear Mountain Parkway and Locust Avenue																
Westbound	L	0.00	8.8	A	L	0.01	8.8	A	L	0.03	9.1	A	L	0.00	9.2	A
Northbound	R	0.03	12.4	B	R	0.03	12.5	B	R	0.09	14.7	B	R	0.02	13.8	B
Bear Mountain Parkway and Arlo Lane																
Eastbound	L	0.01	8.6	A	L	0.01	8.6	A	L	0.01	9.6	A	L	0.01	9.6	A
Westbound	L	0.00	9.6	A	L	0.00	9.6	A	L	0.00	0.0	A	L	0.00	0.0	A
Northbound	LTR	0.44	64.4	F	LTR	0.52	72.9	F	LTR	0.79	138.6	F	LTR	0.98	188.5	F
Southbound	LTR	0.33	35.2	E	LTR	0.33	36.0	E	LTR	0.13	22.0	C	LTR	0.13	22.3	C
Lafayette Avenue and Ridge Road																
Westbound	LR	0.04	9.1	A	LR	0.04	9.1	A	LR	0.06	9.7	A	LR	0.06	9.7	A
Southbound	L	0.01	7.5	A	L	0.01	7.5	A	L	0.03	7.6	A	L	0.03	7.6	A
Notes: L = Left Turn, T = Through, R = Right Turn, LOS = Level of Service																
= Indicates notable deterioration in operating conditions																

MEASURES OF EFFECTIVENESS

For the 2021 With Action condition, several locations along the NYS Route 202/35 corridor exceed LOS D, the minimum acceptable LOS for state roadways as identified in Chapter 5 of the NYSDOT *Highway Design Manual (HDM)*. Variance from standard accepted values requires additional justification to warrant design trade-offs. In addition, additional Measures of Effectiveness (MOEs), quantitative where possible, are necessary to properly evaluate a corridor nearing or at fully saturated conditions. Based guidance provided in the HDM, queue lengths and corridor delay were also evaluated.

QUEUE CONDITIONS

Queue lengths are a quantitative measure of traffic demand. In saturated conditions, as is the case on the Route 202/35 corridor, queue lengths represent the unmet demand where a building queue indicates a worsening of congestion. A review of the Synchro 95th Percentile queue data shows that under 2021 With Action conditions the majority of intersection approaches and turning lanes which under 2021 No Action conditions extend to or beyond the storage length would be improved or continue to exceed the storage length under 2021 With Action conditions. Locations where the 95th percentile queues would exceed the storage capacity only under the 2021 With Action Condition (as a result of the Proposed Project) and would be considered an impact are listed below.

- The eastbound left turn lane at the intersection of Route 202/35 and Dayton Lane
- The eastbound shared through/right turn lane at the intersection of Route 202/35 and Gyrodyne Driveway/NYPH Driveway

- The westbound through lane at the intersection of Route 202/35 and Lafayette Avenue/NYPH Driveway
- The eastbound left turn lane at the intersection of Route 202/35 and Conklin Avenue
- The eastbound approach at the intersection of Route 202/35 and Bear Mountain Parkway
- The westbound left turn lane at the intersection of Route 202/35 and Croton Avenue/Maple Row

For the detailed queue results see **Appendix 11**.

CORRIDOR DELAY

Delay is a quantitative measure describing the additional time it takes to travel through a segment. Lane group delays as shown in **Table 11-22** identify the additional time it takes to make individual movements throughout the study area, but does not provide information on the additional travel time through a series of movements along a route. The total delay along a route, usually measured in minutes per vehicle, includes control, queue and geometric (due to added roadway curvature, increased travel distance, etc.) delay which represent the additional time for the average vehicle to travel a segment in each direction.

As the Proposed Project does not include changes in the alignment of Route 202/35 or other geometric modifications, the geometric delays are not anticipated to increase. Therefore, as only the queue and control delay would be effected by the Proposed Project, the Synchro approach delays were summarized for the 2021 No Action and 2021 With Action condition to identify the additional travel time for the Route 202/35 corridor in the study area with the Proposed Project. **Table 11-23** presents a comparison of the 2021 No Action and 2021 With Action corridor delays for the Proposed Project.

Table 11-23

2021 No Action and With Action Conditions Corridor Delay – Proposed Project

Intersection	Weekday AM			Weekday PM		
	2021 No Action Delay (mins/veh)	2021 With Action Delay (mins/veh)	Difference	2021 No Action Delay (mins/veh)	2021 With Action Delay (mins/veh)	Difference
Route 202/35 Dayton Lane to Conklin Avenue						
Eastbound	00:42.9	00:43.2	00:00.3	00:56.3	01:33.2	00:36.9
Westbound	00:52.0	00:58.8	00:06.8	01:07.9	01:35.8	00:27.9
Total	01:34.9	01:42.0	00:07.1	02:04.2	03:09.0	01:04.8
Route 202/35 Dayton Lane to Arlo Lane						
Eastbound	00:59.8	01:00.8	00:01.0	01:24.0	02:02.8	00:38.8
Westbound	01:35.6	01:44.4	00:08.8	01:52.4	02:23.6	00:31.2
Total	02:35.4	02:45.2	00:09.8	03:16.4	04:26.4	01:10.0
Route 202/35 Bear Mountain Parkway to Lexington Avenue						
Eastbound	04:04.3	06:51.0	02:46.7	06:40.7	18:32.7	11:52.0
Westbound	01:14.3	01:26.6	00:12.3	05:14.4	06:58.0	01:43.6
Total	05:18.6	08:17.6	02:59.0	11:55.1	25:30.7	13:35.6
Route 202/35 Dayton Lane to Lexington Avenue						
Eastbound	05:04.1	07:51.8	02:47.7	08:04.7	20:35.5	12:30.8
Westbound	02:49.9	03:11.0	00:21.1	07:06.8	09:21.6	02:14.8
Total	07:54.0	11:02.8	03:08.8	15:11.5	29:57.1	14:45.6

PARKING

The Proposed Project would provide approximately 563 parking spaces (383 surface lot spaces and 180 spaces located in a parking structure) on the Gyrodyne Project Site and 593 surface parking spaces on the Evergreen Project Site.

Parking generation rates and time-of-day distributions provided by the *ITE Parking Generation Manual, 5th Edition* were used to estimate the parking demand throughout a typical weekday for each land use on the Gyrodyne and Evergreen Project Sites. As the parking lots for Gyrodyne and Evergreen Projects are not connected, parking for each site was considered separately. In addition, based on the layout of the Gyrodyne Project Site parking spaces are considered shared for all land uses whereas the Evergreen Project Site provides shared parking for the retail, medical office, restaurant and hotel land uses (298 parking spaces) and distinct parking lots for the assisted living (75 parking spaces) and residential (220 parking spaces) buildings.

As shown in **Table 11-24** it is estimated that the peak period parking demand for a typical weekday would be 398 parking spaces on the Gyrodyne Project Site. As the Gyrodyne Project Site provides 563 parking spaces, the available parking supply would exceed the parking demand and it is not anticipated that the Gyrodyne project would result in a parking shortfall.

Table 11-24
Gyrodyne Project Site Time-of-Day Distribution of Parking Demand¹

Hour Beginning	Land Use			Total
	Residential ²	Medical Office ³	Eatery ⁴	
12:00 AM	259	0	0	259
1:00 AM	259	0	0	259
2:00 AM	259	0	0	259
3:00 AM	259	0	0	259
4:00 AM	259	0	0	259
5:00 AM	243	0	0	243
6:00 AM	215	0	4	219
7:00 AM	184	27	10	221
8:00 AM	158	98	26	282
9:00 AM	142	202	27	371
10:00 AM	140	227	29	396
11:00 AM	137	229	32	398
12:00 PM	130	190	38	358
1:00 PM	127	169	35	331
2:00 PM	127	215	21	363
3:00 PM	130	213	16	359
4:00 PM	150	197	16	363
5:00 PM	166	124	24	314
6:00 PM	174	0	33	207
7:00 PM	181	0	30	211
8:00 PM	197	0	25	222
9:00 PM	215	0	16	231
10:00 PM	233	0	8	241
11:00 PM	241	0	0	241

Notes:

1. Parking Demand was calculated using average rates or fitted curve equations and time-of-day distributions from the *ITE Parking Generation Manual, 5th Edition*
2. Residential peak period parking demand is based on the fitted curve equation for general urban/suburban apartments not nearby rail transit for land use code 221.
3. Medical Office peak period parking demand is based on the fitted curve equation for land use code 720.
4. Eatery/Restaurant peak period parking demand is based on the average rate for land use code 932.

As shown in **Table 11-25** it is estimated that the peak period parking demand for a typical weekday would be 440 parking spaces on the Evergreen Project Site which is less than the 593 parking spaces provided. The peak period parking demand for the shared parking associated with the hotel, retail, medical office, and restaurant land uses would be 288 parking spaces, less than the 298 parking spaces provided. In addition, both the assisted living peak period parking demand of 47 parking spaces and the residential peak period parking demand of 214 parking spaces are less than the 75 and 220 parking spaces provided, respectively. Therefore, it is anticipated that Evergreen project will not result in a parking shortfall.

Table 11-25
Evergreen Project Site Time-of-Day Distribution of Parking Demand¹

Hour Beginning	Land Use						Total
	Assisted Living ²	Hotel ³	Restaurant ⁴	Retail ⁵	Medical Office ⁶	Residential ⁷	
12:00 AM	0	71	0	0	0	214	285
1:00 AM	0	71	0	0	0	214	285
2:00 AM	0	71	0	0	0	214	285
3:00 AM	0	71	0	0	0	214	285
4:00 AM	0	71	0	0	0	214	285
5:00 AM	0	69	0	0	0	201	270
6:00 AM	0	67	7	0	0	178	252
7:00 AM	24	66	17	0	5	152	264
8:00 AM	29	67	45	18	19	131	309
9:00 AM	37	74	48	39	40	118	356
10:00 AM	39	73	51	66	45	116	390
11:00 AM	44	66	55	87	45	113	410
12:00 PM	45	63	66	122	37	107	440
1:00 PM	47	56	60	123	33	105	424
2:00 PM	45	60	37	111	42	105	400
3:00 PM	40	52	28	102	42	107	371
4:00 PM	35	55	28	100	39	124	381
5:00 PM	32	48	42	103	24	137	386
6:00 PM	29	54	57	106	0	143	389
7:00 PM	0	58	52	98	0	150	358
8:00 PM	0	69	43	77	0	163	352
9:00 PM	0	71	28	52	0	178	329
10:00 PM	0	70	14	18	0	193	295
11:00 PM	0	70	0	0	0	199	269

Notes:

1. Parking Demand was calculated using average rates or fitted curve equations and time-of-day distributions from the ITE Parking Generation Manual, 5th Edition
2. Assisted Living peak period parking demand is based on the average rate for land use code 254.
3. Hotel peak period parking demand is based on the average rate for land use code 310.
4. Eatery/Restaurant peak period parking demand is based on the average rate for land use code 932.
5. Retail peak period parking demand is on the fitted curve equation of the average peak parking demand for a non-Friday weekday (non-December) for land use code 820.
6. Medical Office peak period parking demand is based on the fitted curve equation for land use code 720.
7. Residential peak period parking demand is based on the fitted curve equation for general urban/suburban apartments not nearby rail transit for land use code 221.

TRAFFIC SAFETY CONDITIONS

With increased traffic volumes in the study area from the Proposed Project, it is possible that there would be an increase in the accident experience in the study area under 2021 With Action Conditions. Based on the anticipated increase in traffic due to the Proposed Project, and absent any improvement measures, the following intersections are estimated to have one or more additional accidents per year as compared to the 2021 No Action Condition:

- Route 202/35 and Gyrodyne/NYPH driveway (estimated 1.0 additional accidents/year)
- Route 202/35 and Conklin Avenue (estimated 1.7 additional accidents/year)

- Route 202/35 and Bear Mountain Parkway (estimated 1.3 additional accidents/year)
- Route 202/35 and Croton Avenue/Maple Row (estimated 1.0 additional accidents/year)

The estimated increases in accidents/year at the study area intersections are not anticipated to create or exacerbate traffic safety conditions without the Proposed Project (2021 No Action Condition).

PEDESTRIAN AND BICYCLE CONDITIONS

As part of the Proposed Project, pedestrian facilities providing connectivity between the Gyrodyne and Evergreen Project Sites as well as the NYPH are proposed. As shown on the Evergreen Site Plan, the internal sidewalks and crosswalks will provide accessibility throughout the site and will provide connection to Route 202/35 via a sidewalk along the west side of the proposed driveway to Route 202/35 at its intersections with Conklin Avenue. The Evergreen Project Site sidewalk will continue along the south side of Route 202/35 from Conklin Avenue to Lafayette Avenue. At the intersection of Route 202/35 and Lafayette Avenue/NYPH exit driveway, a crosswalk will be provided across the Lafayette Avenue approach to connect the Evergreen Project's sidewalk with the Gyrodyne Project's sidewalk. As shown on the Gyrodyne Site Plan, Gyrodyne will construct sidewalk along the south side of Route 202/35 from Lafayette Avenue to the Gyrodyne driveway/NYPH entrance driveway and continue into the Gyrodyne Project Site along the west side of the driveway with accessibility throughout the site. At the intersection of Route 202/35 and the Gyrodyne driveway/NYPH entrance driveway, crosswalks will be provided on all approaches.

PUBLIC TRANSPORTATION

No significant changes are expected in the study area's public transportation conditions under 2021 With Action Condition with the Proposed Project.

G. 2021 WITH ACTION CONDITION – PROPOSED ZONING ACTION

PROJECT DESCRIPTION

The MOD Zoning is the proposed zoning law for the MOD to establish a Medical Oriented District (MOD) in the area surrounding the existing New York Presbyterian Hospital (NYPH) facility including uses, bulk and density requirements. The Proposed Zoning Action would allow for the development of up to 200,000 gsf of new medical uses, 366 residential units, a 100 room hotel, 120 assisted living units, and 60,000 gsf commercial uses. Based on the Proposed Project's development, the MOD Zoning would allow for an additional 85,000 gsf of new medical use and 34,000 gsf commercial use beyond the MOD Development Plan.

For the purpose of the generic analysis and in consultation with the Town, it is assumed that the additional 85,000 gsf of new medical use would be developed on the NYPH site and both the Gyrodyne and Evergreen Project Sites would develop an additional 17,000 gsf of commercial use at a possible later phase.

PROJECT TRIP GENERATION

Similar to the methodology used for the Proposed Project, the estimated number of trips generated by the Proposed Zoning Action was based on trip generation rates provided by the *Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition)* using the Weekday AM and PM Peak Hour Generator and adjusting to reflect:

- Internalization – internal trips made between multiple land uses within the Project Sites;
- Mode share for transit, pedestrian, and bicycle trips; and

- Vehicle occupancy.

See **Appendix 11** for the detailed Trip Generation

~~The~~**additional** development allowed under the Proposed Zoning Action would generate approximately 235 and 341 net new trips (beyond the build out of the Proposed Project) during the Weekday AM and PM peak hours respectively. As shown in **Table 11-26**, it is estimated that the full build out of the Proposed Zoning Action (including the Proposed Project) would generate approximately 677 net new trips during the Weekday AM peak hour (369 entering, 308 exiting) and 1,012 net new trips during the Weekday PM peak hour (445 entering, 567 exiting).

PROJECT VEHICLE TRIP DISTRIBUTION AND ASSIGNMENT

Similar to the Proposed Project, the directional distribution of vehicle trips for the Proposed Zoning Action utilized the existing travel patterns in the study area for each peak hour and assigned trips to project driveways based the anticipated development locations summarized above. These trip distribution patterns are shown in **Figure 11-6** and represent the most logical approach and departure paths to and from the project site. **Figures 11-11** and **11-12** show the project generated vehicle trips for the Weekday AM and PM peak hours, respectively, for the Proposed Zoning Action.

LEVEL OF SERVICE CONDITIONS

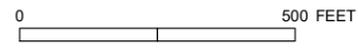
The project generated vehicle trips for the Proposed Zoning Action described above were added to the No Action traffic volumes in order to estimate the With Action traffic volumes. **Figures 11-13** and **11-14** show the 2021 With Action traffic volumes for the Weekday AM and PM peak hours, respectively, for the Proposed Zoning Action. **Table 11-27** presents a comparison of the 2021 No Action and 2021 With Action LOS conditions for the Proposed Zoning Action. Synchro 10 outputs for the 2021 With Action condition are provided in **Appendix 11**.

Under the 2021 With Action condition, absent any additional improvements beyond those specified for the Proposed Project, there would be impacts at the following locations;

- U.S. Route 6 and Dayton Lane—the northbound left turn movement would deteriorate from LOS D to LOS E during the Weekday PM peak hour.
- Route 202/35 and Lafayette Avenue/NYPH Driveway—the eastbound approach would deteriorate from LOS C to LOS F during the Weekday PM peak hour. The westbound through movement would deteriorate from LOS C to LOS D during the Weekday PM peak hour. The northbound approach would deteriorate from LOS D to LOS during the Weekday PM peak hour. The southbound shared left turn/through movement would deteriorate within LOS F during the Weekday AM and PM peak hours.
 - Route 202/35 and Conklin Avenue—the westbound approach would deteriorate from LOS C to LOS F during the Weekday PM peak hour.
 - Route 202/35 and Bear Mountain State Parkway—the eastbound approach would deteriorate within LOS F during the Weekday AM and PM peak hours. The westbound through movement would deteriorate from LOS C to LOS E during the Weekday PM peak hour.
 - Route 202/35 and Croton Avenue/Maple Row—the eastbound through movement would deteriorate from LOS E to LOS F during the Weekday AM peak hour. The westbound left turn movement would deteriorate from LOS B to LOS E during the Weekday PM peak hour. The westbound through/right turn movement would deteriorate within LOS F during the Weekday PM peak hour. The northbound left turn movement would deteriorate within LOS F during the Weekday AM and PM peak hours.



- Legend**
- Signalized Intersection
 - Unsignalized Intersection





Legend
 ● Signalized Intersection
 ○ Unsignalized Intersection



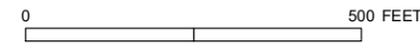
- Legend*
- *Signalized Intersection*
 - *Unsignalized Intersection*

CORTLANDT MOD

Project Generated Increments - Propsed Zoning Action
 Weekday PM Peak Hour
Figure 11-12a

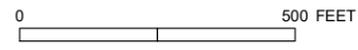


- Legend
- Signalized Intersection
 - Unsignalized Intersection





- Legend**
- Signalized Intersection
 - Unsignalized Intersection





2021 With Action Traffic Volumes - Proposed Zoning Action
 Weekday AM Peak Hour
Figure 11-13b



- Legend**
- Signalized Intersection
 - Unsignalized Intersection

**Table 11-26
Proposed Zoning Action Trip Generation**

Building Component	Development Size ¹	Peak Hour	ITE Data ²					Trip Generation											
			ITE Land Use		Independent Variable	ITE Trip Rate	Total Trips	% In	% Out	Total Trips		Internal Trips		Non-Motorized, Carpool, Transit		Final Adjusted Trips ³		External Trips	
			#	Name						In	Out	In	Out	In	Out	In	Out		
Gyrodyne																			
Residential (Apartments)	200	Units	AM	221	Multifamily Housing (Mid-Rise)	Dwelling Units	0.32	64	0.27	0.73	17	47	1	7	1	1	15	39	54
			PM	221	Multifamily Housing (Mid-Rise)	Dwelling Units	0.41	82	0.60	0.40	49	33	19	11	1	1	29	21	50
Medical Office	100	Ksf	AM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	3.53	223	0.62	0.38	138	85	14	17	1	0	123	68	191
			PM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	4.10	410	0.39	0.61	160	250	3	6	0	3	157	241	398
Eatery	4	Ksf	AM	932	High Turnover (Sit-down) Restaurant	1,000 SF Gross Floor Area	14.04	56	0.52	0.48	29	27	17	12	0	0	12	15	27
			PM	932	High Turnover (Sit-down) Restaurant	1,000 SF Gross Floor Area	17.41	70	0.50	0.50	35	35	14	21	0	0	21	14	35
Retail	17	Ksf	AM	820	Shopping Center	1,000 SF Leasable Area	3.00	33	0.54	0.46	18	15	13	8	0	0	15	15	30
			PM	820	Shopping Center	1,000 SF Leasable Area	4.21	46	0.50	0.50	23	23	23	21	0	0	13	15	28
Medical Office (To Be Removed)	30	Ksf	AM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	-3.53	-76	0.62	0.38	-47	-29	0	0	0	0	-47	-29	-76
			PM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	-4.10	-123	0.39	0.61	-48	-75	0	0	0	0	-48	-75	-123
Gyrodyne AM Net Trips																118	108	226	
Gyrodyne PM Net Trips																172	216	388	
Evergreen																			
Assisted Living	120	Beds	AM	254	Assisted Living	Beds	0.18	22	0.67	0.33	15	7	0	0	0	0	15	7	22
			PM	254	Assisted Living	Beds	0.34	41	0.45	0.55	18	23	0	0	0	0	18	23	41
Hotel	100	Rooms	AM	310	Hotel	Rooms	0.54	45	0.54	0.46	24	21	1	4	2	0	21	17	38
			PM	310	Hotel	Rooms	0.61	49	0.58	0.42	28	21	8	5	0	0	20	16	36
Eatery	7	Ksf	AM	932	High Turnover (Sit-down) Restaurant	1,000 SF Gross Floor Area	14.04	98	0.52	0.48	51	47	29	11	0	0	22	36	58
			PM	932	High Turnover (Sit-down) Restaurant	1,000 SF Gross Floor Area	17.41	122	0.50	0.50	61	61	24	37	1	0	36	24	60
Retail	32	Ksf	AM	820	Shopping Center	1,000 SF Leasable Area	3.00	78	0.54	0.46	42	36	10	7	0	0	42	37	79
			PM	820	Shopping Center	1,000 SF Leasable Area	4.21	110	0.50	0.50	55	55	41	39	0	0	27	29	56
Medical/Dental Laboratory	15	Ksf	AM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	3.53	41	0.62	0.38	25	16	6	15	0	0	19	1	20
			PM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	4.10	62	0.39	0.61	24	38	5	9	0	0	19	29	48
Residential (Apartments)	166	Units	AM	221	Multifamily Housing (Mid-Rise)	Dwelling Units	0.32	53	0.27	0.73	14	39	1	9	1	1	12	29	41
			PM	221	Multifamily Housing (Mid-Rise)	Dwelling Units	0.41	68	0.60	0.40	41	27	23	9	1	1	17	17	34
Evergreen AM Net Trips																131	127	258	
Evergreen PM Net Trips																137	138	275	
New York-Presbyterian Hospital (NYPH)																			
Medical Office	85	Ksf	AM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	3.53	193	0.62	0.38	120	73	0	0	0	0	120	73	193
			PM	720	Medical-Dental Office Building	1,000 SF Gross Floor Area	4.10	349	0.39	0.61	136	213	0	0	0	0	136	213	349
NYPH AM Net Trips																120	73	193	
NYPH PM Net Trips																136	213	349	
Total External AM Trips																369	308	677	
Total External PM Trips																445	567	1012	
Notes:																			
ksf = 1,000 square feet																			
1. Development sizes and uses are preliminary and are subject to change.																			
2. Rates shown are average generator peak hour rates from the <i>Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition</i>																			
3. Final Adjusted Trips are calculated by subtracting internal, non-motorized, carpool, and transit trips from the Total Trips																			

**Table 11-27
2021 No Action and With Action Conditions Analysis - MOD Zoning**

Intersection	Weekday AM								Weekday PM							
	2021 No Action				2021 With Action				2021 No Action				2021 With Action			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Signalized Intersections																
Route 6 and Dayton Lane																
Eastbound	L	0.04	5.3	A	L	0.04	5.8	A	L	0.09	10.1	B	L	0.10	10.7	B
	TR	0.29	9.4	A	TR	0.31	9.4	A	TR	0.55	21.3	C	TR	0.61	23.4	C
Westbound	L	0.13	5.5	A	L	0.13	6.0	A	L	0.40	12.7	B	L	0.44	14.5	B
	TR	0.16	9.8	A	TR	0.17	10.4	B	TR	0.33	17.2	B	TR	0.34	18.4	B
Northbound	L	0.41	32.8	C	L	0.57	37.4	D	L	0.83	48.6	D	L	0.91	57.8	E
	TR	0.24	27.7	C	TR	0.22	26.9	C	TR	0.13	23.5	C	TR	0.12	23.0	C
Southbound	LT	0.54	36.1	D	LT	0.50	34.2	C	LT	0.08	22.9	C	LT	0.07	22.5	C
	R	0.31	19.7	B	R	0.29	19.2	B	R	0.07	14.2	B	R	0.07	14.0	B
	Intersection			B	Intersection			B	Intersection			C	Intersection			C
Route 6 and Conklin Avenue																
Eastbound	L	0.01	2.6	A	L	0.01	2.9	A	L	0.02	3.3	A	L	0.02	4.0	A
	TR	0.18	5.1	A	TR	0.18	5.2	A	TR	0.29	6.2	A	TR	0.29	7.5	A
Westbound	L	0.26	3.4	A	L	0.32	4.1	A	L	0.34	5.2	A	L	0.45	7.4	A
	TR	0.16	3.2	A	TR	0.16	3.4	A	TR	0.22	4.0	A	TR	0.22	5.5	A
Northbound	LT	0.24	55.2	E	LT	0.23	54.0	D	LT	0.35	57.1	E	LT	0.33	54.2	D
	R	0.71	19.8	B	R	0.74	19.4	B	R	0.75	18.3	B	R	0.79	17.6	B
Southbound	LTR	0.23	33.4	C	LTR	0.22	32.7	C	LTR	0.42	38.1	D	LTR	0.39	35.6	D
	Intersection			A	Intersection			A	Intersection			A	Intersection			B
Route 6 and Lexington Avenue																
Eastbound	L	0.34	17.8	B	L	0.33	17.5	B	L	0.95	95.7	F	L	0.95	95.8	F
	TR	0.93	53.8	D	TR	0.94	54.3	D	TR	1.16	120.7	F	TR	1.18	128.6	F
Westbound	L	0.53	24.5	C	L	0.55	25.9	C	L	0.58	42.5	D	L	0.60	44.6	D
	TR	0.83	41.8	D	TR	0.82	41.1	D	TR	1.17	127.0	F	TR	1.17	127.9	F
Northbound	L	0.39	39.8	D	L	0.42	40.8	D	L	1.04	115.3	F	L	1.09	130.1	F
	TR	0.93	87.9	F	TR	0.97	95.9	F	TR	0.74	74.5	E	TR	0.79	77.7	E
Southbound	L	0.55	45.1	D	L	0.58	47.0	D	L	0.36	46.1	D	L	0.39	46.7	D
	TR	0.67	62.3	E	TR	0.69	64.2	E	TR	0.96	107.7	F	TR	0.97	109.5	F
	Intersection			D	Intersection			D	Intersection			F	Intersection			F
Route 202/35 and Gyrodyne/NYPH Driveway																
Eastbound	Intersection Unsignalized in No Action Condition				L	0.43	9.0	A	Intersection Unsignalized in No Action Condition				L	0.51	18.4	B
					TR	0.52	6.6	A					TR	0.52	8.1	A
Westbound					L	0.24	1.6	A					L	0.27	2.0	A
					TR	0.66	4.8	A					TR	0.84	12.2	B
Northbound					LT	0.36	45.7	D					LT	0.47	46.9	D
	R	0.40	11.9	B	R	0.50	10.7	B								
	Intersection			B	Intersection			B	Intersection			B	Intersection			B
Route 202/35 and Lafayette Avenue/NYPH Driveway																
Eastbound	TR	0.62	22.4	C	TR	0.79	26.3	C	TR	0.78	33.3	C	TR	1.08	84.8	F
Westbound	L	0.14	14.6	B	L	0.21	13.2	B	L	0.41	20.6	C	L	0.60	18.2	B
	T	0.58	22.7	C	T	0.78	30.8	C	T	0.67	32.5	C	T	0.95	53.9	D
Northbound	LTR	0.61	20.6	C	LTR	0.66	24.3	C	LTR	0.85	47.0	D	LTR	0.93	62.8	E
Southbound	LT	0.78	83.9	F	LT	1.14	164.2	F	LT	1.43	267.1	F	LT	2.49	713.5	F
	R	0.14	0.9	A	R	0.23	2.5	A	R	0.37	9.4	A	R	0.59	19.1	B
	Intersection			C	Intersection			D	Intersection			D	Intersection			F

Table 11-27 (cont'd)
2021 No Action and With Action Conditions Analysis - MOD Zoning

Intersection	Weekday AM								Weekday PM										
	2021 No Action				2021 With Action				2021 No Action				2021 With Action						
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS			
Signalized Intersections (continued)																			
Route 202/35 and Conklin Avenue/Evergreen Driveway																			
Eastbound	L	0.37	2.2	A	L	0.47	3.7	A	L	0.50	5.2	A	L	0.62	5.8	A			
	T	0.36	1.8	A	TR	0.53	4.9	A	T	0.39	1.0	A	T	0.64	3.4	A			
Westbound	TR	0.52	13.1	B	LTR	0.86	29.7	C	TR	0.69	20.8	C	TR	1.14	102.1	F			
Northbound	L	-	-	-	L	0.86	118.9	F	L	-	-	-	L	0.93	137.9	F			
	TR	-	-	-	TR	0.27	14.5	B	TR	-	-	-	TR	0.33	15.3	B			
Southbound	L	0.48	51.5	D	L	0.51	49.5	D	L	0.46	51.1	D	L	0.50	50.4	D			
	R	0.53	15.3	B	TR	0.63	12.4	B	R	0.32	9.7	A	R	0.56	13.5	B			
Intersection		10.7		B	Intersection		19.9		B	Intersection		13.0		B	Intersection		47.8		D
Route 202/35 and Bear Mountain Parkway																			
Eastbound	LT	1.01	88.3	F	LT	1.77	384.6	F	LT	1.44	249.6	F	LT	5.76	2164.8	F			
Westbound	T	0.45	19.7	B	T	0.61	24.4	C	T	0.61	20.9	C	T	0.81	70.2	E			
	R	0.46	5.1	A	R	0.48	9.5	A	R	0.69	16.7	B	R	0.72	23.4	C			
Southbound	LR	1.36	214.8	F	LR	1.37	217.4	F	LR	1.02	118.2	F	LR	1.03	118.5	F			
Intersection		103.4		F	Intersection		180.2		F	Intersection		94.8		F	Intersection		646.9		F
Route 202/35 and Croton Avenue/Maple Row																			
Eastbound	L	0.13	2.6	A	L	0.17	3.3	A	L	0.33	28.2	C	L	0.33	24.8	C			
	T	1.02	59.0	E	T	1.12	73.1	E	T	0.88	59.9	E	T	1.06	63.0	E			
Westbound	R	0.25	1.6	A	R	0.28	2.5	A	R	0.14	1.7	A	R	0.21	3.2	A			
	L	1.04	124.6	F	L	1.04	124.6	F	L	0.56	17.8	B	L	0.84	77.3	E			
Northbound	TR	0.67	20.8	C	TR	0.79	26.4	C	TR	1.12	93.5	F	TR	1.25	149.7	F			
	L	1.66	373.8	F	L	2.09	552.1	F	L	0.97	120.4	F	L	1.26	202.2	F			
Southbound	TR	0.42	26.7	C	TR	0.42	26.7	C	TR	0.42	37.0	D	TR	0.42	37.0	D			
	LTR	0.99	108.4	F	LTR	0.99	108.4	F	LTR	0.73	71.2	E	LTR	0.73	72.4	E			
Intersection		67.9		E	Intersection		87.1		F	Intersection		71.8		E	Intersection		102.5		F
Route 202/35 and Lexington Avenue																			
Eastbound	L	0.18	7.5	A	L	0.33	11.5	B	L	0.58	25.1	C	L	0.66	30.9	C			
	TR	1.18	112.6	F	TR	1.26	147.6	F	TR	1.16	107.1	F	TR	1.34	182.9	F			
Westbound	L	0.11	7.4	A	L	0.11	7.5	A	L	0.20	9.5	A	L	0.20	10.0	A			
	T	0.82	26.1	C	T	0.96	42.9	D	T	1.50	253.0	F	T	1.68	333.2	F			
Northbound	R	0.12	2.9	A	R	0.12	2.9	A	R	0.30	4.9	A	R	0.31	6.1	A			
	LTR	0.14	28.9	C	LTR	0.19	30.7	C	LTR	0.21	31.6	C	LTR	0.29	34.6	C			
Southbound	LT	0.77	50.8	D	LT	0.79	54.1	D	LT	0.84	59.7	E	LT	0.85	62.9	E			
	R	0.21	9.0	A	R	0.25	11.3	B	R	0.22	10.0	A	R	0.27	13.3	B			
Intersection		67.0		E	Intersection		88.7		F	Intersection		147.6		F	Intersection		207.8		F
Unsignalized Intersections																			
Dayton Lane and Beach Shopping Center North Driveway																			
Westbound	LR	0.16	11.1	B	LR	0.18	11.8	B	LR	0.26	14.3	B	LR	0.30	16.3	C			
Southbound	L	0.04	7.6	A	L	0.04	7.7	A	L	0.06	8.3	A	L	0.06	8.6	A			
Dayton Lane and Beach Shopping Center South Driveway																			
Westbound	LR	0.10	11.5	B	LR	0.11	12.3	B	LR	0.92	73.4	F	LR	1.12	138.4	F			
Southbound	L	0.02	7.7	A	L	0.02	7.8	A	L	0.14	9.3	A	L	0.15	9.7	A			
Route 202/35 and Dayton Lane																			
Eastbound	L	0.12	8.8	A	L	0.14	9.4	A	L	0.18	10.6	B	L	0.22	12.4	B			
Southbound	LR	1.33	225.2	F	LR	2.31	666.3	F	LR	1.80	421.2	F	LR	3.71	1301.1	F			
Route 202/35 and Buttonwood Avenue																			
Westbound	L	0.01	9.3	A	L	0.01	10.0	B	L	0.00	8.8	A	L	0.00	9.5	A			
Northbound	LR	0.18	22.5	C	LR	0.26	33.3	D	LR	0.02	18.8	C	LR	0.03	28.4	D			

Table 11-27 (cont'd)
2021 No Action and With Action Conditions Analysis - MOD Zoning

Intersection	Weekday AM								Weekday PM							
	2021 No Action				2021 With Action				2021 No Action				2021 With Action			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Unsignalized Intersections (continued)																
Route 202/35 and Cortlandt Medical Driveway/NYPH Driveway																
Eastbound	L	0.13	9.8	A	Intersection Signalized in Action Condition				L	0.06	10.2	B	Intersection Signalized in Action Condition			
Westbound	L	0.04	8.9	A					L	0.01	8.7	A				
Northbound	LTR	0.04	17.0	C					LTR	0.15	18.9	C				
Route 202/35 and Tamarack Drive																
Westbound	L	0.00	8.6	A	L	0.00	9.2	A	L	0.03	9.1	A	L	0.04	10.3	B
Northbound	LR	0.13	19.7	C	LR	0.24	33.0	D	LR	0.09	20.6	C	LR	0.25	51.6	F
Route 202/35 and Dimond Avenue/ShIPLEY Drive																
Eastbound	L	0.00	0.0	A	L	0.00	0.0	A	L	0.01	9.3	A	L	0.02	10.3	B
Westbound	L	0.01	8.7	A	L	0.01	9.3	A	L	0.03	8.8	A	L	0.03	9.9	A
Northbound	LTR	0.12	14.7	B	LTR	0.17	19.6	C	LTR	0.49	31.0	D	LTR	1.02	151.3	F
Southbound	LTR	0.03	11.3	B	LTR	0.04	13.1	B	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Route 202/35 and Locust Avenue																
Eastbound	L	0.01	8.4	A	L	0.01	9.0	A	L	0.03	9.1	A	L	0.04	10.1	B
Southbound	LTR	0.40	30.2	D	LTR	0.71	76.6	F	LTR	0.09	14.7	B	LTR	0.15	19.8	C
Route 202/35 and Crestview Avenue																
Westbound	L	0.00	8.7	A	L	0.00	9.3	A	L	0.00	8.8	A	L	0.00	9.9	A
Northbound	LTR	0.09	19.7	C	LTR	0.14	30.1	D	LTR	0.03	17.7	C	LTR	0.05	29.7	D
Route 202/35 and Forest Avenue																
Westbound	L	0.01	8.8	A	L	0.01	9.4	A	L	0.01	8.9	A	L	0.01	10.1	B
Northbound	LR	0.05	15.8	C	LR	0.07	21.1	C	LR	0.06	19.3	C	LR	0.11	34.0	D
Route 202/35 and Rick Lane																
Westbound	L	0.01	8.8	A	L	0.01	9.4	A	L	0.01	8.9	A	L	0.01	10.1	B
Northbound	LR	0.04	18.8	C	LR	0.07	27.2	D	LR	0.05	19.2	C	LR	0.09	33.5	D
Route 202/35 and Arlo Lane																
Eastbound	L	0.01	8.5	A	L	0.02	9.1	A	L	0.04	9.3	A	L	0.07	10.4	B
Southbound	LR	0.09	13.4	B	LR	0.14	16.8	C	LR	0.07	18.6	C	LR	0.18	27.4	D
Bear Mountain Parkway and Locust Avenue																
Westbound	L	0.00	8.8	A	L	0.01	8.9	A	L	0.03	9.1	A	L	0.00	9.3	A
Northbound	R	0.03	12.4	B	R	0.03	12.5	B	R	0.09	14.7	B	R	0.02	13.9	B
Bear Mountain Parkway and Arlo Lane																
Eastbound	L	0.01	8.6	A	L	0.01	8.6	A	L	0.01	9.6	A	L	0.01	9.6	A
Westbound	L	0.00	9.6	A	L	0.00	9.6	A	L	0.00	0.0	A	L	0.00	0.0	A
Northbound	LTR	0.44	64.4	F	LTR	0.55	77.9	F	LTR	0.79	138.6	F	LTR	1.09	225.6	F
Southbound	LTR	0.33	35.2	E	LTR	0.33	36.0	E	LTR	0.13	22.0	C	LTR	0.13	22.3	C
Lafayette Avenue and Ridge Road																
Westbound	LR	0.04	9.1	A	LR	0.04	9.1	A	LR	0.06	9.7	A	LR	0.06	9.8	A
Southbound	L	0.01	7.5	A	L	0.01	7.5	A	L	0.03	7.6	A	L	0.03	7.7	A
Notes: * Indicates exceeds Synchro capacity using HCM 2010																

- Route 202/35 and Lexington Avenue—the eastbound through/right turn movement would deteriorate within LOS F during the Weekday AM and PM peak hours. The westbound through movement would deteriorate within LOS F during the Weekday PM peak hour.
- Dayton Lane and Beach Shopping Center South Driveway—the westbound left turn/right turn movement would deteriorate within LOS F during the Weekday PM peak hour.
- Route 202/35 and Dayton Lane—the southbound approach would deteriorate within LOS F during the Weekday AM and PM peak hours.
- Route 202/35 and Tamarack Drive—the northbound approach would deteriorate from LOS C to LOS F during the Weekday PM peak hour.
- Route 202/35 and Shipley Drive—the northbound approach would deteriorate from LOS D to LOS F during the Weekday PM peak hour.
- Route 202/35 and Locust Avenue—the southbound approach would deteriorate from LOS D to LOS F during the Weekday AM peak hour.
- Bear Mountain Parkway and Arlo Lane—the northbound approach would deteriorate within LOS F during the Weekday AM and PM peak hours.

MEASURES OF EFFECTIVENESS

For the 2021 With Action condition with the Proposed Zoning Action, several locations along the NYS Route 202/35 corridor exceed LOS D, the minimum acceptable LOS for state roadways as identified in Chapter 5 of the NYSDOT *Highway Design Manual (HDM)*. Variance from standard accepted values requires additional justification to warrant design trade-offs. In addition, additional Measures of Effectiveness (MOEs), quantitative where possible, are necessary to properly evaluate a corridor nearing or at fully saturated conditions. Based guidance provided in the HDM, queue lengths and corridor delay were also evaluated.

QUEUE CONDITIONS

Queue lengths are a quantitative measure of traffic demand. In saturated conditions, as is the case on the Route 202/35 corridor, queue lengths represent the unmet demand where a building queue indicates a worsening of congestion. A review of the Synchro 95th Percentile queue data shows that under 2021 With Action conditions with the Proposed Zoning Action the majority of intersection approaches and turning lanes which under 2021 No Action conditions extend to or beyond the storage length would be improved or continue to exceed the storage length under 2021 With Action conditions. Locations where the 95th percentile queues would exceed the storage capacity only under the 2021 With Action Condition (as a result of the Proposed Zoning Action) and would be considered an impact are listed below.

- The northbound left turn lane at the intersection of Route 6 and Dayton Lane
- The eastbound left turn lane at the intersection of Route 202/35 and Dayton Lane
- The eastbound and westbound shared through/right turn lanes at the intersection of Route 202/35 and Gyrodyne Driveway/NYPH Driveway
- The westbound through lane at the intersection of Route 202/35 and Lafayette Avenue/NYPH Driveway
- The eastbound left turn lane at the intersection of Route 202/35 and Conklin Avenue
- The eastbound approach at the intersection of Route 202/35 and Bear Mountain Parkway
- The westbound left turn lane at the intersection of Route 202/35 and Croton Avenue/Maple Row

For the detailed queue results see **Appendix 11**.

CORRIDOR DELAY

Delay is a quantitative measure describing the additional time it takes to travel through a segment. Lane group delays for the Proposed Zoning Action as shown in **Table 11-27** identify the additional time it takes to make individual movements throughout the study area, but does not provide information on the additional travel time through a series of movements along a route. The total delay along a route, usually measured in minutes per vehicle, includes control, queue and geometric (due to added roadway curvature, increased travel distance, etc.) delay which represent the additional time for the average vehicle to travel a segment in each direction.

As the Proposed Zoning Action does not include changes in the alignment of Route 202/35 or other geometric modifications, the geometric delays are not anticipated to increase. Therefore, as only the queue and control delay would be effected by the Proposed Zoning Action, the Synchro approach delays were summarized for the 2021 No Action and 2021 With Action condition to identify the additional travel time for the Route 202/35 corridor in the study area with the Proposed Zoning Action. **Table 11-28** presents a comparison of the 2021 No Action and 2021 With Action corridor delays for the Proposed Zoning Action.

Table 11-28
2021 No Action and With Action Conditions Corridor Delay – Proposed Zoning Action

Intersection	Weekday AM			Weekday PM		
	2021 No Action Delay (mins/veh)	2021 With Action Delay (mins/veh)	Difference (mins/veh)	2021 No Action Delay (mins/veh)	2021 With Action Delay (mins/veh)	Difference (mins/veh)
Route 202/35 Dayton Lane to Conklin Avenue						
Eastbound	00:42.9	00:43.4	00:00.5	00:56.3	01:50.5	00:54.2
Westbound	00:52.0	00:59.1	00:07.1	01:07.9	02:52.6	01:44.7
Total	01:34.9	01:42.5	00:07.6	02:04.2	04:43.1	02:38.9
Route 202/35 Dayton Lane to Arlo Lane						
Eastbound	00:59.8	01:01.5	00:01.7	01:24.0	02:21.3	00:57.3
Westbound	01:35.6	01:45.7	00:10.1	01:52.4	03:42.9	01:50.5
Total	02:35.4	02:47.2	00:11.8	03:16.4	06:04.2	02:47.8
Route 202/35 Bear Mountain Parkway to Lexington Avenue						
Eastbound	04:04.3	06:51.0	02:46.7	06:40.7	39:45.7	33:05.0
Westbound	01:14.3	01:26.6	00:12.3	05:14.4	07:51.5	02:37.1
Total	05:18.6	08:17.6	02:59.0	11:55.1	47:37.2	35:42.1
Route 202/35 Dayton Lane to Lexington Avenue						
Eastbound	05:04.1	07:52.5	02:48.4	08:04.7	42:07.0	34:02.3
Westbound	02:49.9	03:12.3	00:22.4	07:06.8	11:34.4	04:27.6
Total	07:54.0	11:04.8	03:10.8	15:11.5	53:41.4	38:29.9

PARKING

The Proposed Zoning Action would allow for 85,000 gsf of medical use and 34,000 gsf of commercial use in addition to the Proposed Project. For the purpose of the generic analysis and in consultation with the Town, it is assumed that the additional 85,000 gsf of new medical use would be developed on the NYPH site and both the Gyrodyne and Evergreen Project Sites would develop an additional 17,000 gsf of commercial use at a possible later phase.

The Proposed Project would provide approximately 563 parking spaces (383 surface lot spaces and 180 spaces located in a parking structure) on the Gyrodyne Project Site and 593 surface parking spaces on the Evergreen Project Site. As shown in **Table 11-24** above, it is estimated that the peak period parking demand for a typical weekday would be 398 parking spaces on the Gyrodyne Project Site. With the additional 17,000 gsf of commercial use, it is estimated that the

peak period parking demand for a typical weekday would increase to 487 parking spaces. As the Gyrodyne Project Site under the Proposed Project provides 563 parking spaces, the available parking supply would exceed the parking demand and it is not anticipated that additional parking would be required.

As shown in **Table 11-25** above, it is estimated that the peak period parking demand for a typical weekday would be 440 parking spaces on the Evergreen Project Site. With the additional 17,000 gsf of commercial use, it is estimated that the peak period parking demand for a typical weekday would increase to 465 parking spaces. As the Evergreen Project Site under the Proposed Project provides 593 parking spaces, the available parking supply would exceed the parking demand. However, because the Evergreen Project Site provides some shared and some distinct parking lots, depending on the location of the commercial use, additional parking may be required.

If the NYPH were to construct an additional 85,000 gsf of new medical use, it is estimated that the peak period parking demand for a typical weekday would be 279 parking spaces. However, depending on the nature of the medical use (office space, hospital expansion, etc.) the actual demand may vary. If the new medical use is similar to what exists on the existing NYPH campus, a parking survey should be conducted to determine existing peak parking demand and to estimate the future peak parking demand.

See **Appendix 11** for the estimated peak period parking demand for a typical weekday for the Gyrodyne, Evergreen and NYPH Project Sites with the Proposed Zoning Action.

TRAFFIC SAFETY CONDITIONS

With increased traffic volumes in the study area from the Proposed Zoning Action, it is possible that there would be an increase in the accident experience in the study area under 2021 With Action Conditions. Based on the anticipated increase in traffic due to the Proposed Zoning Action, and absent any improvement measures, the following intersections are estimated to have one or more additional accidents per year as compared to the 2021 No Action Condition:

- Route 202/35 and Gyrodyne/NYPH driveway (estimated 1.0 additional accidents/year)
- Route 202/35 and Conklin Avenue (estimated 1.7 additional accidents/year)
- Route 202/35 and Locust Avenue (estimated 1.0 additional accidents/year)
- Route 202/35 and Bear Mountain Parkway (estimated 2.0 additional accidents/year)
- Route 202/35 and Croton Avenue/Maple Row (estimated 1.3 additional accidents/year)

The estimated increases in accidents/year at the study area intersections are not anticipated to create or exacerbate traffic safety conditions without the Proposed Project (2021 No Action Condition).

PEDESTRIAN AND BICYCLE CONDITIONS

In addition to the pedestrian facilities being provided as part of the Proposed Project described in Section F above, additional pedestrian facilities should be considered to further enhance the pedestrian network within the MOD and the interconnectivity to the existing pedestrian facilities in the adjacent municipality of the City of Peekskill. Site Plan Approval for additional development within the MOD beyond the Proposed Project will be required and additional pedestrian facilities will be identified.

PUBLIC TRANSPORTATION

No significant changes are expected in the study area's public transportation conditions under 2021 With Action Condition with the Proposed Zoning Action.

H. TRAFFIC MITIGATION – MOD DEVELOPMENT PLAN

For the impacted locations described in **Table 11-1**, mitigation measures, such as signal installation or retiming and roadway restriping, were examined as a means to improve traffic operating conditions. In addition, improvement measure for impacts to queue lengths and deterioration of corridor delay were also assessed. A discussion of the recommended mitigation measures is provided below.

MITIGATION MEASURES

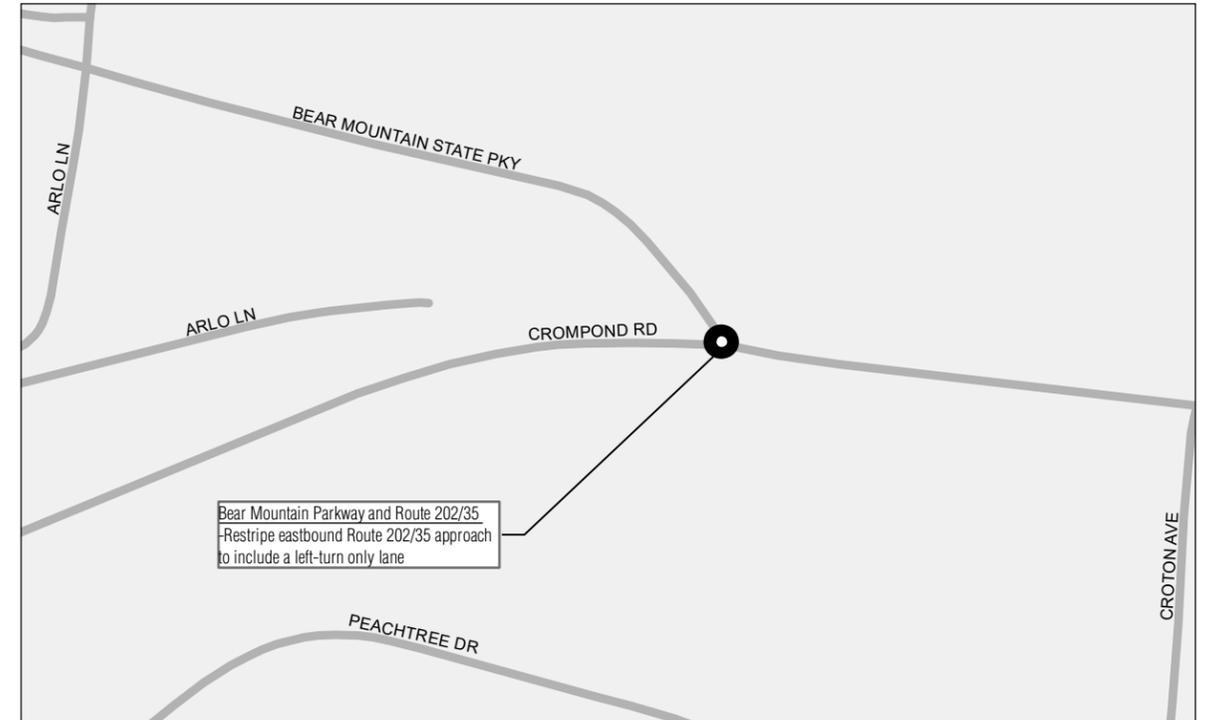
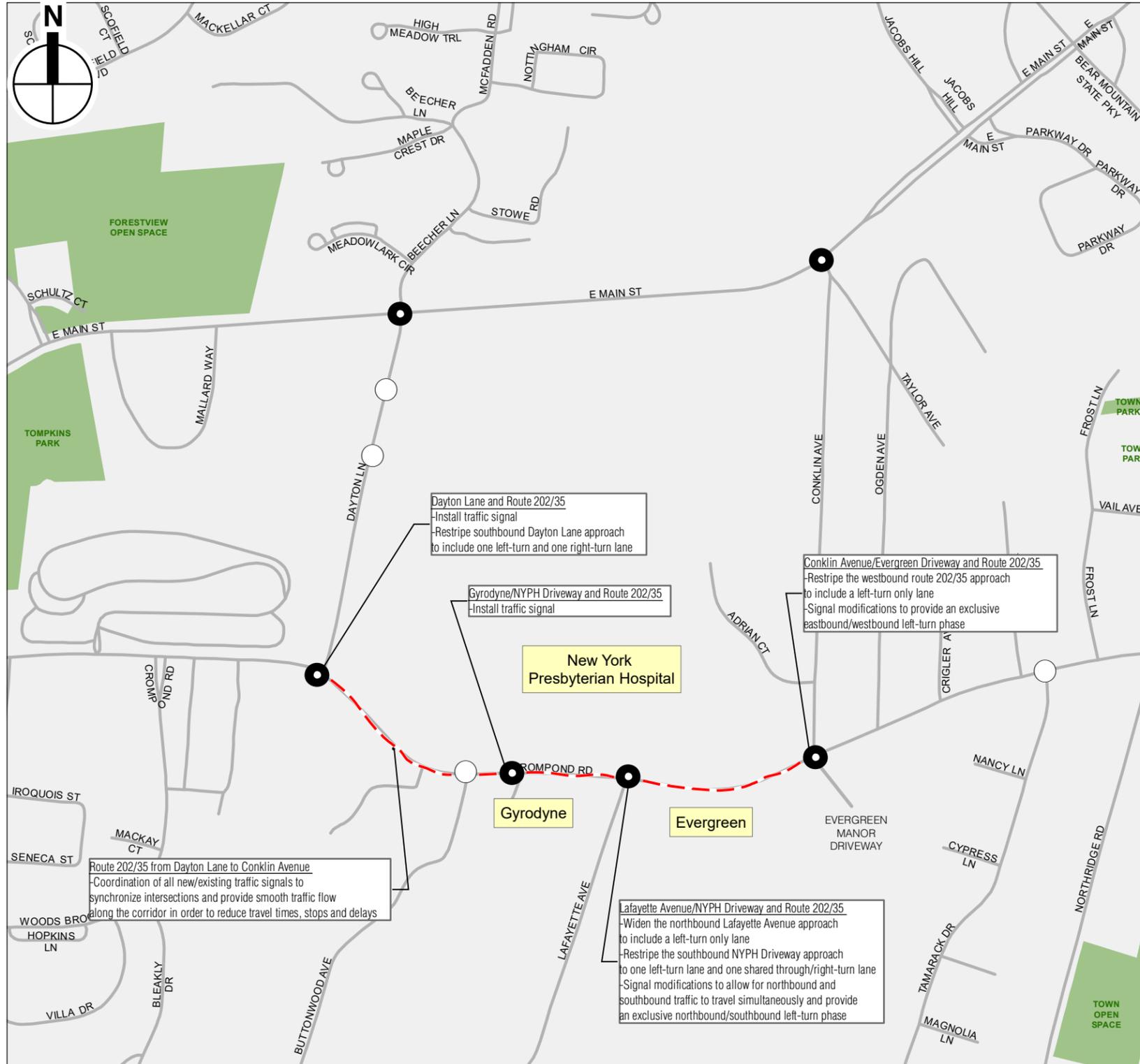
Table 11-29 and **Figure 11-15** presents the recommended mitigation measures that address the identified impacts with the proposed MOD Development Plan.

With the implementation of these mitigation measures which are subject to review and approval by the Town and NYSDOT, the significant adverse traffic impacts identified above in Section F could be fully mitigated except for the signalized intersections of Route 202/35 and Bear Mountain Parkway (Weekday PM peak hour), Route 202/35 and Croton Avenue/Maple Row (Weekday AM and PM peak hours) and Route 202/35 and Lexington Avenue (Weekday PM peak hour). In addition, the unsignalized intersections of Dayton Lane and Beach Shopping Center south driveway (weekday PM peak hour), Route 202/35 and Tamarack Drive (Weekday PM peak hour), Route 202/35 and Shipley Drive/Diamond Avenue (Weekday PM peak hour), Route 202/35 and Locust Avenue (Weekday AM peak hour), and Bear Mountain Parkway and Arlo Lane (Weekday AM and PM peak hours) could not be fully mitigated.

ROUTE 202/35 AND BEAR MOUNTAIN PARKWAY AND CROTON AVENUE/MAPLE ROW

The intersections of Route 202/35 and Bear Mountain Parkway and Route 202/35 and Croton Avenue/Maple Row are located approximately 1.2 miles from the MOD Development Plan, however under existing conditions are operating at or over capacity. The 2021 No Action Condition shows considerable deterioration to the Route 202/35 and Bear Mountain Parkway approaches without any proposed improvements to increase capacity. In addition, these locations are not currently included on the Statewide Transportation Improvements Plan (STIP), a comprehensive list of projects in New York State proposed to receive federal funding for improvements. As such, they represent an existing choke point along the corridor. Furthermore, as the two intersections are closely spaced and operate as a single traffic signal, signal retiming is not feasible unless coupled with increasing the roadway capacity. Increasing the roadway capacity for the critical eastbound approach is not feasible as sufficient right-of-way does not exist due to the NYCDEP aqueduct in the vicinity of the approach.

With signal retiming and increasing capacity being unfeasible mitigation measures, diverting trips away from the area of congestion would be the most cost effective and practical improvement to operating conditions. As shown in **Figures 11-2** and **11-3**, approximately 27 and 30 vehicles currently make an eastbound left turn from Route 202/35 to the Bear Mountain Parkway during the Weekday AM and PM peak hours, respectively. However, the limited vehicles making a left turn have the potential to create substantial delay for the larger number of eastbound through vehicles as the eastbound approach of Route 202/35 is not wide enough to accommodate vehicles maneuvering around waiting left turn vehicles. In addition, the eastbound left turn is a difficult maneuver due to the alignment of Route 202/35 with the Bear Mountain Parkway, a factor which may be contributing to the high crash rate at this location. After consultation with the Town of Cortlandt, it is recommended that the eastbound left turn be banned and the limited number of vehicles wishing to travel northbound on Bear Mountain Parkway from Route 202/35 be rerouted via wayfinding signage to Conklin Avenue where vehicles can turn right onto U.S. Route 6 and then turn right onto the Bear Mountain Parkway northbound ramp. This rerouting creates a safe,



Legend

- Signalized intersection
- Unsignalized intersection



effective route for vehicles traveling to the Bear Mountain Parkway and greatly reduces eastbound congestion at the Route 202/35 and Bear Mountain Parkway intersection.

As banning of the eastbound left turn movement removes a movement from a State Highway and creates discontinuity between State roadways (the Bear Mountain Parkway and Route 202/35) additional review by NYSDOT to determine whether such an improvement would be permitted. Therefore, the banning of the eastbound left turn movement was conservatively not included as a proposed mitigation measure. Instead, the intersection is partially mitigated by providing a limited left-turn only lane for the eastbound approach based on the available right-of-way to allow through vehicles to maneuver around waiting turning vehicles. However, it should be noted that banning of the eastbound left turn to Bear Mountain Parkway would allow both the intersections of Route 202/35 and Bear Mountain Parkway and Croton Avenue/Maple Row to be fully mitigated with the MOD Development Plan.

LEVEL OF SERVICE CONDITIONS

Table 11-30 presents a comparison of the 2021 No Action, With Action and Mitigation Conditions for the study area intersections with the MOD Development Plan for the Weekday AM and PM peak hours. Synchro 10 outputs for the 2021 Mitigation condition are provided in **Appendix 11**.

MEASURES OF EFFECTIVENESS

As several locations along the NYS Route 202/35 corridor exceed LOS D under the 2021 With Action condition (with the Proposed Project), additional MOEs including queue length and corridor delay were used to evaluate the corridor. Similarly, these additional MOEs were evaluated for the 2021 With Mitigation condition to assess the proposed mitigation measures along the corridor.

QUEUE CONDITIONS

A review of the Synchro 95th Percentile queue data shows that under 2021 With Mitigation Conditions, the majority of queues impacted under the 2021 With Action Condition would be mitigated by the proposed mitigation measures listed in **Table 11-29** above. An assessment of the remaining impacted queues under the 2021 With Action Condition identified improvements which would increase the storage capacity for the impacted movements and mitigate the 95th Percentile queues with the Proposed Project for all approaches with the exception of the left turn lane at the intersection of Route 202/35 and Bear Mountain Parkway which is constricted by available right-of-way as discussed above. The additional improvement measures are listed below.

- The eastbound left turn lane at the intersection of Route 202/35 and Dayton Lane would be increased in length from 50 feet to 125 feet.
- The eastbound left turn lane at the intersection of Route 202/35 and Conklin Avenue would be increased in length from 125 feet to 200 feet.
- The westbound left turn lane at the intersection of Route 202/35 and Croton Avenue/Maple Row would be increased in length from 100 feet to 225 feet.

For the detailed queue results see **Appendix 11**.

Table 11-29

Recommended Intersection Mitigation Measures – MOD Development Plan

Intersection/Roadway Segment	Recommended Mitigation Measures	
	Weekday AM Peak Hour	Weekday PM Peak Hour
Signalized Intersections		
Route 202/35 and Dayton Lane	1) Restripe the SB Dayton Lane approach from one lane to one left turn only lane and one right turn only lane 2) Signalize the intersection ¹	1) Restripe the SB Dayton Lane approach from one lane to one left turn only lane and one right turn only lane 2) Signalize the intersection ¹
Route 202/35 and Lafayette Avenue / NY Presbyterian Driveway	1) Widen the NB Lafayette Avenue approach from one lane to one 100-foot left turn only lane and one through/right turn lane 2) Restripe the SB NY Presbyterian driveway approach from one left turn/through lane and one right turn lane to one left turn lane and one through/right turn lane 3) Signal phasing modifications to allow for protected/permitted NB/SB left turns ⁶	1) Widen the NB Lafayette Avenue approach from one lane to one 100-foot left turn only lane and one through/right turn lane 2) Restripe the SB NY Presbyterian driveway approach from one left turn/through lane and one right turn lane to one left turn lane and one through/right turn lane 3) Signal phasing modifications to allow for protected/permitted NB/SB left turns
Route 202/35 from Dayton Lane to Conklin Avenue	Coordinate the corridor with optimized offsets ⁷	Coordinate the corridor with optimized offsets ⁷
Route 202/35 and Bear Mountain Parkway	Restripe the EB Route 202/35 Approach to include an approximate 50-foot left turn only lane	Restripe the EB Route 202/35 Approach to include an approximate 50-foot left turn only lane ²
Route 202/35 and Croton Avenue/Maple Row	Unmitigated	Unmitigated
Route 202/35 and Lexington Avenue	1) Restripe the SB Lexington Avenue approach from one left turn/through lane and one right turn lane to one left turn lane and one through/right turn lane 2) Signal Timing Modifications	1) Restripe the SB Lexington Avenue approach from one left turn/through lane and one right turn lane to one left turn lane and one through/right turn lane 2) Signal Timing Modifications ²
Unsignalized Intersections		
Dayton Lane and South Shopping Center Driveway ³	No significant impact	Unmitigated
Route 202/35 and Tamarack Drive	No significant impact	Unmitigated
Route 202/35 and Shipley Drive ^{3,4}	No significant impact	Unmitigated
Route 202/35 and Locust Avenue ^{3,4}	Unmitigated	No significant impact
Arlo Lane and Bear Mountain Parkway	Unmitigated	Unmitigated
<p>Notes: EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound. (1) Traffic Signal is warranted with or without the Proposed Project. (2) Does not fully mitigate the intersection (3) Unsignalized intersection which does not meet signal warrant criteria under With Action Condition. (4) Not uncommon for unsignalized minor approaches/driveways on a state/city roadway to operate at LOS E and F (6) Mitigation not necessary for peak hour (7) Coordination and offsets synchronize traffic signals together in order to provide smooth flow of traffic along a segment with closely spaced intersections in order to reduce travel time, stops and delay.</p>		

Table 11-30
2021 No Action, With Action and Mitigation Conditions Analysis – MOD Development Plan

Intersection	Weekday AM												Weekday PM																
	2021 No Action				2021 With Action				2021 Mitigation				2021 No Action				2021 With Action				2021 With Action								
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS					
Signalized Intersections																													
Route 6 and Dayton Lane																													
Eastbound	L	0.04	5.3	A	L	0.04	5.4	A	L	0.04	5.4	A	L	0.09	10.1	B	L	0.10	10.5	B	L	0.10	10.5	B					
	TR	0.29	9.4	A	TR	0.30	9.3	A	TR	0.30	9.3	A	TR	0.55	21.3	C	TR	0.59	22.6	C	TR	0.59	22.6	C					
Westbound	L	0.13	5.5	A	L	0.13	5.7	A	L	0.13	5.7	A	L	0.40	12.7	B	L	0.42	13.9	B	L	0.42	13.9	B					
	TR	0.16	9.8	A	TR	0.17	10.0	A	TR	0.17	10.0	A	TR	0.33	17.2	B	TR	0.34	18.0	B	TR	0.34	18.0	B					
Northbound	L	0.41	32.8	C	L	0.53	36.7	D	L	0.53	36.7	D	L	0.83	48.6	D	L	0.87	53.3	D	L	0.87	53.3	D					
	TR	0.24	27.7	C	TR	0.23	27.5	C	TR	0.23	27.5	C	TR	0.13	23.5	C	TR	0.13	23.2	C	TR	0.13	23.2	C					
Southbound	LT	0.54	36.1	D	LT	0.53	35.6	D	LT	0.53	35.6	D	LT	0.08	22.9	C	LT	0.08	22.6	C	LT	0.08	22.6	C					
	R	0.31	19.7	B	R	0.30	19.6	B	R	0.30	19.6	B	R	0.07	14.2	B	R	0.07	14.0	B	R	0.07	14.0	B					
Intersection		15.0		B	Intersection		15.5		B	Intersection		15.5		B	Intersection		23.6		C	Intersection		25.7		C	Intersection		25.7		C
Route 6 and Conklin Avenue																													
Eastbound	L	0.01	2.6	A	L	0.01	2.7	A	L	0.01	2.7	A	L	0.02	3.3	A	L	0.02	3.8	A	L	0.02	3.8	A					
	TR	0.18	5.1	A	TR	0.18	5.2	A	TR	0.18	5.2	A	TR	0.29	6.2	A	TR	0.29	7.0	A	TR	0.29	7.0	A					
Westbound	L	0.26	3.4	A	L	0.29	3.8	A	L	0.29	3.8	A	L	0.34	5.2	A	L	0.41	6.6	A	L	0.41	6.6	A					
	TR	0.16	3.2	A	TR	0.16	3.3	A	TR	0.16	3.3	A	TR	0.22	4.0	A	TR	0.22	4.9	A	TR	0.22	4.9	A					
Northbound	LT	0.24	55.2	E	LT	0.23	54.5	D	LT	0.23	54.5	D	LT	0.35	57.1	E	LT	0.33	55.1	E	LT	0.33	55.1	E					
	R	0.71	19.8	B	R	0.73	19.6	B	R	0.73	19.6	B	R	0.75	18.3	B	R	0.77	17.7	B	R	0.77	17.7	B					
Southbound	LTR	0.23	33.4	C	LTR	0.23	32.9	C	LTR	0.23	32.9	C	LTR	0.42	38.1	D	LTR	0.40	36.3	D	LTR	0.40	36.3	D					
	Intersection		7.9		A	Intersection		8.1		A	Intersection		8.1		A	Intersection		9.3		A	Intersection		10.0		A	Intersection		10.0	
Route 6 and Lexington Avenue																													
Eastbound	L	0.34	17.8	B	L	0.34	17.6	B	L	0.34	17.6	B	L	0.95	95.7	F	L	0.95	95.8	F	L	0.95	95.8	F					
	TR	0.93	53.8	D	TR	0.93	54.0	D	TR	0.93	54.0	D	TR	1.16	120.7	F	TR	1.18	125.3	F	TR	1.18	125.3	F					
Westbound	L	0.53	24.5	C	L	0.54	25.0	C	L	0.54	25.0	C	L	0.58	42.5	D	L	0.59	44.1	D	L	0.59	44.1	D					
	TR	0.83	41.8	D	TR	0.83	41.5	D	TR	0.83	41.5	D	TR	1.17	127.0	F	TR	1.17	127.7	F	TR	1.17	127.7	F					
Northbound	L	0.39	39.8	D	L	0.41	40.3	D	L	0.41	40.3	D	L	1.04	115.3	F	L	1.05	123.7	F	L	1.05	123.7	F					
	TR	0.93	87.9	F	TR	0.96	92.4	F	TR	0.96	92.4	F	TR	0.74	74.5	E	TR	0.77	76.2	E	TR	0.77	76.2	E					
Southbound	L	0.55	45.1	D	L	0.57	46.3	D	L	0.57	46.3	D	L	0.36	46.1	D	L	0.38	46.4	D	L	0.38	46.4	D					
	TR	0.67	62.3	E	TR	0.68	63.3	E	TR	0.68	63.3	E	TR	0.96	107.7	F	TR	0.97	109.1	F	TR	0.97	109.1	F					
Intersection		52.7		D	Intersection		53.6		D	Intersection		53.6		D	Intersection		112.1		F	Intersection		114.6		F	Intersection		114.6		F

Table 11-30 (cont'd)
2021 No Action, With Action and Mitigation Conditions Analysis – MOD Development Plan

Intersection	Weekday AM												Weekday PM											
	2021 No Action				2021 With Action				2021 Mitigation				2021 No Action				2021 With Action				2021 Mitigation			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Signalized Intersections (continued)																								
Route 202/35 and Dayton Lane																								
Eastbound	Intersection Unsignalized in No Action Condition				Intersection Unsignalized in Action Conditions				L	0.25	6.5	A	Intersection Unsignalized in No Action Condition				Intersection Unsignalized in Action Conditions				L	0.55	17.2	B
									T	0.51	7.9	A									T	0.40	6.5	A
Westbound									TR	0.40	3.9	A									TR	0.72	62	A
Southbound									L	0.68	52.6	D									L	0.67	52.7	D
									R	0.21	10.1	B									R	0.43	8.7	A
	Intersection				Intersection				Intersection				Intersection				Intersection							
Route 202/35 and Gyrodyne/NYPH Driveway																								
Eastbound	Intersection Unsignalized in No Action Condition				L	0.24	5.4	A	L	0.24	4.1	A	Intersection Unsignalized in No Action Condition				L	0.13	5.5	A	L	0.13	4.0	A
					TR	0.50	4.2	A	TR	0.50	4.2	A					TR	0.47	6.4	A	TR	0.50	5.2	A
Westbound					L	0.22	1.4	A	L	0.22	2.4	A					L	0.16	1.4	A	L	0.24	2.8	A
					TR	0.57	1.6	A	TR	0.57	3.4	A					TR	0.70	1.6	A	TR	0.70	4.8	A
Northbound					LT	0.33	45.1	D	LT	0.33	45.1	D					LT	0.46	46.9	D	LT	0.46	46.9	D
	R	0.38	12.2	B	R	0.38	12.1	B	R	0.50	11.4	B	R	0.50	10.9	B								
	Intersection				Intersection				Intersection				Intersection				Intersection							
Route 202/35 and Lafayette Avenue/NYPH Driveway																								
Eastbound	TR	0.62	22.4	C	TR	0.74	23.9	C	TR	0.59	9.4	A	TR	0.78	33.3	C	TR	1.04	71.3	E	TR	0.90	30.7	C
Westbound	L	0.14	14.6	B	L	0.19	13.8	B	L	0.14	3.2	A	L	0.41	20.6	C	L	0.60	22.0	C	L	0.56	21.1	C
	T	0.58	22.7	C	T	0.68	26.2	C	T	0.57	4.4	A	T	0.67	32.5	C	T	0.84	36.2	D	T	0.75	7.6	A
Northbound	LTR	0.61	20.6	C	LTR	0.64	22.6	C	L	0.33	40.3	D	LTR	0.85	47.0	D	LTR	0.88	52.4	D	L	0.45	37.2	D
	-	-	-	-	-	-	-	-	TR	0.22	1.2	A	-	-	-	-	-	-	-	-	TR	0.36	2.9	A
Southbound	LT	0.78	83.9	F	LT	0.78	83.4	F	L	0.33	40.2	D	LT	1.43	267.1	F	LT	1.42	262.7	F	L	0.56	39.9	D
	R	0.14	0.9	A	R	0.14	0.9	A	TR	0.41	29.0	C	R	0.37	9.4	A	R	0.37	9.4	A	TR	0.56	21.0	C
	Intersection				Intersection				Intersection				Intersection				Intersection				Intersection			
Route 202/35 and Conklin Avenue/Evergreen Driveway																								
Eastbound	L	0.37	2.2	A	L	0.41	3.2	A	L	0.47	7.4	A	L	0.50	5.2	A	L	0.56	2.8	A	L	0.67	18.2	B
	T	0.36	1.8	A	TR	0.47	4.2	A	TR	0.50	6.8	A	T	0.39	1.0	A	T	0.55	2.8	A	T	0.59	13.0	B
Westbound	TR	0.52	13.1	B	LTR	0.73	20.7	C	LTR	0.73	19.3	B	TR	0.69	20.8	C	LTR	0.97	46.5	D	TR	0.98	47.5	D
Northbound	L	-	-	-	L	0.70	89.5	F	L	0.34	42.3	D	L	-	-	-	L	0.68	77.9	E	L	0.36	40.4	D
	TR	-	-	-	TR	0.26	16.0	B	TR	0.34	20.7	C	TR	-	-	-	TR	0.30	15.2	B	TR	0.40	20.8	C
Southbound	L	0.48	51.5	D	L	0.56	54.3	D	L	0.50	47.7	D	L	0.46	51.1	D	L	0.49	50.0	D	L	0.40	41.4	D
	R	0.53	15.3	B	R	0.63	12.6	B	R	0.71	17.8	B	R	0.32	9.7	A	R	0.53	13.0	B	R	0.63	18.3	B
	Intersection				Intersection				Intersection				Intersection				Intersection				Intersection			

Table 11-30 (cont'd)

2021 No Action, With Action and Mitigation Conditions Analysis – MOD Development Plan

Intersection	Weekday AM												Weekday PM															
	2021 No Action				2021 With Action				2021 Mitigation				2021 No Action				2021 With Action				2021 Mitigation							
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS				
Signalized Intersections (continued)																												
Route 202/35 and Bear Mountain Parkway																												
Eastbound	LT	1.01	88.3	F	LT	1.40	231.2	F	L	0.20	39.2	D	LT	1.44	249.6	F	LT	2.98	922.4	F	L	0.76	118.4	F				
	-	-	-	-	-	-	-	-	T	1.00	84.1	F	-	-	-	-	-	-	-	-	T	1.09	106.6	F				
Westbound	T	0.45	19.7	B	T	0.55	21.9	C	T	0.55	21.9	C	T	0.61	20.9	C	T	0.74	58.9	E	T	0.74	58.9	E				
	R	0.46	5.1	A	R	0.47	8.0	A	R	0.47	8.0	A	R	0.69	16.7	B	R	0.71	21.0	C	R	0.71	21.0	C				
Southbound	LR	1.36	214.8	F	LR	1.36	215.4	F	LR	1.36	215.3	F	LR	1.02	118.2	F	LR	1.03	118.4	F	LR	1.03	118.3	F				
	Intersection			F	Intersection			F	Intersection			F	Intersection			F	Intersection			F	Intersection			F	Intersection			F
Route 202/35 and Croton Avenue/Maple Row																												
Eastbound	L	0.13	2.6	A	L	0.15	3.1	A	L	0.15	2.9	A	L	0.33	28.2	C	L	0.33	25.7	C	L	0.33	25.6	C				
	T	1.02	59.0	E	T	1.09	63.8	E	T	1.09	61.5	E	T	0.88	59.9	E	T	0.99	58.5	E	T	0.99	55.6	E				
	R	0.25	1.6	A	R	0.27	2.3	A	R	0.27	1.9	A	R	0.14	1.7	A	R	0.18	2.6	A	R	0.18	2.5	A				
Westbound	L	1.04	124.6	F	L	1.04	124.6	F	L	1.04	124.6	F	L	0.56	17.8	B	L	0.84	77.3	E	L	0.84	77.3	E				
	TR	0.67	20.8	C	TR	0.74	23.7	C	LTR	0.74	23.7	C	TR	1.12	93.5	F	TR	1.21	129.3	F	TR	1.21	129.3	F				
Northbound	L	1.66	373.8	F	L	1.90	472.2	F	L	1.90	472.2	F	L	0.97	120.4	F	L	1.16	167.9	F	L	1.16	167.9	F				
	TR	0.42	26.7	C	TR	0.42	26.7	C	TR	0.42	26.7	C	TR	0.42	37.0	D	TR	0.42	37.0	D	TR	0.42	37.0	D				
Southbound	LTR	0.99	108.4	F	LTR	0.99	108.4	F	LTR	0.99	108.4	F	LTR	0.73	71.2	E	LTR	0.73	71.5	E	LTR	0.73	71.5	E				
	Intersection			E	Intersection			E	Intersection			E	Intersection			E	Intersection			F	Intersection			F	Intersection			F
Route 202/35 and Lexington Avenue																												
Eastbound	L	0.18	7.5	A	L	0.26	8.9	A	L	0.24	7.8	A	L	0.58	25.1	C	L	0.63	28.7	C	L	0.74	42.8	D				
	TR	1.18	112.6	F	TR	1.23	134.0	F	TR	1.18	109.9	F	TR	1.16	107.1	F	TR	1.27	152.5	F	TR	1.20	119.6	F				
Westbound	L	0.11	7.4	A	L	0.11	7.5	A	L	0.12	7.4	A	L	0.20	9.5	A	L	0.20	9.8	A	L	0.22	9.4	A				
	T	0.82	26.1	C	T	0.91	35.2	D	T	0.87	29.5	C	T	1.50	253.0	F	T	1.61	303.0	F	T	1.47	239.4	F				
	R	0.12	2.9	A	R	0.12	2.9	A	R	0.12	2.8	A	R	0.30	4.9	A	R	0.30	5.7	A	R	0.28	3.5	A				
Northbound	LTR	0.14	28.9	C	LTR	0.17	30.1	C	LTR	0.16	31.9	C	LTR	0.21	31.6	C	LTR	0.26	33.6	C	LTR	0.22	34.7	C				
Southbound	LT	0.77	50.8	D	LT	0.78	53.8	D	LT	0.75	53.8	D	LT	0.84	59.7	E	LT	0.85	61.4	E	LT	0.83	65.0	E				
	R	0.21	9.0	A	R	0.23	10.3	B	R	0.33	13.2	B	R	0.22	10.0	A	R	0.25	12.2	B	R	0.33	12.7	B				
	Intersection			E	Intersection			F	Intersection			E	Intersection			F	Intersection			F	Intersection			F	Intersection			F

Table 11-30 (cont'd)
2021 No Action, With Action and Mitigation Conditions Analysis – MOD Development Plan

Intersection	Weekday AM												Weekday PM															
	2021 No Action				2021 With Action				2021 Mitigation				2021 No Action				2021 With Action				2021 Mitigation							
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Unsignalized Intersections																												
Dayton Lane and Beach Shopping Center North Driveway																												
Westbound	LR	0.16	11.1	B	LR	0.17	11.5	B	LR	0.17	11.5	B	LR	0.26	14.3	B	LR	0.28	15.4	C	LR	0.28	15.4	C	LR	0.28	15.4	C
Southbound	L	0.04	7.6	A	L	0.04	7.7	A	L	0.04	7.7	A	L	0.06	8.3	A	L	0.06	8.5	A	L	0.06	8.5	A	L	0.06	8.5	A
Dayton Lane and Beach Shopping South Center South Driveway																												
Westbound	LR	0.10	11.5	B	LR	0.10	12.0	B	LR	0.10	12.0	B	LR	0.92	73.4	F	LR	1.04	108.8	F	LR	1.04	108.8	F	LR	1.04	108.8	F
Southbound	L	0.02	7.7	A	L	0.02	7.7	A	L	0.02	7.7	A	L	0.14	9.3	A	L	0.14	9.5	A	L	0.14	9.5	A	L	0.14	9.5	A
Route 202/35 and Dayton Lane																												
Eastbound	L	0.12	8.8	A	L	0.13	9.2	A	Intersection Signalized in Mitigation Condition				L	0.18	10.6	B	L	0.21	11.6	B	Intersection Signalized in Mitigation Condition							
Southbound	LR	1.33	225.2	F	LR	1.86	459.3	F					LR	1.80	421.2	F	LR	2.83	893.7	F								
Route 202/35 and Buttonwood Avenue																												
Westbound	L	0.01	9.3	A	L	0.01	9.7	A	L	0.01	9.7	A	L	0.00	8.8	A	L	0.00	9.3	A	L	0.00	9.3	A	L	0.00	9.3	A
Northbound	LR	0.18	22.5	C	LR	0.22	28.2	D	LR	0.22	28.2	D	LR	0.02	18.8	C	LR	0.02	24.1	C	LR	0.02	24.1	C	LR	0.02	24.1	C
Route 202/35 and Cortlandt Medical Driveway/NYPH Driveway																												
Eastbound	L	0.13	9.8	A	Intersection Signalized in With Action Condition				Intersection Signalized in Mitigation Condition				L	0.06	10.2	B	Intersection Signalized in With Action Condition				Intersection Signalized in Mitigation Condition							
Westbound	L	0.04	8.9	A									L	0.01	8.7	A												
Northbound	LTR	0.04	17.0	C									LTR	0.15	18.9	C												
Route 202/35 and Tamarack Drive																												
Westbound	L	0.00	8.6	A	L	0.00	9.0	A	L	0.00	9.0	A	L	0.03	9.1	A	L	0.04	9.8	A	L	0.04	9.8	A	L	0.04	9.8	A
Northbound	LR	0.13	19.7	C	LR	0.20	26.9	D	LR	0.20	26.9	D	LR	0.09	20.6	C	LR	0.20	36.3	E	LR	0.20	36.3	E	LR	0.20	36.3	E
Route 202/35 and Dimond Avenue/Shiple Drive																												
Eastbound	L	0.00	0.0	A	L	0.00	0.0	A	L	0.00	0.0	A	L	0.01	9.3	A	L	0.02	9.9	A	L	0.02	9.9	A	L	0.02	9.9	A
Westbound	L	0.01	8.7	A	L	0.01	9.1	A	L	0.01	9.1	A	L	0.03	8.8	A	L	0.03	9.4	A	L	0.03	9.4	A	L	0.03	9.4	A
Northbound	LTR	0.12	14.7	B	LTR	0.15	17.5	C	LTR	0.15	17.5	C	LTR	0.49	31.0	D	LTR	0.76	72.3	F	LTR	0.76	72.3	F	LTR	0.76	72.3	F
Southbound	LTR	0.03	11.3	B	LTR	0.03	12.3	B	LTR	0.03	12.3	B	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Route 202/35 and Locust Avenue																												
Eastbound	L	0.01	8.4	A	L	0.01	8.7	A	L	0.01	8.7	A	L	0.03	9.1	A	L	0.04	9.7	A	L	0.04	9.7	A	L	0.04	9.7	A
Southbound	LTR	0.40	30.2	D	LTR	0.57	50.9	F	LTR	0.57	50.9	F	LTR	0.09	14.7	B	LTR	0.13	17.6	C	LTR	0.13	17.6	C	LTR	0.13	17.6	C
Route 202/35 and Crestview Avenue																												
Westbound	L	0.00	8.7	A	L	0.00	9.1	A	L	0.00	9.1	A	L	0.00	8.8	A	L	0.00	9.4	A	L	0.00	9.4	A	L	0.00	9.4	A
Northbound	LTR	0.09	19.7	C	LTR	0.12	25.7	D	LTR	0.12	25.7	D	LTR	0.03	17.7	C	LTR	0.04	23.9	C	LTR	0.04	23.9	C	LTR	0.04	23.9	C
Route 202/35 and Forest Avenue																												
Westbound	L	0.01	8.8	A	L	0.01	9.2	A	L	0.01	9.2	A	L	0.01	8.9	A	L	0.01	9.6	A	L	0.01	9.6	A	L	0.01	9.6	A
Northbound	LR	0.05	15.8	C	LR	0.06	18.8	C	LR	0.06	18.8	C	LR	0.06	19.3	C	LR	0.09	26.8	D	LR	0.09	26.8	D	LR	0.09	26.8	D

Table 11-30 (cont'd)

2021 No Action, With Action and Mitigation Conditions Analysis – MOD Development Plan

Intersection	Weekday AM												Weekday PM											
	2021 No Action				2021 With Action				2021 Mitigation				2021 No Action				2021 With Action				2021 With Action			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Unsignalized Intersections																								
Route 202/35 and Rick Lane																								
Westbound	L	0.01	8.8	A	L	0.01	9.2	A	L	0.01	9.2	A	L	0.01	8.9	A	L	0.01	9.6	A	L	0.01	9.6	A
Northbound	LR	0.04	18.8	C	LR	0.06	23.5	C	LR	0.06	23.5	C	LR	0.05	19.2	C	LR	0.07	26.5	D	LR	0.07	26.5	D
Route 202/35 and Arlo Lane																								
Eastbound	L	0.01	8.5	A	L	0.02	8.9	A	L	0.02	8.9	A	L	0.04	9.3	A	L	0.06	10.0	A	L	0.06	10.0	A
Southbound	LR	0.09	13.4	B	LR	0.12	15.3	C	LR	0.12	15.3	C	LR	0.07	18.6	C	LR	0.13	23.1	C	LR	0.13	23.1	C
Bear Mountain Parkway and Locust Avenue																								
Westbound	L	0.00	8.8	A	L	0.01	8.8	A	L	0.01	8.8	A	L	0.03	9.1	A	L	0.00	9.2	A	L	0.00	9.2	A
Northbound	R	0.03	12.4	B	R	0.03	12.5	B	R	0.03	12.5	B	R	0.09	14.7	B	R	0.02	13.8	B	R	0.02	13.8	B
Bear Mountain Parkway and Arlo Lane																								
Eastbound	L	0.01	8.6	A	L	0.01	8.6	A	L	0.01	8.6	A	L	0.01	9.6	A	L	0.01	9.6	A	L	0.01	9.6	A
Westbound	L	0.00	9.6	A	L	0.00	9.6	A	L	0.00	9.6	A	L	0.00	0.0	A	L	0.00	0.0	A	L	0.00	0.0	A
Northbound	LTR	0.44	64.4	F	LTR	0.52	72.9	F	LTR	0.52	72.9	F	LTR	0.79	138.6	F	LTR	0.98	188.5	F	LTR	0.98	188.5	F
Southbound	LTR	0.33	35.2	E	LTR	0.33	36.0	E	LTR	0.33	36.0	E	LTR	0.13	22.0	C	LTR	0.13	22.3	C	LTR	0.13	22.3	C
Lafayette Avenue and Ridge Road																								
Westbound	LR	0.04	9.1	A	LR	0.04	9.1	A	LR	0.04	9.1	A	LR	0.06	9.7	A	LR	0.06	9.7	A	LR	0.06	9.7	A
Southbound	L	0.01	7.5	A	L	0.01	7.5	A	L	0.01	7.5	A	L	0.03	7.6	A	L	0.03	7.6	A	L	0.03	7.6	A

Notes: * Indicates exceeds Synchro capacity using HCM 2010

CORRIDOR DELAY

As identified in **Table 11-23**, there would be an increase in corridor delays with the Proposed Project. With the proposed mitigation measures identified in **Table 11-29**, the delay associated with the Proposed Project would be greatly reduced, however there would remain an increase in delay along the Route 202/35 corridor as compared to the 2021 No Action Condition. As such, additional mitigation measures listed below are proposed to reduce travel time along the corridor with the Proposed Project.

- Route 202/35 and Conklin Avenue—Restripe the westbound Route 202/35 approach from one lane to one left turn lane and one shared through/right turn lane and signal timing modifications to provide protected/permitted eastbound and westbound left turns.

The additional improvement measure, as well as the partial mitigation measures at the intersections of Route 202/35 and Bear Mountain Parkway and Route 202/35 and Lexington Avenue (see **Table 11-29**) provide additional storage capacity for turning vehicles to improve the flow of through traffic along Route 202/35. As shown in **Table 11-31** below, the travel times along the Route 202/35 corridor from Dayton Lane to Lexington Avenue would be reduced by approximately 17 seconds and 1 minute 27 seconds in the Weekday AM and PM peak hours, respectively.

Table 11-31
2021 No Action, With Action and Mitigation Conditions Corridor Delay
Proposed Project

Intersection	Weekday AM					Weekday PM				
	2021 No Action	2021 With Action		2021 With Mitigation		2021 No Action	2021 With Action		2021 With Mitigation	
	Delay (mins/veh)	Delay (mins/veh)	Difference (mins/veh)	Delay (mins/veh)	Difference (mins/veh)	Delay (mins/veh)	Delay (mins/veh)	Difference (mins/veh)	Delay (mins/veh)	Difference (mins/veh)
Route 202/35 Dayton Lane to Conklin Avenue										
Eastbound	00:42.9	00:43.2	00:00.3	00:32.9	-00:10.0	00:56.3	01:33.2	00:36.9	01:02.9	00:06.6
Westbound	00:52.0	00:58.8	00:06.8	00:42.2	-00:09.8	01:07.9	01:35.8	00:27.9	00:54.7	-00:13.2
Total	01:34.9	01:42.0	00:07.1	01:15.1	-00:19.8	02:04.2	03:09.0	01:04.8	01:57.6	-00:06.6
Route 202/35 Dayton Lane to Arlo Lane										
Eastbound	00:59.8	01:00.8	00:01.0	00:50.5	-00:09.3	01:24.0	02:02.8	00:38.8	01:32.5	00:08.5
Westbound	01:35.6	01:44.4	00:08.8	01:27.8	-00:07.8	01:52.4	02:23.6	00:31.2	01:42.5	-00:09.9
Total	02:35.4	02:45.2	00:09.8	02:18.3	-00:17.1	03:16.4	04:26.4	01:10.0	03:15.0	-00:01.4
Route 202/35 Bear Mountain Parkway to Lexington Avenue										
Eastbound	04:04.3	06:51.0	02:46.7	03:56.8	-00:07.5	06:40.7	18:32.7	11:52.0	04:25.3	-02:15.4
Westbound	01:14.3	01:26.6	00:12.3	01:21.6	00:07.3	05:14.4	06:58.0	01:43.6	06:04.7	00:50.3
Total	05:18.6	08:17.6	02:59.0	05:18.4	-00:00.2	11:55.1	25:30.7	13:35.6	10:30.0	-01:25.1
Route 202/35 Dayton Lane to Lexington Avenue										
Eastbound	05:04.1	07:51.8	02:47.7	04:47.3	-00:16.8	08:04.7	20:35.5	12:30.8	05:57.8	-02:06.9
Westbound	02:49.9	03:11.0	00:21.1	02:49.4	-00:00.5	07:06.8	09:21.6	02:14.8	07:47.2	00:40.4
Total	07:54.0	11:02.8	03:08.8	07:36.7	-00:17.3	15:11.5	29:57.1	14:45.6	13:45.0	-01:26.5

TRAFFIC SAFETY CONDITIONS

Although the Proposed Project is not anticipated to exacerbate traffic safety conditions, the following improvements, included as mitigation measures above, would also be beneficial to traffic safety conditions:

- Route 202/35 and Dayton Lane— Installation of a new red/yellow/green signal (CMF of 0.78 for all crashes and 0.75 for left turn crashes) and Installation of a left turn only lane for the southbound Dayton Lane approach (CMF of 0.75 for all crashes)
- Route 202/35 and Conklin Avenue—Installation of a left turn lane for westbound Route 202/35 approach and signal timing modifications to provide protected/permitted eastbound, westbound, northbound and southbound left turns (CMF of 0.62 for left turn crashes along Route 202/35)
- Route 202/35 and Bear Mountain Parkway—Installation of a left turn lane along the Route 202/35 eastbound approach (CMF of 0.88 for all crashes) In addition, for the left turn prohibition discussed above there would be a CMF of 0.40 for left turn crashes, and 0.77 for rear end crashes.
- Route 202/35 corridor from Dayton Lane to Conklin Avenue—Coordinate arterial signals (CMF of 0.79 for all crashes)

I. TRAFFIC MITIGATION – PROPOSED ZONING ACTION

For the impacted locations described in **Table 11-1**, mitigation measures, such as signal installation or retiming and roadway restriping, were examined as a means to improve traffic operating conditions. In addition, improvement measure for impacts to queue lengths and deterioration of corridor delay were also assessed. A discussion of the recommended mitigation measures is provided below.

MITIGATION MEASURES

The mitigation measures described in **Table 11-29** as well as the additional queue and corridor delay improvement measures discussed in Section H above are the only traditional mitigation measures feasible for the study area given the existing right-of-way for Route 202/35. When the roadway capacity cannot be increased Intelligent Transportation Systems (ITS) can sometimes be employed to manage peak period congestion and fluctuations in traffic. This strategy is discussed in more detailed below.

With the implementation of the mitigation measures described in Section H above for the full-build out of the Proposed Zoning Action, the significant adverse traffic impacts identified above in Section G could be fully mitigated except for the signalized intersections of Route 202/35 and Bear Mountain Parkway (Weekday PM peak hour), Route 202/35 and Croton Avenue/Maple Row (Weekday AM and PM peak hours) and Route 202/35 and Lexington Avenue (Weekday PM peak hour). In addition, the unsignalized intersections of Dayton Lane and Beach Shopping Center south driveway (Weekday PM peak hour), Route 202/35 and Tamarack Drive (Weekday PM peak hour), Route 202/35 and Shipley Drive/Diamond Avenue (Weekday PM peak hour), Route 202/35 and Locust Avenue (Weekday AM peak hour), and Bear Mountain Parkway and Arlo Lane (Weekday AM and PM peak hours) could not be fully mitigated.

ROUTE 202/35 AND BEAR MOUNTAIN PARKWAY AND CROTON AVENUE/MAPLE ROW

As discussed in Section H above, since banning the eastbound left turn movement requires additional review by NYSDOT to determine whether such an improvement would be permitted, the banning of the eastbound left turn movement was conservatively not included as a proposed

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mitigation measure. Instead, the intersection is partially mitigated by providing a limited left turn only lane for the eastbound approach based on the available right-of-way to allow through vehicles to maneuver around waiting turning vehicles.

LEVEL OF SERVICE CONDITIONS

Table 11-32 presents a comparison of the 2021 No Action, With Action and Mitigation Conditions for the study area intersections with the Proposed Zoning Action for the Weekday AM and PM peak hours. Synchro 10 outputs for the 2021 Mitigation condition are provided in **Appendix 11**.

MEASURES OF EFFECTIVENESS

As several locations along the NYS Route 202/35 corridor exceed LOS D under the 2021 With Action condition (with the Proposed Zoning Action), additional MOEs including queue length and corridor delay were used to evaluate the corridor. Similarly, these additional MOEs were evaluated for the 2021 With Mitigation condition to assess the proposed mitigation measures along the corridor.

QUEUE CONDITIONS

A review of the Synchro 95th Percentile queue data shows that under 2021 With Mitigation Conditions, the majority of queues impacted under the 2021 With Action Condition with the Proposed Zoning Action would be mitigated by the proposed mitigation measures listed in **Table 11-29** above. An assessment of the remaining impacted queues under the 2021 With Action Condition identified improvements which would increase the storage capacity for the impacted movements and mitigate the 95th Percentile queues with the Proposed Zoning Action for the majority of approaches with the exception of the left turn lane at the intersection of Route 202/35 and Bear Mountain Parkway which is constricted by available right-of-way as discussed above and the through/right turn movement at the intersection of Route 202/35 and Gyrodyne/NYPH driveway. The additional improvement measures are listed below.

- The northbound left turn lane at the intersection of Route 6 and Dayton Lane would be increased in length from 85 feet to 100 feet.
- The eastbound left turn lane at the intersection of Route 202/35 and Dayton Lane would be increased in length from 50 feet to 125 feet.
- The eastbound left turn lane at the intersection of Route 202/35 and Conklin Avenue would be increased in length from 125 feet to 200 feet.
- The westbound left turn lane at the intersection of Route 202/35 and Croton Avenue/Maple Row would be increased in length from 100 feet to 225 feet.

For the detailed queue results see **Appendix 11**.

CORRIDOR DELAY

As identified in **Table 11-28**, there would be an increase in corridor delays with the Proposed Zoning Action. With the proposed mitigation measures identified in **Table 11-29**, the delay associated with the Proposed Zoning Action would be greatly reduced, however there would remain an increase in delay along the Route 202/35 corridor as compared to the 2021 No Action Condition.

Table 11-32
2021 No Action, With Action and Mitigation Conditions Analysis – Proposed Zoning Action

Intersection	Weekday AM												Weekday PM																
	2021 No Action				2021 With Action				2021 Mitigation				2021 No Action				2021 With Action				2021 Mitigation								
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS					
Signalized Intersections																													
Route 6 and Dayton Lane																													
Eastbound	L	0.04	5.3	A	L	0.04	5.8	A	L	0.04	5.8	A	L	0.09	10.1	B	L	0.10	10.7	B	L	0.10	12.2	B					
	TR	0.29	9.4	A	TR	0.31	9.4	A	TR	0.31	9.3	A	TR	0.55	21.3	C	TR	0.61	23.4	C	TR	0.66	25.8	C					
Westbound	L	0.13	5.5	A	L	0.13	6.0	A	L	0.13	6.0	A	L	0.40	12.7	B	L	0.44	14.5	B	L	0.46	16.4	B					
	TR	0.16	9.8	A	TR	0.17	10.4	B	TR	0.19	10.6	B	TR	0.33	17.2	B	TR	0.34	18.4	B	TR	0.36	20.3	C					
Northbound	L	0.41	32.8	C	L	0.57	37.4	D	L	0.59	38.8	D	L	0.83	48.6	D	L	0.91	57.8	E	L	0.86	48.2	D					
	TR	0.24	27.7	C	TR	0.22	26.9	C	TR	0.23	27.1	C	TR	0.13	23.5	C	TR	0.12	23.0	C	TR	0.12	20.5	C					
Southbound	LT	0.54	36.1	D	LT	0.50	34.2	C	LT	0.53	35.0	D	LT	0.08	22.9	C	LT	0.07	22.5	C	LT	0.07	20.0	B					
	R	0.31	19.7	B	R	0.29	19.2	B	R	0.31	19.4	B	R	0.07	14.2	B	R	0.07	14.0	B	R	0.06	11.9	B					
Intersection		15.0		B	Intersection		15.6		B	Intersection		15.8		B	Intersection		23.6		C	Intersection		27.3		C	Intersection		27.0		C
Route 6 and Conklin Avenue																													
Eastbound	L	0.01	2.6	A	L	0.01	2.9	A	L	0.01	2.7	A	L	0.02	3.3	A	L	0.02	4.0	A	L	0.02	4.0	A					
	TR	0.18	5.1	A	TR	0.18	5.2	A	TR	0.18	5.2	A	TR	0.29	6.2	A	TR	0.29	7.5	A	TR	0.29	7.5	A					
Westbound	L	0.26	3.4	A	L	0.32	4.1	A	L	0.29	3.8	A	L	0.34	5.2	A	L	0.45	7.4	A	L	0.45	7.4	A					
	TR	0.16	3.2	A	TR	0.16	3.4	A	TR	0.16	3.3	A	TR	0.22	4.0	A	TR	0.22	5.5	A	TR	0.22	5.5	A					
Northbound	LT	0.24	55.2	E	LT	0.23	54.0	D	LT	0.23	54.5	D	LT	0.35	57.1	E	LT	0.33	54.2	D	LT	0.33	54.2	D					
	R	0.71	19.8	B	R	0.74	19.4	B	R	0.73	19.6	B	R	0.75	18.3	B	R	0.79	17.6	B	R	0.79	17.6	B					
Southbound	LTR	0.23	33.4	C	LTR	0.22	32.7	C	LTR	0.23	32.9	C	LTR	0.42	38.1	D	LTR	0.39	35.6	D	LTR	0.39	35.6	D					
	Intersection		7.9		A	Intersection		8.1		A	Intersection		8.1		A	Intersection		9.3		A	Intersection		10.5		B	Intersection		10.5	

Table 11-32 (cont'd)
2021 No Action, With Action and Mitigation Conditions Analysis – Proposed Zoning Action

Intersection	Weekday AM												Weekday PM															
	2021 No Action				2021 With Action				2021 Mitigation				2021 No Action				2021 With Action				2021 Mitigation							
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS				
Signalized Intersections (continued)																												
Route 6 and Lexington Avenue																												
Eastbound	L	0.34	17.8	B	L	0.33	17.5	B	L	0.33	17.5	B	L	0.95	95.7	F	L	0.95	95.8	F	L	0.95	95.8	F				
	TR	0.93	53.8	D	TR	0.94	54.3	D	TR	0.94	54.3	D	TR	1.16	120.7	F	TR	1.18	128.6	F	TR	1.18	128.6	F				
Westbound	L	0.53	24.5	C	L	0.55	25.9	C	L	0.55	25.9	C	L	0.58	42.5	D	L	0.60	44.6	D	L	0.60	44.6	D				
	TR	0.83	41.8	D	TR	0.82	41.1	D	TR	0.82	41.1	D	TR	1.17	127.0	F	TR	1.17	127.9	F	TR	1.17	127.9	F				
Northbound	L	0.39	39.8	D	L	0.42	40.8	D	L	0.42	40.8	D	L	1.04	115.3	F	L	1.09	130.1	F	L	1.09	130.1	F				
	TR	0.93	87.9	F	TR	0.97	95.9	F	TR	0.97	95.9	F	TR	0.74	74.5	E	TR	0.79	77.7	E	TR	0.79	77.7	E				
Southbound	L	0.55	45.1	D	L	0.58	47.0	D	L	0.58	47.0	D	L	0.36	46.1	D	L	0.39	46.7	D	L	0.39	46.7	D				
	TR	0.67	62.3	E	TR	0.69	64.2	E	TR	0.69	64.2	E	TR	0.96	107.7	F	TR	0.97	109.5	F	TR	0.97	109.5	F				
	Intersection	52.7	D	Intersection	54.3	D	Intersection	54.3	D	Intersection	112.1	F	Intersection	116.3	F	Intersection	116.3	F	Intersection	116.3	F							
Route 202/35 and Dayton Lane																												
Eastbound	Intersection Unsignalized in No Action Condition				Intersection Unsignalized in With Action Conditions				L	0.27	7.3	A	Intersection Unsignalized in No Action Condition				Intersection Unsignalized in With Action Conditions				L	0.77	42.5	D				
Westbound Southbound									T	0.56	9.0	A									T	0.44	5.0	A	T	0.44	7.3	A
									L	0.70	52.6	D									L	0.70	52.6	D	L	0.69	8.1	A
									R	0.20	11.0	B									R	0.20	11.0	B	R	0.42	8.7	A
									Intersection	13.1	B	Intersection									14.5	B						
Route 202/35 and Gyrodyne/NYPH Driveway																												
Eastbound	Intersection Unsignalized in No Action Condition				L	0.43	9.0	A	L	0.42	6.5	A	Intersection Unsignalized in No Action Condition				L	0.51	18.4	B	L	0.51	14.5	B				
Westbound Northbound					L	0.52	6.6	A	TR	0.52	4.3	A					TR	0.52	8.1	A	TR	0.52	5.4	A				
					L	0.24	1.6	A	L	0.24	2.4	A					L	0.27	2.0	A	L	0.27	2.8	A				
					L	0.66	4.8	A	TR	0.66	3.7	A					TR	0.84	12.2	B	TR	0.84	8.7	A				
					L	0.36	45.7	D	LT	0.36	45.7	D					TR	0.47	46.9	D	LT	0.47	46.9	D				
					L	0.40	11.9	B	R	0.40	11.8	B					LTR	0.50	10.7	B	R	0.50	10.7	B				
	Intersection	7.3	B	Intersection	5.9	A	Intersection	12.2	B	Intersection	9.5	A																

Table 11-32 (cont'd)
2021 No Action, With Action and Mitigation Conditions Analysis – Proposed Zoning Action

Intersection	Weekday AM												Weekday PM																
	2021 No Action				2021 With Action				2021 Mitigation				2021 No Action				2021 With Action				2021 Mitigation								
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS					
Signalized Intersections (continued)																													
Route 202/35 and Lafayette Avenue/NYPH Driveway																													
Eastbound	TR	0.62	22.4	C	TR	0.79	26.3	C	TR	0.63	10.4	B	TR	0.78	33.3	C	TR	1.08	84.8	F	TR	0.94	38.0	D					
Westbound	L	0.14	14.6	B	L	0.21	13.2	B	L	0.15	3.4	A	L	0.41	20.6	C	L	0.60	18.2	B	L	0.65	37.0	D					
Northbound	T	0.58	22.7	C	T	0.78	30.8	C	T	0.67	5.6	A	T	0.67	32.5	C	T	0.95	53.9	D	T	0.86	11.6	B					
	LTR	0.61	20.6	C	LTR	0.66	24.3	C	L	0.34	40.6	D	LTR	0.85	47.0	D	LTR	0.93	62.8	E	L	0.47	37.0	D					
Southbound	LT	0.78	83.9	F	LT	1.14	164.2	F	LT	0.59	49.8	D	LT	1.43	267.1	F	LT	2.49	713.5	F	L	0.94	72.7	E					
	R	0.14	0.9	A	R	0.23	2.5	A	R	0.53	26.9	C	R	0.37	9.4	A	R	0.59	19.1	B	TR	0.68	21.2	C					
Intersection		24.9		C	Intersection		36.3		D	Intersection		11.9		B	Intersection		54.1		D	Intersection		138.8		F	Intersection		29.2		C
Route 202/35 and Conklin Avenue																													
Eastbound	L	0.37	2.2	A	L	0.47	3.7	A	L	0.65	23.9	C	L	0.50	5.2	A	L	0.62	5.8	A	L	0.87	35.4	D					
Westbound	T	0.36	1.8	A	TR	0.53	4.9	A	TR	0.63	11.9	B	T	0.39	1.0	A	TR	0.64	3.4	A	T	0.71	16.2	B					
	TR	0.52	13.1	B	LTR	0.86	29.7	C	LTR	0.17	6.8	A	TR	0.69	20.8	C	LTR	1.14	102.1	F	L	0.22	6.7	A					
Northbound										0.77	26.1	C									TR	0.96	49.3	D					
	L	-	-	-	L	0.86	118.9	F	L	0.37	40.9	D	L	-	-	-	L	0.93	137.9	F	L	0.96	141.3	F					
Southbound	TR	-	-	-	TR	0.27	14.5	B	TR	0.36	19.6	B	TR	-	-	-	TR	0.33	15.3	B	TR	0.33	16.6	B					
	L	0.48	51.5	D	L	0.51	49.5	D	L	0.45	43.4	D	L	0.46	51.1	D	L	0.50	50.4	D	L	0.51	52.8	D					
	R	0.53	15.3	B	R	0.63	12.4	B	R	0.72	17.4	B	R	0.32	9.7	A	R	0.56	13.5	B	R	0.56	13.8	B					
Intersection		10.7		B	Intersection		19.9		B	Intersection		20.7		C	Intersection		13.0		B	Intersection		47.8		D	Intersection		34.1		F
Route 202/35 and Bear Mountain Parkway																													
Eastbound	LT	1.01	88.3	F	LT	1.77	384.6	F	L	0.28	44.0	D	LT	1.44	249.6	F	LT	5.76	2164.8	F	L	0.80	126.7	F					
Westbound									T	1.07	102.9	F									T	1.25	165.4	F					
	T	0.45	19.7	B	T	0.61	24.4	C	T	0.61	24.4	C	T	0.61	20.9	C	T	0.81	70.2	E	T	0.81	70.2	E					
Southbound	R	0.46	5.1	A	R	0.48	9.5	A	R	0.48	9.5	A	R	0.69	16.7	B	R	0.72	23.4	C	R	0.72	23.4	C					
	LR	1.36	214.8	F	LR	1.37	217.4	F	LR	1.37	217.4	F	LR	1.02	118.2	F	LR	1.03	118.5	F	LR	1.03	118.5	F					
Intersection		103.4		F	Intersection		180.2		F	Intersection		103.6		F	Intersection		94.8		F	Intersection		646.9		F	Intersection		94.7		F

Table 11-32 (cont'd)
2021 No Action, With Action and Mitigation Conditions Analysis – Proposed Zoning Action

Intersection	Weekday AM												Weekday PM											
	2021 No Action				2021 With Action				2021 Mitigation				2021 No Action				2021 With Action				2021 Mitigation			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Signalized Intersections (continued)																								
Route 202/35 and Croton Avenue/Maple Row																								
Eastbound	L	0.13	2.6	A	L	0.17	3.3	A	L	0.17	3.2	A	L	0.33	28.2	C	L	0.33	24.8	C	L	0.33	24.7	C
	T	1.02	59.0	E	T	1.12	73.1	E	T	1.12	71.1	E	T	0.88	59.9	E	T	1.06	63.0	E	T	1.06	60.3	E
Westbound	R	0.25	1.6	A	R	0.28	2.5	A	R	0.28	2.3	A	R	0.14	1.7	A	R	0.21	3.2	A	R	0.21	3.2	A
	L	1.04	124.6	F	L	1.04	124.6	F	L	1.04	124.6	F	L	0.56	17.8	B	L	0.84	77.3	E	L	0.84	77.3	E
Northbound	TR	0.67	20.8	C	TR	0.79	26.4	C	LTR	0.79	26.4	C	TR	1.12	93.5	F	TR	1.25	149.7	F	LTR	1.25	149.7	F
	L	1.66	373.8	F	L	2.09	552.1	F	L	2.09	552.1	F	L	0.97	120.4	F	L	1.26	202.2	F	L	1.26	202.2	F
Southbound	TR	0.42	26.7	C	TR	0.42	26.7	C	TR	0.42	26.7	C	TR	0.42	37.0	D	TR	0.42	37.0	D	TR	0.42	37.0	D
	LTR	0.99	108.4	F	LTR	0.99	108.4	F	LTR	0.99	108.4	F	LTR	0.73	71.2	E	LTR	0.73	72.4	E	LTR	0.73	72.4	E
	Intersection	67.9		E	Intersection	87.1		F	Intersection	86.3		F	Intersection	71.8		E	Intersection	102.5		F	Intersection	101.6		F
Route 202/35 and Lexington Avenue																								
Eastbound	L	0.18	7.5	A	L	0.33	11.5	B	L	0.28	8.6	A	L	0.58	25.1	C	L	0.66	30.9	C	L	0.79	49.2	D
	TR	1.18	112.6	F	TR	1.26	147.6	F	TR	1.18	112.5	F	TR	1.16	107.1	F	TR	1.34	182.9	F	TR	1.26	147.6	F
Westbound	L	0.11	7.4	A	L	0.11	7.5	A	L	0.12	7.2	A	L	0.20	9.5	A	L	0.20	10.0	A	L	0.21	8.7	A
	T	0.82	26.1	C	T	0.96	42.9	D	T	0.88	28.9	C	T	1.50	253.0	F	T	1.68	333.2	F	T	1.52	263.3	F
Northbound	R	0.12	2.9	A	R	0.12	2.9	A	R	0.11	2.4	A	R	0.30	4.9	A	R	0.31	6.1	A	R	0.28	3.7	A
	LTR	0.14	28.9	C	LTR	0.19	30.7	C	LTR	0.18	34.5	C	LTR	0.21	31.6	C	LTR	0.29	34.6	C	LTR	0.24	35.2	D
Southbound	LT	0.77	50.8	D	LT	0.79	54.1	D	LT	0.72	53.3	D	LT	0.84	59.7	E	LT	0.85	62.9	E	LT	0.84	65.8	E
	R	0.21	9.0	A	R	0.25	11.3	B	R	0.35	13.5	B	R	0.22	10.0	A	R	0.27	13.3	B	R	0.35	12.4	B
	Intersection	67.0		E	Intersection	88.7		F	Intersection	67.2		E	Intersection	147.6		F	Intersection	207.8		F	Intersection	167.1		F

Table 11-32 (cont'd)
2021 No Action, With Action and Mitigation Conditions Analysis – Proposed Zoning Action

Intersection	Weekday AM												Weekday PM											
	2021 No Action				2021 With Action				2021 Mitigation				2021 No Action				2021 With Action				2021 Mitigation			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Unsignalized Intersections																								
Dayton Lane and Beach Shopping Center North Driveway																								
Westbound	LR	0.16	11.1	B	LR	0.18	11.8	B	LR	0.18	11.8	B	LR	0.26	14.3	B	LR	0.30	16.3	C	LR	0.30	16.3	C
Southbound	L	0.04	7.6	A	L	0.04	7.7	A	L	0.04	7.7	A	L	0.06	8.3	A	L	0.06	8.6	A	L	0.06	8.6	A
Dayton Lane and Beach Shopping Center South Driveway																								
Westbound	LR	0.10	11.5	B	LR	0.11	12.3	B	LR	0.11	12.3	B	LR	0.92	73.4	F	LR	1.12	138.4	F	LR	1.12	138.4	F
Southbound	L	0.02	7.7	A	L	0.02	7.8	A	L	0.02	7.8	A	L	0.14	9.3	A	L	0.15	9.7	A	L	0.15	9.7	A
Route 202/35 and Dayton Lane																								
Eastbound	L	0.12	8.8	A	L	0.14	9.4	A	Intersection Signalized in Mitigation Condition				L	0.18	10.6	B	L	0.22	12.4	B	Intersection Signalized in Mitigation Condition			
Southbound	LR	1.33	225.2	F	LR	2.31	666.3	F					LR	1.80	421.2	F	LR	3.71	1301.1	F				
Route 202/35 and Buttonwood Avenue																								
Westbound	L	0.01	9.3	A	L	0.01	10.0	B	L	0.01	10.0	B	L	0.00	8.8	A	L	0.00	9.5	A	L	0.00	9.5	A
Northbound	LR	0.18	22.5	C	LR	0.26	33.3	D	LR	0.26	33.3	D	LR	0.02	18.8	C	LR	0.03	28.4	D	LR	0.03	28.4	D
Route 202/35 and Cortlandt Medical Driveway/NYPH Driveway																								
Eastbound	L	0.13	9.8	A	Intersection Signalized in With Action Condition				Intersection Signalized in Mitigation Condition				L	0.06	10.2	B	Intersection Signalized in With Action Condition				Intersection Signalized in Mitigation			
Westbound	L	0.04	8.9	A									L	0.01	8.7	A								
Northbound	LTR	0.04	17.0	C									LTR	0.15	18.9	C								
Route 202/35 and Tamarack Drive																								
Westbound	L	0.00	8.6	A	L	0.00	9.2	A	L	0.00	9.2	A	L	0.03	9.1	A	L	0.04	10.3	B	L	0.04	10.3	B
Northbound	LR	0.13	19.7	C	LR	0.24	33.0	D	LR	0.24	33.0	D	LR	0.09	20.6	C	LR	0.25	51.6	F	LR	0.28	52.4	F
Route 202/35 and Dimond Avenue/Shipley Drive																								
Eastbound	L	0.00	0.0	A	L	0.00	0.0	A	L	0.00	0.0	A	L	0.01	9.3	A	L	0.02	10.3	B	L	0.02	10.3	B
Westbound	L	0.01	8.7	A	L	0.01	9.3	A	L	0.01	9.3	A	L	0.03	8.8	A	L	0.03	9.9	A	L	0.03	9.9	A
Northbound	LTR	0.12	14.7	B	LTR	0.17	19.6	C	LTR	0.17	19.6	C	LTR	0.49	31.0	D	LTR	1.02	151.3	F	LTR	1.02	151.3	F
Southbound	LTR	0.03	11.3	B	LTR	0.04	13.1	B	LTR	0.04	13.1	B	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Route 202/35 and Locust Avenue																								
Eastbound	L	0.01	8.4	A	L	0.01	9.0	A	L	0.01	9.0	A	L	0.03	9.1	A	L	0.04	10.1	B	L	0.04	10.1	B
Southbound	LTR	0.40	30.2	D	LTR	0.71	76.6	F	LTR	0.71	76.6	F	LTR	0.09	14.7	B	LTR	0.15	19.8	C	LTR	0.15	19.8	C

Table 11-32 (cont'd)
2021 No Action, With Action and Mitigation Conditions Analysis – Proposed Zoning Action

Intersection	Weekday AM												Weekday PM											
	2021 No Action				2021 With Action				2021 Mitigation				2021 No Action				2021 With Action				2021 Mitigation			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Unsignalized Intersections (continued)																								
Route 202/35 and Crestview Avenue																								
Westbound	L	0.00	8.7	A	L	0.00	9.3	A	L	0.00	9.3	A	L	0.00	8.8	A	L	0.00	9.9	A	L	0.00	9.9	A
Northbound	LTR	0.09	19.7	C	LTR	0.14	30.1	D	LTR	0.14	30.1	D	LTR	0.03	17.7	C	LTR	0.05	29.7	D	LTR	0.05	29.7	D
Route 202/35 and Forest Avenue																								
Westbound	L	0.01	8.8	A	L	0.01	9.4	A	L	0.01	9.4	A	L	0.01	8.9	A	L	0.01	10.1	B	L	0.01	10.1	B
Northbound	LR	0.05	15.8	C	LR	0.07	21.1	C	LR	0.07	21.1	C	LR	0.06	19.3	C	LR	0.11	34.0	D	LR	0.11	34.0	D
Route 202/35 and Rick Lane																								
Westbound	L	0.01	8.8	A	L	0.01	9.4	A	L	0.01	9.4	A	L	0.01	8.9	A	L	0.01	10.1	B	L	0.01	10.1	B
Northbound	LR	0.04	18.8	C	LR	0.07	27.2	D	LR	0.07	27.2	D	LR	0.05	19.2	C	LR	0.09	33.5	D	LR	0.09	33.5	D
Route 202/35 and Arlo Lane																								
Eastbound	L	0.01	8.5	A	L	0.02	9.1	A	L	0.02	9.1	A	L	0.04	9.3	A	L	0.07	10.4	B	L	0.07	10.4	B
Southbound	LR	0.09	13.4	B	LR	0.14	16.8	C	LR	0.14	16.8	C	LR	0.07	18.6	C	LR	0.18	27.4	D	LR	0.18	27.4	D
Bear Mountain Parkway and Locust Avenue																								
Westbound	L	0.00	8.8	A	L	0.01	8.9	A	L	0.01	8.9	A	L	0.03	9.1	A	L	0.00	9.3	A	L	0.00	9.3	A
Northbound	R	0.03	12.4	B	R	0.03	12.5	B	R	0.03	12.5	B	R	0.09	14.7	B	R	0.02	13.9	B	R	0.02	13.9	B
Bear Mountain Parkway and Arlo Lane																								
Eastbound	L	0.01	8.6	A	L	0.01	8.6	A	L	0.01	8.6	A	L	0.01	9.6	A	L	0.01	9.6	A	L	0.01	9.6	A
Westbound	L	0.00	9.6	A	L	0.00	9.6	A	L	0.00	9.6	A	L	0.00	0.0	A	L	0.00	0.0	A	L	0.00	0.0	A
Northbound	LTR	0.44	64.4	F	LTR	0.55	77.9	F	LTR	0.55	77.9	F	LTR	0.79	138.6	F	LTR	1.09	225.6	F	LTR	1.09	225.6	F
Southbound	LTR	0.33	35.2	E	LTR	0.33	36.0	E	LTR	0.33	36.0	E	LTR	0.13	22.0	C	LTR	0.13	22.3	C	LTR	0.13	22.3	C
Lafayette Avenue and Ridge Road																								
Westbound	LR	0.04	9.1	A	LR	0.04	9.1	A	LR	0.04	9.1	A	LR	0.06	9.8	A	LR	0.06	9.8	A	LR	0.06	9.8	A
Westbound	LR	0.01	7.5	A	LR	0.01	7.5	A	LR	0.01	7.5	A	LR	0.03	7.7	A	LR	0.03	7.7	A	LR	0.03	7.7	A

As shown in **Table 11-33** below, the travel times along the Route 202/35 corridor from Dayton Lane to Lexington Avenue would be increased by approximately 28 seconds and 1 minute 40 seconds in the Weekday AM and PM peak hours, respectively.

Table 11-33
2021 No Action, With Action and Mitigation Conditions Corridor Delay
Proposed Zoning Action

Intersection	Weekday AM					Weekday PM				
	2021 No Action	2021 With Action		2021 With Mitigation		2021 No Action	2021 With Action		2021 With Mitigation	
	Delay (mins/veh)	Delay (mins/veh)	Difference (mins/veh)	Delay (mins/veh)	Difference (mins/veh)	Delay (mins/veh)	Delay (mins/veh)	Difference (mins/veh)	Delay (mins/veh)	Difference (mins/veh)
Route 202/35 Dayton Lane to Conklin Avenue										
Eastbound	00:42.9	00:43.4	00:00.5	00:38.6	-00:04.3	00:56.3	01:50.5	00:54.2	01:19.4	00:23.1
Westbound	00:52.0	00:59.1	00:07.1	00:48.6	-00:03.4	01:07.9	02:52.6	01:44.7	01:26.2	00:18.3
Total	01:34.9	01:42.5	00:07.6	01:27.2	-00:07.7	02:04.2	04:43.1	02:38.9	02:45.6	00:41.4
Route 202/35 Dayton Lane to Arlo Lane										
Eastbound	00:59.8	01:01.5	00:01.7	00:56.7	-00:03.1	01:24.0	02:21.3	00:57.3	01:50.2	00:26.2
Westbound	01:35.6	01:45.7	00:10.1	01:35.2	-00:00.4	01:52.4	03:42.9	01:50.5	02:16.5	00:24.1
Total	02:35.4	02:47.2	00:11.8	02:31.9	-00:03.5	03:16.4	06:04.2	02:47.8	04:06.7	00:50.3
Route 202/35 Bear Mountain Parkway to Lexington Avenue										
Eastbound	04:04.3	06:51.0	02:46.7	04:24.9	00:20.6	06:40.7	39:45.7	33:05.0	05:52.5	-00:48.2
Westbound	01:14.3	01:26.6	00:12.3	01:25.0	00:10.7	05:14.4	07:51.5	02:37.1	06:52.6	01:38.2
Total	05:18.6	08:17.6	02:59.0	05:49.9	00:31.3	11:55.1	47:37.2	35:42.1	12:45.1	00:50.0
Route 202/35 Dayton Lane to Lexington Avenue										
Eastbound	05:04.1	07:52.5	02:48.4	05:21.6	00:17.5	08:04.7	42:07.0	34:02.3	07:42.7	-00:22.0
Westbound	02:49.9	03:12.3	00:22.4	03:00.2	00:10.3	07:06.8	11:34.4	04:27.6	09:09.1	02:02.3
Total	07:54.0	11:04.8	03:10.8	08:21.8	00:27.8	15:11.5	53:41.4	38:29.9	16:51.8	01:40.3

An ATCS, which is capable of adjusting traffic signal timing (offsets, cycle lengths and splits) to real-time conditions, has the potential to improve vehicle delay and number of stops along a congested arterial by approximately 10 percent (during the peak periods) when implemented correctly. In addition, as an ATCS is based on real-time conditions it adapts to the variations in traffic volumes throughout the day, leading to a better driver experience through the corridor. The U.S. Route 6 corridor from Jerome Avenue to Lexington Avenue operates under the control of an ATCS which has shown improvements to travel times of approximately 10 percent during the peak periods, and greater improvements during the shoulder and weekend hours.

As the delay along the corridor with the Proposed Zoning Action is approximately 6 and 11 percent greater than the 2021 No Action condition during the Weekday AM and PM peak hours, respectively, it is possible that with the installation of an ATCS, delays with the Proposed Zoning Action would be similar to the delays under the 2021 No Action Condition.

TRAFFIC SAFETY CONDITIONS

As the proposed mitigation measures are the same for the Proposed Project and the Proposed Zoning Action, the same traffic safety improvements as shown in Section H above would be expected for the Proposed Zoning Action. In addition, if an ATCS were installed along a portion of the Route 202/35 corridor, there would be the potential for safety improvements associated with the ATCS (CMF of 0.87 for all crashes).

J. SATURDAY QUALITATIVE ASSESSMENT

Based on discussions with NYSDOT and due to the unique characteristics of the Proposed Zoning Action, an assessment of Saturday traffic conditions was conducted to ensure additional impacts to traffic operations would not be expected during the weekend peak hour.

EXISTING CONDITIONS

As discussed in Section C above, ATR counts were conducted on Route 202/35 east of Lafayette Avenue for one full week during October 2017. **Table 11-34** presents a comparison of the 2017 Existing Volumes. As shown, the existing Saturday peak hour volumes along the Route 202/35 corridor adjacent to the Proposed Zoning Action are less than both the existing Weekday AM and PM peak hour volumes in both directions.

Table 11-34
Existing 2017 ATR Volume Comparison

ATR Location	Direction of Travel	Traffic Volumes		
		Weekday AM Peak Hour (7:45AM-8:45AM)	Weekday PM Peak Hour (5:00PM-6:00PM)	Saturday Peak Hour (11:45AM-12:45PM)
Route 202/35 east of Lafayette Avenue	Eastbound	503	669	502
	Westbound	514	577	456

TRIP GENERATION

Similar to the methodology used for the Weekday AM and PM peak hours, the estimated number of trips generated by the Proposed Zoning Action was based on trip generation rates provided by the *Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition)* using the Saturday Peak Hour Generator. As the *ITE Trip Generation Handbook (3rd Edition)* and *National Cooperative Highway Research Program (NCHRP) Report 684: Enhancing Internal Trip Capture Estimation for Mixed-Use Developments* do not contain internal capture rates for the Saturday peak hour, conservatively, no internal trips were considered for the Saturday peak hour. However, it should be noted that the potential for internal trips on weekends is acknowledged in both sources. See **Appendix 11** for the detailed Saturday Trip Generation Memorandum.

The Proposed Zoning Action for the Saturday peak hour would generate approximately 963 trips. As shown in **Table 11-35**, the Saturday peak hour trip generation estimates are less than the weekday PM peak hour trip generation estimates.

Table 11-35
Trip Generation Comparison – Proposed Zoning Action

Project Component	Weekday AM Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour ¹		
	In	Out	Total	In	Out	Total	In	Out	Total
Gyrodyne	118	108	226	172	216	388	190	167	357
Evergreen	131	127	258	137	138	275	214	199	413
New York Presbyterian Hospital	120	73	193	136	213	349	110	83	193
Total	369	308	677	445	567	1,012	514	449	963

Note:(1) Conservatively, no internal trips were considered for the Saturday peak hour

In addition, as only the Evergreen Project Site would experience greater in/out vehicles in the Saturday peak hour, a sensitivity analysis was conducted at the Evergreen driveway/Conklin Avenue and Route 202/35. As shown in **Table 11-36**, the delays and LOS for the Weekday PM peak hour are greater than those for the Saturday peak hour for all lane groups. Therefore, further

Medical Oriented District (DGEIS)
 & MOD Development Plan (DEIS)

analysis was not performed and mitigation measures for the Weekday PM peak hour are expected to also accommodate the Saturday peak hour.

Table 11-36
2021 With Action Conditions Level of Service Analysis Comparison

Intersection	2021 With Action Condition – Proposed Zoning Action							
	Weekday PM				Saturday			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Route 202/35 and Conklin Avenue								
Eastbound	L	0.62	5.8	A	L	0.36	6.4	A
	TR	0.64	3.4	A	TR	0.39	6.5	A
Westbound	LTR	1.14	102.1	F	LTR	0.74	25.1	C
Northbound	L	0.93	137.9	F	L	0.79	71.9	E
	TR	0.33	15.3	B	TR	0.42	12.5	B
Southbound	L	0.50	50.4	D	L	0.52	44.2	D
	R	0.56	13.5	B	TR	0.50	11.8	B
	Intersection		47.8	D	Intersection		18.9	B