

Traffic Impact Study

HUDSON HERITAGE

U.S. Route 9

Town of Poughkeepsie, Dutchess County, NY

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Prepared For

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I. INTRODUCTION

A. PROJECT DESCRIPTION AND LOCATION (Figure No. 1)

The Hudson Heritage development is a proposed mixed use redevelopment planned on the former Hudson River Psychiatric Center property located on the east side of U.S. Route 9 in the Town of Poughkeepsie, New York. The site will be redeveloped to include a total of approximately 750 residential dwelling units (500 multi-family homes, 225 townhomes and 25 single family homes), 350,000 s.f. of commercial/retail space and an 80 room hotel with 60 seat restaurant and a 15 room bed and breakfast or museum. It should be noted that the hotel will also include an ancillary spa use that will be for the exclusive use of the hotel and therefore will not result in any additional traffic or parking impacts. The existing internal access roads will be reconfigured to improve the geometry and to accommodate the development layout. The primary access will be to U.S. Route 9 via modifications of the two existing roadway connections. The Winstow Gate access will be widened and reconstructed to meet current standards. The Hudson View Drive access will be relocated to the north, upgraded and aligned with the exit from the Quiet Cove Park. A secondary access connection via Paint Shop Road and West Cottage Road will provide connection to NYS Route 9G at Cottage Road.

The project is expected to be completed over several years with completion by 2025. Furthermore, to comply with the requirements of the Scoping Document for an ETC+10, an analysis year of 2035 has been utilized in completing the traffic analysis of future traffic conditions in the area.

B. SCOPE OF STUDY

This study has been prepared to identify current and future traffic operating conditions on the surrounding roadway network and to assess the potential traffic impacts of the proposed Hudson Heritage mixed use development.

Traffic count data for the study area intersections were collected by representatives of Maser Consulting, P.A. These data were also compared to count data obtained from the New York State Department of Transportation (NYSDOT) as well as data obtained from other reports completed in the area. Together these data were utilized to establish the Existing Traffic Volumes for the various intersections.

The Existing Traffic Volumes were then projected to the 2035 Design Year to take into account background traffic growth. In addition, traffic for other specific potential or approved developments in the area were estimated and then added to the 2035 Projected Traffic Volumes to obtain the Year 2035 No-Build Traffic Volumes.

Estimates were then made of the potential traffic that the proposed development would generate during each of the peak hours (see Section III-B for further discussion). The resulting site generated traffic volumes were then added to the roadway system and combined with the Year 2035 No-Build Traffic Volumes resulting in the Year 2035 Build Traffic Volumes.

The Existing, No-Build and Build Traffic Volumes were then compared to roadway capacities based on the procedures from the *2010 Highway Capacity Manual* to determine existing and future Levels of Service and operating conditions. Recommendations for improvements were made where necessary to serve both the existing and/or future traffic volumes.

II. EXISTING ROADWAY AND TRAFFIC DESCRIPTIONS

A. DESCRIPTION OF EXISTING ROADWAYS (Figure No. 1)

The Hudson Heritage development will be served by primary access to U.S. Route 9, as shown on Figure No. 1. The following is a brief description of this and the other roadways located within the study area. In addition, Figure No 1A, Table E-1 and Section III.F provide a further description of the existing geometrics, traffic control and a summary of the existing and future Levels of Service and any recommended improvements for each of the study area intersections and roadway segments. Appendix D contains copies of the capacity analyses which indicate the existing geometrics (including lane widths) and other characteristics for each of the individual intersections studied.

1. U.S. Route 9 (North Road) is a major arterial under the jurisdiction of the NYSDOT, which traverses in a north/south direction throughout Dutchess County and fronts the project site on the west side. It consists of two lanes per direction plus turn lanes in this area. It has signalized intersections with Fulton Street, Marist College Driveway/Mid-Hudson Shopping Center Driveway, Marist Drive (south), and at Winslow Gate. Note that within the last ten years, a pedestrian underpass was constructed under Route 9 south of Fulton Street to improve the safety of pedestrian flow between the east and west portions of the Marist Campus. It has a posted speed limit of 45 MPH north of Hudson View Drive where it consists of two lanes per direction plus a center left turn lane. It reduces to 40 MPH approaching Winslow Gate and changes to 30 MPH in the vicinity of Marist College and Fulton Street. South of the College the speed limit returns to 40 mph. [As shown on Figure No. 1C U.S. Route 9 has an Average Annual Daily Traffic \(AADT\) volume of approximately 29,000 vehicles per day \(vpd\) south of Fulton Street and approximately 22,000 vpd north of Fulton Street.](#)
2. NYS Route 9G (Violet Avenue) is a state highway which traverses through the northern section of the Town of Poughkeepsie and into the Town of Hyde Park, due north of the Town of Poughkeepsie. The roadway generally consists one lane per direction plus separate turn lanes at major intersections. It has signalized intersections with Pendell Road and also Cottage Road. It has a posted speed limit of 35 MPH. The Fairview Fire District is located on NYS Route 9G north of Fulton

Street. [As shown on Figure No. 1C NYS Route 9G has an AADT of between 8,000 and 10,000 vpd.](#)

3. [Fulton Street](#) originates at a signalized intersection with U.S. Route 9. It traverses in an easterly direction intersecting with Beck Place, Fairview Avenue and other local roadways. The roadway generally consists of one lane per direction and has a speed limit of 30 MPH. It terminates at a “Stop” sign controlled “T” intersection with NYS Route 9G. This roadway also has a posted 5 ton weight restriction. [As shown on Figure No. 1C Fulton Street has an AADT of approximately 9,300 vpd in the vicinity of U.S. Route 9, approximately 5,800 vpd in the vicinity of Fairview Avenue and approximately 3,700 in the vicinity of NYS Route 9G.](#)
4. [Cottage Road](#) is a town road which runs from an intersection with Creek Road, travels in a northwesterly direction intersecting with other local roadways and intersecting with NYS Route 9G at a signalized intersection opposite West Cottage Road. West Cottage Road provides access to Our Lady of the Rosary Chapel as well as to the Highview and Edgewood Residences. West Cottage Road also intersects with Paint Shop Road and terminates at an intersection with Hudson View Drive. It has a posted speed limit of 30 MPH.
5. [Hudson View Drive](#) provides access to the property and originates at unsignalized “T” intersection with U.S. Route 9, traverses in an easterly direction through the proposed site and terminates at an intersection with West Cottage Road and Paint Shop Road. Note that as part of the project, the western portion of this roadway will be relocated, widened and realigned opposite the Quiet Cove Park exit roadway.
6. [Paint Shop Road](#) is an internal roadway which originates at an intersection with West Cottage Road. It runs in a westerly direction and terminates at an intersection with Hudson View Drive internal to the site. Paint Shop Road is currently gated with no through traffic permitted.
7. [West Dorsey Lane](#) is a two lane roadway which originates at a signalized intersection with Violet Avenue (NYS Route 9G) opposite East Dorsey Lane (C.R. 40). The roadway continues in a westerly direction providing access primarily to residential areas. It has intersections with West View Drive, Luty Drive, Yates Avenue and terminates at a signalized intersection with U.S. Route 9 opposite the entry driveway to the Culinary Institute of America (CIA). This intersection is signalized and the West Dorsey Lane approach is widened to provide two lanes

approaching the signal. The posted speed limit is 30 MPH and the roadway has a “5 Ton Weight Limit” restriction except for local deliveries. [As shown on Figure No. 1C West Dorsey Lane has an AADT of approximately 3,000 vpd.](#)

8. [North Road](#) is a two lane roadway which originates at an intersection with NYS Route 9G and the Marist Drive Extension. It continues in a northerly direction connecting West Cedar Street and with U.S. Route 9 at a “T” intersection with only right turns permitted. U.S. Route 9 north of the location is known as North Road. [As shown on Figure No. 1C North Road has an AADT of approximately 9,600 vpd south of West Cedar Street and an AADT of approximately 3,000 vpd north of West Cedar Street.](#)
9. [East/West Cedar Street](#) is a two lane roadway, which originates at “Stop” sign control “T” intersection with North Road. It continues in an east/west direction through a residential neighborhood. Its designation changes to East Cedar, which intersects with Inwood Avenue and ends at an unsignalized “T” intersection with NYS Route 9G. It has a posted speed limit of 30 MPH. [As shown on Figure No. 1C Cedar Street has an AADT of approximately 7,000 vpd in the vicinity of U.S. Route 9, approximately 4,400 vpd in the vicinity of Fairview Avenue and approximately 4,000 in the vicinity of NYS Route 9G.](#)

B. YEAR 2015 EXISTING TRAFFIC VOLUMES (Figures No. 2, 3 and 4)

Manual turning movement traffic counts were collected by representatives of Maser Consulting, P.A. on February 4, 7 and 11 of 2014 as well as on March 11, 14 and 29 and April 1, 3 and 5 of 2014 for the Weekday AM and PM Peak Hours and Saturday Peak Hours to determine the existing traffic volume conditions at the study area intersections. Automatic Traffic Recorders (ATR’s) were also used in the period between April 1 – 11, 2014 to collect traffic data in order identify hourly and daily variations. A summary of the ATR Count Data collected, including the location, dates of counts, and AM, PM and Saturday Peak Hour traffic volumes is provided in Table No. V-1 contained in Appendix “B”. Additional counts were collected on September 21, 22, 24, 25 and 26 of 2015 and on October 10, 2015. These traffic counts were then compared to traffic volume data from previous traffic studies conducted by our office and to traffic volume data available from the New York State Department of Transportation (NYSDOT) for the U.S. Route 9, U.S. Route 9G and Fulton Street Corridors. Table V-1 also summarizes the available NYSDOT ATR Machine Count data obtained from the NYSDOT Traffic Data Viewer website. Based on this information, the Existing Traffic Volumes were established for the

Weekday Peak AM and Peak PM Hours and Saturday Peak Hours at the following study area intersections.

- 1) U.S. Route 9 and new access to Culinary Institute of America (CIA) (Parsley Lane)/St. Andrews project
- 2) U.S. Route 9 and West Dorsey Lane/CIA Drive (Chive Court)
- 3) U.S. Route 9 and River Point Road
- 4) U.S. Route 9 and Big Meadow Lane
- 5) U.S. Route 9 and Existing Northerly Project Site Driveway (Hudson View Drive)/aligned with Quite Cove Park
- 6) U.S. Route 9 and Proposed New Southerly Project Site Driveway (Winslow Gate)
- 7) U.S. Route 9 and Home Depot (Mid-Hudson Shopping Center)/Northern Marist College Driveway ([N. Gate Road](#))
- 8) U.S. Route 9 and Central Marist College Drive/Fulton Street
- 9) U.S. Route 9 and Southern Marist Drive/Marist Drive Extension/NYS Route 9G
- 10) NYS Route 9G and Pendell Road
- 11) NYS Route 9G and East Cedar Street
- 12) NYS Route 9G and Fulton Street
- 13) NYS Route 9G and Paint Shop Road/ Cottage Road
- 14) Route 9G and W. Dorsey Lane
- 15) U.S. Route 9 and Quiet Cove Park Exit/Northerly Site Access (Note: This replaces intersection No. 5 – Hudson View Drive in Future Build Conditions)
- 16) U.S. Route 9 and Quiet Cove Park Entrance (Clearwater Drive)
- 17) U.S. Route 9 ~~and~~ North Road
- 18) North Road ~~and~~ West Cedar Street
- [19\) North Road and NYS Route 9G](#)
- [20\) Fulton Street and Beck Place/Mid-Hudson Plaza](#)
- [21\) U.S. Route 9 and St. Andrews Road](#)
- ~~19)22)~~ [NYS Route 9G and St. Andrews Road](#)

Note that the scope lists only 17 intersections, however, Intersection No. 15 replaces Intersection No. 5 as noted above under the future build conditions. Also, intersection No. 16 was added for continuity between locations in the Synchro analysis. [Furthermore, intersections 20, 21 and 22 were added in response to comments on the DEIS from the NYSDOT and the Town's Traffic Consultant.](#)

Based upon a review of the traffic counts, the peak hours were generally identified as follows:

- Weekday Peak AM Hour 7:45 AM – 8:45 AM
- Weekday Peak PM Hour 5:00 PM – 6:00 PM
- Saturday Peak Hour 12:30 PM – 1:30 PM

The resulting Year 2015 Existing Traffic Volumes are shown on Figures No. 2, 3 and 4 for the Weekday AM and PM Peak Hours and Saturday Peak Hour, respectively. Appendix A contains copies of the various figures and Appendix G contains copies of the manual turning movement traffic counts and the ATR volume/classification counts and other count data including any pedestrian and bicycle counts. It should be noted that the manual turning movement traffic counts and ATR traffic counts collected during 2014 were found to be consistent with the traffic volume data collected during 2015. Therefore, it was not necessary to project the 2014 traffic volumes to the 2015 Existing Traffic Volume year. Where necessary, the traffic volumes between intersections were balanced utilizing the highest traffic volumes at an intersection or ATR count location. Table V-2 contained in Appendix “B” provides a comparison of the 2014 and 2015 Traffic Volumes for key locations along U.S. Route 9 and NYS Route 9G. As indicated in the table, the 2015 traffic counts were generally found to be consistent with and in some cases less than the 2014 traffic count data.

In addition to the traffic volume counts, pedestrians and bicycles were also observed at the study area intersections. Tables PB-1 and PB-2 contained in Appendix B provides a summary of the movements by direction for pedestrian and bicycle movement during the peak hours at the key intersections observed including the intersection of Route 9 and Marist College South Driveway/North 9G and Route 9 and Marist College North Driveway/Home Depot access road. Note that at all other study area intersections, fewer than five (5) pedestrians were observed during any peak hour and no bicycles were observed during the Weekday Peak hours. Along Route 9G between Pendell Road and West Dorsey Lane, two (2) bicycles were observed traveling in the northbound direction during the Saturday Peak Hour. The bicycle activity on Route 9 during each of the peak hours was very limited on the days that the traffic counts were collected, but it should be noted that Route 9 is a designated bike route. In addition, since the completion of the Route 9 pedestrian underpass located approximately 450 ft. south of the U.S. Route 9/Fulton Street intersection, the pedestrian/bicycle movements at Route 9 and Fulton Street are now minimal since they are accommodated via the underpass. Pedestrian and bicycle movements from the east to the west side of the campus (east and west side of Route 9) are now accommodated primarily at this location.

C. ACCIDENT DATA/ANALYSIS (Tables A-1, A-2 and A-3)

Available accident data was obtained from the NYSDOT as well as from the Town of Poughkeepsie and Town of Hyde Park Police Departments for the area roadways. The NYSDOT accident data covers the period between October 1, 2010 through April 30, 2014. A summary of the NYSDOT information categorized by type, location and other variables is presented in Table A-1 (Appendix “B”) for intersections along US Route 9 and NYS Route 9G. Tables A-2 and A-3 in Appendix “B” summarize the accident data from the Town of Poughkeepsie Police Department and Town of Hyde Park Police Department, respectively. The Town of Poughkeepsie and Town of Hyde Park accident data covers the period between November 1, 2012 through November 31, 2015. Also, note that the Town of Poughkeepsie accident reports also include minor accidents reported within the Mid-Hudson Shopping Center parking lots, the Marist College Campus and other area parking lots. Copies of the accident data are contained in Appendix E. The accidents vary by location and are due to a variety of factors. The summary tables are categorized by location to indicate any patterns. The following provides a summary discussion of the accident data by intersection.

1. U.S. Route 9 and new Access to Culinary Institute of America Access (CIA) (Parsley Lane)/St. Andrews project – There were no recorded accidents at this intersection during the study period.
2. U.S. Route 9 and West Dorsey Lane/Culinary Institute Driveway (Chive Court) – A total of two (2) recorded accidents were identified during the study period with one (1) accident occurring in 2011 and one (1) accident occurring in 2013. Neither of the accidents resulted in injuries and no significant accident pattern could be identified.
3. U.S. Route 9 and River Point Road – A total of seven (7) accidents were recorded during the study period with one (1) accident occurring during 2010, one (1) accident occurring during 2011, four (4) accidents occurring in 2012, and one (1) accident occurring in 2013. Three (3) of the seven accidents resulted in injuries and right angle and rear-end accidents were the most common type of accidents.
4. U.S. Route 9 and Big Meadow Lane – A total of nine (9) accidents were recorded during the study period with two (2) occurring during 2012, five (5) occurring during 2013, one (1) occurring during 2014 and one (1) occurring during 2015. Only one of the accidents resulted in injuries and no significant accident pattern could be determined from the accident data.
5. U.S. Route 9 and Existing Northerly Project Site Driveway (Hudson View Drive)/aligned with Quite Cove Park – See Intersection 15 below for accident summary.

6. U.S. Route 9 and Proposed New Southerly Site Access Driveway (Winslow Gate) – A total of three (3) accidents were recorded at this intersection during the study period. All three accidents were rear-end type accidents occurring in 2013 with one (1) of the accidents resulting in injuries.
7. U.S. Route 9 and Home Depot (Mid-Hudson Shopping Center)/Norther Marist College Drive – A total of seven (7) accidents were recorded at this intersection during the study period. Two (2) accidents were found to occur during 2013, four (4) during 2014 and one (1) during 2015. Five (5) of the seven accidents were rear-end type accidents with three (3) resulting in injuries.
8. U.S. Route 9 and Fulton Street – A total of 39 accidents were recorded at this intersection during the study period with three (3) occurring in 2011, ten (10) occurring in 2013, 23 occurring in 2014 and three (3) occurring in 2015. Eleven (11) of the 32 accidents were found to have resulted in injuries while, 22 of the accidents were found to be non-reportable accidents with less than \$1,000 in total estimate damage. The most common accident types were rear-end (21 accidents) and sideswipe (8 accidents). The significant accident history at this intersection is likely a result of peak hour congestion that occurs along this section of U.S. Route 9.
9. U.S. Route 9 and southern Marist Drive/NYS Route 9G/Marist Drive Extension – A total of 47 accidents were recorded at this intersection during the study period with one (1) occurring in 2010, three (3) occurring in 2011, two (2) occurring in 2012, thirteen (13) occurring in 2013, 26 occurring in 2014 and three (3) occurring in 2015. Seven (7) of the 47 accidents were found to have resulted in injuries while, 20 of the accidents were found to be non-reportable accidents with less than \$1,000 in total estimate damage. The most common accident type was rear-end type accidents totaling 38 of the 47 total accidents. The significant accident history at this intersection is likely a result of peak hour congestion that occurs along this section of U.S. Route 9.
10. NYS Route 9G and Pendell Road – A total of ten (10) accidents were recorded at this intersection during the study period. Two (2) accidents were found to occur during 2011, one (1) during 2012, three (3) during 2013, two (2) during 2014 and two (2) during 2015. Three (3) of the ten accidents were found to result in injuries and rear-end (3 accidents) and sideswipe (3 accidents) were the most common accident type.
11. NYS Route 9G and East Cedar Street - A total of eight (8) accidents were recorded at this intersection during the study period. The (3) accidents were found to occur during 2012, three (3) during 2013, and two (2) during 2014. Two (2) of the eight accidents were found to result in injuries and rear-end (3 accidents) and right angle (3 accidents) were the most common accident type.
12. NYS Route 9G and Fulton Street – A total of thirteen (13) recorded accidents were identified during the study period with one (1) accident occurring in 2010, two (2)

occurring in 2012, three (3) occurring in 2013, four (4) occurring in 2014 and three (3) occurring in 2015. Four (4) of the accidents were found to have resulted in injuries and the most common accident types were right angle (4 accidents) and rear-end (3 accidents). The accident history at this location supports the need for a traffic signal at the intersection, which is discussed further below. The intersection currently meets the volume warrants for a traffic signal under existing conditions and the potential for signalization should be considered regardless of the proposed project. [The installation of a traffic signal at this intersection would reduce the types of accidents that have been experienced. As discussed further below, this intersection will be monitored for a traffic signal after completion of the proposed project.](#)

13. [NYS Route 9G and Paint Shop Road/Cottage Road](#) – A total of four (4) recorded accidents were identified during the study period with one (1) accident occurring in 2011, one (1) accident occurring in 2012, one (1) accident in 2014 and one (1) accident in 2015. Three (3) of the four accidents resulted in injuries with two of the accidents being rear-end type accidents.
14. [NYS Route 9G/ and East/West Dorsey Lane](#) – A total of five (5) recorded accidents were identified during the study period with one (1) accident occurring in 2012, two (2) occurring in 2013 and two (2) occurring in 2014. None of the accidents were found to have resulted in injuries and rear-end (2 accidents) and sideswipe (2 accidents) were the most common accident types.
15. [U.S. Route 9 and Quiet Cove Park Exit Driveway/Proposed Site Access Driveway \(Hudson Heritage Drive\)](#) – A total of two (2) recorded accidents were identified during the study period both of which occurred in 2013 and no injuries were found to have occurred as a result of these accidents.
16. [U.S. Route 9 and Clearwater Drive \(Quiet Cove Park Entrance\)](#) – There were no recorded accidents at this intersection during the study period.
17. [U.S. Route 9 and North Road](#) – A total of three (3) recorded accidents were identified during the study period with one (1) accident occurring in 2010, 2011 and 2012. All three accidents were rear-end type accidents with one resulting in injuries.
18. [North Road and West Cedar Street](#) – A total of two (2) recorded accidents were identified during the study period both of which occurred in 2013 and no injuries were found to have occurred as a result of these accidents.
19. [NYS Route 9G and North Road](#) – A total of seventeen (17) accidents were recorded during the study period with six (6) occurring during 2013, ten (10) occurring during 2014 and one (1) occurring during 2015. The most common accident type was found to be rear-end type accidents constituting 13 of the 17 total accidents. One (1) of the accidents was found to have resulted in injuries, while ten (10) were found to non-reportable accidents with less than \$1,000 in total estimate damage. The accidents at

this location are a result of the somewhat unconventional traffic control, i.e. stop control on two of the three approaches, as well as some sight distance limitations.

20. Fulton Street and Beck Place – A total of fourteen (14) accidents were recorded during the study period with four (4) occurring during 2013, seven (7) occurring during 2014 and three (3) occurring during 2015. The most common accident type was found to be left turn and right angle accidents constituting four (4) accidents each. Three (3) of the accidents were found to have resulted in injuries, while seven (7) were found to non-reportable accidents with less than \$1,000 in total estimate damage. It should be noted that this accident history was recorded prior to the installation of a traffic signal at this intersection in association with the Beck Place Marist College Health and Sciences Building.
21. U.S. Route 9 & St. Andrews Road – A total of seven (7) accidents were recorded during the study period with three (3) occurring during 2013, three (3) occurring during 2014 and one (1) occurring during 2015. The most common accident type was found to be rear-end type accidents constituting 4 of the seven accidents recorded.
22. U.S. Route 9G & St. Andrews Road – There were no recorded accidents at this intersection during the study period.

D. PUBLIC TRANSPORTATION (Figure No. 1B)

The nearest Metro-North/Amtrak train station is in the City of Poughkeepsie at 41 Main Street, approximately 2 miles south of the Site. Currently, the nearest bus stops serving the Site, Dutchess Community College (“DCC”), Mid-Hudson Regional Hospital (“MHRP”) and Marist College are: Route 9 and Fulton Street stop (serving Marist College and MHRP), West Dorsey Lane and Route 9 (serving CIA), Creek Road & DCC stop (serving DCC), Cottage Road & Route 9G (serving eastern Site vicinity), and Route 9G at West Dorsey Lane (serving eastern Site vicinity) on Route C Southbound – Tivoli to Poughkeepsie. There are no other bus routes or stops in the vicinity of the Site or nearby Fairview-area attractions and many of the listed bus stops would not be easily or readily walkable for many living on the Site. Figure No. 1B contained in Appendix A of the TIS details the location of the Poughkeepsie Metro-North Train Station as well as all bus stops within the study area and their proximity to the project site. The public transit maps and schedules are also contained in Appendix F of the TIS.

III. EVALUATION OF FUTURE TRAFFIC CONDITIONS

A. YEAR 2035 NO-BUILD TRAFFIC VOLUMES (Figures No. 5 through 13)

The Year 2015 Existing Traffic Volumes were increased by a growth factor of 0.25% per year to account for general background growth resulting in the Year 2035 Projected Traffic Volumes, which are shown on Figures No. 5, 6 and 7 for each of the Peak Hours. The background growth factor is based on historical traffic volume data obtained from NYSDOT in their 2014 Traffic Volume Report. This information, which is included in Appendix H of the TIS for reference, indicates that traffic volumes in the vicinity of the NYS Route 9/NYS Route 9G/Marist Drive intersection have generally decreased between 2006, 2008 and 2014. The 0.25% growth factor was utilized to be somewhat conservative and equates to a total growth rate of 5%. In addition, traffic volumes from other specific planned or potential developments in the area including the following:

- Dutton Property Redevelopment (City of Poughkeepsie)
- North Road Commercial Development
- Fox Run at Fulton (Former Fairview Commons)
- Marist College North Residence Halls
- Marist College Natural Science and Allied Health Building
- Creek Road Residential
- Dalia Senior Apartments
- Beacon Residential
- T-Rex Development – Phase 1 (Town of Hyde Park)
- Golf Plaza
- Vassar Brothers Medical Center

Traffic for each of these other potential developments was specifically accounted for. The resulting traffic volumes associated with these other developments are shown on Figures No. 8, 9 and 10 for each of the peak hours. These volumes were added to the 2035 Projected Traffic Volumes resulting in the Year 2035 No-Build Traffic Volumes, which are shown on Figures No. 11, 12 and 13 for the Weekday AM, PM and Saturday Peak Hours, respectively.

The New York State Department of Transportation Statewide Transportation Improvement Program (STIP) identifies current and future projects to be completed within the State of New York and specific to each region. The latest available STIP is

dated May 2, 2016. Based on this document there are several projects in the Town of Poughkeepsie and the City of Poughkeepsie, that are planned to be completed by the 2035 analysis year. These include the following:

- Creek Road at Smith Road/Little George Street Intersection Reconstruction in the City of Poughkeepsie
- Hoffman Street/Metro North Railroad Hudson Line Bridge Replacement in the City of Poughkeepsie
- Poughkeepsie-White Plains Commuter Bus: Weekday Peak Hour Service along the Route 9 corridor serving residents of Dutchess and Putnam Counties.
- Construction of a new transit transfer station at Main & Market Street in the City of Poughkeepsie
- Installation of Intelligent Transportation System (ITS) equipment for the City of Poughkeepsie Transit System
- ~~Including the installation of bus shelters and signs with schedule information, parking and new access and collection system software. for the City of Poughkeepsie Transit System~~

The relevant pages from the current NYS STIP are provided in Appendix H of the TIS. All other potential projects that are currently identified to be completed in the vicinity of the project site are maintenance type projects. None of the projects known projects is anticipated to have a significant impact on traffic conditions in the vicinity of the project site.

B. SITE GENERATED TRAFFIC VOLUMES (Table No. 1)

Estimates of the amount of traffic to be generated by the proposed Hudson Heritage development during each of the peak hours were developed based on information published by the Institute of Transportation Engineers (ITE) as contained in the report entitled “Trip Generation”, 9th Edition, 2012, based on Land Use Categories 220 – Apartment/Condos, 820- Shopping Center and 710 - Office. Table No. 1 (Appendix B) summarizes the trip generation rates and corresponding site generated traffic volumes. Note that for the commercial uses, it is anticipated that a significant portion of the trips will be attracted from the existing traffic stream as “pass-by or diverted link” trips and will not be new to the roadway system. ITE data, which is provided in Appendix H of the TIS for reference, indicates that the percentage of pass-by trips could be as high as 60% of the total trips entering and exiting the site. A 25% pass-by/diverted link credit was utilized in the analysis to provide somewhat conservative estimates of the site trip

generation. This is also consistent with NYSDOT standards for pass-by/diverted link credits. Also due to the mixed use nature of the development, a significant number of trips are expected to be “internal” to the project and will not appear on the external roadway system. The portion of the total trips, which would be internal trips (i.e., within the overall site), was estimated based on the ITE procedures and were computed at approximately 5%, 15% and 10% of the total site generated traffic volumes for the AM, PM and Saturday Peak Hours, respectively. The calculations of these internal trip percentages are provided in Appendix H for reference.

It should also be noted that actual traffic counts from conditions when the Psychiatric Center was fully operational in the late 1950’s are not available. However, at that time, there were over 1,900 employees and over 6,500 patients. Based on this information and the likely shifts, it is expected that the site would have generated in excess of 1,000 peak hour vehicle trips at that time.

C. ARRIVAL/DEPARTURE DISTRIBUTIONS (Figures No. 14 through 17)

It was necessary to establish arrival and departure distributions for the residential and commercial portions of the site to assign the site generated traffic volumes to the surrounding roadway network. Based on a review of the Existing Traffic Volumes and the expected travel patterns on the surrounding roadway network, the distributions were identified. The arrival and departure distributions for the residential portion of the development were also developed based on available Journey-to-Work data for the Town of Poughkeepsie obtained from the U.S. Census Bureau, which is contained in Appendix H for reference. The anticipated arrival and departure distributions for the residential portion of the site are shown on Figures No. 14 and 15, respectively. The anticipated arrival and departure distributions for the commercial portion of the site are shown on Figures No. 16 and 17, respectively.

D. 2035 BUILD CONDITIONS TRAFFIC VOLUMES (Figures No. 18 through 26)

The site generated traffic volumes associate with the proposed Hudson Heritage were assigned to the roadway network based on the arrival and departure distributions referenced above. The resulting Site Generated Traffic Volumes for the residential portion of the site for the study area intersections are shown on Figures No. 18, 19 and 20 for each of the peak hours, respectively. The resulting Site Generated Traffic Volumes for the commercial portion of the site for the study area intersections are shown on

Figures No. 21, 22 and 23 for each of the peak hours. These site generated traffic volumes were then added to the Year 2035 No-Build Traffic Volumes to obtain the Year 2035 Build Traffic Volumes. The resulting Year 2035 Build Traffic Volumes are shown on Figures No. 24, 25 and 26 for the Weekday Peak AM and Weekday Peak PM Hours, and Saturday Peak Hours respectively.

E. DESCRIPTION OF ANALYSIS PROCEDURES

It was necessary to perform capacity analyses in order to determine existing and future traffic operating conditions at the study area intersections. The following is a brief description of the analysis method utilized in this report:

- **Signalized Intersection Capacity Analysis**

The capacity analysis for a signalized intersection was performed in accordance with the procedures described in the *2010 Highway Capacity Manual*, published by the Transportation Research Board. The terminology used in identifying traffic flow conditions is Levels of Service. A Level of Service “A” represents the best condition and a Level of Service “F” represents the worst condition. A Level of Service “C” is generally used as a design standard while a Level of Service “D” is acceptable during peak periods. A Level of Service “E” represents an operation near capacity. In order to identify an intersection’s Level of Service, the average amount of vehicle delay is computed for each approach to the intersection as well as for the overall intersection.

- **Unsignalized Intersection Capacity Analysis**

The unsignalized intersection capacity analysis method utilized in this report was also performed in accordance with the procedures described in the *2010 Highway Capacity Manual*. The procedure is based on total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. The average total delay for any particular critical movement is a function of the service rate or capacity of the approach and the degree of saturation. In order to identify the Level of Service, the average amount of vehicle delay is computed for each critical movement to the intersection.

Additional information concerning signalized and unsignalized Levels of Service can be found in Appendix C of this report.

F. RESULTS OF ANALYSIS (Table No. 2)

Capacity analyses, which take into consideration appropriate truck percentages, pedestrian activity, roadway grades and other factors, were performed using the Synchro Version 8 analysis software at the study area intersections utilizing the procedures described above to determine the Levels of Service and average vehicle delays. Summarized below are a description of the existing geometrics, traffic control and a summary of the existing and future Levels of Service as well as any recommended improvements.

Table No. 2 summarizes the results of the capacity analysis including volume-to-capacity ratios, delay and Level of Service for each lane group and overall intersection for the 2015 Existing, 2035 No-Build and 2035 Build Conditions. Appendix D contains copies of the capacity analyses, which also indicate the existing geometrics (including lane widths) and other characteristics for each of the individual intersections studied, which are also shown on Figure No. 1A and Table E-1. Table S-1 provides a summary of the improvements for the various intersections, including some which are like to be required regardless of the project.

1. U.S. Route 9 and new Access to Culinary Institute of America Access (CIA) (Parsley Lane)/St. Andrews project

The Culinary Institute of America driveway (Parsley Lane) intersects with U.S. Route 9 at a signalized “T” intersection. U.S. Route 9 consists of two lanes per direction plus a 265 ft. long northbound left turn lane and the Culinary Institute driveway consists of a wide exiting approach with two lanes at the signal, each with a storage length of approximately 100 ft. [There are no sidewalks at this intersection, however, an unsignalized pedestrian crosswalk across U.S. Route 9 is provided on the north side \(southbound approach\) of the intersection. Approximately 8 ft. wide shoulders are provided at the intersection in the northbound and southbound directions, which can be utilized by bicyclists.](#)

Capacity analysis conducted at this intersection utilizing the 2015 Existing Traffic Volumes indicate that under current conditions this intersection operates at an overall Level of Service “A” during the AM and Saturday Peak Hours while an overall Level of Service “B” is experienced during the PM Peak Hour..

This intersection is expected to continue to operate at an overall Levels of Service “A” during the AM and Saturday Peak Hours and at an overall Level of Service “B” during the PM Peak Hour under the future 2035 No-Build and 2035 Build conditions.

The queuing analysis results indicate that all queues are currently accommodated within the available storage lengths under existing conditions. The analysis of future No-Build and Build conditions indicates that all queues will continue to be accommodate in the future both with and without the proposed project.

2. U.S. Route 9 and West Dorsey Lane/Culinary Institute Driveway (Chive Court)

West Dorsey Lane intersects with U.S. Route 9 at a signalized four-way intersection. The Culinary Institute driveway is an entry only driveway. U.S. Route 9 consists of two (2) through lanes in each direction with a 105 ft. long separate left turn lane that transitions from a two-way left turn lane northbound. In the southbound direction a 230 ft. long separate left turn lane is also provided. —The West Dorsey Lane westbound approach consists of a 90 ft. long separate left turn lane and a through/right lane. Signalized pedestrian crosswalks are provided on the northbound (crossing U.S. Route 9) and westbound (crossing West Dorsey Lane) intersection approaches with appropriate ADA compliant concrete landing ramps on the northwest, southeast and southwest corners of the intersection. However, no full sidewalks are provided approaching the intersection. Approximately 8 ft. wide shoulders are provided at the intersection in the northbound and southbound directions, which can be utilized by bicyclists.

The capacity analysis conducted at this intersection indicates that the intersection currently operates at an overall Level of Service “B” during the AM Peak Hour and at a Level of Service “A” during the PM and Saturday Peak Hours. Similar Levels of Service are expected to be maintained under future 2035 No-Build conditions.

The analysis was recomputed for future Build conditions, which indicates that the intersection will operate at an overall Level of Service “B” during each of the peak hours. Similar Levels of Service were identified for these conditions.

The queuing analysis indicates that the westbound left turn queue currently exceeds the storage length under existing conditions during each of the peak hours. This condition will continue to be experienced in the future both with and without the proposed project. In addition, during the AM Peak Hour the northbound left turn queue will exceed the storage length under future No-Build and Build conditions, however this condition will be mitigated with minor signal timing adjustments.

3. U.S. Route 9 and River Point Road

River Point Road and U.S. Route 9 intersect at a “Stop” sign controlled “T” intersection. River Point Road consists of one lane in each direction and provides access to the Hudson River. U.S. Route 9 consists of two lanes per direction plus an approximately 55 ft. long northbound left turn lane. [There are no existing pedestrian accommodations at this intersection. Approximately 8 ft. wide shoulders are provided at the intersection in the northbound and southbound directions, which can be utilized by bicyclists.](#)

Capacity analysis conducted at this intersection indicates the intersection currently operates at Level of Service “C” during the AM and PM Peak Hours for left turns exiting River Point Road and at a Level of Service “B” during the Saturday Peak Hour.

The analysis was recomputed for the future No-Build and Build conditions. A Level of Service “C” was identified for each of the peak periods.

The queuing analysis indicates that all queues are currently accommodated by the available storage lengths at this intersection during all time periods. Similar queues are expected to be experienced under future No-Build and Build conditions.

4. U.S. Route 9 and Big Meadow Lane

Big Meadow Lane intersects with U.S. Route 9 approximately 200 ft. south of Riverpoint Road at a “T” intersection. At this intersection, U.S. Route 9 has two lanes per direction plus an approximately 55 ft. long southbound left turn lane. Traffic is currently controlled by a “Stop” sign on the Big Meadow Lane approach, which has one lane in each direction. [There are no existing pedestrian accommodations at this intersection. Approximately 8 ft. wide shoulders are provided at the intersection in the northbound and southbound directions, which can be utilized by bicyclists.](#)

The capacity analysis conducted at this intersection indicates that a Level of Service “C” is experienced during both the AM and Saturday Peak Hours and a Level of Service “D” is experienced during in the PM Peak Hour. The capacity analysis conducted under the 2035 No-Build indicates that similar Levels of Service will be maintained without the proposed development.

Under future 2035 Build conditions the intersection is expected to continue to operate at a Level of Service “C” during the AM Peak Hour, while a Level of Service “E” will be experienced during the PM Peak Hour and a Level of Service “D” will be experienced during the Saturday Peak Hour.

The queuing analysis indicates that all queues are currently accommodated by the available storage lengths at this intersection during all time periods. Similar queues are expected to be experienced under future No-Build and Build conditions.

5. U.S. Route 9 and Existing Northerly Project Site Driveway (Hudson View Drive)/aligned with Quiet Cove Park

Hudson View Drive intersects with U.S. Route 9 at a “Stop” sign controlled “T” type intersection. U.S. Route 9 at this location consists of two through lanes in each direction and has a 100 ft. long separate left turn lane on the southbound approach. The Hudson View Drive approach to the intersection consists of a separate left and a separate right turn lane exiting. Under Existing conditions, the intersection currently has limited traffic since it serves as a site access road and is gated. [There is an existing sidewalk on the east side of U.S. Route 9 northbound approach that continues into Hudson View Drive and the existing site property. No sidewalk is provided along Route 9 north of this intersection. The shoulders on either side of Route 9 at this intersection are approximately 4 ft. wide.](#)

As part of the development, this intersection is proposed to be relocated and reconstructed to form a more standard type intersection aligned with the north access to Quiet Cove Park. (See Intersection No. 15 under future conditions.) It is expected to be signalized. The new signal should also be coordinated with other U.S. Route 9 signals.

6. U.S. Route 9 and Proposed New Southerly Site Access Driveway (Winslow Gate)

The intersection of U.S. Route 9 and Winslow Gate is currently controlled by a flashing traffic signal. U.S. Route 9 has two lanes per direction plus a 150 ft. long southbound left turn lane. The Winslow Gate Road approach consists of a 130 ft. left turn lane and a separate right turn lane. This roadway also provides access to the Mid-Hudson Shopping Center in the vicinity of the Mobil Station. Sight distances at this location are good and there is an unsignalized pedestrian crossing of the Winslow Gate approach. [There is an existing sidewalk on the east side of Route 9 at the intersection with existing curb ramps at the Winslow Gate Road crossing. The existing shoulders on either side of Route 9 are approximately 4 ft. wide in this vicinity.](#)

The capacity analysis conducted at this intersection indicates that a Level of Service “B” is currently experienced during both the AM and Saturday Peak Hours, while a Level of Service “C” is experienced during the Saturday Peak Hour. The capacity analysis conducted under the 2035 No-Build indicates that similar Levels of Service will be maintained without the proposed development.

This intersection will be modified as part of the site development plans to consist of three lanes exiting onto U.S. Route 9 and the signal should be modified to become fully operational and to be interconnected and coordinated with the adjacent signals on Route 9. Pedestrian signals and crosswalks should also be installed. [A traffic signal warrant analysis was conducted for this proposed intersection as summarized in Tables TSW-1B, TSW-2B and TSW-3B, which indicate that the intersection will meet warrants for a traffic signal with the proposed modifications.](#)

The capacity analysis of the future 2035 Build conditions indicates that the intersection will operate at overall Level of Service “A” during the AM Peak Hour and at an overall Level of Service “B” during the PM and Saturday Peak Hours.

The queuing analysis indicates that all queues are currently accommodated by the available storage lengths at this intersection during all time periods. Similar queues are expected to be experienced under future No-Build conditions. Under future Build conditions when this intersection becomes a site access driveway with the traffic signal activated it is projected that the northbound queue will extend through the Mid-Hudson Plaza/Mid-Hudson Drive intersection during each of the peak hours due to the close proximity of the intersections. The signal timing and coordination along the corridor will help to ensure that this queue does not impact the operation of the other nearby intersections.

7. U.S. Route 9 and Home Depot (Mid-Hudson Shopping Center)/Norther Marist College Drive

The intersection of U.S. Route 9 and Mid-Hudson Shopping Center/Marist College Driveway is a signalized full movement intersection. The U.S. Route 9 approaches each consist of two lanes per direction. The northbound approach also has a 95 ft. long separate left turn lane and a 145 ft. long separate right turn lane, while the southbound approach has a 175 ft. long separate left turn lane. The Mid-Hudson Shopping Center approach consists of three exiting lanes in the form of a separate right, a through/left turn lane and a separate left turn lane each with a storage length of approximately 200 ft. The Marist College driveway approach consists of a

through/right turn lane and a separate left turn lane each with a storage length of approximately 275 ft. Under current conditions, there are existing [sidewalks on all intersection approaches with appropriate curb ramps and](#) signalized pedestrian crosswalks on all ~~intersection~~ approaches. [The existing shoulders in the vicinity of this intersection are approximately 4 ft. wide.](#)

Capacity analysis conducted at this intersection indicates that the intersection currently operates at an overall Level of Service “B” during the AM Peak Hour and at an overall Level of Service “C” during the PM and Saturday Peak Hours for the 2015 Existing and 2035 No-Build.

The capacity analysis of the future 2035 Build conditions indicates that with traffic signal coordination improvements resulting from the interconnection of the Winslow Gate traffic signal, the intersection will operate at an overall intersection Level of Service “A” during the AM Peak Hour and at an overall Level of Service “B” during the PM and Saturday Peak Hours.

The queuing analysis indicates that during all peak hours the queues currently exceed the storage length on the southbound through movement due to the close proximity of this intersection to the Winslow Gate intersection north of this location. Similar queuing conditions are expected to be experienced in the future both with and without the proposed development. The signal timing and coordination along the corridor will help to ensure that this queue does not impact the operation of the other nearby intersections.

8. [U.S. Route 9 and Fulton Street](#)

U.S. Route 9 and Fulton Street intersect at a full movement signalized intersection. The U.S. Route 9 approaches consist of two lanes per direction plus a 100 ft. separate left turn lane in the southbound direction and a 75 ft. separate u-turn lane in the northbound direction as well as a 215 ft. long separate northbound right turn lane. Fulton Street has two westbound lanes, i.e., separate left and a shared left/right, each with a storage length of approximately 230 ft. There are [sidewalks on all sides of the intersection and](#) ~~also~~ signalized pedestrian crosswalks on the northbound and westbound intersection approaches. [Appropriate ADA compliant curb ramps are provided on the northeast, southeast and southwest corners of the intersection. The existing shoulders in the vicinity of this intersection are approximately 4 ft. wide.](#) The Marist College access is now closed and gated and is only used for emergency vehicle access. Separate bus turnouts are provided north and south of the intersection for the Dutchess County Loop Bus that stops at this location.

Capacity analysis was conducted for this intersection utilizing the 2015 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at an overall Level of Service “C” during the AM and Saturday Peak Hours and at an overall Level of Service “D” during the PM Peak Hour.

The capacity analysis was recomputed using the 2035 No-Build Traffic Volumes and the Levels of Service during all peak hours all peak hours are expected to be maintained.

The capacity analysis was recomputed using the 2035 Build Traffic Volumes including traffic signal coordination improvements. These results indicate that the intersection is expected to experience an overall Levels of Service “D” during the AM and Saturday Peak Hours and an overall Level of Service “E” in the PM Peak Hour under future conditions.

Traffic signal timing and coordination improvements will be required to improve the intersection operations under future conditions.

The queuing analysis indicates that the queue currently exceeds the storage capacity on the southbound left turn movement during the PM Peak Hour. All other queues are currently accommodated by the available storage lengths. Under future No-Build and Build conditions the southbound left turn movement queue will continue to exceed the storage length during the PM Peak Hour as well as the Saturday Peak Hour. In addition, the westbound left turn movement queue is projected to exceed the storage capacity during under No-Build and Build conditions during the PM Peak Hour. The signal timing and coordination improvements will help to mitigate these queuing conditions.

9. U.S. Route 9 and southern Marist Drive/NYS Route 9G/Marist Drive Extension

U.S. Route 9 and intersects with NYS Route 9G and Marist Drive South at a full movement signalized intersection. The northbound U.S. Route 9 approach consists of an approximately 290 ft. long left turn lane, two through lanes and a separate channelized right turn lane with a storage length of approximately 250 ft. The right turn lane is controlled by a yield sign. The southbound U.S. Route 9 approach consists of an approximately 475 ft. separate left turn lane and two through lanes with a shared right turn. The westbound NYS Route 9G approach consists of two left turn lanes each with a storage length of approximately 175 ft. and a shared through/right turn lane. The eastbound Marist drive approach consists of a 200 ft. separate left turn

lane, a through lane and a 200 ft. separate right turn lane. Right turns on red are prohibited on the westbound and southbound approaches. [Sidewalks are provided on the east side of the Route 9 northbound approach, both sides of the Route 9 southbound approach, the north side of the Marist College Driveway and the south side of the Marist Drive Extension/NYS Route 9G. There are also s](#)Signalized pedestrian crosswalks [are provided](#) on the westbound and southbound intersection approaches [with ADA compliant pedestrian curb ramps on the northeast, northwest and southeast corners as well as through the northbound right turn channelization island. No separate bicycle facilities are provided at this intersection-](#)

Capacity analysis was conducted for this intersection utilizing the 2015 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at an overall Level of Service “B” during the AM Peak Hour, at an overall Level of Service “D” during the PM Peak Hour and at an overall Level of Service “C” during the Saturday Peak Hour. It should be noted that a Level of Service “D” is experienced on the eastbound (Marist Drive) left turn and through movements during each of the peak hours, while the westbound left turn movement operates at a Level of Service “E” during the PM Peak Hour.

The capacity analysis was recomputed using the 2035 No-Build and Build Traffic volumes. These results indicate similar overall Levels of Service will be maintained during the AM and Saturday Peak Hours both with and without the project in the future. However, during the PM Peak Hour an overall Level of Service “F” will be experienced as well as a Level of Service “F” on the westbound left turn and southbound left turn movements while the eastbound through movement will operate at a Level for Service “E” during both No-Build and Build conditions. Future traffic signal timing modifications will be required under both No-Build and Build conditions at this location to provide the most efficient operation. [The traffic signal timing modifications will be determined as part of the post-monitoring study to be completed by the Applicant after occupancy of the proposed development. The Applicant will coordinate with NYSDOT on the installation of any new detection equipment that may be required at this intersection as part of the Highway Work Permit.](#)

The queuing analysis indicates that the queue currently exceeds the storage capacity on the westbound left turn movement during the PM Peak Hour. The available storage lengths currently accommodate all other queues. The westbound left turn movement is expected to be exceeded during the PM Peak Hour under future No-Build and Build conditions as well as the southbound left turn movement. During the

other peak hours all queues will be accommodated by the available storage lengths. The identified traffic signal timing and coordination improvements will help to mitigate these queuing conditions.

10. NYS Route 9G and Pendell Road

Pendell Road intersects with NYS Route 9G at a signalized “T” type intersection. The northbound approach to the intersection consists of one lane while the southbound approach has one through lane and an approximately 255 ft. long separate left turn lane. The westbound approach has an approximately 625 ft. long separate left turn lane and a separate right turn lane. [There are no pedestrian facilities provided at this intersection. Approximately 6 ft. wide shoulders are provided on the NYS Route 9G approaches that can be used by bicyclists.](#)

The capacity analysis conducted at the intersection utilizing the 2015 Existing Traffic Volumes indicates that an overall Level of Service “B” during peak periods.

The intersection was reanalyzed utilizing the 2035 No-Build and 2035 Build conditions. A review of these analyses indicates that an overall Level of Service “B” will be maintained during the AM Peak Hour, while an overall Level of Service “C” will be experienced during the PM and Saturday Peak Hours.

The available storage lengths currently accommodate all queues during each of the peak hours. Similar queuing conditions will be experienced during each of the peak hours under No-Build and Build conditions.

11. NYS Route 9G and East Cedar Street

NYS Route 9G and East Cedar Street intersect at a “Stop” sign controlled “T” type intersection. The eastbound and southbound approaches to the intersection consist of one lane while the northbound approach has one through lane and an approximately 125 ft. long separate left turn lane. [There are no separate pedestrian facilities along NYS Route 9G at this intersection. There is an existing sidewalk on the south side of East Cedar Street, however this sidewalk terminates approximately 25 ft. prior to the roadways intersection with Route 9G. Approximately 6 ft. wide shoulders are provided on the NYS Route 9G approaches that can be used by bicyclists.](#)

Capacity analysis conducted at this intersection under Existing conditions indicates that the intersection currently operates at a Level of Service “C” during the AM Peak Hour, a Level of Service “E” during the PM Peak Hour and a Level of Service “B” during the Saturday Peak Hour.

The intersection was reanalyzed utilizing the 2035 No-Build and 2035 Build conditions. A review of these analyses indicates a Level of Service “E” will be experienced during the AM Peak Hour, a Level of Service “F” will be experienced during the PM Peak Hour and a Level of Service “C” will be experienced during the Saturday Peak Hour.

The intersection was reanalyzed with signalization and will operate at an overall Level of Service “B” or better if a signal was installed. The intersection should continue to be monitored in the future to determine if traffic signal warrants will be satisfied.

The available storage lengths currently accommodate all queues during each of the peak hours. Similar queuing conditions will be experienced during each of the peak hours under No-Build and Build conditions.

12. NYS Route 9G and Fulton Street

Fulton Street intersects with NYS Route 9G at an unsignalized “T” type intersection. The Fulton Street eastbound and NYS Route 9G southbound approaches to the intersection each consist of one lane. One through lane and an approximately 145 ft. separate left turn lane are provided on the northbound approach. [There is an existing sidewalk along the east side of NYS Route 9G through the area of this intersection. There is also an existing sidewalk along the north side of Fulton Street however it terminates approximately 250 ft. west of the intersection. The shoulders along Route 9G in the immediate vicinity of this intersection narrow to approximately 2 ft. in width to accommodate the left turn lane on Route 9G and therefore are not suitable for bicycle use.](#)

The capacity analysis conducted at the intersection indicates that the Level of Service for the Fulton Street approach is “C” during the AM Peak Hour and the left turn exiting from Fulton Street experiences a Level of Service “F” during the PM Peak Hour and a Level of Service “C” during the Saturday Peak Hour.

The capacity analysis was recomputed using the 2035 No-Build Traffic Volumes. The results indicate the Fulton Street approach to the intersection is expected to experience Levels of Service “D” and “F” during the AM and PM Peak Hours, respectively and a Level of Service “C” during the Saturday Peak Hour.

The capacity analysis was also recomputed using the 2035 Build Traffic Volumes. The Level of Service is expected to remain the same during the PM and Saturday Peak Hours. The results show that a Level of Service “E” is expected during the AM Peak Hour.

A traffic signal would be needed to address the Fulton Street delays. Based on a comparison to the Traffic Signal Warrants as shown in Tables [TSW-1C through TSW-3C-BD-No. 3E, 3NB and 3BD](#), the installation of an actuated traffic signal is warranted under Existing, No-Build and Build Conditions. The intersection was reanalyzed with signalization and was found to operate at an overall Level of Service “B” during each of the peak hours. The installation of a traffic signal at this location should be considered regardless of the proposed project.

The available storage lengths currently accommodate all queues during each of the peak hours. Similar queuing conditions will be experienced during each of the peak hours under No-Build and Build conditions.

13. NYS Route 9G and Paint Shop Road/Cottage Road

Cottage Road intersects with NYS Route 9G (Violet Avenue) at a signalized full movement intersection opposite West Cottage Road, which provides access to Paint Shop Road. The NYS Route 9G northbound approach consists of approximately 65 ft. long separate left and right turn lanes and a through lane. The southbound NYS Route 9G approach includes an approximately 145 ft. long ~~seprate~~[separate](#) left turn lane and a through/right turn lane. The Cottage Road westbound approach consists of an approximately 60 ft. separate right turn lane and through/left turn lane and the West Cottage Road approach is a single wide lane. [There are no existing pedestrian facilities at this intersection. The existing shoulders along Route 9G are approximately 5-6 ft. wide and can be used by bicyclists.](#)

Capacity analysis conducted at this intersection indicates that an overall Levels of Service “A” is currently experienced during the AM and Saturday Peak Hours, while an overall Level of Service “B” is currently experienced during the PM Peak Hour.

Analysis of future operating conditions indicates that the a Level of Service “B” will be experienced during each of the peak hours under future 2035 Build conditions. Some signal timing changes are expected to be required based on actual volumes to provide the most efficient operation.

The available storage lengths currently accommodate all queues during each of the peak hours. Similar queuing conditions will be experienced during each of the peak hours under No-Build and Build conditions.

14. NYS Route 9G/and East/West Dorsey Lane

East/West Dorsey Lane intersects with NYS Route 9G at a signalized (signal D-146) four-way intersection. All approaches consist of one lane in each direction with separate left turn lanes on NYS Route 9G. The northbound left turn lane has a storage length of approximately 225 ft. while the southbound left turn lane has a storage length of approximately 160 ft. [There are no existing pedestrian facilities at this intersection with the exception of a sidewalk along the west side of Route 9G south of West Dorsey Lane. This sidewalk has a curb ramp near the southwest corner of the intersection. The existing shoulders along Route 9G are approximately 5-6 ft. wide and can be used by bicyclists.](#)

Capacity analysis conducted at this intersection utilizing the 2015 Existing Traffic Volumes indicates that an overall Level of Service “C” is experienced during the AM and PM Peak Hours, while a Level of Service “B” is experienced during the Saturday Peak Hour.

The capacity analysis was reanalyzed for future 2035 No-Build and 2035 Build conditions. A review of the analysis indicates that similar Levels of Service will be maintained at this location. Some signal timing changes may be required in the future based on actual background growth and the site traffic.

The available storage lengths currently accommodate all queues during each of the peak hours. Similar queuing conditions will be experienced during each of the peak hours under No-Build and Build conditions.

15. U.S. Route 9 and Quiet Cove Park Exit Driveway/Proposed Site Access Driveway (Relocated Hudson Heritage-View Drive)

The Quiet Cove Park Exit Driveway intersects at a “Stop” sign controlled “T” type intersection with U.S. Route 9. U.S. Route 9, at this location, consists of two through lanes, northbound and southbound and a striped center median. The Quiet Cove Park Exit Driveway consists of one lane and is “Stop” sign controlled. Sight distances at this location are good. [There are no existing pedestrian facilities at this intersection. The existing shoulders along Route 9 are approximately 8 ft. wide and can be used by bicyclists.](#)

Capacity analysis conducted at this intersection indicates that under current conditions a Level of Service “D” is currently experienced during the AM and PM Peak Hours while a Level of Service “E” is experienced during the Saturday Peak Hour.

The capacity analysis was recomputed for future 2035 No-Build conditions. The analysis indicates that Levels of Service “E”, “E” and “F” are expected during the AM, PM and Saturday Peak Hours, respectively.

Under the Build scenario, Hudson View Drive is being relocated opposite this roadway, which will be a signalized four-way intersection. The eastbound approach from Quiet Cove Park will remain the same. The westbound site access driveway should be constructed to consist of two left turn lanes and a separate right turn lane. With these improvements, this intersection will operate at an overall intersection Level of Service “A” during the AM Peak Hour and at an overall Level of Service “D” during the PM and Saturday Peak Hours. Also, since it is anticipated that there will be increased pedestrian movements at this location between the site and the Quiet Cove Park, pedestrian signals and crosswalks should be included as part of the intersection reconstruction improvements. [A traffic signal warrant analysis was conducted for this proposed intersection as summarized in Tables TSW-1A, TSW-2A and TSW-3A, which indicate that the intersection will meet warrants for a traffic signal with the proposed modifications.](#)

The available storage lengths currently accommodate all queues during each of the peak hours. Similar queuing results are projected under No-Build conditions. Under future Build conditions with a traffic signal all queues are anticipated to be accommodated with the proposed intersection improvements required to accommodate the site access driveway.

16. U.S. Route 9 and Clearwater Drive (Quiet Cove Park Entrance)

Clearwater Drive intersects with U.S. Route 9 at an unsignalized “T” shaped “Stop” sign controlled intersection. The eastbound approach consists of a shared left/right lane. The northbound U.S. Route 9 approach consists of an approximately 90 ft. separate left turn lane and two through lanes. The southbound consists of two through lanes with a shared right turn. [There are no existing pedestrian facilities at this intersection. The existing shoulders along Route 9 are approximately 8 ft. wide and can be used by bicyclists.](#)

A capacity analysis was conducted for this intersection utilizing the Existing and No-Build Traffic Volumes. The results of this analysis indicate that the intersection is currently operating at an overall Level of Service “B” during the AM, PM and Saturday Peak Hours.

This intersection was reanalyzed using the 2035 Build Traffic Volumes. The results indicate that the intersection will remain the same during all peak hours. Capacity analysis conducted for the intersection with the 2035 Build Traffic Volumes indicates that the intersection will continue to operate at an Level of Service “B” during the PM and Saturday Peak Hours, while a Level of Service “C” will be experienced during the AM Peak Hour.

The available storage lengths currently accommodate all queues during each of the peak hours. Similar queuing conditions will be experienced during each of the peak hours under No-Build and Build conditions.

17. U.S. Route 9 and North Road

North Road intersects with U.S. Route 9 at an unsignalized “T” shaped intersection. The westbound approach consists of a single lane “Stop” controlled approach. The U.S. Route 9 approaches consist of two through lanes northbound and southbound divided by a raised/landscaped median. Right turns only are permitted to U.S. Route 9 northbound from the North Road approach. [Sidewalks are provided along both sides of Route 9 and the north side of North Road in the vicinity of this intersection.](#) There is also an unsignalized pedestrian crosswalk [with ADA compliant pedestrian curb ramps](#) crossing the North Road approach. [The existing shoulders in the vicinity of this intersection are approximately 4 ft. wide.](#)

Capacity analysis utilizing the Existing Traffic Volumes indicates that the intersection allows right turns only onto Route 9 northbound. The analysis indicates poor Levels of Service however, it should be noted that the intersection benefits from the gaps in traffic that are created as a result of the traffic signal located to the south at the Marist College South Driveway.

The intersection was reanalyzed for the future No-Build and Build conditions with signalization. A review of the analysis indicates that with a new traffic signal, the future No-Build and Build intersection volumes will be accommodated at an overall Level of Service “C” or better during each of the peak hours. Therefore, the intersection should be monitored for a potential future traffic signal.

The queuing analysis indicates that the storage length for the westbound right turn movement is currently exceeded during the PM Peak Hour. Similar queues are projected for the No-Build conditions. Under future Build conditions the queue for the westbound right turn is projected to exceed the available storage length during each of the peak hours. As indicate this intersection should be monitored for the installation of a traffic signal.

18. North Road and West Cedar Street

West Cedar Street intersects with North Road at a “Stop” sign controlled “T” type intersection. The westbound approach (West Cedar Street) consists of a shared left/right lane. North Road only has a northbound approach with a through lane and an approximately 80 ft. long separate right turn lane. There is an existing sidewalk along the east side of North Road and the north side of West Cedar Street. Pedestrian curb ramps are provided on the northeast and southeast corners of the intersection, however there is no striped crosswalk. There are also no separate pedestrian facilities at this intersection, however North Road has sufficient width to safely accommodate pedestrians.

A capacity analysis was conducted for this intersection utilizing the Existing and No-Build Traffic Volumes and the results of this analysis indicates that the intersection is currently operating at a Level of Service “B” during the AM and Saturday Peak Hours and at a Level of Service “C” during the PM Peak Hour.

The intersection was reanalyzed using the 2035 Build Traffic Volumes. The results indicate that the intersection will continue to operate at a Level of Service “B” during the AM Peak Hour, while a Level of Service “F” will be experienced during the PM Peak Hour and a Level of Service “C” will be experienced during the Saturday Peak Hour. The intersection should be monitored for potential signalization.

The available storage lengths currently accommodate all queues during each of the peak hours. Similar queuing conditions will be experienced during each of the peak hours under No-Build and Build conditions.

19. NYS Route 9G and North Road

North Road and NYS Route 9G intersect at an unsignalized “T” shaped intersection. The eastbound approach consists of an approximately 450 ft. separate left turn lane and a separate through lane. The westbound approach consists of a through lane and a separate channelized right turn lane. The westbound through lane is controlled by a “Stop” sign, while the westbound right turn lane is controlled by a “Yield” sign. The

southbound North Road approach consists of separate left and right turn lanes with a storage length of approximately 145 ft. and the approach is controlled by a “Stop” sign. There are existing sidewalks along the south side of Marist Drive Extension, the east side of North Road and both sides of NYS Route 9G south of the intersection. No pedestrian curb ramps or striped crosswalks are provided at the intersection as pedestrian crossing maneuvers are not encouraged at this location. In addition, no separate bicycle facilities are provided at the intersection. It should be noted that for the purposes of the capacity analysis the intersection was analyzed as an “All-Way” stop intersection since the Synchro 8 software cannot analyze an intersection with “Stop” signs on two of the three legs of a “T” intersection.

A capacity analysis was conducted for this intersection utilizing the Existing Traffic Volumes. The results of this analysis indicate that the intersection is currently operating at an overall Level of Service “C” during the AM and PM Peak Hours and at an overall Level of Service “B” during the Saturday Peak Hour.

This intersection was reanalyzed using the 2035 No-Build Traffic Volumes. The results indicate that the intersection will experience an overall Level of Service “C” or during the AM Peak Hour, while an overall Level of Service “D” can be expected for the PM Peak Hour and “B” during the Saturday Peak Hour. Capacity analysis conducted for the intersection with the 2035 Build Traffic Volumes indicates that the intersection will operate at an overall Level of Service “C” during the AM Peak Hour and Saturday Peak Hours, while an overall Level of Service “E” will be experienced during the PM Peak Hour. The intersection should be monitored for potential future signalization.

The available storage lengths currently accommodate all queues during each of the peak hours. Similar queuing conditions will be experienced during each of the peak hours under No-Build and Build conditions.

20. Fulton Street and Beck Place/Mid-Hudson Plaza

Fulton Street intersects with Beck Place and the Mid-Hudson Plaza driveway to form a full movement, signalized intersection. The eastbound Fulton Street approach consists of a 140 ft. separate left turn lane and a shared through/right turn lane. The westbound approach consists of an approximately 110 ft. separate left turn lane and a shared through/right turn lane. The northbound and southbound approaches each consist of one lane. There are existing sidewalks on all both sides of Fulton Street and Beck Place, while a sidewalk is only provided on the west side of the Mid-Hudson Plaza approach. Signalized pedestrian crosswalks are provided on the westbound,

northbound approaches with ADA compliant curb ramps on the northeast, southeast and southwest corners of the intersection. There is also an unsignalized crosswalk on the southbound approach with a sidewalk curb ramp on the northwest corner of the intersection. No separate bicycle facilities are provided at this intersection.

A capacity analysis was conducted for this intersection utilizing the Existing Traffic Volumes. The results of this analysis indicate that the intersection is currently operating at an overall Level of Service “A” during the AM and Saturday Peak Hours and at an overall Level of Service “B” during the PM Peak Hour.

This intersection was reanalyzed using the 2035 No-Build and Build Traffic Volumes. The results indicate that the intersection will experience an overall Level of Service “C” or during the AM Peak Hour, while an overall Level of Service “D” can be expected for the PM Peak Hour and “B” during the Saturday Peak Hour. Capacity analysis conducted for the intersection with the 2035 Build Traffic Volumes indicates that the intersection will operate at an overall Level of Service “C” during the AM Peak Hour and Saturday Peak Hours, while an overall Level of Service “E” will be experienced during the PM Peak Hour. The intersection should be monitored for potential future signalization.

The available storage lengths currently accommodate all queues during each of the peak hours. Similar queuing conditions will be experienced during each of the peak hours under No-Build and Build conditions.

21. U.S. Route 9 and St. Andrews Road

U.S. Route 9 and St. Andrews Road intersect at a “T” shaped, signalized intersection. The northbound U.S. Route 9 approach consists of a through lane and separate right turn lane drop. The southbound approach consists of an approximately 120 ft. separate left turn lane and a through lane. The westbound St. Andrews Road approach consists of two left turn lanes with approximately 370 ft. of storage distance and an approximately 150 ft. long separate right turn lane. There are striped pedestrian crosswalks on the northbound and westbound approaches, however these crossings are unsignalized and there are no existing sidewalks in the vicinity of the intersection. Approximately 8 ft. wide shoulders are provided at the intersection in the northbound and southbound directions, which can be utilized by bicyclists.

A capacity analysis was conducted for this intersection utilizing the Existing Traffic Volumes. The results of this analysis indicate that the intersection is currently operating at an overall Level of Service “B” during each of the peak hours.

This intersection was reanalyzed using the 2035 No-Build and Build Traffic Volumes. The results indicate that the intersection will continue to experience an overall Level of Service “B” during the AM Peak Hour, while an overall Level of Service “D” can be expected for the PM Peak Hour. During the Saturday Peak Hour the intersection is expected to operate at a Level of Service “B” under No-Build Conditions and a Level of Service “C” under build conditions. This intersection should be included as part of the post monitoring study to ensure proper signal timings based actual future conditions.

The available storage lengths currently accommodate all queues during each of the peak hours. Similar queuing conditions will be experienced during each of the peak hours under No-Build and Build conditions.

22. NYS Route 9G and St. Andrews Road

NYS Route 9G intersects with St. Andrews Road at a signalized “T” shaped intersection. The northbound approach consists of an approximately 70 ft. long separate left turn lane and a through lane. The southbound approach consists of a through lane and a separate channelized right turn lane that is controlled by a “Yield” sign. The eastbound St. Andrews Road approach consists of a separate left turn lane and an approximately 200 ft. long separate right turn lane. There are no existing pedestrian facilities at the intersection. The shoulders along Route 9G vary in width between 5 and 8 ft. and can be utilized by bicyclists.

A capacity analysis was conducted for this intersection utilizing the Existing Traffic Volumes. The results of this analysis indicate that the intersection is currently operating at an overall Level of Service “B” during each of the peak hours.

This intersection was reanalyzed using the 2035 No-Build and Build Traffic Volumes. The results indicate that the intersection will continue to operate at an overall Level of Service “B” during each of the Peak Hours under future conditions both with and without the project.

The available storage lengths currently accommodate all queues during each of the peak hours. Similar queuing conditions will be experienced during each of the peak hours under No-Build and Build conditions.

G. SUMMARY OF PROJECT IMPACTS AND MITIGATION

Project related traffic impacts were identified for each of the area signalized intersections. These are defined as any of the following occurring upon the full build-out of the proposed project:

- Any reduction in overall Level of Service (LOS) to LOS D or worse at a street intersection that operates at LOS C or better without the proposed project
- Any reduction in overall Level of Service (LOS) to less than LOS D at a street intersection that operates at LOS D or worse without the proposed project.
- Introduction of new traffic volumes that will cause the overall volume of the roadway to exceed the design capacity of the mainline (non-intersection) highway sections within the TIS study area.

For any unsignalized intersections where the minor roadway approaches are projected to operate at a Level of Service “F” as a result of the project generated traffic, these locations were identified for possible signalization and/or monitoring for future signalization.

Based on these criteria certain mitigation measures have been identified for the area intersections. These are summarized in Table S-1 in Appendix B for each of the study area intersections as well as the responsibility and cost of these measures. Many of these improvements are recommended regardless of the proposed development as specified in Table No. S-1. The need for the completion of project related improvements is generally tied to the additional traffic generation for the site. These are discussed further in detail below for those intersections where project related impacts are anticipated based on the above criteria.

- U.S. Route 9 and Proposed Big Meadow Lane – This intersection currently operates at a LOS “D” on the westbound Big Meadow Lane approach during the Weekday Peak PM Hour. The intersection is expected to continue to operate at a LOS “D” under No-Build conditions as well. Under future Build conditions during the PM Peak Hour the intersection is projected to operate at a LOS “E”.
- U.S. Route 9 and Proposed New Southerly Site Access Driveway (Winslow Gate) – The westbound approach to this intersection (site exit) will be widened to provide three exiting lanes in the form of two left turn lanes and a separate right turn lane. The existing traffic signal will be upgraded to be fully actuated and interconnected with adjacent traffic signals. Equipment will also be provided to connect the traffic signal to the New York State Advanced Traffic Management System (ATMS). The sidewalks at this intersection will also be reconstructed to be ADA compliant and

signalized pedestrian crosswalks will be provided. These improvements will be completed by the Applicant at a projected cost of \$350,000.

- U.S. Route 9 and Home Depot (Mid-Hudson Shopping Center)/Norther Marist College Drive – During the PM Peak Hour the overall Level of Service at this intersection is projected to drop from LOS “C” under No-Build conditions to LOS “D” under Build conditions. In order to mitigate this impact, traffic signal timing and coordination improvements have been recommended. These timing and coordination improvements will be coordinated by the Applicant with NYSDOT as part of the Highway Work Permit process. In addition, the Applicant will furnish and install the equipment required to connect this signal to the NYS ATMS. The total cost of these improvements is projected to be \$25,000.
- U.S. Route 9 and Fulton Street – During the AM and Saturday Peak Hours the overall Level of Service at this intersection is projected to drop from LOS “C” under No-Build conditions to LOS “D” under Build conditions, while during the PM Peak Hour the intersection operates at LOS F under Existing, No-Build and Build conditions. Traffic signal timing and coordination improvements have been recommended to mitigate the project related impacts. These timing and coordination improvements will be coordinated by the Applicant with NYSDOT as part of the Highway Work Permit process. In addition, the Applicant will furnish and install the equipment required to connect this signal to the NYS ATMS. The total cost of these improvements is projected to be \$25,000.
- U.S. Route 9 and southern Marist Drive/NYS Route 9G/Marist Drive Extension – During the PM Peak Hour the overall Level of Service at this intersection is projected to drop from LOS “D” under No-Build conditions to LOS “F” under Build conditions. Traffic signal timing and coordination improvements have been recommended to mitigate the project related impacts. These timing and coordination improvements will be coordinated by the Applicant with NYSDOT as part of the Highway Work Permit process. In addition, the Applicant will furnish and install the equipment required to connect this signal to the NYS ATMS. The total cost of these improvements is projected to be \$25,000.
- NYS Route 9G and East Cedar Street – During the PM Peak Hour the overall Level of Service at this intersection is projected to drop from LOS “E” under Existing conditions to LOS “F” under No-Build conditions without the project. This intersection should be monitored for signalization in the future regardless of the proposed development.
- NYS Route 9G and Fulton Street – This intersection currently operates at a LOS “F” during the PM Peak Hour. The traffic signal warrant analysis conducted for this intersection and summarized on Tables No. ~~3-E, 3-NB and 3-BD~~[T_{SW-1C} through](#)

[TSW-3C-BD](#) indicates that a traffic signal is currently warranted. The installation of a traffic signal at this intersection should be considered regardless of the project.

- [NYS Route 9G and Paint Shop Road/Cottage Road](#) – This intersection is not expected to experience a significant impact as a result of the proposed development however some minor signal timing adjustments may be required to maintain the existing levels of service. Any required signal timing adjustments will be coordinated by the Applicant with NYSDOT as part of the Highway Work Permit process.
- [NYS Route 9G/and East/West Dorsey Lane](#) – This intersection is not expected to experience a significant impact as a result of the proposed development however some minor signal timing adjustments may be required to maintain the existing levels of service. Any required signal timing adjustments will be coordinated by the Applicant with NYSDOT as part of the Highway Work Permit process.
- [U.S. Route 9 and Quiet Cove Park Exit Driveway/Proposed Site Access Driveway \(Hudson Heritage Drive\)](#) – [As part of the proposed Project, the existing Hudson Heritage Drive roadway connection to U.S. Route 9 is proposed to be relocated to the north to align opposite the Quiet Cove Park Exit Driveway. The westbound approach to this intersection \(site exit\) will consist of three exiting lanes in the form of two left turn lanes and a separate right turn lane. The existing median along U.S. Route 9 will be restriped in the southbound direction in order to provide a separate left turn lane entering the site. A new fully actuated traffic signal will be installed at the intersection that will be interconnected with adjacent traffic signal along U.S. Route 9 and connected to the NYS ATMS. New ADA compliant sidewalks will be installed at the intersection with signalized crosswalks. These improvements, \[which are detailed in Exhibit No. 1 contained in Appendix “A” of this TIS,\]\(#\) will be completed by the Applicant at a projected cost of \\$600,000. With respect to any pedestrian movements in the vicinity of Quiet Cove Park, it is anticipated that long term modifications in addition to the pedestrian signals crossings would be pursued together with the Town and County.](#)
- [U.S. Route 9 and North Road](#) – During the AM and Saturday Peak Hours the Level of Service at this intersection exiting North Road is projected to drop from LOS “C” under No-Build conditions to LOS “F” under Build conditions. During the PM Peak Hour this intersection is projected to operate at LOS “F” under No-Build conditions regardless of the project. The Applicant will monitor this intersection for signalization after completion of the project. This is project to cost approximately \$10,000.
- [North Road and West Cedar Street](#) – During the PM Peak Hour the intersection Level of Service is projected to drop from LOS “C” under No-Build conditions to LOS “F” under Build conditions. The Applicant will monitor this intersection for signalization after completion of the project. This is project to cost approximately \$10,000.

- NYS Route 9G and North Road – During the PM Peak Hour the intersection Level of Service is projected to be LOS “E” under Build conditions, while all other time periods will operate at LOS “C”. This intersection should be monitored for future signalization regardless of the proposed project.

The monitoring of traffic signals to be conducted by the Applicant would be ongoing and will be completed after the completion of the first phase of development with continued monitoring in one year intervals until the completion of the development. This would allow the need for signalization to be determined as actual development traffic occurs.

The intersection of Route 9G and Fulton Street, which currently satisfies warrant(s) for signalization, should be pursued in the initial phase of development if signalization has not already been implemented.

[It should be noted that the New York State Advanced Traffic Management System \(ATMS\) is an initiative that the Department of Transportation is requiring Applicants for new or modified signalized installations to provide the necessary communications equipment, including modems and related equipment to allow individual signals to communicate directly with the Transportation Management Center. This is an on-going effort that the State has identified to be contributed to for all permit projects.](#)

H. OTHER CONSIDERATIONS

1. Mass Transit

The area is serviced by the Dutchess County Loop Bus system which operates along NYS Route 9G in the immediate vicinity of the site and along Route 9 north of West Dorsey Lane and south of Fulton Street. More specifically it has stops at Route 9G and Cottage Road, at Dutchess Community College, Route 9G and Pendell Road and also Route 9G and Fulton Street. It also has stops at Marist College, St. Francis Hospital and then continues along Washington Street into the City of Poughkeepsie.

Metro-North train services are available via the Hudson River line which is accessed locally at the Poughkeepsie station location approximately two miles south of the site. The trains operate between Poughkeepsie and Grand Central Station in Manhattan. Peak hour trains run on headways between 15 and 30 minutes. The typical travel time is approximately 1:45 between Poughkeepsie and Grand Central Station.

Copies of the schedules for the bus and rail service are contained in Appendix F.

2. Pedestrian and Bicycle Accommodations

The proposed site plan includes a series of proposed internal sidewalks and walking paths to promote pedestrian and bike activity. The proposed roadway and sidewalk system provides connectivity between the residential and commercial areas as well as connecting to U.S. Route 9 and the other commercial areas south of the property including Mid-Hudson Plaza. The sidewalk system is also configured to accommodate easy access to future bus service in the area.

3. Emergency Access

The site plan is designed to provide two means of access to U.S. Route 9 as well as a connection to Paint Shop Road which connects to West Cottage Road. This roadway layout provides good emergency access to the overall site. The individual site development areas include a series of roadways which provide alternate travel routes for emergency vehicles. Note that with the completion of the development, improved emergency access for the overall area as well as to the Mid-Hudson Plaza will be provided and the internal road system and connection to Paint Shop Road provides an alternate path of travel between U.S. Route 9 and NYS Route 9G for vehicular traffic including emergency vehicles.

4. Potential Route 9G and CSX Connector Roadway

The pedestrian paths are expected to make use of the area adjacent to former CSX right-of-way. The site plan has also been designed to accommodate potential connections to a roadway if it was developed along this right-of-way. The right-of-way runs from West Cedar Street and past Fulton Street behind the Mid-Hudson Plaza along the easterly property boundary of the site. The use of this right-of-way would allow a connection from Paint Shop Road, through the site connecting to Fulton Street as well as West Cedar Street. While the site plan has been laid out to accommodate connections to such a future roadway, no plans are currently being advanced for this roadway. Note that the development connection to Paint Shop Road to West Cottage Road provides a vehicular traffic corridor connection to NYS Route 9G which allows vehicular and pedestrian traffic from that corridor to access the development and provide the ability to cross between U.S. Route 9 and NYS Route 9G which improves overall accessibility and traffic circulation for the area.

5. Potential Jitney Service

As the residential component of development advances, the potential for a jitney service to connect from this site to the Poughkeepsie Train Station would provide convenient access for commuters. The Jitney will be provided for use by residents of

the proposed development and will begin services as occupancy of the residential portions begins. The number of vehicles, route and stop locations will be determined and expanded as market demand dictates. [The exact timing of implementation of the Jitney Service will be determined as part of the site plan review process with the Town of Poughkeepsie.](#) The site plan has also been designed to accommodate future loop bus stops, which would be able to serve both the commercial and residential portions of the site.

6. U.S. Route 9 Pedestrian Crossing Options

The proposed signalized access connections to U.S. Route 9 provide the ability for pedestrian traffic from the new Hudson View Drive to connect to the Quiet Cove Park. Pedestrian signals are anticipated as part of the future signal design. The proposed pedestrian cross connections to Mid-Hudson Plaza also provide a convenient path to connect to Marist College and other points further to the south such as along Fulton Street. The pedestrian and bicycle paths proposed on this site provide connections elsewhere to the entire area including connections to the CSX right of way, which in turn provides access to other off site locations. Pedestrians and bicyclists would be accommodated at the signalized crossings of U.S. Route 9 connecting to Quiet Cove Park via the provision of pedestrian signals.

7. Parking

The Hudson Heritage development is proposed to have in excess of 3,600 parking spaces. Based on the Town Code, the commercial portion of the development is required to have a total of 1,827 parking spaces or a parking ratio of 5.22 spaces per 1,000 sq. ft., the residential portion of the development is required to have at total 1,319 parking spaces at an overall parking ratio of 1.75 spaces per dwelling unit and the hotel is required to have 90 spaces at a ratio of 1.13 spaces per hotel room. The proposed site plan will meet the Town Code for the commercial and hotel portion of the development. For the residential portion of the development the site is proposed to be provided 1,729 parking spaces at an overall rate of 2.3 spaces per dwelling unit, including reserved parking spaces, which exceeds the Town Code requirements.

Due to the separation distance between the residential, hotel and commercial portions of the development, it is expected that there would be little shared parking that would occur between these uses. However, pedestrian connections will be provided between the two distinct portions to allow for walking and biking trips to occur more easily. Furthermore, within the commercial area, there may be some shared parking that will occur depending on the final mix in commercial uses. For example, banks, retail stores, office and restaurant space all have slightly different peak parking demand

times during the day. This will have to be further determined as part of the site plan process as specific users are determined.

8. On-site Circulation and Traffic Control

The internal intersections within the proposed site will generally be unsignalized and controlled by a “Stop” sign. The termination of Hudson View Drive (Road 1B on Sheet No. C101) at Road 2A will be controlled by a traffic circle (roundabout) as show on Sheet No. 101. The main travel paths through the side will consist of Hudson View Drive made up of Roads 1A, 1B and 1C, Pain Shop Road made up of Roads 2B and 3 and the extension of Winslow Gate Road which will serve as the “spine” of the retail component of the site and is identified as Road 10 on Sheet No. C101. The intersection of Roads 1A/1B and Road 10 may require the installation of a traffic signal in order to properly control vehicular and pedestrian traffic at this intersection. This intersection should be monitored as development within the retail and residential components of the site occur to determine the need for a traffic signal. It is not anticipated that any other internal intersection will require the installation of a traffic signal. However, the intersections of Roads 1B & 2B and Roads 2B & 3 may need to be monitored in the future as well, since existing traffic may use this route as an alternate route between U.S. Route 9 and NYS Route 9G. The specific traffic control at the internal intersections and monitoring programs will be finalized as part of the Site Plan Approval.

I. ALTERNATE ACCESS SCENARIO

An alternate access scenario was also analyzed in order to assess the project related impacts associated with the project only having access to U.S. Route 9 via the relocated Hudson View Drive access connection and via Winslow Gate Road. This would occur if the Applicant cannot obtain access to the site from NYS Route 9G via West Cottage Road/Pain Shop Road, as the property east of the site is under the control of New York State. The modified arrival and departure distributions, site generated traffic volumes and 2035 Build Traffic Volumes for this alternate access scenario are summarized on Figures No. 14-ALT through 32-ALT contained in Appendix A.2. Separate analyses were conducted for this which are summarized in Table No. 2-ALT contained in Appendix B. The full synchro analysis results for this Build Scenario are provided in Appendix D.

The results of the analysis indicate that there would be additional impacts along U.S. Route 9 as a result of this scenario that would require additional mitigation measures such as increased length of the southbound left turn lane on U.S. Route 9 at Fulton Street. The intersection of Route 9G and Fulton Street would also have to be signalized as part of the

proposed project mitigation under this scenario, rather than be monitored for future signalization after completion of the proposed project.

IV. SUMMARY AND CONCLUSION

Based on the analysis contained herein various improvements, as summarized in Table S-1, will be required to accommodate the proposed development. The improvements include access related improvements, upgrade to existing traffic signals, installation of new traffic signals, reconstruction of internal and external access roadways and other related pedestrian improvements. Transit improvements including potential jitney service to the Poughkeepsie train station will also have to be pursued as the development progresses.