

SUPPLEMENTAL FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR THE

175-LOT CLUSTER SUBDIVISION APPLICATION

FOR THE

SUMMIT WOODS SUBDIVISION

Town of East Fishkill, Dutchess County, New York

Date Submitted:

February 25, 2019

Revised: August 26, 2019

Supplemental Final Environmental Impact Statement

For The 175-Lot Cluster Subdivision For the Summit Woods Subdivision

**NYS Route 52
Town of East Fishkill, New York**

Lead Agency:

Town of East Fishkill Planning Board
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I. Introduction and Project Summary

A. State Environmental Quality Review

This Supplemental Final Environmental Impact Statement (“SFEIS”) has been prepared for the Town of East Fishkill Planning Board (the “Planning Board”) in compliance with Article 8 of the New York State Environmental Conservation Law, and its implementing regulations (6 NYCRR Part 617) (collectively “SEQRA”). The Planning Board has been designated as lead agency pursuant to the provisions of SEQRA. Pursuant to the requirements of Part 617, the Draft Environmental Impact Statement (“DEIS”) for the Project is incorporated herein by reference.

The applications for subdivision and site plan approval were made to the Planning Board in December of 2001. The Planning Board determined the Project to be a Type I action pursuant to SEQRA, declared its intent to act as Lead Agency, decided to coordinate environmental review of the Project and notified all involved and interested agencies of its intent. The Planning Board subsequently adopted a Positive Declaration requiring the preparation of a DEIS and initiated public scoping for the DEIS. The East Fishkill Planning Board issued a Positive Declaration on February 19, 2002, and accepted a Draft Scoping Checklist from the Project Sponsor on March 26, 2002. Comments on the draft scope were accepted through April 26, 2002. After consideration of all comments, the Planning Board issued a final scope on May 8, 2002.

The DEIS was accepted as complete by the Planning Board on November 18, 2003. A combined Public Hearing on the DEIS and the Project, together with Site and Subdivision Plan, was held on February 17, 2004. The portion of the Public Hearing pertaining to the DEIS was closed on February 17, 2004. The written comment period, required by SEQRA, closed on March 2, 2004.

Thereafter, an FEIS was submitted to the Planning Board, and was accepted in August of 2005.

However, prior to the FEIS acceptance by the Planning Board, the United States Fish & Wildlife Service (USFWS), coordinated as part of the application review by the United States Army Corps of Engineers, raised a concern regarding the potential for on-site threatened and endangered species, specifically bog turtles, Blandings turtles, and Indiana bats. In response, additional ecological investigation and preparation of a habitat assessment report and habitat management recommendations were completed. Ultimately, the USFWS concurred in the issuance of a permit for the project by the United States Army Corps of Engineers, subject to special conditions, including execution of a conservation easement over a portion of the project site.

The Planning Board required the FEIS to be supplemented to include discussion of the USFWS and Army Corps of Engineers review. Also, the Planning Board required the FEIS to be supplemented with discussion of additional review by the New York State Department of

Environmental Conservation (NYSDEC) and New York State Office of Parks, Recreation and Historic Preservation (OPRHP).

While the SFEIS was being prepared, the option of connecting the Summit Woods project to public water and public sewer was identified, and conceptual analysis of this option was pursued. Following preliminary discussion with the Town of East Fishkill, the alternative of public water and public sewer infrastructure connections were also included in the SFEIS.

This SFEIS contains the latest information requested by the lead agency for the specific categories listed.

B. Proposed Action

The Applicant, ABD Fishkill LLC, intends to develop a property consisting of 329.84 (+/-) acres for the creation of a maximum number of 175 single-family residential lots. The project consists of 6 separate parcels, located on State Route 52 near the intersection of Route 52 and Primrose Lane, Southern Drive, Stormville Road and Collarbark Road. The Applicant intends to develop 100% of the site, disturbing approximately 39% of the property and leaving the remaining land (steep slopes and wetlands) as open space. The Applicant is proposing to provide 201.42 acres of open space on the property.

The proposed lots range in size between 13,062 square feet and 5.47 acres. A preliminary subdivision plat is included in the plan set included in the appendices of this document. It is the intent of the Applicant to preserve the open space in perpetuity. The Applicant proposes a cluster subdivision. In accordance with Article IX of the Subdivision Regulations of the Town of East Fishkill, at least 30% of the gross acreage of the subdivision shall be composed of land which is preserved as open space. This project will provide approximately 61% of its total area to open space. The open space land is to be permanently preserved as open space from future development or future use as part of a yard of any individual lot. In order to effectuate the preservation of open space, the land designated as open space will be offered to a qualified, not-for-profit corporation eligible to hold a conservation easement. The Applicant has identified North American Land Trust as an interested not-for profit land conservancy. As an alternative, the Applicant will offer the conservation easement to the Town of East Fishkill for management. The conservation easement will require the open space land to be permanently designated for use only as open space and will not be allowed to be used for future development or future use as part of a yard of any individual lot.

During its review of the action, OPRHP identified one area on the project site that raised a potential cultural resource impact. To address this issue, Lot 30 of the subdivision was relocated and appropriate mitigation was included. As a consequence, OPRHP concluded the project will have no adverse impact on historic resources with implementation of the avoidance plan.

Also, the project design was revised in response to comments of the United States Army Corps of Engineers and USFWS. Specifically, the plan was revised to remove lots out of the wetland buffer areas, and the open space area will be subjected to a conservation easement.

The Applicant anticipates that construction will begin in 2020 and full build out will be completed in 2026.

It should be noted that the maximum number of lots that can be developed on the Summit Woods and the Montage at East Fishkill projects site is 175 and 122, respectively.

II. Additional Information

A. Utilities

Water Supply:

The previous proposal for the water supply for the project was to utilize a regional water supply system between the Summit Woods project and the adjoining project known as “Montage of East Fishkill”.

The two projects involve the development of a maximum of 297 single-family residential lots. The two projects are contiguous and are located on the south side of NYS Route 52 near the intersection of NYS Route 216 in the Hamlet of Stormville in the Town of East Fishkill, Dutchess County, New York. Refer to the figure on the following page.

During the review process, the New York State Department of Environmental Conservation requested that a regional water supply and sewerage collection and treatment system be considered for these two projects.

The regional water supply system will service the 297 proposed lots. The water demand assumes a four-bedroom count per residential lot. The Dutchess County Department of Health (DCDOH) guidelines assume water demand estimates of 110 gpd (gallons per day) per bedroom for single-family homes of this size. However, experience has shown that the actual average daily flow for a 4-bedroom home is approximately 300 gallons per day for a metered water supply. This is corroborated by similar water systems in the Town of East Fishkill where the average daily flow for four bedroom house is typically less than 300 gallons per day even during the summer months when demand is the highest.

Therefore, the average daily flow for the two projects shall be as follows:

$$297 \text{ homes} \times 300 \text{ gallons per day} = 89,100 \text{ gallons per day} \approx 62 \text{ gpm}$$

$$\text{Maximum Daily Demand} = 2 \times 89,100 \text{ gpd} = 178,200 \text{ gpd} \approx 124 \text{ gpm.}$$

$$\text{Peak Hourly Demand} = 89,100 \text{ gpd} \times 4 \text{ (peaking factor)} = 356,400 \text{ gpd} \approx 248 \text{ gpm}$$

An Average Daily Flow value of 154,690 gallons per day was deemed acceptable by the Dutchess County Board of Health in a flow confirmation letter dated December 12, 2012, based on 298 4-bedroom homes at 130 gallons per day per bedroom. This flow confirmation letter is in the appendices of this document.

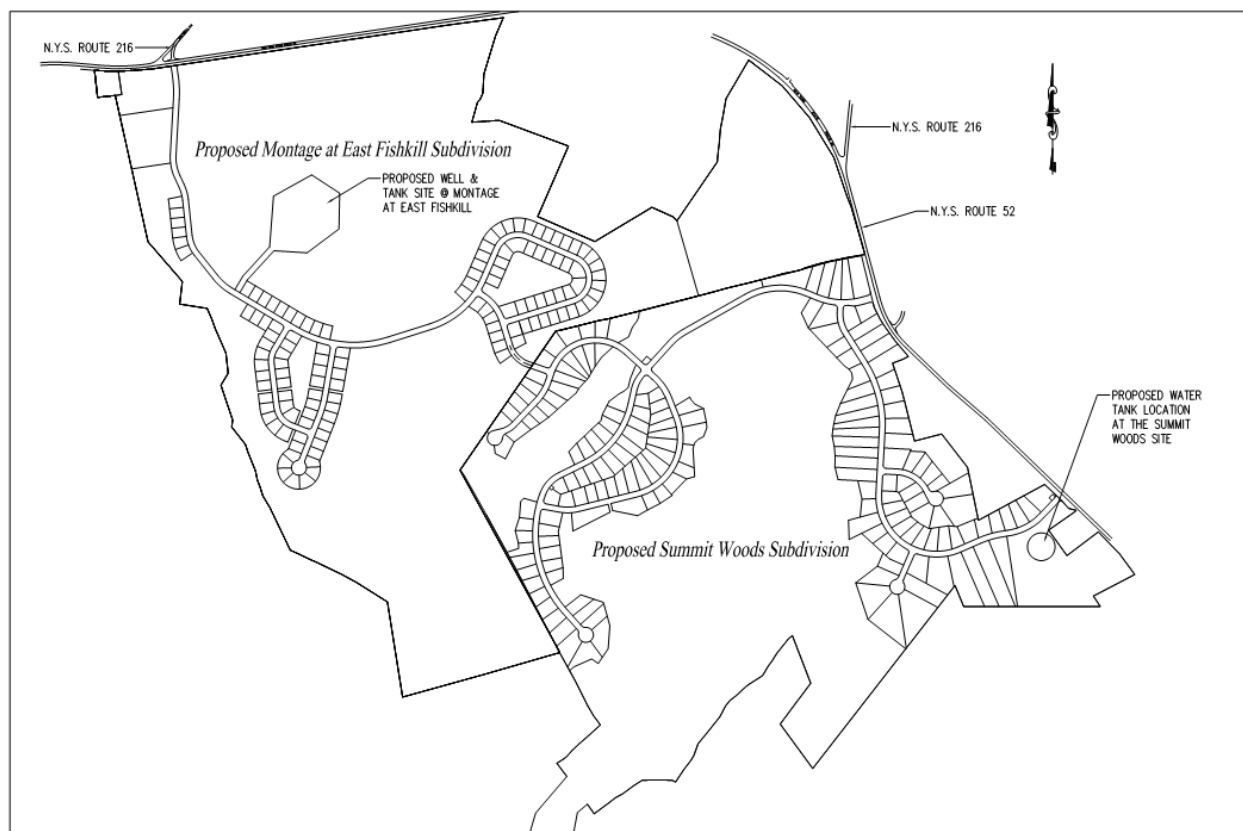


Figure 1- Summit Woods & Montage at East Fishkill Water Supply Plan

Two wells were constructed on the Montage at East Fishkill site for the proposed public water supply system for that subdivision. Wells were also installed on the Summit Woods project site that were to serve that subdivision.

The water quality testing of the two projects indicates that the water quality of the wells located at the Montage at East Fishkill site are better suited for a regional water supply system. Therefore, these wells were proposed to be used for the Summit Woods and Montage at East Fishkill regional water supply.

These wells are high-yielding, 8" diameter bedrock wells installed in September of 2005 and developed in November of 2005 by P.F. Beal and Sons, Brewster, New York. These wells will draw water from underlying water-bearing deposits into a centralized water treatment system. Pumping tests confirm that the production wells, PW-1 and PW-2, can support a sustained withdrawal of 150 gallons of water per minute (GPM) and in excess of 200 GPM, respectively.

A full Subpart 5 analysis was conducted on samples taken from each well at the end of the pump test. The results of both the quantity and quality are included in the Appendix of the Engineering Report included in the DEIS of the Montage at East Fishkill project.

Due to the separate ownership of both projects and the probability that both projects will not be developed at the same time, a phased approach for the water storage tanks for the water supply system was addressed in both DEIS documents for each project.

Phase 1 will include the development of the Montage at East Fishkill site water supply system first since the wells at this site will be used for the regional system. Water storage tanks will be installed at the Montage at East Fishkill site to serve the system until construction of the infrastructure for the Summit Woods subdivision is begun. A second storage tank shall be constructed on the Summit Woods site which will be connected to the water supply system. This will be considered phase 2 of the development of the water supply system.

Cross-easement agreements have been secured between the two project sponsors to allow the building of the infrastructure on each property.

The regionalization of the water system between the two projects will reduce the impacts on the wetlands as the water lines will only be installed in the proposed roadway rights-of-way.

Since the preparation of the SFEIS, another alternative for utilities has been explored with the Town of East Fishkill which will involve the connection of both of the proposed Summit Woods and Montage at East Fishkill sewer and water systems to the existing water and sewer utilities currently serving the existing Four Corners project located approximately 2 miles to the north. Refer to figures 1 and 2 which outline the proposed routing of the water and sewer lines from the Summit Woods and Montage at East Fishkill site to the Four Corners project site.

It should be noted that all of the public utilities on-site will remain in the locations as previously proposed. All potential off-site impacts due to the new utility routing shall be addressed in the following sections.

Water – Alternate #1 (Preferred Alternative):

Alternate #1 or the preferred alternative for the water system would be to connect the proposed water systems for the Summit Woods project site with the Four Corners subdivision by installing a new water line (and sewer line) from the Summit Woods as outlined in figure 2 on the following page. The Montage at East Fishkill site would also connect to the Four Corners systems either through the Summit Woods site or an alternate route as outlined in figure 3. Under alternate #1, the proposed water system for the Summit Woods project may be constructed and may operate independently of the Montage at East Fishkill project. Alternate #1 provides for a fully functional, independent water system, for the Summit Woods project and allows for construction of the Summit Woods project in the event that the Montage at East Fishkill project does not proceed.

The Town owns and operates the water supply system at the Four Corners subdivision. The Town has stated that an additional source of water would need to be provided in order to meet the demand requirements for the additional users. Since the wells at both the Summit Woods and Montage sites were good producing wells of good quality, it is proposed that these wells be used as a supplemental water source if the need arises. Treatment and storage facility would have to be constructed on either the Montage at East Fishkill site or the Summit Woods prior to distribution if wells from either of these sites were to be used.

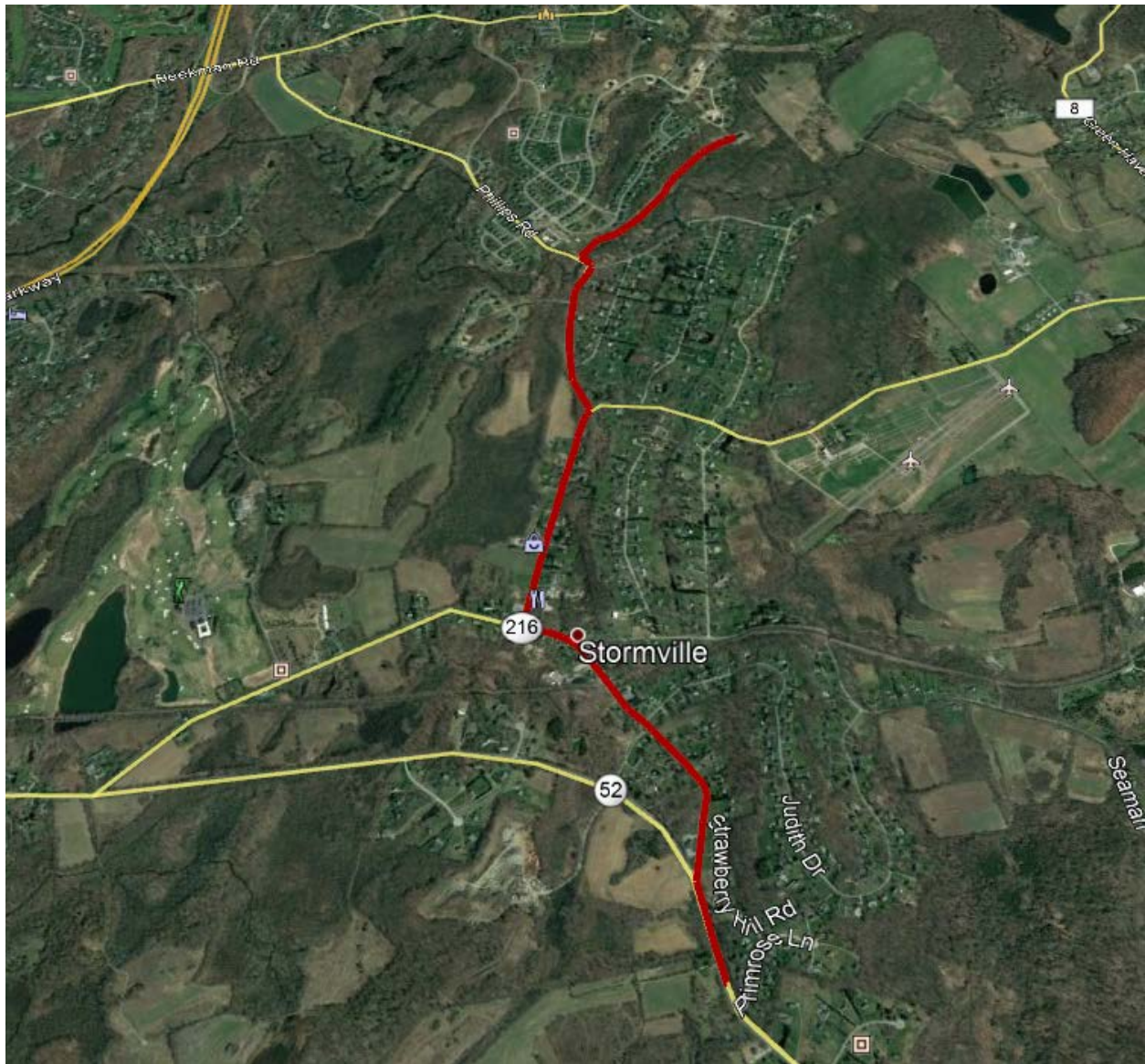


Figure 2- Utility Routing for the Summit Woods Project

Alternate #2 would be to connect the two water systems from the Summit Woods site and the Montage at East Fishkill site and run a single water main to the Four Corners site. Refer to figure 3. This alternate was the original proposal for the regionalized system. This alternative may be selected depending on which project begins development first.

In any event the impact of the utility routing will be very similar depending on which alternative is selected.

The proposed utility route will require a railroad crossing a stream crossing and various culvert crossings. Directional boring will be used whenever possible to mitigate impacts.

Permits will be required from the NYSDOT for the any utility work that is done in the NYSDOT rights-of-way. Permits may also be required by the Town of East Fishkill Highway Department.

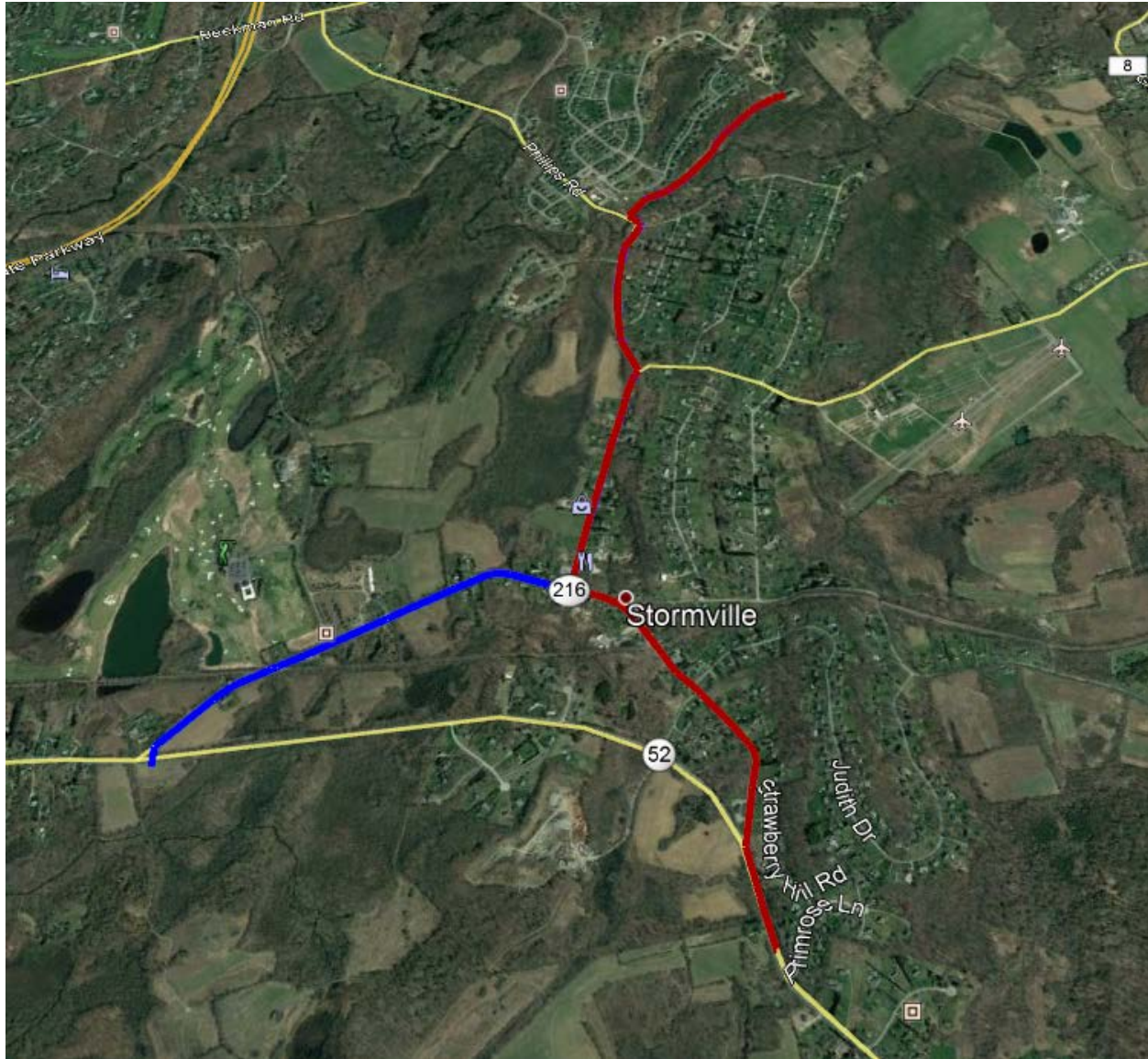


Figure 3- Montage at East Fishkill and Summit Woods Utilities Routes

There is no anticipated impacts to wetlands along the proposed off-site utility routing since the utilities shall be installed immediately off the edge of the existing pavement. There is a proposed stream crossing near the intersection of Phillips and Route 216. This stream crossing shall be done using a “jack & bore” methodology outside the bed and banks of the Sprout Creek so that there is no impact to the stream or adjacent areas.

Once in the vicinity of the Four Corners subdivision, the routing shall follow existing easements and will remain outside of the area of wetlands or adjacent areas. Refer to figure 4.



Figure 4- Off-Site Utility Routing with Wetlands

Water – Alternate #3:

The third alternative for the water supply would be providing an on-site public water supply which will serve the Summit Woods project site.

Sewer – Alternate #1 (Preferred Alternative):

Alternate #1 or the preferred alternative for sewage disposal, would require a pump station be provided on the Summit Woods project site in the location of the where the WWTP was originally proposed. The pump station would convey the sewage via a force main north through the site to NYS Route 52 to NYS Route 216 to the Four Corners site as shown on Figure 5.

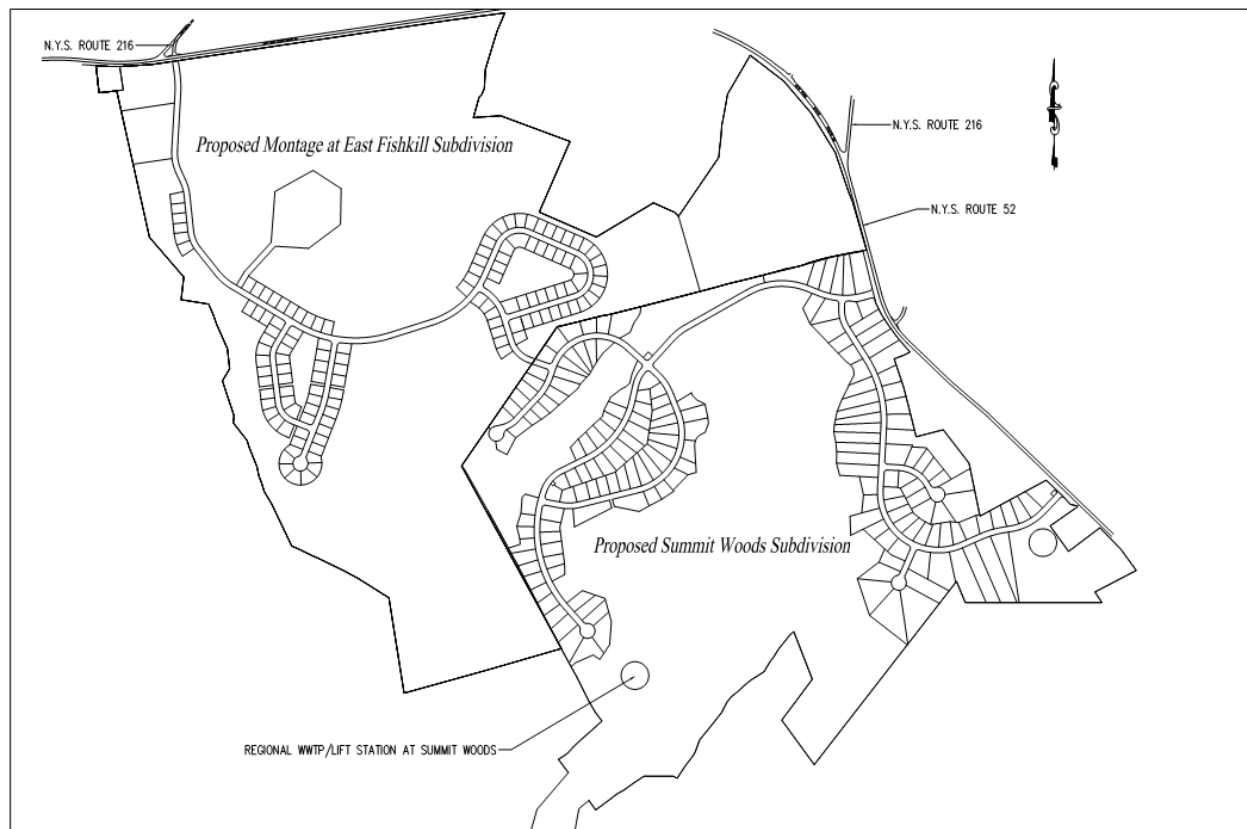


Figure 5- Summit Woods and Montage at East Fishkill Sanitary Sewer Plan

The environmental impacts at the Summit Woods site will be reduced and will be limited to the impacts of the installation of a pump station. The footprint of the pump station will be much less than that of the originally proposed WWTP.

The force main length from the Summit Woods pump station site to the WWTP at Four Corners is approximately 13,520'. The exact routing of the force main will be coordinated with the Town Engineer and the Town Highway Department.

The force main will be kept as close as possible to the existing edge of pavement along the force main route. There are a couple of culverts crossings that will need to be made either by directional bore or cut and cover. There is one railroad crossing that will need to be made using directional boring technology. Jack & bore technology (directional boring) will be used, to eliminate the impacts to the Sprout Creek near the intersection of Phillips Road and NYS Route 216. This work will be done outside the limits of the federal jurisdiction area to ensure no impacts to the creek, wetlands or adjacent areas. Where cut and cover methods are to be used for the force main installation, proper erosion control measures will be utilized. Refer to figure 4 for the proposed off-site utility routing in relation to existing wetlands.

All on-site sanitary utilities will remain in the locations as previously proposed.

Air relief valves, clean-outs and other infrastructure pertaining to the force main, will need to be installed along the route, as the final design dictates. Locations of these items will be determined during final design of the force main.

Permits will be required from the NYSDOT for the any utility work that is done in the NYSDOT rights-of-way. Permits may also be required by the Town of East Fishkill Highway Department.

The Town of East Fishkill and the Dutchess County Department of Health, will have to review and approve the design of the proposed pump station and force main installation.

Similar to the alternative #1 for water supply, alternative #1 for sewer will allow the Summit Woods project to be constructed and operate independently of the Montage at East Fishkill project. This sewer alternative provides for a fully functional, independent, sewer system for the Summit Woods project and allows for the construction of the Summit Woods project in the event that the Montage at East Fishkill project does not proceed.

Sewer – Alternative #2:

The second alternative for sewage disposal would be providing an on-site WWTP which will serve the Summit Woods project site.

Water and Sewer Districts:

The Applicant will petition the Town of East Fishkill Town Board and prepare a Map, Plan and Report for the creation or extension of the water and sewer districts to serve the Summit Woods project.

Utility Connections Between Summit Woods and Montage:

As discussed above, the preferred water and sewer alternatives outlined herein for the Summit Woods project can be installed and can operate independently of the adjacent Montage at East Fishkill project. With respect to sanitary sewer, a pump station will be constructed on the Summit Woods site that will collect and convey the sanitary sewage flows from the Summit Woods site to the Four Corners WWTP site. The routing of the force main shall be in the R.O.W. or easements within the Summit Woods project site where it will follow a path to the Four Corners WWTP as shown on figure 2 herein. Since the water supply will be provided from the Four Corners site under the preferred alternative for water supply, there is no need for a connection between the Summit Woods and Montage at East Fishkill projects.

B. US Fish and Wildlife Service

A Federal Wetland permit was issued on May 10, 2012 for the proposed project. As part of the permit, the US Army Corps of Engineers requested that the US Fish and Wildlife Service review the proposed project, since potential habitat for Federally listed species was known to occur on and near the site.

As part of the permit, the Applicant completed a Habitat Management Plan to improve site habitat for threatened and endangered species. A monitoring plan was completed and submitted to the Agencies, and subsequently approved.

The Federal wetland permit for the project expired on May 10, 2015. Since the proposed work was not completed as of May 10, 2015, a new application for a permit was submitted in 2015. All the necessary documents were submitted to the USACE and USFWS. In addition to the material that was previously submitted and permitted, the USACE/USFWS requested that the Applicant place the open space acreage on the site in a Conservation Easement. The permit is currently in process. A written description of the Conservation Easement has been requested by the USACE/USFWS, before a permit will be re-issued.

In order to effectuate the preservation of open space, the land designated as open space will be offered to a qualified, not-for-profit corporation eligible to hold a conservation easement. The Applicant has identified North American Land Trust as an interested not-for-profit land conservancy. As an alternative, the Applicant will offer the conservation easement to the Town of East Fishkill for management. The conservation easement will require the open space land to be permanently designated for use only as open space and will not be allowed to be used for future development or future use as part of a yard of any individual lot.

C. Revised Stormwater Management Plan

The Stormwater Pollution Prevention Plan (SWPPP) for the residential subdivision to be known as “Summit Woods Subdivision” has been developed in accordance with New York State Department of Environmental Conservation (NYSDEC) technical standards as presented in the New York Standards and Specifications for Sediment and Erosion Control Manual (July 2016), and the New York State Stormwater Management Design Manual (August 2015). The report has also been designed to meet the criteria requirements of the New York State Pollutant Discharge Elimination System (SPDES) General Permit GP-0-15-002.

The proposed project includes the development of the 6 current parcels for the creation of a cluster subdivision with a maximum number of 175 single-family homes. The Applicant intends to develop the site, disturbing approximately 39% of the property and leaving the remaining land (steep slopes and wetlands) as open space. The Applicant is proposing to provide 201.42 acres of open space on the property, inclusive of the mapped wetland areas. Other improvements to the site will include such associated amenities for a single-family homes subdivision, as driveways, lawns, landscaping etc. A stormwater system shall be constructed to direct runoff from the site into Extended Detention Ponds. The roof runoff from the proposed homes will be directed into drywells. This site will be served by the Four Corners water and sewer facilities, which shall be approved by the Dutchess County Department of Health and the NYSDEC.

According to the NY SPDES General Permit, a SWPPP must be implemented for single family residential project greater than five (5) acre of disturbance. The total disturbance for this project shall be approximately 128.42 acres, therefore a complete SWPPP has been provided.

Disturbance to the site during construction will be minimized in every extent possible. Temporary erosion and sediment control measures have been provided and locations have been shown on the plan to indicate the limits of disturbance and to delineate the areas deemed necessary for regrading and clearing during construction. This report has been designed to offer both temporary and permanent mitigation practices, during and after the construction phase, in an effort to reduce the sediment laden runoff created by the disturbed areas.

The predominant existing land use on the site, is open space, with an isolated single-family residential site. The large majority of the open space consists of abandoned fields, woodlands, thickets, and a large NYSDEC wetland and stream. The single-family house site located on the site is dilapidated with frontage on Route 52. Several outbuildings also accompany this home. Existing land uses along Route 52 can be broken down into three general but distinct categories. Beginning on the western end of Route 52 off of Old Post Road, land uses are characterized by large fenced meadows and several large farmhouses and barns. Further east on Route 52 is old farmland where the project site is located. In this area, land uses consist of open space areas and formerly agricultural lands that have essentially become open space mixed with some single-family residences and new subdivisions. Route 52 continues east to Stormville Road, with older single-family residences along the southern side of the road and some open space along the northern and southern side of the road.

A NYSDEC wetland constitutes the central portion of the property, which is generally level with an elevation between 314 feet msl and 324 feet msl. Large areas of steep slopes exist mainly in the

southern portion of the site with an elevation between 324 feet msl and 582 feet msl. The remaining areas of the site are generally gently rolling old agricultural field. The majority of the steep slopes are in the proposed open space area and will remain undisturbed under the current proposal. Approximately 92% of the development will occur in the area of the property where the natural slopes are between 0% and 10%. About 6% will occur in the slopes from 10% to 20%. The remaining 2% of development will occur in the areas of the property where the slopes are greater than 20%.

Stormwater Management Practices - Drywells

Dry Well infiltration systems will mitigate the roof runoff from each of the proposed houses. A precast concrete drywell, will provide ample volume for a 25-year storm. Each drywell shall consist of a Woodard's precast drywell model DW4X10 drywells (or equal) and have an available storage volume of 415 cubic feet. A surcharge pipe shall be provided on the roof leader in the event the chamber is clogged, or the system is overwhelmed (storm events greater the 25-year event). The surcharge pipe shall discharge on a splash block at grade and direct the flow away for the structure to a vegetated area. Every effort shall be made to limit the amount of overland flow on to adjacent properties. It shall be the home owner's responsibly to maintain the dry well in proper working order.

Extended Detention Stormwater Ponds

To insure the quality of the stormwater, Extended Detention ponds (P-3) will be implemented to properly mitigate stormwater quality and quantity for the drainage areas. These systems shall be designed to mitigate stormwater quality and quantity before discharging into the adjacent stream.

Temporary Erosion & Sediment Control Measures

This SWPPP adheres to the erosion and sediment control requirements as described in the New York State Standards and Specifications for Erosion and Sediment Control. Construction on the project site involves the disturbance of greater than one (1) acre of soil and, therefore, requires GP-0-15-001 permit coverage. Coverage under this permit requires that a comprehensive Erosion and Sediment Control Plan be developed for the site during the construction phase. Please refer to the following items concerning temporary erosion & sediment control practices:

Silt Fence: The purpose of a silt fence is to reduce runoff velocity and effect deposition of transported sediment load. Limits imposed by ultraviolet stability of the fabric will dictate the maximum period the silt fence may be used (approximately one year).

Construction Entrance: The purpose of stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public rights-of way or streets.

Dust Control: To prevent surface and air movement of dust from disturbed soil surfaces that may cause offsite damage, health hazards, and traffic safety problems.

Temporary Swale: The purpose of a temporary swale is to prevent runoff from entering disturbed areas by intercepting and diverting it to a stabilized outlet or to intercept sediment laden water and divert it to a sediment trapping device.

Pre-Construction Schedule

As required under GP-0-15-002 permit coverage, a construction schedule for the site is required and must be strictly adhered to. This project will adhere to the NYS DEC policy of disturbing less than five (5) acres of land at any given time. Please refer to the construction schedule outlined below: Any deviations to this schedule must receive prior approval by the applicant's Engineer and shall be noticed to the Town. Limits of disturbance for each sequence should be clearly marked to the Town Engineer's satisfaction prior to construction of that sequence. Coverage for the preliminary work shall be obtained and terminated by the Applicant.

Pre-Construction Sequence:

1. Submit N.O.I. accompanied by an executed MS4 SWPPP acceptance form to bureau of water permits, Albany NY.
2. Receive acknowledgement back from NYSDEC.
3. Non-disturbance areas shall be marked with a 4-ft orange snow fencing to the Town Engineer's satisfaction prior to site disturbance, and shall be maintained until issuance of a Certificate-of-Occupancy for that lot.
4. Hold a pre-construction meeting with the site engineer, Town Engineer, Contractor, Erosion Control Inspector and Building Inspector. Place a copy of the SWPPP report on site along with a copy of the inspector's log book containing copies of the weekly inspections. (applicant's erosion & sediment control inspection agent shall conduct an inspection on a weekly basis).

Construction Sequence:

1. Install silt fencing and other temporary controls on all downhill slopes as shown on the Erosion and Sediment Control plan.
2. Install and stabilize temporary construction entrance for the pond area.
3. Commence initial site clearing and grub areas of disturbance of the proposed pond area.
4. Rough grade the roadway and site utilities.
5. Construct the drainage ponds as shown on the plans.
6. Construction of the individual lots may commence once the temporary sediment trap and drainage swale has been completed. The total disturbance at any one time shall not exceed 5 acres.
7. Once all major site disturbance activities have completed and the site has been stabilized, all swales, yard drains and culverts shall be cleaned of all debris and sediment. All grassed areas shall be seeded and mulched. The temporary sedimentation basin shall be cleaned to its bottom elevation and converted to a permanent basin.
8. Once an MS4 Acceptance letter has been issued, an N.O.T. (notice of termination) can be filled with NYSDEC.
9. Terminate erosion control inspection

Construction on the Individual Lots:

1. Install/construct the temporary construction entrance into the lot.
2. Install all silt fencing, diversion swales and all other necessary erosion control measures necessary to prevent sediment-laden runoff from leaving the lot.
3. Construct all improvements on the lot. Final grading shall be completed as soon as practicable.
4. Inlet protection shall be provided for the drywell until the lot is stabilized.
5. Topsoil, seed and mulch shall be applied as soon as final grading is completed.
6. Once the completed lawn has been established and stabilized, the erosion control measures shall be removed.
7. The individual who files the Notice of Intent (NOI) shall be responsible for maintenance of the erosion control measures, while construction on the lot is underway. This person shall also be responsible for any clean-up or damage due to failure of erosion control measures on the respective lot.

The SWPPP (Stormwater Pollution Prevention Plan) for the site to be known as “Summit Woods Subdivision”, has been designed in accordance with the *New York Standards and Specifications for Sediment and Erosion Control Manual August 2016*, and the *New York State Stormwater Management Design Manual 2015*. All BMP (Best Management Practices) have been applied to the site to ensure the proper control of any erosion and sediment created on site from disturbance activities. The Town of East Fishkill Building Inspector, Town Engineer and NYSDEC representative have the authority to modify, add or eliminate any erosion control practice on the construction site. The site’s owner shall file an NOI as required by the NYSDEC before starting construction.

D. Fiscal Impacts

The Summit Woods subdivision may generate approximately 85 school-aged students based on a multiplier of 0.48¹ for this type residential project.

The School District budget totaled approximately \$225,181,606² for the 2017-2018 school year, and the current enrollment is approximately 11,903³ students. Per-student costs based strictly on the budget are \$20,299.00⁴. Of the total budget, 68% (\$153,123,492.08) was raised through the property tax revenue, with the balance (\$72,058,113.92) received through a combination of state aid and a number of lesser sources.

Assuming the same proportionate sources above, the amount of municipal taxes that must be raised to cover the current cost of each student is approximately \$13,803⁵. These figures are, however, estimates and will only occur if the combination of State aid and other lesser revenue sources making up the District's non-real property tax revenue increases proportionately with the increase in District enrollment. The remainder of the District's revenue is accrued through miscellaneous sources, including interest and penalties, gifts and dedications, property rental, summer school tuition, adult education, and insurance recoveries. The cost of educating 85 additional students will require that the School District receive an additional \$1,173,255⁶ in property tax revenue

The total assessed value of the 175 potential new residences shall be \$78,750,000⁷. The WCSD receives \$16.63 per thousand dollars of assessed value. Therefore, the anticipated tax revenues for the proposed 175 potential lots shall be \$1,309,612.50 thus the surplus to the WCSD is \$136,358.

Other Impacts to the District will be mitigated by the fact that new residents will be added to the community gradually, as the proposed project will take place in over a period of approximately 4-5 years.

¹ Multiplier is based on an analysis of major subdivision and actual school-age children counts in the Wappingers Central School District.

² 2017-2018 Board of Education Total Budget Summary, WCSD

³ Per 2017-2018 Budget Summary, WCSD

⁴ \$225,181,606 ÷ 11,903 students

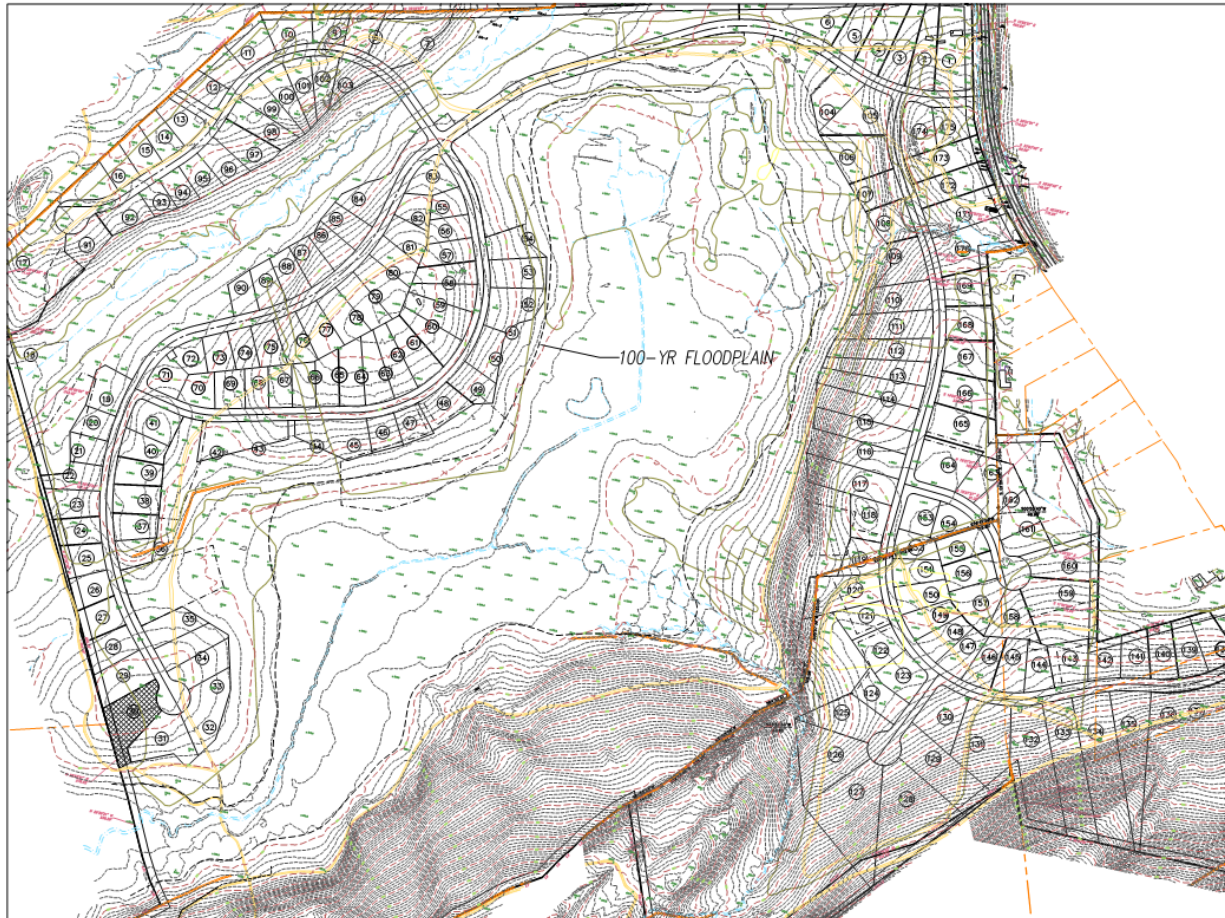
⁵ \$153,123,492.08 ÷ 11,903 students = \$13,803 per student

⁶ 85 students x \$13,803 per student

⁷ 175 lots (maximum) x \$450,000 anticipated assessed value per lot.

E. Floodplain Revisions

In May of 2012, the floodplain was revised throughout Dutchess County. The limits of the floodplain on the Summit Woods project site were revised by FEMA since the original DEIS was accepted. The limits of the revised floodplain do not impact the proposed subdivision.



F. Traffic

A revised Traffic Study (dated April 12, 2017) has been prepared to assess existing conditions as well as future traffic operations in association with the proposed Summit Woods development located in the Town of East Fishkill, NY. The development proposes two driveway connections onto NY 52. The northern driveway (site driveway A) provides full movement access to the proposed development and is located in the vicinity of Primrose Lane. The southern driveway (site driveway B) is proposed to be a right-in/ right-out driveway located near the intersection of NY 52 and Stormville Mountain Road (north of Interstate 84). A potential connection to the adjacent development, Montage, is proposed as part of the Summit Woods application.

In order to evaluate the changes in traffic associated with the proposed development, the following intersections were analyzed:

1. NY 52 & Taconic State Parkway Southbound Ramps
2. NY 52 & Taconic State Parkway Northbound Ramps
3. NY 52 & Carpenter Road
4. NY 52 & NY 216
5. NY 52 & Site Driveway A
6. NY 52 & Site Driveway B
7. NY 52 & Stormville Mountain Road (west intersection)
8. NY 52 & Leetown Road
9. NY 52 & Stormville Mountain Road (east intersection)
10. NY 52 & Milltown Road

Traffic counts were performed at the studied intersections in order to quantify and analyze existing peak hour volumes as well as to establish base conditions for projecting future operations. The counts included pedestrian activities and truck traffic. Traffic counts were conducted from 7:00 – 9:00 AM and 4:00 – 6:00 PM on Wednesday, February 15, 2017 for intersections of NY 52 and the Taconic State Parkway ramps as well as the intersection of NY 52 and NY 216. All other studied intersections were counted from 7:00 – 9:00 AM and 4:00 – 6:00 PM on Thursday, February 16, 2017. The turning movement counted volumes were increased and balanced conservatively where applicable to represent 2017 existing volumes. The peak hour volumes occurred between 7:30-8:30 AM during the weekday morning and 5:00-6:00 PM during the weekday afternoon.

During the peak weekday AM hour, the overall intersection of NY 52 and the Taconic State Parkway (TSP) southbound ramps operate at a level of service E and the NY 52 northbound approach operates above capacity at a level of service F. The eastbound and westbound approaches to the intersection of NY 52 and TSP southbound ramps operate at a level of service D. The overall intersection of NY 52 and TSP northbound ramps operates at a level of service F. The southbound thru/right lane and southbound approach operate at a level of service F while the eastbound approach operates at a level of service E.

At the intersection of NY 52 and TSP northbound ramps the westbound left/thru lane, westbound right lane, westbound approach, northbound thru/right lane and northbound approach operate at a

level of service D. All other movements at the studied intersections operate at a level of service C or better during the peak weekday AM hour.

During the peak weekday PM hour, the overall intersection of NY 52 and TSP southbound ramps operate at a level of service C while the northbound approach operates at a level of service E and the westbound approach operates at a level of service D. The overall intersection of NY 52 and TSP northbound ramps operates at a level of service F. The northbound thru/right lane, northbound approach, southbound thru/right lane, and southbound approach operate at a level of service F. The westbound left/thru and westbound approach operate at a level of service D while the eastbound approach operates at a level of service E. All other movements at the studied intersections operate at a level of service C or better during the peak weekday PM hour.

PROJECTED CONDITIONS

A. No-Build Volumes

In order to project future traffic increases to the year 2025, the existing volumes were increased by a general growth rate of 1% per year compounded annually. Based on discussions with the Town's consultant, we have incorporated the traffic volumes associated with the Montage at East Fishkill development. The resulting 2025 no build volumes represent traffic operation in 2025 without the redevelopment of the site. The Montage at East Fishkill proposes to realign NY 216 at the intersection of NY 52 to be opposite the site driveway for the development. The project would also signalize the intersection of NY 216 and NY 52 and provide left turn lanes along NY 52. The improvements to the intersection by the Montage development have been incorporated into the 2025 no build analysis.

During the peak weekday AM hour, the overall intersection of TSP southbound ramps and NY 52 is projected to operate at a level of service F. At the intersection of NY 52 and TSP northbound ramps, the westbound left/thru lane is projected to operate at a level of service E. The northbound and southbound approaches to the intersection of NY 52 and NY 216 are projected to operate at a level of service C with the improvements by the Montage development. The overall intersection and all other approaches to the intersection of NY 52 and NY 216 are projected to operate at a level of service A. All other movements at the studied intersections are projected to operate at the same levels of service during the peak weekday AM hour as experienced under existing conditions.

During the peak weekday PM hour, the southbound left lane at the intersection of NY 52 and TSP northbound ramps is projected to operate at a level of service D. At the intersection of NY 52 and TSP southbound ramps, the northbound approach is projected to operate over capacity at a level of service F and the southbound left turn lane is projected to operate at a level of service B. At the intersection of NY 52 and Carpenter Road, the southeast left turn lane on Carpenter Road is projected to increase in delay to a level of service D. The northbound and southbound approaches to the intersection of NY 52 and NY 216 are projected to operate at a level of service C with the improvements by the Montage development. The overall intersection and all other approaches to the intersection of NY 52 and NY 216 are projected to operate at a level of service A.

All other movements at the studied intersections are projected to operate at the same levels of service during the peak weekday PM hour as experienced under existing conditions.

FINDINGS & CONCLUSION

Regardless of the subject application, we recommend traffic signal timing modifications at the NY 52 intersections with the Taconic State Parkway ramps. The signal timing improvements consists of shifting 15 seconds of green time from the NY 52 left turn phase at its intersection with the TSP northbound ramps to the NY 52 through movement phase during the peak weekday AM hour. At the southbound ramps, the timing improvements consist of shifting 14 seconds of green time from the TSP ramp/NYSDOT driveway phase to provide additional 6 seconds of green time to the NY 52 southbound left turn phase and 8 seconds of green time to the NY 52 common through movement phase during the peak weekday AM hour.

During the peak weekday PM hour, 5 seconds of green time from the TSP northbound ramp phase as well as 7 seconds of green time from the Park and Ride approach phase and 2 seconds of green time from the NY 52 left turn phase were shifted to the common through movement phase for NY 52. At the southbound ramps, the timing improvements consist of shifting 10 seconds of green time from the TSP ramp/NYSDOT driveway phase and 5 seconds of green time from the NY 52 southbound left turn phase to the NY 52 common through movement phase during the peak weekday PM hour. These traffic signal timing improvements will provide additional green time to process the vehicles traveling along NY 52. The Applicant is willing to coordinate with the New York State Department of Transportation, who owns and maintains the existing traffic signals, to recommend the signal timing improvements.

As part of the proposed development, the Applicant proposes improvements at the two proposed site driveway connections. At Site Driveway A (the northern property access), the Applicant proposes a full movement driveway and to construct a 150 foot long northbound left turn lane along NY 52 to enter the development. Site Driveway A proposes a single approach lane to exit onto NY 52. At Site Driveway B (the southern property access), the Applicant proposes this access to be a right-in/right-out driveway.

During the peak weekday AM hour, the overall intersection with the TSP southbound ramps is projected to improve to a level of service E. The southbound left turn is projected to operate at a level of service D while the southbound approach is projected to operate at a level of service C. The overall intersection with the TSP northbound ramps is projected to improve to a level of service D. The northbound left turn lane and northbound thru/right lane are projected to operate at a level of service C while the southbound thru/right lane and southbound approach are projected to improve to a level of service D. The southeast right turn at the intersection of NY 52 and Carpenter Road is projected to increase by 1.0 seconds in delay from the No Build conditions to a level of service C under Build conditions. The proposed site driveways are projected to operate at a level of service B. All other movements at the studied intersections are projected to operate at the same levels of service as projected under No Build conditions.

During the peak weekday PM hour, the TSP southbound ramp thru/right lane is projected to operate at a level of service E while the NY 52 northbound approach is projected to improve to a level of service D. The TSP northbound ramp left/thru lane is projected to operate at a level of service E while the NY 52 northbound left turn lane is projected to operate at a level of service D. The NY 52 southbound thru/right lane and southbound approach to the TSP northbound ramp

intersection are projected to improve to a level of service E. The southeast left turn lane at the intersection of NY 52 and Carpenter Road is projected to increase to a level of service E.

Proposed Site Driveway A is projected to operate at a level of service C while proposed Site Driveway B is projected to operate at a level of service B. All other movements at the studied intersections are projected to operate at the same levels of service as projected under No Build conditions.

PROPOSED DEVELOPMENT VOLUMES⁽¹⁾

DESCRIPTION	PEAK WEEKDAY AM HOUR			PEAK WEEKDAY PM HOUR		
	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
a. Proposed 175 Single-Family Detached Houses (ITE Code 210) ⁽²⁾	33	99	132	110	65	175

Notes:

(1) Trip Generation based on ITE (Institute of Transportation Engineers) Trip Generation Manual, 9th Edition.

(2) Single-Family Detached Housing (ITE Code 210) is defined by ITE as all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision.

Alternate Traffic Impact Analysis without Montage at East Fishkill Site

An alternate TIS was prepared dated September 11, 2019, which supplements the original TIS dated April 12, 2017. This alternate TIS explored the potential traffic-related impacts that may be experienced if the Montage at East Fishkill project was not constructed or constructed after the Summit Woods project was completed. A copy of the alternate TIS is included in the appendix of this document.

The alternate analysis does not include the traffic volumes that would be associated with the development of the Montage at East Fishkill site nor does it include the benefits that would be associated with the signalized improvements at the entrance to the Montage at East Fishkill site.

The Alternative No Build Volumes without Montage at East Fishkill are depicted on attached Figures 13 and 14 of the September 11, 2019 TIS. Adding the development related traffic results in 2025 Alternative Build Volumes which reflect projected volumes after the completion and occupancy of the development without the Montage at East Fishkill project, depicted on attached Figures 15 and 16 of the September 11, 2019 TIS.

As outlined in the both the April 12, 2017 and the September 11, 2019 traffic studies, recommendations for traffic signal timing modifications at the NY 52 intersections with the Taconic State Parkway ramps regardless of the subject application have been made. The same timing modifications are presented with the alternative analysis in attached Tables 2 and 3. The applicant is continuing to propose a full movement driveway at the northern property access with a left turn lane for vehicles entering the development and a right-in/right-out driveway at the southern property access.

Intersection capacity analysis computed based on the Alternative Build Volumes with the traffic signal timing improvements indicate that intersections will essentially operate at the same levels of service as projected for the Alternative No Build Volumes. Projected operations with the proposed development and improvements without the Montage at East Fishkill project volumes and improvements are shown on attached Tables 2 and 3 of the September 11, 2019 TIS.

During the peak weekday AM hour, there is only one change in level of service between the Alternative Build Volumes without the Montage at East Fishkill site and the Alternative No-Build Volumes without the Montage at East Fishkill site. At the intersection of NY 52 and Stormville Mountain Road (west intersection), the Stormville Mountain Road is projected to increase in delay by 0.2 seconds from a level of service A under Alternative No-Build Volume without the Montage at East Fishkill site to a level of service B under Alternative Build Volumes without the Montage at East Fishkill site. All other studied turning movements under the Alternative Build Volumes without the Montage at East Fishkill site are projected to operate at a level levels of service as Alternative No-Build Volumes without the Montage at East Fishkill site.

During the peak weekday PM hour, there is only one change in level of service between the Alternative Build Volumes without the Montage at East Fishkill site and the Alternative No-Build Volumes without the Montage at East Fishkill. At the intersection of NY 52 and the Taconic State Parkway Southbound Ramp, the NY 52 northbound approach is projected to increase in delay by 8.1 seconds from a level of service E under Alternative No-Build Volume without the Montage at East Fishkill site to a level of service F under Alternative Build Volumes without the Montage at East Fishkill site without the recommended traffic signal timing at the intersection. As previously mentioned, we recommend traffic signal timing modifications at the NY 52 intersections with the Taconic State Parkway ramps regardless of the subject application. With the recommended traffic signal timing, the NY 52 northbound approach is projected to improve in delay to operate at a level of service D under Alternative Build Volumes without the Montage at East Fishkill site. All other studied turning movements under the Alternative Build Volumes without the Montage at East Fishkill site are projected to operate at a level levels of service as Alternative No-Build Volumes without the Montage at East Fishkill site.

G. Project Interconnectivity:

1. Utility Connections Between Summit Woods and Montage:

The Summit Woods and Montage at East Fishkill projects are contiguous. Both projects will be served by central water and sewerage facilities. The earlier proposals for each project involved the development of separate central water and sewer facilities for both projects. The NYSDEC, during its review, had requested that the two subdivisions be linked together with respect to water and sewer to create one regionalized system.

To that end, the proposals evolved so as to create a regionalized water system such that the wells that had been installed on the Montage at East Fishkill site would provide the water supply for both projects since those wells were the higher producing wells. The treatment and pumping equipment would be installed on the Montage at East Fishkill Site. The water storage tank for the regionalized system was to be installed on the Summit Woods site on the easterly side of the property since the elevation in that area would be able to provide enough system pressure to adequately serve both sites.

The regionalized sewer system was proposed with a collection system that would convey flows to from both projects to a waste-water treatment plant (WWTP) located on the Summit Woods site on the south side of the project near Collarbark Road.

Since the preparation of the SFEIS, another alternative for both water and sewer utilities has been explored with the Town of East Fishkill which will involve the connection of both of the proposed Summit Woods and Montage at East Fishkill sewer and water systems to the existing water and sewer utilities currently serving the existing Four Corners project located approximately 2 miles to the north as outlined earlier herein.

The regionalization of the water and sewer system introduces logistical concerns since the projects are under different ownership and could be developed at different times. The following outlines the two scenarios if the Summit Woods project is developed before or after the Montage at East Fishkill project is developed:

A. Summit Woods Site Developed Before the Montage at East Fishkill Site:

The current proposal for the Summit Woods project is to construct a sanitary lift station in the area where the proposed WWTP was to be constructed near Collarbark Road. Sanitary waste from the site would be conveyed to the lift station and pumped via a force main to the Four Corners site following the route outlined in figure 2.

As discussed earlier, the preferred water and sewer alternatives for the Summit Woods project can be installed and can operate independently of the adjacent Montage at East Fishkill project. With respect to sanitary sewer, a pump station will be constructed on the Summit Woods site that will collect and convey the sanitary sewage flows from the Summit Woods site to the Four Corners WWTP site. The routing of the force main shall be in the R.O.W. or easements within the Summit

Woods project site where it will follow a path to the Four Corners WWTP as shown on figure 2 herein.

Since the water supply will be provided from the Four Corners site under the preferred alternative for water supply, there is no need for a connection between the Summit Woods and Montage at East Fishkill projects.

B. Summit Woods Site Developed after the Montage at East Fishkill Site:

The Summit Woods site can be developed such that the water and sewer facilities can be constructed separately and independently from the Montage at East Fishkill site. All the utilities can be constructed on the site. The connection to the Four Corners project site would take the same route as outlined in figure 2.

2. Traffic Connections Between Summit Woods and Montage:

Both projects are linked from a single roadway between them. Refer to figures 1 and 5 of this document.

The Summit Woods project is proposing two entrances on Route 52 on opposite ends of its frontage along Route 52.

Once the Montage at East Fishkill site has been constructed, there will be a third option for access to Route 52 through the Montage at East Fishkill site.

A. Summit Woods Site Developed Before the Montage at East Fishkill Site:

If the Summit Woods site is developed first, the site would be constructed such that the easterly side of the project would be developed first. This would involve the construction of both entrances on Route 52 and the roadway between them to be constructed first. This would allow access to both entrances for the lots on the east side of the project site.

The development would proceed to the southwest. At all times there will be two points of egress on to Route 52 for the entire Summit Woods Project.

B. Summit Woods Site Developed after the Montage at East Fishkill Site:

If the Summit Woods site follows the Montage at East Fishkill site, the phasing would be the same such that the easterly portion of the project is developed with both entrances onto Route 52.

As the development continues to the southwest on the project site, a connection will be made to the Montage at East Fishkill site allowing a third means of egress to Route 52.

APPENDIX

1. Traffic Study – Dated April 12, 2017
2. Alternate Traffic Study – Dated September 11, 2019
3. Stormwater Pollution Prevention Plan – Revised December 11, 2017
4. Flow Confirmation Letter from DCDOH – Dated December 12, 2012
5. Correspondence with the NYSDOT

TRAFFIC STUDY

SUMMIT WOODS

ROUTE 52 TOWN OF EAST FISHKILL, NEW YORK

Prepared for:

ABD Fishkill, LLC
1995 Broadway, Suite 1200
New York, NY 10023

Prepared by:



120 Bedford Road
Armonk, NY 10504
JMC Project **17039**

Date:

April 12, 2017

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11	2025 Build Volumes-Peak Weekday AM Hour
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C. TURNING MOVEMENT COUNTS

D. CAPACITY ANALYSES

I. INTRODUCTION

This Traffic Study has been prepared to assess existing conditions as well as future traffic operations in association with the proposed Summit Woods development located in the Town of East Fishkill, NY. The location of the site is illustrated on the figures included in Appendix B.

The development proposes a 175-lot residential subdivision. The proposed lots will consist of single family homes. The proposed development will also contain open space parcels.

The development proposes two driveway connections onto NY 52. The northern driveway (site driveway A) provides full movement access to the proposed development and is located in the vicinity of Primrose Lane. The southern driveway (site driveway B) is proposed to be a right-in/right-out driveway located near the intersection of NY 52 and Stormville Mountain Road (north of Interstate 84). A potential connection to the adjacent development, Montage, is proposed as part of the Summit Woods application.

II. EXISTING CONDITIONS

A. Existing Roadway Network

JMC performed field reconnaissance at the site and adjoining roadway network in order to gather existing conditions data. The field work included a determination of lane widths, striping, horizontal and vertical alignments, signs, traffic signal phasing and timings, speed limits, pedestrian activities, traffic flows, sidewalks, curbing, etc.

NY 52 is under the jurisdiction of the New York State Department of Transportation (NYSDOT). It is generally an east-west roadway which connects to NY 9D in Beacon and US 6 in Carmel on the east side of the Hudson River. It generally provides one travel lane in each direction; however, it does widen to provide additional lanes at several locations. Within the study area, NY 52 has a posted speed limit of 55 mph east of its intersection with Honeysuckle Court and it has posted speed limit of 45 mph west of Honeysuckle

Court.

Interstate 84 and the Taconic State Parkway (TSP) provide regional access to the proposed development and generally provide two lanes in each direction along the mainline.

NY 216 is a State roadway which generally traverses in an east/west direction. The roadway terminates at NY 52 in the west and at NY 55 in the east. NY 216 provides one travel lane in each direction.

Carpenter Road is a county road (CR 29) under the jurisdiction of Dutchess County Department of Public Works. In the study area, the road provides a single lane in each direction and a posted speed limit of 40 mph.

Stormville Mountain Road, Leetown Road and Milltown Road are Town roadways. These roadways generally provide one travel lane in each direction and intersect with NY 52. The roadways have a posted speed limit of 30 mph except for Milltown Road which has a posted speed limit of 45 mph.

In order to evaluate the changes in traffic associated with the proposed development, the following intersections have been analyzed:

1. NY 52 & Taconic State Parkway Southbound Ramps
2. NY 52 & Taconic State Parkway Northbound Ramps
3. NY 52 & Carpenter Road
4. NY 52 & NY 216
5. NY 52 & Site Driveway A
6. NY 52 & Site Driveway B
7. NY 52 & Stormville Mountain Road (west intersection)
8. NY 52 & Leetown Road
9. NY 52 & Stormville Mountain Road (east intersection)
10. NY 52 & Milltown Road

The Taconic State Parkway southbound ramps intersect NY 52 at an actuated traffic signal. The Taconic State Parkway southbound ramps provide a separate left turn lane as well as a shared thru/right turn lane. The NY 52 southbound approach provides a separate left turn lane and a shared thru/right turn lane. The NY 52 northbound approach provides a single travel lane with shared turning movements. A NYSDOT maintenance facility driveway serves as the fourth leg to this intersection. The driveway approach provides a single travel lane with shared turning movements.

The Taconic State Parkway northbound ramps intersect NY 52 at an actuated traffic signal. The Taconic State Parkway northbound ramps provide a left/thru lane and a separate right turn lane. Both NY 52 approaches provide a separate left turn lane and a shared thru/right turn lane. Access to a park and ride parking lot serves as the fourth leg to this intersection. The park and ride approach provides a single travel lane with shared turning movements.

NY 52 provides a single thru lane with shared turning movements at its unsignalized intersection with Carpenter Road. Carpenter Road has a triangular island which separates turns to and from both directions on NY 52. The Carpenter Road approach is controlled by a stop sign.

NY 216 intersects NY 52 at a three-legged unsignalized intersection. All approaches provide a single travel lane with shared turning movements. The NY 216 approach is controlled by a stop sign.

Site Driveway A proposes to intersect NY 52 at an unsignalized intersection. Widening of NY 52 is proposed to provide a thru and left turn lanes on the northbound approach for vehicles turning onto the site driveway. The southbound approach of NY 52 is proposed as a single lane for thru and right turn movements. The eastbound approach of Site Driveway A is proposed as a single lane for left or right turns under stop control.

Site Driveway B proposes to intersect NY 52 at an unsignalized intersection. Site Driveway

B proposes a right-in/right-out driveway. NY 52 southbound approach will provide shared right turning movements into the driveway. No access would be provided for the NY 52 northbound approach.

Stormville Mountain Road (west intersection) intersects NY 52 at a three-legged unsignalized intersection. This intersection is located north of Interstate 84. All approaches provide a single travel lane with shared turning movements. The Stormville Mountain Road approach is controlled by a stop sign.

The intersection of Leetown Road and NY 52 is a three-legged unsignalized intersection. The NY 52 southeast approach provides two travel lanes with shared right turns. The NY 52 northwest approach provides a single travel lane with shared left turns. Leetown Road provides a single travel lane with shared turns onto NY 52. Leetown Road is controlled by a stop sign.

Stormville Mountain Road (east intersection) intersects NY 52 at a three-legged unsignalized intersection. This intersection is located south of Interstate 84. All approaches provide a single travel lane with shared turning movements. The Stormville Mountain Road approach is controlled by a stop sign.

The intersection of Milltown Road and NY 52 is a three-legged unsignalized intersection. All approaches provide a single travel lane with shared turning movements. Milltown Road is controlled by a stop sign.

B. Existing Volumes

Traffic counts were performed at the studied intersections in order to quantify and analyze existing peak hour volumes as well as to establish base conditions for projecting future operations. The counts included pedestrian activities and truck traffic.

Traffic counts were conducted from 7:00 – 9:00 AM and 4:00 – 6:00 PM on Wednesday,

February 15, 2017 for intersections of NY 52 and the Taconic State Parkway ramps as well as the intersection of NY 52 and NY 216. All other studied intersections were counted from 7:00 – 9:00 AM and 4:00 – 6:00 PM on Thursday, February 16, 2017. The turning movement counted volumes were increased and balanced conservatively where applicable to represent 2017 existing volumes. The peak hour volumes occurred between 7:30-8:30 AM during the weekday morning and 5:00-6:00 PM during the weekday afternoon. The intersection traffic count data is included in Appendix C. The peak hour volumes are shown on Figures 1 and 2 "2017 Existing Volumes". All figures are included in Appendix B.

C. Intersection Analysis Methodology

The intersections have been analyzed based on the methodologies of the Highway Capacity Manual, 6th Edition. Information derived from the manual relative to the level of service criteria is provided below.

I. Level-of-Service Criteria for Signalized Intersections

Levels of Service (LOS) for signalized intersections are defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road. Only the portion of total delay attributed to the control facility is quantified. This delay is called control delay. Control delay includes the delays of initial deceleration, move-up time in the queue, stops, and reacceleration. In this chapter, control delay may also be referred to as signal delay. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a peak 15-minute analysis period. Delay is a complex measure and is dependent on a number of variables, including the

quality of progression, the cycle length, the green ratio, and the volume/capacity (v/c) ratio for the lane group in question.

LOS A describes operations with very low control delay, up to 10 seconds per vehicle. This level of services occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

LOS B describes operations which control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both.

LOS C describes operations with control delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both.

LOS D describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines.

LOS E describes operations with control delay greater than 55 and up to 80 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

LOS F describes operations with control delay in excess of 80 seconds per vehicle and/or the arrival flow rates exceed the capacity of the intersection. It will also occur at high v/c ratios below 1.0 with many individual cycle failures.

The LOS criteria for signalized intersections are presented below.

Signalized Level of Service Criteria		
Control Delay (Seconds/Vehicle)	LOS by Volume-to-Capacity Ratio	
	$v/c \leq 1.0$	$v/c > 1.0$
≤ 10	A	F
> 10 and ≤ 20	B	F
> 20 and ≤ 35	C	F
> 35 and ≤ 55	D	F
> 55 and ≤ 80	E	F
> 80	F	F

For approach-based and intersectionwide assessments, LOS is defined solely by control delay.

If the volume-to-capacity (v/c) is greater than 1.0, the LOS is considered an F, even if the delays are lower than 80 seconds.

2. Level of Service for Unsignalized Intersections

The Levels of Service (LOS) for Two Way Stop Control (TWSC) and All Way Stop Control (AWSC) intersections are determined by the computed or measured control delay and are defined for each minor movement. LOS is not defined for the intersection as a whole for TWSC intersections. LOS criteria are presented below.

Unsignalized Level of Service Criteria		
Control Delay (Seconds/Vehicle)	LOS by Volume-to-Capacity Ratio	
	$v/c \leq 1.0$	$v/c > 1.0$
≤ 10	A	F
> 10 and ≤ 15	B	F
> 15 and ≤ 25	C	F
> 25 and ≤ 35	D	F
> 35 and ≤ 50	E	F
> 50	F	F

If the volume-to-capacity (v/c) is greater than 1.0, the LOS is considered an F, even if the delays are lower than 50 seconds.

Average control delay less than 10 seconds/vehicle are defined as LOS A. Follow-up times of less than 5 seconds/vehicle have been measured when there is no conflicting traffic, so control delays of less than 10 seconds/vehicle are appropriate for low flow conditions.

The LOS criteria for unsignalized intersections are somewhat different than the criteria used for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. A number of driver behavior considerations combine to make delays at signalized intersections less onerous than delays at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, whereas drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at an unsignalized intersections versus that at signalized intersections. For these reasons, it is

considered that the control delay threshold for any given LOS would be less for an unsignalized intersection than it would be for a signalized intersection.

D. Existing Operations

The intersection capacity analyses based on existing volumes and conditions are shown on Tables 2 and 3. The specific volume/capacity ratios, delay for average vehicle in seconds and the associated levels of service are summarized for each lane group, the approach as well as the overall intersection as applicable on Tables 2 and 3. All tables are included in Appendix A.

During the peak weekday AM hour, the overall intersection of NY 52 and the Taconic State Parkway (TSP) southbound ramps operate at a level of service E and the NY 52 northbound approach operates above capacity at a level of service F. The eastbound and westbound approaches to the intersection of NY 52 and TSP southbound ramps operate at a level of service D. The overall intersection of NY 52 and TSP northbound ramps operates at a level of service F. The southbound thru/right lane and southbound approach operate at a level of service F while the eastbound approach operates at a level of service E. At the intersection of NY 52 and TSP northbound ramps the westbound left/thru lane, westbound right lane, westbound approach, northbound thru/right lane and northbound approach operate at a level of service D. All other movements at the studied intersections operate at a level of service C or better during the peak weekday AM hour.

During the peak weekday PM hour, the overall intersection of NY 52 and TSP southbound ramps operate at a level of service C while the northbound approach operates at a level of service E and the westbound approach operates at a level of service D. The overall intersection of NY 52 and TSP northbound ramps operates at a level of service F. The northbound thru/right lane, northbound approach, southbound thru/right lane, and southbound approach operate at a level of service F. The westbound left/thru and westbound approach operate at a level of service D while the eastbound approach operates

at a level of service E. All other movements at the studied intersections operate at a level of service C or better during the peak weekday PM hour.

III. PROJECTED CONDITIONS

A. No-Build Volumes

In order to project future traffic increases to the year 2025, the existing volumes were increased by a general growth rate of 1% per year compounded annually. Based on discussions with the Town's consultant, we have incorporated the traffic volumes associated with the Montage at East Fishkill development. The resulting 2025 no build volumes represent traffic operation in 2025 without the redevelopment of the site. The other development and no build volumes have been shown in the figures in Appendix B. The Montage at East Fishkill proposes to realign NY 216 at the intersection of NY 52 to be opposite the site driveway for the development. The project would also signalize the intersection of NY 216 and NY 52 and provide left turn lanes along NY 52. The improvements to the intersection by the Montage development have been incorporated into the 2025 no build analysis.

During the peak weekday AM hour, the overall intersection of TSP southbound ramps and NY 52 is projected to operate at a level of service F. At the intersection of NY 52 and TSP northbound ramps, the westbound left/thru lane is projected to operate at a level of service E. The northbound and southbound approaches to the intersection of NY 52 and NY 216 are projected to operate at a level of service C with the improvements by the Montage development. The overall intersection and all other approaches to the intersection of NY 52 and NY 216 are projected to operate at a level of service A. All other movements at the studied intersections are projected to operate at the same levels of service during the peak weekday AM hour as experienced under existing conditions.

During the peak weekday PM hour, the southbound left lane at the intersection of NY 52 and TSP northbound ramps is projected to operate at a level of service D. At the

intersection of NY 52 and TSP southbound ramps, the northbound approach is projected to operate over capacity at a level of service F and the southbound left turn lane is projected to operate at a level of service B. At the intersection of NY 52 and Carpenter Road, the southeast left turn lane on Carpenter Road is projected to increase in delay to a level of service D. The northbound and southbound approaches to the intersection of NY 52 and NY 216 are projected to operate at a level of service C with the improvements by the Montage development. The overall intersection and all other approaches to the intersection of NY 52 and NY 216 are projected to operate at a level of service A. All other movements at the studied intersections are projected to operate at the same levels of service during the peak weekday PM hour as experienced under existing conditions.

B. Build Volumes

The projected traffic associated with the proposed development is based on information published by the Institute of Transportation Engineers (ITE) in its publication “Trip Generation Manual, 9th Edition.” Table I shows the traffic volumes associated with the proposed development. The development will result in approximately 132 and 175 trips during the peak weekday AM and PM hours, respectively. The driveway volumes for the development have been shown in the figures in Appendix B.

The primary volumes were routed through the studied intersections based on traffic volume data and consideration of the area roadways. Adding the development related traffic results in 2025 Build Volumes which reflect projected volumes after the completion and occupancy of the development.

IV. FINDINGS & CONCLUSION

Regardless of the subject application, we recommend traffic signal timing modifications at the NY 52 intersections with the Taconic State Parkway ramps. The signal timing improvements consists of shifting 15 seconds of green time from the NY 52 left turn phase at its intersection with the TSP northbound ramps to the NY 52 through movement phase during the peak weekday AM

hour. At the southbound ramps, the timing improvements consist of shifting 14 seconds of green time from the TSP ramp/NYSDOT driveway phase to provide additional 6 seconds of green time to the NY 52 southbound left turn phase and 8 seconds of green time to the NY 52 common through movement phase during the peak weekday AM hour.

During the peak weekday PM hour, 5 seconds of green time from the TSP northbound ramp phase as well as 7 seconds of green time from the Park and Ride approach phase and 2 seconds of green time from the NY 52 left turn phase were shifted to the common through movement phase for NY 52. At the southbound ramps, the timing improvements consist of shifting 10 seconds of green time from the TSP ramp/NYSDOT driveway phase and 5 seconds of green time from the NY 52 southbound left turn phase to the NY 52 common through movement phase during the peak weekday PM hour. These traffic signal timing improvements will provide additional green time to process the vehicles traveling along NY 52. The Applicant is willing to coordinate with the New York State Department of Transportation, who owns and maintains the existing traffic signals, to recommend the signal timing improvements.

As part of the proposed development, the Applicant proposes improvements at the two proposed site driveway connections. At Site Driveway A (the northern property access), the Applicant proposes a full movement driveway and to construct a 150 foot long northbound left turn lane along NY 52 to enter the development. Site Driveway A proposes a single approach lane to exit onto NY 52. At Site Driveway B (the southern property access), the Applicant proposes this access to be a right-in/right-out driveway.

Intersection capacity analysis computed based on the Build Volumes with the traffic signal timing improvements indicate that intersections will essentially operate at the same levels of service as projected for the No-Build Volumes. Projected operations with the proposed development and improvements are shown on Tables 2 and 3.

During the peak weekday AM hour, the overall intersection with the TSP southbound ramps is projected to improve to a level of service E. The southbound left turn is projected to operate at a level of service D while the southbound approach is projected to operate at a level of service

C. The overall intersection with the TSP northbound ramps is projected to improve to a level of service D. The northbound left turn lane and northbound thru/right lane are projected to operate at a level of service C while the southbound thru/right lane and southbound approach are projected to improve to a level of service D. The southeast right turn at the intersection of NY 52 and Carpenter Road is projected to increase by 1.0 seconds in delay from the No Build conditions to a level of service C under Build conditions. The proposed site driveways are projected to operate at a level of service B. All other movements at the studied intersections are projected to operate at the same levels of service as projected under No Build conditions.

During the peak weekday PM hour, the TSP southbound ramp thru/right lane is projected to operate at a level of service E while the NY 52 northbound approach is projected to improve to a level of service D. The TSP northbound ramp left/thru lane is projected to operate at a level of service E while the NY 52 northbound left turn lane is projected to operate at a level of service D. The NY 52 southbound thru/right lane and southbound approach to the TSP northbound ramp intersection are projected to improve to a level of service E. The southeast left turn lane at the intersection of NY 52 and Carpenter Road is projected to increase to a level of service E. Proposed Site Driveway A is projected to operate at a level of service C while proposed Site Driveway B is projected to operate at a level of service B. All other movements at the studied intersections are projected to operate at the same levels of service as projected under No Build conditions.

It is the professional opinion of JMC that the proposed subdivision will not have a significant impact on traffic operations in the study area.

Respectfully submitted,

JMC Planning Engineering Landscape Architecture & Land Surveying PLLC

Richard J. Pearson, PE, PTOE
Senior Associate Principal

Marc Petraro, PE
Project Manager

APPENDIX A

TABLES

TABLE 1

PROPOSED DEVELOPMENT VOLUMES⁽¹⁾

DESCRIPTION	PEAK WEEKDAY AM HOUR			PEAK WEEKDAY PM HOUR		
	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
a. Proposed 175 Single-Family Detached Houses (ITE Code 210) ⁽²⁾	33	99	132	110	65	175

Notes:

(1) Trip Generation based on ITE (Institute of Transportation Engineers) Trip Generation Manual, 9th Edition.

(2) Single-Family Detached Housing (ITE Code 210) is defined by ITE as all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision.

TABLE 2**INTERSECTION OPERATIONS-PEAK WEEKDAY AM HOUR**

INTERSECTION	APPROACH	LANE GROUP	2017 EXISTING			2025 NO BUILD			2025 BUILD		
			V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎
1. NY 52 & Taconic State Parkway Southbound Ramp/NYS DOT Driveway (Signalized)	EASTBOUND	LEFT/THRU /RIGHT	0.00	38.5	D	0.00	38.2	D	0.00	38.3	D
		LEFT	0.59	41.6	D	0.61	41.1	D	0.61	41.1	D
	WESTBOUND	THRU/RIGHT	0.29	37.6	D	0.32	37.2	D	0.33	37.3	D
		COMPOSITE	-	40.5	D	-	40.0	D	-	40.0	D
	NORTHBOUND	LEFT/THRU /RIGHT	1.24	146.7	F	1.35	193.1	F	1.36	196.9	F
		LEFT	0.63	21.1	C	0.73	24.0	C	0.79	25.8	C
	SOUTHBOUND	THRU/RIGHT	0.27	0.4	A	0.31	0.4	A	0.33	0.4	A
		COMPOSITE	-	10.7	B	-	12.2	B	-	13.3	B
	INTERSECTION	COMPOSITE	-	79.3	E	-	100.6	F	-	100.6	F
1a. NY 52 & Taconic State Parkway Southbound Ramp/NYS DOT Driveway (Signalized with Improvements)	EASTBOUND	LEFT/THRU /RIGHT							0.01	41.0	D
		LEFT							0.70	50.4	D
	WESTBOUND	THRU/RIGHT							0.41	40.5	D
		COMPOSITE							-	47.4	D
	NORTHBOUND	LEFT/THRU /RIGHT		N/A			N/A		1.13	96.7	F
		LEFT							0.96	50.1	D
	SOUTHBOUND	THRU/RIGHT							0.31	0.3	A
		COMPOSITE							-	25.6	C
	INTERSECTION	COMPOSITE							-	60.8	E
2. NY 52 & Taconic State Parkway Northbound Ramp/Park and Ride Driveway (Signalized)	EASTBOUND	LEFT/THRU /RIGHT	0.75	60.5	E	0.74	59.2	E	0.74	59.2	E
		LEFT/THRU	0.81	53.4	D	0.83	55.6	E	0.82	55.5	E
	WESTBOUND	RIGHT	0.62	42.4	D	0.65	43.6	D	0.71	46.8	D
		COMPOSITE	-	49.0	D	-	50.7	D	-	51.7	D
	NORTHBOUND	LEFT	0.04	15.4	B	0.04	16.1	B	0.04	16.1	B
		THRU/RIGHT	0.90	39.3	D	0.91	35.7	D	0.92	35.6	D
	SOUTHBOUND	COMPOSITE	-	37.5	D	-	34.3	C	-	34.2	C
		LEFT	0.05	16.0	B	0.07	17.2	B	0.09	17.5	B
	SOUTHBOUND	THRU/RIGHT	1.21	147.1	F	1.37	216.7	F	1.50	269.6	F
		COMPOSITE	-	138.6	F	-	200.1	F	-	246.9	F
	INTERSECTION	COMPOSITE	-	87.3	F	-	116.9	F	-	142.4	F
2a. NY 52 & Taconic State Parkway Northbound Ramp/Park and Ride Driveway (Signalized with Improvements)	EASTBOUND	LEFT/THRU /RIGHT							0.74	59.2	E
		LEFT/THRU							0.82	55.5	E
	WESTBOUND	RIGHT							0.71	46.8	D
		COMPOSITE							-	51.7	D
	NORTHBOUND	LEFT							0.06	22.0	C
		THRU/RIGHT		N/A			N/A		0.90	27.2	C
	SOUTHBOUND	COMPOSITE							-	26.8	C
		LEFT							0.09	18.0	B
	SOUTHBOUND	THRU/RIGHT							0.96	51.5	D
		COMPOSITE							-	48.5	D
	INTERSECTION	COMPOSITE							-	43.9	D
3. NY 52 & Carpenter Road (Unsignalized)	SOUTHEAST	LEFT	0.06	17.8	C	0.07	20.8	C	0.08	22.9	C
		RIGHT	0.13	12.8	B	0.16	14.1	B	0.17	15.1	C
	NORTHEAST	LEFT/THRU	0.03	8.8	A	0.04	9.2	A	0.04	9.5	A
	SOUTHWEST	THRU/RIGHT	-	-	-	-	-	-	-	-	-

TABLE 2**INTERSECTION OPERATIONS-PEAK WEEKDAY AM HOUR**

INTERSECTION	APPROACH	LANE GROUP	2017 EXISTING			2025 NO BUILD			2025 BUILD		
			V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾
4. NY 52 & NY 216 (Unsignalized)	EASTBOUND	LEFT/THRU	0.14	8.3	A						
	WESTBOUND	THRU/RIGHT	-	-	-		N/A			N/A	
	SOUTHBOUND	LEFT/RIGHT	0.44	13.8	B						
4a. NY 52 & NY 216 (Signalized by Others)	EASTBOUND	LEFT				0.24	3.8	A	0.25	4.0	A
		THRU/RIGHT				0.21	4.5	A	0.23	4.6	A
		COMPOSITE				-	4.2	A	-	4.3	A
	WESTBOUND	LEFT				0.01	4.9	A	0.01	4.9	A
		THRU/RIGHT				0.29	6.8	A	0.35	7.4	A
		COMPOSITE		N/A		-	6.8	A	-	7.3	A
	NORTHBOUND	LEFT/THRU /RIGHT				0.35	25.2	C	0.35	25.2	C
	SOUTHBOUND	LEFT/THRU				0.08	23.4	C	0.08	23.4	C
		RIGHT				-	-	-	-	-	-
		COMPOSITE				-	23.4	C	-	23.4	C
	INTERSECTION	COMPOSITE				-	7.5	A	-	7.7	A
5. NY 52 & Site Driveway A (Unsignalized)	EASTBOUND	LEFT/RIGHT							0.18	13.7	B
	NORTHBOUND	LEFT/THRU		N/A			N/A		0.01	8.0	A
	SOUTHBOUND	THRU/RIGHT							-	-	-
5a. NY 52 & Site Driveway A (Unsignalized with Improvements)	EASTBOUND	LEFT/RIGHT							0.18	13.7	B
	NORTHBOUND	LEFT		N/A			N/A		0.01	8.0	A
		THRU							-	-	-
	SOUTHBOUND	THRU/RIGHT							-	-	-
6. NY 52 & Site Driveway B (Unsignalized)	EASTBOUND	RIGHT							0.02	10.3	B
	NORTHBOUND	THRU		N/A			N/A		-	-	-
	SOUTHBOUND	THRU/RIGHT							-	-	-
7. NY 52 & Stormville Mountain Road (West Intersection) (Unsignalized)	SOUTHEAST	LEFT/THRU	0.01	7.5	A	0.01	7.6	A	0.01	7.6	A
	NORTHWEST	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	SOUTHWEST	LEFT/RIGHT	0.09	9.8	A	0.10	10.0	B	0.10	10.2	B
8. NY 52 & Leetown Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.16	11.8	B	0.20	12.8	B	0.21	13.4	B
	SOUTHEAST	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	NORTHWEST	LEFT/THRU	0.01	8.1	C	0.01	8.2	A	0.01	8.3	A
9. NY 52 & Stormville Mountain Road (East Intersection) (Unsignalized)	EASTBOUND	LEFT/THRU	0.01	7.5	A	0.01	7.6	A	0.01	7.6	A
	WESTBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/RIGHT	0.05	9.7	A	0.06	9.9	A	0.06	10.0	B
10. NY 52 & Milltown Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.15	11.6	B	0.17	12.4	B	0.18	12.8	B
	SOUTHEAST	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	NORTHWEST	LEFT/THRU	0.03	8.2	A	0.04	8.4	A	0.04	8.5	A

Notes:

- (1) V/C represents volume/capacity ratio
(2) Delay is average seconds delay per vehicle
(3) LOS represents level of service

TABLE 3**INTERSECTION OPERATIONS-PEAK WEEKDAY PM HOUR**

INTERSECTION	APPROACH	LANE GROUP	2017 EXISTING			2025 NO BUILD			2025 BUILD		
			V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎
1. NY 52 & Taconic State Parkway Southbound Ramp/NYSDOT Driveway (Signalized)	EASTBOUND	LEFT/THRU /RIGHT	0.00	0.0	A	0.00	0.0	A	0.00	0.0	A
		LEFT	0.52	50.5	D	0.53	50.0	D	0.53	49.9	D
	WESTBOUND	THRU/RIGHT	0.55	51.0	D	0.66	52.5	D	0.73	54.5	D
		COMPOSITE	-	50.7	D	-	51.2	D	-	52.1	D
		NORTHBOUND	LEFT/THRU /RIGHT	0.96	56.9	E	1.02	70.4	F	1.05	79.5
	SOUTHBOUND	LEFT	0.15	8.3	A	0.19	10.3	B	0.23	10.3	B
		THRU/RIGHT	0.59	1.2	A	0.65	1.0	A	0.66	0.7	A
		COMPOSITE	-	2.1	A	-	2.1	A	-	2.1	A
INTERSECTION		COMPOSITE	-	27.3	C	-	32.6	C	-	35.9	D
1a. NY 52 & Taconic State Parkway Southbound Ramp/NYSDOT Driveway (Signalized with Improvements)	EASTBOUND	LEFT/THRU /RIGHT							0.00	0.0	A
		LEFT							0.54	50.3	D
	WESTBOUND	THRU/RIGHT							0.75	55.7	E
		COMPOSITE							-	52.9	D
		NORTHBOUND	LEFT/THRU /RIGHT		N/A			N/A		0.93	46.7
	SOUTHBOUND	LEFT							0.25	14.5	B
		THRU/RIGHT							0.66	1.2	A
		COMPOSITE							-	3.1	A
INTERSECTION		COMPOSITE						-	24.6	C	
2. NY 52 & Taconic State Parkway Northbound Ramp/Park and Ride Driveway (Signalized)	EASTBOUND	LEFT/THRU /RIGHT	0.77	60.3	E	0.77	59.8	E	0.77	59.8	E
		LEFT/THRU	0.90	46.2	D	0.91	47.6	D	0.91	47.2	D
	WESTBOUND	RIGHT	0.54	29.6	C	0.58	28.9	C	0.65	30.7	C
		COMPOSITE	-	40.4	D	-	40.8	D	-	40.8	D
		NORTHBOUND	LEFT	0.04	23.5	C	0.05	26.5	C	0.05	26.7
	THRU/RIGHT		1.79	401.8	F	2.05	515.4	F	2.16	562.8	F
	COMPOSITE		-	390.2	F	-	500.9	F	-	547.7	F
	SOUTHBOUND	LEFT	0.11	33.2	C	0.16	35.5	D	0.18	35.6	D
		THRU/RIGHT	1.29	196.3	F	1.46	267.1	F	1.58	318.6	F
		COMPOSITE	-	177.8	F	-	237.4	F	-	282.2	F
INTERSECTION		COMPOSITE	-	175.8	F	-	225.8	F	-	251.8	F
2a. NY 52 & Taconic State Parkway Northbound Ramp/Park and Ride Driveway (Signalized with Improvements)	EASTBOUND	LEFT/THRU /RIGHT							0.78	72.7	E
		LEFT/THRU							0.95	57.3	E
	WESTBOUND	RIGHT							0.68	33.2	C
		COMPOSITE							-	47.9	D
		NORTHBOUND	LEFT							0.08	45.6
	THRU/RIGHT			N/A			N/A		1.27	174.8	F
	COMPOSITE								-	171.1	F
	SOUTHBOUND	LEFT							0.34	46.8	D
		THRU/RIGHT							0.95	65.6	E
		COMPOSITE							-	63.2	E
INTERSECTION		COMPOSITE						-	89.3	F	
3. NY 52 & Carpenter Road (Unsignalized)	SOUTHEAST	LEFT	0.13	23.9	C	0.18	31.1	D	0.22	37.5	E
		RIGHT	0.10	10.8	B	0.12	11.5	B	0.12	11.9	B
	NORTHEAST	LEFT/THRU	0.12	8.6	A	0.14	8.8	A	0.14	9.0	A
	SOUTHWEST	THRU/RIGHT	-	-	-	-	-	-	-	-	-

TABLE 3**INTERSECTION OPERATIONS-PEAK WEEKDAY PM HOUR**

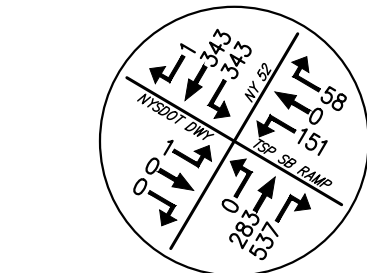
INTERSECTION	APPROACH	LANE GROUP	2017 EXISTING			2025 NO BUILD			2025 BUILD		
			V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾
4. NY 52 & NY 216 (Unsignalized)	EASTBOUND	LEFT/THRU	0.26	8.8	A						
	WESTBOUND	THRU/RIGHT	-	-	-		N/A			N/A	
	SOUTHBOUND	LEFT/RIGHT	0.29	12.7	B						
4a. NY 52 & NY 216 (Signalized by Others)	EASTBOUND	LEFT				0.43	3.8	A	0.44	4.0	A
		THRU/RIGHT				0.27	4.7	A	0.33	5.1	A
		COMPOSITE				-	4.2	A	-	4.6	A
	WESTBOUND	LEFT				0.03	4.7	A	0.03	4.7	A
		THRU/RIGHT				0.29	7.1	A	0.33	7.4	A
		COMPOSITE		N/A		-	6.9	A	-	7.2	A
	NORTHBOUND	LEFT/THRU /RIGHT				0.27	28.4	C	0.27	28.4	C
	SOUTHBOUND	LEFT/THRU				0.10	27.3	C	0.10	27.3	C
		RIGHT				-	-	-	-	-	-
		COMPOSITE				-	27.3	C	-	27.3	C
	INTERSECTION	COMPOSITE				-	6.7	A	-	6.9	A
5. NY 52 & Site Driveway A (Unsignalized)	EASTBOUND	LEFT/RIGHT							0.20	18.8	C
	NORTHBOUND	LEFT/THRU		N/A			N/A		0.03	8.2	A
	SOUTHBOUND	THRU/RIGHT							-	-	-
5a. NY 52 & Site Driveway A (Unsignalized with Improvements)	EASTBOUND	LEFT/RIGHT							0.19	18.6	C
	NORTHBOUND	LEFT		N/A			N/A		0.03	8.2	A
		THRU							-	-	-
	SOUTHBOUND	THRU/RIGHT							-	-	-
6. NY 52 & Site Driveway B (Unsignalized)	EASTBOUND	RIGHT							0.01	10.2	B
	NORTHBOUND	THRU		N/A			N/A		-	-	-
	SOUTHBOUND	THRU/RIGHT							-	-	-
7. NY 52 & Stormville Mountain Road (West Intersection) (Unsignalized)	SOUTHEAST	LEFT/THRU	0.03	8.3	A	0.04	8.5	A	0.04	8.6	A
	NORTHWEST	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	SOUTHWEST	LEFT/RIGHT	0.05	11.3	B	0.05	12.0	B	0.06	12.4	B
8. NY 52 & Leetown Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.19	16.8	C	0.24	20.1	C	0.27	22.4	C
	SOUTHEAST	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	NORTHWEST	LEFT/THRU	0.02	7.8	A	0.02	7.9	A	0.02	8.0	A
9. NY 52 & Stormville Mountain Road (East Intersection) (Unsignalized)	EASTBOUND	LEFT/THRU	0.01	8.4	A	0.01	8.7	A	0.01	8.8	A
	WESTBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/RIGHT	0.03	10.3	B	0.04	10.7	B	0.04	10.9	B
10. NY 52 & Milltown Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.14	11.4	B	0.16	12.1	B	0.17	12.6	B
	SOUTHEAST	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	NORTHWEST	LEFT/THRU	0.09	8.1	A	0.11	8.2	A	0.11	8.3	A

Notes:

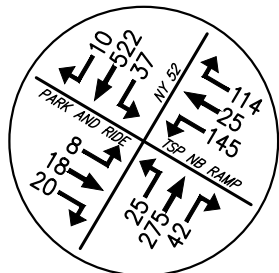
- (1) V/C represents volume/capacity ratio
(2) Delay is average seconds delay per vehicle
(3) LOS represents level of service

APPENDIX B

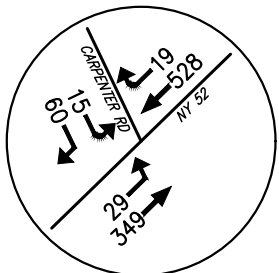
FIGURES



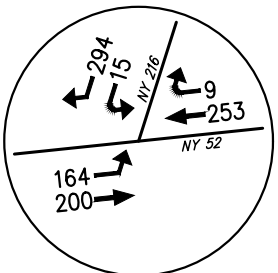
1 NY 52 & TACONIC STATE PARKWAY SOUTHBOUND RAMP / NYSDOT DRIVEWAY



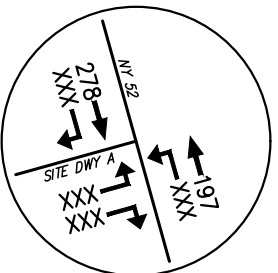
2 NY 52 & TACONIC STATE PARKWAY NORTHBOUND RAMP / PARK AND RIDE DRIVEWAY



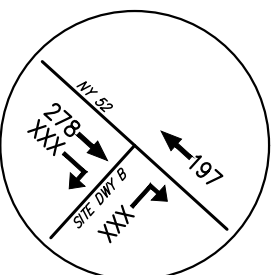
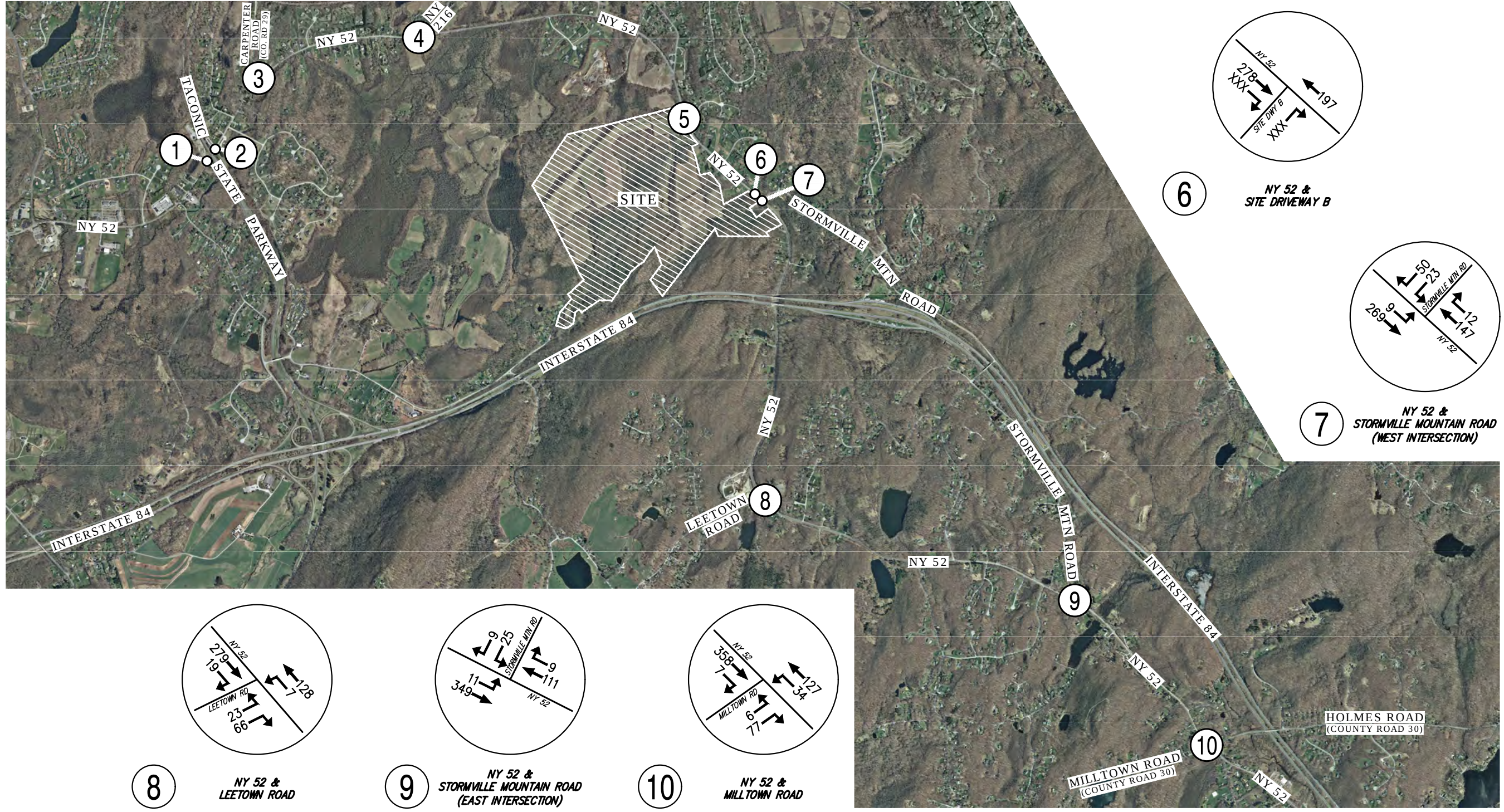
3 NY 52 & CARPENTER ROAD



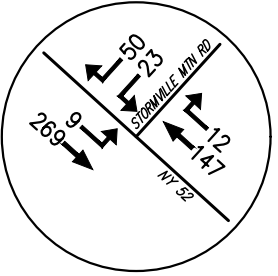
4 NY 52 & NY 216



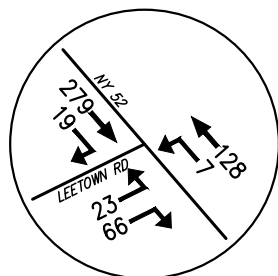
5 NY 52 & SITE DRIVEWAY A



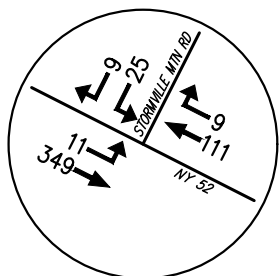
6 NY 52 & SITE DRIVEWAY B



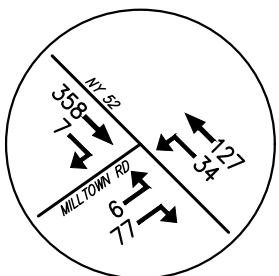
7 NY 52 & STORMVILLE MOUNTAIN ROAD (WEST INTERSECTION)



8 NY 52 & LEETOWN ROAD

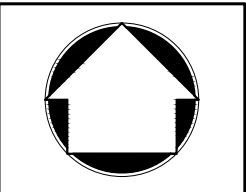


9 NY 52 & STORMVILLE MOUNTAIN ROAD (EAST INTERSECTION)



10 NY 52 & MILLTOWN ROAD

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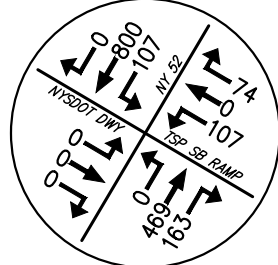
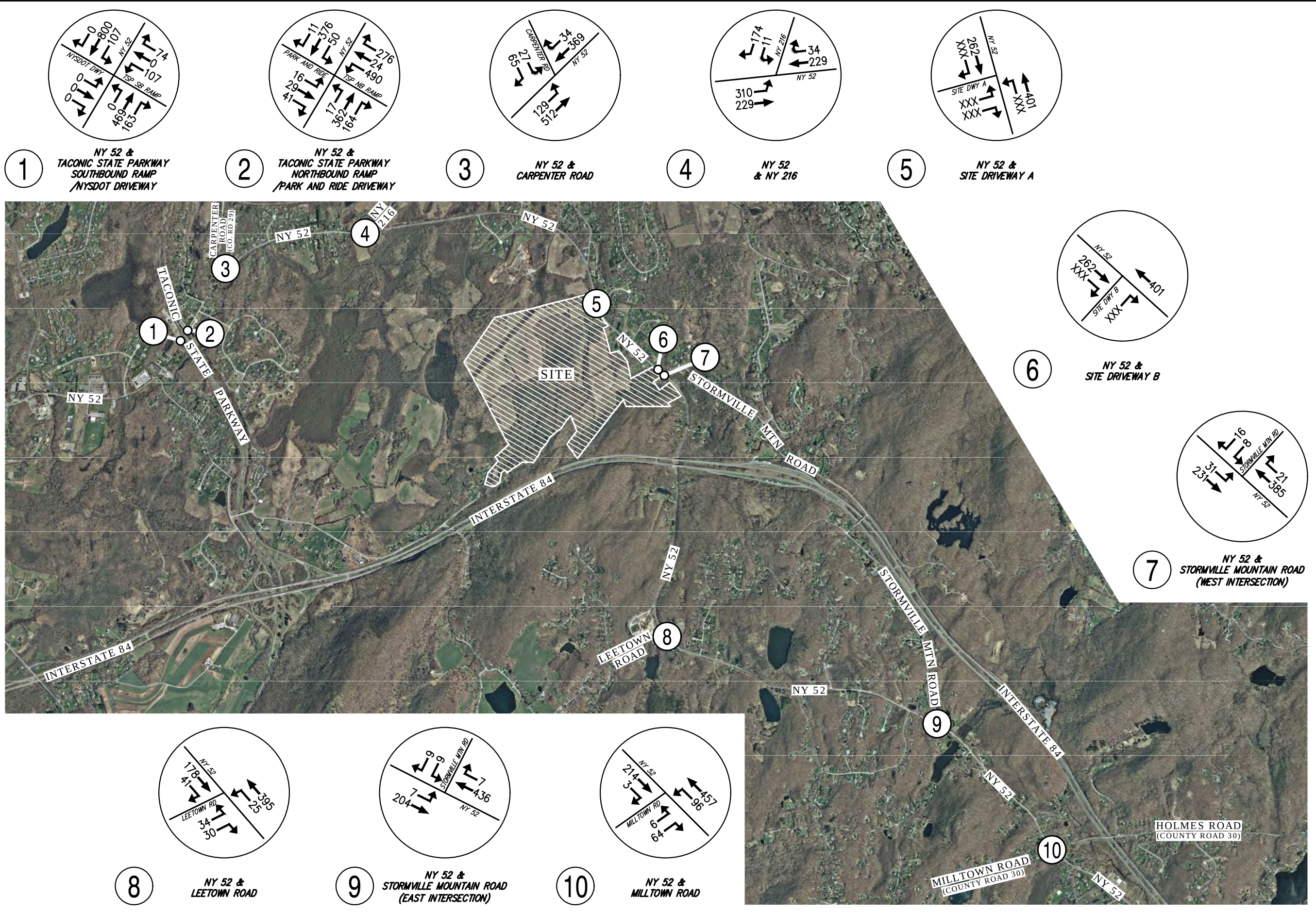
2017 EITING ME
PEA EE DA AM H 7:30 - 8:30

DATE 04/12/2017

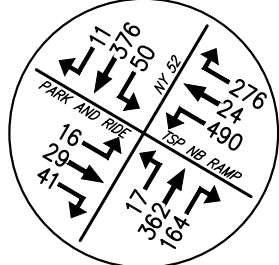
FIG E101

SCALE 1" = 2500'

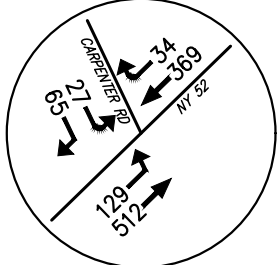
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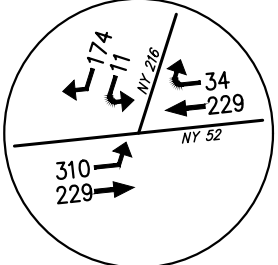
1 NY 52 & TACONIC STATE PARKWAY SOUTHBOUND RAMP / NYSDOT DRIVEWAY



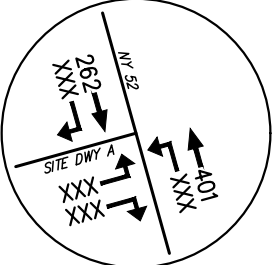
2 NY 52 & TACONIC STATE PARKWAY NORTHBOUND RAMP / PARK AND RIDE DRIVEWAY



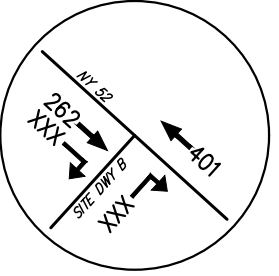
3 NY 52 & CARPENTER ROAD



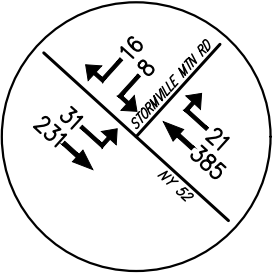
4 NY 52 & NY 216



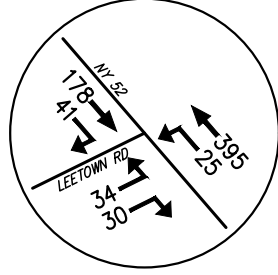
5 NY 52 & SITE DRIVEWAY A



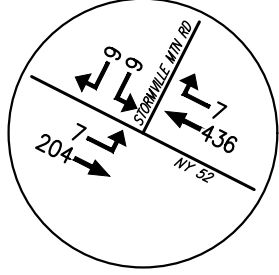
6 NY 52 & SITE DRIVEWAY B



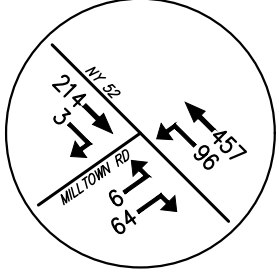
7 NY 52 & STORMVILLE MOUNTAIN ROAD (WEST INTERSECTION)



8 NY 52 & LEETOWN ROAD

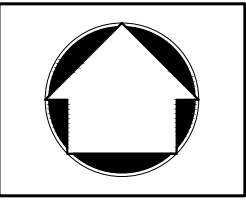


9 NY 52 & STORMVILLE MOUNTAIN ROAD (EAST INTERSECTION)



10 NY 52 & MILLTOWN ROAD

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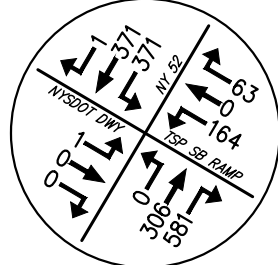
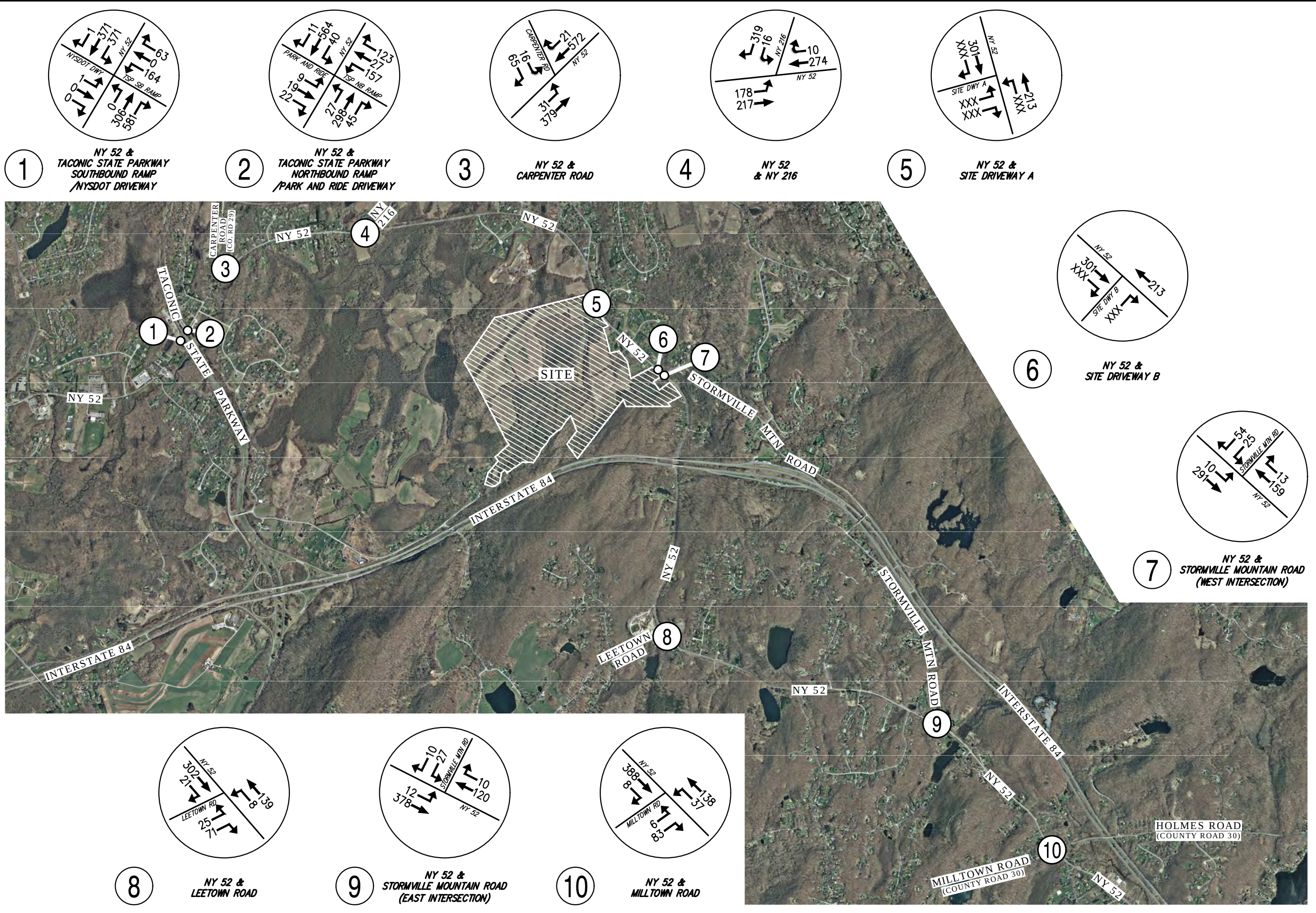
2017 EITING ME
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DATE 04/12/2017

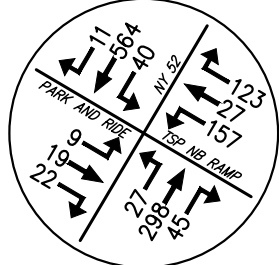
FIG E102

SCALE 1" = 2500'

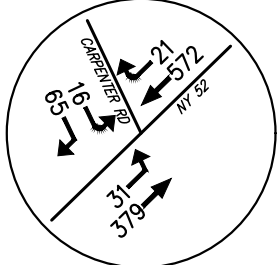
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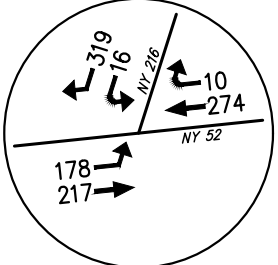
1 NY 52 & TACONIC STATE PARKWAY SOUTHBOUND RAMP / NYSDOT DRIVEWAY



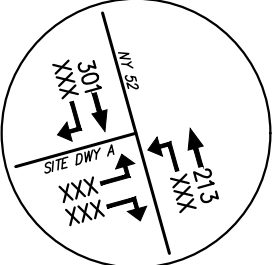
2 NY 52 & TACONIC STATE PARKWAY NORTHBOUND RAMP / PARK AND RIDE DRIVEWAY



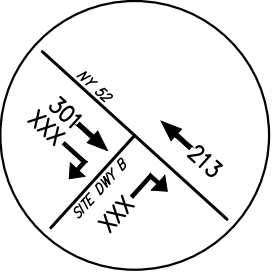
3 NY 52 & CARPENTER ROAD



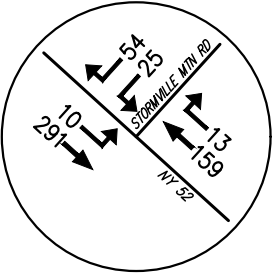
4 NY 52 & NY 216



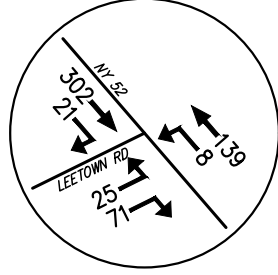
5 NY 52 & SITE DRIVEWAY A



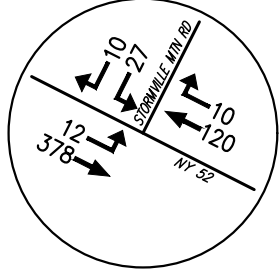
6 NY 52 & SITE DRIVEWAY B



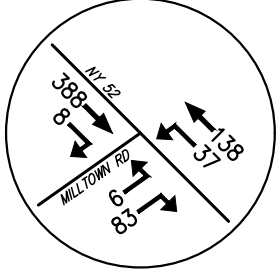
7 NY 52 & STORMVILLE MOUNTAIN ROAD (WEST INTERSECTION)



8 NY 52 & LEETOWN ROAD

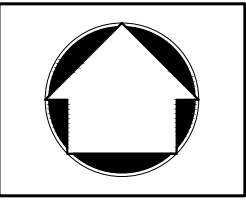


9 NY 52 & STORMVILLE MOUNTAIN ROAD (EAST INTERSECTION)



10 NY 52 & MILLTOWN ROAD

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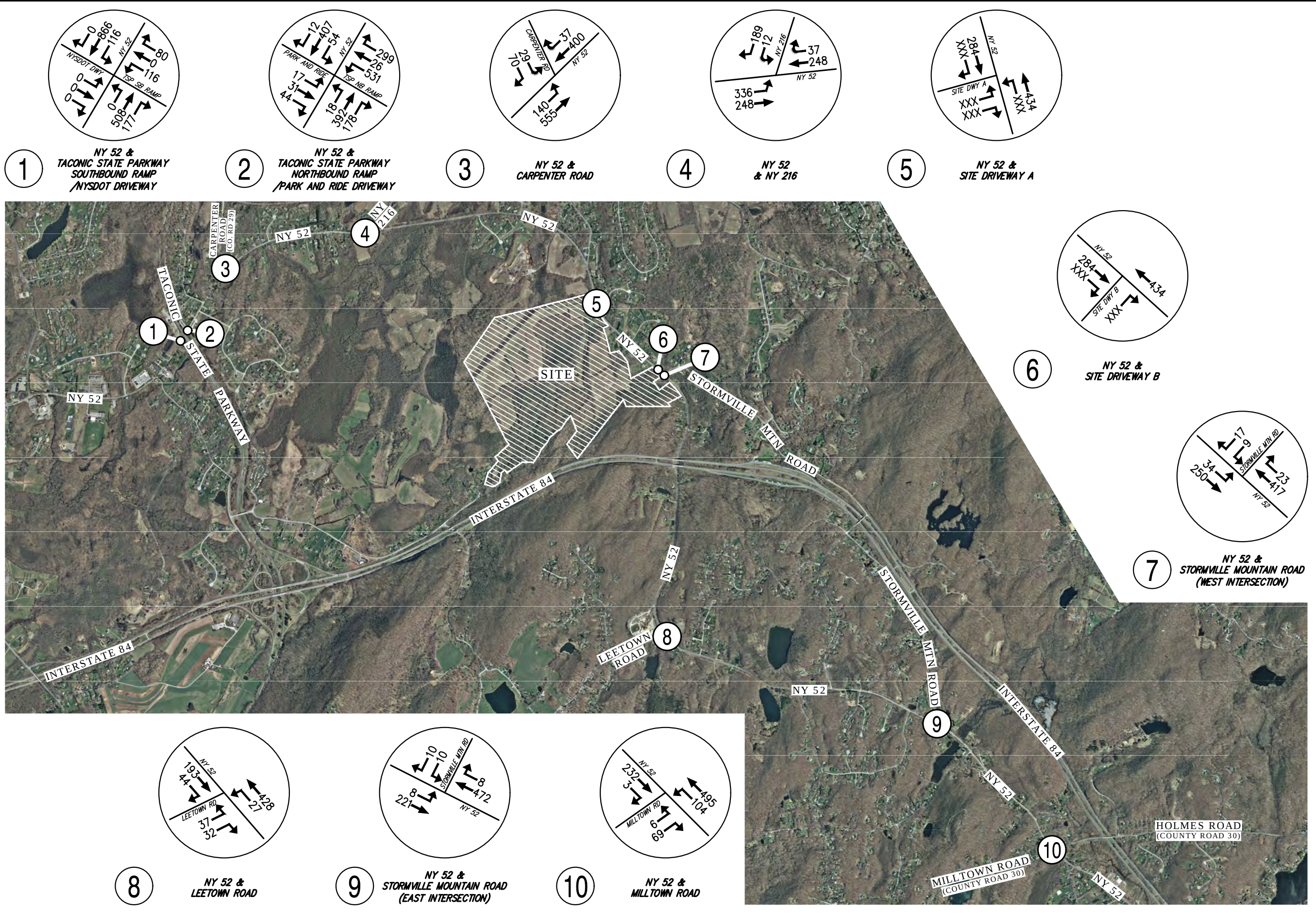
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DATE 04/12/2017

FIG E 03

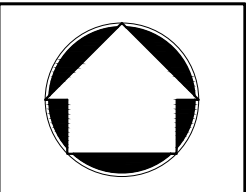
SCALE 1" = 2500'

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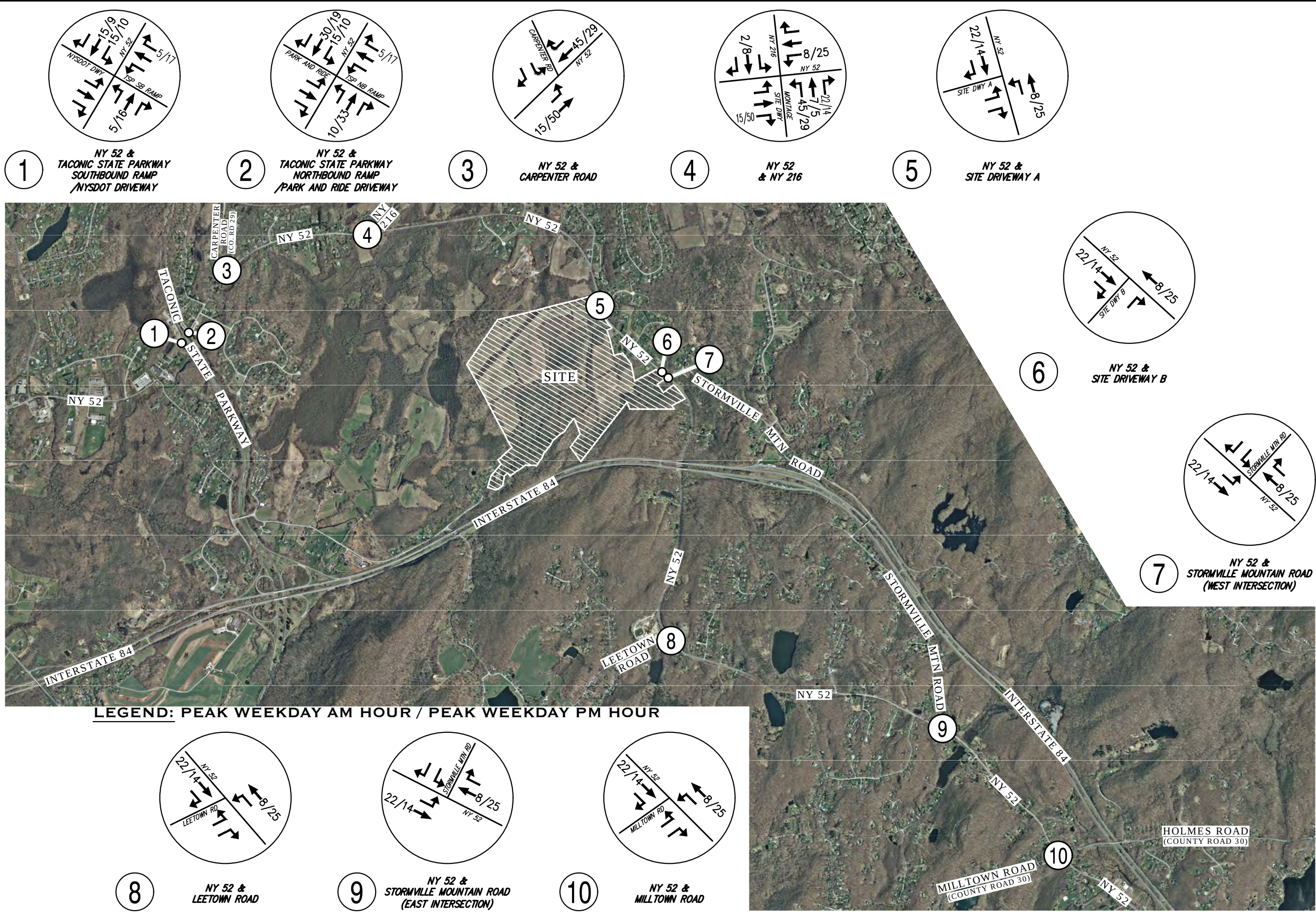
FIG E 104

T F E A T F L H E

PEA E E D A P M H

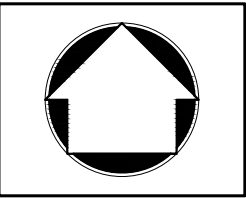
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SCALE 1" = 2500'



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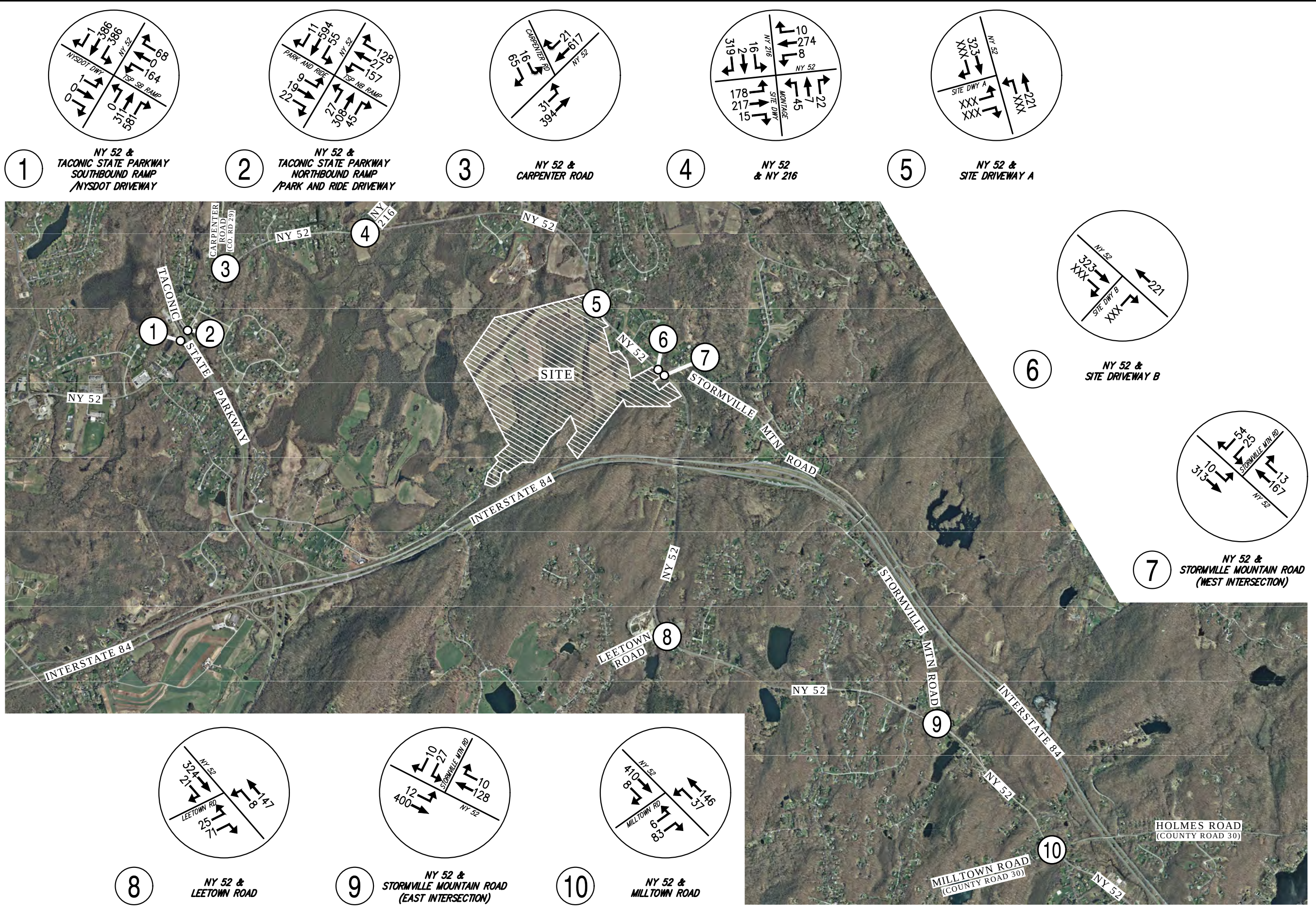
SUMMIT WOODS

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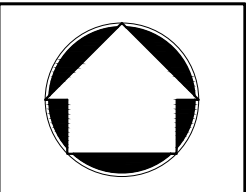
DATE 04/12/2017

FIG 105

17039-TRAFFIC-FIG.dwg; PROPOSED.tbb



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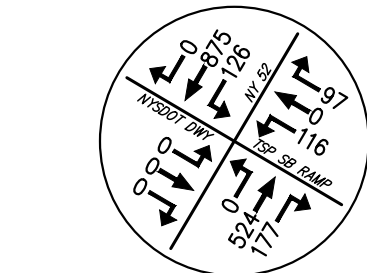
2025 BID ME
PEA EE DA AM H 7:30 - 8:30

DATE 04/12/2017

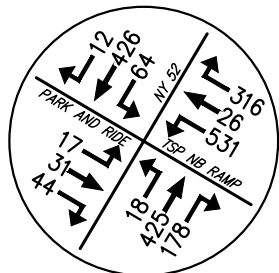
FIG E106

CA E1" = 2'500'

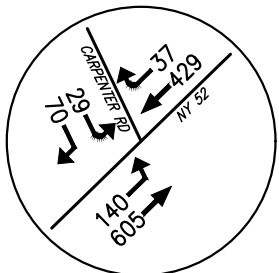
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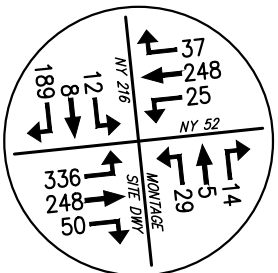
1 NY 52 & TACONIC STATE PARKWAY SOUTHBOUND RAMP / NYSDOT DRIVEWAY



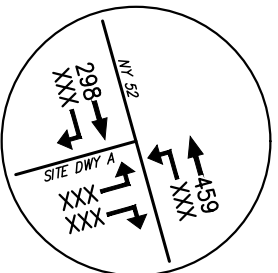
2 NY 52 & TACONIC STATE PARKWAY NORTHBOUND RAMP / PARK AND RIDE DRIVEWAY



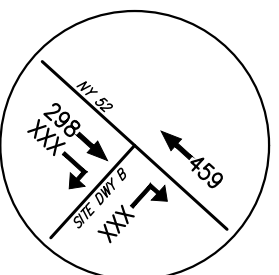
3 NY 52 & CARPENTER ROAD



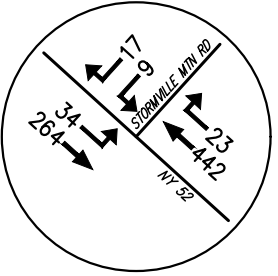
4 NY 52 & NY 216



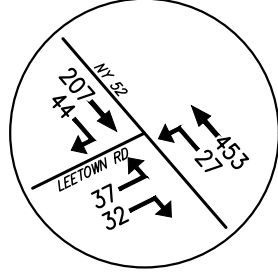
5 NY 52 & SITE DRIVEWAY A



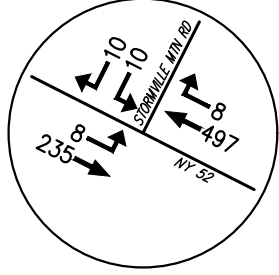
6 NY 52 & SITE DRIVEWAY B



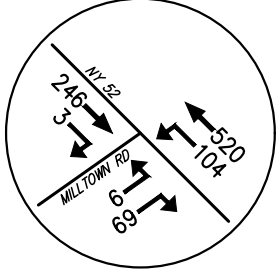
7 NY 52 & STORMVILLE MOUNTAIN ROAD (WEST INTERSECTION)



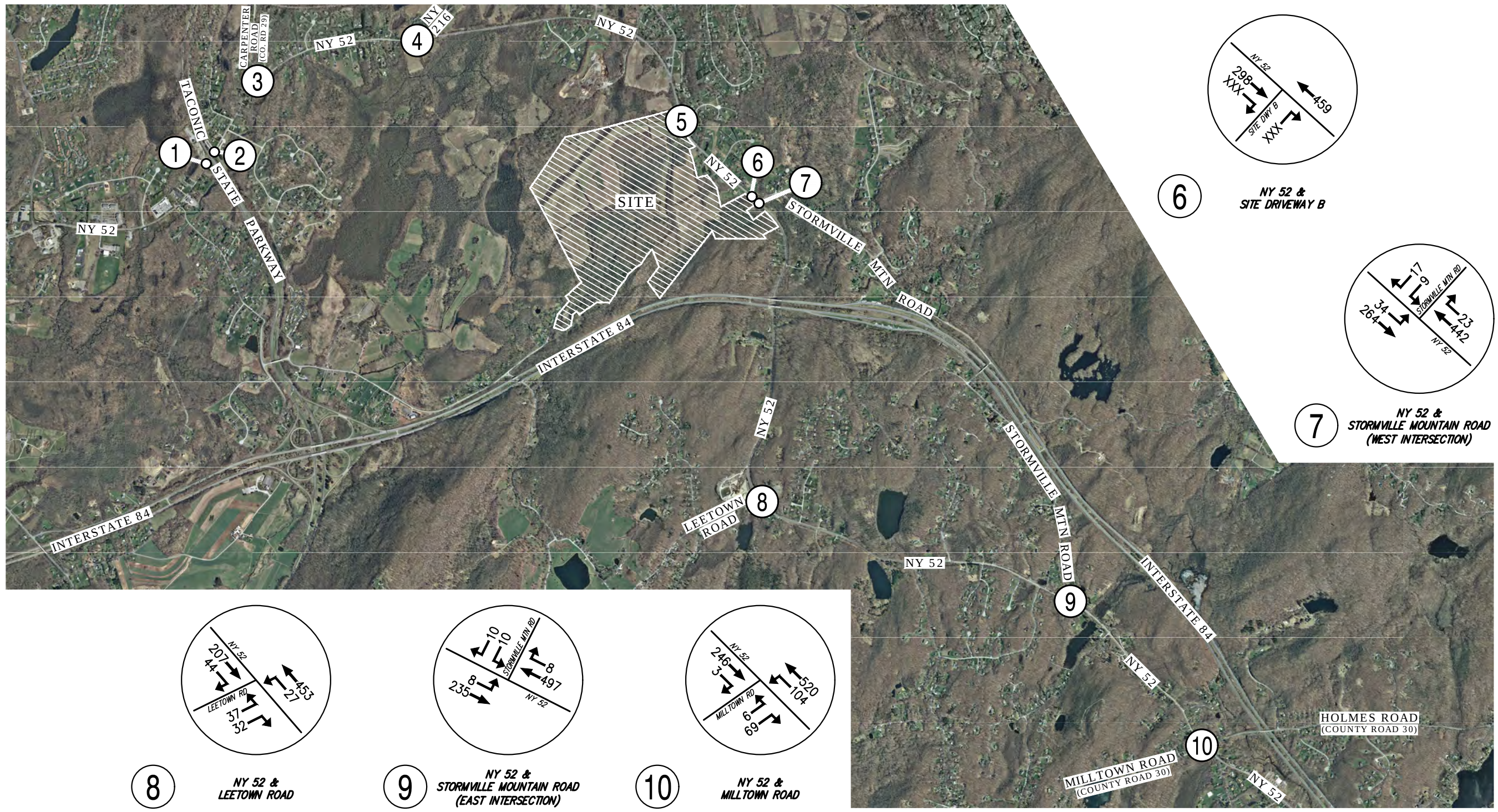
8 NY 52 & LEETOWN ROAD



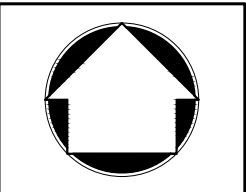
9 NY 52 & STORMVILLE MOUNTAIN ROAD (EAST INTERSECTION)



10 NY 52 & MILLTOWN ROAD



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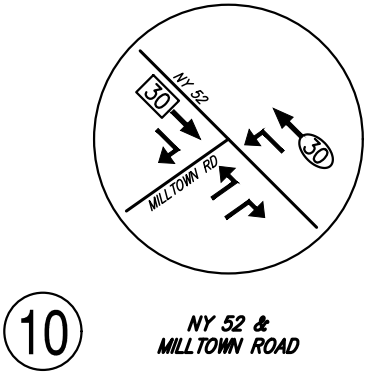
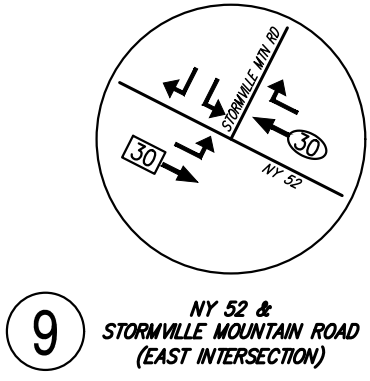
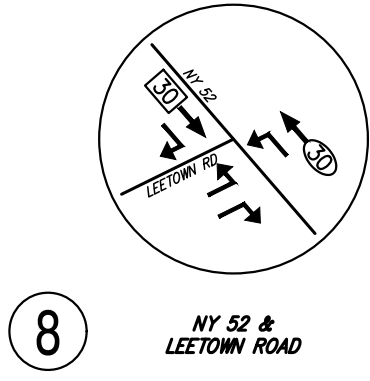
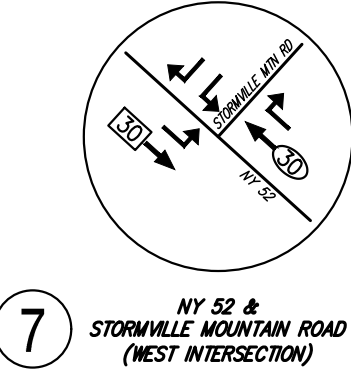
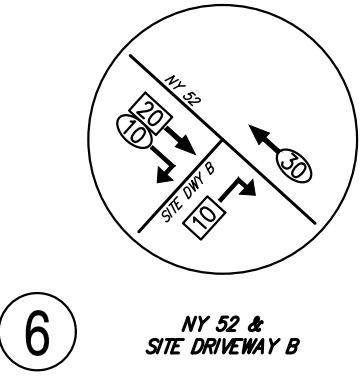
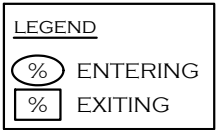
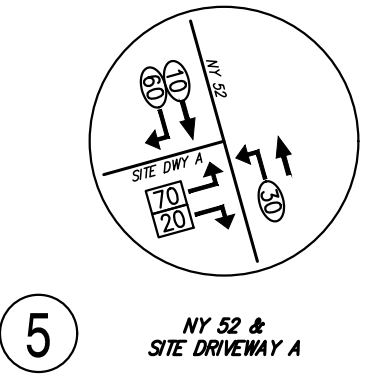
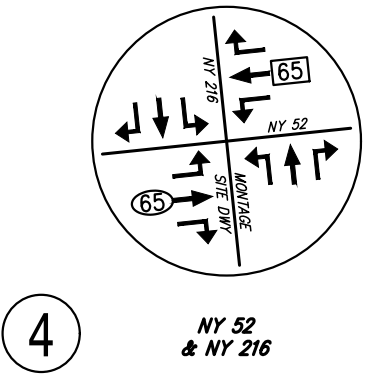
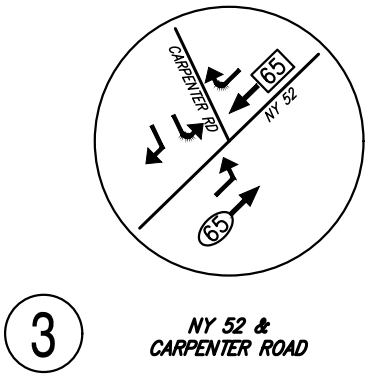
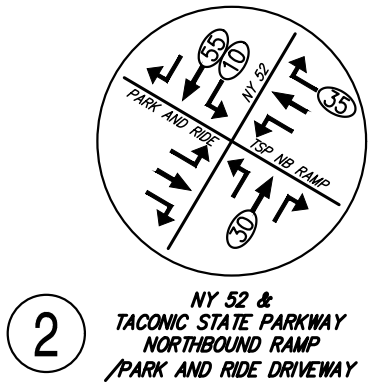
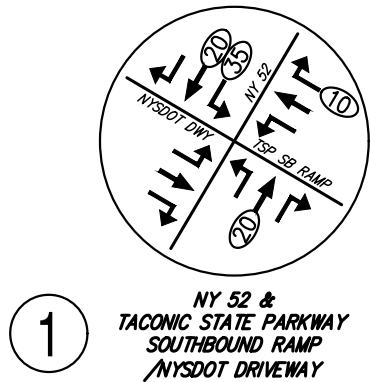
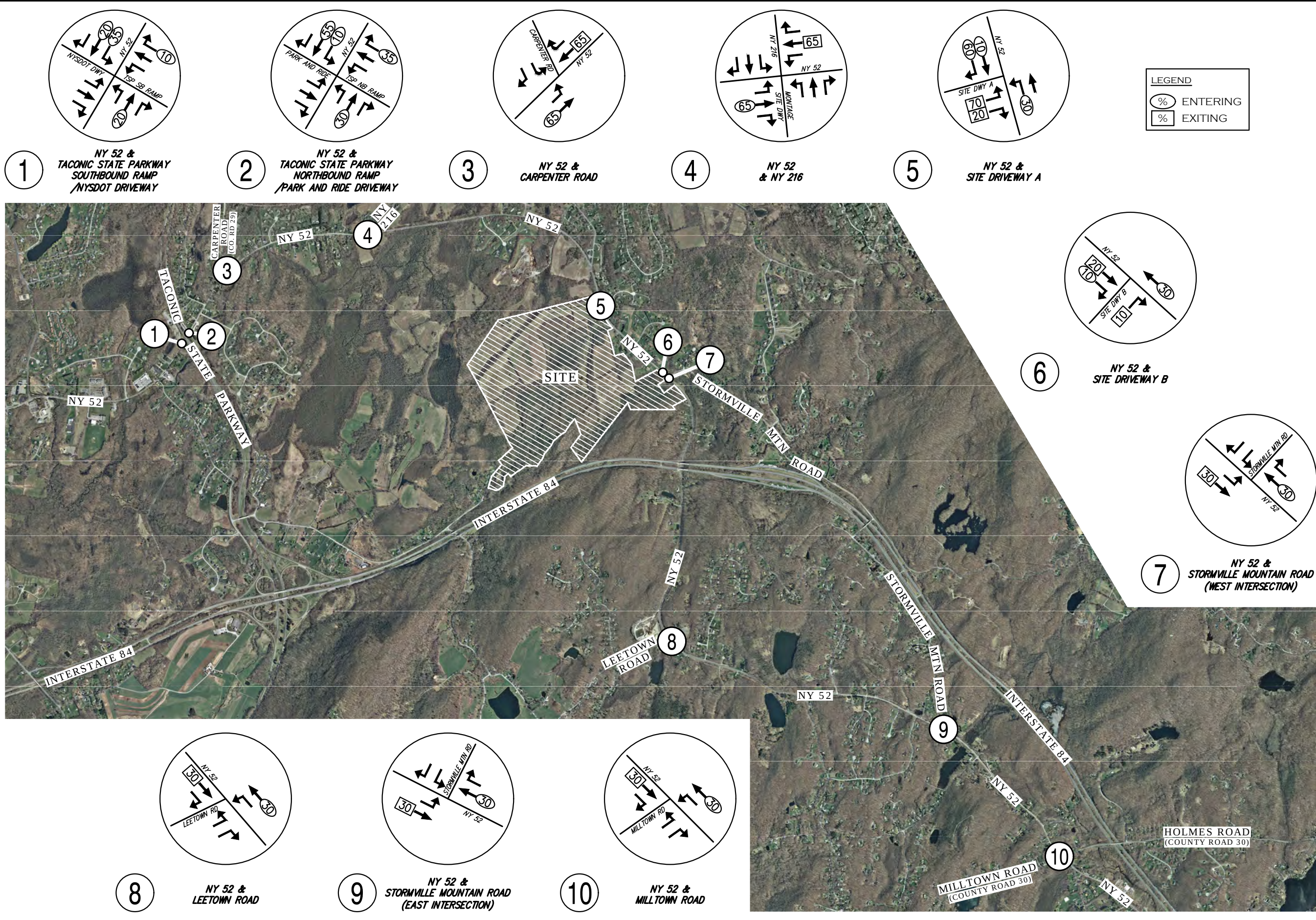
2025 BID ME
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DATE 04/12/2017

FIG E107

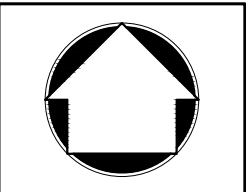
SCALE 1" = 2500'

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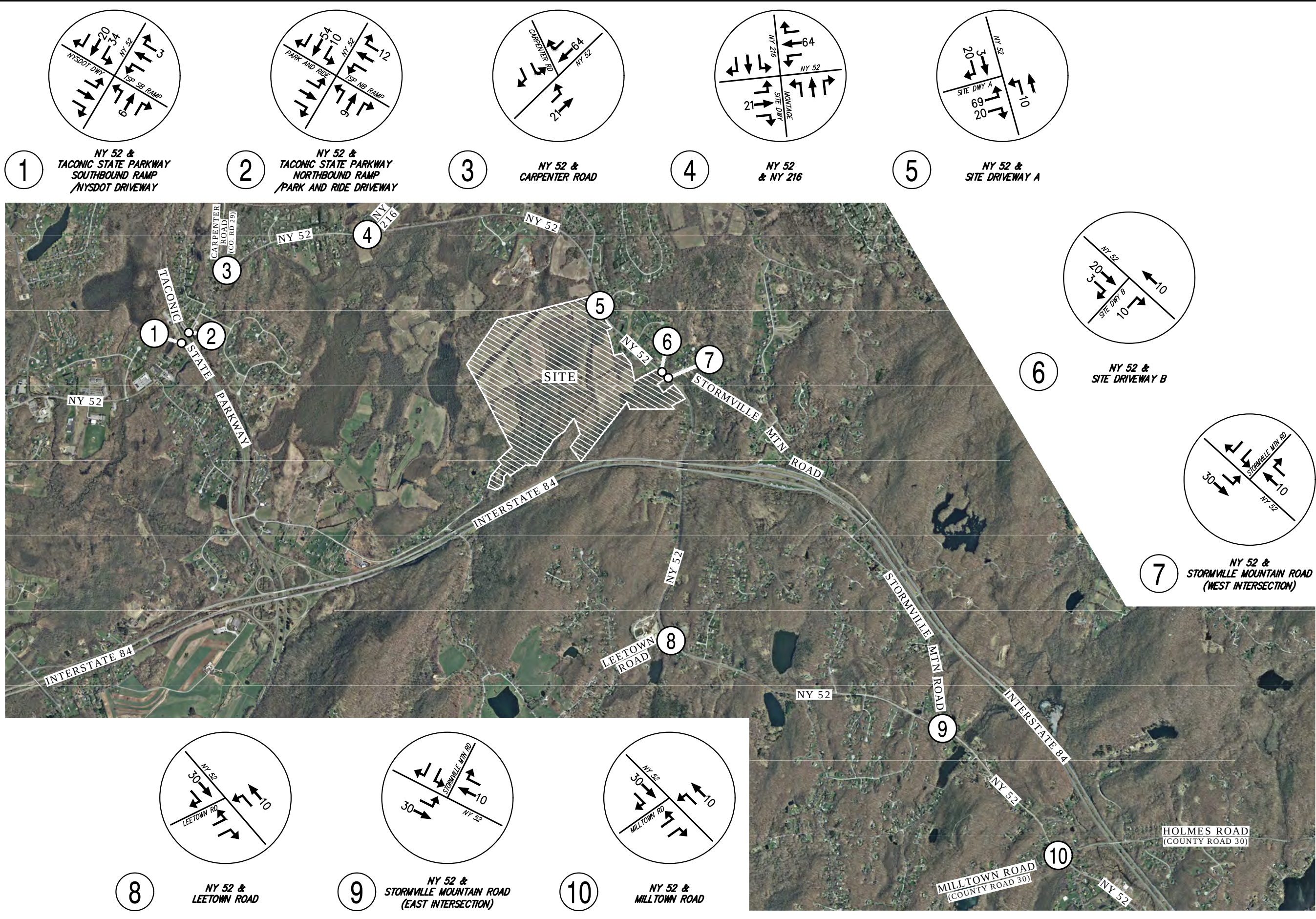
PROJECT INFORMATION

DATE: 04/12/2017

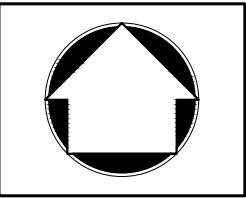
FIGURE 108

SCALE: 1" = 2,500'

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TOTAL AREA: 11.00 AC

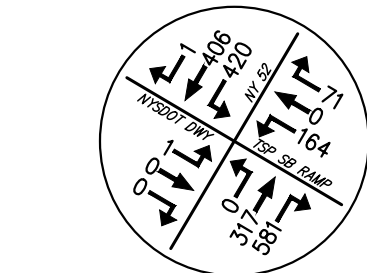
PEA: 11.00 AC

DATE: 04/12/2017

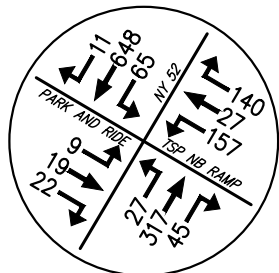
FIG: 109

SCALE: 1" = 2500'

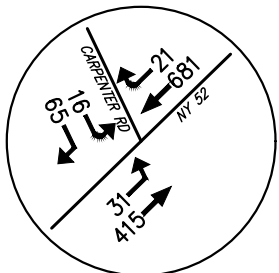
JMC PROJECT: 17039



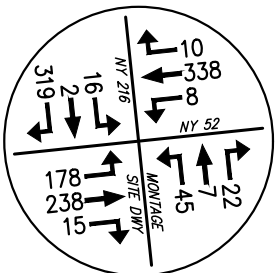
1 NY 52 & TACONIC STATE PARKWAY SOUTHBOUND RAMP / NYSDOT DRIVEWAY



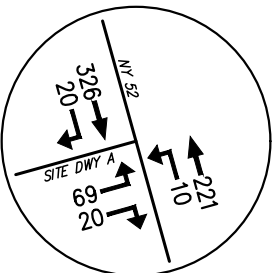
2 NY 52 & TACONIC STATE PARKWAY NORTHBOUND RAMP / PARK AND RIDE DRIVEWAY



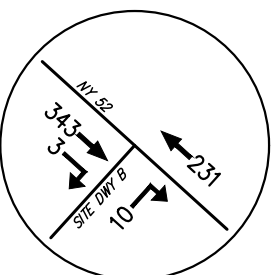
3 NY 52 & CARPENTER ROAD



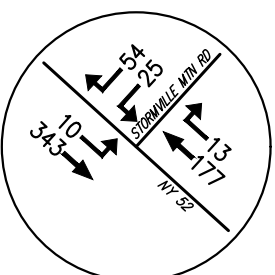
4 NY 52 & NY 216



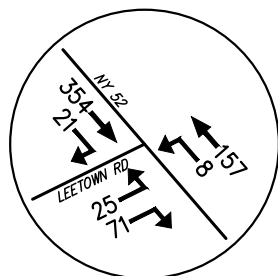
5 NY 52 & SITE DRIVEWAY A



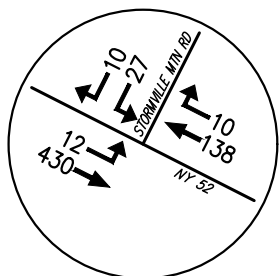
6 NY 52 & SITE DRIVEWAY B



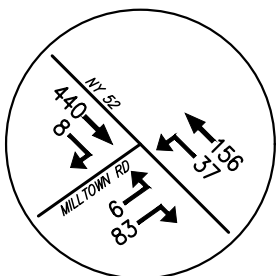
7 NY 52 & STORMVILLE MOUNTAIN ROAD (WEST INTERSECTION)



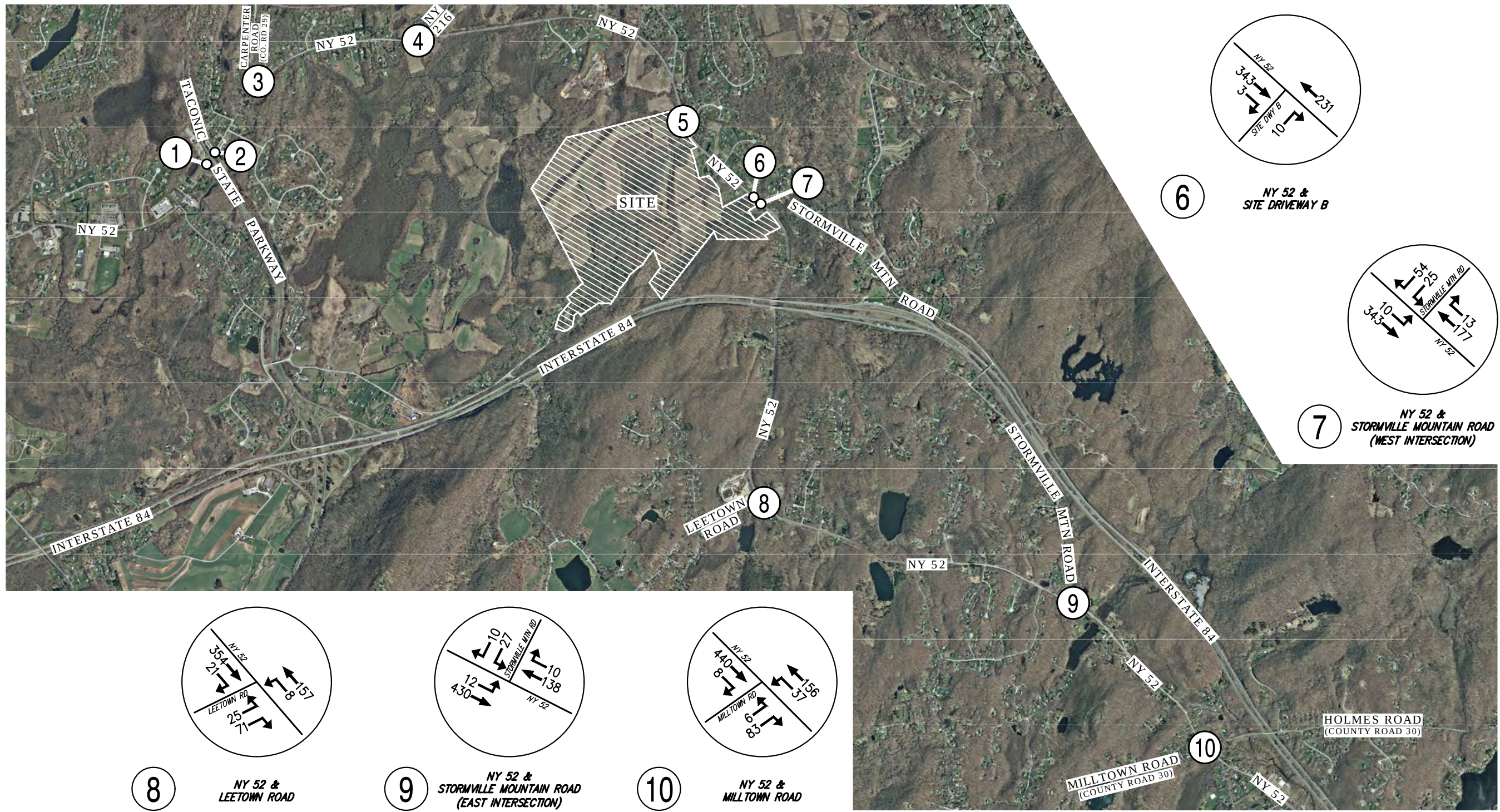
8 NY 52 & LEETOWN ROAD



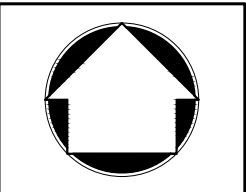
9 NY 52 & STORMVILLE MOUNTAIN ROAD (EAST INTERSECTION)



10 NY 52 & MILLTOWN ROAD



JMC
120 BEDFORD RD
ARMONK
NY 10504
(914) 273-5225
fax 273-2102
JMCPLLC.COM



SUMMIT WOODS

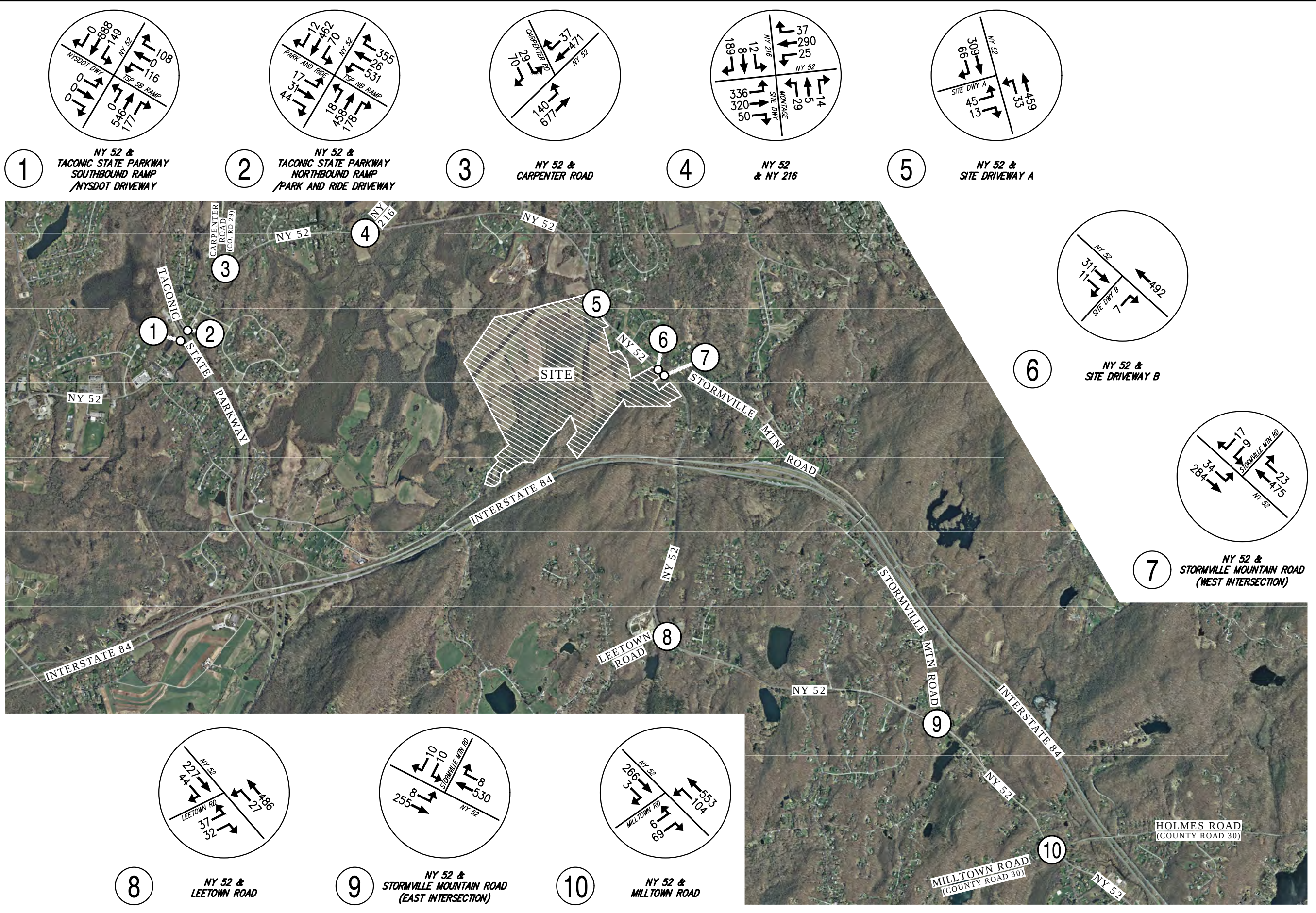
2025 B D ME
PEA EE DA AM H 7:30 - 8:30

DATE 04/12/2017

FIG 11

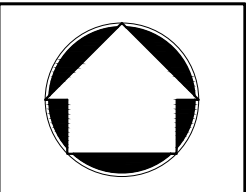
SCALE 1" = 2500'

JMC PROJECT 17039





120 BEDFORD RD
ARMONK
NY 10504
(914) 273-5225
fax 273-2102
JMCPLLC.COM



SUMMIT WOODS

2025 B D ME

PEA EEDA PM H 5:00 6:00

DATE 04/12/2017

FIG 12

T F E A T F L H E

JMC PROJECT 17039

SCALE 1" = 2500'

APPENDIX C

TURNING MOVEMENT COUNTS

DATE:	2/15/2017	JOB NO:	17039
PERIOD:	7:00 - 9:00 AM 4:00 - 6:00 PM	NAME:	J.RAP & Associates, Inc.
LOCATION:	NY 52 & Taconic State Parkway Southbound Ramp/NYSDOT Driveway	INT #:	1

PEAK HOUR MOVEMENTS & % HEAVY
VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL		175	396	83		38	276	231	1				1,200						0.723
	TRUCK		0%	0%	0%		0%	0%	0%	0%										
7:15 - 8:15 AM	TOTAL		242	487	128		44	326	299	1	1			1,528						0.825
	TRUCK		0%	0%	0%		0%	0%	0%	0%	0%									
7:30 - 8:30 AM	TOTAL		283	537	151		58	343	343	1	1			1,717						0.927
	TRUCK		0%	0%	0%		0%	0%	0%	0%	0%									
7:45 - 8:45 AM	TOTAL		284	496	140		62	304	319	1	1			1,607						0.868
	TRUCK		0%	0%	0%		0%	0%	0%	0%	0%									
8:00 - 9:00 AM	TOTAL		287	434	134		69	260	319		1			1,504						0.812
	TRUCK		0%	0%	0%		0%	0%	0%		0%									
4:00 - 5:00 PM	TOTAL		391	114	77		41	79	660					1,362						0.858
	TRUCK		0%	0%	0%		0%	0%	0%											
4:15 - 5:15 PM	TOTAL		422	134	84		47	88	697					1,472						0.927
	TRUCK		0%	0%	0%		0%	0%	0%											
4:30 - 5:30 PM	TOTAL		453	153	80		56	98	725					1,565						0.895
	TRUCK		0%	0%	0%		0%	0%	0%											
4:45 - 5:45 PM	TOTAL		476	159	93		68	102	790					1,688						0.909
	TRUCK		0%	0%	0%		0%	0%	0%											
5:00 - 6:00 PM	TOTAL		469	163	107		74	107	800					1,720						0.927
	TRUCK		0%	0%	0%		0%	0%	0%											

- 1: NY 52 EB - Left
2: NY 52 EB - Thru
3: NY 52 EB - Right
4: TSP SB Ramp NB - Left
5: TSP SB Ramp NB - Thru
6: TSP SB Ramp NB - Right

- 7: NY 52 WB - Left
8: NY 52 WB - Thru
9: NY 52 WB - Right
10: NYSDOT SB - Left
11: NYSDOT SB - Thru
12: NYSDOT SB - Right

- A:
B:
C:
D:

DATE:

2/15/2017

JOB NO:

17039

PERIOD:

7:00 - 9:00 AM
4:00 - 6:00 PM

NAME:

J.RAP & Associates, Inc.

LOCATION:

NY 52 & Taconic State Parkway Northbound Ramp/Park and Ride Driveway

INT #:

2

PEAK HOUR MOVEMENTS & % HEAVY
VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
		17	7	5	22	163	28	97	10	91	25	394	10	869						
7:00 - 8:00 AM	TOTAL	17	7	5	22	163	28	97	10	91	25	394	10	869						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						0.696
7:15 - 8:15 AM	TOTAL	22	10	8	24	228	35	130	17	114	29	474	13	1,104						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						0.839
7:30 - 8:30 AM	TOTAL	20	12	8	25	275	42	145	25	114	37	522	10	1,235						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						0.93
7:45 - 8:45 AM	TOTAL	21	11	8	23	284	40	129	23	95	32	474	9	1,149						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						0.865
8:00 - 9:00 AM	TOTAL	16	12	6	22	294	41	126	25	81	31	437	8	1,099						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						0.828
4:00 - 5:00 PM	TOTAL	27	19	18	7	271	154	373	3	237	30	339	3	1,481						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						0.855
4:15 - 5:15 PM	TOTAL	35	20	20	10	306	153	421	5	244	31	329	7	1,581						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						0.913
4:30 - 5:30 PM	TOTAL	39	24	19	16	321	172	462	16	273	35	322	8	1,707						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						0.891
4:45 - 5:45 PM	TOTAL	41	23	16	17	353	174	501	22	273	44	350	10	1,824						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						0.901
5:00 - 6:00 PM	TOTAL	41	29	16	17	362	164	490	24	276	50	376	11	1,856						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						0.917

- 1: Park and Ride Dwy SB - Right

2: Park and Ride Dwy SB - Thru

3: Park and Ride Dwy SB - Left

4: NY 52 EB - Left

5: NY 52 EB - Thru

6: NY 52 EB - Right
- 7: TSP NB Ramp NB - Left

8: TSP NB Ramp NB - Thru

9: TSP NB Ramp NB - Right

10: NY 52 WB - Left

11: NY 52 WB - Thru

12: NY 52 WB - Right
- A:

B:

C:

D:

DATE:

2/16/2017

JOB NO:

17039

PERIOD:

7:00 - 9:00 AM
4:00 - 6:00 PM

NAME:

J.RAP & Associates, Inc.

LOCATION:

NY 52 & Carpenter Road

INT #:

3

PEAK HOUR MOVEMENTS & % HEAVY
VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL	18	436	263	29	49	16							811						
	TRUCK	0%	0%	0%	0%	0%	0%													0.901
7:15 - 8:15 AM	TOTAL	15	456	286	26	47	12							842						
	TRUCK	0%	0%	0%	0%	0%	0%													0.936
7:30 - 8:30 AM	TOTAL	16	445	313	29	60	13							876						
	TRUCK	0%	0%	0%	0%	0%	0%													0.88
7:45 - 8:45 AM	TOTAL	12	444	335	29	64	15							899						
	TRUCK	0%	0%	0%	0%	0%	0%													0.903
8:00 - 9:00 AM	TOTAL	17	448	342	31	61	16							915						
	TRUCK	0%	0%	0%	0%	0%	0%													0.919
4:00 - 5:00 PM	TOTAL	26	386	465	98	38	12							1,025						
	TRUCK	0%	0%	0%	0%	0%	0%													0.893
4:15 - 5:15 PM	TOTAL	28	385	476	109	45	15							1,058						
	TRUCK	0%	0%	0%	0%	0%	0%													0.922
4:30 - 5:30 PM	TOTAL	31	390	470	113	57	20							1,081						
	TRUCK	0%	0%	0%	0%	0%	0%													0.942
4:45 - 5:45 PM	TOTAL	32	389	460	121	64	25							1,091						
	TRUCK	0%	0%	0%	0%	0%	0%													0.95
5:00 - 6:00 PM	TOTAL	34	369	476	120	65	27							1,091						
	TRUCK	0%	0%	0%	0%	0%	0%													0.95

- 1: NY 52 WB - Right
- 2: NY 52 WB - Thru
- 3: NY 52 EB - Thru
- 4: NY 52 EB - Left
- 5: Carpenter SB - Right
- 6: Carpenter SB - Left

- 7:
- 8:
- 9:
- 10:
- 11:
- 12:

- A:
- B:
- C:
- D:

DATE:

2/15/2017

JOB NO:

17039

PERIOD:

7:00 - 9:00 AM
4:00 - 6:00 PM

NAME:

J.RAP & Associates, Inc.

LOCATION:

NY 52 & NY 216

INT #:

4

PEAK HOUR MOVEMENTS & % HEAVY
VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL	5	226	172	141	286	10							840						
	TRUCK	0%	0%	0%	0%	0%	0%													0.864
7:15 - 8:15 AM	TOTAL	6	240	191	149	296	14							896						
	TRUCK	0%	0%	0%	0%	0%	0%													0.922
7:30 - 8:30 AM	TOTAL	9	253	200	164	294	15							935						
	TRUCK	0%	0%	0%	0%	0%	0%													0.958
7:45 - 8:45 AM	TOTAL	11	260	193	160	277	16							917						
	TRUCK	0%	0%	0%	0%	0%	0%													0.94
8:00 - 9:00 AM	TOTAL	10	239	177	152	294	14							886						
	TRUCK	0%	0%	0%	0%	0%	0%													0.908
4:00 - 5:00 PM	TOTAL	8	196	200	202	156	9							771						
	TRUCK	0%	0%	0%	0%	0%	0%													0.936
4:15 - 5:15 PM	TOTAL	18	208	208	200	154	10							798						
	TRUCK	0%	0%	0%	0%	0%	0%													0.937
4:30 - 5:30 PM	TOTAL	20	231	206	223	166	11							857						
	TRUCK	0%	0%	0%	0%	0%	0%													0.92
4:45 - 5:45 PM	TOTAL	23	233	194	244	168	11							873						
	TRUCK	0%	0%	0%	0%	0%	0%													0.937
5:00 - 6:00 PM	TOTAL	34	222	200	271	169	11							907						
	TRUCK	0%	0%	0%	0%	0%	0%													0.949

- 1: NY 52 WB - Right
- 2: NY 52 WB - Thru
- 3: NY 52 EB - Thru
- 4: NY 52 EB - Left
- 5: NY 219 SB - Right
- 6: NY 219 SB - Left

- 7:
- 8:
- 9:
- 10:
- 11:
- 12:

- A:
- B:
- C:
- D:

DATE:

2/16/2017

PERIOD:

7:00 - 9:00 AM
4:00 - 6:00 PM

LOCATION:

NY 52 & Stormville Mountain Road (West Intersection)

JOB NO:

17039

NAME:

J.RAP & Associates, Inc.

INT #:

7

ENTER COUNT DATA ON THIS PAGE

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL	3	17											99						
	TRUCK																			
7:15 - 7:30 AM	TOTAL	1	17											112						
	TRUCK																			
7:30 - 7:45 AM	TOTAL	4	24											112						
	TRUCK																			
7:45 - 8:00 AM	TOTAL	2	23											119						
	TRUCK																			
8:00 - 8:15 AM	TOTAL	2	27											116						
	TRUCK																			
8:15 - 8:30 AM	TOTAL	4	28											118						
	TRUCK																			
8:30 - 8:45 AM	TOTAL	4	19											106						
	TRUCK																			
8:45 - 9:00 AM	TOTAL	3	18											95						
	TRUCK																			
4:00 - 4:15 PM	TOTAL	6	68											120						
	TRUCK																			
4:15 - 4:30 PM	TOTAL	4	60											114						
	TRUCK																			
4:30 - 4:45 PM	TOTAL	4	70											116						
	TRUCK																			
4:45 - 5:00 PM	TOTAL	3	75											129						
	TRUCK																			
5:00 - 5:15 PM	TOTAL	8	70											124						
	TRUCK																			
5:15 - 5:30 PM	TOTAL	4	70											113						
	TRUCK																			
5:30 - 5:45 PM	TOTAL	4	97											146						
	TRUCK																			
5:45 - 6:00 PM	TOTAL	5	105											145						
	TRUCK																			

DATE:

2/16/2017

JOB NO:

17039

PERIOD:

7:00 - 9:00 AM
4:00 - 6:00 PM

NAME:

J.RAP & Associates, Inc.

LOCATION:

NY 52 & Stormville Mountain Road (West Intersection)

INT #:

7

PEAK HOUR MOVEMENTS & % HEAVY
VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL	10	81	259	10	51	31							442						
	TRUCK	0%	0%	0%	0%	0%	0%													0.929
7:15 - 8:15 AM	TOTAL	9	91	268	10	50	31							459						
	TRUCK	0%	0%	0%	0%	0%	0%													0.964
7:30 - 8:30 AM	TOTAL	12	102	269	9	50	23							465						
	TRUCK	0%	0%	0%	0%	0%	0%													0.977
7:45 - 8:45 AM	TOTAL	12	97	259	8	61	22							459						
	TRUCK	0%	0%	0%	0%	0%	0%													0.964
8:00 - 9:00 AM	TOTAL	13	92	251	7	49	23							435						
	TRUCK	0%	0%	0%	0%	0%	0%													0.922
4:00 - 5:00 PM	TOTAL	17	273	132	12	28	17							479						0.928
	TRUCK	0%	0%	0%	0%	0%	0%													
4:15 - 5:15 PM	TOTAL	19	275	137	13	26	13							483						0.936
	TRUCK	0%	0%	0%	0%	0%	0%													
4:30 - 5:30 PM	TOTAL	19	285	127	14	23	14							482						0.934
	TRUCK	0%	0%	0%	0%	0%	0%													
4:45 - 5:45 PM	TOTAL	19	312	133	19	20	9							512						0.877
	TRUCK	0%	0%	0%	0%	0%	0%													
5:00 - 6:00 PM	TOTAL	21	342	124	17	16	8							528						0.904
	TRUCK	0%	0%	0%	0%	0%	0%													

- 1: NY 52 WB - Right

2: NY 52 WB - Thru

3: NY 52 EB - Thru

4: NY 52 EB - Left

5: Stormville Mtn SB - Right

6: Stormville Mtn SB - Left
- 7:

8:

9:

10:

11:

12:
- A:

B:

C:

D:

DATE:	2/16/2017
PERIOD:	7:00 - 9:00 AM 4:00 - 6:00 PM
LOCATION:	NY 52 & Leetown Road

JOB NO:	17039
NAME:	J.RAP & Associates, Inc.
INT #:	8

ENTER COUNT DATA ON THIS PAGE

[illegible]

DATE:

2/16/2017

JOB NO:

17039

PERIOD:

7:00 - 9:00 AM
4:00 - 6:00 PM

NAME:

J.RAP & Associates, Inc.

LOCATION:

NY 52 & Leetown Road

INT #:

8

PEAK HOUR MOVEMENTS & % HEAVY
VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL	9	67	290	28	10	79							483						
	TRUCK	0%	0%	0%	0%	0%	0%													0.875
7:15 - 8:15 AM	TOTAL	9	76	284	24	15	75							483						
	TRUCK	0%	0%	0%	0%	0%	0%													0.875
7:30 - 8:30 AM	TOTAL	7	90	279	19	16	66							477						
	TRUCK	0%	0%	0%	0%	0%	0%													0.864
7:45 - 8:45 AM	TOTAL	10	100	281	17	16	68							492						
	TRUCK	0%	0%	0%	0%	0%	0%													0.891
8:00 - 9:00 AM	TOTAL	10	107	264	15	16	65							477						
	TRUCK	0%	0%	0%	0%	0%	0%													0.962
4:00 - 5:00 PM	TOTAL	34	311	106	20	40	33							544						
	TRUCK	0%	0%	0%	0%	0%	0%													0.919
4:15 - 5:15 PM	TOTAL	33	306	105	24	44	35							547						
	TRUCK	0%	0%	0%	0%	0%	0%													0.924
4:30 - 5:30 PM	TOTAL	35	347	95	24	33	30							564						
	TRUCK	0%	0%	0%	0%	0%	0%													0.855
4:45 - 5:45 PM	TOTAL	36	390	92	24	35	27							604						
	TRUCK	0%	0%	0%	0%	0%	0%													0.91
5:00 - 6:00 PM	TOTAL	25	395	91	21	34	30							596						
	TRUCK	0%	0%	0%	0%	0%	0%													0.898

- 1: NY 52 WB - Left
- 2: NY 52 WB - Thru
- 3: NY 52 EB - Thru
- 4: NY 52 EB - Right
- 5: Leetown NB - Left
- 6: Leetown NB - Right

- 7:
- 8:
- 9:
- 10:
- 11:
- 12:
- A:
- B:
- C:
- D:

DATE:

2/16/2017

PERIOD:

7:00 - 9:00 AM
4:00 - 6:00 PM

LOCATION:

NY 52 & Stormville Mountain Road (East Intersection)

ENTER COUNT DATA ON THIS PAGE

JOB NO:

17039

NAME:

J.RAP & Associates, Inc.

INT #:

9

ENTER COUNT DATA ON THIS PAGE

[illegible]

DATE:

2/16/2017

JOB NO:

17039

PERIOD:

7:00 - 9:00 AM
4:00 - 6:00 PM

NAME:

J.RAP & Associates, Inc.

LOCATION:

NY 52 & Stormville Mountain Road (East Intersection)

INT #:

9

PEAK HOUR MOVEMENTS & % HEAVY
VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL	8	86	374	8	7	31							514						
	TRUCK	0%	0%	0%	0%	0%	0%													0.818
7:15 - 8:15 AM	TOTAL	8	99	364	9	9	31							520						
	TRUCK	0%	0%	0%	0%	0%	0%													0.828
7:30 - 8:30 AM	TOTAL	9	111	349	11	9	25							514						
	TRUCK	0%	0%	0%	0%	0%	0%													0.818
7:45 - 8:45 AM	TOTAL	10	119	320	8	9	24							490						
	TRUCK	0%	0%	0%	0%	0%	0%													0.78
8:00 - 9:00 AM	TOTAL	8	111	295	6	11	25							456						
	TRUCK	0%	0%	0%	0%	0%	0%													0.927
4:00 - 5:00 PM	TOTAL	26	375	113	5	22	21							562						0.962
	TRUCK	0%	0%	0%	0%	0%	0%													
4:15 - 5:15 PM	TOTAL	21	375	111	4	17	15							543						0.93
	TRUCK	0%	0%	0%	0%	0%	0%													
4:30 - 5:30 PM	TOTAL	19	407	114	4	14	14							572						0.831
	TRUCK	0%	0%	0%	0%	0%	0%													
4:45 - 5:45 PM	TOTAL	14	437	119	3	11	12							596						0.866
	TRUCK	0%	0%	0%	0%	0%	0%													
5:00 - 6:00 PM	TOTAL	7	436	120	4	9	9							585						0.85
	TRUCK	0%	0%	0%	0%	0%	0%													

- 1: NY 52 WB - Right

2: NY 52 WB - Thru

3: NY 52 EB - Thru

4: NY 52 EB - Left

5: Stormville Mtn SB - Right

6: Stormville Mtn SB - Left
- 7:

8:

9:

10:

11:

12:
- A:

B:

C:

D:

DATE:

2/16/2017

JOB NO:

17039

PERIOD:

7:00 - 9:00 AM
4:00 - 6:00 PM

NAME:

J.RAP & Associates, Inc.

LOCATION:

NY 52 & Milltown Road

INT #:

10

PEAK HOUR MOVEMENTS & % HEAVY
VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL	34	101	415	6	5	80							641						
	TRUCK	0%	0%	0%	0%	0%	0%													0.911
7:15 - 8:15 AM	TOTAL	34	112	398	5	6	76							631						
	TRUCK	0%	0%	0%	0%	0%	0%													0.896
7:30 - 8:30 AM	TOTAL	34	127	358	7	6	77							609						
	TRUCK	0%	0%	0%	0%	0%	0%													0.865
7:45 - 8:45 AM	TOTAL	36	137	339	8	7	71							598						
	TRUCK	0%	0%	0%	0%	0%	0%													0.849
8:00 - 9:00 AM	TOTAL	31	120	333	10	8	66							568						
	TRUCK	0%	0%	0%	0%	0%	0%													0.922
4:00 - 5:00 PM	TOTAL	83	425	140	7	4	73							732						
	TRUCK	0%	0%	0%	0%	0%	0%													0.929
4:15 - 5:15 PM	TOTAL	82	409	140	8	4	76							719						
	TRUCK	0%	0%	0%	0%	0%	0%													0.912
4:30 - 5:30 PM	TOTAL	94	439	146	6	5	83							773						
	TRUCK	0%	0%	0%	0%	0%	0%													0.812
4:45 - 5:45 PM	TOTAL	92	456	133	2	6	72							761						
	TRUCK	0%	0%	0%	0%	0%	0%													0.799
5:00 - 6:00 PM	TOTAL	96	457	131	2	6	64							756						
	TRUCK	0%	0%	0%	0%	0%	0%													0.794

- 1: NY 52 WB - Left
- 2: NY 52 WB - Thru
- 3: NY 52 EB - Thru
- 4: NY 52 EB - Right
- 5: Milltown NB - Left
- 6: Milltown NB - Right

- 7:
- 8:
- 9:
- 10:
- 11:
- 12:

- A:
- B:
- C:
- D:

APPENDIX D

CAPACITY ANALYSES

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2017-EX-AM

03/17/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	0	151	0	58	0	283	537	343	343	1
Future Volume (vph)	1	0	0	151	0	58	0	283	537	343	343	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.912				
Flt Protected		0.950		0.950						0.950		
Satd. Flow (prot)	0	1651	0	1769	1635	0	0	1657	0	1668	1716	0
Flt Permitted		0.717		0.757						0.091		
Satd. Flow (perm)	0	1246	0	1410	1635	0	0	1657	0	160	1716	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					610			124				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	1	0	0	162	0	62	0	304	577	369	369	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	162	62	0	0	881	0	369	370	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2017-EX-AM
03/17/2017

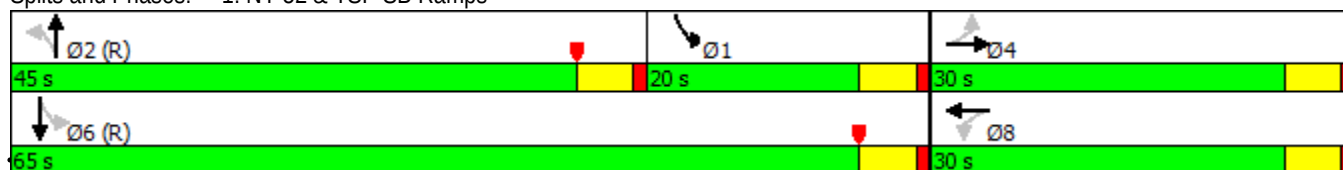


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		45.0	45.0		20.0	65.0	
Total Split (%)	31.6%	31.6%		31.6%	31.6%		47.4%	47.4%		21.1%	68.4%	
Maximum Green (s)	25.0	25.0		25.0	25.0		40.0	40.0		15.0	60.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio		0.00		0.67	0.08			0.97		1.05	0.30	
Control Delay		29.0		50.0	0.2			44.9		89.1	7.0	
Queue Delay		0.0		0.0	0.0			0.0		33.9	1.1	
Total Delay		29.0		50.0	0.2			44.9		123.0	8.1	
Queue Length 50th (ft)		1		92	0			441		~194	125	
Queue Length 95th (ft)		5		148	0			#798		#393	148	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)		327		371	879			910		353	1241	
Starvation Cap Reductn		0		0	0			0		221	618	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.00		0.44	0.07			0.97		2.80	0.59	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: NY 52 & TSP SB Ramps



PEAK HOUR 7:30-8:30
JMC 17039

Synchro 10 Report
Page 2

HCM 6th Signalized Intersection Summary

1: NY 52 & TSP SB Ramps

2017-EX-AM

03/17/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	0	151	0	58	0	283	537	343	343	1
Future Volume (veh/h)	1	0	0	151	0	58	0	283	537	343	343	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	1	0	0	162	0	62	0	304	577	369	369	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	206	0	0	274	0	216	0	245	466	586	1352	4
Arrive On Green	0.14	0.00	0.00	0.14	0.00	0.14	0.00	0.42	0.42	0.48	1.00	1.00
Sat Flow, veh/h	960	0	0	1369	0	1592	0	583	1106	1787	1782	5
Grp Volume(v), veh/h	1	0	0	162	0	62	0	0	881	369	0	370
Grp Sat Flow(s),veh/h/ln	960	0	0	1369	0	1592	0	0	1689	1787	0	1787
Q Serve(g_s), s	0.1	0.0	0.0	6.6	0.0	3.3	0.0	0.0	40.0	9.5	0.0	0.0
Cycle Q Clear(g_c), s	3.4	0.0	0.0	10.0	0.0	3.3	0.0	0.0	40.0	9.5	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	206	0	0	274	0	216	0	0	711	586	0	1356
V/C Ratio(X)	0.00	0.00	0.00	0.59	0.00	0.29	0.00	0.00	1.24	0.63	0.00	0.27
Avail Cap(c_a), veh/h	371	0	0	448	0	419	0	0	711	586	0	1356
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.82	0.00	0.82
Uniform Delay (d), s/veh	38.4	0.0	0.0	39.6	0.0	36.9	0.0	0.0	27.5	19.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.0	0.0	0.7	0.0	0.0	119.2	1.8	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.8	0.0	1.3	0.0	0.0	37.9	4.8	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.5	0.0	0.0	41.6	0.0	37.6	0.0	0.0	146.7	21.1	0.0	0.4
LnGrp LOS	D	A	A	D	A	D	A	A	F	C	A	A
Approach Vol, veh/h	1				224				881			
Approach Delay, s/veh	38.5				40.5				146.7			
Approach LOS	D				D				F			
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	32.1	45.0		17.9		77.1		17.9				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	15.0	40.0		25.0		60.0		25.0				
Max Q Clear Time (g_c+I1), s	11.5	42.0		5.4		2.0		12.0				
Green Ext Time (p_c), s	0.6	0.0		0.0		1.9		0.9				
Intersection Summary												
HCM 6th Ctrl Delay	79.3											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

1: NY 52 & TSP SB Ramps

2017-EX-AM
03/17/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↘			↕		↗	↘	
Traffic Volume (veh/h)	1	0	0	151	0	58	0	283	537	343	343	1
Future Volume (veh/h)	1	0	0	151	0	58	0	283	537	343	343	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	1	0	0	162	0	62	0	304	577	369	369	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	206	0	0	274	0	216	0	245	466	586	1352	4
Arrive On Green	0.14	0.00	0.00	0.14	0.00	0.14	0.00	0.42	0.42	0.48	1.00	1.00
Sat Flow, veh/h	960	0	0	1369	0	1592	0	583	1106	1787	1782	5
Grp Volume(v), veh/h	1	0	0	162	0	62	0	0	881	369	0	370
Grp Sat Flow(s),veh/h/ln	960	0	0	1369	0	1592	0	0	1689	1787	0	1787
Q Serve(g_s), s	0.1	0.0	0.0	6.6	0.0	3.3	0.0	0.0	40.0	9.5	0.0	0.0
Cycle Q Clear(g_c), s	3.4	0.0	0.0	10.0	0.0	3.3	0.0	0.0	40.0	9.5	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	206	0	0	274	0	216	0	0	711	586	0	1356
V/C Ratio(X)	0.00	0.00	0.00	0.59	0.00	0.29	0.00	0.00	1.24	0.63	0.00	0.27
Avail Cap(c_a), veh/h	371	0	0	448	0	419	0	0	711	586	0	1356
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.82	0.00	0.82
Uniform Delay (d), s/veh	38.4	0.0	0.0	39.6	0.0	36.9	0.0	0.0	27.5	19.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.0	0.0	0.7	0.0	0.0	119.2	1.8	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.8	0.0	1.3	0.0	0.0	37.9	4.8	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.5	0.0	0.0	41.6	0.0	37.6	0.0	0.0	146.7	21.1	0.0	0.4
LnGrp LOS	D	A	A	D	A	D	A	A	F	C	A	A
Approach Vol, veh/h	1			224			881			739		
Approach Delay, s/veh	38.5			40.5			146.7			10.7		
Approach LOS	D			D			F			B		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	32.1	45.0		17.9		77.1		17.9				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	15.0	40.0		25.0		60.0		25.0				
Max Q Clear Time (g_c+1), s	11.5	42.0		5.4		2.0		12.0				
Green Ext Time (p_c), s	0.6	0.0		0.0		1.9		0.9				

Intersection Summary

HCM 6th Ctrl Delay 79.3
HCM 6th LOS E

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2017-EX-AM

03/17/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	18	20	145	25	114	25	275	42	37	522	10
Future Volume (vph)	8	18	20	145	25	114	25	275	42	37	522	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941				0.850		0.980			0.997	
Flt Protected		0.991			0.959		0.950			0.950		
Satd. Flow (prot)	0	1988	0	0	1744	1546	1693	1719	0	1676	1721	0
Flt Permitted		0.991			0.959		0.314			0.496		
Satd. Flow (perm)	0	1988	0	0	1744	1546	560	1719	0	875	1721	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22				138		8			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	9	19	22	156	27	123	27	296	45	40	561	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	183	123	27	341	0	40	572	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT	NYS	DOT		NYS	DOT	
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2017-EX-AM

03/17/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	15.0	15.0		20.0	20.0	20.0	30.0	30.0		30.0	30.0	
Total Split (%)	15.8%	15.8%		21.1%	21.1%	21.1%	31.6%	31.6%		31.6%	31.6%	
Maximum Green (s)	10.0	10.0		15.0	15.0	15.0	25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.29			0.65	0.34	0.06	0.34		0.07	0.55	
Control Delay		30.9			47.2	7.1	3.3	8.7		10.0	18.7	
Queue Delay		0.1			0.0	0.0	0.0	0.4		0.0	0.1	
Total Delay		31.0			47.2	7.1	3.3	9.1		10.0	18.8	
Queue Length 50th (ft)		16			105	0	2	63		9	186	
Queue Length 95th (ft)		51			162	36	m3	m60		28	#490	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		228			310	388	747	991		922	1037	
Starvation Cap Reductn		0			0	0	0	289		0	0	
Spillback Cap Reductn		12			0	0	0	0		0	45	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.23			0.59	0.32	0.04	0.49		0.04	0.58	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 60

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NY 52 & TSP NB Ramps



PEAK HOUR 7:30-8:30
JMC 17039

Synchro 10 Report
Page 6

HCM 6th Signalized Intersection Summary
2: NY 52 & TSP NB Ramps

2017-EX-AM

03/17/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	8	18	20	145	25	114	25	275	42	37	522	10
Future Volume (veh/h)	8	18	20	145	25	114	25	275	42	37	522	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	9	19	22	156	27	123	27	296	45	40	561	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	12	26	30	193	33	200	753	331	50	841	464	9
Arrive On Green	0.03	0.03	0.03	0.13	0.13	0.13	0.49	0.28	0.28	0.42	0.26	0.26
Sat Flow, veh/h	354	747	865	1534	266	1590	1847	1568	238	1804	1764	35
Grp Volume(v), veh/h	50	0	0	183	0	123	27	0	341	40	0	572
Grp Sat Flow(s),veh/h/ln	1966	0	0	1800	0	1590	1847	0	1806	1804	0	1799
Q Serve(g_s), s	2.4	0.0	0.0	9.4	0.0	7.0	0.0	0.0	17.2	0.0	0.0	25.0
Cycle Q Clear(g_c), s	2.4	0.0	0.0	9.4	0.0	7.0	0.0	0.0	17.2	0.0	0.0	25.0
Prop In Lane	0.18		0.44	0.85		1.00	1.00		0.13	1.00		0.02
Lane Grp Cap(c), veh/h	67	0	0	226	0	200	753	0	381	841	0	473
V/C Ratio(X)	0.75	0.00	0.00	0.81	0.00	0.62	0.04	0.00	0.90	0.05	0.00	1.21
Avail Cap(c_a), veh/h	207	0	0	284	0	251	753	0	475	841	0	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.17	0.00	0.17	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.5	0.0	0.0	40.4	0.0	39.4	15.4	0.0	33.2	15.9	0.0	35.0
Incr Delay (d2), s/veh	15.0	0.0	0.0	13.0	0.0	3.1	0.0	0.0	6.1	0.0	0.0	112.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	4.9	0.0	2.9	0.3	0.0	7.1	0.5	0.0	24.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	0.0	0.0	53.4	0.0	42.4	15.4	0.0	39.3	16.0	0.0	147.1
LnGrp LOS	E	A	A	D	A	D	B	A	D	B	A	F
Approach Vol, veh/h	50			306			368			612		
Approach Delay, s/veh	60.5			49.0			37.5			138.6		
Approach LOS	E			D			D			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	44.8	25.0		8.2	39.8	30.0		16.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	25.0	25.0		10.0	25.0	25.0		15.0				
Max Q Clear Time (g_c+I1), s	2.0	19.2		4.4	2.0	27.0		11.4				
Green Ext Time (p_c), s	0.1	0.8		0.0	0.0	0.0		0.5				
Intersection Summary												
HCM 6th Ctrl Delay	87.3											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2017-EX-AM
03/17/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	8	18	20	145	25	114	25	275	42	37	522	10
Future Volume (veh/h)	8	18	20	145	25	114	25	275	42	37	522	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	9	19	22	156	27	123	27	296	45	40	561	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	12	26	30	193	33	200	753	331	50	841	464	9
Arrive On Green	0.03	0.03	0.03	0.13	0.13	0.13	0.49	0.28	0.28	0.42	0.26	0.26
Sat Flow, veh/h	354	747	865	1534	266	1590	1847	1568	238	1804	1764	35
Grp Volume(v), veh/h	50	0	0	183	0	123	27	0	341	40	0	572
Grp Sat Flow(s),veh/h/ln	1966	0	0	1800	0	1590	1847	0	1806	1804	0	1799
Q Serve(g_s), s	2.4	0.0	0.0	9.4	0.0	7.0	0.0	0.0	17.2	0.0	0.0	25.0
Cycle Q Clear(g_c), s	2.4	0.0	0.0	9.4	0.0	7.0	0.0	0.0	17.2	0.0	0.0	25.0
Prop In Lane	0.18		0.44	0.85		1.00	1.00		0.13	1.00		0.02
Lane Grp Cap(c), veh/h	67	0	0	226	0	200	753	0	381	841	0	473
V/C Ratio(X)	0.75	0.00	0.00	0.81	0.00	0.62	0.04	0.00	0.90	0.05	0.00	1.21
Avail Cap(c_a), veh/h	207	0	0	284	0	251	753	0	475	841	0	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.17	0.00	0.17	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.5	0.0	0.0	40.4	0.0	39.4	15.4	0.0	33.2	15.9	0.0	35.0
Incr Delay (d2), s/veh	15.0	0.0	0.0	13.0	0.0	3.1	0.0	0.0	6.1	0.0	0.0	112.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	4.9	0.0	2.9	0.3	0.0	7.1	0.5	0.0	24.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	0.0	0.0	53.4	0.0	42.4	15.4	0.0	39.3	16.0	0.0	147.1
LnGrp LOS	E	A	A	D	A	D	B	A	D	B	A	F
Approach Vol, veh/h	50			306			368			612		
Approach Delay, s/veh	60.5			49.0			37.5			138.6		
Approach LOS	E			D			D			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	44.8	25.0		8.2	39.8	30.0		16.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	25.0	25.0		10.0	25.0	25.0		15.0				
Max Q Clear Time (g_c+12, s)	19.2	19.2		4.4	2.0	27.0		11.4				
Green Ext Time (p_c), s	0.1	0.8		0.0	0.0	0.0		0.5				

Intersection Summary

HCM 6th Ctrl Delay 87.3
HCM 6th LOS F

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

2017-EX-AM
03/17/2017



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	15	60	29	349	528	19
Future Volume (vph)	15	60	29	349	528	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.995	
Flt Protected	0.950			0.996		
Satd. Flow (prot)	1780	1592	0	1802	1778	0
Flt Permitted	0.950			0.996		
Satd. Flow (perm)	1780	1592	0	1802	1778	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	17	68	33	397	600	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	68	0	430	622	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

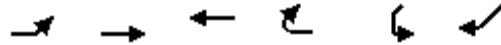
Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection							
Int Delay, s/veh	1.3						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	15	60	29	349	528	19	
Future Vol, veh/h	15	60	29	349	528	19	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	88	88	88	88	88	88	
Heavy Vehicles, %	0	0	0	6	6	0	
Mvmt Flow	17	68	33	397	600	22	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1074	611	622	0	-	0	
Stage 1	611	-	-	-	-	-	
Stage 2	463	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	312	532	969	-	-	-	
Stage 1	625	-	-	-	-	-	
Stage 2	707	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	298	532	969	-	-	-	
Mov Cap-2 Maneuver	298	-	-	-	-	-	
Stage 1	598	-	-	-	-	-	
Stage 2	707	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	13.8	0.7		0			
HCM LOS	B						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	969	-	298	532	-	-	
HCM Lane V/C Ratio	0.034	-	0.057	0.128	-	-	
HCM Control Delay (s)	8.8	0	17.8	12.8	-	-	
HCM Lane LOS	A	A	C	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.2	0.4	-	-	

Intersection							
Int Delay, s/veh	1.3						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	15	60	29	349	528	19	
Future Vol, veh/h	15	60	29	349	528	19	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	88	88	88	88	88	88	
Heavy Vehicles, %	0	0	0	6	6	0	
Mvmt Flow	17	68	33	397	600	22	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1074	611	622	0	-	0	
Stage 1	611	-	-	-	-	-	
Stage 2	463	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	312	532	969	-	-	-	
Stage 1	625	-	-	-	-	-	
Stage 2	707	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	298	532	969	-	-	-	
Mov Cap-2 Maneuver	298	-	-	-	-	-	
Stage 1	598	-	-	-	-	-	
Stage 2	707	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	13.8	0.7		0			
HCM LOS	B						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	969	-	298	532	-	-	
HCM Lane V/C Ratio	0.034	-	0.057	0.128	-	-	
HCM Control Delay (s)	8.8	0	17.8	12.8	-	-	
HCM Lane LOS	A	A	C	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.2	0.4	-	-	



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	164	200	253	9	15	294
Future Volume (vph)	164	200	253	9	15	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)		1%	-1%		-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.996		0.872	
Flt Protected		0.978			0.998	
Satd. Flow (prot)	0	1744	1794	0	1583	0
Flt Permitted		0.978			0.998	
Satd. Flow (perm)	0	1744	1794	0	1583	0
Link Speed (mph)		45	45		55	
Link Distance (ft)		2481	2900		858	
Travel Time (s)		37.6	43.9		10.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	6%	6%	6%	6%	2%	2%
Adj. Flow (vph)	171	208	264	9	16	306
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	379	273	0	322	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		11	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.03	1.03
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	6					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	164	200	253	9	15	294
Future Vol, veh/h	164	200	253	9	15	294
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	-2	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	171	208	264	9	16	306
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	273	0	-	0	819	269
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	550	-
Critical Hdwy	4.16	-	-	-	6.02	6.02
Critical Hdwy Stg 1	-	-	-	-	5.02	-
Critical Hdwy Stg 2	-	-	-	-	5.02	-
Follow-up Hdwy	2.254	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1267	-	-	-	378	781
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	614	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1267	-	-	-	320	781
Mov Cap-2 Maneuver	-	-	-	-	320	-
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	614	-
Approach	EB		WB		SW	
HCM Control Delay, s	3.7		0		13.8	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBRSWLn1		
Capacity (veh/h)	1267	-	-	-	730	
HCM Lane V/C Ratio	0.135	-	-	-	0.441	
HCM Control Delay (s)	8.3	0	-	-	13.8	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.5	-	-	-	2.3	

Intersection						
Int Delay, s/veh	6					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	164	200	253	9	15	294
Future Vol, veh/h	164	200	253	9	15	294
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	-2	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	171	208	264	9	16	306
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	273	0	-	0	819	269
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	550	-
Critical Hdwy	4.16	-	-	-	6.02	6.02
Critical Hdwy Stg 1	-	-	-	-	5.02	-
Critical Hdwy Stg 2	-	-	-	-	5.02	-
Follow-up Hdwy	2.254	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1267	-	-	-	378	781
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	614	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1267	-	-	-	320	781
Mov Cap-2 Maneuver	-	-	-	-	320	-
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	614	-
Approach	EB		WB		SW	
HCM Control Delay, s	3.7		0		13.8	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBRSWLn1		
Capacity (veh/h)	1267	-	-	-	730	
HCM Lane V/C Ratio	0.135	-	-	-	0.441	
HCM Control Delay (s)	8.3	0	-	-	13.8	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.5	-	-	-	2.3	

Lanes, Volumes, Timings
5: NY 52 & Site Dwy A

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	197	278	0
Future Volume (vph)	0	0	0	197	278	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr t						
Flt Protected						
Satd. Flow (prot)	1900	0	0	1828	1791	0
Flt Permitted						
Satd. Flow (perm)	1900	0	0	1828	1791	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	5%	5%	0%
Adj. Flow (vph)	0	0	0	203	287	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	203	287	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

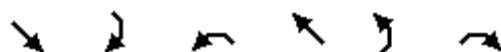
Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	197	278	0
Future Vol, veh/h	0	0	0	197	278	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	5	5	0
Mvmt Flow	0	0	0	203	287	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	490	287	287	0	-	0
Stage 1	287	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	541	757	1287	-	-	-
Stage 1	766	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	541	757	1287	-	-	-
Mov Cap-2 Maneuver	541	-	-	-	-	-
Stage 1	766	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1287	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	-	0	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	-	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	197	278	0
Future Vol, veh/h	0	0	0	197	278	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	5	5	0
Mvmt Flow	0	0	0	203	287	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	490	287	287	0	-	0
Stage 1	287	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	541	757	1287	-	-	-
Stage 1	766	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	541	757	1287	-	-	-
Mov Cap-2 Maneuver	541	-	-	-	-	-
Stage 1	766	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1287	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	-	0	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	-	-	-	

Lanes, Volumes, Timings
6: Site Dwy B & NY 52

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Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	278	0	0	197	0	0
Future Volume (vph)	278	0	0	197	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1764	0	0	1855	1900	0
Flt Permitted						
Satd. Flow (perm)	1764	0	0	1855	1900	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	5%	0%	0%	5%	0%	0%
Adj. Flow (vph)	287	0	0	203	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	287	0	0	203	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

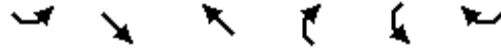
Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	278	0	0	197	0	0
Future Vol, veh/h	278	0	0	197	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	287	0	0	203	0	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	287	0	490	287
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	203	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1287	-	541	757
Stage 1	-	-	-	-	766	-
Stage 2	-	-	-	-	836	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1287	-	541	757
Mov Cap-2 Maneuver	-	-	-	-	541	-
Stage 1	-	-	-	-	766	-
Stage 2	-	-	-	-	836	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0		0	
HCM LOS					A	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	-	1287	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	0	-	-	-	
HCM Lane LOS	A	A	-	-	-	
HCM 95th %tile Q(veh)	-	0	-	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	278	0	0	197	0	0
Future Vol, veh/h	278	0	0	197	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	287	0	0	203	0	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	287	0	490	287
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	203	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1287	-	541	757
Stage 1	-	-	-	-	766	-
Stage 2	-	-	-	-	836	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1287	-	541	757
Mov Cap-2 Maneuver	-	-	-	-	541	-
Stage 1	-	-	-	-	766	-
Stage 2	-	-	-	-	836	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0		0	
HCM LOS					A	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	-	1287	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	0	-	-	-	
HCM Lane LOS	A	A	-	-	-	
HCM 95th %tile Q(veh)	-	0	-	-	-	

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

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Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	9	269	147	12	23	50
Future Volume (vph)	9	269	147	12	23	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990		0.907	
Flt Protected		0.998			0.985	
Satd. Flow (prot)	0	1745	1915	0	1815	0
Flt Permitted		0.998			0.985	
Satd. Flow (perm)	0	1745	1915	0	1815	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	5%	5%	0%	0%	0%
Adj. Flow (vph)	9	274	150	12	23	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	283	162	0	74	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	1.5					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	9	269	147	12	23	50
Future Vol, veh/h	9	269	147	12	23	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	5	5	0	0	0
Mvmt Flow	9	274	150	12	23	51
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	162	0	-	0	448	156
Stage 1	-	-	-	-	156	-
Stage 2	-	-	-	-	292	-
Critical Hdwy	4.1	-	-	-	5	5.5
Critical Hdwy Stg 1	-	-	-	-	4	-
Critical Hdwy Stg 2	-	-	-	-	4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1429	-	-	-	681	922
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	854	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1429	-	-	-	676	922
Mov Cap-2 Maneuver	-	-	-	-	676	-
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	854	-
Approach	SE		NW		SW	
HCM Control Delay, s	0.2		0		9.8	
HCM LOS					A	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1429	-	827	
HCM Lane V/C Ratio	-	-	0.006	-	0.09	
HCM Control Delay (s)	-	-	7.5	0	9.8	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	-	0.3	

Intersection						
Int Delay, s/veh	1.5					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	9	269	147	12	23	50
Future Vol, veh/h	9	269	147	12	23	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	5	5	0	0	0
Mvmt Flow	9	274	150	12	23	51
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	162	0	-	0	448	156
Stage 1	-	-	-	-	156	-
Stage 2	-	-	-	-	292	-
Critical Hdwy	4.1	-	-	-	5	5.5
Critical Hdwy Stg 1	-	-	-	-	4	-
Critical Hdwy Stg 2	-	-	-	-	4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1429	-	-	-	681	922
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	854	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1429	-	-	-	676	922
Mov Cap-2 Maneuver	-	-	-	-	676	-
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	854	-
Approach	SE		NW		SW	
HCM Control Delay, s	0.2		0		9.8	
HCM LOS					A	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1429	-	827	
HCM Lane V/C Ratio	-	-	0.006	-	0.09	
HCM Control Delay (s)	-	-	7.5	0	9.8	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	-	0.3	

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

2017-EX-AM
03/17/2017



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	23	66	279	19	7	128
Future Volume (vph)	23	66	279	19	7	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.900		0.990			
Flt Protected	0.987					0.997
Satd. Flow (prot)	1799	0	3308	0	0	1745
Flt Permitted	0.987					0.997
Satd. Flow (perm)	1799	0	3308	0	0	1745
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	27	77	324	22	8	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	104	0	346	0	0	157
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

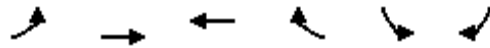
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	23	66	279	19	7	128
Future Vol, veh/h	23	66	279	19	7	128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	27	77	324	22	8	149
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	500	173	0	0	346	0
Stage 1	335	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	392	804	-	-	1186	-
Stage 1	581	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	389	804	-	-	1186	-
Mov Cap-2 Maneuver	389	-	-	-	-	-
Stage 1	577	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	11.8		0		0.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1186	-	630	-	-	
HCM Lane V/C Ratio	0.007	-	0.164	-	-	
HCM Control Delay (s)	8.1	0	11.8	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.6	-	-	

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	23	66	279	19	7	128
Future Vol, veh/h	23	66	279	19	7	128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	27	77	324	22	8	149
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	500	173	0	0	346	0
Stage 1	335	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	392	804	-	-	1186	-
Stage 1	581	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	389	804	-	-	1186	-
Mov Cap-2 Maneuver	389	-	-	-	-	-
Stage 1	577	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	11.8		0		0.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1186	-	630	-	-	
HCM Lane V/C Ratio	0.007	-	0.164	-	-	
HCM Control Delay (s)	8.1	0	11.8	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.6	-	-	

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

2017-EX-AM
03/17/2017



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	11	349	111	9	25	9
Future Volume (vph)	11	349	111	9	25	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990		0.964	
Flt Protected		0.999			0.965	
Satd. Flow (prot)	0	1795	1662	0	1900	0
Flt Permitted		0.999			0.965	
Satd. Flow (perm)	0	1795	1662	0	1900	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	13	426	135	11	30	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	439	146	0	41	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	349	111	9	25	9
Future Vol, veh/h	11	349	111	9	25	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	13	426	135	11	30	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	146	0	-	0	593	141
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	452	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1448	-	-	-	773	967
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	940	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1448	-	-	-	764	967
Mov Cap-2 Maneuver	-	-	-	-	764	-
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	940	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.2		0		9.7	
HCM LOS					A	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1448	-	-	-	809	
HCM Lane V/C Ratio	0.009	-	-	-	0.051	
HCM Control Delay (s)	7.5	0	-	-	9.7	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	349	111	9	25	9
Future Vol, veh/h	11	349	111	9	25	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	13	426	135	11	30	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	146	0	-	0	593	141
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	452	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1448	-	-	-	773	967
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	940	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1448	-	-	-	764	967
Mov Cap-2 Maneuver	-	-	-	-	764	-
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	940	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.2		0		9.7	
HCM LOS					A	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1448	-	-	-	809	
HCM Lane V/C Ratio	0.009	-	-	-	0.051	
HCM Control Delay (s)	7.5	0	-	-	9.7	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Lanes, Volumes, Timings
10: NY 52 & Milltown Road

2017-EX-AM
03/17/2017



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	77	358	7	34	127
Future Volume (vph)	6	77	358	7	34	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.875		0.997			
Flt Protected	0.996					0.990
Satd. Flow (prot)	1617	0	1798	0	0	1697
Flt Permitted	0.996					0.990
Satd. Flow (perm)	1617	0	1798	0	0	1697
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	5%	0%	0%	5%
Adj. Flow (vph)	7	89	411	8	39	146
Shared Lane Traffic (%)						
Lane Group Flow (vph)	96	0	419	0	0	185
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	77	358	7	34	127
Future Vol, veh/h	6	77	358	7	34	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	5	0	0	5
Mvmt Flow	7	89	411	8	39	146
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	639	415	0	0	419	0
Stage 1	415	-	-	-	-	-
Stage 2	224	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.1	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	476	657	-	-	1151	-
Stage 1	702	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	458	657	-	-	1151	-
Mov Cap-2 Maneuver	458	-	-	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	11.6		0		1.7	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1151	-	637	-	-	
HCM Lane V/C Ratio	0.034	-	0.15	-	-	
HCM Control Delay (s)	8.2	0	11.6	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-	

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	77	358	7	34	127
Future Vol, veh/h	6	77	358	7	34	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	5	0	0	5
Mvmt Flow	7	89	411	8	39	146
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	639	415	0	0	419	0
Stage 1	415	-	-	-	-	-
Stage 2	224	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.1	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	476	657	-	-	1151	-
Stage 1	702	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	458	657	-	-	1151	-
Mov Cap-2 Maneuver	458	-	-	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	11.6		0		1.7	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1151	-	637	-	-	
HCM Lane V/C Ratio	0.034	-	0.15	-	-	
HCM Control Delay (s)	8.2	0	11.6	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2017-EX-PM

03/17/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	107	0	74	0	469	163	107	800	0
Future Volume (vph)	0	0	0	107	0	74	0	469	163	107	800	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.965				
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1738	0	1769	1635	0	0	1714	0	1668	1715	0
Flt Permitted				0.757						0.320		
Satd. Flow (perm)	0	1738	0	1410	1635	0	0	1714	0	562	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					487			19				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	0	0	0	115	0	80	0	504	175	115	860	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	115	80	0	0	679	0	115	860	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2017-EX-PM

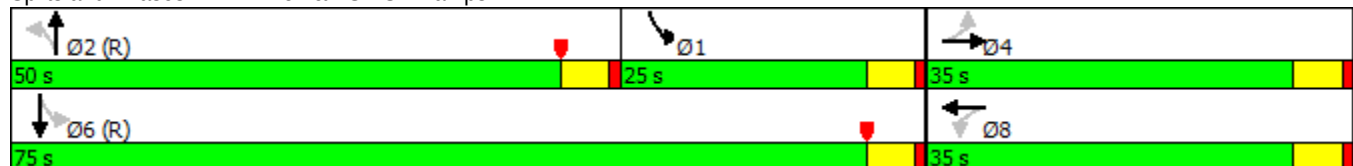
03/17/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0		50.0	50.0		25.0	75.0	
Total Split (%)	31.8%	31.8%		31.8%	31.8%		45.5%	45.5%		22.7%	68.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		45.0	45.0		20.0	70.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio				0.62	0.13			0.59		0.23	0.64	
Control Delay				59.2	0.4			13.3		5.2	11.6	
Queue Delay				0.0	0.0			19.8		0.0	4.6	
Total Delay				59.2	0.4			33.0		5.2	16.1	
Queue Length 50th (ft)				78	0			218		11	344	
Queue Length 95th (ft)				131	0			442		m33	753	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)				384	800			1159		706	1334	
Starvation Cap Reductn				0	0			0		0	392	
Spillback Cap Reductn				0	140			484		0	0	
Storage Cap Reductn				0	0			0		0	0	
Reduced v/c Ratio				0.30	0.12			1.01		0.16	0.91	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 20 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: NY 52 & TSP SB Ramps



HCM 6th Signalized Intersection Summary
1: NY 52 & TSP SB Ramps

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03/17/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	107	0	74	0	469	163	107	800	0
Future Volume (veh/h)	0	0	0	107	0	74	0	469	163	107	800	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	0	0	0	115	0	80	0	504	175	115	860	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	0	165	0	223	0	145	0	527	183	750	1462	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.39	0.39	0.76	1.00	0.00
Sat Flow, veh/h	0	1806	0	1720	0	1592	0	1340	465	1787	1788	0
Grp Volume(v), veh/h	0	0	0	115	0	80	0	0	679	115	860	0
Grp Sat Flow(s),veh/h/ln	0	1806	0	1720	0	1592	0	0	1805	1787	1788	0
Q Serve(g_s), s	0.0	0.0	0.0	7.2	0.0	5.3	0.0	0.0	40.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.2	0.0	5.3	0.0	0.0	40.2	0.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	0	165	0	223	0	145	0	0	711	750	1462	0
V/C Ratio(X)	0.00	0.00	0.00	0.52	0.00	0.55	0.00	0.00	0.96	0.15	0.59	0.00
Avail Cap(c_a), veh/h	0	492	0	534	0	434	0	0	738	750	1462	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.71	0.71	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	48.7	0.0	47.8	0.0	0.0	32.4	8.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.9	0.0	3.2	0.0	0.0	24.5	0.1	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.2	0.0	2.2	0.0	0.0	21.1	0.7	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	50.5	0.0	51.0	0.0	0.0	56.9	8.3	1.2	0.0
LnGrp LOS	A	A	A	D	A	D	A	A	E	A	A	A
Approach Vol, veh/h	0				195			679			975	
Approach Delay, s/veh	0.0				50.7			56.9			2.1	
Approach LOS					D			E			A	
Timer - Assigned Phs	1	2	4			6		8				
Phs Duration (G+Y+Rc), s	46.6	48.3	15.0			95.0		15.0				
Change Period (Y+Rc), s	5.0	5.0	5.0			5.0		5.0				
Max Green Setting (Gmax), s	20.0	45.0	30.0			70.0		30.0				
Max Q Clear Time (g_c+I1), s	2.0	42.2	0.0			2.0		9.2				
Green Ext Time (p_c), s	0.4	1.1	0.0			6.3		0.9				
Intersection Summary												
HCM 6th Ctrl Delay	27.3											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

1: NY 52 & TSP SB Ramps

2017-EX-PM
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↖			↕		↗	↖	
Traffic Volume (veh/h)	0	0	0	107	0	74	0	469	163	107	800	0
Future Volume (veh/h)	0	0	0	107	0	74	0	469	163	107	800	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	0	0	0	115	0	80	0	504	175	115	860	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	0	165	0	223	0	145	0	527	183	750	1462	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.39	0.39	0.76	1.00	0.00
Sat Flow, veh/h	0	1806	0	1720	0	1592	0	1340	465	1787	1788	0
Grp Volume(v), veh/h	0	0	0	115	0	80	0	0	679	115	860	0
Grp Sat Flow(s),veh/h/ln	0	1806	0	1720	0	1592	0	0	1805	1787	1788	0
Q Serve(g_s), s	0.0	0.0	0.0	7.2	0.0	5.3	0.0	0.0	40.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.2	0.0	5.3	0.0	0.0	40.2	0.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	0	165	0	223	0	145	0	0	711	750	1462	0
V/C Ratio(X)	0.00	0.00	0.00	0.52	0.00	0.55	0.00	0.00	0.96	0.15	0.59	0.00
Avail Cap(c_a), veh/h	0	492	0	534	0	434	0	0	738	750	1462	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.71	0.71	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	48.7	0.0	47.8	0.0	0.0	32.4	8.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.9	0.0	3.2	0.0	0.0	24.5	0.1	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.2	0.0	2.2	0.0	0.0	21.1	0.7	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	50.5	0.0	51.0	0.0	0.0	56.9	8.3	1.2	0.0
LnGrp LOS	A	A	A	D	A	D	A	A	E	A	A	A
Approach Vol, veh/h	0			195			679			975		
Approach Delay, s/veh	0.0			50.7			56.9			2.1		
Approach LOS				D			E			A		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	46.6	48.3		15.0		95.0		15.0				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	20.0	45.0		30.0		70.0		30.0				
Max Q Clear Time (g_c+12, s)	12.0	42.2		0.0		2.0		9.2				
Green Ext Time (p_c), s	0.4	1.1		0.0		6.3		0.9				

Intersection Summary

HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2017-EX-PM

03/17/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	29	41	490	24	276	17	362	164	50	376	11
Future Volume (vph)	16	29	41	490	24	276	17	362	164	50	376	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.935				0.850		0.953			0.996	
Flt Protected		0.991			0.954		0.950			0.950		
Satd. Flow (prot)	0	1975	0	0	1735	1546	1693	1689	0	1676	1720	0
Flt Permitted		0.991			0.954		0.251			0.107		
Satd. Flow (perm)	0	1975	0	0	1735	1546	447	1689	0	189	1720	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35				172		18			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	17	32	45	533	26	300	18	393	178	54	409	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	94	0	0	559	300	18	571	0	54	421	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT	NYS	DOT		NYS	DOT	
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2017-EX-PM

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	20.0	20.0		50.0	50.0	50.0	15.0	25.0		15.0	25.0	
Total Split (%)	18.2%	18.2%		45.5%	45.5%	45.5%	13.6%	22.7%		13.6%	22.7%	
Maximum Green (s)	15.0	15.0		45.0	45.0	45.0	10.0	20.0		10.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.48			0.85	0.43	0.07	0.98		0.34	0.65	
Control Delay		39.1			43.6	11.2	15.6	63.3		41.9	39.2	
Queue Delay		0.0			48.1	0.0	0.0	11.8		0.0	0.0	
Total Delay		39.1			91.8	11.2	15.6	75.1		41.9	39.2	
Queue Length 50th (ft)		40			350	59	7	~457		24	235	
Queue Length 95th (ft)		90			452	118	m10	#800		58	#590	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		299			727	748	305	584		219	649	
Starvation Cap Reductn		0			0	0	0	27		0	0	
Spillback Cap Reductn		4			214	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.32			1.09	0.40	0.06	1.03		0.25	0.65	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 90

Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.

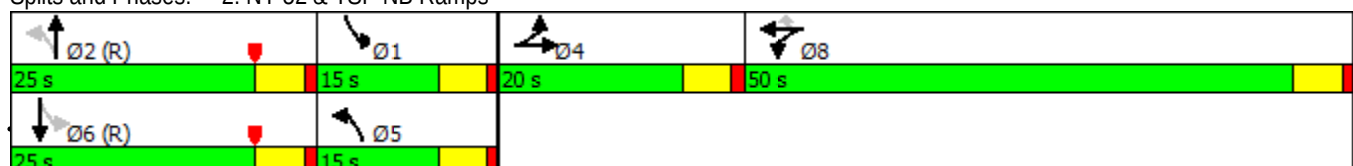
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NY 52 & TSP NB Ramps



HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

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03/17/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	16	29	41	490	24	276	17	362	164	50	376	11
Future Volume (veh/h)	16	29	41	490	24	276	17	362	164	50	376	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	17	32	45	533	26	300	18	393	178	54	409	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	22	42	59	596	29	555	481	219	99	471	317	9
Arrive On Green	0.06	0.06	0.06	0.35	0.35	0.35	0.45	0.36	0.36	0.22	0.18	0.18
Sat Flow, veh/h	353	665	935	1708	83	1590	1847	1205	546	1804	1745	51
Grp Volume(v), veh/h	94	0	0	559	0	300	18	0	571	54	0	421
Grp Sat Flow(s),veh/h/ln	1954	0	0	1791	0	1590	1847	0	1751	1804	0	1796
Q Serve(g_s), s	5.2	0.0	0.0	32.5	0.0	16.7	0.0	0.0	20.0	0.0	0.0	20.0
Cycle Q Clear(g_c), s	5.2	0.0	0.0	32.5	0.0	16.7	0.0	0.0	20.0	0.0	0.0	20.0
Prop In Lane	0.18		0.48	0.95		1.00	1.00		0.31	1.00		0.03
Lane Grp Cap(c), veh/h	123	0	0	625	0	555	481	0	318	471	0	327
V/C Ratio(X)	0.77	0.00	0.00	0.90	0.00	0.54	0.04	0.00	1.79	0.11	0.00	1.29
Avail Cap(c_a), veh/h	266	0	0	733	0	651	481	0	318	471	0	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.78	0.00	0.78	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.8	0.0	0.0	33.9	0.0	28.8	23.5	0.0	35.0	33.0	0.0	45.0
Incr Delay (d2), s/veh	9.5	0.0	0.0	12.3	0.0	0.8	0.0	0.0	366.8	0.1	0.0	151.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.0	16.0	0.0	6.4	0.3	0.0	38.6	1.1	0.0	22.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.3	0.0	0.0	46.2	0.0	29.6	23.5	0.0	401.8	33.2	0.0	196.3
LnGrp LOS	E	A	A	D	A	C	C	A	F	C	A	F
Approach Vol, veh/h		94			859			589			475	
Approach Delay, s/veh		60.3			40.4			390.2			177.8	
Approach LOS		E			D			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.7	25.0		11.9	29.7	25.0		43.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	20.0		15.0	10.0	20.0		45.0				
Max Q Clear Time (g_c+I1), s	2.0	22.0		7.2	2.0	22.0		34.5				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	0.0		3.9				

Intersection Summary

HCM 6th Ctrl Delay	175.8
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2017-EX-PM
03/17/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (veh/h)	16	29	41	490	24	276	17	362	164	50	376	11
Future Volume (veh/h)	16	29	41	490	24	276	17	362	164	50	376	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	17	32	45	533	26	300	18	393	178	54	409	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	22	42	59	596	29	555	481	219	99	471	317	9
Arrive On Green	0.06	0.06	0.06	0.35	0.35	0.35	0.45	0.36	0.36	0.22	0.18	0.18
Sat Flow, veh/h	353	665	935	1708	83	1590	1847	1205	546	1804	1745	51
Grp Volume(v), veh/h	94	0	0	559	0	300	18	0	571	54	0	421
Grp Sat Flow(s),veh/h/ln	1954	0	0	1791	0	1590	1847	0	1751	1804	0	1796
Q Serve(g_s), s	5.2	0.0	0.0	32.5	0.0	16.7	0.0	0.0	20.0	0.0	0.0	20.0
Cycle Q Clear(g_c), s	5.2	0.0	0.0	32.5	0.0	16.7	0.0	0.0	20.0	0.0	0.0	20.0
Prop In Lane	0.18		0.48	0.95		1.00	1.00		0.31	1.00		0.03
Lane Grp Cap(c), veh/h	123	0	0	625	0	555	481	0	318	471	0	327
V/C Ratio(X)	0.77	0.00	0.00	0.90	0.00	0.54	0.04	0.00	1.79	0.11	0.00	1.29
Avail Cap(c_a), veh/h	266	0	0	733	0	651	481	0	318	471	0	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.78	0.00	0.78	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.8	0.0	0.0	33.9	0.0	28.8	23.5	0.0	35.0	33.0	0.0	45.0
Incr Delay (d2), s/veh	9.5	0.0	0.0	12.3	0.0	0.8	0.0	0.0	366.8	0.1	0.0	151.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.0	16.0	0.0	6.4	0.3	0.0	38.6	1.1	0.0	22.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.3	0.0	0.0	46.2	0.0	29.6	23.5	0.0	401.8	33.2	0.0	196.3
LnGrp LOS	E	A	A	D	A	C	C	A	F	C	A	F
Approach Vol, veh/h	94			859			589			475		
Approach Delay, s/veh	60.3			40.4			390.2			177.8		
Approach LOS	E			D			F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.7	25.0		11.9	29.7	25.0		43.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	20.0		15.0	10.0	20.0		45.0				
Max Q Clear Time (g_c+I), s	12.0	22.0		7.2	2.0	22.0		34.5				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	0.0		3.9				

Intersection Summary

HCM 6th Ctrl Delay 175.8
HCM 6th LOS F

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

2017-EX-PM
03/17/2017



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	27	65	129	512	369	34
Future Volume (vph)	27	65	129	512	369	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.989	
Flt Protected	0.950			0.990		
Satd. Flow (prot)	1780	1592	0	1790	1757	0
Flt Permitted	0.950			0.990		
Satd. Flow (perm)	1780	1592	0	1790	1757	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	7%	7%	0%
Adj. Flow (vph)	28	68	136	539	388	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	68	0	675	424	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

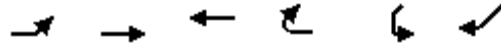
Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection							
Int Delay, s/veh	2.1						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	27	65	129	512	369	34	
Future Vol, veh/h	27	65	129	512	369	34	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	0	0	0	7	7	0	
Mvmt Flow	28	68	136	539	388	36	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1217	406	424	0	-	0	
Stage 1	406	-	-	-	-	-	
Stage 2	811	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	264	679	1146	-	-	-	
Stage 1	741	-	-	-	-	-	
Stage 2	527	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	219	679	1146	-	-	-	
Mov Cap-2 Maneuver	219	-	-	-	-	-	
Stage 1	616	-	-	-	-	-	
Stage 2	527	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	14.7	1.7		0			
HCM LOS	B						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	1146	-	219	679	-	-	
HCM Lane V/C Ratio	0.118	-	0.13	0.101	-	-	
HCM Control Delay (s)	8.6	0	23.9	10.9	-	-	
HCM Lane LOS	A	A	C	B	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.4	0.3	-	-	

Intersection							
Int Delay, s/veh	2.1						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	27	65	129	512	369	34	
Future Vol, veh/h	27	65	129	512	369	34	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	0	0	0	7	7	0	
Mvmt Flow	28	68	136	539	388	36	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1217	406	424	0	-	0	
Stage 1	406	-	-	-	-	-	
Stage 2	811	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	264	679	1146	-	-	-	
Stage 1	741	-	-	-	-	-	
Stage 2	527	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	219	679	1146	-	-	-	
Mov Cap-2 Maneuver	219	-	-	-	-	-	
Stage 1	616	-	-	-	-	-	
Stage 2	527	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	14.7	1.7		0			
HCM LOS	B						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	1146	-	219	679	-	-	
HCM Lane V/C Ratio	0.118	-	0.13	0.101	-	-	
HCM Control Delay (s)	8.6	0	23.9	10.9	-	-	
HCM Lane LOS	A	A	C	B	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.4	0.3	-	-	



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	310	229	222	34	11	169
Future Volume (vph)	310	229	222	34	11	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)		1%	-1%		-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.982		0.874	
Flt Protected		0.972			0.997	
Satd. Flow (prot)	0	1734	1769	0	1600	0
Flt Permitted		0.972			0.997	
Satd. Flow (perm)	0	1734	1769	0	1600	0
Link Speed (mph)		45	45		55	
Link Distance (ft)		2481	2900		858	
Travel Time (s)		37.6	43.9		10.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	6%	6%	6%	6%	1%	1%
Adj. Flow (vph)	326	241	234	36	12	178
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	567	270	0	190	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		11	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.03	1.03
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	5.2					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	310	229	222	34	11	169
Future Vol, veh/h	310	229	222	34	11	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	-2	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	6	6	6	6	1	1
Mvmt Flow	326	241	234	36	12	178
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	270	0	-	0	1145	252
Stage 1	-	-	-	-	252	-
Stage 2	-	-	-	-	893	-
Critical Hdwy	4.16	-	-	-	6.01	6.01
Critical Hdwy Stg 1	-	-	-	-	5.01	-
Critical Hdwy Stg 2	-	-	-	-	5.01	-
Follow-up Hdwy	2.254	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1271	-	-	-	252	800
Stage 1	-	-	-	-	815	-
Stage 2	-	-	-	-	443	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1271	-	-	-	177	800
Mov Cap-2 Maneuver	-	-	-	-	177	-
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	443	-
Approach	EB		WB		SW	
HCM Control Delay, s	5.1		0		12.7	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBRSWLn1		
Capacity (veh/h)	1271	-	-	-	658	
HCM Lane V/C Ratio	0.257	-	-	-	0.288	
HCM Control Delay (s)	8.8	0	-	-	12.7	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	1	-	-	-	1.2	

Intersection						
Int Delay, s/veh	5.2					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	310	229	222	34	11	169
Future Vol, veh/h	310	229	222	34	11	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	-2	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	6	6	6	6	1	1
Mvmt Flow	326	241	234	36	12	178
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	270	0	-	0	1145	252
Stage 1	-	-	-	-	252	-
Stage 2	-	-	-	-	893	-
Critical Hdwy	4.16	-	-	-	6.01	6.01
Critical Hdwy Stg 1	-	-	-	-	5.01	-
Critical Hdwy Stg 2	-	-	-	-	5.01	-
Follow-up Hdwy	2.254	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1271	-	-	-	252	800
Stage 1	-	-	-	-	815	-
Stage 2	-	-	-	-	443	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1271	-	-	-	177	800
Mov Cap-2 Maneuver	-	-	-	-	177	-
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	443	-
Approach	EB		WB		SW	
HCM Control Delay, s	5.1		0		12.7	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBRSWLn1		
Capacity (veh/h)	1271	-	-	-	658	
HCM Lane V/C Ratio	0.257	-	-	-	0.288	
HCM Control Delay (s)	8.8	0	-	-	12.7	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	1	-	-	-	1.2	

Lanes, Volumes, Timings
5: NY 52 & Site Dwy A

2017-EX-PM
03/17/2017

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	401	262	0
Future Volume (vph)	0	0	0	401	262	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr t						
Flt Protected						
Satd. Flow (prot)	1900	0	0	1810	1775	0
Flt Permitted						
Satd. Flow (perm)	1900	0	0	1810	1775	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	0	0	0	436	285	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	436	285	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	401	262	0
Future Vol, veh/h	0	0	0	401	262	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	0	0	0	436	285	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	721	285	285	0	-	0
Stage 1	285	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	397	759	1289	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	397	759	1289	-	-	-
Mov Cap-2 Maneuver	397	-	-	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1289	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	-	0	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	-	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	401	262	0
Future Vol, veh/h	0	0	0	401	262	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	0	0	0	436	285	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	721	285	285	0	-	0
Stage 1	285	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	397	759	1289	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	397	759	1289	-	-	-
Mov Cap-2 Maneuver	397	-	-	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1289	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	-	0	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	-	-	-	

Lanes, Volumes, Timings
6: Site Dwy B & NY 52

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Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	262	0	0	401	0	0
Future Volume (vph)	262	0	0	401	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr						
Flt Protected						
Satd. Flow (prot)	1748	0	0	1837	1900	0
Flt Permitted						
Satd. Flow (perm)	1748	0	0	1837	1900	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	0%	6%	0%	0%
Adj. Flow (vph)	285	0	0	436	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	285	0	0	436	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	262	0	0	401	0	0
Future Vol, veh/h	262	0	0	401	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	6	0	0
Mvmt Flow	285	0	0	436	0	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	285	0	721	285
Stage 1	-	-	-	-	285	-
Stage 2	-	-	-	-	436	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1289	-	397	759
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	656	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1289	-	397	759
Mov Cap-2 Maneuver	-	-	-	-	397	-
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	656	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0		0	
HCM LOS					A	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	-	1289	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	0	-	-	-	
HCM Lane LOS	A	A	-	-	-	
HCM 95th %tile Q(veh)	-	0	-	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	262	0	0	401	0	0
Future Vol, veh/h	262	0	0	401	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	6	0	0
Mvmt Flow	285	0	0	436	0	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	285	0	721	285
Stage 1	-	-	-	-	285	-
Stage 2	-	-	-	-	436	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1289	-	397	759
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	656	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1289	-	397	759
Mov Cap-2 Maneuver	-	-	-	-	397	-
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	656	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0		0	
HCM LOS					A	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	-	1289	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	0	-	-	-	
HCM Lane LOS	A	A	-	-	-	
HCM 95th %tile Q(veh)	-	0	-	-	-	

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

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Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	31	231	385	21	8	16
Future Volume (vph)	31	231	385	21	8	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.993		0.910	
Flt Protected		0.994			0.984	
Satd. Flow (prot)	0	1731	1901	0	1802	0
Flt Permitted		0.994			0.984	
Satd. Flow (perm)	0	1731	1901	0	1802	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	6%	6%	0%	1%	1%
Adj. Flow (vph)	34	257	428	23	9	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	291	451	0	27	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.8					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	31	231	385	21	8	16
Future Vol, veh/h	31	231	385	21	8	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	6	6	0	1	1
Mvmt Flow	34	257	428	23	9	18
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	451	0	-	0	765	440
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	325	-
Critical Hdwy	4.1	-	-	-	5.01	5.51
Critical Hdwy Stg 1	-	-	-	-	4.01	-
Critical Hdwy Stg 2	-	-	-	-	4.01	-
Follow-up Hdwy	2.2	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1120	-	-	-	502	675
Stage 1	-	-	-	-	773	-
Stage 2	-	-	-	-	833	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1120	-	-	-	484	675
Mov Cap-2 Maneuver	-	-	-	-	484	-
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	833	-
Approach	SE		NW		SW	
HCM Control Delay, s	1		0		11.3	
HCM LOS					B	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1120	-	597	
HCM Lane V/C Ratio	-	-	0.031	-	0.045	
HCM Control Delay (s)	-	-	8.3	0	11.3	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0.1	-	0.1	

Intersection						
Int Delay, s/veh	0.8					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	31	231	385	21	8	16
Future Vol, veh/h	31	231	385	21	8	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	6	6	0	1	1
Mvmt Flow	34	257	428	23	9	18
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	451	0	-	0	765	440
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	325	-
Critical Hdwy	4.1	-	-	-	5.01	5.51
Critical Hdwy Stg 1	-	-	-	-	4.01	-
Critical Hdwy Stg 2	-	-	-	-	4.01	-
Follow-up Hdwy	2.2	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1120	-	-	-	502	675
Stage 1	-	-	-	-	773	-
Stage 2	-	-	-	-	833	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1120	-	-	-	484	675
Mov Cap-2 Maneuver	-	-	-	-	484	-
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	833	-
Approach	SE		NW		SW	
HCM Control Delay, s	1		0		11.3	
HCM LOS					B	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1120	-	597	
HCM Lane V/C Ratio	-	-	0.031	-	0.045	
HCM Control Delay (s)	-	-	8.3	0	11.3	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0.1	-	0.1	

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

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Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	34	30	178	41	25	395
Future Volume (vph)	34	30	178	41	25	395
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.937		0.972			
Flt Protected	0.974					0.997
Satd. Flow (prot)	1848	0	3248	0	0	1745
Flt Permitted	0.974					0.997
Satd. Flow (perm)	1848	0	3248	0	0	1745
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	38	33	198	46	28	439
Shared Lane Traffic (%)						
Lane Group Flow (vph)	71	0	244	0	0	467
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

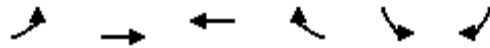
Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	34	30	178	41	25	395
Future Vol, veh/h	34	30	178	41	25	395
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	38	33	198	46	28	439
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	716	122	0	0	244	0
Stage 1	221	-	-	-	-	-
Stage 2	495	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	257	879	-	-	1295	-
Stage 1	706	-	-	-	-	-
Stage 2	466	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	250	879	-	-	1295	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	466	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	16.8		0		0.5	
HCM LOS	C					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1295	-	376	-	-	
HCM Lane V/C Ratio	0.021	-	0.189	-	-	
HCM Control Delay (s)	7.8	0	16.8	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-	

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	34	30	178	41	25	395
Future Vol, veh/h	34	30	178	41	25	395
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	38	33	198	46	28	439
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	716	122	0	0	244	0
Stage 1	221	-	-	-	-	-
Stage 2	495	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	257	879	-	-	1295	-
Stage 1	706	-	-	-	-	-
Stage 2	466	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	250	879	-	-	1295	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	466	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	16.8		0		0.5	
HCM LOS	C					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1295	-	376	-	-	
HCM Lane V/C Ratio	0.021	-	0.189	-	-	
HCM Control Delay (s)	7.8	0	16.8	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-	

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	7	204	436	7	9	9
Future Volume (vph)	7	204	436	7	9	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998		0.932	
Flt Protected		0.998			0.976	
Satd. Flow (prot)	0	1793	1670	0	1858	0
Flt Permitted		0.998			0.976	
Satd. Flow (perm)	0	1793	1670	0	1858	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	8	240	513	8	11	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	248	521	0	22	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	204	436	7	9	9
Future Vol, veh/h	7	204	436	7	9	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	8	240	513	8	11	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	521	0	-	0	773	517
Stage 1	-	-	-	-	517	-
Stage 2	-	-	-	-	256	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1056	-	-	-	705	697
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	980	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1056	-	-	-	699	697
Mov Cap-2 Maneuver	-	-	-	-	699	-
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	980	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.3		0		10.3	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1056	-	-	-	698	
HCM Lane V/C Ratio	0.008	-	-	-	0.03	
HCM Control Delay (s)	8.4	0	-	-	10.3	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	204	436	7	9	9
Future Vol, veh/h	7	204	436	7	9	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	8	240	513	8	11	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	521	0	-	0	773	517
Stage 1	-	-	-	-	517	-
Stage 2	-	-	-	-	256	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1056	-	-	-	705	697
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	980	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1056	-	-	-	699	697
Mov Cap-2 Maneuver	-	-	-	-	699	-
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	980	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.3		0		10.3	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1056	-	-	-	698	
HCM Lane V/C Ratio	0.008	-	-	-	0.03	
HCM Control Delay (s)	8.4	0	-	-	10.3	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	64	214	3	96	457
Future Volume (vph)	6	64	214	3	96	457
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.877		0.998			
Flt Protected	0.996					0.991
Satd. Flow (prot)	1604	0	1799	0	0	1696
Flt Permitted	0.996					0.991
Satd. Flow (perm)	1604	0	1799	0	0	1696
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	5%	0%	0%	5%
Adj. Flow (vph)	8	81	271	4	122	578
Shared Lane Traffic (%)						
Lane Group Flow (vph)	89	0	275	0	0	700
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	64	214	3	96	457
Future Vol, veh/h	6	64	214	3	96	457
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	1	1	5	0	0	5
Mvmt Flow	8	81	271	4	122	578
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1095	273	0	0	275	0
Stage 1	273	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Critical Hdwy	6.01	6.01	-	-	4.1	-
Critical Hdwy Stg 1	5.01	-	-	-	-	-
Critical Hdwy Stg 2	5.01	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	268	780	-	-	1300	-
Stage 1	799	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	231	780	-	-	1300	-
Mov Cap-2 Maneuver	231	-	-	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	11.4		0		1.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1300	-	648	-	-	
HCM Lane V/C Ratio	0.093	-	0.137	-	-	
HCM Control Delay (s)	8.1	0	11.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-	

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	64	214	3	96	457
Future Vol, veh/h	6	64	214	3	96	457
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	1	1	5	0	0	5
Mvmt Flow	8	81	271	4	122	578
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1095	273	0	0	275	0
Stage 1	273	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Critical Hdwy	6.01	6.01	-	-	4.1	-
Critical Hdwy Stg 1	5.01	-	-	-	-	-
Critical Hdwy Stg 2	5.01	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	268	780	-	-	1300	-
Stage 1	799	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	231	780	-	-	1300	-
Mov Cap-2 Maneuver	231	-	-	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	11.4		0		1.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1300	-	648	-	-	
HCM Lane V/C Ratio	0.093	-	0.137	-	-	
HCM Control Delay (s)	8.1	0	11.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-NB-AM

03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	0	164	0	68	0	311	581	386	386	1
Future Volume (vph)	1	0	0	164	0	68	0	311	581	386	386	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.912				
Flt Protected		0.950		0.950						0.950		
Satd. Flow (prot)	0	1651	0	1769	1635	0	0	1657	0	1668	1716	0
Flt Permitted		0.709		0.757						0.076		
Satd. Flow (perm)	0	1232	0	1410	1635	0	0	1657	0	133	1716	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					582			122				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	1	0	0	176	0	73	0	334	625	415	415	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	176	73	0	0	959	0	415	416	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-NB-AM

03/21/2017



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		45.0	45.0		20.0	65.0	
Total Split (%)	31.6%	31.6%		31.6%	31.6%		47.4%	47.4%		21.1%	68.4%	
Maximum Green (s)	25.0	25.0		25.0	25.0		40.0	40.0		15.0	60.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio		0.00		0.69	0.09			1.07		1.23	0.34	
Control Delay		28.0		50.1	0.2			74.1		151.7	7.8	
Queue Delay		0.0		0.0	0.0			0.0		14.9	1.8	
Total Delay		28.0		50.1	0.2			74.1		166.6	9.7	
Queue Length 50th (ft)		1		100	0			~609		~275	116	
Queue Length 95th (ft)		5		157	0			#916		#472	157	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)		324		371	859			895		337	1226	
Starvation Cap Reductn		0		0	0			0		209	630	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.00		0.47	0.08			1.07		3.24	0.70	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

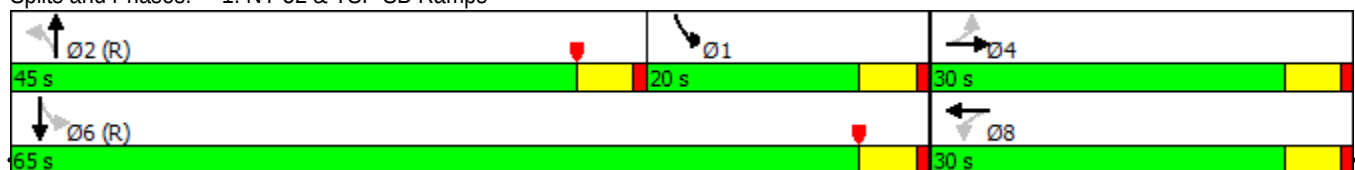
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: NY 52 & TSP SB Ramps



PEAK HOUR 7:30-8:30

JMC 17039

Synchro 10 Report

Page 2

HCM 6th Signalized Intersection Summary

2025-NB-AM

03/21/2017

1: NY 52 & TSP SB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	0	164	0	68	0	311	581	386	386	1
Future Volume (veh/h)	1	0	0	164	0	68	0	311	581	386	386	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	1	0	0	176	0	73	0	334	625	415	415	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	209	0	0	289	0	231	0	248	464	569	1336	3
Arrive On Green	0.15	0.00	0.00	0.15	0.00	0.15	0.00	0.42	0.42	0.46	1.00	1.00
Sat Flow, veh/h	918	0	0	1369	0	1592	0	589	1102	1787	1782	4
Grp Volume(v), veh/h	1	0	0	176	0	73	0	0	959	415	0	416
Grp Sat Flow(s),veh/h/ln	918	0	0	1369	0	1592	0	0	1690	1787	0	1787
Q Serve(g_s), s	0.1	0.0	0.0	6.8	0.0	3.9	0.0	0.0	40.0	12.8	0.0	0.0
Cycle Q Clear(g_c), s	4.0	0.0	0.0	10.8	0.0	3.9	0.0	0.0	40.0	12.8	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	209	0	0	289	0	231	0	0	712	569	0	1340
V/C Ratio(X)	0.00	0.00	0.00	0.61	0.00	0.32	0.00	0.00	1.35	0.73	0.00	0.31
Avail Cap(c_a), veh/h	360	0	0	451	0	419	0	0	712	569	0	1340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.66	0.00	0.66
Uniform Delay (d), s/veh	38.2	0.0	0.0	39.1	0.0	36.4	0.0	0.0	27.5	20.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.8	0.0	0.0	165.6	3.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.1	0.0	1.6	0.0	0.0	47.1	5.9	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	0.0	0.0	41.1	0.0	37.2	0.0	0.0	193.1	24.0	0.0	0.4
LnGrp LOS	D	A	A	D	A	D	A	A	F	C	A	A
Approach Vol, veh/h	1				249				959			
Approach Delay, s/veh	38.2				40.0				193.1			
Approach LOS	D				D				F			
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	31.2	45.0		18.8		76.2		18.8				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	15.0	40.0		25.0		60.0		25.0				
Max Q Clear Time (g_c+I1), s	14.8	42.0		6.0		2.0		12.8				
Green Ext Time (p_c), s	0.0	0.0		0.0		2.2		1.0				
Intersection Summary												
HCM 6th Ctrl Delay	100.6											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

1: NY 52 & TSP SB Ramps

2025-NB-AM
03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↘			↕		↗	↘	
Traffic Volume (veh/h)	1	0	0	164	0	68	0	311	581	386	386	1
Future Volume (veh/h)	1	0	0	164	0	68	0	311	581	386	386	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	1	0	0	176	0	73	0	334	625	415	415	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	209	0	0	289	0	231	0	248	464	569	1336	3
Arrive On Green	0.15	0.00	0.00	0.15	0.00	0.15	0.00	0.42	0.42	0.46	1.00	1.00
Sat Flow, veh/h	918	0	0	1369	0	1592	0	589	1102	1787	1782	4
Grp Volume(v), veh/h	1	0	0	176	0	73	0	0	959	415	0	416
Grp Sat Flow(s),veh/h/ln	918	0	0	1369	0	1592	0	0	1690	1787	0	1787
Q Serve(g_s), s	0.1	0.0	0.0	6.8	0.0	3.9	0.0	0.0	40.0	12.8	0.0	0.0
Cycle Q Clear(g_c), s	4.0	0.0	0.0	10.8	0.0	3.9	0.0	0.0	40.0	12.8	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	209	0	0	289	0	231	0	0	712	569	0	1340
V/C Ratio(X)	0.00	0.00	0.00	0.61	0.00	0.32	0.00	0.00	1.35	0.73	0.00	0.31
Avail Cap(c_a), veh/h	360	0	0	451	0	419	0	0	712	569	0	1340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.66	0.00	0.66
Uniform Delay (d), s/veh	38.2	0.0	0.0	39.1	0.0	36.4	0.0	0.0	27.5	20.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.8	0.0	0.0	165.6	3.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.1	0.0	1.6	0.0	0.0	47.1	5.9	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	0.0	0.0	41.1	0.0	37.2	0.0	0.0	193.1	24.0	0.0	0.4
LnGrp LOS	D	A	A	D	A	D	A	A	F	C	A	A
Approach Vol, veh/h	1			249			959			831		
Approach Delay, s/veh	38.2			40.0			193.1			12.2		
Approach LOS	D			D			F			B		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	31.2	45.0		18.8		76.2		18.8				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	15.0	40.0		25.0		60.0		25.0				
Max Q Clear Time (g_c+14.8)	14.8	42.0		6.0		2.0		12.8				
Green Ext Time (p_c), s	0.0	0.0		0.0		2.2		1.0				

Intersection Summary

HCM 6th Ctrl Delay 100.6
HCM 6th LOS F

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-NB-AM

03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (vph)	9	19	22	157	27	128	27	308	45	55	594	11
Future Volume (vph)	9	19	22	157	27	128	27	308	45	55	594	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.940				0.850		0.981			0.997	
Flt Protected		0.991			0.959		0.950			0.950		
Satd. Flow (prot)	0	1986	0	0	1744	1546	1693	1721	0	1676	1721	0
Flt Permitted		0.991			0.959		0.226			0.448		
Satd. Flow (perm)	0	1986	0	0	1744	1546	403	1721	0	790	1721	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				138		7			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	10	20	24	169	29	138	29	331	48	59	639	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	0	198	138	29	379	0	59	651	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT	NYS	DOT		NYS	DOT	
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

PEAK HOUR 7:30-8:30
JMC 17039

Synchro 10 Report
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Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-NB-AM

03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	15.0	15.0		20.0	20.0	20.0	30.0	30.0		30.0	30.0	
Total Split (%)	15.8%	15.8%		21.1%	21.1%	21.1%	31.6%	31.6%		31.6%	31.6%	
Maximum Green (s)	10.0	10.0		15.0	15.0	15.0	25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.31			0.66	0.36	0.09	0.43		0.11	0.69	
Control Delay		30.8			46.7	8.4	4.1	10.3		11.5	25.4	
Queue Delay		0.1			0.0	0.0	0.0	0.7		0.0	0.5	
Total Delay		30.9			46.7	8.4	4.1	11.0		11.5	25.9	
Queue Length 50th (ft)		17			113	0	2	72		14	314	
Queue Length 95th (ft)		53			172	46	m4	m68		38	#614	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		230			321	397	645	891		846	940	
Starvation Cap Reductn		0			0	0	0	244		0	0	
Spillback Cap Reductn		12			0	0	0	0		0	66	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.25			0.62	0.35	0.04	0.59		0.07	0.74	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 60

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NY 52 & TSP NB Ramps



PEAK HOUR 7:30-8:30
JMC 17039

Synchro 10 Report
Page 6

HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-NB-AM

03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	9	19	22	157	27	128	27	308	45	55	594	11
Future Volume (veh/h)	9	19	22	157	27	128	27	308	45	55	594	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	10	20	24	169	29	138	29	331	48	59	639	12
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	13	27	32	205	35	212	733	363	53	805	465	9
Arrive On Green	0.04	0.04	0.04	0.13	0.13	0.13	0.47	0.31	0.31	0.39	0.26	0.26
Sat Flow, veh/h	364	728	873	1536	264	1590	1847	1579	229	1804	1766	33
Grp Volume(v), veh/h	54	0	0	198	0	138	29	0	379	59	0	651
Grp Sat Flow(s),veh/h/ln	1964	0	0	1800	0	1590	1847	0	1808	1804	0	1799
Q Serve(g_s), s	2.6	0.0	0.0	10.2	0.0	7.8	0.0	0.0	19.2	0.0	0.0	25.0
Cycle Q Clear(g_c), s	2.6	0.0	0.0	10.2	0.0	7.8	0.0	0.0	19.2	0.0	0.0	25.0
Prop In Lane	0.19		0.44	0.85		1.00	1.00		0.13	1.00		0.02
Lane Grp Cap(c), veh/h	73	0	0	240	0	212	733	0	416	805	0	473
V/C Ratio(X)	0.74	0.00	0.00	0.83	0.00	0.65	0.04	0.00	0.91	0.07	0.00	1.37
Avail Cap(c_a), veh/h	207	0	0	284	0	251	733	0	476	805	0	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.00	0.09	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	40.1	0.0	39.1	16.1	0.0	32.0	17.1	0.0	35.0
Incr Delay (d2), s/veh	13.9	0.0	0.0	15.5	0.0	4.5	0.0	0.0	3.7	0.0	0.0	181.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	5.5	0.0	3.3	0.3	0.0	7.6	0.8	0.0	34.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	0.0	0.0	55.6	0.0	43.6	16.1	0.0	35.7	17.2	0.0	216.7
LnGrp LOS	E	A	A	E	A	D	B	A	D	B	A	F
Approach Vol, veh/h		54			336			408			710	
Approach Delay, s/veh		59.2			50.7			34.3			200.1	
Approach LOS		E			D			C			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	42.0	26.8		8.5	38.8	30.0		17.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	25.0	25.0		10.0	25.0	25.0		15.0				
Max Q Clear Time (g_c+I1), s	2.0	21.2		4.6	2.0	27.0		12.2				
Green Ext Time (p_c), s	0.1	0.7		0.0	0.0	0.0		0.5				

Intersection Summary

HCM 6th Ctrl Delay	116.9
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-NB-AM
03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (veh/h)	9	19	22	157	27	128	27	308	45	55	594	11
Future Volume (veh/h)	9	19	22	157	27	128	27	308	45	55	594	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	10	20	24	169	29	138	29	331	48	59	639	12
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	13	27	32	205	35	212	733	363	53	805	465	9
Arrive On Green	0.04	0.04	0.04	0.13	0.13	0.13	0.47	0.31	0.31	0.39	0.26	0.26
Sat Flow, veh/h	364	728	873	1536	264	1590	1847	1579	229	1804	1766	33
Grp Volume(v), veh/h	54	0	0	198	0	138	29	0	379	59	0	651
Grp Sat Flow(s),veh/h/ln	1964	0	0	1800	0	1590	1847	0	1808	1804	0	1799
Q Serve(g_s), s	2.6	0.0	0.0	10.2	0.0	7.8	0.0	0.0	19.2	0.0	0.0	25.0
Cycle Q Clear(g_c), s	2.6	0.0	0.0	10.2	0.0	7.8	0.0	0.0	19.2	0.0	0.0	25.0
Prop In Lane	0.19		0.44	0.85		1.00	1.00		0.13	1.00		0.02
Lane Grp Cap(c), veh/h	73	0	0	240	0	212	733	0	416	805	0	473
V/C Ratio(X)	0.74	0.00	0.00	0.83	0.00	0.65	0.04	0.00	0.91	0.07	0.00	1.37
Avail Cap(c_a), veh/h	207	0	0	284	0	251	733	0	476	805	0	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.00	0.09	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	40.1	0.0	39.1	16.1	0.0	32.0	17.1	0.0	35.0
Incr Delay (d2), s/veh	13.9	0.0	0.0	15.5	0.0	4.5	0.0	0.0	3.7	0.0	0.0	181.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	5.5	0.0	3.3	0.3	0.0	7.6	0.8	0.0	34.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	0.0	0.0	55.6	0.0	43.6	16.1	0.0	35.7	17.2	0.0	216.7
LnGrp LOS	E	A	A	E	A	D	B	A	D	B	A	F
Approach Vol, veh/h	54			336			408			710		
Approach Delay, s/veh	59.2			50.7			34.3			200.1		
Approach LOS	E			D			C			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	42.0	26.8		8.5	38.8	30.0		17.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	25.0	25.0		10.0	25.0	25.0		15.0				
Max Q Clear Time (g_c+12, s)	12.0	21.2		4.6	2.0	27.0		12.2				
Green Ext Time (p_c), s	0.1	0.7		0.0	0.0	0.0		0.5				

Intersection Summary

HCM 6th Ctrl Delay	116.9
HCM 6th LOS	F

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

2025-NB-AM
03/21/2017



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	16	65	31	394	617	21
Future Volume (vph)	16	65	31	394	617	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.996	
Flt Protected	0.950			0.996		
Satd. Flow (prot)	1780	1592	0	1802	1780	0
Flt Permitted	0.950			0.996		
Satd. Flow (perm)	1780	1592	0	1802	1780	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	18	74	35	448	701	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	74	0	483	725	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection							
Int Delay, s/veh	1.4						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	16	65	31	394	617	21	
Future Vol, veh/h	16	65	31	394	617	21	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	88	88	88	88	88	88	
Heavy Vehicles, %	0	0	0	6	6	0	
Mvmt Flow	18	74	35	448	701	24	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1231	713	725	0	-	0	
Stage 1	713	-	-	-	-	-	
Stage 2	518	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	260	471	887	-	-	-	
Stage 1	573	-	-	-	-	-	
Stage 2	675	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	246	471	887	-	-	-	
Mov Cap-2 Maneuver	246	-	-	-	-	-	
Stage 1	543	-	-	-	-	-	
Stage 2	675	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	15.4	0.7		0			
HCM LOS	C						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	887	-	246	471	-	-	
HCM Lane V/C Ratio	0.04	-	0.074	0.157	-	-	
HCM Control Delay (s)	9.2	0	20.8	14.1	-	-	
HCM Lane LOS	A	A	C	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.2	0.6	-	-	

Intersection							
Int Delay, s/veh	1.4						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	16	65	31	394	617	21	
Future Vol, veh/h	16	65	31	394	617	21	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	88	88	88	88	88	88	
Heavy Vehicles, %	0	0	0	6	6	0	
Mvmt Flow	18	74	35	448	701	24	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1231	713	725	0	-	0	
Stage 1	713	-	-	-	-	-	
Stage 2	518	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	260	471	887	-	-	-	
Stage 1	573	-	-	-	-	-	
Stage 2	675	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	246	471	887	-	-	-	
Mov Cap-2 Maneuver	246	-	-	-	-	-	
Stage 1	543	-	-	-	-	-	
Stage 2	675	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	15.4	0.7		0			
HCM LOS	C						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	887	-	246	471	-	-	
HCM Lane V/C Ratio	0.04	-	0.074	0.157	-	-	
HCM Control Delay (s)	9.2	0	20.8	14.1	-	-	
HCM Lane LOS	A	A	C	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.2	0.6	-	-	

Lanes, Volumes, Timings
4: NY 52 & NY 216

2025-NB-AM

03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	217	15	8	274	10	45	7	22	16	2	319
Future Volume (vph)	178	217	15	8	274	10	45	7	22	16	2	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			0%			-2%	
Storage Length (ft)	150		0	100		0	0		0	0		80
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.995			0.960				0.850
Flt Protected	0.950			0.950				0.970			0.957	
Satd. Flow (prot)	1581	1772	0	1693	1792	0	0	1769	0	0	1775	1577
Flt Permitted	0.486			0.608				0.802			0.795	
Satd. Flow (perm)	809	1772	0	1084	1792	0	0	1463	0	0	1475	1577
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			2			23				332
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		2638			2750			543			840	
Travel Time (s)		40.0			41.7			12.3			10.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	6%	6%	0%	0%	6%	6%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	185	226	16	8	285	10	47	7	23	17	2	332
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	242	0	8	295	0	0	77	0	0	19	332
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.10	1.01	1.01	1.09	0.99	0.99	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		1	2		1	2	2
Detector Template	NYSDOT	NYSDOT		NYSDOT	NYSDOT		Left	NYSDOT		Left	NYSDOT	NYSDOT
Leading Detector (ft)	83	83		83	83		20	83		20	83	83
Trailing Detector (ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Position(ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Size(ft)	40	40		40	40		20	40		20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)	43	43		43	43			43			43	43
Detector 2 Size(ft)	40	40		40	40			40			40	40
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0

PEAK HOUR 7:30-8:30
JMC 17039

Synchro 10 Report
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Lanes, Volumes, Timings
4: NY 52 & NY 216

2025-NB-AM
03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.0	22.5		10.0	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	15.0	35.0		15.0	35.0		40.0	40.0		40.0	40.0	40.0
Total Split (%)	16.7%	38.9%		16.7%	38.9%		44.4%	44.4%		44.4%	44.4%	44.4%
Maximum Green (s)	10.0	30.0		10.0	30.0		35.0	35.0		35.0	35.0	35.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max		None	None		None	None	None
v/c Ratio	0.27	0.20		0.01	0.34			0.36			0.10	0.67
Control Delay	4.6	5.8		4.1	12.2			23.6			24.7	10.8
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	4.6	5.8		4.1	12.2			23.6			24.7	10.8
Queue Length 50th (ft)	17	22		1	64			19			7	0
Queue Length 95th (ft)	47	95		5	134			53			23	62
Internal Link Dist (ft)		2558			2670			463			760	
Turn Bay Length (ft)	150			100								80
Base Capacity (vph)	694	1197		795	865			833			830	1032
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.27	0.20		0.01	0.34			0.09			0.02	0.32

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 62.4

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Splits and Phases: 4: NY 52 & NY 216

 Ø1	 Ø2	 Ø4
15 s	35 s	40 s
 Ø5	 Ø6	 Ø8
15 s	35 s	40 s

HCM 6th Signalized Intersection Summary

4: NY 52 & NY 216

2025-NB-AM
03/21/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	217	15	8	274	10	45	7	22	16	2	319
Future Volume (veh/h)	178	217	15	8	274	10	45	7	22	16	2	319
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1805	1805	1805	1939	1849	1849	1900	1900	1900	1979	1979	1979
Adj Flow Rate, veh/h	185	226	16	8	285	10	47	7	23	17	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	6	6	0	6	6	0	0	0	0	0	0
Cap, veh/h	784	1063	75	816	996	35	176	10	33	232	21	
Arrive On Green	0.09	0.64	0.64	0.01	0.56	0.56	0.07	0.07	0.07	0.07	0.07	0.00
Sat Flow, veh/h	1719	1666	118	1847	1776	62	953	142	467	1475	294	1677
Grp Volume(v), veh/h	185	0	242	8	0	295	77	0	0	19	0	0
Grp Sat Flow(s),veh/h/ln	1719	0	1784	1847	0	1838	1562	0	0	1769	0	1677
Q Serve(g_s), s	2.1	0.0	3.0	0.1	0.0	4.5	2.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	3.0	0.1	0.0	4.5	2.5	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.03	0.61		0.30	0.89		1.00
Lane Grp Cap(c), veh/h	784	0	1138	816	0	1031	219	0	0	253	0	
V/C Ratio(X)	0.24	0.00	0.21	0.01	0.00	0.29	0.35	0.00	0.00	0.08	0.00	
Avail Cap(c_a), veh/h	955	0	1138	1142	0	1031	1106	0	0	1129	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.6	0.0	4.1	4.9	0.0	6.1	24.2	0.0	0.0	23.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.4	0.0	0.0	0.7	1.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.6	0.0	0.0	1.2	0.9	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.8	0.0	4.5	4.9	0.0	6.8	25.2	0.0	0.0	23.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	
Approach Vol, veh/h	427				303			77			19	
Approach Delay, s/veh	4.2				6.8			25.2			23.4	
Approach LOS	A				A			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	39.1		8.8	9.7	35.0		8.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		35.0	10.0	30.0		35.0				
Max Q Clear Time (g_c+I1), s	2.1	5.0		2.5	4.1	6.5		4.5				
Green Ext Time (p_c), s	0.0	1.1		0.0	0.4	1.3		0.3				

Intersection Summary

HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

4: NY 52 & NY 216

2025-NB-AM
03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	217	15	8	274	10	45	7	22	16	2	319
Future Volume (veh/h)	178	217	15	8	274	10	45	7	22	16	2	319
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1805	1805	1805	1939	1849	1849	1900	1900	1900	1979	1979	1979
Adj Flow Rate, veh/h	185	226	16	8	285	10	47	7	23	17	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	6	6	0	6	6	0	0	0	0	0	0
Cap, veh/h	784	1063	75	816	996	35	176	10	33	232	21	
Arrive On Green	0.09	0.64	0.64	0.01	0.56	0.56	0.07	0.07	0.07	0.07	0.07	0.00
Sat Flow, veh/h	1719	1666	118	1847	1776	62	953	142	467	1475	294	1677
Grp Volume(v), veh/h	185	0	242	8	0	295	77	0	0	19	0	0
Grp Sat Flow(s), veh/h/ln	1719	0	1784	1847	0	1838	1562	0	0	1769	0	1677
Q Serve(g_s), s	2.1	0.0	3.0	0.1	0.0	4.5	2.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	3.0	0.1	0.0	4.5	2.5	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.03	0.61		0.30	0.89		1.00
Lane Grp Cap(c), veh/h	784	0	1138	816	0	1031	219	0	0	253	0	
V/C Ratio(X)	0.24	0.00	0.21	0.01	0.00	0.29	0.35	0.00	0.00	0.08	0.00	
Avail Cap(c_a), veh/h	955	0	1138	1142	0	1031	1106	0	0	1129	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.6	0.0	4.1	4.9	0.0	6.1	24.2	0.0	0.0	23.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.4	0.0	0.0	0.7	1.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.6	0.0	0.0	1.2	0.9	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.8	0.0	4.5	4.9	0.0	6.8	25.2	0.0	0.0	23.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	
Approach Vol, veh/h	427			303			77			19		
Approach Delay, s/veh	4.2			6.8			25.2			23.4		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	39.1		8.8	9.7	35.0		8.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		35.0	10.0	30.0		35.0				
Max Q Clear Time (g_c+1.1s), s	12.1	5.0		2.5	4.1	6.5		4.5				
Green Ext Time (p_c), s	0.0	1.1		0.0	0.4	1.3		0.3				

Intersection Summary

HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
5: NY 52 & Site Dwy A

2025-NB-AM
03/21/2017

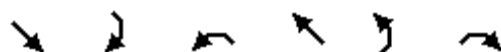
						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	221	323	0
Future Volume (vph)	0	0	0	221	323	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1900	0	0	1828	1791	0
Flt Permitted						
Satd. Flow (perm)	1900	0	0	1828	1791	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	5%	5%	0%
Adj. Flow (vph)	0	0	0	228	333	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	228	333	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	221	323	0
Future Vol, veh/h	0	0	0	221	323	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	5	5	0
Mvmt Flow	0	0	0	228	333	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	561	333	333	0	-	0
Stage 1	333	-	-	-	-	-
Stage 2	228	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	492	713	1238	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	492	713	1238	-	-	-
Mov Cap-2 Maneuver	492	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1238	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	-	0	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	-	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	221	323	0
Future Vol, veh/h	0	0	0	221	323	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	5	5	0
Mvmt Flow	0	0	0	228	333	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	561	333	333	0	-	0
Stage 1	333	-	-	-	-	-
Stage 2	228	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	492	713	1238	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	492	713	1238	-	-	-
Mov Cap-2 Maneuver	492	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1238	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	-	0	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	-	-	-	

Lanes, Volumes, Timings
6: Site Dwy B & NY 52

2025-NB-AM
03/21/2017



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	323	0	0	221	0	0
Future Volume (vph)	323	0	0	221	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1764	0	0	1855	1900	0
Flt Permitted						
Satd. Flow (perm)	1764	0	0	1855	1900	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	5%	0%	0%	5%	0%	0%
Adj. Flow (vph)	333	0	0	228	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	333	0	0	228	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection

Int Delay, s/veh 0

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	323	0	0	221	0	0
Future Vol, veh/h	323	0	0	221	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	333	0	0	228	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	333
Stage 1	-	-	333
Stage 2	-	-	228
Critical Hdwy	-	4.1	6.4
Critical Hdwy Stg 1	-	-	5.4
Critical Hdwy Stg 2	-	-	5.4
Follow-up Hdwy	-	2.2	3.5
Pot Cap-1 Maneuver	-	1238	492
Stage 1	-	-	731
Stage 2	-	-	815
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1238	492
Mov Cap-2 Maneuver	-	-	492
Stage 1	-	-	731
Stage 2	-	-	815

Approach	SE	NW	NE
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	-	1238	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	-
HCM Lane LOS	A	A	-	-	-
HCM 95th %tile Q(veh)	-	0	-	-	-

Intersection

Int Delay, s/veh 0

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	323	0	0	221	0	0
Future Vol, veh/h	323	0	0	221	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	333	0	0	228	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	333
Stage 1	-	-	333
Stage 2	-	-	228
Critical Hdwy	-	4.1	6.4
Critical Hdwy Stg 1	-	-	5.4
Critical Hdwy Stg 2	-	-	5.4
Follow-up Hdwy	-	2.2	3.5
Pot Cap-1 Maneuver	-	1238	492
Stage 1	-	-	731
Stage 2	-	-	815
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1238	492
Mov Cap-2 Maneuver	-	-	492
Stage 1	-	-	731
Stage 2	-	-	815

Approach	SE	NW	NE
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	-	1238	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	-
HCM Lane LOS	A	A	-	-	-
HCM 95th %tile Q(veh)	-	0	-	-	-

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

2025-NB-AM

03/21/2017



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	10	313	167	13	25	54
Future Volume (vph)	10	313	167	13	25	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990		0.908	
Flt Protected		0.998			0.984	
Satd. Flow (prot)	0	1745	1914	0	1816	0
Flt Permitted		0.998			0.984	
Satd. Flow (perm)	0	1745	1914	0	1816	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	5%	5%	0%	0%	0%
Adj. Flow (vph)	10	319	170	13	26	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	329	183	0	81	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 1.5

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	10	313	167	13	25	54
Future Vol, veh/h	10	313	167	13	25	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	5	5	0	0	0
Mvmt Flow	10	319	170	13	26	55

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	183	0	516
Stage 1	-	-	177
Stage 2	-	-	339
Critical Hdwy	4.1	-	5
Critical Hdwy Stg 1	-	-	4
Critical Hdwy Stg 2	-	-	4
Follow-up Hdwy	2.2	-	3.5
Pot Cap-1 Maneuver	1404	-	639
Stage 1	-	-	920
Stage 2	-	-	828
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1404	-	633
Mov Cap-2 Maneuver	-	-	633
Stage 1	-	-	912
Stage 2	-	-	828

Approach	SE	NW	SW
HCM Control Delay, s	0.2	0	10
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	1404	-	795
HCM Lane V/C Ratio	-	-	0.007	-	0.101
HCM Control Delay (s)	-	-	7.6	0	10
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0	-	0.3

Intersection

Int Delay, s/veh 1.5

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	10	313	167	13	25	54
Future Vol, veh/h	10	313	167	13	25	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	5	5	0	0	0
Mvmt Flow	10	319	170	13	26	55

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	183	0	516
Stage 1	-	-	177
Stage 2	-	-	339
Critical Hdwy	4.1	-	5
Critical Hdwy Stg 1	-	-	4
Critical Hdwy Stg 2	-	-	4
Follow-up Hdwy	2.2	-	3.5
Pot Cap-1 Maneuver	1404	-	639
Stage 1	-	-	920
Stage 2	-	-	828
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1404	-	633
Mov Cap-2 Maneuver	-	-	633
Stage 1	-	-	912
Stage 2	-	-	828

Approach	SE	NW	SW
HCM Control Delay, s	0.2	0	10
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SEL	SETSWLn1
Capacity (veh/h)	-	-	1404	795
HCM Lane V/C Ratio	-	-	0.007	0.101
HCM Control Delay (s)	-	-	7.6	10
HCM Lane LOS	-	-	A	B
HCM 95th %tile Q(veh)	-	-	0	0.3

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

2025-NB-AM
03/21/2017



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	25	71	324	21	8	147
Future Volume (vph)	25	71	324	21	8	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.900		0.991			
Flt Protected	0.987					0.998
Satd. Flow (prot)	1799	0	3311	0	0	1747
Flt Permitted	0.987					0.998
Satd. Flow (perm)	1799	0	3311	0	0	1747
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	29	83	377	24	9	171
Shared Lane Traffic (%)						
Lane Group Flow (vph)	112	0	401	0	0	180
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

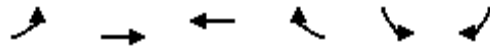
Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	25	71	324	21	8	147
Future Vol, veh/h	25	71	324	21	8	147
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	29	83	377	24	9	171
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	578	201	0	0	401	0
Stage 1	389	-	-	-	-	-
Stage 2	189	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	336	766	-	-	1131	-
Stage 1	530	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	333	766	-	-	1131	-
Mov Cap-2 Maneuver	333	-	-	-	-	-
Stage 1	525	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	12.8		0		0.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1131	-	572	-	-	
HCM Lane V/C Ratio	0.008	-	0.195	-	-	
HCM Control Delay (s)	8.2	0	12.8	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.7	-	-	

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	25	71	324	21	8	147
Future Vol, veh/h	25	71	324	21	8	147
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	29	83	377	24	9	171
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	578	201	0	0	401	0
Stage 1	389	-	-	-	-	-
Stage 2	189	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	336	766	-	-	1131	-
Stage 1	530	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	333	766	-	-	1131	-
Mov Cap-2 Maneuver	333	-	-	-	-	-
Stage 1	525	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	12.8		0		0.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1131	-	572	-	-	
HCM Lane V/C Ratio	0.008	-	0.195	-	-	
HCM Control Delay (s)	8.2	0	12.8	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.7	-	-	

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

2025-NB-AM
03/21/2017



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	400	128	10	27	10
Future Volume (vph)	12	400	128	10	27	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990		0.964	
Flt Protected		0.999			0.965	
Satd. Flow (prot)	0	1795	1662	0	1900	0
Flt Permitted		0.999			0.965	
Satd. Flow (perm)	0	1795	1662	0	1900	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	15	488	156	12	33	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	503	168	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	400	128	10	27	10
Future Vol, veh/h	12	400	128	10	27	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	15	488	156	12	33	12
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	168	0	-	0	680	162
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	518	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1422	-	-	-	740	950
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	927	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1422	-	-	-	730	950
Mov Cap-2 Maneuver	-	-	-	-	730	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	927	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.2		0		9.9	
HCM LOS					A	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1422	-	-	-	779	
HCM Lane V/C Ratio	0.01	-	-	-	0.058	
HCM Control Delay (s)	7.6	0	-	-	9.9	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	400	128	10	27	10
Future Vol, veh/h	12	400	128	10	27	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	15	488	156	12	33	12

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	168	0	680
Stage 1	-	-	162
Stage 2	-	-	518
Critical Hdwy	4.1	-	3.4
Critical Hdwy Stg 1	-	-	2.4
Critical Hdwy Stg 2	-	-	2.4
Follow-up Hdwy	2.2	-	3.5
Pot Cap-1 Maneuver	1422	-	740
Stage 1	-	-	998
Stage 2	-	-	927
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1422	-	730
Mov Cap-2 Maneuver	-	-	730
Stage 1	-	-	984
Stage 2	-	-	927

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1422	-	-	-	779
HCM Lane V/C Ratio	0.01	-	-	-	0.058
HCM Control Delay (s)	7.6	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Lanes, Volumes, Timings
10: NY 52 & Milltown Road

2025-NB-AM

03/21/2017



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	83	410	8	37	146
Future Volume (vph)	6	83	410	8	37	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.874		0.997			
Flt Protected	0.997					0.990
Satd. Flow (prot)	1616	0	1798	0	0	1696
Flt Permitted	0.997					0.990
Satd. Flow (perm)	1616	0	1798	0	0	1696
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	5%	0%	0%	5%
Adj. Flow (vph)	7	95	471	9	43	168
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	0	480	0	0	211
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	83	410	8	37	146
Future Vol, veh/h	6	83	410	8	37	146
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	5	0	0	5
Mvmt Flow	7	95	471	9	43	168
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	730	476	0	0	480	0
Stage 1	476	-	-	-	-	-
Stage 2	254	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.1	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	425	609	-	-	1093	-
Stage 1	663	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	407	609	-	-	1093	-
Mov Cap-2 Maneuver	407	-	-	-	-	-
Stage 1	634	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	12.4		0		1.7	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1093	-	589	-	-	
HCM Lane V/C Ratio	0.039	-	0.174	-	-	
HCM Control Delay (s)	8.4	0	12.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-	

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	83	410	8	37	146
Future Vol, veh/h	6	83	410	8	37	146
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	5	0	0	5
Mvmt Flow	7	95	471	9	43	168
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	730	476	0	0	480	0
Stage 1	476	-	-	-	-	-
Stage 2	254	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.1	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	425	609	-	-	1093	-
Stage 1	663	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	407	609	-	-	1093	-
Mov Cap-2 Maneuver	407	-	-	-	-	-
Stage 1	634	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	12.4		0		1.7	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1093	-	589	-	-	
HCM Lane V/C Ratio	0.039	-	0.174	-	-	
HCM Control Delay (s)	8.4	0	12.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-NB-PM

03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	116	0	97	0	524	177	126	875	0
Future Volume (vph)	0	0	0	116	0	97	0	524	177	126	875	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.966				
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1738	0	1769	1635	0	0	1715	0	1668	1715	0
Flt Permitted				0.757						0.260		
Satd. Flow (perm)	0	1738	0	1410	1635	0	0	1715	0	456	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					460			19				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	0	0	0	125	0	104	0	563	190	135	941	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	125	104	0	0	753	0	135	941	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-NB-PM

03/21/2017



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0		50.0	50.0		25.0	75.0	
Total Split (%)	31.8%	31.8%		31.8%	31.8%		45.5%	45.5%		22.7%	68.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		45.0	45.0		20.0	70.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio				0.64	0.17			0.68		0.30	0.71	
Control Delay				59.3	0.6			19.2		6.9	19.5	
Queue Delay				0.0	0.2			51.8		0.0	50.5	
Total Delay				59.3	0.8			71.0		6.9	70.0	
Queue Length 50th (ft)				85	0			285		1	541	
Queue Length 95th (ft)				139	0			#713		m42	808	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)				384	780			1101		615	1322	
Starvation Cap Reductn				0	0			0		0	524	
Spillback Cap Reductn				0	295			453		0	0	
Storage Cap Reductn				0	0			0		0	0	
Reduced v/c Ratio				0.33	0.21			1.16		0.22	1.18	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 20 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 60

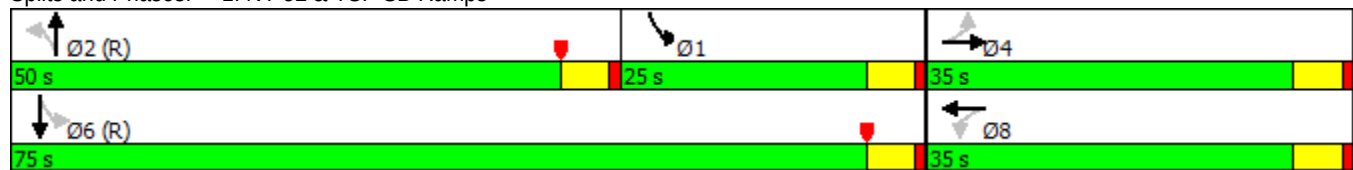
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: NY 52 & TSP SB Ramps



PEAK HOUR 5:00-6:00
JMC 17039

Synchro 10 Report
Page 2

HCM 6th Signalized Intersection Summary

1: NY 52 & TSP SB Ramps

2025-NB-PM

03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔			↔		↔	↔	
Traffic Volume (veh/h)	0	0	0	116	0	97	0	524	177	126	875	0
Future Volume (veh/h)	0	0	0	116	0	97	0	524	177	126	875	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	0	0	0	125	0	104	0	563	190	135	941	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	0	178	0	235	0	157	0	553	186	701	1449	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.41	0.41	0.71	1.00	0.00
Sat Flow, veh/h	0	1806	0	1720	0	1592	0	1351	456	1787	1788	0
Grp Volume(v), veh/h	0	0	0	125	0	104	0	0	753	135	941	0
Grp Sat Flow(s),veh/h/ln	0	1806	0	1720	0	1592	0	0	1807	1787	1788	0
Q Serve(g_s), s	0.0	0.0	0.0	7.8	0.0	6.9	0.0	0.0	45.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.8	0.0	6.9	0.0	0.0	45.0	0.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.25	1.00		0.00
Lane Grp Cap(c), veh/h	0	178	0	235	0	157	0	0	739	701	1449	0
V/C Ratio(X)	0.00	0.00	0.00	0.53	0.00	0.66	0.00	0.00	1.02	0.19	0.65	0.00
Avail Cap(c_a), veh/h	0	492	0	534	0	434	0	0	739	701	1449	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.43	0.43	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	48.2	0.0	47.8	0.0	0.0	32.5	10.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.9	0.0	4.7	0.0	0.0	37.9	0.1	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.4	0.0	2.9	0.0	0.0	25.9	1.0	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	50.0	0.0	52.5	0.0	0.0	70.4	10.3	1.0	0.0
LnGrp LOS	A	A	A	D	A	D	A	A	F	B	A	A
Approach Vol, veh/h	0				229				753			
Approach Delay, s/veh	0.0				51.2				70.4			
Approach LOS					D				E			
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	44.1	50.0		15.9		94.1		15.9				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	20.0	45.0		30.0		70.0		30.0				
Max Q Clear Time (g_c+I1), s	2.0	47.0		0.0		2.0		9.8				
Green Ext Time (p_c), s	0.5	0.0		0.0		7.4		1.1				

Intersection Summary

HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary

1: NY 52 & TSP SB Ramps

2025-NB-PM
03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↖			↕		↗	↖	
Traffic Volume (veh/h)	0	0	0	116	0	97	0	524	177	126	875	0
Future Volume (veh/h)	0	0	0	116	0	97	0	524	177	126	875	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	0	0	0	125	0	104	0	563	190	135	941	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	0	178	0	235	0	157	0	553	186	701	1449	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.41	0.41	0.71	1.00	0.00
Sat Flow, veh/h	0	1806	0	1720	0	1592	0	1351	456	1787	1788	0
Grp Volume(v), veh/h	0	0	0	125	0	104	0	0	753	135	941	0
Grp Sat Flow(s),veh/h/ln	0	1806	0	1720	0	1592	0	0	1807	1787	1788	0
Q Serve(g_s), s	0.0	0.0	0.0	7.8	0.0	6.9	0.0	0.0	45.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.8	0.0	6.9	0.0	0.0	45.0	0.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.25	1.00		0.00
Lane Grp Cap(c), veh/h	0	178	0	235	0	157	0	0	739	701	1449	0
V/C Ratio(X)	0.00	0.00	0.00	0.53	0.00	0.66	0.00	0.00	1.02	0.19	0.65	0.00
Avail Cap(c_a), veh/h	0	492	0	534	0	434	0	0	739	701	1449	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.43	0.43	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	48.2	0.0	47.8	0.0	0.0	32.5	10.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.9	0.0	4.7	0.0	0.0	37.9	0.1	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.4	0.0	2.9	0.0	0.0	25.9	1.0	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	50.0	0.0	52.5	0.0	0.0	70.4	10.3	1.0	0.0
LnGrp LOS	A	A	A	D	A	D	A	A	F	B	A	A
Approach Vol, veh/h	0			229			753			1076		
Approach Delay, s/veh	0.0			51.2			70.4			2.1		
Approach LOS				D			E			A		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	44.1	50.0		15.9		94.1		15.9				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	20.0	45.0		30.0		70.0		30.0				
Max Q Clear Time (g_c+I), s	12.0	47.0		0.0		2.0		9.8				
Green Ext Time (p_c), s	0.5	0.0		0.0		7.4		1.1				

Intersection Summary

HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-NB-PM

03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	31	44	531	26	316	18	425	178	64	426	12
Future Volume (vph)	17	31	44	531	26	316	18	425	178	64	426	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.935				0.850		0.956			0.996	
Flt Protected		0.991			0.954		0.950			0.950		
Satd. Flow (prot)	0	1975	0	0	1735	1546	1693	1693	0	1676	1720	0
Flt Permitted		0.991			0.954		0.138			0.120		
Satd. Flow (perm)	0	1975	0	0	1735	1546	246	1693	0	212	1720	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35				182		17			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	18	34	48	577	28	343	20	462	193	70	463	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	605	343	20	655	0	70	476	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT	NYS	DOT		NYS	DOT	
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-NB-PM

03/21/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	20.0	20.0		50.0	50.0	50.0	15.0	25.0		15.0	25.0	
Total Split (%)	18.2%	18.2%		45.5%	45.5%	45.5%	13.6%	22.7%		13.6%	22.7%	
Maximum Green (s)	15.0	15.0		45.0	45.0	45.0	10.0	20.0		10.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.50			0.87	0.47	0.11	1.30		0.42	0.84	
Control Delay		39.9			44.2	12.3	20.2	179.3		45.0	52.5	
Queue Delay		0.1			54.3	0.0	0.0	0.4		0.0	0.2	
Total Delay		39.9			98.5	12.3	20.2	179.7		45.0	52.7	
Queue Length 50th (ft)		44			376	74	7	~602		32	291	
Queue Length 95th (ft)		95			#539	150	m9	#902		70	#680	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		299			738	762	225	502		217	565	
Starvation Cap Reductn		0			0	0	0	22		0	0	
Spillback Cap Reductn		7			365	0	0	0		0	3	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.34			1.62	0.45	0.09	1.36		0.32	0.85	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 90

Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.

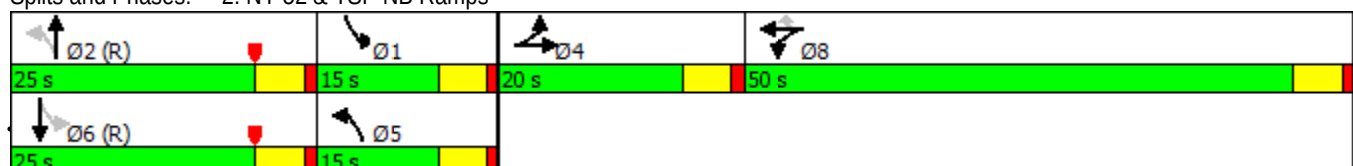
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NY 52 & TSP NB Ramps



HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-NB-PM

03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	17	31	44	531	26	316	18	425	178	64	426	12
Future Volume (veh/h)	17	31	44	531	26	316	18	425	178	64	426	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	18	34	48	577	28	343	20	462	193	70	463	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	23	44	62	633	31	590	433	225	94	425	318	9
Arrive On Green	0.07	0.07	0.07	0.37	0.37	0.37	0.40	0.36	0.36	0.20	0.18	0.18
Sat Flow, veh/h	352	664	938	1708	83	1590	1847	1239	517	1804	1747	49
Grp Volume(v), veh/h	100	0	0	605	0	343	20	0	655	70	0	476
Grp Sat Flow(s),veh/h/ln	1953	0	0	1791	0	1590	1847	0	1756	1804	0	1796
Q Serve(g_s), s	5.5	0.0	0.0	35.3	0.0	19.0	0.0	0.0	20.0	0.0	0.0	20.0
Cycle Q Clear(g_c), s	5.5	0.0	0.0	35.3	0.0	19.0	0.0	0.0	20.0	0.0	0.0	20.0
Prop In Lane	0.18		0.48	0.95		1.00	1.00		0.29	1.00		0.03
Lane Grp Cap(c), veh/h	130	0	0	664	0	590	433	0	319	425	0	327
V/C Ratio(X)	0.77	0.00	0.00	0.91	0.00	0.58	0.05	0.00	2.05	0.16	0.00	1.46
Avail Cap(c_a), veh/h	266	0	0	733	0	651	433	0	319	425	0	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.67	0.00	0.67	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.5	0.0	0.0	32.9	0.0	27.8	26.5	0.0	35.0	35.3	0.0	45.0
Incr Delay (d2), s/veh	9.3	0.0	0.0	14.7	0.0	1.1	0.0	0.0	480.4	0.2	0.0	222.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	17.7	0.0	7.3	0.3	0.0	48.8	1.5	0.0	28.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	0.0	0.0	47.6	0.0	28.9	26.5	0.0	515.4	35.5	0.0	267.1
LnGrp LOS	E	A	A	D	A	C	C	A	F	D	A	F
Approach Vol, veh/h		100			948			675			546	
Approach Delay, s/veh		59.8			40.8			500.9			237.4	
Approach LOS		E			D			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.9	25.0		12.3	26.9	25.0		45.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	20.0		15.0	10.0	20.0		45.0				
Max Q Clear Time (g_c+I1), s	2.0	22.0		7.5	2.0	22.0		37.3				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	0.0		3.5				

Intersection Summary

HCM 6th Ctrl Delay	225.8
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-NB-PM
03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	17	31	44	531	26	316	18	425	178	64	426	12
Future Volume (veh/h)	17	31	44	531	26	316	18	425	178	64	426	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	18	34	48	577	28	343	20	462	193	70	463	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	23	44	62	633	31	590	433	225	94	425	318	9
Arrive On Green	0.07	0.07	0.07	0.37	0.37	0.37	0.40	0.36	0.36	0.20	0.18	0.18
Sat Flow, veh/h	352	664	938	1708	83	1590	1847	1239	517	1804	1747	49
Grp Volume(v), veh/h	100	0	0	605	0	343	20	0	655	70	0	476
Grp Sat Flow(s),veh/h/ln	1953	0	0	1791	0	1590	1847	0	1756	1804	0	1796
Q Serve(g_s), s	5.5	0.0	0.0	35.3	0.0	19.0	0.0	0.0	20.0	0.0	0.0	20.0
Cycle Q Clear(g_c), s	5.5	0.0	0.0	35.3	0.0	19.0	0.0	0.0	20.0	0.0	0.0	20.0
Prop In Lane	0.18		0.48	0.95		1.00	1.00		0.29	1.00		0.03
Lane Grp Cap(c), veh/h	130	0	0	664	0	590	433	0	319	425	0	327
V/C Ratio(X)	0.77	0.00	0.00	0.91	0.00	0.58	0.05	0.00	2.05	0.16	0.00	1.46
Avail Cap(c_a), veh/h	266	0	0	733	0	651	433	0	319	425	0	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	1.00	0.67	0.00	0.67	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.5	0.0	0.0	32.9	0.0	27.8	26.5	0.0	35.0	35.3	0.0	45.0
Incr Delay (d2), s/veh	9.3	0.0	0.0	14.7	0.0	1.1	0.0	0.0	480.4	0.2	0.0	222.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	0.0	17.7	0.0	7.3	0.3	0.0	48.8	1.5	0.0	28.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	0.0	0.0	47.6	0.0	28.9	26.5	0.0	515.4	35.5	0.0	267.1
LnGrp LOS	E	A	A	D	A	C	C	A	F	D	A	F
Approach Vol, veh/h	100			948			675			546		
Approach Delay, s/veh	59.8			40.8			500.9			237.4		
Approach LOS	E			D			F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.9	25.0		12.3	26.9	25.0		45.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	20.0		15.0	10.0	20.0		45.0				
Max Q Clear Time (g_c+I), s	12.0	22.0		7.5	2.0	22.0		37.3				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	0.0		3.5				

Intersection Summary

HCM 6th Ctrl Delay 225.8
HCM 6th LOS F

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

2025-NB-PM
03/21/2017



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	29	70	140	605	429	37
Future Volume (vph)	29	70	140	605	429	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.989	
Flt Protected	0.950			0.991		
Satd. Flow (prot)	1780	1592	0	1790	1757	0
Flt Permitted	0.950			0.991		
Satd. Flow (perm)	1780	1592	0	1790	1757	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	7%	7%	0%
Adj. Flow (vph)	31	74	147	637	452	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	74	0	784	491	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection							
Int Delay, s/veh	2.3						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	29	70	140	605	429	37	
Future Vol, veh/h	29	70	140	605	429	37	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	0	0	0	7	7	0	
Mvmt Flow	31	74	147	637	452	39	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1403	472	491	0	-	0	
Stage 1	472	-	-	-	-	-	
Stage 2	931	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	213	628	1083	-	-	-	
Stage 1	702	-	-	-	-	-	
Stage 2	476	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	168	628	1083	-	-	-	
Mov Cap-2 Maneuver	168	-	-	-	-	-	
Stage 1	555	-	-	-	-	-	
Stage 2	476	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	17.2	1.7		0			
HCM LOS	C						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	1083	-	168	628	-	-	
HCM Lane V/C Ratio	0.136	-	0.182	0.117	-	-	
HCM Control Delay (s)	8.8	0	31.1	11.5	-	-	
HCM Lane LOS	A	A	D	B	-	-	
HCM 95th %tile Q(veh)	0.5	-	0.6	0.4	-	-	

Intersection							
Int Delay, s/veh	2.3						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	29	70	140	605	429	37	
Future Vol, veh/h	29	70	140	605	429	37	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	0	0	0	7	7	0	
Mvmt Flow	31	74	147	637	452	39	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1403	472	491	0	-	0	
Stage 1	472	-	-	-	-	-	
Stage 2	931	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	213	628	1083	-	-	-	
Stage 1	702	-	-	-	-	-	
Stage 2	476	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	168	628	1083	-	-	-	
Mov Cap-2 Maneuver	168	-	-	-	-	-	
Stage 1	555	-	-	-	-	-	
Stage 2	476	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	17.2	1.7		0			
HCM LOS	C						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	1083	-	168	628	-	-	
HCM Lane V/C Ratio	0.136	-	0.182	0.117	-	-	
HCM Control Delay (s)	8.8	0	31.1	11.5	-	-	
HCM Lane LOS	A	A	D	B	-	-	
HCM 95th %tile Q(veh)	0.5	-	0.6	0.4	-	-	

Lanes, Volumes, Timings
4: NY 52 & NY 216

2025-NB-PM
03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	336	248	50	25	248	37	29	5	14	12	8	189
Future Volume (vph)	336	248	50	25	248	37	29	5	14	12	8	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			0%			-2%	
Storage Length (ft)	150		0	100		0	0		0	0		80
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975			0.980			0.960				0.850
Flt Protected	0.950			0.950				0.971			0.970	
Satd. Flow (prot)	1581	1756	0	1693	1765	0	0	1771	0	0	1788	1561
Flt Permitted	0.490			0.570				0.802			0.787	
Satd. Flow (perm)	816	1756	0	1016	1765	0	0	1463	0	0	1451	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			10			15				199
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		2652			2735			439			869	
Travel Time (s)		40.2			41.4			10.0			10.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	6%	6%	0%	0%	6%	6%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	354	261	53	26	261	39	31	5	15	13	8	199
Shared Lane Traffic (%)												
Lane Group Flow (vph)	354	314	0	26	300	0	0	51	0	0	21	199
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.10	1.01	1.01	1.09	0.99	0.99	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		1	2		1	2	2
Detector Template	NYSDOT	NYSDOT		NYSDOT	NYSDOT		Left	NYSDOT		Left	NYSDOT	NYSDOT
Leading Detector (ft)	83	83		83	83		20	83		20	83	83
Trailing Detector (ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Position(ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Size(ft)	40	40		40	40		20	40		20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)	43	43		43	43			43			43	43
Detector 2 Size(ft)	40	40		40	40			40			40	40
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0

PEAK HOUR 5:00-6:00
JMC 17039

Synchro 10 Report
Page 12

Lanes, Volumes, Timings
4: NY 52 & NY 216

2025-NB-PM
03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.0	22.5		10.0	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	15.0	40.0		15.0	40.0		35.0	35.0		35.0	35.0	35.0
Total Split (%)	16.7%	44.4%		16.7%	44.4%		38.9%	38.9%		38.9%	38.9%	38.9%
Maximum Green (s)	10.0	35.0		10.0	35.0		30.0	30.0		30.0	30.0	30.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max		None	None		None	None	None
v/c Ratio	0.50	0.26		0.04	0.33			0.29			0.13	0.57
Control Delay	5.9	6.4		3.5	10.7			25.4			28.4	11.7
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	5.9	6.4		3.5	10.7			25.4			28.4	11.7
Queue Length 50th (ft)	35	28		2	63			14			8	0
Queue Length 95th (ft)	82	114		9	125			43			27	53
Internal Link Dist (ft)		2572			2655			359			789	
Turn Bay Length (ft)	150			100								80
Base Capacity (vph)	712	1192		777	919			658			644	804
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.50	0.26		0.03	0.33			0.08			0.03	0.25

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 67.6

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Splits and Phases: 4: NY 52 & NY 216

 Ø1	 Ø2	 Ø4
15 s	40 s	35 s
 Ø5	 Ø6	 Ø8
15 s	40 s	35 s

HCM 6th Signalized Intersection Summary

4: NY 52 & NY 216

2025-NB-PM
03/21/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	336	248	50	25	248	37	29	5	14	12	8	189
Future Volume (veh/h)	336	248	50	25	248	37	29	5	14	12	8	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1805	1805	1805	1939	1849	1849	1900	1900	1900	1979	1979	1964
Adj Flow Rate, veh/h	354	261	53	26	261	39	31	5	15	13	8	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	0	6	6	0	0	0	0	0	1
Cap, veh/h	832	967	196	814	911	136	151	9	27	149	52	
Arrive On Green	0.11	0.66	0.66	0.03	0.58	0.58	0.06	0.06	0.06	0.06	0.06	0.00
Sat Flow, veh/h	1719	1456	296	1847	1572	235	956	154	463	898	895	1664
Grp Volume(v), veh/h	354	0	314	26	0	300	51	0	0	21	0	0
Grp Sat Flow(s),veh/h/ln	1719	0	1752	1847	0	1807	1573	0	0	1793	0	1664
Q Serve(g_s), s	4.3	0.0	4.4	0.3	0.0	5.1	1.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.3	0.0	4.4	0.3	0.0	5.1	1.8	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.13	0.61		0.29	0.62		1.00
Lane Grp Cap(c), veh/h	832	0	1164	814	0	1048	187	0	0	201	0	
V/C Ratio(X)	0.43	0.00	0.27	0.03	0.00	0.29	0.27	0.00	0.00	0.10	0.00	
Avail Cap(c_a), veh/h	921	0	1164	1066	0	1048	853	0	0	917	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.5	0.0	4.1	4.7	0.0	6.4	27.6	0.0	0.0	27.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.6	0.0	0.0	0.7	0.8	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.0	0.1	0.0	1.5	0.7	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.8	0.0	4.7	4.7	0.0	7.1	28.4	0.0	0.0	27.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	
Approach Vol, veh/h	668				326				51		21	
Approach Delay, s/veh	4.2				6.9				28.4		27.3	
Approach LOS	A				A				C		C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	45.1		8.5	11.9	40.0		8.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	2.3	6.4		2.6	6.3	7.1		3.8				
Green Ext Time (p_c), s	0.0	1.5		0.0	0.6	1.4		0.2				

Intersection Summary

HCM 6th Ctrl Delay	6.7
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

4: NY 52 & NY 216

2025-NB-PM
03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	336	248	50	25	248	37	29	5	14	12	8	189
Future Volume (veh/h)	336	248	50	25	248	37	29	5	14	12	8	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1805	1805	1805	1939	1849	1849	1900	1900	1900	1979	1979	1964
Adj Flow Rate, veh/h	354	261	53	26	261	39	31	5	15	13	8	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	0	6	6	0	0	0	0	0	1
Cap, veh/h	832	967	196	814	911	136	151	9	27	149	52	
Arrive On Green	0.11	0.66	0.66	0.03	0.58	0.58	0.06	0.06	0.06	0.06	0.06	0.00
Sat Flow, veh/h	1719	1456	296	1847	1572	235	956	154	463	898	895	1664
Grp Volume(v), veh/h	354	0	314	26	0	300	51	0	0	21	0	0
Grp Sat Flow(s), veh/h/ln	1719	0	1752	1847	0	1807	1573	0	0	1793	0	1664
Q Serve(g_s), s	4.3	0.0	4.4	0.3	0.0	5.1	1.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.3	0.0	4.4	0.3	0.0	5.1	1.8	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.13	0.61		0.29	0.62		1.00
Lane Grp Cap(c), veh/h	832	0	1164	814	0	1048	187	0	0	201	0	
V/C Ratio(X)	0.43	0.00	0.27	0.03	0.00	0.29	0.27	0.00	0.00	0.10	0.00	
Avail Cap(c_a), veh/h	921	0	1164	1066	0	1048	853	0	0	917	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.5	0.0	4.1	4.7	0.0	6.4	27.6	0.0	0.0	27.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.6	0.0	0.0	0.7	0.8	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.0	0.1	0.0	1.5	0.7	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.8	0.0	4.7	4.7	0.0	7.1	28.4	0.0	0.0	27.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	
Approach Vol, veh/h	668			326			51			21		
Approach Delay, s/veh	4.2			6.9			28.4			27.3		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	45.1		8.5	11.9	40.0		8.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+12, s)	12.3	6.4		2.6	6.3	7.1		3.8				
Green Ext Time (p_c), s	0.0	1.5		0.0	0.6	1.4		0.2				

Intersection Summary

HCM 6th Ctrl Delay	6.7
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
5: NY 52 & Site Dwy A

2025-NB-PM
03/21/2017

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	459	298	0
Future Volume (vph)	0	0	0	459	298	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frnt						
Flt Protected						
Satd. Flow (prot)	1900	0	0	1810	1775	0
Flt Permitted						
Satd. Flow (perm)	1900	0	0	1810	1775	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	0	0	0	499	324	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	499	324	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	459	298	0
Future Vol, veh/h	0	0	0	459	298	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	0	0	0	499	324	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	823	324	324	0	-	0
Stage 1	324	-	-	-	-	-
Stage 2	499	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	346	722	1247	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	346	722	1247	-	-	-
Mov Cap-2 Maneuver	346	-	-	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1247	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	-	0	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	-	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	459	298	0
Future Vol, veh/h	0	0	0	459	298	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	0	0	0	499	324	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	823	324	324	0	-	0
Stage 1	324	-	-	-	-	-
Stage 2	499	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	346	722	1247	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	346	722	1247	-	-	-
Mov Cap-2 Maneuver	346	-	-	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1247	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	-	0	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	-	-	-	

Lanes, Volumes, Timings
6: Site Dwy B & NY 52

2025-NB-PM

03/21/2017

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	298	0	0	459	0	0
Future Volume (vph)	298	0	0	459	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr t						
Flt Protected						
Satd. Flow (prot)	1748	0	0	1837	1900	0
Flt Permitted						
Satd. Flow (perm)	1748	0	0	1837	1900	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	0%	6%	0%	0%
Adj. Flow (vph)	324	0	0	499	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	324	0	0	499	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	298	0	0	459	0	0
Future Vol, veh/h	298	0	0	459	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	6	0	0
Mvmt Flow	324	0	0	499	0	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	324	0	823	324
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	499	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1247	-	346	722
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	614	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1247	-	346	722
Mov Cap-2 Maneuver	-	-	-	-	346	-
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	614	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0		0	
HCM LOS					A	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	-	1247	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	0	-	-	-	
HCM Lane LOS	A	A	-	-	-	
HCM 95th %tile Q(veh)	-	0	-	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	298	0	0	459	0	0
Future Vol, veh/h	298	0	0	459	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	6	0	0
Mvmt Flow	324	0	0	499	0	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	324	0	823	324
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	499	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1247	-	346	722
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	614	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1247	-	346	722
Mov Cap-2 Maneuver	-	-	-	-	346	-
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	614	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0		0	
HCM LOS					A	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	-	1247	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	0	-	-	-	
HCM Lane LOS	A	A	-	-	-	
HCM 95th %tile Q(veh)	-	0	-	-	-	

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

2025-NB-PM

03/21/2017



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	34	264	442	23	9	17
Future Volume (vph)	34	264	442	23	9	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.993		0.912	
Flt Protected		0.994			0.983	
Satd. Flow (prot)	0	1731	1901	0	1804	0
Flt Permitted		0.994			0.983	
Satd. Flow (perm)	0	1731	1901	0	1804	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	6%	6%	0%	1%	1%
Adj. Flow (vph)	38	293	491	26	10	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	331	517	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.8					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	34	264	442	23	9	17
Future Vol, veh/h	34	264	442	23	9	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	6	6	0	1	1
Mvmt Flow	38	293	491	26	10	19
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	517	0	-	0	873	504
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	369	-
Critical Hdwy	4.1	-	-	-	5.01	5.51
Critical Hdwy Stg 1	-	-	-	-	4.01	-
Critical Hdwy Stg 2	-	-	-	-	4.01	-
Follow-up Hdwy	2.2	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1059	-	-	-	452	629
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1059	-	-	-	433	629
Mov Cap-2 Maneuver	-	-	-	-	433	-
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	810	-
Approach	SE		NW		SW	
HCM Control Delay, s	1		0		12	
HCM LOS					B	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1059	-	544	
HCM Lane V/C Ratio	-	-	0.036	-	0.053	
HCM Control Delay (s)	-	-	8.5	0	12	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0.1	-	0.2	

Intersection						
Int Delay, s/veh	0.8					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	34	264	442	23	9	17
Future Vol, veh/h	34	264	442	23	9	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	6	6	0	1	1
Mvmt Flow	38	293	491	26	10	19
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	517	0	-	0	873	504
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	369	-
Critical Hdwy	4.1	-	-	-	5.01	5.51
Critical Hdwy Stg 1	-	-	-	-	4.01	-
Critical Hdwy Stg 2	-	-	-	-	4.01	-
Follow-up Hdwy	2.2	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1059	-	-	-	452	629
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1059	-	-	-	433	629
Mov Cap-2 Maneuver	-	-	-	-	433	-
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	810	-
Approach	SE		NW		SW	
HCM Control Delay, s	1		0		12	
HCM LOS					B	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1059	-	544	
HCM Lane V/C Ratio	-	-	0.036	-	0.053	
HCM Control Delay (s)	-	-	8.5	0	12	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0.1	-	0.2	

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

2025-NB-PM

03/21/2017



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	37	32	207	44	27	453
Future Volume (vph)	37	32	207	44	27	453
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.937		0.974			
Flt Protected	0.974					0.997
Satd. Flow (prot)	1848	0	3255	0	0	1745
Flt Permitted	0.974					0.997
Satd. Flow (perm)	1848	0	3255	0	0	1745
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	41	36	230	49	30	503
Shared Lane Traffic (%)						
Lane Group Flow (vph)	77	0	279	0	0	533
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

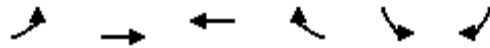
Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	37	32	207	44	27	453
Future Vol, veh/h	37	32	207	44	27	453
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	41	36	230	49	30	503
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	818	140	0	0	279	0
Stage 1	255	-	-	-	-	-
Stage 2	563	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	210	852	-	-	1257	-
Stage 1	666	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	203	852	-	-	1257	-
Mov Cap-2 Maneuver	203	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	20.1		0		0.4	
HCM LOS	C					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1257	-	314	-	-	
HCM Lane V/C Ratio	0.024	-	0.244	-	-	
HCM Control Delay (s)	7.9	0	20.1	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-	

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	37	32	207	44	27	453
Future Vol, veh/h	37	32	207	44	27	453
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	41	36	230	49	30	503
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	818	140	0	0	279	0
Stage 1	255	-	-	-	-	-
Stage 2	563	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	210	852	-	-	1257	-
Stage 1	666	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	203	852	-	-	1257	-
Mov Cap-2 Maneuver	203	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	20.1		0		0.4	
HCM LOS	C					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1257	-	314	-	-	
HCM Lane V/C Ratio	0.024	-	0.244	-	-	
HCM Control Delay (s)	7.9	0	20.1	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-	

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

2025-NB-PM

03/21/2017



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	235	497	8	10	10
Future Volume (vph)	8	235	497	8	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998		0.932	
Flt Protected		0.998			0.976	
Satd. Flow (prot)	0	1793	1670	0	1858	0
Flt Permitted		0.998			0.976	
Satd. Flow (perm)	0	1793	1670	0	1858	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	9	276	585	9	12	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	285	594	0	24	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	235	497	8	10	10
Future Vol, veh/h	8	235	497	8	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	9	276	585	9	12	12
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	594	0	-	0	884	590
Stage 1	-	-	-	-	590	-
Stage 2	-	-	-	-	294	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	992	-	-	-	665	654
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	972	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	992	-	-	-	658	654
Mov Cap-2 Maneuver	-	-	-	-	658	-
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	972	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.3		0		10.7	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	992	-	-	-	656	
HCM Lane V/C Ratio	0.009	-	-	-	0.036	
HCM Control Delay (s)	8.7	0	-	-	10.7	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	235	497	8	10	10
Future Vol, veh/h	8	235	497	8	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	9	276	585	9	12	12
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	594	0	-	0	884	590
Stage 1	-	-	-	-	590	-
Stage 2	-	-	-	-	294	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	992	-	-	-	665	654
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	972	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	992	-	-	-	658	654
Mov Cap-2 Maneuver	-	-	-	-	658	-
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	972	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.3		0		10.7	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	992	-	-	-	656	
HCM Lane V/C Ratio	0.009	-	-	-	0.036	
HCM Control Delay (s)	8.7	0	-	-	10.7	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Lanes, Volumes, Timings
10: NY 52 & Milltown Road

2025-NB-PM

03/21/2017



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	69	246	3	104	520
Future Volume (vph)	6	69	246	3	104	520
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.876		0.998			
Flt Protected	0.996					0.992
Satd. Flow (prot)	1602	0	1799	0	0	1697
Flt Permitted	0.996					0.992
Satd. Flow (perm)	1602	0	1799	0	0	1697
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	5%	0%	0%	5%
Adj. Flow (vph)	8	87	311	4	132	658
Shared Lane Traffic (%)						
Lane Group Flow (vph)	95	0	315	0	0	790
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	69	246	3	104	520
Future Vol, veh/h	6	69	246	3	104	520
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	1	1	5	0	0	5
Mvmt Flow	8	87	311	4	132	658
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1235	313	0	0	315	0
Stage 1	313	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Critical Hdwy	6.01	6.01	-	-	4.1	-
Critical Hdwy Stg 1	5.01	-	-	-	-	-
Critical Hdwy Stg 2	5.01	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	224	742	-	-	1257	-
Stage 1	770	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	187	742	-	-	1257	-
Mov Cap-2 Maneuver	187	-	-	-	-	-
Stage 1	642	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	12.1		0		1.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1257	-	600	-	-	
HCM Lane V/C Ratio	0.105	-	0.158	-	-	
HCM Control Delay (s)	8.2	0	12.1	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.6	-	-	

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	69	246	3	104	520
Future Vol, veh/h	6	69	246	3	104	520
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	1	1	5	0	0	5
Mvmt Flow	8	87	311	4	132	658
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1235	313	0	0	315	0
Stage 1	313	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Critical Hdwy	6.01	6.01	-	-	4.1	-
Critical Hdwy Stg 1	5.01	-	-	-	-	-
Critical Hdwy Stg 2	5.01	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	224	742	-	-	1257	-
Stage 1	770	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	187	742	-	-	1257	-
Mov Cap-2 Maneuver	187	-	-	-	-	-
Stage 1	642	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	12.1		0		1.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1257	-	600	-	-	
HCM Lane V/C Ratio	0.105	-	0.158	-	-	
HCM Control Delay (s)	8.2	0	12.1	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.6	-	-	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-BD-AM

03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	0	164	0	71	0	317	581	420	406	1
Future Volume (vph)	1	0	0	164	0	71	0	317	581	420	406	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.913				
Flt Protected		0.950		0.950						0.950		
Satd. Flow (prot)	0	1651	0	1769	1635	0	0	1659	0	1668	1716	0
Flt Permitted		0.708		0.757						0.076		
Satd. Flow (perm)	0	1230	0	1410	1635	0	0	1659	0	133	1716	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					576			120				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	1	0	0	176	0	76	0	341	625	452	437	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	176	76	0	0	966	0	452	438	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-BD-AM

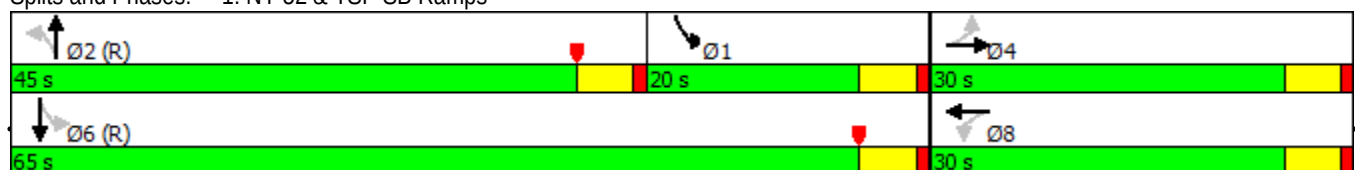
03/21/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		45.0	45.0		20.0	65.0	
Total Split (%)	31.6%	31.6%		31.6%	31.6%		47.4%	47.4%		21.1%	68.4%	
Maximum Green (s)	25.0	25.0		25.0	25.0		40.0	40.0		15.0	60.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio		0.00		0.69	0.10			1.08		1.34	0.36	
Control Delay		28.0		50.1	0.3			76.9		194.5	7.1	
Queue Delay		0.0		0.0	0.0			1.0		14.9	2.2	
Total Delay		28.0		50.1	0.3			77.9		209.4	9.4	
Queue Length 50th (ft)		1		100	0			~619		~324	116	
Queue Length 95th (ft)		5		157	0			#926		m#320	m156	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)		323		371	854			895		337	1226	
Starvation Cap Reductn		0		0	0			0		209	630	
Spillback Cap Reductn		0		0	1			2		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.00		0.47	0.09			1.08		3.53	0.73	

Intersection Summary

Area Type: Other
 Cycle Length: 95
 Actuated Cycle Length: 95
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: NY 52 & TSP SB Ramps



HCM 6th Signalized Intersection Summary

1: NY 52 & TSP SB Ramps

2025-BD-AM

03/21/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	0	164	0	71	0	317	581	420	406	1
Future Volume (veh/h)	1	0	0	164	0	71	0	317	581	420	406	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	1	0	0	176	0	76	0	341	625	452	437	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	206	0	0	289	0	230	0	251	461	570	1337	3
Arrive On Green	0.14	0.00	0.00	0.14	0.00	0.14	0.00	0.42	0.42	0.46	1.00	1.00
Sat Flow, veh/h	899	0	0	1369	0	1592	0	597	1094	1787	1783	4
Grp Volume(v), veh/h	1	0	0	176	0	76	0	0	966	452	0	438
Grp Sat Flow(s),veh/h/ln	899	0	0	1369	0	1592	0	0	1692	1787	0	1787
Q Serve(g_s), s	0.1	0.0	0.0	6.6	0.0	4.1	0.0	0.0	40.0	15.4	0.0	0.0
Cycle Q Clear(g_c), s	4.1	0.0	0.0	10.8	0.0	4.1	0.0	0.0	40.0	15.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	206	0	0	289	0	230	0	0	712	570	0	1340
V/C Ratio(X)	0.00	0.00	0.00	0.61	0.00	0.33	0.00	0.00	1.36	0.79	0.00	0.33
Avail Cap(c_a), veh/h	357	0	0	451	0	419	0	0	712	570	0	1340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.57	0.00	0.57
Uniform Delay (d), s/veh	38.3	0.0	0.0	39.1	0.0	36.5	0.0	0.0	27.5	21.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.8	0.0	0.0	169.4	4.5	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.1	0.0	1.6	0.0	0.0	47.9	6.7	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	0.0	0.0	41.1	0.0	37.3	0.0	0.0	196.9	25.8	0.0	0.4
LnGrp LOS	D	A	A	D	A	D	A	A	F	C	A	A
Approach Vol, veh/h	1				252				966			
Approach Delay, s/veh	38.3				40.0				196.9			
Approach LOS	D				D				F			
Timer - Assigned Phs	1	2	4			6		8				
Phs Duration (G+Y+Rc), s	31.2	45.0	18.8			76.2		18.8				
Change Period (Y+Rc), s	5.0	5.0	5.0			5.0		5.0				
Max Green Setting (Gmax), s	15.0	40.0	25.0			60.0		25.0				
Max Q Clear Time (g_c+I1), s	17.4	42.0	6.1			2.0		12.8				
Green Ext Time (p_c), s	0.0	0.0	0.0			2.3		1.0				
Intersection Summary												
HCM 6th Ctrl Delay	100.6											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

1: NY 52 & TSP SB Ramps

2025-BD-AM
03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↖			↕		↗	↖	
Traffic Volume (veh/h)	1	0	0	164	0	71	0	317	581	420	406	1
Future Volume (veh/h)	1	0	0	164	0	71	0	317	581	420	406	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	1	0	0	176	0	76	0	341	625	452	437	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	206	0	0	289	0	230	0	251	461	570	1337	3
Arrive On Green	0.14	0.00	0.00	0.14	0.00	0.14	0.00	0.42	0.42	0.46	1.00	1.00
Sat Flow, veh/h	899	0	0	1369	0	1592	0	597	1094	1787	1783	4
Grp Volume(v), veh/h	1	0	0	176	0	76	0	0	966	452	0	438
Grp Sat Flow(s),veh/h/ln	899	0	0	1369	0	1592	0	0	1692	1787	0	1787
Q Serve(g_s), s	0.1	0.0	0.0	6.6	0.0	4.1	0.0	0.0	40.0	15.4	0.0	0.0
Cycle Q Clear(g_c), s	4.1	0.0	0.0	10.8	0.0	4.1	0.0	0.0	40.0	15.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	206	0	0	289	0	230	0	0	712	570	0	1340
V/C Ratio(X)	0.00	0.00	0.00	0.61	0.00	0.33	0.00	0.00	1.36	0.79	0.00	0.33
Avail Cap(c_a), veh/h	357	0	0	451	0	419	0	0	712	570	0	1340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.57	0.00	0.57
Uniform Delay (d), s/veh	38.3	0.0	0.0	39.1	0.0	36.5	0.0	0.0	27.5	21.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.8	0.0	0.0	169.4	4.5	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.1	0.0	1.6	0.0	0.0	47.9	6.7	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	0.0	0.0	41.1	0.0	37.3	0.0	0.0	196.9	25.8	0.0	0.4
LnGrp LOS	D	A	A	D	A	D	A	A	F	C	A	A
Approach Vol, veh/h	1			252			966			890		
Approach Delay, s/veh	38.3			40.0			196.9			13.3		
Approach LOS	D			D			F			B		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	31.2	45.0		18.8		76.2		18.8				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	15.0	40.0		25.0		60.0		25.0				
Max Q Clear Time (g_c+1), s	17.4	42.0		6.1		2.0		12.8				
Green Ext Time (p_c), s	0.0	0.0		0.0		2.3		1.0				

Intersection Summary

HCM 6th Ctrl Delay 100.6
HCM 6th LOS F

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-AM

03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	19	22	157	27	140	27	317	45	65	648	11
Future Volume (vph)	9	19	22	157	27	140	27	317	45	65	648	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.940				0.850		0.981			0.997	
Flt Protected		0.991			0.959		0.950			0.950		
Satd. Flow (prot)	0	1986	0	0	1744	1546	1693	1720	0	1676	1721	0
Flt Permitted		0.991			0.959		0.182			0.440		
Satd. Flow (perm)	0	1986	0	0	1744	1546	324	1720	0	776	1721	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				151		7			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	10	20	24	169	29	151	29	341	48	70	697	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	0	198	151	29	389	0	70	709	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT	NYS	DOT		NYS	DOT	
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					CI+Ex	CI+Ex		CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-AM

03/21/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	15.0	15.0		20.0	20.0	20.0	30.0	30.0		30.0	30.0	
Total Split (%)	15.8%	15.8%		21.1%	21.1%	21.1%	31.6%	31.6%		31.6%	31.6%	
Maximum Green (s)	10.0	10.0		15.0	15.0	15.0	25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.31			0.66	0.39	0.11	0.44		0.14	0.75	
Control Delay		30.8			46.7	8.4	4.2	9.9		11.6	28.0	
Queue Delay		0.4			0.0	0.0	0.0	0.8		0.0	4.9	
Total Delay		31.2			46.7	8.4	4.2	10.7		11.6	33.0	
Queue Length 50th (ft)		17			113	0	2	69		17	361	
Queue Length 95th (ft)		53			172	48	m3	m70		44	#697	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		230			321	407	607	894		840	940	
Starvation Cap Reductn		0			0	0	0	248		0	0	
Spillback Cap Reductn		37			0	0	0	0		0	168	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.28			0.62	0.37	0.05	0.60		0.08	0.92	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 65

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NY 52 & TSP NB Ramps



PEAK HOUR 7:30-8:30
JMC 17039

Synchro 10 Report
Page 6

HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-BD-AM

03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	9	19	22	157	27	140	27	317	45	65	648	11
Future Volume (veh/h)	9	19	22	157	27	140	27	317	45	65	648	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	10	20	24	169	29	151	29	341	48	70	697	12
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	13	27	32	205	35	212	733	372	52	797	466	8
Arrive On Green	0.04	0.04	0.04	0.13	0.13	0.13	0.47	0.31	0.31	0.38	0.26	0.26
Sat Flow, veh/h	364	728	873	1536	264	1590	1847	1586	223	1804	1769	30
Grp Volume(v), veh/h	54	0	0	198	0	151	29	0	389	70	0	709
Grp Sat Flow(s),veh/h/ln	1964	0	0	1800	0	1590	1847	0	1809	1804	0	1800
Q Serve(g_s), s	2.6	0.0	0.0	10.2	0.0	8.6	0.0	0.0	19.7	0.0	0.0	25.0
Cycle Q Clear(g_c), s	2.6	0.0	0.0	10.2	0.0	8.6	0.0	0.0	19.7	0.0	0.0	25.0
Prop In Lane	0.19		0.44	0.85		1.00	1.00		0.12	1.00		0.02
Lane Grp Cap(c), veh/h	73	0	0	240	0	212	733	0	425	797	0	474
V/C Ratio(X)	0.74	0.00	0.00	0.82	0.00	0.71	0.04	0.00	0.92	0.09	0.00	1.50
Avail Cap(c_a), veh/h	207	0	0	284	0	251	733	0	476	797	0	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.00	0.09	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	40.1	0.0	39.4	16.1	0.0	31.8	17.5	0.0	35.0
Incr Delay (d2), s/veh	13.9	0.0	0.0	15.4	0.0	7.4	0.0	0.0	3.8	0.0	0.0	234.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	5.5	0.0	3.8	0.3	0.0	7.8	0.9	0.0	41.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	0.0	0.0	55.5	0.0	46.8	16.1	0.0	35.6	17.5	0.0	269.6
LnGrp LOS	E	A	A	E	A	D	B	A	D	B	A	F
Approach Vol, veh/h		54			349			418			779	
Approach Delay, s/veh		59.2			51.7			34.2			246.9	
Approach LOS		E			D			C			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	41.5	27.3		8.5	38.8	30.0		17.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	25.0	25.0		10.0	25.0	25.0		15.0				
Max Q Clear Time (g_c+I1), s	2.0	21.7		4.6	2.0	27.0		12.2				
Green Ext Time (p_c), s	0.2	0.6		0.0	0.0	0.0		0.5				

Intersection Summary

HCM 6th Ctrl Delay	142.4
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-BD-AM
03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (veh/h)	9	19	22	157	27	140	27	317	45	65	648	11
Future Volume (veh/h)	9	19	22	157	27	140	27	317	45	65	648	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	10	20	24	169	29	151	29	341	48	70	697	12
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	13	27	32	205	35	212	733	372	52	797	466	8
Arrive On Green	0.04	0.04	0.04	0.13	0.13	0.13	0.47	0.31	0.31	0.38	0.26	0.26
Sat Flow, veh/h	364	728	873	1536	264	1590	1847	1586	223	1804	1769	30
Grp Volume(v), veh/h	54	0	0	198	0	151	29	0	389	70	0	709
Grp Sat Flow(s),veh/h/ln	1964	0	0	1800	0	1590	1847	0	1809	1804	0	1800
Q Serve(g_s), s	2.6	0.0	0.0	10.2	0.0	8.6	0.0	0.0	19.7	0.0	0.0	25.0
Cycle Q Clear(g_c), s	2.6	0.0	0.0	10.2	0.0	8.6	0.0	0.0	19.7	0.0	0.0	25.0
Prop In Lane	0.19		0.44	0.85		1.00	1.00		0.12	1.00		0.02
Lane Grp Cap(c), veh/h	73	0	0	240	0	212	733	0	425	797	0	474
V/C Ratio(X)	0.74	0.00	0.00	0.82	0.00	0.71	0.04	0.00	0.92	0.09	0.00	1.50
Avail Cap(c_a), veh/h	207	0	0	284	0	251	733	0	476	797	0	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.00	0.09	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	40.1	0.0	39.4	16.1	0.0	31.8	17.5	0.0	35.0
Incr Delay (d2), s/veh	13.9	0.0	0.0	15.4	0.0	7.4	0.0	0.0	3.8	0.0	0.0	234.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	5.5	0.0	3.8	0.3	0.0	7.8	0.9	0.0	41.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	0.0	0.0	55.5	0.0	46.8	16.1	0.0	35.6	17.5	0.0	269.6
LnGrp LOS	E	A	A	E	A	D	B	A	D	B	A	F
Approach Vol, veh/h	54			349			418			779		
Approach Delay, s/veh	59.2			51.7			34.2			246.9		
Approach LOS	E			D			C			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	41.5	27.3		8.5	38.8	30.0		17.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	25.0	25.0		10.0	25.0	25.0		15.0				
Max Q Clear Time (g_c+12, s)	12.0	21.7		4.6	2.0	27.0		12.2				
Green Ext Time (p_c), s	0.2	0.6		0.0	0.0	0.0		0.5				

Intersection Summary

HCM 6th Ctrl Delay 142.4
HCM 6th LOS F

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

2025-BD-AM
03/21/2017



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	16	65	31	415	681	21
Future Volume (vph)	16	65	31	415	681	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.996	
Flt Protected	0.950			0.997		
Satd. Flow (prot)	1780	1592	0	1803	1779	0
Flt Permitted	0.950			0.997		
Satd. Flow (perm)	1780	1592	0	1803	1779	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	18	74	35	472	774	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	74	0	507	798	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection							
Int Delay, s/veh	1.3						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	16	65	31	415	681	21	
Future Vol, veh/h	16	65	31	415	681	21	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	88	88	88	88	88	88	
Heavy Vehicles, %	0	0	0	6	6	0	
Mvmt Flow	18	74	35	472	774	24	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1328	786	798	0	-	0	
Stage 1	786	-	-	-	-	-	
Stage 2	542	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	232	431	833	-	-	-	
Stage 1	539	-	-	-	-	-	
Stage 2	662	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	219	431	833	-	-	-	
Mov Cap-2 Maneuver	219	-	-	-	-	-	
Stage 1	508	-	-	-	-	-	
Stage 2	662	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	16.6	0.7		0			
HCM LOS	C						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	833	-	219	431	-	-	
HCM Lane V/C Ratio	0.042	-	0.083	0.171	-	-	
HCM Control Delay (s)	9.5	0	22.9	15.1	-	-	
HCM Lane LOS	A	A	C	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.3	0.6	-	-	

Intersection							
Int Delay, s/veh	1.3						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	16	65	31	415	681	21	
Future Vol, veh/h	16	65	31	415	681	21	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	88	88	88	88	88	88	
Heavy Vehicles, %	0	0	0	6	6	0	
Mvmt Flow	18	74	35	472	774	24	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1328	786	798	0	-	0	
Stage 1	786	-	-	-	-	-	
Stage 2	542	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	232	431	833	-	-	-	
Stage 1	539	-	-	-	-	-	
Stage 2	662	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	219	431	833	-	-	-	
Mov Cap-2 Maneuver	219	-	-	-	-	-	
Stage 1	508	-	-	-	-	-	
Stage 2	662	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	16.6	0.7		0			
HCM LOS	C						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	833	-	219	431	-	-	
HCM Lane V/C Ratio	0.042	-	0.083	0.171	-	-	
HCM Control Delay (s)	9.5	0	22.9	15.1	-	-	
HCM Lane LOS	A	A	C	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.3	0.6	-	-	

Lanes, Volumes, Timings
4: NY 52 & NY 216

2025-BD-AM

03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	238	15	8	338	10	45	7	22	16	2	319
Future Volume (vph)	178	238	15	8	338	10	45	7	22	16	2	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			0%			-2%	
Storage Length (ft)	150		0	100		0	0		0	0		80
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.996			0.960				0.850
Flt Protected	0.950			0.950				0.970			0.957	
Satd. Flow (prot)	1581	1774	0	1693	1794	0	0	1769	0	0	1775	1577
Flt Permitted	0.432			0.596				0.802			0.795	
Satd. Flow (perm)	719	1774	0	1062	1794	0	0	1463	0	0	1475	1577
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			2			23				332
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		2638			2750			543			840	
Travel Time (s)		40.0			41.7			12.3			10.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	6%	6%	0%	0%	6%	6%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	185	248	16	8	352	10	47	7	23	17	2	332
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	264	0	8	362	0	0	77	0	0	19	332
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.10	1.01	1.01	1.09	0.99	0.99	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		1	2		1	2	2
Detector Template	NYSDOT	NYSDOT		NYSDOT	NYSDOT		Left	NYSDOT		Left	NYSDOT	NYSDOT
Leading Detector (ft)	83	83		83	83		20	83		20	83	83
Trailing Detector (ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Position(ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Size(ft)	40	40		40	40		20	40		20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)	43	43		43	43			43			43	43
Detector 2 Size(ft)	40	40		40	40			40			40	40
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0

PEAK HOUR 7:30-8:30
JMC 17039

Synchro 10 Report
Page 12

Lanes, Volumes, Timings
4: NY 52 & NY 216

2025-BD-AM
03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.0	22.5		10.0	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	15.0	35.0		15.0	35.0		40.0	40.0		40.0	40.0	40.0
Total Split (%)	16.7%	38.9%		16.7%	38.9%		44.4%	44.4%		44.4%	44.4%	44.4%
Maximum Green (s)	10.0	30.0		10.0	30.0		35.0	35.0		35.0	35.0	35.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max		None	None		None	None	None
v/c Ratio	0.29	0.22		0.01	0.42			0.36			0.10	0.67
Control Delay	4.8	5.9		4.1	13.1			23.6			24.7	10.8
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	4.8	5.9		4.1	13.1			23.6			24.7	10.8
Queue Length 50th (ft)	17	25		1	83			19			7	0
Queue Length 95th (ft)	47	104		5	168			53			23	62
Internal Link Dist (ft)		2558			2670			463			760	
Turn Bay Length (ft)	150			100								80
Base Capacity (vph)	645	1199		784	866			833			830	1032
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.29	0.22		0.01	0.42			0.09			0.02	0.32

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 62.4

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

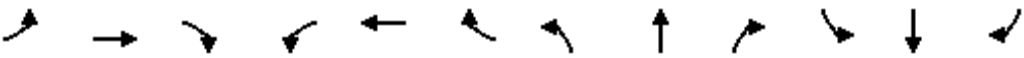
Splits and Phases: 4: NY 52 & NY 216

 Ø1	 Ø2	 Ø4
15 s	35 s	40 s
 Ø5	 Ø6	 Ø8
15 s	35 s	40 s

HCM 6th Signalized Intersection Summary

4: NY 52 & NY 216

2025-BD-AM
03/21/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	238	15	8	338	10	45	7	22	16	2	319
Future Volume (veh/h)	178	238	15	8	338	10	45	7	22	16	2	319
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1805	1805	1805	1939	1849	1849	1900	1900	1900	1979	1979	1979
Adj Flow Rate, veh/h	185	248	16	8	352	10	47	7	23	17	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	6	6	0	6	6	0	0	0	0	0	0
Cap, veh/h	731	1070	69	803	1004	29	176	10	33	232	21	
Arrive On Green	0.09	0.64	0.64	0.01	0.56	0.56	0.07	0.07	0.07	0.07	0.07	0.00
Sat Flow, veh/h	1719	1677	108	1847	1789	51	953	142	467	1475	294	1677
Grp Volume(v), veh/h	185	0	264	8	0	362	77	0	0	19	0	0
Grp Sat Flow(s),veh/h/ln	1719	0	1786	1847	0	1840	1562	0	0	1769	0	1677
Q Serve(g_s), s	2.1	0.0	3.4	0.1	0.0	5.8	2.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	3.4	0.1	0.0	5.8	2.5	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.03	0.61		0.30	0.89		1.00
Lane Grp Cap(c), veh/h	731	0	1139	803	0	1032	219	0	0	253	0	
V/C Ratio(X)	0.25	0.00	0.23	0.01	0.00	0.35	0.35	0.00	0.00	0.08	0.00	
Avail Cap(c_a), veh/h	902	0	1139	1129	0	1032	1106	0	0	1129	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.8	0.0	4.1	4.9	0.0	6.4	24.2	0.0	0.0	23.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.5	0.0	0.0	0.9	1.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.7	0.0	0.0	1.6	0.9	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.0	0.0	4.6	4.9	0.0	7.4	25.2	0.0	0.0	23.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	
Approach Vol, veh/h	449				370				77			
Approach Delay, s/veh	4.3				7.3				25.2			
Approach LOS	A				A				C			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	39.1		8.8	9.7	35.0		8.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		35.0	10.0	30.0		35.0				
Max Q Clear Time (g_c+I1), s	2.1	5.4		2.5	4.1	7.8		4.5				
Green Ext Time (p_c), s	0.0	1.2		0.0	0.4	1.7		0.3				

Intersection Summary

HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

4: NY 52 & NY 216

2025-BD-AM

03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	238	15	8	338	10	45	7	22	16	2	319
Future Volume (veh/h)	178	238	15	8	338	10	45	7	22	16	2	319
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1805	1805	1805	1939	1849	1849	1900	1900	1900	1979	1979	1979
Adj Flow Rate, veh/h	185	248	16	8	352	10	47	7	23	17	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	6	6	0	6	6	0	0	0	0	0	0
Cap, veh/h	731	1070	69	803	1004	29	176	10	33	232	21	
Arrive On Green	0.09	0.64	0.64	0.01	0.56	0.56	0.07	0.07	0.07	0.07	0.07	0.00
Sat Flow, veh/h	1719	1677	108	1847	1789	51	953	142	467	1475	294	1677
Grp Volume(v), veh/h	185	0	264	8	0	362	77	0	0	19	0	0
Grp Sat Flow(s), veh/h/ln	1719	0	1786	1847	0	1840	1562	0	0	1769	0	1677
Q Serve(g_s), s	2.1	0.0	3.4	0.1	0.0	5.8	2.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	3.4	0.1	0.0	5.8	2.5	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.03	0.61		0.30	0.89		1.00
Lane Grp Cap(c), veh/h	731	0	1139	803	0	1032	219	0	0	253	0	
V/C Ratio(X)	0.25	0.00	0.23	0.01	0.00	0.35	0.35	0.00	0.00	0.08	0.00	
Avail Cap(c_a), veh/h	902	0	1139	1129	0	1032	1106	0	0	1129	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.8	0.0	4.1	4.9	0.0	6.4	24.2	0.0	0.0	23.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.5	0.0	0.0	0.9	1.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.7	0.0	0.0	1.6	0.9	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.0	0.0	4.6	4.9	0.0	7.4	25.2	0.0	0.0	23.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	
Approach Vol, veh/h	449			370			77			19		
Approach Delay, s/veh	4.3			7.3			25.2			23.4		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	39.1		8.8	9.7	35.0		8.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		35.0	10.0	30.0		35.0				
Max Q Clear Time (g_c+1.2), s	12.1	5.4		2.5	4.1	7.8		4.5				
Green Ext Time (p_c), s	0.0	1.2		0.0	0.4	1.7		0.3				

Intersection Summary

HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
5: NY 52 & Site Dwy A

2025-BD-AM
03/21/2017

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	69	20	10	221	326	20
Future Volume (vph)	69	20	10	221	326	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.969				0.992	
Flt Protected	0.963			0.998		
Satd. Flow (prot)	1773	0	0	1828	1782	0
Flt Permitted	0.963			0.998		
Satd. Flow (perm)	1773	0	0	1828	1782	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	5%	5%	0%
Adj. Flow (vph)	71	21	10	228	336	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	0	0	238	357	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	69	20	10	221	326	20
Future Vol, veh/h	69	20	10	221	326	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	5	5	0
Mvmt Flow	71	21	10	228	336	21
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	595	347	357	0	-	0
Stage 1	347	-	-	-	-	-
Stage 2	248	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	470	701	1213	-	-	-
Stage 1	720	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	466	701	1213	-	-	-
Mov Cap-2 Maneuver	466	-	-	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.7	0.3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1213	-	504	-	-	
HCM Lane V/C Ratio	0.008	-	0.182	-	-	
HCM Control Delay (s)	8	0	13.7	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.7	-	-	

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	69	20	10	221	326	20
Future Vol, veh/h	69	20	10	221	326	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	5	5	0
Mvmt Flow	71	21	10	228	336	21
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	595	347	357	0	-	0
Stage 1	347	-	-	-	-	-
Stage 2	248	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	470	701	1213	-	-	-
Stage 1	720	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	466	701	1213	-	-	-
Mov Cap-2 Maneuver	466	-	-	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.7	0.3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1213	-	504	-	-	
HCM Lane V/C Ratio	0.008	-	0.182	-	-	
HCM Control Delay (s)	8	0	13.7	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.7	-	-	

Lanes, Volumes, Timings
6: Site Dwy B & NY 52

2025-BD-AM
03/21/2017

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	343	3	0	231	0	10
Future Volume (vph)	343	3	0	231	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.865	
Flt Protected						
Satd. Flow (prot)	1763	0	0	1855	1644	0
Flt Permitted						
Satd. Flow (perm)	1763	0	0	1855	1644	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	5%	0%	0%	5%	0%	0%
Adj. Flow (vph)	354	3	0	238	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	357	0	0	238	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 0.2

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	343	3	0	231	0	10
Future Vol, veh/h	343	3	0	231	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	354	3	0	238	0	10

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	594
Stage 1	-	-	356
Stage 2	-	-	238
Critical Hdwy	-	4.1	6.4
Critical Hdwy Stg 1	-	-	5.4
Critical Hdwy Stg 2	-	-	5.4
Follow-up Hdwy	-	2.2	3.5
Pot Cap-1 Maneuver	-	1213	471
Stage 1	-	-	713
Stage 2	-	-	806
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1213	471
Mov Cap-2 Maneuver	-	-	471
Stage 1	-	-	713
Stage 2	-	-	806

Approach	SE	NW	NE
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	693	1213	-	-	-
HCM Lane V/C Ratio	0.015	-	-	-	-
HCM Control Delay (s)	10.3	0	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

Intersection						
Int Delay, s/veh	0.2					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	343	3	0	231	0	10
Future Vol, veh/h	343	3	0	231	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	354	3	0	238	0	10
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	357	0	594	356
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	238	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1213	-	471	693
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	806	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1213	-	471	693
Mov Cap-2 Maneuver	-	-	-	-	471	-
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	806	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0		10.3	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	693	1213	-	-	-	
HCM Lane V/C Ratio	0.015	-	-	-	-	
HCM Control Delay (s)	10.3	0	-	-	-	
HCM Lane LOS	B	A	-	-	-	
HCM 95th %tile Q(veh)	0	0	-	-	-	

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

2025-BD-AM
03/21/2017



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	10	343	177	13	25	54
Future Volume (vph)	10	343	177	13	25	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.991		0.908	
Flt Protected		0.999			0.984	
Satd. Flow (prot)	0	1747	1916	0	1816	0
Flt Permitted		0.999			0.984	
Satd. Flow (perm)	0	1747	1916	0	1816	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	5%	5%	0%	0%	0%
Adj. Flow (vph)	10	350	181	13	26	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	360	194	0	81	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.4					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	10	343	177	13	25	54
Future Vol, veh/h	10	343	177	13	25	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	5	5	0	0	0
Mvmt Flow	10	350	181	13	26	55
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	194	0	-	0	558	188
Stage 1	-	-	-	-	188	-
Stage 2	-	-	-	-	370	-
Critical Hdwy	4.1	-	-	-	5	5.5
Critical Hdwy Stg 1	-	-	-	-	4	-
Critical Hdwy Stg 2	-	-	-	-	4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1391	-	-	-	614	891
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	812	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1391	-	-	-	608	891
Mov Cap-2 Maneuver	-	-	-	-	608	-
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	812	-
Approach	SE		NW		SW	
HCM Control Delay, s	0.2		0		10.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1391	-	777	
HCM Lane V/C Ratio	-	-	0.007	-	0.104	
HCM Control Delay (s)	-	-	7.6	0	10.2	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0	-	0.3	

Intersection						
Int Delay, s/veh	1.4					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	10	343	177	13	25	54
Future Vol, veh/h	10	343	177	13	25	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	5	5	0	0	0
Mvmt Flow	10	350	181	13	26	55
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	194	0	-	0	558	188
Stage 1	-	-	-	-	188	-
Stage 2	-	-	-	-	370	-
Critical Hdwy	4.1	-	-	-	5	5.5
Critical Hdwy Stg 1	-	-	-	-	4	-
Critical Hdwy Stg 2	-	-	-	-	4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1391	-	-	-	614	891
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	812	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1391	-	-	-	608	891
Mov Cap-2 Maneuver	-	-	-	-	608	-
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	812	-
Approach	SE		NW		SW	
HCM Control Delay, s	0.2		0		10.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1391	-	777	
HCM Lane V/C Ratio	-	-	0.007	-	0.104	
HCM Control Delay (s)	-	-	7.6	0	10.2	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0	-	0.3	

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

2025-BD-AM

03/21/2017



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	25	71	354	21	8	157
Future Volume (vph)	25	71	354	21	8	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.900		0.992			
Flt Protected	0.987					0.998
Satd. Flow (prot)	1799	0	3315	0	0	1747
Flt Permitted	0.987					0.998
Satd. Flow (perm)	1799	0	3315	0	0	1747
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	29	83	412	24	9	183
Shared Lane Traffic (%)						
Lane Group Flow (vph)	112	0	436	0	0	192
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

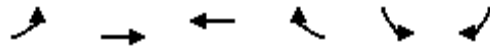
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	25	71	354	21	8	157
Future Vol, veh/h	25	71	354	21	8	157
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	29	83	412	24	9	183
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	625	218	0	0	436	0
Stage 1	424	-	-	-	-	-
Stage 2	201	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	307	743	-	-	1097	-
Stage 1	499	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	304	743	-	-	1097	-
Mov Cap-2 Maneuver	304	-	-	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	13.4		0		0.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1097	-	540	-	-	
HCM Lane V/C Ratio	0.008	-	0.207	-	-	
HCM Control Delay (s)	8.3	0	13.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.8	-	-	

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	25	71	354	21	8	157
Future Vol, veh/h	25	71	354	21	8	157
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	29	83	412	24	9	183
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	625	218	0	0	436	0
Stage 1	424	-	-	-	-	-
Stage 2	201	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	307	743	-	-	1097	-
Stage 1	499	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	304	743	-	-	1097	-
Mov Cap-2 Maneuver	304	-	-	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	13.4		0		0.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1097	-	540	-	-	
HCM Lane V/C Ratio	0.008	-	0.207	-	-	
HCM Control Delay (s)	8.3	0	13.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.8	-	-	

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

2025-BD-AM
03/21/2017



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	430	138	10	27	10
Future Volume (vph)	12	430	138	10	27	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.991		0.964	
Flt Protected		0.999			0.965	
Satd. Flow (prot)	0	1794	1663	0	1900	0
Flt Permitted		0.999			0.965	
Satd. Flow (perm)	0	1794	1663	0	1900	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	15	524	168	12	33	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	539	180	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	430	138	10	27	10
Future Vol, veh/h	12	430	138	10	27	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	15	524	168	12	33	12
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	180	0	-	0	728	174
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	554	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1408	-	-	-	722	940
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	920	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1408	-	-	-	711	940
Mov Cap-2 Maneuver	-	-	-	-	711	-
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	920	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.2		0		10	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1408	-	-	-	761	
HCM Lane V/C Ratio	0.01	-	-	-	0.059	
HCM Control Delay (s)	7.6	0	-	-	10	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	430	138	10	27	10
Future Vol, veh/h	12	430	138	10	27	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	15	524	168	12	33	12
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	180	0	-	0	728	174
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	554	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1408	-	-	-	722	940
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	920	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1408	-	-	-	711	940
Mov Cap-2 Maneuver	-	-	-	-	711	-
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	920	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.2		0		10	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1408	-	-	-	761	
HCM Lane V/C Ratio	0.01	-	-	-	0.059	
HCM Control Delay (s)	7.6	0	-	-	10	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Lanes, Volumes, Timings
10: NY 52 & Milltown Road

2025-BD-AM

03/21/2017



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	83	440	8	37	156
Future Volume (vph)	6	83	440	8	37	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.874		0.998			
Flt Protected	0.997					0.990
Satd. Flow (prot)	1616	0	1800	0	0	1695
Flt Permitted	0.997					0.990
Satd. Flow (perm)	1616	0	1800	0	0	1695
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	5%	0%	0%	5%
Adj. Flow (vph)	7	95	506	9	43	179
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	0	515	0	0	222
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	83	440	8	37	156
Future Vol, veh/h	6	83	440	8	37	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	5	0	0	5
Mvmt Flow	7	95	506	9	43	179
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	776	511	0	0	515	0
Stage 1	511	-	-	-	-	-
Stage 2	265	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.1	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	402	583	-	-	1061	-
Stage 1	642	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	384	583	-	-	1061	-
Mov Cap-2 Maneuver	384	-	-	-	-	-
Stage 1	613	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	12.8		0		1.6	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1061	-	563	-	-	
HCM Lane V/C Ratio	0.04	-	0.182	-	-	
HCM Control Delay (s)	8.5	0	12.8	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-	

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	83	440	8	37	156
Future Vol, veh/h	6	83	440	8	37	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	5	0	0	5
Mvmt Flow	7	95	506	9	43	179
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	776	511	0	0	515	0
Stage 1	511	-	-	-	-	-
Stage 2	265	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.1	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	402	583	-	-	1061	-
Stage 1	642	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	384	583	-	-	1061	-
Mov Cap-2 Maneuver	384	-	-	-	-	-
Stage 1	613	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	12.8		0		1.6	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1061	-	563	-	-	
HCM Lane V/C Ratio	0.04	-	0.182	-	-	
HCM Control Delay (s)	8.5	0	12.8	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-BD-PM

03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	116	0	108	0	546	177	149	888	0
Future Volume (vph)	0	0	0	116	0	108	0	546	177	149	888	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.967				
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1738	0	1769	1635	0	0	1716	0	1668	1715	0
Flt Permitted				0.757						0.242		
Satd. Flow (perm)	0	1738	0	1410	1635	0	0	1716	0	425	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					450			18				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	0	0	0	125	0	116	0	587	190	160	955	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	125	116	0	0	777	0	160	955	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-BD-PM

03/21/2017



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0		50.0	50.0		25.0	75.0	
Total Split (%)	31.8%	31.8%		31.8%	31.8%		45.5%	45.5%		22.7%	68.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		45.0	45.0		20.0	70.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio				0.64	0.19			0.71		0.36	0.72	
Control Delay				59.3	0.7			20.7		9.8	20.1	
Queue Delay				0.0	0.3			51.8		0.0	50.7	
Total Delay				59.3	0.9			72.6		9.8	70.8	
Queue Length 50th (ft)				85	0			318		12	557	
Queue Length 95th (ft)				139	0			#751		m67	m798	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)				384	773			1089		590	1322	
Starvation Cap Reductn				0	0			0		0	553	
Spillback Cap Reductn				0	308			463		0	0	
Storage Cap Reductn				0	0			0		0	0	
Reduced v/c Ratio				0.33	0.25			1.24		0.27	1.24	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 20 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 60

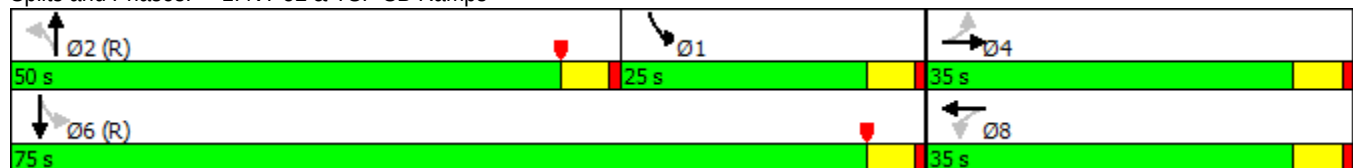
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: NY 52 & TSP SB Ramps



PEAK HOUR 5:00-6:00
JMC 17039

Synchro 10 Report
Page 2

HCM 6th Signalized Intersection Summary

2025-BD-PM

1: NY 52 & TSP SB Ramps

03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔			↔		↔	↔	
Traffic Volume (veh/h)	0	0	0	116	0	108	0	546	177	149	888	0
Future Volume (veh/h)	0	0	0	116	0	108	0	546	177	149	888	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	0	0	0	125	0	116	0	587	190	160	955	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	0	180	0	237	0	158	0	559	181	700	1447	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.41	0.41	0.71	1.00	0.00
Sat Flow, veh/h	0	1806	0	1720	0	1592	0	1367	442	1787	1788	0
Grp Volume(v), veh/h	0	0	0	125	0	116	0	0	777	160	955	0
Grp Sat Flow(s),veh/h/ln	0	1806	0	1720	0	1592	0	0	1809	1787	1788	0
Q Serve(g_s), s	0.0	0.0	0.0	7.8	0.0	7.8	0.0	0.0	45.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.8	0.0	7.8	0.0	0.0	45.0	0.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.24	1.00		0.00
Lane Grp Cap(c), veh/h	0	180	0	237	0	158	0	0	740	700	1447	0
V/C Ratio(X)	0.00	0.00	0.00	0.53	0.00	0.73	0.00	0.00	1.05	0.23	0.66	0.00
Avail Cap(c_a), veh/h	0	492	0	534	0	434	0	0	740	700	1447	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.28	0.28	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	48.1	0.0	48.1	0.0	0.0	32.5	10.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.8	0.0	6.4	0.0	0.0	47.0	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.4	0.0	3.4	0.0	0.0	27.8	1.2	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	49.9	0.0	54.5	0.0	0.0	79.5	10.3	0.7	0.0
LnGrp LOS	A	A	A	D	A	D	A	A	F	B	A	A
Approach Vol, veh/h	0				241				777			
Approach Delay, s/veh	0.0				52.1				79.5			
Approach LOS					D				E			
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	44.1	50.0		15.9		94.1		15.9				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	20.0	45.0		30.0		70.0		30.0				
Max Q Clear Time (g_c+I1), s	2.0	47.0		0.0		2.0		9.8				
Green Ext Time (p_c), s	0.6	0.0		0.0		7.7		1.2				

Intersection Summary

HCM 6th Ctrl Delay	35.9
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary

1: NY 52 & TSP SB Ramps

2025-BD-PM
03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↘			↕		↗	↘	
Traffic Volume (veh/h)	0	0	0	116	0	108	0	546	177	149	888	0
Future Volume (veh/h)	0	0	0	116	0	108	0	546	177	149	888	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	0	0	0	125	0	116	0	587	190	160	955	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	0	180	0	237	0	158	0	559	181	700	1447	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.41	0.41	0.71	1.00	0.00
Sat Flow, veh/h	0	1806	0	1720	0	1592	0	1367	442	1787	1788	0
Grp Volume(v), veh/h	0	0	0	125	0	116	0	0	777	160	955	0
Grp Sat Flow(s),veh/h/ln	0	1806	0	1720	0	1592	0	0	1809	1787	1788	0
Q Serve(g_s), s	0.0	0.0	0.0	7.8	0.0	7.8	0.0	0.0	45.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.8	0.0	7.8	0.0	0.0	45.0	0.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.24	1.00		0.00
Lane Grp Cap(c), veh/h	0	180	0	237	0	158	0	0	740	700	1447	0
V/C Ratio(X)	0.00	0.00	0.00	0.53	0.00	0.73	0.00	0.00	1.05	0.23	0.66	0.00
Avail Cap(c_a), veh/h	0	492	0	534	0	434	0	0	740	700	1447	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.28	0.28	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	48.1	0.0	48.1	0.0	0.0	32.5	10.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.8	0.0	6.4	0.0	0.0	47.0	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.4	0.0	3.4	0.0	0.0	27.8	1.2	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	49.9	0.0	54.5	0.0	0.0	79.5	10.3	0.7	0.0
LnGrp LOS	A	A	A	D	A	D	A	A	F	B	A	A
Approach Vol, veh/h	0			241			777			1115		
Approach Delay, s/veh	0.0			52.1			79.5			2.1		
Approach LOS				D			E			A		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	44.1	50.0		15.9		94.1		15.9				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	20.0	45.0		30.0		70.0		30.0				
Max Q Clear Time (g_c+I), s	12.0	47.0		0.0		2.0		9.8				
Green Ext Time (p_c), s	0.6	0.0		0.0		7.7		1.2				

Intersection Summary

HCM 6th Ctrl Delay	35.9
HCM 6th LOS	D

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-PM

03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↗	↗	↗	↗	↗	
Traffic Volume (vph)	17	31	44	531	26	355	18	458	178	70	462	12
Future Volume (vph)	17	31	44	531	26	355	18	458	178	70	462	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.935				0.850		0.958			0.996	
Flt Protected		0.991			0.954		0.950			0.950		
Satd. Flow (prot)	0	1975	0	0	1735	1546	1693	1695	0	1676	1720	0
Flt Permitted		0.991			0.954		0.139			0.122		
Satd. Flow (perm)	0	1975	0	0	1735	1546	248	1695	0	215	1720	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35				205		16			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	18	34	48	577	28	386	20	498	193	76	502	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	605	386	20	691	0	76	515	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT	NYS	DOT		NYS	DOT	
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					CI+Ex	CI+Ex		CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

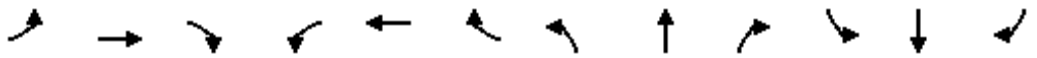
PEAK HOUR 5:00-6:00
JMC 17039

Synchro 10 Report
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Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-PM

03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	20.0	20.0		50.0	50.0	50.0	15.0	25.0		15.0	25.0	
Total Split (%)	18.2%	18.2%		45.5%	45.5%	45.5%	13.6%	22.7%		13.6%	22.7%	
Maximum Green (s)	15.0	15.0		45.0	45.0	45.0	10.0	20.0		10.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.50			0.87	0.52	0.11	1.39		0.44	0.92	
Control Delay		39.9			44.0	13.0	19.5	213.5		46.1	61.5	
Queue Delay		0.1			54.8	0.0	0.0	0.3		0.0	0.4	
Total Delay		39.9			98.7	13.0	19.5	213.8		46.1	61.9	
Queue Length 50th (ft)		44			373	85	6	~666		36	328	
Queue Length 95th (ft)		95			#565	171	m9	#964		74	#744	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		299			738	775	225	498		217	561	
Starvation Cap Reductn		0			0	0	0	19		0	0	
Spillback Cap Reductn		7			383	0	0	0		0	3	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.34			1.70	0.50	0.09	1.44		0.35	0.92	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 110

Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.

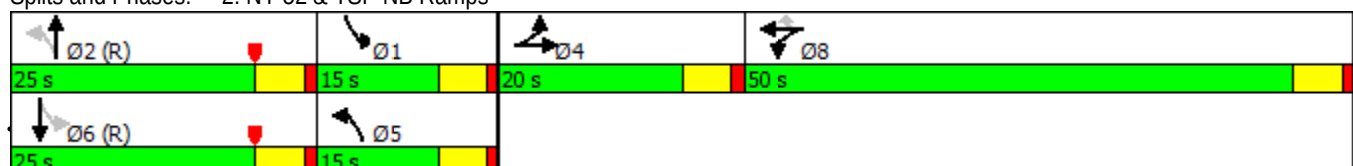
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NY 52 & TSP NB Ramps



HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-BD-PM

03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	17	31	44	531	26	355	18	458	178	70	462	12
Future Volume (veh/h)	17	31	44	531	26	355	18	458	178	70	462	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	18	34	48	577	28	386	20	498	193	76	502	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	23	44	62	635	31	591	431	231	89	423	318	8
Arrive On Green	0.07	0.07	0.07	0.37	0.37	0.37	0.40	0.36	0.36	0.20	0.18	0.18
Sat Flow, veh/h	352	664	938	1708	83	1590	1847	1269	492	1804	1752	45
Grp Volume(v), veh/h	100	0	0	605	0	386	20	0	691	76	0	515
Grp Sat Flow(s),veh/h/ln	1953	0	0	1791	0	1590	1847	0	1761	1804	0	1797
Q Serve(g_s), s	5.5	0.0	0.0	35.2	0.0	22.1	0.0	0.0	20.0	0.0	0.0	20.0
Cycle Q Clear(g_c), s	5.5	0.0	0.0	35.2	0.0	22.1	0.0	0.0	20.0	0.0	0.0	20.0
Prop In Lane	0.18		0.48	0.95		1.00	1.00		0.28	1.00		0.03
Lane Grp Cap(c), veh/h	130	0	0	666	0	591	431	0	320	423	0	327
V/C Ratio(X)	0.77	0.00	0.00	0.91	0.00	0.65	0.05	0.00	2.16	0.18	0.00	1.58
Avail Cap(c_a), veh/h	266	0	0	733	0	651	431	0	320	423	0	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.63	0.00	0.63	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.5	0.0	0.0	32.8	0.0	28.7	26.6	0.0	35.0	35.4	0.0	45.0
Incr Delay (d2), s/veh	9.3	0.0	0.0	14.4	0.0	2.0	0.0	0.0	527.8	0.2	0.0	273.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	17.6	0.0	8.6	0.3	0.0	53.1	1.6	0.0	33.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	0.0	0.0	47.2	0.0	30.7	26.7	0.0	562.8	35.6	0.0	318.6
LnGrp LOS	E	A	A	D	A	C	C	A	F	D	A	F
Approach Vol, veh/h		100			991			711			591	
Approach Delay, s/veh		59.8			40.8			547.7			282.2	
Approach LOS		E			D			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.8	25.0		12.3	26.8	25.0		45.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	20.0		15.0	10.0	20.0		45.0				
Max Q Clear Time (g_c+I1), s	2.0	22.0		7.5	2.0	22.0		37.2				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	0.0		3.7				

Intersection Summary

HCM 6th Ctrl Delay	251.8
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-BD-PM
03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (veh/h)	17	31	44	531	26	355	18	458	178	70	462	12
Future Volume (veh/h)	17	31	44	531	26	355	18	458	178	70	462	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	18	34	48	577	28	386	20	498	193	76	502	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	23	44	62	635	31	591	431	231	89	423	318	8
Arrive On Green	0.07	0.07	0.07	0.37	0.37	0.37	0.40	0.36	0.36	0.20	0.18	0.18
Sat Flow, veh/h	352	664	938	1708	83	1590	1847	1269	492	1804	1752	45
Grp Volume(v), veh/h	100	0	0	605	0	386	20	0	691	76	0	515
Grp Sat Flow(s),veh/h/ln	1953	0	0	1791	0	1590	1847	0	1761	1804	0	1797
Q Serve(g_s), s	5.5	0.0	0.0	35.2	0.0	22.1	0.0	0.0	20.0	0.0	0.0	20.0
Cycle Q Clear(g_c), s	5.5	0.0	0.0	35.2	0.0	22.1	0.0	0.0	20.0	0.0	0.0	20.0
Prop In Lane	0.18		0.48	0.95		1.00	1.00		0.28	1.00		0.03
Lane Grp Cap(c), veh/h	130	0	0	666	0	591	431	0	320	423	0	327
V/C Ratio(X)	0.77	0.00	0.00	0.91	0.00	0.65	0.05	0.00	2.16	0.18	0.00	1.58
Avail Cap(c_a), veh/h	266	0	0	733	0	651	431	0	320	423	0	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.63	0.00	0.63	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.5	0.0	0.0	32.8	0.0	28.7	26.6	0.0	35.0	35.4	0.0	45.0
Incr Delay (d2), s/veh	9.3	0.0	0.0	14.4	0.0	2.0	0.0	0.0	527.8	0.2	0.0	273.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	0.0	17.6	0.0	8.6	0.3	0.0	53.1	1.6	0.0	33.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	0.0	0.0	47.2	0.0	30.7	26.7	0.0	562.8	35.6	0.0	318.6
LnGrp LOS	E	A	A	D	A	C	C	A	F	D	A	F
Approach Vol, veh/h	100				991				711			
Approach Delay, s/veh	59.8				40.8				547.7			
Approach LOS	E				D				F			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.8	25.0		12.3	26.8	25.0		45.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	20.0		15.0	10.0	20.0		45.0				
Max Q Clear Time (g_c+1.0), s	12.0	22.0		7.5	2.0	22.0		37.2				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	0.0		3.7				

Intersection Summary

HCM 6th Ctrl Delay	251.8
HCM 6th LOS	F

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

2025-BD-PM

03/21/2017



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	29	70	140	677	471	37
Future Volume (vph)	29	70	140	677	471	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.990	
Flt Protected	0.950			0.992		
Satd. Flow (prot)	1780	1592	0	1790	1758	0
Flt Permitted	0.950			0.992		
Satd. Flow (perm)	1780	1592	0	1790	1758	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	7%	7%	0%
Adj. Flow (vph)	31	74	147	713	496	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	74	0	860	535	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection							
Int Delay, s/veh	2.2						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	29	70	140	677	471	37	
Future Vol, veh/h	29	70	140	677	471	37	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	0	0	0	7	7	0	
Mvmt Flow	31	74	147	713	496	39	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1523	516	535	0	-	0	
Stage 1	516	-	-	-	-	-	
Stage 2	1007	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	184	596	1043	-	-	-	
Stage 1	677	-	-	-	-	-	
Stage 2	445	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	141	596	1043	-	-	-	
Mov Cap-2 Maneuver	141	-	-	-	-	-	
Stage 1	519	-	-	-	-	-	
Stage 2	445	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	19.4	1.5		0			
HCM LOS	C						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	1043	-	141	596	-	-	
HCM Lane V/C Ratio	0.141	-	0.216	0.124	-	-	
HCM Control Delay (s)	9	0	37.5	11.9	-	-	
HCM Lane LOS	A	A	E	B	-	-	
HCM 95th %tile Q(veh)	0.5	-	0.8	0.4	-	-	

Intersection							
Int Delay, s/veh	2.2						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	29	70	140	677	471	37	
Future Vol, veh/h	29	70	140	677	471	37	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	0	0	0	7	7	0	
Mvmt Flow	31	74	147	713	496	39	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1523	516	535	0	-	0	
Stage 1	516	-	-	-	-	-	
Stage 2	1007	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	184	596	1043	-	-	-	
Stage 1	677	-	-	-	-	-	
Stage 2	445	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	141	596	1043	-	-	-	
Mov Cap-2 Maneuver	141	-	-	-	-	-	
Stage 1	519	-	-	-	-	-	
Stage 2	445	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	19.4	1.5		0			
HCM LOS	C						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	1043	-	141	596	-	-	
HCM Lane V/C Ratio	0.141	-	0.216	0.124	-	-	
HCM Control Delay (s)	9	0	37.5	11.9	-	-	
HCM Lane LOS	A	A	E	B	-	-	
HCM 95th %tile Q(veh)	0.5	-	0.8	0.4	-	-	

Lanes, Volumes, Timings
4: NY 52 & NY 216

2025-BD-PM
03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	336	320	50	25	290	37	29	5	14	12	8	189
Future Volume (vph)	336	320	50	25	290	37	29	5	14	12	8	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			0%			-2%	
Storage Length (ft)	150		0	100		0	0		0	0		80
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.983			0.960				0.850
Flt Protected	0.950			0.950				0.971			0.970	
Satd. Flow (prot)	1581	1761	0	1693	1771	0	0	1771	0	0	1788	1561
Flt Permitted	0.456			0.531				0.802			0.787	
Satd. Flow (perm)	759	1761	0	946	1771	0	0	1463	0	0	1451	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			8			15				199
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		2652			2735			439			869	
Travel Time (s)		40.2			41.4			10.0			10.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	6%	6%	0%	0%	6%	6%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	354	337	53	26	305	39	31	5	15	13	8	199
Shared Lane Traffic (%)												
Lane Group Flow (vph)	354	390	0	26	344	0	0	51	0	0	21	199
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.10	1.01	1.01	1.09	0.99	0.99	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		1	2		1	2	2
Detector Template	NYSDOT	NYSDOT		NYSDOT	NYSDOT		Left	NYSDOT		Left	NYSDOT	NYSDOT
Leading Detector (ft)	83	83		83	83		20	83		20	83	83
Trailing Detector (ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Position(ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Size(ft)	40	40		40	40		20	40		20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)	43	43		43	43			43			43	43
Detector 2 Size(ft)	40	40		40	40			40			40	40
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0

Lanes, Volumes, Timings
4: NY 52 & NY 216

2025-BD-PM
03/21/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.0	22.5		10.0	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	15.0	40.0		15.0	40.0		35.0	35.0		35.0	35.0	35.0
Total Split (%)	16.7%	44.4%		16.7%	44.4%		38.9%	38.9%		38.9%	38.9%	38.9%
Maximum Green (s)	10.0	35.0		10.0	35.0		30.0	30.0		30.0	30.0	30.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max		None	None		None	None	None
v/c Ratio	0.52	0.33		0.04	0.37			0.29			0.13	0.57
Control Delay	6.2	6.9		3.5	11.4			25.4			28.4	11.7
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	6.2	6.9		3.5	11.4			25.4			28.4	11.7
Queue Length 50th (ft)	35	37		2	75			14			8	0
Queue Length 95th (ft)	82	148		9	146			43			27	53
Internal Link Dist (ft)		2572			2655			359			789	
Turn Bay Length (ft)	150			100								80
Base Capacity (vph)	678	1194		740	921			658			644	804
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.52	0.33		0.04	0.37			0.08			0.03	0.25

Intersection Summary

Area Type: Other

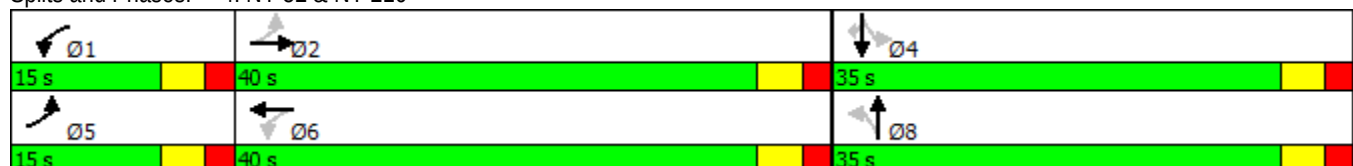
Cycle Length: 90

Actuated Cycle Length: 67.6

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Splits and Phases: 4: NY 52 & NY 216



HCM 6th Signalized Intersection Summary
4: NY 52 & NY 216

2025-BD-PM

03/21/2017

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	336	320	50	25	290	37	29	5	14	12	8	189	
Future Volume (veh/h)	336	320	50	25	290	37	29	5	14	12	8	189	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1805	1805	1805	1939	1849	1849	1900	1900	1900	1979	1979	1964	
Adj Flow Rate, veh/h	354	337	53	26	305	39	31	5	15	13	8	0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	6	6	6	0	6	6	0	0	0	0	0	1	
Cap, veh/h	796	1011	159	759	931	119	151	9	27	149	52		
Arrive On Green	0.11	0.66	0.66	0.03	0.58	0.58	0.06	0.06	0.06	0.06	0.06	0.00	
Sat Flow, veh/h	1719	1523	239	1847	1607	205	956	154	463	898	895	1664	
Grp Volume(v), veh/h	354	0	390	26	0	344	51	0	0	21	0	0	
Grp Sat Flow(s),veh/h/ln	1719	0	1762	1847	0	1812	1573	0	0	1793	0	1664	
Q Serve(g_s), s	4.3	0.0	5.8	0.3	0.0	5.9	1.2	0.0	0.0	0.0	0.0	0.0	
Cycle Q Clear(g_c), s	4.3	0.0	5.8	0.3	0.0	5.9	1.8	0.0	0.0	0.6	0.0	0.0	
Prop In Lane	1.00		0.14	1.00		0.11	0.61		0.29	0.62		1.00	
Lane Grp Cap(c), veh/h	796	0	1170	759	0	1051	187	0	0	201	0		
V/C Ratio(X)	0.44	0.00	0.33	0.03	0.00	0.33	0.27	0.00	0.00	0.10	0.00		
Avail Cap(c_a), veh/h	885	0	1170	1011	0	1051	853	0	0	917	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	
Uniform Delay (d), s/veh	3.7	0.0	4.4	4.7	0.0	6.6	27.6	0.0	0.0	27.1	0.0	0.0	
Incr Delay (d2), s/veh	0.4	0.0	0.8	0.0	0.0	0.8	0.8	0.0	0.0	0.2	0.0	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.3	0.1	0.0	1.7	0.7	0.0	0.0	0.3	0.0	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	4.0	0.0	5.1	4.7	0.0	7.4	28.4	0.0	0.0	27.3	0.0	0.0	
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A		
Approach Vol, veh/h	744				370			51			21		A
Approach Delay, s/veh	4.6				7.2			28.4			27.3		
Approach LOS	A				A			C			C		
Timer - Assigned Phs	1	2		4	5	6		8					
Phs Duration (G+Y+Rc), s	6.8	45.1		8.5	11.9	40.0		8.5					
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0					
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0					
Max Q Clear Time (g_c+I1), s	2.3	7.8		2.6	6.3	7.9		3.8					
Green Ext Time (p_c), s	0.0	2.0		0.0	0.6	1.7		0.2					

Intersection Summary

HCM 6th Ctrl Delay	6.9
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

4: NY 52 & NY 216

2025-BD-PM
03/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	336	320	50	25	290	37	29	5	14	12	8	189
Future Volume (veh/h)	336	320	50	25	290	37	29	5	14	12	8	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1805	1805	1805	1939	1849	1849	1900	1900	1900	1979	1979	1964
Adj Flow Rate, veh/h	354	337	53	26	305	39	31	5	15	13	8	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	0	6	6	0	0	0	0	0	1
Cap, veh/h	796	1011	159	759	931	119	151	9	27	149	52	
Arrive On Green	0.11	0.66	0.66	0.03	0.58	0.58	0.06	0.06	0.06	0.06	0.06	0.00
Sat Flow, veh/h	1719	1523	239	1847	1607	205	956	154	463	898	895	1664
Grp Volume(v), veh/h	354	0	390	26	0	344	51	0	0	21	0	0
Grp Sat Flow(s),veh/h/ln	1719	0	1762	1847	0	1812	1573	0	0	1793	0	1664
Q Serve(g_s), s	4.3	0.0	5.8	0.3	0.0	5.9	1.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.3	0.0	5.8	0.3	0.0	5.9	1.8	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.14	1.00		0.11	0.61		0.29	0.62		1.00
Lane Grp Cap(c), veh/h	796	0	1170	759	0	1051	187	0	0	201	0	
V/C Ratio(X)	0.44	0.00	0.33	0.03	0.00	0.33	0.27	0.00	0.00	0.10	0.00	
Avail Cap(c_a), veh/h	885	0	1170	1011	0	1051	853	0	0	917	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.7	0.0	4.4	4.7	0.0	6.6	27.6	0.0	0.0	27.1	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.8	0.0	0.0	0.8	0.8	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.3	0.1	0.0	1.7	0.7	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.0	0.0	5.1	4.7	0.0	7.4	28.4	0.0	0.0	27.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	
Approach Vol, veh/h	744			370			51			21		
Approach Delay, s/veh	4.6			7.2			28.4			27.3		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	45.1		8.5	11.9	40.0		8.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+12), s	12.3	7.8		2.6	6.3	7.9		3.8				
Green Ext Time (p_c), s	0.0	2.0		0.0	0.6	1.7		0.2				

Intersection Summary

HCM 6th Ctrl Delay	6.9
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
5: NY 52 & Site Dwy A

2025-BD-PM
03/21/2017



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	45	13	33	459	309	66
Future Volume (vph)	45	13	33	459	309	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.970				0.976	
Flt Protected	0.963			0.997		
Satd. Flow (prot)	1775	0	0	1812	1749	0
Flt Permitted	0.963			0.997		
Satd. Flow (perm)	1775	0	0	1812	1749	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	49	14	36	499	336	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	0	535	408	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	13	33	459	309	66
Future Vol, veh/h	45	13	33	459	309	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	49	14	36	499	336	72
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	943	372	408	0	-	0
Stage 1	372	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	294	678	1162	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	281	678	1162	-	-	-
Mov Cap-2 Maneuver	281	-	-	-	-	-
Stage 1	672	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	18.8	0.5		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1162	-	323	-	-	
HCM Lane V/C Ratio	0.031	-	0.195	-	-	
HCM Control Delay (s)	8.2	0	18.8	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-	

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	13	33	459	309	66
Future Vol, veh/h	45	13	33	459	309	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	49	14	36	499	336	72
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	943	372	408	0	-	0
Stage 1	372	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	294	678	1162	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	281	678	1162	-	-	-
Mov Cap-2 Maneuver	281	-	-	-	-	-
Stage 1	672	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	18.8	0.5		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1162	-	323	-	-	
HCM Lane V/C Ratio	0.031	-	0.195	-	-	
HCM Control Delay (s)	8.2	0	18.8	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-	

Lanes, Volumes, Timings
6: Site Dwy B & NY 52

2025-BD-PM
03/21/2017

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	311	11	0	492	0	7
Future Volume (vph)	311	11	0	492	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995				0.865	
Flt Protected						
Satd. Flow (prot)	1742	0	0	1837	1644	0
Flt Permitted						
Satd. Flow (perm)	1742	0	0	1837	1644	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	0%	6%	0%	0%
Adj. Flow (vph)	338	12	0	535	0	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	350	0	0	535	8	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	311	11	0	492	0	7
Future Vol, veh/h	311	11	0	492	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	6	0	0
Mvmt Flow	338	12	0	535	0	8
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	350	0	879	344
Stage 1	-	-	-	-	344	-
Stage 2	-	-	-	-	535	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1220	-	321	703
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	591	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1220	-	321	703
Mov Cap-2 Maneuver	-	-	-	-	321	-
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	591	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0		10.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	703	1220	-	-	-	
HCM Lane V/C Ratio	0.011	-	-	-	-	
HCM Control Delay (s)	10.2	0	-	-	-	
HCM Lane LOS	B	A	-	-	-	
HCM 95th %tile Q(veh)	0	0	-	-	-	

Intersection						
Int Delay, s/veh	0.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	311	11	0	492	0	7
Future Vol, veh/h	311	11	0	492	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	6	0	0
Mvmt Flow	338	12	0	535	0	8
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	350	0	879	344
Stage 1	-	-	-	-	344	-
Stage 2	-	-	-	-	535	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1220	-	321	703
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	591	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1220	-	321	703
Mov Cap-2 Maneuver	-	-	-	-	321	-
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	591	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0		10.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	703	1220	-	-	-	
HCM Lane V/C Ratio	0.011	-	-	-	-	
HCM Control Delay (s)	10.2	0	-	-	-	
HCM Lane LOS	B	A	-	-	-	
HCM 95th %tile Q(veh)	0	0	-	-	-	

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

2025-BD-PM

03/21/2017



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	34	284	475	23	9	17
Future Volume (vph)	34	284	475	23	9	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.994		0.912	
Flt Protected		0.995			0.983	
Satd. Flow (prot)	0	1732	1903	0	1804	0
Flt Permitted		0.995			0.983	
Satd. Flow (perm)	0	1732	1903	0	1804	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	6%	6%	0%	1%	1%
Adj. Flow (vph)	38	316	528	26	10	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	354	554	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.7					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	34	284	475	23	9	17
Future Vol, veh/h	34	284	475	23	9	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	6	6	0	1	1
Mvmt Flow	38	316	528	26	10	19
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	554	0	-	0	933	541
Stage 1	-	-	-	-	541	-
Stage 2	-	-	-	-	392	-
Critical Hdwy	4.1	-	-	-	5.01	5.51
Critical Hdwy Stg 1	-	-	-	-	4.01	-
Critical Hdwy Stg 2	-	-	-	-	4.01	-
Follow-up Hdwy	2.2	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1026	-	-	-	426	603
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	798	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1026	-	-	-	407	603
Mov Cap-2 Maneuver	-	-	-	-	407	-
Stage 1	-	-	-	-	690	-
Stage 2	-	-	-	-	798	-
Approach	SE		NW		SW	
HCM Control Delay, s	0.9		0		12.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1026	-	517	
HCM Lane V/C Ratio	-	-	0.037	-	0.056	
HCM Control Delay (s)	-	-	8.6	0	12.4	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0.1	-	0.2	

Intersection						
Int Delay, s/veh	0.7					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	34	284	475	23	9	17
Future Vol, veh/h	34	284	475	23	9	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	6	6	0	1	1
Mvmt Flow	38	316	528	26	10	19
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	554	0	-	0	933	541
Stage 1	-	-	-	-	541	-
Stage 2	-	-	-	-	392	-
Critical Hdwy	4.1	-	-	-	5.01	5.51
Critical Hdwy Stg 1	-	-	-	-	4.01	-
Critical Hdwy Stg 2	-	-	-	-	4.01	-
Follow-up Hdwy	2.2	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1026	-	-	-	426	603
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	798	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1026	-	-	-	407	603
Mov Cap-2 Maneuver	-	-	-	-	407	-
Stage 1	-	-	-	-	690	-
Stage 2	-	-	-	-	798	-
Approach	SE		NW		SW	
HCM Control Delay, s	0.9		0		12.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1026	-	517	
HCM Lane V/C Ratio	-	-	0.037	-	0.056	
HCM Control Delay (s)	-	-	8.6	0	12.4	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0.1	-	0.2	

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

2025-BD-PM

03/21/2017



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	37	32	227	44	27	486
Future Volume (vph)	37	32	227	44	27	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.937		0.976			
Flt Protected	0.974					0.997
Satd. Flow (prot)	1848	0	3261	0	0	1745
Flt Permitted	0.974					0.997
Satd. Flow (perm)	1848	0	3261	0	0	1745
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	41	36	252	49	30	540
Shared Lane Traffic (%)						
Lane Group Flow (vph)	77	0	301	0	0	570
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

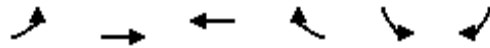
Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	37	32	227	44	27	486
Future Vol, veh/h	37	32	227	44	27	486
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	41	36	252	49	30	540
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	877	151	0	0	301	0
Stage 1	277	-	-	-	-	-
Stage 2	600	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	187	836	-	-	1233	-
Stage 1	642	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	180	836	-	-	1233	-
Mov Cap-2 Maneuver	180	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	22.4		0		0.4	
HCM LOS	C					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1233	-	283	-	-	
HCM Lane V/C Ratio	0.024	-	0.271	-	-	
HCM Control Delay (s)	8	0	22.4	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-	

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	37	32	227	44	27	486
Future Vol, veh/h	37	32	227	44	27	486
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	41	36	252	49	30	540
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	877	151	0	0	301	0
Stage 1	277	-	-	-	-	-
Stage 2	600	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	187	836	-	-	1233	-
Stage 1	642	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	180	836	-	-	1233	-
Mov Cap-2 Maneuver	180	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	22.4		0		0.4	
HCM LOS	C					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1233	-	283	-	-	
HCM Lane V/C Ratio	0.024	-	0.271	-	-	
HCM Control Delay (s)	8	0	22.4	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-	

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

2025-BD-PM

03/21/2017



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	255	530	8	10	10
Future Volume (vph)	8	255	530	8	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998		0.932	
Flt Protected		0.999			0.976	
Satd. Flow (prot)	0	1795	1670	0	1858	0
Flt Permitted		0.999			0.976	
Satd. Flow (perm)	0	1795	1670	0	1858	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	9	300	624	9	12	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	309	633	0	24	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	255	530	8	10	10
Future Vol, veh/h	8	255	530	8	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	9	300	624	9	12	12
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	633	0	-	0	947	629
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	318	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	960	-	-	-	643	631
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	967	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	960	-	-	-	636	631
Mov Cap-2 Maneuver	-	-	-	-	636	-
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	967	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.3		0		10.9	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	960	-	-	-	633	
HCM Lane V/C Ratio	0.01	-	-	-	0.037	
HCM Control Delay (s)	8.8	0	-	-	10.9	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	255	530	8	10	10
Future Vol, veh/h	8	255	530	8	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	9	300	624	9	12	12
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	633	0	-	0	947	629
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	318	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	960	-	-	-	643	631
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	967	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	960	-	-	-	636	631
Mov Cap-2 Maneuver	-	-	-	-	636	-
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	967	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.3		0		10.9	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	960	-	-	-	633	
HCM Lane V/C Ratio	0.01	-	-	-	0.037	
HCM Control Delay (s)	8.8	0	-	-	10.9	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Lanes, Volumes, Timings
10: NY 52 & Milltown Road

2025-BD-PM

03/21/2017



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	69	266	3	104	553
Future Volume (vph)	6	69	266	3	104	553
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.876		0.998			
Flt Protected	0.996					0.992
Satd. Flow (prot)	1602	0	1799	0	0	1696
Flt Permitted	0.996					0.992
Satd. Flow (perm)	1602	0	1799	0	0	1696
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	5%	0%	0%	5%
Adj. Flow (vph)	8	87	337	4	132	700
Shared Lane Traffic (%)						
Lane Group Flow (vph)	95	0	341	0	0	832
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	69	266	3	104	553
Future Vol, veh/h	6	69	266	3	104	553
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	1	1	5	0	0	5
Mvmt Flow	8	87	337	4	132	700
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1303	339	0	0	341	0
Stage 1	339	-	-	-	-	-
Stage 2	964	-	-	-	-	-
Critical Hdwy	6.01	6.01	-	-	4.1	-
Critical Hdwy Stg 1	5.01	-	-	-	-	-
Critical Hdwy Stg 2	5.01	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	206	719	-	-	1229	-
Stage 1	752	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	170	719	-	-	1229	-
Mov Cap-2 Maneuver	170	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	12.6		0		1.3	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1229	-	571	-	-	
HCM Lane V/C Ratio	0.107	-	0.166	-	-	
HCM Control Delay (s)	8.3	0	12.6	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.6	-	-	

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	69	266	3	104	553
Future Vol, veh/h	6	69	266	3	104	553
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	1	1	5	0	0	5
Mvmt Flow	8	87	337	4	132	700
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1303	339	0	0	341	0
Stage 1	339	-	-	-	-	-
Stage 2	964	-	-	-	-	-
Critical Hdwy	6.01	6.01	-	-	4.1	-
Critical Hdwy Stg 1	5.01	-	-	-	-	-
Critical Hdwy Stg 2	5.01	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	206	719	-	-	1229	-
Stage 1	752	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	170	719	-	-	1229	-
Mov Cap-2 Maneuver	170	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	12.6		0		1.3	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1229	-	571	-	-	
HCM Lane V/C Ratio	0.107	-	0.166	-	-	
HCM Control Delay (s)	8.3	0	12.6	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.6	-	-	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

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04/05/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	0	164	0	71	0	317	581	420	406	1
Future Volume (vph)	1	0	0	164	0	71	0	317	581	420	406	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.913				
Flt Protected		0.950		0.950						0.950		
Satd. Flow (prot)	0	1651	0	1769	1635	0	0	1659	0	1668	1716	0
Flt Permitted		0.708		0.757						0.075		
Satd. Flow (perm)	0	1230	0	1410	1635	0	0	1659	0	132	1716	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					650			140				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	1	0	0	176	0	76	0	341	625	452	437	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	176	76	0	0	966	0	452	438	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

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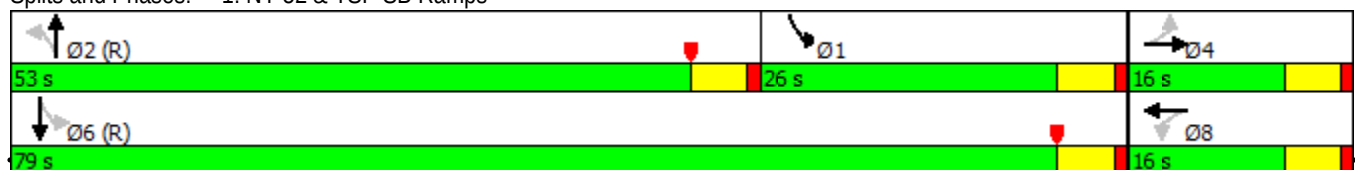
04/05/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	16.0	16.0		16.0	16.0		53.0	53.0		26.0	79.0	
Total Split (%)	16.8%	16.8%		16.8%	16.8%		55.8%	55.8%		27.4%	83.2%	
Maximum Green (s)	11.0	11.0		11.0	11.0		48.0	48.0		21.0	74.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio		0.01		1.08	0.10			1.07		1.02	0.33	
Control Delay		37.0		135.4	0.3			70.6		73.7	4.3	
Queue Delay		0.0		0.0	0.0			12.0		43.0	2.6	
Total Delay		37.0		135.4	0.3			82.7		116.7	6.8	
Queue Length 50th (ft)		1		~119	0			~604		~254	112	
Queue Length 95th (ft)		6		#250	0			#845		#438	147	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)		142		163	764			907		442	1336	
Starvation Cap Reductn		0		0	0			0		307	754	
Spillback Cap Reductn		0		0	9			25		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.01		1.08	0.10			1.10		3.35	0.75	

Intersection Summary

Area Type: Other
 Cycle Length: 95
 Actuated Cycle Length: 95
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: NY 52 & TSP SB Ramps



PEAK HOUR 7:30-8:30
JMC 17039

Synchro 10 Report
Page 2

HCM 6th Signalized Intersection Summary

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1: NY 52 & TSP SB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	0	164	0	71	0	317	581	420	406	1
Future Volume (veh/h)	1	0	0	164	0	71	0	317	581	420	406	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	1	0	0	176	0	76	0	341	625	452	437	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	167	0	0	250	0	184	0	302	553	471	1389	3
Arrive On Green	0.12	0.00	0.00	0.12	0.00	0.12	0.00	0.51	0.51	0.37	1.00	1.00
Sat Flow, veh/h	788	0	0	1369	0	1592	0	597	1094	1787	1783	4
Grp Volume(v), veh/h	1	0	0	176	0	76	0	0	966	452	0	438
Grp Sat Flow(s),veh/h/ln	788	0	0	1369	0	1592	0	0	1692	1787	0	1787
Q Serve(g_s), s	0.1	0.0	0.0	6.7	0.0	4.2	0.0	0.0	48.0	19.3	0.0	0.0
Cycle Q Clear(g_c), s	4.3	0.0	0.0	11.0	0.0	4.2	0.0	0.0	48.0	19.3	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	167	0	0	250	0	184	0	0	855	471	0	1392
V/C Ratio(X)	0.01	0.00	0.00	0.70	0.00	0.41	0.00	0.00	1.13	0.96	0.00	0.31
Avail Cap(c_a), veh/h	167	0	0	250	0	184	0	0	855	471	0	1392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.58	0.00	0.58
Uniform Delay (d), s/veh	41.0	0.0	0.0	41.8	0.0	39.0	0.0	0.0	23.5	27.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	8.6	0.0	1.5	0.0	0.0	73.2	22.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.7	0.0	1.7	0.0	0.0	33.8	9.7	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.0	0.0	0.0	50.4	0.0	40.5	0.0	0.0	96.7	50.1	0.0	0.3
LnGrp LOS	D	A	A	D	A	D	A	A	F	D	A	A
Approach Vol, veh/h	1				252				966			
Approach Delay, s/veh	41.0				47.4				96.7			
Approach LOS	D				D				F			
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	26.0	53.0		16.0		79.0		16.0				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	21.0	48.0		11.0		74.0		11.0				
Max Q Clear Time (g_c+I1), s	21.3	50.0		6.3		2.0		13.0				
Green Ext Time (p_c), s	0.0	0.0		0.0		2.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	60.8											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

2025-BD-AM-IMP

04/05/2017

1: NY 52 & TSP SB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	0	164	0	71	0	317	581	420	406	1
Future Volume (veh/h)	1	0	0	164	0	71	0	317	581	420	406	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	1	0	0	176	0	76	0	341	625	452	437	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	167	0	0	250	0	184	0	302	553	471	1389	3
Arrive On Green	0.12	0.00	0.00	0.12	0.00	0.12	0.00	0.51	0.51	0.37	1.00	1.00
Sat Flow, veh/h	788	0	0	1369	0	1592	0	597	1094	1787	1783	4
Grp Volume(v), veh/h	1	0	0	176	0	76	0	0	966	452	0	438
Grp Sat Flow(s),veh/h/ln	788	0	0	1369	0	1592	0	0	1692	1787	0	1787
Q Serve(g_s), s	0.1	0.0	0.0	6.7	0.0	4.2	0.0	0.0	48.0	19.3	0.0	0.0
Cycle Q Clear(g_c), s	4.3	0.0	0.0	11.0	0.0	4.2	0.0	0.0	48.0	19.3	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	167	0	0	250	0	184	0	0	855	471	0	1392
V/C Ratio(X)	0.01	0.00	0.00	0.70	0.00	0.41	0.00	0.00	1.13	0.96	0.00	0.31
Avail Cap(c_a), veh/h	167	0	0	250	0	184	0	0	855	471	0	1392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.58	0.00	0.58
Uniform Delay (d), s/veh	41.0	0.0	0.0	41.8	0.0	39.0	0.0	0.0	23.5	27.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	8.6	0.0	1.5	0.0	0.0	73.2	22.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.7	0.0	1.7	0.0	0.0	33.8	9.7	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.0	0.0	0.0	50.4	0.0	40.5	0.0	0.0	96.7	50.1	0.0	0.3
LnGrp LOS	D	A	A	D	A	D	A	A	F	D	A	A
Approach Vol, veh/h		1			252			966			890	
Approach Delay, s/veh		41.0			47.4			96.7			25.6	
Approach LOS		D			D			F			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	36.0	53.0		16.0		79.0		16.0				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	21.0	48.0		11.0		74.0		11.0				
Max Q Clear Time (g_c+Y), s	21.3	50.0		6.3		2.0		13.0				
Green Ext Time (p_c), s	0.0	0.0		0.0		2.3		0.0				

Intersection Summary

HCM 6th Ctrl Delay	60.8
HCM 6th LOS	E

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-AM-IMP

04/05/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	19	22	157	27	140	27	317	45	65	648	11
Future Volume (vph)	9	19	22	157	27	140	27	317	45	65	648	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.940				0.850		0.981			0.997	
Flt Protected		0.991			0.959		0.950			0.950		
Satd. Flow (prot)	0	1986	0	0	1744	1546	1693	1720	0	1676	1721	0
Flt Permitted		0.991			0.959		0.146			0.406		
Satd. Flow (perm)	0	1986	0	0	1744	1546	260	1720	0	716	1721	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				151		9			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	10	20	24	169	29	151	29	341	48	70	697	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	0	198	151	29	389	0	70	709	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT	NYS	DOT		NYS	DOT	
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-AM-IMP

04/05/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	15.0	15.0		20.0	20.0	20.0	15.0	45.0		15.0	45.0	
Total Split (%)	15.8%	15.8%		21.1%	21.1%	21.1%	15.8%	47.4%		15.8%	47.4%	
Maximum Green (s)	10.0	10.0		15.0	15.0	15.0	10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.31			0.68	0.40	0.13	0.51		0.12	0.75	
Control Delay		30.8			49.2	8.9	6.5	20.8		10.9	27.0	
Queue Delay		1.2			0.0	0.0	0.0	0.3		0.0	4.2	
Total Delay		32.1			49.2	8.9	6.5	21.2		10.9	31.2	
Queue Length 50th (ft)		17			113	0	6	162		17	363	
Queue Length 95th (ft)		53			180	50	m3	m114		40	#660	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		230			309	398	293	854		594	950	
Starvation Cap Reductn		0			0	0	0	127		0	0	
Spillback Cap Reductn		78			0	0	0	0		0	168	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.36			0.64	0.38	0.10	0.54		0.12	0.91	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 65

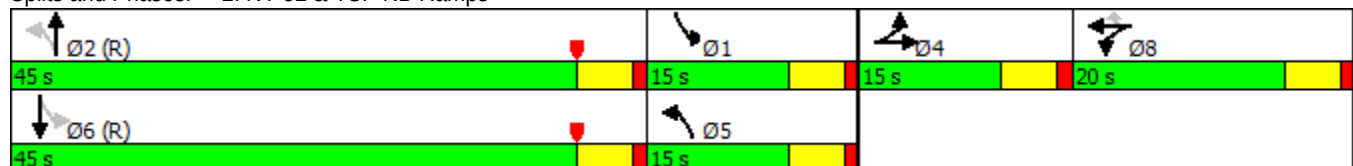
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NY 52 & TSP NB Ramps



HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-BD-AM-IMP

04/05/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	9	19	22	157	27	140	27	317	45	65	648	11
Future Volume (veh/h)	9	19	22	157	27	140	27	317	45	65	648	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	10	20	24	169	29	151	29	341	48	70	697	12
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	13	27	32	205	35	212	460	377	53	782	727	13
Arrive On Green	0.04	0.04	0.04	0.13	0.13	0.13	0.42	0.48	0.48	0.38	0.41	0.41
Sat Flow, veh/h	364	728	873	1536	264	1590	1847	1586	223	1804	1769	30
Grp Volume(v), veh/h	54	0	0	198	0	151	29	0	389	70	0	709
Grp Sat Flow(s),veh/h/ln	1964	0	0	1800	0	1590	1847	0	1809	1804	0	1800
Q Serve(g_s), s	2.6	0.0	0.0	10.2	0.0	8.6	0.0	0.0	18.8	0.0	0.0	36.4
Cycle Q Clear(g_c), s	2.6	0.0	0.0	10.2	0.0	8.6	0.0	0.0	18.8	0.0	0.0	36.4
Prop In Lane	0.19		0.44	0.85		1.00	1.00		0.12	1.00		0.02
Lane Grp Cap(c), veh/h	73	0	0	240	0	212	460	0	430	782	0	740
V/C Ratio(X)	0.74	0.00	0.00	0.82	0.00	0.71	0.06	0.00	0.90	0.09	0.00	0.96
Avail Cap(c_a), veh/h	207	0	0	284	0	251	460	0	762	782	0	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.00	0.09	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	40.1	0.0	39.4	22.0	0.0	23.9	17.9	0.0	27.2
Incr Delay (d2), s/veh	13.9	0.0	0.0	15.4	0.0	7.4	0.0	0.0	3.3	0.0	0.0	24.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	5.5	0.0	3.8	0.4	0.0	5.6	0.9	0.0	19.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	0.0	0.0	55.5	0.0	46.8	22.0	0.0	27.2	18.0	0.0	51.5
LnGrp LOS	E	A	A	E	A	D	C	A	C	B	A	D
Approach Vol, veh/h		54			349			418			779	
Approach Delay, s/veh		59.2			51.7			26.8			48.5	
Approach LOS		E			D			C			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	41.2	27.6		8.5	24.7	44.1		17.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	40.0		10.0	10.0	40.0		15.0				
Max Q Clear Time (g_c+I1), s	2.0	20.8		4.6	2.0	38.4		12.2				
Green Ext Time (p_c), s	0.1	1.8		0.0	0.0	0.7		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				43.9								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-BD-AM-IMP

04/05/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (veh/h)	9	19	22	157	27	140	27	317	45	65	648	11
Future Volume (veh/h)	9	19	22	157	27	140	27	317	45	65	648	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	10	20	24	169	29	151	29	341	48	70	697	12
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	13	27	32	205	35	212	460	377	53	782	727	13
Arrive On Green	0.04	0.04	0.04	0.13	0.13	0.13	0.42	0.48	0.48	0.38	0.41	0.41
Sat Flow, veh/h	364	728	873	1536	264	1590	1847	1586	223	1804	1769	30
Grp Volume(v), veh/h	54	0	0	198	0	151	29	0	389	70	0	709
Grp Sat Flow(s),veh/h/ln	1964	0	0	1800	0	1590	1847	0	1809	1804	0	1800
Q Serve(g_s), s	2.6	0.0	0.0	10.2	0.0	8.6	0.0	0.0	18.8	0.0	0.0	36.4
Cycle Q Clear(g_c), s	2.6	0.0	0.0	10.2	0.0	8.6	0.0	0.0	18.8	0.0	0.0	36.4
Prop In Lane	0.19		0.44	0.85		1.00	1.00		0.12	1.00		0.02
Lane Grp Cap(c), veh/h	73	0	0	240	0	212	460	0	430	782	0	740
V/C Ratio(X)	0.74	0.00	0.00	0.82	0.00	0.71	0.06	0.00	0.90	0.09	0.00	0.96
Avail Cap(c_a), veh/h	207	0	0	284	0	251	460	0	762	782	0	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.00	0.09	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	40.1	0.0	39.4	22.0	0.0	23.9	17.9	0.0	27.2
Incr Delay (d2), s/veh	13.9	0.0	0.0	15.4	0.0	7.4	0.0	0.0	3.3	0.0	0.0	24.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	5.5	0.0	3.8	0.4	0.0	5.6	0.9	0.0	19.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	0.0	0.0	55.5	0.0	46.8	22.0	0.0	27.2	18.0	0.0	51.5
LnGrp LOS	E	A	A	E	A	D	C	A	C	B	A	D
Approach Vol, veh/h	54			349			418			779		
Approach Delay, s/veh	59.2			51.7			26.8			48.5		
Approach LOS	E			D			C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	41.2	27.6		8.5	24.7	44.1		17.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	40.0	40.0		10.0	10.0	40.0		15.0				
Max Q Clear Time (g_c+I), s	20.8	20.8		4.6	2.0	38.4		12.2				
Green Ext Time (p_c), s	0.1	1.8		0.0	0.0	0.7		0.5				

Intersection Summary

HCM 6th Ctrl Delay	43.9
HCM 6th LOS	D

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

2025-BD-AM-IMP

04/05/2017



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	16	65	31	415	681	21
Future Volume (vph)	16	65	31	415	681	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.996	
Flt Protected	0.950			0.997		
Satd. Flow (prot)	1780	1592	0	1803	1779	0
Flt Permitted	0.950			0.997		
Satd. Flow (perm)	1780	1592	0	1803	1779	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	18	74	35	472	774	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	74	0	507	798	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection							
Int Delay, s/veh	1.3						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	16	65	31	415	681	21	
Future Vol, veh/h	16	65	31	415	681	21	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	88	88	88	88	88	88	
Heavy Vehicles, %	0	0	0	6	6	0	
Mvmt Flow	18	74	35	472	774	24	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1328	786	798	0	-	0	
Stage 1	786	-	-	-	-	-	
Stage 2	542	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	232	431	833	-	-	-	
Stage 1	539	-	-	-	-	-	
Stage 2	662	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	219	431	833	-	-	-	
Mov Cap-2 Maneuver	219	-	-	-	-	-	
Stage 1	508	-	-	-	-	-	
Stage 2	662	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	16.6	0.7		0			
HCM LOS	C						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	833	-	219	431	-	-	
HCM Lane V/C Ratio	0.042	-	0.083	0.171	-	-	
HCM Control Delay (s)	9.5	0	22.9	15.1	-	-	
HCM Lane LOS	A	A	C	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.3	0.6	-	-	

Intersection							
Int Delay, s/veh	1.3						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	16	65	31	415	681	21	
Future Vol, veh/h	16	65	31	415	681	21	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	88	88	88	88	88	88	
Heavy Vehicles, %	0	0	0	6	6	0	
Mvmt Flow	18	74	35	472	774	24	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1328	786	798	0	-	0	
Stage 1	786	-	-	-	-	-	
Stage 2	542	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	232	431	833	-	-	-	
Stage 1	539	-	-	-	-	-	
Stage 2	662	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	219	431	833	-	-	-	
Mov Cap-2 Maneuver	219	-	-	-	-	-	
Stage 1	508	-	-	-	-	-	
Stage 2	662	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	16.6	0.7		0			
HCM LOS	C						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	833	-	219	431	-	-	
HCM Lane V/C Ratio	0.042	-	0.083	0.171	-	-	
HCM Control Delay (s)	9.5	0	22.9	15.1	-	-	
HCM Lane LOS	A	A	C	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.3	0.6	-	-	

Lanes, Volumes, Timings
4: NY 52 & NY 216

2025-BD-AM-IMP

04/05/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	238	15	8	338	10	45	7	22	16	2	319
Future Volume (vph)	178	238	15	8	338	10	45	7	22	16	2	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			0%			-2%	
Storage Length (ft)	150		0	100		0	0		0	0		80
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.996			0.960				0.850
Flt Protected	0.950			0.950				0.970			0.957	
Satd. Flow (prot)	1581	1774	0	1693	1794	0	0	1769	0	0	1775	1577
Flt Permitted	0.432			0.596				0.802			0.795	
Satd. Flow (perm)	719	1774	0	1062	1794	0	0	1463	0	0	1475	1577
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			2			23				332
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		2638			2750			543			840	
Travel Time (s)		40.0			41.7			12.3			10.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	6%	6%	0%	0%	6%	6%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	185	248	16	8	352	10	47	7	23	17	2	332
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	264	0	8	362	0	0	77	0	0	19	332
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.10	1.01	1.01	1.09	0.99	0.99	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		1	2		1	2	2
Detector Template	NYSDOT	NYSDOT		NYSDOT	NYSDOT		Left	NYSDOT		Left	NYSDOT	NYSDOT
Leading Detector (ft)	83	83		83	83		20	83		20	83	83
Trailing Detector (ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Position(ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Size(ft)	40	40		40	40		20	40		20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)	43	43		43	43			43			43	43
Detector 2 Size(ft)	40	40		40	40			40			40	40
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0

Lanes, Volumes, Timings
4: NY 52 & NY 216

2025-BD-AM-IMP

04/05/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.0	22.5		10.0	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	15.0	35.0		15.0	35.0		40.0	40.0		40.0	40.0	40.0
Total Split (%)	16.7%	38.9%		16.7%	38.9%		44.4%	44.4%		44.4%	44.4%	44.4%
Maximum Green (s)	10.0	30.0		10.0	30.0		35.0	35.0		35.0	35.0	35.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max		None	None		None	None	None
v/c Ratio	0.29	0.22		0.01	0.42			0.36			0.10	0.67
Control Delay	4.8	5.9		4.1	13.1			23.6			24.7	10.8
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	4.8	5.9		4.1	13.1			23.6			24.7	10.8
Queue Length 50th (ft)	17	25		1	83			19			7	0
Queue Length 95th (ft)	47	104		5	168			53			23	62
Internal Link Dist (ft)		2558			2670			463			760	
Turn Bay Length (ft)	150			100								80
Base Capacity (vph)	645	1199		784	866			833			830	1032
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.29	0.22		0.01	0.42			0.09			0.02	0.32

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 62.4

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Splits and Phases: 4: NY 52 & NY 216

 Ø1	 Ø2	 Ø4
15 s	35 s	40 s
 Ø5	 Ø6	 Ø8
15 s	35 s	40 s

HCM 6th Signalized Intersection Summary

4: NY 52 & NY 216

2025-BD-AM-IMP

04/05/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	238	15	8	338	10	45	7	22	16	2	319
Future Volume (veh/h)	178	238	15	8	338	10	45	7	22	16	2	319
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1805	1805	1805	1939	1849	1849	1900	1900	1900	1979	1979	1979
Adj Flow Rate, veh/h	185	248	16	8	352	10	47	7	23	17	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	6	6	0	6	6	0	0	0	0	0	0
Cap, veh/h	731	1070	69	803	1004	29	176	10	33	232	21	
Arrive On Green	0.09	0.64	0.64	0.01	0.56	0.56	0.07	0.07	0.07	0.07	0.07	0.00
Sat Flow, veh/h	1719	1677	108	1847	1789	51	953	142	467	1475	294	1677
Grp Volume(v), veh/h	185	0	264	8	0	362	77	0	0	19	0	0
Grp Sat Flow(s),veh/h/ln	1719	0	1786	1847	0	1840	1562	0	0	1769	0	1677
Q Serve(g_s), s	2.1	0.0	3.4	0.1	0.0	5.8	2.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	3.4	0.1	0.0	5.8	2.5	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.03	0.61		0.30	0.89		1.00
Lane Grp Cap(c), veh/h	731	0	1139	803	0	1032	219	0	0	253	0	
V/C Ratio(X)	0.25	0.00	0.23	0.01	0.00	0.35	0.35	0.00	0.00	0.08	0.00	
Avail Cap(c_a), veh/h	902	0	1139	1129	0	1032	1106	0	0	1129	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.8	0.0	4.1	4.9	0.0	6.4	24.2	0.0	0.0	23.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.5	0.0	0.0	0.9	1.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.7	0.0	0.0	1.6	0.9	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.0	0.0	4.6	4.9	0.0	7.4	25.2	0.0	0.0	23.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	
Approach Vol, veh/h	449				370				77		19	
Approach Delay, s/veh	4.3				7.3				25.2		23.4	
Approach LOS	A				A				C		C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	39.1		8.8	9.7	35.0		8.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		35.0	10.0	30.0		35.0				
Max Q Clear Time (g_c+I1), s	2.1	5.4		2.5	4.1	7.8		4.5				
Green Ext Time (p_c), s	0.0	1.2		0.0	0.4	1.7		0.3				

Intersection Summary

HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

4: NY 52 & NY 216

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04/05/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	238	15	8	338	10	45	7	22	16	2	319
Future Volume (veh/h)	178	238	15	8	338	10	45	7	22	16	2	319
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1805	1805	1805	1939	1849	1849	1900	1900	1900	1979	1979	1979
Adj Flow Rate, veh/h	185	248	16	8	352	10	47	7	23	17	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	6	6	0	6	6	0	0	0	0	0	0
Cap, veh/h	731	1070	69	803	1004	29	176	10	33	232	21	
Arrive On Green	0.09	0.64	0.64	0.01	0.56	0.56	0.07	0.07	0.07	0.07	0.07	0.00
Sat Flow, veh/h	1719	1677	108	1847	1789	51	953	142	467	1475	294	1677
Grp Volume(v), veh/h	185	0	264	8	0	362	77	0	0	19	0	0
Grp Sat Flow(s), veh/h/ln	1719	0	1786	1847	0	1840	1562	0	0	1769	0	1677
Q Serve(g_s), s	2.1	0.0	3.4	0.1	0.0	5.8	2.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	3.4	0.1	0.0	5.8	2.5	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.03	0.61		0.30	0.89		1.00
Lane Grp Cap(c), veh/h	731	0	1139	803	0	1032	219	0	0	253	0	
V/C Ratio(X)	0.25	0.00	0.23	0.01	0.00	0.35	0.35	0.00	0.00	0.08	0.00	
Avail Cap(c_a), veh/h	902	0	1139	1129	0	1032	1106	0	0	1129	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.8	0.0	4.1	4.9	0.0	6.4	24.2	0.0	0.0	23.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.5	0.0	0.0	0.9	1.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.7	0.0	0.0	1.6	0.9	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.0	0.0	4.6	4.9	0.0	7.4	25.2	0.0	0.0	23.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	
Approach Vol, veh/h	449				370			77			19	
Approach Delay, s/veh	4.3				7.3			25.2			23.4	
Approach LOS	A				A			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	39.1		8.8	9.7	35.0		8.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		35.0	10.0	30.0		35.0				
Max Q Clear Time (g_c+1.5), s	12.5	5.4		2.5	4.1	7.8		4.5				
Green Ext Time (p_c), s	0.0	1.2		0.0	0.4	1.7		0.3				

Intersection Summary

HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
5: NY 52 & Site Dwy A

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	69	20	10	221	326	20
Future Volume (vph)	69	20	10	221	326	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Storage Length (ft)	0	0	150			0
Storage Lanes	1	0	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.969				0.992	
Flt Protected	0.963		0.950			
Satd. Flow (prot)	1773	0	1823	1828	1782	0
Flt Permitted	0.963		0.950			
Satd. Flow (perm)	1773	0	1823	1828	1782	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	5%	5%	0%
Adj. Flow (vph)	71	21	10	228	336	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	0	10	228	357	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	69	20	10	221	326	20
Future Vol, veh/h	69	20	10	221	326	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	5	5	0
Mvmt Flow	71	21	10	228	336	21
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	595	347	357	0	-	0
Stage 1	347	-	-	-	-	-
Stage 2	248	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	470	701	1213	-	-	-
Stage 1	720	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	466	701	1213	-	-	-
Mov Cap-2 Maneuver	466	-	-	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.7	0.3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1213	-	504	-	-	
HCM Lane V/C Ratio	0.008	-	0.182	-	-	
HCM Control Delay (s)	8	-	13.7	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.7	-	-	

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	69	20	10	221	326	20
Future Vol, veh/h	69	20	10	221	326	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	5	5	0
Mvmt Flow	71	21	10	228	336	21
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	595	347	357	0	-	0
Stage 1	347	-	-	-	-	-
Stage 2	248	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	470	701	1213	-	-	-
Stage 1	720	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	466	701	1213	-	-	-
Mov Cap-2 Maneuver	466	-	-	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.7	0.3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1213	-	504	-	-	
HCM Lane V/C Ratio	0.008	-	0.182	-	-	
HCM Control Delay (s)	8	-	13.7	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.7	-	-	

Lanes, Volumes, Timings
6: Site Dwy B & NY 52

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04/05/2017

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	343	3	0	231	0	10
Future Volume (vph)	343	3	0	231	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999					0.865
Flt Protected						
Satd. Flow (prot)	1763	0	0	1855	0	1644
Flt Permitted						
Satd. Flow (perm)	1763	0	0	1855	0	1644
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	5%	0%	0%	5%	0%	0%
Adj. Flow (vph)	354	3	0	238	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	357	0	0	238	0	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.2					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	343	3	0	231	0	10
Future Vol, veh/h	343	3	0	231	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Stop
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	354	3	0	238	0	10
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	354
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	0	0	-	0	694
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	694
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0		10.3	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NWT	SET			
Capacity (veh/h)	694	-	-			
HCM Lane V/C Ratio	0.015	-	-			
HCM Control Delay (s)	10.3	-	-			
HCM Lane LOS	B	-	-			
HCM 95th %tile Q(veh)	0	-	-			

Intersection						
Int Delay, s/veh	0.2					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	343	3	0	231	0	10
Future Vol, veh/h	343	3	0	231	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Stop
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	354	3	0	238	0	10
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	354
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	0	0	-	0	694
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	694
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0		10.3	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NWT	SET			
Capacity (veh/h)	694	-	-			
HCM Lane V/C Ratio	0.015	-	-			
HCM Control Delay (s)	10.3	-	-			
HCM Lane LOS	B	-	-			
HCM 95th %tile Q(veh)	0	-	-			

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

2025-BD-AM-IMP

04/05/2017



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	10	343	177	13	25	54
Future Volume (vph)	10	343	177	13	25	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.991		0.908	
Flt Protected		0.999			0.984	
Satd. Flow (prot)	0	1747	1916	0	1816	0
Flt Permitted		0.999			0.984	
Satd. Flow (perm)	0	1747	1916	0	1816	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	5%	5%	0%	0%	0%
Adj. Flow (vph)	10	350	181	13	26	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	360	194	0	81	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.4					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	10	343	177	13	25	54
Future Vol, veh/h	10	343	177	13	25	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	5	5	0	0	0
Mvmt Flow	10	350	181	13	26	55
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	194	0	-	0	558	188
Stage 1	-	-	-	-	188	-
Stage 2	-	-	-	-	370	-
Critical Hdwy	4.1	-	-	-	5	5.5
Critical Hdwy Stg 1	-	-	-	-	4	-
Critical Hdwy Stg 2	-	-	-	-	4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1391	-	-	-	614	891
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	812	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1391	-	-	-	608	891
Mov Cap-2 Maneuver	-	-	-	-	608	-
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	812	-
Approach	SE		NW		SW	
HCM Control Delay, s	0.2		0		10.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1391	-	777	
HCM Lane V/C Ratio	-	-	0.007	-	0.104	
HCM Control Delay (s)	-	-	7.6	0	10.2	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0	-	0.3	

Intersection						
Int Delay, s/veh	1.4					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	10	343	177	13	25	54
Future Vol, veh/h	10	343	177	13	25	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	5	5	0	0	0
Mvmt Flow	10	350	181	13	26	55
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	194	0	-	0	558	188
Stage 1	-	-	-	-	188	-
Stage 2	-	-	-	-	370	-
Critical Hdwy	4.1	-	-	-	5	5.5
Critical Hdwy Stg 1	-	-	-	-	4	-
Critical Hdwy Stg 2	-	-	-	-	4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1391	-	-	-	614	891
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	812	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1391	-	-	-	608	891
Mov Cap-2 Maneuver	-	-	-	-	608	-
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	812	-
Approach	SE		NW		SW	
HCM Control Delay, s	0.2		0		10.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1391	-	777	
HCM Lane V/C Ratio	-	-	0.007	-	0.104	
HCM Control Delay (s)	-	-	7.6	0	10.2	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0	-	0.3	

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

2025-BD-AM-IMP

04/05/2017



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	25	71	354	21	8	157
Future Volume (vph)	25	71	354	21	8	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.900		0.992			
Flt Protected	0.987					0.998
Satd. Flow (prot)	1799	0	3315	0	0	1747
Flt Permitted	0.987					0.998
Satd. Flow (perm)	1799	0	3315	0	0	1747
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	29	83	412	24	9	183
Shared Lane Traffic (%)						
Lane Group Flow (vph)	112	0	436	0	0	192
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

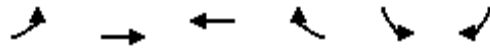
Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	25	71	354	21	8	157
Future Vol, veh/h	25	71	354	21	8	157
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	29	83	412	24	9	183
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	625	218	0	0	436	0
Stage 1	424	-	-	-	-	-
Stage 2	201	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	307	743	-	-	1097	-
Stage 1	499	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	304	743	-	-	1097	-
Mov Cap-2 Maneuver	304	-	-	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	13.4		0		0.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1097	-	540	-	-	
HCM Lane V/C Ratio	0.008	-	0.207	-	-	
HCM Control Delay (s)	8.3	0	13.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.8	-	-	

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	25	71	354	21	8	157
Future Vol, veh/h	25	71	354	21	8	157
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	29	83	412	24	9	183
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	625	218	0	0	436	0
Stage 1	424	-	-	-	-	-
Stage 2	201	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	307	743	-	-	1097	-
Stage 1	499	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	304	743	-	-	1097	-
Mov Cap-2 Maneuver	304	-	-	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	13.4		0		0.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1097	-	540	-	-	
HCM Lane V/C Ratio	0.008	-	0.207	-	-	
HCM Control Delay (s)	8.3	0	13.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.8	-	-	

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

2025-BD-AM-IMP

04/05/2017



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	430	138	10	27	10
Future Volume (vph)	12	430	138	10	27	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.991		0.964	
Flt Protected		0.999			0.965	
Satd. Flow (prot)	0	1794	1663	0	1900	0
Flt Permitted		0.999			0.965	
Satd. Flow (perm)	0	1794	1663	0	1900	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	15	524	168	12	33	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	539	180	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	430	138	10	27	10
Future Vol, veh/h	12	430	138	10	27	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	15	524	168	12	33	12
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	180	0	-	0	728	174
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	554	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1408	-	-	-	722	940
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	920	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1408	-	-	-	711	940
Mov Cap-2 Maneuver	-	-	-	-	711	-
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	920	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.2		0		10	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1408	-	-	-	761	
HCM Lane V/C Ratio	0.01	-	-	-	0.059	
HCM Control Delay (s)	7.6	0	-	-	10	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	430	138	10	27	10
Future Vol, veh/h	12	430	138	10	27	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	15	524	168	12	33	12
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	180	0	-	0	728	174
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	554	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1408	-	-	-	722	940
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	920	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1408	-	-	-	711	940
Mov Cap-2 Maneuver	-	-	-	-	711	-
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	920	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.2		0		10	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1408	-	-	-	761	
HCM Lane V/C Ratio	0.01	-	-	-	0.059	
HCM Control Delay (s)	7.6	0	-	-	10	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Lanes, Volumes, Timings
10: NY 52 & Milltown Road

2025-BD-AM-IMP

04/05/2017



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	83	440	8	37	156
Future Volume (vph)	6	83	440	8	37	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.874		0.998			
Flt Protected	0.997					0.990
Satd. Flow (prot)	1616	0	1800	0	0	1695
Flt Permitted	0.997					0.990
Satd. Flow (perm)	1616	0	1800	0	0	1695
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	5%	0%	0%	5%
Adj. Flow (vph)	7	95	506	9	43	179
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	0	515	0	0	222
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	83	440	8	37	156
Future Vol, veh/h	6	83	440	8	37	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	5	0	0	5
Mvmt Flow	7	95	506	9	43	179

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	776	511	0	0	515	0
Stage 1	511	-	-	-	-	-
Stage 2	265	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.1	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	402	583	-	-	1061	-
Stage 1	642	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	384	583	-	-	1061	-
Mov Cap-2 Maneuver	384	-	-	-	-	-
Stage 1	613	-	-	-	-	-
Stage 2	807	-	-	-	-	-

Approach	EB		SE		NW
HCM Control Delay, s	12.8		0		1.6
HCM LOS	B				

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1061	-	563	-	-
HCM Lane V/C Ratio	0.04	-	0.182	-	-
HCM Control Delay (s)	8.5	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	83	440	8	37	156
Future Vol, veh/h	6	83	440	8	37	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	5	0	0	5
Mvmt Flow	7	95	506	9	43	179
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	776	511	0	0	515	0
Stage 1	511	-	-	-	-	-
Stage 2	265	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.1	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	402	583	-	-	1061	-
Stage 1	642	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	384	583	-	-	1061	-
Mov Cap-2 Maneuver	384	-	-	-	-	-
Stage 1	613	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	12.8		0		1.6	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1061	-	563	-	-	
HCM Lane V/C Ratio	0.04	-	0.182	-	-	
HCM Control Delay (s)	8.5	0	12.8	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-BD-PM-IMP

04/12/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	116	0	108	0	546	177	149	888	0
Future Volume (vph)	0	0	0	116	0	108	0	546	177	149	888	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.967				
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1738	0	1769	1635	0	0	1716	0	1668	1715	0
Flt Permitted				0.757						0.260		
Satd. Flow (perm)	0	1738	0	1410	1635	0	0	1716	0	456	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					433			23				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	0	0	0	125	0	116	0	587	190	160	955	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	125	116	0	0	777	0	160	955	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-BD-PM-IMP

04/12/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	25.0	25.0		25.0	25.0		65.0	65.0		20.0	85.0	
Total Split (%)	22.7%	22.7%		22.7%	22.7%		59.1%	59.1%		18.2%	77.3%	
Maximum Green (s)	20.0	20.0		20.0	20.0		60.0	60.0		15.0	80.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio				0.66	0.20			0.68		0.37	0.72	
Control Delay				61.1	0.7			16.8		10.4	8.1	
Queue Delay				0.0	0.2			54.4		0.0	6.4	
Total Delay				61.1	0.9			71.2		10.4	14.5	
Queue Length 50th (ft)				85	0			282		49	130	
Queue Length 95th (ft)				142	0			610		m34	m720	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)				256	651			1143		549	1328	
Starvation Cap Reductn				0	0			0		0	321	
Spillback Cap Reductn				0	178			679		0	0	
Storage Cap Reductn				0	0			0		0	0	
Reduced v/c Ratio				0.49	0.25			1.67		0.29	0.95	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: NY 52 & TSP SB Ramps



HCM 6th Signalized Intersection Summary

2025-BD-PM-IMP

04/12/2017

1: NY 52 & TSP SB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	116	0	108	0	546	177	149	888	0
Future Volume (veh/h)	0	0	0	116	0	108	0	546	177	149	888	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	0	0	0	125	0	116	0	587	190	160	955	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	0	175	0	232	0	154	0	629	204	638	1452	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.46	0.46	0.61	1.00	0.00
Sat Flow, veh/h	0	1806	0	1720	0	1592	0	1367	442	1787	1788	0
Grp Volume(v), veh/h	0	0	0	125	0	116	0	0	777	160	955	0
Grp Sat Flow(s),veh/h/ln	0	1806	0	1720	0	1592	0	0	1809	1787	1788	0
Q Serve(g_s), s	0.0	0.0	0.0	7.8	0.0	7.8	0.0	0.0	44.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.8	0.0	7.8	0.0	0.0	44.7	0.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.24	1.00		0.00
Lane Grp Cap(c), veh/h	0	175	0	232	0	154	0	0	833	638	1452	0
V/C Ratio(X)	0.00	0.00	0.00	0.54	0.00	0.75	0.00	0.00	0.93	0.25	0.66	0.00
Avail Cap(c_a), veh/h	0	328	0	378	0	289	0	0	987	638	1452	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.51	0.51	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	48.4	0.0	48.4	0.0	0.0	28.1	14.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.9	0.0	7.2	0.0	0.0	18.7	0.1	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.5	0.0	3.4	0.0	0.0	21.9	1.6	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	50.3	0.0	55.7	0.0	0.0	46.7	14.5	1.2	0.0
LnGrp LOS	A	A	A	D	A	E	A	A	D	B	A	A
Approach Vol, veh/h	0				241				777			
Approach Delay, s/veh	0.0				52.9				46.7			
Approach LOS					D				D			
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	38.7	55.6		15.6		94.4		15.6				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	15.0	60.0		20.0		80.0		20.0				
Max Q Clear Time (g_c+I1), s	2.0	46.7		0.0		2.0		9.8				
Green Ext Time (p_c), s	0.5	3.9		0.0		7.7		0.8				
Intersection Summary												
HCM 6th Ctrl Delay	24.6											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

1: NY 52 & TSP SB Ramps

2025-BD-PM-IMP

04/12/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↘			↕		↗	↘	
Traffic Volume (veh/h)	0	0	0	116	0	108	0	546	177	149	888	0
Future Volume (veh/h)	0	0	0	116	0	108	0	546	177	149	888	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	0	0	0	125	0	116	0	587	190	160	955	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	0	175	0	232	0	154	0	629	204	638	1452	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.46	0.46	0.61	1.00	0.00
Sat Flow, veh/h	0	1806	0	1720	0	1592	0	1367	442	1787	1788	0
Grp Volume(v), veh/h	0	0	0	125	0	116	0	0	777	160	955	0
Grp Sat Flow(s),veh/h/ln	0	1806	0	1720	0	1592	0	0	1809	1787	1788	0
Q Serve(g_s), s	0.0	0.0	0.0	7.8	0.0	7.8	0.0	0.0	44.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.8	0.0	7.8	0.0	0.0	44.7	0.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.24	1.00		0.00
Lane Grp Cap(c), veh/h	0	175	0	232	0	154	0	0	833	638	1452	0
V/C Ratio(X)	0.00	0.00	0.00	0.54	0.00	0.75	0.00	0.00	0.93	0.25	0.66	0.00
Avail Cap(c_a), veh/h	0	328	0	378	0	289	0	0	987	638	1452	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.51	0.51	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	48.4	0.0	48.4	0.0	0.0	28.1	14.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.9	0.0	7.2	0.0	0.0	18.7	0.1	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.5	0.0	3.4	0.0	0.0	21.9	1.6	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	50.3	0.0	55.7	0.0	0.0	46.7	14.5	1.2	0.0
LnGrp LOS	A	A	A	D	A	E	A	A	D	B	A	A
Approach Vol, veh/h	0			241			777			1115		
Approach Delay, s/veh	0.0			52.9			46.7			3.1		
Approach LOS				D			D			A		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	38.7	55.6		15.6		94.4		15.6				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	15.0	60.0		20.0		80.0		20.0				
Max Q Clear Time (g_c+12, s)	12.0	46.7		0.0		2.0		9.8				
Green Ext Time (p_c), s	0.5	3.9		0.0		7.7		0.8				

Intersection Summary

HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-PM-IMP

04/12/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	17	31	44	531	26	355	18	458	178	70	462	12
Future Volume (vph)	17	31	44	531	26	355	18	458	178	70	462	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.935				0.850		0.958			0.996	
Flt Protected		0.991			0.954		0.950			0.950		
Satd. Flow (prot)	0	1975	0	0	1735	1546	1693	1695	0	1676	1720	0
Flt Permitted		0.991			0.954		0.148			0.104		
Satd. Flow (perm)	0	1975	0	0	1735	1546	264	1695	0	184	1720	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33				190		18			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	18	34	48	577	28	386	20	498	193	76	502	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	605	386	20	691	0	76	515	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT	NYS	DOT		NYS	DOT	
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					CI+Ex	CI+Ex		CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

PEAK HOUR 5:00-6:00
JMC 17039

Synchro 10 Report
Page 5

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-PM-IMP

04/12/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	13.0	13.0		45.0	45.0	45.0	13.0	39.0		13.0	39.0	
Total Split (%)	11.8%	11.8%		40.9%	40.9%	40.9%	11.8%	35.5%		11.8%	35.5%	
Maximum Green (s)	8.0	8.0		40.0	40.0	40.0	8.0	34.0		8.0	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.59			0.95	0.56	0.11	1.18		0.46	0.79	
Control Delay		48.0			60.0	17.0	19.8	128.7		43.7	42.6	
Queue Delay		0.1			44.1	0.0	0.0	2.2		0.0	0.0	
Total Delay		48.0			104.1	17.0	19.8	130.9		43.7	42.6	
Queue Length 50th (ft)		46			406	104	11	~619		33	302	
Queue Length 95th (ft)		#103			#643	204	m9	#804		62	#577	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		179			642	692	212	587		187	651	
Starvation Cap Reductn		0			0	0	0	139		0	0	
Spillback Cap Reductn		1			97	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.56			1.11	0.56	0.09	1.54		0.41	0.79	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 110

Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.

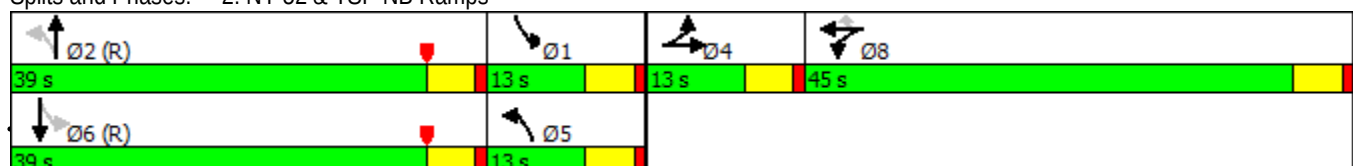
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NY 52 & TSP NB Ramps



HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-BD-PM-IMP

04/12/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	31	44	531	26	355	18	458	178	70	462	12
Future Volume (veh/h)	17	31	44	531	26	355	18	458	178	70	462	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	18	34	48	577	28	386	20	498	193	76	502	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	23	43	61	609	30	567	259	392	152	222	529	14
Arrive On Green	0.07	0.07	0.07	0.36	0.36	0.36	0.06	0.21	0.21	0.09	0.30	0.30
Sat Flow, veh/h	352	664	938	1708	83	1590	1847	1269	492	1804	1752	45
Grp Volume(v), veh/h	100	0	0	605	0	386	20	0	691	76	0	515
Grp Sat Flow(s),veh/h/ln	1953	0	0	1791	0	1590	1847	0	1761	1804	0	1797
Q Serve(g_s), s	5.5	0.0	0.0	36.1	0.0	22.7	0.0	0.0	34.0	0.3	0.0	30.9
Cycle Q Clear(g_c), s	5.5	0.0	0.0	36.1	0.0	22.7	0.0	0.0	34.0	0.3	0.0	30.9
Prop In Lane	0.18		0.48	0.95		1.00	1.00		0.28	1.00		0.03
Lane Grp Cap(c), veh/h	128	0	0	639	0	567	259	0	544	222	0	542
V/C Ratio(X)	0.78	0.00	0.00	0.95	0.00	0.68	0.08	0.00	1.27	0.34	0.00	0.95
Avail Cap(c_a), veh/h	142	0	0	651	0	578	259	0	544	222	0	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.68	0.00	0.68	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	0.0	0.0	34.4	0.0	30.1	45.5	0.0	43.6	45.8	0.0	37.6
Incr Delay (d2), s/veh	22.1	0.0	0.0	22.9	0.0	3.2	0.1	0.0	131.2	0.9	0.0	28.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.0	19.4	0.0	9.0	0.5	0.0	34.8	1.9	0.0	17.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.7	0.0	0.0	57.3	0.0	33.2	45.6	0.0	174.8	46.8	0.0	65.6
LnGrp LOS	E	A	A	E	A	C	D	A	F	D	A	E
Approach Vol, veh/h	100			991			711			591		
Approach Delay, s/veh	72.7			47.9			171.1			63.2		
Approach LOS	E			D			F			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.6	39.0		12.2	15.4	38.2		44.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	34.0		8.0	8.0	34.0		40.0				
Max Q Clear Time (g_c+I1), s	2.3	36.0		7.5	2.0	32.9		38.1				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	0.3		1.1				
Intersection Summary												
HCM 6th Ctrl Delay	89.3											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-BD-PM-IMP

04/12/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (veh/h)	17	31	44	531	26	355	18	458	178	70	462	12
Future Volume (veh/h)	17	31	44	531	26	355	18	458	178	70	462	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	18	34	48	577	28	386	20	498	193	76	502	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	23	43	61	609	30	567	259	392	152	222	529	14
Arrive On Green	0.07	0.07	0.07	0.36	0.36	0.36	0.06	0.21	0.21	0.09	0.30	0.30
Sat Flow, veh/h	352	664	938	1708	83	1590	1847	1269	492	1804	1752	45
Grp Volume(v), veh/h	100	0	0	605	0	386	20	0	691	76	0	515
Grp Sat Flow(s),veh/h/ln	1953	0	0	1791	0	1590	1847	0	1761	1804	0	1797
Q Serve(g_s), s	5.5	0.0	0.0	36.1	0.0	22.7	0.0	0.0	34.0	0.3	0.0	30.9
Cycle Q Clear(g_c), s	5.5	0.0	0.0	36.1	0.0	22.7	0.0	0.0	34.0	0.3	0.0	30.9
Prop In Lane	0.18		0.48	0.95		1.00	1.00		0.28	1.00		0.03
Lane Grp Cap(c), veh/h	128	0	0	639	0	567	259	0	544	222	0	542
V/C Ratio(X)	0.78	0.00	0.00	0.95	0.00	0.68	0.08	0.00	1.27	0.34	0.00	0.95
Avail Cap(c_a), veh/h	142	0	0	651	0	578	259	0	544	222	0	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.68	0.00	0.68	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	0.0	0.0	34.4	0.0	30.1	45.5	0.0	43.6	45.8	0.0	37.6
Incr Delay (d2), s/veh	22.1	0.0	0.0	22.9	0.0	3.2	0.1	0.0	131.2	0.9	0.0	28.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	0.0	0.0	19.4	0.0	9.0	0.5	0.0	34.8	1.9	0.0	17.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.7	0.0	0.0	57.3	0.0	33.2	45.6	0.0	174.8	46.8	0.0	65.6
LnGrp LOS	E	A	A	E	A	C	D	A	F	D	A	E
Approach Vol, veh/h	100			991			711			591		
Approach Delay, s/veh	72.7			47.9			171.1			63.2		
Approach LOS	E			D			F			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.6	39.0		12.2	15.4	38.2		44.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	34.0	34.0		8.0	8.0	34.0		40.0				
Max Q Clear Time (g_c+I), s	12.3	36.0		7.5	2.0	32.9		38.1				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	0.3		1.1				

Intersection Summary

HCM 6th Ctrl Delay	89.3
HCM 6th LOS	F

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

2025-BD-PM-IMP

04/12/2017



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	29	70	140	677	471	37
Future Volume (vph)	29	70	140	677	471	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.990	
Flt Protected	0.950			0.992		
Satd. Flow (prot)	1780	1592	0	1790	1758	0
Flt Permitted	0.950			0.992		
Satd. Flow (perm)	1780	1592	0	1790	1758	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	7%	7%	0%
Adj. Flow (vph)	31	74	147	713	496	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	74	0	860	535	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection							
Int Delay, s/veh	2.2						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	29	70	140	677	471	37	
Future Vol, veh/h	29	70	140	677	471	37	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	0	0	0	7	7	0	
Mvmt Flow	31	74	147	713	496	39	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1523	516	535	0	-	0	
Stage 1	516	-	-	-	-	-	
Stage 2	1007	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	184	596	1043	-	-	-	
Stage 1	677	-	-	-	-	-	
Stage 2	445	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	141	596	1043	-	-	-	
Mov Cap-2 Maneuver	141	-	-	-	-	-	
Stage 1	519	-	-	-	-	-	
Stage 2	445	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	19.4	1.5		0			
HCM LOS	C						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	1043	-	141	596	-	-	
HCM Lane V/C Ratio	0.141	-	0.216	0.124	-	-	
HCM Control Delay (s)	9	0	37.5	11.9	-	-	
HCM Lane LOS	A	A	E	B	-	-	
HCM 95th %tile Q(veh)	0.5	-	0.8	0.4	-	-	

Intersection							
Int Delay, s/veh	2.2						
Movement	SEL	SER	NEL	NET	SWT	SWR	
Lane Configurations							
Traffic Vol, veh/h	29	70	140	677	471	37	
Future Vol, veh/h	29	70	140	677	471	37	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	50	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	-4	-	-	-1	1	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	0	0	0	7	7	0	
Mvmt Flow	31	74	147	713	496	39	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1523	516	535	0	-	0	
Stage 1	516	-	-	-	-	-	
Stage 2	1007	-	-	-	-	-	
Critical Hdwy	5.6	5.8	4.1	-	-	-	
Critical Hdwy Stg 1	4.6	-	-	-	-	-	
Critical Hdwy Stg 2	4.6	-	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-	
Pot Cap-1 Maneuver	184	596	1043	-	-	-	
Stage 1	677	-	-	-	-	-	
Stage 2	445	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	141	596	1043	-	-	-	
Mov Cap-2 Maneuver	141	-	-	-	-	-	
Stage 1	519	-	-	-	-	-	
Stage 2	445	-	-	-	-	-	
Approach	SE	NE		SW			
HCM Control Delay, s	19.4	1.5		0			
HCM LOS	C						
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR	
Capacity (veh/h)	1043	-	141	596	-	-	
HCM Lane V/C Ratio	0.141	-	0.216	0.124	-	-	
HCM Control Delay (s)	9	0	37.5	11.9	-	-	
HCM Lane LOS	A	A	E	B	-	-	
HCM 95th %tile Q(veh)	0.5	-	0.8	0.4	-	-	

Lanes, Volumes, Timings
4: NY 52 & NY 216

2025-BD-PM-IMP

04/12/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	336	320	50	25	290	37	29	5	14	12	8	189
Future Volume (vph)	336	320	50	25	290	37	29	5	14	12	8	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			0%			-2%	
Storage Length (ft)	150		0	100		0	0		0	0		80
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.983			0.960				0.850
Flt Protected	0.950			0.950				0.971			0.970	
Satd. Flow (prot)	1581	1761	0	1693	1771	0	0	1771	0	0	1788	1561
Flt Permitted	0.456			0.531				0.802			0.787	
Satd. Flow (perm)	759	1761	0	946	1771	0	0	1463	0	0	1451	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			8			15				199
Link Speed (mph)		45			45			30			55	
Link Distance (ft)		2652			2735			439			869	
Travel Time (s)		40.2			41.4			10.0			10.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	6%	6%	0%	0%	6%	6%	0%	0%	0%	1%	0%	1%
Adj. Flow (vph)	354	337	53	26	305	39	31	5	15	13	8	199
Shared Lane Traffic (%)												
Lane Group Flow (vph)	354	390	0	26	344	0	0	51	0	0	21	199
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.10	1.01	1.01	1.09	0.99	0.99	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		1	2		1	2	2
Detector Template	NYSDOT	NYSDOT		NYSDOT	NYSDOT		Left	NYSDOT		Left	NYSDOT	NYSDOT
Leading Detector (ft)	83	83		83	83		20	83		20	83	83
Trailing Detector (ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Position(ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Size(ft)	40	40		40	40		20	40		20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)	43	43		43	43			43			43	43
Detector 2 Size(ft)	40	40		40	40			40			40	40
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0

Lanes, Volumes, Timings
4: NY 52 & NY 216

2025-BD-PM-IMP

04/12/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.0	22.5		10.0	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	15.0	40.0		15.0	40.0		35.0	35.0		35.0	35.0	35.0
Total Split (%)	16.7%	44.4%		16.7%	44.4%		38.9%	38.9%		38.9%	38.9%	38.9%
Maximum Green (s)	10.0	35.0		10.0	35.0		30.0	30.0		30.0	30.0	30.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max		None	None		None	None	None
v/c Ratio	0.52	0.33		0.04	0.37			0.29			0.13	0.57
Control Delay	6.2	6.9		3.5	11.4			25.4			28.4	11.7
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	6.2	6.9		3.5	11.4			25.4			28.4	11.7
Queue Length 50th (ft)	35	37		2	75			14			8	0
Queue Length 95th (ft)	82	148		9	146			43			27	53
Internal Link Dist (ft)		2572			2655			359			789	
Turn Bay Length (ft)	150			100								80
Base Capacity (vph)	678	1194		740	921			658			644	804
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.52	0.33		0.04	0.37			0.08			0.03	0.25

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 67.6

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Splits and Phases: 4: NY 52 & NY 216

 Ø1	 Ø2	 Ø4
15 s	40 s	35 s
 Ø5	 Ø6	 Ø8
15 s	40 s	35 s

HCM 6th Signalized Intersection Summary

4: NY 52 & NY 216

2025-BD-PM-IMP

04/12/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	336	320	50	25	290	37	29	5	14	12	8	189
Future Volume (veh/h)	336	320	50	25	290	37	29	5	14	12	8	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1805	1805	1805	1939	1849	1849	1900	1900	1900	1979	1979	1964
Adj Flow Rate, veh/h	354	337	53	26	305	39	31	5	15	13	8	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	0	6	6	0	0	0	0	0	1
Cap, veh/h	796	1011	159	759	931	119	151	9	27	149	52	
Arrive On Green	0.11	0.66	0.66	0.03	0.58	0.58	0.06	0.06	0.06	0.06	0.06	0.00
Sat Flow, veh/h	1719	1523	239	1847	1607	205	956	154	463	898	895	1664
Grp Volume(v), veh/h	354	0	390	26	0	344	51	0	0	21	0	0
Grp Sat Flow(s),veh/h/ln	1719	0	1762	1847	0	1812	1573	0	0	1793	0	1664
Q Serve(g_s), s	4.3	0.0	5.8	0.3	0.0	5.9	1.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.3	0.0	5.8	0.3	0.0	5.9	1.8	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.14	1.00		0.11	0.61		0.29	0.62		1.00
Lane Grp Cap(c), veh/h	796	0	1170	759	0	1051	187	0	0	201	0	
V/C Ratio(X)	0.44	0.00	0.33	0.03	0.00	0.33	0.27	0.00	0.00	0.10	0.00	
Avail Cap(c_a), veh/h	885	0	1170	1011	0	1051	853	0	0	917	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.7	0.0	4.4	4.7	0.0	6.6	27.6	0.0	0.0	27.1	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.8	0.0	0.0	0.8	0.8	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.3	0.1	0.0	1.7	0.7	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.0	0.0	5.1	4.7	0.0	7.4	28.4	0.0	0.0	27.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	
Approach Vol, veh/h	744			370			51			21		
Approach Delay, s/veh	4.6			7.2			28.4			27.3		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	45.1		8.5	11.9	40.0		8.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	2.3	7.8		2.6	6.3	7.9		3.8				
Green Ext Time (p_c), s	0.0	2.0		0.0	0.6	1.7		0.2				

Intersection Summary

HCM 6th Ctrl Delay	6.9
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

4: NY 52 & NY 216

2025-BD-PM-IMP
04/12/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	336	320	50	25	290	37	29	5	14	12	8	189
Future Volume (veh/h)	336	320	50	25	290	37	29	5	14	12	8	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1805	1805	1805	1939	1849	1849	1900	1900	1900	1979	1979	1964
Adj Flow Rate, veh/h	354	337	53	26	305	39	31	5	15	13	8	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	0	6	6	0	0	0	0	0	1
Cap, veh/h	796	1011	159	759	931	119	151	9	27	149	52	
Arrive On Green	0.11	0.66	0.66	0.03	0.58	0.58	0.06	0.06	0.06	0.06	0.06	0.00
Sat Flow, veh/h	1719	1523	239	1847	1607	205	956	154	463	898	895	1664
Grp Volume(v), veh/h	354	0	390	26	0	344	51	0	0	21	0	0
Grp Sat Flow(s), veh/h/ln	1719	0	1762	1847	0	1812	1573	0	0	1793	0	1664
Q Serve(g_s), s	4.3	0.0	5.8	0.3	0.0	5.9	1.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.3	0.0	5.8	0.3	0.0	5.9	1.8	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.14	1.00		0.11	0.61		0.29	0.62		1.00
Lane Grp Cap(c), veh/h	796	0	1170	759	0	1051	187	0	0	201	0	
V/C Ratio(X)	0.44	0.00	0.33	0.03	0.00	0.33	0.27	0.00	0.00	0.10	0.00	
Avail Cap(c_a), veh/h	885	0	1170	1011	0	1051	853	0	0	917	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.7	0.0	4.4	4.7	0.0	6.6	27.6	0.0	0.0	27.1	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.8	0.0	0.0	0.8	0.8	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.3	0.1	0.0	1.7	0.7	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.0	0.0	5.1	4.7	0.0	7.4	28.4	0.0	0.0	27.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	
Approach Vol, veh/h	744			370			51			21		
Approach Delay, s/veh	4.6			7.2			28.4			27.3		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	45.1		8.5	11.9	40.0		8.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+12, s)	12.3	7.8		2.6	6.3	7.9		3.8				
Green Ext Time (p_c), s	0.0	2.0		0.0	0.6	1.7		0.2				

Intersection Summary

HCM 6th Ctrl Delay	6.9
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
5: NY 52 & Site Dwy A

2025-BD-PM-IMP

04/12/2017

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	45	13	33	459	309	66
Future Volume (vph)	45	13	33	459	309	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Storage Length (ft)	0	0	150			0
Storage Lanes	1	0	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.970				0.976	
Flt Protected	0.963		0.950			
Satd. Flow (prot)	1775	0	1823	1810	1749	0
Flt Permitted	0.963		0.950			
Satd. Flow (perm)	1775	0	1823	1810	1749	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	49	14	36	499	336	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	36	499	408	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	13	33	459	309	66
Future Vol, veh/h	45	13	33	459	309	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	49	14	36	499	336	72
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	943	372	408	0	-	0
Stage 1	372	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	294	678	1162	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	285	678	1162	-	-	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	680	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	18.6	0.5		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1162	-	328	-	-	
HCM Lane V/C Ratio	0.031	-	0.192	-	-	
HCM Control Delay (s)	8.2	-	18.6	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-	

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	13	33	459	309	66
Future Vol, veh/h	45	13	33	459	309	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	49	14	36	499	336	72
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	943	372	408	0	-	0
Stage 1	372	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	294	678	1162	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	285	678	1162	-	-	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	680	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	18.6	0.5		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1162	-	328	-	-	
HCM Lane V/C Ratio	0.031	-	0.192	-	-	
HCM Control Delay (s)	8.2	-	18.6	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-	

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	311	11	0	492	0	7
Future Volume (vph)	311	11	0	492	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995					0.865
Flt Protected						
Satd. Flow (prot)	1742	0	0	1837	0	1644
Flt Permitted						
Satd. Flow (perm)	1742	0	0	1837	0	1644
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	0%	6%	0%	0%
Adj. Flow (vph)	338	12	0	535	0	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	350	0	0	535	0	8
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	311	11	0	492	0	7
Future Vol, veh/h	311	11	0	492	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Stop
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	6	0	0
Mvmt Flow	338	12	0	535	0	8
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	338
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	0	0	-	0	709
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	709
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0		10.1	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NWT	SET			
Capacity (veh/h)	709	-	-			
HCM Lane V/C Ratio	0.011	-	-			
HCM Control Delay (s)	10.1	-	-			
HCM Lane LOS	B	-	-			
HCM 95th %tile Q(veh)	0	-	-			

Intersection						
Int Delay, s/veh	0.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	311	11	0	492	0	7
Future Vol, veh/h	311	11	0	492	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Stop
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	6	0	0
Mvmt Flow	338	12	0	535	0	8
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	338
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	0	0	-	0	709
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	709
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0		10.1	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NWT	SET			
Capacity (veh/h)	709	-	-			
HCM Lane V/C Ratio	0.011	-	-			
HCM Control Delay (s)	10.1	-	-			
HCM Lane LOS	B	-	-			
HCM 95th %tile Q(veh)	0	-	-			

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

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Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	34	284	475	23	9	17
Future Volume (vph)	34	284	475	23	9	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.994		0.912	
Flt Protected		0.995			0.983	
Satd. Flow (prot)	0	1732	1903	0	1804	0
Flt Permitted		0.995			0.983	
Satd. Flow (perm)	0	1732	1903	0	1804	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	6%	6%	0%	1%	1%
Adj. Flow (vph)	38	316	528	26	10	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	354	554	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.7					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	34	284	475	23	9	17
Future Vol, veh/h	34	284	475	23	9	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	6	6	0	1	1
Mvmt Flow	38	316	528	26	10	19
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	554	0	-	0	933	541
Stage 1	-	-	-	-	541	-
Stage 2	-	-	-	-	392	-
Critical Hdwy	4.1	-	-	-	5.01	5.51
Critical Hdwy Stg 1	-	-	-	-	4.01	-
Critical Hdwy Stg 2	-	-	-	-	4.01	-
Follow-up Hdwy	2.2	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1026	-	-	-	426	603
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	798	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1026	-	-	-	407	603
Mov Cap-2 Maneuver	-	-	-	-	407	-
Stage 1	-	-	-	-	690	-
Stage 2	-	-	-	-	798	-
Approach	SE		NW		SW	
HCM Control Delay, s	0.9		0		12.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1026	-	517	
HCM Lane V/C Ratio	-	-	0.037	-	0.056	
HCM Control Delay (s)	-	-	8.6	0	12.4	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0.1	-	0.2	

Intersection						
Int Delay, s/veh	0.7					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	34	284	475	23	9	17
Future Vol, veh/h	34	284	475	23	9	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	6	6	0	1	1
Mvmt Flow	38	316	528	26	10	19
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	554	0	-	0	933	541
Stage 1	-	-	-	-	541	-
Stage 2	-	-	-	-	392	-
Critical Hdwy	4.1	-	-	-	5.01	5.51
Critical Hdwy Stg 1	-	-	-	-	4.01	-
Critical Hdwy Stg 2	-	-	-	-	4.01	-
Follow-up Hdwy	2.2	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1026	-	-	-	426	603
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	798	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1026	-	-	-	407	603
Mov Cap-2 Maneuver	-	-	-	-	407	-
Stage 1	-	-	-	-	690	-
Stage 2	-	-	-	-	798	-
Approach	SE		NW		SW	
HCM Control Delay, s	0.9		0		12.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1026	-	517	
HCM Lane V/C Ratio	-	-	0.037	-	0.056	
HCM Control Delay (s)	-	-	8.6	0	12.4	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0.1	-	0.2	

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

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Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	37	32	227	44	27	486
Future Volume (vph)	37	32	227	44	27	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.937		0.976			
Flt Protected	0.974					0.997
Satd. Flow (prot)	1848	0	3261	0	0	1745
Flt Permitted	0.974					0.997
Satd. Flow (perm)	1848	0	3261	0	0	1745
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	41	36	252	49	30	540
Shared Lane Traffic (%)						
Lane Group Flow (vph)	77	0	301	0	0	570
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

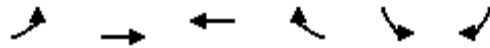
Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	37	32	227	44	27	486
Future Vol, veh/h	37	32	227	44	27	486
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	41	36	252	49	30	540
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	877	151	0	0	301	0
Stage 1	277	-	-	-	-	-
Stage 2	600	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	187	836	-	-	1233	-
Stage 1	642	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	180	836	-	-	1233	-
Mov Cap-2 Maneuver	180	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	22.4		0		0.4	
HCM LOS	C					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1233	-	283	-	-	
HCM Lane V/C Ratio	0.024	-	0.271	-	-	
HCM Control Delay (s)	8	0	22.4	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-	

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	37	32	227	44	27	486
Future Vol, veh/h	37	32	227	44	27	486
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	41	36	252	49	30	540
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	877	151	0	0	301	0
Stage 1	277	-	-	-	-	-
Stage 2	600	-	-	-	-	-
Critical Hdwy	8.615	7.915	-	-	4.19	-
Critical Hdwy Stg 1	7.815	-	-	-	-	-
Critical Hdwy Stg 2	7.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.3095	-	-	2.257	-
Pot Cap-1 Maneuver	187	836	-	-	1233	-
Stage 1	642	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	180	836	-	-	1233	-
Mov Cap-2 Maneuver	180	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	22.4		0		0.4	
HCM LOS	C					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1233	-	283	-	-	
HCM Lane V/C Ratio	0.024	-	0.271	-	-	
HCM Control Delay (s)	8	0	22.4	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-	

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	255	530	8	10	10
Future Volume (vph)	8	255	530	8	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998		0.932	
Flt Protected		0.999			0.976	
Satd. Flow (prot)	0	1795	1670	0	1858	0
Flt Permitted		0.999			0.976	
Satd. Flow (perm)	0	1795	1670	0	1858	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	9	300	624	9	12	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	309	633	0	24	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	255	530	8	10	10
Future Vol, veh/h	8	255	530	8	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	9	300	624	9	12	12
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	633	0	-	0	947	629
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	318	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	960	-	-	-	643	631
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	967	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	960	-	-	-	636	631
Mov Cap-2 Maneuver	-	-	-	-	636	-
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	967	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.3		0		10.9	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	960	-	-	-	633	
HCM Lane V/C Ratio	0.01	-	-	-	0.037	
HCM Control Delay (s)	8.8	0	-	-	10.9	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	255	530	8	10	10
Future Vol, veh/h	8	255	530	8	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	9	300	624	9	12	12
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	633	0	-	0	947	629
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	318	-
Critical Hdwy	4.1	-	-	-	3.4	4.7
Critical Hdwy Stg 1	-	-	-	-	2.4	-
Critical Hdwy Stg 2	-	-	-	-	2.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	960	-	-	-	643	631
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	967	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	960	-	-	-	636	631
Mov Cap-2 Maneuver	-	-	-	-	636	-
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	967	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.3		0		10.9	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	960	-	-	-	633	
HCM Lane V/C Ratio	0.01	-	-	-	0.037	
HCM Control Delay (s)	8.8	0	-	-	10.9	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	69	266	3	104	553
Future Volume (vph)	6	69	266	3	104	553
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.876		0.998			
Flt Protected	0.996					0.992
Satd. Flow (prot)	1602	0	1799	0	0	1696
Flt Permitted	0.996					0.992
Satd. Flow (perm)	1602	0	1799	0	0	1696
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	5%	0%	0%	5%
Adj. Flow (vph)	8	87	337	4	132	700
Shared Lane Traffic (%)						
Lane Group Flow (vph)	95	0	341	0	0	832
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	69	266	3	104	553
Future Vol, veh/h	6	69	266	3	104	553
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	1	1	5	0	0	5
Mvmt Flow	8	87	337	4	132	700
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1303	339	0	0	341	0
Stage 1	339	-	-	-	-	-
Stage 2	964	-	-	-	-	-
Critical Hdwy	6.01	6.01	-	-	4.1	-
Critical Hdwy Stg 1	5.01	-	-	-	-	-
Critical Hdwy Stg 2	5.01	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	206	719	-	-	1229	-
Stage 1	752	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	170	719	-	-	1229	-
Mov Cap-2 Maneuver	170	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	12.6		0		1.3	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1229	-	571	-	-	
HCM Lane V/C Ratio	0.107	-	0.166	-	-	
HCM Control Delay (s)	8.3	0	12.6	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.6	-	-	

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	69	266	3	104	553
Future Vol, veh/h	6	69	266	3	104	553
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	1	1	5	0	0	5
Mvmt Flow	8	87	337	4	132	700
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1303	339	0	0	341	0
Stage 1	339	-	-	-	-	-
Stage 2	964	-	-	-	-	-
Critical Hdwy	6.01	6.01	-	-	4.1	-
Critical Hdwy Stg 1	5.01	-	-	-	-	-
Critical Hdwy Stg 2	5.01	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	206	719	-	-	1229	-
Stage 1	752	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	170	719	-	-	1229	-
Mov Cap-2 Maneuver	170	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Approach	EB		SE		NW	
HCM Control Delay, s	12.6		0		1.3	
HCM LOS	B					
Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER	
Capacity (veh/h)	1229	-	571	-	-	
HCM Lane V/C Ratio	0.107	-	0.166	-	-	
HCM Control Delay (s)	8.3	0	12.6	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.6	-	-	



Site Planning
Civil Engineering
Landscape Architecture
Land Surveying
Transportation Engineering

Environmental Studies
Entitlements
Construction Services
3D Visualization
Laser Scanning

September 11, 2019

Chairwomen Lori Gee
Town of East Fishkill Planning Board
330 Route 376
Hopewell Junction, NY 12533

Re: JMC Project 17039
Summit Woods
Route 52
Town of Fishkill, NY

Alternative Traffic Analysis

Dear Chairwoman Gee and Members of the Planning Board:

At the request of your Board, we have prepared an alternative traffic analysis to supplement our Traffic Study, dated April 12, 2017. We have enclosed 6 copies of the following materials for your review regarding the SFEIS:

1. JMC Tables:

<u>Table No.</u>	<u>Title</u>
2	"Intersection Operations-Peak Weekday AM Hour"
3	"Intersection Operations-Peak Weekday PM Hour"

2. JMC Figures:

<u>Figure No.</u>	<u>Title</u>
13	"2025 Alternative No Build Volumes Without Montage-Peak Weekday AM Hour"
14	"2025 Alternative No Build Volumes Without Montage-Peak Weekday PM Hour"
15	"2025 Alternative Build Volumes Without Montage-Peak Weekday AM Hour"
16	"2025 Alternative Build Volumes Without Montage-Peak Weekday PM Hour"

3. Capacity Analyses

Our office has prepared a traffic analysis to consider the potential situation of the Montage at Fishkill subdivision project not progressing or not being completed in advance of the subject project. The alternative analysis excludes the volumes associated with the Montage project as well as the proposed improvements to realign and signalize the intersection of NY 216 and NY 52.

The Alternative No Build Volumes without Montage are depicted on attached Figures 13 and 14. Adding the development related traffic results in 2025 Alternative Build Volumes which reflect projected volumes after the completion and occupancy of the development without the Montage project, depicted on attached Figures 15 and 16.

As discussed in the Traffic Study, we recommend traffic signal timing modifications at the NY 52 intersections with the Taconic State Parkway ramps regardless of the subject application. The same timing modifications are presented with the alternative analysis in attached Tables 2 and 3. The applicant is continuing to propose a full movement driveway at the northern property access with a left turn lane for vehicles entering the development and a right-in/right-out driveway at the southern property access.

Intersection capacity analysis computed based on the Alternative Build Volumes with the traffic signal timing improvements indicate that intersections will essentially operate at the same levels of service as projected for the Alternative No Build Volumes. Projected operations with the proposed development and improvements without the Montage project volumes and improvements are shown on attached Tables 2 and 3.

During the peak weekday AM hour, there is only one change in level of service between the Alternative Build Volumes without Montage and the Alternative No-Build Volumes without Montage. At the intersection of NY 52 and Stormville Mountain Road (west intersection), the Stormville Mountain Road is projected to increase in delay by 0.2 seconds from a level of service A under Alternative No-Build Volume without Montage to a level of service B under Alternative Build Volumes without Montage. All other studied turning movements under the Alternative Build Volumes without Montage are projected to operate at a level levels of service as Alternative No-Build Volumes without Montage.

During the peak weekday PM hour, there is only one change in level of service between the Alternative Build Volumes without Montage and the Alternative No-Build Volumes without Montage. At the intersection of NY 52 and the Taconic State Parkway Southbound Ramp, the NY 52 northbound approach is projected to increase in delay by 8.1 seconds from a level of service E under Alternative No-Build Volume without Montage to a level of service F under Alternative Build Volumes without Montage without the recommended traffic signal timing at the intersection. As previously mentioned, we recommend traffic signal timing modifications at the NY 52 intersections with the Taconic State Parkway ramps regardless of the subject application. With the recommended traffic signal timing, the NY 52 northbound approach is projected to improve in delay to operate at a level of service D under Alternative Build Volumes without Montage. All other studied turning movements under the Alternative Build Volumes without Montage are projected to operate at a level levels of service as Alternative No-Build Volumes without Montage.

We trust the above responses and additional traffic analysis addresses the comments received regarding the SFEIS. Thank you for your time and consideration.

Sincerely,

JMC Planning Engineering Landscape Architect & Land Surveying PLLC



Marc Petraro, PE, PTOE
Senior Project Manager

cc: Mr. Dan Gueron
Mr. Mark Day, PE

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TABLE 2***INTERSECTION OPERATIONS-PEAK WEEKDAY AM HOUR***

INTERSECTION	APPROACH	LANE GROUP	2017 EXISTING			2025 NO BUILD			2025 BUILD			2025 NO BUILD ALTERNATIVE			2025 BUILD ALTERNATIVE		
			V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎
1. NY 52 & Taconic State Parkway Southbound Ramp/NYS DOT Driveway (Signalized)	EASTBOUND	LEFT/THRU /RIGHT	0.00	38.5	D	0.00	38.2	D	0.00	38.3	D	0.00	37.9	D	0.00	38.1	D
	WESTBOUND	LEFT	0.59	41.6	D	0.61	41.1	D	0.61	41.1	D	0.61	41.1	D	0.61	41.1	D
		THRU/RIGHT	0.29	37.6	D	0.32	37.2	D	0.33	37.3	D	0.29	36.9	D	0.31	37.1	D
		COMPOSITE	-	40.5	D	-	40.0	D	-	40.0	D	-	40.0	D	-	40.0	D
	NORTHBOUND	LEFT/THRU /RIGHT	1.24	146.7	F	1.35	193.1	F	1.36	196.9	F	1.34	190.4	F	1.35	193.7	F
	SOUTHBOUND	LEFT	0.63	21.1	C	0.73	24.0	C	0.79	25.8	C	0.70	23.4	C	0.76	25.0	C
		THRU/RIGHT	0.27	0.4	A	0.31	0.4	A	0.33	0.4	A	0.30	0.4	A	0.31	0.4	A
		COMPOSITE	-	10.7	B	-	12.2	B	-	13.3	B	-	11.9	B	-	12.9	B
	INTERSECTION	COMPOSITE	-	79.3	E	-	100.6	F	-	100.6	F	-	100.6	F	-	100.2	F
1a. NY 52 & Taconic State Parkway Southbound Ramp/NYS DOT Driveway (Signalized with Improvements)	EASTBOUND	LEFT/THRU /RIGHT							0.01	41.0	D				0.01	40.7	D
	WESTBOUND	LEFT							0.70	50.4	D				0.71	50.6	D
		THRU/RIGHT							0.41	40.5	D				0.39	40.2	D
		COMPOSITE							-	47.4	D				-	47.6	D
	NORTHBOUND	LEFT/THRU /RIGHT		N/A			N/A		1.13	96.7	F		N/A		1.12	94.3	F
	SOUTHBOUND	LEFT							0.96	50.1	D				0.92	44.6	D
		THRU/RIGHT							0.31	0.3	A				0.30	0.4	A
		COMPOSITE							-	25.6	C				-	22.8	C
	INTERSECTION	COMPOSITE							-	60.8	E				-	59.1	E
2. NY 52 & Taconic State Parkway Northbound Ramp/Park and Ride Driveway (Signalized)	EASTBOUND	LEFT/THRU /RIGHT	0.75	60.5	E	0.74	59.2	E	0.74	59.2	E	0.74	59.2	E	0.74	59.2	E
	WESTBOUND	LEFT/THRU	0.81	53.4	D	0.83	55.6	E	0.82	55.5	E	0.83	55.7	E	0.82	55.5	E
		RIGHT	0.62	42.4	D	0.65	43.6	D	0.71	46.8	D	0.62	42.5	D	0.68	45.2	D
		COMPOSITE	-	49.0	D	-	50.7	D	-	51.7	D	-	50.4	D	-	51.2	D
	NORTHBOUND	LEFT	0.04	15.4	B	0.04	16.1	B	0.04	16.1	B	0.04	16.1	B	0.04	16.1	B
		THRU/RIGHT	0.90	39.3	D	0.91	35.7	D	0.92	35.6	D	0.91	35.9	D	0.91	35.8	D
		COMPOSITE	-	37.5	D	-	34.3	C	-	34.2	C	-	34.5	C	-	34.4	C
	SOUTHBOUND	LEFT	0.05	16.0	B	0.07	17.2	B	0.09	17.5	B	0.05	16.9	B	0.07	17.1	B
		THRU/RIGHT	1.21	147.1	F	1.37	216.7	F	1.50	269.6	F	1.31	187.1	F	1.43	240.3	F
		COMPOSITE	-	138.6	F	-	200.1	F	-	246.9	F	-	176.1	F	-	223.8	F
	INTERSECTION	COMPOSITE	-	87.3	F	-	116.9	F	-	142.4	F	-	104.0	F	-	129.2	F

TABLE 2

INTERSECTION OPERATIONS-PEAK WEEKDAY AM HOUR

INTERSECTION	APPROACH	LANE GROUP	2017 EXISTING				2025 NO BUILD			2025 BUILD				2025 NO BUILD ALTERNATIVE			2025 BUILD ALTERNATIVE		
			V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎		V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎		V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎
2a. NY 52 & Taconic State Parkway Northbound Ramp/Park and Ride Driveway (Signalized with Improvements)	EASTBOUND	LEFT/THRU /RIGHT								0.74	59.2	E					0.74	59.2	E
	WESTBOUND	LEFT/THRU								0.82	55.5	E					0.82	55.5	E
		RIGHT								0.71	46.8	D					0.68	45.2	D
		COMPOSITE								-	51.7	D					-	51.2	D
	NORTHBOUND	LEFT								0.06	22.0	C					0.06	20.6	C
		THRU/RIGHT		N/A			N/A			0.90	27.2	C		N/A			0.90	27.7	C
		COMPOSITE								-	26.8	C					-	27.2	C
	SOUTHBOUND	LEFT								0.09	18.0	B					0.07	17.6	B
		THRU/RIGHT								0.96	51.5	D					0.95	50.4	D
		COMPOSITE								-	48.5	D					-	47.9	D
	INTERSECTION	COMPOSITE								-	43.9	D					-	43.6	D
3. NY 52 & Carpenter Road (Unsignalized)	SOUTHEAST	LEFT	0.06	17.8	C		0.07	20.8	C	0.08	22.9	C		0.07	19.5	C	0.08	21.4	C
		RIGHT	0.13	12.8	B		0.16	14.1	B	0.17	15.1	C		0.15	13.4	B	0.16	14.3	B
	NORTHEAST	LEFT/THRU	0.03	8.8	A		0.04	9.2	A	0.04	9.5	A		0.04	9.0	A	0.04	9.3	A
	SOUTHWEST	THRU/RIGHT	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-
4. NY 52 & NY 216 (Unsignalized)	EASTBOUND	LEFT/THRU	0.14	8.3	A									0.15	8.4	A	0.16	8.6	A
	WESTBOUND	THRU/RIGHT	-	-	-			N/A			N/A			-	-	-	-	-	-
	SOUTHBOUND	LEFT/RIGHT	0.44	13.8	B									0.49	15.0	C	0.54	16.9	C
4a. NY 52 & NY 216 (Signalized by Others)	EASTBOUND	LEFT					0.24	3.8	A	0.25	4.0	A							
		THRU/RIGHT					0.21	4.5	A	0.23	4.6	A							
		COMPOSITE					-	4.2	A	-	4.3	A							
	WESTBOUND	LEFT					0.01	4.9	A	0.01	4.9	A							
		THRU/RIGHT					0.29	6.8	A	0.35	7.4	A							
		COMPOSITE		N/A			-	6.8	A	-	7.3	A		N/A			N/A		
	NORTHBOUND	LEFT/THRU /RIGHT					0.35	25.2	C	0.35	25.2	C							
		LEFT/THRU					0.08	23.4	C	0.08	23.4	C							
	SOUTHBOUND	RIGHT					-	-	-	-	-	-							
		COMPOSITE					-	23.4	C	-	23.4	C							
		COMPOSITE					-	7.5	A	-	7.7	A							
	INTERSECTION	COMPOSITE					-	7.5	A	-	7.7	A							
5. NY 52 & Site Driveway A (Unsignalized)	EASTBOUND	LEFT/RIGHT								0.18	13.7	B					0.18	13.3	B
	NORTHBOUND	LEFT/THRU		N/A				N/A		0.01	8.0	A		N/A			0.01	7.9	A
	SOUTHBOUND	THRU/RIGHT								-	-	-					-	-	-
5a. NY 52 & Site Driveway A (Unsignalized with Improvements)	EASTBOUND	LEFT/RIGHT								0.18	13.7	B					0.18	13.3	B
	NORTHBOUND	LEFT		N/A				N/A		0.01	8.0	A		N/A			0.01	7.9	A
		THRU								-	-	-					-	-	-
	SOUTHBOUND	THRU/RIGHT								-	-	-					-	-	-
6. NY 52 & Site Driveway B (Unsignalized)	EASTBOUND	RIGHT								0.02	10.3	B					0.01	10.1	B
	NORTHBOUND	THRU		N/A				N/A		-	-	-		N/A			-	-	-
	SOUTHBOUND	THRU/RIGHT								-	-	-					-	-	-

TABLE 2***INTERSECTION OPERATIONS-PEAK WEEKDAY AM HOUR***

INTERSECTION	APPROACH	LANE GROUP	2017 EXISTING			2025 NO BUILD			2025 BUILD			2025 NO BUILD ALTERNATIVE			2025 BUILD ALTERNATIVE		
			V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾
7. NY 52 & Stormville Mountain Road (West Intersection) (Unsignalized)	SOUTHEAST	LEFT/THRU	0.01	7.5	A	0.01	7.6	A	0.01	7.6	A	0.01	7.6	A	0.01	7.6	A
	NORTHWEST	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHWEST	LEFT/RIGHT	0.09	9.8	A	0.10	10.0	B	0.10	10.2	B	0.10	9.9	A	0.10	10.1	B
8. NY 52 & Leetown Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.16	11.8	B	0.20	12.8	B	0.21	13.4	B	0.19	12.4	B	0.20	13.0	B
	SOUTHEAST	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NORTHWEST	LEFT/THRU	0.01	8.1	C	0.01	8.2	A	0.01	8.3	A	0.01	8.1	A	0.01	8.2	A
9. NY 52 & Stormville Mountain Road (East Intersection) (Unsignalized)	EASTBOUND	LEFT/THRU	0.01	7.5	A	0.01	7.6	A	0.01	7.6	A	0.01	9.8	A	0.01	7.6	A
	WESTBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/RIGHT	0.05	9.7	A	0.06	9.9	A	0.06	10.0	B	0.06	7.5	A	0.06	9.9	A
10. NY 52 & Milltown Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.15	11.6	B	0.17	12.4	B	0.18	12.8	B	0.17	12.1	B	0.18	12.5	B
	SOUTHEAST	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NORTHWEST	LEFT/THRU	0.03	8.2	A	0.04	8.4	A	0.04	8.5	A	0.04	8.4	A	0.04	8.5	A

Notes:

(1) V/C represents volume/capacity ratio

(2) Delay is average seconds delay per vehicle

(3) LOS represents level of service

TABLE 3**INTERSECTION OPERATIONS-PEAK WEEKDAY PM HOUR**

INTERSECTION	APPROACH	LANE GROUP	2017 EXISTING			2025 NO BUILD			2025 BUILD			2025 NO BUILD ALTERNATIVE			2025 BUILD ALTERNATIVE		
			V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎
1. NY 52 & Taconic State Parkway Southbound Ramp/NYS DOT Driveway (Signalized)	EASTBOUND	LEFT/THRU /RIGHT	0.00	0.0	A	0.00	0.0	A	0.00	0.0	A	0.00	0.0	A	0.00	0.0	A
	WESTBOUND	LEFT	0.52	50.5	D	0.53	50.0	D	0.53	49.9	D	0.54	50.2	D	0.53	50.1	D
		THRU/RIGHT	0.55	51.0	D	0.66	52.5	D	0.73	54.5	D	0.55	50.4	D	0.63	51.7	D
		COMPOSITE	-	50.7	D	-	51.2	D	-	52.1	D	-	50.3	D	-	50.8	D
	NORTHBOUND	LEFT/THRU /RIGHT	0.96	56.9	E	1.02	70.4	F	1.05	79.5	F	1.00	64.8	E	1.03	72.9	F
	SOUTHBOUND	LEFT	0.15	8.3	A	0.19	10.3	B	0.23	10.3	B	0.18	10.2	B	0.21	10.2	B
		THRU/RIGHT	0.59	1.2	A	0.65	1.0	A	0.66	0.7	A	0.64	1.1	A	0.65	0.8	A
		COMPOSITE	-	2.1	A	-	2.1	A	-	2.1	A	-	2.2	A	-	2.1	A
	INTERSECTION	COMPOSITE	-	27.3	C	-	32.6	C	-	35.9	D	-	30.3	C	-	33.3	C
1a. NY 52 & Taconic State Parkway Southbound Ramp/Park and Ride Driveway (Signalized with Improvements)	EASTBOUND	LEFT/THRU /RIGHT							0.00	0.0	A				0.00	0.0	A
	WESTBOUND	LEFT							0.54	50.3	D				0.54	50.5	D
		THRU/RIGHT							0.75	55.7	E				0.64	52.4	D
		COMPOSITE							-	52.9	D				-	51.3	D
	NORTHBOUND	LEFT/THRU /RIGHT		N/A			N/A		0.93	46.7	D		N/A		0.93	47.1	D
	SOUTHBOUND	LEFT							0.25	14.5	B				0.23	13.6	B
		THRU/RIGHT							0.66	1.2	A				0.65	1.3	A
		COMPOSITE							-	3.1	A				-	3.0	A
	INTERSECTION	COMPOSITE							-	24.6	C				-	24.3	C
2. NY 52 & Taconic State Parkway Northbound Ramp/Park and Ride Driveway (Signalized)	EASTBOUND	LEFT/THRU /RIGHT	0.77	60.3	E	0.77	59.8	E	0.77	59.8	E	0.77	59.8	E	0.77	59.8	E
	WESTBOUND	LEFT/THRU	0.90	46.2	D	0.91	47.6	D	0.91	47.2	D	0.91	47.8	D	0.91	47.4	D
		RIGHT	0.54	29.6	C	0.58	28.9	C	0.65	30.7	C	0.55	28.2	C	0.62	29.8	C
		COMPOSITE	-	40.4	D	-	40.8	D	-	40.8	D	-	40.9	D	-	40.7	D
	NORTHBOUND	LEFT	0.04	23.5	C	0.05	26.5	C	0.05	26.7	C	0.05	26.5	C	0.05	26.6	C
		THRU/RIGHT	1.79	401.8	F	2.05	515.4	F	2.16	562.8	F	1.94	467.8	F	2.05	515.3	F
		COMPOSITE	-	390.2	F	-	500.9	F	-	547.7	F	-	454.0	F	-	500.8	F
	SOUTHBOUND	LEFT	0.11	33.2	C	0.16	35.5	D	0.18	35.6	D	0.14	35.4	D	0.15	35.5	D
		THRU/RIGHT	1.29	196.3	F	1.46	267.1	F	1.58	318.6	F	1.39	239.8	F	1.52	292.1	F
		COMPOSITE	-	177.8	F	-	237.4	F	-	282.2	F	-	216.3	F	-	262.3	F
	INTERSECTION	COMPOSITE	-	175.8	F	-	225.8	F	-	251.8	F	-	204.0	F	-	230.0	F

TABLE 3***INTERSECTION OPERATIONS-PEAK WEEKDAY PM HOUR***

INTERSECTION	APPROACH	LANE GROUP	2017 EXISTING				2025 NO BUILD			2025 BUILD				2025 NO BUILD ALTERNATIVE			2025 BUILD ALTERNATIVE		
			V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎		V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎		V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎	V/C ₍₁₎	DELAY ₍₂₎	LOS ₍₃₎
2a. NY 52 & Taconic State Parkway Northbound Ramp/Park and Ride Driveway (Signalized with Improvements)	EASTBOUND	LEFT/THRU /RIGHT								0.78	72.7	E					0.78	72.7	E
	WESTBOUND	LEFT/THRU								0.95	57.3	E					0.95	57.4	E
		RIGHT								0.68	33.2	C					0.65	32.1	C
		COMPOSITE								-	47.9	D					-	47.8	D
	NORTHBOUND	LEFT								0.08	45.6	D					0.07	37.8	D
		THRU/RIGHT		N/A			N/A			1.27	174.8	F		N/A			1.21	126.0	F
		COMPOSITE								-	171.1	F					-	123.4	F
	SOUTHBOUND	LEFT								0.34	46.8	D					0.29	46.5	D
		THRU/RIGHT								0.95	65.6	E					0.94	64.9	E
		COMPOSITE								-	63.2	E					-	62.8	E
	INTERSECTION	COMPOSITE								-	89.3	F					-	74.7	E
3. NY 52 & Carpenter Road (Unsignalized)	SOUTHEAST	LEFT	0.13	23.9	C		0.18	31.1	D	0.22	37.5	E		0.16	27.7	D	0.19	32.7	D
		RIGHT	0.10	10.8	B		0.12	11.5	B	0.12	11.9	B		0.11	11.2	B	0.12	11.6	B
	NORTHEAST	LEFT/THRU	0.12	8.6	A		0.14	8.8	A	0.14	9.0	A		0.13	8.7	A	0.14	8.9	A
	SOUTHWEST	THRU/RIGHT	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-
4. NY 52 & NY 216 (Unsignalized)	EASTBOUND	LEFT/THRU	0.26	8.8	A									0.29	9.1	A	0.30	9.3	A
	WESTBOUND	THRU/RIGHT	-	-	-			N/A			N/A			-	-	-	-	-	-
	SOUTHBOUND	LEFT/RIGHT	0.29	12.7	B									0.34	13.9	B	0.38	15.3	B
4a. NY 52 & NY 216 (Signalized by Others)	EASTBOUND	LEFT					0.43	3.8	A	0.44	4.0	A							
		THRU/RIGHT					0.27	4.7	A	0.33	5.1	A							
		COMPOSITE					-	4.2	A	-	4.6	A							
	WESTBOUND	LEFT					0.03	4.7	A	0.03	4.7	A							
		THRU/RIGHT					0.29	7.1	A	0.33	7.4	A							
		COMPOSITE		N/A			-	6.9	A	-	7.2	A		N/A			N/A		
	NORTHBOUND	LEFT/THRU /RIGHT					0.27	28.4	C	0.27	28.4	C							
		LEFT/THRU					0.10	27.3	C	0.10	27.3	C							
	SOUTHBOUND	RIGHT					-	-	-	-	-	-							
		COMPOSITE					-	27.3	C	-	27.3	C							
		COMPOSITE					-	6.7	A	-	6.9	A							
	INTERSECTION	COMPOSITE					-	6.7	A	-	6.9	A							
5. NY 52 & Site Driveway A (Unsignalized)	EASTBOUND	LEFT/RIGHT								0.20	18.8	C					0.18	17.9	C
	NORTHBOUND	LEFT/THRU		N/A				N/A		0.03	8.2	A		N/A			0.03	8.2	A
	SOUTHBOUND	THRU/RIGHT								-	-	-					-	-	-
5a. NY 52 & Site Driveway A (Unsignalized with Improvements)	EASTBOUND	LEFT/RIGHT								0.19	18.6	C					0.18	17.8	C
	NORTHBOUND	LEFT		N/A				N/A		0.03	8.2	A		N/A			0.03	8.2	A
		THRU								-	-	-					-	-	-
	SOUTHBOUND	THRU/RIGHT								-	-	-					-	-	-
6. NY 52 & Site Driveway B (Unsignalized)	EASTBOUND	RIGHT								0.01	10.2	B					0.01	10.1	B
	NORTHBOUND	THRU		N/A				N/A		-	-	-		N/A			-	-	-
	SOUTHBOUND	THRU/RIGHT								-	-	-					-	-	-

TABLE 3***INTERSECTION OPERATIONS-PEAK WEEKDAY PM HOUR***

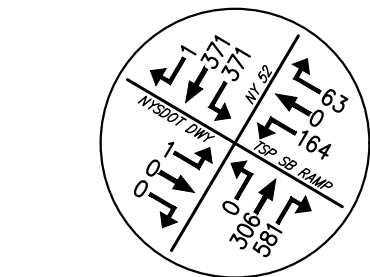
INTERSECTION	APPROACH	LANE GROUP	2017 EXISTING			2025 NO BUILD			2025 BUILD			2025 NO BUILD ALTERNATIVE			2025 BUILD ALTERNATIVE		
			V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾
7. NY 52 & Stormville Mountain Road (West Intersection) (Unsignalized)	SOUTHEAST	LEFT/THRU	0.03	8.3	A	0.04	8.5	A	0.04	8.6	A	0.04	8.4	A	0.04	8.6	A
	NORTHWEST	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHWEST	LEFT/RIGHT	0.05	11.3	B	0.05	12.0	B	0.06	12.4	B	0.05	11.7	B	0.05	12.1	B
8. NY 52 & Leetown Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.19	16.8	C	0.24	20.1	C	0.27	22.4	C	0.23	18.7	C	0.25	20.7	C
	SOUTHEAST	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NORTHWEST	LEFT/THRU	0.02	7.8	A	0.02	7.9	A	0.02	8.0	A	0.02	7.9	A	0.02	8.0	A
9. NY 52 & Stormville Mountain Road (East Intersection) (Unsignalized)	EASTBOUND	LEFT/THRU	0.01	8.4	A	0.01	8.7	A	0.01	8.8	A	0.01	8.6	A	0.01	8.7	A
	WESTBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/RIGHT	0.03	10.3	B	0.04	10.7	B	0.04	10.9	B	0.04	10.5	B	0.04	10.7	B
10. NY 52 & Milltown Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.14	11.4	B	0.16	12.1	B	0.17	12.6	B	0.15	11.9	B	0.16	12.3	B
	SOUTHEAST	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NORTHWEST	LEFT/THRU	0.09	8.1	A	0.11	8.2	A	0.11	8.3	A	0.10	8.1	A	0.11	8.2	A

Notes:

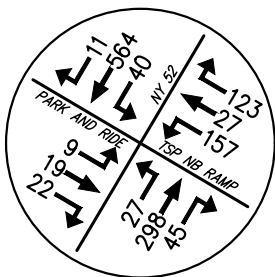
(1) V/C represents volume/capacity ratio

(2) Delay is average seconds delay per vehicle

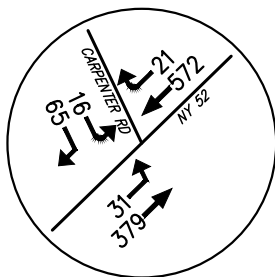
(3) LOS represents level of service



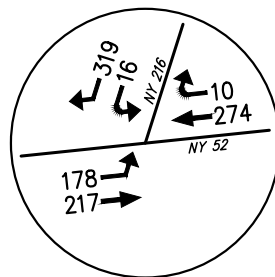
1 NY 52 & TACONIC STATE PARKWAY SOUTHBOUND RAMP /NYS DOT DRIVEWAY



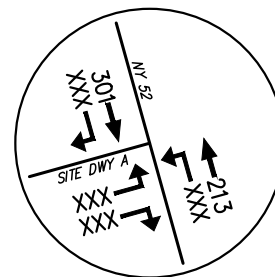
2 NY 52 & TACONIC STATE PARKWAY NORTHBOUND RAMP /PARK AND RIDE DRIVEWAY



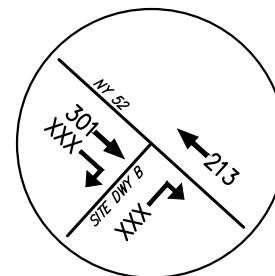
3 NY 52 & CARPENTER ROAD



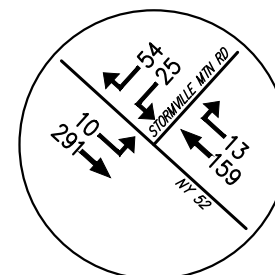
4 NY 52 & NY 216



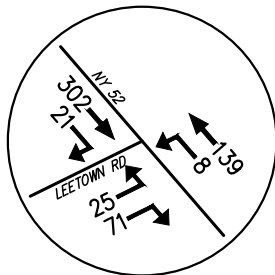
5 NY 52 & SITE DRIVEWAY A



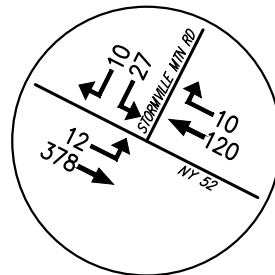
6 NY 52 & SITE DRIVEWAY B



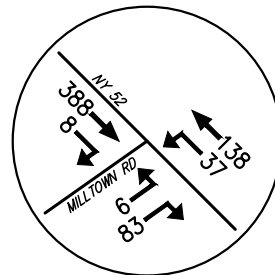
7 NY 52 & STORMVILLE MOUNTAIN ROAD (WEST INTERSECTION)



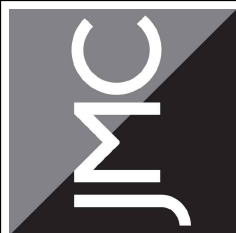
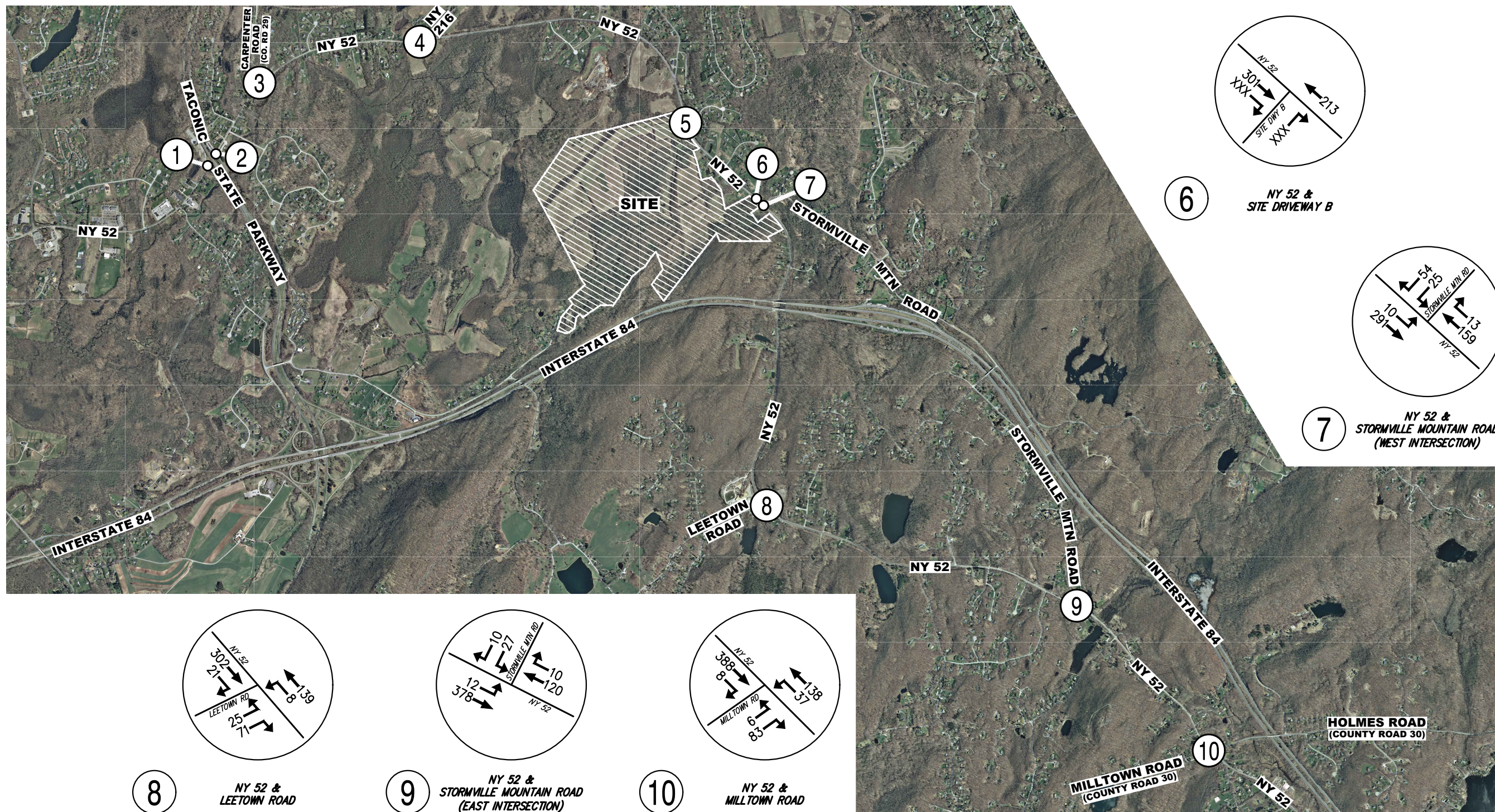
8 NY 52 & LEETOWN ROAD



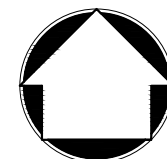
9 NY 52 & STORMVILLE MOUNTAIN ROAD (EAST INTERSECTION)



10 NY 52 & MILLTOWN ROAD



120 BEDFORD RD
ARMONK
NY 10604
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fax 273-2102
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TOWN OF EAST FISHKILL, NEW YORK

SUMMIT WOODS

2025 ALTERNATIVE NO BUILD VOLUMES WITHOUT MONTAGE AT FISHKILL

PEAK WEEKDAY AM HOUR (7:30 - 8:30)

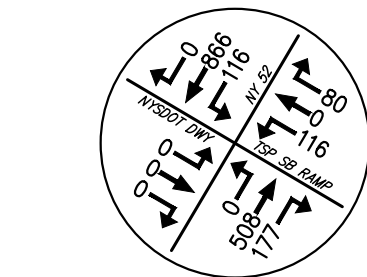
JMC PROJECT: 17039

DATE: 09/11/2019

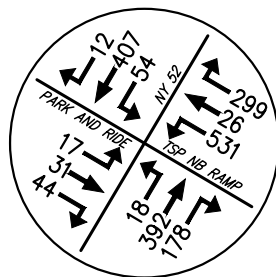
FIGURE: 13

SCALE: 1" = 2,500'

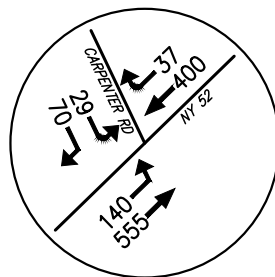
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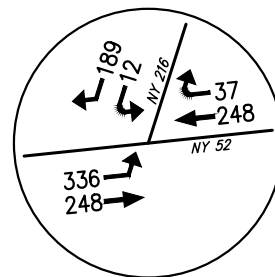
1 NY 52 & TACONIC STATE PARKWAY SOUTHBOUND RAMP /NYS DOT DRIVEWAY



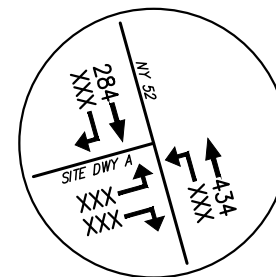
2 NY 52 & TACONIC STATE PARKWAY NORTHBOUND RAMP /PARK AND RIDE DRIVEWAY



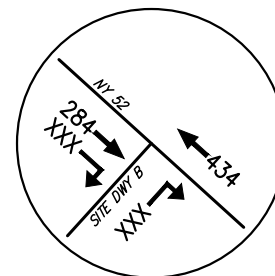
3 NY 52 & CARPENTER ROAD



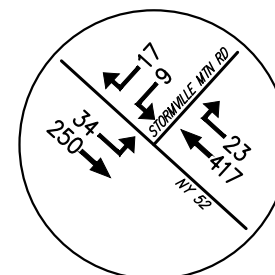
4 NY 52 & NY 216



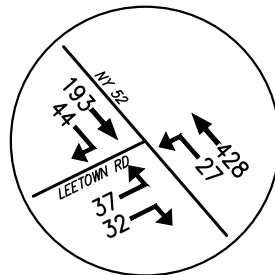
5 NY 52 & SITE DRIVEWAY A



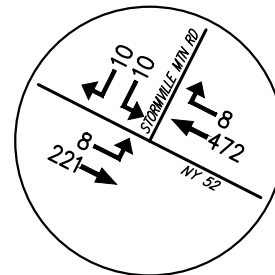
6 NY 52 & SITE DRIVEWAY B



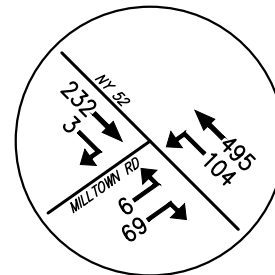
7 NY 52 & STORMVILLE MOUNTAIN ROAD (WEST INTERSECTION)



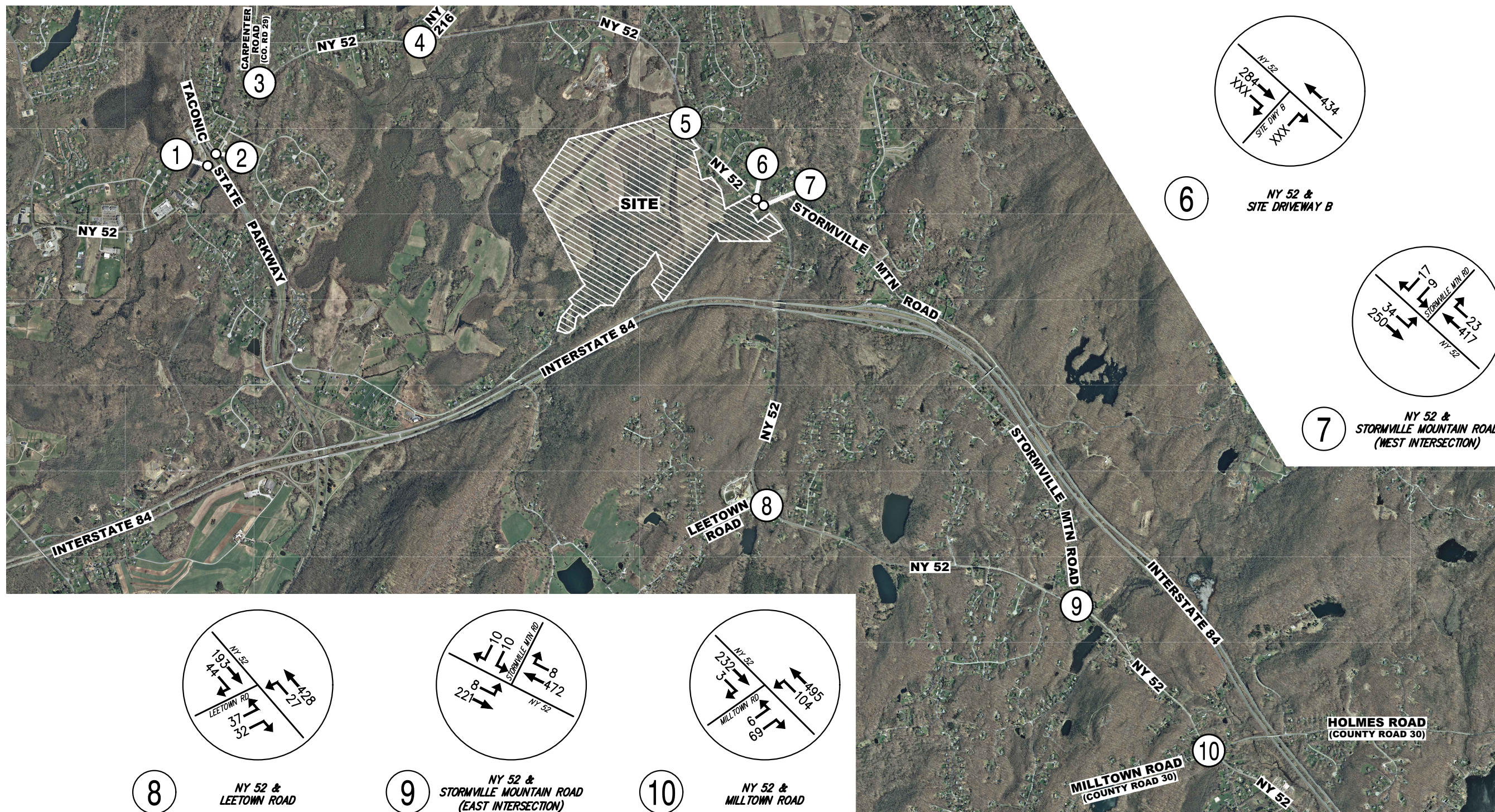
8 NY 52 & LEETOWN ROAD



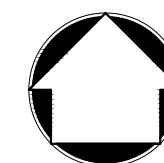
9 NY 52 & STORMVILLE MOUNTAIN ROAD (EAST INTERSECTION)



10 NY 52 & MILLTOWN ROAD



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TOWN OF EAST FISHKILL, NEW YORK

SUMMIT WOODS

2025 ALTERNATIVE NO BUILD VOLUMES WITHOUT MONTAGE AT FISHKILL

PEAK WEEKDAY PM HOUR (5:00 - 6:00)

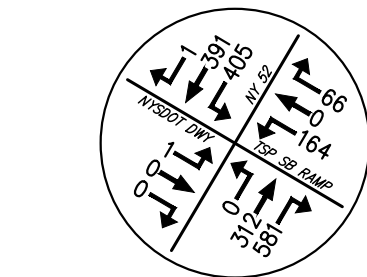
JMC PROJECT: 17039

DATE: 09/11/2019

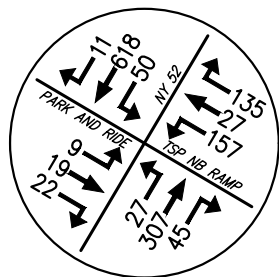
SCALE: 1" = 2,500'

FIGURE: 14

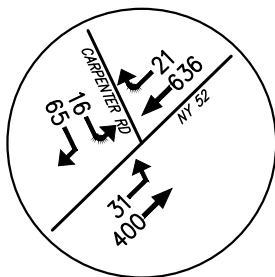
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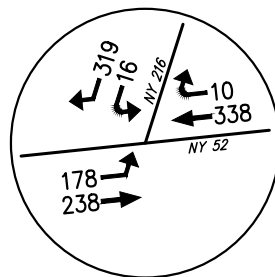
1 NY 52 & TACONIC STATE PARKWAY SOUTHBOUND RAMP /NYS DOT DRIVEWAY



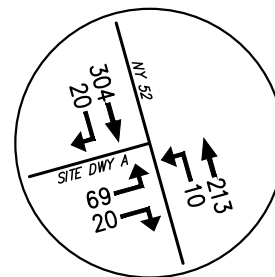
2 NY 52 & TACONIC STATE PARKWAY NORTHBOUND RAMP /PARK AND RIDE DRIVEWAY



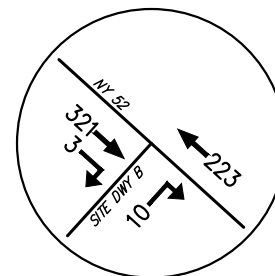
3 NY 52 & CARPENTER ROAD



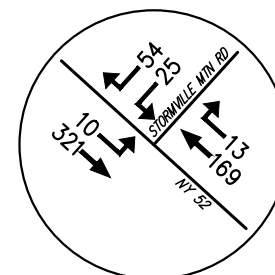
4 NY 52 & NY 216



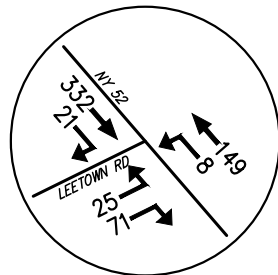
5 NY 52 & SITE DRIVEWAY A



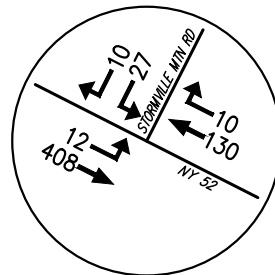
6 NY 52 & SITE DRIVEWAY B



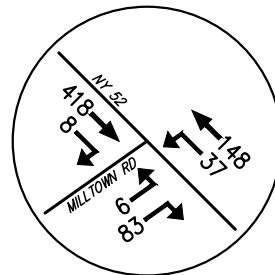
7 NY 52 & STORMVILLE MOUNTAIN ROAD (WEST INTERSECTION)



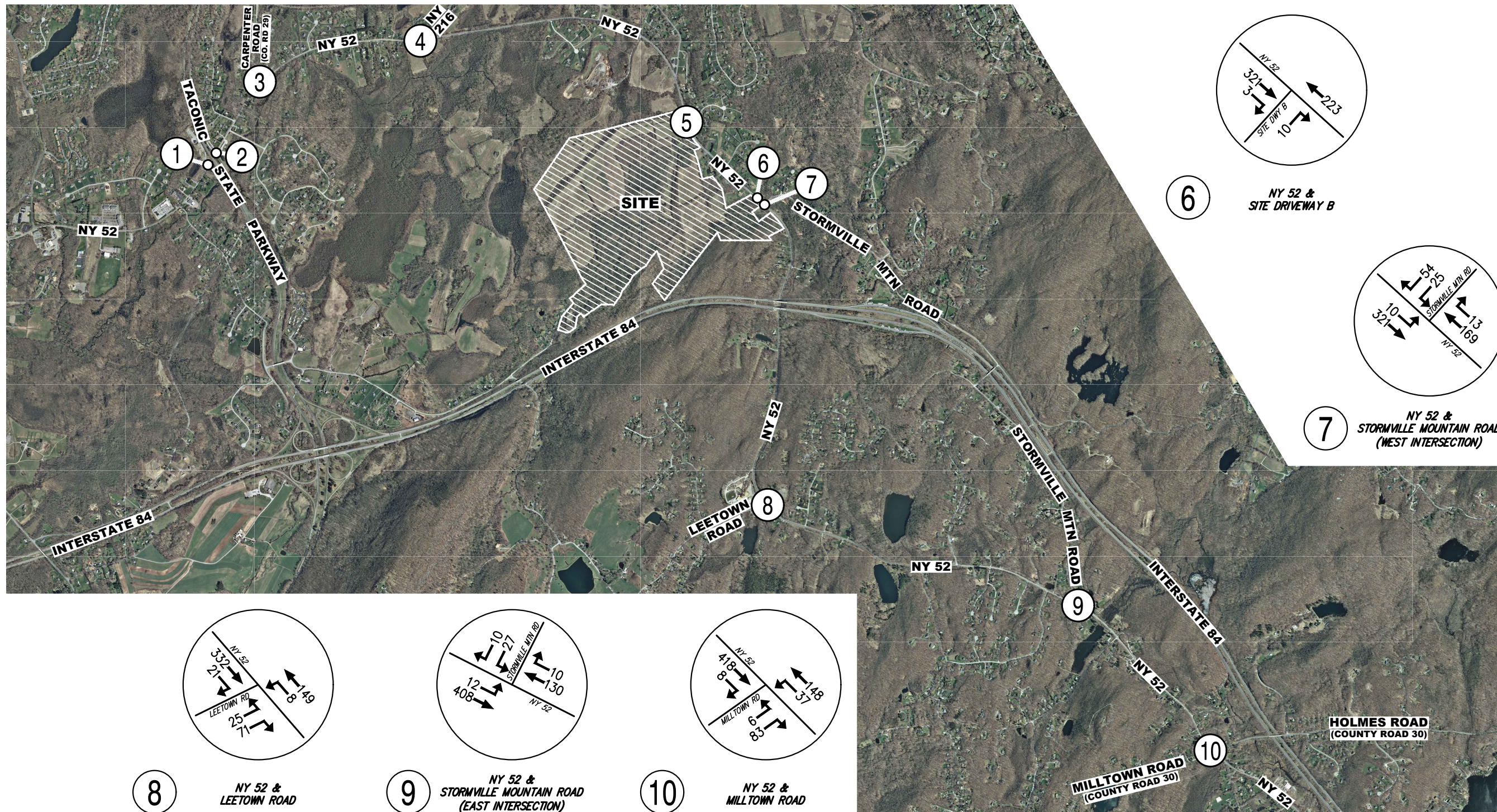
8 NY 52 & LEETOWN ROAD



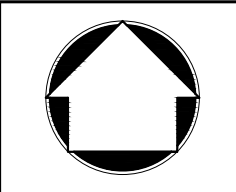
9 NY 52 & STORMVILLE MOUNTAIN ROAD (EAST INTERSECTION)



10 NY 52 & MILLTOWN ROAD



JMC
120 BEDFORD RD
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NY 10604
(914) 273-5225
fax 273-2102
JMCPLLC.COM



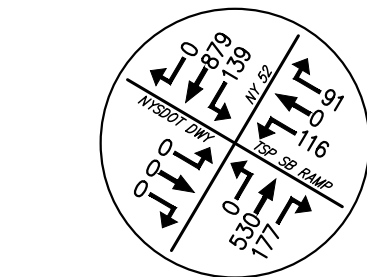
SUMMIT WOODS
TOWN OF EAST FISHKILL, NEW YORK

2025 ALTERNATIVE BUILD VOLUMES WITHOUT MONTAGE AT FISHKILL
PEAK WEEKDAY AM HOUR (7:30 - 8:30)

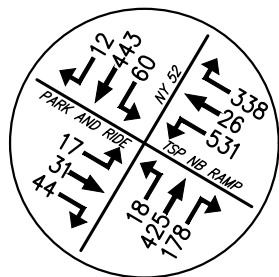
DATE: 09/11/2019
JMC PROJECT: 17039

ROUTE 52

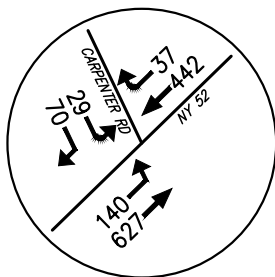
FIGURE: 15
SCALE: 1" = 2,500'



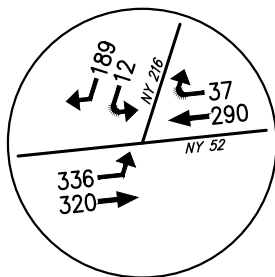
1 NY 52 & TACONIC STATE PARKWAY SOUTHBOUND RAMP /NYS DOT DRIVEWAY



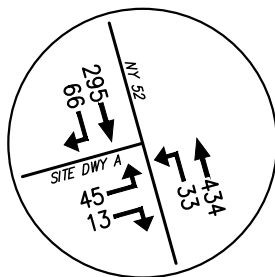
2 NY 52 & TACONIC STATE PARKWAY NORTHBOUND RAMP /PARK AND RIDE DRIVEWAY



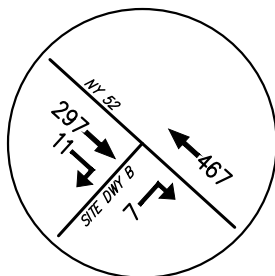
3 NY 52 & CARPENTER ROAD



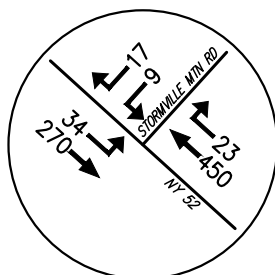
4 NY 52 & NY 216



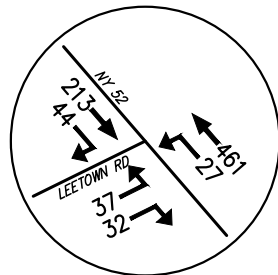
5 NY 52 & SITE DRIVEWAY A



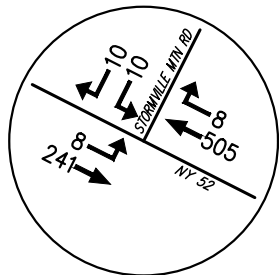
6 NY 52 & SITE DRIVEWAY B



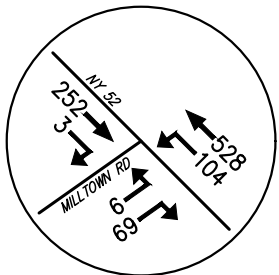
7 NY 52 & STORMVILLE MOUNTAIN ROAD (WEST INTERSECTION)



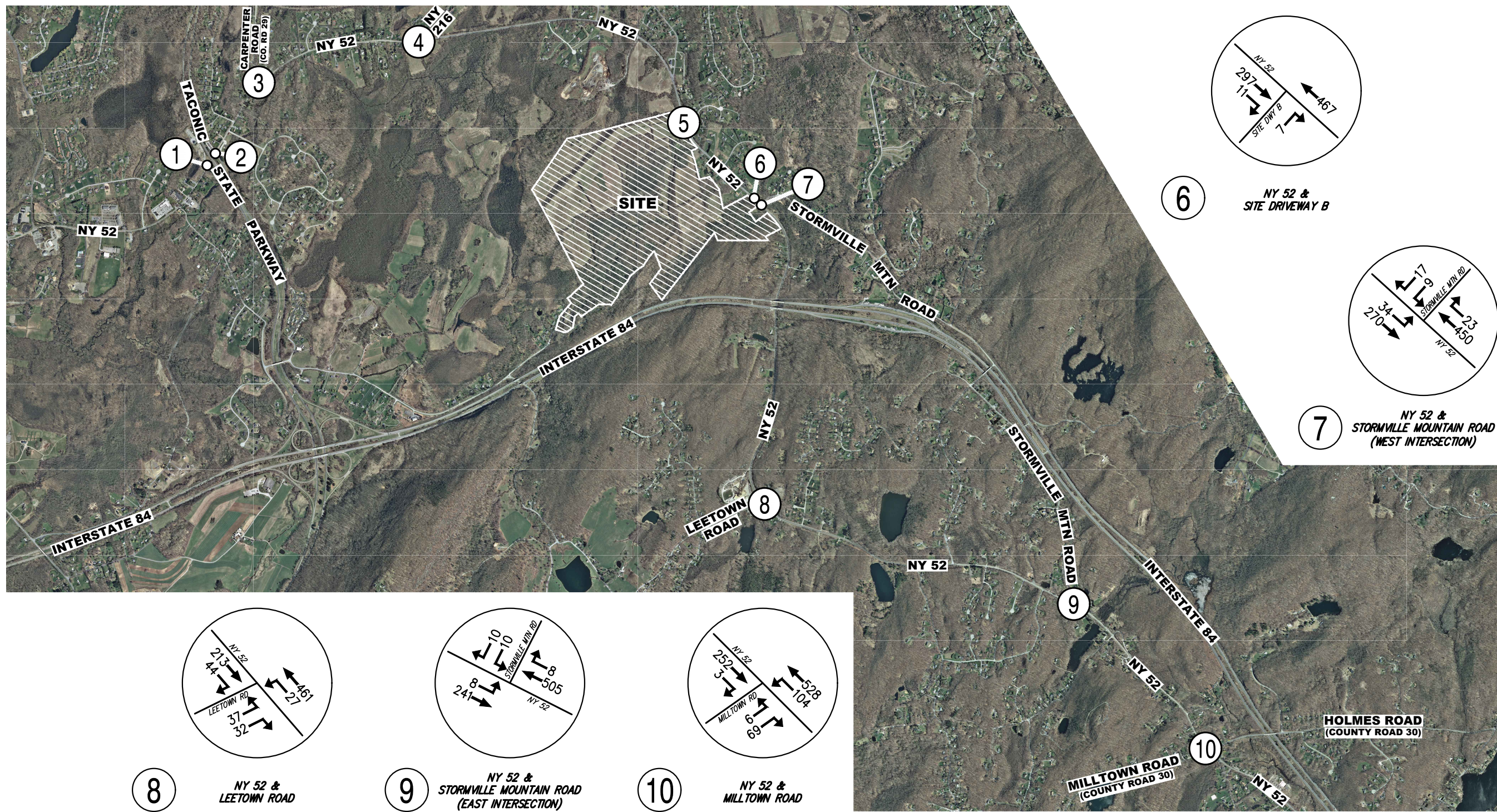
8 NY 52 & LEETOWN ROAD



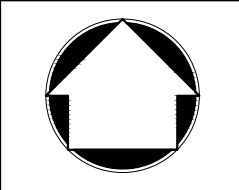
9 NY 52 & STORMVILLE MOUNTAIN ROAD (EAST INTERSECTION)



10 NY 52 & MILLTOWN ROAD



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SUMMIT WOODS
TOWN OF EAST FISHKILL, NEW YORK

2025 ALTERNATIVE BUILD VOLUMES WITHOUT MONTAGE AT FISHKILL
PEAK WEEKDAY PM HOUR (5:00 - 6:00)

ROUTE 52

DATE: 09/11/2019

JMC PROJECT: 17039

FIGURE: 16

SCALE: 1" = 2,500'

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-NB-ALT-AM

09/09/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	0	164	0	63	0	306	581	371	371	1
Future Volume (vph)	1	0	0	164	0	63	0	306	581	371	371	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.912				
Flt Protected		0.950		0.950						0.950		
Satd. Flow (prot)	0	1651	0	1769	1635	0	0	1657	0	1668	1716	0
Flt Permitted		0.713		0.757						0.076		
Satd. Flow (perm)	0	1239	0	1410	1635	0	0	1657	0	133	1716	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					587			124				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	1	0	0	176	0	68	0	329	625	399	399	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	176	68	0	0	954	0	399	400	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-NB-ALT-AM

09/09/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		45.0	45.0		20.0	65.0	
Total Split (%)	31.6%	31.6%		31.6%	31.6%		47.4%	47.4%		21.1%	68.4%	
Maximum Green (s)	25.0	25.0		25.0	25.0		40.0	40.0		15.0	60.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio		0.00		0.69	0.09			1.06		1.18	0.33	
Control Delay		28.0		50.1	0.2			71.7		134.4	8.1	
Queue Delay		0.0		0.0	0.0			0.0		14.9	1.7	
Total Delay		28.0		50.1	0.2			71.7		149.3	9.8	
Queue Length 50th (ft)		1		100	0			~601		~257	116	
Queue Length 95th (ft)		5		157	0			#907		#456	158	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)		326		371	862			896		337	1226	
Starvation Cap Reductn		0		0	0			0		209	634	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.00		0.47	0.08			1.06		3.12	0.68	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated

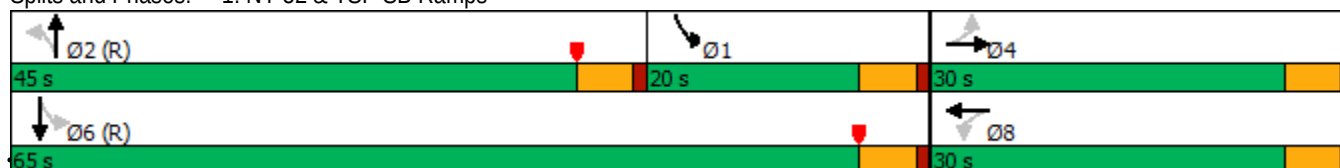
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: NY 52 & TSP SB Ramps



PEAK HOUR 7:30-8:30

JMC 17039

Synchro 10 Report

Page 2

HCM 6th Signalized Intersection Summary

2025-NB-ALT-AM

1: NY 52 & TSP SB Ramps

09/09/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↖			↕		↗	↖	
Traffic Volume (veh/h)	1	0	0	164	0	63	0	306	581	371	371	1
Future Volume (veh/h)	1	0	0	164	0	63	0	306	581	371	371	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	1	0	0	176	0	68	0	329	625	399	399	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	214	0	0	289	0	232	0	245	466	568	1335	3
Arrive On Green	0.15	0.00	0.00	0.15	0.00	0.15	0.00	0.42	0.42	0.46	1.00	1.00
Sat Flow, veh/h	950	0	0	1369	0	1592	0	583	1107	1787	1782	4
Grp Volume(v), veh/h	1	0	0	176	0	68	0	0	954	399	0	400
Grp Sat Flow(s),veh/h/ln	950	0	0	1369	0	1592	0	0	1689	1787	0	1787
Q Serve(g_s), s	0.1	0.0	0.0	7.2	0.0	3.6	0.0	0.0	40.0	11.8	0.0	0.0
Cycle Q Clear(g_c), s	3.7	0.0	0.0	10.9	0.0	3.6	0.0	0.0	40.0	11.8	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.66	1.00		0.00
Lane Grp Cap(c), veh/h	214	0	0	289	0	232	0	0	711	568	0	1339
V/C Ratio(X)	0.00	0.00	0.00	0.61	0.00	0.29	0.00	0.00	1.34	0.70	0.00	0.30
Avail Cap(c_a), veh/h	365	0	0	450	0	419	0	0	711	568	0	1339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.71	0.00	0.71
Uniform Delay (d), s/veh	37.9	0.0	0.0	39.1	0.0	36.2	0.0	0.0	27.5	20.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.7	0.0	0.0	162.9	2.8	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.1	0.0	1.4	0.0	0.0	46.6	5.6	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	0.0	0.0	41.1	0.0	36.9	0.0	0.0	190.4	23.4	0.0	0.4
LnGrp LOS	D	A	A	D	A	D	A	A	F	C	A	A
Approach Vol, veh/h	1				244			954			799	
Approach Delay, s/veh	37.9				40.0			190.4			11.9	
Approach LOS	D				D			F			B	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	31.2	45.0		18.8		76.2		18.8				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	15.0	40.0		25.0		60.0		25.0				
Max Q Clear Time (g_c+I1), s	13.8	42.0		5.7		2.0		12.9				
Green Ext Time (p_c), s	0.3	0.0		0.0		2.1		1.0				

Intersection Summary

HCM 6th Ctrl Delay	100.6
HCM 6th LOS	F

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-NB-ALT-AM

09/09/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	19	22	157	27	123	27	298	45	40	564	11
Future Volume (vph)	9	19	22	157	27	123	27	298	45	40	564	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.940				0.850		0.980			0.997	
Flt Protected		0.991			0.959		0.950			0.950		
Satd. Flow (prot)	0	1986	0	0	1744	1546	1693	1719	0	1676	1721	0
Flt Permitted		0.991			0.959		0.259			0.463		
Satd. Flow (perm)	0	1986	0	0	1744	1546	462	1719	0	817	1721	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				138		8			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	10	20	24	169	29	132	29	320	48	43	606	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	0	198	132	29	368	0	43	618	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT	NYS	DOT		NYS	DOT	
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-NB-ALT-AM

09/09/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	15.0	15.0		20.0	20.0	20.0	30.0	30.0		30.0	30.0	
Total Split (%)	15.8%	15.8%		21.1%	21.1%	21.1%	31.6%	31.6%		31.6%	31.6%	
Maximum Green (s)	10.0	10.0		15.0	15.0	15.0	25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.31			0.66	0.35	0.08	0.40		0.08	0.66	
Control Delay		30.8			46.7	7.8	3.9	9.2		11.1	24.2	
Queue Delay		0.1			0.0	0.0	0.0	0.5		0.0	0.3	
Total Delay		30.9			46.7	7.8	3.9	9.7		11.1	24.5	
Queue Length 50th (ft)		17			113	0	2	72		10	289	
Queue Length 95th (ft)		53			172	42	m4	m65		30	#569	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		230			321	397	684	925		860	941	
Starvation Cap Reductn		0			0	0	0	239		0	0	
Spillback Cap Reductn		11			0	0	0	0		0	62	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.25			0.62	0.33	0.04	0.54		0.05	0.70	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 60

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NY 52 & TSP NB Ramps



PEAK HOUR 7:30-8:30
JMC 17039

Synchro 10 Report
Page 5

HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-NB-ALT-AM

09/09/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	19	22	157	27	123	27	298	45	40	564	11
Future Volume (veh/h)	9	19	22	157	27	123	27	298	45	40	564	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	10	20	24	169	29	132	29	320	48	43	606	12
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	13	27	32	205	35	212	734	353	53	810	464	9
Arrive On Green	0.04	0.04	0.04	0.13	0.13	0.13	0.47	0.30	0.30	0.39	0.26	0.26
Sat Flow, veh/h	364	728	873	1536	264	1590	1847	1571	236	1804	1764	35
Grp Volume(v), veh/h	54	0	0	198	0	132	29	0	368	43	0	618
Grp Sat Flow(s),veh/h/ln	1964	0	0	1800	0	1590	1847	0	1807	1804	0	1799
Q Serve(g_s), s	2.6	0.0	0.0	10.2	0.0	7.5	0.0	0.0	18.6	0.0	0.0	25.0
Cycle Q Clear(g_c), s	2.6	0.0	0.0	10.2	0.0	7.5	0.0	0.0	18.6	0.0	0.0	25.0
Prop In Lane	0.19		0.44	0.85		1.00	1.00		0.13	1.00		0.02
Lane Grp Cap(c), veh/h	73	0	0	240	0	212	734	0	406	810	0	473
V/C Ratio(X)	0.74	0.00	0.00	0.83	0.00	0.62	0.04	0.00	0.91	0.05	0.00	1.31
Avail Cap(c_a), veh/h	207	0	0	284	0	251	734	0	475	810	0	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.00	0.09	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	40.1	0.0	38.9	16.1	0.0	32.4	16.9	0.0	35.0
Incr Delay (d2), s/veh	13.9	0.0	0.0	15.6	0.0	3.5	0.0	0.0	3.6	0.0	0.0	152.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	5.5	0.0	3.1	0.3	0.0	7.3	0.5	0.0	30.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	0.0	0.0	55.7	0.0	42.5	16.1	0.0	35.9	16.9	0.0	187.1
LnGrp LOS	E	A	A	E	A	D	B	A	D	B	A	F
Approach Vol, veh/h	54			330			397			661		
Approach Delay, s/veh	59.2			50.4			34.5			176.1		
Approach LOS	E			D			C			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	42.5	26.3		8.5	38.8	30.0		17.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	25.0	25.0		10.0	25.0	25.0		15.0				
Max Q Clear Time (g_c+I1), s	2.0	20.6		4.6	2.0	27.0		12.2				
Green Ext Time (p_c), s	0.1	0.7		0.0	0.0	0.0		0.5				
Intersection Summary												
HCM 6th Ctrl Delay	104.0											
HCM 6th LOS	F											

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

2025-NB-ALT-AM

09/09/2019



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	16	65	31	379	572	21
Future Volume (vph)	16	65	31	379	572	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.995	
Flt Protected	0.950			0.996		
Satd. Flow (prot)	1780	1592	0	1802	1778	0
Flt Permitted	0.950			0.996		
Satd. Flow (perm)	1780	1592	0	1802	1778	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	18	74	35	431	650	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	74	0	466	674	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

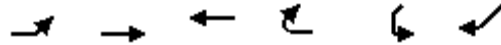
Int Delay, s/veh 1.4

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	16	65	31	379	572	21
Future Vol, veh/h	16	65	31	379	572	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-4	-	-	-1	1	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	18	74	35	431	650	24

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1163	662	674	0	-	0
Stage 1	662	-	-	-	-	-
Stage 2	501	-	-	-	-	-
Critical Hdwy	5.6	5.8	4.1	-	-	-
Critical Hdwy Stg 1	4.6	-	-	-	-	-
Critical Hdwy Stg 2	4.6	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	281	501	927	-	-	-
Stage 1	599	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	267	501	927	-	-	-
Mov Cap-2 Maneuver	267	-	-	-	-	-
Stage 1	569	-	-	-	-	-
Stage 2	685	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	14.6	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR
Capacity (veh/h)	927	-	267	501	-	-
HCM Lane V/C Ratio	0.038	-	0.068	0.147	-	-
HCM Control Delay (s)	9	0	19.5	13.4	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.5	-	-



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	178	217	274	10	16	319
Future Volume (vph)	178	217	274	10	16	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)		1%	-1%		-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995		0.872	
Flt Protected		0.978			0.998	
Satd. Flow (prot)	0	1744	1792	0	1583	0
Flt Permitted		0.978			0.998	
Satd. Flow (perm)	0	1744	1792	0	1583	0
Link Speed (mph)		45	45		55	
Link Distance (ft)		2481	2900		858	
Travel Time (s)		37.6	43.9		10.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	6%	6%	6%	6%	2%	2%
Adj. Flow (vph)	185	226	285	10	17	332
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	411	295	0	349	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		11	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.03	1.03
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	6.4					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	178	217	274	10	16	319
Future Vol, veh/h	178	217	274	10	16	319
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	-2	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	185	226	285	10	17	332
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	295	0	-	0	886	290
Stage 1	-	-	-	-	290	-
Stage 2	-	-	-	-	596	-
Critical Hdwy	4.16	-	-	-	6.02	6.02
Critical Hdwy Stg 1	-	-	-	-	5.02	-
Critical Hdwy Stg 2	-	-	-	-	5.02	-
Follow-up Hdwy	2.254	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1244	-	-	-	348	761
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	588	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1244	-	-	-	289	761
Mov Cap-2 Maneuver	-	-	-	-	289	-
Stage 1	-	-	-	-	651	-
Stage 2	-	-	-	-	588	-
Approach	EB	WB		SW		
HCM Control Delay, s	3.8	0		15		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SWLn1		
Capacity (veh/h)	1244	-	-	- 706		
HCM Lane V/C Ratio	0.149	-	-	- 0.494		
HCM Control Delay (s)	8.4	0	-	- 15		
HCM Lane LOS	A	A	-	- C		
HCM 95th %tile Q(veh)	0.5	-	-	- 2.8		

Lanes, Volumes, Timings
5: NY 52 & Site Dwy A

2025-NB-ALT-AM
09/09/2019



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	213	301	0
Future Volume (vph)	0	0	0	213	301	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr t						
Flt Protected						
Satd. Flow (prot)	1900	0	0	1828	1791	0
Flt Permitted						
Satd. Flow (perm)	1900	0	0	1828	1791	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	5%	5%	0%
Adj. Flow (vph)	0	0	0	220	310	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	220	310	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	213	301	0
Future Vol, veh/h	0	0	0	213	301	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	5	5	0
Mvmt Flow	0	0	0	220	310	0

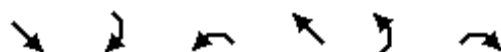
Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	530	310	310
Stage 1	310	-	-
Stage 2	220	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	513	735	1262
Stage 1	748	-	-
Stage 2	821	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	513	735	1262
Mov Cap-2 Maneuver	513	-	-
Stage 1	748	-	-
Stage 2	821	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1262	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lanes, Volumes, Timings
6: Site Dwy B & NY 52

2025-NB-ALT-AM
09/09/2019



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	301	0	0	213	0	0
Future Volume (vph)	301	0	0	213	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr t						
Flt Protected						
Satd. Flow (prot)	1764	0	0	1855	1900	0
Flt Permitted						
Satd. Flow (perm)	1764	0	0	1855	1900	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	5%	0%	0%	5%	0%	0%
Adj. Flow (vph)	310	0	0	220	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	310	0	0	220	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection

Int Delay, s/veh 0

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	301	0	0	213	0	0
Future Vol, veh/h	301	0	0	213	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	310	0	0	220	0	0

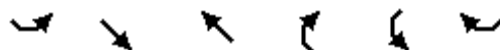
Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	310
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.1	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.2	-
Pot Cap-1 Maneuver	-	1262	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1262	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	-	1262	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	-
HCM Lane LOS	A	A	-	-	-
HCM 95th %tile Q(veh)	-	0	-	-	-

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

2025-NB-ALT-AM
09/09/2019



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	10	291	159	13	25	54
Future Volume (vph)	10	291	159	13	25	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990		0.908	
Flt Protected		0.998			0.984	
Satd. Flow (prot)	0	1745	1915	0	1816	0
Flt Permitted		0.998			0.984	
Satd. Flow (perm)	0	1745	1915	0	1816	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	5%	5%	0%	0%	0%
Adj. Flow (vph)	10	297	162	13	26	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	307	175	0	81	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 1.6

Movement SEL SET NWT NWR SWL SWR

Lane Configurations						
Traffic Vol, veh/h	10	291	159	13	25	54
Future Vol, veh/h	10	291	159	13	25	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	5	5	0	0	0
Mvmt Flow	10	297	162	13	26	55

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	175	0	-	0	486	169
Stage 1	-	-	-	-	169	-
Stage 2	-	-	-	-	317	-
Critical Hdwy	4.1	-	-	-	5	5.5
Critical Hdwy Stg 1	-	-	-	-	4	-
Critical Hdwy Stg 2	-	-	-	-	4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1414	-	-	-	657	910
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	840	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1414	-	-	-	652	910
Mov Cap-2 Maneuver	-	-	-	-	652	-
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	840	-

Approach SE NW SW

HCM Control Delay, s	0.3	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h)	-	-	1414	-	809
HCM Lane V/C Ratio	-	-	0.007	-	0.1
HCM Control Delay (s)	-	-	7.6	0	9.9
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	-	0.3

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

2025-NB-ALT-AM

09/09/2019



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	25	71	302	21	8	139
Future Volume (vph)	25	71	302	21	8	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.900		0.990			
Flt Protected	0.987					0.997
Satd. Flow (prot)	1799	0	3308	0	0	1745
Flt Permitted	0.987					0.997
Satd. Flow (perm)	1799	0	3308	0	0	1745
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	29	83	351	24	9	162
Shared Lane Traffic (%)						
Lane Group Flow (vph)	112	0	375	0	0	171
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	25	71	302	21	8	139
Future Vol, veh/h	25	71	302	21	8	139
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	29	83	351	24	9	162

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	543	188	0
Stage 1	363	-	-
Stage 2	180	-	-
Critical Hdwy	8.615	7.915	-
Critical Hdwy Stg 1	7.815	-	-
Critical Hdwy Stg 2	7.415	-	-
Follow-up Hdwy	3.5095	3.3095	-
Pot Cap-1 Maneuver	360	783	-
Stage 1	554	-	-
Stage 2	772	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	357	783	-
Mov Cap-2 Maneuver	357	-	-
Stage 1	554	-	-
Stage 2	765	-	-

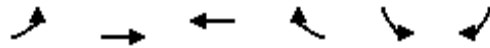
Approach	EB	SE	NW
HCM Control Delay, s	12.4	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1157	-	597	-	-
HCM Lane V/C Ratio	0.008	-	0.187	-	-
HCM Control Delay (s)	8.1	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

2025-NB-ALT-AM

09/09/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	378	120	10	27	10
Future Volume (vph)	12	378	120	10	27	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990		0.964	
Flt Protected		0.998			0.965	
Satd. Flow (prot)	0	1793	1662	0	1900	0
Flt Permitted		0.998			0.965	
Satd. Flow (perm)	0	1793	1662	0	1900	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	15	461	146	12	33	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	476	158	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	378	120	10	27	10
Future Vol, veh/h	12	378	120	10	27	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	15	461	146	12	33	12

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	158	0	0 643 152
Stage 1	-	-	- 152 -
Stage 2	-	-	- 491 -
Critical Hdwy	4.1	-	- 3.4 4.7
Critical Hdwy Stg 1	-	-	- 2.4 -
Critical Hdwy Stg 2	-	-	- 2.4 -
Follow-up Hdwy	2.2	-	- 3.5 3.3
Pot Cap-1 Maneuver	1434	-	- 754 958
Stage 1	-	-	- 1000 -
Stage 2	-	-	- 932 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1434	-	- 743 958
Mov Cap-2 Maneuver	-	-	- 743 -
Stage 1	-	-	- 986 -
Stage 2	-	-	- 932 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1434	-	-	-	791
HCM Lane V/C Ratio	0.01	-	-	-	0.057
HCM Control Delay (s)	7.5	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	83	388	8	37	138
Future Volume (vph)	6	83	388	8	37	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.874		0.997			
Flt Protected	0.997					0.989
Satd. Flow (prot)	1616	0	1798	0	0	1695
Flt Permitted	0.997					0.989
Satd. Flow (perm)	1616	0	1798	0	0	1695
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	5%	0%	0%	5%
Adj. Flow (vph)	7	95	446	9	43	159
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	0	455	0	0	202
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2.1

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	83	388	8	37	138
Future Vol, veh/h	6	83	388	8	37	138
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	5	0	0	5
Mvmt Flow	7	95	446	9	43	159

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	696	451	0
Stage 1	451	-	-
Stage 2	245	-	-
Critical Hdwy	6	6	-
Critical Hdwy Stg 1	5	-	-
Critical Hdwy Stg 2	5	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	444	628	-
Stage 1	679	-	-
Stage 2	823	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	425	628	-
Mov Cap-2 Maneuver	425	-	-
Stage 1	679	-	-
Stage 2	788	-	-

Approach	EB	SE	NW
HCM Control Delay, s	12.1	0	1.8
HCM LOS	B		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1116	-	608	-	-
HCM Lane V/C Ratio	0.038	-	0.168	-	-
HCM Control Delay (s)	8.4	0	12.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-NB-ALT-PM

09/09/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	116	0	80	0	508	177	116	866	0
Future Volume (vph)	0	0	0	116	0	80	0	508	177	116	866	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.965				
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1738	0	1769	1635	0	0	1714	0	1668	1715	0
Flt Permitted				0.757						0.272		
Satd. Flow (perm)	0	1738	0	1410	1635	0	0	1714	0	478	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					467			19				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	0	0	0	125	0	86	0	546	190	125	931	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	125	86	0	0	736	0	125	931	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-NB-ALT-PM

09/09/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0		50.0	50.0		25.0	75.0	
Total Split (%)	31.8%	31.8%		31.8%	31.8%		45.5%	45.5%		22.7%	68.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		45.0	45.0		20.0	70.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio				0.64	0.14			0.67		0.27	0.70	
Control Delay				59.3	0.5			18.5		5.5	19.3	
Queue Delay				0.0	0.1			51.7		0.0	50.4	
Total Delay				59.3	0.6			70.2		5.5	69.7	
Queue Length 50th (ft)				85	0			267		1	522	
Queue Length 95th (ft)				139	0			#687		m35	786	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)				384	785			1105		631	1322	
Starvation Cap Reductn				0	0			0		0	507	
Spillback Cap Reductn				0	286			441		0	0	
Storage Cap Reductn				0	0			0		0	0	
Reduced v/c Ratio				0.33	0.17			1.11		0.20	1.14	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 20 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 60

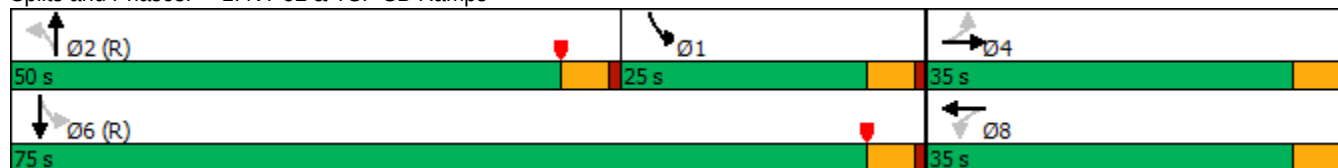
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: NY 52 & TSP SB Ramps



PEAK HOUR 5:00-6:00
JMC 17039

Synchro 10 Report
Page 2

HCM 6th Signalized Intersection Summary

1: NY 52 & TSP SB Ramps

2025-NB-ALT-PM

09/09/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	116	0	80	0	508	177	116	866	0
Future Volume (veh/h)	0	0	0	116	0	80	0	508	177	116	866	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	0	0	0	125	0	86	0	546	190	125	931	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	0	176	0	234	0	156	0	548	191	703	1450	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.41	0.41	0.71	1.00	0.00
Sat Flow, veh/h	0	1806	0	1720	0	1592	0	1339	466	1787	1788	0
Grp Volume(v), veh/h	0	0	0	125	0	86	0	0	736	125	931	0
Grp Sat Flow(s),veh/h/ln	0	1806	0	1720	0	1592	0	0	1805	1787	1788	0
Q Serve(g_s), s	0.0	0.0	0.0	7.8	0.0	5.7	0.0	0.0	44.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.8	0.0	5.7	0.0	0.0	44.8	0.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	0	176	0	234	0	156	0	0	738	703	1450	0
V/C Ratio(X)	0.00	0.00	0.00	0.54	0.00	0.55	0.00	0.00	1.00	0.18	0.64	0.00
Avail Cap(c_a), veh/h	0	492	0	534	0	434	0	0	738	703	1450	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.51	0.51	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	48.3	0.0	47.3	0.0	0.0	32.4	10.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.9	0.0	3.0	0.0	0.0	32.4	0.1	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.4	0.0	2.4	0.0	0.0	24.7	0.9	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	50.2	0.0	50.4	0.0	0.0	64.8	10.2	1.1	0.0
LnGrp LOS	A	A	A	D	A	D	A	A	E	B	A	A
Approach Vol, veh/h	0			211			736			1056		
Approach Delay, s/veh	0.0			50.3			64.8			2.2		
Approach LOS				D			E			A		
Timer - Assigned Phs	1	2	4			6		8				
Phs Duration (G+Y+Rc), s	44.2	50.0	15.8			94.2		15.8				
Change Period (Y+Rc), s	5.0	5.0	5.0			5.0		5.0				
Max Green Setting (Gmax), s	20.0	45.0	30.0			70.0		30.0				
Max Q Clear Time (g_c+I1), s	2.0	46.8	0.0			2.0		9.8				
Green Ext Time (p_c), s	0.4	0.0	0.0			7.3		1.0				
Intersection Summary												
HCM 6th Ctrl Delay	30.3											
HCM 6th LOS	C											

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-NB-ALT-PM

09/09/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	31	44	531	26	299	18	392	178	54	407	12
Future Volume (vph)	17	31	44	531	26	299	18	392	178	54	407	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.935				0.850		0.953			0.996	
Flt Protected		0.991			0.954		0.950			0.950		
Satd. Flow (prot)	0	1975	0	0	1735	1546	1693	1689	0	1676	1720	0
Flt Permitted		0.991			0.954		0.144			0.119		
Satd. Flow (perm)	0	1975	0	0	1735	1546	257	1689	0	210	1720	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35				173		18			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	18	34	48	577	28	325	20	426	193	59	442	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	605	325	20	619	0	59	455	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT		NYS		DOT		
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-NB-ALT-PM

09/09/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	20.0	20.0		50.0	50.0	50.0	15.0	25.0		15.0	25.0	
Total Split (%)	18.2%	18.2%		45.5%	45.5%	45.5%	13.6%	22.7%		13.6%	22.7%	
Maximum Green (s)	15.0	15.0		45.0	45.0	45.0	10.0	20.0		10.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.50			0.87	0.45	0.11	1.22		0.36	0.80	
Control Delay		39.9			44.4	12.0	20.7	143.5		43.2	48.5	
Queue Delay		0.1			54.0	0.0	0.0	0.4		0.0	0.1	
Total Delay		39.9			98.4	12.0	20.7	143.9		43.2	48.6	
Queue Length 50th (ft)		44			376	69	7	~552		27	274	
Queue Length 95th (ft)		95			516	139	m10	#854		62	#645	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		299			736	756	229	509		217	572	
Starvation Cap Reductn		0			0	0	0	24		0	0	
Spillback Cap Reductn		7			356	0	0	0		0	3	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.34			1.59	0.43	0.09	1.28		0.27	0.80	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 90

Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.

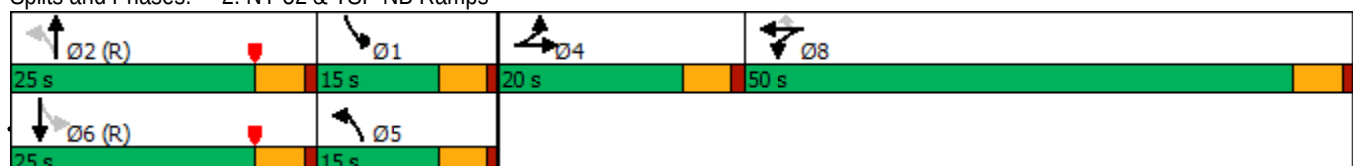
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NY 52 & TSP NB Ramps



HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-NB-ALT-PM

09/09/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	31	44	531	26	299	18	392	178	54	407	12
Future Volume (veh/h)	17	31	44	531	26	299	18	392	178	54	407	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	18	34	48	577	28	325	20	426	193	59	442	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	23	44	62	633	31	589	434	219	99	426	317	9
Arrive On Green	0.07	0.07	0.07	0.37	0.37	0.37	0.40	0.36	0.36	0.20	0.18	0.18
Sat Flow, veh/h	352	664	938	1708	83	1590	1847	1205	546	1804	1745	51
Grp Volume(v), veh/h	100	0	0	605	0	325	20	0	619	59	0	455
Grp Sat Flow(s),veh/h/ln	1953	0	0	1791	0	1590	1847	0	1751	1804	0	1796
Q Serve(g_s), s	5.5	0.0	0.0	35.3	0.0	17.8	0.0	0.0	20.0	0.0	0.0	20.0
Cycle Q Clear(g_c), s	5.5	0.0	0.0	35.3	0.0	17.8	0.0	0.0	20.0	0.0	0.0	20.0
Prop In Lane	0.18		0.48	0.95		1.00	1.00		0.31	1.00		0.03
Lane Grp Cap(c), veh/h	130	0	0	663	0	589	434	0	318	426	0	327
V/C Ratio(X)	0.77	0.00	0.00	0.91	0.00	0.55	0.05	0.00	1.94	0.14	0.00	1.39
Avail Cap(c_a), veh/h	266	0	0	733	0	651	434	0	318	426	0	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.69	0.00	0.69	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.5	0.0	0.0	32.9	0.0	27.4	26.4	0.0	35.0	35.2	0.0	45.0
Incr Delay (d2), s/veh	9.3	0.0	0.0	14.9	0.0	0.8	0.0	0.0	432.8	0.1	0.0	194.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	17.7	0.0	6.8	0.3	0.0	44.5	1.3	0.0	26.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	0.0	0.0	47.8	0.0	28.2	26.5	0.0	467.8	35.4	0.0	239.8
LnGrp LOS	E	A	A	D	A	C	C	A	F	D	A	F
Approach Vol, veh/h		100			930			639			514	
Approach Delay, s/veh		59.8			40.9			454.0			216.3	
Approach LOS		E			D			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.0	25.0		12.3	27.0	25.0		45.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	20.0		15.0	10.0	20.0		45.0				
Max Q Clear Time (g_c+I1), s	2.0	22.0		7.5	2.0	22.0		37.3				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	0.0		3.4				
Intersection Summary												
HCM 6th Ctrl Delay				204.0								
HCM 6th LOS				F								

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

2025-NB-ALT-PM

09/09/2019



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	29	70	140	555	400	37
Future Volume (vph)	29	70	140	555	400	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.989	
Flt Protected	0.950			0.990		
Satd. Flow (prot)	1780	1592	0	1790	1757	0
Flt Permitted	0.950			0.990		
Satd. Flow (perm)	1780	1592	0	1790	1757	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	7%	7%	0%
Adj. Flow (vph)	31	74	147	584	421	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	74	0	731	460	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

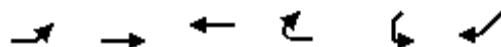
Int Delay, s/veh 2.3

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	29	70	140	555	400	37
Future Vol, veh/h	29	70	140	555	400	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-4	-	-	-1	1	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	7	7	0
Mvmt Flow	31	74	147	584	421	39

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1319	441	460
Stage 1	441	-	-
Stage 2	878	-	-
Critical Hdwy	5.6	5.8	4.1
Critical Hdwy Stg 1	4.6	-	-
Critical Hdwy Stg 2	4.6	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	235	652	1112
Stage 1	720	-	-
Stage 2	498	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	189	652	1112
Mov Cap-2 Maneuver	189	-	-
Stage 1	579	-	-
Stage 2	498	-	-

Approach	SE	NE	SW
HCM Control Delay, s	16	1.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR
Capacity (veh/h)	1112	-	189	652	-	-
HCM Lane V/C Ratio	0.133	-	0.162	0.113	-	-
HCM Control Delay (s)	8.7	0	27.7	11.2	-	-
HCM Lane LOS	A	A	D	B	-	-
HCM 95th %tile Q(veh)	0.5	-	0.6	0.4	-	-



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↰	↱		↰	↱
Traffic Volume (vph)	336	248	248	37	12	189
Future Volume (vph)	336	248	248	37	12	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)		1%	-1%		-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.982		0.873	
Flt Protected		0.972			0.997	
Satd. Flow (prot)	0	1734	1769	0	1599	0
Flt Permitted		0.972			0.997	
Satd. Flow (perm)	0	1734	1769	0	1599	0
Link Speed (mph)		45	45		55	
Link Distance (ft)		2481	2900		858	
Travel Time (s)		37.6	43.9		10.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	6%	6%	6%	6%	1%	1%
Adj. Flow (vph)	354	261	261	39	13	199
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	615	300	0	212	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		11	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.03	1.03
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.4					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	336	248	248	37	12	189
Future Vol, veh/h	336	248	248	37	12	189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	-2	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	6	6	6	6	1	1
Mvmt Flow	354	261	261	39	13	199
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	300	0	-	0	1250	281
Stage 1	-	-	-	-	281	-
Stage 2	-	-	-	-	969	-
Critical Hdwy	4.16	-	-	-	6.01	6.01
Critical Hdwy Stg 1	-	-	-	-	5.01	-
Critical Hdwy Stg 2	-	-	-	-	5.01	-
Follow-up Hdwy	2.254	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1239	-	-	-	220	772
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	412	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1239	-	-	-	147	772
Mov Cap-2 Maneuver	-	-	-	-	147	-
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	412	-
Approach	EB	WB		SW		
HCM Control Delay, s	5.2	0		13.9		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SWLn1		
Capacity (veh/h)	1239	-	-	- 616		
HCM Lane V/C Ratio	0.285	-	-	- 0.343		
HCM Control Delay (s)	9.1	0	-	- 13.9		
HCM Lane LOS	A	A	-	- B		
HCM 95th %tile Q(veh)	1.2	-	-	- 1.5		

Lanes, Volumes, Timings
5: NY 52 & Site Dwy A

2025-NB-ALT-PM
09/09/2019

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	434	284	0
Future Volume (vph)	0	0	0	434	284	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1900	0	0	1810	1775	0
Flt Permitted						
Satd. Flow (perm)	1900	0	0	1810	1775	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	0	0	0	472	309	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	472	309	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	434	284	0
Future Vol, veh/h	0	0	0	434	284	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	0	0	0	472	309	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	781	309	309
Stage 1	309	-	-
Stage 2	472	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	366	736	1263
Stage 1	749	-	-
Stage 2	632	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	366	736	1263
Mov Cap-2 Maneuver	366	-	-
Stage 1	749	-	-
Stage 2	632	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1263	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lanes, Volumes, Timings
6: Site Dwy B & NY 52

2025-NB-ALT-PM

09/09/2019

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	284	0	0	434	0	0
Future Volume (vph)	284	0	0	434	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr t						
Flt Protected						
Satd. Flow (prot)	1748	0	0	1837	1900	0
Flt Permitted						
Satd. Flow (perm)	1748	0	0	1837	1900	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	0%	6%	0%	0%
Adj. Flow (vph)	309	0	0	472	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	309	0	0	472	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 0

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	284	0	0	434	0	0
Future Vol, veh/h	284	0	0	434	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	6	0	0
Mvmt Flow	309	0	0	472	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	309
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.1	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.2	-
Pot Cap-1 Maneuver	-	1263	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1263	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

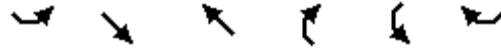
Approach	SE	NW	NE
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	-	1263	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	-
HCM Lane LOS	A	A	-	-	-
HCM 95th %tile Q(veh)	-	0	-	-	-

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

2025-NB-ALT-PM

09/09/2019



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	34	250	417	23	9	17
Future Volume (vph)	34	250	417	23	9	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.993		0.912	
Flt Protected		0.994			0.983	
Satd. Flow (prot)	0	1731	1901	0	1804	0
Flt Permitted		0.994			0.983	
Satd. Flow (perm)	0	1731	1901	0	1804	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	6%	6%	0%	1%	1%
Adj. Flow (vph)	38	278	463	26	10	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	316	489	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 0.8

Movement SEL SET NWT NWR SWL SWR

Lane Configurations						
Traffic Vol, veh/h	34	250	417	23	9	17
Future Vol, veh/h	34	250	417	23	9	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	6	6	0	1	1
Mvmt Flow	38	278	463	26	10	19

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	489	0	-	0	830	476
Stage 1	-	-	-	-	476	-
Stage 2	-	-	-	-	354	-
Critical Hdwy	4.1	-	-	-	5.01	5.51
Critical Hdwy Stg 1	-	-	-	-	4.01	-
Critical Hdwy Stg 2	-	-	-	-	4.01	-
Follow-up Hdwy	2.2	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1085	-	-	-	471	648
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	818	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1085	-	-	-	452	648
Mov Cap-2 Maneuver	-	-	-	-	452	-
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	818	-

Approach SE NW SW

HCM Control Delay, s	1	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h)	-	-	1085	-	563
HCM Lane V/C Ratio	-	-	0.035	-	0.051
HCM Control Delay (s)	-	-	8.4	0	11.7
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0.1	-	0.2

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

2025-NB-ALT-PM

09/09/2019



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	37	32	193	44	27	428
Future Volume (vph)	37	32	193	44	27	428
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.937		0.972			
Flt Protected	0.974					0.997
Satd. Flow (prot)	1848	0	3248	0	0	1745
Flt Permitted	0.974					0.997
Satd. Flow (perm)	1848	0	3248	0	0	1745
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	41	36	214	49	30	476
Shared Lane Traffic (%)						
Lane Group Flow (vph)	77	0	263	0	0	506
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	37	32	193	44	27	428
Future Vol, veh/h	37	32	193	44	27	428
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	41	36	214	49	30	476

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	775	132	0
Stage 1	239	-	-
Stage 2	536	-	-
Critical Hdwy	8.615	7.915	-
Critical Hdwy Stg 1	7.815	-	-
Critical Hdwy Stg 2	7.415	-	-
Follow-up Hdwy	3.5095	3.3095	-
Pot Cap-1 Maneuver	229	864	-
Stage 1	684	-	-
Stage 2	437	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	222	864	-
Mov Cap-2 Maneuver	222	-	-
Stage 1	684	-	-
Stage 2	423	-	-

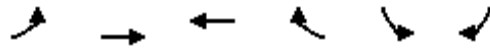
Approach	EB	SE	NW
HCM Control Delay, s	18.7	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1274	-	339	-	-
HCM Lane V/C Ratio	0.024	-	0.226	-	-
HCM Control Delay (s)	7.9	0	18.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

2025-NB-ALT-PM

09/09/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	221	472	8	10	10
Future Volume (vph)	8	221	472	8	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998		0.932	
Flt Protected		0.998			0.976	
Satd. Flow (prot)	0	1793	1670	0	1858	0
Flt Permitted		0.998			0.976	
Satd. Flow (perm)	0	1793	1670	0	1858	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	9	260	555	9	12	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	269	564	0	24	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	221	472	8	10	10
Future Vol, veh/h	8	221	472	8	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	9	260	555	9	12	12

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	564	0	838
Stage 1	-	-	560
Stage 2	-	-	278
Critical Hdwy	4.1	-	3.4
Critical Hdwy Stg 1	-	-	2.4
Critical Hdwy Stg 2	-	-	2.4
Follow-up Hdwy	2.2	-	3.5
Pot Cap-1 Maneuver	1018	-	682
Stage 1	-	-	918
Stage 2	-	-	975
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1018	-	675
Mov Cap-2 Maneuver	-	-	675
Stage 1	-	-	909
Stage 2	-	-	975

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1018	-	-	-	673
HCM Lane V/C Ratio	0.009	-	-	-	0.035
HCM Control Delay (s)	8.6	0	-	-	10.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	69	232	3	104	495
Future Volume (vph)	6	69	232	3	104	495
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.876		0.998			
Flt Protected	0.996					0.991
Satd. Flow (prot)	1602	0	1799	0	0	1696
Flt Permitted	0.996					0.991
Satd. Flow (perm)	1602	0	1799	0	0	1696
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	5%	0%	0%	5%
Adj. Flow (vph)	8	87	294	4	132	627
Shared Lane Traffic (%)						
Lane Group Flow (vph)	95	0	298	0	0	759
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 1.9

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	69	232	3	104	495
Future Vol, veh/h	6	69	232	3	104	495
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	1	1	5	0	0	5
Mvmt Flow	8	87	294	4	132	627

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1187	296	0
Stage 1	296	-	-
Stage 2	891	-	-
Critical Hdwy	6.01	6.01	-
Critical Hdwy Stg 1	5.01	-	-
Critical Hdwy Stg 2	5.01	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	239	758	-
Stage 1	782	-	-
Stage 2	444	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	201	758	-
Mov Cap-2 Maneuver	201	-	-
Stage 1	782	-	-
Stage 2	373	-	-

Approach	EB	SE	NW
HCM Control Delay, s	11.9	0	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1275	-	620	-	-
HCM Lane V/C Ratio	0.103	-	0.153	-	-
HCM Control Delay (s)	8.1	0	11.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-BD-ALT-AM

09/09/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	0	164	0	66	0	312	581	405	391	1
Future Volume (vph)	1	0	0	164	0	66	0	312	581	405	391	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.912				
Flt Protected		0.950		0.950						0.950		
Satd. Flow (prot)	0	1651	0	1769	1635	0	0	1657	0	1668	1716	0
Flt Permitted		0.711		0.757						0.076		
Satd. Flow (perm)	0	1236	0	1410	1635	0	0	1657	0	133	1716	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					581			122				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	1	0	0	176	0	71	0	335	625	435	420	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	176	71	0	0	960	0	435	421	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-BD-ALT-AM

09/09/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		45.0	45.0		20.0	65.0	
Total Split (%)	31.6%	31.6%		31.6%	31.6%		47.4%	47.4%		21.1%	68.4%	
Maximum Green (s)	25.0	25.0		25.0	25.0		40.0	40.0		15.0	60.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio		0.00		0.69	0.09			1.07		1.29	0.34	
Control Delay		28.0		50.1	0.2			74.5		174.9	7.7	
Queue Delay		0.0		0.0	0.0			0.0		14.9	2.0	
Total Delay		28.0		50.1	0.2			74.5		189.8	9.7	
Queue Length 50th (ft)		1		100	0			~610		~304	116	
Queue Length 95th (ft)		5		157	0			#918		#237	156	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)		325		371	858			895		337	1226	
Starvation Cap Reductn		0		0	0			0		209	634	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.00		0.47	0.08			1.07		3.40	0.71	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated

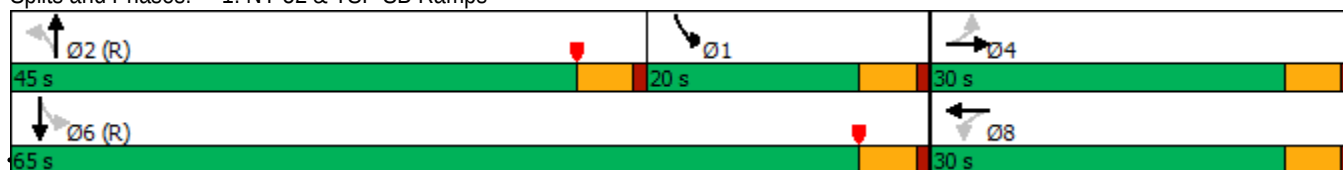
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: NY 52 & TSP SB Ramps



PEAK HOUR 7:30-8:30
JMC 17039

Synchro 10 Report
Page 2

HCM 6th Signalized Intersection Summary

1: NY 52 & TSP SB Ramps

2025-BD-ALT-AM

09/09/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	0	164	0	66	0	312	581	405	391	1
Future Volume (veh/h)	1	0	0	164	0	66	0	312	581	405	391	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	1	0	0	176	0	71	0	335	625	435	420	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	211	0	0	289	0	231	0	248	463	569	1336	3
Arrive On Green	0.15	0.00	0.00	0.15	0.00	0.15	0.00	0.42	0.42	0.46	1.00	1.00
Sat Flow, veh/h	931	0	0	1369	0	1592	0	590	1101	1787	1783	4
Grp Volume(v), veh/h	1	0	0	176	0	71	0	0	960	435	0	421
Grp Sat Flow(s),veh/h/ln	931	0	0	1369	0	1592	0	0	1690	1787	0	1787
Q Serve(g_s), s	0.1	0.0	0.0	7.0	0.0	3.8	0.0	0.0	40.0	14.2	0.0	0.0
Cycle Q Clear(g_c), s	3.9	0.0	0.0	10.8	0.0	3.8	0.0	0.0	40.0	14.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	211	0	0	289	0	231	0	0	712	569	0	1339
V/C Ratio(X)	0.00	0.00	0.00	0.61	0.00	0.31	0.00	0.00	1.35	0.76	0.00	0.31
Avail Cap(c_a), veh/h	362	0	0	450	0	419	0	0	712	569	0	1339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.62	0.00	0.62
Uniform Delay (d), s/veh	38.0	0.0	0.0	39.1	0.0	36.3	0.0	0.0	27.5	21.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.7	0.0	0.0	166.2	3.9	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.1	0.0	1.5	0.0	0.0	47.2	6.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.1	0.0	0.0	41.1	0.0	37.1	0.0	0.0	193.7	25.0	0.0	0.4
LnGrp LOS	D	A	A	D	A	D	A	A	F	C	A	A
Approach Vol, veh/h	1				247				960			
Approach Delay, s/veh	38.1				40.0				193.7			
Approach LOS	D				D				F			
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	31.2	45.0		18.8		76.2		18.8				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	15.0	40.0		25.0		60.0		25.0				
Max Q Clear Time (g_c+I1), s	16.2	42.0		5.9		2.0		12.8				
Green Ext Time (p_c), s	0.0	0.0		0.0		2.2		1.0				
Intersection Summary												
HCM 6th Ctrl Delay	100.2											
HCM 6th LOS	F											

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-ALT-AM

09/09/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	19	22	157	27	135	27	307	45	50	618	11
Future Volume (vph)	9	19	22	157	27	135	27	307	45	50	618	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.940				0.850		0.981			0.997	
Flt Protected		0.991			0.959		0.950			0.950		
Satd. Flow (prot)	0	1986	0	0	1744	1546	1693	1721	0	1676	1721	0
Flt Permitted		0.991			0.959		0.206			0.449		
Satd. Flow (perm)	0	1986	0	0	1744	1546	367	1721	0	792	1721	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				145		7			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	10	20	24	169	29	145	29	330	48	54	665	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	0	198	145	29	378	0	54	677	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT	NYS	DOT		NYS	DOT	
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-ALT-AM

09/09/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	15.0	15.0		20.0	20.0	20.0	30.0	30.0		30.0	30.0	
Total Split (%)	15.8%	15.8%		21.1%	21.1%	21.1%	31.6%	31.6%		31.6%	31.6%	
Maximum Green (s)	10.0	10.0		15.0	15.0	15.0	25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.31			0.66	0.38	0.10	0.42		0.10	0.72	
Control Delay		30.8			46.7	8.4	4.1	10.2		11.3	26.4	
Queue Delay		0.4			0.0	0.0	0.0	0.7		0.0	1.7	
Total Delay		31.2			46.7	8.4	4.1	10.9		11.3	28.2	
Queue Length 50th (ft)		17			113	0	2	71		13	334	
Queue Length 95th (ft)		53			172	47	m4	m67		35	#650	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		230			321	402	627	891		847	940	
Starvation Cap Reductn		0			0	0	0	243		0	0	
Spillback Cap Reductn		37			0	0	0	0		0	127	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.28			0.62	0.36	0.05	0.58		0.06	0.83	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 60

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NY 52 & TSP NB Ramps



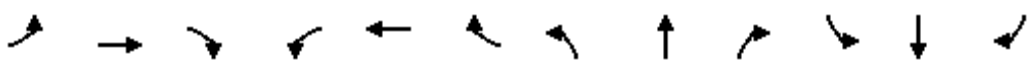
PEAK HOUR 7:30-8:30
JMC 17039

Synchro 10 Report
Page 5

HCM 6th Signalized Intersection Summary 2: NY 52 & TSP NB Ramps

2025-BD-ALT-AM

09/09/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	9	19	22	157	27	135	27	307	45	50	618	11
Future Volume (veh/h)	9	19	22	157	27	135	27	307	45	50	618	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	10	20	24	169	29	145	29	330	48	54	665	12
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	13	27	32	205	35	212	733	362	53	805	465	8
Arrive On Green	0.04	0.04	0.04	0.13	0.13	0.13	0.47	0.31	0.31	0.39	0.26	0.26
Sat Flow, veh/h	364	728	873	1536	264	1590	1847	1578	230	1804	1768	32
Grp Volume(v), veh/h	54	0	0	198	0	145	29	0	378	54	0	677
Grp Sat Flow(s),veh/h/ln	1964	0	0	1800	0	1590	1847	0	1808	1804	0	1799
Q Serve(g_s), s	2.6	0.0	0.0	10.2	0.0	8.3	0.0	0.0	19.1	0.0	0.0	25.0
Cycle Q Clear(g_c), s	2.6	0.0	0.0	10.2	0.0	8.3	0.0	0.0	19.1	0.0	0.0	25.0
Prop In Lane	0.19		0.44	0.85		1.00	1.00		0.13	1.00		0.02
Lane Grp Cap(c), veh/h	73	0	0	240	0	212	733	0	415	805	0	474
V/C Ratio(X)	0.74	0.00	0.00	0.82	0.00	0.68	0.04	0.00	0.91	0.07	0.00	1.43
Avail Cap(c_a), veh/h	207	0	0	284	0	251	733	0	476	805	0	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.00	0.09	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	40.1	0.0	39.2	16.1	0.0	32.1	17.1	0.0	35.0
Incr Delay (d2), s/veh	13.9	0.0	0.0	15.5	0.0	5.9	0.0	0.0	3.7	0.0	0.0	205.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	5.5	0.0	3.5	0.3	0.0	7.6	0.7	0.0	37.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	0.0	0.0	55.5	0.0	45.2	16.1	0.0	35.8	17.1	0.0	240.3
LnGrp LOS	E	A	A	E	A	D	B	A	D	B	A	F
Approach Vol, veh/h		54			343			407			731	
Approach Delay, s/veh		59.2			51.2			34.4			223.8	
Approach LOS		E			D			C			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	42.0	26.8		8.5	38.8	30.0		17.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	25.0	25.0		10.0	25.0	25.0		15.0				
Max Q Clear Time (g_c+I1), s	2.0	21.1		4.6	2.0	27.0		12.2				
Green Ext Time (p_c), s	0.1	0.7		0.0	0.0	0.0		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				129.2								
HCM 6th LOS				F								

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

2025-BD-ALT-AM

09/09/2019



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	16	65	31	400	636	21
Future Volume (vph)	16	65	31	400	636	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.996	
Flt Protected	0.950			0.996		
Satd. Flow (prot)	1780	1592	0	1801	1780	0
Flt Permitted	0.950			0.996		
Satd. Flow (perm)	1780	1592	0	1801	1780	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	18	74	35	455	723	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	74	0	490	747	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 1.3

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	16	65	31	400	636	21
Future Vol, veh/h	16	65	31	400	636	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-4	-	-	-1	1	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	18	74	35	455	723	24

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1260	735	747
Stage 1	735	-	-
Stage 2	525	-	-
Critical Hdwy	5.6	5.8	4.1
Critical Hdwy Stg 1	4.6	-	-
Critical Hdwy Stg 2	4.6	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	251	459	870
Stage 1	563	-	-
Stage 2	671	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	237	459	870
Mov Cap-2 Maneuver	237	-	-
Stage 1	533	-	-
Stage 2	671	-	-

Approach	SE	NE	SW
HCM Control Delay, s	15.7	0.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR
Capacity (veh/h)	870	-	237	459	-	-
HCM Lane V/C Ratio	0.04	-	0.077	0.161	-	-
HCM Control Delay (s)	9.3	0	21.4	14.3	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.6	-	-



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	178	238	338	10	16	319
Future Volume (vph)	178	238	338	10	16	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)		1%	-1%		-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.996		0.872	
Flt Protected		0.979			0.998	
Satd. Flow (prot)	0	1746	1794	0	1583	0
Flt Permitted		0.979			0.998	
Satd. Flow (perm)	0	1746	1794	0	1583	0
Link Speed (mph)		45	45		55	
Link Distance (ft)		2481	2900		858	
Travel Time (s)		37.6	43.9		10.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	6%	6%	6%	6%	2%	2%
Adj. Flow (vph)	185	248	352	10	17	332
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	433	362	0	349	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		11	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.03	1.03
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	6.6					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	178	238	338	10	16	319
Future Vol, veh/h	178	238	338	10	16	319
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	-2	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	185	248	352	10	17	332
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	362	0	-	0	975	357
Stage 1	-	-	-	-	357	-
Stage 2	-	-	-	-	618	-
Critical Hdwy	4.16	-	-	-	6.02	6.02
Critical Hdwy Stg 1	-	-	-	-	5.02	-
Critical Hdwy Stg 2	-	-	-	-	5.02	-
Follow-up Hdwy	2.254	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1175	-	-	-	311	701
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	576	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1175	-	-	-	254	701
Mov Cap-2 Maneuver	-	-	-	-	254	-
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	576	-
Approach	EB	WB		SW		
HCM Control Delay, s	3.7	0		16.9		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SWLn1		
Capacity (veh/h)	1175	-	-	- 647		
HCM Lane V/C Ratio	0.158	-	-	- 0.539		
HCM Control Delay (s)	8.6	0	-	- 16.9		
HCM Lane LOS	A	A	-	- C		
HCM 95th %tile Q(veh)	0.6	-	-	- 3.2		

Lanes, Volumes, Timings
5: NY 52 & Site Dwy A

2025-BD-ALT-AM

09/09/2019



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	69	20	10	213	304	20
Future Volume (vph)	69	20	10	213	304	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.969				0.992	
Flt Protected	0.963			0.998		
Satd. Flow (prot)	1773	0	0	1828	1782	0
Flt Permitted	0.963			0.998		
Satd. Flow (perm)	1773	0	0	1828	1782	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	5%	5%	0%
Adj. Flow (vph)	71	21	10	220	313	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	0	0	230	334	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	69	20	10	213	304	20
Future Vol, veh/h	69	20	10	213	304	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	5	5	0
Mvmt Flow	71	21	10	220	313	21
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	564	324	334	0	-	0
Stage 1	324	-	-	-	-	-
Stage 2	240	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	490	722	1237	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	486	722	1237	-	-	-
Mov Cap-2 Maneuver	486	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.3	0.4		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1237	-	525	-	-	
HCM Lane V/C Ratio	0.008	-	0.175	-	-	
HCM Control Delay (s)	7.9	0	13.3	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.6	-	-	

Lanes, Volumes, Timings
6: Site Dwy B & NY 52

2025-BD-ALT-AM
09/09/2019

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	321	3	0	223	0	10
Future Volume (vph)	321	3	0	223	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.865	
Flt Protected						
Satd. Flow (prot)	1763	0	0	1855	1644	0
Flt Permitted						
Satd. Flow (perm)	1763	0	0	1855	1644	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	5%	0%	0%	5%	0%	0%
Adj. Flow (vph)	331	3	0	230	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	334	0	0	230	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 0.2

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	321	3	0	223	0	10
Future Vol, veh/h	321	3	0	223	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	331	3	0	230	0	10

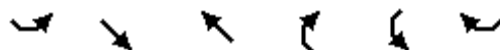
Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	334
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1237
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1237
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	713	1237	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-	-
HCM Control Delay (s)	10.1	0	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

2025-BD-ALT-AM
09/09/2019



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	10	321	169	13	25	54
Future Volume (vph)	10	321	169	13	25	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.991		0.908	
Flt Protected		0.999			0.984	
Satd. Flow (prot)	0	1747	1916	0	1816	0
Flt Permitted		0.999			0.984	
Satd. Flow (perm)	0	1747	1916	0	1816	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	5%	5%	0%	0%	0%
Adj. Flow (vph)	10	328	172	13	26	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	338	185	0	81	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 1.5

Movement SEL SET NWT NWR SWL SWR

Lane Configurations						
Traffic Vol, veh/h	10	321	169	13	25	54
Future Vol, veh/h	10	321	169	13	25	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	5	5	0	0	0
Mvmt Flow	10	328	172	13	26	55

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	185	0	-	0	527	179
Stage 1	-	-	-	-	179	-
Stage 2	-	-	-	-	348	-
Critical Hdwy	4.1	-	-	-	5	5.5
Critical Hdwy Stg 1	-	-	-	-	4	-
Critical Hdwy Stg 2	-	-	-	-	4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1402	-	-	-	632	900
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	824	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1402	-	-	-	626	900
Mov Cap-2 Maneuver	-	-	-	-	626	-
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	824	-

Approach SE NW SW

HCM Control Delay, s	0.2	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h)	-	-	1402	-	791
HCM Lane V/C Ratio	-	-	0.007	-	0.102
HCM Control Delay (s)	-	-	7.6	0	10.1
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0	-	0.3

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

2025-BD-ALT-AM

09/09/2019



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	25	71	332	21	8	149
Future Volume (vph)	25	71	332	21	8	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.900		0.991			
Flt Protected	0.987					0.998
Satd. Flow (prot)	1799	0	3311	0	0	1747
Flt Permitted	0.987					0.998
Satd. Flow (perm)	1799	0	3311	0	0	1747
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	29	83	386	24	9	173
Shared Lane Traffic (%)						
Lane Group Flow (vph)	112	0	410	0	0	182
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	25	71	332	21	8	149
Future Vol, veh/h	25	71	332	21	8	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	29	83	386	24	9	173

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	589	205	0
Stage 1	398	-	-
Stage 2	191	-	-
Critical Hdwy	8.615	7.915	-
Critical Hdwy Stg 1	7.815	-	-
Critical Hdwy Stg 2	7.415	-	-
Follow-up Hdwy	3.5095	3.3095	-
Pot Cap-1 Maneuver	329	760	-
Stage 1	522	-	-
Stage 2	759	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	326	760	-
Mov Cap-2 Maneuver	326	-	-
Stage 1	522	-	-
Stage 2	752	-	-

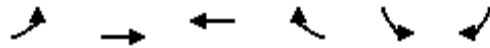
Approach	EB	SE	NW
HCM Control Delay, s	13	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1122	-	564	-	-
HCM Lane V/C Ratio	0.008	-	0.198	-	-
HCM Control Delay (s)	8.2	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

2025-BD-ALT-AM

09/09/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	408	130	10	27	10
Future Volume (vph)	12	408	130	10	27	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.991		0.964	
Flt Protected		0.999			0.965	
Satd. Flow (prot)	0	1795	1664	0	1900	0
Flt Permitted		0.999			0.965	
Satd. Flow (perm)	0	1795	1664	0	1900	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	15	498	159	12	33	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	513	171	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	408	130	10	27	10
Future Vol, veh/h	12	408	130	10	27	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	15	498	159	12	33	12

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	171	0	0 693 165
Stage 1	-	-	- - 165 -
Stage 2	-	-	- - 528 -
Critical Hdwy	4.1	-	- - 3.4 4.7
Critical Hdwy Stg 1	-	-	- - 2.4 -
Critical Hdwy Stg 2	-	-	- - 2.4 -
Follow-up Hdwy	2.2	-	- - 3.5 3.3
Pot Cap-1 Maneuver	1418	-	- - 735 948
Stage 1	-	-	- - 997 -
Stage 2	-	-	- - 925 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1418	-	- - 724 948
Mov Cap-2 Maneuver	-	-	- - 724 -
Stage 1	-	-	- - 982 -
Stage 2	-	-	- - 925 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1418	-	-	-	773
HCM Lane V/C Ratio	0.01	-	-	-	0.058
HCM Control Delay (s)	7.6	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	83	418	8	37	148
Future Volume (vph)	6	83	418	8	37	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.874		0.998			
Flt Protected	0.997					0.990
Satd. Flow (prot)	1616	0	1800	0	0	1696
Flt Permitted	0.997					0.990
Satd. Flow (perm)	1616	0	1800	0	0	1696
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	5%	0%	0%	5%
Adj. Flow (vph)	7	95	480	9	43	170
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	0	489	0	0	213
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	83	418	8	37	148
Future Vol, veh/h	6	83	418	8	37	148
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	5	0	0	5
Mvmt Flow	7	95	480	9	43	170

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	741	485	0
Stage 1	485	-	-
Stage 2	256	-	-
Critical Hdwy	6	6	-
Critical Hdwy Stg 1	5	-	-
Critical Hdwy Stg 2	5	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	420	602	-
Stage 1	658	-	-
Stage 2	814	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	402	602	-
Mov Cap-2 Maneuver	402	-	-
Stage 1	658	-	-
Stage 2	778	-	-

Approach	EB	SE	NW
HCM Control Delay, s	12.5	0	1.7
HCM LOS	B		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1085	-	582	-	-
HCM Lane V/C Ratio	0.039	-	0.176	-	-
HCM Control Delay (s)	8.5	0	12.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-BD-ALT-PM

09/09/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	116	0	91	0	530	177	139	879	0
Future Volume (vph)	0	0	0	116	0	91	0	530	177	139	879	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.966				
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1738	0	1769	1635	0	0	1715	0	1668	1715	0
Flt Permitted				0.757						0.254		
Satd. Flow (perm)	0	1738	0	1410	1635	0	0	1715	0	446	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					457			18				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	0	0	0	125	0	98	0	570	190	149	945	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	125	98	0	0	760	0	149	945	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-BD-ALT-PM

09/09/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0		50.0	50.0		25.0	75.0	
Total Split (%)	31.8%	31.8%		31.8%	31.8%		45.5%	45.5%		22.7%	68.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		45.0	45.0		20.0	70.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio				0.64	0.16			0.69		0.33	0.71	
Control Delay				59.3	0.5			19.8		8.4	19.7	
Queue Delay				0.0	0.2			51.7		0.0	50.6	
Total Delay				59.3	0.7			71.6		8.4	70.3	
Queue Length 50th (ft)				85	0			299		5	539	
Queue Length 95th (ft)				139	0			#725		m58	m796	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)				384	778			1095		606	1322	
Starvation Cap Reductn				0	0			0		0	539	
Spillback Cap Reductn				0	293			450		0	0	
Storage Cap Reductn				0	0			0		0	0	
Reduced v/c Ratio				0.33	0.20			1.18		0.25	1.21	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 20 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 60

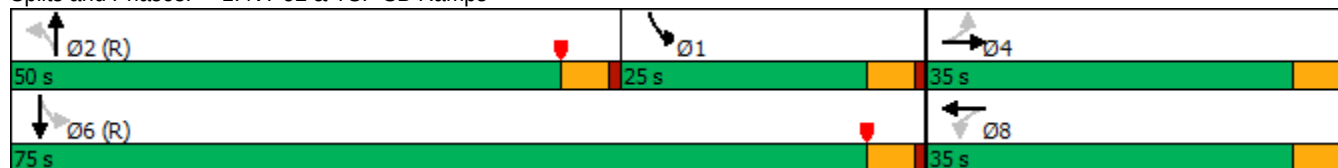
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: NY 52 & TSP SB Ramps



PEAK HOUR 5:00-6:00
JMC 17039

Synchro 10 Report
Page 2

HCM 6th Signalized Intersection Summary

2025-BD-ALT-PM

09/09/2019

1: NY 52 & TSP SB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	116	0	91	0	530	177	139	879	0
Future Volume (veh/h)	0	0	0	116	0	91	0	530	177	139	879	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	0	0	0	125	0	98	0	570	190	149	945	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	0	178	0	235	0	157	0	555	185	702	1449	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.41	0.41	0.71	1.00	0.00
Sat Flow, veh/h	0	1806	0	1720	0	1592	0	1355	452	1787	1788	0
Grp Volume(v), veh/h	0	0	0	125	0	98	0	0	760	149	945	0
Grp Sat Flow(s),veh/h/ln	0	1806	0	1720	0	1592	0	0	1807	1787	1788	0
Q Serve(g_s), s	0.0	0.0	0.0	7.8	0.0	6.5	0.0	0.0	45.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.8	0.0	6.5	0.0	0.0	45.0	0.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.25	1.00		0.00
Lane Grp Cap(c), veh/h	0	178	0	235	0	157	0	0	739	702	1449	0
V/C Ratio(X)	0.00	0.00	0.00	0.53	0.00	0.63	0.00	0.00	1.03	0.21	0.65	0.00
Avail Cap(c_a), veh/h	0	492	0	534	0	434	0	0	739	702	1449	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.36	0.36	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	48.2	0.0	47.6	0.0	0.0	32.5	10.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.9	0.0	4.1	0.0	0.0	40.4	0.1	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.4	0.0	2.8	0.0	0.0	26.4	1.1	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	50.1	0.0	51.7	0.0	0.0	72.9	10.2	0.8	0.0
LnGrp LOS	A	A	A	D	A	D	A	A	F	B	A	A
Approach Vol, veh/h	0				223				760			
Approach Delay, s/veh	0.0				50.8				72.9			
Approach LOS					D				E			
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	44.2	50.0		15.8		94.2		15.8				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	20.0	45.0		30.0		70.0		30.0				
Max Q Clear Time (g_c+I1), s	2.0	47.0		0.0		2.0		9.8				
Green Ext Time (p_c), s	0.5	0.0		0.0		7.5		1.1				
Intersection Summary												
HCM 6th Ctrl Delay	33.3											
HCM 6th LOS	C											

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-ALT-PM

09/09/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	31	44	531	26	338	18	425	178	60	443	12
Future Volume (vph)	17	31	44	531	26	338	18	425	178	60	443	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.935				0.850		0.956			0.996	
Flt Protected		0.991			0.954		0.950			0.950		
Satd. Flow (prot)	0	1975	0	0	1735	1546	1693	1693	0	1676	1720	0
Flt Permitted		0.991			0.954		0.139			0.121		
Satd. Flow (perm)	0	1975	0	0	1735	1546	248	1693	0	214	1720	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35				195		17			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	18	34	48	577	28	367	20	462	193	65	482	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	605	367	20	655	0	65	495	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT	NYS	DOT		NYS	DOT	
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-ALT-PM

09/09/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	20.0	20.0		50.0	50.0	50.0	15.0	25.0		15.0	25.0	
Total Split (%)	18.2%	18.2%		45.5%	45.5%	45.5%	13.6%	22.7%		13.6%	22.7%	
Maximum Green (s)	15.0	15.0		45.0	45.0	45.0	10.0	20.0		10.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.50			0.87	0.50	0.12	1.31		0.39	0.88	
Control Delay		39.9			43.6	12.5	20.3	180.2		44.2	56.0	
Queue Delay		0.1			54.5	0.0	0.0	0.4		0.0	0.3	
Total Delay		39.9			98.0	12.5	20.3	180.5		44.2	56.3	
Queue Length 50th (ft)		44			373	80	6	~613		30	310	
Queue Length 95th (ft)		95			#528	159	m9	#911		67	#711	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		299			740	771	225	501		218	564	
Starvation Cap Reductn		0			0	0	0	21		0	0	
Spillback Cap Reductn		7			373	0	0	0		0	3	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.34			1.65	0.48	0.09	1.36		0.30	0.88	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 90

Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.

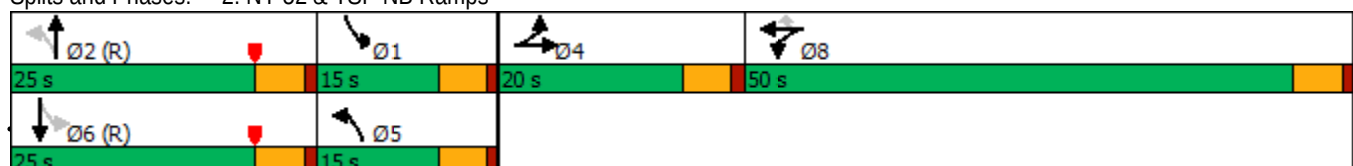
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NY 52 & TSP NB Ramps



HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

2025-BD-ALT-PM

09/09/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	17	31	44	531	26	338	18	425	178	60	443	12
Future Volume (veh/h)	17	31	44	531	26	338	18	425	178	60	443	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	18	34	48	577	28	367	20	462	193	65	482	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	23	44	62	634	31	591	432	225	94	424	318	9
Arrive On Green	0.07	0.07	0.07	0.37	0.37	0.37	0.40	0.36	0.36	0.20	0.18	0.18
Sat Flow, veh/h	352	664	938	1708	83	1590	1847	1239	517	1804	1750	47
Grp Volume(v), veh/h	100	0	0	605	0	367	20	0	655	65	0	495
Grp Sat Flow(s),veh/h/ln	1953	0	0	1791	0	1590	1847	0	1756	1804	0	1797
Q Serve(g_s), s	5.5	0.0	0.0	35.3	0.0	20.7	0.0	0.0	20.0	0.0	0.0	20.0
Cycle Q Clear(g_c), s	5.5	0.0	0.0	35.3	0.0	20.7	0.0	0.0	20.0	0.0	0.0	20.0
Prop In Lane	0.18		0.48	0.95		1.00	1.00		0.29	1.00		0.03
Lane Grp Cap(c), veh/h	130	0	0	665	0	591	432	0	319	424	0	327
V/C Ratio(X)	0.77	0.00	0.00	0.91	0.00	0.62	0.05	0.00	2.05	0.15	0.00	1.52
Avail Cap(c_a), veh/h	266	0	0	733	0	651	432	0	319	424	0	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.66	0.00	0.66	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.5	0.0	0.0	32.8	0.0	28.3	26.6	0.0	35.0	35.3	0.0	45.0
Incr Delay (d2), s/veh	9.3	0.0	0.0	14.6	0.0	1.6	0.0	0.0	480.3	0.2	0.0	247.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	17.6	0.0	8.0	0.3	0.0	48.8	1.4	0.0	31.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	0.0	0.0	47.4	0.0	29.8	26.6	0.0	515.3	35.5	0.0	292.1
LnGrp LOS	E	A	A	D	A	C	C	A	F	D	A	F
Approach Vol, veh/h		100			972			675			560	
Approach Delay, s/veh		59.8			40.7			500.8			262.3	
Approach LOS		E			D			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.8	25.0		12.3	26.8	25.0		45.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	20.0		15.0	10.0	20.0		45.0				
Max Q Clear Time (g_c+I1), s	2.0	22.0		7.5	2.0	22.0		37.3				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	0.0		3.6				
Intersection Summary												
HCM 6th Ctrl Delay				230.0								
HCM 6th LOS				F								

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

2025-BD-ALT-PM

09/09/2019



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	29	70	140	627	442	37
Future Volume (vph)	29	70	140	627	442	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.990	
Flt Protected	0.950			0.991		
Satd. Flow (prot)	1780	1592	0	1790	1758	0
Flt Permitted	0.950			0.991		
Satd. Flow (perm)	1780	1592	0	1790	1758	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	7%	7%	0%
Adj. Flow (vph)	31	74	147	660	465	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	74	0	807	504	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

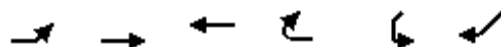
Int Delay, s/veh 2.2

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	29	70	140	627	442	37
Future Vol, veh/h	29	70	140	627	442	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-4	-	-	-1	1	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	7	7	0
Mvmt Flow	31	74	147	660	465	39

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1439	485	504
Stage 1	485	-	-
Stage 2	954	-	-
Critical Hdwy	5.6	5.8	4.1
Critical Hdwy Stg 1	4.6	-	-
Critical Hdwy Stg 2	4.6	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	204	619	1071
Stage 1	694	-	-
Stage 2	466	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	160	619	1071
Mov Cap-2 Maneuver	160	-	-
Stage 1	543	-	-
Stage 2	466	-	-

Approach	SE	NE	SW
HCM Control Delay, s	17.8	1.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR
Capacity (veh/h)	1071	-	160	619	-	-
HCM Lane V/C Ratio	0.138	-	0.191	0.119	-	-
HCM Control Delay (s)	8.9	0	32.7	11.6	-	-
HCM Lane LOS	A	A	D	B	-	-
HCM 95th %tile Q(veh)	0.5	-	0.7	0.4	-	-



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	336	320	290	37	12	189
Future Volume (vph)	336	320	290	37	12	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)		1%	-1%		-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.985		0.873	
Flt Protected		0.975			0.997	
Satd. Flow (prot)	0	1739	1774	0	1599	0
Flt Permitted		0.975			0.997	
Satd. Flow (perm)	0	1739	1774	0	1599	0
Link Speed (mph)		45	45		55	
Link Distance (ft)		2481	2900		858	
Travel Time (s)		37.6	43.9		10.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	6%	6%	6%	6%	1%	1%
Adj. Flow (vph)	354	337	305	39	13	199
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	691	344	0	212	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		11	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.03	1.03
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 5.3

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	336	320	290	37	12	189
Future Vol, veh/h	336	320	290	37	12	189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	-2	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	6	6	6	6	1	1
Mvmt Flow	354	337	305	39	13	199

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	344	0	0 1370 325
Stage 1	-	-	- - 325 -
Stage 2	-	-	- - 1045 -
Critical Hdwy	4.16	-	- - 6.01 6.01
Critical Hdwy Stg 1	-	-	- - 5.01 -
Critical Hdwy Stg 2	-	-	- - 5.01 -
Follow-up Hdwy	2.254	-	- - 3.509 3.309
Pot Cap-1 Maneuver	1193	-	- - 189 732
Stage 1	-	-	- - 761 -
Stage 2	-	-	- - 382 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1193	-	- - 120 732
Mov Cap-2 Maneuver	-	-	- - 120 -
Stage 1	-	-	- - 483 -
Stage 2	-	-	- - 382 -

Approach	EB	WB	SW
HCM Control Delay, s	4.8	0	15.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	1193	-	-	-	561
HCM Lane V/C Ratio	0.296	-	-	-	0.377
HCM Control Delay (s)	9.3	0	-	-	15.3
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	1.2	-	-	-	1.7

Lanes, Volumes, Timings
5: NY 52 & Site Dwy A

2025-BD-ALT-PM

09/09/2019



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	45	13	33	434	295	66
Future Volume (vph)	45	13	33	434	295	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.970				0.975	
Flt Protected	0.963			0.996		
Satd. Flow (prot)	1775	0	0	1810	1748	0
Flt Permitted	0.963			0.996		
Satd. Flow (perm)	1775	0	0	1810	1748	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	49	14	36	472	321	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	0	508	393	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	13	33	434	295	66
Future Vol, veh/h	45	13	33	434	295	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	49	14	36	472	321	72
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	901	357	393	0	-	0
Stage 1	357	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	311	692	1177	-	-	-
Stage 1	713	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	298	692	1177	-	-	-
Mov Cap-2 Maneuver	298	-	-	-	-	-
Stage 1	684	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	17.9	0.6		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1177	-	342	-	-	
HCM Lane V/C Ratio	0.03	-	0.184	-	-	
HCM Control Delay (s)	8.2	0	17.9	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile O(veh)	0.1	-	0.7	-	-	

Lanes, Volumes, Timings
6: Site Dwy B & NY 52

2025-BD-ALT-PM

09/09/2019

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	297	11	0	467	0	7
Future Volume (vph)	297	11	0	467	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995				0.865	
Flt Protected						
Satd. Flow (prot)	1742	0	0	1837	1644	0
Flt Permitted						
Satd. Flow (perm)	1742	0	0	1837	1644	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	0%	6%	0%	0%
Adj. Flow (vph)	323	12	0	508	0	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	335	0	0	508	8	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 0.1

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	297	11	0	467	0	7
Future Vol, veh/h	297	11	0	467	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	6	0	0
Mvmt Flow	323	12	0	508	0	8

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	335
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1236
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1236
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

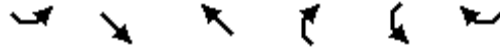
Approach	SE	NW	NE
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	717	1236	-	-	-
HCM Lane V/C Ratio	0.011	-	-	-	-
HCM Control Delay (s)	10.1	0	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

2025-BD-ALT-PM

09/09/2019



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	34	270	450	23	9	17
Future Volume (vph)	34	270	450	23	9	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.993		0.912	
Flt Protected		0.994			0.983	
Satd. Flow (prot)	0	1730	1901	0	1804	0
Flt Permitted		0.994			0.983	
Satd. Flow (perm)	0	1730	1901	0	1804	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	6%	6%	0%	1%	1%
Adj. Flow (vph)	38	300	500	26	10	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	338	526	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 0.8

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	34	270	450	23	9	17
Future Vol, veh/h	34	270	450	23	9	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	6	6	0	1	1
Mvmt Flow	38	300	500	26	10	19

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	526	0	889
Stage 1	-	-	513
Stage 2	-	-	376
Critical Hdwy	4.1	-	5.01
Critical Hdwy Stg 1	-	-	4.01
Critical Hdwy Stg 2	-	-	4.01
Follow-up Hdwy	2.2	-	3.509
Pot Cap-1 Maneuver	1051	-	445
Stage 1	-	-	736
Stage 2	-	-	806
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1051	-	426
Mov Cap-2 Maneuver	-	-	426
Stage 1	-	-	704
Stage 2	-	-	806

Approach	SE	NW	SW
HCM Control Delay, s	1	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SEL	SETSWLn1
Capacity (veh/h)	-	-	1051	537
HCM Lane V/C Ratio	-	-	0.036	0.054
HCM Control Delay (s)	-	-	8.6	12.1
HCM Lane LOS	-	-	A	B
HCM 95th %tile Q(veh)	-	-	0.1	0.2

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

2025-BD-ALT-PM

09/09/2019



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	37	32	213	44	27	461
Future Volume (vph)	37	32	213	44	27	461
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.937		0.974			
Flt Protected	0.974					0.997
Satd. Flow (prot)	1848	0	3255	0	0	1745
Flt Permitted	0.974					0.997
Satd. Flow (perm)	1848	0	3255	0	0	1745
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	41	36	237	49	30	512
Shared Lane Traffic (%)						
Lane Group Flow (vph)	77	0	286	0	0	542
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	37	32	213	44	27	461
Future Vol, veh/h	37	32	213	44	27	461
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	41	36	237	49	30	512

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	834	143	0
Stage 1	262	-	-
Stage 2	572	-	-
Critical Hdwy	8.615	7.915	-
Critical Hdwy Stg 1	7.815	-	-
Critical Hdwy Stg 2	7.415	-	-
Follow-up Hdwy	3.5095	3.3095	-
Pot Cap-1 Maneuver	204	848	-
Stage 1	658	-	-
Stage 2	412	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	197	848	-
Mov Cap-2 Maneuver	197	-	-
Stage 1	658	-	-
Stage 2	398	-	-

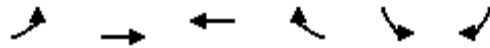
Approach	EB	SE	NW
HCM Control Delay, s	20.7	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1249	-	306	-	-
HCM Lane V/C Ratio	0.024	-	0.251	-	-
HCM Control Delay (s)	8	0	20.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1	-	-

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

2025-BD-ALT-PM

09/09/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	241	505	8	10	10
Future Volume (vph)	8	241	505	8	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998		0.932	
Flt Protected		0.998			0.976	
Satd. Flow (prot)	0	1793	1670	0	1858	0
Flt Permitted		0.998			0.976	
Satd. Flow (perm)	0	1793	1670	0	1858	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	9	284	594	9	12	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	293	603	0	24	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	241	505	8	10	10
Future Vol, veh/h	8	241	505	8	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	9	284	594	9	12	12

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	603	0	901
Stage 1	-	-	599
Stage 2	-	-	302
Critical Hdwy	4.1	-	3.4
Critical Hdwy Stg 1	-	-	2.4
Critical Hdwy Stg 2	-	-	2.4
Follow-up Hdwy	2.2	-	3.5
Pot Cap-1 Maneuver	984	-	659
Stage 1	-	-	910
Stage 2	-	-	970
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	984	-	652
Mov Cap-2 Maneuver	-	-	652
Stage 1	-	-	900
Stage 2	-	-	970

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	984	-	-	-	650
HCM Lane V/C Ratio	0.01	-	-	-	0.036
HCM Control Delay (s)	8.7	0	-	-	10.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	69	252	3	104	528
Future Volume (vph)	6	69	252	3	104	528
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.876		0.998			
Flt Protected	0.996					0.992
Satd. Flow (prot)	1602	0	1799	0	0	1696
Flt Permitted	0.996					0.992
Satd. Flow (perm)	1602	0	1799	0	0	1696
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	5%	0%	0%	5%
Adj. Flow (vph)	8	87	319	4	132	668
Shared Lane Traffic (%)						
Lane Group Flow (vph)	95	0	323	0	0	800
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 1.9

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	69	252	3	104	528
Future Vol, veh/h	6	69	252	3	104	528
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	1	1	5	0	0	5
Mvmt Flow	8	87	319	4	132	668

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1253	321	0
Stage 1	321	-	-
Stage 2	932	-	-
Critical Hdwy	6.01	6.01	4.1
Critical Hdwy Stg 1	5.01	-	-
Critical Hdwy Stg 2	5.01	-	-
Follow-up Hdwy	3.509	3.309	2.2
Pot Cap-1 Maneuver	219	735	1248
Stage 1	764	-	-
Stage 2	427	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	182	735	1248
Mov Cap-2 Maneuver	182	-	-
Stage 1	764	-	-
Stage 2	355	-	-

Approach	EB	SE	NW
HCM Control Delay, s	12.3	0	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1248	-	591	-	-
HCM Lane V/C Ratio	0.105	-	0.161	-	-
HCM Control Delay (s)	8.2	0	12.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.6	-	-

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-BD-ALT-AM-IMP

09/10/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	0	164	0	66	0	312	581	405	391	1
Future Volume (vph)	1	0	0	164	0	66	0	312	581	405	391	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.912				
Flt Protected		0.950		0.950						0.950		
Satd. Flow (prot)	0	1651	0	1769	1635	0	0	1657	0	1668	1716	0
Flt Permitted		0.711		0.757						0.075		
Satd. Flow (perm)	0	1236	0	1410	1635	0	0	1657	0	132	1716	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					655			143				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	1	0	0	176	0	71	0	335	625	435	420	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	176	71	0	0	960	0	435	421	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-BD-ALT-AM-IMP

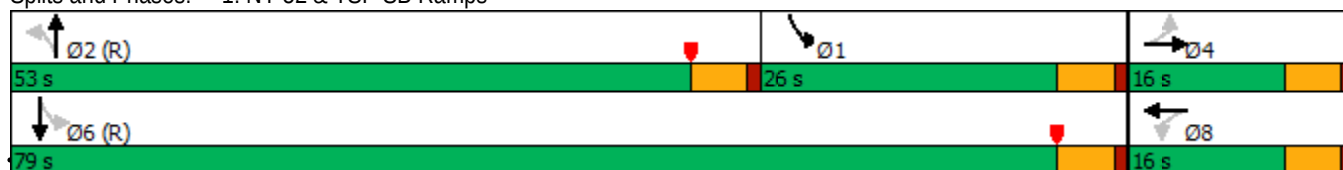
09/10/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	16.0	16.0		16.0	16.0		53.0	53.0		26.0	79.0	
Total Split (%)	16.8%	16.8%		16.8%	16.8%		55.8%	55.8%		27.4%	83.2%	
Maximum Green (s)	11.0	11.0		11.0	11.0		48.0	48.0		21.0	74.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio		0.01		1.08	0.09			1.06		0.98	0.32	
Control Delay		37.0		135.4	0.2			68.3		66.3	4.6	
Queue Delay		0.0		0.0	0.0			10.8		52.0	2.3	
Total Delay		37.0		135.4	0.2			79.1		118.3	6.9	
Queue Length 50th (ft)		1		~119	0			~595		238	112	
Queue Length 95th (ft)		6		#250	0			#836		#420	147	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)		143		163	768			907		442	1336	
Starvation Cap Reductn		0		0	0			0		304	761	
Spillback Cap Reductn		0		0	9			23		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.01		1.08	0.09			1.09		3.15	0.73	

Intersection Summary

Area Type: Other
 Cycle Length: 95
 Actuated Cycle Length: 95
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: NY 52 & TSP SB Ramps



PEAK HOUR 7:30-8:30
JMC 17039

Synchro 10 Report
Page 2

HCM 6th Signalized Intersection Summary

1: NY 52 & TSP SB Ramps

2025-BD-ALT-AM-IMP

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	0	164	0	66	0	312	581	405	391	1
Future Volume (veh/h)	1	0	0	164	0	66	0	312	581	405	391	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	1	0	0	176	0	71	0	335	625	435	420	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	171	0	0	249	0	184	0	298	556	471	1388	3
Arrive On Green	0.12	0.00	0.00	0.12	0.00	0.12	0.00	0.51	0.51	0.37	1.00	1.00
Sat Flow, veh/h	826	0	0	1369	0	1592	0	590	1101	1787	1783	4
Grp Volume(v), veh/h	1	0	0	176	0	71	0	0	960	435	0	421
Grp Sat Flow(s),veh/h/ln	826	0	0	1369	0	1592	0	0	1690	1787	0	1787
Q Serve(g_s), s	0.1	0.0	0.0	7.0	0.0	3.9	0.0	0.0	48.0	17.8	0.0	0.0
Cycle Q Clear(g_c), s	4.0	0.0	0.0	11.0	0.0	3.9	0.0	0.0	48.0	17.8	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	171	0	0	249	0	184	0	0	854	471	0	1392
V/C Ratio(X)	0.01	0.00	0.00	0.71	0.00	0.39	0.00	0.00	1.12	0.92	0.00	0.30
Avail Cap(c_a), veh/h	171	0	0	249	0	184	0	0	854	471	0	1392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.63	0.00	0.63
Uniform Delay (d), s/veh	40.7	0.0	0.0	41.8	0.0	38.9	0.0	0.0	23.5	27.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	8.8	0.0	1.3	0.0	0.0	70.8	17.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.7	0.0	1.6	0.0	0.0	33.2	8.7	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	0.0	0.0	50.6	0.0	40.2	0.0	0.0	94.3	44.6	0.0	0.4
LnGrp LOS	D	A	A	D	A	D	A	A	F	D	A	A
Approach Vol, veh/h	1				247				960			
Approach Delay, s/veh	40.7				47.6				94.3			
Approach LOS	D				D				F			
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	26.0	53.0		16.0		79.0		16.0				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	21.0	48.0		11.0		74.0		11.0				
Max Q Clear Time (g_c+I1), s	19.8	50.0		6.0		2.0		13.0				
Green Ext Time (p_c), s	0.3	0.0		0.0		2.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	59.1											
HCM 6th LOS	E											

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-ALT-AM-IMP

09/10/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	19	22	157	27	135	27	307	45	50	618	11
Future Volume (vph)	9	19	22	157	27	135	27	307	45	50	618	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.940				0.850		0.981			0.997	
Flt Protected		0.991			0.959		0.950			0.950		
Satd. Flow (prot)	0	1986	0	0	1744	1546	1693	1721	0	1676	1721	0
Flt Permitted		0.991			0.959		0.193			0.437		
Satd. Flow (perm)	0	1986	0	0	1744	1546	344	1721	0	771	1721	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				145		10			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	10	20	24	169	29	145	29	330	48	54	665	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	0	198	145	29	378	0	54	677	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT	NYS	DOT		NYS	DOT	
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

2025-BD-ALT-AM-IMP

09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	15.0	15.0		20.0	20.0	20.0	15.0	45.0		15.0	45.0	
Total Split (%)	15.8%	15.8%		21.1%	21.1%	21.1%	15.8%	47.4%		15.8%	47.4%	
Maximum Green (s)	10.0	10.0		15.0	15.0	15.0	10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.31			0.68	0.38	0.11	0.45		0.09	0.71	
Control Delay		30.8			49.2	8.9	5.8	18.5		10.5	25.5	
Queue Delay		1.2			0.0	0.0	0.0	0.2		0.0	1.5	
Total Delay		32.1			49.2	8.9	5.8	18.7		10.5	27.0	
Queue Length 50th (ft)		17			113	0	6	149		13	336	
Queue Length 95th (ft)		53			180	49	m3	m114		33	#614	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		230			309	393	343	926		624	950	
Starvation Cap Reductn		0			0	0	0	131		0	0	
Spillback Cap Reductn		78			0	0	0	0		0	126	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.36			0.64	0.37	0.08	0.48		0.09	0.82	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 60

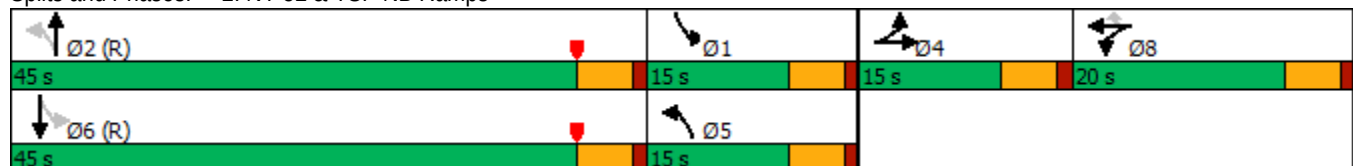
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

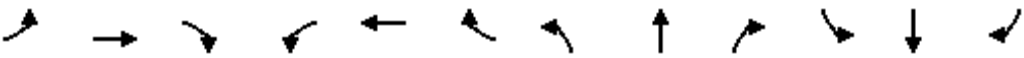
Splits and Phases: 2: NY 52 & TSP NB Ramps



HCM 6th Signalized Intersection Summary 2: NY 52 & TSP NB Ramps

2025-BD-ALT-AM-IMP

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	9	19	22	157	27	135	27	307	45	50	618	11
Future Volume (veh/h)	9	19	22	157	27	135	27	307	45	50	618	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	10	20	24	169	29	145	29	330	48	54	665	12
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	13	27	32	205	35	212	485	366	53	793	703	13
Arrive On Green	0.04	0.04	0.04	0.13	0.13	0.13	0.44	0.46	0.46	0.39	0.40	0.40
Sat Flow, veh/h	364	728	873	1536	264	1590	1847	1578	230	1804	1768	32
Grp Volume(v), veh/h	54	0	0	198	0	145	29	0	378	54	0	677
Grp Sat Flow(s),veh/h/ln	1964	0	0	1800	0	1590	1847	0	1808	1804	0	1799
Q Serve(g_s), s	2.6	0.0	0.0	10.2	0.0	8.3	0.0	0.0	18.3	0.0	0.0	34.5
Cycle Q Clear(g_c), s	2.6	0.0	0.0	10.2	0.0	8.3	0.0	0.0	18.3	0.0	0.0	34.5
Prop In Lane	0.19		0.44	0.85		1.00	1.00		0.13	1.00		0.02
Lane Grp Cap(c), veh/h	73	0	0	240	0	212	485	0	420	793	0	716
V/C Ratio(X)	0.74	0.00	0.00	0.82	0.00	0.68	0.06	0.00	0.90	0.07	0.00	0.95
Avail Cap(c_a), veh/h	207	0	0	284	0	251	485	0	761	793	0	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.00	0.09	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	40.1	0.0	39.2	20.6	0.0	24.4	17.5	0.0	27.6
Incr Delay (d2), s/veh	13.9	0.0	0.0	15.5	0.0	5.9	0.0	0.0	3.3	0.0	0.0	22.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	5.5	0.0	3.5	0.4	0.0	5.5	0.7	0.0	17.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	0.0	0.0	55.5	0.0	45.2	20.6	0.0	27.7	17.6	0.0	50.4
LnGrp LOS	E	A	A	E	A	D	C	A	C	B	A	D
Approach Vol, veh/h		54			343			407			731	
Approach Delay, s/veh		59.2			51.2			27.2			47.9	
Approach LOS		E			D			C			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	41.8	27.0		8.5	26.0	42.8		17.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	40.0		10.0	10.0	40.0		15.0				
Max Q Clear Time (g_c+I1), s	2.0	20.3		4.6	2.0	36.5		12.2				
Green Ext Time (p_c), s	0.1	1.8		0.0	0.0	1.3		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			43.6									
HCM 6th LOS			D									

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

2025-BD-ALT-AM-IMP

09/10/2019



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	16	65	31	400	636	21
Future Volume (vph)	16	65	31	400	636	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.996	
Flt Protected	0.950			0.996		
Satd. Flow (prot)	1780	1592	0	1801	1780	0
Flt Permitted	0.950			0.996		
Satd. Flow (perm)	1780	1592	0	1801	1780	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	18	74	35	455	723	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	74	0	490	747	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

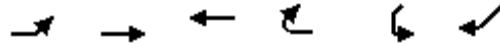
Int Delay, s/veh 1.3

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	16	65	31	400	636	21
Future Vol, veh/h	16	65	31	400	636	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-4	-	-	-1	1	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	18	74	35	455	723	24

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1260	735	747
Stage 1	735	-	-
Stage 2	525	-	-
Critical Hdwy	5.6	5.8	4.1
Critical Hdwy Stg 1	4.6	-	-
Critical Hdwy Stg 2	4.6	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	251	459	870
Stage 1	563	-	-
Stage 2	671	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	237	459	870
Mov Cap-2 Maneuver	237	-	-
Stage 1	533	-	-
Stage 2	671	-	-

Approach	SE	NE	SW
HCM Control Delay, s	15.7	0.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR
Capacity (veh/h)	870	-	237	459	-	-
HCM Lane V/C Ratio	0.04	-	0.077	0.161	-	-
HCM Control Delay (s)	9.3	0	21.4	14.3	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.6	-	-



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↰	↱		↰	↱
Traffic Volume (vph)	178	238	338	10	16	319
Future Volume (vph)	178	238	338	10	16	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)		1%	-1%		-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.996		0.872	
Flt Protected		0.979			0.998	
Satd. Flow (prot)	0	1746	1794	0	1583	0
Flt Permitted		0.979			0.998	
Satd. Flow (perm)	0	1746	1794	0	1583	0
Link Speed (mph)		45	45		55	
Link Distance (ft)		2481	2900		858	
Travel Time (s)		37.6	43.9		10.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	6%	6%	6%	6%	2%	2%
Adj. Flow (vph)	185	248	352	10	17	332
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	433	362	0	349	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		11	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.03	1.03
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 6.6

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	178	238	338	10	16	319
Future Vol, veh/h	178	238	338	10	16	319
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	-2	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	185	248	352	10	17	332

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	362	0	0 975 357
Stage 1	-	-	- - 357 -
Stage 2	-	-	- - 618 -
Critical Hdwy	4.16	-	- - 6.02 6.02
Critical Hdwy Stg 1	-	-	- - 5.02 -
Critical Hdwy Stg 2	-	-	- - 5.02 -
Follow-up Hdwy	2.254	-	- - 3.518 3.318
Pot Cap-1 Maneuver	1175	-	- - 311 701
Stage 1	-	-	- - 737 -
Stage 2	-	-	- - 576 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1175	-	- - 254 701
Mov Cap-2 Maneuver	-	-	- - 254 -
Stage 1	-	-	- - 602 -
Stage 2	-	-	- - 576 -

Approach	EB	WB	SW
HCM Control Delay, s	3.7	0	16.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	1175	-	-	-	647
HCM Lane V/C Ratio	0.158	-	-	-	0.539
HCM Control Delay (s)	8.6	0	-	-	16.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.6	-	-	-	3.2

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	69	20	10	213	304	20
Future Volume (vph)	69	20	10	213	304	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Storage Length (ft)	0	0	150			0
Storage Lanes	1	0	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.969				0.992	
Flt Protected	0.963		0.950			
Satd. Flow (prot)	1773	0	1823	1828	1782	0
Flt Permitted	0.963		0.950			
Satd. Flow (perm)	1773	0	1823	1828	1782	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	5%	5%	0%
Adj. Flow (vph)	71	21	10	220	313	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	0	10	220	334	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	69	20	10	213	304	20
Future Vol, veh/h	69	20	10	213	304	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	5	5	0
Mvmt Flow	71	21	10	220	313	21

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	564	324	334
Stage 1	324	-	-
Stage 2	240	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	490	722	1237
Stage 1	738	-	-
Stage 2	805	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	486	722	1237
Mov Cap-2 Maneuver	486	-	-
Stage 1	732	-	-
Stage 2	805	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1237	-	525	-	-
HCM Lane V/C Ratio	0.008	-	0.175	-	-
HCM Control Delay (s)	7.9	-	13.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

Lanes, Volumes, Timings
6: Site Dwy B & NY 52

2025-BD-ALT-AM-IMP
09/10/2019

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	321	3	0	223	0	10
Future Volume (vph)	321	3	0	223	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.865	
Flt Protected						
Satd. Flow (prot)	1763	0	0	1855	1644	0
Flt Permitted						
Satd. Flow (perm)	1763	0	0	1855	1644	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	5%	0%	0%	5%	0%	0%
Adj. Flow (vph)	331	3	0	230	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	334	0	0	230	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 0.2

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	321	3	0	223	0	10
Future Vol, veh/h	321	3	0	223	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	331	3	0	230	0	10

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	334
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1237
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1237
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	713	1237	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-	-
HCM Control Delay (s)	10.1	0	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

2025-BD-ALT-AM-IMP

09/10/2019



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	10	321	169	13	25	54
Future Volume (vph)	10	321	169	13	25	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.991		0.908	
Flt Protected		0.999			0.984	
Satd. Flow (prot)	0	1747	1916	0	1816	0
Flt Permitted		0.999			0.984	
Satd. Flow (perm)	0	1747	1916	0	1816	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	5%	5%	0%	0%	0%
Adj. Flow (vph)	10	328	172	13	26	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	338	185	0	81	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 1.5

Movement SEL SET NWT NWR SWL SWR

Lane Configurations						
Traffic Vol, veh/h	10	321	169	13	25	54
Future Vol, veh/h	10	321	169	13	25	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	7	-13	-	-7	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	5	5	0	0	0
Mvmt Flow	10	328	172	13	26	55

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	185	0	-	0	527	179
Stage 1	-	-	-	-	179	-
Stage 2	-	-	-	-	348	-
Critical Hdwy	4.1	-	-	-	5	5.5
Critical Hdwy Stg 1	-	-	-	-	4	-
Critical Hdwy Stg 2	-	-	-	-	4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1402	-	-	-	632	900
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	824	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1402	-	-	-	626	900
Mov Cap-2 Maneuver	-	-	-	-	626	-
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	824	-

Approach SE NW SW

HCM Control Delay, s	0.2	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h)	-	-	1402	-	791
HCM Lane V/C Ratio	-	-	0.007	-	0.102
HCM Control Delay (s)	-	-	7.6	0	10.1
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0	-	0.3

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

2025-BD-ALT-AM-IMP

09/10/2019



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	25	71	332	21	8	149
Future Volume (vph)	25	71	332	21	8	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.900		0.991			
Flt Protected	0.987					0.998
Satd. Flow (prot)	1799	0	3311	0	0	1747
Flt Permitted	0.987					0.998
Satd. Flow (perm)	1799	0	3311	0	0	1747
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	29	83	386	24	9	173
Shared Lane Traffic (%)						
Lane Group Flow (vph)	112	0	410	0	0	182
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	25	71	332	21	8	149
Future Vol, veh/h	25	71	332	21	8	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	29	83	386	24	9	173

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	589	205	0
Stage 1	398	-	-
Stage 2	191	-	-
Critical Hdwy	8.615	7.915	-
Critical Hdwy Stg 1	7.815	-	-
Critical Hdwy Stg 2	7.415	-	-
Follow-up Hdwy	3.5095	3.3095	-
Pot Cap-1 Maneuver	329	760	-
Stage 1	522	-	-
Stage 2	759	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	326	760	-
Mov Cap-2 Maneuver	326	-	-
Stage 1	522	-	-
Stage 2	752	-	-

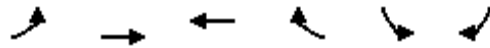
Approach	EB	SE	NW
HCM Control Delay, s	13	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1122	-	564	-	-
HCM Lane V/C Ratio	0.008	-	0.198	-	-
HCM Control Delay (s)	8.2	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	408	130	10	27	10
Future Volume (vph)	12	408	130	10	27	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.991		0.964	
Flt Protected		0.999			0.965	
Satd. Flow (prot)	0	1795	1664	0	1900	0
Flt Permitted		0.999			0.965	
Satd. Flow (perm)	0	1795	1664	0	1900	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	15	498	159	12	33	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	513	171	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	408	130	10	27	10
Future Vol, veh/h	12	408	130	10	27	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	15	498	159	12	33	12

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	171	0	0 693 165
Stage 1	-	-	- 165 -
Stage 2	-	-	- 528 -
Critical Hdwy	4.1	-	- 3.4 4.7
Critical Hdwy Stg 1	-	-	- 2.4 -
Critical Hdwy Stg 2	-	-	- 2.4 -
Follow-up Hdwy	2.2	-	- 3.5 3.3
Pot Cap-1 Maneuver	1418	-	- 735 948
Stage 1	-	-	- 997 -
Stage 2	-	-	- 925 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1418	-	- 724 948
Mov Cap-2 Maneuver	-	-	- 724 -
Stage 1	-	-	- 982 -
Stage 2	-	-	- 925 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1418	-	-	-	773
HCM Lane V/C Ratio	0.01	-	-	-	0.058
HCM Control Delay (s)	7.6	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	83	418	8	37	148
Future Volume (vph)	6	83	418	8	37	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.874		0.998			
Flt Protected	0.997					0.990
Satd. Flow (prot)	1616	0	1800	0	0	1696
Flt Permitted	0.997					0.990
Satd. Flow (perm)	1616	0	1800	0	0	1696
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	5%	0%	0%	5%
Adj. Flow (vph)	7	95	480	9	43	170
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	0	489	0	0	213
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 2

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	83	418	8	37	148
Future Vol, veh/h	6	83	418	8	37	148
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	5	0	0	5
Mvmt Flow	7	95	480	9	43	170

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	741	485	0
Stage 1	485	-	-
Stage 2	256	-	-
Critical Hdwy	6	6	-
Critical Hdwy Stg 1	5	-	-
Critical Hdwy Stg 2	5	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	420	602	-
Stage 1	658	-	-
Stage 2	814	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	402	602	-
Mov Cap-2 Maneuver	402	-	-
Stage 1	658	-	-
Stage 2	778	-	-

Approach	EB	SE	NW
HCM Control Delay, s	12.5	0	1.7
HCM LOS	B		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1085	-	582	-	-
HCM Lane V/C Ratio	0.039	-	0.176	-	-
HCM Control Delay (s)	8.5	0	12.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

2025-BD-ALT-PM-IMP

09/10/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	116	0	91	0	530	177	139	879	0
Future Volume (vph)	0	0	0	116	0	91	0	530	177	139	879	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	13	13	11	11	11	10	11	11
Grade (%)		4%			4%			-2%			2%	
Storage Length (ft)	0		0	108		0	0		0	165		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850			0.966				
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1738	0	1769	1635	0	0	1715	0	1668	1715	0
Flt Permitted				0.757						0.270		
Satd. Flow (perm)	0	1738	0	1410	1635	0	0	1715	0	474	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					442			24				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		206			716			819			309	
Travel Time (s)		4.7			16.3			12.4			4.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	0	0	0	125	0	98	0	570	190	149	945	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	125	98	0	0	760	0	149	945	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.03	0.98	0.98	1.03	1.03	1.03	1.11	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		2	2		1	2		2	2	
Detector Template	Left			NYSDOT	NYSDOT		Left	NYSDOT		NYSDOT	NYSDOT	
Leading Detector (ft)	20	35		83	83		20	83		83	83	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				43	43			43		43	43	
Detector 2 Size(ft)				40	40			40		40	40	
Detector 2 Type				Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)				0.0	0.0			0.0		0.0	0.0	

Lanes, Volumes, Timings
1: NY 52 & TSP SB Ramps

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		15.0	15.0		8.0	15.0	
Total Split (s)	25.0	25.0		25.0	25.0		65.0	65.0		20.0	85.0	
Total Split (%)	22.7%	22.7%		22.7%	22.7%		59.1%	59.1%		18.2%	77.3%	
Maximum Green (s)	20.0	20.0		20.0	20.0		60.0	60.0		15.0	80.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio				0.66	0.16			0.66		0.33	0.71	
Control Delay				61.1	0.6			16.3		5.9	10.7	
Queue Delay				0.0	0.3			51.9		0.0	12.3	
Total Delay				61.1	0.9			68.2		5.9	22.9	
Queue Length 50th (ft)				85	0			270		16	41	
Queue Length 95th (ft)				142	0			585		m25	m724	
Internal Link Dist (ft)		126			636			739			229	
Turn Bay Length (ft)				108						165		
Base Capacity (vph)				256	658			1143		562	1328	
Starvation Cap Reductn				0	0			0		0	371	
Spillback Cap Reductn				0	251			497		0	0	
Storage Cap Reductn				0	0			0		0	0	
Reduced v/c Ratio				0.49	0.24			1.18		0.27	0.99	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 20 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: NY 52 & TSP SB Ramps



HCM 6th Signalized Intersection Summary

2025-BD-ALT-PM-IMP

09/10/2019

1: NY 52 & TSP SB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	116	0	91	0	530	177	139	879	0
Future Volume (veh/h)	0	0	0	116	0	91	0	530	177	139	879	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1806	1806	1806	1806	1878	1878	1889	1889	1889	1876	1788	1788
Adj Flow Rate, veh/h	0	0	0	125	0	98	0	570	190	149	945	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	6	6	6	0	6	6
Cap, veh/h	0	173	0	230	0	152	0	612	204	656	1454	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.45	0.45	0.63	1.00	0.00
Sat Flow, veh/h	0	1806	0	1720	0	1592	0	1355	452	1787	1788	0
Grp Volume(v), veh/h	0	0	0	125	0	98	0	0	760	149	945	0
Grp Sat Flow(s),veh/h/ln	0	1806	0	1720	0	1592	0	0	1807	1787	1788	0
Q Serve(g_s), s	0.0	0.0	0.0	7.8	0.0	6.5	0.0	0.0	43.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.8	0.0	6.5	0.0	0.0	43.8	0.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.25	1.00		0.00
Lane Grp Cap(c), veh/h	0	173	0	230	0	152	0	0	816	656	1454	0
V/C Ratio(X)	0.00	0.00	0.00	0.54	0.00	0.64	0.00	0.00	0.93	0.23	0.65	0.00
Avail Cap(c_a), veh/h	0	328	0	378	0	289	0	0	986	656	1454	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.56	0.56	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	48.5	0.0	47.9	0.0	0.0	28.5	13.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.0	0.0	4.5	0.0	0.0	18.6	0.1	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.5	0.0	2.8	0.0	0.0	21.5	1.4	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	50.5	0.0	52.4	0.0	0.0	47.1	13.6	1.3	0.0
LnGrp LOS	A	A	A	D	A	D	A	A	D	B	A	A
Approach Vol, veh/h	0				223				760			
Approach Delay, s/veh	0.0				51.3				47.1			
Approach LOS					D				D			
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	39.8	54.7		15.5		94.5		15.5				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	15.0	60.0		20.0		80.0		20.0				
Max Q Clear Time (g_c+I1), s	2.0	45.8		0.0		2.0		9.8				
Green Ext Time (p_c), s	0.5	3.9		0.0		7.5		0.8				
Intersection Summary												
HCM 6th Ctrl Delay	24.3											
HCM 6th LOS	C											

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	31	44	531	26	338	18	425	178	60	443	12
Future Volume (vph)	17	31	44	531	26	338	18	425	178	60	443	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	11	11	11	10	11	11	10	11	11
Grade (%)		-4%			2%			-1%			1%	
Storage Length (ft)	0		0	0		120	28		0	45		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.935				0.850		0.956			0.996	
Flt Protected		0.991			0.954		0.950			0.950		
Satd. Flow (prot)	0	1975	0	0	1735	1546	1693	1693	0	1676	1720	0
Flt Permitted		0.991			0.954		0.174			0.103		
Satd. Flow (perm)	0	1975	0	0	1735	1546	310	1693	0	182	1720	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33				181		20			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		166			621			309			822	
Travel Time (s)		3.8			14.1			4.7			12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	6%	0%
Adj. Flow (vph)	18	34	48	577	28	367	20	462	193	65	482	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	605	367	20	655	0	65	495	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.86	0.86	0.86	1.06	1.06	1.06	1.09	1.04	1.04	1.10	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	2	2	1	2		1	2	
Detector Template	Left			Left	NYS	DOT	NYS	DOT		NYS	DOT	
Leading Detector (ft)	20	15		20	83	83	25	83		35	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	20		20	40	40	30	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					43	43		43			43	
Detector 2 Size(ft)					40	40		40			40	
Detector 2 Type					Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0	0.0		0.0			0.0	

Lanes, Volumes, Timings
2: NY 52 & TSP NB Ramps

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		5.0	5.0	5.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	8.0	8.0		10.0	10.0	10.0	8.0	15.0		8.0	15.0	
Total Split (s)	13.0	13.0		45.0	45.0	45.0	13.0	39.0		13.0	39.0	
Total Split (%)	11.8%	11.8%		40.9%	40.9%	40.9%	11.8%	35.5%		11.8%	35.5%	
Maximum Green (s)	8.0	8.0		40.0	40.0	40.0	8.0	34.0		8.0	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
v/c Ratio		0.58			0.95	0.54	0.10	1.11		0.40	0.76	
Control Delay		47.1			60.0	16.5	15.8	101.8		40.8	40.8	
Queue Delay		0.2			44.2	0.0	0.0	0.6		0.0	1.1	
Total Delay		47.3			104.2	16.5	15.8	102.5		40.8	41.9	
Queue Length 50th (ft)		46			406	97	10	~552		28	286	
Queue Length 95th (ft)		#103			#643	192	m7	#751		54	#544	
Internal Link Dist (ft)		86			541			229			742	
Turn Bay Length (ft)						120	28			45		
Base Capacity (vph)		182			642	686	225	588		187	651	
Starvation Cap Reductn		0			0	0	0	48		0	0	
Spillback Cap Reductn		3			102	0	0	0		0	42	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.56			1.12	0.53	0.09	1.21		0.35	0.81	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 90

Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.

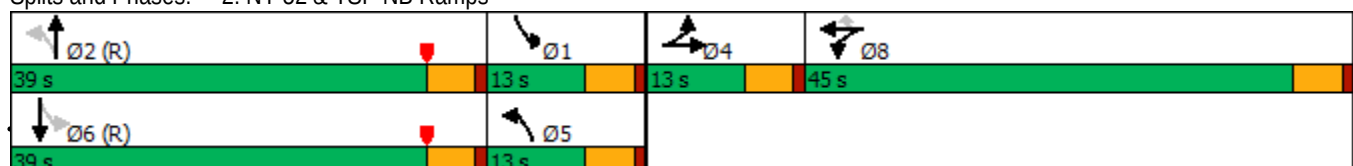
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NY 52 & TSP NB Ramps



HCM 6th Signalized Intersection Summary

2: NY 52 & TSP NB Ramps

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	31	44	531	26	338	18	425	178	60	443	12
Future Volume (veh/h)	17	31	44	531	26	338	18	425	178	60	443	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2140	2140	2140	1876	1876	1876	1939	1849	1849	1894	1805	1805
Adj Flow Rate, veh/h	18	34	48	577	28	367	20	462	193	65	482	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	6	0	6	6
Cap, veh/h	23	43	61	609	30	567	279	383	160	223	512	14
Arrive On Green	0.07	0.07	0.07	0.36	0.36	0.36	0.21	0.62	0.62	0.09	0.29	0.29
Sat Flow, veh/h	352	664	938	1708	83	1590	1847	1239	517	1804	1750	47
Grp Volume(v), veh/h	100	0	0	605	0	367	20	0	655	65	0	495
Grp Sat Flow(s),veh/h/ln	1953	0	0	1791	0	1590	1847	0	1756	1804	0	1797
Q Serve(g_s), s	5.5	0.0	0.0	36.1	0.0	21.2	0.0	0.0	34.0	0.0	0.0	29.6
Cycle Q Clear(g_c), s	5.5	0.0	0.0	36.1	0.0	21.2	0.0	0.0	34.0	0.0	0.0	29.6
Prop In Lane	0.18		0.48	0.95		1.00	1.00		0.29	1.00		0.03
Lane Grp Cap(c), veh/h	128	0	0	638	0	567	279	0	543	223	0	526
V/C Ratio(X)	0.78	0.00	0.00	0.95	0.00	0.65	0.07	0.00	1.21	0.29	0.00	0.94
Avail Cap(c_a), veh/h	142	0	0	651	0	578	279	0	543	223	0	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.70	0.00	0.70	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	0.0	0.0	34.4	0.0	29.6	37.8	0.0	21.0	45.8	0.0	38.0
Incr Delay (d2), s/veh	22.1	0.0	0.0	23.0	0.0	2.5	0.1	0.0	105.0	0.7	0.0	27.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.0	19.4	0.0	8.4	0.4	0.0	22.3	1.6	0.0	16.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.7	0.0	0.0	57.4	0.0	32.1	37.8	0.0	126.0	46.5	0.0	64.9
LnGrp LOS	E	A	A	E	A	C	D	A	F	D	A	E
Approach Vol, veh/h		100			972			675			560	
Approach Delay, s/veh		72.7			47.8			123.4			62.8	
Approach LOS		E			D			F			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.6	39.0		12.2	16.4	37.2		44.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	34.0		8.0	8.0	34.0		40.0				
Max Q Clear Time (g_c+I1), s	2.0	36.0		7.5	2.0	31.6		38.1				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	0.6		1.1				
Intersection Summary												
HCM 6th Ctrl Delay				74.7								
HCM 6th LOS				E								

Lanes, Volumes, Timings
3: NY 52 & Carpenter Road

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Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	29	70	140	627	442	37
Future Volume (vph)	29	70	140	627	442	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%			-1%	1%	
Storage Length (ft)	50	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.990	
Flt Protected	0.950			0.991		
Satd. Flow (prot)	1780	1592	0	1790	1758	0
Flt Permitted	0.950			0.991		
Satd. Flow (perm)	1780	1592	0	1790	1758	0
Link Speed (mph)	40			45	45	
Link Distance (ft)	887			1036	1285	
Travel Time (s)	15.1			15.7	19.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	7%	7%	0%
Adj. Flow (vph)	31	74	147	660	465	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	74	0	807	504	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2.2

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	29	70	140	627	442	37
Future Vol, veh/h	29	70	140	627	442	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-4	-	-	-1	1	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	7	7	0
Mvmt Flow	31	74	147	660	465	39

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1439	485	504
Stage 1	485	-	-
Stage 2	954	-	-
Critical Hdwy	5.6	5.8	4.1
Critical Hdwy Stg 1	4.6	-	-
Critical Hdwy Stg 2	4.6	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	204	619	1071
Stage 1	694	-	-
Stage 2	466	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	160	619	1071
Mov Cap-2 Maneuver	160	-	-
Stage 1	543	-	-
Stage 2	466	-	-

Approach	SE	NE	SW
HCM Control Delay, s	17.8	1.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR
Capacity (veh/h)	1071	-	160	619	-	-
HCM Lane V/C Ratio	0.138	-	0.191	0.119	-	-
HCM Control Delay (s)	8.9	0	32.7	11.6	-	-
HCM Lane LOS	A	A	D	B	-	-
HCM 95th %tile Q(veh)	0.5	-	0.7	0.4	-	-



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	336	320	290	37	12	189
Future Volume (vph)	336	320	290	37	12	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)		1%	-1%		-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.985		0.873	
Flt Protected		0.975			0.997	
Satd. Flow (prot)	0	1739	1774	0	1599	0
Flt Permitted		0.975			0.997	
Satd. Flow (perm)	0	1739	1774	0	1599	0
Link Speed (mph)		45	45		55	
Link Distance (ft)		2481	2900		858	
Travel Time (s)		37.6	43.9		10.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	6%	6%	6%	6%	1%	1%
Adj. Flow (vph)	354	337	305	39	13	199
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	691	344	0	212	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		11	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.03	1.03
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	336	320	290	37	12	189
Future Vol, veh/h	336	320	290	37	12	189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	-2	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	6	6	6	6	1	1
Mvmt Flow	354	337	305	39	13	199
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	344	0	-	0	1370	325
Stage 1	-	-	-	-	325	-
Stage 2	-	-	-	-	1045	-
Critical Hdwy	4.16	-	-	-	6.01	6.01
Critical Hdwy Stg 1	-	-	-	-	5.01	-
Critical Hdwy Stg 2	-	-	-	-	5.01	-
Follow-up Hdwy	2.254	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1193	-	-	-	189	732
Stage 1	-	-	-	-	761	-
Stage 2	-	-	-	-	382	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1193	-	-	-	120	732
Mov Cap-2 Maneuver	-	-	-	-	120	-
Stage 1	-	-	-	-	483	-
Stage 2	-	-	-	-	382	-
Approach	EB	WB		SW		
HCM Control Delay, s	4.8	0		15.3		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBRSWLn1		
Capacity (veh/h)	1193	-	-	- 561		
HCM Lane V/C Ratio	0.296	-	-	- 0.377		
HCM Control Delay (s)	9.3	0	-	- 15.3		
HCM Lane LOS	A	A	-	- C		
HCM 95th %tile Q(veh)	1.2	-	-	- 1.7		

Lanes, Volumes, Timings
5: NY 52 & Site Dwy A

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	45	13	33	434	295	66
Future Volume (vph)	45	13	33	434	295	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			-2%	2%	
Storage Length (ft)	0	0	150			0
Storage Lanes	1	0	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.970				0.975	
Flt Protected	0.963		0.950			
Satd. Flow (prot)	1775	0	1823	1810	1748	0
Flt Permitted	0.963		0.950			
Satd. Flow (perm)	1775	0	1823	1810	1748	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	335			491	930	
Travel Time (s)	7.6			6.1	11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	6%	6%	0%
Adj. Flow (vph)	49	14	36	472	321	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	36	472	393	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	13	33	434	295	66
Future Vol, veh/h	45	13	33	434	295	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	49	14	36	472	321	72

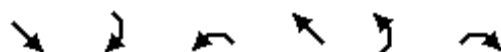
Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	901	357	393
Stage 1	357	-	-
Stage 2	544	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	311	692	1177
Stage 1	713	-	-
Stage 2	586	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	301	692	1177
Mov Cap-2 Maneuver	301	-	-
Stage 1	691	-	-
Stage 2	586	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.8	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1177	-	345	-	-
HCM Lane V/C Ratio	0.03	-	0.183	-	-
HCM Control Delay (s)	8.2	-	17.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

Lanes, Volumes, Timings
6: Site Dwy B & NY 52

2025-BD-ALT-PM-IMP
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Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	297	11	0	467	0	7
Future Volume (vph)	297	11	0	467	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%			-5%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995				0.865	
Flt Protected						
Satd. Flow (prot)	1742	0	0	1837	1644	0
Flt Permitted						
Satd. Flow (perm)	1742	0	0	1837	1644	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	991			229	443	
Travel Time (s)	12.3			2.8	10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	0%	6%	0%	0%
Adj. Flow (vph)	323	12	0	508	0	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	335	0	0	508	8	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.97	0.97	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection

Int Delay, s/veh 0.1

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	297	11	0	467	0	7
Future Vol, veh/h	297	11	0	467	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	6	0	0
Mvmt Flow	323	12	0	508	0	8

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	335
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1236
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1236
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	717	1236	-	-	-
HCM Lane V/C Ratio	0.011	-	-	-	-
HCM Control Delay (s)	10.1	0	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

Lanes, Volumes, Timings
7: NY 52 & Stormville Mountain Road

2025-BD-ALT-PM-IMP

09/10/2019



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	34	270	450	23	9	17
Future Volume (vph)	34	270	450	23	9	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	13
Grade (%)		7%	-13%		-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.993		0.912	
Flt Protected		0.994			0.983	
Satd. Flow (prot)	0	1730	1901	0	1804	0
Flt Permitted		0.994			0.983	
Satd. Flow (perm)	0	1730	1901	0	1804	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		229	1634		642	
Travel Time (s)		2.8	20.3		14.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	6%	6%	0%	1%	1%
Adj. Flow (vph)	38	300	500	26	10	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	338	526	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.92	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 0.8

Movement SEL SET NWT NWR SWL SWR

Lane Configurations 

Traffic Vol, veh/h 34 270 450 23 9 17

Future Vol, veh/h 34 270 450 23 9 17

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Free Free Free Free Stop Stop

RT Channelized - None - None - None

Storage Length - - - - 0 -

Veh in Median Storage, # - 0 0 - 0 -

Grade, % - 7 -13 - -7 -

Peak Hour Factor 90 90 90 90 90 90

Heavy Vehicles, % 0 6 6 0 1 1

Mvmt Flow 38 300 500 26 10 19

Major/Minor Major1 Major2 Minor2

Conflicting Flow All 526 0 - 0 889 513

Stage 1 - - - - 513 -

Stage 2 - - - - 376 -

Critical Hdwy 4.1 - - - 5.01 5.51

Critical Hdwy Stg 1 - - - - 4.01 -

Critical Hdwy Stg 2 - - - - 4.01 -

Follow-up Hdwy 2.2 - - - 3.509 3.309

Pot Cap-1 Maneuver 1051 - - - 445 622

Stage 1 - - - - 736 -

Stage 2 - - - - 806 -

Platoon blocked, % - - - -

Mov Cap-1 Maneuver 1051 - - - 426 622

Mov Cap-2 Maneuver - - - - 426 -

Stage 1 - - - - 704 -

Stage 2 - - - - 806 -

Approach SE NW SW

HCM Control Delay, s 1 0 12.1

HCM LOS B

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h) - - 1051 - 537

HCM Lane V/C Ratio - - 0.036 - 0.054

HCM Control Delay (s) - - 8.6 0 12.1

HCM Lane LOS - - A A B

HCM 95th %tile Q(veh) - - 0.1 - 0.2

Lanes, Volumes, Timings
8: NY 52 & Leetown Road

2025-BD-ALT-PM-IMP

09/10/2019



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	37	32	213	44	27	461
Future Volume (vph)	37	32	213	44	27	461
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	11	11	11	11
Grade (%)	10%		-3%			-2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.937		0.974			
Flt Protected	0.974					0.997
Satd. Flow (prot)	1848	0	3255	0	0	1745
Flt Permitted	0.974					0.997
Satd. Flow (perm)	1848	0	3255	0	0	1745
Link Speed (mph)	30		55			55
Link Distance (ft)	916		995			1285
Travel Time (s)	20.8		12.3			15.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	6%	6%	6%	6%
Adj. Flow (vph)	41	36	237	49	30	512
Shared Lane Traffic (%)						
Lane Group Flow (vph)	77	0	286	0	0	542
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	16		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.91	0.91	1.02	1.02	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	37	32	213	44	27	461
Future Vol, veh/h	37	32	213	44	27	461
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-3	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	6	6	6	6
Mvmt Flow	41	36	237	49	30	512

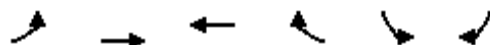
Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	834	143	0
Stage 1	262	-	-
Stage 2	572	-	-
Critical Hdwy	8.615	7.915	-
Critical Hdwy Stg 1	7.815	-	-
Critical Hdwy Stg 2	7.415	-	-
Follow-up Hdwy	3.5095	3.3095	-
Pot Cap-1 Maneuver	204	848	-
Stage 1	658	-	-
Stage 2	412	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	197	848	-
Mov Cap-2 Maneuver	197	-	-
Stage 1	658	-	-
Stage 2	398	-	-

Approach	EB	SE	NW
HCM Control Delay, s	20.7	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1249	-	306	-	-
HCM Lane V/C Ratio	0.024	-	0.251	-	-
HCM Control Delay (s)	8	0	20.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1	-	-

Lanes, Volumes, Timings
9: NY 52 & Stormville Mountain Road

2025-BD-ALT-PM-IMP
09/10/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	241	505	8	10	10
Future Volume (vph)	8	241	505	8	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)		-7%	7%		-15%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998		0.932	
Flt Protected		0.998			0.976	
Satd. Flow (prot)	0	1793	1670	0	1858	0
Flt Permitted		0.998			0.976	
Satd. Flow (perm)	0	1793	1670	0	1858	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		2306	1149		1014	
Travel Time (s)		28.6	14.2		23.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%
Adj. Flow (vph)	9	284	594	9	12	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	293	603	0	24	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	241	505	8	10	10
Future Vol, veh/h	8	241	505	8	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-7	7	-	-15	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	9	284	594	9	12	12

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	603	0	901
Stage 1	-	-	599
Stage 2	-	-	302
Critical Hdwy	4.1	-	3.4
Critical Hdwy Stg 1	-	-	2.4
Critical Hdwy Stg 2	-	-	2.4
Follow-up Hdwy	2.2	-	3.5
Pot Cap-1 Maneuver	984	-	659
Stage 1	-	-	910
Stage 2	-	-	970
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	984	-	652
Mov Cap-2 Maneuver	-	-	652
Stage 1	-	-	900
Stage 2	-	-	970

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	984	-	-	-	650
HCM Lane V/C Ratio	0.01	-	-	-	0.036
HCM Control Delay (s)	8.7	0	-	-	10.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	6	69	252	3	104	528
Future Volume (vph)	6	69	252	3	104	528
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-2%		-6%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.876		0.998			
Flt Protected	0.996					0.992
Satd. Flow (prot)	1602	0	1799	0	0	1696
Flt Permitted	0.996					0.992
Satd. Flow (perm)	1602	0	1799	0	0	1696
Link Speed (mph)	45		55			55
Link Distance (ft)	868		956			217
Travel Time (s)	13.2		11.9			2.7
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	5%	0%	0%	5%
Adj. Flow (vph)	8	87	319	4	132	668
Shared Lane Traffic (%)						
Lane Group Flow (vph)	95	0	323	0	0	800
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

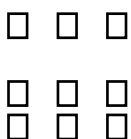
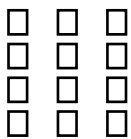
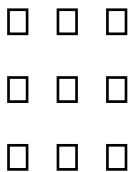
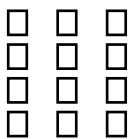
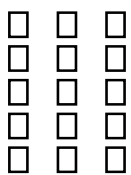
Int Delay, s/veh 1.9

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	69	252	3	104	528
Future Vol, veh/h	6	69	252	3	104	528
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	-6	-	-	6
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	1	1	5	0	0	5
Mvmt Flow	8	87	319	4	132	668

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1253	321	0
Stage 1	321	-	-
Stage 2	932	-	-
Critical Hdwy	6.01	6.01	-
Critical Hdwy Stg 1	5.01	-	-
Critical Hdwy Stg 2	5.01	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	219	735	-
Stage 1	764	-	-
Stage 2	427	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	182	735	-
Mov Cap-2 Maneuver	182	-	-
Stage 1	764	-	-
Stage 2	355	-	-

Approach	EB	SE	NW
HCM Control Delay, s	12.3	0	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1248	-	591	-	-
HCM Lane V/C Ratio	0.105	-	0.161	-	-
HCM Control Delay (s)	8.2	0	12.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.6	-	-



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