Traffic Impact Study

Artis Senior Living Facility
Residential Memory Care Facility

153 White Plains Road
Village of Tarrytown, New York

Prepared for:

Artis Senior Living

McLean, VA

Prepared by:

Kimley-Horn of New York, P.C.

White Plains, New York

January 2019
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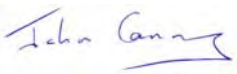

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EXECUTIVE SUMMARY

This traffic study was prepared by Kimley-Horn of New York, P.C. to document the potential traffic impacts associated with the proposed Artis Senior Living residential memory care facility (the "Project") to be constructed at 153 White Plains Road in the Village of Tarrytown, NY. The traffic impact study quantifies existing and future traffic conditions surrounding the site, both with and without the Project.

a) Project Description

The proposed 35,952 square-foot (sf), Artis Senior Living residential memory care facility will have 64 beds and will provide communal dining, routine protective oversight, personalized assistance/supportive services and 24-hour care for people suffering from Alzheimer's Disease or Alzheimer's-like disorders resulting in dementia. The Project site is located at 153 White Plains Road (NYS Route 119) which is situated immediately to the northwest of the adjoining parcel at 155 White Plains Road. The subject site was originally part of the 155 White Plains Road parcel for which an Environmental Impact Statement was prepared and a Findings Statement adopted in 2006 to permit the development of a 60,000-sf office building. The 153 White Plains Road parcel was subsequently carved out from the 155 site and is currently undeveloped while 155 White Plains Road is developed with two office buildings. With the proposed change in use from office to residential memory care facility, and in order to be in compliance with New York State's Environmental Quality Review Act (SEQRA), the Village has indicated that a Supplemental Draft Environmental Impact Statement (SDEIS), based on the previous Environmental Impact Statement (EIS) prepared for the property in 2006, will need to be prepared. A Scoping document was prepared and accepted on July 23, 2018 which identifies the following four key intersections as requiring analysis:

1. US Route 9 (Broadway) at White Plains Road (NYS 119)
2. US Route 9 (Broadway) at I-287/I-87 Eastbound Ramps & Doubletree Hotel Driveway
3. White Plains Road (NYS 119) at the 155 Western Site Driveway/ I-287/I-87 Westbound Ramps
4. White Plains Road (NYS 119) at 155 Eastern Site Driveway

The adjoining parcel at 155 White Plains Road has two driveways along White Plains Road. Access to White Plains Road from the subject project is to be provided via a driveway connecting to the circulation road between these two driveways, however, the site will be most directly accessed via the 155 driveway opposite the westbound I-87/I-287 ramps. An emergency access will also be provided to Martling Avenue

b) Public Transportation

Bus service is provided along White Plains Road by Westchester County's Bee-Line bus system and by Coach USA. The Bee-Line system operates two bus routes; #13 provides weekday service between Ossining and Rye and route #1W provides service Monday through Saturday between the Bronx and White Plains. The Bee-Line bus stops are located in front of the subject site. Coach USA operates one bus route (OWL Express) which operates Monday through Friday during the peak morning and afternoon commuter periods. The OWL Express bus stop is located on White Plains Road adjacent to Meadow Street, approximately 0.15 miles from the subject property. The Bee-Line and Coach USA buses each connect to the White Plains TransCenter, a multi-modal transportation center which provides transfers to Metro-North Railroad's Harlem Line trains and other Bee-Line buses. Bee-Line bus #13 also connects to Metro-North Railroad's Tarrytown station. The Hudson Link bus (Routes H07 and H07X) operates seven days a week between the Palisades Center Mall in

West Nyack and Metro-North Railroad's Tarrytown station with a bus stop located along US Route 9 at White Plains Road.

c) Proposed Improvements

The New York State Thruway Authority (NYSTA) is implementing improvements to US Route 9 as part of the New NY (Mario Cuomo) Bridge project. These improvements, which are expected to be completed prior to the opening of the proposed project, include providing an additional southbound left-turn lane on US Route 9 at the intersection with I-287/I-87 Eastbound Ramps and the Doubletree Hotel driveway and constructing a 10-foot wide, paved, shared use path on the west side of US Route 9. The northern end of the shared use path will connect to the New NY Bridge's shared use path (near 330 South Broadway) and continue southbound to the Doubletree Hotel driveway. Studies are underway to consider a possible extension of the shared use path to the south. The improvements also include the reopening of Ramp E, which provides access to the New NY Bridge from NY Route 9 southbound.

A complete streets study is being conducted for White Plains Road (NY Route 119) between Route 9 in Tarrytown and Route 22 in White Plains. This study, the *Route 119 Complete Streets Plan,* is evaluating measures to make the Route 119 corridor more pedestrian and bicycle friendly. The study, with specific recommendations, is anticipated to be completed by 2019.

d) Existing & Future Traffic Volumes

To assess existing traffic conditions in the vicinity of the site, peak-hour manual turning movement traffic volumes were recorded at the study intersections on Wednesday September 12, 2018 during the weekday peak afternoon period and on Thursday September 13, 2018 during the weekday peak morning period. The counted volumes were compared to 2005 existing volumes that were part of the 2006 SEQRA analysis for the formerly-approved 60,000 sf office building. Due to the current diversions of traffic associated with the new NY Bridge construction, which were not in place in 2005, only one intersection would provide a true comparison. At this intersection, White Plains Road at the eastern Site driveway, the comparison revealed that the 2005 existing volumes are higher than the 2018 existing volumes during the AM and PM peak hours (13 percent higher in the AM peak hour; 3 percent higher in the PM peak hour). A more detailed comparison to the 2006 application is provided later in this report.

The 2018 existing volumes were increased to account for anticipated increases in background traffic by the time the project is completed, establishing the future traffic volume conditions without the proposed Project ("No-Build" volumes). The future traffic volumes include increases associated with the contemplated 248-unit residential development at 200 White Plains Road, the remaining residential units at the Hudson Harbor development and the proposed Edge on Hudson development in Sleepy Hollow. Other developments, such as the Tarrytown Honda expansion, Doubletree Hotel, Montefiore, and the J.C.C. property have been completed and traffic associated with these developments are included in the counted traffic volumes. The No-Build volumes also include traffic volume reassignments associated with the future reopening of Ramp E and traffic from 5,000 sf of vacant office space at 155 White Plains Road. Compared to the existing volumes, peak-hour traffic activity at the study intersections is projected to increase by up to 9% in the No-Build conditions.

e) Project-Development Traffic

Traffic anticipated to be generated by the project was forecast based on published trip generation data and traffic surveys at a similar type memory care facility. Based on these projections, the

proposed development of the site is projected to add 14 vehicular trips to the surrounding roadways during the typical weekday AM peak hour and 17 trips during the typical weekday PM peak hour. Parenthetically, the site's previously-approved 60,000 sf office building was projected to generate 70 trips during the weekday AM peak hour and 69 trips during the weekday PM peak hour.

A summary of the Project's trip generation is presented in Table 1.

Table 1 - Peak Hour Trip Summary

Land Use	Weekday AM Peak Hour	Weekday PM Peak Hour
Proposed Artis Residential Memory Care Facility *35,952 sf / 64 beds*	14	17

Source: ITE *Trip Generation Manual*, 10th Edition

The Build volumes include the No-Build volumes and the trips from proposed Artis residential memory care facility.

f) Existing and Future Traffic Operating Conditions

Capacity analyses were conducted at the study intersections to assess the quality of traffic flow in the study area under existing conditions and future conditions with and without the proposed action. The analyses indicate that all of the studied intersections currently experience acceptable traffic operating conditions during peak hours (overall intersection Level-of-Service "D" or better with no approaches experiencing "F" levels of service).

In the future under No-Build conditions (without the Proposed Action but with forecast increases in existing traffic volumes, the reopening of Ramp E from southbound Route 9 to I-87/I-287 westbound, the proposed modifications to the intersection of Broadway with the I-87/I-287 ramps, traffic from 5,000 sf of vacant office space and traffic from three nearby development projects), compared to the existing conditions, the overall intersection levels of service ("LOS") will remain at existing levels with one exception. At the US Route 9 intersection with the I-287/I-87 Eastbound Ramps/Doubletree Hotel the overall delays will be reduced resulting in a change in LOS during the AM peak hour from LOS "D" under existing conditions to LOS "C" under No-Build conditions. This improvement can be attributed to the proposed additional southbound left-turn lane and proposed signal phasing and timing modifications. At this intersection, although the overall intersection will operate with lower delays than under existing conditions, the changes in traffic volumes and signal phasing will result in delay increases of up to 27.9 seconds on some movements. The US Route 9 intersection with White Plains Road will experience a decrease in overall delays which can be attributed to the reopening of Ramp E and the removal of traffic from the eastbound approach.

At the intersection of White Plains Road with the I-287/I-87 Westbound Ramps and the western Site driveway, compared to existing conditions, there will be a slight increase in overall delays on the order of 6.2 seconds or less. Some individual movements will see delay increases ranging from 0.3 seconds to 6.6 seconds (the northbound ramp approach), while the eastbound right-turn lane on White Plains Road will see reduced delays due to the reassignment of traffic to the reopened Ramp E. The eastern Site driveway intersection with White Plains Road will see delay increases of less than one second on the driveway approach. The increases in delay can be attributed mainly to the added traffic from the vicinity developments.

Under Build conditions, with the addition of traffic from the proposed Artis residential memory care facility, there will be an imperceptible increase in overall intersection delays of up to 0.3 seconds

when compared to No-Build conditions. The intersection levels of service will remain at No-Build levels (LOS "D" or better). Most individual movements will experience either no change in delay or a slight increase in delay of up to 1 second compared to No-Build conditions.

Based on a review of these findings, it is concluded that the proposed action will not have a significant adverse impact on area traffic operating conditions.

g) Parking and Circulation

The proposed project includes 45 on-site parking spaces, which is consistent with Artis' experience that providing 37 spaces will be needed to accommodate their parking needs. Per the proposed zoning, a parking ratio of 0.5 parking spaces per patient bed is recommended, which results in a requirement of 32 parking spaces for the proposed 64-bed facility. Therefore, sufficient on-site parking will be provided to accommodate the project's parking needs.

To access the project, vehicles will travel along an access easement through the parking area at 155 White Plains Road. Signage will be provided to direct visitors to the Artis facility. The proposed facility will generate very low volumes and, thus, is not expected to have a significant adverse impact on visitors and employees using the circulation road and parking areas at 155 White Plains Road.

h) Potential Emergency Access and Vehicular Connections

The Applicant has been working with the Tarrytown Volunteer Fire department to ensure that adequate access will be provided to the site. The current site plan will provide the following three points of access to the building for emergency purposes:

- From Martling Avenue (and the north) via a gated, emergency-only access;
- From NYS 119 (and the south west) via the western driveway serving 155 White Plains Road and the site's primary access;
- From NYS 119 (and the south east) via the eastern driveway serving 155 White Plains Road and the site's secondary access.

A vehicle turning analysis was conducted which confirmed that emergency vehicles will be able to access, circulate through and exit the property from White Plains Road and Martling Avenue (Insite Engineering, Drawing No. MP-1).

i) Comparison to 2006 SEQRA analysis

A comparison to the 2006 SEQRA analysis for the formerly-approved 60,000 sf office building found that, ignoring movements impacted by the closure of Ramp E, traffic volumes in the study area today are 6.3% lower than they were in 2005. A comparison of the background traffic volumes revealed that the traffic volumes projected to prevail in 2011 without the office building were 10% to 20% higher than current projections. Furthermore, traffic volumes for the Artis Senior Living residential memory care facility will be 75% to 80% lower than the previously-approved office building traffic volumes. Due to a number of factors that have changed in the intervening 12 years, a comparison of projected intersection performance revealed that, with one exception, the overall intersection operations projected for the subject development will be similar to the intersection operations projected in the 2006 studies (overall LOS "C" or "D" at each intersection). The exception is at the intersection of Route 9 with the I-287/I-87 Eastbound Ramps and Doubletree Hotel driveway where the 2006 studies identified overall levels of service of "E" during the AM and PM peak hours with some movements operating at LOS "F", (compared to overall LOS "C" or "D" and individual

movements LOS "E" or better for the subject project). The 2006 analysis was based on higher projected volumes and did not include a currently proposed additional southbound left-turn lane with signal timing modifications at this intersection.

j) Pedestrian/Bicycle Access and Impacts

There has been a significant rise in interest in walking and biking since 2006 which is reflected in improvements to the Old Croton Aqueduct Trail, and a new shared-use pedestrian and bicycle path set to open on the New NY (Mario Cuomo) Bridge project and ongoing studies to improve pedestrian and bicycle access on US Route 9 and NYS 119. The analysis performed for this study takes the projected impacts of these measures into account and has increased pedestrian and bicycle activity by an average of 30 and 25 pedestrians and cyclists per hour per intersection, respectively. New sidewalks will be provided on the subject property and a bicycle rack will be provided to accommodate those who might cycle to or from the facility.

k) Alternatives

Other than the No Action alternative, the Proposed Action will generally result in fewer trips than each alternative evaluated which include general office (36,000 sf and 54,000 sf) and medical office (36,000 sf). During the weekday peak hours, the Proposed Action will generate between 24 and 49 fewer trips than the office building alternatives and between 86 and 107 fewer trips than the medical office alternative. Throughout the course of an entire day on weekdays, the Proposed Action will generate between 200 and 375 fewer trips than an office building and 1,102 fewer trips than a medical office building.

On Saturdays, when office traffic is typically light, the Proposed Action will generate 5 more trips during the peak hour than a 36,000-sf office building, 5 fewer trips than a 54,000-sf office building and 88 fewer trips than a 36,000-sf medical office building. It will generate 27 more trips over the course of the entire day on a Saturday than a 36,000-sf office building, 13 fewer trips than a 54,000-sf office and 202 fewer trips than a 36,000-sf medical office.

Therefore, it can be concluded that, as a result of the significantly lower volumes, the Proposed Action will have less of an impact than the other development alternatives evaluated (except for the No Action alternative).

l) Conclusions

Based on the findings above, is concluded that the proposed Project will not have a significant adverse impact on area traffic operating conditions. The Project will only add 14 to 17 peak hour trips to the surrounding roadways on a weekday (which equates to approximately 1 new trip every 4 minutes during the peak hours), resulting in traffic operating conditions that will be similar to the future conditions without the project. Furthermore, the proposed access and parking will be sufficient for the Project.

A. Introduction

This traffic study was prepared by Kimley-Horn of New York, P.C. to document the potential traffic impacts associated with the proposed Artis Senior Living residential memory care facility (the "Project") to be constructed at 153 White Plains Road in the Village of Tarrytown, NY. The traffic impact study quantifies existing and future traffic conditions surrounding the site, both with and without the Project.

a) Project Description

The Project site is located at 153 White Plains Road (NYS Route 119) which is situated immediately to the northwest of the adjoining parcel at 155 White Plains Road. The subject site was originally part of the 155 White Plains Road parcel. An Environmental Impact Statement was prepared and a Findings Statement adopted in 2006 to permit the development of a 60,000-sf office building on the 153 / 155 White Plains Road parcels. The 153 White Plains Road parcel is currently undeveloped while 155 White Plains Road is developed with two office buildings. With the proposed change in use from office to senior living facility, and in order to be in compliance with New York State's Environmental Quality Review Act (SEQRA), the Village has indicated that a Supplemental Draft Environmental Impact Statement (SDEIS), based on the previous Environmental Impact Statement (EIS) prepared for the property in 2006, will need to be prepared. This report has been prepared in accordance with the requirements of the Scoping document (accepted on July 23, 2018).

The adjoining parcel at 155 White Plains Road has two driveways along White Plains Road. Access to White Plains Road from the subject project is to be provided via a driveway connecting to the circulation road between these two driveways, however, the site will be most directly accessed via the 155 White Plains Road driveway opposite the westbound I-87/I-287 ramps. The 155 White Plains Road owner (Crescent) considered acquiring the adjoining Cavendish property; however, Crescent passed on the acquisition and, therefore, has no ability to provide access across it to the subject property at 153 White Plains Road.

B. Existing Traffic Operating Conditions

a) Traffic Data Collection

To assess the traffic impacts associated with the proposed action, the following four key intersections were identified as requiring analysis:

1. US Route 9 (Broadway) at White Plains Road (NYS 119)
2. US Route 9 (Broadway) at I-287/I-87 Eastbound Ramps & Doubletree Hotel Driveway
3. White Plains Road (NYS 119) at 155 Western Site Driveway/ I-287/I-87 Westbound Ramps
4. White Plains Road (NYS 119) at 155 Eastern Site Driveway

The study intersections are shown in **Figure 1**.

Turning movement traffic volumes were recorded at the study intersections on Wednesday September 12, 2018 during the weekday peak afternoon period (4:00 to 7:00 p.m.) and on Thursday September 13, 2018 during the weekday peak morning period (7:00 to 9:00 a.m.). The counts were tabulated which indicated that the weekday morning peak hour occurred from 8:00 to 9:00 AM and the weekday evening peak hour occurred from 5:00 to 6:00 PM. The Existing volumes for the AM and PM peak hours are shown on **Figure 2**. The counted volumes were compared to 2005 existing volumes that were part of the 2006 SEQRA analysis for a 60,000-sf office building. Due to the current diversions of traffic associated with the New NY Bridge construction, which were not in place

in 2005, only one intersection was deemed appropriate for comparison. At this intersection, White Plains Road at the eastern Site driveway, the comparison revealed that the 2005 existing volumes are higher than the 2018 existing volumes during the AM and PM peak hours (13 percent higher in the AM peak hour; 3 percent higher in the PM peak hour).

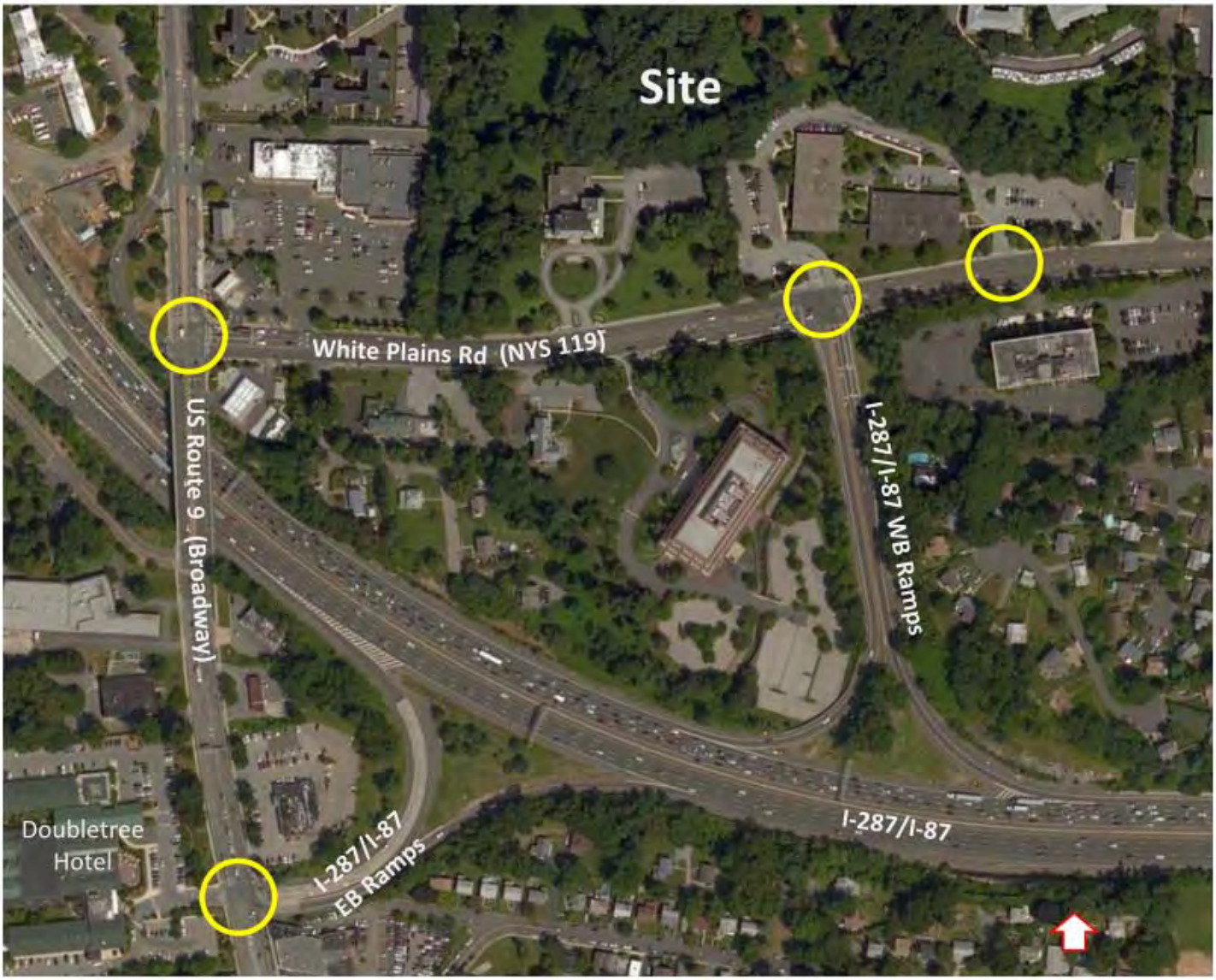

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Figure 1
Study Locations

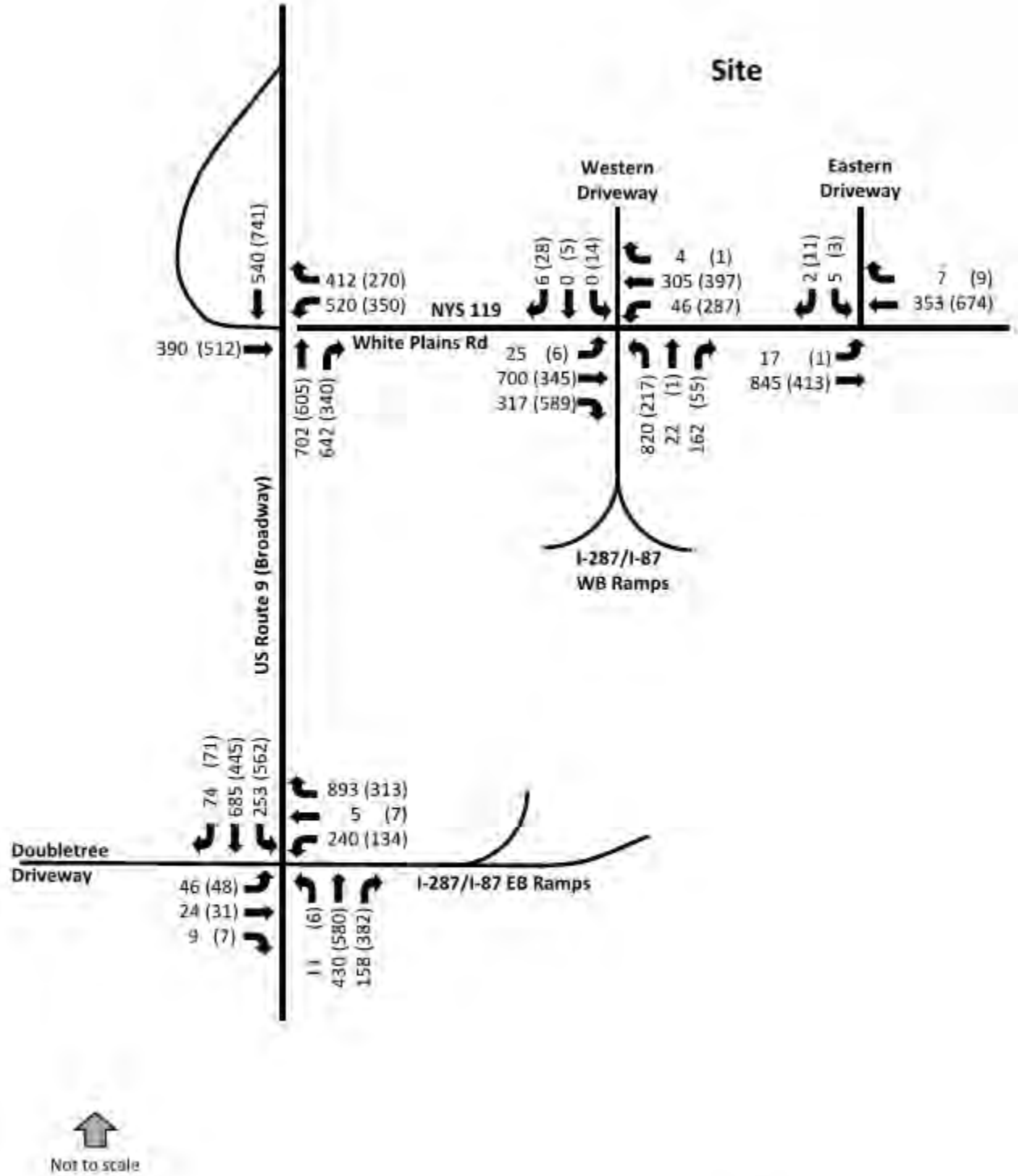


Figure 2
Existing Traffic Volumes
AM (PM) Peak Hours

b) Study Roadways and Intersections

Evaluation of the traffic impacts associated with the proposed Project requires a thorough understanding of the existing roadway system in the vicinity of the site. The existing conditions observed in the study area include an inventory of roadway and intersection geometry, traffic control devices, traffic signal timings, and the collection of traffic volumes. This information is provided in the following section.

Roadways

White Plains Road is an east-west oriented State highway (NYS 119) which extends from US Route 9 in Tarrytown to NYS Route 22 in White Plains. In the vicinity of the subject project, White Plains Road provides two travel lanes in each direction with turning lanes provided at major signalized intersections and a shared center turn lane provided between signalized intersections. The roadway is classified as a principal arterial and the travel lanes are generally 11 to 12 feet in width. Sidewalks are provided on both sides of White Plains Road in front of the project site and the pavement is in fair condition. Parking is not permitted on either side of the roadway within the study area. In the vicinity of the site, the New York State Department of Transportation (NYSDOT) estimates a 2015 average annual daily traffic volume (AADT) of 11,447. The roadway has a posted speed limit of 30 miles per hour (mph).

US Route 9 is a north-south oriented state highway which extends in a northerly direction from New York City to the Canadian border. In the vicinity of the subject project, US Route 9, also known locally as Broadway, is classified as a principal arterial. It provides two travel lanes per direction with exclusive turn lanes provided at the signalized intersections with White Plains Road and the I-287/I-87 eastbound ramps. A shared center left-turn lane is provided near Paulding Avenue. Within the study area, the travel lanes vary from 11 to 12 feet in width and the pavement is in generally fair condition. The roadway is generally straight and level and sidewalks are provided along both sides of the roadway. Parking is not permitted along US Route 9 within the study area. The speed limit is 30 mph. NYSDOT's 2015 AADT for US Route 9 to the north of White Plains Road is 26,252.

In conjunction with the New York State Thruway Authority's (NYSTA) New NY Bridge project, it is proposed to reconstruct US Route 9 to provide a second southbound left-turn lane at the intersection with the I-287/I-87 Eastbound Ramps/Doubletree Hotel driveway. The project also includes construction of a shared use path on the west side of US Route 9, which will connect to the shared use path planned for the new bridge. Ramp E, which provides access to I-287/I-87 westbound from US Route 9 southbound has been closed during the new bridge's construction. The Ramp is to re-open in 2019 and future traffic volumes on the affected movements have been adjusted to reflect conditions with Ramp E open. The Route 9 improvements have also been included in the analysis of future conditions.

Descriptions of the four study locations are provided below.

Study Intersections

- ***US Route 9 (Broadway) at White Plains Road (NYS 119)***

  The signalized intersection of White Plains Road and US Route 9 is a four-legged intersection. The eastbound approach is a near-side jughandle from southbound US Route 9, accommodating the southbound movement to eastbound White Plains Road and provides two through lanes. The westbound White Plains Road approach consists of two left-turn lanes and a right-turn lane. US Route 9 northbound provides two through lanes and a right-turn lane, while the southbound approach provides two through lanes. The intersection is controlled by a multi-phase traffic signal. Pedestrian displays and crosswalks are provided on the east, west and north legs of the intersection.

- ***US Route 9 (Broadway) at I-287/I-87 Eastbound Ramps & Doubletree Hotel Driveway***

  The I-287/I-87 Eastbound Ramps form the westbound approach and the Doubletree Hotel Driveway forms the eastbound approach to this four-way signalized intersection with US Route 9. The westbound approach provides a shared left-turn/through lane and a right-turn lane. The Doubletree driveway provides one lane permitting all movements. US Route 9 currently provides a left-turn lane and two through lanes in each direction. Related to the New NY bridge project, it is proposed to construct a second left-turn lane in the southbound direction. The intersection is controlled by a multi-phase traffic signal. Pedestrian displays and crosswalks are provided on the east, west and north legs of the intersection.

- ***White Plains Road (NYS 119) at Western Site Driveway/ I-287/I-87 Westbound Ramps***

  White Plains Road (NYS 119) forms the eastbound and westbound approaches to this four-way, signalized intersection. The eastbound approach provides a left-turn lane, two through lanes and a right-turn lane. The westbound approach provides a left-turn lane and two through lanes. The northbound I-287/I-87 Westbound Ramp approach provides a left-turn lane, a shared left-turn/through lane and a right-turn lane. The southbound driveway approach provides an unstriped, 24'-wide lane which generally functions as two lanes. The intersection is controlled by a multi-phase traffic signal. Pedestrian displays and crosswalks are provided only on the east leg of the intersection.

- ***White Plains Road (NYS 119) at #155 Eastern Site Driveway***

  The eastern site driveway serving 155 White Plains Road intersects with White Plains Road approximately 375 feet to the east of the western site driveway and provides one shared left-turn/right-turn lane in the southbound direction. At this unsignalized intersection, White Plains Road provides two through lanes in each direction with a shared center left-turn lane.

c) Existing Traffic Conditions

Intersection capacity analyses were conducted with the existing peak-hour traffic volumes (shown on Figure 2) to assess the quality of the existing traffic flow at the study intersections.

The evaluation criteria used to analyze the study intersections are based on the evaluation criteria contained in the *2010 Highway Capacity Manual* ("HCM"). The term "level of service" ("LOS") is used to denote the different operating conditions that occur at an intersection under various traffic volume loads. It is a qualitative measure that considers a number of factors including roadway geometry, speed, travel delay, and freedom to maneuver. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

Synchro 10 software was used to model the study intersections based on the parameters mentioned above. Synchro 10 software is widely used by traffic engineering professionals, is approved for use by NYSDOT, and is consistent with the procedures in the HCM.

The LOS designations, which are based on delay, are reported differently for signalized and unsignalized intersections. For signalized intersections, LOS is based on the average control delay per vehicle for the various lane group movements within the intersection. LOS can be reported for individual turning movements, approaches, or for the intersection as a whole.

For unsignalized intersections, the analysis assumes that traffic on the mainline is not affected by traffic on the side streets. Thus the LOS designation is for the critical movement exiting the side street, which is generally the left turn out of the side street or side driveway. For the purposes of this analysis, control delay is defined as the total elapsed time that includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation.

The control delay criteria for the range of service levels for signalized and unsignalized intersections are shown in **Table 2**.

Table 2
LOS Criteria

Level-of-Service (LOS)	Control Delay Per Vehicle	
	Signalized Intersections	**Unsignalized Intersections**
A	≤ 10.0 seconds	≤ 10.0 seconds
B	>10.0 and ≤ 20.0 seconds	>10.0 and ≤ 15.0 seconds
C	>20.0 and ≤ 35.0 seconds	>15.0 and ≤ 25.0 seconds
D	>35.0 and ≤ 55.0 seconds	>25.0 and ≤ 35.0 seconds
E	>55.0 and ≤ 80.0 seconds	>35.0 and ≤ 50.0 seconds
F	>80.0 seconds	>50.0 seconds

Source: Transportation Research Board. *Highway Capacity Manual*, 2010.

The existing physical roadway characteristics of the study intersections and signal phasing and timing settings at the signalized study intersections were determined from a field review and signal timing plans provided by NYSDOT.

The results of the intersection analysis for existing volume conditions are summarized in **Table 3** below. Synchro worksheets are provided in the Appendix.

Table 3 – Summary of Existing Traffic Conditions

Approach	AM Peak Hour		PM Peak Hour	
	Delay (secs)	LOS	Delay (secs)	LOS
1. US Route 9 (Broadway) at White Plains Rd (NYS 119)				
EB T	36.6	D	34.7	C
WB L	24.7	C	25.4	C
WB R	47.7	D	36.0	D
NB T	32.0	C	26.5	C
NB R	9.2	A	6.8	A
SB T	28.2	C	29.1	C
OVERALL INT	**28.2**	**C**	**27.1**	**C**
2. US Route 9 (Broadway) at I-287/I-87 Eastbound Ramps/Doubletree Hotel Drwy.				
EB LTR	45.3	D	52.3	D
WB LT	78.4	E	66.0	E
WB R	52.8	D	13.0	B
NB L	15.6	B	15.3	B
NB TR	39.6	D	42.3	D
SB L	10.6	B	45.7	D
SB TR	12.0	B	6.6	A
OVERALL INT	**37.2**	**D**	**33.9**	**C**
3. White Plains Rd (NYS 119) at I-287/I-87 Westbound Ramps/Western Site Drwy.				
EB L	21.8	C	16.0	B
EB T	53.1	D	39.3	D
EB R	2.0	A	8.8	A
WB L	24.9	C	25.3	C
WB TR	30.9	C	19.6	B
NB L	54.7	D	34.6	C
NB LT	55.2	E	34.6	C
NB R	2.5	A	2.1	A
SB LTR	0.0	A	17.6	B
OVERALL INT	**39.8**	**D**	**21.8**	**C**
4. White Plains Rd (NYS 119) at Eastern Site Driveway (unsignalized)				
EB L	0.2	A	0.0	A
SB LR	10.7	B	11.6	B

Note: Delay is measured in seconds per vehicle ("secs").
Source: Kimley-Horn of New York P.C.

As can be seen from Table 3, for existing conditions, all intersections currently operate at level of service (LOS) "D" or better during each peak hour, which is indicative of acceptable operating conditions. All individual movements, with two exceptions, operate at LOS "D" or better during the peak hours. LOS "E" is experienced during at least one of the peak hours on the westbound shared left-turn/through lane at the I-287/I-87 Eastbound Off-Ramp intersection with US Route 9 and on the northbound shared left-turn/through lane on the I-287/I-87 Westbound Off-Ramp at the White Plains Road intersection. Level of service "E" is generally considered to be at or near the capacity of a particular movement.

d) Public Transportation

Bus service is provided along White Plains Road by Westchester County's Bee-Line bus system and by Coach USA and along US Route 9 by Transdev's Hudson Link system. The Bee-Line system operates two bus routes; #13 provides weekday service between Ossining and Rye and route #1W provides service Monday through Saturday between the Bronx and White Plains. Route #13 has 56 daily buses (27 eastbound; 29 westbound). Route #1W operates 25 buses each weekday (12 northbound; 13 southbound) and 20 buses on Saturdays (7 northbound; 13 southbound). The Bee-Line bus stops are located in front of 155 White Plains Road.

Coach USA operates one bus route (OWL Express) which provides weekday service during the peak morning and afternoon commuter periods between White Plains and Middletown, NY. Five southbound buses operate in the morning and 5 northbound buses operate in the afternoon. The OWL Express bus stop is located on White Plains Road adjacent to Meadow Street, approximately 0.15 miles from the subject property. The Bee-Line and OWL Express buses each connect to the White Plains TransCenter, a multi-modal transportation center which provides transfers to Metro-North Railroad's Harlem Line trains and to over 20 additional bus routes in the region. Bee-Line bus #13 also connects to Metro-North Railroad's Tarrytown station.

Transdev's Hudson Link bus (Routes H07 and H07X) operates seven days a week between the Palisades Center Mall in West Nyack and Metro-North Railroad's Tarrytown station with a bus stop located along US Route 9 at White Plains Road.

C. Future Traffic Operating Conditions

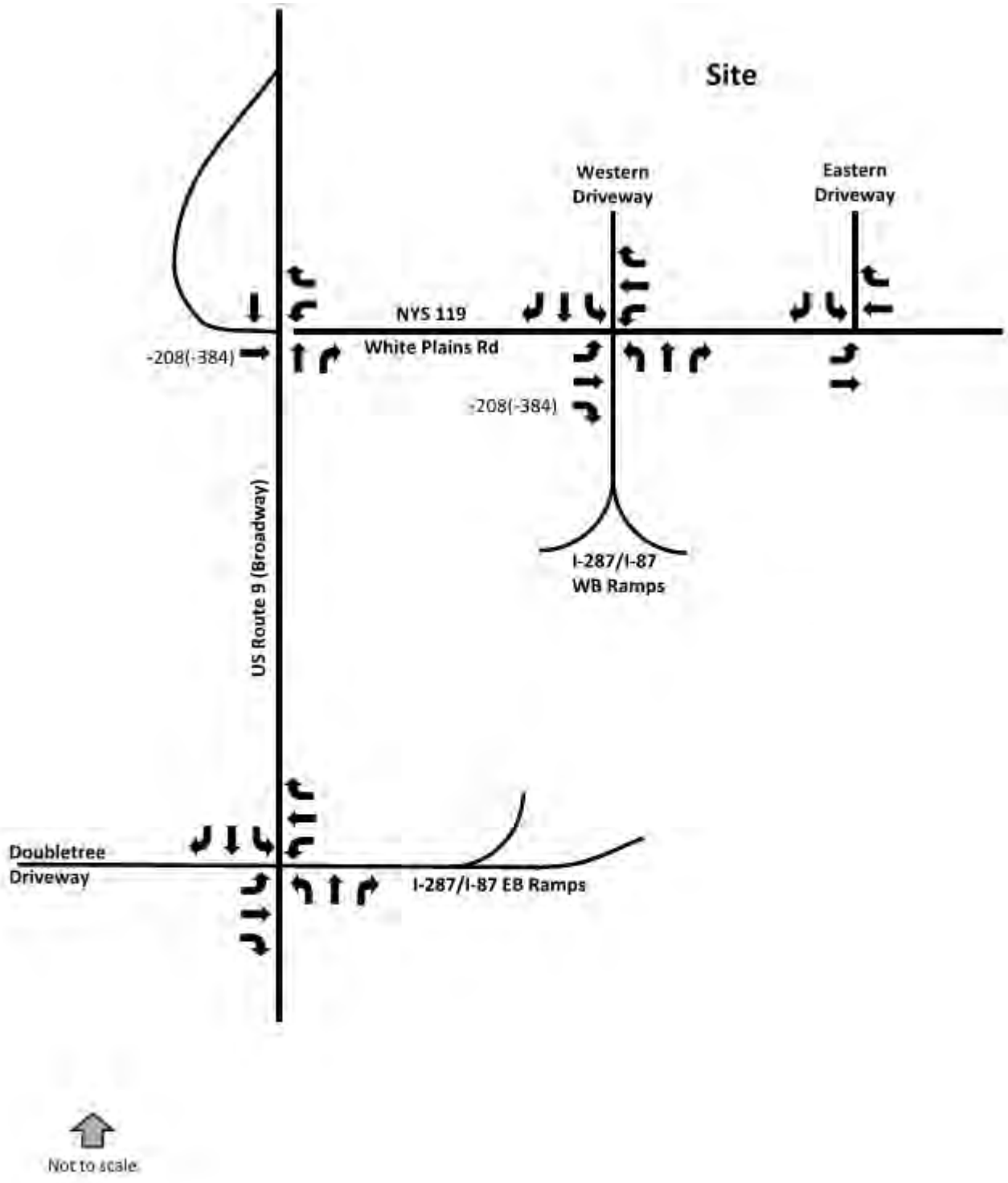
a) No-Build Traffic Volumes

No-Build traffic volumes are defined as expected traffic on the roadway network in the future, immediately prior to the opening of the proposed Project. To develop the No-Build traffic volumes, the existing volumes were adjusted to reflect the planned reopening of Ramp E (from southbound Route 9 to the new Bridge), the increase in volumes associated with typical background growth and the traffic related to the planned redevelopment of 200 White Plains Road, the proposed Edge on Hudson development and Hudson Harbor. In addition, traffic from the 5,000 sf of currently vacant office space at 155 White Plains Road was estimated and included in the No-Build volumes. The No-Build volume development is described below.

Reopening of Ramp E

Ramp E from southbound US Route 9 to the Tappan Zee bridge has been closed during the construction of the new bridge and is expected to re-open in 2019. During the ramp closure, all vehicles on Route 9 southbound destined to the bridge must use the jughandle to travel to White Plains Road eastbound and then use the right-turn lane at the I-287/I-87 westbound on-ramp intersection. The Draft Environmental Impact Statement (DEIS) for the new NY Bridge Project included a calculation of the number of rerouted trips based on peak hour counts conducted in 2011 when Ramp E was open. The calculation was provided in a October 19, 2011 memorandum by AECOM (copy provided in the Appendix) which estimated a total of 216 trips would be rerouted during the AM peak hour and 464 trips would be rerouted during the PM peak hour in the peak construction year, assumed to occur in 2017. The September 2018 traffic counts conducted for the subject Project included the rerouted Ramp E volumes. As the subject project is to be constructed after Ramp E is reopened, an adjustment was made to account for the reopening of the ramp. After reviewing AECOM's estimates and the 2018 traffic counts, it

was determined that 208 AM peak hour trips and 384 PM peak hour trips should be redistributed to Ramp E by removing them from the two affected movements noted above. The redistributed volumes are shown on **Figure 3.**



Kimley»Horn

Figure 3
Ramp E Redistributed Traffic Volumes
AM (PM) Peak Hours

Background Traffic Growth

The 2018 existing traffic volumes shown on Figure 2, less the Ramp E adjusted volumes shown on Figure 3, were grown to the year 2021 when the project is expected to be completed, to represent typical traffic growth not associated with any planned development. A growth factor of 1 percent per year was applied to the existing volumes, based on historical data. The AM and PM peak hour grown volumes are shown on **Figure 4**.

Vicinity Development Traffic

Traffic volumes from three (3) planned developments in the vicinity of the subject Project have been identified and included in the future traffic volumes. These developments include 200 White Plains Road, Edge-on-Hudson and Hudson Harbor, as described below.

- An existing office building at 200 White Plains Road is to be replaced with 248 residential units. Traffic volumes associated with this development were estimated based on the Institutue of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition* as a traffic study had not been prepared at the time of this report.
- The Edge-on-Hudson development in Sleepy Hollow is to consist of 1,177 residential units, 137,000 sf of retail/commercial space and a 140-room hotel. The traffic volumes were obtained from Figure 6.41a in the 2005 traffic study prepared for the project when it was known as Lighthouse Landing. The 2005 traffic study was for a larger development (1,250 residential units, 132,000 sf retail/commercial, and a 35,000 sf office). It is anticipated that approximately half of the Edge-on-Hudson development will be constructed in the timeframe of the subject Project, which constituted approximately 47% of the 2005 Lighthouse Landing volumes.
- The Hudson Harbor residential development has been mostly completed, however 65 units remain to be constructed. The trip generations from the 65 units constitute approximately 3% of the 2005 Lighthouse Landing volumes. Since Edge on Hudson and Hudson Harbor are both located over a mile and a half from the site and are within a quarter mile of each other, the trips associated with Hudson Harbor were combined with those associated with Edge on Hudson and were projected by taking 50% of the 2005 Lighthouse Landing volumes.

The volumes associated with the three vicinity developments are shown on **Figure 5**. Four other nearby developments, the Tarrytown Honda expansion, Doubletree Hotel, Montefiore, and the J.C.C. property have been completed and traffic associated with these developments are included in the counted traffic volumes. The combined volume of traffic that these developments generate would be on the order of 1 or 2 percent of existing volumes and is not likely to have had a significant impact on area traffic volumes. Another existing development, Sleepy Hollow Gardens, was recently approved to provide 20 new parking spaces. These spaces are being provided to address a current parking shortfall issue and, therefore, will not generate any new traffic activity.

Vacant Office Traffic

At the time of the traffic counts in September 2018, the building at 155 White Plains Road had 5,000 sf of vacant office space. To represent full occupancy of the building, trips for the vacant space were estimated based on ITE's *Trip Generation Manual, 10th Edition* for Land Use Code 710 (General Office Building) and distributed to the study intersections based on existing traffic flows. The vacant office space trips are shown on **Figure 6.**

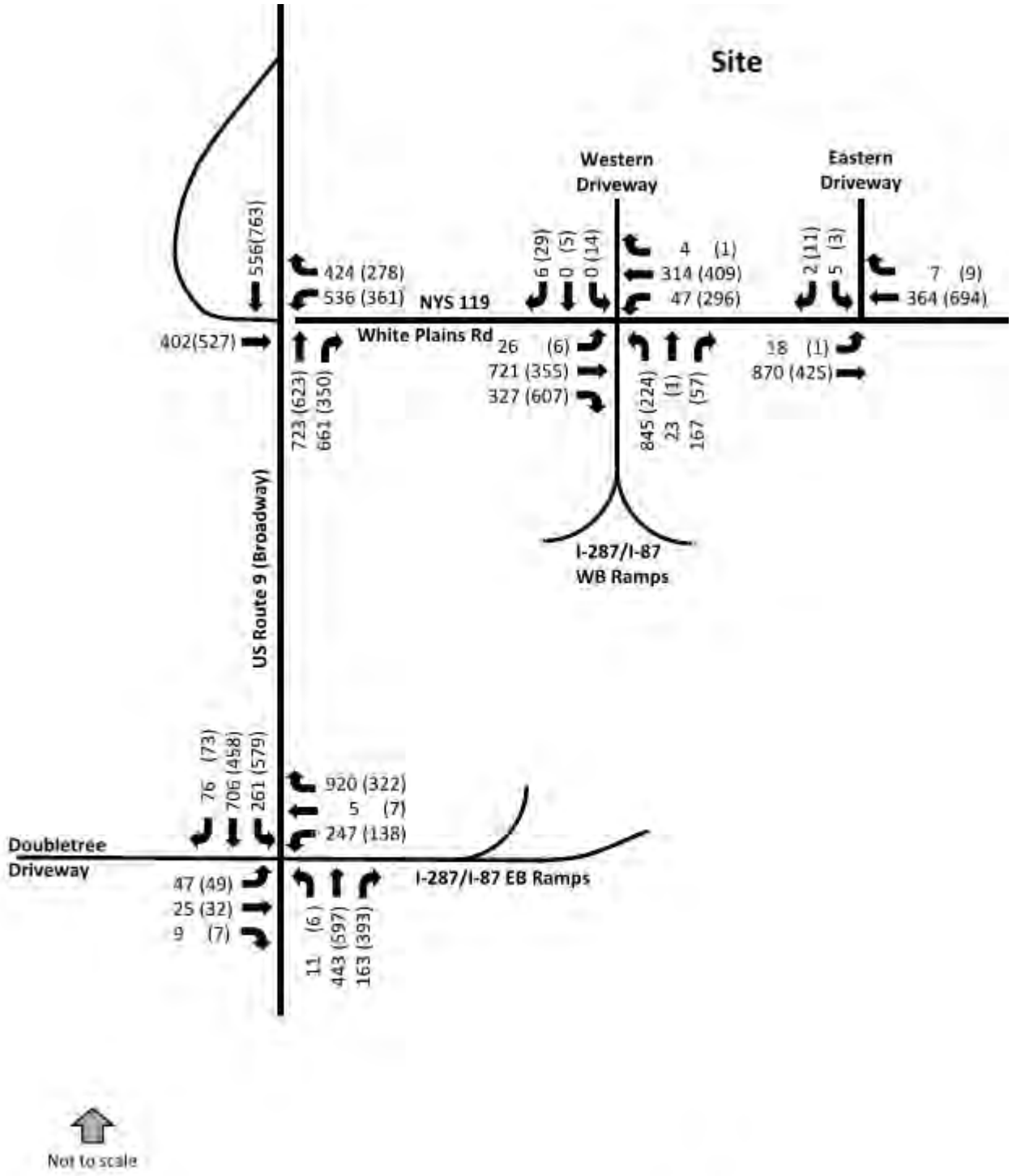


Figure 4
Grown Traffic Volumes
AM (PM) Peak Hours

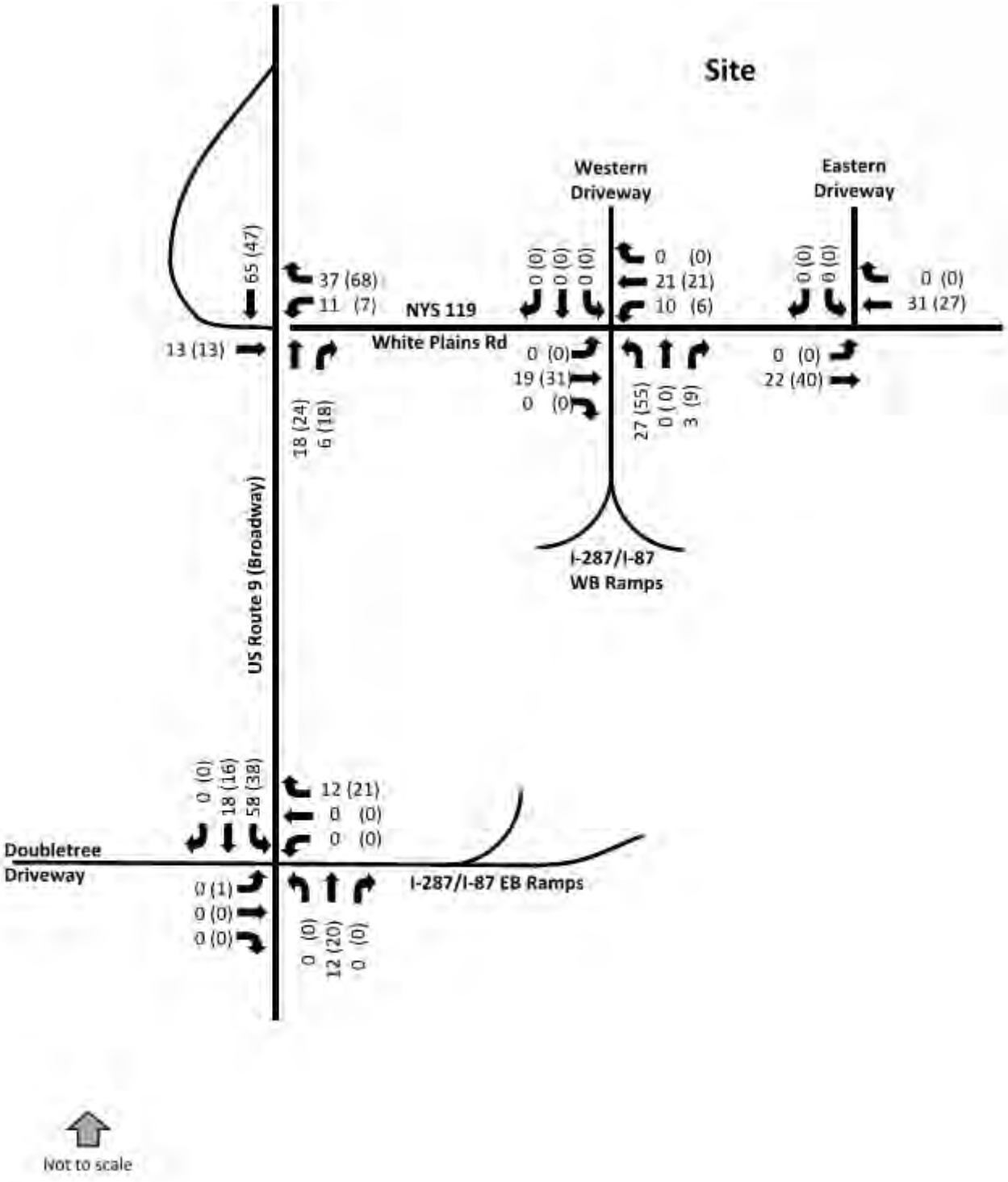


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Figure 5
Vicinity Development Traffic Volumes
AM (PM) Peak Hours

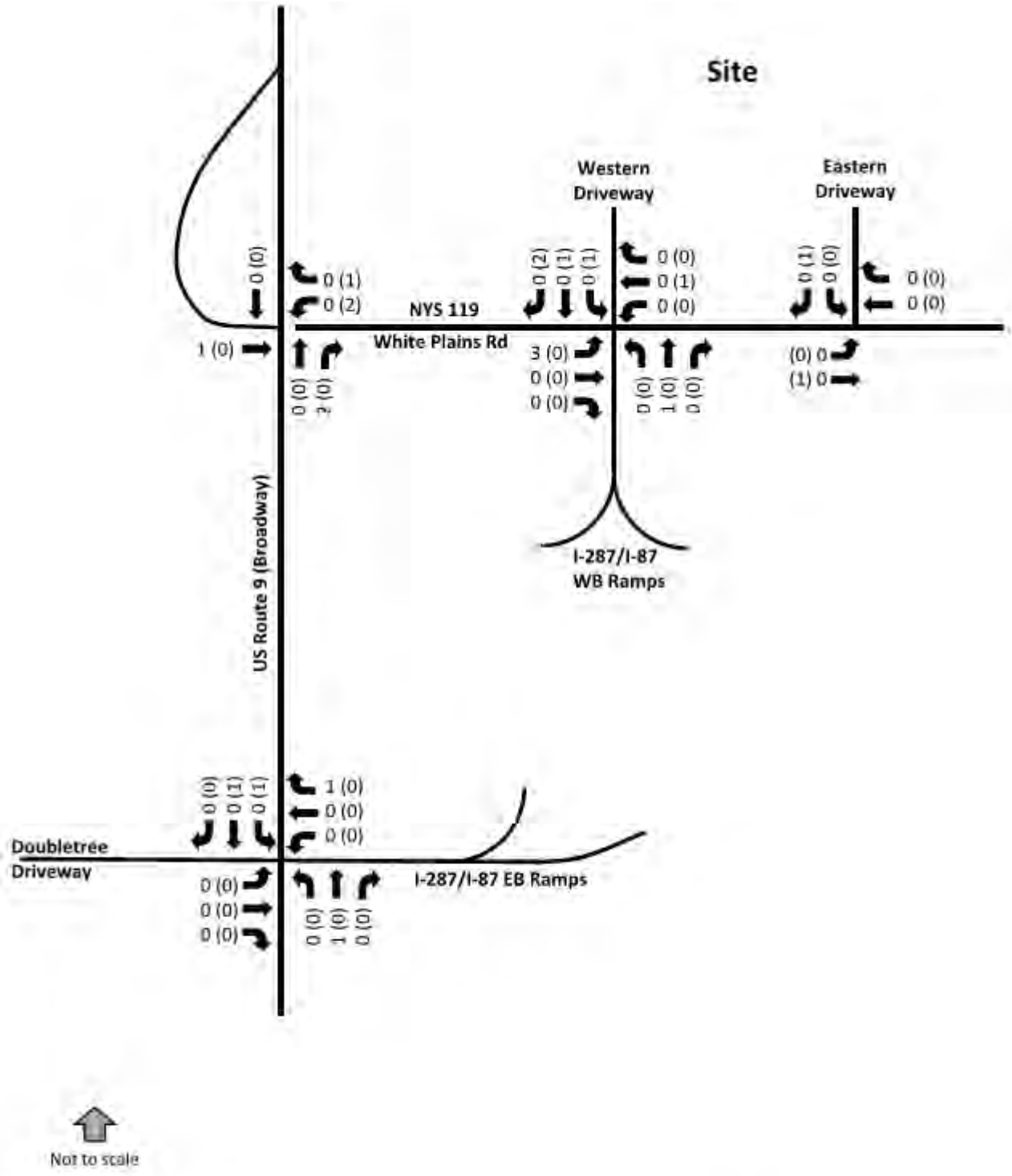

Figure 6
Vacant Office Trips
AM (PM) Peak Hours

The Ramp E volumes, vicinity development volumes and vacant office trips were added to the grown volumes, resulting in the No-Build volumes shown on **Figure 7**. The analysis conducted for this study project that No-Build traffic volumes in the area will increase by 7 percent during the AM Peak Hour and by 9 percent during the PM Peak Hour (from existing conditions), although actual increases at the study intersections will be somewhat lower with the reopening of Ramp E providing a direct connection to the new bridge for southbound traffic on Broadway.

In addition, to reflect the potential effects of the New NY Bridge shared-use path, pedestrian activity was increased by an average of 30 pedestrians per intersection per hour in the No-Build and Build conditions (and these values were included in the intersection capacity analyses). This reflected an increase of almost 1.3 times the current number of pedestrians. Similarly, bicycle activity was increased by an average of 25 bicycles per intersection in the No-Build and Build conditions (and these values were also included in the intersection capacity analyses).

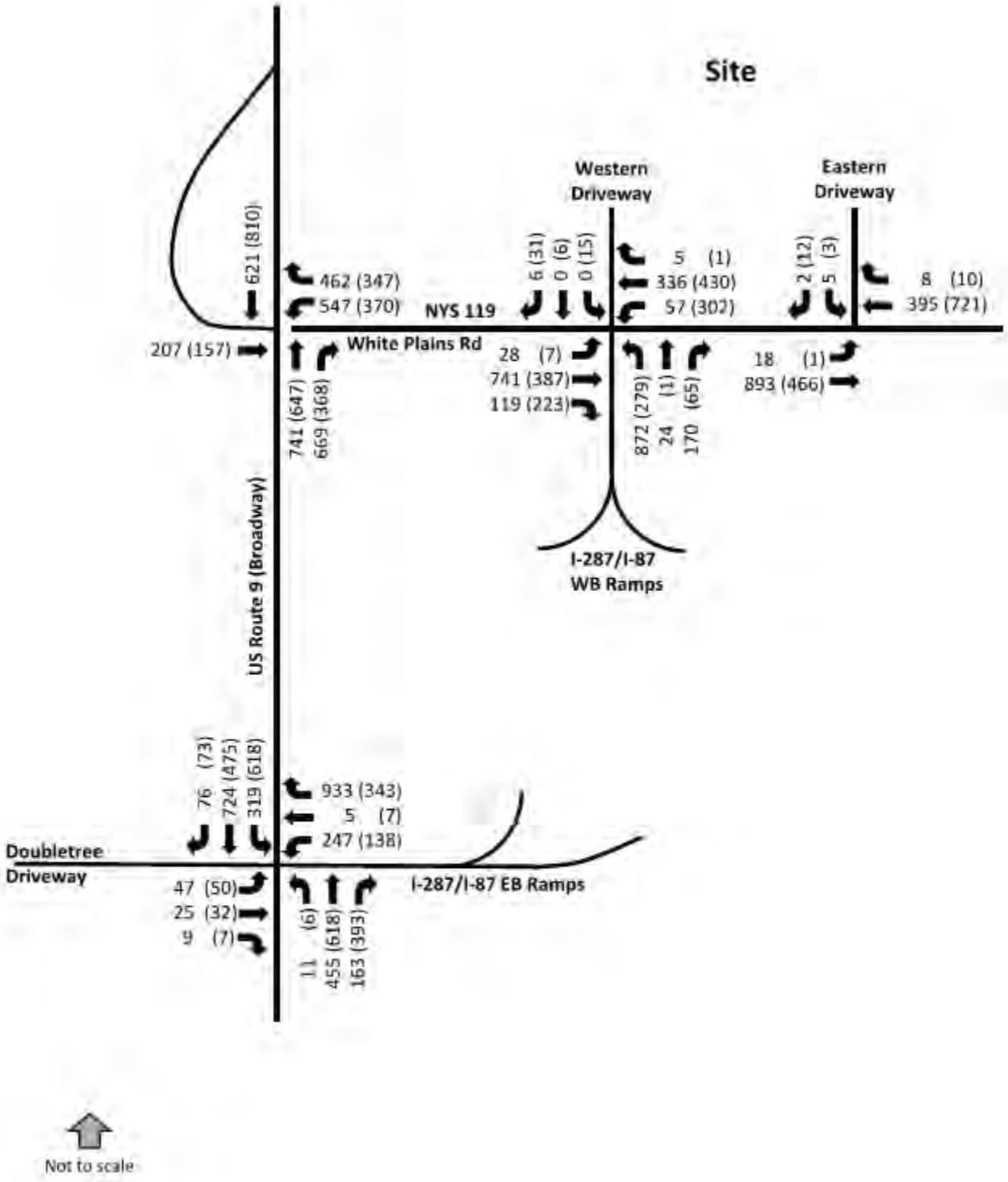

Figure 7
No-Build Traffic Volumes
AM (PM) Peak Hours

b) Project Trip Generation

The proposed 35,952 square-foot (sf), Artis Senior Living residential memory care facility will have 64 beds and will provide services to Alzheimer's and dementia residents. Trip generation rates for the proposed facility were determined using information contained in the Institute of Transportation Engineers' (ITE) publication, Trip Generation, 10th Edition. To determine the ITE Land Use that most closely resembles the characteristics of the proposed facility, the ITE land use descriptions and trip rates for "Assisted Living", "Congregate Care Facility", "Continuing Care Retirement Community" and "Nursing Home" were reviewed. Based on this review, it was determined that the "Assisted Living" land use (Land Use Code 254) would be more appropriate to use than the other land uses as it is more consistent with the characteristics of Alzheimer's / Dementia Care Housing. Per ITE, "*An Assisted Living complex is a residential setting that provides either routine general protective oversight or assistance with activities necessary for independent living to mentally or physically limited persons." ITE further states that "Alzheimer's and ALS care are commonly offered by these facilities*." The trip rates for Assisted Living were generally higher than the trips rates for the other categories. The trip projections for the proposed facility are provided in **Table 4**.

Table 4 - Peak Hour Trip Summary

Land Use	Weekday AM Peak Hour	Weekday PM Peak Hour
Proposed Artis Residential Memory Care Facility *35,952 sf / 64 beds*	14	17

Source: ITE Trip Generation, 10th Edition. Land Use Code 254, Assisted Living.

In addition to the ITE data, Kimley-Horn reviewed recent weekday traffic surveys conducted in February 2015 at an existing Sunrise assisted living and memory care facility in New City, Rockland County, NY. Using rates established from those surveys, the contemplated 35,952-sf, 64-bed Artis residential memory care facility would generate 13 trips in the morning peak hour and 19 trips in the afternoon peak hour at the proposed Tarrytown facility. These trip projections are almost identical to the trip projections based on the ITE data (14 AM trips; 17 PM trips).

For context, a comparison was made to the site's previously-approved 60,000 sf office building which indicated that the office building would have generated 70 trips during the weekday AM peak hour and 69 trips during the weekday PM peak hour, a significantly higher number of trips than the Proposed Action. For more discussion on trip generation for other possible uses of the site, see the Alternatives section.

c) Trip Distributions

Trip arrival and departure patterns, which show how the proposed Artis facility-generated trips identified in Table 4 will travel to and from the Site, were determined based on a review of the existing roadway network, existing traffic patterns and proposed access to the Project. The trip origin and destination percentages for Project-generated trips are shown graphically on **Figures 8** and **9**, respectively. The trip distribution percentages were applied to the project trips shown in Table 4, resulting in the Project-generated trips shown on **Figure 10** for the AM and PM peak hours.

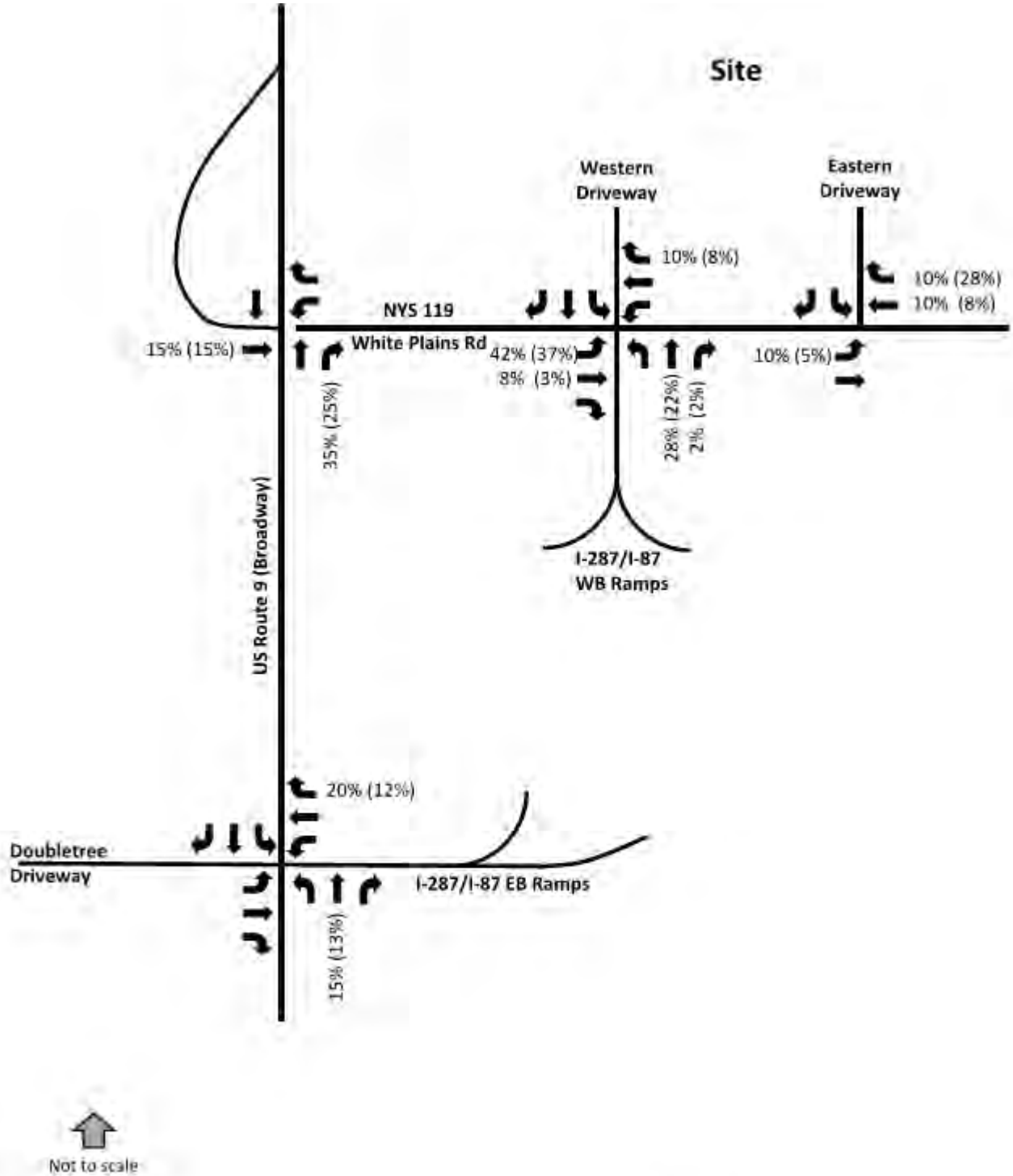

Figure 8
Project Trips – Arrival Distribution
AM (PM) Peak Hours

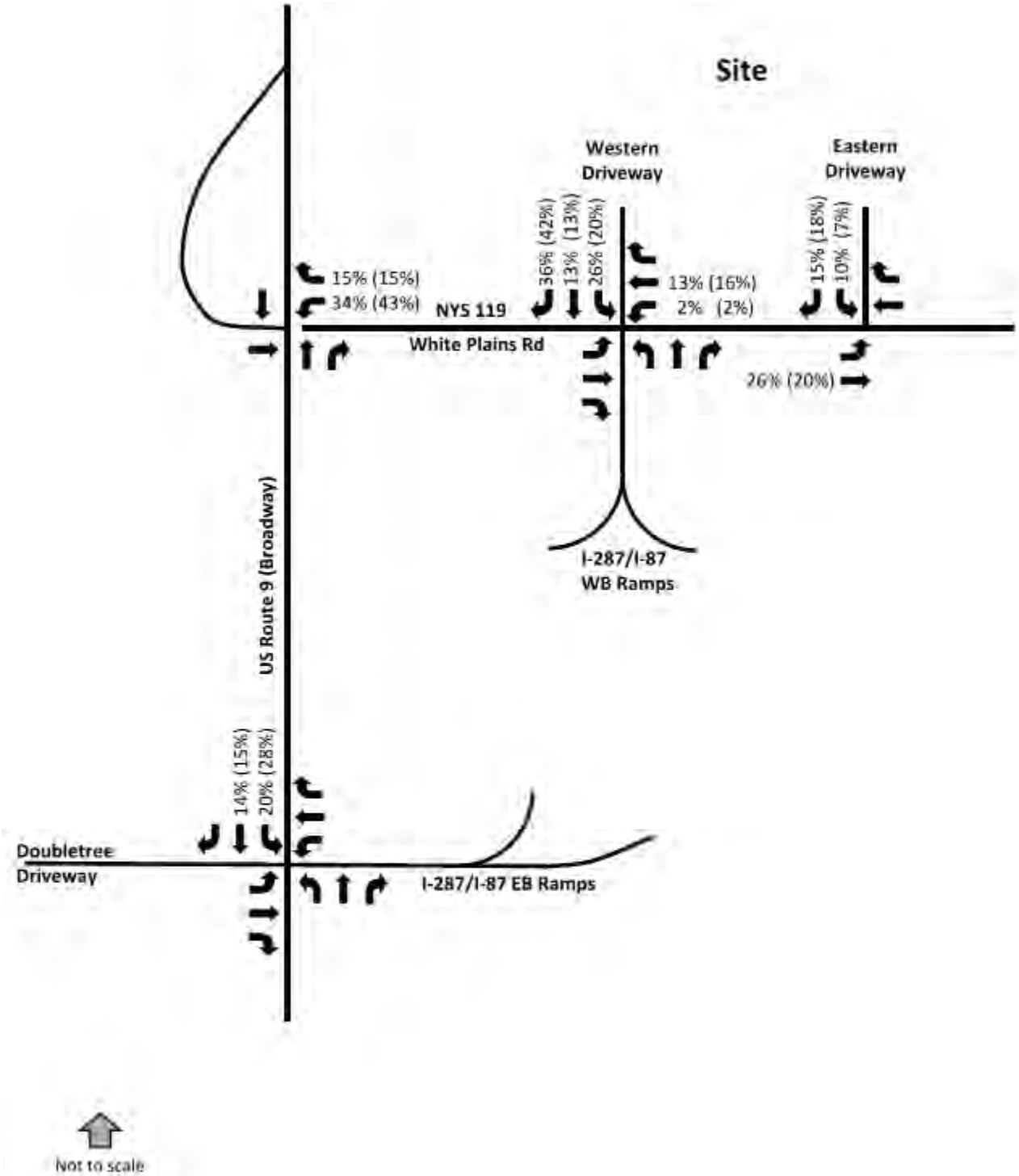

Figure 9
Project Trips – Departure Distribution
AM (PM) Peak Hours

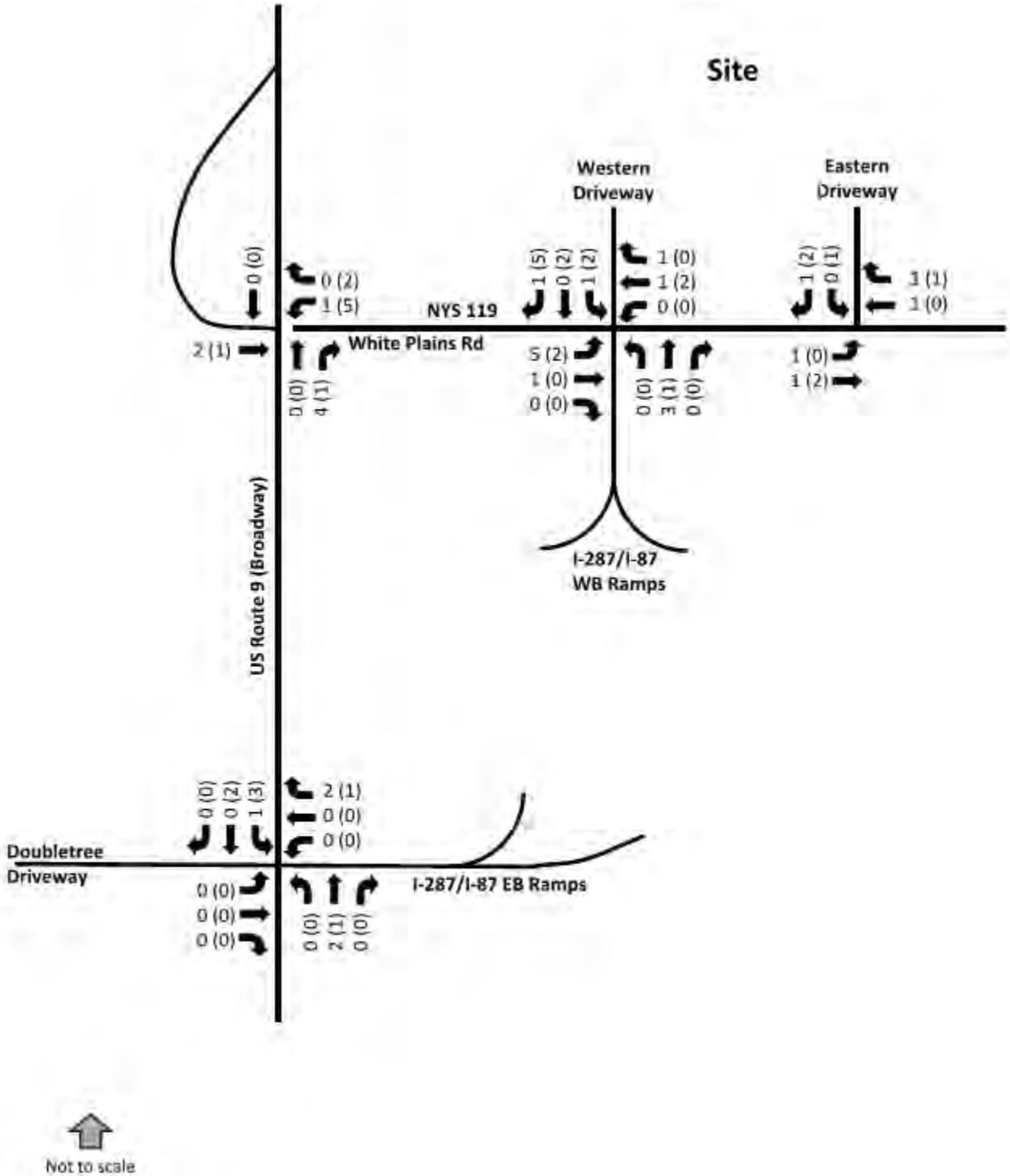

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Figure 10
Project Generated Trips
AM (PM) Peak Hours

d) Build Traffic Volumes

To determine the future Build traffic volumes, the Project-Generated trips shown in Figure 10 were added to the No-Build Traffic volumes (shown in Figure 7) to yield the Build Traffic Volumes, shown in **Figure 11.**

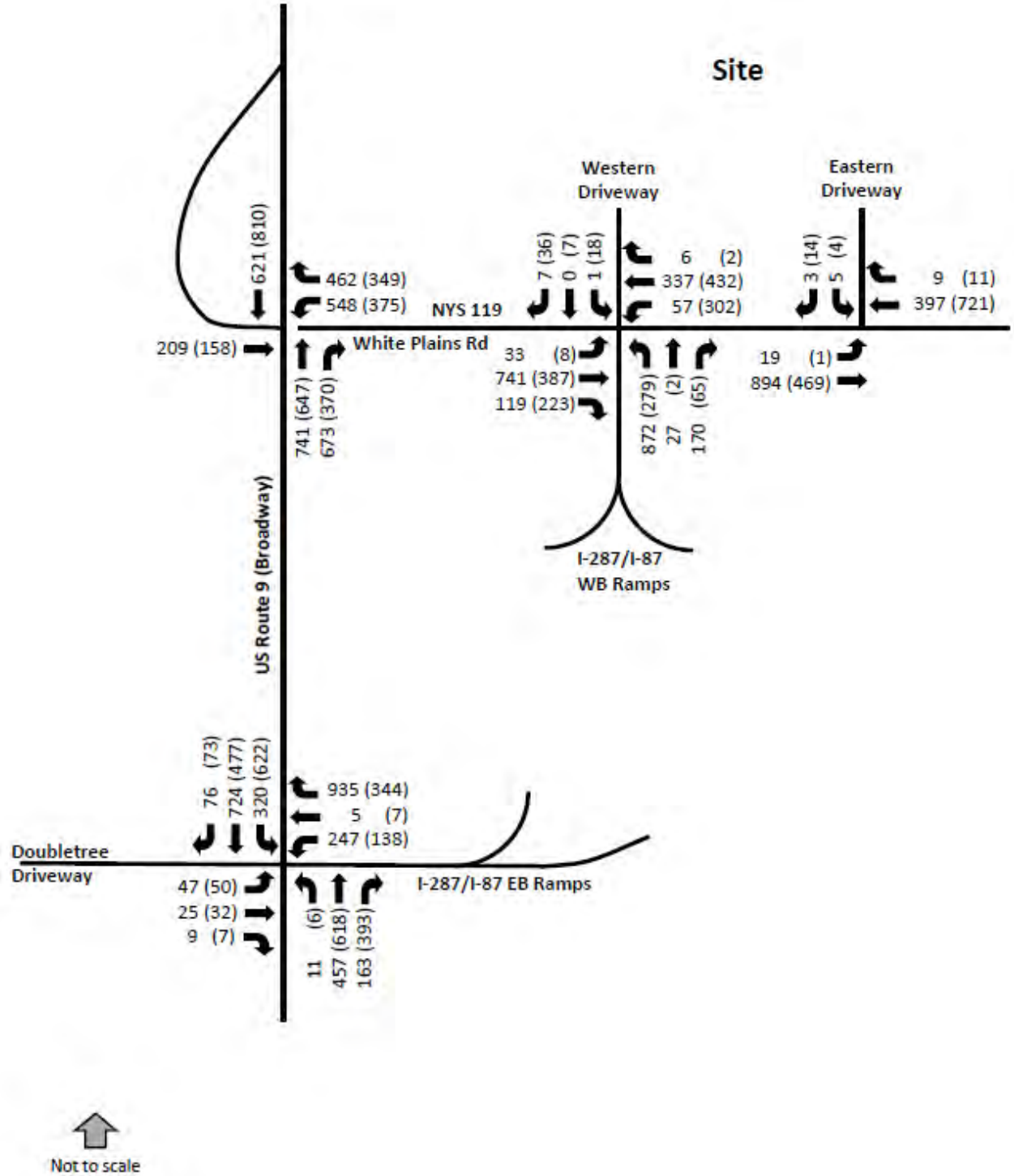

Figure 11
Build Traffic Volumes
AM (PM) Peak Hours

e) Future Traffic Operating Conditions

Intersection capacity analyses were conducted for the No-Build and Build volume conditions using Synchro (version 10) software to assess the quality of the future traffic flow at the study intersections. The Synchro analysis for the No-Build and Build conditions includes the scheduled improvements proposed by NYSTA at the Route 9 intersection with the I-287/I-87 Eastbound Ramps and the Doubletree Hotel driveway, consisting of an additional southbound left-turn lane and signal timing modifications. The No-Build and Build analysis also includes the rerouting of traffic volumes associated with the reopening of Ramp E. **Table 5** presents a comparison of No-Build and Build LOS conditions for the peak hours analyzed. Synchro outputs for the No-Build and Build scenarios are provided in the Appendix.

Table 5 - No-Build and Build Traffic Conditions LOS Summary

Approach	Weekday AM Peak Hour				Weekday PM Peak Hour			
	No-Build		Build		No-Build		Build	
	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS
1. US Route 9 (Broadway) at White Plains Rd (NYS 119)								
EB T	35.9	D	36.0	D	32.9	C	33.0	C
WB L	21.3	C	21.4	C	20.0	C	20.0	C
WB R	45.5	D	45.6	D	32.6	C	32.6	C
NB T	29.3	C	29.4	C	22.4	C	22.5	C
NB R	4.5	A	4.6	A	1.1	A	1.1	A
SB T	26.6	C	26.6	C	25.1	C	25.2	C
OVERALL INT	**25.1**	**C**	**25.1**	**C**	**21.9**	**C**	**22.0**	**C**
2. US Route 9 (Broadway) at I-287/I-87 Eastbound Ramps/Doubletree Hotel Drwy.								
EB LTR	28.7	C	28.7	C	32.0	C	32.0	C
WB LT	55.1	E	55.1	E	41.2	D	41.2	D
WB R	41.2	D	41.7	D	10.1	B	10.2	B
NB L	43.5	D	43.5	D	39.2	D	39.2	D
NB TR	53.0	D	53.4	D	33.6	C	33.7	C
SB L	22.5	C	22.5	C	35.3	D	35.4	D
SB TR	11.2	B	11.2	B	7.6	A	7.6	A
OVERALL INT	**34.5**	**C**	**34.8**	**C**	**26.3**	**C**	**26.3**	**C**
3. White Plains Rd (NYS 119) at I-287/I-87 Westbound Ramps/Western Site Drwy.								
EB L	22.4	C	22.5	C	15.7	B	15.8	B
EB T	54.0	D	54.0	D	39.6	D	39.6	D
EB R	1.9	A	1.9	A	3.5	A	3.5	A
WB L	26.8	C	26.8	C	26.5	C	26.5	C
WB TR	31.7	C	31.8	C	19.4	B	19.5	B
NB L	60.7	E	60.7	E	37.9	D	37.9	D
NB LT	61.8	E	62.8	E	37.9	D	38.0	D
NB R	2.5	A	2.5	A	2.7	A	2.7	A
SB LTR	0.0	A	0.1	A	18.1	B	18.2	B
OVERALL INT	**46.0**	**D**	**46.1**	**D**	**25.4**	**C**	**25.3**	**C**
4. White Plains Rd (NYS 119) at Eastern Site Driveway (unsignalized)								
EB L	0.2	A	0.2	A	0.0	A	0.0	A
SB LR	11.1	B	11.0	B	12.0	B	12.2	B

Note: Delay is measured in seconds per vehicle ("secs").
Source: Kimley-Horn of New York P.C.

As shown in **Table 5**, in the future under No-Build conditions (without the Proposed Action but with forecast increases in traffic volumes, the reopening of Ramp E and the NYSTA improvements on southbound Route 9), all intersections will continue to operate at level of service (LOS) "D" or better during each peak hour, which is indicative of acceptable, rush-hour operating conditions. All individual movements, with two exceptions, will operate at LOS "D" or better during the peak hours. LOS "E" conditions will be experienced (during the AM peak hour only) on the westbound shared left-turn/through lane at the I-287/I-87 Eastbound Off-Ramp intersection with US Route 9 and on the northbound shared left-turn/through lane on the I-287/I-87 Westbound Off-Ramp at the White Plains Road intersection.

A comparison of Existing conditions to No-Build conditions at each intersection is described below.

1. US Route 9 (Broadway) at White Plains Rd (NYS 119)

   Under No-Build conditions, the intersection will operate at acceptable LOS "C" during the AM and PM peak hours and, compared to Existing conditions, the overall intersection delays will decrease by 3.1 seconds during the AM peak hour and by 5.2 seconds during the PM peak hour. Delays on individual movements will decrease by up to 5.7 seconds. The reduced delays can be attributed to the reopening of Ramp E and the removal of traffic from the eastbound approach.

2. US Route 9 (Broadway) at I-287/I-87 Eastbound Ramps/Doubletree Hotel Driveway

   Under No-Build conditions, overall intersection delays will decrease by 2.7 seconds during the AM peak hour (resulting in a change in LOS from "D" under Existing conditions to "C" under No-Build conditions) and by 7.6 seconds during the PM peak hour. A number of movements will experience decreased delays during the peak hours, which is attributable to the proposed additional southbound left-turn lane and proposed signal phasing and timing modifications. Although the overall intersection will operate with fewer delays than under existing conditions, the added traffic will result in increased delays on some movements, ranging from 1 second on the southbound through/right-turn movement during the PM peak hour to 27.9 seconds on the northbound left-turn movement during the AM peak hour (due to the Thruway's requirement that, hence forth, motorists on this movement can only proceed on the green arrow).

3. White Plains Rd (NYS 119) at I-287/I-87 Westbound Ramps/Western Site Driveway

   Under No-Build conditions, the overall intersection delays will increase by 6.2 seconds during the AM peak hour and by 3.6 seconds during the PM peak hour, however, the LOS will remain at existing levels (AM LOS "D" and PM LOS "C"). For individual movements, the eastbound right-turn movement will experience reduced delays during the PM peak hour (5.3 seconds) which is attributable to a reduction in volumes due to the Ramp E reopening. Delays on the northbound ramp approach will increase by up to 6.6 seconds during the AM peak hour and by up to 3.3 seconds during the PM peak hour, due to the forecast increases in traffic volumes.

4. White Plains Rd (NYS 119) at Eastern Site Driveway

   Under No-Build conditions, the driveway approach will experience negligible increases in delay of less than one second with exiting movements from the driveway operating at good levels of service (LOS "B") during each peak hour.

f) Project Traffic Impact

In the future Build conditions (with the Proposed Action and all of the other added traffic and improvements), all intersections will also operate at level of service (LOS) "D" or better during each

peak hour. Similar to the No-Build conditions, all individual movements, with the same two exceptions, will operate at LOS "D" or better during the peak hours.

To identify project impacts, a comparison was made between the Build conditions and the No-Build conditions. When compared to No-Build conditions, there will be an imperceptible increase in overall intersection delays of up to 0.3 seconds. The intersection and individual movement levels of service will remain at No-Build levels (LOS "D" or better). Most individual movements will experience either no change in delay or a slight increase in delay of up to 1 second compared to No-Build conditions.

Therefore, it can be concluded that the project's traffic will not result in a significant adverse impact on the study intersections or surrounding roadways.

g) Comparison to 2006 Studies

A comparison of 2005 traffic volumes compiled for the 2006 SEQRA analysis with the current traffic volumes, which can be found in the Appendix, revealed that, ignoring movements impacted by the closure of Ramp E, traffic volumes in the study area today are 6.3% lower than they were in 2005. A comparison of the background traffic volumes revealed that the traffic volumes projected to prevail in 2011 without the office building were 10% to 20% higher than current projections. Furthermore, traffic volumes for the Artis facility will be 75% to 80% lower than the formerly-approved office building traffic volumes.

The results of the No-Build and Build Synchro analyses for the Proposed Action were compared to the No-Build and Build analyses from the 2006 traffic studies for the approved 60,000 sf office development. It can be difficult to conduct an informative comparison of analysis results for studies conducted several years apart (in this case, 12 years apart) due to normal changes in traffic volumes and patterns, modifications to roadway geometry or signal timings and changes in capacity analysis methodology and software.

At the intersection of US Route 9 (Broadway) with the I-87/I-287 eastbound ramps, future traffic volume projections are approximately 21 percent lower than they were when the project was last evaluated in 2006. Combined with the proposed improvements to this intersection, average intersection delays are projected to be dramatically reduced over those projected in 2006.

At the intersection of White Plains Road (NYS 119) with US Route 9, future traffic volumes are projected to be approximately 17 percent lower than when last projected in 2006. Delays are actually projected to be virtually identical in the AM peak hour (all related to computer software changes) but will be somewhat lower than previously projected in the PM peak hour.

At the intersection of White Plains Road with the I-87/I-287 westbound ramps (opposite the primary access to the development), future traffic volumes are projected to be approximately 20 percent lower than they were when last projected in 2006. Delays are actually projected to be higher in the AM peak hour (all related to computer software changes) but will be virtually identical in the PM peak hour.

At the intersection of White Plains Road with the 155 White Plains Road east driveway, traffic volumes are projected to be approximately 11 percent lower than they were when last projected in 2006 and delays are projected to be similarly reduced.

In summary, this comparison (see Table 7 in the Appendix) indicates that, with one exception, the overall intersection operations projected for the subject development will be similar to the intersection operations projected in the 2006 studies (overall LOS "C" or "D" at each intersection). The exception, as noted above, is at the Route 9 intersection with the I-287/I-87 Eastbound Ramps and Doubletree

Hotel driveway where the 2006 studies identified overall levels of service of "E" during the AM and PM peak hours with some movements operating at LOS "F", (compared to overall LOS "C" and individual movements LOS "E" or better for the subject project). The 2006 analysis was based on higher projected volumes and did not include the currently proposed additional southbound left-turn lane with signal timing modifications at this intersection.

D. Parking and Circulation

a) Parking

The proposed project includes 45 on-site parking spaces. Per the proposed zoning, a parking ratio of 0.5 parking spaces per patient bed is recommended, which results in a requirement of 32 parking spaces for the proposed 64-bed facility. Based on Artis' staff projections, a total of 27 parking spaces will be required. Studies of similar facilities (summarized in the Appendix) indicate an average of 0.4 spaces per bed, though the highest value recorded was 0.58 spaces per bed. Applying this latter value suggests that providing a total of 37 parking spaces will be adequate to accommodate even the greatest expected parking demand. As indicated above, 45 spaces are proposed. Therefore, sufficient on-site parking will be provided to accommodate the project's parking needs.

b) Circulation

To access the project, vehicles will travel along an access easement through the parking area at 155 White Plains Road. Signage will be provided to direct visitors to the Artis facility. The proposed facility will generate very low volumes and, thus, is not expected to have a significant adverse impact on visitors and employees using the circulation road and parking areas at 155 White Plains Road.

c) Emergency *Access*

The Applicant has been working with the Tarrytown Volunteer Fire Department to ensure that adequate access will be provided to the site. The current site plan will provide the following three points of access to the building for emergency purposes:

- From Martling Avenue (and the north) via a gated, emergency-only access;
- From NYS 119 (and the south west) via the western driveway serving 155 White Plains Road and the site's primary access;
- From NYS 119 (and the south east) via the eastern driveway serving 155 White Plains Road and the site's secondary access;

A vehicle turning analysis was conducted to determine if emergency vehicles would be able to access, circulate through and exit the property. This analysis indicated that emergency vehicles would be accommodated safely.

E. Pedestrian and Bicyclist Connections

a) Public Transit Access

The proposed Project will be located within a short 2 to 5-minute walk of two existing bus stops along White Plains Road which are served by Westchester County's Bee-Line System and the OWL bus line between Middletown and White Plains. Slightly further away on US Route 9, to the north of White Plains Road (an approximate 10-minute walk from the proposed Project), is the bus stop for the Hudson Link H07 and H07X buses. The Bee-Line bus stop is located at the signalized intersection

with the western site driveway and the I-287/I-87 Westbound Ramps, which also includes a crosswalk and pedestrian-activated displays on the east leg of White Plains Road. The OWL bus stop is located at the signalized intersection of White Plains Road with Meadow Street and crosswalks are provided on all approaches with pedestrian displays provided on the east and west legs. Within the study area, sidewalks are provided along both sides of White Plains Road and US Route 9 and a new sidewalk is to be constructed on the west side of the proposed driveway to the subject site that will connect to the parking area at 155 White Plains Road. A sidewalk needs to be provided from the street through the adjoining 155 White Plains Road property to complete the pedestrian connection to the new development.

b) Connections to Martling Avenue

A connection from the subject property to Martling Avenue for bicycles and pedestrians is currently available via the Old Croton Aqueduct, a public pathway directly adjacent to the property which is accessed from White Plains Road.

c) US Route 9 Proposed Shared Use Path

The New York State Thruway Authority (NYSTA) is implementing improvements to US Route 9 as part of the New NY Bridge project. These improvements, which are expected to be completed prior to the opening of the proposed project, include providing a 10-foot wide, paved, shared-use path on the west side of US Route 9. The northern end of the shared use path will connect to the New NY Bridge's shared use path (near 330 South Broadway) and continue southbound to the Doubletree Hotel driveway. Studies are underway to consider a possible extension of the shared use path to the south.

A parking lot is to be constructed for users of the shared use path. Although some commuters may cycle or walk across the new bridge, they are expected to be few in number and are unlikely to be destined to the new parking lot serving the facility. The parking lot is expected to primarily serve recreational pedestrians and cyclists and, as such, will see minimal use during the peak commuter hours. The parking lot, therefore will have little impact on pedestrian, bicycle or vehicular traffic impact in the study area during the hours of busiest traffic activity, although a substantial number of pedestrians and cyclists have been added to the intersection capacity analyses to ensure that the analysis was conservative.

d) NYS Route 119 Complete Streets Study

A complete streets study is being conducted for White Plains Road (NY Route 119) between Route 9 in Tarrytown and Route 22 in White Plains. This study, the *Route 119 Complete Streets Plan,* is evaluating measures to make the Route 119 corridor more pedestrian and bicycle friendly. Some of the design alternatives being considered in the area near the subject Project (Section 1 of the study includes the area between US Route 9 and Benedict Avenue) are removal of one travel lane in each direction, buffered bike lanes in one or both directions and a wider, shared sidewalk. A copy of the design alternatives under consideration is provided in the Appendix. The study, with specific recommendations, is to be completed by 2019 and any recommendations would be the subject to approval by the New York State Department of Transportation. The timeline for implementation of this process is unknown at this time.

The implementation of the shared-use path along US Route 9 and potential future pedestrian and bicycle improvements along White Plains Road are expected to increase non-vehicular travel in the area which consequently, would result in a reduced mode share for automobile traffic. To be

conservative, the traffic volume projections in this study have not included any reductions in vehicular traffic due to the potential shift to non-motorized travel.

F. Alternatives

a) Trip Generation Comparison

The accepted Scoping document included five (5) development alternatives to be evaluated, as listed below:

a. Commercial Office Building of 36,000 Square Feet
b. Commercial Office Building of 54,000 Square Feet
c. Medical Office Building of 36,000 Square Feet
d. No Action Alternative

The trip generations for each alternative were identified based on rates provided in ITE's *Trip Generation Manual* (Tenth Edition) and then compared to the subject Project as shown in **Table 6** below.

Table 6- Trip Generation Comparison - Alternatives

Alternative	AM Peak Hour Trips	PM Peak Hour Trips	Weekday Daily Trips	Saturday Peak Hour Trips	Saturday Daily Trips
a. Office (36,000 sf)	42	41	351	19	80
b. Office (54,000 sf)	63	62	526	29	119
c. Medical Office (36,000 sf)	100	125	1253	112	309
e. No Action	0	0	0	0	0
Proposed Action	***14***	***17***	***151***	***24***	***107***

Note: Trip generations based on ITE Trip Generation Manual, tenth edition. Rates were based on Land Use Code 710 (General Office Building), Land Use Code 720 (Medical-Dental Office Building) and Land Use Code 254 (Assisted Living).

As indicated in the Table, other than the No Action alternative, the Proposed Action will result in fewer trips than each alternative evaluated (with one minor exception). During the AM and PM peak hours, the Proposed Action will generate from 24 to 49 fewer trips than the office building alternatives and from 86 to 107 fewer trips than the medical office alternatives. Throughout the course of an entire day on weekdays, the Proposed Action will generate from 200 to 375 fewer trips than an office building and 1,102 fewer trips than a medical office building. It can be concluded that, as a result of the significantly lower volumes, the Proposed Action will have less of an impact than the other development alternatives evaluated.

During the Saturday peak hour, when office traffic is typically light, the Proposed Action will generate 5 more trips than a 36,000-sf office and 5 fewer trips than a 54,000-sf office building. All day on Saturday, the Proposed Action will generate 27 more trips than a 36,000-sf office and 13 fewer trips than a 54,000-sf office building.

Appendix

- Ramp E rerouted trips (from AECOM study)
- Synchro Intersection Analysis Worksheets
- Route 119 Complete Streets design alternatives diagram
- Traffic Volume Comparison
- LOS comparison (Table 7)
- Compendium of Parking Studies